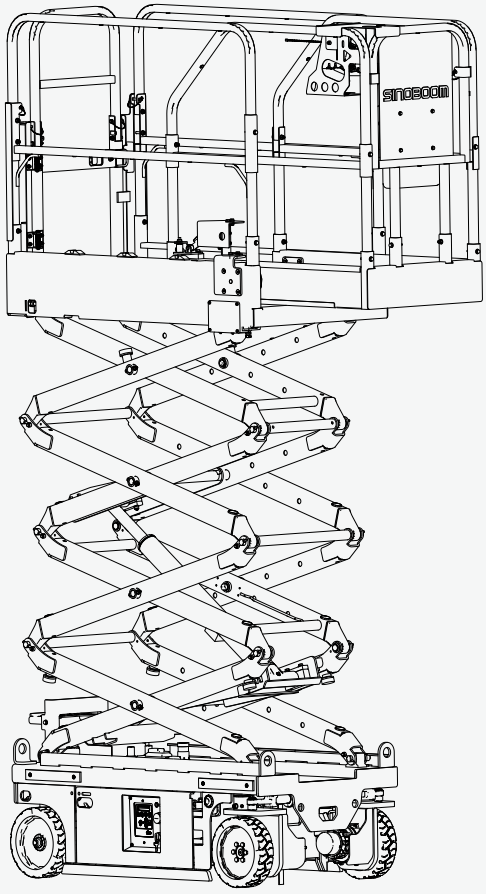
Operation Manual

Manual No: 501091100002-EN
Manual Version: B
October 2025
Translated version

0407E/1330E *0110600100 to current*

0407EN/1530EN *0109000100 to current*

0607EN/1930EN *0109100100 to current*



CE ANSI AS/NZS EAC KCs

SINOBOOM

⚠ WARNING

Operating, servicing and maintaining this vehicle or equipment can expose you to chemicals including engine exhaust, carbon monoxide, phthalates and lead, which are known to cause cancer and birth defects or other reproductive harm. To minimize exposure and avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle or equipment in a well-ventilated area and wear gloves or wash your hands frequently when servicing.

For disposal, please comply with local regulations.

SINOBOOM

星邦智能

星邦

All of the above are registered trademarks of **Hunan Sinoboom Intelligent Equipment Co., Ltd.**

Contact us:

Website: www.sinoboom.com.cn (China) / www.sinoboom.com (outside China)

Sales Tel: 400-601-5828 (China) / 0086-0731-87116222 (outside China)

Service Tel: 400-608-1289 (China) / 0086-0731-87116333 (outside China)

E-mail: info@sinoboom.com (China) / sales@sinoboom.com (outside China)

Address: No.128, East Jinzhou Avenue, Ningxiang High-tech Industrial Park, Changsha, Hunan, China

Postal code: 410600

To Users

Thank you for choosing and using the machinery of **Hunan Sinoboom Intelligent Equipment Co., Ltd.**

Use this machine only to transport tools to work locations and for performing tasks on the work platform. Only authorized personnel who have received appropriate MEWP training may operate this machine. Before using the machine, carefully read and fully understand this manual and strictly follow its relevant instructions. Different countries, regions, or governments may have equipment relevant regulations that conflict with this manual. The stricter safety regulations should be followed. Our company will not be liable for any adverse consequences arising from the failure to operate and use the machine in accordance with this manual or other relevant regulations.

This manual provides necessary safety precautions and operation instructions for users. This manual covers the basic configuration information of one or more models. Please refer to the information applicable to your machine model. Treat this manual as an integral part of the machine and keep it with the machine at all times. This manual may not be copied, distributed, sold, or altered without written permission from Sinoboom.

Due to continuous improvement and upgrading of product design and different product models covered, some charts and textual content in the manual may be not applicable to your machine. Our company reserves the right to revise the contents of this manual due to technological improvements. Changes will be made without prior notice. Contact Sinoboom to obtain the most current version of the manual.

Please go to www. sinoboom. com to download your desired Operation Manual, Maintenance Manual and Parts Manual.

If you have any questions, contact **Hunan Sinoboom Intelligent Equipment Co., Ltd.**

Manual Revision History:

Version	Date	Description
A	October 2024	Original issue
B	October 2025	Added special state codes, power-off switch, brake release switch, disclaimer for entering or exiting the platform at height, and description of model 0407E

Applicability

The manual applies to the following models and serial numbers:

Model	Metric Trade Name	Imperial Trade Name	Serial No.
0407E	0407E	1330E	0110600100 to current
0407EN	0407EN	1530EN	0109000100 to current
0607EN	0607EN	1930EN	0109100100 to current

Note:

- Check the machine model and serial number on the machine nameplate. The location of the nameplate can be found in the ***Decals Diagram*** section of the Operation Manual.
- Product model numbers are indicated on the nameplates to distinguish products with different main technical parameters.
- Product trade names (product commercial codes) are used for marketing purposes and machine decals for the differentiation of products with different main technical parameters. Product trade names are categorized as metric and imperial trade names: metric trade names are applicable to regions/countries using the metric system or as specifically requested by customers; imperial trade names are applicable to regions/countries using the imperial system or as specifically requested by customers.

CONTENTS

1 SAFETY WARNING SYMBOLS AND SIGNS

The safety warning symbols used on the machine and in the manuals have the following meanings:

Safety warning symbol. This symbol is used to alert you to potential hazards. Observe all safety instructions following a symbol to avoid possible injuries.

⚠ DANGER

Indicates an imminently hazardous situation that, if not avoided, *will* result in death or serious injury.

⚠ WARNING

Indicates an imminently hazardous situation that, if not avoided, *could* result in death or serious injury or serious damage to the machine.

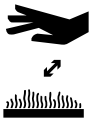
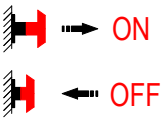
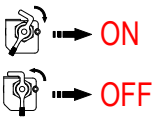
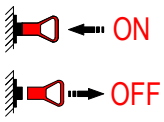
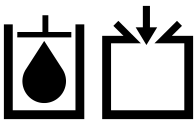
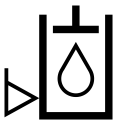
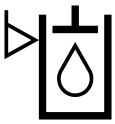
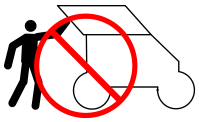
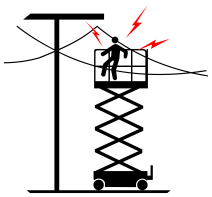
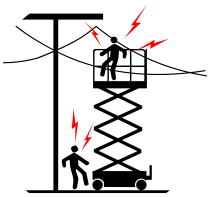
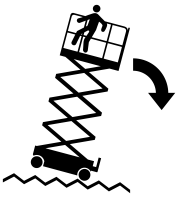
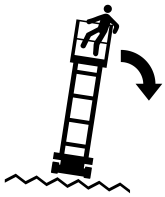
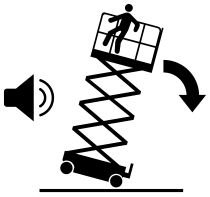
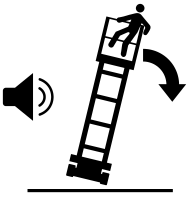
⚠ CAUTION

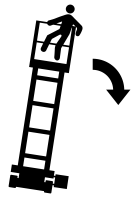
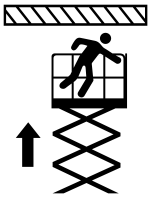
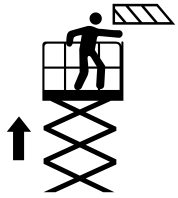
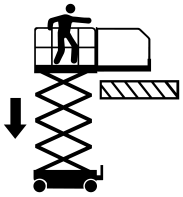
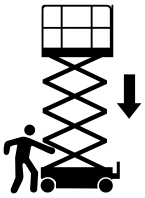
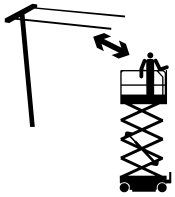
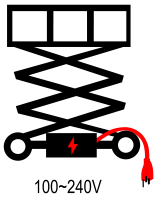
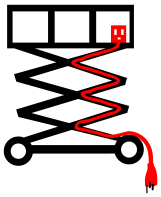
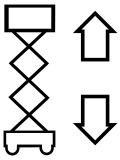
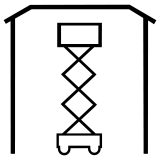
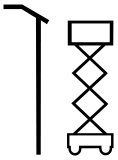
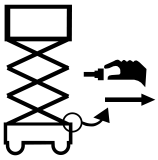
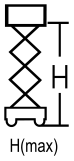
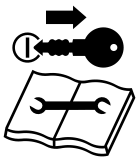
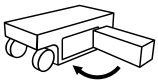
Indicates an imminently hazardous situation that, if not avoided, *could* result in minor or moderate injury or machine damage.

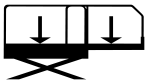
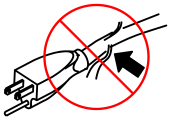
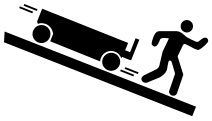
NOTICE

Indicates information directly or indirectly related to personal safety, machine damage, or property loss.

The safety signs used on the machine and in the manuals have the following meanings:

 Refer to the Maintenance Manual	 Anchor point only for 1 person	 Wind speed	 Chock the wheels	 Chock the wheels
 Refer to the Operation Manual	 Add lubricant	 Crushing hazard—safety shoes required	 Danger of hot, high-pressure fluid spray	 Wind
 Press the directional-control valve	 Repeatedly operate the manual brake release valve	 Release the brake	 Alarm sounding	 Horn
 Burn hazard	 Keep a safe distance from high temperatures	 Pull out—ON Press—OFF	 Turn right—ON Turn left to mid position—OFF	 Insert—ON Pull out—OFF
 Hydraulic oil filler	 Hydraulic oil level low	 Hydraulic oil level high	 Temperature	 Replace with tires of the same specification
 Only qualified maintenance personnel may access the compartment	 Electrocution hazard on platform	 Electrocution hazard on the ground and platform	 Tipping hazard—avoid uneven ground	 Tipping hazard—avoid uneven ground
 Tipping hazard – never use machine in strong, gusty winds	 Tipping hazard—never use machine in strong, gusty winds	 Tipping hazard—never push or pull objects outside the platform	 Tipping hazard—never suspend objects from the platform	 Tipping hazard—never place ladders and scaffolding on the platform

 Tipping hazard—never leave the door open	 Collision hazard—keep head clear of overhead obstacles when raising platform	 Crushing hazard—keep hands clear from overhead obstacles when raising platform	 Collision hazard—keep the platform clear of obstacles below when lowering the platform	 Crushing hazard—keep hands away form scissor arms when lowering the platform
 Fall hazard – never climb on platform guardrails	 Fall hazard—never climb on scissor arms	 Keep a safe distance from power lines	 Battery charging plug	 Platform power plug
 Platform up and down movement	 Indoor use	 Outdoor use	 Emergency lowering handle position	 Maximum platform height
 Only qualified maintenance personnel may perform maintenance work	 Wear protective clothing and safety goggles	 Lateral force	 Electrocution hazard	 Battery explosion hazard
 No smoking or open flames/sparks	 No smoking or open flames/sparks	 Lifting point	 Lashing point	 Tire ground pressure
 Forklift pocket position	 Close the chassis compartment	 Tool or weight	 Fast/high speed	 Slow/low speed

 Platform load capacity	 Respective load capacity of main platform and platform extension	 Engage the safety strut	 Do not use damaged power cords	 Collision hazards—never release the brake on slope
 Noise level				

2 IMPORTANT SAFETY RULES

2.1 GENERAL

This chapter briefly describes the precautions that must be followed for safe and proper operation and maintenance of this machine. To ensure safe use and proper operation of the machine, the operator must perform routine maintenance on the machine in accordance with the Operation Manual and Maintenance Manual. In addition, the machine must be regularly maintained and serviced by a qualified service technician according to the instructions provided in the Maintenance Manual.

Familiarize yourself with the local regulations concerning Mobile Elevating Work Platforms (MEWPs) and related operations. The rules for equipment operation from different countries, regions, or governments may conflict with this manual, so the stricter safety operation rules should be followed. If you have any questions about safety, training, inspection, maintenance, purposes and operation of the machine, please contact Hunan Sinoboom Intelligent Equipment Co., Ltd.

Sinoboom cannot foresee all the potential hazards related to this machine, so all parties involved should place high importance on safety issues.

⚠ WARNING

Failure to follow the operating instructions and safety rules in this manual may result in machine damage, property loss, or personal injury.

2.2 PREPARING FOR OPERATION

Operator's Training and Knowledge Requirements

Before operating this machine, read, understand, and comply with all applicable regulations and requirements of employers, local authorities, and the government related to equipment use.

Before operating this machine, you should read and fully understand this manual, undergo professional training based on this Operation Manual, and only operate this machine independently after acquiring the qualification for proficient operation. The training content should include, but not be limited to, the following topics:

- Warnings, operating instructions, and the Operation Manual on the machine.
- Pre-start test
- Factors affecting the stability of the machine
- Common hazards and how to avoid them
- Workplace inspection
- Functions and related knowledge of all controls, including emergency controls
- Use of personal protective equipment appropriate to the work task, workplace, and environment
- Safe operation
- Transport
- How to prevent unauthorized use

Workplace Inspection

Before and during the operation of the machine, users must pay attention to the hazards and take preventive measures to avoid hazards in the work area. Without the written permission of Hunan Sinoboom Intelligent Equipment Co., Ltd., this machine shall not be used in the following areas or conditions:

- Steep slopes or caves
- Ground with protrusions, obstacles, or debris
- Insecure or slippery surfaces
- Surfaces not sufficient to support the machine (machine weight + load weight)
- Trucks, trailers, rail cars, ships, or other equipment
- Dangerous locations
- Places with overhead electric wires, cranes, or other potential obstacles
- In gusty and/or strong wind conditions, or lightning
- Unauthorized persons
- Other areas where unsafe conditions may occur

Machine Inspection

Make sure to complete all checks in strict accordance with the steps in the ***Pre-operation Inspection*** section of this manual before operating the machine:

- ***Pre-start test*** : Ensure that no components are loose/loosening, missing or altered. Components must be securely fixed, without visible damage, leakage, or excessive wear, etc., all parts must be in their original locations and operating position; make sure that all fluid levels, battery level, etc. are appropriate; ensure that maintenance work has been completed

in accordance with the requirements specified in the Maintenance Manual.

- ***Decals inspection*** : Ensure that no decals and nameplates are missing and/or damaged; decals must be clearly visible.
- ***Functional test*** : Make sure that all functions of the machine are working properly.

⚠ WARNING

It is forbidden to alter or modify the machine without the written permission of Hunan Sinoboom Intelligent Equipment Co., Ltd.

2.3 OPERATION SAFETY

General

⚠ WARNING

- This machine shall only be used to transport tools to work locations and for performing tasks on the work platform, and should not be used for other purposes.
- Operators should use personal fall protection equipment (PFPE) while operating the machine. If the use of PFPE by persons on the platform is required in the workplace or user rules, the PFPE shall be inspected and used in accordance with the PFPE manufacturer's instructions and applicable government requirements.
- The operator must devote their full attention to their work during the operation of the machine. The use of mobile phones, wireless communication devices, etc. may distract the operator and affect the safe operation of the machine, so the operator should completely stop the machine before using such devices.
- Remove all accessories (rings, watches and others) before operating the machine, do not wear loose clothing, and do not let long hair hang loosely.
- Individuals who have consumed alcohol or taken medication, who are overly fatigued or mentally distressed, who suffer from health conditions such as heart disease, high blood pressure, epilepsy, etc., individuals with a fear of heights or who feel unwell are prohibited from operating the machine.
- It is prohibited to use the power supply of the machine to power external electrical devices.
- Do not operate a damaged or malfunctioning machine. In case of any failure, stop the machine immediately, label the machine appropriately, and contact the manufacturer or relevant department.
- Never disassemble, modify or retrofit the machine or its parts.

⚠ WARNING

- Never disable any safety devices of the machine.
- Never place objects on the platform guardrails.
- Never push the control switch or joystick forcefully through the neutral position directly into the opposite direction. Before pushing the switch to the next function position, move it back to the neutral position and stop, and then move it with slow and uniform force to perform the next function.
- Except in case of emergency, it is forbidden to perform operations from the ground if any person is still on the platform.
- When there are two or more people on the platform, all operation of the machine must be conducted by the operator.
- Always operate the machine in well-ventilated conditions to avoid carbon monoxide or nitrogen oxide poisoning.
- Before leaving the machine, the platform should be completely lowered and all power should be shut off.

Electrocution Hazard

⚠ WARNING

- **This machine is not insulated and is not equipped with electric shock or insulation protection features.**
- **Do not use this machine during thunderstorms or heavy rain. Should you encounter thunderstorms or heavy rain while operating the machine, immediately lower the platform completely to a safe and stable position, and disconnect all power sources so as to avoid personal injury or machine damage.**

- **Comply with the national or regional provisions covering minimum safe distance from live conductors. In absence of such provisions, comply with the specifications in the table below to keep a minimum safe distance from power lines, electrical equipment or any live (bare or insulated) components. The minimum safe distance must take into account factors such as machine movement and the swinging or sagging of power lines.**
- **If an insulating partition rated for the voltage of the power lines is installed, the minimum safe distance can be reduced. Such partitions may not be part of the machine or fixed on the machine. The reduction in the minimum safe distance due to insulating partitions must comply with the relevant national or local regulations.**
- **Do not use the machine as a ground wire during welding and polishing operations.**

Table 2-1 Minimum Safe Distance

Voltage (Phase to Phase, kV)	Minimum safe distance m (ft)
0–50	3 (9.8)
51–220	4 (13.1)
221–500	5 (16.4)

Table 2-1 Minimum Safe Distance (continued)

Voltage (Phase to Phase, kV)	Minimum safe distance m (ft)
501–750	10 (32.8)
751–1000	13 (42.7)

⚠ DANGER

Do not operate the machine or transport personnel with the machine within access-restricted areas with live electrical equipment.

Tripping and Fall Hazards

⚠ WARNING

- Before operating the machine, make sure that the platform guardrails are properly installed and that the platform gates are closed and properly secured.
- Operators on the platform must wear the safety belt properly and secure the safety belt to the specified anchorage point with the hook. Each anchorage point should only be used by one person.
- Only enter and exit the platform through the platform gate, never through the scissor, and extra care should be taken. Before entering and exiting the platform, make sure the platform is fully lowered. When entering and exiting the platform, face the platform and maintain three points of contact with the machine, with both hands and one foot or both feet and one hand.
- Both feet must be securely placed on the platform floor at all times. It is forbidden to sit, stand or climb on the platform guardrails.
- Never use ladders, boxes, steps, boards, or similar items on the platform to extend your reach.
- Do not allow oil, sludge or other slippery substances to remain on work shoes and platform floor.
- Keep the platform floor unobstructed.

Tipping Hazard

⚠ WARNING

- Before driving the machine onto any ground, bridge, truck or other surface, check if the loading capacity of the surface is sufficient to support the machine (machine weight + platform load). Do not drive the machine on any surfaces or edges that are not capable of fully supporting the machine.
- Operators must familiarize themselves with the ground conditions of the work area before commencing work.
- Do not operate the machine on moving surfaces or vehicles.
- The total weight of personnel, devices and materials on the platform may not exceed the platform's rated load capacity, and all loads must be kept within the designated range of the platform.
- The machine must not be driven on slopes, steps or arched surfaces that exceed the maximum gradeability of the machine.

⚠ WARNING

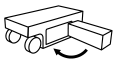
- Do not use the tilt alarm as a level indicator. The tilt alarm on the platform will only sound when the machine is severely tilted.

- When the platform is raised, if the tilt alarm sounds, lower the platform carefully, and do not modify the level switch or limit switch.
- Do not drive the machine on uneven or soft surfaces or slopes that exceed the maximum gradeability of the machine or under other hazardous conditions with the platform raised.

- The platform can only be raised or extended when the machine is on firm, flat ground.

- When the machine is traveling on uneven ground, or on other rough ground with gravel, or near cave openings, steep slopes, etc., be careful and reduce the speed.
- Do not push or pull any objects located outside the platform.

- Never push or pull other equipment or objects with the platform or scissor arm.



- Do not place or attach any suspended load on or to any part of the machine.
- Do not place any load outside the perimeter of the platform.
- Using the machine as a hoist or crane is strictly prohibited.
- Never attach the machine or any part of it to any adjacent object.
- Do not operate the machine while the chassis door is opened.
- When one or more tires are off the ground, first evacuate all personnel and then stabilize the machine with cranes, hoists, forklifts, or other suitable equipment.

⚠ WARNING

- Without written authorization of the manufacturer, it is forbidden to modify, remove or install any parts (including counterweights), that may affect the safety and stability of the machine.
- Do not replace critical parts that affect the stability of the machine with parts of different weight or specifications. For example, batteries not only provide power, but also serve as a counterweight, and are crucial for maintaining the stability of the machine.

⚠ WARNING

- If the machine can be used outdoors, do not operate the machine when the wind speed exceeds 12.5 m/s (28 mph) (including gust). Please refer to the Beaufort wind force scale in the table below. Factors that affect wind speed include: the height of the platform, surrounding terrain, and local weather conditions, such as wind speed at height, which may be much higher than at ground level.
- Wind speeds may change at any time. Always consider the impending weather conditions, the time needed to lower the platform, and methods to monitor the current and potential wind conditions.
- When operating the machine outdoors, do not carry items with a large surface area on the platform, do not cover the surface of the platform or load, and never use additional items to increase the surface area of the platform or load. Adding such additional items will increase the exposure of the machine to the wind. Increasing the windward area will lead to reduced machine stability.

Table 2-2

BEAUFORT SCALE	WIND SPEED		DESCRIP-TION	SURFACE CONDITIONS
	METERS/ SECOND	MILES/ HOUR		
0	0–0.2	0–0.5	Calm	Calm. Smoke rises vertically.
1	0.3–1.5	1–3	Light air	Direction of wind shown by smoke drift.
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 small twigs in constant motion.
4	5.5–7.9	13–18	Moderate breeze	Raises dust and loose paper. Small branches move.
5	8.0–10.7	19–24	Fresh breeze	Small trees sway.
6	10.8–13.8	25–31	Strong breeze	Large branches in motion. Whistling heard in telegraph wires. Umbrella used with difficulty.
7	13.9–17.1	32–38	Near gale	Whole trees in motion. Inconvenience felt when walking against the wind.
8	17.2–20.7	39–46	Gale	Twigs break from trees. Cars veer on the road.
9	20.8–24.4	47–54	Strong gale	Slight structural damage.

⚠ DANGER

- **The indoor models must not be used in outdoor applications.**
- **For outdoor-use models: if wind speed exceeds 12.5 m/s (28 mph) after raising the platform, retract the platform immediately, then cut off all power sources. Do not continue operating the machine.**

Collision and Crushing Hazards

⚠ WARNING

- All operators and other personnel in the work area must wear approved safety helmets.
- Keep all parts of the body within the platform guardrails during operation.

- Care should be taken at all times to avoid contact with stationary (built-up structures etc.) objects or moving objects (vehicles, cranes etc.) to prevent obstacles from hitting or interfering with control components or personnel on the platform.

- During operation, make sure to check the clearance and obstacles above, around and below the platform.

- Be aware of the field of vision and potential blind spots when moving or operating the machine. Observers should be put in place in case the field of vision is obstructed.

- Pay attention to the position of the extending platform while moving the machine.

- Make sure there are no persons and/or obstacles below the platform before lowering the platform.
- Do not place hands, arms, or other body parts near areas where they may be crushed.
- Do not work under the platform or near the scissor arm if the safety arm has not been properly set up.
- Ensure that operators of other equipment in the vicinity working at height and on the ground are aware that this MEWP is in operation.
- Limit travel speed based on ground conditions, congestion, ground slope, position of personnel, and other factors.
- Understand braking distances at all travel speeds. When traveling at high speed reduce the travel speed before stopping.
- Do not use the high speed setting when traveling in areas with limited or enclosed spaces or when reversing.
- Before releasing the brake, the machine must be placed on a horizontal surface or secured.

⚠ WARNING

2.4 TOWING, HAULING AND LIFTING SAFETY

⚠ WARNING

- **Except in case of emergency situations, machine malfunction, power loss or loading/unloading, it is strictly prohibited to tow or drag the machine.**
- **When towing or dragging the machine, comply with local policies and road traffic regulations.**
- **Before towing, dragging or lifting operations, make sure that the machine is in stowed condition, the machine has no loose or unfixed parts, and no tools are on the platform.**
- **Only the lifting points/rigging equipment lashing points on the chassis may be used to tow, haul or lift the machine. Ensure that the machine lifting points/rigging equipment lashing points and their rigging equipment are intact and that the belt or rope to be used has sufficient load strength.**
- **When towing, hauling or lifting the machine, no persons are allowed on the platform.**
- **Before loading/unloading the machine, ensure that the transport vehicle is parked on level ground, that the loading surface of the transport vehicle has sufficient capacity/strength to support the machine, and that the slope of the ramp used for driving the machine onto the vehicle does not exceed the maximum gradeability of the machine.**
- **When loading/unloading machinery, it is necessary to secure the wheels of the transport vehicle with chocks to prevent accidental movement of the vehicle.**
- **After the machine is loaded, use chocks to secure the wheels to prevent the machine from moving accidentally.**
- **The machine can only be lifted from the specific position with lifting equipment with sufficient lifting capacity. Care should be taken to prevent the machine from colliding with surrounding objects.**

⚠ WARNING

For towing and dragging procedures, refer to the ***Emergency Towing*** section of this manual. For transport and lifting procedures, please refer to the ***Transport and Lifting*** section of this manual.

2.5 MAINTENANCE SAFETY

Unsafe Maintenance Hazards

⚠ WARNING

- **Before performing any adjustment or service operations, power off all control units and ensure that all moving parts are safely secured and cannot move unintentionally.**
- **Before performing any adjustment or service operations, ensure that the scissor arms are stowed, and do not carry out maintenance with the scissor arms raised. If maintenance must be carried out with the scissor arms raised, take appropriate protective measures to avoid dangerous conditions.**
- **When lifting or moving heavy components of the machine, use equipment with sufficient capacity for assistance, and it should be operated by professionals with the qualifications. The lifting or moving operation shall be done gently, and pay attention to objects on the ground to prevent tripping or falling. Lift the components smoothly and at a constant speed to avoid vibration or shock, and do not allow the components to overturning or remain suspended for a long time. After moving, do not place heavy components at an unstable position.**
- **Before vertical lifting, ensure that all components of the assembly are securely fastened with screws. It is strictly forbidden to unscrew the fasteners of the components in the assembly.**
- **When machine parts are lifted by other equipment, ensure that there are no persons under and/or around the equipment.**
- **When striking brass rods with a mallet, make sure to wear eye protection.**
- **If you need to replace parts, use only original parts specified by Sinoboom. Parts replaced during maintenance should be the same or equivalent to the original machine's components.**

⚠ WARNING

- Do not wash the machine with water. The machine contains electronic components such as solenoid valves and sensors, which may fail or operate erratically after water ingress. If it is necessary to wash with water, turn off the main power switch before proceeding. Only turn the power back on after ensuring the machine is completely dry.
- Make sure the machine is turned off before using flushing equipment (such as a high-pressure water gun) to clean the machine. Do not direct water or steam ejected from the flushing equipment at electrical components, as this may cause short-circuits or electrical shocks.
- After maintenance is completed, thoroughly clean up any spilled hydraulic oil, and avoid allowing it to be spilled on the ground.
- After maintenance is completed, immediately wash off any hydraulic oil that may have come into contact with your skin.
- Waste hydraulic fluids, fuels, coolants and refrigerants must be recycled or disposed as per local regulations.

High Temperature and High Pressure Hazards

⚠ WARNING

- While the machine is in operation or after running for a period of time, components may generate high surface temperatures, which can cause burns upon contact. Do not touch any hot parts!
- It is forbidden to repair or tighten hydraulic hoses or seals while the machine is operating or when the oil system is under pressure.
- Before loosening or disassembling hydraulic parts (especially the counterbalance valve on the cylinder), the hydraulic pressure of all hydraulic lines should be released and the hydraulic oil should completely cool down.
- After the hydraulic pressure has been released, take protective measures first, and then disassemble the hydraulic components slowly to prevent the hydraulic oil from splashing and causing injuries.
- Never check for hydraulic leakages by hand. Use a piece of cardboard or stiff paper to locate leaks, and wear gloves to protect your hands from spraying hydraulic fluid.
- Do not operate the machine in case of hydraulic or air leaks. Oil or air leakage from the hydraulic system may penetrate and burn the skin.
- Never plug hydraulic leaks by hand. If there is a leak, the pressure of the hydraulic system should be released first, maintenance/repair should be carried out after the hydraulic oil has cooled down.
- If the machine is equipped with a radiator, do not attempt to unscrew the radiator cover or touch the radiator while the coolant is still at high temperature.
- If injury occurs due to high temperature and/or high pressure, seek immediate medical attention. If treatment is not carried out

⚠ WARNING

immediately, serious complications may result.

Welding and Grinding Operation Hazards

⚠ WARNING

- When performing welding operations on the machine body or using this machine to transport personnel for external structural work (such as welding, grinding, or polishing), all applicable local safety procedures must be followed.
- If welding on the machine body, disconnect both the positive and negative battery terminals first, and ensure proper grounding of the structure to be welded.
- Before performing welding, grinding and polishing operations on external structures, turn off the machine's power, and ensure that all wires or cables are connected correctly.
- When conducting welding, grinding, or similar operations on external structures, never use the machine as a ground connection.
- Always make sure that all power tools are placed completely within the perimeter of the platform. Do not hang the cords of power tools on the guardrail of the platform or in any work area outside the platform, and do not hang the power tools directly by their cords.

Fire and Explosion Hazards

⚠ WARNING

- Do not operate the machine, charge the battery or refuel the machine in places where potentially flammable or explosive gases may be present.
- Refueling and charging should be carried out in a well-ventilated place without flames, sparks, and other hazards that may cause fire or explosion.
- For engine-powered machines, do not refuel the machine while the engine is running.
- Never spray ether or other starting agents into glow-plug-equipped engines (engine-powered machines).
- The electrolyte in the battery can produce explosive gases. Avoid any actions that may produce flames or sparks near the battery. Never touch the battery terminals or cable clamps with tools that can generate sparks.
- Never reverse the positive and negative terminals of the batteries.
- Only approved non-flammable cleaning solutions should be used on the machine.
- In case the machine catches fire, do not use the "water drenching method"; use a "dry powder extinguisher" to extinguish the fire.

Battery Hazard

⚠ WARNING

- Be sure to read and adhere to the battery manufacturer's recommendations on proper battery use and maintenance procedures.
- Individuals without adequate professional qualification should not repair and maintain the battery system, otherwise this may cause personal injury or damage to the battery system.

- Individuals without adequate professional qualification should not modify parameters, signal lights, etc. during the operation of the battery system, otherwise this may cause personal injury or damage to the battery system.

- When the BMS issues an alarm, do not use the machine. Ensure that the fault has been resolved before the machine can be used.

- Always wear goggles, protective gloves and protective clothing, and remove all rings, watches and other accessories before servicing the battery. Contact with live circuits may result in death or serious injury.

- Before replacing the battery, be sure to select an appropriate number of personnel and suitable lifting methods.
- It is forbidden to modify or dismantle the battery system without approval to avoid serious accidents.
- When maintaining electrical components, the battery should be disconnected.
- Do not short-circuit the battery terminals by connecting them with tools or other metal objects.
- The battery charger can only be connected to a grounded three-wire AC power outlet. Make sure the charger is working properly before charging. Do not connect the battery directly to a power outlet.
- If the battery becomes hot, deformed, leaks, emits an unusual smell, or produces smoke during use, stop using the battery immediately and report to the relevant maintenance personnel promptly.
- Batteries contain sulfuric acid and can produce explosive mixtures of hydrogen and oxygen. Keep any materials (including cigarette/smoking materials) that can cause sparks or flames away from batteries to prevent explosion.
- It is strictly prohibited to expose the battery to extremely high temperatures or to throw it into a fire.
- Never touch the battery terminals or cable clamps with tools that can generate sparks.
- Never charge the battery in direct sunlight. The battery should be charged in a well-ventilated place.

⚠ CAUTION

- Avoid spilling battery acid or allowing it to come into contact with unprotected skin. If battery acid spills, use water mixed with bicarbonate (baking soda) to neutralize the acid. In case of contact with battery acid, rinse the acid off immediately with plenty of water and seek medical attention promptly.
- Always keep the battery upright. If the battery is placed on its side or at an angle, liquid may spill from the battery.
- Discarded batteries can be hazardous, and must not be treated like regular waste. If you need to discard them, please contact a battery recycling company.

NOTICE

- **Please use the charger provided by the manufacturer to charge the battery.**
- **The charging process must be completed in full. Frequent intermittent charging can damage the battery.**
- **The battery is only suitable for use with the equipment it was provided with at the time of manufacture. Do not use the battery for other purposes.**
- **Do not reverse the positive and negative terminals of the battery for use.**
- **Do not short-circuit the positive and negative terminals of the battery system.**
- **Do not place objects or tools on the battery to prevent short circuiting it.**
- **Do not strike, throw, step on, or hit the battery with sharp objects.**
- **Do not immerse the battery in water, acidic, alkaline or salty solutions, and protect the battery from rain.**
- **The battery should be fully charged immediately after each use of the machine. During charging, keep the power-off switch closed.**

NOTICE

Battery over-discharge (continued use of battery with levels of less than 10 %) or battery under-voltage caused by long-term non-charging (battery with levels of less than 10 % not charged for more than three days), resulting in battery capacity attenuation and failure, are not covered by the warranty.

3 RESPONSIBILITIES OF RELEVANT PARTIES

3.1 OWNER'S (OR LESSOR'S) RESPONSIBILITIES

- The owner refers to the person or entity that possesses the equipment, which could be an individual, company, or organization.
- The lessor is the individual or company that rents out the equipment for others to use, typically being the owner of the equipment or a leasing company.
- The owner (or lessor) is obliged to help the user understand all the instructions in the manual.
- The owner (or lessor) should provide the latest manuals or replace missing or damaged decals. To obtain the most current machine manuals please contact Sinoboom or its authorized agents.
- The owner (or lessor) should comply with local regulatory requirements related to the use of the machine.

3.2 EMPLOYER'S RESPONSIBILITIES

- The employer refers to the company or individual that hires operators to operate the equipment.
- The employer must ensure that the operator is properly trained and qualified to operate the machine.
- The employer should ensure that the user is healthy and has good judgment, sense of cooperation and psychological qualities.
- The employer has the responsibility to ensure that signalmen have good visual and auditory judgment, master standard command signals and send clear and accurate signals, and have sufficient experience to identify hazards and inform operators to avoid hazards in time.
- The employer should clarify the corresponding safety responsibilities to each operator and require them to report unsafe factors to the supervisor timely.

3.3 TRAINER'S RESPONSIBILITIES

- The trainer refers to an individual or organization responsible for instructing operators on how to use the equipment safely and effectively.
- The trainer must be accredited by Sinoboom, have comprehensive knowledge training on the machine, and must have the required skills related to machine repair and maintenance.
- The trainer must conduct training in an open area free of hazards until the trainees acquire the ability to safely control and operate the machine.

3.4 USER'S RESPONSIBILITIES

- The user refers to the personnel who directly operates the equipment.
- The user must be properly trained on MEWP, and authorized.
- The user must carefully read and fully understand this manual and the decals on the machine.
- The user must report to the owner (lessor) all anomalies that may cause the machine to work abnormally or have potential dangers, and if possible, correct the abnormal situation promptly while ensuring safety.
- The user must be fully aware of the content and procedures of the respective operation.
- The user must be familiar with and comply with signal instructions and operation requirements in emergency situations.
- The user must be vigilant in observing for any hazardous conditions and promptly report any dangers to other operators and signal personnel. This includes situations such as high-voltage lines, unrelated personnel, and unfavorable ground conditions.
- The user must stop using the equipment if it is not functioning properly or if a hazardous condition arises.

3.5 DISCLAIMER FOR ENTERING OR EXITING THE PLATFORM AT HEIGHT

MEWPs are designed to lift personnel and tools to a work position and enable safe operations within the work platform. It is strictly prohibited for anyone to enter or exit the platform unless it is in the stowed position. In the event of special circumstances requiring the use of this machine to access high-altitude areas, a strict assessment must be conducted, and use may only be considered under the following conditions:

- If after a comprehensive assessment, it can be clearly demonstrated that it is the safest and most effective way to access or exit a specific location.
- If it is part of an emergency rescue operation (e.g., evacuating personnel trapped in a hazardous area, or when the platform is stranded at height due to equipment malfunction).

If, after a rigorous risk assessment, permission is granted by the machine owner (or lessor)/employer, this machine may be used to gain access to and from an area at height.

The responsible personnel must fully consider all aspects of the risks and plan the entire access operation in detail. Specific operating procedures should be formulated by the responsible person based on the actual situation and on-site environment. This manual does not provide detailed instructions but emphasizes the following key requirements:

- All operational procedures shall adhere to the restrictions, directives, and warnings outlined in this manual.
- The machine’s designated load limits and maximum occupancy must not be exceeded under any circumstances during operation.
- Ensure continuous and effective fall protection measures are implemented throughout the operation;
- In addition to the personnel being lifted, at least two operators should be assigned: one must always remain at the platform control position, and the other must always remain at the ground control position, to ensure timely operation of the machine in case of emergencies. The operator must undergo professional training and acquire the qualification for proficient operation.
- Take effective measures to minimize the dynamic load applied on the platform and prevent accidental or unexpected movement of the platform.
- Clearly define the platform entry and exit; climbing over guardrails to access or exit the platform is prohibited.
- The entire process must be supervised by the responsible body to ensure all relevant personnel strictly adhere to the established safety operating procedures.
- Develop a detailed emergency response plan based on potential risks.

⚠ WARNING

The above instructions does not constitute an official authorization from Sinoboom for “entering or exiting the platform at height." It is intended to provide relevant reference information for this operation. The machine owner (or lessor)/ employer bears full responsibility for this.

4 TECHNICAL PARAMETERS

4.1 MACHINE SPECIFICATIONS

Table 4-1 0407E Specifications

Item	Metric	Imperial
Product Category		
Battery type	Maintenance-free lead-acid battery	
Travel drive type	DC motor	
Dimensions		
Maximum platform height, outdoor	3.8 m	12 ft 5.6 in
Maximum working height, outdoor	5.8 m	19 ft
Maximum horizontal reach	0.6 m	2 ft
Overall length (ladder unfolded)	1.58 m	5 ft 2.2 in
Overall length (ladder folded)	1.47 m	4 ft 9.9 in
Overall width	0.78 m	2 ft 6.7 in
Overall height (guardrails folded)	1.55 m	5 ft 1 in
Overall height (guardrails unfolded)	1.91 m	6 ft 3.2 in
Wheelbase	1.14 m	3 ft 8.9 in
Wheel track (front/rear)	0.69 m/0.71 m	2 ft 3.2 in/2 ft 4 in
Ground clearance (with pothole protection retracted)	0.061 m	2.4 in
Ground clearance (with pothole protection extended)	0.02 m	0.75 in
Platform dimensions (L×W×H)	1.41 m×0.76 m×1.1 m	4 ft 7.5 in×2 ft 5.9 in ×3 ft 7.3 in
Performance parameters		
Rated platform capacity	230 kg	507 lb
Rated capacity – extending platform	120 kg	265 lb
Maximum number of occupants (indoor/outdoor)	2 persons/1 person	
Travel speed (stowed)	0 – 4.0 km/h	0 – 2.49 mph
Travel speed (elevated)	0 - 0.5 km/h	0 - 0.31 mph
Platform lifting time (rated load)	20 - 23 s	
Platform lowering time (rated load)	25 - 30 s	
Gradeability (2WD)	25 %/14 °	
Maximum allowable inclination (front-rear/left-right)	3°/1.5°	

Table 4-1 0407E Specifications (continued)

Item	Metric	Imperial
Turning radius (inside/outside)	0.1 m/1.48 m	3.9 in/4 ft 10.3 in
Tire (spec/type)	φ280x76 mm/solid	φ11 in×3 in
Maximum operating noise level	72 dB	
IP rating	IP54	
Maximum total vibration on the platform	2.5 m/s²	
Maximum whole body vibration value (WBV)	0.5 m/s²	
Power		
Drive × steer	2 WD × 2 WS	
Power unit motor (voltage/power)	24V DC, 2.2 kW	
Hydraulic tank capacity	4 L	0.9 gal (UK)/1.05 gal (US)
Hydraulic system pressure	16.5 MPa	2393 psi
Battery specifications (voltage, capacity, discharge time) – lead-acid battery	24 V, 120 Ah, 20 hr	
System voltage	24 VDC	
Control voltage	24 VDC	
Charger (input voltage/output current)	100 – 240 V AC/15 A	
Drive motor (voltage/power)	24 V DC/0.4 kW	
Weight		
Gross weight (indoor/outdoor)	920 kg	2028 lb
Ground Bearing Data		
Maximum tire load	500 kg	1102 lb
Ground pressure	1000 kPa	145 Psi
Environment		
Maximum allowable lateral force (indoor/outdoor)	400 N/200 N	90 lbf/45 lbf
Maximum allowable wind speed (indoor/outdoor)	0/12.5 m/s	0/28 mph
Maximum allowable altitude	1000 m	3280.8 ft
Allowable ambient temperature range (lead-acid battery)	-10℃~40℃	14℉~104℉
Allowable ambient temperature range (lithium battery)	-20℃~40℃	-4℉~104℉
Maximum allowable ambient relative humidity	90 %	

Table 4-1 0407E Specifications (continued)

Item	Metric	Imperial
Storage environment	Store at -20℃ to 50℃ (-4℉ to 122℉) in a well-ventilated environment with 90 % relative humidity (max.) (20℃ [68℉]), protected from rain, sun, corrosive gas, flammable or explosive materials.	
Conforming standards	CE	

Table 4-2 0407EN Specifications

Item	Metric	Imperial
Product Category		
Battery type	Maintenance-free lead-acid battery	
Travel drive type	DC motor	
Dimensions		
Maximum platform height, indoor	4.3 m	14 ft 1.3 in
Maximum platform height, outdoor	3.8 m	12 ft 5.6 in
Maximum working height, indoor	6.3 m	20 ft 8 in
Maximum working height, outdoor	5.8 m	19 ft
Maximum horizontal reach	0.6 m	2 ft
Overall length (ladder unfolded)	1.58 m	5 ft 2.2 in
Overall length (ladder folded)	1.47 m	4 ft 9.9 in
Overall width	0.78 m	2 ft 6.7 in
Overall height (guardrails folded)	1.55 m	5 ft 1 in
Overall height (guardrails unfolded)	1.91 m	6 ft 3.2 in
Wheelbase	1.14 m	3 ft 8.9 in
Wheel track (front/rear)	0.69 m/0.71 m	2 ft 3.2 in/2 ft 4 in
Ground clearance (with pothole protection retracted)	0.061 m	2.4 in
Ground clearance (with pothole protection extended)	0.02 m	0.75 in
Platform dimensions (L×W×H)	1.41 m×0.76 m×1.1 m	4 ft 7.5 in×2 ft 5.9 in ×3 ft 7.3 in
Performance parameters		
Rated platform capacity	230 kg	507 lb
Rated capacity – extending platform	120 kg	265 lb
Maximum number of occupants (indoor/outdoor)	2 persons/1 person	
Travel speed (stowed)	0 – 4.0 km/h	0 – 2.49 mph
Travel speed (elevated)	0 - 0.5 km/h	0 - 0.31 mph
Platform lifting time (rated load)	20 - 23 s	
Platform lowering time (rated load)	25 - 30 s	

Table 4-2 0407EN Specifications (continued)

Item	Metric	Imperial
Gradeability (2WD)	25 %/14 °	
Maximum allowable inclination (front-rear/left-right)	3°/1.5°	
Turning radius (inside/outside)	0.1 m/1.48 m	3.9 in/4 ft 10.3 in
Tire (spec/type)	φ280x76 mm/solid	φ11 in×3 in
Maximum operating noise level	72 dB	
IP rating	IP54	
Maximum total vibration on the platform	2.5 m/s²	
Maximum whole body vibration value (WBV)	0.5 m/s²	
Power		
Drive × steer	2 WD × 2 WS	
Power unit motor (voltage/power)	24V DC, 2.2 kW	
Hydraulic tank capacity	4 L	0.9 gal (UK)/1.05 gal (US)
Hydraulic system pressure	16.5 MPa	2393 psi
Battery specifications (voltage, capacity, discharge time) – lead-acid battery	24 V, 120 Ah, 20 hr	
System voltage	24 VDC	
Control voltage	24 VDC	
Charger (input voltage/output current)	100 – 240 V AC/15 A	
Drive motor (voltage/power)	24 V DC/0.4 kW	
Weight		
Gross weight (indoor/outdoor)	920 kg	2028 lb
Ground Bearing Data		
Maximum tire load	500 kg	1102 lb
Ground pressure	1000 kPa	145 Psi
Environment		
Maximum allowable lateral force (indoor/outdoor)	400 N/200 N	90 lbf/45 lbf
Maximum allowable wind speed (indoor/outdoor)	0/12.5 m/s	0/28 mph
Maximum allowable altitude	1000 m	3280.8 ft
Allowable ambient temperature range (lead-acid battery)	-10℃~40℃	14℉~104℉

Table 4-2 0407EN Specifications (continued)

Item	Metric	Imperial
Allowable ambient temperature range (lithium battery)	-20℃~40℃	-4℉~104℉
Maximum allowable ambient relative humidity	90 %	
Storage environment	Store at -20℃ to 50℃ (-4℉ to 122℉) in a well-ventilated environment with 90 % relative humidity (max.) (20℃ [68℉]), protected from rain, sun, corrosive gas, flammable or explosive materials.	

Table 4-3 0607EN Specifications

Item	Metric	Imperial
Product Category		
Battery type	Maintenance-free lead-acid battery	
Travel drive type	DC motor	
Dimensions		
Maximum platform height, indoor	5.55 m	18 ft 2.5 in
Maximum platform height, outdoor	4.6 m	15 ft 1.1 in
Maximum working height, indoor	7.55 m	24 ft 9.2 in
Maximum working height, outdoor	6.6 m	21 ft 7.8 in
Maximum horizontal reach	0.6 m	2 ft
Overall length (ladder unfolded)	1.58 m	5 ft 2.2 in
Overall length (ladder folded)	1.47 m	4 ft 9.9 in
Overall width	0.78 m	2 ft 6.7 in
Overall height (guardrails folded)	1.63 m	5 ft 4.2 in
Overall height (guardrails unfolded)	1.99 m	6 ft 6.3 in
Wheelbase	1.14 m	3 ft 8.9 in
Wheel track (front/rear)	0.69 m/0.71 m	2 ft 3.2 in/2 ft 4 in
Ground clearance (with pothole protection retracted)	0.061 m	2.4 in
Ground clearance (with pothole protection extended)	0.02 m	0.75 in
Platform dimensions (L×W×H)	1.41 m×0.76 m×1.1 m	4 ft 7.5 in×2 ft 5.9 in ×3 ft 7.3 in
Performance		
Rated platform capacity	230 kg	507 lb
Rated capacity – extending platform	120 kg	265 lb
Maximum number of occupants (indoor/outdoor)	2 persons/1 person	
Travel speed (stowed)	0 – 4.0 km/h	0 – 2.49 mph
Travel speed (elevated)	0 - 0.5 km/h	0 - 0.31 mph

Table 4-3 0607EN Specifications (continued)

Item	Metric	Imperial
Platform lifting time (rated load)	24 - 28 sec	
Platform lowering time (rated load)	25 - 30 s	
Gradeability (2WD)	25 %/14 °	
Maximum allowable inclination (front-rear/left-right)	3°/1.5°	
Turning radius (inside/outside)	0.1 m/1.48 m	3.9 in/4 ft 10.3 in
Tire (spec/type)	φ280x76 mm/solid	φ11 in×3 in
Maximum operating noise level	72 dB	
IP rating	IP54	
Maximum total vibration on the platform	2.5 m/s²	
Maximum whole body vibration value (WBV)	0.5 m/s²	
Power		
Drive × steer	2 WD × 2 WS	
Power unit motor (voltage/power)	24V DC, 2.2 kW	
Hydraulic tank capacity	4 L	0.9 gal (UK)/1.05 gal (US)
Hydraulic system pressure	16.5 MPa	2393 psi
Battery specifications (voltage, capacity, discharge time) – lead-acid battery	24 V, 120 Ah, 20 hr	
System voltage	24 VDC	
Control voltage	24 VDC	
Charger (input voltage/output current)	100 – 240 V AC/15 A	
Drive motor (voltage/power)	24 V DC/0.4 kW	
Weight		
Gross weight (indoor/outdoor)	1100 kg	2425 lb
Ground Bearing Data		
Maximum tire load	555 kg	1224 lb
Ground pressure	1000 kPa	145 Psi
Environment		
Maximum allowable lateral force (indoor/outdoor)	400 N/200 N	90 lbf/45 lbf
Maximum allowable wind speed (indoor/outdoor)	0/12.5 m/s	0/28 mph
Maximum allowable altitude	1000 m	3280.8 ft

Table 4-3 0607EN Specifications (continued)

Item	Metric	Imperial
Allowable ambient temperature range (lead-acid battery)	-10℃~40℃	14℉~104℉
Allowable ambient temperature range (lithium battery)	-20℃~40℃	-4℉~104℉
Maximum allowable ambient relative humidity	90 %	
Storage environment	Store at -20℃ to 50℃ (-4℉ to 122℉) in a well-ventilated environment with 90 % relative humidity (max.) (20℃ [68℉]), protected from rain, sun, corrosive gas, flammable or explosive materials.	

Note:

1. The platform height plus the operator height (assumed to be 2 m/6 ft 7 in) equals the working height.
2. The ground bearing information is approximate, without considering different options. It is applicable only when taking an adequate safety factor into account.
3. Different regions should use hydraulic oil, engine oil, coolant, fuel, lubricating oil, etc., that are suitable for the environmental temperature requirements.
4. In cold weather, auxiliary devices are needed to start the machine.
5. Rated platform load capacity refers to the maximum allowable load on the platform, including the weight of persons, materials, tools, accessories and other objects. The mass of one person shall be taken as 80 kg (176 lb).
6. It is recommended not to use a lead-acid battery with an ambient temperature below 0 °C (32 °F); otherwise the battery capacity will decay rapidly, and battery life will be affected.
7. The hydraulic tank capacity is the maximum volume of the tank.

4.2 FUNCTION SPEED

Table 4-4

Item	Parameter
Raise the platform (0407E&0407EN)	20 – 23 s
Raise the platform (0607EN)	24 – 28 s
Lower the platform (0407E&0407EN)	25 – 30 s
Lower the platform (0607EN)	25 – 30 s
Travel – high-speed mode (3.6 – 4 km/h/2.2 – 2.5 mph)	27 – 30 s
Travel – turtle mode (1.8 – 2 km/h/ 1.1 – 1.2 mph)	54 – 60 s
Travel – low-speed mode (0.45 – 0.55 km/h/0.28 – 0.34 mph)	65 – 80 s

Table 4-4 (continued)

Item	Parameter
Braking distance	S ≤ 0.55 m (1.31 ft)

Note:

1. The function speed depends on the start and end point of the movement rather than the controls/ switches.
2. The travel speed test results will vary with tires of different specifications.
3. All speed tests should be conducted from the platform controller. Test results will differ if tested from the ground controller.
4. All tests should be conducted with the hydraulic oil temperature higher than 20 – 30 ℃ (68 – 86 ℉). If the hydraulic oil temperature is too low, the test results will be affected.

Test requirements:

Raise the platform: Place a load that matches the machine's rated capacity on the platform, raise the platform (with the scissor arms from fully retracted position to fully raised position). Perform this maneuver for two times.

Lower the platform: Place a load that matches the machine's rated capacity on the platform, lower the platform (with the scissor arms from fully raised position to fully retracted position). Perform this maneuver for two times.

Travel – high-speed mode : The test shall be done on a level surface. With the machine in stowed position, switch to high-speed mode, and push the travel joystick to the maximum travel distance to drive the machine forward and reverse for 30 m (98.4 ft) respectively for two times.

Travel – turtle mode : The test shall be done on a level surface. With the machine in stowed position, switch to turtle mode, and push the travel joystick to the maximum travel distance to drive the machine forward and reverse for 30 m (98.4 ft) respectively for two times.

Travel – low-speed mode : The test shall be done on a level surface. With the machine in operating position, push the travel joystick to the maximum travel distance to drive the machine forward and reverse for 10 m (32.8 ft) respectively for two times.

Braking distance : As described in the "travel – high-speed mode" test requirements, once the machine reaches the maximum travel speed, immediately release the joystick (starting timing) until the machine stops. Perform this maneuver for two times.

Note: For models with special configuration, the machine cannot travel while elevated to operating position.

5 PRE-OPERATION INSPECTION

A pre-operation inspection must be performed before each operation, before resuming operations, and before changing operators, as well as after each repair. Please carefully check each item according to the content of this section.

5.1 BASIC MACHINE COMPONENTS

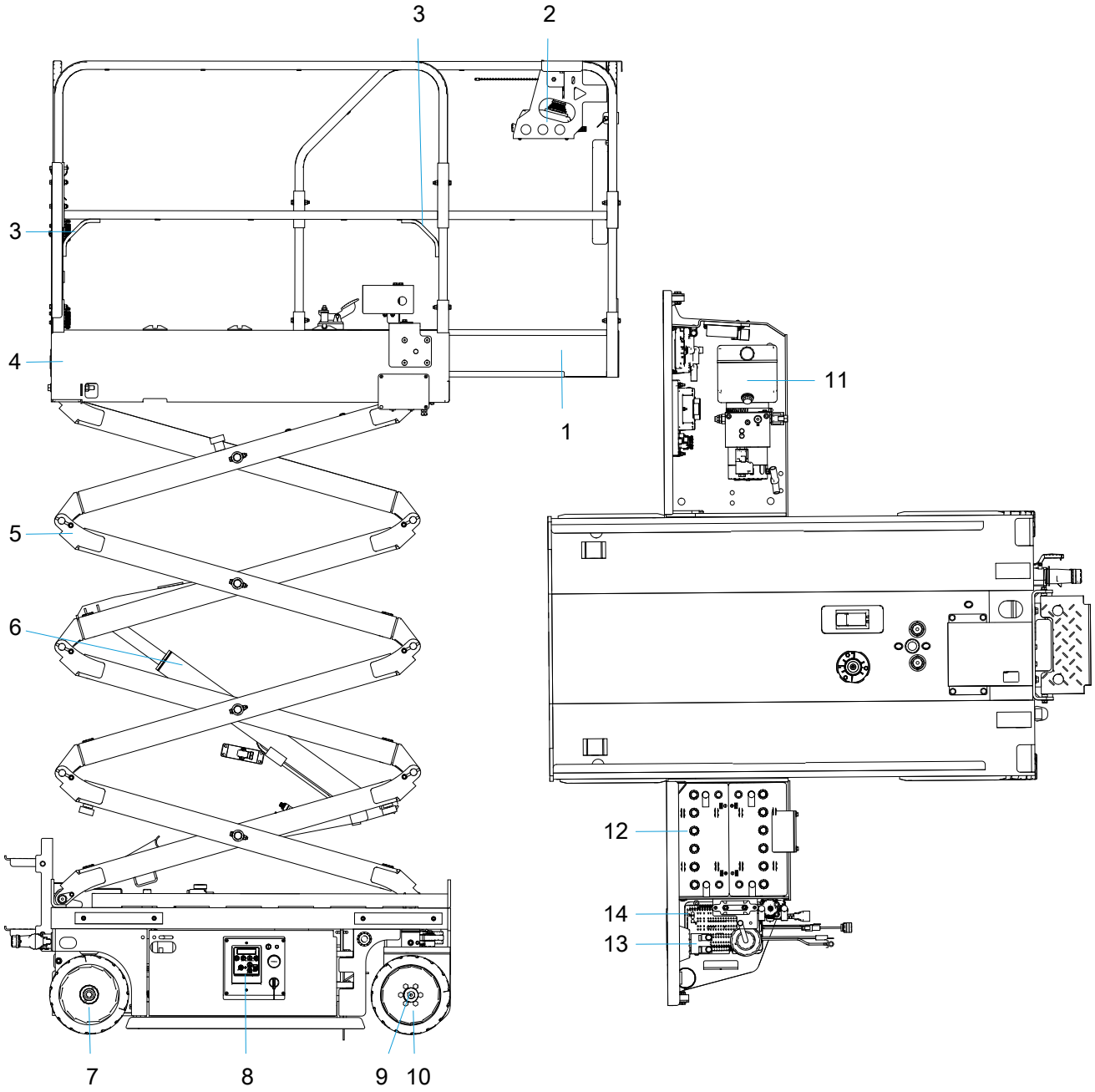


Fig. 1

Table 5-1

1. Platform extension	**2.** Platform controller	**3.** Harness anchorage point
4. Main platform	**5.** Scissor assembly	**6.** Lift cylinder
7. Rear wheel (non-steering wheel)	**8.** Ground controller	**9.** Travel motor
10. Front wheel (steering wheel)	**11.** Power unit	**12.** Battery
13. Power-off switch	**14.** Charger	

5.2 MACHINE POSITIONS

The machine positions/states covered in this manual are stowed position, transport position, operating position, and non-operating position. Each position is described in detail below:

- **Stowed position:** the scissor arms are fully retracted.
- **Transport position:** the scissor arms and the platform extension are fully retracted.
- **Operating position (elevated):** the scissor arms are elevated until disengaged from the down limit switch.
- **Non-operating position:** the scissor arms are not disengaged from the down limit switch.

Note: When the scissor arms are disengaged from the down limit switch, the platform height range (from the ground to the platform floor) shall be: 1.5 – 1.8 m (4 ft 11 in – 5 ft 10 in)

5.3 PRE-START INSPECTION

⚠ WARNING

If any damage, malfunction, or unauthorized modifications differing from the factory state are found with the machine, it should be immediately tagged and shut down. Report the fault to the relevant maintenance personnel and do not operate the machine until safe operation can be guaranteed.

The pre-start test must include the following:

1. Cleanliness – check all surfaces of the machine for leaks (hydraulic oil, battery electrolyte, etc.) or foreign objects.
2. Structure – check whether there are any abnormalities in the equipment structure, such as dents, damage, cracks in welds or structural components, severe rust, severe corrosion, etc.
3. Operation Manual and Maintenance Manual – ensure that the Operation Manual and Maintenance Manual are intact, easy to read, and stored in the manuals storage box on the platform.
4. Decals and nameplate – ensure that labels and the nameplate are in place, intact, accurately located and visible.

⚠ WARNING

Do not operate the machine if any label or nameplate is missing or worn.

5. Maintenance – ensure that maintenance has been completed on the machine in accordance with the maintenance inspection requirements specified in the Maintenance Manual.
6. Battery – charge the battery as required. The electrolyte level, if adjustable, must be kept at an appropriate height.
7. Hydraulic oil – check the hydraulic oil level. Add a suitable amount of hydraulic oil as needed.
8. Options/accessories – if the machine is equipped with any options/accessories, consult this manual and the supplemental manuals for options/accessories for inspection, operation and maintenance instructions.
9. Machine components – in addition to checking other stated items, check the following components to ensure that they are correctly installed and firmly attached without loose, missing or altered parts and visible damage, leakage or excessive wear, etc., and that all components are in their original positions and normal operating position.

    1) Platform assembly and gate – the platform extension shall extend and retract normally and be secured firmly; all wire rope safety pins (if equipped) for supporting the platform shall be installed properly. Ensure that the rope anchorage points are safe and reliable with only one

person per anchorage point; make sure the latches and hinges are in normal working states, that the platform gate opens and closes properly, is not bent or damaged, and that the surrounding area is free of obstacles. The gate should remain closed at all times, except for entering/exiting the platform and loading/unloading materials;

2) Ground controller and platform controller – ensure that all control switches are turned off, that joysticks are in the neutral position and can return to the neutral position after activated and released, and that all control markings are visible.
3) Scissor assembly;
4) Tire and wheel assembly – ensure that the tire and wheel assembly is firmly secured and wheel nuts are not loose or missing; check for worn tread, cuts, breakage or other abnormalities;
5) Drive machine or motor.
6) Brake device and brake release function.
7) Platform emergency lowering function.
8) Tire steering linkage and wheel carrier.
9) Pothole protective device – extend and retract normally.
10) Power unit, hydraulic cylinder, valve block, oil tank, hoses, pipe joints and other hydraulic parts;
11) Electrical parts such as limit switches and wire harnesses.

NOTICE

Make sure to check the platform floor area, as inspection of this area may uncover conditions that could cause personal injury or machine damage.

5.4 FUNCTIONAL TEST

Before performing a functional test:

- Choose a firm, flat and level test area.
- Make sure the test area is free from obstructions.
- Be sure that the batteries are well connected.

⚠ WARNING

Do not operate the machine if any movement switch/handle fails to return to the OFF or neutral position or the corresponding movement does not stop after release.

⚠ WARNING

If any movement switch/handle returns to the OFF or neutral position but the corresponding movement does not stop, push in the emergency stop switch to stop the machine.

Follow these steps to perform a functional test:

1. With no load on the platform, switch the ground/platform control selector switch on the ground controller to the ground control position, set the emergency stop switch on both the ground controller and platform controller to ON position, and perform the following checks from the ground controller:

1) Make sure that the screen is turned on and shows no error message during the entire functional test.
2) Make sure that when any one of the emergency stop switches is pressed, the controller is powered off, the machine cannot be started and no functions operate.
3) Activate any movement switch without activating the enable switch – the corresponding movement cannot operate.
4) Activate the enable switch and any movement switch at the same time – the corresponding movement shall operate normally. Release the switch after one movement is performed – the corresponding movement should be stopped reliably and safely.

2. Switch the ground/platform control selector switch on the ground controller to the platform control position, set the emergency stop switch both on the ground controller and platform controller to ON position, and perform the following checks from the platform controller:

1) Make sure that when any one of the emergency stop switches is pressed, the controller is powered off, the machine cannot be started and no functions operate.
2) Make sure that the horn sounds properly when the horn button is pressed.
3) Activate any movement switch/handle without activating the enable switch – the corresponding movement cannot be activated.
4) Activate the enable switch and any movement switch/handle at the same time – the corresponding function should operate normally. Move the switch/handle to the neutral position after a movement is performed – the corresponding movement should stop reliably and safely.

Note: When the travel joystick is released, the brake must be able to hold the machine on any slope within the maximum gradeability reliably without sliding.

5) In platform lift and lower mode, the joystick controls the platform lifting and lowering functions, while the drive and steer functions shall be disabled.
6) In drive and steer mode, the joystick controls drive and steer functions, while the platform lifting and lowering functions shall be disabled.
7) In the non-operating position, switch the travel speed to the high-speed mode and activate the travel joystick – the machine will then travel at high speed.
8) In the non-operating position, switch the travel speed to the turtle mode and activate the travel joystick – the machine will then travel in turtle mode.
9) In the operating position, activate the travel joystick – the machine will then travel at low speed.

5.5 INDOOR/OUTDOOR MODE VERIFICATION

The indoor or outdoor mode can be set on outdoor models. The maximum working height in different modes can be found in ***Technical Parameters*** section of this manual.

The selected indoor or outdoor mode will not change when the machine is turned off. When the machine is turned on, the previously selected mode is still selected. You have to check and confirm after each startup that the machine is in the correct mode, and change the operating mode corresponding with the working environment.

⚠ WARNING

The indoor mode must not be used in outdoor applications.

For indoor/outdoor mode setting method, please refer to ***Operation Instructions*** section.

6 CONTROLLERS AND INDICATORS

This chapter provides a brief introduction of switches, handles and screens at the ground controller and platform controller. Refer to the ***Operation Instructions*** section for a detailed description.

6.1 GROUND CONTROLLER

NOTICE

The manufacturer cannot directly control the application and operation of the machine. Users and operators are responsible for complying with the applicable safety specifications.

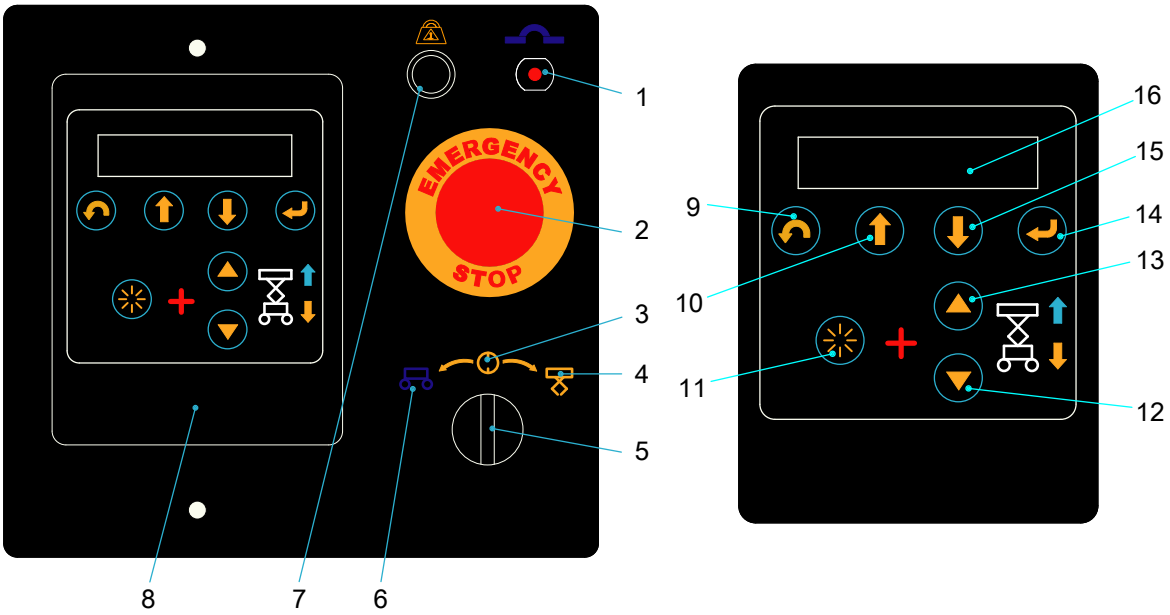


Fig. 1

Table 6-1

No.	Name	Description
1	Self-resetting fuse	Provides overcurrent protection
2	Emergency stop switch	The emergency stop switches come in two configurations: • pull-type: pull out to the "ON" position, push in to the "OFF" position. • twist-type: twist out to the "ON" position, push in to the "OFF" position. The machine can start normally only when both the emergency stop switches on the ground controller and the platform controller are in the "ON" position. If either emergency stop switch on the ground or platform controller is in the "OFF" position, the machine's control

Table 6-1 (continued)

No.	Name	Description
		console will lose power, preventing the machine from starting and disabling all functions.
3	Neutral/OFF position	/
4	Platform control position	/
5	Key switch (ground/platform control selector switch)	Set the switch to neutral position: the machine will be powered off. Turn the switch to “platform control position”: all functions will be operative only at the platform controller while the ground controller will not work. Turn the switch to “ground control position”, and all functions will be operative only at the ground controller while the platform controller will not work.
6	Ground control position	/
7	Overload alarm light (if equipped)	This indicator flashes to indicate an overload status.
8	Main controller	/
9	Return key	Go to the previous interface of the ground display screen
10	Up arrow key	Scroll up the ground display screen
11	Enable key	Keep holding the enable key; all functions will be enabled to operate.
12	Platform down key	Control platform down function
13	Platform up key	Control platform up function
14	Enter key	Enter the next interface of the ground display screen
15	Down arrow key	Scroll down the ground display screen
16	Ground display screen	ECU menu selection/setting interface

Note: Machines with different configurations may be equipped with different main controllers, whose icons may have some subtle differences from those in the above diagram.

6.2 PLATFORM CONTROLLER (SINOBOOM CONTROL SYSTEM)

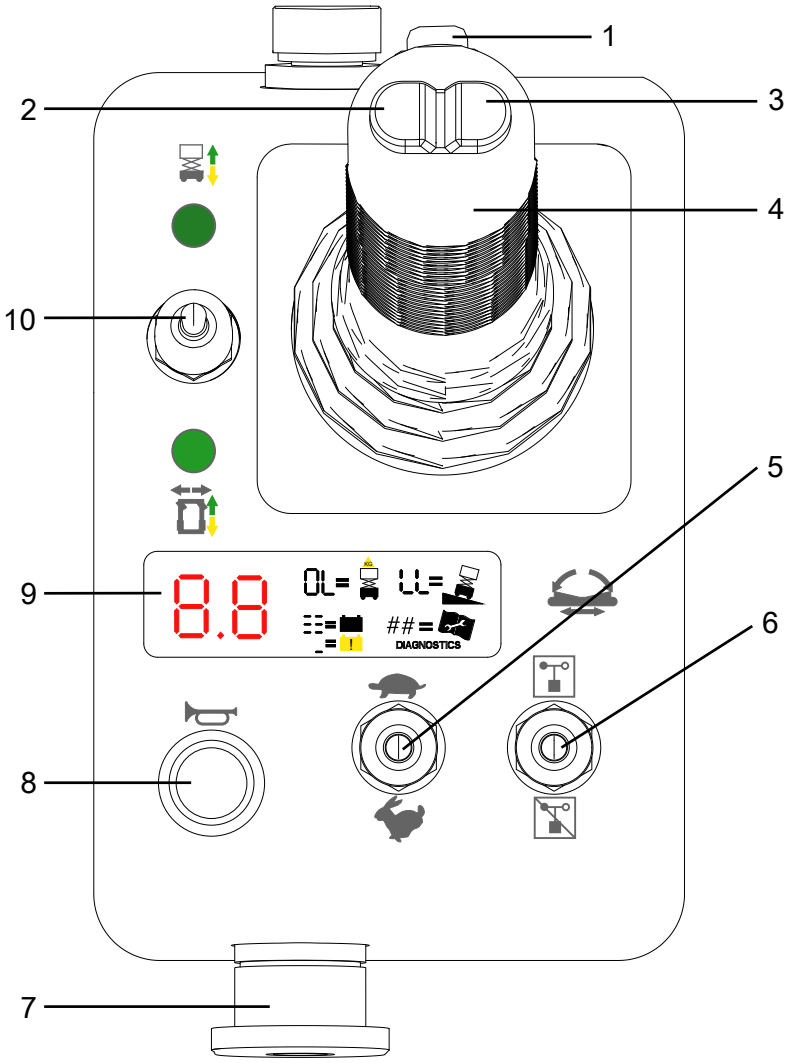


Fig. 2 Platform Controller (Sinoboom Control System)

Table 6-2

No.	Name	Description
1	Enable switch	Keep holding the switch – all functions will be enabled to operate.
2	Left turn thumb button	Press the button to steer the machine to the left.
3	Right turn thumb button	Press the button to steer the machine to the right.
4	Joystick	In platform lift and lower mode, pushing this joystick forward/ backward will raise/lower the platform; In drive and steer mode, pushing this joystick forward/back will drive forward/backward.
5	Travel speed selector switch	Move the switch up to enable turtle mode; Move the switch down to enable high-speed mode.

Table 6-2 (continued)

No.	Name	Description
6	Indoor/outdoor mode selector switch (if equipped)	Move the switch up to enable outdoor mode; Move the switch down to enable indoor mode.
7	Emergency stop switch	The machine can start normally only when both the emergency stop switches on the ground controller and the platform controller are in the "ON" position. If either emergency stop switch on the ground or platform controller is in the "OFF" position, the machine's control console will lose power, preventing the machine from starting and disabling all functions.
8	Horn button	Press the button to sound the horn.
9	Platform display screen	Display battery level, alarm message and fault codes.
10	Lift and lower/drive and steer function enable switch	Move the switch up to enable platform lift and lower mode; Move the switch down to enable drive and steer mode.

6.3 PLATFORM CONTROLLER (DTC CONTROL SYSTEM)

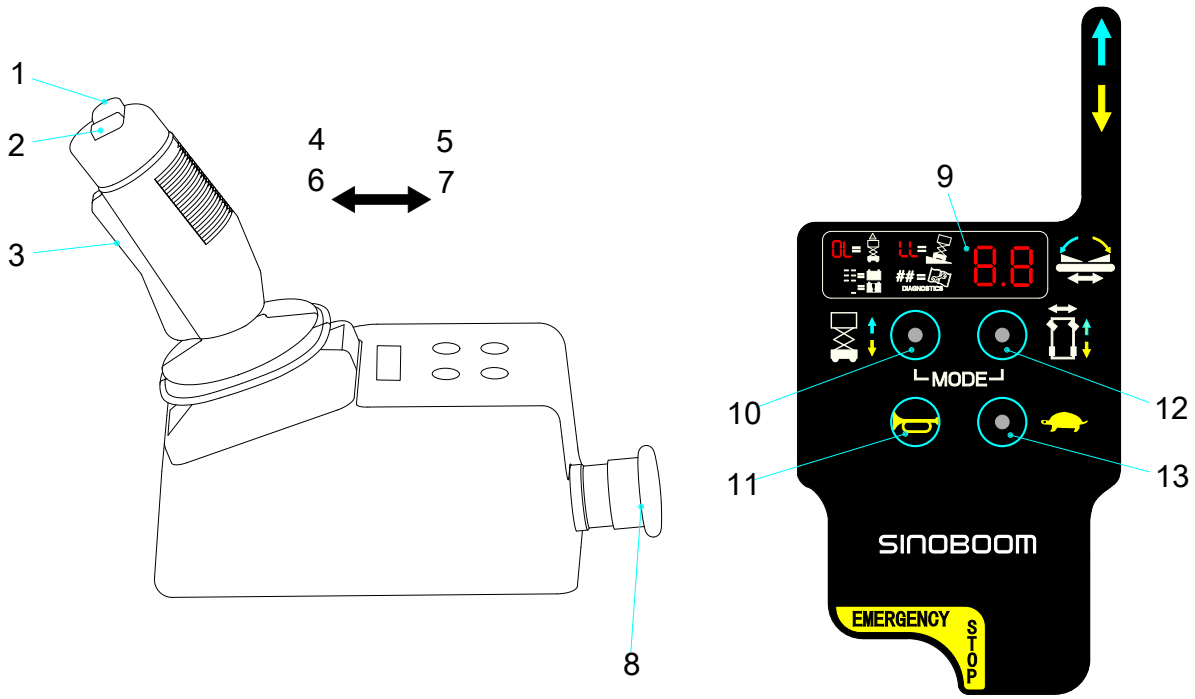


Fig. 3 Platform Controller (DTC Control System)

Table 6-3

No.	Name	Description
1	Right turn thumb button	Press the button to steer the machine to the right.
2	Left turn thumb button	Press the button to steer the machine to the left.

Table 6-3 (continued)

No.	Name	Description
3	Enable switch	Keep holding the switch – all functions will be enabled to operate.
4	Platform up	After the platform lift function is activated, push the joystick forward to raise the platform.
5	Platform down	After the platform lift function is activated, pull the joystick back to lower the platform.
6	Drive forward	After the travel & steer function is activated, push the joystick forward to control the machine driving forward.
7	Drive reverse	After the travel & steer function is activated, pull the joystick back to control the machine driving reverse.
8	Emergency stop switch	The machine can start normally only when both the emergency stop switches on the ground controller and the platform controller are in the "ON" position. If either emergency stop switch on the ground or platform controller is in the "OFF" position, the machine's control console will lose power, preventing the machine from starting and disabling all functions.
9	Display screen	Display battery level, alarm message and fault codes.
10	Platform lift and lower function enable button	Press the button, and the button light will illuminate and the platform lift mode will be enabled.
11	Horn	Press the button to sound the horn.
12	Travel and steer function enable button	Press the button, and the button light will illuminate and the travel and steer mode will be enabled.
13	Turtle mode button	Press the button, and the button light will illuminate and the turtle mode will be enabled.

This Page Intentionally Left Blank

7 OPERATION INSTRUCTIONS

7.1 GENERAL

This mobile elevating work platform is used to transport people and tools to work locations and for performing tasks on the work platform. This machine has two control positions: ground control position and platform control position.

⚠ WARNING

- **Except in case of emergency, it is forbidden to perform operations from the ground if any person is still on the platform.**
- **If any switch/handle returns to the neutral position but the corresponding movement does not stop, push in the emergency stop button to stop the machine.**
- **The replacement joystick of the platform controller must be of the same brand as the original one, otherwise the machine functions may be impeded or accidents may occur.**

7.2 SPECIAL STATUS CODES

The ground controller and platform controller displays show machine parameters and codes, allowing users to monitor the machine's current status.

Below is a brief explanation of some special status codes:

Code	Description
18	When the machine enters operating position, if the pothole protection plate fails to deploy properly, an alarm will be triggered. • To clear the alarm, lower the platform and retract the pothole protection plate.
CH	Machine is in ground control mode. • To exit the ground control mode: turn the ground/platform control selector switch to platform control position.
CL	Lifting guarding device triggered – platform raised and obstacle detected, activating the limit switch. • To clear the alarm: lower the platform to clear obstruction.
Ft	Footswitch not engaged – operating handle without depressing the footswitch triggers the alarm. • To clear the alarm: depress and hold the footswitch before operating the handle.
LL	Excessive tilt angle – machine inclination in the operating position exceeds the maximum allowed tilt. • To clear the alarm: lower the platform to non-operating position.
LO	Indoor/outdoor mode selector switch operated in the operating position. • To clear the alarm: return the switch to its original position.
OL	Overload in operating position – platform load exceeds the maximum allowable load in operating position. • To clear the alarm: immediately reduce load.
PL	Overload in non-operating position – platform load exceeds the maximum allowable load in non-operating position. • To clear the alarm: immediately reduce load.
SL	Machine in standby mode • To exit the standby mode: turn the ground/platform control selector switch to platform control position.

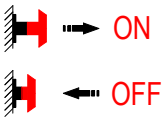
Note: If the alarm persists after following these steps, refer to the ***Maintenance Manual*** for troubleshooting.

7.3 POWER-OFF SWITCH

The power-off switch is a core safety component. During shutdown, maintenance, or emergencies, the power-off switch can be activated to cut off the entire machine's electrical circuit, preventing accidental operation and protecting the control system. To restart the machine, manually reset the power-off switch to the "ON" position.

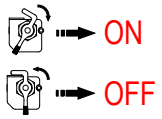
Operation may vary depending on the configuration. Refer to the label next to the switch for instructions (see the ***Decals Diagram*** for exact labeling details).

- Power-off switch in "OFF" position: entire circuit is disconnected;
- Power-off switch in "ON" position: entire circuit is energized.



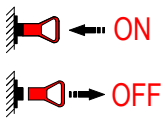
pull-type:

- Pull out to "ON" position;
- Push in to "OFF" position.



twist-type:

- Turn clockwise to "ON" position;
- Turn counterclockwise to "OFF" position.



lever-type:

- Insert to "ON" position;
- Pull out to "OFF" position.

7.4 ACTIVATE LITHIUM BATTERY

If your machine is equipped with a lithium battery, it may be needed to activate the battery when it has entered sleep mode.

The lithium battery will go into sleep mode under the following conditions:

- After pressing and holding the lithium battery start switch for 3 s, BMS detects 0 V voltage and enters sleep state;
- When the machine has not been used for 72 hours (the discharge current has been lower than 10 A for 72 hours).
- When the state of charge (SOC) of lithium battery is between 5 % and 10 %, after the battery has operated for 5 minutes;
- When the SOC is less than 5%;
- When the lithium battery has the highest-level failure and output is prohibited.

To use the machine again, push the start switch of the lithium battery (located at the side of the lithium battery), or charge the battery.

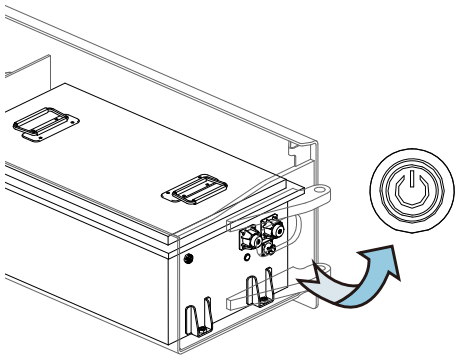


Fig. 1 Start Switch Icon

NOTICE

- *When the SOC is between 5 % and 10 %, the lithium battery can be activated by pushing the start switch for several times until the SOC is lower than 5 %;*
- *When the SOC is less than 5%, the lithium battery cannot be activated by pushing the start switch, and it must be connected to an external charger to get charged.*

7.5 ACTIVATE THE MACHINE

NOTICE

Before activating the machine, make sure that:

- *Ensure that the power-off switch is turned on.*
- *The lithium battery, if acting as the power source, is activated (refer to* ***Activate Lithium Battery*** *).*

Note: The first start must always be done from the ground control position.

Start machine from the ground

1. Turn the ground/platform control selector switch at the ground control position to the ground control position.
2. Set the emergency stop switch at the ground controller to the ON position.
3. Set the emergency stop switch at the platform controller to the ON position.

⚠ WARNING

Before turning on the emergency stop switch at the platform controller, ensure the joystick is in the neutral position; if not, do not operate the machine.

4. The ground display screen will be turned on and should show no error message. All functions will be operative only at the ground control position; the platform control position will not work.

Start machine from the platform

1. Turn the ground/platform control selector switch at the ground control position to the platform control position.
2. Set the emergency stop switch at the ground controller to the ON position.
3. Set the emergency stop switch at the platform controller to the ON position.

⚠ WARNING

Before turning on the emergency stop switch at the platform controller, ensure the joystick is in the neutral position; if not, do not operate the machine.

4. The platform display screen will be turned on and should show no error message. All functions will be operative only at the platform control position; the ground control position will not work.

7.6 CHARGE THE BATTERY

There are three types of batteries that may be used in this machine: Lead acid battery, maintenance-free lead acid battery, and lithium battery. The latter two types do not require maintenance.

The battery level must be checked before each operation.

When the battery level is too low, the low battery alarm will be displayed on the platform display screen, and the high travel speed will be reduced. Stop the machine immediately and fully charge the battery.

NOTICE

- *During charging, ensure that the power-off switch is in ON position.*
- *The machine is delivered with a battery level less than 80 %, so it is recommended that the battery is fully charged once the machine has been delivered.*
- *The charging current must not exceed the maximum allowable charging current indicated on the battery.*
- *The charging voltage must not exceed the maximum allowable voltage indicated on the battery.*
- *The battery charging temperature range is -10 °C to 45 °C. If equipped with a charging heating system, the charging temperature range is -30 °C to 55 °C.*
- *Battery over-discharge (continued use of battery with levels of less than 10 %) or battery under-voltage caused by long-term non-charging (battery with levels of less than 10 % not charged for more than three days), resulting in battery capacity attenuation and failure, are not covered by the warranty.*

Charging lead-acid (maintenance required) batteries

1. Checking the battery level.
   - Check the battery level on the display screen of the platform controller. When the battery level is ≤ 20 %, the low battery alarm will be triggered and the battery needs to be charged immediately. To avoid affecting the normal performance of the machine it is recommended to charge the battery when the battery level is below 30 %.
   - As an alternative means of determining the battery status, open the cover on the battery and measure the density of the electrolyte. If the density of the electrolyte is less than 1.13 kg/l the battery has been over-discharged (discharge depth exceeds 80 %) and must be charged immediately. This should be avoided, as frequently over-discharging the battery will reduce its service life.

   NOTICE

   Measure the temperature of the electrolyte. If it exceeds 45 °C wait for the battery to cool before proceeding to the following steps.

2. Connect the plug between the battery and the charger cable. If the machine is equipped with an automatic liquid refilling system, ensure that the refilling pipe is connected.

3. Connect the battery charger to a grounded AC circuit. The indicator light will illuminate steadily once the battery is fully charged.
4. After charging is complete, disconnect the cable plug from the battery to the charger.

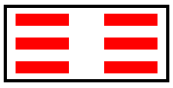
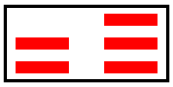
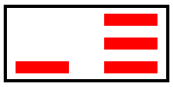
Charging maintenance-free batteries

1. Check the battery level on the display screen of the platform controller. When the battery level is ≤ 20 %, the low battery alarm will be triggered and the battery needs to be charged immediately. To avoid affecting the normal performance of the machine it is recommended to charge the battery when the battery level is below 30 %.
2. Connect the battery charger to a grounded AC circuit. The indicator light will illuminate steadily once the battery is fully charged.
3. After charging is complete, disconnect the cable plug from the battery to the charger.

Description of Battery Level Indications

The battery level indication on the platform display is as follows:

Table 7-1

Platform battery level indication	Description
	Battery level 80 – 100%
	Battery level 60 – 80%
	Battery level 40 – 60%
	Battery level 20 – 40%
	Battery level 10 – 20%, lifting movement restricted, charge the battery immediately.
	Battery level below 10%, all movements (except lowering) restricted, charge the battery immediately.

7.7 INDOOR/OUTDOOR MODE SETTING

For machines with outdoor mode with limited height, you can set the machine to indoor/outdoor mode.as per the instructions below. The maximum working height in different modes is different, as described in ***Technical Parameters*** section of this manual.

⚠ WARNING

The indoor mode must not be used in outdoor applications.

Note: The selected mode will not change when the machine is turned off. When the machine is turned on, the previously selected mode is still selected.

DTC Control System

1. Press and hold the combined keys (platform lift function enable button + low speed button) at the platform controller for at least 3s to switch between the indoor and outdoor modes.
2. After the outdoor mode is selected, the decimal point at the bottom center of the platform control screen will be off, the battery level indication will be changed to “Od” on the screen, and the platform can be lifted to its maximum height in outdoor mode. The battery level will be displayed again after the combined keys are released.
3. After the indoor mode is selected, the decimal point at the bottom center of the platform control screen will be on, the battery level indication will be changed to “Id” on the screen (the battery level will be displayed again after the combined keys are released), and the platform can be lifted to its maximum height in outdoor mode. Then, return the joystick to the neutral position and release it, hold the enable switch on the joystick and push the joystick forward, and the platform will continue to rise to its maximum height in indoor mode.

Sinoboom Control System

⚠ WARNING

Do not change the indoor/outdoor mode while the machine is in operating position.

Indoor/outdoor mode switching instructions

The switching method for indoor/outdoor mode varies depending on machine configuration. Please follow the appropriate steps based on your machine's configuration.

- If the platform controller has an indoor/outdoor mode selector switch:
  - Move up the indoor/outdoor mode selector switch, the machine will be switched to outdoor mode. The decimal point at the bottom right of the platform control screen will light up.
  - Move down the indoor/outdoor mode selector switch, the machine will be switched to indoor mode. The decimal point at the bottom right of the platform control screen will turn off.
- If the platform controller does not has an indoor/outdoor mode selector switch:
  1. Set the emergency stop switch at the ground controller to the ON position.
  2. Turn the key switch to the ground control position.
  3. Press the Enter key to enter the ECU menu selection mode.
  4. Press the Page Down key until the screen shows “User Setting”, then press the Enter key.
  5. Press the Page Down key until "Indoor/Outdoor Mode Selection" appears, and press "Enter" to confirm.
     - Press the Page Down key until "Outdoor Mode" appears, and press "Enter" to confirm – the machine will enter outdoor mode. The decimal point at the bottom right of the platform control screen will light up.
     - Press the Page Down key until “Indoor Mode" appears, and press "Enter" to confirm – the machine will enter indoor mode. The decimal point at the bottom right of the platform control screen will turn off.

Lifting Function in Indoor Mode

The operation logic of the lifting function in indoor mode varies depending on the functional configuration. Check the actual configuration and follow the corresponding operating method.

Table 7-2 Functional Configuration Table

Item	Secondary Lifting Confirm	Indoor Continuous Lifting
Configuration 1 (USA/Australia/ Europe)	Enabled	Disabled
Configuration 2 (China)	Disabled	Disabled

Table 7-2 Functional Configuration Table (continued)

Item	Secondary Lifting Confirm	Indoor Continuous Lifting
Configuration 3 (Korea/Japan/ Other Countries)	Disabled	Enabled

Note:

1. The configurations listed above represent the default settings for the specified countries or regions. While China uses the default configuration (Configuration 2), other countries and regions can freely select their preferred functional configuration.
2. "Other Countries" in this table refers to countries or regions excluding China, Korea, Japan, Europe, and USA/Australia.
3. If the platform controller does not have an indoor/outdoor mode selector switch, then Configuration 1 cannot be selected.

- **Configuration 1:**
  1. With the machine in stowed position, switch to indoor mode.
  2. Press and hold the joystick's enable switch, then push forward to raise the platform.
  3. The platform will automatically stop when reaching the maximum platform height (outdoor).
  4. To continue lifting the platform:
     1) Release the joystick to return to neutral position.
     2) Move up the indoor/outdoor mode selector switch to switch to outdoor mode.
     3) Move down the indoor/outdoor mode selector switch to switch to indoor mode.
     4) Press and hold the joystick's enable switch and push forward to continue lifting.
     5) The platform will stop at the maximum platform height (indoor), with the display continuously showing "Id".
- **Configuration 2:**
  1. With the machine in stowed position, switch to indoor mode.
  2. Press and hold the joystick's enable switch, then push forward to raise the platform.
  3. The platform will automatically stop when reaching the maximum platform height (outdoor).
  4. To continue lifting the platform:

1) Release the joystick to return to neutral position.
2) Press and hold the joystick's enable switch and push forward to continue lifting.
3) The platform will stop at the maximum platform height (indoor), with the display continuously showing "Id".

- **Configuration 3:**

1. With the machine in stowed position, switch to indoor mode.
2. Press and hold the joystick's enable switch, then push forward to raise the platform.
3. The platform will stop at the maximum platform height (indoor), with the display continuously showing "Id".

Lifting Function in Outdoor Mode

1. With the machine in stowed position, switch to outdoor mode.
2. Press and hold the joystick's enable switch, then push forward to raise the platform.
3. The platform will stop at the maximum platform height (outdoor), with the display continuously showing “Od".

Note: During lifting, the display will show "Id/Od" while the handle is engaged. Upon releasing the handle, the display will automatically switch back to battery level indication.

7.8 LIFT AND LOWER THE PLATFORM

⚠ WARNING

If the tilt alarm is triggered, stop operation and fully lower the platform. Do not start operation again unless the tilt cause has been corrected.

Perform Operations on the Ground

1. **Raise the platform:** Press and hold the Enable key on the joystick and press the Platform Up key. The platform should rise and the pothole protection device should deploy.
2. **Lower the platform:** Press and hold the Enable key on the joystick and press the Platform Down key. The platform should descend and the pothole protection device should retract.

Perform Operations on the Platform

- **Activate platform lift and lower mode - Sinoboom control system:** Move up the lift and lower/ drive and steer function enable switch, the indicator above the switch will illuminate. The machine will enter the platform lift and lower mode.
- **Activate platform lift and lower mode - DTC control system:** Press the platform lift and lower function enable button: the indicator light will illuminate. The machine will enter the platform lift and lower mode.

Note: When performing operation from the platform, the lifting speed of the platform is in direct proportion to the travel distance of the joystick. The shorter the travel distance, the slower the speed.

1. **Raise the platform:** Press and hold the enable switch on the joystick and push the joystick forward. The platform should rise and the pothole protective device should deploy.
2. **Lower the platform:** Press and hold the enable switch on the joystick and pull the joystick back. The platform should descend and the pothole protective device should retract.

Note: Except for special configurations, in the operating position, when using the platform controller to lower the platform to the non-operating position, the platform will automatically stop lowering. The operator must restart the platform lowering function (release the joystick, return to the neutral position, and then move the joystick again). The platform will continue to descend after 5 s.

7.9 TRAVELING

⚠ WARNING

- **The machine must not travel with the platform raised unless it is on a firm and flat surface without exceeding the maximum allowable climbing angle.**
- **The machine must not be driven on slopes, steps or arched surfaces that exceed the maximum gradeability of the machine.**
- **Extreme care must be taken when driving the machine in reverse or with the platform raised.**
- **When driving the machine in potentially dangerous situations such as driving on slopes or reversing, operate the joystick in small increments to avoid danger due to excessive speed.**

Activate Travel and Steer Mode

- Sinoboom Control System: Move the lift and lower/ travel and steer function enable switch down, the indicator under the switch will illuminate. The machine will enter travel and steer mode.

- DTC control system: Press the travel and steer function enable switch, the indicator light will illuminate. The machine will enter travel and steer mode.

Drive Forward and Reverse

Note: The travel speed is in direct proportion to the travel distance of the joystick. The shorter the travel distance, the slower the speed.

1. Activate the drive and steer mode.
2. **Drive forward:** Press and hold the enable switch on the joystick and push the joystick forward. The machine will be driven forward.
3. **Drive reverse:** Press and hold the enable switch on the joystick and pull the joystick back. The machine will be driven reverse.
4. **Brake:** While the machine is traveling: when the joystick is released the machine should stop.

Steering While Traveling

1. Activate the travel and steer mode.
2. **Steer left:** Press and hold the enable switch on the joystick, push the joystick forward and press the left button on the top of the joystick with your thumb – the machine will steer left.
3. **Steer right:** Press and hold the enable switch on the joystick, push the joystick forward and press the right button on the top of the joystick with your thumb – the machine will steer right.

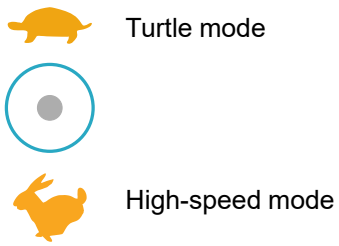
Travel Speed Switching

⚠ WARNING

- **In a tilted condition the machine must be driven at low speed.**
- **Before traveling at high speeds, make sure to first observe whether the surrounding environment is safe. Otherwise, it is possible that collisions and other hazards may occur with obstacles or other people.**

Note: The travel speed is in direct proportion to the travel distance of the joystick. The shorter the travel distance, the slower the speed. Pushing the joystick to the maximum extent will bring the machine to the maximum travel speed in the corresponding speed gear.

Sinoboom control system:



1. Activate the travel and steer mode.
2. **High-speed mode:** In the non-operating position, move the travel speed selector switch to the high-speed mode — the decimal point at the bottom left of the platform control screen will turn off. Hold down the joystick's enable switch and push the joystick to drive the machine at high speed.
3. **Turtle mode:** In the non-operating position, move the travel speed selector switch to the turtle mode — the decimal point at the bottom left of the platform control screen will light up. Hold down the joystick's enable switch and push the joystick to drive the machine in turtle mode.

NOTICE

When traveling in turtle mode in non-operating position, if the travel speed selector switch is moved to high speed, the machine will immediately switch to high-speed travel.

4. **Low-speed mode:** In the operating position, hold down the joystick's enable switch and push the joystick to drive the machine at low speed.

DTC control system:

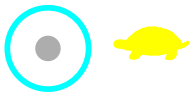


Fig. 2 Turtle mode button

1. Activate the travel and steer mode.
2. **High-speed mode:** In non-operating position, press the turtle mode button – the button light will turn off. Hold down the joystick's enable switch and push the joystick to drive the machine at high speed.
3. **Turtle mode:** In non-operating position, press the turtle mode button – the button will illuminate. Hold down the joystick's enable switch and push the joystick to drive the machine in turtle mode.

NOTICE

When traveling in turtle mode in non-operating position, pressing the turtle mode button will turn off the button light and the machine will immediately switch to high-speed travel.

4. **Low-speed mode:** In the operating position, hold down the joystick's enable switch and push the joystick to drive the machine at low speed.

Traveling on Slopes

⚠ WARNING

- **The machine must not be driven on slopes, steps or arched surfaces that exceed its maximum allowable slope gradient.**
- **To prevent overheating of the travel motor, the machine must not travel on slopes for more than 2 minutes.**

Before driving on a slope, ensure the actual gradient ≤ the machine's maximum allowable slope gradient.

- To determine the slope gradient :
  1. Prepare a suitable carpenter's ruler, a straight piece of wood and a tape measure.
  2. Measure the height (H) and length (L) of the slope.

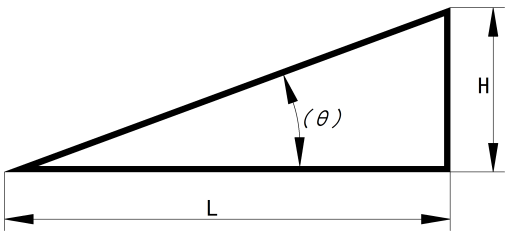
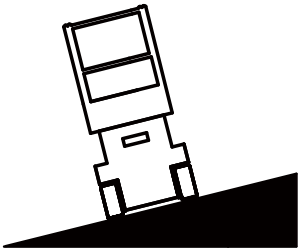


Fig. 3

  3. Slope grade= H/L x 100 %.
- Machine's maximum allowable slope gradient:

Uphill/downhill: 25 %/14 °



Lateral: 25 %/14 °

NOTICE

The maximum allowable slope gradient is the steepest slope the machine can safely climb on firm ground with sufficient traction, and the platform in stowed position and occupied by only one person. When the platform's load increases, the maximum allowable slope gradient decreases.

7.10 EXTEND AND RETRACT PLATFORM

⚠ WARNING

- **While extending the platform, do not stand on the platform extension.**
- **Do not lower the platform if the platform extension has not been fully retracted.**
- **The platform extension can be secured in three slots. Do not work on the platform extension while it has not been secured.**

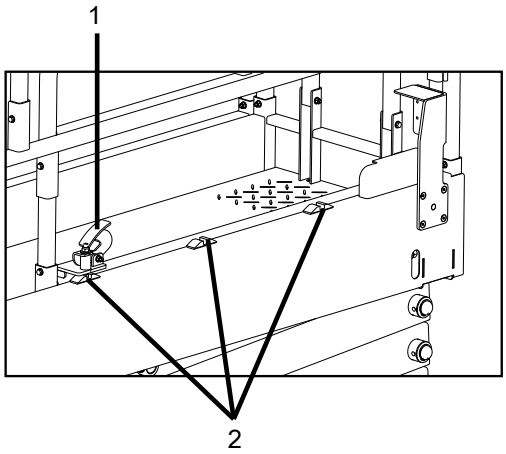


Fig. 4

Extend the platform:

1. Depress the pedal #1, grasp and push the guardrail of the platform extension to extend the platform extension.
2. Release the pedal #1, and insert the platform extension end into the slot #2 to secure it.

Retract the platform:

1. Depress the pedal #1, grasp and pull the guardrail of the platform extension back to retract the platform extension.
2. Release the pedal #1, and insert the platform extension end into the slot #2 to secure it.

7.11 FOLD AND UNFOLD PLATFORM GUARDRAILS

The platform guardrails can be folded for convenient transportation.

⚠ WARNING

- **Do not raise the platform while the guardrails are folded down. The guardrails must be unfolded and secured properly while the platform is lifting.**
- **Fold down/unfold the guardrails only when the machine is stowed and the platform extension is fully retracted.**
- **Do not reach hands and arms near areas where they may be crushed.**
- **With the platform guardrails folded, if the machine is to be started from the ground with the platform controller, the operator should maintain a safe distance of at least 1 m (3 ft) from the machine.**

Fold down the platform guardrails:

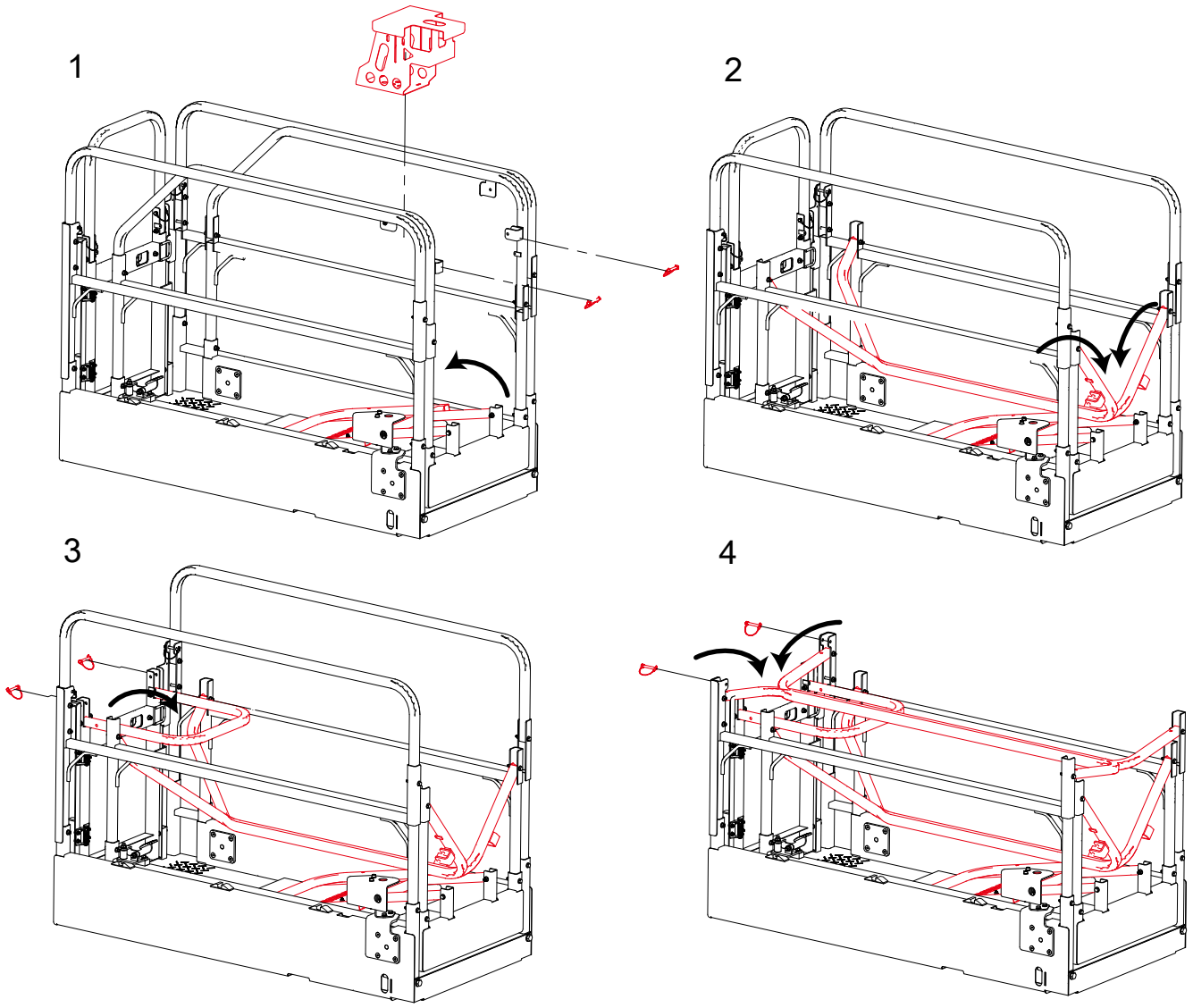


Fig. 5

1. Remove the platform controller and its bracket. Remove the two wire rope safety pins at the front of the platform extension. Fold the front guardrail of platform extension inward.
2. Fold the guardrails on both sides of the platform extension inward.
3. Pull out the two wire rope safety pins at the access gate of the platform. Fold the access gate inward.
4. Pull out the two wire rope safety pins at the rear of the platform, and fold the guardrails on both sides of the platform inward.

Unfold the platform guardrails:

Unfold the platform guardrails in the reverse order of the fold-down instructions.

7.12 TURNING OFF AND STOPPING

1. Park the machine on a firm, flat, and level surface, and make sure the area is adequately protected.
2. Make sure that platform has been completely lowered, and remove all loads from the platform.
3. Push in the emergency stop switch on the ground control position and platform control position to the OFF position.
4. Switch the “ground/platform control selector switch” to “neutral” position, and remove the key (if equipped).
5. Fit the platform controller protective cover (if equipped) properly to protect the platform controller

and its handles, switches and panels from damage in harsh environments.

6. If the machine is to be left unused for a long time, set the power-off switch to OFF position.
7. Make sure that all panels and gates are closed and secured.

7.13 TRANSPORT AND LIFTING

The mobile elevating work platform is a non-road vehicle and is not licensed for on-road use, so the machine needs to be transported and transferred by road, railway or waterway.

⚠ WARNING

Only qualified individuals may drive the machine onto or from the transport vehicle.

Before transporting and lifting the machine:

1. Determine the total weight of the machine (see machine nameplate or ***Technical Parameters*** section of this manual) and select the appropriate lifting equipment, rigging equipment, and transport vehicle.
2. Make sure that the machine is in transport position, the machine has no loose or unfixed parts, and that no people or any tools are on the platform.
3. Ensure that the machine lifting points/rigging equipment lashing points and their rigging equipment are intact and that the belt or rope to be used has sufficient load strength.
4. Before loading/unloading the machine, ensure that the transport vehicle is parked on level ground and that the ramp used for driving the machine onto the transport vehicle does not exceed the maximum gradeability of the machine.
5. When loading/unloading machinery, it is necessary to secure the wheels of the transport vehicle with chocks to prevent accidental movement of the vehicle.
6. After the machine is loaded, use chocks to secure the wheels to prevent the machine from moving accidentally.
7. Before releasing the brake, the machine must be parked on a horizontal surface or secured.
8. The machine may only be lifted from a specific position with a forklift or crane with sufficient lifting capacity. Care should be taken to prevent the machine from colliding with surrounding objects.

Transport

1. Adjust the machine to the transport position.
2. On the ground controller, switch the “ground/platform control selector switch” to “neutral” position, and remove the key (if equipped).
3. Use at least 2 ropes or belts at the lashing points shown in the figure below to securely fix the chassis to the transport vehicle, and take appropriate safety protection measures.
4. Adjust the rigging appropriately to prevent damage to the rope or belt.

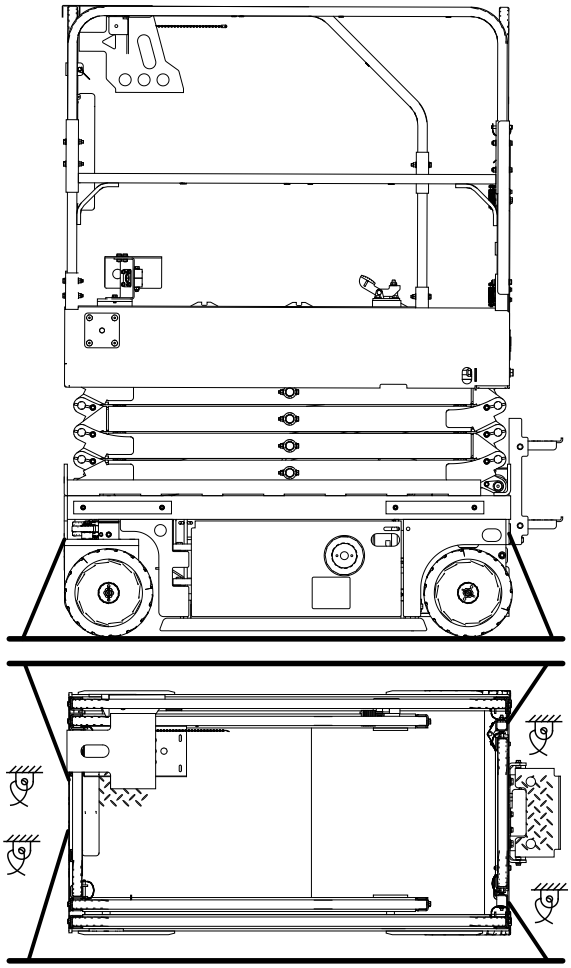


Fig. 6 Transport Diagram

Lifting

1. Determine the center of gravity of the machine.
2. The rigging equipment must be attached to the machine’s specified lifting point.
3. Adjust the rigging equipment properly to avoid damage to the machine and keep the machine level.

0407E&0407EN:

X=545 mm (21.5 in) Y=483 mm (19.0 in)

0607EN:

X=617 mm (24.3 in) Y=472 mm (18.6 in)

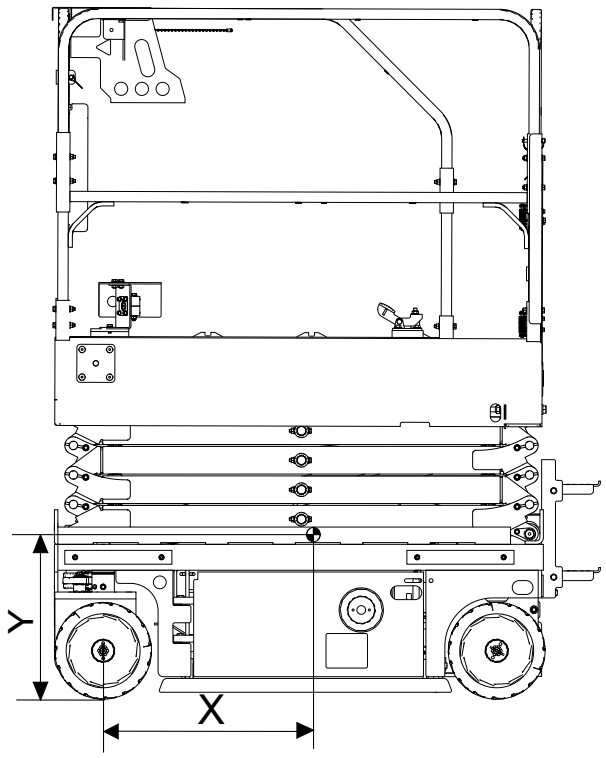


Fig. 7 Diagram of Center of Gravity

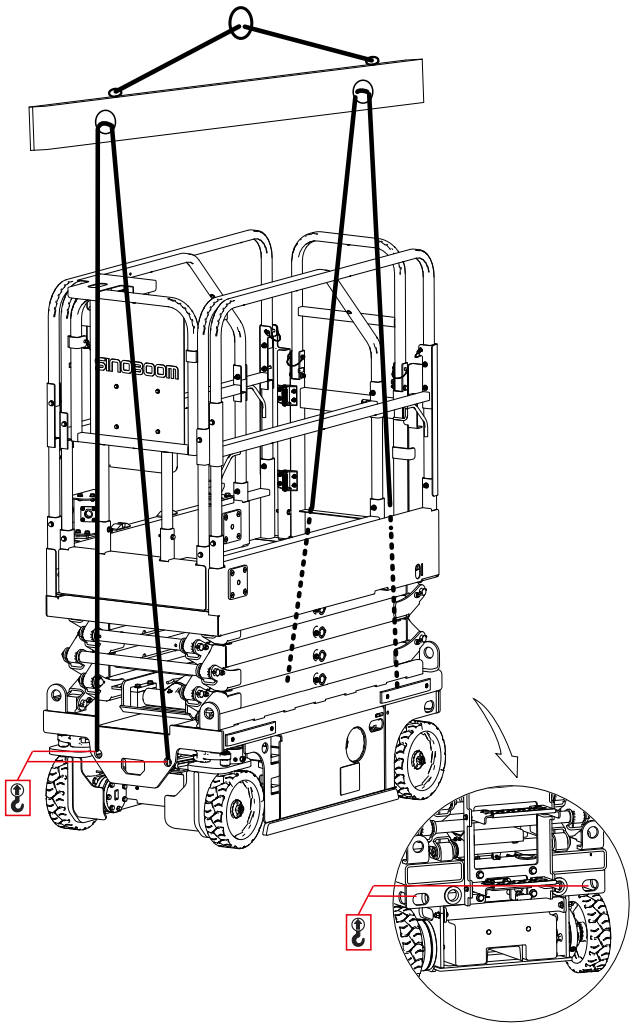


Fig. 8 Diagram of Lifting with Rigging Equipment

A forklift may be used to lift the machine.

1. Align the forklift forks with the pockets on both sides of the ladder.
2. Drive the forklift forward to fully insert the forks into the pockets.
3. Lift the machine by 0.4 m (16 in) and then tilt the forks backward slightly to keep the machine stable.
4. Keep the machine horizontal when lowering the fork frame.

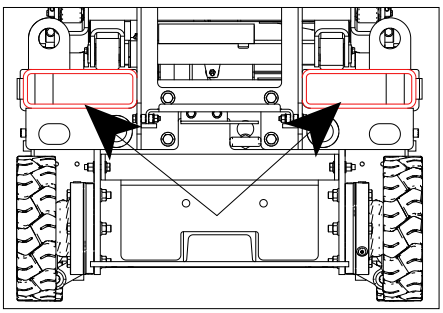


Fig. 9 Diagram of Lifting with Forklift

7.14 STORAGE

Mobile elevating work platforms should be stored in places that are protected from rain, humidity, sunlight, or corrosive gases, and that have good ventilation.

In order to ensure the machine can be operated normally after prolonged storage, the following measures should be taken when storing the machine:

1. Lower the platform to the stowed position.
2. Push in the emergency stop switch on the ground control position and platform control position to the OFF position.
3. Switch the “ground/platform control selector switch” to “neutral” position, and remove the key (if equipped).
4. Turn the power-off switch to the OFF position.
5. Use chocks to secure the wheels to prevent the machine from moving accidentally.
6. Wipe off all dust and oil from the machine to keep it clean.
7. Apply lubricating oil to parts prone to corrosion.
8. For a machine stored for more than three months, the hydraulic oil should be drained, the positive pole and negative pole of the battery should be disconnected, and insulation protection measures shall be taken.
9. Close and lock all panels and gate locks on the machine.
10. For a machine stored for more than three months, idle the machine every three months for not less than one hour each time, and clean and maintain the machine.
11. For a machine stored for more than one and a half years, a comprehensive inspection and maintenance on the machine should be carried out before use, aging seals and filter elements should be replaced as appropriate.

This Page Intentionally Left Blank

8 EMERGENCY PROCEDURES

This chapter describes the steps to follow in the event of unexpected situations during operation.

8.1 REPORTING ACCIDENTS

In case of any accident involving Hunan Sinoboom Intelligent Equipment Co., Ltd. products, Hunan Sinoboom Intelligent Equipment Co., Ltd. must be notified immediately. In case of any accident involving the machinery of Hunan Sinoboom Intelligent Equipment Co., Ltd., notify Hunan Sinoboom Intelligent Equipment Co., Ltd. by telephone immediately and provide all necessary details, even if the accident did not cause personal injury or property damage.

Failure to notify the manufacturer within 48 hours of the incident involving the machinery of Hunan Sinoboom Intelligent Equipment Co., Ltd. may void the product warranty.

NOTICE

Thoroughly inspect the machine and all its functions after any accident. First, test all functions from the ground controller, then from the platform controller. Ensure the machine's lifting height does not exceed 3 m (10 ft) until all damage has been repaired and all controllers operate properly.

8.2 EMERGENCY OPERATION

When the operator is unable to control the machine (squeezed or trapped on the platform):

1. Other personnel can only operate the machine with the ground controller according to the operation requirements.
2. Other qualified operation personnel on the platform can operate the platform controller. If the controller is not working properly, do not continue to operate.
3. Hoists, forklifts or other equipment that meet the requirements of use can be used to transport people on the platform and stabilize the movement of the machine.

When the platform is stuck at height:

If the platform is stuck or blocked by high buildings or aerial equipment, rescue the operator on the platform first and then get the machine out.

If any switch is reset but the movement does not stop:

If any switch/handle returns to the neutral position but the corresponding movement does not stop, push in the emergency stop button to stop the machine.

8.3 EMERGENCY LOWERING

When the power source fails, the emergency lowering handle can be used as appropriate to lower the platform into place. Correct steps for its application are as follows:

1. Locate the emergency lowering handle located at the rear of the chassis(located near the Decal of Emergency Lowering).
2. Pull out the emergency lowering handle slowly to lower the platform.

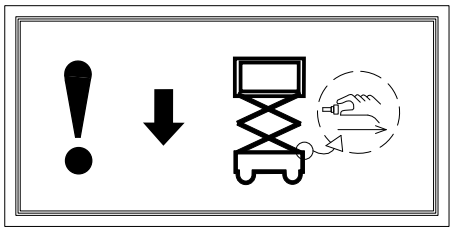


Fig. 1 Decal of Emergency Lowering

8.4 EMERGENCY TOWING

⚠ WARNING

- **Except in case of emergency situations, machine malfunction, power loss or loading/unloading, it is strictly prohibited to tow or drag the machine.**
- **When towing or dragging the machine, comply with local policies and road traffic regulations.**
- **Towing the machine on public highways is prohibited.**
- **The machine is not equipped with a brake for towing control, so the towing vehicle must be able to control the machine at all times, otherwise the machine may lose control, resulting in serious injury or death.**
- **The maximum permissible towing speed is 3 km/h (1.9 mph).**
- **The maximum permissible towing gradient is 25 %.**
- **The machine must not be towed/dragged when the brake has not been released or the machine has been started.**
- **Before the brake is released, the machine must be parked on a horizontal surface or secured.**

Method 1:

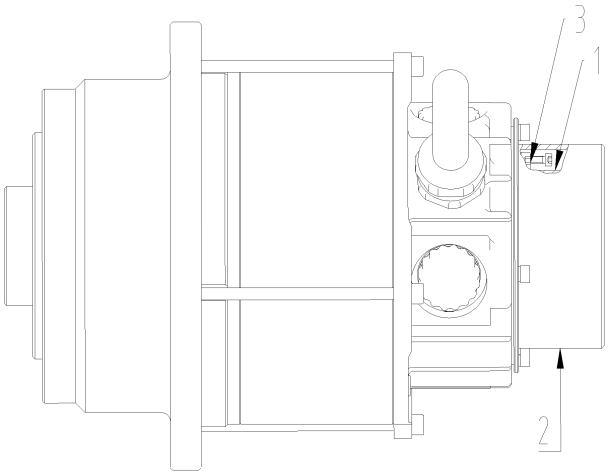


Fig. 2

Table 8-1

No.	Name
1	Brake (including release screw #3)
2	Brake hood
3	Release screw

1. Park the machine on solid level ground.
2. Use chocks to secure the wheels to prevent the machine from moving accidentally.
3. Make sure that the machine is stowed and has no loose or unfixed parts, and there are no people or tools in the platform and no obstacles in the surrounding passage.
4. Open the brake hood.
5. Tighten release screw, the brake is separated, the brake is released, the machine can be towed or dragged by an external force.
6. After towing, park the machine on solid level ground.
7. Use chocks to secure the wheels to prevent the machine from moving accidentally.
8. Loosen release screw to the original position, and re-install the hood.

Method 2 (for Sinoboom Control System):

1. Park the machine on solid level ground.
2. Use chocks to secure the wheels to prevent the machine from moving accidentally.
3. Make sure that the machine is stowed and has no loose or unfixed parts, and there are no people or tools in the platform and no obstacles in the surrounding passage.
4. Set the emergency stop switch at the ground controller to the ON position.
5. Turn the key switch to the ground control position.
6. Press the Enter key to enter the ECU menu selection mode.
7. Press the Page Down key until the screen shows “User Setting”, then press the Enter key.
8. Press the Page Down key until the screen shows “Brake Release”, and then press and hold the Enter key for 5 s.
9. The buzzer will sound, and the message “Brake Is Released” will be shown on the display, indicating that the brakes have been released successfully.
10. The machine can now be towed or dragged by external force.
11. After towing, park the machine on solid level ground.

12. Use chocks to secure the wheels to prevent the machine from moving accidentally.
13. Turn on the machine, so the brake can be operated properly.

Method 2 (for DTC control system):

1. Park the machine on solid level ground.
2. Use chocks to secure the wheels to prevent the machine from moving accidentally.
3. Make sure that the machine is stowed and has no loose or unfixed parts, and there are no people or tools in the platform and no obstacles in the surrounding passage.
4. Set the emergency stop switch at the ground controller to the ON position.
5. Turn the key switch to the ground control position.
6. Press and hold the “Enter key” for 5s while powering on the machine to enter the ECU menu selection mode.
7. Press the Page Down key until the screen shows “Machine Mode”, then press the Enter key.
8. Press the Page Down key until the screen shows “Break Release”, and then press and hold the Enter key for 5s.
9. The buzzer will sound, and the message and “Break Is Released” will be shown on the screen, indicating braking released successfully.
10. The machine can now be towed or dragged by external force.
11. After towing, park the machine on solid level ground.
12. Use chocks to secure the wheels to prevent the machine from moving accidentally.
13. Turn on the machine, so the brake can be operated properly.

Method 3 (for Brake Release Switch):

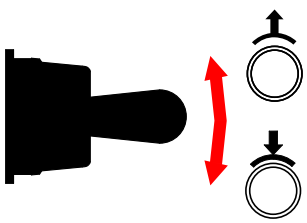


Fig. 3 Brake release switch

- **Applicable to DC drive motor:**
  1. Park the machine on solid level ground.
  2. Use chocks to secure the wheels to prevent the machine from moving accidentally.
  3. Make sure that the machine is stowed and has no loose or unfixed parts, and there are no people or tools in the platform and no obstacles in the surrounding passage.
  4. Move the brake release switch upward until a click is heard (brakes disengage). Display screens on both ground and platform controllers will show "82”.
     – To clear the alarm, return the brake release switch to neutral position by moving it downward, and then restart the machine.
  5. The machine can now be towed or dragged by external force.
  6. After towing, park the machine on solid level ground.
  7. Use chocks to secure the wheels to prevent the machine from moving accidentally.
  8. Move the brake release switch downward, and then the brake can work normally.
- **Applicable to AC drive motor:**
  1. Park the machine on solid level ground.
  2. Use chocks to secure the wheels to prevent the machine from moving accidentally.
  3. Make sure that the machine is stowed and has no loose or unfixed parts, and there are no people or tools in the platform and no obstacles in the surrounding passage.
  4. Set the emergency stop switch at the ground controller to the ON position.
  5. Move the brake release switch upward until a click is heard (brakes disengage). The buzzer will sound, and the message “Brake Is Released” will be shown on the display, indicating that the brakes have been released successfully.

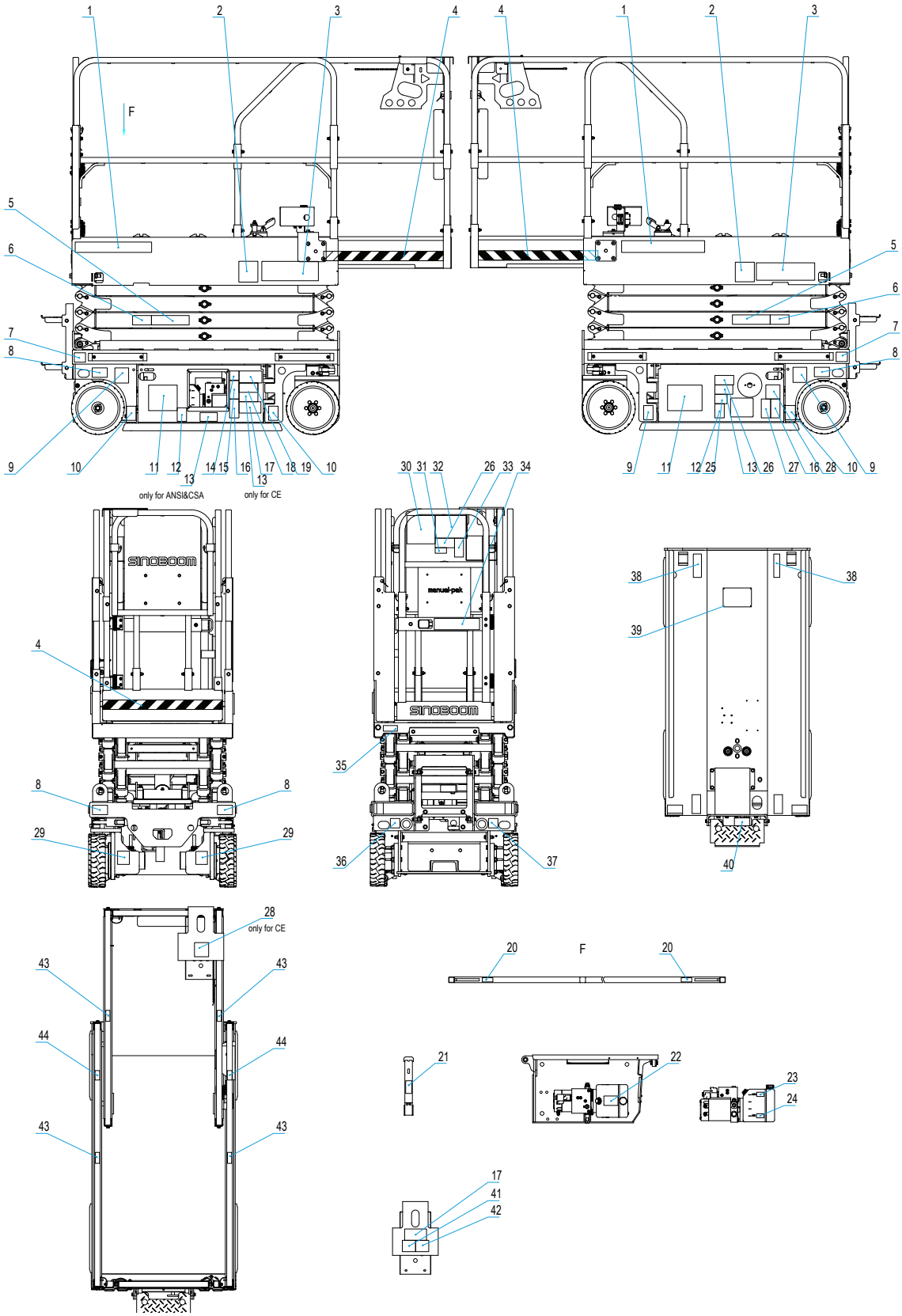
NOTICE

To release the motor brake, the brake release switch must be moved upward within 60 seconds after machine startup. The operation will be invalid if timed out.

  6. The machine can now be towed or dragged by external force.
  7. After towing, park the machine on solid level ground.
  8. Use chocks to secure the wheels to prevent the machine from moving accidentally.
  9. Turn on the machine, so the brake can be operated properly.

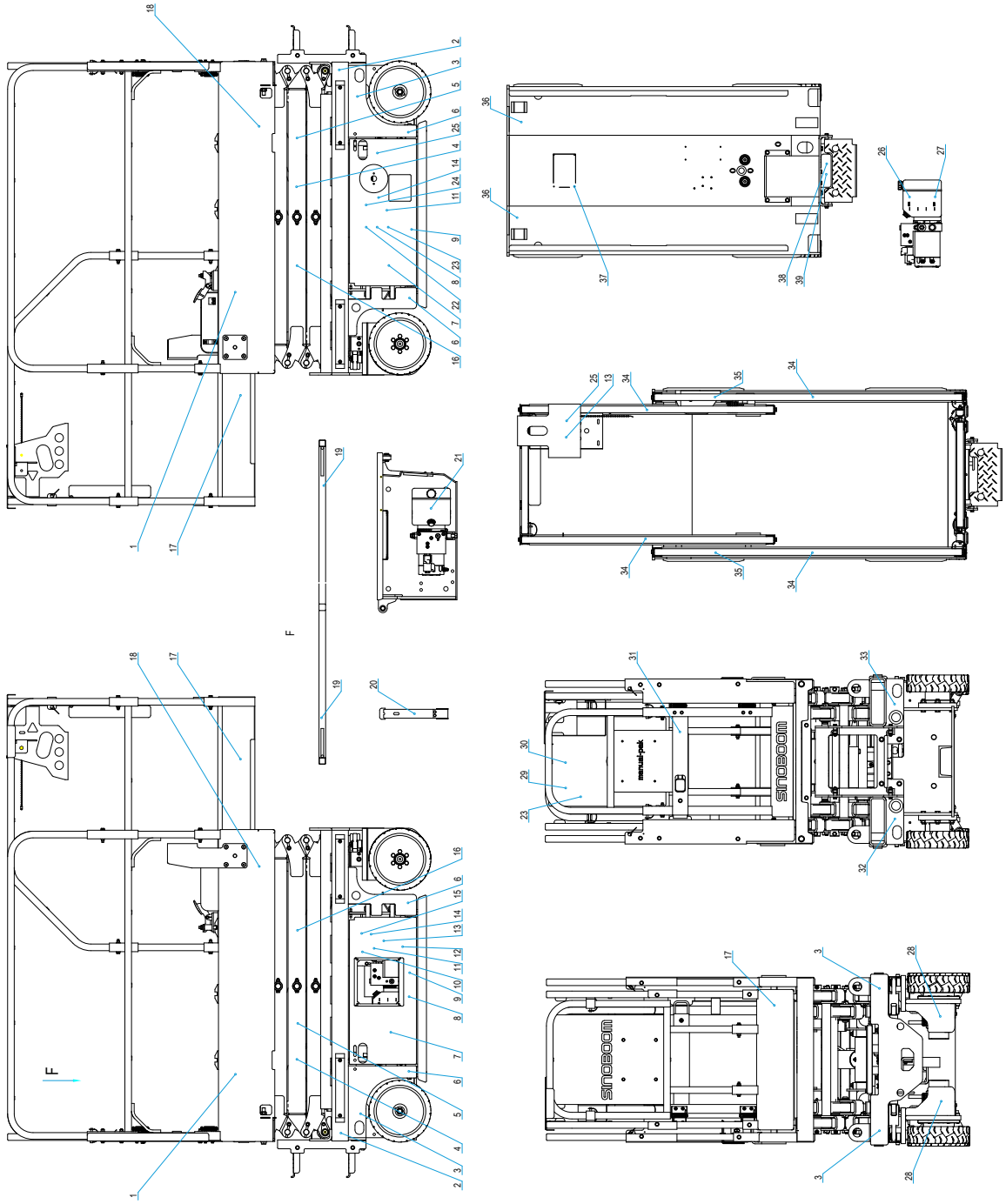
This Page Intentionally Left Blank

9 DECALS DIAGRAM



No.	ANSI&CSA - 0407EN	CE (Metric) - 0407EN	CE (Imperial) - 0407EN	ANSI&CSA - 0607EN	CE (Metric) - 0607EN	CE (Imperial) - 0607EN	Description	Quantity
	101090100004	101090100003	101090100002	101091100004	101091100003	101091100002	General decals diagram	1
1	101040103021	101040103021	101040103021	101040103021	101040103021	101040103021	LOGO SINOBOOM	2
2	103010103017	/	/	103010103017	/	/	Decal – Lead-acid battery (small)	2
3	101090100009	101090100008	101090100009	101091100009	101091100008	101091100009	Decal - Trade name	2
4	216060000004	216060000004	216060000004	216060000004	216060000004	216060000004	Yellow and black striped hazard warning tape	2
5	101079103017	101079103017	101079103017	101079103017	101079103017	101079103017	Decal – Crushing hazard	2
6	102015100025	102015100025	102015100025	102015100025	102015100025	102015100025	Decal – Crushing hazard	2
7	101012100026	101012100026	101012100026	101012100026	101012100026	101012100026	Decal - Forklift pockets	2
8	101079103010	101079103010	101079103010	101079103010	101079103010	101079103010	Decal – Lifting point and lashing point	4
9	101016100034	101016100034	101016100034	101016100034	101016100034	101016100034	Decal – Noise level of 72 dB	2
10	101040103029	101040103025	101040103025	101062103009	101062103006	101062103006	Decal - Tire ground load	4
11	101040103023	101040103023	101040103023	101040103023	101040103023	101040103023	Decal - Large logo in white	2
12	101014100013	101014100013	101014100013	101014100013	101014100013	101014100013	Decal – Crushing hazard	2
13	101012100008	101012100008	101012100008	101012100008	101012100008	101012100008	Decal – Tipping hazard	2
14	101014100018	101014100018	101014100018	101014100018	101014100018	101014100018	Decal - Lifting point	1
15	101038100002	101038100002	101038100002	101038100002	101038100002	101038100002	Decal - High pressure hazard	1
16	101038100008	101038100008	101038100008	101038100008	101038100008	101038100008	Decal - No smoking or open flames	2
17	101062103022	/	/	101062103022	/	/	Decal - Check working environment	2
18	101040103013	101012100005	101012100005	101040103013	101012100005	101012100005	Decal – Electrocution hazard	1
19	101014100027	101014100027	101014100027	101014100027	101014100027	101014100027	Decal – Refer to the manuals	1
20	103006103014	103006103014	103006103014	103006103014	103006103014	103006103014	Decal – Anchorage point	4
21	101040100010	101040100010	101040100010	101040100010	101040100010	101040100010	Decal - Safety strut	1
22	101014100022	101014100022	101014100022	101014100022	101014100022	101014100022	Decal - Hydraulic oil filler	1
23	104011100010	104011100010	104011100010	104011100010	104011100010	104011100010	Decal – Hydraulic oil level	1
24	104011100003	104011100003	104011100003	104011100003	104011100003	104011100003	Decal – Hydraulic oil level	1
25	101040103020	101040103018	101040103018	101040103020	101040103018	101040103018	Decal – Tipping hazard	1

No.	ANSI&CSA - 0407EN	CE (Metric) - 0407EN	CE (Imperial) - 0407EN	ANSI&CSA - 0607EN	CE (Metric) - 0607EN	CE (Imperial) - 0607EN	Description	Quan-tity
26	101079103031	101079103031	101079103031	101079103031	101079103031	101079103031	Decal – Tipping hazard	2
27	101038100007	101038100007	101038100007	101038100007	101038100007	101038100007	Decal – Electrocution hazard	1
28	104011100016	104011100016	104011100016	104011100016	104011100016	104011100016	Decal – Emergency stop switch	1
29	101040103046	101040103046	101040103046	101040103046	101040103046	101040103046	Decal - Release brake	2
30	101090100012	101090100010	101090100010	101091100012	101091100010	101091100010	Decal - Requirements of use	1
31	103010103014	/	/	103010103014	/	/	Decal – Non-insulated	1
32	101079103016	101079103016	101079103016	101079103016	101079103016	101079103016	Decal – General safety instructions	1
33	101048103023	/	/	101048103023	/	/	Decal - Operation instructions	1
34	101090100014	101090100011	101090100011	101091100013	101091100011	101091100011	Decal - Requirements of use	1
35	101040103015	/	/	101040103015	/	/	Decal – Annual inspection date	1
36	101091100014	101091100014	101091100014	101091100014	101091100014	101091100014	Decal – Charging voltage and current	1
37	101079103015	101079103015	101079103015	101079103015	101079103015	101079103015	Decal – Platform power plug	1
38	101014100032	101014100032	101014100032	101014100032	101014100032	101014100032	Decal – Machine serial number	2
39	215050000012	215050000012	215050000012	215050000012	215050000012	215050000012	Blind rivet 4×8-ZnD GB/T 12618.2	4
40	101012100011	101012100011	101012100011	101012100011	101012100011	101012100011	Decal - Emergency lowering	1
41	101040103014	/	/	101040103014	/	/	Decal - Detachable joystick bracket	1
42	101055103015	/	/	101055103015	/	/	Decal – Emergency stop switch	1
43	/	101089100019	101089100019	/	101089100019	101089100019	Decal – Handle hold position	4
44	/	101086103013	101086103013	/	101086103013	101086103013	Decal – Crushing hazard	2


F
F
sinoboom
manual-pak
sinoboom

No.	Part number	Description	Quan-tity	Remarks
	101106100006	General decals diagram CE - Metric (0407E)	1	
	101106100007	General decals diagram CE - Imperial (0407E)	1	
1	101106100003	LOGO SINOBOOM	2	
2	101090100021	Decal - Forklift pockets	2	
3	101065100028	Decal – Lifting point and lashing point	4	
4	101065100022	Decal – Crushing hazard	2	
5	101090100028	Decal – Crushing hazard	2	
6	101090100035	Decal - Tire ground load	4	
7	101092100026	Decal - Large logo in white	2	
8	101077100010	Decal – Tipping hazard	2	
9	101077100013	Decal – Crushing hazard	2	
10	101077100011	Decal - Lifting point	1	
11	101065100030	Decal – Noise level of 72 dB	2	
12	101090100022	Decal – Electrocution hazard	1	
13	103010100003	Decal – Refer to the manuals	2	
14	103010100016	Decal - No smoking or open flames	2	
15	101065100020	Decal - High pressure hazard	1	
16	101090100019	Decal - Maintenance warning	2	
17	216060000004	Yellow and black striped hazard warning tape, 50mm wide	2	
18	101106100001	Decal - Trade name	2	
19	101090100027	Decal – Anchorage point	4	
20	101065100010	Decal - Safety strut	1	
21	101077100008	Decal - Hydraulic oil filler	1	
22	110002100047	Decal – Tipping hazard	1	
23	101077100003	Decal – Tipping hazard	2	
24	103010100001	Decal – Electrocution hazard	1	
25	101090100023	Decal - Main power switch	2	
26	104011100010	Decal – Hydraulic oil level	1	
27	104011100003	Decal – Hydraulic oil level	1	
28	101090100025	Decal - Release brake	2	
29	101106100004	Decal - Requirements of use	1	
30	101090100026	Decal – General safety instructions	1	
31	101106100005	Decal - Requirements of use	1	
32	101091100023	Decal – Charging voltage and current	1	
33	101077100002	Decal – Platform power plug	1	
34	101065100035	Decal – Handle hold position	4	

No.	Part number	Description	Quan-tity	Remarks
35	101065100023	Decal – Crushing hazard	2	
36	101014100032	Decal – Machine serial number	2	
37	215050000012	Blind rivet 4×8-ZnD GB/T 12618.2	4	
38	101077100007	Decal - Emergency lowering	1	
39	101090100024	Decal - Release brake	1	

10 INSPECTION AND MAINTENANCE

Your machine must receive regular maintenance to ensure it remains in good condition.This chapter provides the operator with additional information needed to properly operate and maintain the machine, and is only intended to assist the operator in performing routine maintenance tasks. For more comprehensive maintenance instructions, please refer to the ***Inspection and Preventive Maintenance Schedule*** and the Maintenance Manual.

10.1 OIL SPECIFICATIONS

NOTICE

- *Please choose suitable oil according to the ambient temperature and local regulations; the use of unsuitable oil will damage the machine components.*
- *Oils of different grades or viscosities should not be mixed. When refilling oil, the oil being added must be of the same grade and viscosity as that of the oil currently in use in the machine.*
- *To fill with oil with a different grade or viscosity, the remaining oil in the circuit must be drained out completely.*
- *The oil recommendations in this manual are for general operating conditions. For special environments or special operating requirements please contact Sinoboom for special oil.*

⚠ WARNING

- **Before refilling oil, wait until the temperature of the machine drops to room temperature, otherwise it may cause splashes, burns or other personal injury.**
- **The use of inferior oils is strictly prohibited. Using inferior oil may damage the machine, and faults caused by this are not covered by Sinoboom's warranty.**

Hydraulic Oil

Factory-filled hydraulic oil is usually based on the ambient temperature of the delivery place or as specified by customers. If the factory-filled hydraulic oil is not applicable for the machine operating environments, change to other hydraulic oil suitable for actual operating environment. The following table shows the recommended hydraulic oil grade for different ambient temperature ranges:

Table 10-1

Ambient temperature range	Hydraulic oil grade
> 40℃ (104℉)	HM-68
0℃–40℃ (32℉–104℉)	HM-46
-15℃–25℃ (5℉–77℉)	HV-32
-22℃–25℃ (-7.6℉–77℉)	L-HS32
< -22℃ (-7.6 ℉)	AE-VX

10.2 TIRE AND WHEEL ASSEMBLY

Check Tires and Rims

Maintaining the tires and rims is essential for the normal and safe operation of the machine. The machine may tip over if a tire or a rim fails, so check the tires and rims each time before operating the machine and repair defective tires and rims in a timely fashion.

This machine is equipped with solid tires that do not need to be inflated.

- Check each tire for cuts, cracks, punctures and abnormal wear. Replace the tire if necessary.
- Check each rim for damage, deformation or cracked welds. Replace the rim if necessary.

Check Wheel Nuts

The wheel nuts should be tightened before the machine is put into service for the first time and after each tire is removed. Check and tighten the wheel nuts to the specified torque every 3 months or 250 operating hours.

Replacement Requirements

⚠ WARNING

- **The tires and rims on the machine have been designed and selected according to the overall performance and load stability requirements of the machine. Therefore, the model specifications, rim width, installation center surface, diameter, etc. must not be changed, otherwise this could lead to an unstable and hazardous condition.**
- **Wheel-specific nuts must be used that match the wheel bolts. The wheel nuts must be installed and maintained with the proper tightening torque to prevent loose rims, broken bolts and wheels loosening from the axle. Be sure to only use nuts that match the mounting angle of the rim holes.**

Hunan Sinoboom Intelligent Equipment Co., Ltd. recommends the replacement tire be of the same size, ply rating and brand as the original tire. For the tire part numbers of specific machine models, please refer to the Parts Manual of the corresponding machine. If you choose not to use the replacement tires recommended by Hunan Sinoboom Intelligent Equipment Co., Ltd., the following specifications should be adhered to:

- The ply rating/rated load capacity and size should be the same as the original tire or superior to it.
- The tire tread contact width should be the same as or superior to the original tire.
- The wheel diameter, width, offset dimensions and weight must be the same as the original tires.
- The replacement tire must be approved for the application by the tire manufacturer (including intended purpose, maximum travel speed, maximum tire load, etc.).
- Due to size differences between different tire brands, both tires on the same axle should be of the same brand.

NOTICE

Unless specifically approved by Sinoboom, do not replace foam-filled tires with pneumatic tires.

Replace Tire and Wheel Assembly

⚠ WARNING

Tighten the wheel nuts to the specified torque to prevent the wheel from loosening. Use a torque wrench to tighten the nuts. If no torque wrench is available use a socket wrench to tighten the nuts and then immediately have a service station or dealer tighten the nuts to the specified torque. Over-tightening will cause the nuts to break or permanently deform the bolt holes in the rims.

Performing tire replacement on flat, level, and solid ground:

1. Make sure the machine is in stowed position.
2. Turn the power-off switch to the OFF position and disconnect all power sources (such as battery charger) connected to the machine.
3. Use a jack with sufficient load capacity (rated load ≥ 1.5 times the machine's weight) to steadily lift the machine frame until the tire is about 50 mm (2 in) off the ground.

⚠ WARNING

Always maintain machine balance while jacking. Improper operation may cause tipping hazards.

4. Remove the fasteners in an alternating sequence, then remove the wheel.
5. Align the mounting holes of the new tire with the corresponding mounting holes on the hub, fit the flat surface of the gasket to the mounting surface (if gaskets are used). After applying medium-to-high-strength threadlocking adhesive to the bolt threads, install the bolts in sequence, and tighten the bolts diagonally to the torque specified in ***Torque Specifications*** .
6. Remove the jack as needed after installation.

10.3 INSPECTION AND PREVENTIVE MAINTENANCE SCHEDULE

This section provides safety and other vital information for machine operators. To extend the service life of the machine and ensure safe operation, all necessary inspections and maintenance work must be completed before the machine is put into service.

It is crucial to develop and adhere to a comprehensive inspection and preventive maintenance program. This manual outlines the regular inspections and maintenance procedures recommended by Hunan Sinoboom Intelligent Equipment Co., Ltd. Consult your national, regional or local regulations for aerial work platforms. The frequency of the inspection and maintenance must be increased as required by environmental conditions, requirements and frequency of usage.

Pre-delivery Inspection

The pre-delivery inspection shall be performed by qualified Sinoboom technicians.

A pre-delivery inspection shall be performed before each sale, lease or rental delivery.

Refer to the ***Inspection and Preventive Maintenance Schedule*** for items requiring a pre-delivery inspection. Refer to the corresponding section of this manual to perform inspection and maintenance procedures.

Pre-operation Inspection

A pre-operation inspection must be performed before each start or restart of work, change of operator, and after each maintenance operation. Refer to the pre-operation inspection section of the Operation Manual for detailed information. The Operation Manual must be entirely read and understood before performing the pre-operation inspection.

Regular Inspections

Regular inspections shall be performed by qualified Sinoboom technicians.

Regular inspections must be performed after the machine has been in service for 3 months or 250 hours, whichever comes first, or if it has been out of service for more than 3 months. The frequency of the inspection and maintenance must be increased as required by environmental conditions, requirements and frequency of usage.

The items included in the regular inspections are identical to the pre-delivery inspection.

Annual Inspection

An annual machine inspection must be performed once a year and no later than 13 months from the date of the previous annual inspection. Hunan Sinoboom Intelligent Equipment Co., Ltd. recommends this task be performed by a factory-trained service technician, a person recognized by Sinoboom as one who, by qualification, certificate and training, has successfully demonstrated the ability and proficiency to service, repair and maintain the Sinoboom model in question.

Refer to the ***Inspection and Preventive Maintenance Schedule*** for items requiring annual inspection, and refer to the corresponding section of this manual to perform inspection and maintenance procedures.

Preventive Maintenance

Preventive maintenance procedures shall be performed by qualified Sinoboom technicians. The frequency of the inspection and maintenance must be increased as required by environmental conditions, requirements and frequency of usage.

Refer to the ***Inspection and Preventive Maintenance Schedule*** for items requiring a preventive maintenance. Refer to the corresponding section of this manual to perform inspection and maintenance procedures.

Responsible Persons and Qualifications for Performing Inspection and Maintenance

Table 10-2

Inspection Type	Inspection Frequency	Primary Responsible Persons	Service Qualifications
Pre-operation Inspection	Before starting/restarting work, change of user, after each maintenance activity.	User or operator	Properly trained user or operator
Pre-delivery Inspection	Before each sale, lease or rental delivery	Owner, dealer or user	Qualified Sinoboom technician
Regular Inspections	In service for 3 months or 250 hours (whichever comes first) or out of service for more than 3 months	Owner, dealer or user	Qualified Sinoboom technician

Table 10-2 (continued)

Inspection Type	Inspection Frequency	Primary Responsible Persons	Service Qualifications
Annual Inspection	Once a year and no later than 13 months from the date of the previous annual inspection	Owner, dealer or user	Factory-trained service technician
Preventive Maintenance	At intervals specified in the ***Inspection and Preventive Maintenance Schedule***	Owner, dealer or user	Qualified Sinoboom technician

Inspection and Preventive Maintenance Schedule

Perform inspection and preventive maintenance for the items in the table below at the specified intervals. Maintenance and inspection intervals are calculated based on the months of service or the “accumulated operating hours” (cumulative working time) displayed on the ground controls (whichever comes first).

Inspection intervals are based on the use of the machine under normal operating conditions. The intervals should be shortened accordingly when operating in harsh environmental conditions.

Table 10-3 Inspection and Preventive Maintenance Schedule

Item	Interval		
	Before each delivery[1] or quarterly[2]	Semiannually[3]	Annually[4]
Platform assembly			
Platform	1	1	1
Guardrails and floor	2	2	2
Access gate	1, 2, 3	1, 2, 3	1, 2, 3
Pedal for platform extension	1, 2, 3	1, 2, 3	1, 2, 3
Platform wear pads (at the connection with scissor arm) and fasteners	1, 2	1, 2	1, 2
Safety belt anchorage point	1, 2, 7	1, 2, 7	1, 2, 7
Scissor arms assembly			
Scissor arms	1, 2	1, 2	1, 2
Safety strut	1, 2, 3	1, 2, 3	1, 2, 3
Bearings	1, 2, 5, 12	1, 2, 5, 12	1, 2, 5, 8, 12
Pivot pins, retaining rings and fasteners	1, 2	1, 2	1, 2
Chassis assembly			
Chassis	2	2	2
Chassis wear pads (at the connection with scissor arm)	1, 2, 5	1, 2, 5	1, 2, 5, 8
Tires	1, 2	1, 2	1, 2

Table 10-3 Inspection and Preventive Maintenance Schedule (continued)

Item	Interval		
	Before each delivery[1] or quarterly[2]	Semiannually[3]	Annually[4]
Wheel nuts	1[50]	1[50]	1[50]
Traveling and steering components	1, 2, 5	1, 2, 5	1, 2, 5
Bearings	1, 2, 5, 12	1, 2, 5, 12	1, 2, 5, 12
Chassis compartment at both sides	1, 2, 3	1, 2, 3	1, 2, 3
Ladder	1, 2, 5	1, 2, 5	1, 2, 5
Drive motor	1, 5, 6	1, 5, 6	1, 5, 6
Brake and brake release device	1, 5, 6	1, 5, 6	1, 5, 6
Lifting motor	1, 2, 3, 6	1, 2, 3, 6, 13	1, 2, 3, 6, 13
Gear pump	1, 2, 3, 6	1, 2, 3, 6	1, 2, 3, 6
Hydraulic system			
Hydraulic pump	1, 2, 3, 6	1, 2, 3, 6	1, 2, 3, 6
Hydraulic cylinder	1, 2, 3, 5, 6, 12	1, 2, 3, 5, 6, 12	1, 2, 3, 5, 6, 12
Hydraulic valves	1, 2, 3, 5, 6	1, 2, 3, 5, 6	1, 2, 3, 5, 6
Hydraulic hoses, pipelines and fittings	1, 2, 6	1, 2, 6	1, 2, 6
Hydraulic tank	1, 2, 3, 5, 6	1, 2, 3, 5, 6	1, 2, 3, 5, 6
Hydraulic tank air filter	1, 5, 6	1, 5, 6, 11	1, 5, 6, 11
Hydraulic oil filter	1, 5, 6	1, 5, 6	1, 5, 6, 11
Hydraulic oil	5, 6	5, 6	5, 6, 11
Electrical system			
Electrical harness, connectors	1, 2	1, 2	1, 2
Battery	1, 2, 6, 9, 12	1, 2, 6, 9, 12	1, 2, 6, 9, 12
Electrolyte	6	6	6
Charging function	3	3	3
Instruments, gauges, switches, lamps, horn, contactor, relay	1, 3	1, 3	1, 3
Functions and controls			
Platform controller	1, 3, 4, 7, 10	1, 3, 4, 7, 10	1, 3, 4, 7, 10
Ground controller	1, 3, 4, 7, 10	1, 3, 4, 7, 10	1, 3, 4, 7, 10
Function control lock, secondary guarding device and brake	1, 3, 10	1, 3, 10	1, 3, 10
Emergency stop switch (ground and platform)	1, 3, 10	1, 3, 10	1, 3, 10
Limit switches and power-off switch	1, 3, 10	1, 3, 10	1, 3, 10

Table 10-3 Inspection and Preventive Maintenance Schedule (continued)

Item	Interval		
	Before each delivery[1] or quarterly[2]	Semiannually[3]	Annually[4]
Overload limit function	1, 3, 10	1, 3, 10	1, 3, 10
Tilt alarm	1, 3, 10	1, 3, 10	1, 3, 10
Pothole protection device	1, 3, 10	1, 3, 10	1, 3, 10
Emergency lowering device	1, 3, 10	1, 3, 10	1, 3, 10
Drive function	1, 3, 10	1, 3, 10	1, 3, 10
Braking function	1, 3, 10	1, 3, 10	1, 3, 10
Others			
Operation Manual in the manuals compartment	10	10	10
All decals/labels complete, clear and secure	10	10	10
Annual inspection date of the machine	/	/	10
No unapproved changes or additions	10	10	10
All safety publications taken into account	10	10	10
General structural components and weldments	2	2	2
All fasteners, pins, protective guards and covers	1, 2	1, 2	1, 2
Greasing and lubricating according to specifications	10	10	10
Functional test of all systems	10	10	10
Paint and appearance	5	5	5
Inspection date stamped on the chassis	/	/	10
Notify Sinoboom of machine ownership (change)	/	/	10

Table 10-3 Inspection and Preventive Maintenance Schedule (continued)

Item	Interval		
	Before each delivery[1]or quarterly[2]	Semiannually[3]	Annually[4]
Note: [1] Before each sale, lease or shipment delivery; [2] In service for 3 months or 250 hours; or out of service for more than 3 months; [3] In service for 6 months or 500 hours; [4] Once a year and no later than 13 months from the date of the previous annual machine inspection; [50] The first inspection shall be performed once the machine reaches 50 hours in service for the first time. This occurs only once in the service life of the machine. [250] The first inspection shall be performed once the machine reaches 250 hours in service for the first time. This occurs only once in the service life of the machine. [NO.1] Before the machine is put into service for the first time			
Inspection activity (numerical codes): **1.** Check for correct installation (accurate position, firmly installed, tightened to the specified torque) **2.** Check for damage (cracks, cracked welds, deformation, wear, corrosion, excessive wear, gouges, abrasions and exposed threads) **3.** Check for normal function **4.** Check for normal return to neutral or “off” position (self-resetting switches return to neutral or “off” position after released) **5.** Clean and free of foreign objects **6.** Check for correct level, sealing and leaks **7.** Labels complete, clear and secure **8.** Check for appropriate dimensions/tolerances **9.** Fully charged **10.** Verify/perform **11.** Replace the oil or filter element **12.** Correctly lubricated **13.** Inspect the carbon brush			

EC Declaration of Conformity

WE

Hunan Sinoboom Intelligent Equipment Co., Ltd.
No.128 East Jinzhou Avenue, Ning Xiang High-tech Industrial Park, Changsha, Hunan, China
Declares the Machine models referred in this declaration
complies with the following derictive

The Machinery Directive: 2006/42/EC
The Electromagnetic compatibility Directive: 2014/30/EU

Applicable Harmonized standards:
EN ISO 12100:2010，EN 280-1:2022，EN 60204-1:2018

Product Name: Mobile elevating working platform
Product Model: XXXX
Serial Number: As per order
Trade Mark:
SINOBOOM
Authorised Representative and technical documentation for the machinery is available from and person authorized to compile the technical file:
Sinoboom B.V.
Nikkelstraat 26,NL-2984 AM Ridderkerk, The Netherlands

<Notified Body's Name, Notified Body's Number>
<Notified Body's Address>
The number of the EC-Type certificate: XXXX

Responsible for making this declaration is the

Manufacturer : Hunan Sinoboom Intelligent Equipment Co., Ltd.

Authorized representative established within the EU
Company Name: Sinoboom B.V.
Company Address: Nikkelstraat 26,NL-2984 AM Ridderkerk, The Netherlands

Issue date and place	Name and position	Signature and company stamp

PARTNERS IN ACCESS

Hunan Sinoboom Intelligent Equipment Co., Ltd.

No.128, East Jinzhou Avenue, Ningxiang High-tech Industrial Park, Changsha, Hunan, China

0086-0731-87116222 (Sales) & 0086-0731-87116333 (Service)
sales@sinoboom.com
www.sinoboom.com

North American Subsidiary

Sinoboom North America LLC

105 W Riley Rd, Houston, TX,
77047, US
E-mail: sales@sinoboom.us
Phone: +1 (800)867-2552

Europe Subsidiary

Sinoboom B.V.

Nikkelstraat 26
NL-2984 AM Ridderkerk
The Netherlands
E-mail: info@sinoboom.eu
Phone: +31 180 225 666

Poland Subsidiary

Sinoboom Poland sp.z o.o.

ul. Feliksa Tychowskiego 5A 61-248
Poznań, Poland
E-mail: sales@sinoboom.com

Australia Subsidiary

Sinoboom Intelligent Equipment Pty Ltd.

32-34 Marni St, Dandenong South, Vic
3175
E-mail: au@sinoboom.com
Phone: +61 484 118 324

Brazil Subsidiary

SINOBOOM Brasil LTDA

Av. Antonieta Piva Barranqueiros,
62 – Unidade 1 - Distrito Industrial, Jundiaí
- SP Brazil
E-mail: sales@sinoboom.com

Middle East Subsidiary

Sinoboom Middle East FZE

Q4-085，SAIF-Zone,
Sharjah, U.A.E.
E-mail: sales@sinoboom.com

Korea Subsidiary

Sinoboom Korea Co., Ltd.

E-mail: sales@sinoboom.com
Phone: +82-10-2533-1831

Mexican Subsidiary

SINOBOOM LATIN AMERICA, S. DE R. L.
DE C. V.
Camino a Napoles Km. 2+370(LI)
entronque a brecha Km.1(LI) del Ejido San
Miguel del Arenal, Silao de la Victoria, Gto.