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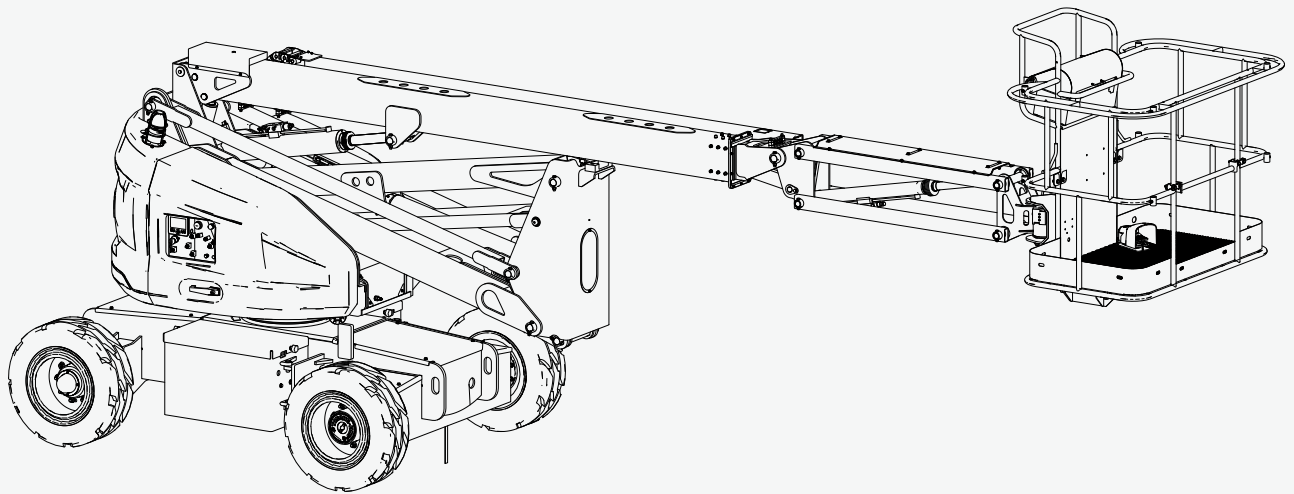
Dec 2021

# Operation Manual

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GTZZ14EJ/AB14EJ/AB460EJ

GTZZ16EJ/AB16EJ/AB520EJ



CE *ANSI* AS/NZS  EAC GB 

**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 the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, 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 more information go to: [www.P65warnings.ca.gov](http://www.P65warnings.ca.gov).  
For disposal, please follow your nation regulation.

## Manual revision history:

REV	DATE	DESCRIPTION	REMARK
A	Aug, 2020	Original issue of the manual	
B	Dec, 2021	Manual updating	

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# APPLICATION

Use the following table to identify the specific serial number for models included in this manual. Check the model of your machine before consulting the manual, and then use the correct manual according to the serial number of the model. See the nameplate on your machine to identify the model and serial number. (See **Decals/Nameplates Inspection** of the *Operation Manual* for details.)

Model	Trade Identification		Serial No.
	Metric	Imperial	
GTZZ14EJ	AB14EJ	AB460EJ	From 0300600309 to present
GTZZ16EJ	AB16EJ	AB520EJ	From 0300700423 to present

## NOTE:

- Product model is applied in product nameplate for distinction of products of different main parameters.
- Product trade identification is applied in marketing and machine decals for distinction of products of different main parameters, and can be classified as metric type and imperial type: The metric type of trade identification is applicable to machines for countries/regions using metric system or as specially required by customers; The imperial type of trade identification is applicable to the machines for countries/regions using imperial system or as specially required by customers.

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# STATEMENTS

Hunan Sinoboom Intelligent Equipment Co., Ltd. (Hereinafter referred to as Sinoboom) will upload the latest product manual information to the website [www.sinoboom.com](http://www.sinoboom.com) as soon as possible. However, due to continuous product improvement, the information in this manual is subject to change without prior notice.

This manual covers the basic parts information of one or more products. Therefore, please use this manual according to your needs. If you find problems in the manual or have suggestions for improvement, feel free to share your feedback with Sinoboom, and we will address these issues as soon as possible.

Feel free to consult and download the *Operation Manual*, *Maintenance Manual* and *Parts Manual* of the products you need online at [www.sinoboom.com](http://www.sinoboom.com).

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# INTRODUCTION

Thank you for choosing and using the machinery of Hunan Sinoboom Intelligent Equipment Co., Ltd. Always read, understand and become familiar with the operation requirements of the machine and its associated safety procedures before operating, maintaining and repairing the machine. Operating the machine without becoming familiar with its specific operation requirements and safety procedures poses serious risks. Operators who follow safety rules and operate the machine carefully and effectively will prevent personal injury, property loss and accidents.

Use this machine only to transport tools to work locations and for performing tasks on the work platform. Operators must be competent and must obtain training to carefully use the machine and follow safety procedures. Only trained and authorized personnel may operate the machine.

This manual guides the operator in operating and using the machine. The operator is responsible for reading, understanding and implementing the operation and safety procedures in this manual and for following the manufacturer's instructions before beginning any work. Read, understand and follow all safety rules and operating instructions. The operator must also consider the machine's uses and limitations and the conditions at the jobsite before using this machine. Strictly following all safety requirements in this manual is critical.

Consider this manual a part of the machine, along with *Maintenance Manual* and *Parts Manual*, and always keep the manuals with the machine. The owner or administrator of the machine shall offer all manuals and other necessary information provided by the machine manufacturer regarding the daily inspection and maintenance to each of the renters. If the machine is sold, the owner or administrator must pass along the manuals and other necessary information to the purchaser. The owner or administrator of the machine shall also provide the manufacturer's maintenance information to the person responsible for maintaining the machine.

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

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# 1 MACHINE SPECIFICATIONS

Table 1-1 GTZZ14EJ specifications

MEASURE	AB14EJ (METRIC)	AB460EJ (IMPERIAL)
<b>DIMENSION PARAMETERS</b>		
Max platform height	14 m	45 ft 11 in
Max working height	16 m	52 ft 6 in
Max horizontal reach	7.6 m	24 ft 11 in
Max up and over height	7.8 m	25 ft 7 in
Overall length (stowed)	6 m	19 ft 8 in
Overall width (stowed)	1.73 m	5 ft 8 in
Overall height (stowed)	2 m	6 ft 7 in
Wheelbase	1.9 m	6 ft 3 in
Ground clearance	0.22 m	8.7 in
Tire size (spec / type)	Optional 250–15 (non-marking) 250–15 (solid) 240/55D17.5/foam-filled 240/55D17.5/foam-filled, non-marking 27×10.5-15 (off-road, splayed, foam-filled) 27×10.5-15 (off-road, splayed, non-marking, foam-filled)	
Platform dimension (L×W×H)	Optional 1.45×0.85×1.1 m 1.83x 0.85 x 1.1 m	Optional 57×33.5×43 in 72×33.5×43 in
<b>PERFORMANCE PARAMETERS</b>		
Platform capacity	230 kg (unrestricted / 2 persons&tools)	507 lb (unrestricted / 2 persons&tools)
Turntable rotation / continuous	355° / uncontinuous	
Platform rotation	160°	
Max drive speed (stowed)	5.2 km/h	3.2 mph
Max drive speed (raised)	0.8 km / h	0.5 mph
Drive mode (drive×steer)	2WD×2WS	
Gradeability	30% / 17°	
Turntable tailswing	0 m	0 in
Max allowable inclination	5°	
Turning radius (inside)	1.15 m	3 ft 9.2 in
Turning radius (outside)	3.51 m	11 ft 6.2 in

**Table 1-1 GTZZ14EJ specifications (continued)**

MEASURE	AB14EJ (METRIC)	AB460EJ (IMPERIAL)
Max allowable side force	400 N	90 lbf
Max operating noise level	72dB	
IP grade	IP54	
POWER PARAMETERS		
Engine (rated power, rated rpm)	5kW, 48VAC	
Hydraulic tank capacity	40 L	8.8 gal (UK) / 10.6 gal (US)
Fuel tank capacity	52 L	11.4 gal (UK) / 13.7 gal (US)
Hydraulic system pressure	21 MPa	3045 Psi
Battery (number×voltage, capacity)	Optional 8×6V, 390Ah 2×24V, 315Ah	
System voltage	48 VDC	
Control voltage	12 VDC	
GROUND BEARING DATA		
Max tire load	3580 kg	7893 lb
Tire contact pressure	724.9 725 KPa	105.2 psi
ENVIRONMENT REQUIREMENT		
Max allowable wind speed	12.5 m/s	28 mph
Max allowable altitude	1000 m	3280 ft
Allowable ambient temperature (lead-acid battery)	-10°C ~ 40°C	14°F ~ 104°F
Allowable ambient temperature (-lithium battery)	-20°C ~ 40°C	-4°F ~ 104°F
Max allowable RH	90%	
Storage environment	Stored at -20°C to 50°C (-4°F to 122°F) in a well-ventilated environment with 90% relative humidity (20°C [68°F]), and away from rain, sun, corrosive gas, inflammables and explosives.	
WEIGHT		
Gross weight (unladen)	7100 kg	15653 lb

**Table 1-2 GTZZ16EJ specifications**

MEASURE	AB16EJ (METRIC)	AB520EJ (IMPERIAL)
DIMENSION PARAMETERS		
Max platform height	15.7 m	51 ft 6 in
Max working height	17.7 m	58 ft 1 in

**Table 1-2 GTZZ16EJ specifications (continued)**

MEASURE	AB16EJ (METRIC)	AB520EJ (IMPERIAL)
Max horizontal reach	9.3 m	30 ft 6 in
Max up and over height	7.8 m	25 ft 7 in
Overall length (stowed)	6.8 m	22 ft 4 in
Overall width (stowed)	1.9 m	6 ft 3 in
Overall height (stowed)	2 m	6 ft 7 in
Wheelbase	1.9 m	6 ft 3 in
Ground clearance	0.22 m	8.7 in
Tire size (spec / type)	Optional 250-15 (non-marking) 250-15 (solid) 240/55D17.5/foam-filled 240/55D17.5/foam-filled, non-marking 27×10.5-15 (off-road, splayed, foam-filled) 27×10.5-15 (off-road, splayed, non-marking, foam-filled)	
Platform dimension (L×W×H)	Optional 1.45 x 0.85 x 1.1 m 1.83 x 0.85 x 1.1 m	Optional 57×33.5×43 in 72 x 33.5 x 43 in
PERFORMANCE PARAMETERS		
Platform capacity	230 kg (unrestricted / 2 persons&tools)	507 lb (unrestricted / 2 persons&tools)
Turntable rotation / continuous	355° / uncontinuous	
Platform rotation	160°	
Max drive speed (stowed)	5.2 km/h	3.2 mph
Max drive speed (raised)	0.8 km / h	0.5 mph
Drive mode (drive×steer)	2WD×2WS	
Gradeability	30% / 17°	
Turntable tailswing	50 mm	2 in
Max allowable inclination	5°	
Turning radius (inside)	0.7 m	2 ft 3.5 in
Turning radius (outside)	3.31 m	10 ft 10.3 in
Max allowable side force	400 N	90 lbf
Max operating noise level	72dB	
IP grade	IP54	
POWER PARAMETERS		
Engine (rated power, rated rpm)	5KW, 48VAC	
Hydraulic tank capacity	40 L	8.8 gal (UK) / 10.6 gal (US)
Fuel tank capacity	52 L	11.4 gal (UK) / 13.7 gal (US)

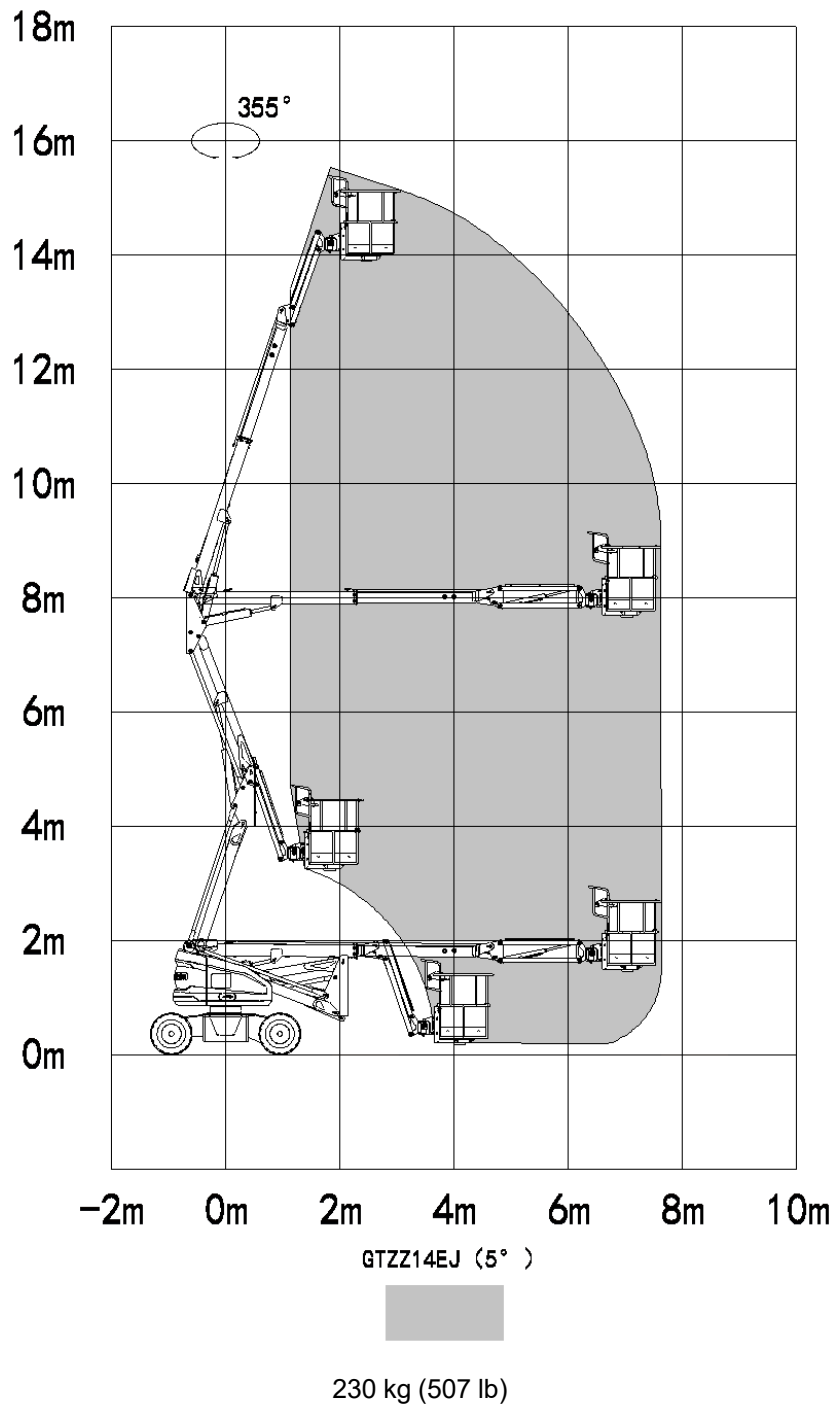
**Table 1-2 GTZZ16EJ specifications (continued)**

MEASURE	AB16EJ (METRIC)	AB520EJ (IMPERIAL)
Hydraulic system pressure	21 MPa	3045 Psi
Battery (number×voltage, capacity)	8×6V, 420Ah	
System voltage	12 VDC	
Control voltage	12 VDC	
GROUND BEARING DATA		
Max tire load	3760 kg	8289 lb
Tire contact pressure	740.1 715 KPa	103.7 psi
ENVIRONMENT REQUIREMENT		
Max allowable wind speed	12.5 m/s	28 mph
Max allowable altitude	1000 m	3280 ft
Allowable ambient temperature (lead-acid battery)	-10°C ~ 40°C	14°F ~ 104°F
Allowable ambient temperature (-lithium battery)	-20°C ~ 40°C	-4°F ~ 104°F
Max allowable RH	90%	
Storage environment	Stored at -20°C to 50°C (-4°F to 122°F) in a well-ventilated environment with 90% relative humidity (20°C [68°F]), and away from rain, sun, corrosive gas, inflammables and explosives.	
WEIGHT		
Gross weight (unladen)	7300 kg	16094 lb

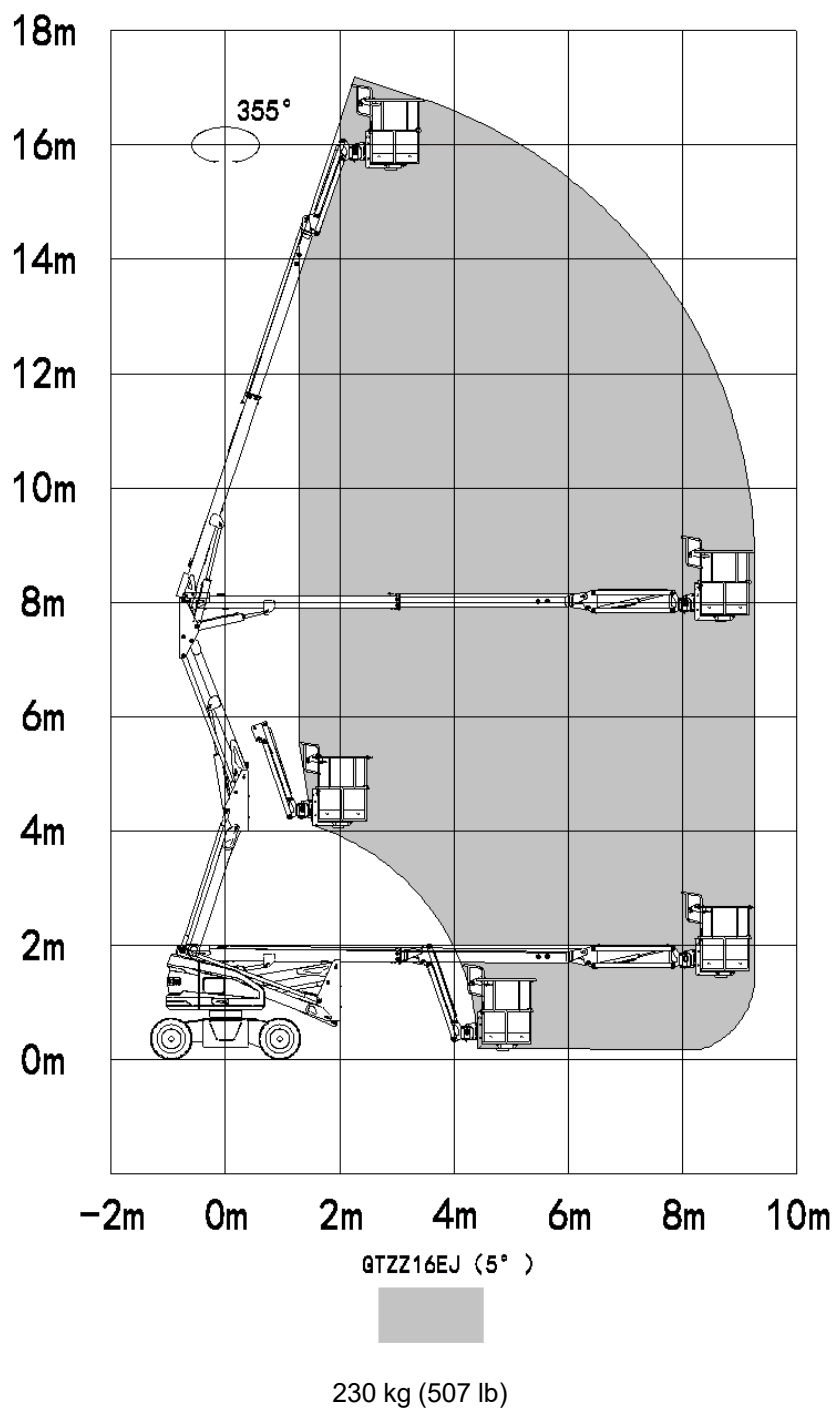
**Note:**

- a) The working height adds 2m (6ft 7in) of human height to platform height.
- b) The ground bearing data is approximate value, not factoring the different options, thus it serves only in adequately safe conditions
- c) In different areas, hydraulic oil, engine oil, coolant, fuel and lubrication should be added in accordance with the environmental temperature.
- d) In cold weather, auxiliary devices are needed to start the machines.
- e) The loads of persons, accessories, tools and materials are factored into the rated platform capacity.

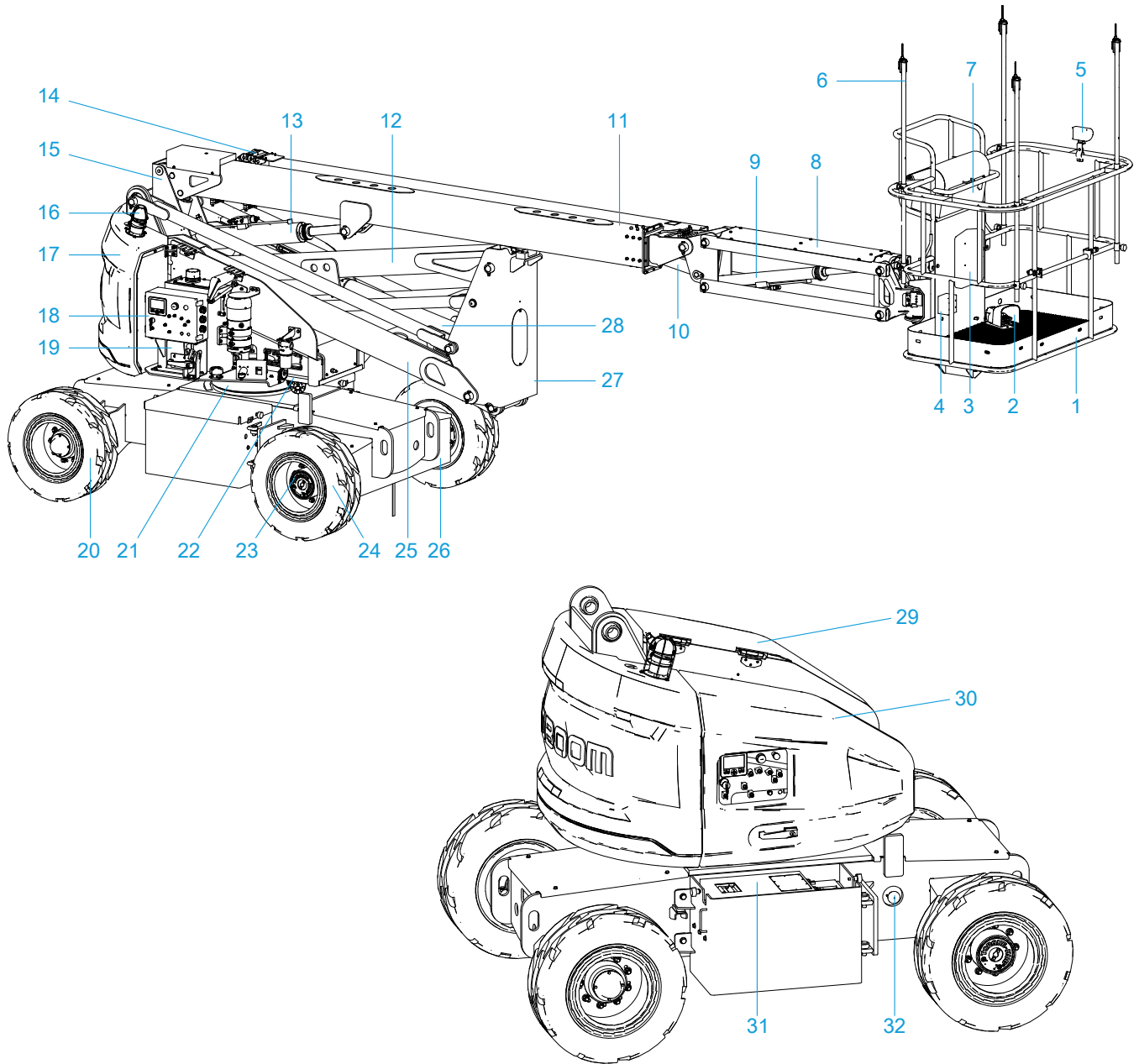
GTZZ14EJ (5°) Chart of motion



GTZZ16EJ (5°) Chart of motion



# 2 MACHINE COMPONENTS



**Figure 2-1**

**Table 2-1**

1.Work platform	12.Upper foldable boom	23. Drive reducer
2. Foot switch	13. Main lift cylinder	24.Main power switch
3.Manual storage container (optional)	14. Cable track system	25.Lower foldable boom
4. AC Power Socket	15. Upper connector	26. Chassis assembly

**Table 2-1 (continued)**

5. Working Light (optional)	16. Flash Light	27. Lower connector
6. Limit device (optional)	17. Counterweight	28. Lift cylinder of foldable boom
7. Platform controller	18. Ground controller	29. Turntable cover, RH
8. Jib boom	19. Hydraulic tank	30. Turntable cover, LH
9. Jib boom cylinder	20. Front wheel	31. Battery
10. Upper leveling cylinder	21. Slewing reducer	32. Power-off switch
11. Main boom	22. Turntable assembly	

## Machine positions

### Operating/raised position :

Main boom telescoping/luffing or foldable boom luffing, and the display indicating the working status.

### Non-operating position :

Main boom and foldable boom both retracted to non-working status and the display indicating the non-working status.

### Storage/stowed position :

Main boom, foldable boom and jib boom all retracted to storage/stowed status.

### Transport position :

Main boom and foldable boom both retracted, jib boom and platform adjusted as necessary for transport by trailer.

# 3 SAFETY

Read, understand and comply with the safety rules and regulations of your workplace and your government.

Before using the machine, ensure the operator is properly trained and qualified in safely operating the machine. The training includes but is not limited to :

- Warning and instruction decals on the machine
- Pre-operation inspection
- Any factors that may affect the machine stability
- Common hazards and countermeasures
- Jobsite inspection
- Functions of all controls and associated knowledge, including emergency control.
- Personal protection equipment that suits the task, workplace and environment.
- Safety operation
- Transporting the machine
- Measures against unauthorized use
- Operating instructions

Understand that as the operator you have the responsibility and right to shut down the machine in case of failure with the machine or other emergency at your workplace.

NOTICE
<p><i>People suffering from heart disease, hypertension, epilepsy and other diseases and people who fear heights must never operate or use this machine. Also, people who have alcohol or drugs in their system, or experience excessive fatigue or depression, are prohibited from operating or using this machine.</i></p>

## SAFETY DEFINITIONS



This safety alert symbol appears with most safety statements. It means attention, become alert, your safety is involved! Please read and abide by the message that follows the safety alert symbol.

<b>DANGER</b>
<p><b>Indicates a hazardous situation that, if not avoided, <i>will</i> result in death or serious injury.</b></p>

<b>WARNING</b>
<p><b>Indicates a hazardous situation that, if not avoided, <i>could</i> result in death or serious injury.</b></p>

<b>CAUTION</b>
<p><b>Indicates a hazardous situation that, if not avoided, <i>could</i> result in minor or moderate injury.</b></p>

<b>NOTICE</b>
<p><i>Indicates a situation that can cause damage to the engine, personal property and/or the environment, or cause the equipment to operate improperly.</i></p>

**NOTE:** Indicates a procedure, practice or condition that should be followed in order for the engine or component to function in the manner intended.

## REPORTING ACCIDENTS

In case of any accident involving the machinery of Hunan Sinoboom Intelligent Equipment Co., Ltd., notify Hunan Sinoboom Intelligent Equipment Co., Ltd. Immediately, even if no personal injury or property damage occurs during the accident. Contact Hunan Sinoboom Intelligent Equipment Co., Ltd. by telephone and provide all necessary details. 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's warranty.

<b>NOTICE</b>
<p><i>Thoroughly inspect the machine and all its functions after any accident, being sure to test first from the ground controller and then from the platform controller. Ensure the machine's lifting height does not exceed 3 m(9.8 ft) until all damage has been repaired and all controllers operate properly.</i></p>

## ELECTROCUTION HAZARDS

**NOTE:** This machine is not insulated and does not have an electric shock protection function.

All operators and managers shall comply with national or local regulations regarding the minimum safe distance of live conductors above the ground. In the absence of such requirements, operators and managers should follow the minimum safety distance requirements in [Table 3-1 Minimum Safe Distance](#), [page 3-2](#).

**WARNING**

ELECTRICAL SHOCK HAZARDS

- Always maintain a safe distance from power lines and electrical equipment in accordance with applicable government regulations and see [Table 3-1 Minimum Safe Distance](#), [page 3-2](#).
- Consider platform and boom movement, wire swinging or drooping, beware of strong winds or gusts, and do not operate the machine when there is lightning or heavy rain.
- If the machine comes into contact with live wires, keep away from the machine. Personnel on the ground or on the platform must not touch or operate the machine until the power is switched off.
- Do not use the machine as a ground wire during welding and polishing operations.

## TIPPING HAZARDS AND RATED LOAD

Maximum rated load bearing capacity of the platform:

**Table 3-2**

GTZZ14EJ	
Metric	230kg (unrestricted/2 persons & tools)
Imperial	507 lb (unrestricted/2 persons & tools)
GTZZ16EJ	
Metric	230kg (unrestricted/2 persons & tools)
Imperial	507 lb (unrestricted/2 persons & tools)

**Table 3-1 Minimum Safe Distance**

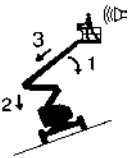
Voltage (Phase to Phase, kV)	Minimum Safe Distance (m/ft)
0-50	3.05 (10)
50-200	4.60 (15)
200-350	6.10 (20)
350 -500	7.62 (25)
500 -750	10.67 (35)
750 -1000	13.725 (45)

**⚠ WARNING**

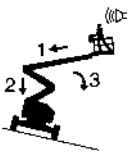
**TIPPING HAZARDS**



- Personnel, equipment and materials on the platform must not exceed the maximum load capacity.
- Only raise or extend the boom when the machine is on solid, level ground.
- Select only the low speed when driving the machine on a slope.
- Do not use the tilt alarm as a level indicator. The tilt alarm on the platform will sound only if the machine is heavily tilted.
- If the tilt alarm sounds when the machine drives up a slope, please lower the boom per the following procedure and move the machine onto firm level ground. Be sure not to rotate the boom when lowering.



1. Lower the main boom;
  2. Lower foldable boom;
  3. Retract the telescopic boom.
- If the tilt alarm sounds when the machine drives down a slope, please lower the boom per the following procedure and move the machine onto firm level ground. Be sure not to rotate the boom when lowering.



1. Retract the telescopic boom;
  2. Lower foldable boom;
  3. Lower the main boom.
- Do not drive faster than 0.8 km/h (0.5 mph) when the platform is raised.
  - When the platform is raised, the machine cannot travel on uneven terrain, unstable surfaces or in other dangerous conditions.
  - Do not operate the machine during strong winds or gusts, and do not increase the surface area of the platform or load. Increasing the area exposed to the wind will reduce the stability of the machine.
  - When the machine is on rough ground, with gravel or other uneven surfaces, or near holes

**⚠ WARNING**

**TIPPING HAZARDS**

- and steep slopes, maintain a minimum distance of 0.6m (2ft) and reduce the speed.
- When on the platform do not push and pull objects outside of it. The maximum lateral force allowed is: 400 N (90 lbf).
- Tow the machine only from the tiedown/lifting points on the chassis.
- Never use the boom or platform to stabilize or support any objects outside of the machine.
- Do not change any machine parts that may affect safety and stability.
- Do not replace key parts that affect machine stability with different weights or specifications.
- Do not modify or change moving aerial platforms without the manufacturer's prior written permission.
- On the platform, do not attach an additional device for placing tools or other materials to the guardrail. This will increase the platform weight, surface area and load.
- Do not place on, or fasten any overhanging load to any part of this machine.
- Do not place ladders or scaffolding on the platform or any parts of the machine.
- Do not use the machine on a moving or active surface or on a vehicle. Ensure all tires are in good condition, the slotted nuts tightened and the cotter pins complete.
- Do not use a battery that weighs less than the original lead acid battery (50kg[110 lb]) or lithium battery (65kg[143 lb]), and do not remove or modify the counterweight or other parts of the battery box. The battery not only provides power, it also serves as a counterweight. The battery is vital to maintaining the stability of the machine.

**⚠ WARNING**

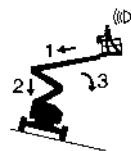
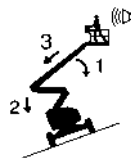
**TIPPING HAZARDS**

- Do not use the platform or boom assembly to push other machines or objects.
- Do not let the platform or boom assembly touch the nearby structures.
- Do not tie off the platform with rope or other binding materials to the nearby structures.
- Do not put a load outside the platform.
- When the platform is caught or stuck or when other objects in the vicinity impede its normal movement, do not use the platform controller to lower the platform. If you intend to lower the platform with a ground controller, you must operate it only after all personnel have left the platform.

**WORK ENVIRONMENT HAZARDS**

**⚠ WARNING**

**UNSAFE JOBSITE HAZARDS**



- Do not operate the machine on surfaces, edges or potholes that cannot bear the weight of the machine. Raise or extend the boom only when the machine is on firm, flat ground.
- Never travel on uneven terrain or unstable surfaces or in other dangerous conditions when raising the platform.
- When the machine is on rough ground, with gravel or other uneven surfaces, or near holes and steep slopes, maintain a minimum distance of 0.6m(2ft) and reduce the speed.
- Do not use the tilt alarm as a horizontal indicator. The tilt alarm on the platform will sound only when the machine is heavily tilted.
- If the tilt alarm sounds when the machine drives up a slope, lower the boom per the following procedure and move the machine onto firm level ground. Be sure not to rotate the boom while lowering.
  1. Lower the main boom;
  2. Lower foldable boom;
  3. Retract the telescopic boom.
- If the tilt alarm sounds when the machine drives down a slope, lower the boom per the following procedure and move the machine onto firm level ground. Be sure not to rotate the boom while lowering.
  1. Retract the telescopic boom;
  2. Lower foldable boom;
  3. Lower the main boom.
- Running speed should not exceed 0.8 km/h (0.5 in./second) when the platform rises.
- If the machine can be used outdoors, never operate it during strong winds or gusts. Do not lift

**⚠ WARNING**

**UNSAFE JOBSITE HAZARDS**

the platform when the wind speed exceeds 12.5 m/s (28 mph). If the wind speed exceeds 12.5 m/s (28 mph) after the platform is lifted, fold the platform and do not continue to operate the machine.

- Do not drive or lift the machine on slopes, steps or vaulted surfaces that exceed the maximum gradeability of the machine.

**⚠ WARNING**

**UNSAFE JOBSITE HAZARDS**

- Do not lift the machine on slopes of more than 5° and do not drive laterally on slopes of more than 5°.

Before or during machine operation, check the possible hazards on the jobsite and beware of the restrictions within the environment, including flammable and explosive gas/dust. If the machine is used in any other applications, or by any other means, as specified by **Sinoboom**, it must be approved or guided by the manufacturer.

Table 3-3

BEAUFORT NUMBER	METERS/SECOND	MILE/HOUR	DESCRIPTION	GROUND CONDITION
0	0 ~ 0.2	0 ~ 0.5	Calm	Calm. Smoke rises vertically.
1	0.3 ~ 1.5	1 ~ 3	Light air	Wind motion visible in smoke.
2	1.6 ~ 3.3	4 ~ 7	Light breeze	Wind felt on exposed skin. Leaves rustle.
3	3.4 ~ 5.4	8 ~ 12	Gentle breeze	Leaves and smaller twigs in constant motion.
4	5.5 ~ 7.9	13 ~ 18	Moderate breeze	Dust and loose paper rise. Small branches begin to move.
5	8.0 ~ 10.7	19 ~ 24	Fresh breeze	Smaller trees sway.
6	10.8 ~ 13.8	25 ~ 31	Strong breeze	Large branches in motion. Flags waving near horizontal. Umbrella use becomes difficult.
7	13.9 ~ 17.1	32 ~ 38	Near gale/moderate gale	Whole trees in motion. Effort needed to walk against the wind.
8	17.2 ~ 20.7	39 ~ 46	Fresh gale	Twigs broken from trees. Cars veer on road.
9	20.8 ~ 24.4	47 ~ 54	Strong gale	Light structure damage.

**NOTICE**

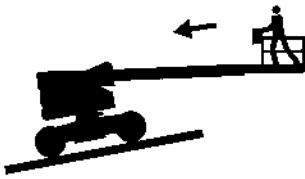
Maximum gradeability is suitable for machines with platform retracted. Gradeability: 30%/17°

Gradeability means the maximum allowable tilt angle of the machine when it is on solid ground and the platform is only capable of carrying one person. As the weight of the machine's platform increases, the machine's climbing capacity reduces.

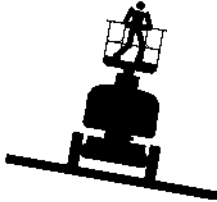
Maximum gradeability:



Uphill: 30%/17°



Downhill: 30%/17°



Side slope: 9%/5°

## UNSAFE OPERATION HAZARDS

At a minimum, operators must operate and maintain the machine as stated in the *Operation Manual* and in the *Maintenance Manual* in addition to following more stringent industry regulations and workplace rules. Never engage in unsafe machine operation.

Do not use the machine in the following situations :

- Unrelated personnel/equipment is present in the working envelope of the machine.
- Use as a crane (except the custom-made ones with such functions).
- Use on the truck, trailer, tracked vehicle, ship, scaffold and the like without written consent by the manufacturer or a qualified professional.
- Improper securing of the machine to another object by just sitting it against, fastening or binding.
- Stunt or imprudent use of the machine.
- Overloaded or over-moment situation.
- Other situations as specified in the Manuals.

### WARNING

#### UNSAFE OPERATION HAZARDS



- Do not push any object outside the platform. The maximum lateral force allowed is 400N (90 lbf).
- Tow the machine only from the tiedown/lifting points on the chassis.
- Never use the boom or platform to stabilize or support any objects outside of the machine.
- Do not modify any component that may affect the machine safety and stability.
- Do not replace key parts that affect machine stability with the ones of different weights or specifications.
- Do not change or modify moving aerial platforms without the manufacturer's written permission.
- On the platform, do not attach an additional device for placing tools or other materials to the guardrail. This will increase the platform weight, surface area and load.
- Do not put ladders or scaffolding on the platform or any part of this machine.
- Do not use the machine on any mobile or movable surface or vehicle. Ensure all tires are in good condition, the slotted nuts tightened and the cotter pins complete.
- Do not use a battery that weighs less than the original lead acid battery (55kg[121 lb]) or lithium battery (75kg[165 lb]), and do not remove or modify the counterweight or other parts inside the battery box. The battery not only provides power, it also serves as a counterweight. The battery is vital to maintaining the stability of the machine.
- Do not place or attach any suspended load onto any part of the machine.

**⚠ WARNING**

**UNSAFE OPERATION HAZARDS**

- Do not use the machine as a crane.
- Do not use the platform to push the machine or other objects.
- Do not allow the platform or boom to touch structures.
- Do not use rope or other binding materials to tie the platform or boom onto nearby structures.
- Do not put the load outside the platform.
- When the platform is caught or stuck or when other objects in the vicinity impede its normal movement, do not use the platform controller to lower the platform. If you intend to lower the platform with a ground controller, you must operate it only after all personnel have left the platform.
- When one or more of the machine's tires are off the ground, evacuate all personnel before attempting to stabilize the equipment. Use a crane, forklift or other suitable equipment to stabilize the machine.

**⚠ WARNING**

**FALL HAZARDS**






- Each person on the platform must wear harnesses or use safety equipment consistent with government regulations. Fasten the cable to the fixed point of the platform. Never fasten the cable of more than one person to a fixed point on the platform.
- Do not sit, stand or crawl on the guardrails. When on the platform always remain standing on the platform floor.
- Do not enter or exit the platform through the boom.
- Keep the platform floor free of obstacles.
- Do not allow mud, oil stains, grease or other slippery substances reside on the footwear or platform floor.
- Do not enter or exit the platform unless the machine is fully in stowed position.
- Close the platform entrance door before operating the machine.
- Do not operate the machine if the handrails are not properly installed and the platform entry door is not closed.

## FALL HAZARDS

At a minimum, operators must operate and maintain the machine as stated in the operation manual and in the maintenance manual in addition to following more stringent industry regulations and workplace rules.

## COLLISION HAZARDS

At a minimum, operators must operate and maintain the machine as stated in the *Operation Manual* and in the *Maintenance Manual* in addition to following more stringent industry regulations and workplace rules.

### WARNING

#### COLLISION HAZARDS



- Pay attention to the field of sight and the presence of blind spots when moving or operating the machine.
- The non-staff must maintain a minimum of 1.8m (5.9ft) distance from the machine while it is travelling or swinging.
- When the work platform of a moving machine is approx.2m away from the obstructions, use the boom lifting/lowering function (rather than the driving function) to get close to the obstructions.
- Switch to the low speed gear before parking the machine that drives at high speed.
- Do not use the high speed gear when the machine is driving reverse or in restricted or enclosed work area.
- Check the work area to avoid ground and overhead obstructions or other possible risks.
- Be sure to exercise caution when using the platform controller and ground controller. Color-marked directional arrows show the function of travel, lift and steering.
- Users must comply with user, workplace and government rules regarding the use of personal protective equipment (hard hats, safety belts and gloves, etc.).
- Place the machine on level ground or in a secured position before releasing the brakes.
- Only lower the platform when there are no people or obstructions in the area beneath it.
- When the machine is conducting aerial work, warn the staff/non-staff not to work, stand or walk under the raised boom or platform.
- Limit the speed of travel according to ground conditions, crowding, gradients, the presence and location of personnel and any



### WARNING

#### COLLISION HAZARDS

- other factors that may cause collisions.
- Do not operate the machine on any crane or overhead traveling device unless the crane control is locked or precautions have been taken to prevent any potential collision.
- Never operate a machine dangerously or for fun.

## CRUSH HAZARDS

A potential crush hazard exists during movement of the machine. Always keep body parts and clothing a safe distance from the machine during machine operation.




### WARNING

#### CRUSH HAZARDS





- Do not place your hands and arms where they may become crushed or trapped.
- Do not work under the platform or the boom when the boom is not protected by a crane.
- Maintain good judgment and planning when using the controller on the ground to operate the machine. Maintain proper distance between operator, machine and fixed object.

## EXPLOSION AND FIRE HAZARDS

 <b>WARNING</b>	
<b>EXPLOSION AND FIRE HAZARDS</b>	
	<ul style="list-style-type: none"> <li>Do not use the machine or charge the battery in hazardous or potentially flammable or explosive atmospheres.</li> </ul>
	<ul style="list-style-type: none"> <li>For the engine-powered machines, never add fuel while the engine is still running, and only add fuel when the place is well ventilated and free of flame, spark or any other hazards that may cause explosion.</li> <li>Never spray ether on the engine equipped with glow plug.</li> </ul>



## DAMAGED MACHINE HAZARDS

<b>NOTICE</b>
<p><i>To avoid machine damage, follow all operation and maintenance requirements in the Operation Manual and the Maintenance Manual.</i></p>

 <b>WARNING</b>	
<b>DAMAGED MACHINE HAZARDS</b>	
	<ul style="list-style-type: none"> <li>Do not use the machine if it is damaged or not in proper operating condition.</li> <li>Thoroughly inspect and test for all functions of the machine before use. Immediately mark and stop damaged or faulty machines.</li> <li>Ensure that all maintenance operations have been performed in accordance with the <i>Operation Manual</i> and the <i>Maintenance Manual</i>.</li> <li>Make sure all labels are in place and are legible.</li> <li>Ensure that the <i>Operation Manual</i> and <i>Maintenance Manual</i> are sound, easy to read and stored in the storage compartment on the platform.</li> </ul>


## BODILY INJURY HAZARDS

Always follow all operation and maintenance requirements in the Operation Manual and the Maintenance Manual.



 <b>WARNING</b>	
<b>BODILY INJURY HAZARDS</b>	
	<ul style="list-style-type: none"> <li>Do not operate the machine when there are oil spills/leaks. Oil spills or leaks in hydraulic fluids may penetrate and burn the skin.</li> <li>Always operate the machine in well ventilated atmosphere to prevent carbon monoxide poisoning.</li> <li>Be extremely careful when entering or exiting the platform. Fully lower the elevated boom and get the platform close to the ground to facilitate entry and exit. When entering or exiting the machine, face towards the machine and always keep three-point contact with the machine using two feet and one hand or two hands and one foot.</li> </ul>

**NOTE:** The operator must carry out maintenance during the pre-operation inspection only. During operation, keep the left and right doors of the chassis closed and locked. Only trained service personnel can open the left and right doors to repair the machine.


## BATTERY HAZARDS

 **WARNING**



**FIRE AND EXPLOSION HAZARD**


- Batteries contain sulfuric acid and generate explosive mixtures of hydrogen and oxygen gases. Keep any device that may cause sparks or flames (including cigarettes/smoking materials) away from the battery to prevent explosion.
- Do not touch the battery terminals or cable clips with tools that may cause sparks.
- Avoid charging the battery in direct sunlight.
- The battery shall be charged at a well-ventilated place.
- In case of heating, deformation, leakage, abnormal smell or smoke during the use of the battery, stop using the battery and place the battery in an open place away from the crowd.
- Do not throw the battery into the fire or heater.

 **WARNING**


**ELECTRICAL SHOCK HAZARDS**

- Contact with live circuits may lead to death or serious injury. Always wear protective glasses or goggles and protective clothing
- Remove all rings, watches and other accessories.

 **WARNING**

**CHEMICAL BURN HAZARD**



- Avoid spilling or contacting battery acid with unprotected skin. Seek medical attention immediately if battery acid contacts skin.
- Should the battery acid spill out, use bicarbonate (baking soda) mixed with water to neutralize the acid.

**⚠ WARNING**

**BATTERY HAZARD**



- Be sure to read and follow the recommendations given by the battery manufacturer regarding how to correctly use and maintain the battery.
- The battery charger can only be connected to the grounded three-plug AC power socket. Ensure that the charger is in normal working state before charging.
- Please use the charger provided by the manufacturer to charge the battery.
- The battery is only applicable for its matched equipment. Do not use the battery in other cases.
- Only the properly trained personnel authorized by the workplace are allowed to remove the battery from the machine.
- Before replacing the battery, be sure to identify the appropriate number of personnel and the lifting method.
- Do not allow sharp objects to contact with the battery, otherwise the battery membrane will easily get damaged.
- Other objects and tools shall not be placed on the battery to prevent short circuit of the battery.
- Please always keep the battery upright. If the battery is placed sideways or obliquely, the liquid in the battery may overflow.
- Do not short circuit the positive and negative poles of the battery.
- Do not use the battery with the positive or negative poles installed inversely.
- Do not directly connect the battery to a power outlet.
- Do not knock, throw or step on the battery.
- Do not immerse the battery into the water, acidic, alkaline and salt-containing solutions. Keep the battery away from rain.
- Never modify the battery system to avoid serious accidents.

**⚠ WARNING**


**BATTERY HAZARD**

- Turn off the main power switch on the battery if the machine is unused for a long time.
- Waste batteries may cause danger. Please do not discard them at will. Please contact the battery recycling company for discarding.
- Non-professional personnel are not allowed to repair and maintain the system, otherwise personal injury or battery damage may be caused.
- Non-professional personnel are not allowed to modify parameters and detect signal lights when the system is operating, otherwise personal injury or battery damage may be caused.
- Non-professional personnel are not allowed to dismantle the battery case, otherwise damage may be caused.



**NOTICE**

*The battery capacity attenuation and failure caused by over-discharge (continued use with less than 10% power) or power loss from long-term non-charging (- failure to charge in time for more than 3 days with less than 10% power) due to customer's errors are not covered by the warranty.*

## HYDRAULIC HAZARDS

 **WARNING**


**BURN AND SPRAY HAZARDS**


- When the hydraulic system is hot, do not touch to avoid severe skin burn.
- After the machine shutdown, thoroughly clean the spilled hydraulic oil. Do not throw the oil on the ground. Once the maintenance and repair is complete, immediately clean any oil on the skin, Dispose of the used oil as per the governing laws and regulations.
- Do not use your hand to block the hydraulic leaks. If the leakage occurs, please first release the system pressure and maintain only after the hydraulic oil cools down. If any injury is caused by the spray of hydraulic oil, go to the doctor immediately, otherwise severe complication may develop.

## WELDING AND POLISHING REQUIREMENTS

Before welding, grinding and polishing operations, always ensure you read and understand all operation and maintenance requirements in the *Operation Manual* and the *Maintenance Manual*.

 **WARNING**

**WELDING HAZARDS**



- Comply with the welder manufacturer's recommendations for procedures concerning proper use of the welder.
- Welding leads or cables may only be connected after turning off the power unit.
- Carry out welding operations only after the welding cable has been correctly connected.
- Do not use the machine as a ground wire during welding operation.
- At all times, make sure that the power tools are completely stored in the working platform. Do not hang the power tools on the railing of the working platform or the work area outside the working platform, or hang the power tools directly by the wire.

Before performing welding, grinding and polishing work, welders must seek permission of the responsible department at the workplace.

## AFTER USING THE MACHINE

1. Choose a safe parking location that is on sturdy, level ground and that is free of obstructions. Avoid areas with heavy traffic.
2. Ensure the boom is lowered over the rear drive outrigger, and all maintenance panels and gates are closed and secured.
3. Do not allow the hydraulic cylinders to be in fully extended position before the machine is shut down or kept idle for a long period.
4. Push in the emergency stop button at the platform controls to the OFF position.
5. Close the cover of platform controls to protect the control panel, handle and controller from hostile weather conditions.
6. Push in the emergency stop button at ground controls to the OFF position.
7. Turn the key switch at the ground controls to OFF position and remove the key to avoid unauthorized operation of the machine.


8. Turn off the main power switch.
9. Charge the battery.


**NOTICE**

*After using the machine, the main power switch must be disconnected.*

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# 4 JOBSITE INSPECTION

 **WARNING**



**UNSAFE OPERATION HAZARD**

**Be sure to follow the instructions and safety rules in this manual. Failure to follow the instructions and safety rules in this manual may result in death or serious injury.**

**Do not operate this machine unless you have learned and practiced the rules for safely operating the machine as stated in this manual.**

- **Know and understand the safety rules before continuing the next step.**
- **Avoid dangerous situations.**
- **Always check the machine before operating.**
- **Select appropriate machinery and personal protective equipment (hard hats, safety belt and gloves, etc.) for the task.**
- **Always perform a pre-operation function test before using the machine.**
- **Check the work site.**
- **Check the safety decals/ name-plate on the machine.**
- **Only use the machine according to the instructions in this manual and for its intended purpose.**

- Unstable or ultra-smooth surfaces
- Overhead obstacles and high-voltage wires
- Hazardous locations
- Ground surface that could fail to support the capacity of the machine and its load
- Gusts and strong winds
- Actions by unauthorized personnel
- Other possible unsafe conditions

During the jobsite inspection the operator determines whether the jobsite is suitable for safe machine operation. The operator should conduct the jobsite inspection before moving the machine to the jobsite.

Safety is the operator's responsibility. Part of safety is conducting a thorough jobsite inspection. Operators must identify and avoid workplace hazards when moving, installing and operating the machine.

Unless approved by Sinoboam, never operate the machine in a hazardous site. The following items present danger on the jobsite:

- Steep hills or caves
- Ground prominences, obstacles or debris
- Ground inclines

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# 5 PRE-OPERATION INSPECTION

## WARNING

### UNSAFE OPERATION HAZARD



Be sure to follow the instructions and safety rules in this manual. Failure to follow the instructions and safety rules in this manual may result in death or serious injury.

Do not operate this machine unless you have learned and practiced the rules for safely operating the machine as stated in this manual.

- Know and understand the safety rules before continuing the next step.
- Avoid dangerous situations.
- Always check the machine before operating.
- Select appropriate machinery and personal protective equipment (- hard hats, safety belt and gloves, etc.) for the task.
- Always perform a pre-operation function test before using the machine.
- Check the work site.
- Check the safety decals/ nameplates on the machine.
- Only use the machine according to the instructions in this manual and for its intended purpose.

Before operating the machine, please first understand the tasks to be done and be aware of the following :

1. Be familiar with each function of the machine and capable of operating it adeptly.
2. Only the person authorized by the management is allowed to operate the machine.
3. Obey the safety rules in this manual, and fully understand and follow the operating instructions in this manual to operate the machine.
4. The operator should go through a professional training based on this operation manual, and should be certified as a qualified operator in operation of this machine.

5. Clearly understand all nameplates, warning and safety decals on the machine.
6. Before each operation, examine and check the operational environment, and ensure the safety protection equipment is properly in place. The safety equipment may differ according to the operational environment.
7. Before operating the machine, be sure that all control handles are returned to neutral, and all switches in the OFF position.

## TIPS FOR CONDUCTING A PRE-OPERATION INSPECTION

## WARNING

### TIPPING HAZARD



Do not change or modify the aerial work platform without the prior written permission of the manufacturer. If an additional device is installed on the platform or guardrail for placing tools or other materials, this will increase the platform weight and surface area or increase the load.

- The operator is responsible for performing the “pre-operation inspection” and routine maintenance as stated in this manual.
- Before each shift change, the operator must conduct a pre-operation inspection to find out whether the machine has obvious problems before the operator performs a pre-operation function test.
- The pre-operation inspection also helps the operator determine whether the machine requires routine maintenance. The operator can only perform the routine maintenance items as stated in this manual.
- Please refer to [Inspecting Parts, page 5-2](#) and check each item.
- Never use a machine that has damaged or modified parts. Mark the machine and stop using the machine if you discover damage or modifications.

- Only qualified maintenance technicians can repair the machine according to the manufacturer's regulations. After any maintenance, the operator must perform another pre-operation inspection before conducting a pre-operation function test.
- Qualified maintenance technicians must perform regular maintenance inspections according to the requirements in the manufacturer's *Maintenance Manual*.

- Platform ( including rails, floor plate, safety lock, brackets and entry door )
- Personal protection equipment
- Emergency control equipment
- Operation instructions, warning and control decals
- Structure and welding cracks
- Nuts, bolts and other fasteners

## CONDUCTING A PRE-OPERATION INSPECTION

Before starting the machine, check whether it meets the following requirements:

- Ensure the *Operation Manual* and *Maintenance Manual* are in good condition, legible and stored in the storage compartment on the platform.
- Make sure all labels are legible and appropriately located.
- Check for hydraulic oil leaks and proper oil level. Add oil as needed. See [Inspect Hydraulic Oil Level, page 5-2](#).
- Check battery for leaks and proper liquid level. Add distilled water as needed. See .
- Check whether the protective device in use matches the type of work performed and conforms to relevant technical standards.

## INSPECTING PARTS

Before each use or work shift, check the machine for any damaged, improperly installed, loose or lost parts and unauthorized changes:

- Electrical components, wirings, cables and safety ropes
- Hydraulic hoses & fittings, hydraulic cylinder and valve block
- hydraulic tank
- Storage battery pack and its connection
- Drive motor & brake
- Turntable swing motor and hydraulic pump
- Boom wear pads and telescopic axle wear pads
- Limit switch and horn
- Tire and rim
- Alarms and lighting (if equipped)

### NOTICE

*If damaged parts, incorrect installation or missing parts are discovered, please replace immediately and install correctly; if the fasteners are found detached or loose, please secure immediately.*

## INSPECTING ENTIRE MACHINE

Inspect the entire machine for:

- Control switches and handles on platform controller and turntable controller in neutral position
- Cracks in a weld joint or structural part
- Dents or other damage
- Severe rust, corrosion or oxidation
- Improper twisting of steel wire ropes, electric cables, hoses inside the platform
- Missing or loose structural parts and key components, including fasteners and pins for correct positioning and tightness
- After the inspection, ensure all covers are in place and securely locked

## INSPECT HYDRAULIC OIL LEVEL

Ensuring appropriate hydraulic oil level is vital to proper operation of the machine. If too high, the oil will spill out from the oil tank during machine operation, if too low, the oil pump will suction air and damage hydraulic components. Performing daily inspection of the hydraulic oil level will help you determine if a problem exists in the hydraulic system.

Perform the following procedures with the boom in stowed position:

1. Open the left turntable cover to make visual inspection of the sides of hydraulic tank, the

hydraulic oil level should be within the marking range of oil level indicator.

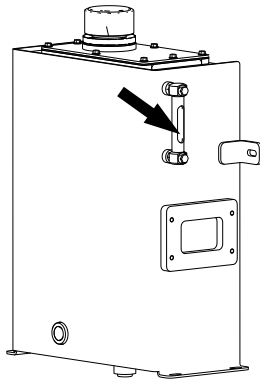


Figure 5-1

2. Ensure the hydraulic tank body and its connections are free of leaks.
3. Add oil as needed. Never overfill the tank.

Table 5-1

CUSTOMER REQUIREMENTS	HYDRAULIC OIL MARK
Normal-temperature region 0°C to 40°C (32°F to 104°F)	L-HV32
Cold region -25°C to 25°C (-13°F to 77°F)	L-HV32
High-temperature region greater than 40°C (104°F)	L-HM68
Extremely cold region less than -30°C (-22°F)	Special programmes need to be identified.

**NOTICE**



*Different hydraulic oils can be added according to customer requirements upon factory delivery, but cannot be mixed.*

**INSPECTING THE BATTERY**

Battery condition is critical to machine performance and safe operation. A battery with improper electrolyte level or damaged cables and wiring may harm battery parts and may pose dangerous conditions.

**⚠ WARNING**


**ELECTROCUTION HAZARD**

- Contact with live circuit may cause serious injury or death. Be sure to wear goggles, gloves and protective clothing.
- Remove all rings, watches and other jewelry.

**⚠ WARNING**

**CHEMICAL BURN HAZARD**



**Avoid battery acid spills or contact with unprotected skin. If battery acid comes into contact with skin, wash the skin immediately with plenty of water and seek medical attention immediately.**

**If battery acid spills, use water mixed with bicarbonate (baking soda) to neutralize the acid.**

- Inspect the battery level to make sure the consumed battery power is no more than 80% of the total capacity. Charge the battery after each use.
- Ensure the battery cells are wired reliably with the locking nuts torqued to the specifications as below:

Nut type	Torque
M8	9 ~ 11Nm (6.6 ~ 8.1ft-lb)
M10	18 ~ 23Nm (13.2 ~ 17ft-lb)

**NOTICE**

*Improper connection may cause reduced performance, damaged terminals, fusions and even fires.*

- Ensure the battery negative and positive are correctly connected.
- Ensure the battery connections are not corroded.
- Check the battery electrolyte level is proper (for lead-acid battery requiring maintenance)
- Check the battery box for accumulation of water, and if any, clear the water.

- Check the paint of battery for damage, if any, repair immediately to prevent corrosion and keep the box insulated.

**Note:** Adding terminal protectors or applying anti-corrosion agent will help the terminals and cables from corrosion.

# 6

## PRE-OPERATION FUNCTION TEST

### WARNING

#### UNSAFE OPERATION HAZARD



Be sure to follow the instructions and safety rules in this manual. Failure to follow the instructions and safety rules in this manual may result in death or serious injury.

Do not operate this machine unless you have learned and practiced the rules for safely operating the machine as stated in this manual.

- Know and understand the safety rules before continuing the next step.
- Avoid dangerous situations.
- Always check the machine before operating.
- Select appropriate machinery and personal protective equipment (- hard hats, safety belt and gloves, etc.) for the task.
- Always perform a pre-operation function test before using the machine.
- Check the work site.
- Check the safety decals/ nameplate on the machine.
- Only use the machine according to the instructions in this manual and for its intended purpose.

Conducting a pre-operation function test helps you discover potential problems before you start using the machine. The operator must test all machine functions according to the instructions in this manual.

Do not use a machine with problems or malfunctions. Mark the machine and do not use it if you discover any

problems. Only qualified maintenance technicians can repair the machine according to the manufacturer's regulations.

After any maintenance, the operator must perform another pre-operation inspection before conducting a pre-operation function test.

## PREPARING FOR A PRE-OPERATION FUNCTION TEST

### NOTICE

*All the pre-operation function tests must be completed within the same period..*

### NOTICE

*In cold weather, auxiliary devices are needed to start the machines.*

Before beginning a pre-operation function test:

1. Select a test area that has a solid, flat, level surface.
2. Ensure the test area is free of obstacles.

## TESTING THE GROUND CONTROLLER

### NOTICE

*All the function tests of ground controller must be completed within a cycle.*

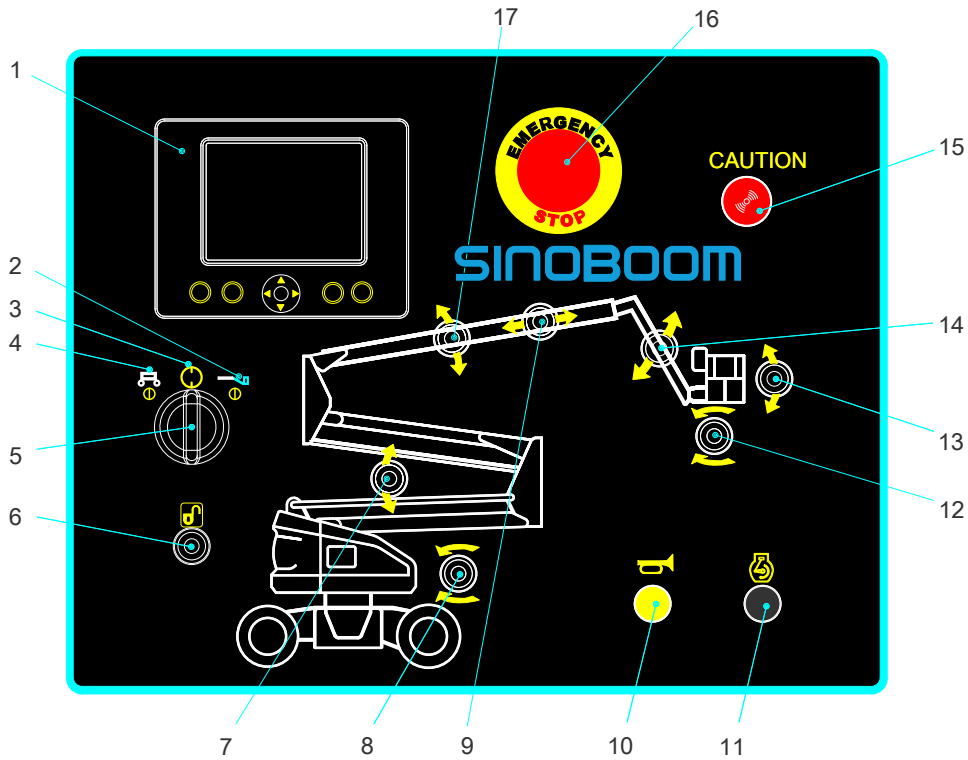


Figure 6-1 Ground Controller

Table 6-1

1. Display screen (see the figure and table below)	7. Foldable boom up/down switch	13. Platform leveling switch
2. Platform control	8. Turntable rotate function button	14. Jib boom up/down function button
3. Off position	9. Main boom telescoping switch	15. Buzzer
4. Ground control position	10. Horn	16. Emergency stop button
5. Key switch (ground/platform control select switch)	11. Petrol generator switch (if equipped with a generator)	17. Main boom up/down switch
6. Enable switch	12. Platform rotation switch	




Figure 6-2 Turntable controller screen

Table 6-2

1. Diesel oil gauge/battery indicator	3. Tachometer	5. Platform load
2. Cumulative working hours	4. Current working hours	

**WARNING**


**UNSAFE OPERATION HAZARD**



- Unless in emergency situations, never operate from the ground control console if there are still persons on the platform.
- Never operate the machine if any control handle or switch that controls the platform movement is not returned to the OFF position after being released.

**WARNING**

**COLLISION HAZARD**



Before operating the boom, ensure the area near or under the platform is clear of persons or obstructions.

**Preparation**

1. Turn the Ground/Platform select switch to ground control position.
2. Pull out the emergency stop button to ON position.
3. Ensure the relevant indicator light on the display screen is illuminated and no error comes up.

**Horn button**



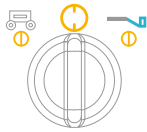
Push down the horn button, and the horn should sound.

**Emergency stop button**



1. Push in the emergency stop button on the ground controller to OFF position. All functions should be inoperative.
2. Pull out the emergency stop button on the ground controller to ON position.

## Ground/Platform select switch



1. Turn the “ground/platform control select switch” on the ground controller to “ground control” position. Then, relevant operations can only be carried out on the ground controller, and platform control function is invalid.
2. Turn the “ground/platform control select switch” on the ground controller to “platform control” position. Then, relevant operations can only be carried out on the platform controller, and ground control function is invalid.

## Enable switch



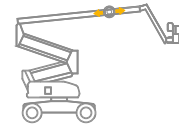
1. Move each function switch without moving the enable switch, and the corresponding function shall be inoperative.
2. Move each function switch together with the enable switch, and each function shall operate normally.

## Main boom up/down switch



1. After turning on the enable switch and pulling the main boom up/down switch upwards, the boom shall move up smoothly.
2. After turning on the enable switch and pulling the main boom up/down switch downwards, the boom shall move down smoothly and the buzzer shall sound.

## Main boom telescoping switch



1. After turning on the enable switch and pulling the main boom telescoping switch towards the right, the boom shall extend smoothly.
2. After turning on the enable switch and pulling the main boom telescoping switch towards the left, the boom shall retract smoothly.

## Foldable boom up/down switch



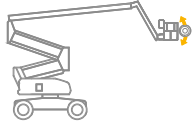
1. After turning on the enable switch and pulling the foldable boom up/down switch upwards, the foldable boom shall move up smoothly.
2. After turning on the enable switch and pulling the foldable boom up/down switch downwards, the foldable boom shall move down smoothly and the buzzer shall sound.

## Turntable rotating switch



1. After turning on the enable switch and pulling the turntable rotating switch upwards, the turntable shall rotate anticlockwise.
2. After turning on the enable switch and pulling the turntable rotating switch downwards, the turntable shall rotate clockwise.

## Platform leveling switch



1. After turning on the enable switch and pulling the platform leveling switch upwards, the platform's horizontal level shall rotate upwards.
2. After turning on the enable switch and pulling the platform leveling switch downwards, the platform's horizontal level shall rotate downwards.

### CAUTION

The buzzer shall give a sound-light alarm at variable frequency when any of following situations occurs:

- Main boom, foldable boom or jib boom down
- Machine overloaded
- Machine tilted
- Length sensor faulted
- Angle sensor faulted
- Other faults

**WARNING**

**FALL HAZARD**

The platform leveling function is only used for slight adjustment of the platform. Improper operation may result in unintended movement or fall of the load/occupants.

### Petrol generator switch (if equipped)



Activate the petrol generator switch. The petrol generator switch offers AC power for storage battery charging or electric tools.

### Platform rotating switch



1. After turning on the enable switch and pulling the platform rotating switch upwards, the platform shall rotate anticlockwise.
2. After turning on the enable switch and pulling the platform rotating switch downwards, the platform shall rotate clockwise.

## TESTING THE PLATFORM CONTROLLER

### NOTICE

*All the tests of platform controllers should be completed within one cycle.*

### Jib up/down switch



1. After turning on the enable switch and pulling the jib up/down switch upwards, the jib shall move up.
2. After turning on the enable switch and pulling the jib up/down switch downwards, the jib shall move down and the buzzer shall sound.

### Buzzer

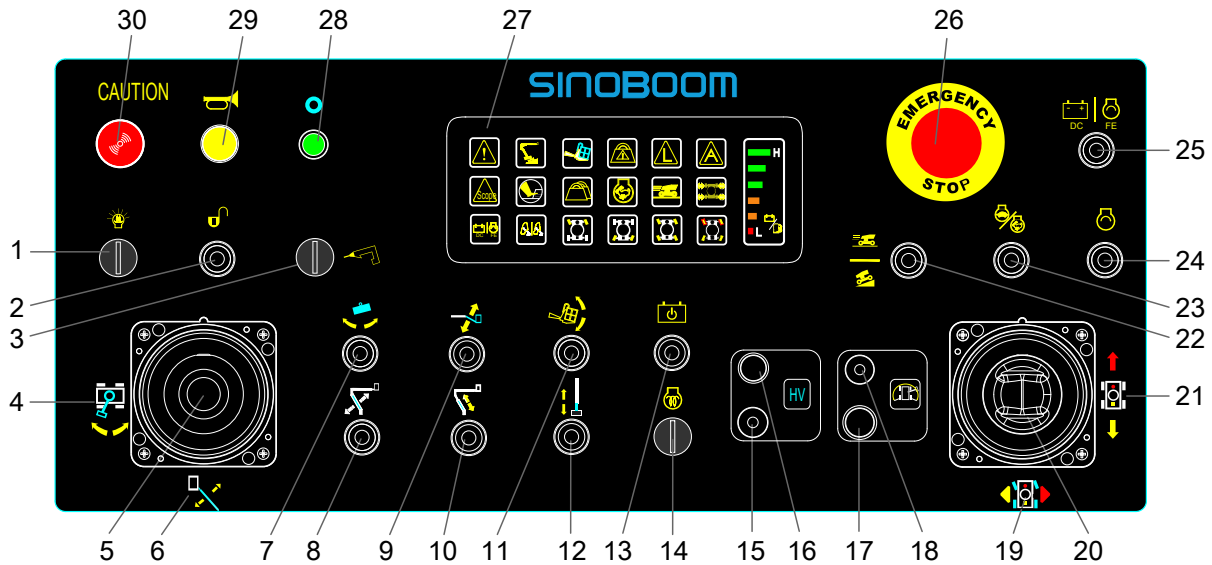



Figure 6-3 Platform controller

Table 6-3

1. Working light switch (if equipped)	11. Platform leveling switch	21. Drive direction control
2. Anti-pinch/soft touch unlock switch (if equipped)	12. Main boom telescoping switch	22. Drive high/low speed select switch
3. Hydraulic generator switch (if equipped)	13. Unused	23. Unused
4. Turntable rotation direction proportional control	14. Unused	24. Unused
5. Main boom up/down/turntable slewing proportional control handle	15. Unused	25. Unused
6. Main boom up/down proportional control	16. Unused	26. Emergency stop switch
7. Platform rotate switch	17. Rear detection switch	27. Fault panel indicator light
8. Foldable up/down switch	18. Rear detection indicator light	28. Power indicator light
9. Jib up/down switch	19. Steer direction proportional control	29. Horn button
10. Unused	20. Drive/steer proportional control handle	30. Buzzer

**⚠ WARNING**


**UNSAFE OPERATION HAZARD**



- Unless in emergency situations, never operate from the ground control console if there are still persons on the platform.
- Never operate the machine if any control handle or switch that controls the platform movement is not returned to the OFF position after being released.

**⚠ WARNING**

**COLLISION HAZARD**



Before operating the boom, ensure the area near or under the platform is clear of persons or obstructions.

### PREPARATION

1. Turn the Ground/Platform select switch to platform control position.
2. Pull out the emergency stop button on both the ground and platform controllers to ON position.
3. Turn the key switch to ON position.  
Ensure the power indicator is illuminated and no error comes up.

### POWER INDICATOR LIGHT



When the power indicator light is on, it indicates the power supply of the platform controller is normal.

### FOOTSWITCH



1. Release the footswitch, and directly move each function switch/handle, the corresponding function shall fail to operate and the buzzer shall sound.
2. Depress the footswitch, and meanwhile move each function switch/handle, the corresponding function shall operate normally.
3. Move some function switch first and then depress the footswitch, the corresponding function shall fail to operate and the buzzer shall sound.
4. Depress the footswitch for 7 seconds, and then move some function switch/handle, the corresponding function shall fail to operate and the buzzer shall sound.

### HORN



Push in the horn button, and the horn shall sound.

### EMERGENCY STOP FUNCTION



1. Push in the emergency stop button on the platform controller to OFF position, all functions shall be inoperative.
2. Turn the emergency stop button on the platform controller and ground controller to ON position, the corresponding functions shall be operative.
3. Push in the emergency stop button on the ground controller to OFF position and that on the platform controller to ON position, all functions shall be inoperative.

## DRIVE FUNCTION



The drive speed of the machine in stowed position allows selection of high/low speed by moving the drive high/low speed select switch.

1. Depress the footswitch and move forward the Drive/Steer control handle, the machine shall drive forward smoothly without noticeable impact in startup; when the handle is released, the machine shall be held reliably.
2. Depress the footswitch and move backward the Drive/Steer control handle, the machine shall drive reverse smoothly without noticeable impact in startup; when the handle is released, the machine shall be held reliably.

**Note** : The drive speed is in positive proportion to the travel distance of control handle.

## STEER FUNCTION



1. Depress the footswitch and move forward the Drive/Steer control handle, and press the left side of the thumb rocker switch on top of the drive control handle, the machine shall steer left.
2. Depress the footswitch and move forward the Drive/Steer control handle, and press the right side of the thumb rocker switch on top of the drive control handle, the machine shall steer right.

**Note** : The steering drive speed is in positive proportion to the travel distance of control handle.

## DRIVE HIGH/LOW SPEED SELECT FUNCTION

 **WARNING**



**TIPPING HAZARD**  
The machine must drive at low speed when not on a level surface.

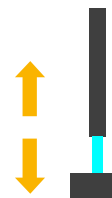
## MAIN BOOM UP/DOWN



1. Depress the footswitch and move forward the main boom lift/turntable rotate proportional control handle, the main boom shall lift smoothly.
2. Depress the footswitch and move backward the main boom lift/turntable rotate proportional control handle, the main boom shall lower smoothly, and the buzzer shall sound.

**Note** : The main boom up/down speed is in positive proportion to the travel distance of control handle.

## MAIN BOOM TELESCOPE



1. Depress the footswitch and move downwards the main boom telescope switch, the main boom shall extend smoothly.
2. Depress the footswitch and move upwards the main boom telescope switch, the main boom shall extract smoothly.

### FOLDABLE BOOM UP/DOWN



1. Depress the footswitch and move upwards the foldable boom up/down switch, the foldable boom shall lift smoothly.
2. Depress the footswitch and move downwards the foldable boom up/down switch, the foldable boom shall lower smoothly, and the buzzer shall sound.



1. Depress the footswitch and move upwards the platform level switch, the platform level should go up.
2. Depress the footswitch and move downwards the platform level switch, the platform level should go down.

### TURNTABLE ROTATE



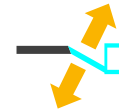
1. Depress the footswitch and move leftwards the main boom lift/turntable rotate proportional control handle, the turntable shall rotate clockwise.
2. Depress the footswitch and move rightwards the main boom lift/turntable rotate proportional control handle, the turntable shall rotate anticlockwise.



1. Depress the footswitch and move leftwards the platform rotate switch, the platform shall rotate clockwise.
2. Depress the footswitch and move rightwards the platform rotate switch, the platform shall rotate anticlockwise.



**Note** : The turntable rotate speed is in positive proportion to the travel distance of control handle.

### JIB UP/DOWN SWITCH

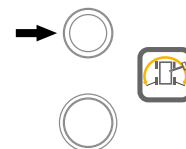


1. Depress the footswitch and move upwards the jib up/down switch, the jib boom shall go up.
2. Depress the footswitch and move downwards the jib up/down switch, the jib boom shall go down, and the buzzer shall sound.

### PLATFORM LEVEL SWITCH

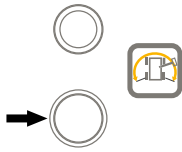
 <b>WARNING</b>	
	<p><b>FALL HAZARD</b></p> <p>The platform leveling function is only used for slight adjustment of the platform. Improper operation may result in unintended movement or fall of the load/occupants.</p>

### REAR DETECTION INDICATOR LIGHT



When the boom rotates beyond the rear wheels, the rear detection indicator light shall flash at an interval of 0.5S and the drive function shall be invalid.

## REAR DETECTION SWITCH



When the rear detection indicator light is on, the drive function shall be turned off. Turn on the rear detection switch, the light shall go out and the drive function shall resume.

### NOTICE

*When driving reverse, the machine will drive and steer in opposite direction as indicated.*

## BUZZER

The buzzer shall give a sound-light alarm at variable frequency when the following situations occur:

- Main boom, foldable boom or jib boom down
- Machine overloaded
- Machine tilted
- Length sensor faulted
- Angle sensor faulted
- Other faults

## SYSTEM DISTRESS INDICATOR LIGHT



The system distress indicator light will be lit under any of the following conditions:

- Failure of weight sensor
- Turntable tilting alarm
- CAN bus error
- Other faults

## OVERLOAD INDICATOR LIGHT



When the load on the platform exceeds the platform capacity, the overload indicator light will be lit.

## CHASSIS TILT INDICATOR LIGHT



When the machine is tilted, the tilt alarm will sound and the chassis tilt indicator light will be lit.

### NOTICE

*When the main boom lifts or telescopes out, the chassis tilt indicator light goes on, be sure to retract and lower the boom in place.*

## PLATFORM TILT INDICATOR LIGHT



If the platform tilts excessively, the platform tilt indicator light will be on.

## LENGTH SENSOR FAULT INDICATOR LIGHT



When the length sensor has a fault, the length sensor fault indicator light shall be on.

### ANGLE SENSOR FAULT INDICATOR LIGHT



When the angle sensor has a fault, the angle sensor fault indicator light shall be on.

### RANGE-LIMITING INDICATOR LIGHT



When the boom extends the operating range, the range-limiting indicator light shall be lit.

### FOOT SWITCH INDICATOR LIGHT



When the foot switch is depressed, the foot switch indicator light shall be lit.

### HEAVY LOAD INDICATOR LIGHT



When the platform is within the heavy-load operating range and the platform load exceeds the light load, the heavy load indicator light will be on.

### HIGH TRAVEL SPEED INDICATOR LIGHT



When the vehicle enters the high travel speed, the high travel speed indicator light will be on.

### WORK LIGHT SWITCH (IF EQUIPPED)



Move the work lamp switch, and the work lamp shall be on/off.

### ANTI-PINCH/SOFT TOUCH UNLOCK SWITCH

#### NOTICE

*The anti-pinch/soft touch unlock switch serves only for freeing the machine from the obstructions in which it is snagged.*



When the machine contacts an obstacle and stops, by turning on the anti-pinch/soft touch unlock switch, the machine can free itself from the obstacle in safety direction.

### HYDRAULIC GENERATOR SWITCH (IF EQUIPPED)



Toggle the hydraulic generator switch, and the hydraulic generator can be switched on or off.

## TESTING THE DRIVE SPEED

1. Turn the Ground/Platform select switch on the ground controller to the platform position.
2. Pull out the emergency stop buttons on both the ground and platform controllers to the ON position.
3. Depress the footswitch.
4. Slowly push forward the drive/steer control handle to full drive speed.
5. Move the drive high/low speed select switch on the platform controller to select the drive high speed.
6. The test results are shown in the table below:

Table 6-4

State	Max drive speed
Non-operating	0.8km/h (0.5 mph)
Operating	5.2km/h (3.2 mph)

**NOTICE**

If the drive speed exceeds 10% of the test results as shown above, please immediately remove the machine from service and have it tagged.

**TESTING THE EMERGENCY LOWERING FUNCTION**

1. Turn the Ground/Platform select switch on the ground controller to the ground control position.
2. Pull out the emergency stop button on the ground controller to the ON position.
3. Operate the boom function switches on turntable controller to raise the platform to a certain height.
4. Operate as indicated by the emergency decent decal.

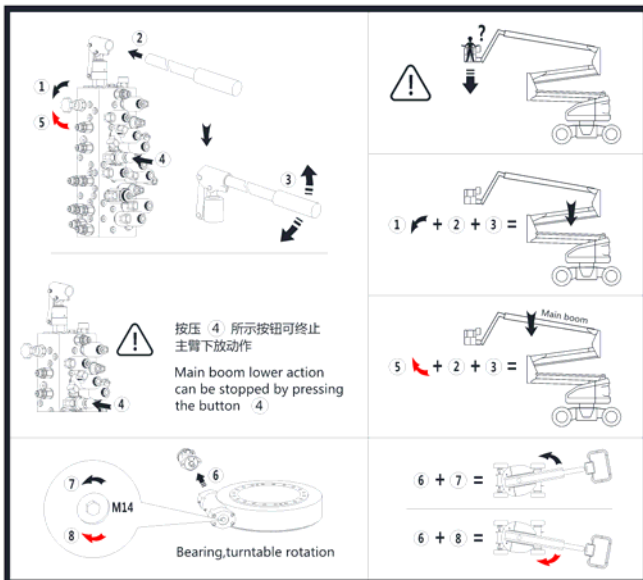


Figure 6-4

**TESTING THE TILT PROTECTION SYSTEM**

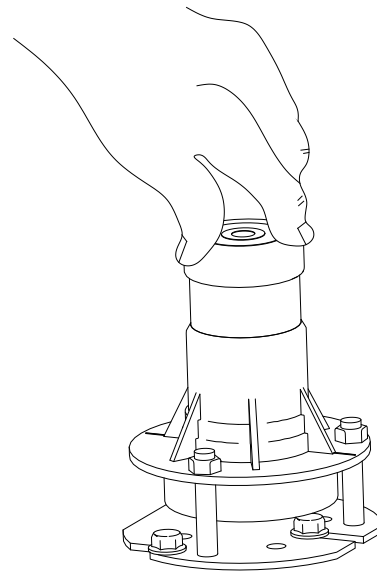


Figure 6-5

1. Turn the Ground/Platform select switch to the ground control position.
2. Pull out the emergency stop button on the ground controller to the ON position.
3. With the machine in non-operating position, flip the level switch to exceed 5° in X (left-to-right)/Y (front-to-back) direction.
4. The tilt alarm sounds and the chassis tilt indicator light flashes, no functions are restricted.
5. With the machine in operating position, flip the level switch to exceed 5° in X (left-to-right)/Y (front-to-back) direction.
6. The tilt alarm sounds and the chassis tilt indicator light flashes, some functions are restricted, but the boom retracting, lowering and turntable rotating are allowed.
7. With the machine in non-operating position, place two wooden blocks under the two wheels on the front or back side of the machine, and then drive the machine onto the two wooden blocks. The wooden block should measure 750mm L×250mm W×166mm H.
8. The tilt alarm sounds and the chassis tilt indicator light flashes, no functions are restricted.
9. Drive the machine off the blocks, extend the telescopic boom by slightly over 1.2m (3.9ft) or raise/lower the foldable boom by slightly over 15°.
10. place these two wooden blocks under the two wheels on the front or back side of the machine,

and then drive the machine onto the two wooden blocks.

11. The tilt alarm sounds and the chassis tilt indicator light flashes, some functions are restricted, but the boom retracting, lowering and turntable rotating are allowed.
12. Retract and lower the boom, drive off the machine in non-operating position and remove the wooden blocks.

## TESTING THE MAXIMUM OPERATING RANGE

### Maximum horizontal extension

#### 0kg ≤ platform loading capacity ≤ 230kg (507 lb)

1. Turn the ground/platform select switch on the ground controller leftwards to the ground control position.
2. Push the emergency stop button on the ground controller to the position ON.
3. Use the foldable boom luffing function to adjust the foldable boom to the maximum angle.
4. Use the main boom telescoping function to extend the boom.
5. GTZZ14EJ: the boom will stop when it reaches the farthest position (with the length of 7.6m), and then the upper and lower buzzers will sound, the boom can't be further extended or changed in angle but can be retracted, and the turntable can be slowly rotated.
6. GTZZ16EJ: the boom will stop when it reaches the farthest position (with the length of 9.3m), and then the upper and lower buzzers will sound, the boom can't be further extended or changed in angle but can be retracted, and the turntable can be slowly rotated.
7. Retract the boom using the main boom telescoping function.
8. The boom can be retracted in place.

### Maximum luffing angle of main boom

1. Turn the ground/platform select switch on the ground controller leftwards to the ground control position.
2. Push the emergency stop button on the ground controller to the position ON.
3. Use the foldable boom luffing function to adjust the foldable boom to the maximum angle.
4. Adjust the main boom to the horizontal position and the jib upwards to the highest position using the main boom luffing and jib up/down functions respectively.
5. Adjust the main boom to the maximum angle using the main boom luffing function.
6. The main boom will stop luffing when it reaches the maximum angle ( $72^{\circ}[\pm 1^{\circ}]$ ).
7. The main boom will stop luffing when it reaches the minimum angle ( $0^{\circ}[\pm 1^{\circ}]$ ).
8. Retract and luff the boom downwards using the boom telescoping function and boom luffing function respectively.
9. The boom can be retracted in place.

**Note:** The maximum allowable tolerance of the angle sensor in the whole range of measurement shall be no greater than  $0.5^{\circ}$ .

## TESTING THE WEIGHING SYSTEM

Before the test, move the boom fully up and down and telescope in and out for at least twice to ensure the pulley and track are adequately lubricated. The test results are shown in the table below:

Table 6-5

MODELS	TEST RESULTS
GTZZ14EJ&GT-ZZ16EJ (KG)	When the load does not exceed 230kg (507 lb), ensure that the platform is able to lift to the highest position. when the load exceeds 230kg (507 lb), the buzzer will sound continuously, the overload indicator light will flash, the display screen will indicate platform overload, all the functions will be restricted. The machine will not resume all the functions until the excessive load is removed.
GTZZ14EJ&GT-ZZ16EJ (non-KG )	When the load does not exceed 230kg (507 lb), ensure that the platform is able to lift to the highest position. when the load exceeds 230kg (507 lb), the buzzer will sound continuously, the overload indicator light will flash, the display screen will indicate platform overload, some functions will be restricted but boom retracting, lowering and turntable rotating is allowed, main boom/ foldable boom down only when main boom is fully retracted.

# 7 OPERATING THE MACHINE

## WARNING

### UNSAFE OPERATION HAZARD



**Be sure to follow the instructions and safety rules in this manual. Failure to follow the instructions and safety rules in this manual may result in death or serious injury.**

**Do not operate this machine unless you have learned and practiced the rules for safely operating the machine as stated in this manual.**

- **Know and understand the safety rules before continuing the next step.**
- **Avoid dangerous situations.**
- **Always check the machine before operating.**
- **Select appropriate machinery and personal protective equipment (- hard hats, safety belt and gloves, etc.) for the task.**
- **Always perform a pre-operation inspection.**
- **Always perform a pre-operation function test before using the machine.**
- **Check the work site.**
- **Check the safety decals/ nameplate on the machine.**
- **Only use the machine according to the instructions in this manual and for its intended purpose.**

This section provides specific instructions for all the aspects of machine operation. The operator is responsible for following all the safety rules and instructions in this manual.

Use this machine to transport people and tools to the workplace. It is unsafe and dangerous to use this machine for purposes other than what is stated in this manual.

Only trained and authorized personnel may operate the machine. If more than one operator uses the same machine at different times of the same work shift, they must all be qualified operators and follow all the safety rules and instructions in this *Operation Manual*.

Each new operator must perform the pre-operation inspection, pre-operation function test, and workplace checks before using the machine.

## STABILITY

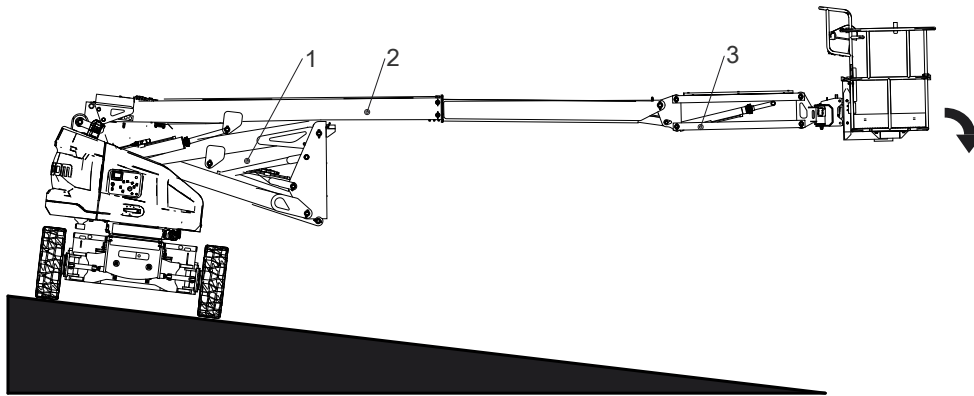
The machine stability is based on two conditions which are called forward stability and backward stability.

## WARNING

### TIPPING HAZARD

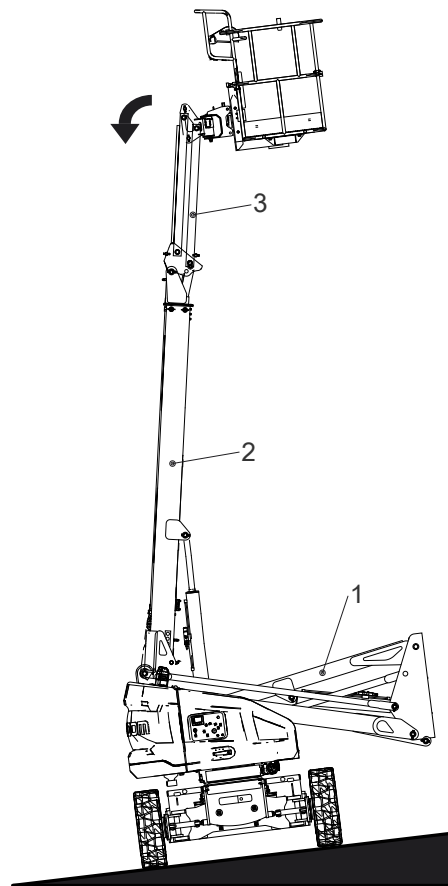


**Do not overload the platform or operate the machine on tilted surface to prevent forward or backward tipping.**



**Figure 7-1 Position of least forward stability**

1. Foldable boom fully folded;
2. Main boom elevated horizontal and fully extended;
3. Jib elevated horizontal;
4. Turntable rotated 90°;
5. The machine will tip over in the direction as indicated by the arrow if overloaded or operated beyond the limits of the maximum operating slope.



**Figure 7-2 Position of least backward stability**

1. Foldable boom fully folded;
2. Main boom fully retracted and fully extended;
3. Jib fully elevated;
4. Turntable rotated 90° ;
5. The machine will tip over in the direction as indicated by the arrow if overloaded or operated beyond the limits of the maximum operating slope.

## EMERGENCY STOP

The power off switch is located as shown in the below figure.

1. Push the emergency stop button on the platform controller to OFF, and all functions under the control of the platform controller will get inoperative.
2. Push the emergency stop button on the ground controller to OFF, and all functions under the control of the ground and platform controllers will get inoperative.
3. Push the power off switch at the left side of the chassis to OFF, and the system power will be disconnected and all functions will get inoperative.

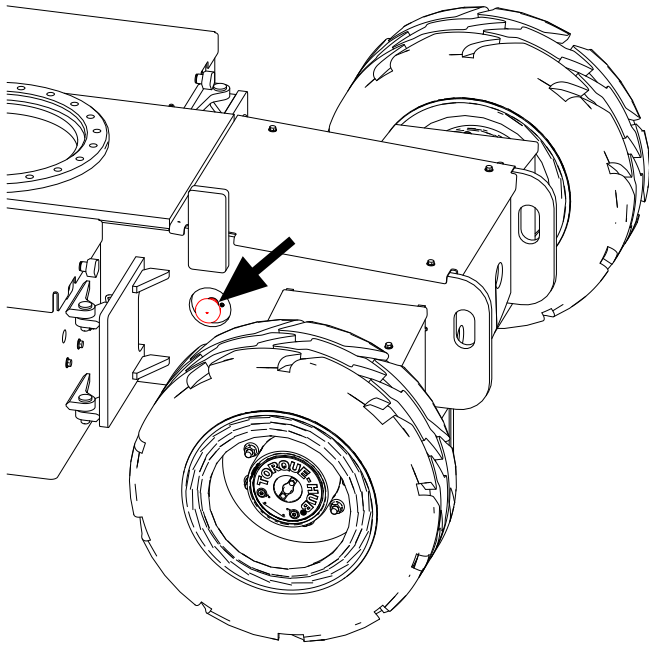


Figure 7-3

## EMERGENCY LOWERING

In case of any fault in the electric power equipment, operate as indicated by the emergency lowering decal.

Refer to [Testing the Emergency Lowering Function, page 6-12](#) for details.

## EMERGENCY OPERATING

### When the operator is unable to control the machine:

1. Other personnel should operate the machine from the ground controls only as required by the safety rules.
2. Other qualified personnel on the platform may use the platform controls. Do not continue operation if the controls do not function properly.
3. Cranes, forklift trucks or other equipment can be used to stabilize motion of the machine.

### When the platform or boom is caught overhead:

If the platform or boom becomes jammed or snagged in overhead structures or equipment, rescue all people in the platform before freeing the machine.

## EMERGENCY TOWING/ DRAGGING

### WARNING

#### UNSAFE OPERATION HAZARD



- Unless in case of emergency situations, machine malfunction, power loss or loading/unloading, it is strictly prohibited to tow or drag the machine.
- When towing/dragging the machine, there should be no person in the platform.
- Before towing/dragging the machine, ensure that the machine is in stowed position with the turntable securely locked and platform free of any tools or objects.
- Do not tow/drag the machine with the engine started or the drive hub engaged.
- The machine must on a level surface or secured before releasing the brake.
- The towing/dragging of the machine must follow the local laws and traffic rules.

1. Choke wheels securely to prevent motion of the machine.
2. Ensure the travel path is free of obstacles and the main power switch is off.
3. Loosen the bolts on each drive hub, then reverse the cover of drive hub.
4. Tighten the bolts, till now the drive hub is disengaged and ready for towing/dragging.

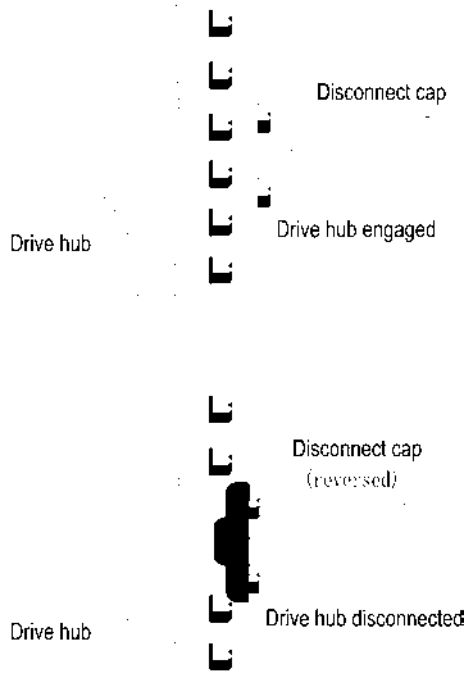


Figure 7-4

5. After moving the machine, position machine on a firm level surface.
6. Choke the wheels securely to prevent motion of the machine.
7. Loosen the bolts on each drive hub, then reverse the cover of drive hub.
8. Tighten the bolts and engage the drive hub.
9. Remove the chokes as necessary.

**NOTICE**

*The allowable towing speed is 3km/h (1.9mph) , the maximum towing distance is 1km (0.6mile)*

**OPERATION FROM GROUND**

**⚠ WARNING**

**UNSAFE OPERATION HAZARD**

- Unless in emergency situations, do not operate from the ground controller when there are personnel in the platform.
- Do not operate the machine if any control handle or switch is not returned to off position after being released.

**⚠ WARNING**

**COLLISION HAZARD**

When operating the boom, be sure the area around or under the platform is free of persons or obstacles.

**Before operation:**

1. Be sure the battery is well connected before operating the machine.
2. Turn the Ground/Platform select switch on the ground controller to Ground.
3. Pull out the red emergency stop button on the ground controller to the ON position.

**To position platform:**

1. Move the enable switch and meanwhile move upwards/downwards the main boom up/down switch to raise or lower the main boom.
2. Move the enable switch and meanwhile move rightwards/leftwards the main boom telescope switch to extend or extract the main boom.
3. Move the enable switch and meanwhile move upwards/downwards the foldable boom up/down switch to raise or lower the foldable boom.
4. Move the enable switch and meanwhile move downwards/upwards the turntable rotate switch to rotate the turntable clockwise or anticlockwise.
5. Move the enable switch and meanwhile move upwards/downwards the platform level switch to level up or down the platform.

**WARNING**

**WARNING**

**FALL HAZARD**

The platform level switch can only be used for slight leveling of the platform, improper use may cause the load/occupant to shift or fall.

6. Move the enable switch and meanwhile move upwards/downwards the platform rotate switch to rotate the platform clockwise or anticlockwise.
7. Move the enable switch and meanwhile move upwards/downwards the jib up/down switch to raise or lower the jib boom.

**To drive:**

The drive function is not enabled on the ground controller.

**To steer:**

The steer function is not enabled on the ground controller.

2. Turn the Ground/Platform select switch on the ground controller to Ground.
3. Pull out the red emergency stop button on the ground controller to the ON position.

**To position platform:**

1. Depress the footswitch and meanwhile move forward/backward the main boom lift/turntable rotate control handle to raise or lower the main boom.
2. Depress the footswitch and meanwhile move leftwards/rightwards the main boom telescope switch to extend or retract the main boom.
3. Depress the footswitch and meanwhile move upwards/downwards the foldable boom up/down switch to raise or lower the foldable boom.
4. Depress the footswitch and meanwhile move leftwards/rightwards the main boom lift/turntable rotate control handle to rotate the turntable clockwise or anticlockwise.
5. Depress the footswitch and meanwhile move upwards/downwards the platform level switch to level up/down the platform.

## OPERATION FROM PLATFORM

**WARNING**

**WARNING**

**UNSAFE OPERATION HAZARD**

- Unless in emergency situations, do not operate from the ground controller when there are personnel in the platform.
- Do not operate the machine if any control handle or switch is not returned to off position after being released.

**WARNING**

**WARNING**

**COLLISION HAZARD**

When operating the boom, be sure the area around or under the platform is free of persons or obstacles.

**Before operation:**

1. Be sure the battery is well connected before operating the machine.

**WARNING**

**WARNING**

**FALL HAZARD**

The platform level switch can only be used for slight leveling of the platform, improper use may cause the load/occupant to shift or fall.

6. Depress the footswitch and meanwhile move leftwards/rightwards the platform rotate switch to rotate the platform clockwise or anticlockwise.
7. Depress the footswitch and meanwhile move upwards/downwards the jib up/down switch to raise or lower the jib boom.

**To drive:**

1. Depress the footswitch and meanwhile move forward/backward the steer/drive control handle to drive the machine forward or backward.
2. Speed increase: slowly move the handle off center.
3. Speed decrease: slowly move the handle toward center.
4. Stop: return the handle to center or release the footswitch.

When the boom is in operating position, the drive speed of the machine will be restricted.

The battery condition will affect the machine performance. When the platform screen indicates a low battery level, the machine drive speed and lift speed will be reduced.

### To steer:

Depress the footswitch and meanwhile move forward the drive/steer control handle and press the left/right side of the thumb rocker switch on top of the handle to steer left/right.

### To select drive speed:

1. The machine in non-operating position can select from two drive speed modes (high/low speed).
2. In the process of driving, move the drive high/low speed select switch to select the desired drive speed.

 **WARNING**


**TIPPING HAZARD**

**The machine must be driven at low speed when tilted.**



When in operating position, the machine can only drive at operating speed, operation of the drive high/low speed select switch will not enable the high speed mode.

## DRIVING ON A SLOPE

 **WARNING**

**TIPPING HAZARD**

- Do not operate the machine on the slope exceeding the maximum slope rating (5°).
- Do not drive the machine across the slope exceeding the maximum side slope rating (5°).
- Do not drive the machine on the slope exceeding the machine gradeability.

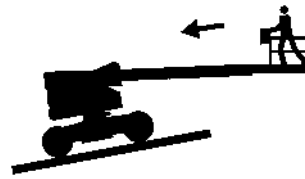
### Before driving on a slope:

1. Determine the gradeability (climbing ability) of the machine: 30% (17°).

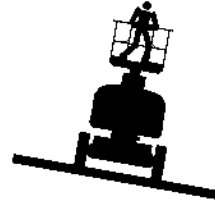
#### Maximum gradeability:



Uphill: 30%/17°



Downhill: 30%/17°



Side slope: 9%/5°

2. Ensure the machine is in stowed position.
3. Ensure the slope grade is within the limits of the machine gradeability.

**NOTICE**

*Gradeability refers to the maximum permissible percentage of the slope (or called slope grade as below) when the machine is on solid ground with sufficient traction and the platform is carrying only one person. As the weight of the machine's platform increases, the machine's gradeability reduces.*

### To determine the slope grade:

1. Use a carpenter's level, a straight piece of wood (at least 1 m [3.3 ft] long) and a tape measure.
2. Measure the height H and length/distance L of the slope.

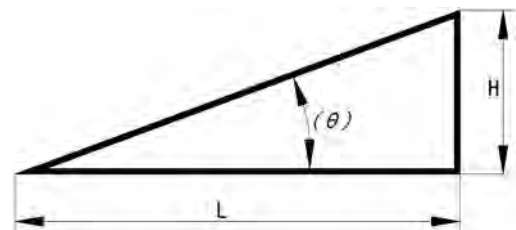


Figure 7-5

3. Slope grade=  $H/L \times 100\%$ .


**NOTICE**

*The machine must not drive for over 2min on the maximum permissible slope grade to prevent the tires running suspended.*

## CHARGING THE BATTERY

The batteries used include 3 types: lead acid, lead acid maintenance-free and lithium batteries, and the latter two batteries do not need maintenance.


**⚠ WARNING**



**UNSAFE OPERATION HAZARD**

- Make sure to read and follow the manufacturer's recommendations on how to use and maintain the battery.
- The battery contains sulfuric acid and can generate explosive mixture of hydrogen and oxygen. Keep the battery far away from sparks and fire (including cigarette and smoke) to avoid explosion.
- Do not charge the battery under direct sunshine.
- Charge the battery on a well-ventilated site.
- Do not expose the battery on charging to water or rain.
- Charge the battery at the proper voltage as indicated on the decal.
- If the battery is topped by a cover or other objects, remove them before charging to ensure the flammable gas produced during charging can be fully dispersed. Do not close the cover until 30 minutes after the charging is completed. The charging site should be well-ventilated and if charging the battery indoor, a fan can be used for better ventilation.


**⚠ WARNING**



**DAMAGED BATTERY HAZARD**


- Only use the charger provided by the manufacturer, and only connect the charger to a grounded 3-phase power outlet.
- Do not reverse the positive and negative of the battery for charging.
- Charge the battery as soon as possible once the battery is depleted.
- Do not deplete the battery more than 80% of the standard capacity, as frequent over-depletion of the battery will shorten the battery life.
- The battery must be charged fully, as intermittent charging will bring damage to the battery.

**⚠ WARNING**



**ELECTROCUTION HAZARD**

- Contact with live circuit may cause serious injury or death. Make sure to wear goggles, gloves and protective clothing.
- Remove all rings, watches and other jewelry.



**NOTICE**

- The machine is delivered with a battery level less than 80%, therefore it is recommended that the battery be fully charged after receiving the shipment.
- The charging current should not exceed the max allowable charging current as specified on the battery.
- The charging voltage should not exceed the max allowable voltage as specified on the battery.
- The charging temperature range is -10°C~45°C. If a charge heating system is available, the temperature range is -20°C~45°C.

**Charging the lead acid battery (requiring maintenance)**

## Charging

1. Check the battery level on the display of ground control box. When the battery level is less than or equal to 20%, an alarm will be triggered and the battery needs to be charged immediately. For the purpose of not affecting the normal operation of the machine, it is recommended to charge the battery when the battery level is lower than 30%.

Alternatively, open the cover on the battery and measure the density of the electrolyte. If the density of the electrolyte is less than 1.13kg/l, it means that the battery has been over-discharged (the depth of discharge exceeds 80%) and must be charged immediately. This should be avoided, as frequent over-discharge will reduce the service life of the battery.

**Note: Measure the temperature of the electrolyte, if it is higher than 45°C, wait for the battery to cool before continuing the following steps.**

2. Completely power off the machine.
3. Connect the plug between the battery and the charger cable. If the machine is equipped with an automatic water refilling system, ensure that the refilling pipe is connected.
4. Connect the battery charger to a grounded AC circuit. When the battery is fully charged, the corresponding indicator light will be on.
5. After charging is complete, disconnect the cable plug from the battery to the charger.

## Adding water

### NOTICE

- The electrolyte level should be checked after each charging, and if the level is found to be low, add water in time.
- The water shall be added after charging. Adding water before charging may cause acid overflow during charging.

1. For batteries equipped with an automatic water refilling system, when the electrolyte is at the lowest level with the battery fully charged (the white dot of the battery observation hole is not at the top), add water immediately. It is recommended to use an automatic water refilling machine for refilling, with the operation steps as follows:
  - 1) Open the bucket cover of the water refilling machine.
  - 2) Add deionized water.
  - 3) Put back the bucket cover and connect the water refilling plug.

- 4) Connect the quick connector between the water refilling machine and the battery and turn on the power switch to start automatic water refilling.
  - 5) After water refilling is completed, the automatic water refilling system will automatically stop.
  - 6) Turn off the power switch and disconnect the water refilling plug to complete water refilling.
2. If the battery is not equipped with an automatic water refilling system, check the electrolyte level after charging. If the level is lower than the allowable height (the white dot of the battery observation hole is not at the top), wear gloves to add conforming distilled water or deionized water to the standard level (1-2cm above the minimal level of the water filler plug). Never add any acid solution.

### WARNING

#### CHEMICAL BURN HAZARD



- Avoid battery acid escaping out or contact with unprotected skin, and if does, wash the skin with a large amount of clear water and seek medical assistance immediately.
- If excessive distilled water is added, suck out the excessive distilled water until normal level is reached. If excessive distilled water is added and the electrolyte overflows, use water mixed with bicarbonate (baking soda) to neutralize the acid, and blot up the liquid with a suction pipe.

## Charging the maintenance-free battery

1. Check the battery level on the display of ground control box. When the battery level is less than or equal to 20%, an alarm will be triggered and the battery needs to be charged immediately. For the purpose of not affecting the normal operation of the machine, it is recommended to charge the battery when the battery level is lower than 30%.
2. Completely power off the machine.
3. Connect the charger to a grounded AC circuit. The indicator light will be on after the battery is fully charged.
4. After charging, disconnect the cable plug from the battery to the charger.

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# 8 TRANSPORTING AND LIFTING THE MACHINE

## WARNING

### TRANSPORTATION AND LIFTING HAZARD



- Use a forklift or crane with the proper lifting capacity to lift the machine. Use good judgment and a planned movement to control the machine.
- The transport vehicle must be parked on level ground.
- The transport vehicle must be secured from rolling when loading the machine.
- Ensure that the vehicle capacity, loading surface, belts or ropes are sufficient to support the weight of the machine, refer to [1 Machine Specifications, page 1-1](#).
- Before driving the machine onto the transport vehicle, ensure that the slope is within the limit of the machine gradeability, refer to [1 Machine Specifications, page 1-1](#).
- Be sure the machine is on a level surface or secured before releasing the brake.
- Never transport people on the machine while the machine is being towed or while the machine is engaged in towing or lifting operations.
- The machine should be transported following the local laws and traffic rules.
- When using a forklift or crane to lift the machine, beware not to collide the machine with the nearby objects.
- Lock the wheels of the machine after it has been installed to prevent the machine from rolling.

## NOTICE

*Do not tow/drag the machine unless an emergency, failure or loss of power occurs. Refer to.*

## LIFTING THE MACHINE WITH A CRANE

Follow these requirements when lifting the machine by crane:

1. The boom must be stowed while lifting the machine with a crane.

2. Ensure the boom is positioned in the same direction as the chassis travels.
3. Ensure the controllers and chassis components are safe and reliable.
4. Remove all loose parts of the machine.
5. Determine the center of gravity of the machine.

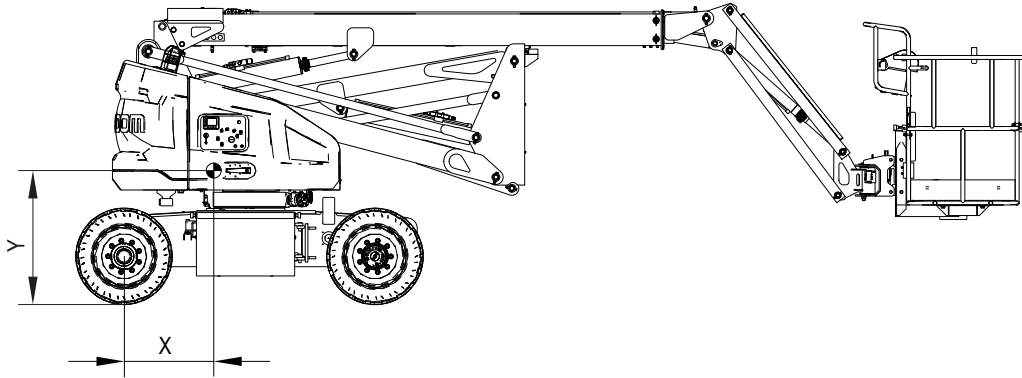


Figure 8-1

Table 8-1

MODEL	X	Y
GTZZ14EJ	1065.1mm (41.9 in)	1068.2mm (42 in)
GTZZ16EJ	1049.2mm (41.3 in)	1078.3mm (42.45 in)

6. Lift the machine as shown in the figure below.

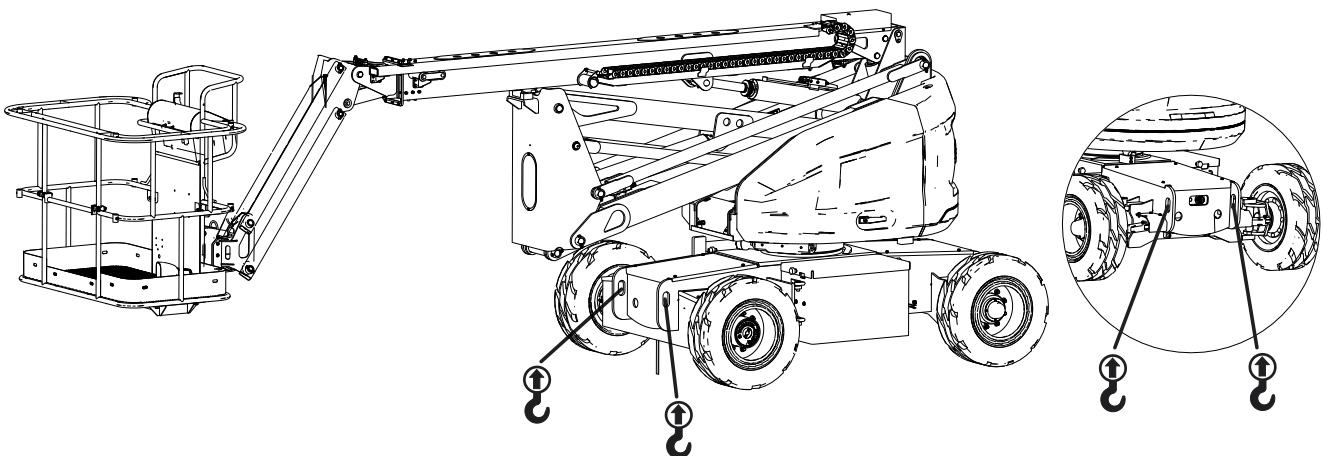


Figure 8-2

7. Only connect the rigging to the lifting point specified on the machine. Adjust the rigging to avoid damaging the machine and to keep the machine horizontal.

**NOTICE**

*To protect the machine, choose the appropriate length of rigging.*

### TRANSPORTING THE MACHINE

Follow these requirements when transporting the machine by truck or trailer:

1. Before transport, turn the key switch on ground controller to OFF, and remove the key.
2. Perform a thorough inspection of the machine to prevent loose or untightened components.
3. Ensure the rope or belt is of sufficient capacity.
4. Use at least 4 ropes/belts to fasten the chassis and one rope/belt for the platform.
5. Adjust the rigging to prevent damage to the rope/belt.
6. To protect the boom components and platform load sensors, do not apply too large a downward force to the rope/belt fastened near the platform. It is recommended to add a foam layer beneath the platform and ensure the platform is suspended in the air.

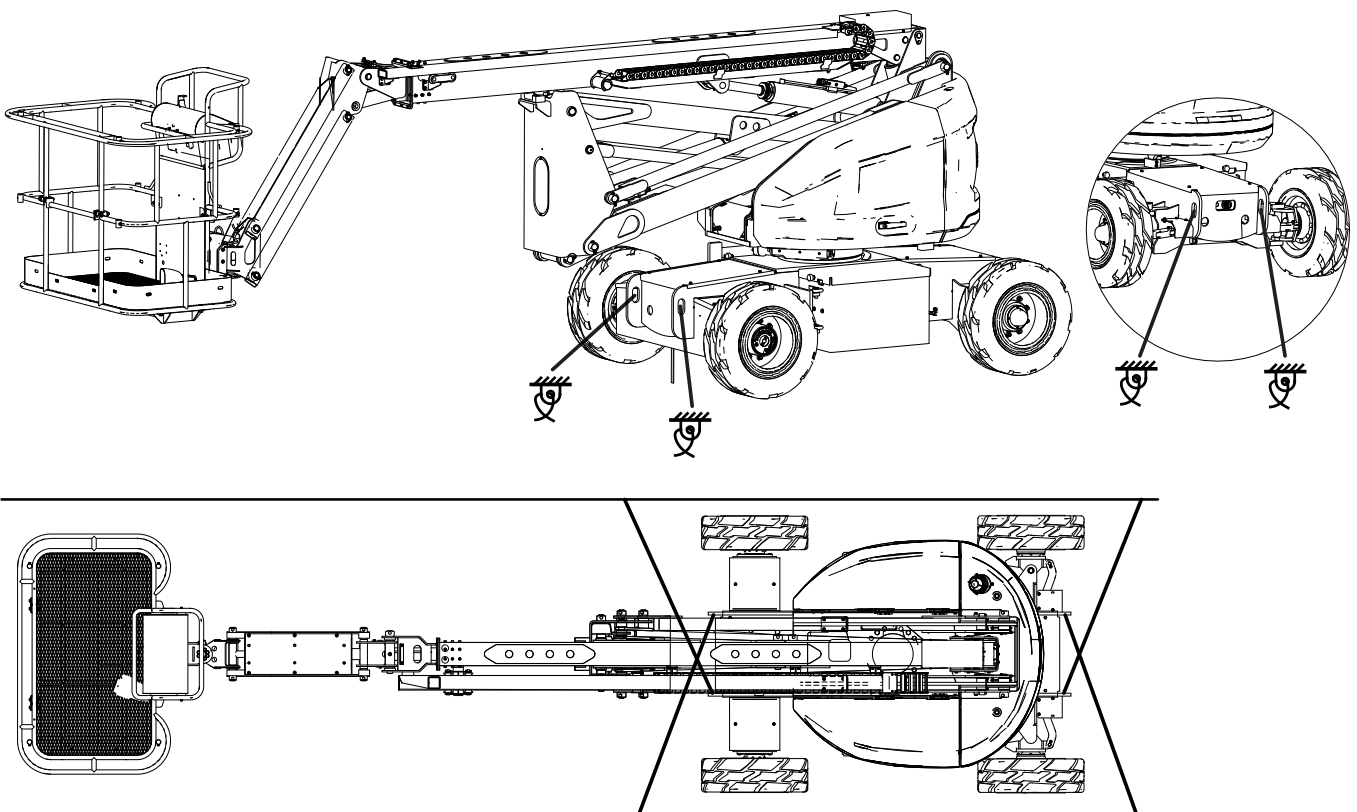


Figure 8-3

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# 9 MAINTENANCE

This section provides detailed procedures for regular maintenance inspections. For further information about maintenance, please see **Maintenance Manual**.

 **WARNING**



**UNSAFE OPERATION HAZARD**

**Failure to follow the proper maintenance may result in death, serious injury or damage to the machine.**

Follow these general rules:

- Preventive maintenance procedure should be established by the user according to the manufacturer's recommendations, machine operational environment and intensity of use, which should include both the regular inspection and the annual inspection.
  - Professionally trained, qualified personnel must conduct routine maintenance inspections on this machine.
  - Daily routine maintenance inspections must occur during normal operation of the machine. Maintenance inspectors must carry out inspection and maintenance according to the repair & inspection report and must complete the repair & inspection report.
  - Regular maintenance inspections must occur by operators and at quarterly, biannual and annual intervals by qualified, trained personnel. Qualified, trained personnel must check and maintain the machine according to the repair & inspection report and must complete the repair & inspection report.
  - Immediately remove a damaged or malfunctioning machine, mark it and stop using it.
  - Repair any damaged or malfunctioning machine before operating it.
  - Keep all machine inspection records for at least 10 years or until the machine is no longer in use or as required by machine owner/company/custodian.
  - The inspection and maintenance intervals depend on the manufacturer's recommendations, and should also be appropriate to the operational conditions and environment.
  - Conduct a quarterly inspection on machines that have been out of service for a period lasting longer than three months.
- While maintaining the machine, replace any parts on the machine using the same parts or the same parts of the original machine.
  - Unless otherwise specified, perform the maintenance procedures according the following terms and conditions:
    - Park the machine on flat, level and solid ground.
    - Place the machine in non-operating position.
    - Turn the key switch on ground controller to OFF position and remove the key to prevent unauthorized use of the machine.
    - Pull out the red emergency stop buttons on ground and platform controllers to OFF position to avoid unintended start-up of the operating system.
    - Turn off the main power switch,
    - Disconnect all DC power from the machine.
    - Lock all wheels to prevent movement of the machine.
    - Before releasing or removing the hydraulic components, release the hydraulic oil pressure in the hydraulic circuit, particularly with the counterbalance valve on the cylinder.

## CONDUCTING A PRE-DELIVERY INSPECTION

When the machine owner/company changes, in addition to conducting a pre-delivery inspection, the corresponding inspection shall be carried out according to the maintenance schedule requirement and repair & inspection report. When conducting a pre-delivery inspection, comply with the following requirements:

1. It is the responsibility of the machine owner/company to perform a pre-delivery inspection.
2. Follow this procedure each time before delivery. Performing a pre-delivery inspection could reveal potential problems with the machine before you begin putting the machine into service.
3. Never use a damaged or malfunctioning machine. Tag the machine and do not use it.
4. Only professionally trained, qualified personnel may repair the machine and must follow the procedures as stated in *operation manual* and *maintenance manual*.

- 5. A competent operator must conduct daily maintenance on this machine as stated in *operation manual* and *maintenance manual*.

Before delivering the machine, complete the following record using these instructions:

- 1. Prepare the machine before delivery, which includes performing a pre-delivery inspection,

following maintenance procedures and performing functional inspections.

- 2. Use the following table to note the results. After each section is complete, mark the appropriate box.
- 3. Record the inspection results. If any inspection results are "NO", the machine must be stopped and re-inspected after repair is completed and marked in the box marked "inspection".

**Table 9-1**

<b>PREPARE THE WORK RECORD BEFORE DELIVERY</b>			
Model			
Serial No.			
<b>Inspection Item</b>	<b>YES/Machine is in Good Condition</b>	<b>NO/Machine Has Damage or Malfunction</b>	<b>REPAIRED/Machine Has Been Repaired</b>
Pre-operational Inspection			
Maintenance Procedure			
Functional Inspection			
Machine Buyer/ Renter			
Inspector Signature			
Inspector Title			
Inspector Company			

## **FOLLOWING A MAINTENANCE SCHEDULE**

Regular maintenance inspections must occur daily, quarterly, biannually (every 6 months) and annually, and must be performed by the personnel qualified in the maintenance and service of the machine models involved. Use the table to help you adhere to a routine maintenance schedule.

**Table 9-2**

<b>INSPECTION INTERVAL</b>	<b>INSPECTION PROCEDURES</b>
Every day or every 8 hours	A
Every quarter or every 250 hours	A+B
Every half a year or every 500 hours	A+B+C
Every year or every 1000 hours	A+B+C+D

## **COMPLETING A REPAIR & INSPECTION REPORT**

- 1. Divide the Repair & Inspection Report into four sections (A, B, C and D) according to the time requirements of the maintenance schedule and the maintenance procedure requirements.
- 2. The Repair & Inspection Report shall include the inspection table of each regular inspection.
- 3. Duplicate the Repair & Inspection Report for each inspection. Store the completed tables for 10 years or until the machine is no longer in use or as required by machine owner/company/custodian.
- 4. Use the following table to note the results. After each section is complete, mark the appropriate box.
- 5. Record the inspection results. If any inspection results are "NO", the machine must be stopped and re-inspected after repair is completed and marked in the box marked "inspection". Select the appropriate inspection procedure based on the inspection type.

Table 9-3

<b>REPAIR &amp; INSPECTION REPORT</b>				
Model				
Serial No.				
<b>Checklist A Procedures</b>				
Items	YES/Machine is in Good Condition	NO/Machine Has Damage or Malfunction	REPAIRED/ Machine Has Been Repaired	Problem Description
A-1 Inspect All Manuals				
A-2 Inspect All Decals				
A-3 Inspect Damaged, Loose or Lost Parts				
A-4 Inspect Hydraulic Oil Level				
A-5 Inspect Hydraulic Oil Leakage				
A-6 Functional Tests				
A-7 Perform Maintenance after 30 Days				
<b>Checklist B Procedures</b>				
Items	YES/Machine is in Good Condition	NO/Machine Has Damage or Malfunction	REPAIRED/ Machine Has Been Repaired	Problem Description
B-1 Inspect Electrical Wiring				
B-2 Inspect the battery				
B-3 Inspect Rim, Tire and Fasteners				
B-4 Inspect Hydraulic Oil				
B-5 Inspect and replace return filter element				
B-6 Inspect maximum operating range				
B-7 Inspect Slewing Bearing Bolts				
B-8 Lubricate Slewing Bearing				
B-9 Inspect Air filter of Hydraulic Tank				
B-10 Replace High-Pressure Filter				
B-11 Inspect Drive Reducer Oil Level				

<b>REPAIR &amp; INSPECTION REPORT</b>				
B-12 Inspect Platform Rotate Cylinder Fasteners				
B-13 Test Tilt Protection System				
B-14 Test Drive Speed				
B-15 Test Emergency Lowering Function				
B-16 Test Cylinder Drift				
<b>Checklist C Procedures</b>				
Items	YES/Machine is in Good Condition	NO/Machine Has Damage or Malfunction	REPAIRED/ Machine Has Been Repaired	Problem Description
C-1 Replace hydraulic oil tank air filter				
C-2 Test Weighing System				
<b>Checklist D Procedures</b>				
Items	YES/Machine is in Good Condition	NO/Machine Has Damage or Malfunction	REPAIRED/ Machine Has Been Repaired	Problem Description
D-1 Inspect Boom Wear Pads				
D-2 Replace Drive Reducer Gear Oil				
D-3 Replace Hydraulic Oil				
D-4 Replace Hydraulic Tank Suction Filter				
User				
Inspector Signature				
Inspection Date				
Inspector Title				
Inspector Company				


# 10 DECALS/NAMEPLATES INSPECTION


Use appropriate inspection methods to check that all decals are easy to identify and properly placed.

Replace any lost or damaged safety decals.

Clean safety decals with neutral soap and water. Do not use solvent-based cleaners, which can damage safety label materials.

Do not operate machines without decals/nameplates.

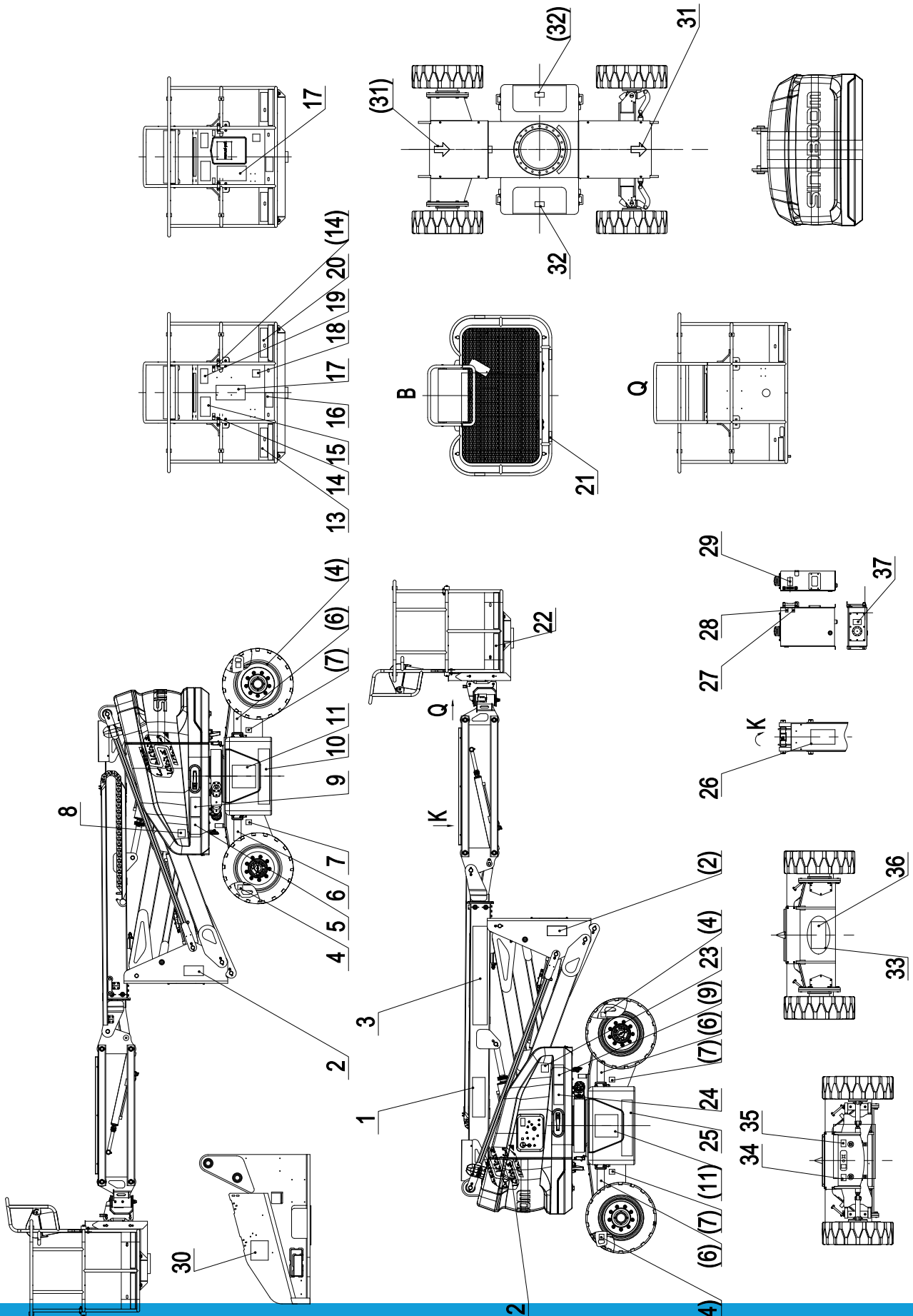
 **WARNING**



**UNSAFE OPERATION HAZARD**

**All safety labels must be legible to alert personnel of safety hazards. Replace any illegible or missing labels immediately. Safety labels removed during any repair work must be replaced in their original position before the engine is placed back into service. Do not operate the engine if there are missing or badly worn safety labels.**

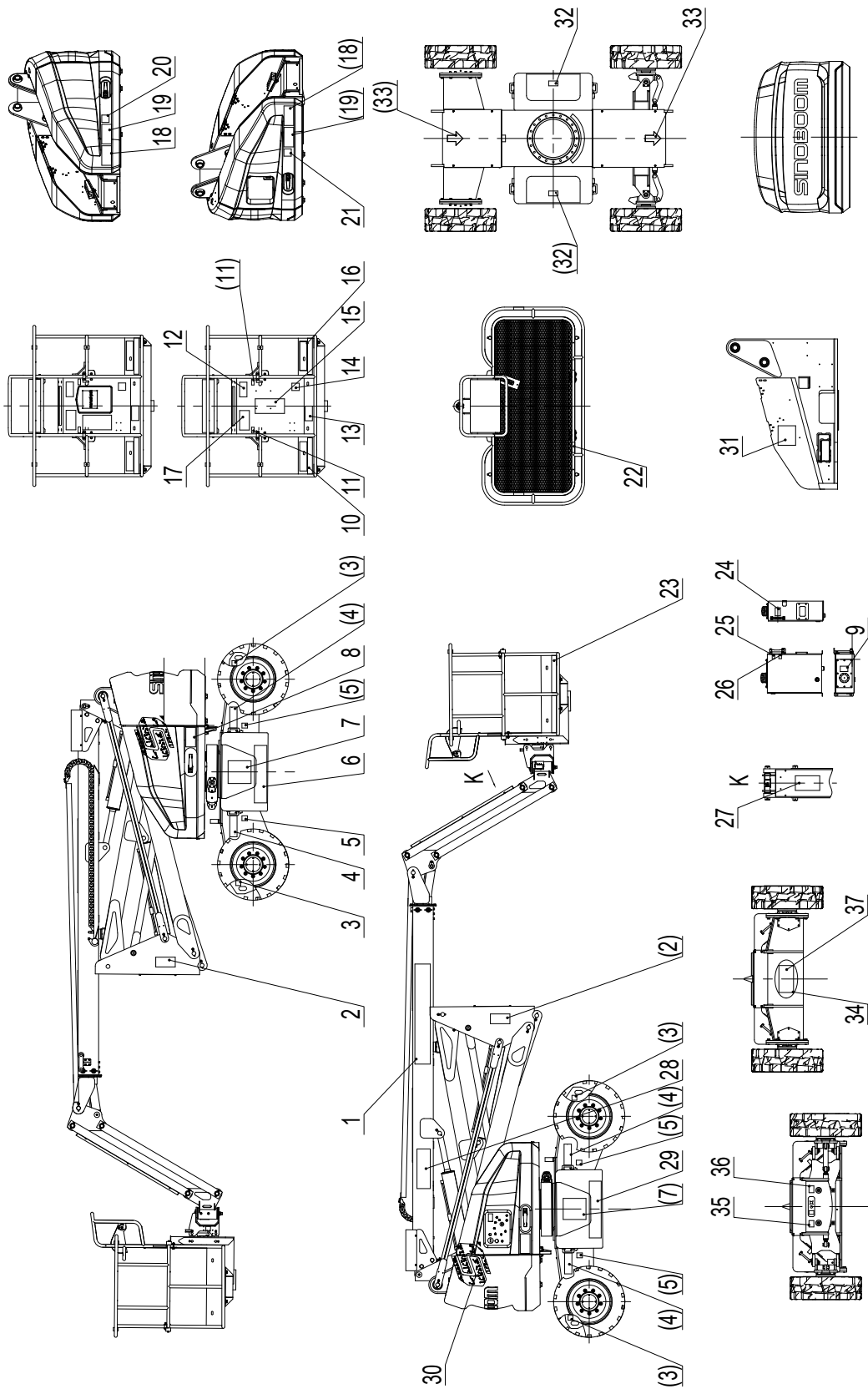
DECALS/NAMEPLATES (GB)-GTZZ14EJ



No.	Part No.	Description	Qty.	Remarks
	103004000004	Decals (GB)-GTZZ14EJ	1	
1	103006103005	Decals-AB14EJ	1	
2	104011100011	Decal-Crush hazard	2	
3	105058103003	LOGO-SINOBOOM (small)	1	
4	104011100002	Decal-Lifting lugs	4	
5	104011100007	Decal-Tipping hazard	1	
6	104011100001	Decal-Tipping hazard	4	
7	103006103007	Decal-Wheel load 3580kg	4	
8	104011100016	Decal-Emergency stop switch	1	
9	104011100006	Decal-Bulkhead overhaul	2	
10	103003100004	Decal-Contact information	1	
11	103003100014	Decal-Recyclable	2	
12	103008103006	LOGO-Symbol (small)	2	
13	104010100015	Decal-Tipping hazard	1	
14	101016100030	Decal-Lanyard anchorage points	2	
15	104011100015	Decal-Tipping hazard	1	
16	104011100019	Decal-Crush hazard	1	
17	104011100020	Decal-General safety	1	
18	104011100017	Decal-Footswitch	1	
19	104011100009	Decal-Read manuals	1	
20	104008100011	Decal-Rated load 230kg	1	
21	104011100021	Decal-Crush hazard	4	
22	216060000002	Yellow-black caution stripe	4	
23	101016100034	Decal-Noise 72dB	1	
24	104011100013	Decal-Electrocution hazard	1	
25	103003100013	Decal-Contact information	1	
26	104011100012	Decal-Fall hazard	1	
27	104011100003	Decal-Hydraulic oil level	1	
28	104011100010	Decal-Hydraulic oil level	1	
29	104010100021	Decal-Temperature range	1	
30	103006103000	Decal-Emergency lowering	1	
31	103003100006	Decal-Direction	2	
32	101012100001	Decal-No smoking or fire	2	
33	215050000001	Blind rivet	4	
34	101012100010	Decal-Electrocution hazard	1	
35	101012100014	Decal-Charge voltage	1	

No.	Part No.	Description	Qty.	Remarks
36	105001100057	Nameplate-GB	1	
37	104009100018	Decal-Hydraulic oil	1	

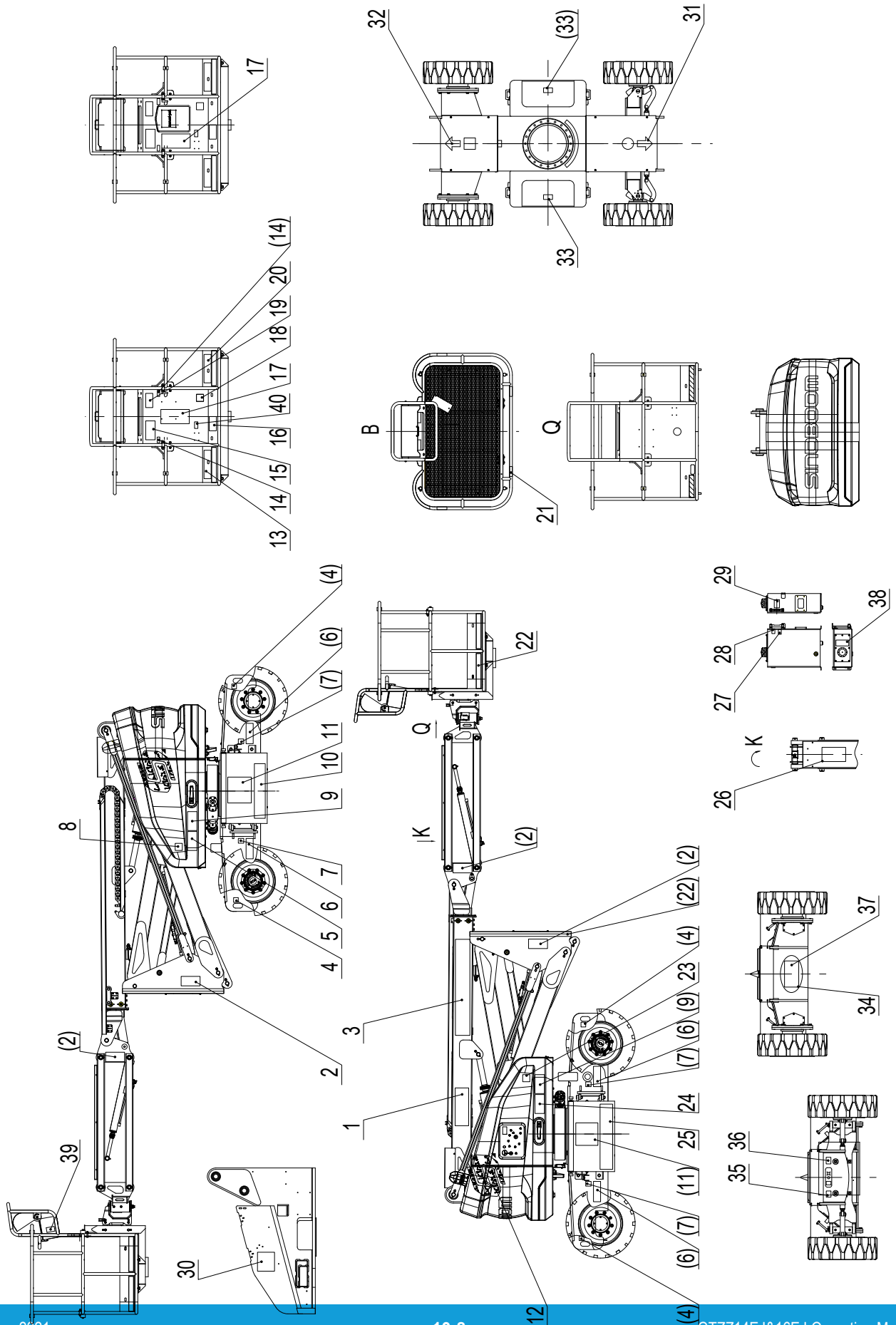
DECALS/NAMEPLATES (GB)-GTZZ16EJ



No.	Part No.	Description	Qty.	Remarks
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1	105058103003	LOGO-SINOBOOM (small)	1	
2	104011100011	Decal-Crush hazard	2	
3	104011100002	Decal-Lifting lugs	4	
4	104011100001	Decal-Tipping hazard	4	
5	103007103008	Decal-Wheel load 3760kg	4	
6	103003100013	Decal-Contact information	1	
7	103003100014	Decal-Recyclable	2	
8	104011100006	Decal-Bulkhead overhaul	2	
9	104009100018	Decal-Hydraulic oil	1	
10	104010100015	Decal-Tipping hazard	1	
11	101016100030	Decal-Lanyard anchorage points	2	
12	104011100009	Decal-Read manuals	1	
13	104011100019	Decal-Crush hazard	1	
14	104011100017	Decal-Footswitch	1	
15	104011100020	Decal-General safety	1	
16	104008100011	Decal-Rated load 230kg	1	
17	104011100015	Decal-Tipping hazard	1	
18	104011100007	Decal-Tipping hazard	2	
19	104011100013	Decal-Electrocution hazard	2	
20	104011100016	Decal-Emergency stop switch	1	
21	101016100034	Decal-Noise 72dB	1	
22	104011100021	Decal-Crush hazard	4	
23	216060000002	Yellow-black caution stripe	4	
24	104010100021	Decal-Temperature range	1	
25	104011100010	Decal-Hydraulic oil level	1	
26	104011100003	Decal-Hydraulic oil level	1	
27	104011100012	Decal-Fall hazard	1	
28	103007103007	Decal-AB16EJ	1	
29	103003100004	Decal-Contact information	1	
30	103008103006	LOGO-Symbol (small)	2	
31	103006103000	Decal-Emergency lowering	1	
32	101012100001	Decal-No smoking or fire	2	
33	103003100006	Decal-Direction	2	
34	215050000001	Blind rivet	4	
35	101012100010	Decal-Electrocution hazard	1	

No.	Part No.	Description	Qty.	Remarks
36	101012100014	Decal-Charge voltage	1	
37	105001100057	Nameplate GB	1	

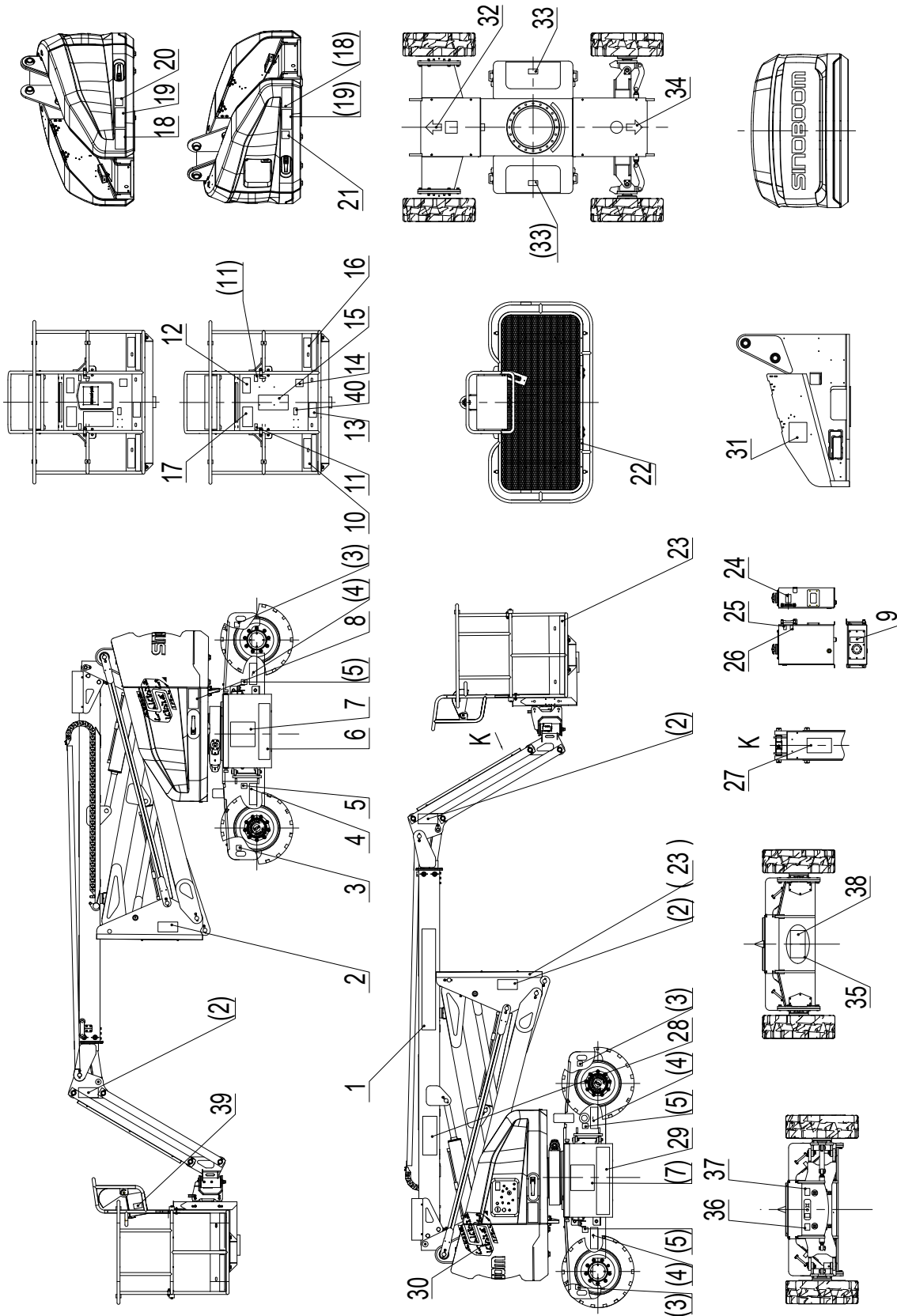
DECALS/NAMEPLATES (CE-METRIC)-GTZZ14EJ



NO.	Part NO.	Description	Qty	Remarks
	103004000006	Decals (CE-Metric)-GTZZ14EJ	1	
1	103006103005	Decal-AB14EJ	1	
2	104011100011	Decal-Crush hazard	4	
3	105058103003	LOGO-SINOBOOM (small)	1	
4	104011100002	Decal-Lifting point	4	
5	104011100007	Decal-Tipping hazard	1	
6	104011100001	Decal-Tipping hazard	4	
7	103006103007	Decal-Wheel load 3580kg	4	
8	104011100016	Decal-Emergency stop switch	1	
9	104011100006	Decal-Bulkhead overhaul	2	
10	103003100009	Decal-Contact information	1	
11	103003100014	Decal-Recyclable	2	
12	103008103006	LOGO-Symbol (small)	2	
13	104010100015	Decal-Tipping hazard	1	
14	103006103014	Decal-Lanyard anchorage point	2	
15	104011100015	Decal-Tipping hazard	1	
16	104011100019	Decal-Crush hazard	1	
17	104011100020	Decal-General safety	1	
18	104011100017	Decal-Footswitch	1	
19	104011100009	Decal-Read manuals	1	
20	103004103003	Decal-Rated load 230kg	1	
21	104011100021	Decal-Crush hazard	4	
22	216060000002	Yellow-black caution stripe	6	
23	101016100034	Decal-Noise 72dB	1	
24	104011100013	Decal-Electrocution hazard	1	
25	103003100015	Decal-Contact information	1	
26	104011100012	Decal-Fall hazard	1	
27	104011100003	Decal-Hydraulic oil level	1	
28	104011100010	Decal-Hydraulic oil level	1	
29	104010100021	Decal-Temperature range	1	
30	103006103000	Decal-Emergency lowering	1	
31	103006103011	Decal-Direction	1	
32	103006103012	Decal-Direction	1	
33	101012100001	Decal-No smoking or fire	2	
34	215050000001	Blind rivet 3×8-ZnD	4	
35	101012100010	Decal-Electrocution hazard	1	

NO.	Part NO.	Description	Qty	Remarks
36	101012100014	Decal-Charge voltage	1	
37	104011100028	Nameplate CE (AB)	1	
38	104009100022	Decal-Hydraulic oil	1	
39	103006103013	Decal-Bumper reset	1	
40	103006103015	Decal-230V	1	

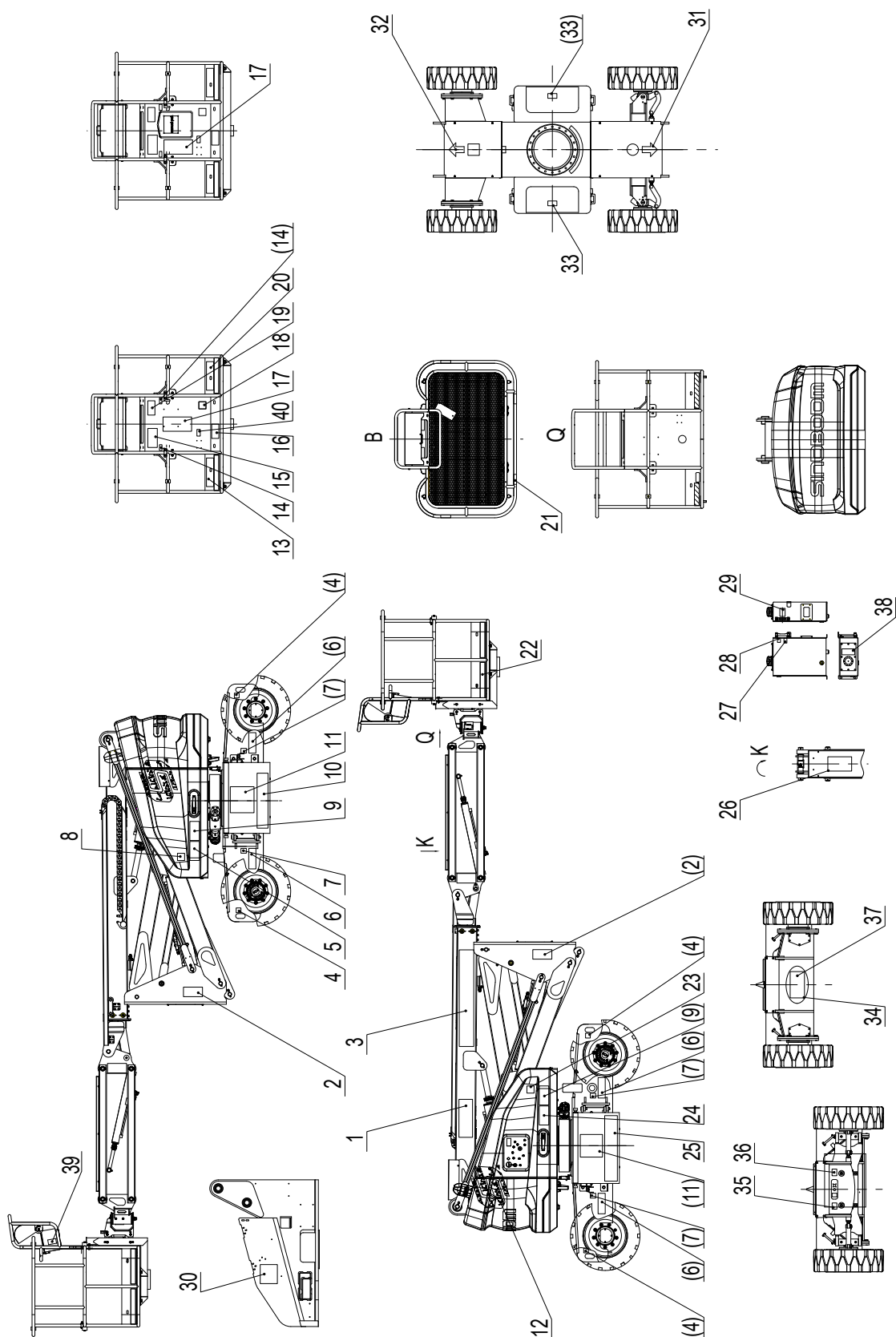
DECALS/NAMEPLATES (CE-METRIC)-GTZZ16EJ



NO.	Part NO.	Description	Qty	Remarks
	103005000004	Decals (CE-Metric)-GTZZ16EJ	1	
1	105058103003	LOGO-SINOBOOM (small)	1	
2	104011100011	Decal-Crush hazard	4	
3	104011100002	Decal-Lifting point	4	
4	104011100001	Decal-Tipping hazard	4	
5	103007103008	Decal-Wheel load 3760kg	4	
6	103003100009	Decal-Contact information	1	
7	103003100014	Decal-Recyclable	2	
8	104011100006	Decal-Bulkhead overhaul	2	
9	104009100022	Decal-Hydraulic oil	1	
10	104010100015	Decal-Tipping hazard	1	
11	103006103014	Decal-Lanyard anchorage point	2	
12	104011100009	Decal-Read manuals	1	
13	104011100019	Decal-Crush hazard	1	
14	104011100017	Decal-Footswitch	1	
15	104011100020	Decal-General safety	1	
16	103004103003	Decal-Rated load 230kg	1	
17	104011100015	Decal-Tipping hazard	1	
18	104011100007	Decal-Tipping hazard	2	
19	104011100013	Decal-Electrocution hazard	2	
20	104011100016	Decal-Emergency stop switch	1	
21	101016100034	Decal-Noise 72dB	1	
22	104011100021	Decal-Crush hazard	4	
23	216060000002	Yellow-black caution stripe	6	
24	104010100021	Decal-Temperature range	1	
25	104011100010	Decal-Hydraulic oil level	1	
26	104011100003	Decal-Hydraulic oil level	1	
27	104011100012	Decal-Fall hazard	1	
28	103007103007	Decal-AB16EJ	1	
29	103003100015	Decal-Contact information	1	
30	103008103006	LOGO-Symbol (small)	2	
31	103006103000	Decal-Emergency lowering	1	
32	103006103012	Decal-Direction	1	
33	101012100001	Decal-No smoking or fire	2	
34	103006103011	Decal-Direction	1	
35	215050000001	Blind rivet 3×8-ZnD	4	

NO.	Part NO.	Description	Qty	Remarks
36	101012100010	Decal-Electrocution hazard	1	
37	101012100014	Decal-Charge voltage	1	
38	104011100028	Nameplate CE (AB)	1	
39	103006103013	Decal-Bumper reset	1	
40	103006103015	Decal-230V	1	

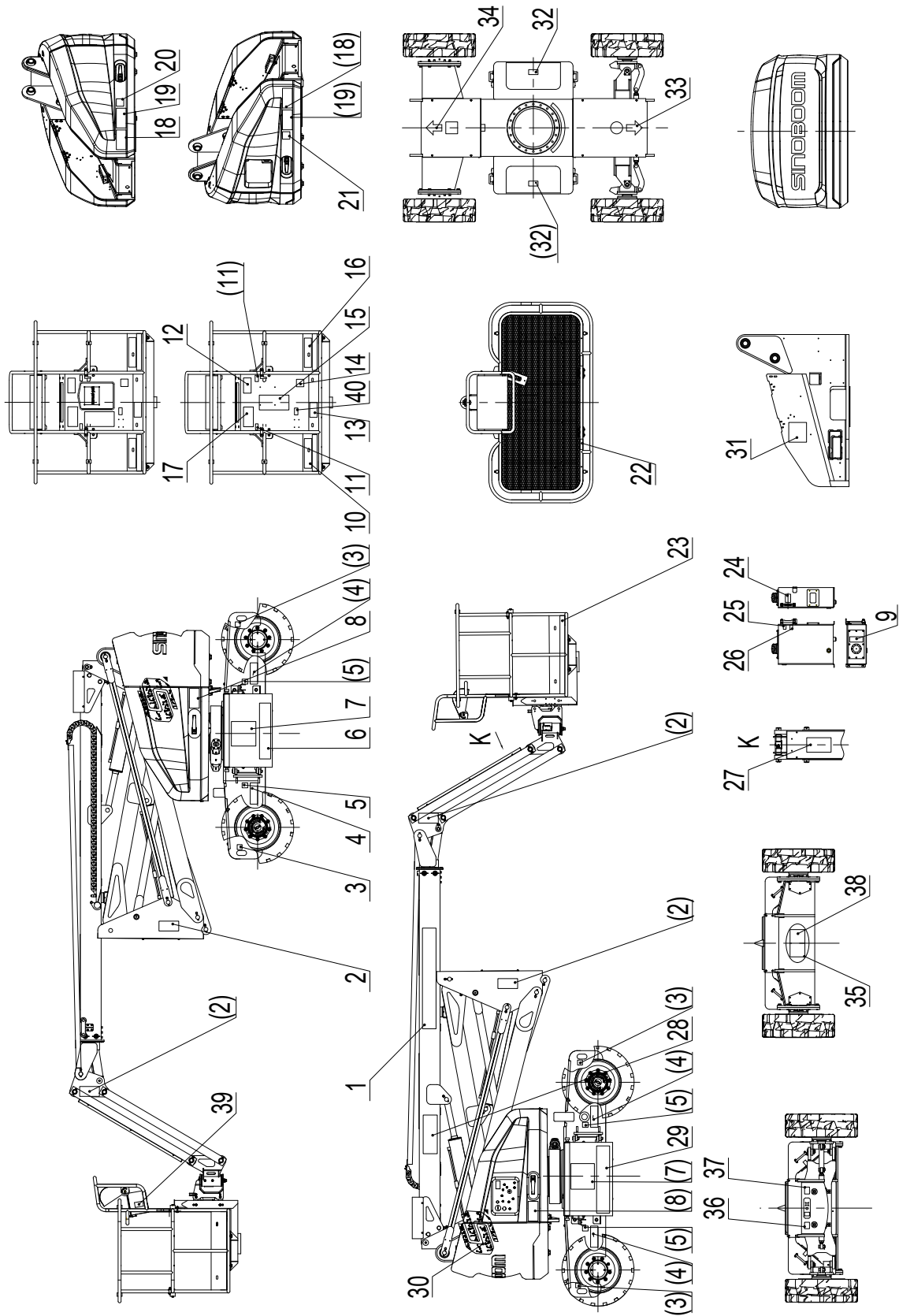
## DECALS/NAMEPLATES (CE-IMPERIAL)-GTZZ14EJ



NO.	Part NO.	Description	Qty	Remarks
	103006103010	Decals (CE-Imperial)-GTZZ14EJ	1	
1	103006103001	Decal-AB460EJ	1	
2	104011100011	Decal-Crush hazard	4	
3	105058103003	LOGO-SINOBOOM (small)	1	
4	104011100002	Decal-Lifting point	4	
5	104011100007	Decal-Tipping hazard	1	
6	104011100001	Decal-Tipping hazard	4	
7	103006103007	Decal-Wheel load 3580kg	4	
8	104011100016	Decal-Emergency stop switch	1	
9	104011100006	Decal-Bulkhead overhaul	2	
10	103003100009	Decal-Contact information	1	
11	103003100014	Decal-Recyclable	2	
12	103008103006	LOGO-Symbol (small)	2	
13	104010100015	Decal-Tipping hazard	1	
14	101016100030	Decal-Lanyard anchorage point	2	
15	104011100015	Decal-Tipping hazard	1	
16	104011100019	Decal-Crush hazard	1	
17	104011100020	Decal-General safety	1	
18	104011100017	Decal-Footswitch	1	
19	104011100009	Decal-Read manuals	1	
20	103004103003	Decal-Rated load 230kg	1	
21	104011100021	Decal-Crush hazard	4	
22	216060000002	Yellow-black caution stripe	4	
23	101016100034	Decal-Noise 72dB	1	
24	104011100013	Decal-Electrocution hazard	1	
25	103003100015	Decal-Contact information	1	
26	104011100012	Decal-Fall hazard	1	
27	104011100003	Decal-Hydraulic oil level	1	
28	104011100010	Decal-Hydraulic oil level	1	
29	104010100021	Decal-Temperature range	1	
30	103006103000	Decal-Emergency lowering	1	
31	103006103011	Decal-Direction	1	
32	103006103012	Decal-Direction	1	
33	101012100001	Decal-No smoking or fire	2	
34	215050000001	Blind rivet 3×8-ZnD	4	
35	101012100010	Decal-Electrocution hazard	1	

NO.	Part NO.	Description	Qty	Remarks
36	101012100014	Decal-Charge voltage	1	
37	104011100028	Nameplate CE (AB)	1	
38	104009100022	Decal-Hydraulic oil	1	
39	103006103013	Decal-Bumper reset	1	

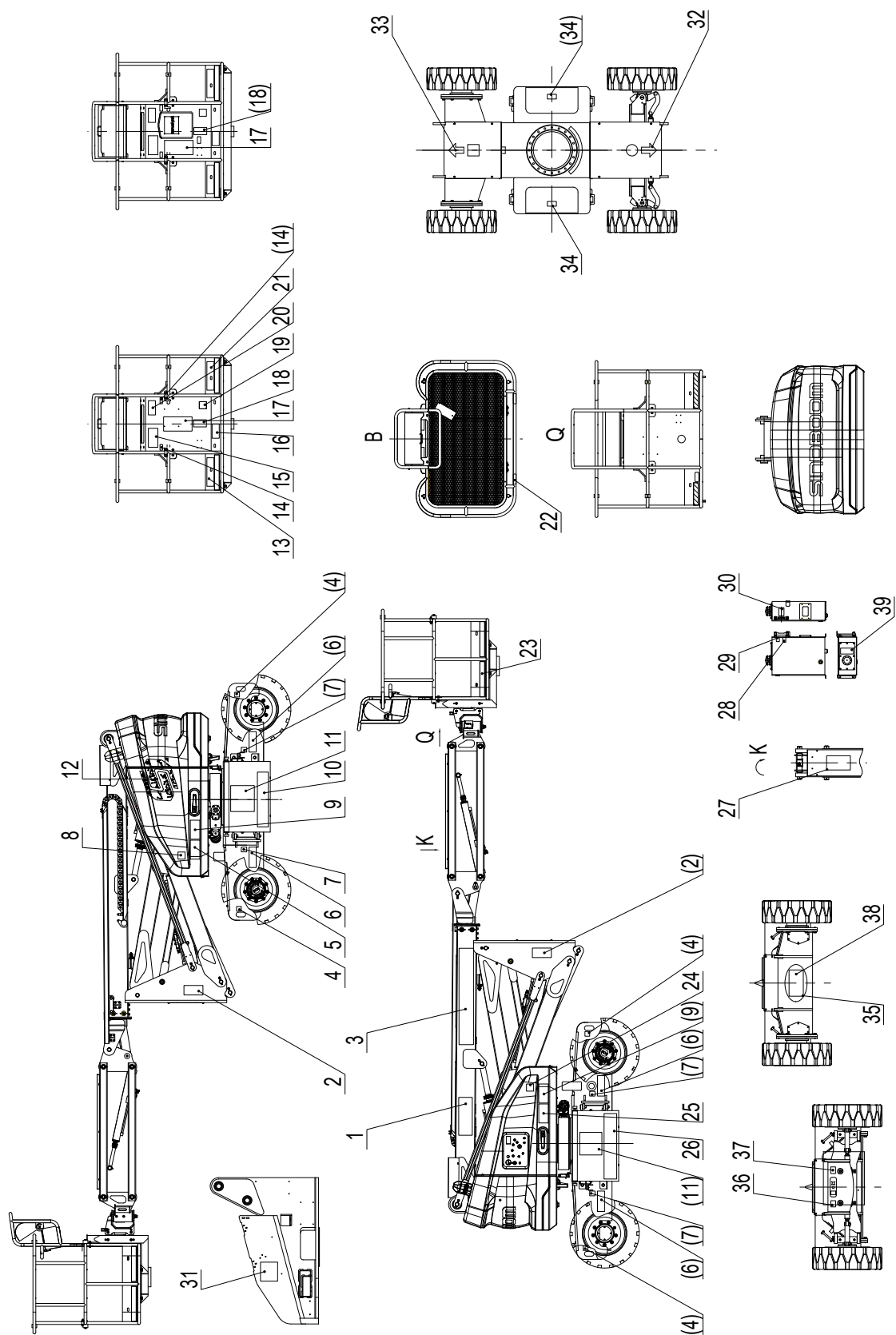
DECALS/NAMEPLATES (CE-IMPERIAL)-GTZZ16EJ



NO.	Part NO.	Description	Qty	Remarks
	103007103010	Decals (CE-Imperial)-GTZZ16EJ	1	
1	105058103003	LOGO-SINOBOOM (small)	1	
2	104011100011	Decal-Crush hazard	4	
3	104011100002	Decal-Lifting point	4	
4	104011100001	Decal-Tipping hazard	4	
5	103007103008	Decal-Wheel load 3760kg	4	
6	103003100009	Decal-Contact information	1	
7	103003100014	Decal-Recyclable	2	
8	104011100006	Decal-Bulkhead overhaul	2	
9	104009100022	Decal-Hydraulic oil	1	
10	104010100015	Decal-Tipping hazard	1	
11	101016100030	Decal-Lanyard anchorage point	2	
12	104011100009	Decal-Read manuals	1	
13	104011100019	Decal-Crush hazard	1	
14	104011100017	Decal-Footswitch	1	
15	104011100020	Decal-General safety	1	
16	103004103003	Decal-Rated load 230kg	1	
17	104011100015	Decal-Tipping hazard	1	
18	104011100007	Decal-Tipping hazard	2	
19	104011100013	Decal-Electrocution hazard	2	
20	104011100016	Decal-Emergency stop switch	1	
21	101016100034	Decal-Noise 72dB	1	
22	104011100021	Decal-Crush hazard	4	
23	216060000002	Yellow-black caution stripe	4	
24	104010100021	Decal-Temperature range	1	
25	104011100010	Decal-Hydraulic oil level	1	
26	104011100003	Decal-Hydraulic oil level	1	
27	104011100012	Decal-Fall hazard	1	
28	103007103005	Decal-AB520EJ	1	
29	103003100015	Decal-Contact information	1	
30	103008103006	LOGO-Symbol (small)	2	
31	103006103000	Decal-Emergency lowering	1	
32	101012100001	Decal-No smoking or fire	2	
33	103006103011	Decal-Direction	1	
34	103006103012	Decal-Direction	1	
35	215050000001	Blind rivet 3×8-ZnD	4	

NO.	Part NO.	Description	Qty	Remarks
36	101012100010	Decal-Electrocution hazard	1	
37	101012100014	Decal-Charge voltage	1	
38	104011100028	Nameplate CE (AB)	1	
39	103006103013	Decal-Bumper reset	1	

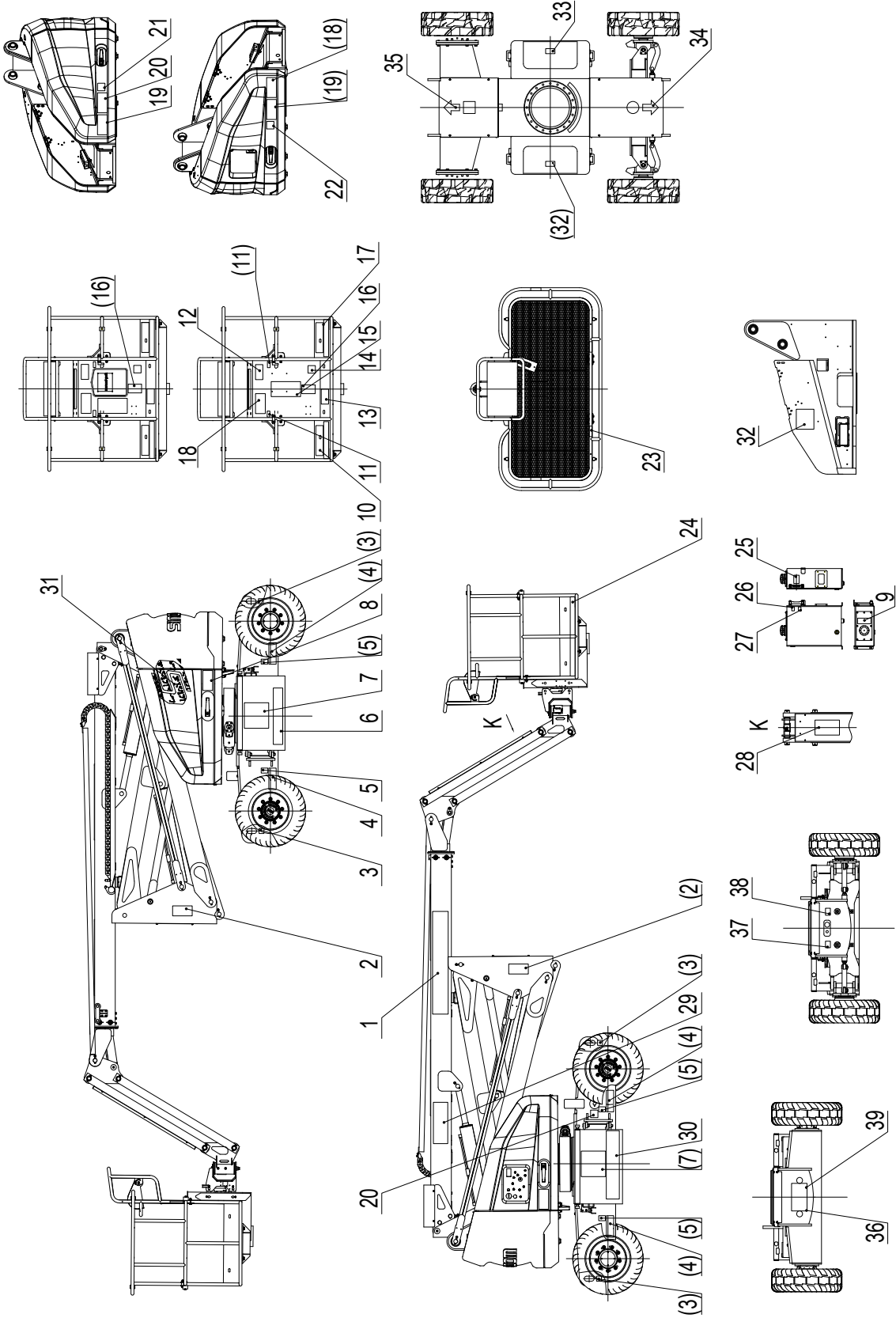
## DECALS/NAMEPLATES (CSA)-GTZZ14EJ



No.	Part No.	Description	Qty.	Remarks
	103006103004	Decals (CSA)-GTZZ14EJ	1	
1	103006103001	Decal-AB460EJ	1	
2	104011100011	Decal-Crush hazard	2	
3	105058103003	LOGO-SINOBOOM (small)	1	
4	104011100002	Decal-Lifting point	4	
5	104011100007	Decal-Tipping hazard	1	
6	104011100001	Decal-Tipping hazard	4	
7	103006103009	Decal-Wheel load 3580kg	4	
8	104011100016	Decal-Emergency stop switch	1	
9	104011100006	Decal-Bulkhead overhaul	2	
10	103003100009	Decal-Contact information	1	
11	103003100014	Decal-Recyclable	2	
12	103008103006	LOGO-Symbol (small)	1	
13	104010100015	Decal-Tipping hazard	1	
14	101016100030	Decal-Lanyard anchorage point	2	
15	104011100015	Decal-Tipping hazard	1	
16	104011100019	Decal-Crush hazard	1	
17	104011100020	Decal-General safety	1	
18	103006103003	Decal-Brief instructions	1	
19	104011100017	Decal-Footswitch	1	
20	104011100009	Decal-Read manuals	1	
21	103007103001	Decal-Rated load 230kg	1	
22	104011100021	Decal-Crush hazard	4	
23	216060000002	Yellow-black caution stripe	4	
24	101016100034	Decal-Noise 72dB	1	
25	104011100013	Decal-Electrocution hazard	1	
26	103003100015	Decal-Contact information	1	
27	104011100012	Decal-Fall hazard	1	
28	104011100003	Decal-Hydraulic oil level	1	
29	104011100010	Decal-Hydraulic oil level	1	
30	104010100021	Decal-Temperature range	1	
31	103006103000	Decal-Emergency lowering	1	
32	103006103011	Decal-Direction	1	
33	103006103012	Decal-Direction	1	
34	101012100001	Decal-No smoking or fire	2	
35	215050000001	Blind rivet 3×8-ZnD	4	

No.	Part No.	Description	Qty.	Remarks
36	101012100010	Decal-No smoking or fire	1	
37	101012100014	Decal-Charge voltage	1	
38	103006103002	Nameplate CSA (AB)	1	
39	104009100022	Decal-Hydraulic oil	1	

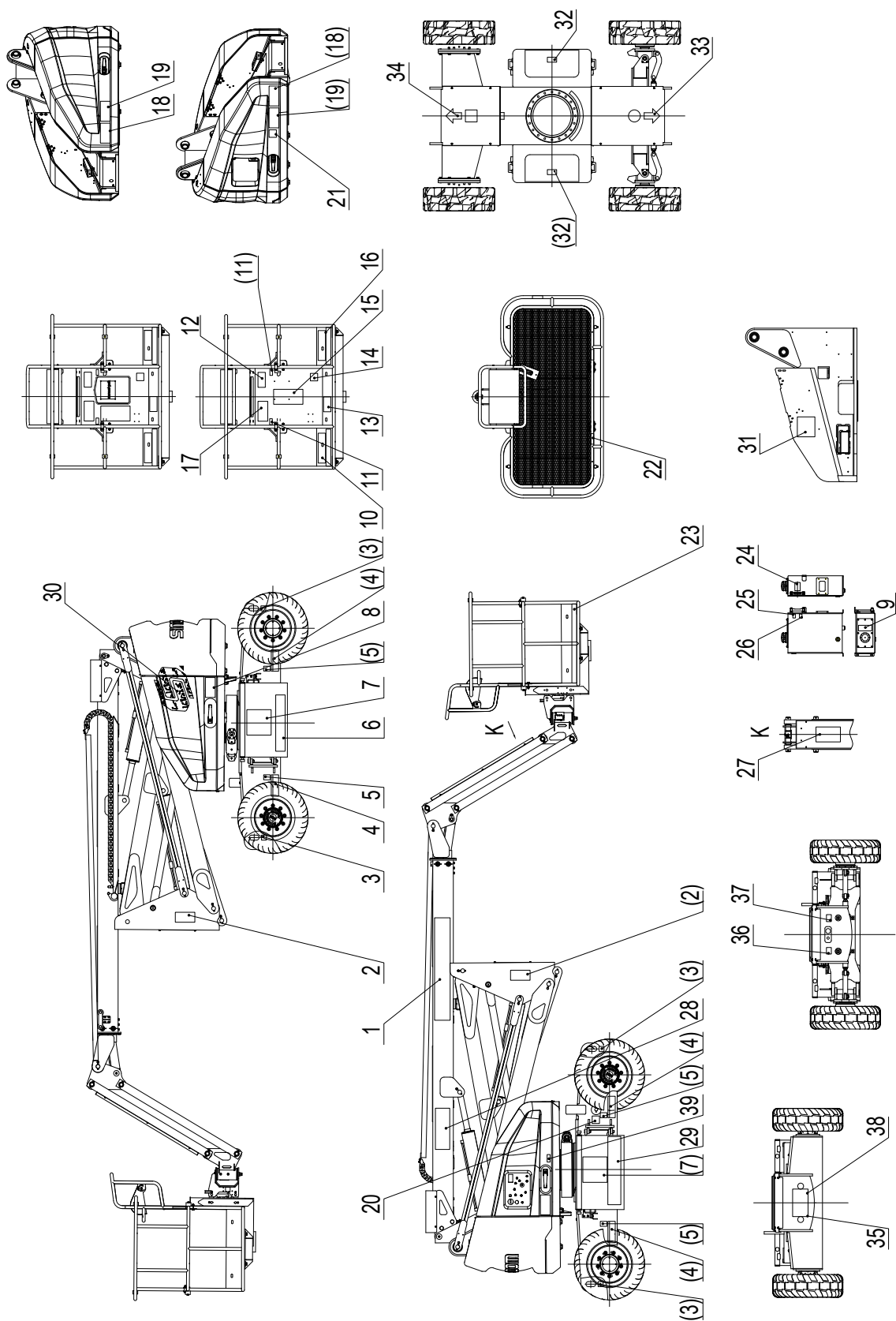
DECALS/NAMEPLATES (CSA)-GTZZ16EJ



No.	Part No.	Description	Qty.	Remarks
	103007103006	Decals (CSA)-GTZZ16EJ	1	
1	105058103003	LOGO-SINOBOOM (small)	1	
2	104011100011	Decal-Crush hazard	2	
3	104011100002	Decal-Lifting point	4	
4	104011100001	Decal-Tipping hazard	4	
5	103007103009	Decal-Wheel load 3760kg	4	
6	103003100009	Decal-Contact information	1	
7	103003100014	Decal-Recyclable	2	
8	104011100006	Decal-Bulkhead overhaul	2	
9	104009100022	Decal-Hydraulic oil	1	
10	104010100015	Decal-Tipping hazard	1	
11	101016100030	Decal-Lanyard anchorage point	2	
12	104011100009	Decal-Read manuals	1	
13	104011100019	Decal-Crush hazard	1	
14	104011100017	Decal-Footswitch	1	
15	104011100020	Decal-General safety	1	
16	103006103003	Decal-Brief instructions	1	
17	103007103001	Decal-Rated load 230kg	1	
18	104011100015	Decal-Tipping hazard	1	
19	104011100007	Decal-Tipping hazard	2	
20	104011100013	Decal-Electrocution hazard	2	
21	104011100016	Decal-Emergency stop switch	1	
22	101016100034	Decal-Noise 72dB	1	
23	104011100021	Decal-Crush hazard	4	
24	216060000002	Yellow-black caution stripe	4	
25	104010100021	Decal-Temperature range	1	
26	104011100010	Decal-Hydraulic oil level	1	
27	104011100003	Decal-Hydraulic oil level	1	
28	104011100012	Decal-Fall hazard	1	
29	103007103005	Decal-AB520EJ	1	
30	103003100015	Decal-Contact information	1	
31	103008103006	LOGO-Symbol (small)	1	
32	103006103000	Decal-Emergency lowering	1	
33	101012100001	Decal-No smoking or fire	2	
34	103006103011	Decal-Direction	1	
35	103006103012	Decal-Direction	1	

No.	Part No.	Description	Qty.	Remarks
36	215050000001	Blind rivet 3×8-ZnD	4	
37	101012100010	Decal-Electrocution hazard	1	
38	101012100014	Decal-Charge voltage	1	
39	103006103002	Nameplate CSA (AB)	1	

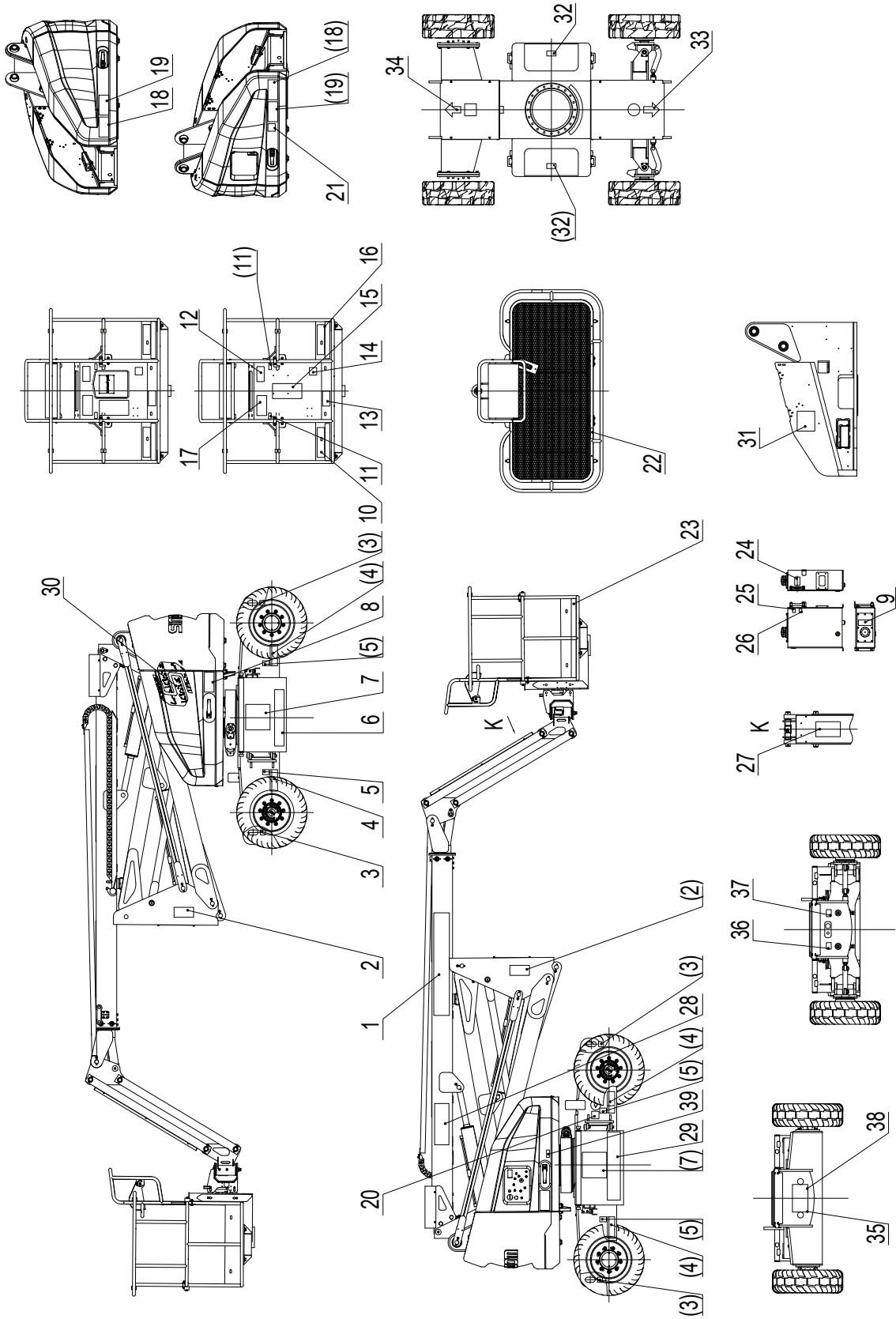
## DECALS/NAMEPLATES (ANSI)-GTZZ14EJ



No.	Part No.	Description	Qty.	Remarks
	103006103008	Decals (ANSI)-GTZZ14EJ	1	
1	105058103003	LOGO-SINOBOOM (small)	1	
2	104011100011	Decal-Crush hazard	2	
3	104011100002	Decal-Lifting point	4	
4	104011100001	Decal-Tipping hazard	4	
5	103006103009	Decal-Wheel load 3580kg	4	
6	103003100009	Decal-Contact information	1	
7	103003100014	Decal-Recyclable	2	
8	104011100006	Decal-Bulkhead overhaul	2	
9	104009100022	Decal-Hydraulic oil	1	
10	103007103002	Decal-Tipping hazard	1	
11	101016100030	Decal-Lanyard anchorage point	2	
12	104011100009	Decal-Read manuals	1	
13	104011100019	Decal-Crush hazard	1	
14	104011100017	Decal-Footswitch	1	
15	104011100020	Decal-General safety	1	
16	103007103001	Decal-Rated load 230kg	1	
17	104011100015	Decal-Tipping hazard	1	
18	104011100007	Decal-Tipping hazard	2	
19	104011100013	Decal-Electrocution hazard	2	
20	104011100016	Decal-Emergency stop switch	1	
21	101016100034	Decal-Noise 72dB	1	
22	104011100021	Decal-Crush hazard	4	
23	216060000002	Yellow-black caution stripe	4	
24	104010100021	Decal-Temperature range	1	
25	104011100010	Decal-Hydraulic oil level	1	
26	104011100003	Decal-Hydraulic oil level	1	
27	104011100012	Decal-Fall hazard	1	
28	103006103001	Decal-AB460EJ	1	
29	103003100015	Decal-Contact information	1	
30	103008103006	LOGO-Symbol (small)	1	
31	103006103000	Decal-Emergency lowering	1	
32	101012100001	Decal-No smoking or fire	2	
33	103006103011	Decal-Direction	1	
34	103006103012	Decal-Direction	1	
35	215050000012	Blind rivet 4×8-ZnD	4	

No.	Part No.	Description	Qty.	Remarks
36	101012100010	Decal-Electrocution hazard	1	
37	101012100014	Decal-Charge voltage	1	
38	103006103006	Nameplate ANSI (AB)	1	
39	101040103015	Decal-Annual inspection	1	

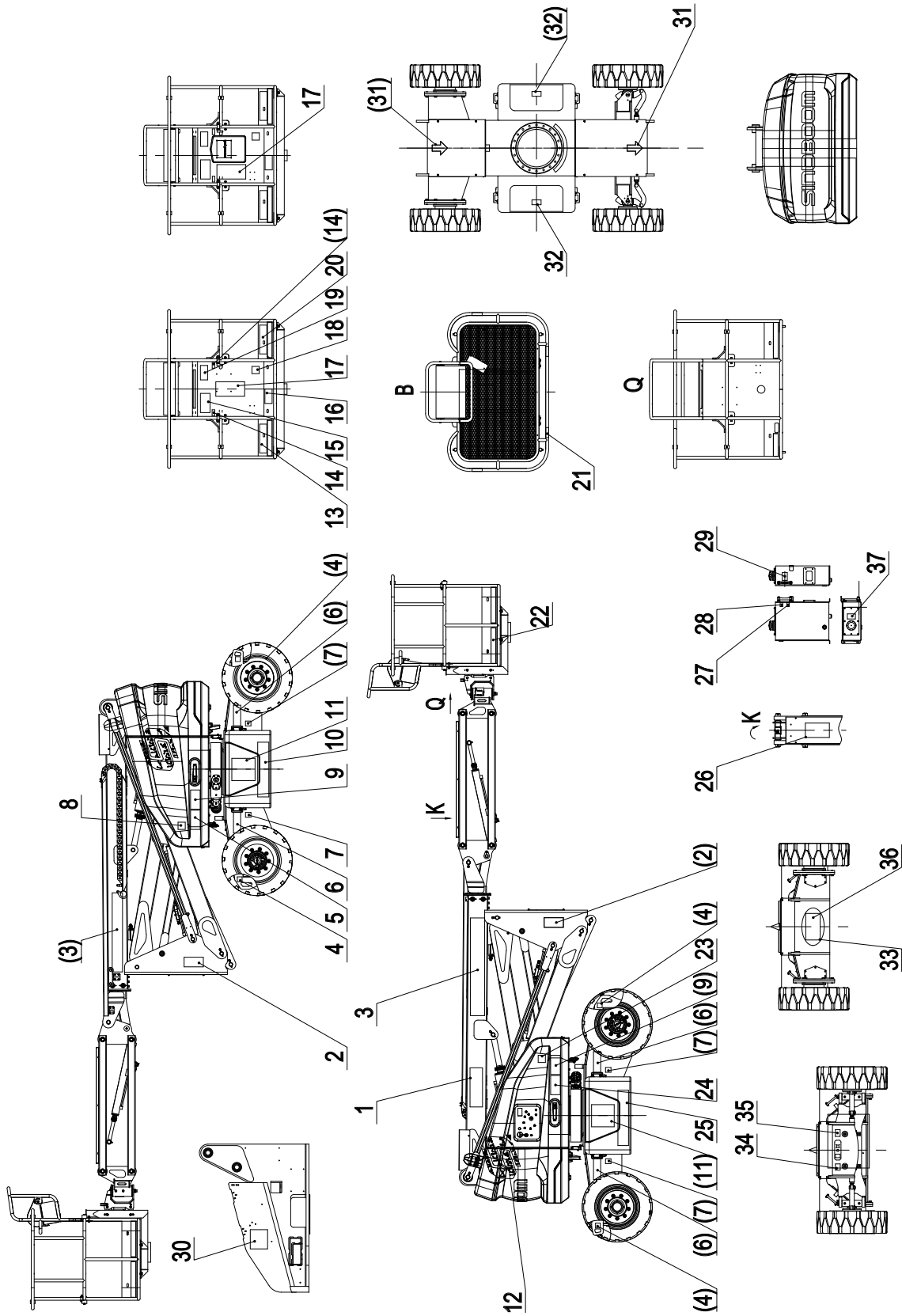
DECALS/NAMEPLATES (ANSI)-GTZZ16EJ



No.	Part No.	Description	Qty.	Remarks
	103007103004	Decals (ANSI)-GTZZ16EJ	1	
1	105058103003	LOGO-SINOBOOM (small)	1	
2	104011100011	Decal-Crush hazard	2	
3	104011100002	Decal-Lifting point	4	
4	104011100001	Decal-Tipping hazard	4	
5	103007103009	Decal-Wheel load 3760kg	4	
6	103003100009	Decal-Contact information	1	
7	103003100014	Decal-Recyclable	2	
8	104011100006	Decal-Bulkhead overhaul	2	
9	104009100022	Decal-Hydraulic oil	1	
10	103007103002	Decal-Tipping hazard	1	
11	101016100030	Decal-Lanyard anchorage point	2	
12	104011100009	Decal-Read manuals	1	
13	104011100019	Decal-Crush hazard	1	
14	104011100017	Decal-Footswitch	1	
15	104011100020	Decal-General safety	1	
16	103007103001	Decal-Rated load 230kg	1	
17	104011100015	Decal-Tipping hazard	1	
18	104011100007	Decal-Tipping hazard	2	
19	104011100013	Decal-Electrocution hazard	2	
20	104011100016	Decal-Emergency stop switch	1	
21	101016100034	Decal-Noise 72dB	1	
22	104011100021	Decal-Crush hazard	4	
23	216060000002	Yellow-black caution stripe	4	
24	104010100021	Decal-Temperature range	1	
25	104011100010	Decal-Hydraulic oil level	1	
26	104011100003	Decal-Hydraulic oil level	1	
27	104011100012	Decal-Fall hazard	1	
28	103007103005	Decal-AB520EJ	1	
29	103003100015	Decal-Contact information	1	
30	103008103006	LOGO-Symbol (small)	1	
31	103006103000	Decal-Emergency lowering	1	
32	101012100001	Decal-No smoking or fire	2	
33	103006103011	Decal-Direction	1	
34	103006103012	Decal-Direction	1	
35	215050000012	Blind rivet 4×8-ZnD	4	

No.	Part No.	Description	Qty.	Remarks
36	101012100010	Decal-Electrocution hazard	1	
37	101012100014	Decal-Charge voltage	1	
38	103006103006	Nameplate ANSI (AB)	1	
39	101040103015	Decal-Annual inspection	1	

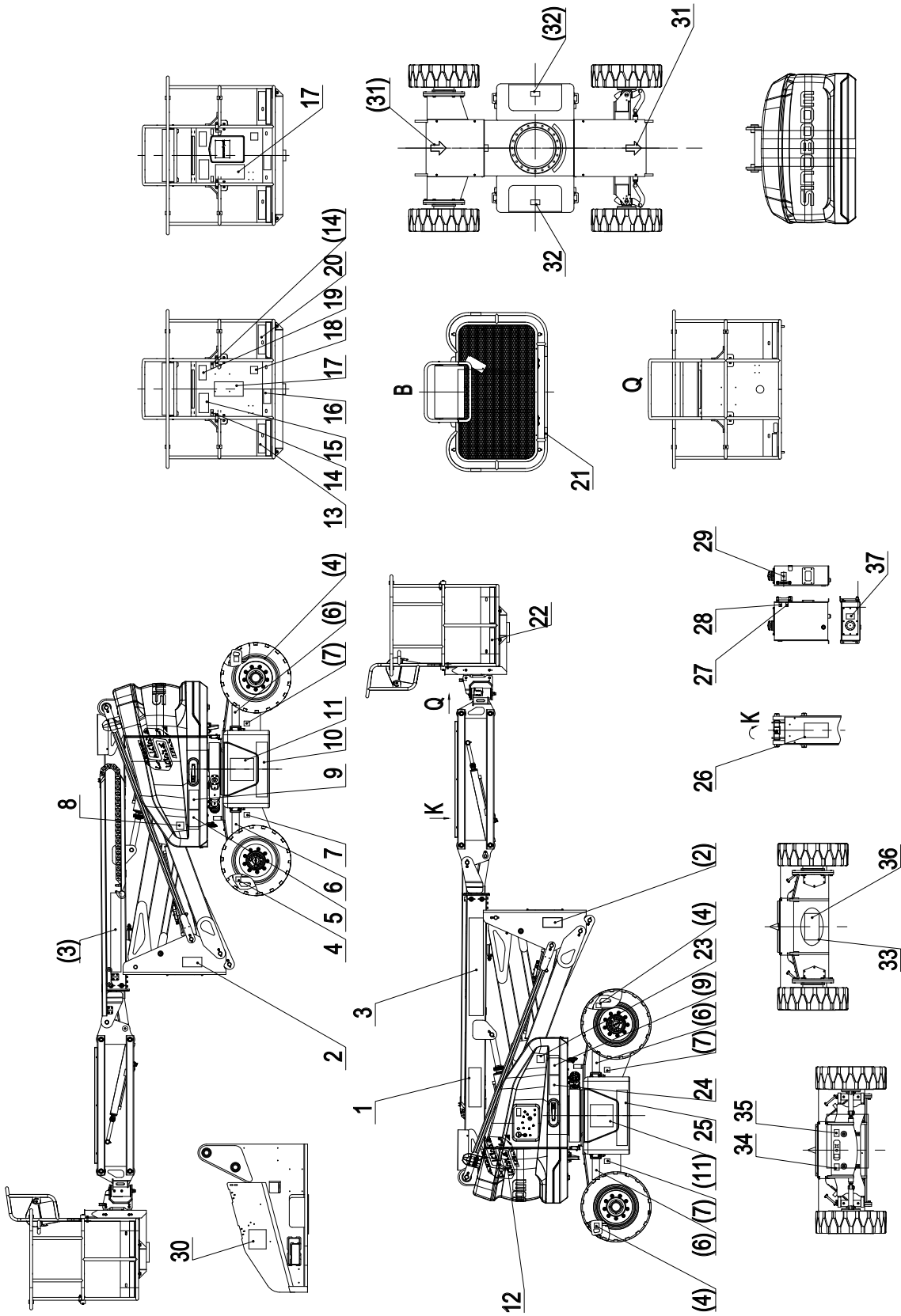
DECALS/NAMEPLATES (AS)-GTZZ14EJ



No.	Part No.	Description	Qty.	Remarks
	103004103000	Decals (AS)-GTZZ14EJ	1	
1	103006103005	Decal-AB14EJ	1	
2	104011100011	Decal-Crush hazard	2	
3	105058103003	LOGO-SINOBOOM (small)	1	
4	104011100002	Decal-Lifting point	4	
5	104011100007	Decal-Tipping hazard	1	
6	104011100001	Decal-Tipping hazard	4	
7	103006103007	Decal-Wheel load 3580kg	4	
8	104011100016	Decal-Emergency stop switch	1	
9	104011100006	Decal-Bulkhead overhaul	2	
10	103003100009	Decal-Contact information	1	
11	103003100014	Decal-Recyclable	2	
12	103008103006	LOGO-Symbol (small)	2	
13	104010100015	Decal-Tipping hazard	1	
14	101016100030	Decal-Lanyard anchorage point	2	
15	104011100015	Decal-Tipping hazard	1	
16	104011100019	Decal-Crush hazard	1	
17	104011100020	Decal-General safety	1	
18	104011100017	Decal-Footswitch	1	
19	104011100009	Decal-Read manuals	1	
20	104008100011	Decal-Rated load 230kg	1	
21	104011100021	Decal-Crush hazard	4	
22	216060000002	Yellow-black caution stripe	4	
23	101016100034	Decal-Noise 72dB	1	
24	104011100013	Decal-Electrocution hazard	1	
25	103003100015	Decal-Contact information	1	
26	104011100012	Decal-Fall hazard	1	
27	104011100003	Decal-Hydraulic oil level	1	
28	104011100010	Decal-Hydraulic oil level	1	
29	104010100021	Decal-Temperature range	1	
30	103006103000	Decal-Emergency lowering	1	
31	103003100006	Decal-Direction	2	
32	101012100001	Decal-No smoking or fire	2	
33	215050000001	Blind rivet	4	
34	101012100010	Decal-Electrocution hazard	1	
35	101012100014	Decal-Charge voltage	1	

No.	Part No.	Description	Qty.	Remarks
36	105018100005	Nameplate AS	1	
37	104009100022	Decal-Hydraulic oil	1	

### DECALS/NAMEPLATES (KCS)-GTZZ14EJ




























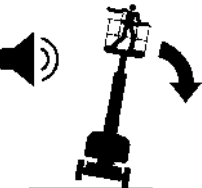
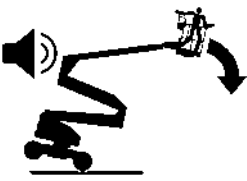



No.	Part No.	Description	Qty.	Remarks
	103004103000	Decals (AS)-GTZZ14EJ	1	
1	103006103005	Decal-AB14EJ	1	
2	104011100011	Decal-Crush hazard	2	
3	105058103003	LOGO-SINOBOOM (small)	1	
4	104011100002	Decal-Lifting point	4	
5	104011100007	Decal-Tipping hazard	1	
6	104011100001	Decal-Tipping hazard	4	
7	103006103007	Decal-Wheel load 3580kg	4	
8	104011100016	Decal-Emergency stop switch	1	
9	104011100006	Decal-Bulkhead overhaul	2	
10	103003100009	Decal-Contact information	1	
11	103003100014	Decal-Recyclable	2	
12	103008103006	LOGO-Symbol (small)	2	
13	104010100015	Decal-Tipping hazard	1	
14	101016100030	Decal-Lanyard anchorage point	2	
15	104011100015	Decal-Tipping hazard	1	
16	104011100019	Decal-Crush hazard	1	
17	104011100020	Decal-General safety	1	
18	104011100017	Decal-Footswitch	1	
19	104011100009	Decal-Read manuals	1	
20	104008100011	Decal-Rated load 230kg	1	
21	104011100021	Decal-Crush hazard	4	
22	216060000002	Yellow-black caution stripe	4	
23	101016100034	Decal-Noise 72dB	1	
24	104011100013	Decal-Electrocution hazard	1	
25	103003100015	Decal-Contact information	1	
26	104011100012	Decal-Fall hazard	1	
27	104011100003	Decal-Hydraulic oil level	1	
28	104011100010	Decal-Hydraulic oil level	1	
29	104010100021	Decal-Temperature range	1	
30	103006103000	Decal-Emergency lowering	1	
31	103003100006	Decal-Direction	2	
32	101012100001	Decal-No smoking or fire	2	
33	215050000001	Blind rivet	4	
34	101012100010	Decal-Electrocution hazard	1	
35	101012100014	Decal-Charge voltage	1	

No.	Part No.	Description	Qty.	Remarks
36	105018100005	Nameplate AS	1	
37	104009100022	Decal-Hydraulic oil	1	

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# APPENDIX 1: SYMBOLS AND DESCRIPTION

## SYMBOLS CHART

 Read maintenance manual	 Anchor point allows only 1 person to tie	 Wind speed	 Chemical burns hazards	 Wedge the wheel
 Read operation manual	 Add lubricant	 Crushing hazard- Please wear work shoes	 Danger of hot, high pressure fluids	 Wind
 Noise level	 Burns hazards	 Keep a safe distance from high temperatures	 Pull out-open Press-close	 Alarm sounds
 Step-open Release-close	 Hydraulic oil level - low position	 Hydraulic oil level - high position	 Temperature	 Change the tires of the same specification
 Only trained maintenance personnel can access the bulkhead	 Electrocution hazards on platform	 Electrocution hazards on the ground and platform	 Tip-over hazards-Avoid uneven ground	 Tip-over hazards-Avoid uneven ground
 Tip-over hazards- Never use machine during strong, gusty wind	 Tip-over hazards- Never use machine during strong, gusty wind	 Tip-over hazards- Never push or pull objects outside platform	 Tip-over hazards- Never suspend objects from platform	 Tip-over hazards- Never place ladders and scaffolding on the platform

 <p>Collision hazards- Never lower platform without checking for nearby obstacles</p>	 <p>Collision hazards- Never raise platform without checking for overhead obstacles</p>	 <p>Crushing hazards- Keep hands away from nearby obstacles when raising platform</p>	 <p>Fall hazards-Never climb on guardrails of platform</p>	 <p>Fall hazards-Never climb on boom</p>
 <p>Keep away from platform in rotation</p>	 <p>Engine preheat explosion hazard</p>	 <p>No ether or other start additives to machine with glow plug</p>	 <p>Fuel explosion hazard</p>	 <p>Wear protective clothing and glasses</p>
 <p>Only professional maintenance personnel can start the maintenance</p>	 <p>The side force</p>	 <p>Electrocution hazards</p>	 <p>Battery explosion hazard</p>	 <p>No smoking</p>
 <p>No smoking</p>	 <p>Improve point</p>	 <p>Lashing points</p>	 <p>Tire to ground load</p>	 <p>Hydraulic oil filler</p>
 <p>Platform carrying capacity</p>	 <p>Do not use damaged cords</p>	 <p>Tool or weight</p>	 <p>Fast/high speed</p>	 <p>Slow/low speed</p>
 <p>Horn</p>				

# APPENDIX 2: PREPARE THE WORK RECORD BEFORE DELIVERY

PREPARE THE WORK RECORD BEFORE DELIVERY			
Model			
Serial No.			
Inspection Item	YES/Machine is in Good Condition	NO/Machine Has Damage or Malfunction	REPAIRED/Machine Has Been Repaired
Pre-operational Inspection			
Maintenance Procedure			
Functional Inspection			
Machine Buyer/ Renter			
Inspector Signature			
Inspector Title			
Inspector Company			
<p><b>NOTE:</b></p> <ol style="list-style-type: none"> <li>1. Prepare the machine before delivery, which includes performing a pre-delivery inspection, following maintenance procedures and performing functional inspections.</li> <li>2. Use the table to record the results. After each section is complete, mark the appropriate box.</li> <li>3. Record the inspection results. If any inspection results are "NO", the machine must be stopped and re-inspected after repair is completed and marked in the box marked "inspection".</li> </ol>			

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# APPENDIX 3: REPAIR & INSPECTION REPORT

Repair & Inspection Report				
Model				
Serial No.				
Checklist A Procedures				
Items	YES/Machine is in Good Condition	NO/Machine Has Damage or Malfunction	REPAIRED/ Machine Has Been Repaired	Problem Description
A-1 Inspect All Manuals				
A-2 Inspect All Decals				
A-3 Inspect Damaged, Loose or Lost Parts				
A-4 Inspect Hydraulic Oil Level				
A-5 Inspect Hydraulic Oil Leakage				
A-6 Functional Tests				
A-7 Perform Maintenance after 30 Days				
Checklist B Procedures				
Items	YES/Machine is in Good Condition	NO/Machine Has Damage or Malfunction	REPAIRED/ Machine Has Been Repaired	Problem Description
B-1 Inspect Electrical Wiring				
B-2 Inspect battery				
B-3 Inspect Rim, Tire and Fasteners				
B-4 Inspect Hydraulic Oil				
B-5 Inspect and replace return filter element				
B-6 Inspect maximum operating range				
B-7 Inspect Slewing Bearing Bolts				
B-8 Lubricate Slewing Bearing				

Repair & Inspection Report				
B-9 Inspect Air filter of Hydraulic Tank				
B-10 Replace High-Pressure Filter				
B-11 Inspect Drive Reducer Oil Level				
B-12 Inspect Platform Rotate Cylinder Fasteners				
B-13 Test Tilt Protection System				
B-14 Test Drive Speed				
B-15 Test Emergency Lowering Function				
B-16 Test Cylinder Drift				
Checklist C Procedures				
<b>Items</b>	<b>YES/Machine is in Good Condition</b>	<b>NO/Machine Has Damage or Malfunction</b>	<b>REPAIRED/ Machine Has Been Repaired</b>	<b>Problem Description</b>
C-1 Replace Hydraulic tank air filter				
C-2 Test Weighing System				
Checklist D Procedures				
<b>Items</b>	<b>YES/Machine is in Good Condition</b>	<b>NO/Machine Has Damage or Malfunction</b>	<b>REPAIRED/ Machine Has Been Repaired</b>	<b>Problem Description</b>
D-1 Inspect Boom Wear Pads				
D-2 Replace Drive Reducer Gear Oil				
D-3 Replace Hydraulic Oil				
D-4 Replace Hydraulic Tank Suction Filter				
User				
Inspector Signature				
Inspection Date				
Inspector Title				
Inspector Company				



# Always for Better Access Solutions



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