



Operator's Manual

Serial Number Range

Z[®]-45J

from Z4525F-62000
from Z4525D-3978

DC Power

ANSI/CSA
North America
South America
Asia

with
Maintenance
Information

Original Instructions
Fifth Edition
Second Printing
Part No. 1297032GT

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These machines comply with
ANSI/SAIA A92.20
CAN/CSA B354.6

Introduction

About this manual

Genie appreciates your choice of our machine for your application. Our number one priority is user safety, which is best achieved by our joint efforts. This book is an operation and daily maintenance manual for the user or operator of a Genie machine.

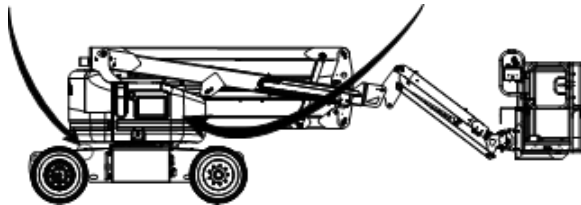
This manual should be considered a permanent part of your machine and should remain with the machine at all times. If you have any questions, contact Genie.

Product Identification

The machine serial number is located on the serial label.

Serial number stamped
on chassis

Serial label
(located under cover)



Intended Use and Familiarization Guide

The intended use of this machine is to lift personnel, including tools, and materials to an aerial work site. Before operating the machine, it's the operator's responsibility to read and understand this familiarization guide.

- ☒ Each person must be trained to operate a Mobile Elevating Work Platform (MEWP).
- ☒ Familiarization with the MEWP must be given to each person who is authorized, competent and trained.
- ☒ Only trained and authorized personnel should be permitted to operate the machine.
- ☒ The operator is responsible to read, understand, and obey the manufacturer's instructions and safety rules provided in the Operator's Manual.
- ☒ The Operator's Manual is located in the manual storage container, at the platform.
- ☒ For specific product applications, see **Contacting The Manufacturer**.

Introduction

Platform controls symbology and related machine movement:



Platform level



Platform rotate



Jib boom up/down



Primary boom up/down



Turntable rotate



Primary boom extend/retract



Secondary boom up/down



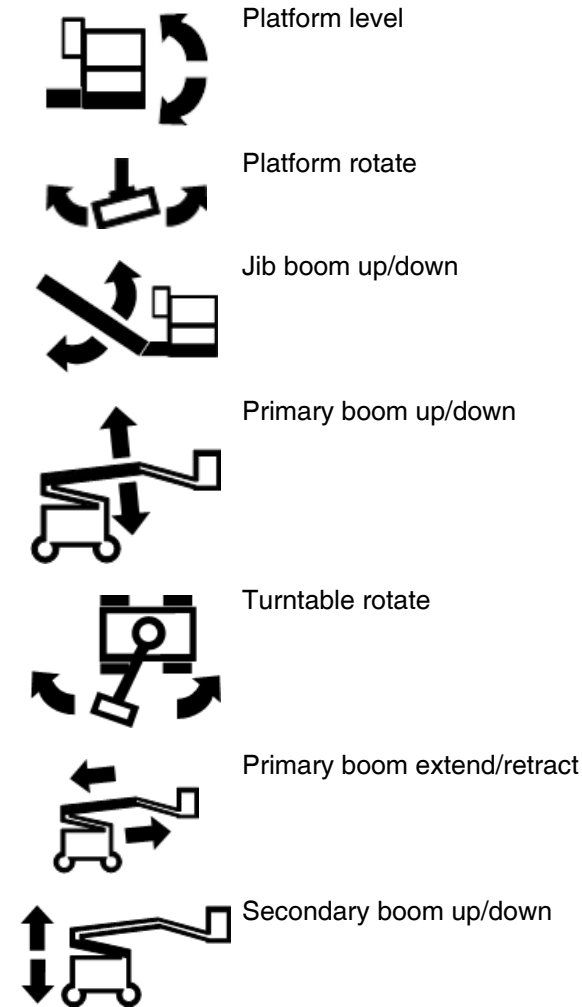
Drive forward/reverse



Steer right/left

Introduction

Ground controls symbology and related machine movement:



Sequential functions and movement:

- Drive and steer.

Interlocked functions:

- Elevated drive speed.
- Elevated drive in an off-level condition.
- Drive enable when the boom is rotated past the non-steer wheels.
- All platform and ground controls.

Limitations of use:

- The intended use of this machine is to lift personnel, including tools, and materials to an aerial work site.
- Do not elevate the platform unless the machine is on firm level ground.

Stability enhancing means:

- Foam filled tires

Restricted operating envelope:

- 500 lbs/227 kg platform capacity.

Introduction

Bulletin Distribution and Compliance

Safety of product users is of paramount importance to Genie. Various bulletins are used by Genie to communicate important safety and product information to dealers and machine owners.

The information contained in the bulletins is tied to specific machines using the machine model and serial number.

Distribution of bulletins is based on the most current owner on record along with their associated dealer, so it is important to register your machine and keep your contact information up to date.

To ensure safety of personnel and the reliable continued operation of your machine, be sure to comply with the action indicated in a respective bulletin.

To view any open bulletins for your machine, visit us on the web at www.genielift.com.

Contacting the Manufacturer

At times it may be necessary to contact Genie. When you do, be ready to supply the model number and serial number of your machine, along with your name and contact information. At minimum, Genie should be contacted for:

Accident reporting

Questions regarding product applications and safety

Standards and regulatory compliance information

Current owner updates, such as changes in machine ownership or changes in your contact information. See Transfer of Ownership, below.

Transfer of Machine Ownership

Taking a few minutes to update owner information will ensure that you receive important safety, maintenance and operating information that applies to your machine.

Please register your machine by visiting us on the web at www.genielift.com or by calling us toll free at 1-800-536-1800.

Introduction



Danger

Failure to obey the instructions and safety rules in this manual will result in death or serious injury.

Do Not Operate Unless:

- ☑ You learn and practice the principles of safe machine operation contained in this operator's manual.
 - 1 Avoid hazardous situations.**

Know and understand the safety rules before going on to the next section.

 - 2 Always perform a pre-operation inspection.
 - 3 Always perform function tests prior to use.
 - 4 Inspect the workplace.
 - 5 Only use the machine as it was intended.
- ☑ You read, understand and obey the manufacturer's instructions and safety rules—safety and operator's manuals and machine decals.
- ☑ You read, understand and obey employer's safety rules and worksite regulations.
- ☑ You read, understand and obey all applicable governmental regulations.
- ☑ You are properly trained to safely operate the machine.

Safety Sign Maintenance

Replace any missing or damaged safety signs. Keep operator safety in mind at all times. Use mild soap and water to clean safety signs. Do not use solvent-based cleaners because they may damage the safety sign material.

Hazard Classification

Decals on this machine use symbols, color coding, and signal words to identify the following:



Safety alert symbol—used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

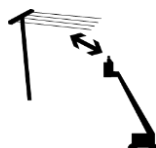
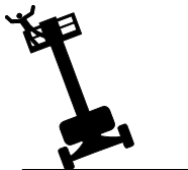


Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

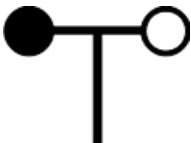
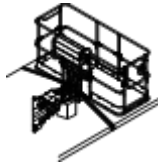
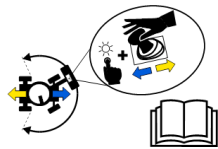
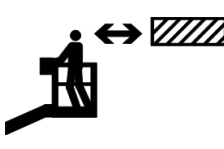


Indicates a property damage message.

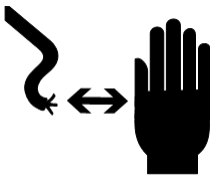
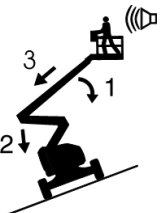
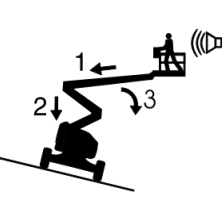
Symbol and Hazard Pictorials Definitions

				
Fire hazard	Explosion hazard	Explosion hazard	Do not use ether or other high energy starting aids on machines equipped with glow plugs.	No smoking. No flame. Stop engine.
				
Fire extinguisher	No smoking	Explosion hazard	Electrocution hazard	Maintain required clearance
				
Tip-over hazard	Tip-over hazard	Tip-over hazard	Tip-over hazard	Tire specifications

Symbol and Hazard Pictorials Definitions

				
Wheel load	Wind speed	Maximum capacity	Manual force	Support the platform or boom during maintenance
				
Tie-down point	Lifting point	Platform tie-down instructions	Lifting and tie down instructions	Lanyard anchorage points
				
Corrosive acid.	Color coded direction arrows	Runaway hazard	Collision hazard	Overhead obstruction

Symbol and Hazard Pictorials Definitions

				
Electrocution hazard	Avoid contact	Disconnect battery	Voltage rating for power to platform	Pressure rating for air line to platform
Recovery procedure if tilt alarm sounds while elevated.				
				
Platform uphill: 1 Lower primary. 2 Lower secondary. 3 Retract primary.	Platform downhill: 1 Retract primary. 2 Lower secondary. 3 Lower primary.	Read the operator's manual	Access by trained and authorized personnel only	Read the service manual
				
Auxiliary lowering	Crush hazard			

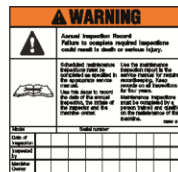
General Safety



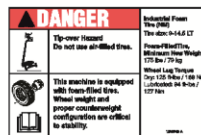
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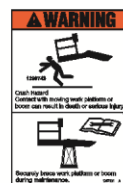
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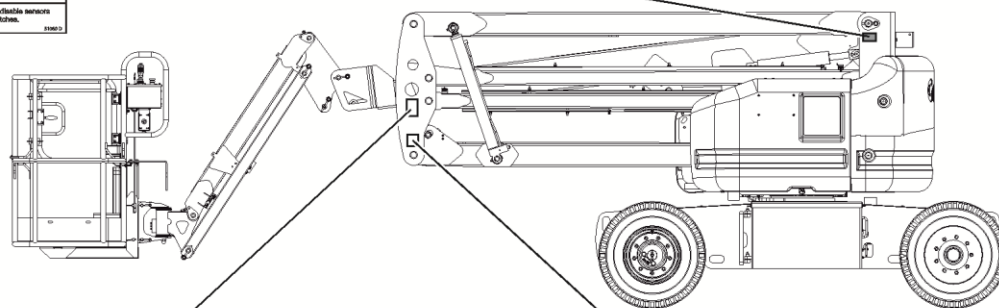
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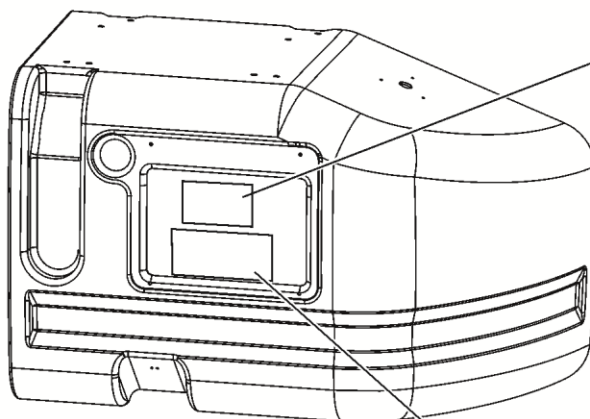


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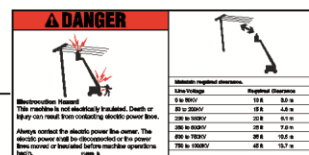


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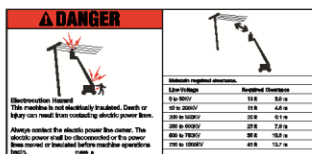
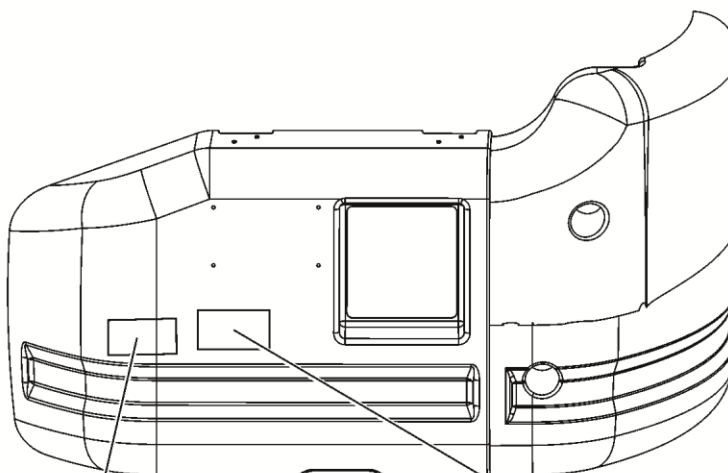
General Safety



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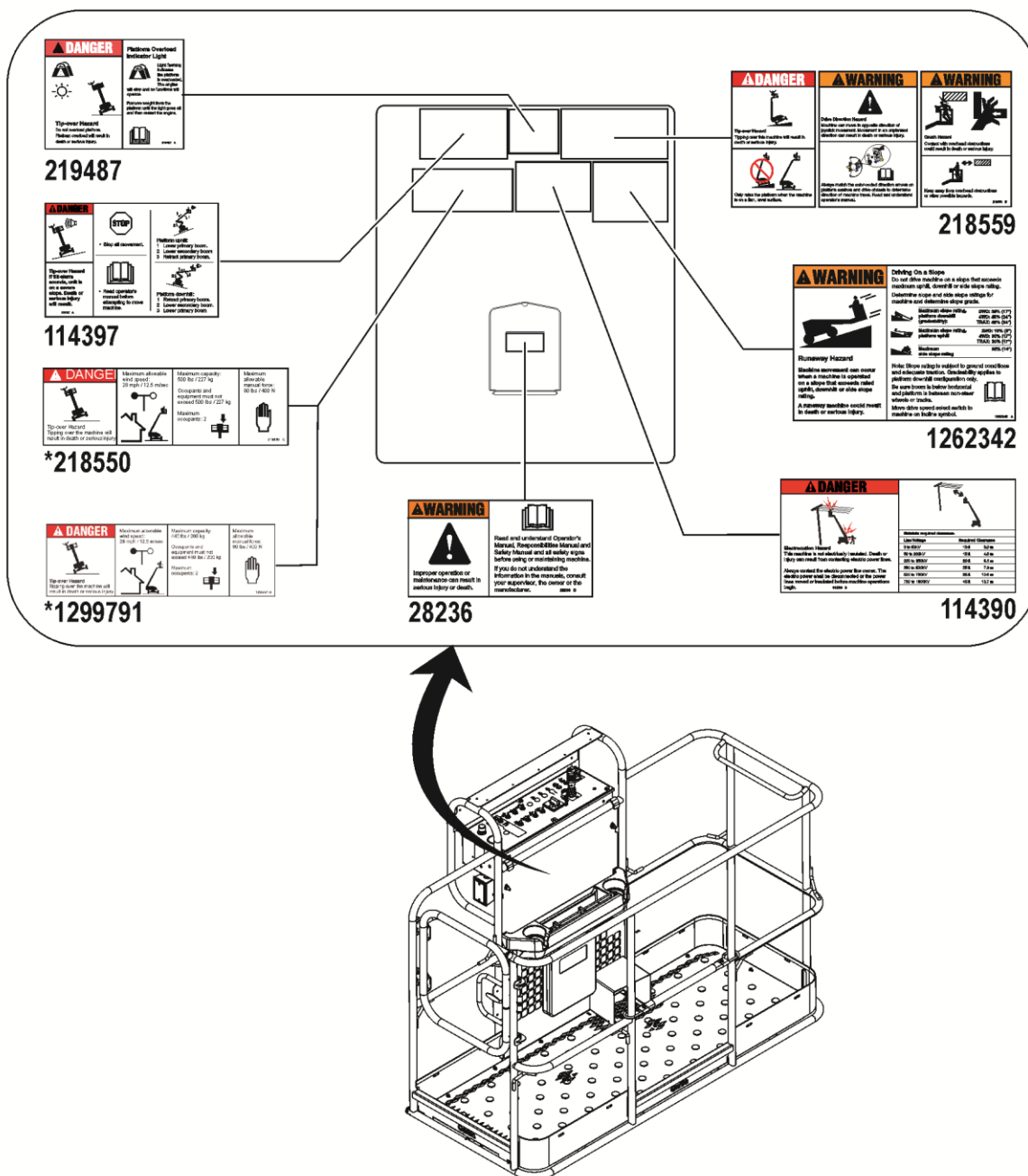
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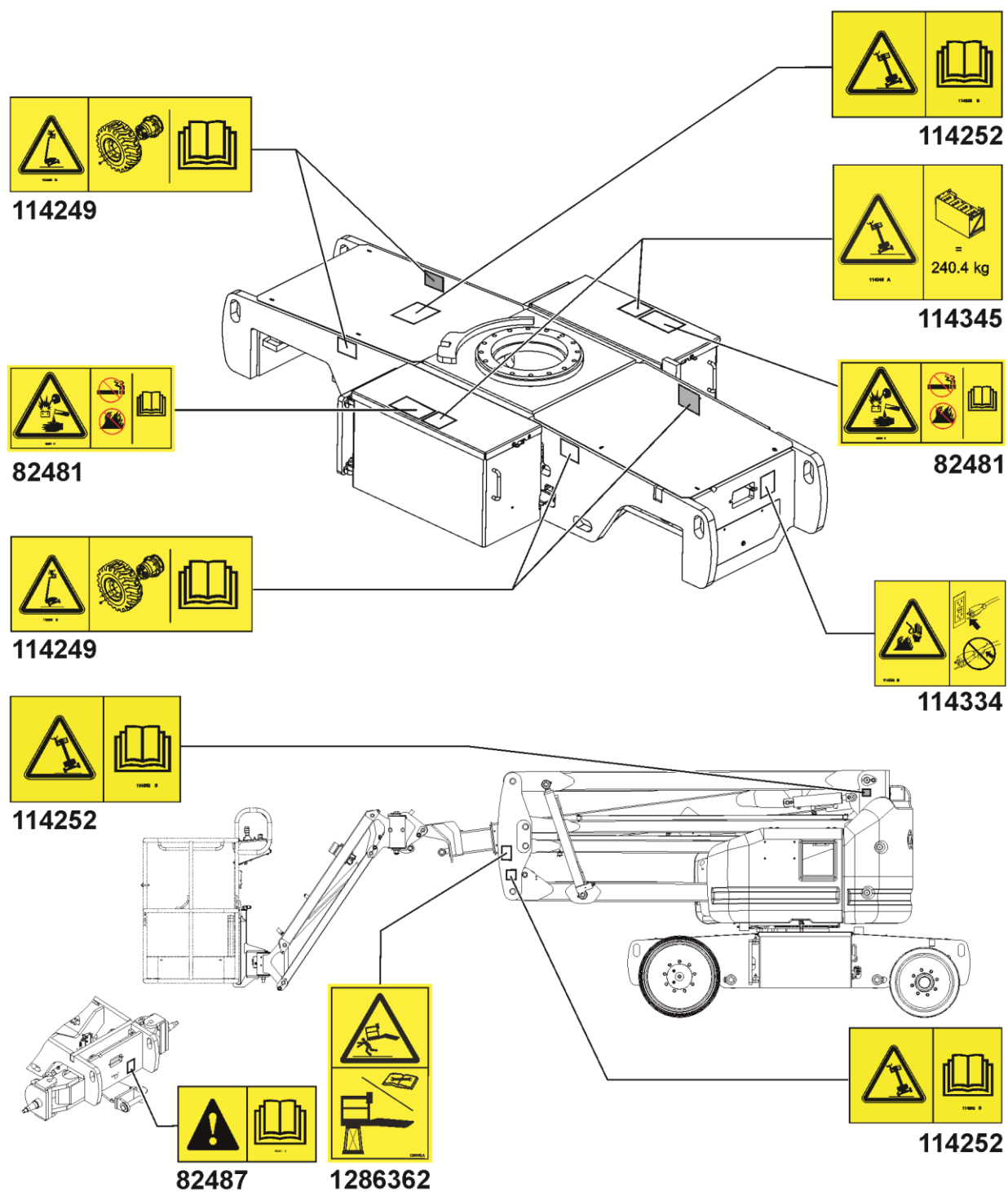
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General Safety

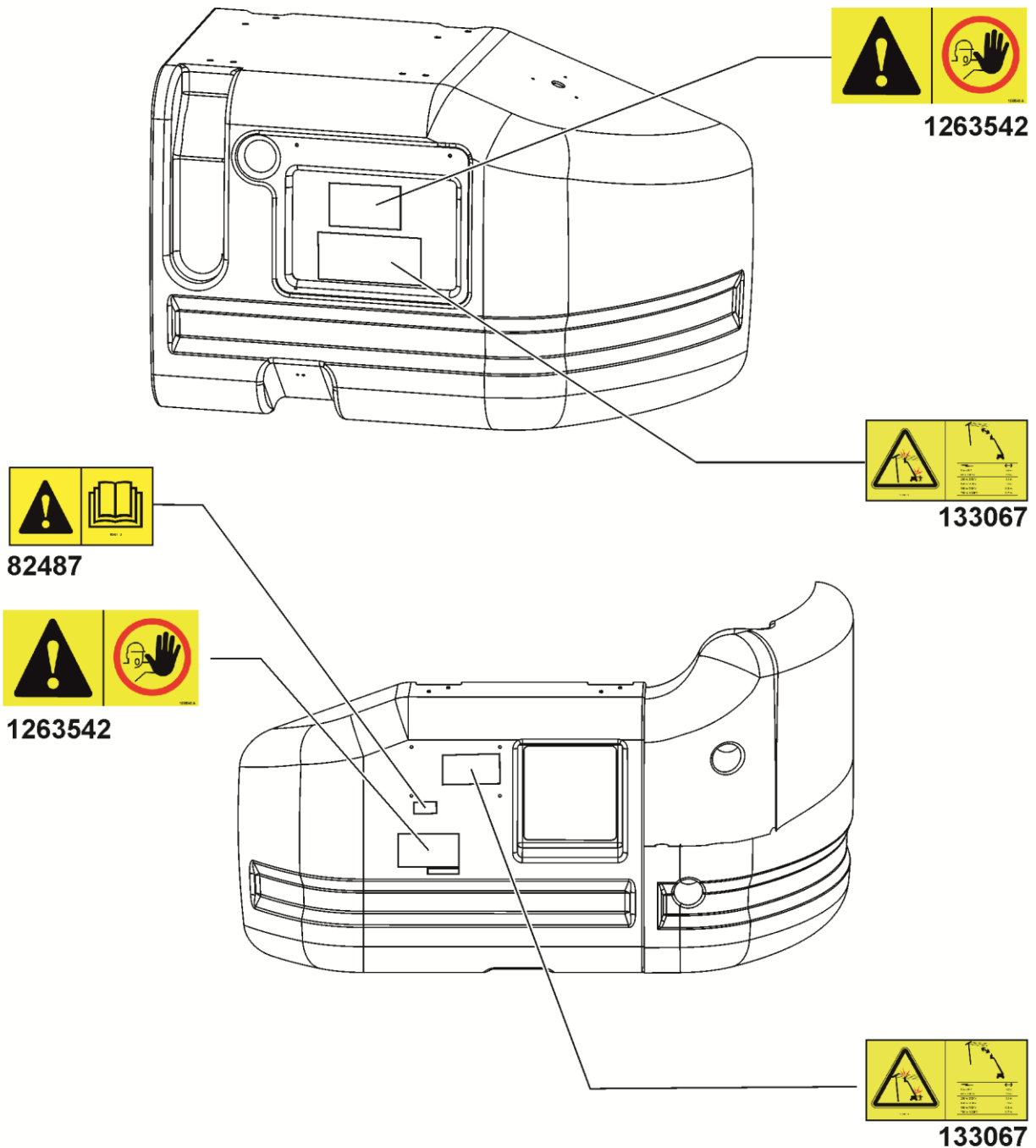
* These decals are model, option or configuration specific.



General Safety

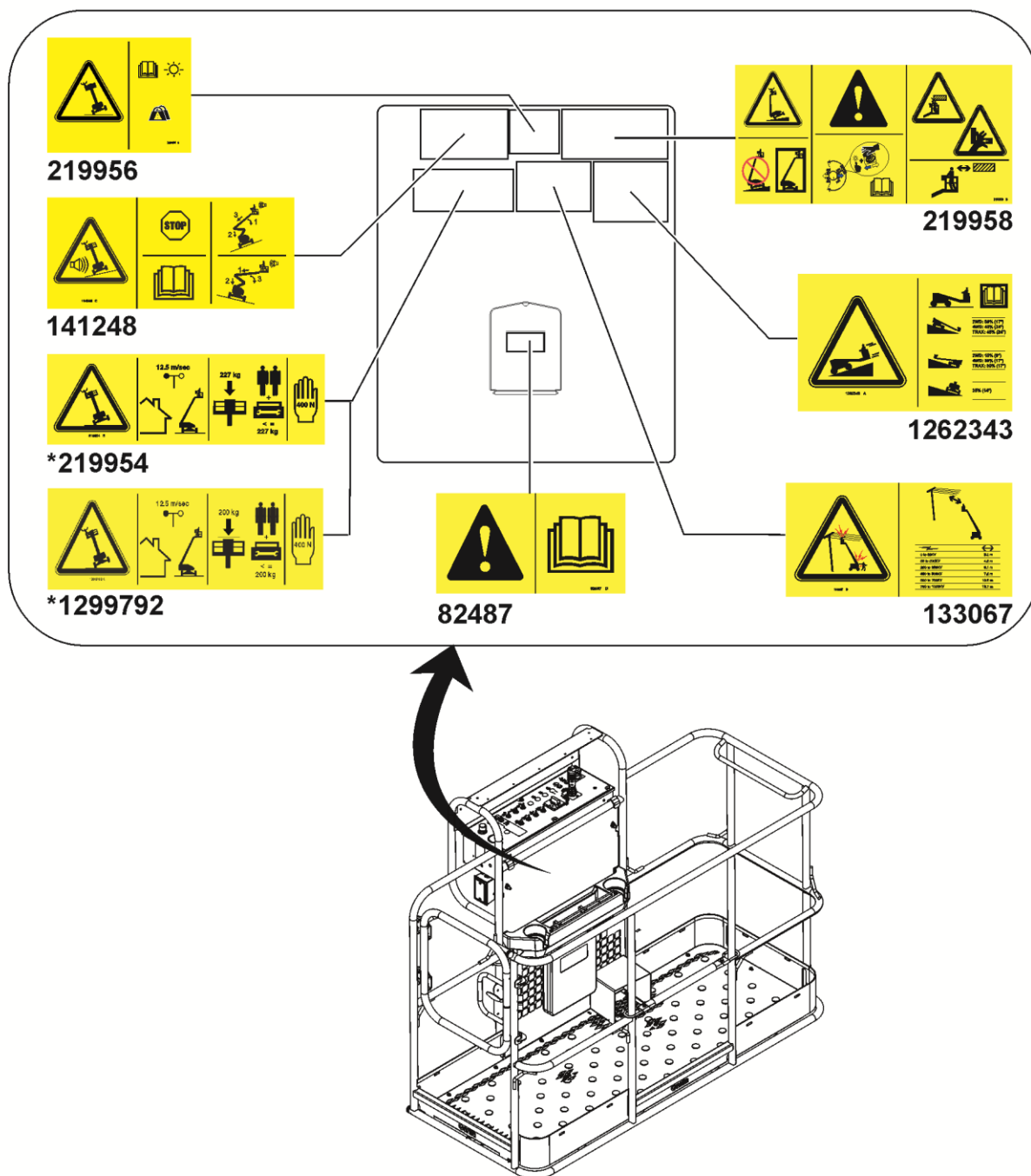


General Safety



General Safety

* These decals are model, option or configuration specific.



Personal Safety

Personal Fall Protection

Personal fall protection equipment (PFPE) is required when operating this machine.

Occupants must wear a safety belt or harness in accordance with governmental regulations. Attach the lanyard to the anchor provided in the platform.

Operators must comply with employer, job site and governmental rules regarding the use of personal protective equipment.

All PFPE must comply with applicable governmental regulations, and must be inspected and used in accordance with the PFPE manufacturer's instructions.

Work Area Safety

⚠ Electrocution Hazards

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



Obey all local and governmental regulations regarding required clearance from electrical power lines. At a minimum, the required clearance contained in the chart below must be followed.

Line Voltage	Required Clearance	
0 to 50KV	10 ft	3.05 m
50 to 200KV	15 ft	4.60 m
200 to 350KV	20 ft	6.10 m
350 to 500KV	25 ft	7.62 m
500 to 750KV	35 ft	10.67 m
750 to 1000KV	45 ft	13.72 m

Allow for platform movement, electrical line sway or sag, and beware of strong or gusty winds.



Keep away from the machine if it contacts energized power lines. Personnel on the ground or in the platform must not touch or operate the machine until energized power lines are shut off.

Do not operate the machine during lightning or storms.

Do not use the machine as a ground for welding.

⚠ Tip-over Hazards

Occupants, equipment and materials shall not exceed the maximum platform capacity.

Maximum platform capacity	500 lbs	227 kg
Maximum platform capacity		
Machine equipped with Aircraft Protection Package		
Machine equipped with Platform Padding Option	440 lbs	200 kg
Maximum occupants		2

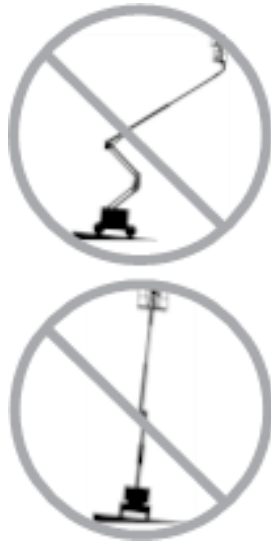
The weight of options and accessories, such as pipe cradles, panel cradles and welders, will reduce the rated platform capacity and must be subtracted from the platform capacity. See the decals with the options and accessories.

If using accessories, read, understand and obey the decals, instructions and manuals with the accessory.

Do not alter or disable the limit switches.

Work Area Safety

Do not use air-filled tires. These machines are equipped with foam-filled tires. Wheel weight and proper counterweight configuration are critical to stability.

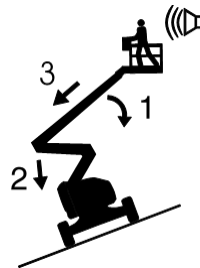


Do not raise or extend the boom unless the machine is on a firm, level surface.

Do not depend on the tilt alarm as a level indicator. The tilt alarm sounds in the platform only when the machine is on a severe slope.

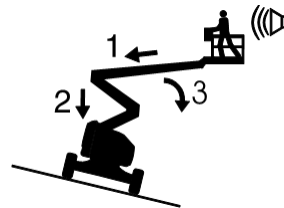
If the tilt alarm sounds while the boom is lowered: Do not extend, rotate or raise the boom above horizontal. Move the machine to a firm, level surface before raising the platform.

If the tilt alarm sounds when the platform is raised, use extreme caution. The Machine Not Level indicator light will come on and the drive function in one or both directions will not operate. Identify the condition of the boom on the slope as shown below. Follow the steps to lower the boom before moving to a firm, level surface. Do not rotate the boom while lowering.



If the tilt alarm sounds with the platform uphill:

- 1 Lower the primary boom.
- 2 Lower the secondary boom.
- 3 Retract the primary boom.



If the tilt alarm sounds with the platform downhill:

- 1 Retract the primary boom.
- 2 Lower the secondary boom.
- 3 Lower the primary boom.

Do not operate the machine in strong or gusty winds. Do not increase the surface area of the platform or the load. Increasing the area exposed to the wind will decrease machine stability.

Work Area Safety



Do not raise the boom when wind speeds may exceed 28 mph/12.5 m/s. If wind speeds exceed 28 mph/12.5 m/s when the boom is raised, lower the boom and do not continue to operate the machine.



Use extreme care and slow speeds while driving the machine in the stowed position across uneven terrain, debris, unstable or slippery surfaces and near holes and drop-offs.

Do not drive the machine on or near uneven terrain, unstable surfaces or other hazardous conditions with the boom raised or extended.



Do not push off or pull toward any object outside of the platform.

Maximum allowable manual force: –
90 lbs/400 N

Do not alter or disable machine components that in any way affect safety and stability.

Do not replace items critical to machine stability with items of different weight or specification.

Do not modify or alter a mobile elevating work platform without prior written permission from the manufacturer. Mounting attachments for holding tools or other materials onto the platform, toeboards, or guard rail system can increase the weight in the platform and the surface area of the platform or the load.



Do not place or attach fixed or overhanging loads to any part of this machine.



Do not place ladders or scaffolds in the platform or against any part of this machine.

Do not transport tools and materials unless they are evenly distributed and can be safely handled by person(s) in the platform.

Do not use the machine on a moving or mobile surface or vehicle.

Be sure the tires are in good condition and the lug nuts tightened.

Do not use the platform controls to free a platform that is caught, snagged, or otherwise prevented from normal motion by an adjacent structure. All personnel must be removed from the platform before attempting to free the platform using the ground controls.

Work Area Safety

Do not use batteries that weigh less than the original equipment. Batteries are used as counterweight and are critical to machine stability. Each battery must weigh a minimum of 105 lbs / 47.6 kg. Each battery box including batteries must weigh a minimum of 530 lbs / 240.4 kg.

Do not use the machine as a crane.

Do not push the machine or other objects with the boom.

Do not contact adjacent structures with the boom.

Do not tie the boom or platform to adjacent structures.

Do not place loads outside the platform perimeter.

▲ Operation on Slopes Hazards

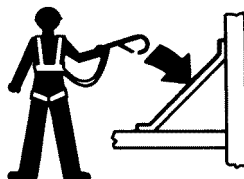
Do not drive the machine on a slope that exceeds the maximum uphill, downhill or side slope rating of the machine. Slope rating applies only to machines in the stowed position.

Maximum slope rating, stowed position

Platform downhill	30%	(17°)
Platform uphill	20%	(11°)
Side slope	25%	(14°)

Note: Slope rating is subject to ground conditions with one person in the platform and adequate traction. Additional platform weight may reduce slope rating. See Driving on a Slope in the Operating Instructions section.

▲ Fall Hazards



Occupants must wear a safety belt or harness in accordance with governmental regulations. Attach the lanyard to the anchor provided in the platform.



Do not sit, stand, or climb on the platform guard rails. Maintain a firm footing on the platform floor at all times.



Do not climb down from the platform when raised.

Keep the platform floor clear of debris.

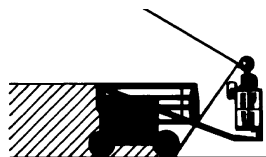
Lower the platform entry mid-rail or close the entry gate before operating.

Do not enter or exit the platform unless the machine is in the stowed position and the platform is at ground level.

Hazards related with the specific product application of exiting at height have been considered in the design of the machine, for further information contact Genie (see section Contacting the Manufacturer).

Work Area Safety

⚠ Collision Hazards



Be aware of limited sight distance and blind spots when driving or operating.

Be aware of the boom position and tailswing when rotating the turntable.



Check the work area for overhead obstructions or other possible hazards.



Be aware of crushing hazards when grasping the platform guard rail.

Operators must comply with employer, job site, and governmental rules regarding use of personal protective equipment.

Observe and use the color-coded direction arrows on the platform controls and drive chassis for drive and steer functions.



Do not lower the boom unless the area below is clear of personnel and obstructions.



Limit travel speed according to the condition of the ground surface, congestion, slope, location of personnel, and any other factors which may cause collision.

Do not operate a boom in the path of any crane unless the controls of the crane have been locked out and/or precautions have been taken to prevent any potential collision.

No stunt driving or horseplay while operating a machine.

Work Area Safety

⚠ Explosion and Fire Hazards

All models:

Charge the battery only in an open, well-ventilated area away from sparks, flames and lighted tobacco.

Do not operate the machine in hazardous locations or locations where potentially flammable or explosive gases or particles may be present.

⚠ Bodily Injury Hazard

All models:

Do not operate the machine with a hydraulic oil or air leak. An air leak or hydraulic leak can penetrate and/or burn skin.

Improper contact with components under any cover will cause serious injury. Only trained maintenance personnel should access compartments. Access by the operator is only advised when performing a pre-operation inspection. All compartments must remain closed and secured during operation.

⚠ Damaged Machine Hazards

Do not use a damaged or malfunctioning machine.

Conduct a thorough pre-operation inspection of the machine and test all functions before each work shift. Immediately tag and remove from service a damaged or malfunctioning machine.

Be sure all maintenance has been performed as specified in this manual and the appropriate Genie service manual.

Be sure all decals are in place and legible.

Be sure the operator's, safety, and responsibilities manuals are complete, legible, and in the storage container located on the machine.

⚠ Component Damage Hazards

All models:

Do not use the machine as a ground for welding.

Work Area Safety

⚠ Battery Safety

Burn Hazards

Batteries contain acid. Always wear protective clothing and eye wear when working with batteries.



Avoid spilling or contacting battery acid. Neutralize battery acid spills with baking soda and water.

The battery pack must remain in the upright position.

Do not expose the batteries or the charger to water or rain during charging.

Explosion Hazards



Keep sparks, flames, and lighted tobacco away from batteries. Batteries emit explosive gas.

The battery pack covers should remain open during the entire charging cycle.



Do not contact the battery terminals or the cable clamps with tools that may cause sparks.



Component Damage Hazard

Do not use any battery charger greater than 48V to charge the batteries.

Both battery packs must be charged together.

Disconnect the battery pack plug before removing the battery pack.

Electrocution/Burn Hazards



Connect the battery charger to a grounded, AC 3-wire electrical outlet only.

Inspect daily for damaged cords, cables and wires. Replace damaged items before operating.

Avoid electrical shock from contact with battery terminals. Remove all rings, watches and other jewelry.

Tip-over Hazard

Do not use batteries that weigh less than the original equipment. Batteries are used as counterweight and are critical to machine stability. Each battery must weigh a minimum of 105 lbs / 47.6 kg. Each battery box including batteries must weigh a minimum of 530 lbs / 240.4 kg.

Lifting Hazard

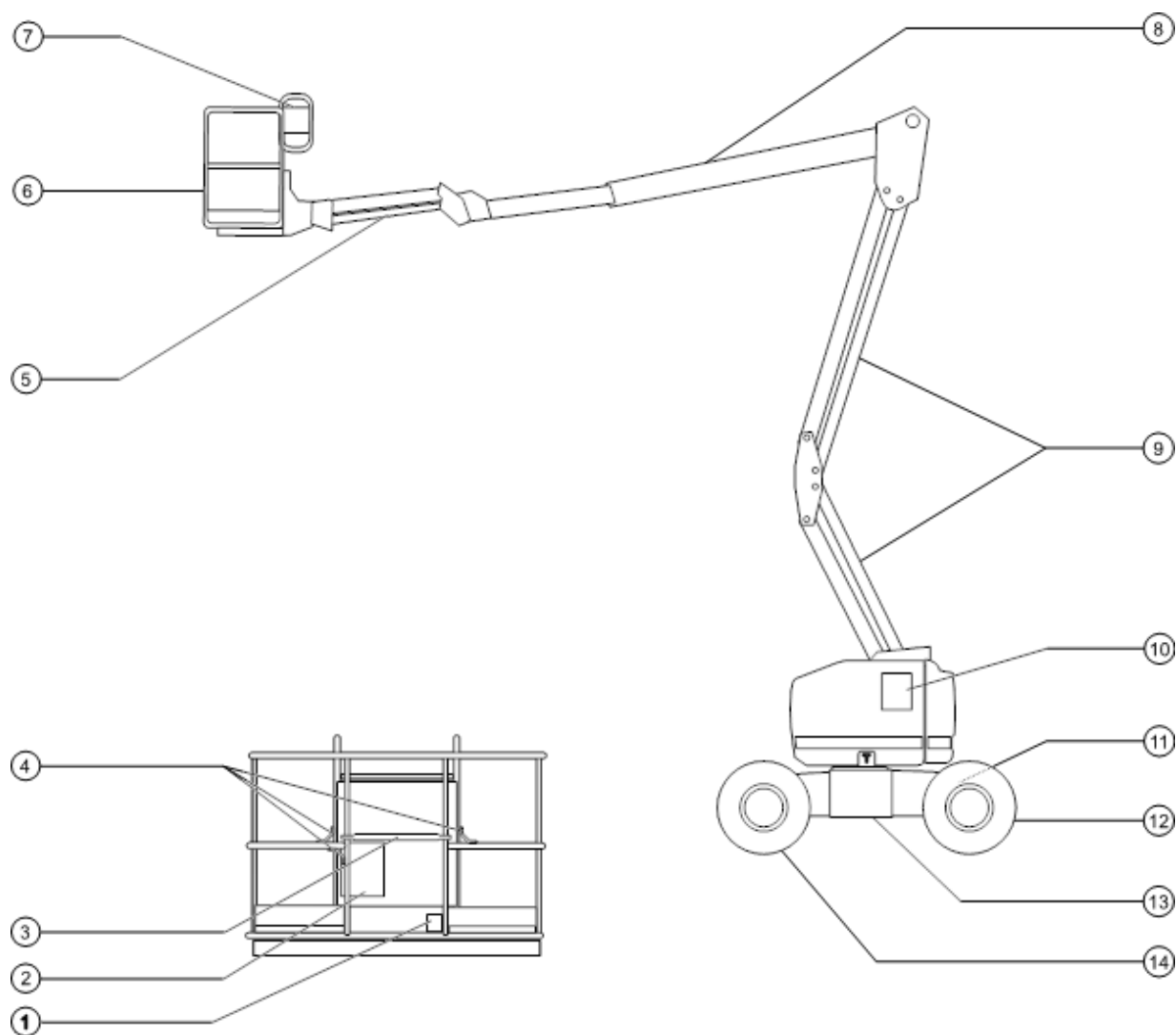
Use a forklift to remove or install a battery pack.

Work Area Safety

Lockout After Each Use

- 1 Select a safe parking location—firm level surface, clear of obstruction and traffic.
- 2 Retract and lower the boom to the stowed position.
- 3 Rotate the turntable so that the boom is between the non-steer wheels.
- 4 Turn the key switch to the off position and remove the key to secure from unauthorized use.

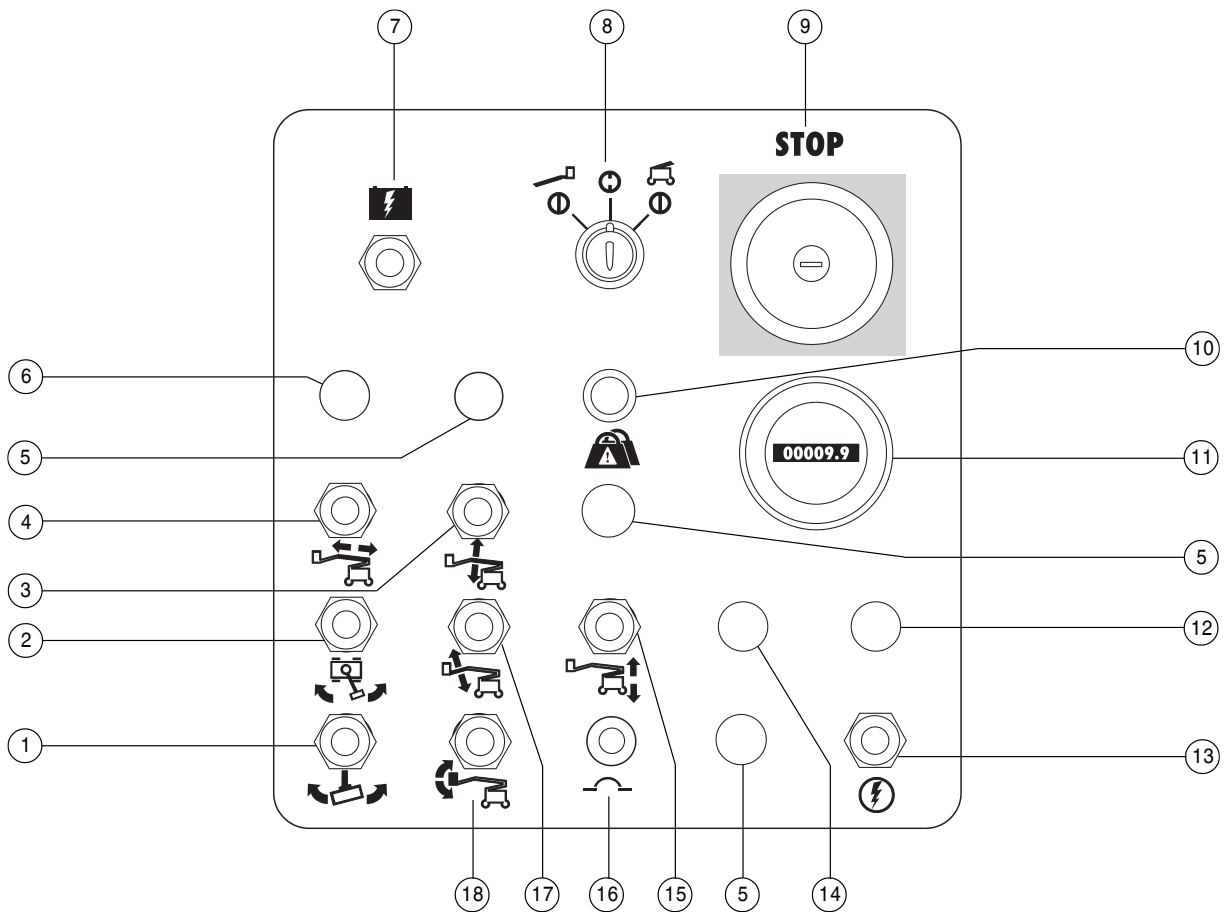
Legend



- 1 Foot switch
- 2 Manual storage container
- 3 Sliding mid-rail
- 4 Lanyard anchorage points
- 5 Jib boom
- 6 Platform
- 7 Platform controls

- 8 Primary boom
- 9 Secondary boom
- 10 Ground controls
- 11 Power to charger (between steer tires)
- 12 Steer tire
- 13 Battery box
- 14 Non-steer tire

Controls



Ground Control Panel

- | | |
|--|--|
| 1 Platform rotate switch | 9 Red Emergency Stop button |
| 2 Turntable rotate switch | 10 Platform overload indicator light |
| 3 Primary boom up/down switch | 11 Hour meter |
| 4 Primary boom extend/retract switch | 12 Not used |
| 5 Used for optional equipment | 13 Function enable button |
| 6 Not used | 14 Not used |
| 7 Auxiliary power switch | 15 Secondary boom up/down switch |
| 8 Key switch for platform/off/ground selection | 16 10A breaker for control electrical circuits |
| | 17 Jib boom up/down switch |
| | 18 Platform level switch |

Controls

Ground Control Panel

1 Platform rotate switch

Move the platform rotate switch to the right and the platform will rotate to the right. Move the platform rotate switch to the left and the platform will rotate to the left.



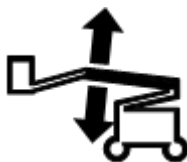
2 Turntable rotate switch

Move the turntable rotate switch to the right and the turntable will rotate to the right. Move the turntable rotate switch to the left and the turntable will rotate to the left.



3 Primary boom up/down switch

Move the switch up and the primary boom will raise. Move the switch down and the primary boom will lower.



4 Primary boom extend/retract switch

Move the switch to the left and the boom will extend. Move the switch to the right and the boom will retract.



5 Used for optional equipment

6 Not used

7 Auxiliary power switch

Use auxiliary power if the primary power source fails.

Simultaneously hold the auxiliary power switch on and activate the desired function.

8 Key switch for platform/off/ground selection

Turn the key switch to the platform position and the platform controls will operate. Turn the key switch to the off position and the machine will be off. Turn the key switch to the ground position and the ground controls will operate.

9 Red Emergency Stop button

Push in the red Emergency Stop button to the off position to stop all functions. Pull out the red Emergency Stop button to the on position to operate the machine.

10 Platform overload indicator light

Light flashing indicates the platform is overloaded and no functions will operate. Remove weight until the light goes off.

11 Hour meter

The hour meter displays the number of hours the machine has operated.

12 Not used

Controls

13 Function enable switch

Move the function enable switch to either side to enable the functions on the ground control panel to operate.

14 Not used

15 Secondary boom up/down switch

Move the switch up and the secondary boom will raise. Move the switch down and the secondary boom will lower.



16 10A breaker for control electrical circuits

17 Jib boom up/down switch

Move the switch up and the jib boom will raise. Move the switch down and the jib boom will lower.

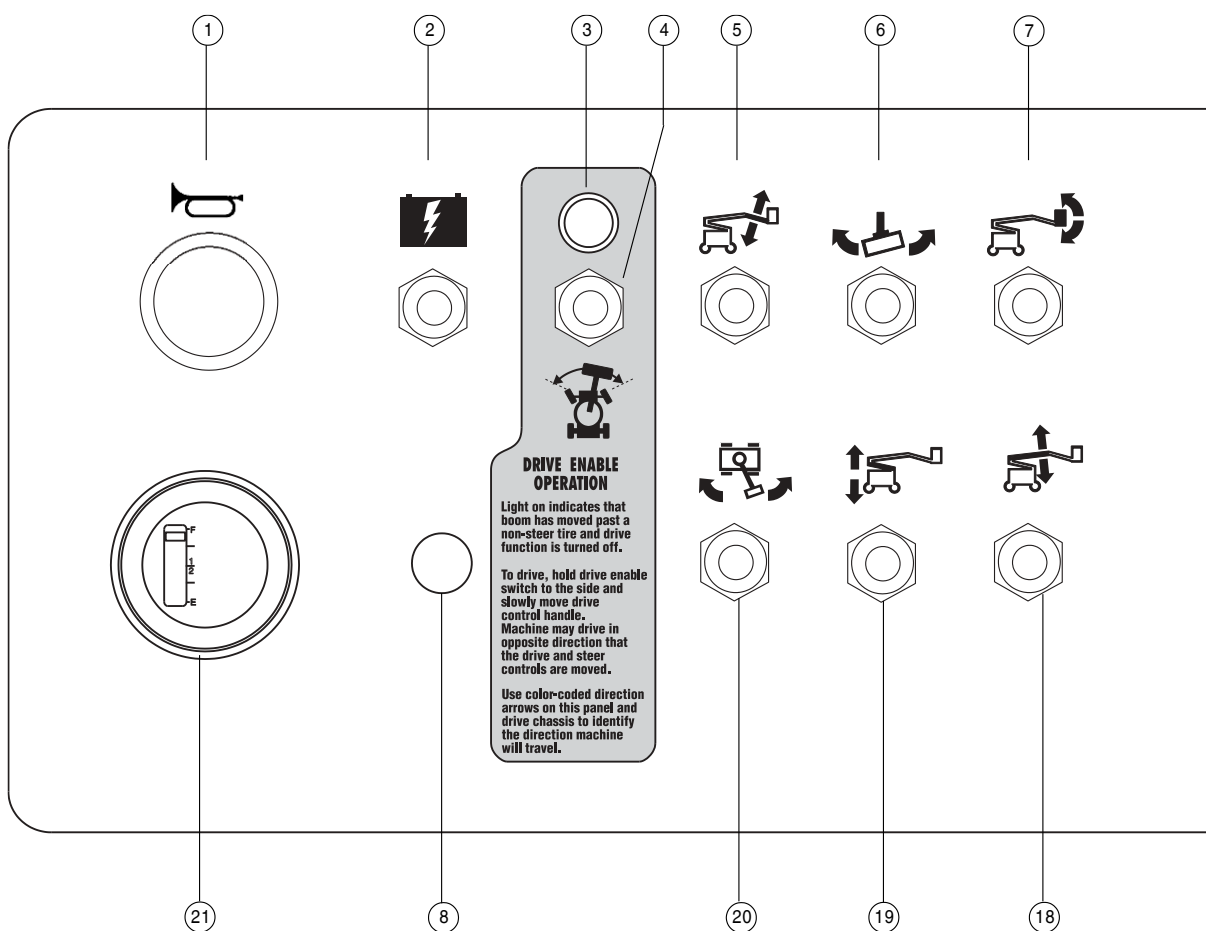


18 Platform level switch

Move the platform level switch up and the level of the platform will raise. Move the platform level switch down and the level of the platform will lower.



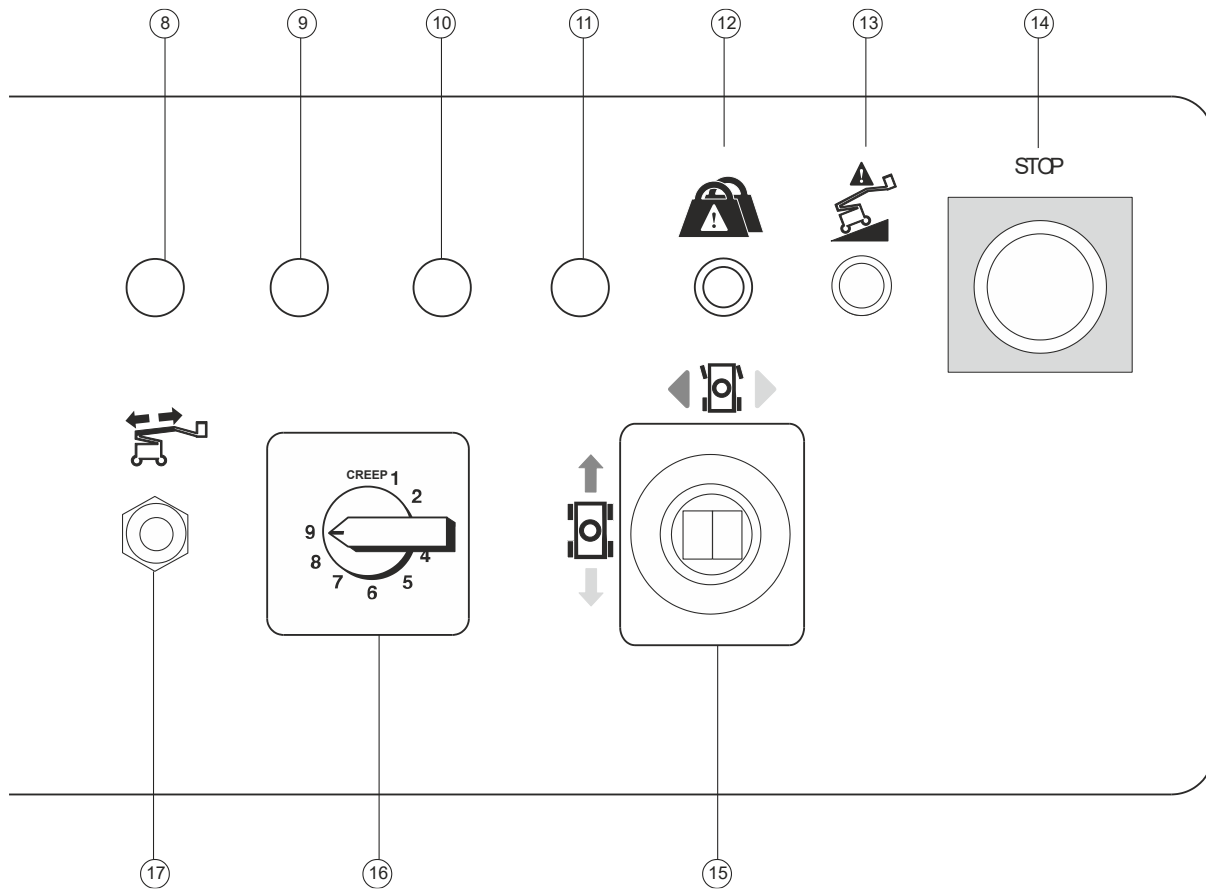
Controls



Platform Control Panel

- | | | | |
|---|------------------------------|----|--|
| 1 | Horn button | 9 | Not used |
| 2 | Auxiliary power switch | 10 | Not used |
| 3 | Drive enable indicator light | 11 | Not used |
| 4 | Drive enable switch | 12 | Platform overload indicator light |
| 5 | Jib boom up/down switch | 13 | Machine not level indicator light |
| 6 | Platform rotate switch | 14 | Red Emergency Stop button |
| 7 | Platform level switch | 15 | Proportional control handle for drive function and thumb rocker for steer function |
| 8 | Used for optional equipment | | |

Controls



- 16 Boom function speed controller
- 17 Primary boom extend/retract switch
- 18 Primary boom up/down switch
- 19 Secondary boom up/down switch
- 20 Turntable rotate switch
- 21 Battery charge indicator

Controls

Platform Control Panel

1 Horn button

Press this button and the horn will sound. Release the button and the horn will stop.

2 Auxiliary power switch with cover

Use auxiliary power if the primary power source fails.

Simultaneously hold the auxiliary power switch on and activate the desired function.

3 Drive enable indicator light

Light on indicates that the boom has moved just past either non-steer wheel and drive function has been interrupted.

4 Drive enable switch

To drive when the drive enable light is on, hold the drive enable switch to either side and slowly move the drive control handle off center. Be aware that the machine may move in the opposite direction that the drive and steer controls are moved.

5 Jib boom up/down switch

Move the switch up and the jib boom will raise. Move the switch down and the jib boom will lower.



6 Platform rotate switch

Move the platform rotate switch to the right and the platform will rotate to the right. Move the platform rotate switch to the left and the platform will rotate to the left.



7 Platform level switch

Move the platform level switch up and the level of the platform will raise. Move the platform level switch down and the level of the platform will lower.



8 Used for optional equipment

9 Not used

10 Not used

11 Not used

12 Platform overload indicator light

Light flashing indicates the platform is overloaded and no functions will operate. Remove weight until the light goes off.

13 Machine not level indicator light

Light flashes when the platform is raised and the machine is on a severe slope. The drive function in one or both directions will not operate.

Controls

14 Red Emergency Stop button

Push in the red Emergency Stop button to the off position to stop all functions. Pull out the red Emergency Stop button to the on position to operate the machine.

15 Proportional control handle for drive function and thumb rocker for steer function

Move the control handle in the direction indicated by the blue arrow on the control panel and the machine will drive forward. Move the control handle in the direction indicated by the yellow arrow and the machine will drive backwards.

Press the left side of the thumb rocker and the machine will steer to the left. Press the right side of the thumb rocker and the machine will steer to the right.

16 Boom function speed controller

Turn the dial to increase or decrease the speed of the machine functions.

17 Primary boom extend/retract switch

Move the switch to the left and the boom will extend. Move the switch to the right and the boom will retract.



18 Primary boom up/down switch

Move the switch up and the primary boom will raise. Move the switch down and the primary boom will lower.



19 Secondary boom up/down switch

Move the switch up and the secondary boom will raise. Move the switch down and the secondary boom will lower.



20 Turntable rotate switch

Move the turntable rotate switch to the right and the turntable will rotate to the right. Move the turntable rotate switch to the left and the turntable will rotate to the left.



21 Battery charge indicator

The battery charge indicator displays the charge level of the batteries.

Inspections



Do Not Operate Unless:

- ☑ You learn and practice the principles of safe machine operation contained in this operator's manual.
 - 1 Avoid hazardous situations.
 - 2 **Always perform a pre-operation inspection.**
- Know and understand the pre-operation inspection before going on to the next section.**
- 3 Always perform function tests prior to use.
- 4 Inspect the workplace.
- 5 Only use the machine as it was intended.

Pre-operation Inspection Fundamentals

It is the responsibility of the operator to perform a pre-operation inspection and routine maintenance.

The pre-operation inspection is a visual inspection performed by the operator prior to each work shift. The inspection is designed to discover if anything is apparently wrong with a machine before the operator performs the function tests.

The pre-operation inspection also serves to determine if routine maintenance procedures are required. Only routine maintenance items specified in this manual may be performed by the operator.

Refer to the list on the next page and check each of the items.

If damage or any unauthorized variation from factory delivered condition is discovered, the machine must be tagged and removed from service.

Repairs to the machine may only be made by a qualified service technician, according to the manufacturer's specifications. After repairs are completed, the operator must perform a pre-operation inspection again before going on to the function tests.

Scheduled maintenance inspections shall be performed by qualified service technicians, according to the manufacturer's specifications and the requirements listed in the responsibilities manual.

Inspections

Pre-operation Inspection

- ☐ Be sure that the operator's, safety, and responsibilities manuals are complete, legible and in the storage container located in the platform.
- ☐ Be sure that all decals are legible and in place. See Inspections section.
- ☐ Check for hydraulic oil leaks and proper oil level. Add oil if needed. See Maintenance section.
- ☐ Check for battery fluid leaks and proper fluid level. Add distilled water if needed. See Maintenance section.

Check the following components or areas for damage, improperly installed, or missing parts and unauthorized modifications:

- ☐ Electrical components, wiring, and electrical cables
- ☐ Hydraulic hoses, fittings, cylinders, and manifolds
- ☐ Hydraulic tank
- ☐ Drive and turntable motors and drive hubs
- ☐ Boom wear pads
- ☐ Tires and wheels
- ☐ Limit switches and horn

- ☐ Alarms and beacons (if equipped)
- ☐ Nuts, bolts and other fasteners
- ☐ Platform entry mid-rail or gate
- ☐ Lanyard anchorage points

Check entire machine for:

- ☐ Cracks in welds or structural components
- ☐ Dents or damage to machine
- ☐ Excessive rust, corrosion or oxidation
- ☐ Verify that all structural and other critical components are present and all associated fasteners and pins are in place and properly tightened.
- ☐ Be sure that both battery packs are in place and properly connected.
- ☐ After you complete your inspection, be sure that all compartment covers are in place and latched.

Inspections



Do Not Operate Unless:

- ☒ You learn and practice the principles of safe machine operation contained in this operator's manual.
- 1 Avoid hazardous situations.
- 2 Always perform a pre-operation inspection.
- 3 Always perform function tests prior to use.**

Know and understand the function tests before going on to the next section.

- 4 Inspect the workplace.
- 5 Only use the machine as it was intended.

Function Test Fundamentals

The function tests are designed to discover any malfunctions before the machine is put into service. The operator must follow the step-by-step instructions to test all machine functions.

A malfunctioning machine must never be used. If malfunctions are discovered, the machine must be tagged and removed from service. Repairs to the machine may only be made by a qualified service technician, according to the manufacturer's specifications.

After repairs are completed, the operator must perform a pre-operation inspection and function tests again before putting the machine into service.

Inspections

At the Ground Controls

- 1 Select a test area that is firm, level and free of hazards.
- 2 Turn the key switch to ground control.
- 3 Pull out the red Emergency Stop button to the on position.
- ⦿ Result: The beacon (if equipped) should flash.

Test Emergency Stop

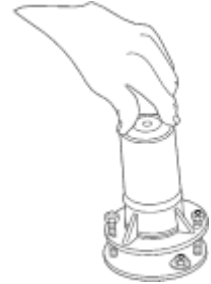
- 4 Push in the red Emergency Stop button to the off position.
- 5 Activate each machine function control handle or toggle switch.
- ⦿ Result: No functions should operate.
- 6 Pull out the red Emergency Stop button to the on position.

Test Machine Functions and Descent Alarm

- 7 Do not hold the function enable switch to either side. Attempt to activate each boom and platform function toggle switch. 
- ⦿ Result: No boom and platform functions should operate.
- 8 Hold the function enable switch to either side and activate each boom and platform function toggle switch.
- ⦿ Result: All boom and platform functions should operate through a full cycle. The descent alarm should sound while the boom is lowering.

Test the Tilt Sensor

- 9 Turn the key switch to platform control. Pull out the platform red Emergency Stop button to the on position.
- 10 Open the turntable cover on the side opposite the ground controls and locate the tilt sensor.



- 11 Press down one side of the tilt sensor.
- ⦿ Result: The alarm, located in the platform, should sound.

Test Auxiliary Lowering

- 12 Turn the key switch to ground control.
- 13 Pull out the red Emergency Stop button to the on position.
- 14 Simultaneously hold the auxiliary power switch on and activate each boom function toggle switch. 

Note: To conserve battery power, test each function through a partial cycle.

- ⦿ Result: All boom functions should operate.
- 15 Turn the key switch to platform control.

Inspections

At the Platform Controls

- 16 Pull out the red Emergency Stop button to the on position.

Test Emergency Stop

- 17 Push in the platform red Emergency Stop button to the off position.
- 18 Activate each machine function control handle or toggle switch.
- ⦿ Result: No functions should operate.
- 19 Pull out the red Emergency Stop button to the on position.

Test the Horn

- 20 Press the horn button.
- ⦿ Result: The horn should sound.

Test the Foot Switch

- 21 Do not press down the foot switch.
- ⦿ Result: No functions should operate.

Test Machine Functions and Descent Alarm

- 22 Press down the foot switch.
- 23 Activate each machine function control handle or toggle switch.
- ⦿ Result: All boom and platform functions should operate through a full cycle. The descent alarm should sound while the boom is lowering.

Test the Steering

- 24 Press down the foot switch.
- 25 Press the thumb rocker switch on top of the control handle in the direction indicated by the blue triangle on the control panel.
- ⦿ Result: The steer wheels should turn in the direction that the blue triangles point on the drive chassis.
- 26 Press the thumb rocker switch on top of the control handle in the direction indicated by the yellow triangle, on the control panel.
- ⦿ Result: The steer wheels should turn in the direction that the yellow triangles point on the drive chassis.

Inspections

Test Drive and Braking

- 27 Press down the foot switch.
- 28 Slowly move the drive control handle in the direction indicated by the blue arrow on the control panel until the machine begins to move, then return the handle to the center position.
 - ⊙ Result: The machine should move in the direction that the blue arrow points on the drive chassis, then come to an abrupt stop.
- 29 Slowly move the control handle in the direction indicated by the yellow arrow on the control panel until the machine begins to move, then return the handle to the center position.
 - ⊙ Result: The machine should move in the direction that the yellow arrow points on the drive chassis, then come to an abrupt stop.

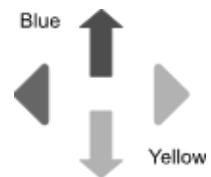
Note: The brakes must be able to hold the machine on any slope it is able to climb.

Test the Drive Enable System

- 30 Press down the foot switch and lower the boom to the stowed position.
- 31 Rotate the turntable until the primary boom moves past one of the non-steer wheels.
 - ⊙ Result: The drive enable indicator light should come on and remain on while the boom is anywhere in the range shown.
- 32 Move the drive control handle off center.
 - ⊙ Result: The drive function should not operate.
- 33 Move and hold the drive enable toggle switch to either side and slowly move the drive control handle off center.
 - ⊙ Result: The drive function should operate.

Note: When the drive enable system is in use, the machine may drive in the opposite direction that the drive and steer control handle is moved.

Use the color-coded direction arrows on the platform controls and the drive chassis to identify the direction of travel.



Inspections

Test Limited Drive Speed

- 34 Press down the foot switch.
- 35 Raise the primary boom approximately 3 ft/91 cm.
- 36 Slowly move the drive control handle to the full drive position.
- ⦿ Result: The maximum achievable drive speed with the primary boom raised should not exceed 1 ft / 30 cm per second.
- 37 Lower the primary boom to the stowed position.
- 38 Raise the secondary boom approximately 3 feet / 91 cm.
- 39 Slowly move the drive control handle to the full drive position.
- ⦿ Result: The maximum achievable drive speed with the secondary boom raised should not exceed 1 ft / 30 cm per second.
- 40 Lower the secondary boom to the stowed position.
- 41 Extend the primary boom approximately 2 feet/61 cm.
- 42 Slowly move the drive control handle to the full drive position.
- ⦿ Result: The maximum achievable drive speed with the primary boom extended should not exceed 1 ft/30 cm per second.
- 43 Retract the boom.

If the drive speed with the primary or secondary boom raised or the primary boom extended exceeds 1 ft/30 cm per second, immediately tag and remove the machine from service.

Test Drive Tilt Cutout

- 44 Press down the foot switch.
- 45 With the boom fully stowed, drive the machine onto a slope where the chassis pitch angle is greater than 2.5°.
- ⦿ Result: The machine should continue to drive.
- 46 Return to level ground and raise the primary boom to an out of stowed position (approximately 10° above horizontal).
- ⦿ Result: The machine should stop once the machine reaches 2.5° of chassis tilt and the alarm should sound at the platform controls.
- 47 Lower the primary boom to the stowed position.
- ⦿ Result: The machine should drive.
- 48 Return to level ground and extend the primary boom approximately 1.6 ft / 0.5 m.
- 49 Drive the machine onto a slope where the chassis pitch angle is greater than 2.5°.
- ⦿ Result: The machine should stop once the machine reaches 2.5° of chassis tilt and the alarm should sound at the platform controls.
- 50 Retract the primary boom to the stowed position.
- ⦿ Result: The machine should drive.

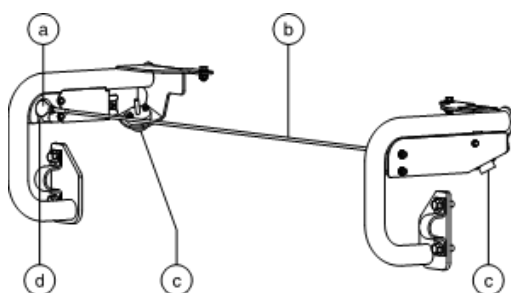
Inspections

- 51 Return to level ground and stow the boom.
- 52 With the boom fully stowed, drive the machine onto a slope where the chassis pitch angle is greater than 2.5°.
 - ⊙ Result: The machine should continue to drive.
- 53 Return to level ground and raise the secondary boom to an out of stowed position (approximately 15° above horizontal).
 - ⊙ Result: The machine should stop once the machine reaches 2.5° of chassis tilt and the alarm should sound at the platform controls.
- 54 Lower the secondary boom to the stowed position or drive in the opposite direction.
 - ⊙ Result: The machine should drive.
- 55 With the boom fully stowed, drive the machine onto a slope where the chassis pitch angle is greater than 2.5°.
 - ⊙ Result: The machine should continue to drive.
- 56 Return to level ground and raise the primary boom to an out of stowed position (approximately 10° above horizontal).
- 57 Drive the machine onto a slope where the chassis roll angle is greater than 4.5°.
 - ⊙ Result: The machine should stop once the machine reaches 4.5° of chassis tilt and the alarm should sound at the platform controls.
- 58 Lower the primary boom to the stowed position or drive in the opposite direction.
 - ⊙ Result: The machine should drive.
- 59 Return to level ground and extend the primary boom approximately 1.6 ft / 0.5 m.
- 60 Drive the machine onto a slope where the chassis roll angle is greater than 4.5°.
 - ⊙ Result: The machine should stop once the machine reaches 4.5° of chassis tilt and the alarm should sound at the platform controls.
- 61 Retract the primary boom to the stowed position.
 - ⊙ Result: The machine should drive.
- 62 Return to level ground and stow the boom.
- 63 With the boom fully stowed, drive the machine onto a slope where the chassis roll angle is greater than 4.5°.
 - ⊙ Result: The machine should continue to drive.
- 64 Return to level ground and raise the secondary boom to an out of stowed position (approximately 15° above horizontal).
- 65 Drive the machine onto a slope where the chassis roll angle is greater than 4.5°.
 - ⊙ Result: The machine should stop once the machine reaches 4.5° of chassis tilt and the alarm should sound at the platform controls.
- 66 Lower the primary boom to the stowed position.
 - ⊙ Result: The machine should drive.

Inspections

Test the Contact Alarm (if equipped)

- 67 Do not activate the foot switch and press on the contact alarm cable to release the actuator from the switch socket.
- ⦿ Result: The contact alarm lights will not flash and the machine horn will not sound.
- 68 Activate the foot switch by pressing the foot switch down.
- ⦿ Result: The contact alarm lights will flash and the machine horn will sound.
- 69 Insert the actuator into the switch socket.
- ⦿ Result: The lights and horn will turn off.
- 70 Activate the foot switch by pressing the foot switch down and press on the contact alarm cable to release the actuator from the switch socket.
- ⦿ Result: The contact alarm lights will flash and the machine horn will sound.
- 71 Operate each machine function.
- ⦿ Result: All machine functions should not operate.
- 72 Insert the actuator into the switch socket.
- ⦿ Result: The lights and horn will turn off.
- 73 Operate each machine function.
- ⦿ Result: All machine functions should operate.



- a actuator
b contact alarm cable
c flashing alarm
d switch socket

Test Auxiliary Lowering

- 74 Pull out the red Emergency Stop button to the on position.
- 75 Press down the foot switch.
- 76 Simultaneously hold the auxiliary power switch on and activate each function control handle or toggle switch.

Note: To conserve battery power, test each function through a partial cycle.

- ⦿ Result: All boom and steer functions should operate. Drive functions should not operate with auxiliary power.

Inspections



Do Not Operate Unless:

- ☒ You learn and practice the principles of safe machine operation contained in this operator's manual.

- 1 Avoid hazardous situations.
- 2 Always perform a pre-operation inspection.
- 3 Always perform function tests prior to use.

4 Inspect the workplace.

Know and understand the workplace inspection before going on to the next section.

- 5 Only use the machine as it was intended.

Workplace Inspection Checklist

Be aware of and avoid the following hazardous situations:

- ☐ drop-offs or holes
- ☐ bumps, floor obstructions, or debris
- ☐ sloped surfaces
- ☐ unstable or slippery surfaces
- ☐ overhead obstructions and high voltage conductors
- ☐ hazardous locations
- ☐ inadequate surface support to withstand all load forces imposed by the machine
- ☐ wind and weather conditions
- ☐ the presence of unauthorized personnel
- ☐ other possible unsafe conditions

Workplace Inspection Fundamentals

The workplace inspection helps the operator determine if the workplace is suitable for safe machine operation. It should be performed by the operator prior to moving the machine to the workplace.

It is the operator's responsibility to read and remember the workplace hazards, then watch for and avoid them while moving, setting up, and operating the machine.

Inspections

Inspection for Decals with Words

Use the pictures on the next page to verify that all decals are legible and in place.

Below is a numerical list with quantities and descriptions.

Part No.	Decal Description	Qty
27204	Arrow – Blue	1
27205	Arrow – Yellow	1
27206	Triangle – Blue	2
27207	Triangle – Yellow	2
28174	Label – Power to Platform, 230V*	2
28235	Label – Power to Platform, 115V*	2
28236	Warning – Improper Operation	1
28372	Label – Disconnect Battery Pack Plug	2
29104	Warning – Tow Package (option)*	1
31060	Danger – Tip-over Hazard, Limit Switch	3
31508	Danger – Electrocutation Hazard	1
31785	Notice – Battery Charger Operating Instr.	2
31787	Danger – Tip-over, Batteries	2
31788	Danger – Explosion/Burn Hazard	2
32728	Label – Generator (option)*	1
35526	Notice – Tow Package (option)*	1
38149	Label – Patent*	1
44980	Label – Power to Charger, 115V*	1
44981	Label – Air Line to Platform (option)*	2
46468	Function Override*	1
48731	Label – FM Approval (option)***	2
48732	Label – EE Rating (option)***	2
52475	Label – Transport Tie Down**	4
52664	Label – Controller Status Indicator Light	1
52865	Warning – Annual Inspection Record*	1
72086	Label – Lifting Point**	4
72444	Ground Control Panel	1
72833	Label – Open	2
72867	Label – Work Lights (option)*	1
82279	Platform Control Panel	1
82366	Label – Chevron Rando*	1
97815	Label – Lower Mid-rail	3

Part No.	Decal Description	Qty
114025	Label – Wheel Load	4
114117	Notice – Battery Connection Diagram	2
114343	Label – Emergency Lowering	1
114350	Label – AC Inverter Power (option)*	2
114390	Danger – Electrocutation Hazard	3
114397	Danger – Tilt-Alarm	1
133286	Label – Power to Charger*	1
218550	Danger – Tip-over Hazard, 500 lbs / 227 kg*	1
218559	Danger, Warning – Tip-over, Crush Hazard	1
219487	Label – Platform Overload	1
227213	Instructions – Operating Instructions, Ground Controls*	1
1262342	Warning – Slope Rating	1
1263543	Warning – Compartment Access	2
1267121	Warning – Crush Hazard, Service	1
1272242	Label – Machine Registration/Owner Transfer	1
1272808	Label – No Step*	3
1278542	Label – Contact Alarm Weight	1
1278982	Label – Actuator Switch Socket	1
1280819	Label – Warning, Prop 65*	1
1281174	Label – Lanyard Anchorage Point, Fall Arrest/Fall Restrained	8
1293324	Label – ICES-2/CAN-2 Compliance	1
1294398	Label – ANSI/CSA Compliant	1
1298825	Label – Relays, Z-45, Z-45BE, Z-45DC	1
1299743	Danger – Tip-over Hazard, Tires, Z-45	4
1299744	Label – Transport Diagram, Z-45	2
1299791	Label – Maximum Capacity 440 lbs/200 kg, Manual Force 90 lbs/400 N (Aircraft Protection Package)*	1



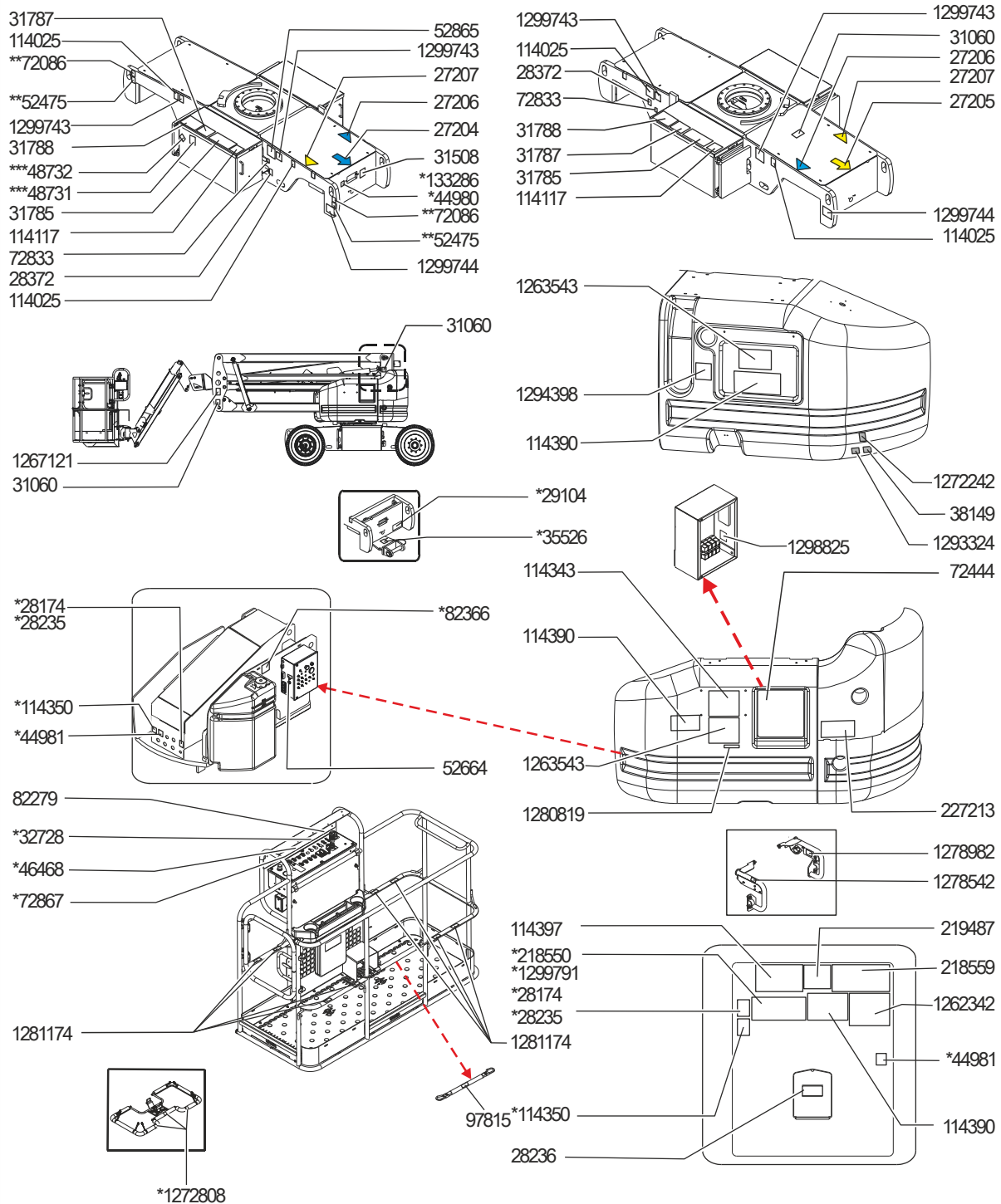
Shading indicates decal is hidden from view, i.e. under covers

* These decals are model, option or configuration specific.

** These decals are installed on both sides of chassis.

*** These decals are installed on both sides of chassis and are model, option, or configuration specific.

Inspections



Inspections

Inspection for Decals with Symbols

Use the pictures on the next page to verify that all decals are legible and in place.

Below is a numerical list with quantities and descriptions.

Part No.	Decal Description	Qty
27204	Arrow – Blue	1
27205	Arrow – Yellow	1
27206	Triangle – Blue	2
27207	Triangle – Yellow	2
28174	Label – Power to Platform, 230V*	2
28235	Label – Power to Platform, 115V*	2
44981	Label – Air Line to Platform (option)*	2
46468	Function Override*	1
52475	Label – Transport Tie-down**	4
65278	Caution – No Step*	3
72086	Label – Lifting Point**	4
72444	Ground Control Panel	1
72867	Label – Work Lights (option)*	1
82279	Platform Control Panel	1
82481	Label – Battery/Charger Safety	2
82487	Label – Read the Manual*	3
82647	Label – Drive Enable Patch	1
97815	Label – Lower Mid-rail	3
114025	Label – Wheel Load	4
114248	Label – Tip-over Hazard, Tilt Alarm	1
114249	Label – Tip-over Hazard, Tires	4

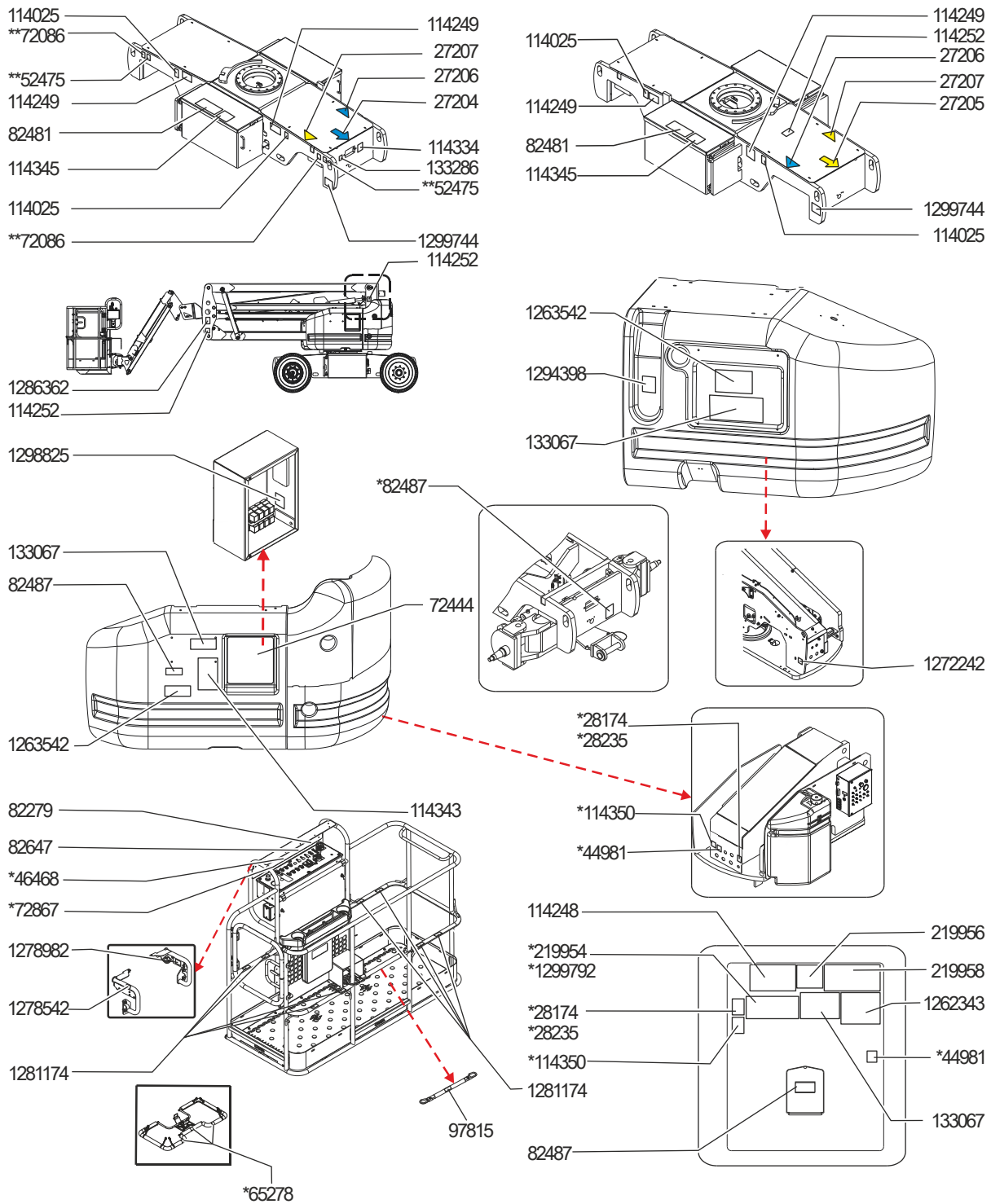
Part No.	Decal Description	Qty
114252	Label – Tip-over Hazard, Limit Switches	3
114334	Label – Electrocution Hazard, Plug	1
114343	Label – Emergency Lowering	1
114345	Label – Tip-over Hazard, Batteries	2
114350	Label – AC Inverter Power (option)*	2
133067	Label – Electrocution Hazard	3
133286	Label – Power to Charger	1
219954	Label – Tip-over Hazard	1
219956	Label – Platform Overload	1
219958	Label – Tip-over, Crush Hazard	1
1262343	Label – Runaway Machine Hazard	1
1263542	Label – Compartment Access	2
1272242	Label – Machine Registration/Owner Transfer	1
1278542	Instructions – Contact Alarm	1
1278982	Label – Actuator Switch Socket	1
1281174	Label – Lanyard Anchorage Point, Fall Arrest/Fall Restrained*	8
1286362	Label – Crush Hazard, Service	1
1294398	Label – ANSI/CSA Compliant	1
1298825	Label – Relays, Z-45, Z-45BE, Z-45DC	1
1299744	Label – Transport Diagram, Z-45	2
1299792	Label – Tip-over Hazard Aircraft Protection (Aircraft Protection Package)	1

 Shading indicates decal is hidden from view, i.e. under covers

* These decals are model, option or configuration specific.

** These decals are installed on both sides of chassis.

Inspections



Operating Instructions



Do Not Operate Unless:

- ☒ You learn and practice the principles of safe machine operation contained in this operator's manual.
 - 1 Avoid hazardous situations.
 - 2 Always perform a pre-operation inspection.
 - 3 Always perform function tests prior to use.
 - 4 Inspect the workplace.
 - 5 **Only use the machine as it was intended.**

Fundamentals

The Operating Instructions section provides instructions for each aspect of machine operation. It is the operator's responsibility to follow all the safety rules and instructions in the operator's, safety, and responsibilities manuals.

Using the machine for anything other than lifting personnel, along with their tools and materials, to an aerial work site is unsafe and dangerous.

Only trained and authorized personnel should be permitted to operate a machine. If more than one operator is expected to use a machine at different times in the same work shift, they must all be qualified operators and are all expected to follow all safety rules and instructions in the operator's, safety, and responsibilities manuals. That means every new operator should perform a pre-operation inspection, function tests, and a workplace inspection before using the machine.

Operating Instructions

Emergency Stop

Push in the red Emergency Stop button to the off position at the ground controls or the platform controls to stop all machine functions and turn the engine off.

Repair any function that operates when either red Emergency Stop button is pushed in.

Selecting and operating the ground controls will override the platform red Emergency Stop button.

Auxiliary Controls

Use auxiliary power if the primary power source fails.

- 1 Turn the key switch to ground or platform control.
- 2 Pull out the red Emergency Stop button to the on position.
- 3 Press down the foot switch when operating the auxiliary controls from the platform.
- 4 Simultaneously hold the auxiliary power switch on and activate the desired function.



The drive function will not operate with auxiliary power.

Operating Instructions

Operation from Ground

- 1 Turn the key switch to ground control.
- 2 Pull out the red Emergency Stop button to the on position.

To Position Platform

- 1 Hold the function enable switch to either side.



- 2 Move the appropriate toggle switch according to the markings on the control panel.

Drive and steer functions are not available from the ground controls.

Platform Overload Indicator Light

Light flashing indicates the platform is overloaded.

Remove weight from the platform until the light goes off.

Note: An alarm will sound at the platform when an overload condition occurs and will stop sounding when weight is removed from the platform.

Operation from Platform

- 1 Turn the key switch to platform control.
- 2 Pull out both ground and platform red Emergency Stop buttons to the on position.

To Position Platform

- 1 Set the boom function speed controller to the desired speed.

Note: Drive and steer functions are not affected by the boom function speed controller.

- 2 Press down the foot switch.
- 3 Move the appropriate toggle switch according to the markings on the control panel.

To Steer

- 1 Press down the foot switch.
- 2 Turn the steer wheels with the thumb rocker switch located on the top of the control handle.

Use the color-coded direction triangles on the platform controls and the drive chassis to identify the direction the wheels will turn.

Operating Instructions

To Drive

- 1 Press down the foot switch.
- 2 Increase speed: Slowly move the control handle off center.

Decrease speed: Slowly move the control handle toward center.

Stop: Return the control handle to center or release the foot switch.

Use the color-coded direction arrows on the platform controls and the drive chassis to identify the direction the machine will travel.

Machine travel speed is restricted when the booms are raised or extended.

Drive Enable

Light on indicates that the boom has moved just past either non-steer wheel and the drive function has been interrupted.



To drive, hold the drive enable switch to either side and slowly move the drive control handle off center.

Be aware that the machine may move in the opposite direction that the drive and steer controls are moved.

Always use the color-coded direction arrows on the platform controls and the drive chassis to identify the direction the machine will travel.

▲ Driving on a slope

Determine the uphill, downhill and side slope ratings for the machine and determine the slope grade.



Maximum slope rating, platform downhill (gradeability):

30% (17°)



Maximum slope rating, platform uphill:

20% (11°)



Maximum side slope rating:

25% (14°)

Note: Slope rating is subject to ground conditions with one person in the platform and adequate traction. Additional platform weight may reduce slope rating. The term gradeability applies to the platform downhill configuration only.

Be sure the boom is below horizontal and the platform is between the non-steer wheels.

Move the drive speed select switch to machine on incline symbol.

Operating Instructions

To determine the slope grade:

Measure the slope with a digital inclinometer OR use the following procedure.

You will need:

- carpenter's level
- straight piece of wood, at least 3 feet/1 m long
- tape measure

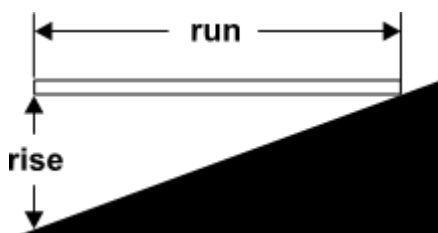
Lay the piece of wood on the slope.

At the downhill end, lay the level on the top edge of the piece of wood and lift the end until the piece of wood is level.

While holding the piece of wood level, measure the vertical distance from the bottom of the piece of wood to the ground.

Divide the tape measure distance (rise) by the length of the piece of wood (run) and multiply by 100.

Example:



Piece of wood = 144 inches (3.6 m)

Run = 144 inches (3.6 m)

Rise = 12 inches (0.3 m)

$12 \text{ in} \div 144 \text{ in} = 0.083 \times 100 = 8.3\% \text{ grade}$

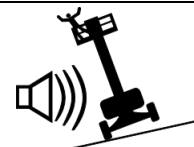
$0.3 \text{ m} \div 3.6 \text{ m} = 0.083 \times 100 = 8.3\% \text{ grade}$

If the slope exceeds the maximum uphill, downhill or side slope rating, then the machine must be winched or transported up or down the slope. See Transport and Lifting section.

Tilt Sensor Activation Settings

Model	Chassis Angle (side to side)	Chassis Angle (front to back)
Z-45J DC	4.5°	2.5°

When the Machine On Incline indicator light is on and the tilt alarm sounds, the following functions are affected; drive functions are disabled.



Follow the Boom lowering procedure (see Operating Instructions) to restore drive function.

When the machine is stowed, on a slope, and the tilt alarm sounds, the following functions are affected; lift functions are disabled.



Return the machine to level ground to restore lift functions.

AC Inverter (if equipped)

The inverter supplies power to the platform when external AC power is removed.



Plug the power to platform cable on the machine into the the inverter power cable.

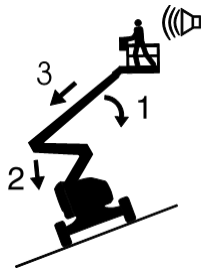
Move the inverter switch up to activate the inverter. Move the switch down to turn off the inverter. All boom functions will operate while the inverter is in use.

Operating Instructions

Machine Not Level Indicator Light

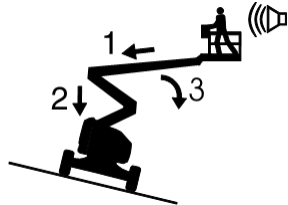


If the tilt alarm sounds when the platform is raised, the Machine Not Level indicator light will come on and the drive function in one or both directions will not operate. Identify the condition of the boom on the slope as shown below. Follow the steps to lower the boom before moving to a firm, level surface. Do not rotate the boom while lowering.



If the tilt alarm sounds with the platform uphill:

- 1 Lower the primary boom.
- 2 Lower the secondary boom.
- 3 Retract the primary boom.



If the tilt alarm sounds with the platform downhill:

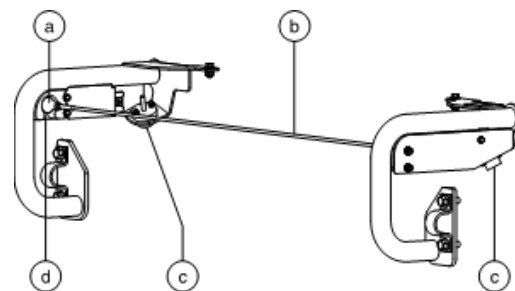
- 1 Retract the primary boom.
- 2 Lower the secondary boom.
- 3 Lower the primary boom.

Contact Alarm (if equipped)

The contact alarm is designed to alert ground personnel when an operator makes contact with the platform control panel, interrupting boom movement, sounding an alarm and flashing warning lights.

When the contact alarm cable is tripped, the lift and drive functions are disabled at the platform. The audio and visual warnings will activate alerting others that assistance may be needed. These notifications will continue until the system is reset.

- 1 The contact alarm cable is tripped, releasing the actuator from the switch socket.
- 2 Insert the actuator into the switch socket to turn off flashing lights and audio alarm.



- a actuator
- b contact alarm cable
- c flashing alarm
- d switch socket

Operating Instructions

Aircraft Protection Package (if equipped)

If the platform bumpers come into contact with aircraft components, the machine will shut down and no functions will operate.

- 1 Press down the foot switch.
- 2 Move and hold the aircraft protection function override switch.
- 3 Move the appropriate function control handle or toggle switch to move the machine away from aircraft components.

Lockout After Each Use

- 1 Select a safe parking location—firm level surface, clear of obstruction and traffic.
- 2 Retract and lower the boom to the stowed position.
- 3 Rotate the turntable so that the boom is between the non-steer wheels.
- 4 Turn the key switch to the off position and remove the key to secure from unauthorized use.

Machine Storage

Properly preparing and stowing the machine for extended storage will make it easier to put the machine back into service.

- 1 See After Each Use section for basic machine stowing instructions.
- 2 Store the machine in a dry and well-ventilated location. Be sure machine is clean and dry.
- 3 Perform a complete Pre-Operation Inspection.
Models with Engines: fill the fuel tank.
- 4 Refer to the Scheduled Maintenance section in the appropriate Service Manual, and complete each lubrication procedure.
- 5 Remove and store the battery.
- 6 Models with Engines: Refer to the OEM engine manual for additional extended storage procedures. As needed, start and run the engine for 10 minutes.

Operating Instructions



Battery and Charger Instructions

Observe and Obey:

- ☒ Do not use an external charger or booster battery.
- ☒ Charge the battery in a well-ventilated area.
- ☒ Use proper AC input voltage for charging as indicated on the charger.
- ☒ Use only a Genie authorized battery and charger.
- ☒ Do not operate the machine with the battery charger plugged in.

To Charge Batteries

- 1 Be sure the batteries are connected before charging the batteries.
- 2 Open the battery compartment. The compartment should remain open for the entire charging cycle.

Maintenance-free batteries

- 1 Connect the battery charger to a grounded AC circuit.
- 2 The charger will indicate when the battery is fully charged.

Operating Instructions

Standard Batteries

- 1 Remove the battery vent caps and check the battery acid level. If necessary, add only enough distilled water to cover the plates. Do not overfill prior to the charge cycle.
- 2 Replace the battery vent caps.
- 3 Connect the battery charger to a grounded AC circuit.
- 4 The charger will indicate when the battery is fully charged.
- 5 Check the battery acid level when the charging cycle is complete. Replenish with distilled water to the bottom of the fill tube. Do not overfill.

Dry Battery Filling and Charging Instructions

- 1 Remove the battery vent caps and permanently remove the plastic seal from the battery vent openings.
- 2 Fill each cell with battery acid (electrolyte) until the level is sufficient to cover the plates.

Do not fill to maximum level until the battery charge cycle is complete. Overfilling can cause the battery acid to overflow during charging. Neutralize battery acid spills with baking soda and water.

- 3 Install the battery vent caps.
- 4 Charge the battery.
- 5 Check the battery acid level when the charging cycle is complete. Replenish with distilled water to the bottom of the fill tube. Do not overfill.

Transport and Lifting Instructions



Observe and Obey:

- ☑ Genie provides this securement information as a recommendation. Drivers are solely responsible for making sure machines are properly secured and the correct trailer is selected pursuant to US Department of Transportation regulations, other localized regulations, and their company policy.
- ☑ Genie customers needing to containerize any lift or Genie product should source a qualified freight forwarder with expertise in preparing, loading and securing construction and lifting equipment for international shipment.
- ☑ Only qualified mobile elevating work platform operators should move the machine on or off the truck.
- ☑ The transport vehicle must be parked on a level surface.
- ☑ The transport vehicle must be secured to prevent rolling while the machine is being loaded.
- ☑ Be sure the vehicle capacity, loading surfaces and chains or straps are sufficient to withstand the machine weight. Genie lifts are very heavy relative to their size. See the serial label for the machine weight. See the inspections section for the serial label location.

- ☑ Be sure the turntable is secured with the turntable rotation lock before transporting. Be sure to unlock the turntable for operation.
- ☑ Do not drive the machine on a slope that exceeds the uphill, downhill or side slope rating. See Driving on a Slope in the Operating Instructions section.
- ☑ If the slope of the transport vehicle bed exceeds the uphill or downhill maximum slope rating, the machine must be loaded and unloaded using a winch as described in the brake release operation. See the Specifications section for the slope ratings.

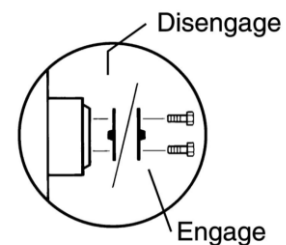
Free-wheel Configuration for Winching

Chock the wheels to prevent the machine from rolling.

Release the non-steer wheel brakes by turning over the drive hub disconnect caps.

Be sure the winch line is properly secured to the drive chassis tie points and the path is clear of all obstructions.

Reverse the procedures described to re-engage the brakes.

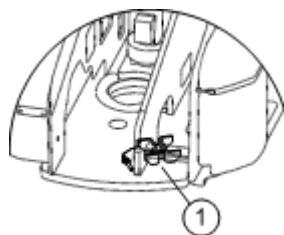


Transport and Lifting Instructions

Securing to Truck or Trailer for Transit

Always use the turntable rotation lock pin each time the machine is transported.

The lock pin is located under the turntable on the hydraulic tank side of the machine.



1 Turntable rotation lock pin

Turn the key switch to the off position and remove the key before transporting.

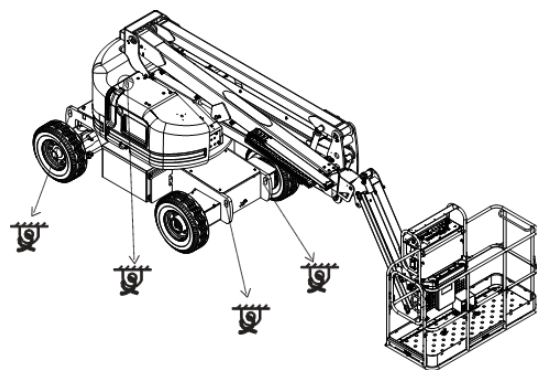
Inspect the entire machine for loose or unsecured items.

Securing the Chassis

Use chains of ample load capacity.

Use a minimum of 4 chains or straps.

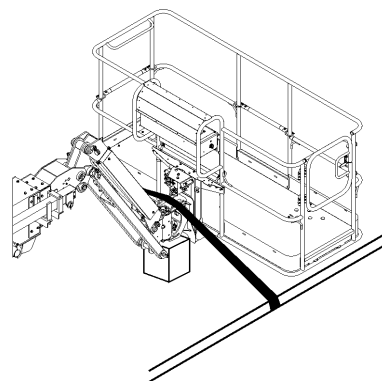
Adjust the rigging to prevent damage to the chains.



Securing the Platform – Z-45/25J

Make sure the jib and platform are in the stowed position.

Secure the platform with a nylon strap placed over the platform mount near the platform rotator (see below). Do not use excessive downward force when securing the boom section.



Transport and Lifting Instructions



Observe and Obey:

- ☑ Only qualified riggers should rig the machine.
- ☑ Only certified crane operators should lift the machine and only in accordance with the applicable crane regulations.
- ☑ Be sure the crane capacity, loading surfaces and straps or lines are sufficient to withstand the machine weight. See the serial label for the machine weight.

Lifting Instructions

Fully lower and retract the boom. Fully lower the jib (if equipped). Remove all loose items on the machine.

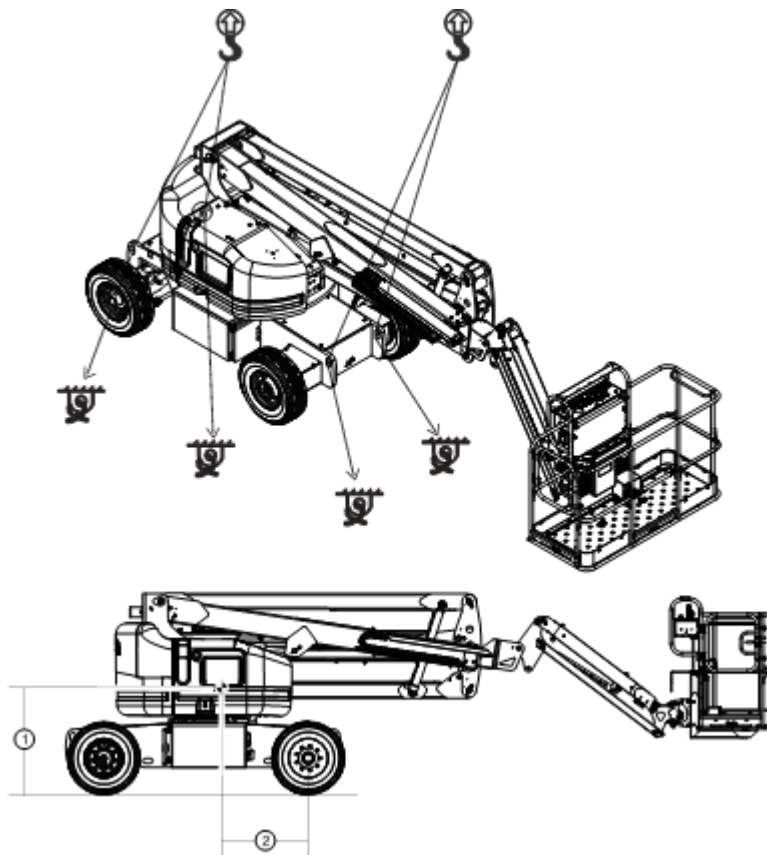
Use the turntable rotation lock to secure the turntable.

Determine the center of gravity of your machine using the table and the picture on this page.

Attach the rigging only to the designated lifting points on the machine. There are four lifting points on the chassis.

Adjust the rigging to prevent damage to the machine and to keep the machine level.

Y Axis (1)	41.9 in	106.5 cm
X Axis (2)	34.6 in	88 cm



Maintenance



Observe and Obey:

- ☑ Only routine maintenance items specified in this manual shall be performed by the operator.
- ☑ Scheduled maintenance inspections shall be completed by qualified service technicians, according to the manufacturer's specifications and the requirements specified in the responsibilities manual.
- ☑ Dispose of material in accordance with governmental regulations.
- ☑ Use only Genie approved replacement parts.

Maintenance Symbols Legend

The following symbols have been used in this manual to help communicate the intent of the instructions. When one or more of the symbols appear at the beginning of a maintenance procedure, it conveys the meaning below.



Indicates that tools will be required to perform this procedure.



Indicates that new parts will be required to perform this procedure.



Indicates that a cold motor or pump will be required to perform this procedure.

Check the Batteries



Proper battery condition is essential to good machine performance and operational safety. Improper fluid levels or damaged cables and connections can result in component damage and hazardous conditions.

- ⚠ **Electrocution hazard.** Contact with hot or live circuits may result in death or serious injury. Remove all rings, watches and other jewelry.
 - ⚠ **Bodily injury hazard.** Batteries contain acid. Avoid spilling or contacting battery acid. Neutralize battery acid spills with baking soda and water.
- 1 Put on protective clothing and eye wear.
 - 2 Be sure that the battery cable connections are tight and free of corrosion.
 - 3 Be sure that the battery hold-down brackets are in place and secure.

Standard Batteries

- 4 Remove the battery vent caps.
- 5 Check the battery acid level of each battery. If needed, replenish with distilled water to the bottom of the battery fill tube. Do not overfill.
- 6 Install the vent caps.

Note: Adding terminal protectors and a corrosion preventative sealant will help eliminate the corrosion on the battery terminals and cables.

Maintenance

Check the Hydraulic Oil Level



Maintaining the hydraulic oil at the proper level is essential to machine operation. Improper hydraulic oil levels can damage hydraulic components. Daily checks allow the inspector to identify changes in oil level that might indicate the presence of hydraulic system problems.

- 1 Be sure that the boom is in the stowed position.
- 2 Visually inspect the sight gauge located on the side of the hydraulic oil tank.
- ⊙ Result: The fluid level should be at the FULL mark.
- 3 Add oil as needed. Do not overfill.

Hydraulic oil specifications

Hydraulic oil type	Chevron Rando HD equivalent
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Scheduled Maintenance

Maintenance performed quarterly, annually and every two years must be completed by a person trained and qualified to perform maintenance on this machine according to the procedures found in the service manual for this machine.

Machines that have been out of service for more than three months must receive the quarterly inspection before they are put back into service.

Obey all local and governmental regulations regarding the disposal and decommissioning of the machine at the end of its lifetime. Refer to the appropriate Genie service manual for additional information.

Specifications

Z-45J DC (jib)

Height, working maximum	51 ft 9 in	15.9 m
Height, platform maximum	45 ft 9 in	13.9 m
Height, stowed maximum	6 ft 7 in	2.0 m
Horizontal reach, platform 90°, maximum	25 ft 1 in	7.7 m
Width	5 ft 10.3 in	1.79 m
Length, stowed	22 ft 5 in	6.83 m
Maximum load capacity	500 lbs	227 kg
Maximum platform capacity, models with Aircraft Protection Package	440 lbs	200 kg
Maximum platform capacity, models with Platform Padding Option	440 lbs	200 kg
Maximum wind speed	28 mph	12.5 m/s
Wheelbase	6 ft 8 in	2.0 m
Turning radius (outside)	14 ft	4.3 m
Turning radius (inside)	6 ft	1.8 m
Turntable rotation		355°
Turntable tailswing	0 in	0 cm
Power source	8 Group 903, L-16, 6V 390AH Batteries	
Drive speed, stowed	3.0 mph 40 ft/9 sec	4.8 km/h 12.2 m/9 sec
Drive speed, booms raised	0.6 mph 40 ft/45 sec	1 km/h 12.2 m/45 sec
Ground clearance, center	9.5 in	24.1 cm
Ground clearance, minimum	7.5 in	19.1 cm
Weight	16,300 lbs	7394 kg
(Machine weights vary with option configurations. See serial label for specific machine weight.)		
Ambient operating temperature	-20° F to 120° F -29° C to 49° C	

Platform dimensions, 6 foot (length x width)	72 in x 30 in 1.8 m x 76 cm	
Platform dimensions, 5 foot (length x width)	60 in x 30 in 1.5 m x 76 cm	
Platform dimensions, 4 foot (length x width)	48 in x 30 in 1.2 m x 76 cm	
Platform leveling	self-leveling	
Platform rotation	160°	
Controls	24V DC proportional	
AC outlet in platform	Standard	
Hydraulic pressure, maximum (boom functions)	3200 psi	221 bar
System voltage	48V	
Tire size, 2WD Industrial Foam filled only	9-14.5 LT	
Fuel tank capacity	9 gallons	34.1 liters

Maximum slope rating, stowed position

Platform downhill	30% (17°)
Platform uphill	20% (11°)
Side slope	25% (14°)

Note: Slope rating is subject to ground conditions with one person in the platform and adequate traction. Additional platform weight may reduce slope rating.

Maximum allowable chassis inclination	Refer to "Tilt Sensor Activation Settings" section	
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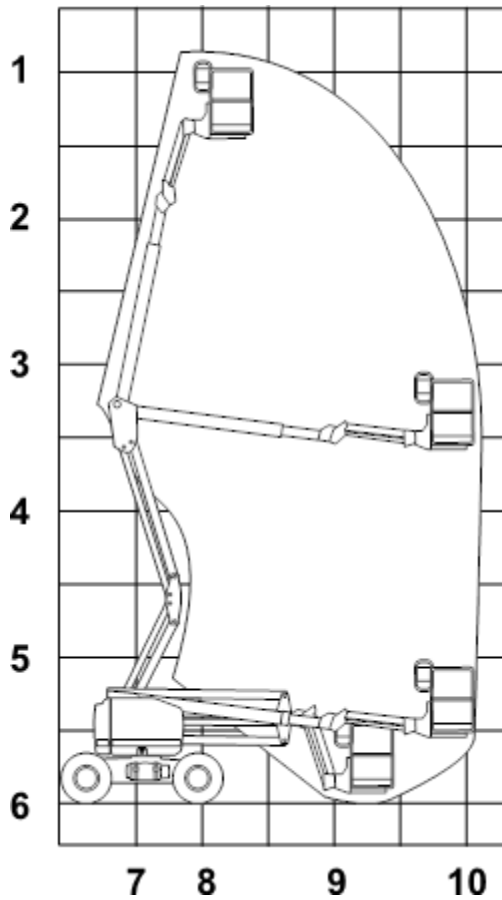
Floor loading information

Tire load maximum	8100 lbs	3674 kg
Tire contact pressure	100 psi	7.03 kg/cm ² 689 kPa
Occupied floor pressure	315 psf	1538 kg/m ² 15.08 kPa

Note: Floor loading information is approximate and does not incorporate different option configurations. It should be used only with adequate safety factors.

Continuous improvement of our products is a Genie policy. Product specifications are subject to change without notice or obligation.

Specifications

Z-45J Range of motion chart**Max Height**

1	50 ft	15.2 m
2	40 ft	12.2 m
3	30 ft	9.1 m
4	20 ft	6.1 m

Max Reach

7	0 ft	0 m
8	5 ft	1.5 m
9	15 ft	4.6 m
10	25 ft	7.6 m

California Proposition 65



WARNING

Operating, servicing and maintaining this 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. These chemicals can be emitted from or contained in other various parts and systems, fluids and some component wear by-products. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your equipment and vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your equipment or vehicle and after operation. For more information go to www.P65Warnings.ca.gov/passenger-vehicle.

Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information go to www.P65warnings.ca.gov/diesel.