Genie
A TEREX BRAND

Operator's Manual

Serial Number Range

S®-85 XC™ FE
S®-85 XC™ E

from S85XCEH-101
from S85XCED-101

ANSI/CSA
North America
South America
Asia
AUS
Australia
CE
UK CA

with
Maintenance
Information

Original Instructions
First Edition
First Printing
Part No. 1326214GT

EU and UK Manufacturer:

Terex Global GmbH
Bleicheplatz 2
Schaffhausen, 8200
Switzerland

EU Authorized representative:

Genie Industries B.V.
Boekerman 5
4751 XK OUD GASTEL
The Netherlands

UK Authorized representative:

Genie UK Limited
The Maltings
Wharf Road
Grantham
NG31 6BH
UK

Contents

First Edition: First Printing, May 2025

CE/UK Markets, Previous Edition: Third Edition
ANSI/CSA Markets, Previous Edition: Second Edition
AUS Market, Previous Edition: Second Edition

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

AUS 1418.10

CE Complies with EC Directive 2006/42/EC
See EC Declaration of Conformity

UKCA Supply of Machinery (Safety) Regulations 2008

Introduction

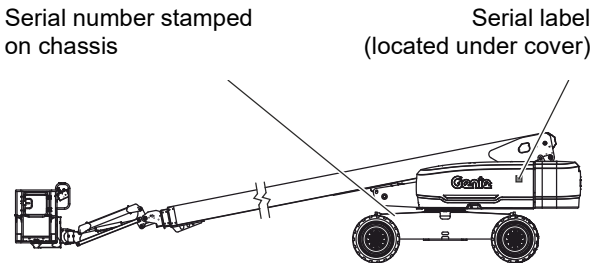
About this manual

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.



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

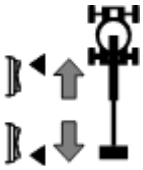
Platform controls symbology and related machine movement:


Platform level


Platform rotate


Jib boom up/down


Boom up/down

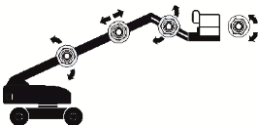

Boom extend/retract


Turntable rotate


Drive forward/reverse


Steer right/left

Ground controls symbology and related machine movement:


Platform level, jib boom up/down, boom extend/retract, and boom up/down


Turntable rotate and platform rotate

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 (if equipped)
- Solid tires (if equipped)

Restricted operating envelope:

- 1,000 lbs/454 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.

Declaration of Conformity

A copy of the original Declaration of Conformity can be obtained by visiting us on the web at https://my.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.

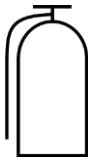
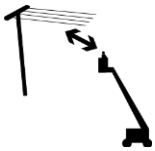
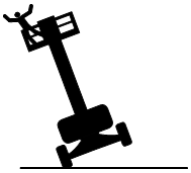
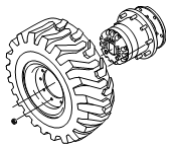
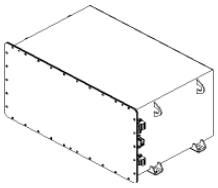
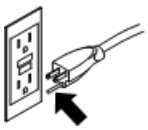
⚠ DANGER Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

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

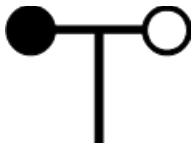
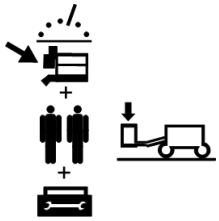
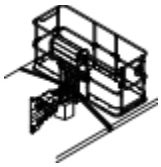
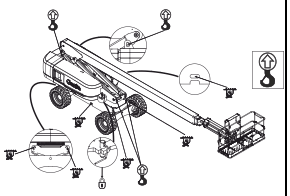
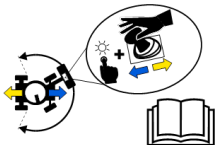
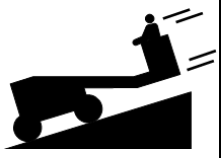
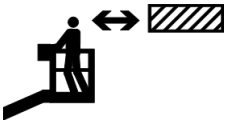
⚠ CAUTION Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE Indicates a property damage message.

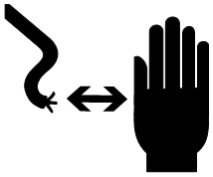
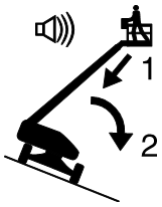
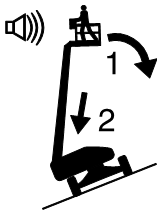
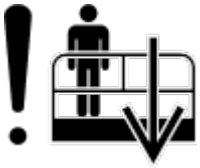
Symbol and Hazard Pictorials Definitions

 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
 Machine not level	 Batteries used as counterweights	 Grounded AC 3-wire only	 Replace damaged wires and cords	 Access by trained and authorized personnel only

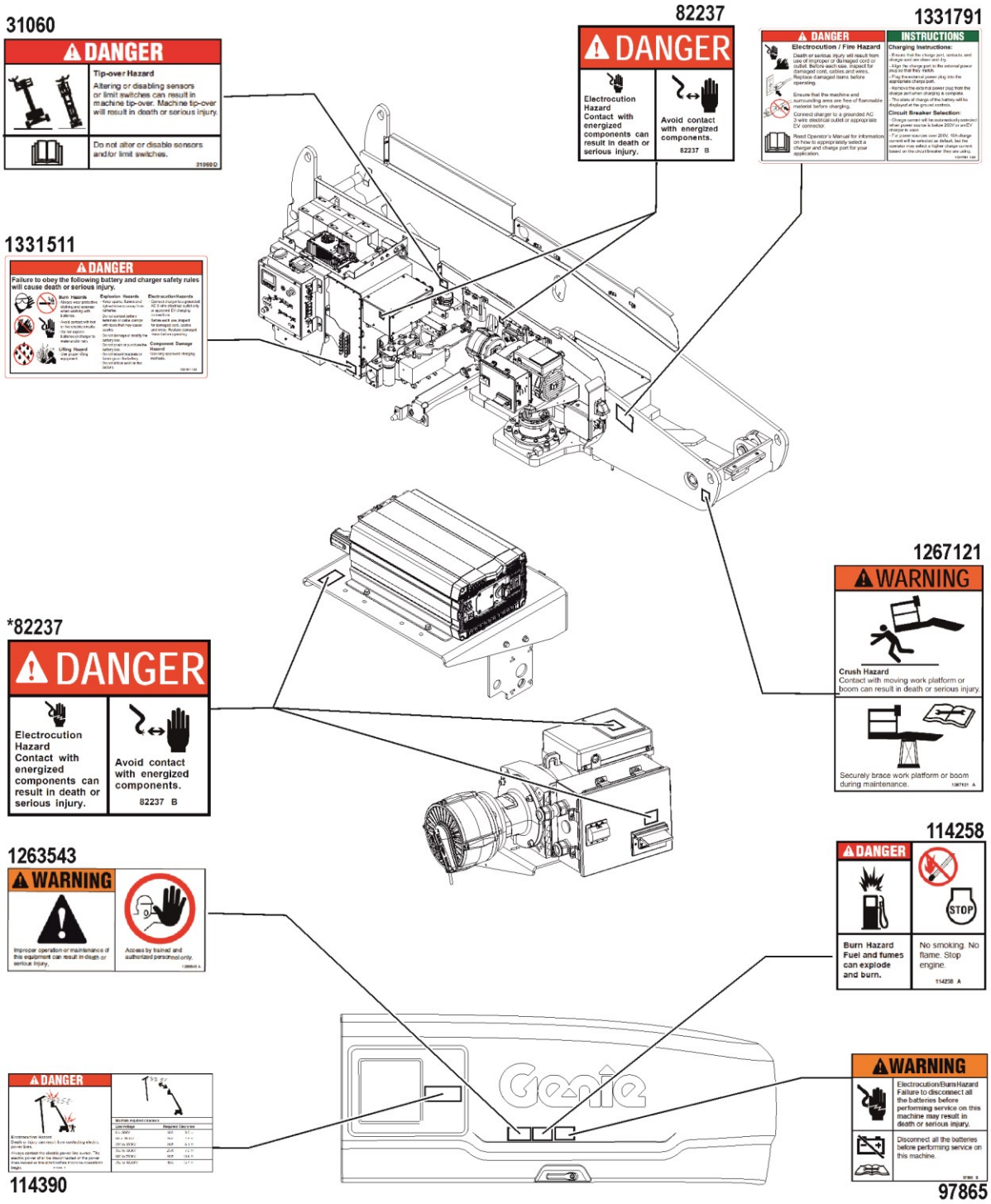
Symbol and Hazard Pictorials Definitions

 Wheel load	 Wind speed	 Maximum capacity	 Manual force	 Weight of welder reduces capacity
 Tie-down point	 Lifting point	 Platform tie-down instructions	 Lifting and tie down instructions	 Lanyard anchorage points
 Burn hazard	 Color coded direction arrows	 Runaway hazard	 Collision hazard	 Overhead obstruction

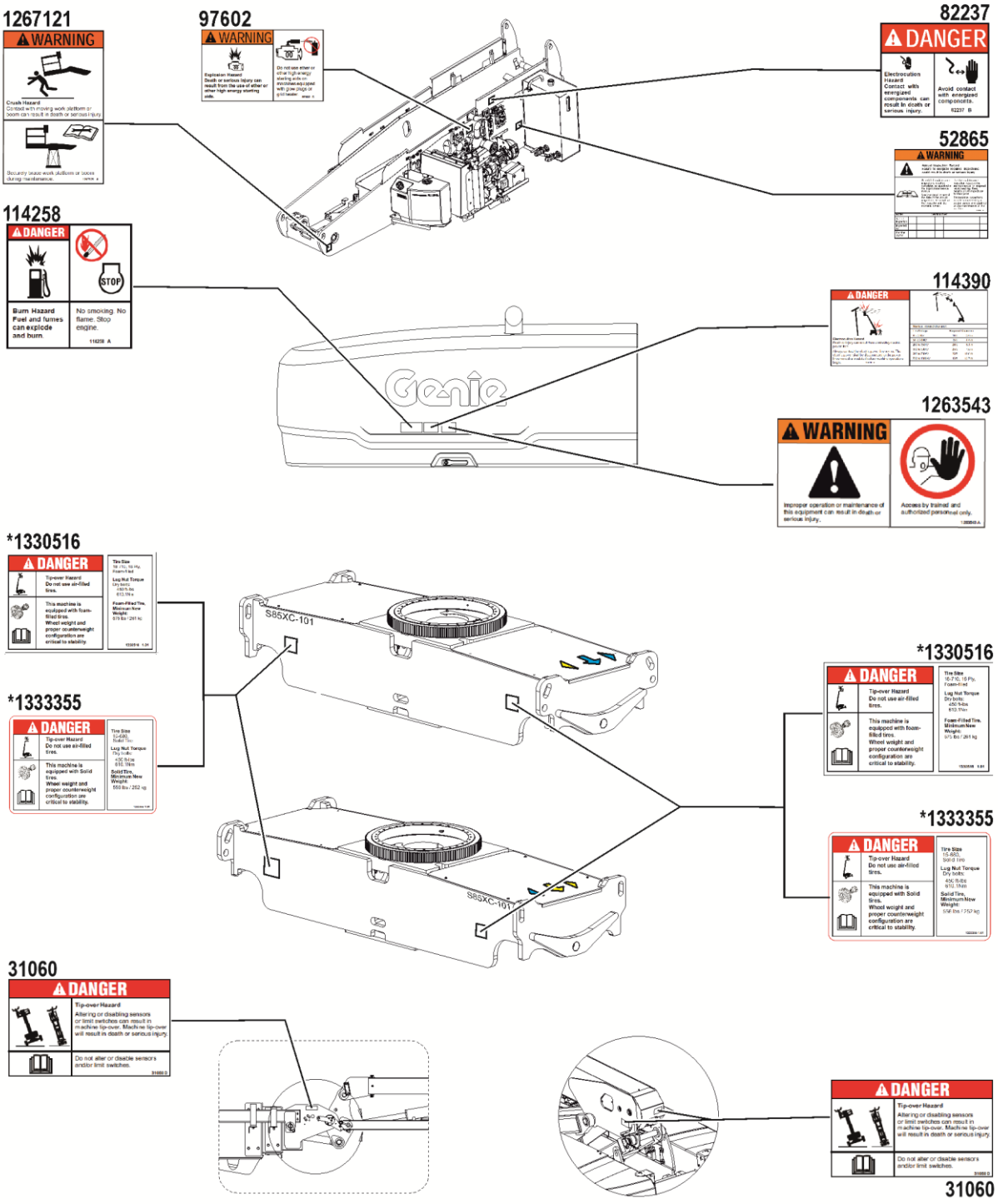
Symbol and Hazard Pictorials Definitions

 Electrocution hazard	 Avoid contact	 Disconnect battery	 Voltage rating for power to platform	 Pressure rating for air line to platform
 Crush hazard	 Support the platform or boom during maintenance	 Read the service manual	 Explosion hazard	 Relieve all pressure
Recovery procedure if tilt alarm sounds while elevated.   Platform downhill: 1 Retract boom. 2 Lower boom. Platform uphill: 1 Lower boom. 2 Retract boom.		 Read the operator's manual	 Auxiliary lowering	 No Pressure Wash

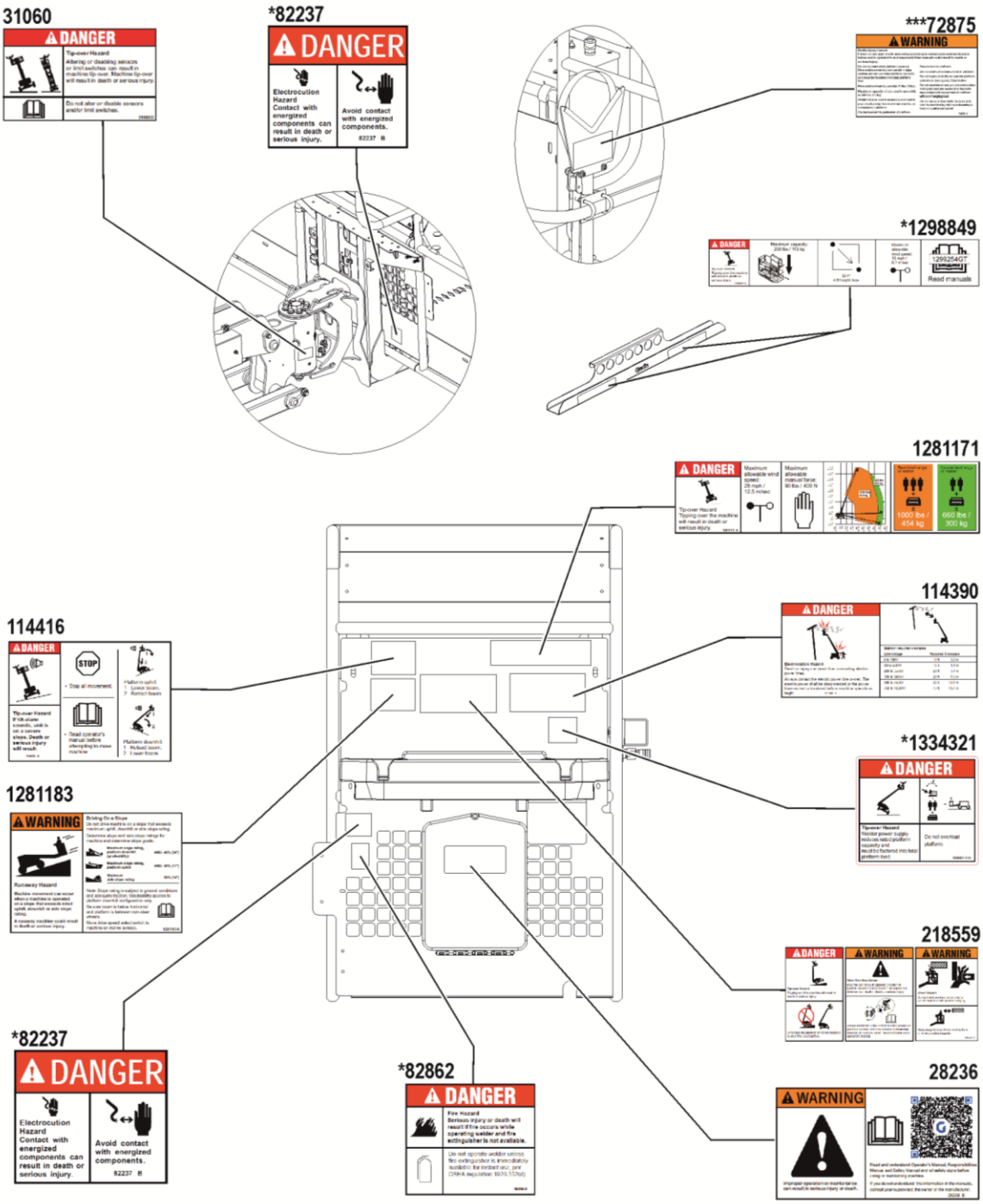
General Safety



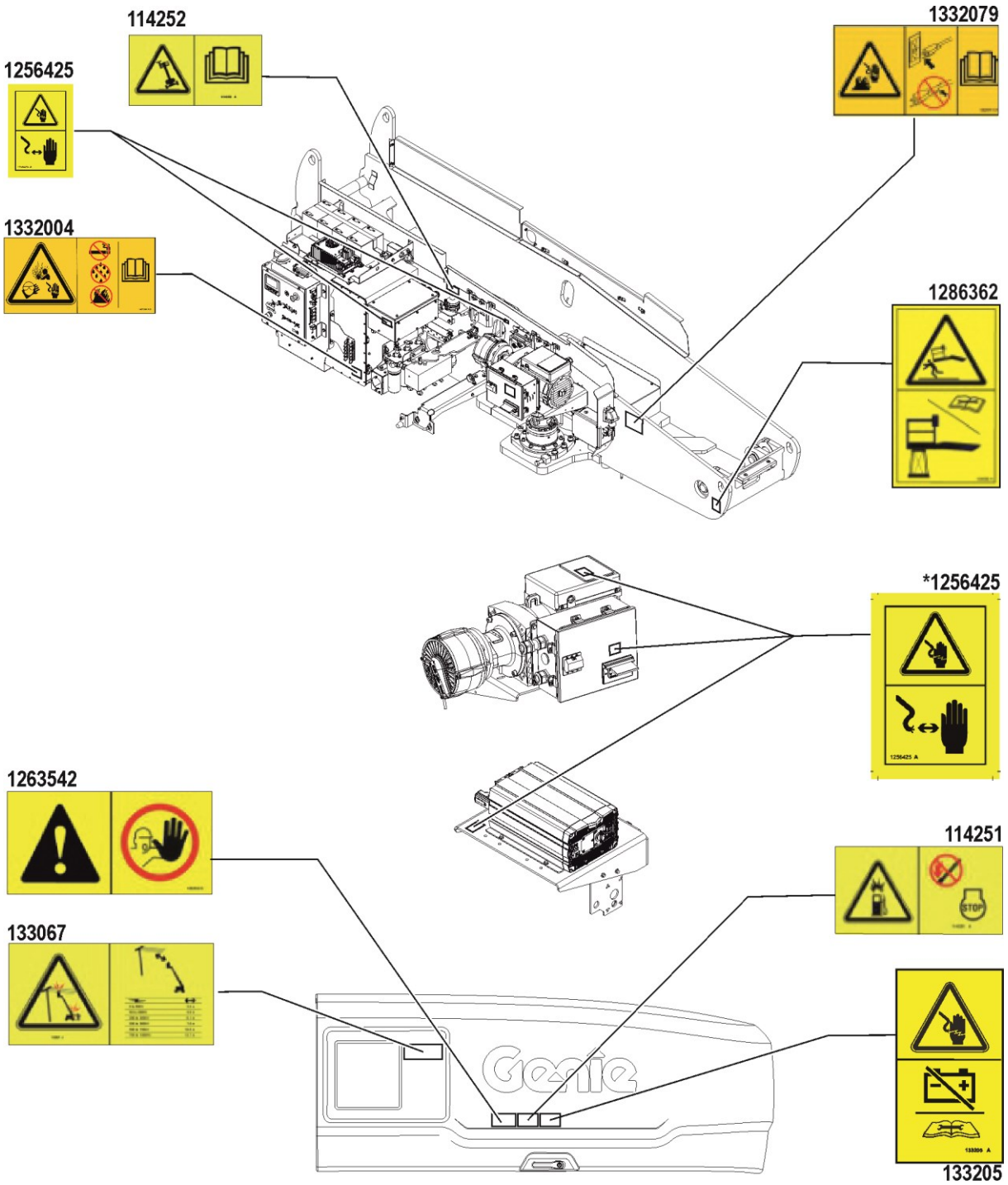
General Safety



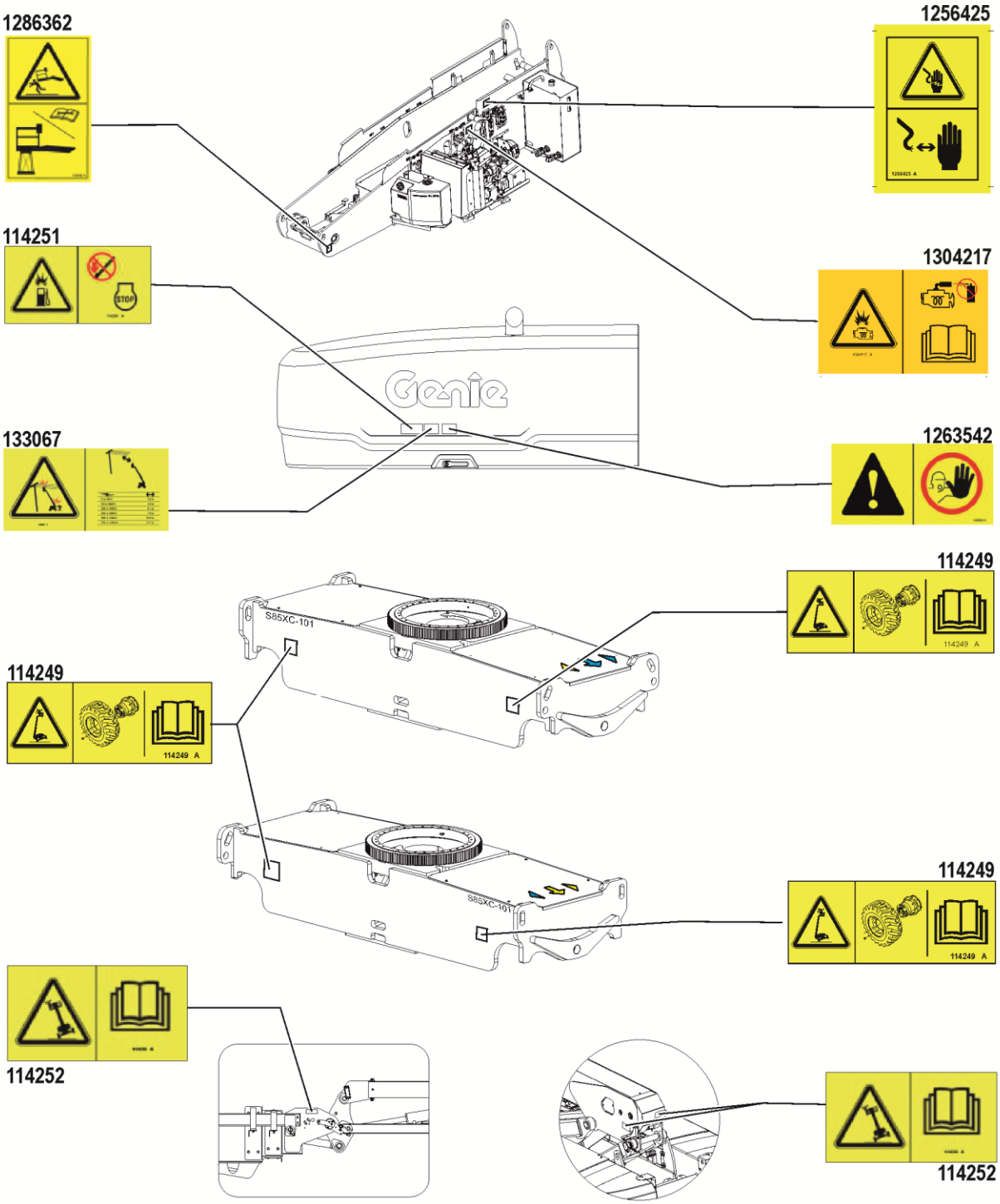
General Safety



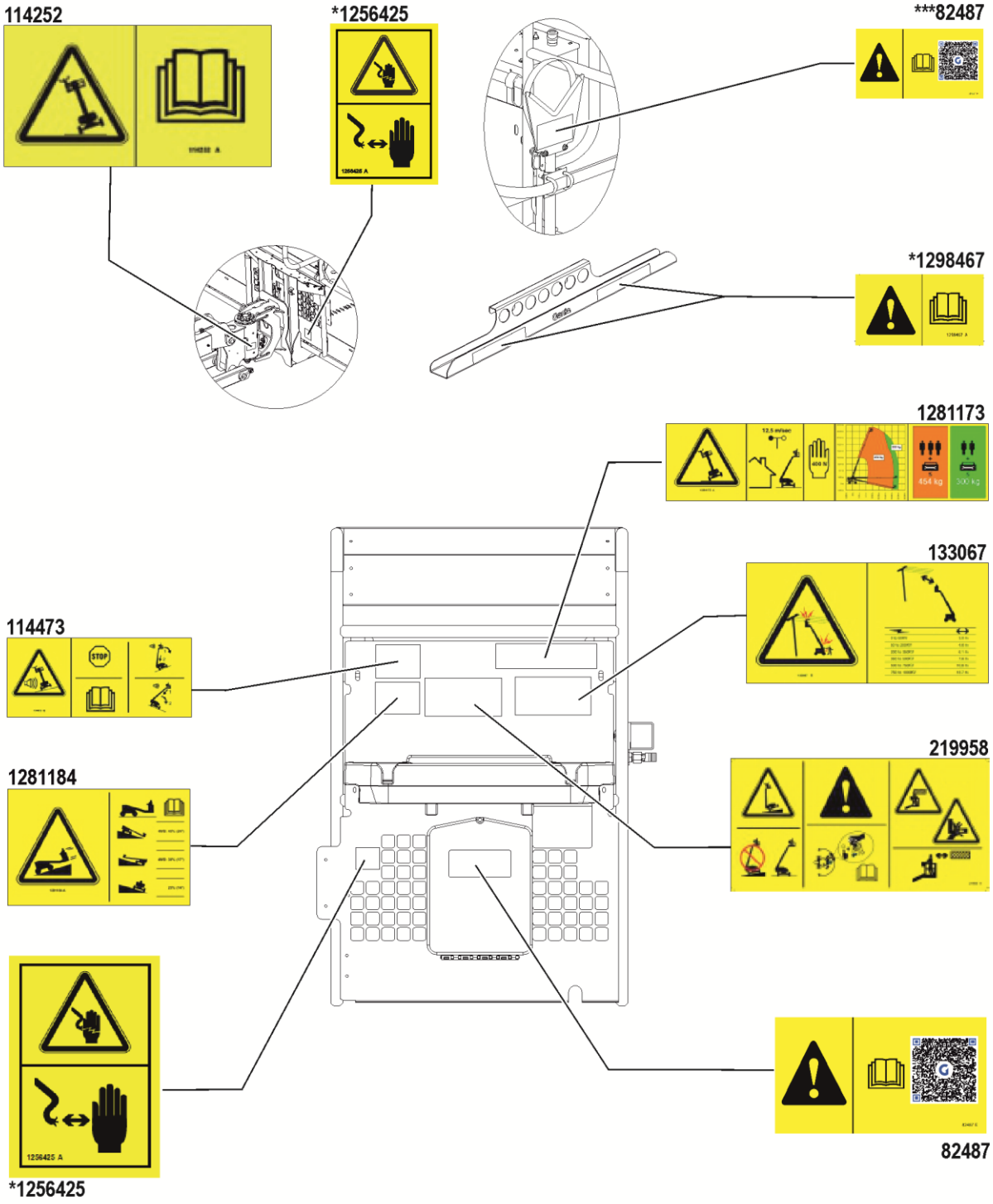
General Safety



General Safety



General Safety



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.

Work Area Safety

⚠ Tip-over Hazards

Occupants, equipment and materials shall not exceed the maximum platform capacity for the restricted or unrestricted range of motion.

Maximum platform capacity Unrestricted range of motion	660 lbs	300 kg
Maximum occupants		2
Maximum platform capacity Restricted range of motion	1,000 lbs	454 kg
Maximum occupants		3

If the platform load is greater than 660 lbs/300 kg, do not move the platform into the unrestricted range of motion zone.

Do not exceed the maximum platform capacity.

Do not attach a platform rated at 660 lbs/300 kg (unrestricted range of motion) or 1000 lbs/454 kg (restricted range of motion) to machines with any other rated load. See the serial label for the maximum rated load.

Do not use batteries that weigh less than the original equipment. Batteries are used as counterweight and are critical to machine stability.

The weight of options and accessories such as pipe 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.

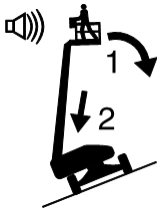
Do not raise or extend the boom unless the machine is on a firm, level surface.

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.

Work Area Safety

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.

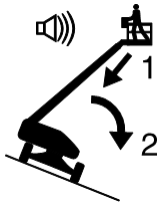
The recovery mode should be used only by trained and authorized personnel.



If the tilt alarm sounds with the platform uphill:

1 Lower the boom.

2 Retract the boom.



If the tilt alarm sounds with the platform downhill:

1 Retract the boom.

2 Lower the boom.

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.

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

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 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.

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 replace factory-installed tires with tires of different specification or ply rating.

Do not use air-filled tires. These machines are equipped with foam-filled tires. Wheel weight is critical to stability.

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 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.

⚠ Operation on Slopes Hazards

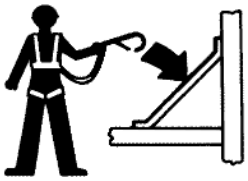
Do not drive the machine on a slope that exceeds the maximum uphill, downhill or side slope rating of the machine. Slope rating applies only to machines in the stowed position.

Maximum slope rating, stowed position, 4WD		
Platform downhill	45%	(24°)
Platform uphill	30%	(17°)
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.

Work Area Safety

⚠ 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.

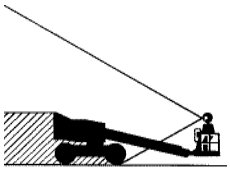
Keep the platform floor clear of debris.

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).

⚠ 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.

Work Area Safety

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.

⚠ Bodily Injury Hazard

Always operate the machine in a well-ventilated area to avoid carbon monoxide poisoning.

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.

⚠ Explosion and Fire Hazards

Do not start the engine if you smell or detect diesel fuel or other explosive substances.

Do not refuel the machine with the engine running.

Refuel the machine and charge the batteries only in an open, well-ventilated area away from sparks, flames and lighted tobacco.

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

Do not spray ether into engine.

Work Area Safety

⚠ 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

Do not use the machine as a ground for welding.

Do not use any battery or charger greater than 12V to jump-start the engine.

Do not operate the machine in locations where extremely high magnetic fields may be present.

Do not submerge the tires in water past the top of the drive hub.

⚠ Battery Safety

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

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.

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.

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

Do not open or remove the main lithium battery cover.

Keep clear of sharp objects.

Work Area Safety

Component Damage Hazard

Do not use any battery charger greater than 48V to charge 48V Auxiliary battery pack.

Disconnect the battery pack before removing it.

Do not use an external charger to charge the Lithium battery.

Do not subject lithium batteries to impacts such as dropping, crushing, or puncturing to prevent damage.

The original Genie Lithium battery must be replaced with a genuine Genie Lithium replacement battery. The machine will be disabled if the appropriate genuine Genie Lithium battery is not detected.

Do not remove the main lithium battery. It must only be replaced by a certified service technician. Follow the specific instructions provided for safe battery removal.

Electrocution/Burn Hazards

Connect the battery charger to a grounded, AC 3-wire electrical outlet or an electric vehicle charging station.

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

Connect the Electric Vehicle Supply Equipment (EVSE) charge port to the machines matching charge plug.

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

Do not submerge the tires in water past the top of the drive hub.

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.

Lifting Hazard

Use a forklift to remove or install a battery pack.

⚠ Contact Alarm Safety

Read, understand and obey all warnings and instructions provided with the contact alarm.

Do not exceed the rated platform capacity. The weight of the contact alarm assembly will reduce the rated platform capacity and must be subtracted from the total platform load.

The contact alarm assembly weighs 10 lbs/4.5 kg.

Be sure the contact alarm is securely installed.

Work Area Safety

⚠ Pipe Cradle Safety

Read, understand, and obey all warnings and instructions provided with the pipe cradles.

Do not exceed the rated platform capacity. The pipe cradle assembly and the weight in the pipe cradles will reduce rated platform capacity and must be factored into total platform load.

The pipe cradle assembly weighs 21 lbs/9.5 kg.

The maximum capacity of the pipe cradle assembly is 200 lbs/91 kg.

The weight of the pipe cradle assembly and the load in the pipe cradles may limit the maximum number of occupants in platform.

Center the load within the perimeter of the platform.

Secure the load to the platform.

Do not obstruct the entrance or the exit of the platform.

Do not obstruct the ability to operate the platform controls or the red Emergency Stop button.

Do not operate unless you are adequately instructed and are aware of all of the hazards associated with movement of the platform with an overhanging load.

Do not cause a horizontal force or side load to machine by raising or lowering a fixed or overhanging load.

Electrocution Hazard: Keep pipes away from all energized electrical conductors.

⚠ Panel Cradle Safety

Read, understand and obey all warnings and instructions provided with the panel cradles.

Do not exceed the rated platform capacity. The combined weight of the cradles, panels, occupants, tools and any other equipment must not exceed rated capacity.

The panel cradle assembly weighs 30 lbs/13.6 kg.

The maximum capacity of the panel cradles is 250 lbs/113 kg.

The weight of the panel cradles and the load in the panel cradles may limit the maximum number of occupants in platform to one person.

Secure the cradles to the platform. Secure the panel (s) to the platform railing using the straps provided.

Do not operate unless you are adequately instructed and are aware of all hazards associated with lifting panels.

Do not cause a horizontal force or side load to machine by raising or lowering a fixed or overhanging load.

Maximum vertical height of panels: 4 ft/1.2 m.

Maximum wind speed: 15 mph/6.7 m/sec.

Maximum panel area: 32 sq ft/3 m^2.

Work Area Safety

⚠ Welder Safety

Read, understand and obey all warnings and instructions provided with the welding power unit.

Do not connect weld leads or cables unless the welding power unit is turned off at the platform controls.

Do not operate unless the weld cables are properly connected and the welder is properly grounded.

The weight of the welder will reduce the rated platform capacity and must be factored into the total platform load.

Do not operate the welder unless a fire extinguisher is immediately available for instant use, per OSHA regulation 1926.352(d).

Lockout After Each Use

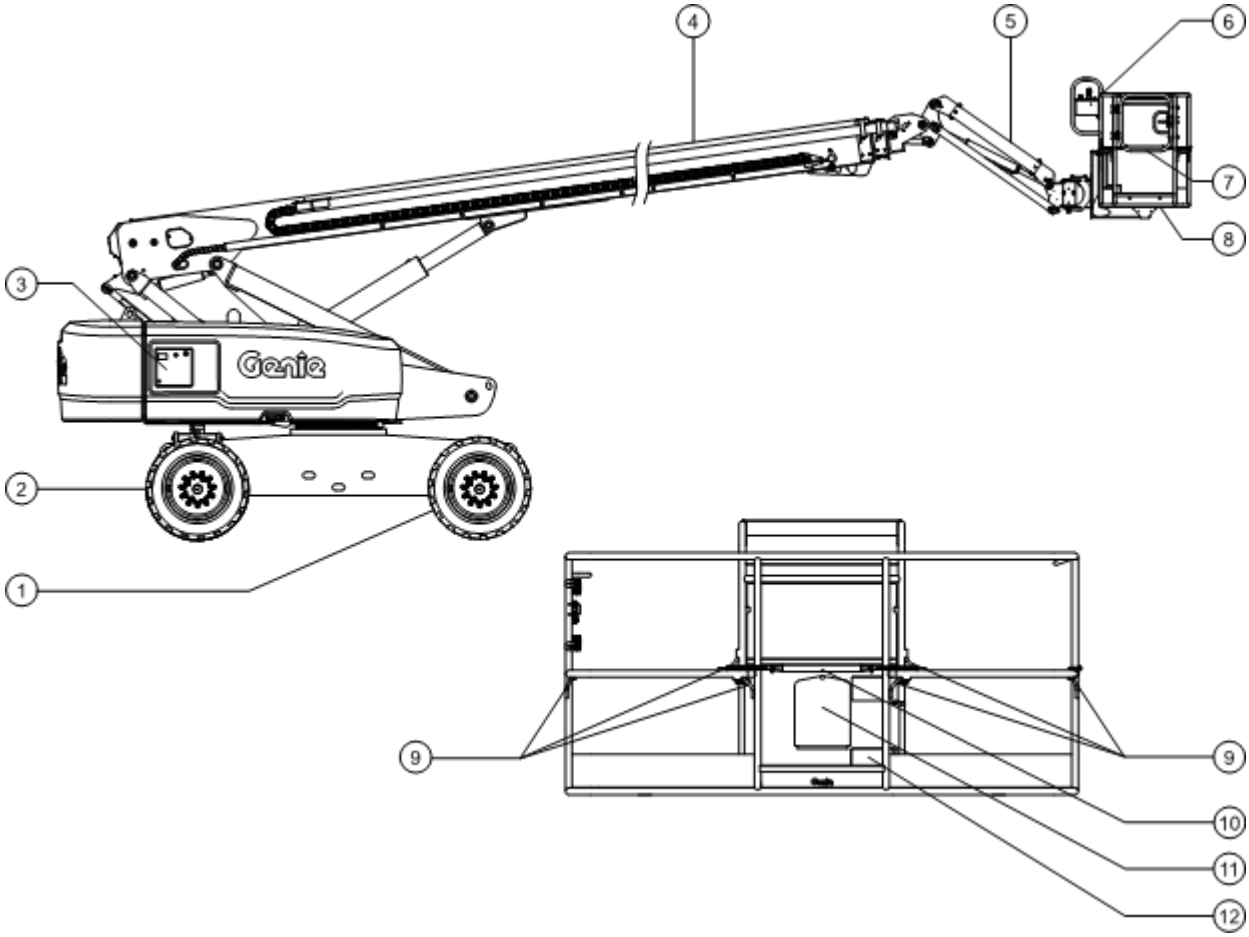
1 Select a safe parking location—firm level surface, clear of obstruction and traffic.

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 Non-steer tire
2 Steer tire
3 Ground controls
4 Boom
5 Jib boom
6 Platform controls
7 Swing gate
8 Platform
9 Lanyard anchorage points
10 Sliding mid-rail
11 Manual storage container
12 Foot switch

Controls

Ground and Platform control display Icon legends:

Icon Representation	Icon Description	Display Location	Machine Condition
	Platform Overload	Ground Control Panel Display and Platform Control Panel Display	Platform load is greater than the rated capacity
	Platform Level Up Recover	Ground Control Panel Display and Platform Control Panel Display	Platform angle is ±10° lower than the level platform
	Platform Level Down Recover	Ground Control Panel Display and Platform Control Panel Display	Platform angle is ± 10° higher than the level platform
	Extend Envelope	Ground Control Panel Display and Platform Control Panel Display	Platform position is at the operational envelope
	Primary Up Envelope	Ground Control Panel Display and Platform Control Panel Display	Platform position is at the operational envelope
	Fault Active	Ground Control Panel Display and Platform Control Panel Display	Fault has been detected
	Lithium Battery Faulted	Ground Control Panel Display and Platform Control Panel Display	Main battery fault has been detected

Controls

Icon Representation	Icon Description	Display Location	Machine Condition
	Check Engine	Ground Control Panel Display and Platform Control Panel Display	Engine fault has been detected
	Engine Oil Pressure (Kohler engine only)	Ground Control Panel Display and Platform Control Panel Display	Engine oil level is low
	Coolant Temperature (Kohler engine only)	Ground Control Panel Display and Platform Control Panel Display	Engine coolant temperature is too high
	Tilt warning	Ground Control Panel Display and Platform Control Panel Display	Chassis tilt angle exceeds the allowed limit
	Footswitch Timeout	Platform Control Panel Display	Footswitch was pressed too long without activating a function
	Drive Enable	Platform Control Panel Display	Indicates that the boom has moved past either non-steer wheel
	Battery Temperature	Ground Control Panel Display and Platform Control Panel Display	The main battery has a temperature fault

Controls

Icon Representation	Icon Description	Display Location	Machine Condition
	Aux System	Ground Control Panel Display and Platform Control Panel Display	Auxiliary pump required
	Fuel Level	Ground Control Panel Display and Platform Control Panel Display	Engine fuel level low
	Footswitch Priority	Ground Control Panel Display and Platform Control Panel Display	Function was activated before pressing the footswitch or Function enable button
	Refer Service Manual	Ground Control Panel Display and Platform Control Panel Display	Refer to the service manual
	Plug in Charger	Ground Control Panel Display and Platform Control Panel Display	Battery state of charge is low
	Refer Operator's Manual	Ground Control Panel Display and Platform Control Panel Display	Refer to the operator's manual
	Glow Plug	Ground Control Panel Display and Platform Control Panel Display	Glow plug active

Controls

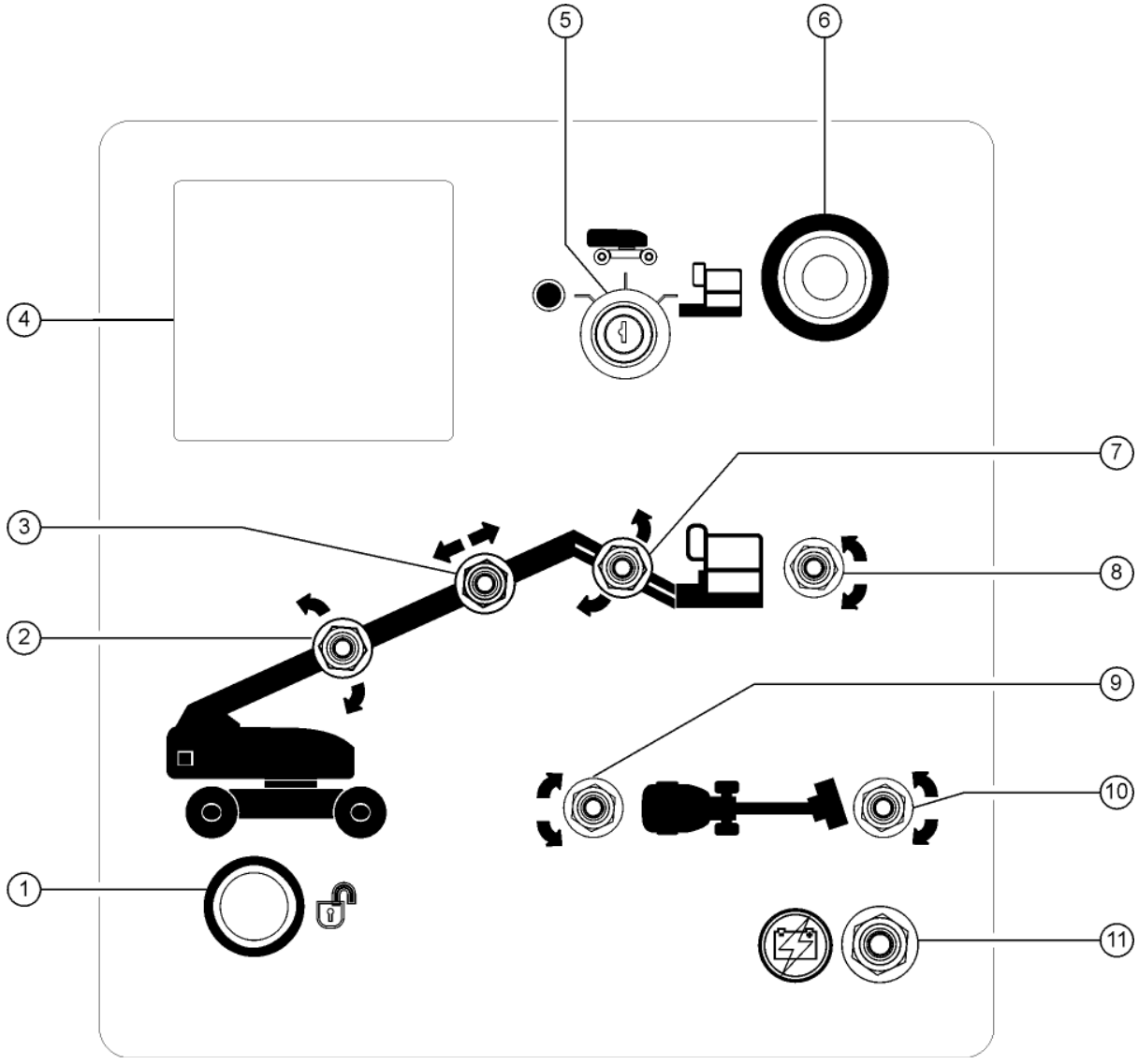
Icon Representation	Icon Description	Display Location	Machine Condition
	Battery Heating	Ground Control Panel Display and Platform Control Panel Display	Battery heating is active
	Unplug Before Operation	Ground Control Panel Display and Platform Control Panel Display	Charger is connected to AC power
	Battery OK	Ground Control Panel Display and Platform Control Panel Display	No battery faults present
	Keyswitch	Platform Control Panel Display	Key Switch is in ground control position
	Tilt Envelope	Ground Control Panel Display and Platform Control Panel Display	Machine tilt has limited the operating range.
	Capacity Envelope	Ground Control Panel Display and Platform Control Panel Display	Platform capacity has reduced the operating range

Controls

Icon Representation	Icon Description	Display Location	Machine Condition
	Disable Boom	Ground Control Panel Display and Platform Control Panel Display	Boom functions are disabled
	Disable Drive	Ground Control Panel Display and Platform Control Panel Display	Drive functions are disabled
	General Warning	Ground Control Panel Display and Platform Control Panel Display	General warning displayed

Controls

The ground control station is to be used as a means to raise the platform for storage purposes and for function tests. The ground control station can be used in the event of an emergency to rescue an incapacitated person in the platform. When the ground control station is selected, the platform controls are inoperable, including the E-stop switch.



Ground Control Panel

Controls

Ground Control Panel

1 Function enable button

Press and hold the function enable button to enable the functions on the ground control panel to operate.

2 Boom up/down switch

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

3 Boom extend/retract switch

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

4 LCD display

At machine start up the LCD screen displays pitch and roll angles of the machine, the number of hours the machine has operated, the battery charge level and the alarm beeps. The screen also displays fault codes and other operational and service information.

5 Key switch for off/ground/platform selection

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. Turn the key switch to the platform position and the platform controls will operate.

6 Red Emergency Stop button

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

7 Jib boom up/down switch

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

8 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.

9 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.

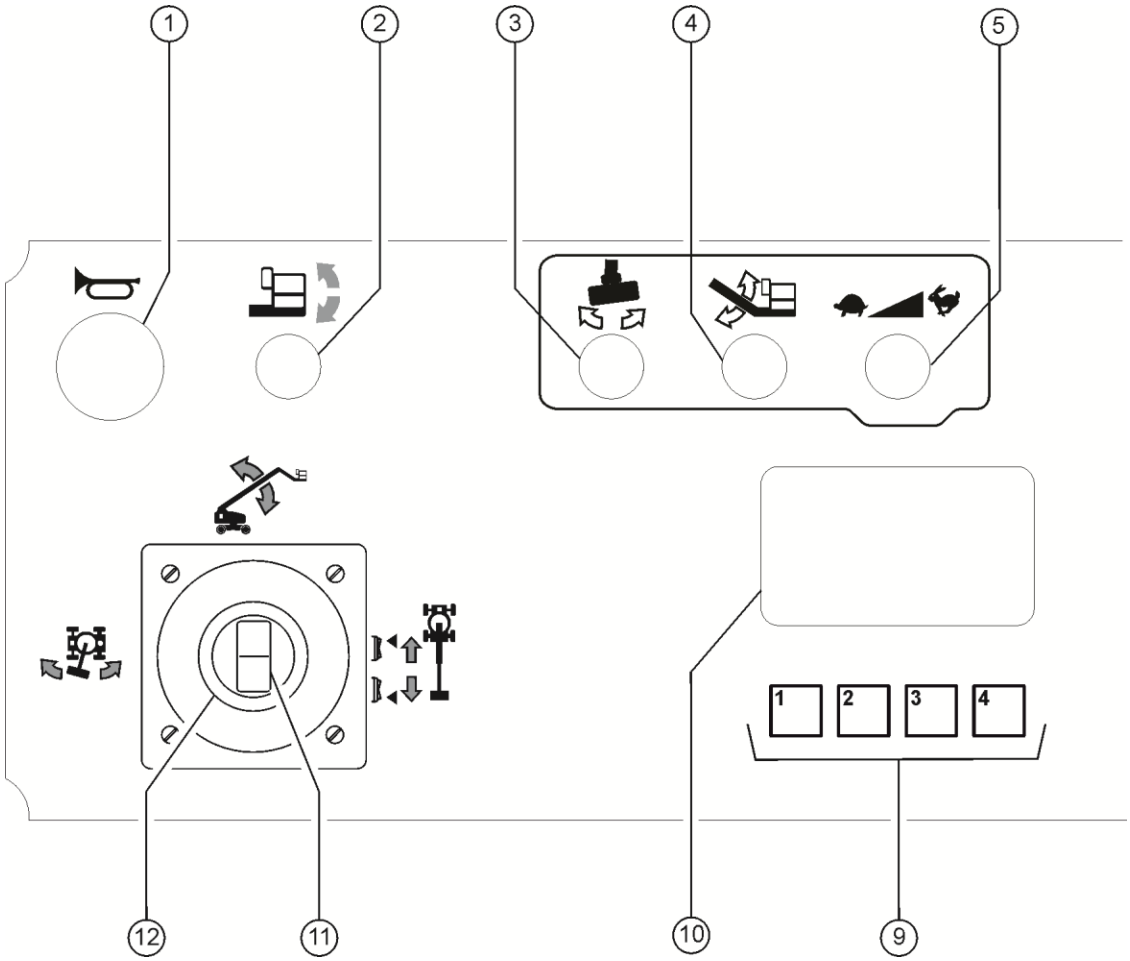
10 Platform rotate switch

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.

11 Auxiliary power switch

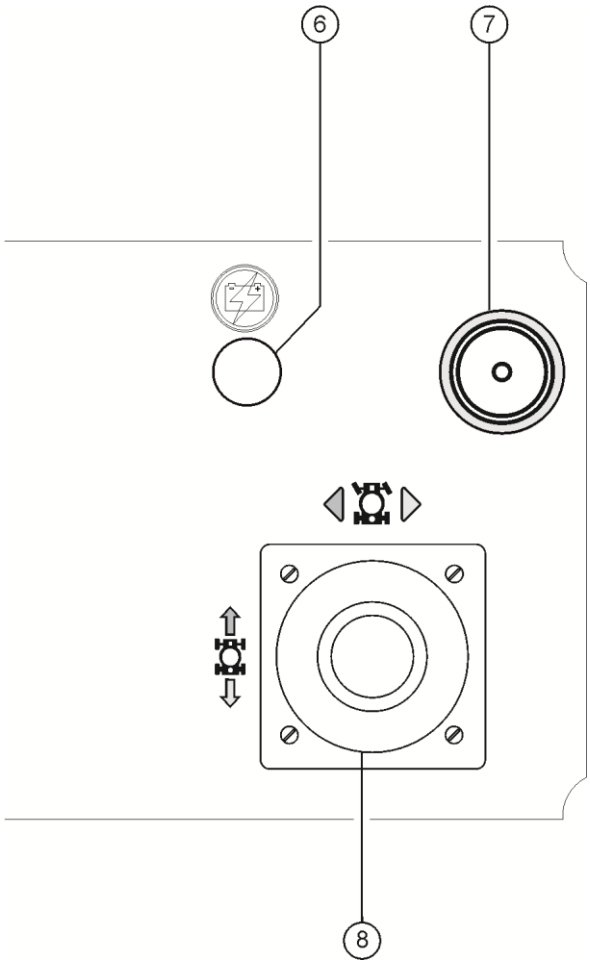
Use auxiliary power if the primary power source (main battery or engine) is not available.
Simultaneously hold the auxiliary power switch to either side and activate the desired function.

Controls



Platform Control Panel

Controls



Controls

Platform Control Panel

1 Horn button

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

2 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.

3 Platform rotate switch

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

4 Jib boom up/down switch

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

5 Function speed control switch

Move the switch to the left and the function speeds for jib up/down, platform rotate and primary boom extend/retract will decrease. Move the switch to the right and the function speeds for jib up/down, platform rotate and primary boom extend/retract will increase.

Note: Function speeds will increase or decrease by 5% each time the speed control switch is moved. The speed control switch can also be held in either direction to increase or decrease function speed.

6 Auxiliary power switch

Use auxiliary power if the primary power source fails.
Simultaneously hold the auxiliary power switch up or down and activate the desired function.

7 Red Emergency Stop button

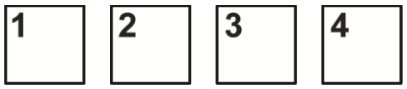
Push in the red Emergency Stop button to the off position to stop all functions and turn the engine off. Pull out the red Emergency Stop button to the on position to operate the machine.

Controls

8 Dual axis proportional control handle for drive and steer functions.
OR
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. Move the control handle in the direction indicated by the blue triangle and the machine will steer to the left. Move the control handle in the direction indicated by the yellow triangle and the machine will steer to the right.
OR
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.

9 LCD screen control buttons



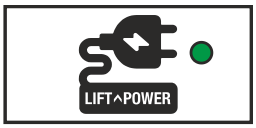
1 FE and E Toggle Button
(FE models only)

2 Drive Speed Toggle Button

3 Generator/Welder Button
(if equipped)

or

Inverter On/OFF
(if equipped)



4 Menu

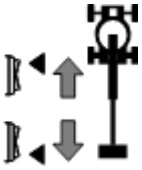
10 LCD readout screen

The LCD screen displays system parameters and includes various icons, as explained in the Icon Legends section, to indicate system status and warnings. It also shows fault codes, operational alerts, and service information.

Controls

11 Thumb rocker switch for boom extend/retract function

Push the top of the rocker switch and boom will retract. Push the bottom of the rocker switch and the boom will extend.



12 Dual axis proportional control handle for boom up/down and turntable rotate left/right functions

Move the control handle up and the boom will raise. Move the control handle down and the boom will lower.

Move the control handle to the right and the turntable will rotate to the right. Move the control handle to the left and the turntable will rotate to the left.

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.

Obey all local and governmental regulations regarding examinations and tests.

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.
- ❑ FE Models - Check for engine oil leaks and proper oil level. Add oil if needed. See Maintenance section.
- ❑ FE Models - Check for engine coolant leaks and proper level of coolant. Add coolant if needed. See Maintenance section.
- ❑ Check air-filled tires for proper tire pressure. Add air if needed. See Maintenance section. (if equipped)

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
- ❑ Fuel and hydraulic tanks
- ❑ Drive and turntable motors and drive hubs
- ❑ Wear pads
- ❑ Tires and wheels
- ❑ FE Models - Engine and related components
- ❑ Limit switches and horn
- ❑ Contact alarm
- ❑ Primary boom angle sensor
- ❑ Platform angle sensor
- ❑ Turntable level sensor
- ❑ String pot length sensor
- ❑ Alarms and beacons (if equipped)
- ❑ Nuts, bolts and other fasteners
- ❑ Platform entry mid-rail and gate
- ❑ Platform load cell
- ❑ 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.
- ❑ 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 alarm should sound at the ground controls.

4 FE models: Start the engine. See Operating Instructions section.

⊙ Result: The beacons (if equipped) should flash.

Test Emergency Stop

5 Push in the red Emergency Stop button to the off position.

⊙ Result FE models： The engine will shut off after 2 to 3 seconds.

6 Press and hold the function enable button and activate each boom and platform function toggle switch.

⊙ Result: No functions should operate.

7 Pull out the red Emergency Stop button to the on position.

Test Machine Functions

8 Do not push the function enable button. Attempt to activate each boom and platform function button.

⊙ Result: No boom and platform functions should operate.

9 Press and hold the function enable button and activate each boom and platform function button.

⊙ Result: All boom and platform functions should operate through a full cycle. The descent alarm should sound while the boom is lowering.

Inspections

Test the Tilt Sensor

10 Select a test area that is firm, level and free of hazards.

11 Turn the key switch to ground control.

12 Pull out the red Emergency Stop button to the on position.

⊙ Result： The LCD screen at ground control should display chassis and boom angles in degrees, make sure the displayed angles match the surface slope of the test area.

Test Auxiliary Power

13 Turn the key switch to ground control.

14 Pull out the red Emergency Stop button to the on position.

15 Simultaneously hold the auxiliary power switch on and activate each function toggle switch.

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

⊙ Result: All boom functions should operate.

16 Turn the key switch to platform control.

At the Platform Controls

17 Pull out the red Emergency Stop button to the on position.

18 FE Models: Start the engine. See Operating Instructions section.

Test Emergency Stop

19 Push in the platform red Emergency Stop button to the off position.

⊙ Result FE models： The engine should turn off.

20 Activate each function control handle, toggle switch or thumb rocker switch.

⊙ Result: No functions should operate.

21 Pull out the platform red Emergency Stop button to the on position.

Test the Horn

22 Press the horn button.

⊙ Result: The horn should sound.

Inspections

Test the Foot Switch

E Models:

23 Do not press down the foot switch. Test each machine function.

⊙ Result: No functions should operate.

FE Models:

24 Push in the platform red Emergency Stop button to the off position.

25 Pull out the red Emergency Stop button to the on position and do not start the engine.

26 Do not press down the foot switch and attempt to start the engine by pressing FE toggle button.

⊙ Result: The engine should not start.

27 Press the FE toggle button to select FE mode.

28 Press and hold the foot switch.

⊙ Result: The engine should start.

29 Do not press down the foot switch and test each machine function.

⊙ Result: No functions should operate.

Test Machine Functions

30 Press down the foot switch.

31 Activate each machine function control handle or toggle switch.

⊙ Result: All boom and platform functions should operate through a full cycle.

Test the Steering

32 Press down the foot switch.

33 Press the thumb rocker switch on top of the drive control handle in the direction indicated by the blue triangle on the control panel OR slowly move the control handle in the direction indicated by the blue triangle.

⊙ Result: The steer wheels should turn in the direction that the blue triangles point on the drive chassis.

34 Press the thumb rocker switch in the direction indicated by the yellow triangle on the control panel OR slowly move the control handle in the direction indicated by the yellow triangle.

⊙ Result: The steer wheels should turn in the direction that the yellow triangles point on the drive chassis.

Inspections

Test Drive and Braking

35 Press down the foot switch.

36 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.

37 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 Oscillating Axle

Note: The machine must travel 5 feet/1.5 m before driving over the block or curb.

38 Drive the right steer tire up onto a 6 in/15 cm block or curb.

⊙ Result: The three remaining tires should stay in firm contact with the ground.

39 Drive the left steer tire up onto a 6 in/15 cm block or curb.

⊙ Result: The three remaining tires should stay in firm contact with the ground.

40 Drive both steer tires up onto a 6 in/15 cm block or curb.

⊙ Result: The non-steer tires should stay in firm contact with the ground.

Test the Drive Enable System

41 Press down the foot switch and lower the boom to the stowed position.

42 Rotate the turntable until the boom moves past one of the non-steer wheels.

⊙ Result: The drive enable indicator should appear on LCD display while the boom is anywhere in the range shown.

43 Move the drive control handle off center.

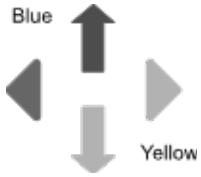
⊙ Result: The drive function should not operate.

44 Press the drive enable button below the LCD display 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 Drive Tilt Cutout

45 Press down the foot switch.

46 With the boom fully stowed, drive the machine onto a slope where the machine pitch angle is greater than 7° (front to back).

⊙ Result: The machine should continue to drive.

47 Return the machine to level ground and extend the boom approximately 18 inches/46 cm.

48 Drive the machine onto a slope where the pitch angle is greater than 7° (front to back).

⊙ Result: The machine should stop once the machine reaches 7° of chassis tilt and the alarm should sound at the platform controls.

49 Retract the boom to the stowed position.

⊙ Result: The machine should drive.

50 Return to level ground and raise the boom to approximately 15° above horizontal.

51 Drive the machine onto a slope where the pitch angle is greater than 7° (front to back).

⊙ Result: The machine should stop once the machine reaches 7° of chassis tilt and the alarm should sound at the platform controls.

52 While on the slope, attempt to raise and extend the boom.

⊙ Result: The boom raise and extend functions should not operate.

53 Lower the boom to the stowed position.

⊙ Result: The machine should drive.

54 Return to level ground and stow the boom.

55 Press down the foot switch.

56 With the boom fully stowed, drive the machine onto a slope where the roll angle is greater than 5° (side to side).

⊙ Result: The machine should continue to drive.

57 Return the machine to level ground and extend the boom approximately 18 inches/46 cm.

58 Drive the machine onto a slope where the roll angle is greater than 5° (side to side).

⊙ Result: The machine should stop once the machine reaches 5° of chassis tilt and the alarm should sound at the platform controls.

Inspections

59 Retract the boom to the stowed position.

⊙ Result: The machine should drive.

60 Return to level ground and raise the boom to approximately 15° above horizontal.

61 Drive the machine onto a slope where the roll angle is greater than 5° (side to side).

⊙ Result: The machine should stop once the machine reaches 5° of chassis tilt and the alarm should sound at the platform controls.

62 While on the slope, attempt to raise and extend the boom.

⊙ Result: The boom raise and extend functions should not operate.

63 Lower the boom to the stowed position.

⊙ Result: The machine should drive.

64 Return to level ground and stow the boom.

Test Auxiliary Power

65 Push in the red Emergency Stop button to the off position.

66 Pull out the red Emergency Stop button to the on position.

67 Press down the foot switch.

68 Simultaneously move and hold the auxiliary power switch and activate each function control handle, toggle switch or thumb rocker switch.

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

⊙ Result: All boom and steer functions should operate.

Inspections

Test the Contact Alarm (if equipped)

69 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.

70 Activate the foot switch by pressing the foot switch down.

⊙ Result: The contact alarm lights will flash and the machine horn will sound.

71 Insert the actuator into the switch socket.

⊙ Result: The lights and horn will turn off.

72 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.

73 Operate each machine function.

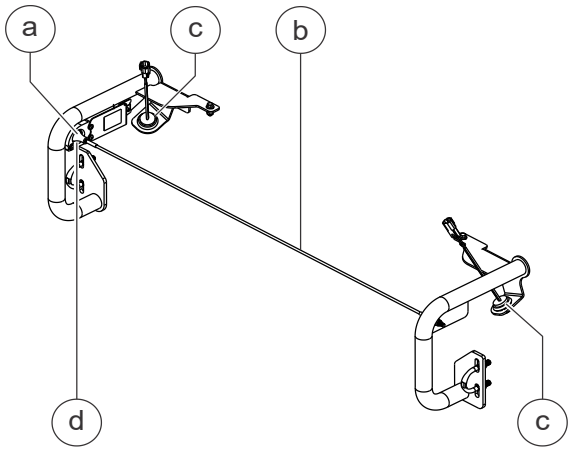
⊙ Result: All machine functions should not operate.

74 Insert the actuator into the switch socket.

⊙ Result: The lights and horn will turn off.

75 Operate each machine function.

⊙ Result: All machine functions should operate.



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

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 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.

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

Inspections

Inspection for Decals with Words

Determine whether the decals on your machine have words or symbols. Use the appropriate inspection to verify that all decals are legible and in place.

Below is a numerical list with quantities and descriptions.

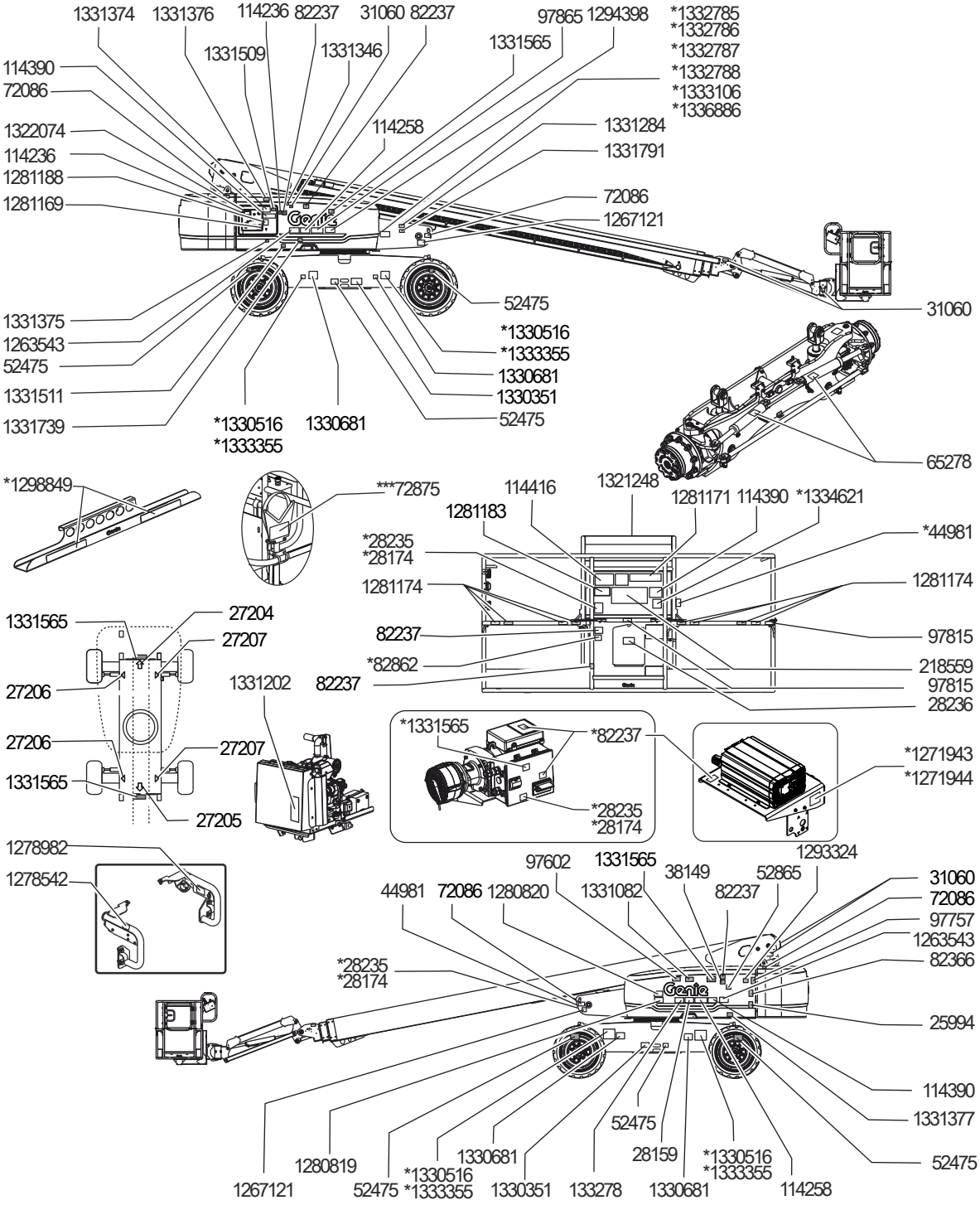
Part No.	Decal Description	Qty
25994	Notice – Component Damage Hazard	1
27204	Arrow – Blue	1
27205	Arrow – Yellow	1
27206	Triangle – Blue	2
27207	Triangle – Yellow	2
28159	Label – Diesel	1
28174	Label – Power to Platform, 230V	3
28235	Label – Power to Platform, 115V	3
28236	Warning – Improper Operation	1
31060	Danger – Tip-over Hazard, Limit Switch	5
38149	Label – Patent (US only)	1
44981	Label – Air Line to Platform (option)	2
52475	Label – Transport Tie Down	6
52865	Warning – Annual Inspection Record	1
65278	Caution – No Step	2
72086	Label – Lifting Point	4
72875	Warning – Pipe Cradle (option)	2
82237	Danger – Electrocution Hazard (option)	8
82366	Label – Chevron Rando	1
82862	Danger – Fire Extinguisher, Welder (option)	1
97602	Warning – Explosion Hazard	1
97757	Label – Hydraulic Oil Level	1
97815	Label – Lower Mid-rail	2
97865	Warning – Electrocution Hazard	1
114236	Label – CB Symbol	2
114258	Danger – Explosion Hazard	2
114390	Danger – Electrocution Hazard	3
114416	Danger – Tip-over Hazard, Tilt Alarm	1
133278	Label – Low Sulfur Fuel	1
218559	Danger, Warning – Tip-over, Crush Hazard	1
1263543	Label – Improper Operation	2
1267121	Label – Boom support	2
1271943	Label - AC Inverter Power, 115V	1
1271944	Label - AC Inverter Power, 220V	1
1278542	Instructions – Contact Alarm	1
1278982	Label – Actuator Switch Socket	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 and are model, option, or configuration specific.

Inspections



Inspections

Inspection for Decals with Words

Determine whether the decals on your machine have words or symbols. Use the appropriate inspection to verify that all decals are legible and in place.

Below is a numerical list with quantities and descriptions.

Continued from previous page.

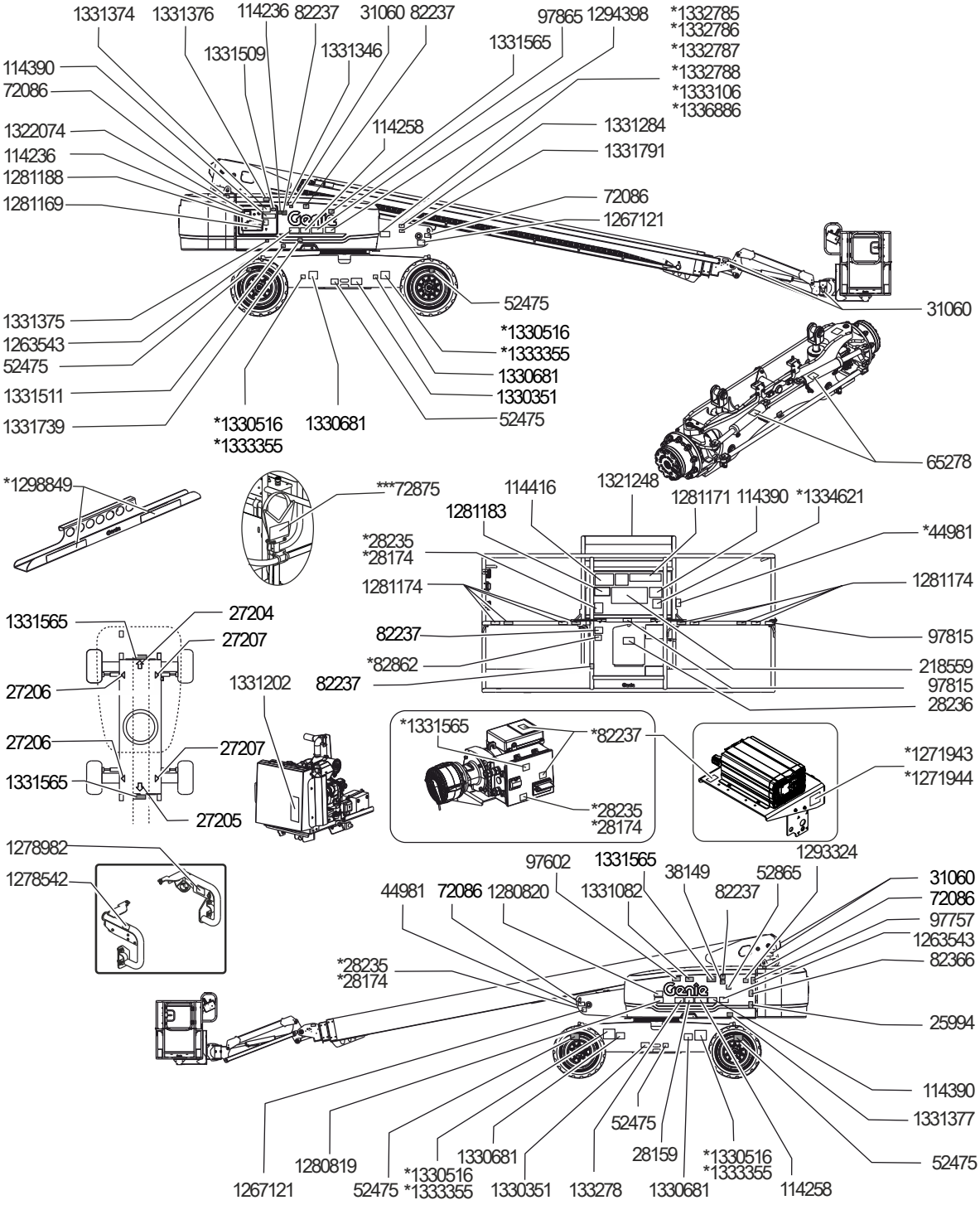
Part No.	Decal Description	Qty
1280819	Label – Warning, Prop 65 (US only)	1
1280820	Label – Fuel, Diesel Exhaust, Prop 65 (US only)	1
1281169	Label – Recovery Switch	1
1281171	Danger – Tip-over Hazard, S-85 XC	1
1281174	Label – Lanyard Anchorage Point, Fall Arrest/Fall Restrained	8
1281183	Warning – Runaway Machine Hazard, S-80/85 XC	1
1281188	Label – Emergency Lowering	1
1293324	Label – ICES-2/CAN-2 Compliance	1
1294398	Label – ANSI/CSA Compliant	1
1298849	Danger – Panel Cradle (option)	2
1321248	Platform Control Panel	1
1322074	Ground Control Panel	1
1330351	Label – Transport and Lifting	2
1330516	Danger – Tire Specification, S-85 XC FE/E	4
1330681	Label - Wheel Load, S-85 XC FE/E	4
1331082	Label – Center Air Hose, S-85 XC FE/E	1
1331202	Instructions – Engine Specs, Kubota D1105-E4B	1
1331284	Notice – Charger Instructions, S-85 XC FE/E	1
1331346	Instructions – Battery Connection Diagram	1
1331374	Label – Operating Instructions S-85 XC FE/E	1
1331375	Label - Battery, Main, 48V	1
1331376	Label – Battery, Auxillary, 48V	1
1331377	Label – Battery, Starter Engine, 12V	1
1331509	Label – Contactor Box Layout, S-85 XC FE/E	1
1331511	Danger – Battery Safety, S-85 XC FE/E	1
1331565	Label – No Pressure Washing	5
1331739	Label – Battery Disconnect	1
1331791	Danger – Electrical Hazard	1
1332785	Label – Receptacle, Charging, NEMA 5-15	1
1332786	Label – Receptacle, Charging, SAE J1772, 230VAC, 32A	1
1332787	Label – Receptacle Charging, IEC 62196 TYPE 2	1
1332788	Label – Receptacle Charging, IEC 60309, 230VAC, 16A	1
1333106	Label – Receptacle Charging, AS/NSZ 3112 TYPE 1, 250VAC, 15A	1
1333355	Danger – Tire Spec, Solid, S-85 XC FE/E	4
1334621	Danger – Tip-over Welder (option)	1
1336886	Label – Receptacle Charging, IEC, 60309, 110VAC, 16A	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 and are model, option, or configuration specific.

Inspections



Inspections

Inspection for Decals with Symbols

Determine whether the decals on your machine have words or symbols. Use the appropriate inspection to verify that all decals are legible and in place.

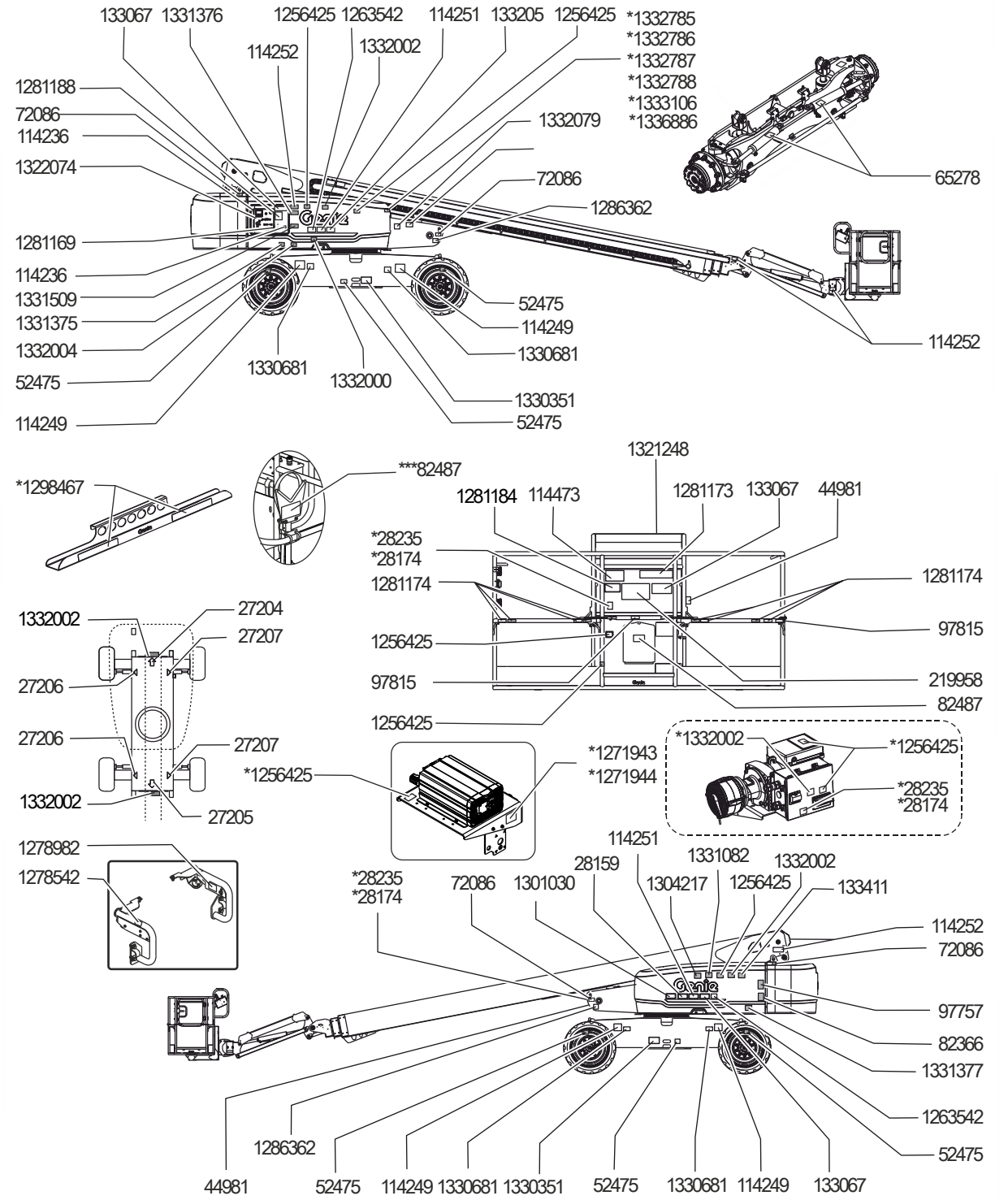
Below is a numerical list with quantities and descriptions.

Part No.	Decal Description	Qty
27204	Arrow – Blue	1
27205	Arrow – Yellow	1
27206	Triangle – Blue	2
27207	Triangle – Yellow	2
28159	Label – Diesel	1
28174	Label – Power to Platform, 230V	3
28235	Label – Power to Platform, 115V	3
44981	Label – Air Line to Platform (option)	2
52475	Label – Transport Tie Down	6
65278	Caution – No Step	2
72086	Label – Lifting Point	4
82366	Label – Chevron Rando	1
82487	Label – Read the Manual	1
82487	Label – Read the Manual (pipe cradle)	2
97757	Label – Hydraulic Oil Level	1
97815	Label – Lower Mid-rail	2
114236	Label – CB Symbol	2
114249	Label – Tip-over Hazard, Tires	4
114251	Label – Explosion Hazard	2
114252	Label – Tip-over Hazard, Limit Switches	5
114473	Label – Tilt Alarm	1
133067	Label – Electrocution Hazard	3
133205	Label – Electrocution/Burn Hazard	1
133411	Label – 106 dBa	1
219958	Label – Tip-over, Crush Hazard	1
1256425	Label – Danger, Electrocution Hazard	8
1263542	Label – Compartment Access	2
1271943	Label - AC Inverter Power, 115V	1
1271944	Label - AC Inverter Power, 220V	1
1278542	Instructions – Contact Alarm	1
1278982	Label – Actuator Switch Socket	1
1281169	Label – Recovery Switch	1
1281173	Label – Tip-over Hazard, S-85 XC	1
1281174	Label – Lanyard Anchorage Point, Fall Arrest/Fall Restrained	8
1281184	Label – Runaway Machine Hazard, S-80/85 XC	1

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

* These decals are model, option or configuration specific.

Inspections



Inspections

Inspection for Decals with Symbols

Determine whether the decals on your machine have words or symbols. Use the appropriate inspection to verify that all decals are legible and in place.

Below is a numerical list with quantities and descriptions.

Continued from previous page.

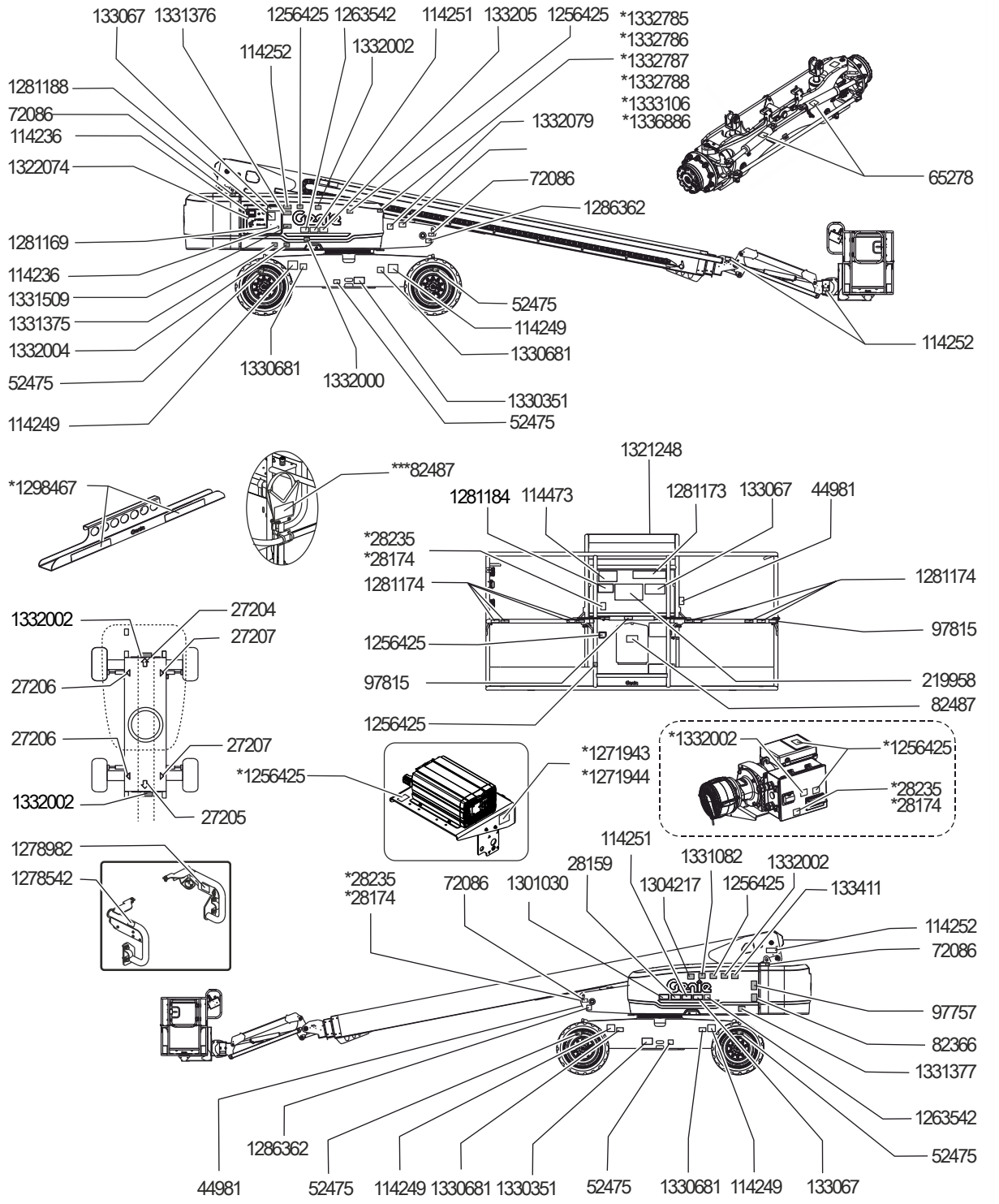
Part No.	Decal Description	Qty
1281188	Label – Emergency Lowering	1
1286362	Label – Crush Hazard, Service	2
1293324	Label – ICES-2/CAN-2 Compliance	1
1298467	Label – Read the Manual	2
1301030	Label – Diesel, Stage V	1
1304217	Label – Explosion Hazard	1
1321248	Platform Control Panel	1
1322074	Ground Control Panel	1
1330351	Label – Transport and Lifting	2
1330681	Label - Wheel Load, S-85 XC FE/E	4
1331082	Label – Center Air Hose, S-85 XC FE/E	1
1331375	Label - Battery, Main, 48V	1
1331376	Label – Battery, Auxillary, 48V	1
1331377	Label – Battery, Starter Engine, 12V	1
1331509	Label – Contactor Box Layout, S-85 XC FE/E	1
1332000	Label – Battery Disconnect, SYM	1
1332002	Label – No Pressure Washing, SYM	5
1332004	Label – Battery Safety, SYM, S-85 XC FE/E	1
1332079	Label – Electrical Hazard, SYM	1
1332785	Label – Receptacle, Charging, NEMA 5-15	1
1332786	Label – Receptacle, Charging, SAE J1772, 230VAC, 32A	1
1332787	Label – Receptacle Charging, IEC 62196 TYPE 2	1
1332788	Label – Receptacle Charging, IEC 60309, 230VAC, 16A	1
1333106	Label – Receptacle Charging, AS/NSZ 3112 TYPE 1, 250VAC, 15A	1
1336886	Label – Receptacle Charging, IEC, 60309, 110VAC, 16A	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 and are model, option, or configuration specific.

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

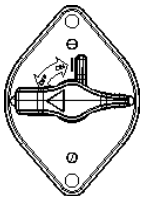
The Operating Instructions section provides instructions for each aspect of machine operation. It is the operator's responsibility to follow all the safety rules and instructions in the operator's, safety, and responsibilities manuals.

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

Battery Disconnect Switch



1 Turn the battery disconnect switch to the right to connect the battery.

2 Turn the battery disconnect switch to the left to disconnect the battery.

Note: Apply a padlock to prevent accidental re-engagement of the battery.

Machine Operation

FE models can be operated with or without the engine running.

1 Turn the key switch to ground or platform control.

2 Be sure the battery pack is connected before operating the machine.

3 Be sure both ground and platform control red Emergency Stop buttons are pulled out to the on position.

Emergency Stop

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

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 Power

Use auxiliary power if the primary power source (main battery) 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 using the 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

FE Models: Starting the Engine

From the ground control panel:

1 Turn the key switch to ground control.

2 Be sure to pull out the red Emergency Stop buttons to the on position.

3 Press the FE toggle button on display to select FE mode.

4 Push the function enable button to start the engine.

From the platform control panel:

5 Turn the key switch to platform control.

6 Be sure both ground and platform control red Emergency Stop buttons are pulled out to the on position.

7 Press the FE toggle button on display to select FE mode.

8 Press down the foot switch to start the engine.

If the engine fails to start after 15 seconds of cranking, determine the cause and repair any malfunction. Wait 60 seconds before trying to start again.

In cold conditions, 20°F/-6°C and below, warm the engine for 5 minutes before operating to prevent hydraulic system damage.

In extreme cold conditions, 0°F/-18°C and below, machines should be equipped with optional cold start kits. Attempting to start the engine when temperatures are below 0°F/-18°C may require the use of a booster battery.

Operation from Ground

1 Turn the key switch to ground control.

2 Pull out the red Emergency Stop button to the on position.

3 FE Models: Select E mode or FE mode.

Note: Starting the engine during machi**ne o**peration is optional. If the engine is started, it will charge the batteries.

To Position Platform

1 Push and hold the function enable button.

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.

Operating Instructions

Platform Overload LCD Symbol

LCD symbol flashing indicates the platform is overloaded and no functions will operate. The alarm will sound at both ground and Platform controls.

Remove weight from the platform until the LCD symbol goes off.

Operation from Platform

Note: When operating the machine from the platform, the following foot switch messages may appear on the platform control LCD screen.

- FOOT SWITCH POWER UP FAULT. RELEASE FOOT SWITCH AND REPOWER.
- FOOT SWITCH MUST BE APPLIED BEFORE FUNCTION IS ACTIVATED.

- FOOT SWITCH TIMED OUT. RELEASE FOOT SWITCH TO RESET.

If any of these messages appear, follow the message instructions to resume machine operation.

1 Turn the key switch to platform control.

2 Pull out the red Emergency Stop button to the on position.

3 FE Models: Select E mode or FE mode.

Note: Starting the engine during machi**ne o**peration is optional. If the engine is started, it will charge the batteries.

Operating Instructions

To Position Platform

1 Press down the foot switch.

2 Slowly move the appropriate function control handle or toggle switch or press the appropriate button according to the markings on the control panel.

Note: When the boom is positioned at the edge of the operating envelope, boom down and boom retract are coordinated by the control system. The boom may retract while operating the boom down function.

To Steer

1 Press down the foot switch.

2 Slowly move the drive control handle in the direction indicated by blue or yellow triangles OR press the thumb rocker switch located on top of the drive control handle.

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

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 function enable 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 boom is raised.

⚠ 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):

4WD: 45% (24°)

Maximum slope rating, platform uphill:

4WD: 30% (17°)

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 counterweight uphill 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

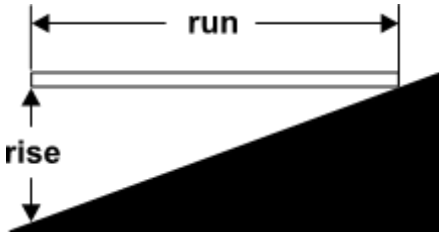
Lay the piece of wood on the slope.

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 in ÷ 144 in = 0.083 x 100 = 8.3% grade
0.3 m ÷ 3.6 m = 0.083 x 100 = 8.3% grade

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

Drive Enable

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

To drive, press the drive enable button below the LCD display 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.

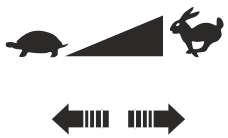
Always use the color-coded direction arrows on the platform controls and the drive chassis to identify the direction the machine will travel.

Drive Speed Select

- Turtle mode: Low range operation with reduced drive speed.
- Rabbit mode: High range operation for maximum drive speed.

Operating Instructions

Function Speed Control



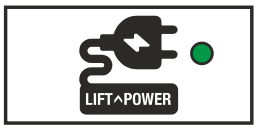
1 Move the switch to the left to decrease the function speeds for jib up/down, platform rotate and boom extend/retract.

2 Move the switch to the right to increase the function speeds for jib up/down, platform rotate and boom extend/retract.

Note: Function speeds will increase or decrease by 5% each time the function speed control switch is moved. The speed control switch can also be held in either direction to increase or decrease function speed.

Generator (if equipped)

To operate the generator, press the lift power button on the LCD display.



Note: The lift power symbol on LCD display shows generator is on and the symbol changes from gray to black.

The generator will turn on.

Plug a power tool into AC power outlet located at the platform, or turntable.

To stop the generator, press the lift power button on the LCD display.

Note: The lift power symbol on LCD display shows generator is off and the symbol grayed out.

Inverter (if equipped)

To operate the inverter, press the inverter button on the LCD display.

Note: The inverter symbol on LCD display shows inverter is on and the symbol changes from gray to black.

The inverter will turn on.

Plug a power tool into AC power outlet located at the platform, or turntable.

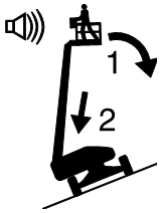
To stop the inverter, press the inverter button on the LCD display.

Note: The inverter symbol on LCD display shows inverter is off and the symbol grayed out.

Operating Instructions

Machine Not Level LCD Symbol

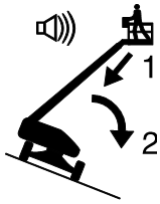
If the tilt alarm sounds when the platform is raised, the Machine Not Level LCD symbol will come on and the drive function in one or both directions will not operate. Identify the condition of the boom on the slope as shown below. Follow the steps to lower the boom before moving to a firm, level surface.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



If the tilt alarm sounds with the platform uphill:

1 Lower the boom.

2 Retract the boom.



If the tilt alarm sounds with the platform downhill:

1 Retract the boom.

2 Lower the boom.

Platform Overload LCD Symbol

LCD symbol flashing indicates the platform is overloaded and no functions will operate. The alarm will sound at both ground and Platform controls.

Remove weight from the platform until the LCD symbol goes off and the message in no longer displayed.

Operating Instructions

Platform Out of Level (> ±10° error)

When the platform level is > +/- 10° off target angle, then the platform recovery and system fault LCD symbols appear and remain on along with the Operator's manual and Auxiliary system and the LCD screen display fault code 98-10.

You will need to follow the below procedures:

1 Push in and then pull out the red Emergency Stop button. OR

Use auxiliary power to manually level the platform.

⊙ The platform target angle will reset.

2 Platform recovery and system fault LCD symbols should turn OFF. LCD screen should no longer display fault code 98-10.

3 Operator can resume normal operation.

If the icons associated with the platform level do not disappear from the display after multiple target angle resets.

1 Retract and lower the boom to the stowed position.

2 Tag and remove the machine from service until the fault has been corrected by a qualified service technician.

Machine Malfunction LCD symbol

LCD symbol flashing indicates a system fault.

1 If Platform is out of expected level see Platform Out of Level section.

2 Push in and then pull out the red Emergency Stop button.

3 Lower and retract the boom.

4 Tag the machine and remove from service. Functions will not operate.

Platform Capacity Range

Range of motion is controlled automatically based on platform load.

Unrestricted Range of Motion: When the platform load is less than 661 lbs/300 kg.

Restricted Range of Motion: When the platform load is 661 - 1,000 lbs/301 - 454 kg.

Operating Instructions

Tilt Sensor Activation Settings

Model	Chassis Angle (front to back)	Chassis Angle (side to side)
S-85 XC FE/E	7°	5°

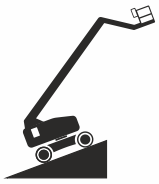
The range of motion LCD symbol is on when the platform load exceeds 660 lbs/300 kg.

LCD symbol on indicates restricted range of motion due to platform weight.

The range of motion LCD symbol is on when the platform load is less than 660 lbs/300 kg and on a slope.

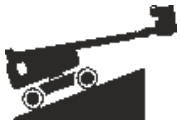
LCD symbol on indicates restricted range of motion due to platform weight and slope angle.

When the Machine On Incline LCD symbol 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.

Operating Instructions

LCD Screen

The LCD screen at the ground controls displays hour meter, voltage, oil pressure and coolant temperature. The screen also displays fault codes and other service information.

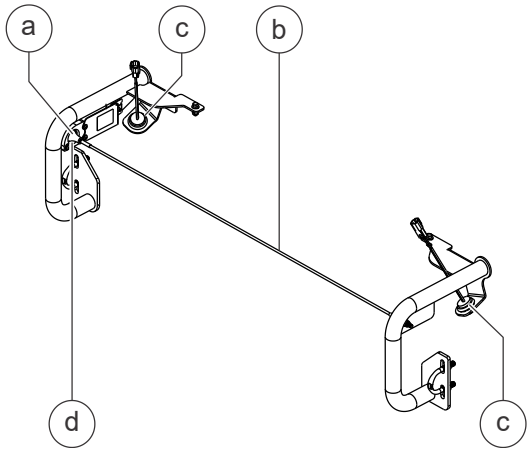
Contact Alarm (if equipped)

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.

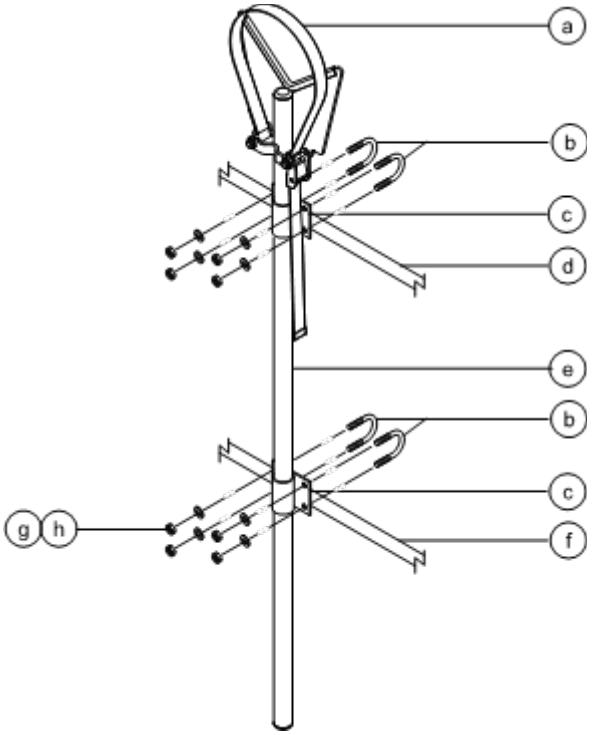


a actuator
b contact alarm cable
c flashing alarm
d switch socket

Operating Instructions

Pipe Cradle Instructions

The pipe cradle assembly consists of 2 pipe cradles positioned at either side of the platform and mounted to the guardrails with U-bolts.



a strap
b U-bolts
c pipe cradle mount
d upper platform railing
e pipe cradle weldment
f middle platform railing
g flat washers
h nylock nuts

Observe and Obey:

☑ Pipe cradles must be installed on the inside of the platform.

☑ Pipe cradles must not obstruct the platform controls or the platform entrance.

☑ The bottom of the pipe cradle tube must rest on the platform floor.

☑ Be sure the platform is level before installing a pipe cradle.

Pipe Cradle Installation

1 Install a pipe cradle on each side of the platform. Refer to the illustration on the left. Make sure the bottom of the pipe cradle tube rests on the platform floor.

2 Install two U-bolts from the outside of the platform rails through each pipe cradle mount.

3 Secure each U-bolt with 2 washers and 2 nuts.

Operating Instructions

Pipe Cradle Operation

1 Be sure the pipe cradle assembly and installation instructions have been followed properly and that the pipe cradles are secured to the platform railings.

2 Place the load so that it rests in both pipe cradles. The length of the load should be parallel with the length of the platform.

3 Center the load in the pipe cradles.

4 Secure the load to each pipe cradle. Pass the nylon strap over the load. Depress the buckle and slide the strap through. Tighten the strap.

5 Gently push and pull on the load to make sure the pipe cradles and load are secure.

6 Keep the load secured when the machine is moving.

⚠ Tip-over hazard. The weight of the pipe cradle assembly and the load in the pipe cradles will reduce the rated platform capacity of the machine and must be factored into the total platform load.

⚠ Tip-over hazard. The weight of the pipe cradle assembly and the load in the pipe cradles may limit the maximum number of occupants in the platform.

Maximum Pipe Cradle Capacity	
All models	200 lbs 90.7 kg
Pipe Cradle Assembly Weight	21 lbs 9.5 kg

Panel Cradle

Panel Cradle Assembly - Weld-In

1 Weld-in Panel Cradle comes pre-assembled.

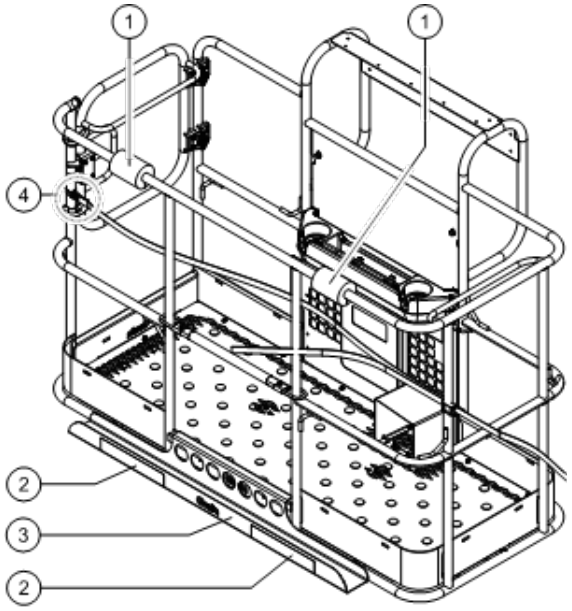
Panel Cradle Installation - Weld-In

Note: Perform this procedure on a firm, level surface with the boom in the stowed position.

Note: Kit decals should already be installed onto the tray.

1 Adjust the platform so that the toe board at the front of the platform is at a comfortable working height.

2 Place the Panel Cradle Tray over the toe board and push it down until the tray is flush across the top of the toe board with the slots on the back of the tray aligned with corresponding slots in the toe board.



1 foam pad x 2
2 decal x 2
3 panel cradle tray
4 clamp

3 Use the provided fasteners to secure the tray to the platform. Tighten the fasteners.

Operating Instructions

Installation of Padding

Install the 2 pieces of padding on the platform rails. Position the padding to protect the panels from contact with the platform rails.

Installation of Strap

1 Open the clamp and install it around a vertical platform rail tube.

2 Insert a bolt with a washer through one side of the clamp.

3 Install the strap assembly end plate onto the bolt.

4 Insert the bolt through the other side of the clamp.

Secure with a washer and a nut. Do not over-tighten.

Note: The strap assembly must be secured between the clamp.

Note: The strap assembly should be able to slide freely up and down the platform rail.

Panel Cradle Operation

Note: The bolt-in style has 2 cradles and the Weld-in has 1.

Operating Instructions:

1 Secure the panel cradle and strap assembly to the platform.

2 Center the load on the platform.

3 Secure the load to the platform using the strap.

4 Tighten the strap.

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.

To Charge Battery

FE Models: Use the engine or an external power source to recharge the batteries.

E Models: Use an external power source to recharge the batteries.

Be sure the batteries are connected before charging the batteries.

If machine is equipped with flooded lead acid batteries, 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.

Charge lithium battery and 48V auxiliary battery using external power source. Using the engine to charge the batteries will not complete the charge.

FE Models: Charging the Batteries with the Engine

Running the engine will automatically charge the batteries.

The engine will automatically shut off when the lithium battery charge cycle reaches around 90%.

The platform control panel LCD screen will display the following message, HYBRID CHARGE COMPLETE. PLUG IN FOR 100% CHARGE.

Charging Batteries with External Power

1 Connect the battery charger to a grounded AC circuit.

The charger will automatically shut off when charging cycle is complete.

If machine is equipped with flooded lead acid batteries, 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.

Operating Instructions

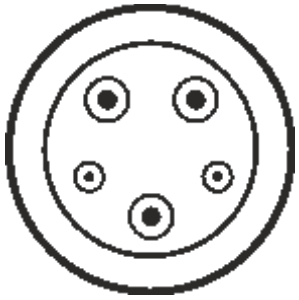
Charging Batteries with Electric Vehicle Supply Equipment (EVSE)

1 Locate the EVSE charge port (if equipped).

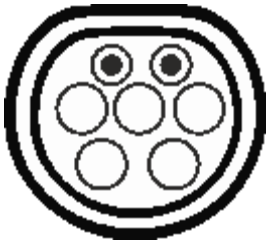
2 If an EVSE style charge port or station with a compatible charge plug is available, follow the EVSE style charge port or station instructions before proceeding.

3 Once the plug is connected to the EVSE charge port and is recognized by the charger, charging will begin after several seconds. The charger will automatically shut off when the charging cycle is complete.

Types of EVSE Charge Plugs:

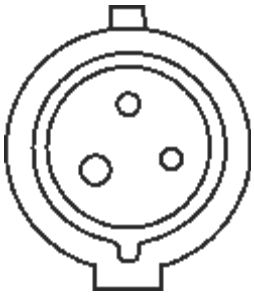


North America and Japan SAE (J-1772)



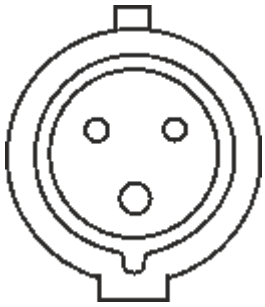
EU Type 2 IEC 62196 (Mennekes)

Types of Standard Charge Plugs:



UK IEC 60309

North America NEMA 5-15



EU IEC 60309

Australia and New Zealand 3112 Type 1

Operating Instructions

Lithium Battery Heating

When the main battery temperature is below its operational limit of -20°F (-29°C), the battery needs time to heat up using its internal heaters before use. This process is called Battery Heating. There are three methods to enable heating.

- ❑ Method 1: Plug in the charger. The charger will provide power to the heaters and begin charging the battery once the battery temperature has risen above 32°F/0°C. The heaters will continue to operate to maintain an optimal temperature for machine functions and charging as long as the charger remains plugged in. The battery will begin to able to provide power once the temperature of the battery has risen above its operational limit.
- ❑ Method 2: Turn on the machine (Emergency Stop Button to the ON position). The heaters will turn on if there is sufficient charge in the battery. The heaters will continue to operate to maintain an optimal temperature for machine functions and charging as long as there is sufficient energy in the battery and the machine remains ON.
- ❑ Method 3: Follow the procedure to start the engine (if equipped). The engine will provide power to the heaters and begin charging the battery once the battery temperature has risen above 32°F/0°C. The heaters will continue to operate to maintain an optimal temperature for machine functions and charging as long as there is sufficient charge in the battery and the machine remains ON (even if the engine is turned OFF).

Operating Instructions

Dry Battery Filling and Charging Instructions

This procedure applies to flooded lead acid batteries only.

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.

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.

Operating Instructions

Machine Storage

Properly preparing and stowing the machine for extended storage will make it easier to put the machine back into service. Extended storage is defined as 1 week or longer.

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 Charge the machine every 30 days, especially in cold weather, to protect the Auxiliary battery from damage.

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.

Storage of main battery

Standby Mode:

Turning off the ground Emergency stop puts the machine in Standby Mode and displays the shutdown screen on the ground display.

- Standby Mode provides power to the telematics
- Standby Mode allows charging to occur when plugged in.
- Standby Mode keeps heaters active if the battery is cold and charger is plugged in.

Sleep Mode: (Extended storage)

Pressing the Sleep Mode button on the ground display within 10 seconds of turning off the Emergency stop will shut down the machine completely.

- If Sleep Mode button is not pressed, the machine stays in Standby Mode for up to 8 days or until the battery is too low.
- After 8 days staying in Standby mode or low battery, machine will automatically enter Sleep Mode.
- When the machine is in Sleep Mode or the Battery Disconnect is OFF, telematics have no power.

Note: Turning OFF the lockable main disconnect switch to prevent machine from turning back ON if the Emergency stop is turned ON.

Transport and Lifting Instructions

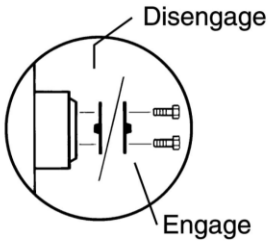
Observe and Obey:

- ☑ 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.
- ☑ 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 maximum slope rating, the machine must be loaded and unloaded using a winch as described in the brake release operation.

Free-wheel Configuration for Winching

Chock the wheels to prevent the machine from rolling.

Release the wheel brakes by turning over all four 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.

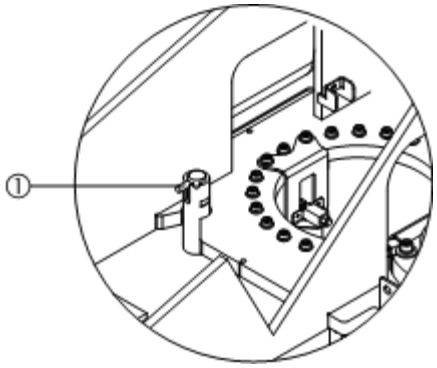
Reverse the procedures described to re-engage the brakes.

Note: The pump free-wheel valve should always remain closed.

Transport and Lifting Instructions

Securing to Truck or Trailer for Transit

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



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 6 chains.

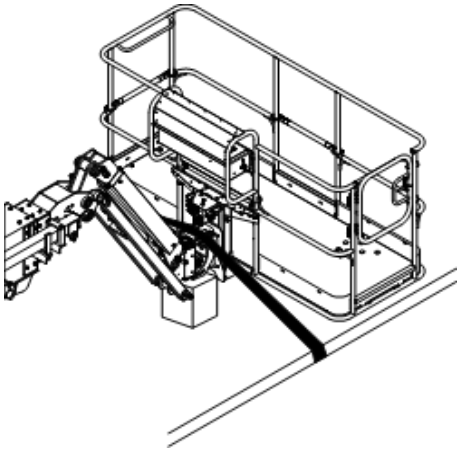
Adjust the rigging to prevent damage to the chains.

For diagram, refer to the Lifting Instructions.

Securing the Platform

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

Secure the platform with a nylon strap placed parallel to the strap guides. 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

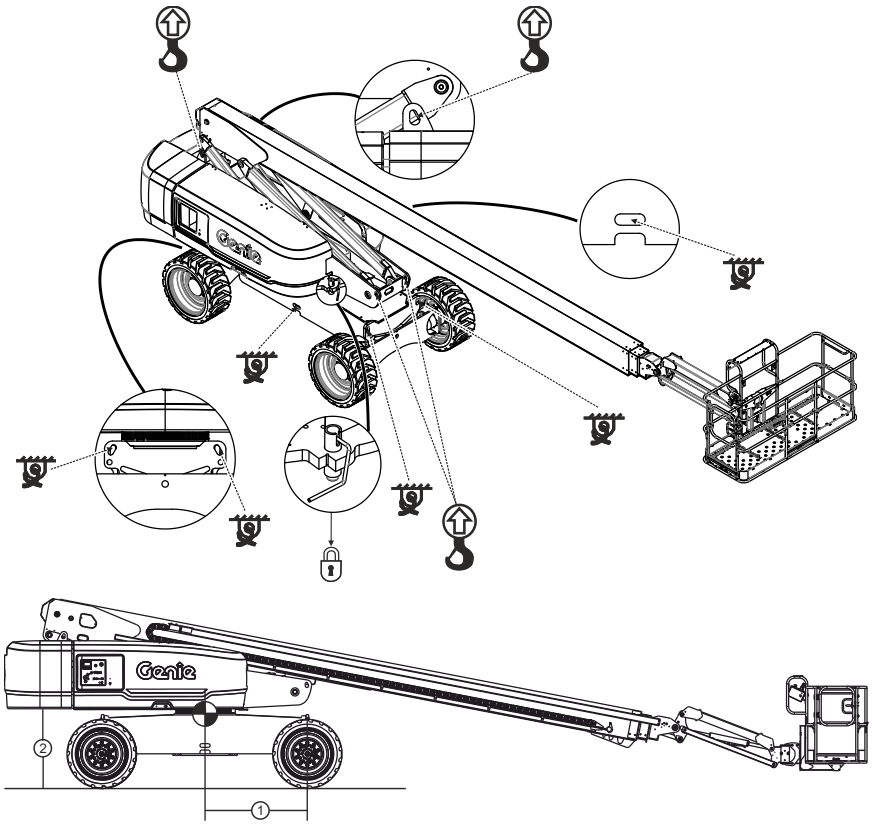
Fully lower and retract the boom. Fully lower the jib. (if equipped)

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. All four of the lifting points are on the turntable.

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

Center of gravity	X Axis	Y Axis
S-85 XC FE	84.4 in/2.14 m	54.2 in/1.38 m
S-85 XC E	84.7 in/2.15 m	54.0 in/1.37 m



1 - X Axis

2 - Y Axis

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.
- ☑ 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 engine is required before performing this procedure.

Check the Engine Oil Level

Maintaining the proper engine oil level is essential to good engine performance and service life. Operating the machine with an improper oil level can damage engine components.

Note: Check the oil level with the engine off.

1 Check the oil level dipstick. Add oil as needed.

Kubota D1105-E4-GNI-4	
Oil type	SAE10W or 10W-30
Kohler KSD 1403	
Oil type	10W-40 API CI4

Maintenance

Diesel Fuel Requirements

Satisfactory engine performance is dependent on the use of a good quality fuel. The use of a good quality fuel will give the following result: long engine life and acceptable exhaust emissions levels.

Minimum diesel fuel requirements for each engine are listed below.

Kubota D1105-E4-GNI-4	
Fuel Type	Low Sulfur Diesel (LSD)
Kohler KSD 1403	
Fuel Type	Ultra Low Sulfur Diesel (ULSD)

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 hydraulic oil level should be within the top 2 inches / 5 cm of the sight gauge.

3 Add oil as needed. Do not overfill.

Hydraulic oil specifications	
Hydraulic oil type	Chevron Rando HD equivalent

Maintenance

Check the Engine Coolant Level – Liquid Cooled Models

Maintaining the engine coolant at the proper level is essential to engine service life. Improper coolant level will affect the engine's cooling capability and damage engine components. Daily checks will allow the inspector to identify changes in coolant level that might indicate cooling system problems.

⚠ Burn hazard. Beware of hot engine parts and coolant. Contact with hot engine parts and/or coolant may cause severe burns.

⚠ Burn hazard. Do not remove the radiator cap if the engine has been running. Contact with pressurized coolant may cause severe burns. Allow engine to cool before removing the radiator cap.

1 Check the fluid level in the coolant recovery tank. Add fluid as needed.

⊙ Result: The fluid level should be at the FULL mark on the tank or visible in the sight gauge.

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.

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

Maintenance

Scheduled Maintenance

Maintenance performed commissioning, 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 and maintenance manuals 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

Model	S-85 XC FE/E	
Height, working maximum	91 ft	27.74 m
Height, platform maximum	85 ft	25.91 m
Horizontal reach, platform maximum	74 ft 6 in	22.71 m
Maximum load capacity	660 lbs	300 kg
Maximum load capacity, restricted	1,000 lbs	454 kg
Maximum wind speed	28 mph	12.5 m/s
Platform rotation		160°
Jib rotation		133°
Platform leveling		self-leveling
Turntable rotation (degrees)		360° continuous
Turntable tailswing	5 ft 9 in	1.75 m
Height, stowed maximum	9 ft 2 in	2.8 m
Length, stowed	41 ft 9 in	12.37 m
Width, standard tires	8 ft 2 in	2.49 m
Wheelbase	10 ft	3.05 m
Ground clearance, center	19.4 in	49 cm
Ground clearance, axle	11.7 in	29 cm
Turning radius (inside)	11 ft 6 in	3.5 m
Turning radius (outside)	22 ft 3 in	6.78 m
Platform dimensions, 6 foot (length x width)	72 in x 30 in	183 cm x 76 cm
Platform dimensions, 8 foot (length x width)	96 in x 36 in	244 cm x 91 cm
Ambient operating temperature		-20° F to 120° F -29° C to 49° C
Controls		48V DC proportional
AC outlet in platform		standard
System voltage		48V
Hydraulic pressure, maximum (boom functions)	3,000 psi	207 bar
Tire size		18-710, 16 ply FF
Fuel tank capacity	17 gallons	64 liters
Hydraulic tank capacity	28 gallons	106 liters
Weight S-85 XC FE	39,592 lbs	17,958 kg
Weight S-85 XC E	38,908 lbs	17,648 kg
(Machine weights vary with option configurations. See serial label for specific machine weight.)		

Maximum slope rating, stowed position, 4WD	
Platform uphill	30% (17°)
Platform downhill	45% (24°)
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

Drive speeds		
Drive speed, stowed	3.0 mph 40 ft/9.1 sec	4.8 km/h 12.2 m/9.1 sec
Drive speed, raised or extended	0.5 mph 40 ft/55 sec	0.8 km/h 12.2 m/55 sec

Machine Classification	Group B/Type 3 as defined by ISO 16368

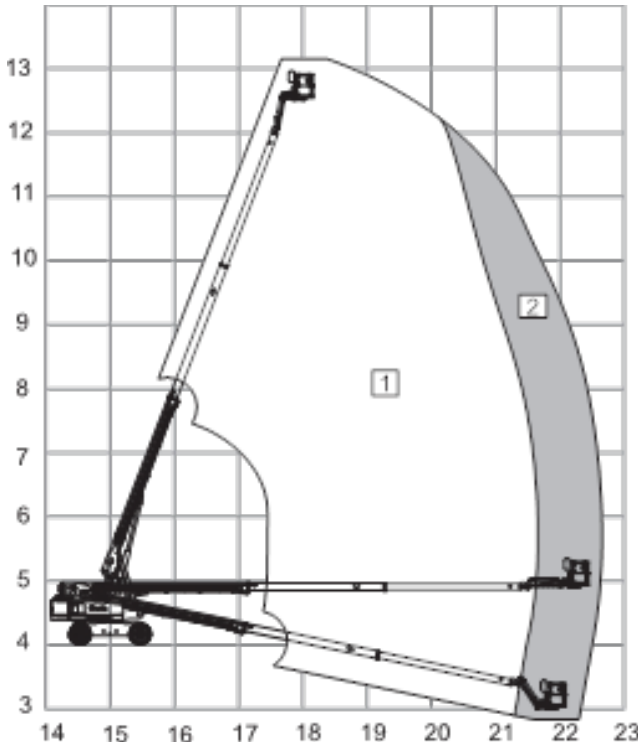
Floor loading information		
Tire load maximum	20,922 lbs	9,490 kg
Tire contact pressure	198 psi	13.91 kg/cm^2 1365 kPa
Occupied floor pressure	395 psf	1,928 kg/m^2 18.9 kPa

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

S-85 XC FE/E Range of Motion Chart



Maximum platform capacity

1	1000 lbs	454 kg	**2**	660 lbs	300 kg

Vertical Values			**Horizontal Values**		
3	-10 ft	-3.05 m	**14**	-10 ft	-3.05 m
4	0 ft	0 m	**15**	0 ft	0 m
5	10 ft	3.05 m	**16**	10 ft	3.05 m
6	20 ft	6.1 m	**17**	20 ft	6.1 m
7	30 ft	9.14 m	**18**	30 ft	9.14 m
8	40 ft	12.19 m	**19**	40 ft	12.19 m
9	50 ft	15.24 m	**20**	50 ft	15.24 m
10	60 ft	18.29 m	**21**	60 ft	18.29 m
11	70 ft	21.34 m	**22**	70 ft	21.34 m
12	80 ft	24.39 m	**23**	80 ft	24.39 m
13	90 ft	27.43 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.

Distributed By: