Genie
A TEREX BRAND

# Operator's Manual

## GS™-3390
## GS™-4390
## GS™-5390

CE
UK
CA

with
Maintenance
Information

Original Instructions
Eighth Edition
First Printing
Part No. 1331898GT

**Manufacturer: CE & UKCA**

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

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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.

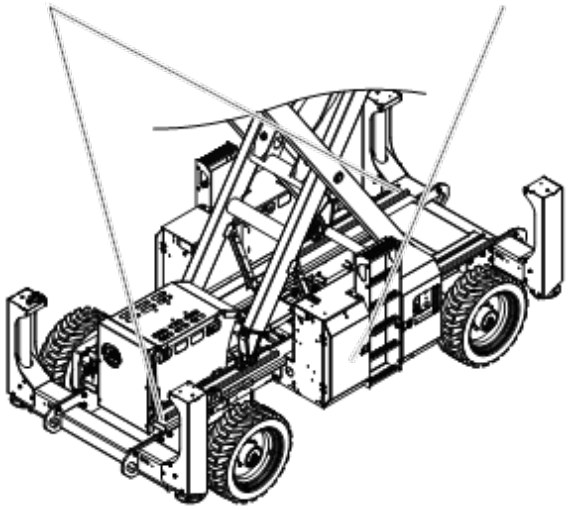
This manual should be considered a permanent part of your machine and should remain with the machine at all times. If you have any questions, contact Genie.

## Product Identification

The machine serial number is located on the serial label.

Serial number stamped on chassis

Serial label (located under cover)



## Intended Use and Familiarization Guide

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

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

# Introduction

Platform controls symbology and related machine movement:



Lift function enable button (when thumb rocker switch is moved up or down)



Steer right/left



Outrigger function buttons (when thumb rocker switch is moved up or down)



Outrigger auto level button (when thumb rocker switch moved up or down)

Ground controls symbology and related machine movement:



Lift function enable button



Platform up button



Platform down button

Sequential functions and movement:

- Drive and steer.

Interlocked functions:

- Lift and drive.
- Elevated drive speed.
- Elevated drive in an off-level condition.
- 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.

# 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.

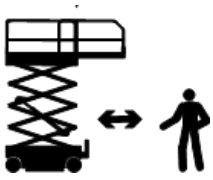
⚠ DANGER Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

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

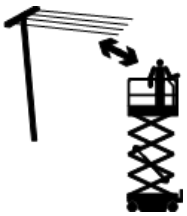
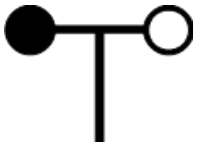
⚠ CAUTION Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE Indicates a property damage message.

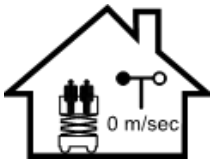
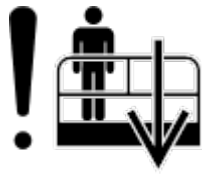
# Symbol and Hazard Pictorials Definitions

| | | | | |
|---|---|---|---|---|
|  Read the operator's manual |  Read the service manual |  Crush hazard |  Crush hazard |  Collision hazard |
|  Tip-over hazard |  Tip-over hazard |  Tip-over hazard |  Tip-over hazard |  Electrocution hazard |
|  Electrocution hazard |  Explosion hazard |  Fire hazard |  Burn hazard |  Skin injection hazard |
|  Engage safety arm |  Keep away from moving parts |  Keep clear of outriggers and tires |  Move machine to level ground |  Close chassis tray |

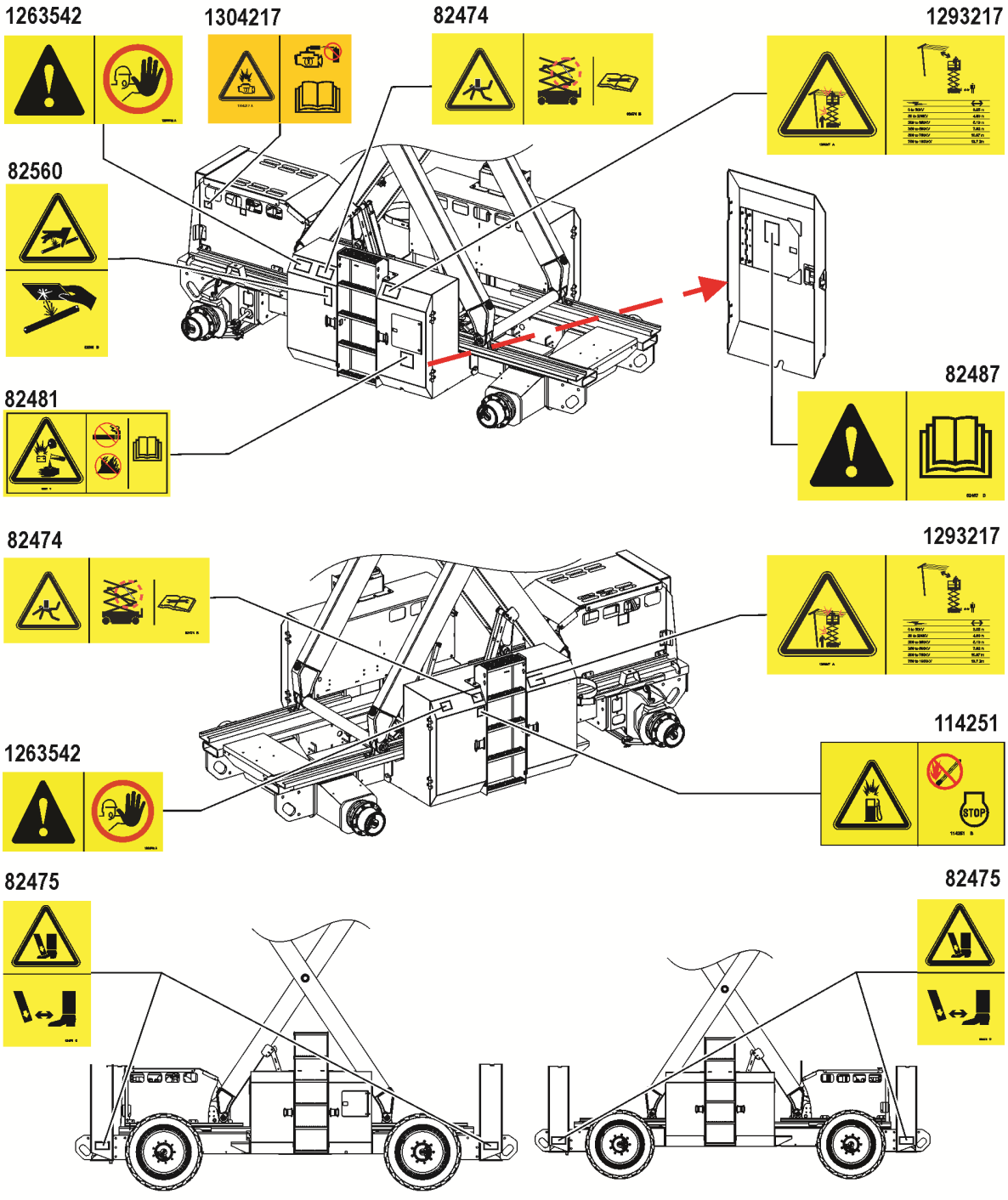
# Symbol and Hazard Pictorials Definitions

| | | | | |
|---|---|---|---|---|
|  Lower the platform. |  Do not set up where it cannot be leveled with outriggers |  Maintain required clearance |  Only trained maintenance personnel should access compartments |  Use a piece of cardboard or paper to search for leaks |
|  Chock the wheels |  Release brakes |  Tie-down point |   Lanyard anchorage points |  No smoking |
|  Wheel load |  Lifting point |  Manual force |  Wind speed |  Outrigger load |

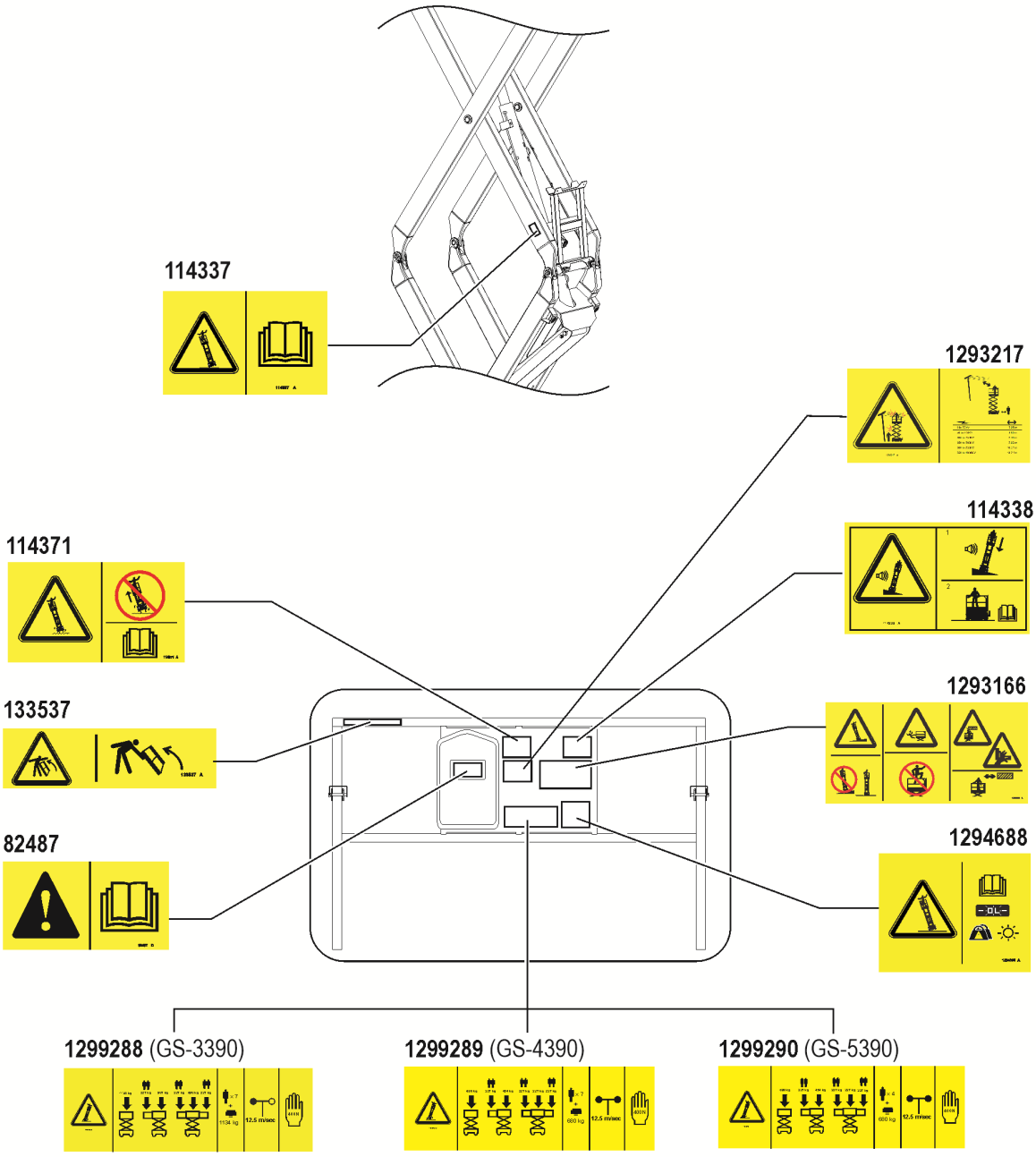
# Symbol and Hazard Pictorials Definitions

| | | | | |
|---|---|---|---|---|
|  Voltage rating for power to platform |  Pressure rating for air line to platform |  Maximum capacity |  Crushing hazard |  Hold rail while lowering |
|  Collision hazard |  Chock the wheels |  Platform overloaded |   Indoor Use Only |  Auxiliary lowering |
|  Transport diagram | | | | |

# General Safety



# General Safety



# Personal Safety

## Personal Fall Protection

Personal fall protection equipment (PFPE) is not required when operating this machine. If PFPE is required by job site or employer rules, the following shall apply:

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

# Work Area Safety

## ⚠ Electrocution Hazards

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



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

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

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



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

Do not operate the machine during lightning or storms.

Do not use the machine as a ground for welding.

## ⚠ Tip-over Hazards

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

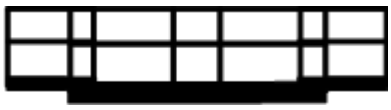
| **Maximum extension deck capacity** | |
|---|---|
| Maximum occupants | 2 persons (each extension deck) |
| Extension deck only | 500 lbs / 227 kg (each extension deck) |

| **Maximum capacity – GS-3390** | | |
|---|---|---|
| **Maximum occupants** | | 7 |
| **Models with one platform extension** | | |
| Platform retracted | 2500 lbs | 1134 kg |
| Platform only | 2000 lbs | 907 kg |
| Extension only | 500 lbs | 227 kg |



| Extension only 500 lbs / 227 kg | Platform only 2000 lbs / 907 kg |
|---|---|

| **Models with two platform extensions** | | |
|---|---|---|
| Platform retracted | 2500 lbs | 1134 kg |
| Platform with one extension out | 2000 lbs | 907 kg |
| Platform with two extensions out | 1500 lbs | 680 kg |
| Each extension only | 500 lbs | 227 kg |



| Extension only 500 lbs / 227 kg | Platform only 1500 lbs / 680 kg | Extension only 500 lbs / 227 kg |
|---|---|---|

# Work Area Safety

| Maximum capacity - GS-4390 | | |
|---|---|---|
| **Maximum occupants** | | 7 |
| **Models with one platform extension** | | |
| Platform retracted | 1500 lbs | 680 kg |
| Platform only | 1000 lbs | 454 kg |
| Extension only | 500 lbs | 227 kg |



| Extension only<br>500 lbs / 227 kg | Platform only<br>1000 lbs / 454 kg |
|---|---|

| Models with two platform extensions | | |
|---|---|---|
| Platform retracted | 1500 lbs | 680 kg |
| Platform with one extension out | 1000 lbs | 454 kg |
| Platform with two extensions out | 500 lbs | 227 kg |
| Extension only | 500 lbs | 227 kg |



| Extension only<br>500 lbs / 227 kg | Platform only<br>500 lbs / 227 kg | Extension only<br>500 lbs / 227 kg |
|---|---|---|

| Maximum capacity – GS-5390 | | |
|---|---|---|
| **Maximum occupants** | | 4 |
| **Models with one platform extension** | | |
| Platform retracted | 1500 lbs | 680 kg |
| Platform only | 1000 lbs | 454 kg |
| Extension only | 500 lbs | 227 kg |



| Extension only<br>500 lbs / 227 kg | Platform only<br>1000 lbs / 454 kg |
|---|---|

| Models with two platform extensions | | |
|---|---|---|
| Platform retracted | 1500 lbs | 680 kg |
| Platform with one extension out | 1000 lbs | 454 kg |
| Platform with two extensions out | 500 lbs | 227 kg |
| Each extension only | 500 lbs | 227 kg |



| Extension only<br>500 lbs / 227 kg | Platform only<br>500 lbs / 227 kg | Extension only<br>500 lbs / 227 kg |
|---|---|---|

# Work Area Safety



Do not raise the platform unless the machine is on a firm, level surface.



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

If the tilt alarm sounds:
Lower the platform. Move the machine to a firm, level surface. If the tilt alarm sounds when the platform is raised, use extreme caution to lower the platform.

Do not alter or disable the limit switches or angle sensor.

Do not drive over 0.7 mph / 1.1 km/h with the platform raised.

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.



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

| Maximum allowable manual force | |
|---|---|
| **GS-3390** | 90 lbs / 400 N |
| **GS-4390** | 90 lbs / 400 N |
| **GS-5390** | 90 lbs / 400 N |

Do not use the machine as a crane.

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

Do not contact adjacent structures with the platform.

Do not tie the platform to adjacent structures.

Do not place loads outside the platform perimeter.

# Work Area Safety

Do not raise the platform when wind speeds may exceed 28 mph / 12.5 m/s. If wind speeds exceed 28 mph / 12.5 m/s when the platform is raised, lower the platform 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.



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

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 alter or disable machine components that in any way affect safety and stability.

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

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



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



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

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

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

Be sure all tires are in good condition, air-filled tires are properly inflated and lug nuts are properly tightened.

# Work Area Safety

## ⚠ Operation on Slopes Hazards

Do not drive the machine on a slope that exceeds the slope and side slope rating of the machine. Slope rating applies to machines in the stowed position.

| Model | Maximum slope rating, stowed position | Maximum side slope rating, stowed position |
|---|---|---|
| **GS-3390 GS-4390** | 50% (26°) | 50% (26°) |
| **GS-5390** | 40% (22°) | 40% (22°) |

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

## ⚠ Fall Hazards

The guard rail system provides fall protection. If occupant(s) of the platform are required to wear personal fall protection equipment (PFPE) due to job site or employer rules, PFPE and its use shall be in accordance with the PFPE manufacturer's instructions and applicable governmental requirements. 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.

Close the entry gate before operating.

Do not operate the machine unless the guard rails are properly installed and the entry is secured for operation.

Do not enter or exit the platform unless the machine is in the stowed position.

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

# Work Area Safety

## ⚠ Collision Hazards



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

Be aware of extended platform position when moving the machine.

The machine must be on a level surface or secured before releasing the brakes.

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



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



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

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



Do not lower the platform 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 machine in the path of any crane or moving overhead machinery unless the controls of the crane have been locked out and/or precautions have been taken to prevent any potential collision.

No stunt driving or horseplay while operating a machine.

# Work Area Safety

## ⚠ 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.

## ⚠ Component Damage Hazards

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

Do not use the machine as a ground for welding.

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

## ⚠ Explosion and Fire Hazards

Do not start the engine if you smell or detect liquid petroleum gas (LPG), gasoline, diesel fuel or other explosive substances.

Do not refuel the machine with the engine running.

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

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

Do not spray ether into engines equipped with glow plugs.

# 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 manual is complete, legible, and in the storage container located on the machine.

## ⚠ Crushing Hazard

Keep hands and limbs out of scissors.

Use common sense and planning when operating the machine with the controller from the ground. Maintain safe distances between the operator, the machine and fixed objects.

Maintain a firm grasp on the platform rail when pulling the rail pins. Do not allow the platform guard rails to fall.

## ⚠ Outrigger Safety

### Tip-over Hazards

Do not lower the outriggers unless the machine is on a firm surface. Avoid drop-offs, holes, unstable or slippery surfaces and other possible hazardous conditions.

When the auto level function is not being used and the outriggers are being lowered individually, the steer-end outriggers must be lowered first.

Do not raise the platform unless the machine is level. Do not set the machine up on a surface where it cannot be leveled using only the outriggers.

Do not raise the platform unless all four outriggers are properly lowered, the footpads are in firm contact with the ground and the machine is level.

Do not adjust the outriggers while the platform is raised.

Do not drive while the outriggers are lowered.

# Work Area Safety

## ⚠ Battery Safety

### Burn Hazards



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

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

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

### Explosion Hazards



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

The battery tray should remain open during the entire charging cycle.



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



### Component Damage Hazard

Do not use any battery charger greater than 24V to charge the batteries.

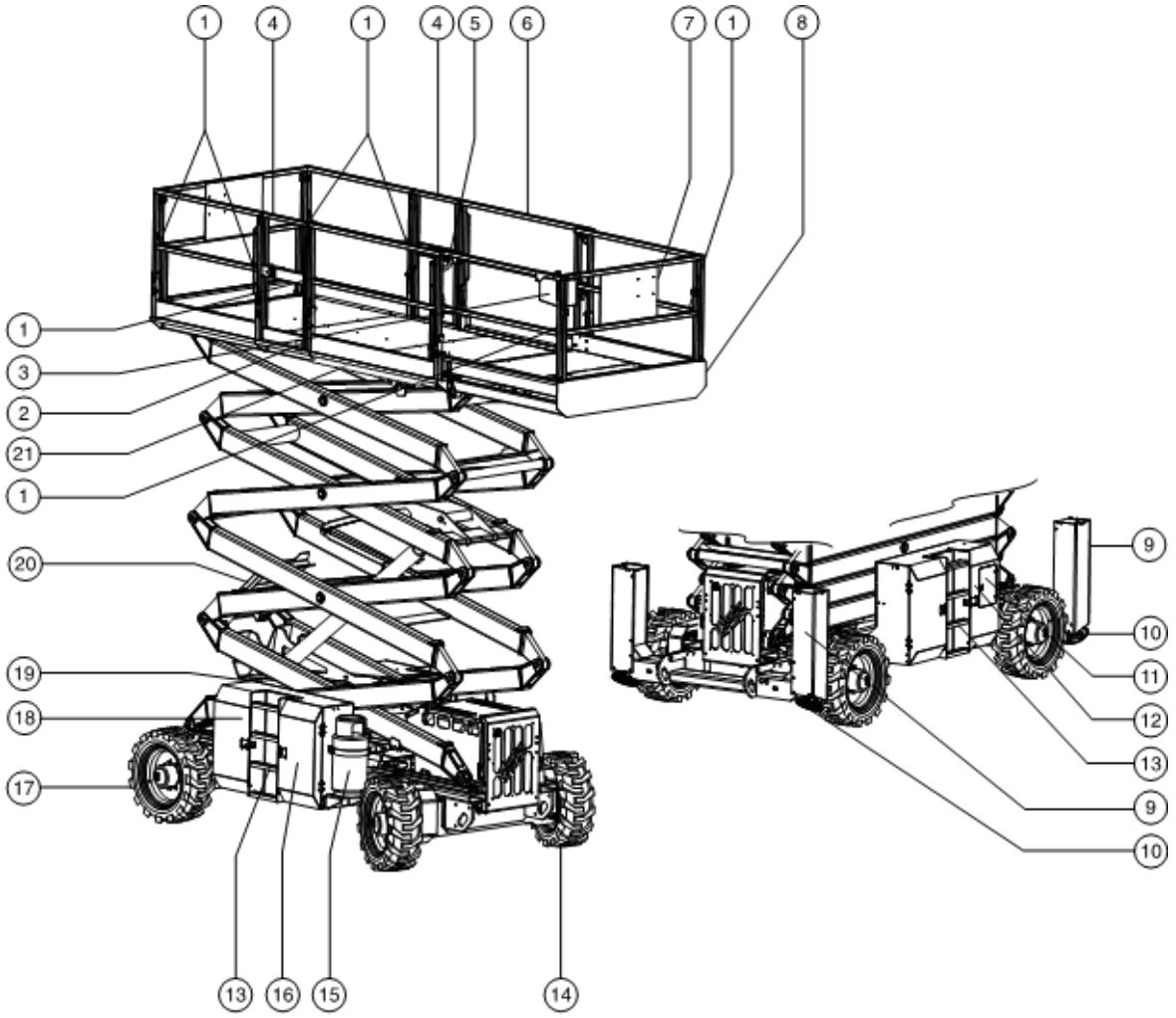
## Lockout After Each Use

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

2 Lower the platform.

3 Turn the key switch to the off position and remove the key to secure from unauthorized use.

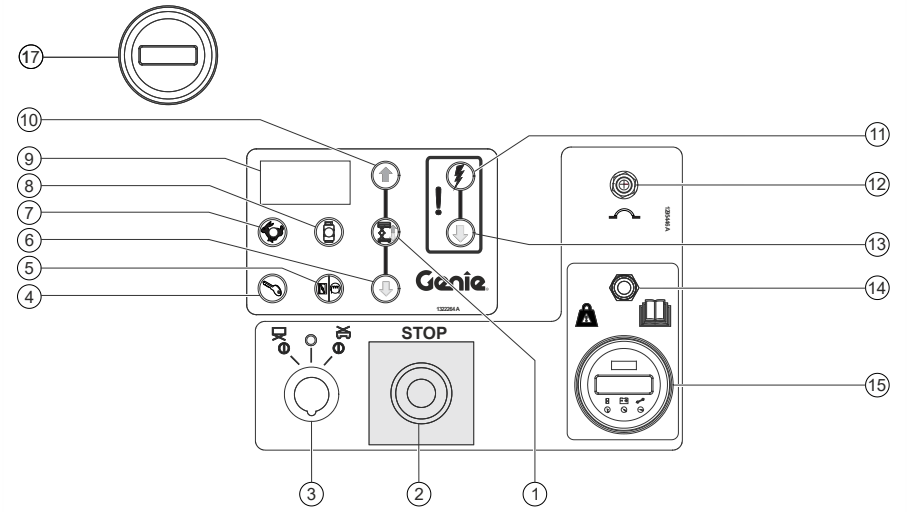
# Legend



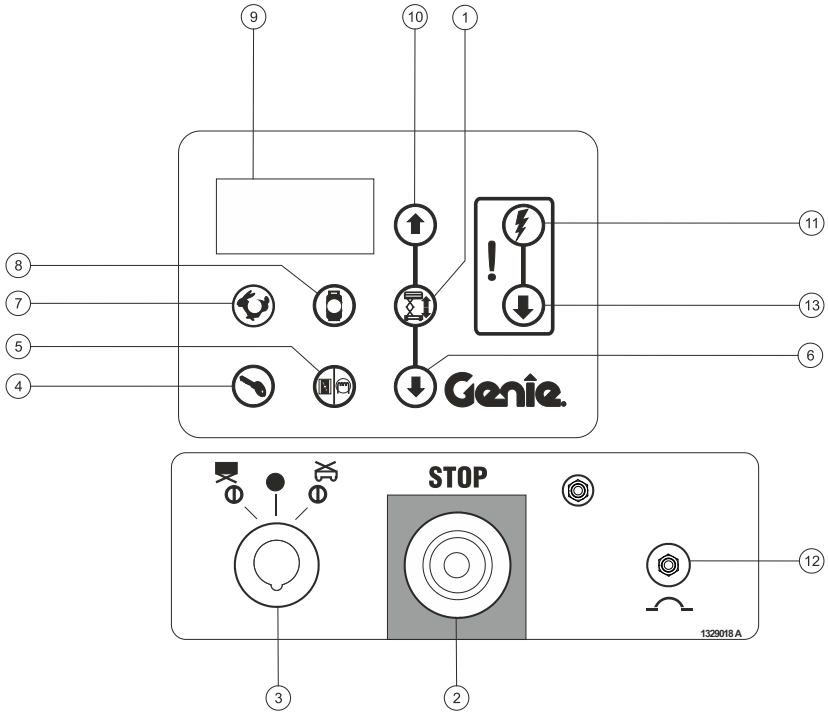

1 Lanyard anchorage points
2 GFCI outlet
3 Platform controls
4 Platform entry gate
5 Platform extension lock handle
6 Platform guard rails
7 Manual storage container
8 Platform extension
9 Outrigger housing (if equipped with outriggers)
10 Outrigger footpad (if equipped with outriggers)
11 Ground controls with LCD readout screen
12 Tilt alarm (behind ground control panel)
13 Entry ladder
14 Steer tire
15 LPG tank
16 Hydraulic tank (behind cover)
17 Non-steer tire
18 Fuel tank (behind cover)
19 Power to platform (hidden from view)
20 Safety arm (hidden from view)
21 Capacity indicator (if equipped)

# Controls

The ground control station is to be used as a means to raise the platform for function tests and for storage purposes. The ground control station can be used in the event of an emergency to rescue an incapacitated person in the platform.

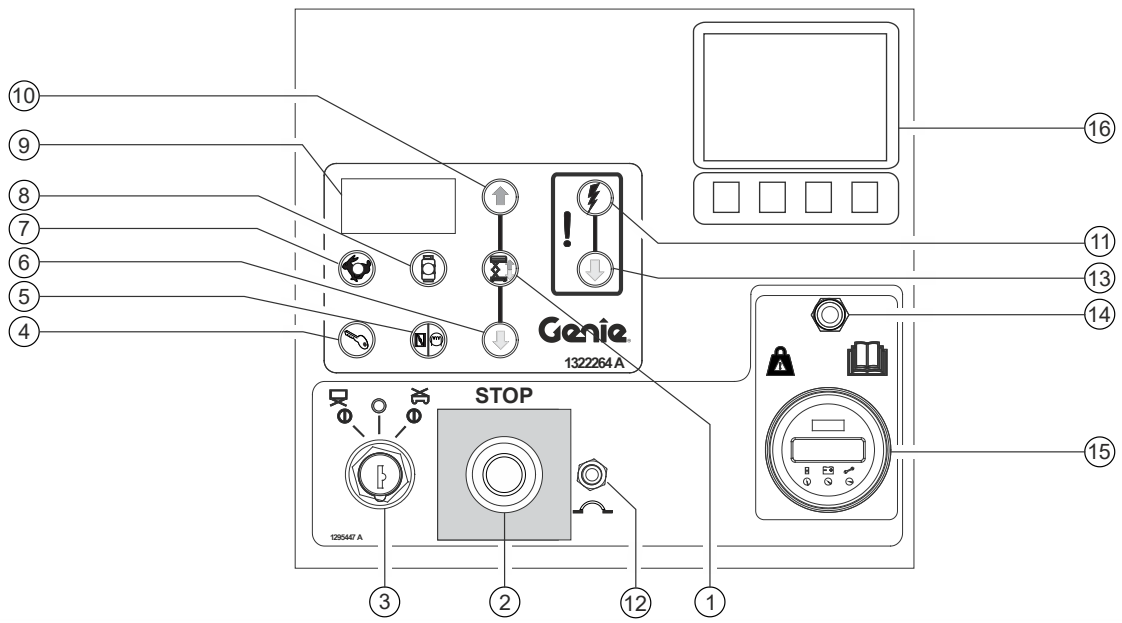



**or**

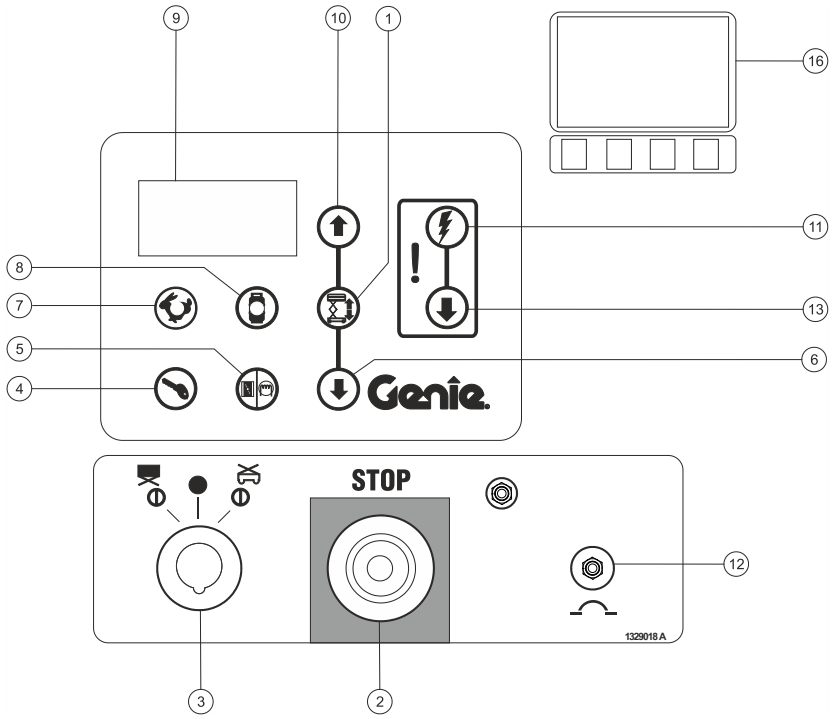



**Ground Control Panel for Ford MSG-425 EFI, Deutz D2011 L03i and Deutz D436 engines**

# Controls




**or**




**Ground Control Panel for Deutz D2.9 L4, Deutz TD 2.2 49 HP and Weichai WP3.2 engines**

# Controls

## Ground Control Panel

1 Lift function enable button

Press this button to activate the lift function.

2 Red Emergency Stop button

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

3 Key switch for platform/off/ground selection

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

4 Engine start button

Press this button to start the engine.

5 Gasoline/LPG models: Choke button
Press this button to activate the choke.

Diesel models: Glow plug button
Press this button to activate the glow plugs.

6 Platform down button

Press this button and the platform will lower.

7 Engine idle select button with indicator light

Press this button to select the engine idle setting. Light on indicates high idle is selected. Light off indicates low idle is selected.

8 Gasoline/LPG models: LPG select button with indicator light

Press this button to select fuel. Light on indicates that LPG is selected. Light off indicates gasoline is selected.

9 LCD readout screen

10 Platform up button

Press this button and the platform will raise.

11 Auxiliary power function enable button

Press this button to activate the auxiliary power function.

12 20A circuit breaker for system circuit

13 Auxiliary lowering down button

Press this button to activate the auxiliary lowering down function.

14 Load Sense Calibration switch (see service manual for details)

15 Load Sense Calibration display (see service manual for details)

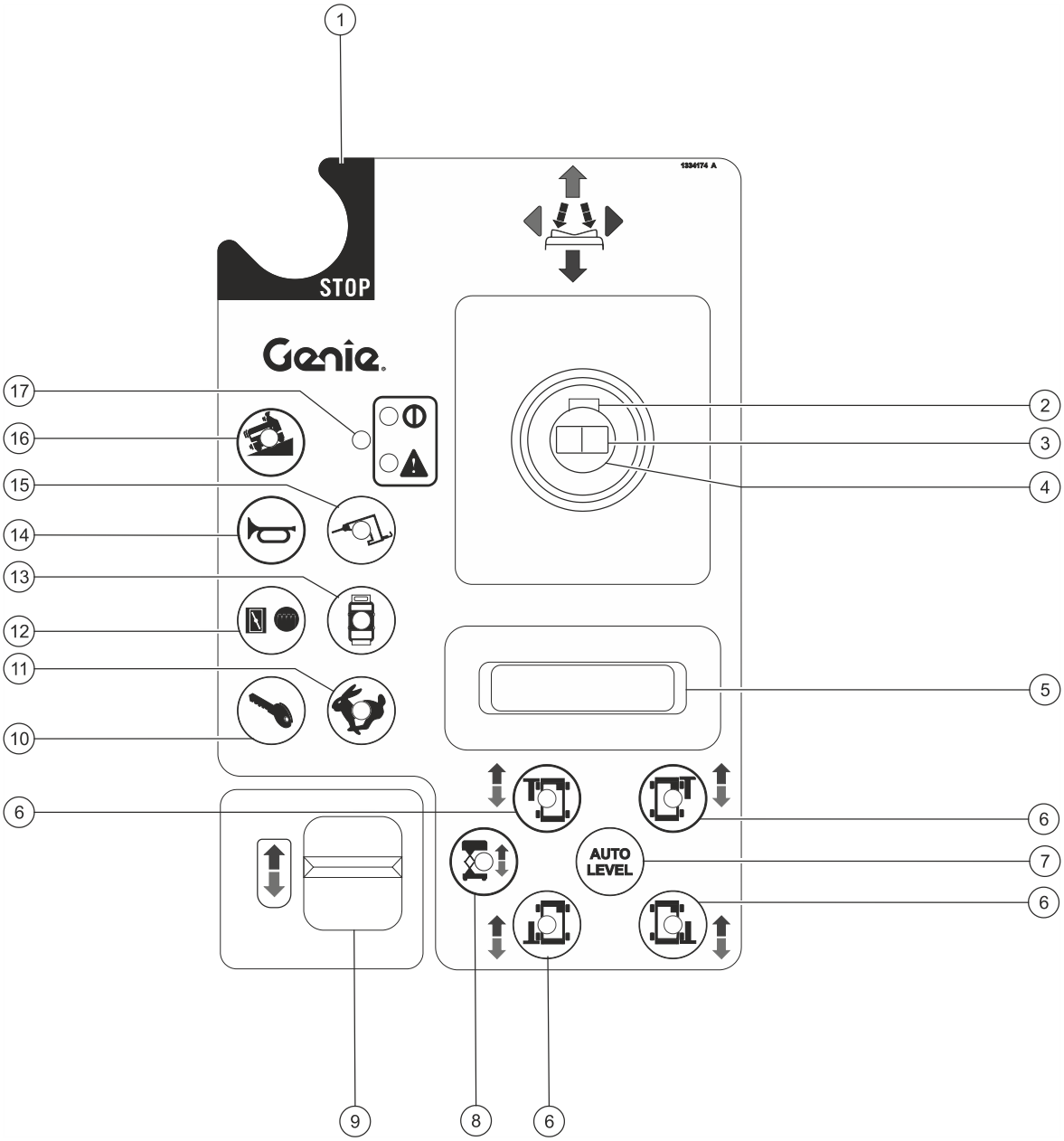
16 LCD readout screen (if equipped)

Screen displays hour meter, voltage, oil pressure and coolant temperature. Screen also displays fault codes and other service information.

17 Hour meter (if equipped)

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

# Controls




**Platform Control Panel**

# Controls

## Platform Control Panel

1 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.

2 Function enable switch

Press and hold the function enable switch to enable the drive function.

3 Thumb rocker switch for steer function

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.

4 Proportional control handle for drive function

Move the control handle in the direction indicated by the blue arrow on the control panel and the machine will move in the direction that the blue arrow points. Move the control handle in the direction indicated by the yellow arrow on the control panel and the machine will move in the direction that the yellow arrow points.

5 Wrist rest

6 Outrigger function enable button with indicator light

Press this button to activate the individual outrigger up/down function.

7 Outrigger auto level button

Press this button to activate the auto level function.

8 Lift function enable button with indicator light

Press this button to enable the lift function.

9 Proportional rocker switch for outrigger up/down and platform up/down

With the auto level button indicator light on, move the rocker switch up and the outriggers will raise. Move the rocker switch down and the outriggers will lower.

With an individual outrigger enable button indicator light on, move the rocker switch up and the outrigger will raise. Move the rocker switch down and the outrigger will lower.

With the lift function enable button indicator light on, move the rocker switch up and the platform will raise. Move the rocker switch down and the platform will lower.

10 Engine start button

Press this button to start the engine.

11 Engine idle select button with indicator light

Press this button to select the engine idle setting. Light on indicates high idle is selected. Light off indicates low idle is selected.

12 Gasoline/LPG models: Choke button

Press this button to aid in starting the engine in cold conditions.

Diesel models: Glow plug button

Press this button to aid in starting the engine in cold conditions.

# Controls

13 Gasoline/LPG models: LPG select button with indicator light

Press this button to select LPG.

14 Horn button

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

15 Generator select button with indicator light

Press this button to turn the generator on. Indicator light will be on. Press the button again to turn the generator off.

16 Machine on incline button with indicator light: Low speed operation for inclines

Press this button to select low speed operation for inclines.

17 Green power light/Red error indicator light

Green power light is on when Red Emergency Stop button is pulled out to the on position.

If red error indicator light is on, push in and pull out the Red Emergency Stop button to set the system. If the light stays red, tag and remove the machine from service.

# 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 or change of operator. 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.

Obey all local and governmental regulations regarding examinations and tests.

# Inspections

## Pre-operation Inspection

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

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

- ❑ Electrical components, wiring, and electrical cables
- ❑ Hydraulic hoses, fittings, cylinders, and manifolds
- ❑ Drive motors
- ❑ Wear pads
- ❑ Tires and wheels
- ❑ Limit switches, angle sensor, alarms and horn
- ❑ Nuts, bolts and other fasteners
- ❑ Brake release components
- ❑ Platform overload components
- ❑ Safety arm
- ❑ Platform extensions
- ❑ Scissor pins and retaining fasteners
- ❑ Platform control joystick
- ❑ Outrigger housing and footpads (if equipped)
- ❑ Fuel and hydraulic tanks
- ❑ Engine and related components
- ❑ Platform entry gate (if platform guard rails are installed)
- ❑ Lanyard anchorage points
- ❑ Generator (if equipped)
- ❑ Alarms and beacons (if equipped)

Check entire machine for:

- ❑ Cracks in welds or structural components
- ❑ Dents or damage to machine
- ❑ Excessive rust, corrosion or oxidation

- ❑ Verify that all structural and other critical components are present and all associated fasteners and pins are in place and properly tightened.
- ❑ Be sure side rails are installed, and snap pins and bolts are fastened (if platform rails are installed).

Note: If the platform must be raised to inspect the machine, make sure the safety arm is in place. See Operating Instructions section.

# 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 Pull out the platform and ground red Emergency Stop button to the on position.

3 Turn the key switch to ground control.

⊙ Result: The LCD screen will come on and display SYSTEM READY.

Note: In cold climates, the LCD readout screen will need to warm up before the display appears.

4 Start the engine. See Operating Instructions section.

### Test Emergency Stop

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

⊙ Result: The engine should shut off and no functions should operate.

6 Pull out the red Emergency Stop button to the on position and restart the engine.

### Test the Up/Down Functions

The audible warnings on this machine and the standard horn all come from the same central alarm. The horn is a constant tone. The descent alarm sounds at 60 beeps per minute. The alarm that goes off when the machine is not level sounds at 180 beeps per minute.

7 Do not press the lift function enable button. Press and hold the platform up button.



⊙ Result: The platform should not raise.

8 Press and hold the lift function enable button. Press and hold the platform up button.

⊙ Result: The platform should raise.

9 Press and hold the lift function enable button. Press and hold the platform down button.

⊙ Result: The platform should lower. The descent alarm should sound while the platform is lowering.

10 Turn the key switch to platform control.

# Inspections

## At the Platform Controls

### Test Emergency Stop

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

⊙ Result: The engine should shut off and no functions should operate.

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

⊙ Result: The indicator light should be green.



### Test the Horn

13 Press the horn button.

⊙ Result: The horn should sound.

### Test Up/Down Functions and Function Enable

14 Start the engine.

15 Activate the up/down rocker switch in the direction indicated by the yellow arrow.

⊙ Result: The platform should not raise.

16 Press and hold the lift function enable button.



17 Activate the up/down rocker switch in the direction indicated by the yellow arrow.

⊙ Result: The platform should raise.

18 Press and hold the lift function enable button.

19 Activate the up/down rocker switch in the direction indicated by the blue arrow.

⊙ Result: The platform should lower. The descent alarm should sound while the platform is lowering.

# Inspections

### Test the Steering

Note: When performing the steer and drive function tests, stand in the platform facing the steer end of the machine.

20 Press and hold the function enable switch on the control handle.

21 Press the thumb rocker switch on top of the control handle in the direction indicated by the blue triangle on the control panel.

⊙ Result: The steer wheels should turn in the direction indicated by the blue triangle.

22 Press the thumb rocker switch in the direction indicated by the yellow triangle on the control panel.

⊙ Result: The steer wheels should turn in the direction indicated by the yellow triangle.

### Test Drive and Braking

23 Press and hold the function enable switch on the control handle.

24 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 control panel, then come to an abrupt stop.

25 Press and hold the function enable switch on the control handle.

26 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 control panel, 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 Limited Drive Speed

27 Press and hold the lift function enable button. Raise the platform at least 6 ft / 1.8 m.

28 Press and hold the function enable switch on the control handle.

29 Slowly move the control handle to full drive position.

⊙ Result: The maximum achievable drive speed with the platform raised should not exceed 1.03 ft / 31 cm/s.

If the drive speed with the platform raised exceeds 1.03 ft / 31 cm/s, immediately tag and remove the machine from service.

# Inspections

### Test the Outrigger Deployment Height (GS5390)

30 Push and hold the lift function enable button. Raise the platform.

⊙ Result: The platform should raise to 35 ft / 10.8 m and then stop. The platform should not raise above 35 ft / 10.8 m unless the outriggers are lowered.

31 Drive the machine forward.

⊙ Result: The drive function should not operate.

32 Lower the platform. If the platform is higher than 15 ft / 4.6 m from the ground, the outriggers will not lower.

33 Push and hold the auto level button.




34 Activate the up/down rocker switch in the down direction.

⊙ Result: The outriggers should extend and level the machine. A beep will sound when the machine is level.

35 Raise the platform.

⊙ Result: The platform should raise to full height.

36 Lower the platform.

37 Push and hold the auto level button and raise the outriggers.

### Test Auxiliary Power

38 Push and hold the lift function enable button and raise the platform approximately 2 ft / 60 cm.

39 Push in the red Emergency Stop button to shut off the engine.

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

41 Press and hold the lift function enable button. Activate the up/down rocker switch in the direction indicated by the blue arrow.

⊙ Result: The platform should lower.

### Test Drive Tilt Cutout

Note: Perform this test from the ground with the platform controller. Do not stand in the platform.

42 Fully lower the platform.

43 Drive the machine onto a slope where the chassis angle is greater than 2.5° side to side.

44 Raise the platform to approximately 15 ft / 4.6 m.

⊙ Result: The platform should stop and the tilt alarm will sound at 180 beeps per minute. The indicator light on the lift function enable button will be red.

45 Press and hold the function enable switch on the control handle.

46 Move the control handle in the direction indicated by the blue arrow, then move the control handle in the direction indicated by the yellow arrow.

⊙ Result: The drive function should not work in either direction.

# Inspections

47 Fully lower the platform.

48 Drive the machine.

⊙ Result: The machine should drive.

49 Return to level ground and raise the platform in excess of approximately 15 ft / 4.6 m.

50 Drive the machine onto a slope where the chassis angle is greater than 2.5° side to side.

⊙ Result: The machine should stop at or before the machine reaches 2.5° of chassis tilt and the tilt alarm will sound at 180 beeps per minute. The indicator light on the lift function enable button will be red.

51 Fully lower the platform.

52 Drive the machine onto a slope where the chassis angle is greater than 3.5° front to back.

53 Raise the platform to approximately 15 ft / 4.6 m.

⊙ Result: The platform should stop and the tilt alarm will sound at 180 beeps per minute. The indicator light on the lift function enable button will be red.

54 Press and hold the function enable switch on the control handle.

55 Move the control handle in the direction indicated by the blue arrow, then move the control handle in the direction indicated by the yellow arrow.

⊙ Result: The drive function should not work in either direction.

56 Fully lower the platform.

57 Drive the machine.

⊙ Result: The machine should drive.

58 Return to level ground and raise the platform in excess of approximately 15 ft / 4.6 m.

59 Drive the machine onto a slope where the slope angle is greater than 3.5° front to back.

⊙ Result: The platform should stop and the tilt alarm will sound at 180 beeps per minute. The indicator light on the lift function enable button will be red.

60 Fully lower the platform and return to level ground.

# 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

## Decals Inspection with Symbols

Use the 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 |
|---|---|---|
| 28158 | Label – Unleaded* | 1 |
| 28159 | Label – Diesel* | 1 |
| 28160 | Label – Liquid Petroleum Gas (1 additional with extra LPG tank option) | 1 |
| 28174 | Label – Power to Platform, 230V* | 3 |
| 28235 | Label – Power to Platform, 115V* | 3 |
| 43618 | Label – Directional Arrows | 1 |
| 44981 | Label – Air Line to Platform* | 2 |
| 52475 | Label – Transport Tie Down | 4 |
| 72086 | Label – Lifting Point | 4 |
| 72868 | Label – Engine Tray Prop | 1 |
| 82240 | Label – 105 dB* | 1 |
| 82474 | Label – Use Safety Chock | 2 |
| 82475 | Label – Crushing Hazard, Outriggers** | 4 |
| 82481 | Label – Battery/Charger Safety | 1 |
| 82487 | Label – Read the Manual | 2 |
| 82560 | Label – Skin Injection Hazard | 1 |
| 82812 | Label – Read the Service Manual | 1 |
| 97709 | Label – Hot | 2 |
| 97719 | Label – Safety Arm | 1 |
| 114251 | Label – Explosion Hazard | 1 |
| 114337 | Label – Tip-over Hazard, Limit Switch | 1 |
| 114338 | Label – Tip-over Hazard, Tilt Alarm | 1 |
| 114371 | Label – Outrigger Safety | 1 |
| 133537 | Label – Crushing Hazard | 1 |
| 215526 | Label – Belt Routing (MSG-425) | 1 |
| 1263542 | Label – Compartment Access | 2 |
| 1272242 | Label – Machine Registration | 1 |
| 1281174 | Label – Lanyard Anchorage Point, Fall Arrest/Fall Restrained | 10 |
| 1293166 | Danger, Warning – Tip-over, Crush Hazard | 1 |
| 1293217 | Label – Danger, Electrocution Hazard | 3 |
| 1294688 | Label – Platform Overload LED Indicator Light | 1 |
| 1299262 | Label – Transport and Lifting Instructions | 2 |
| 1299288 | Label – Max. Capacity/Side Force, GS-3384, GS-3390* | 1 |
| 1299289 | Label – Max. Capacity/Side Force, GS-4390* | 1 |
| 1299290 | Label – Max. Capacity/Side Force, GS-5390* | 1 |
| 1304217 | Label – Explosion Hazard | 1 |
| 1301030 | Label – Diesel, Stage V | 1 |
| 1301217 | Label – Emergency Lowering | 1 |
| 1329018 | Ground Control Panel | 1 |
| 1334174 | Platform Control Panel | 1 |
| 1335261 | Arrow, Platform Control | 1 |
| 1337570 | Ground Control Panel | 1 |
| 1337511 | Label – Wheel Load, GS-90 | 4 |
| 1337512 | Label – Outrigger Load, GS-3390*** | 4 |
| 1337513 | Label – Outrigger Load, GS-4390*** | 4 |
| 1337514 | Label – Outrigger Load, GS-5390*** | 4 |

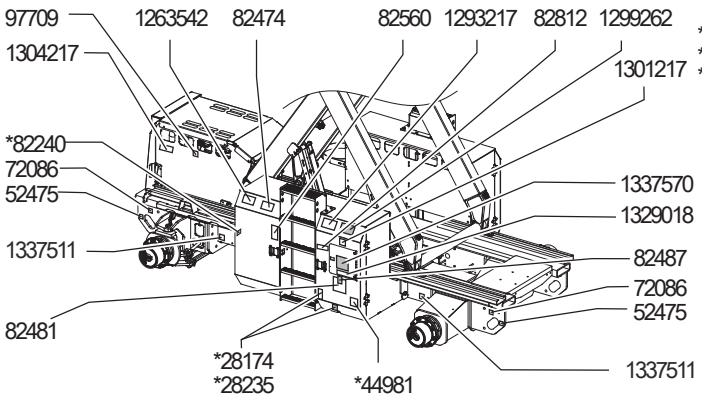
Shading indicates decal is hidden from view, i.e. under covers

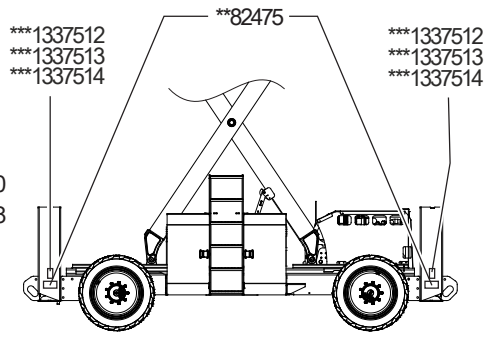
* These decals are model, option or configuration specific.

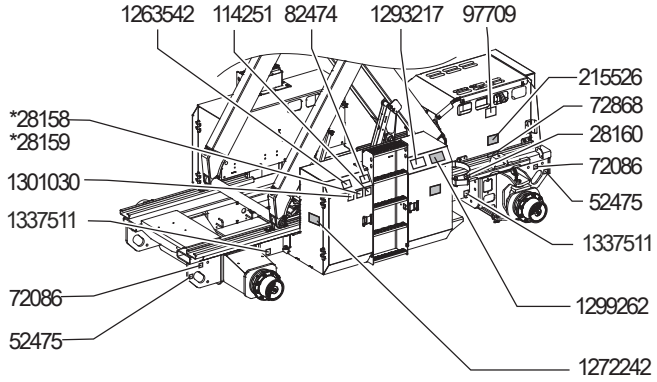
** These decals are installed on both sides of chassis.

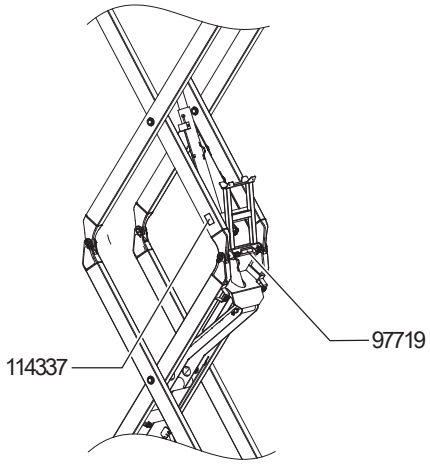
*** These decals are installed on both sides of chassis and are model, option, or configuration specific.

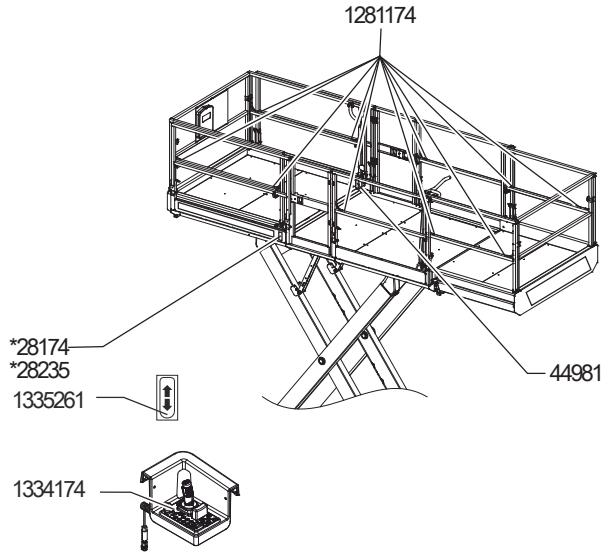
# Inspections

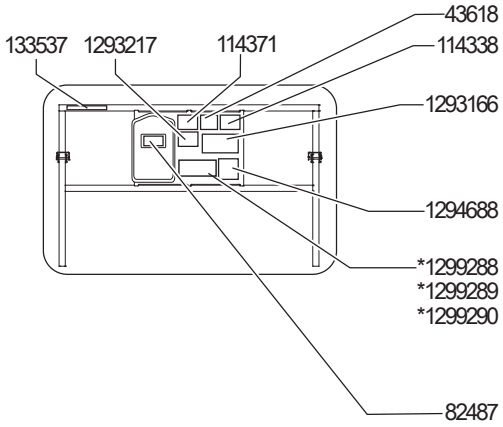


# Operating Instructions



## 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 manual.

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 manual. That means every new operator should perform a pre-operation inspection, function tests, and a workplace inspection before using the machine.

# Operating Instructions

## Emergency Stop

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

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

## Starting the Engine

1 At the ground controls, turn the key switch to the desired position.

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

### Gasoline/LPG models

1 Select LPG by pushing the LPG button.

2 Press the engine start button.

Note: In cold conditions, 20°F / -6°C and below, the machine should be started on gasoline and warmed for 2 minutes, then switched to LPG. Warm engines can be started on LPG.

### Diesel models

1 Press the engine start button.

Note: In cold condition, 50°F / 10°C and below, push and hold the glow plug button for 5 to 10 seconds before starting the engine. Limit continuous use of the glow plug button to 20 seconds.

### All models

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.

# Operating Instructions

## Operation from Ground

1 Turn the key switch to ground control.

2 Pull out both ground and platform red Emergency Stop buttons to the on position.

3 Start the engine.

### To Position Platform



1 Push and hold the lift function enable button.

Note: If the function enable control (i.e., button or foot switch) is activated and a function control is not activated after a pre-determined duration, the function enable controls will deactivate. The operator should then release the function enable control and try again.

2 Activate the up function or the down function.

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

### Engine Idle Select

Select the engine idle (rpm) by pressing the idle select button. There are three settings for engine idle:



- Indicator light off: low idle
- Indicator light blinking: high idle activated by any function enable button
- Indicator light on: high idle

## Operation from Platform

1 Turn the key switch to platform control.

2 Pull out both ground and platform red Emergency Stop buttons to the on position.

3 Start the engine.

### To Position Platform



1 Push and hold the lift function enable button.

Note: If the function enable control (i.e., button or foot switch) is activated and a function control is not activated after a pre-determined duration, the function enable controls will deactivate. The operator should then release the function enable control and try again.

2 Activate the up/down rocker switch in the desired direction.

### To Steer

1 Press and hold the function enable switch on the control handle.

2 Turn the steer wheels with the thumb rocker switch located on the top of the control handle.

### To Drive

1 Press and hold the function enable switch on the control handle.

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 platform is raised.

# Operating Instructions

### Drive Select Button



Machine on incline symbol: Low range operation for inclines.

### Indicator Light On Red



If the indicator light is on red, push in and pull out the red Emergency Stop button to reset the system.

If the light stays red, tag and remove the machine from service.

### Indicator Light Flashing Red



If the indicator light is flashing red, the platform is overloaded and no functions will operate. An alarm will sound at the platform controls.

Remove weight from the platform.

Push in and pull out the red Emergency Stop button to reset the system.

If the platform is still overloaded, the light will continue to flash.

### ⚠ Driving on a slope

Determine the slope and side slope ratings for the machine and determine the slope grade.

| **Maximum slope rating, stowed position:** | | | |
|---|---|---|---|
|  | GS-3390, GS-4390 | 50% | 26° |
| | GS-5390 | 40% | 22° |

| **Maximum side slope rating, stowed position:** | | | |
|---|---|---|---|
|  | GS-3390, GS-4390 | 50% | 26° |
| | GS-5390 | 40% | 22° |

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

# 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 1 m long
- tape measure

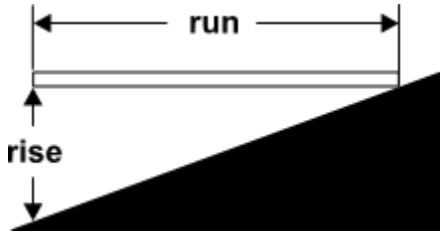
Lay the piece of wood on the slope.

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 = 3.6 m

Run = 3.6 m

Rise = 0.3 m

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

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

## To Extend and Retract Platform

1 Lift the platform extension lock handles to the horizontal position.

2 Push the platform extension lock handles to extend the platform to the desired position.

Do not stand on the platform extension while trying to extend it.

3 Lower the platform extension lock handles.

## Auxiliary Power

### At the Ground Controls



Push and hold the lift function enable button and activate the down function.

In the event of a power failure, use the auxiliary power function.

### At the Platform Controls

Push and hold the lift function enable button and activate the up/down rocker switch in the down direction.

# Operating Instructions

## Tilt Sensor Activation Settings

| Tilt Sensor Activation Settings | |
|---|---|
| **Chassis Angle on Wheels** | |
| Chassis Angle (side to side) | 2° |
| Chassis Angle (front to back) | 3° |
| **Chassis Angle on Outriggers** | |
| Chassis Angle (side to side) | 0.8° |
| Chassis Angle (front to back) | 3° |

When the machine is On Incline and elevated above the down limit height, the tilt alarm sounds and the drive and lift functions are disabled.



Lower the machine below the down limit height to restore drive and lift functionality.



## Operation from Ground with Controller

Maintain safe distances between the operator, machine and fixed objects.

Be aware of the direction the machine will travel when using the controller.

# Operating Instructions

## Outrigger Operation (if equipped)

1 Position the machine below the desired work area.

Note: The engine must be running for the outriggers to operate.

2 Push and hold the auto level button.




3 Activate the up/down rocker switch in the down direction. The outriggers will extend and level the machine. A beep will sound when the machine is level.

The indicator light on the lift function enable button will turn red when one but not all outriggers are down. All drive and lift functions are disabled.



The light turns green on the lift function enable button and on the individual outrigger buttons when all the outriggers are in firm contact with the ground.

The drive function is disabled while the outriggers are down.

### To control individual outriggers

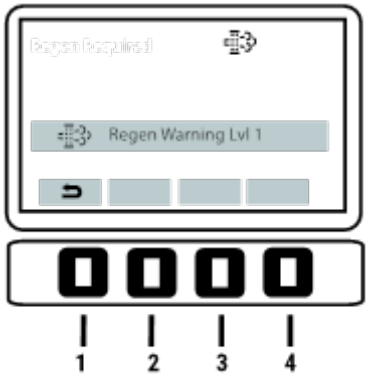
1 Push and hold one or more outrigger buttons.

2 Active the outrigger up/down rocker switch in the desired direction to level the machine.

# Operating Instructions

## Standstill Regeneration

When the LCD screen displays the message "Regen Warning Lvl 1" (level 1 or higher), the DPF (Diesel Particulate Filter) requires a Standstill Regeneration.




- ⚠ During the DPF standstill generation process, all functions are disabled.
- ⚠ Keep clear of the engine exhaust and muffler.
- ⚠ Don't leave the machine unattended.
- ⚠ The DPF standstill regeneration cannot be activated if not requested by the engine, or in the presence of some engine faults.
- ⚠ Do not ignore the regeneration request. Otherwise, the soot in the DPF can reach extreme levels. The filter will be permanently damaged and will have to be replaced by a qualified service technician. If this occurs, the following message will be displayed "Not possible, service needed".
- ⚠ Under emergencies, the DPF standstill regeneration can be interrupted in three ways:
  - The engine is turned off by the key switch.
  - The ESC button is pressed.
  - The ESTOP stop button is pushed.

  If this occurs, the standstill regeneration may need to be restarted.
- ⚠ The DPF standstill regeneration cannot begin until the engine has been run for at least two minutes and the coolant temperature has reached 35°C.

# Operating Instructions

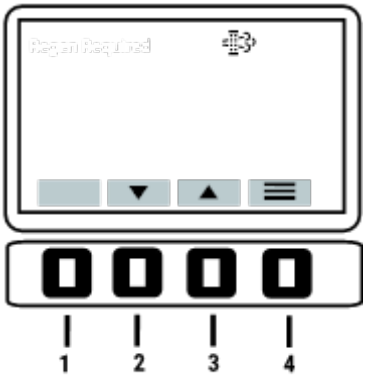
To start the regeneration, proceed as follows.

1 Push back the engine tray.

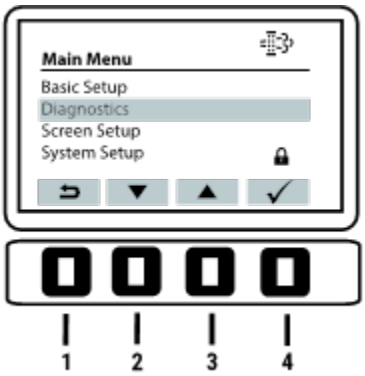
2 Select a safe parking location—firm and level, clear of obstructions and traffic, clear of flammable material and clear of explosive gasses.

3 At the ground control panel, turn the key switch to the ground position.

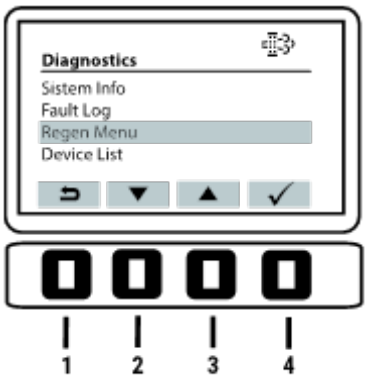
4 Press the control button 4 below the LCD screen twice.




5 Using the control buttons 2 and 3 below the LCD screen, select "Diagnostics" from the Main Menu. Press the control button 4 to confirm the selection.

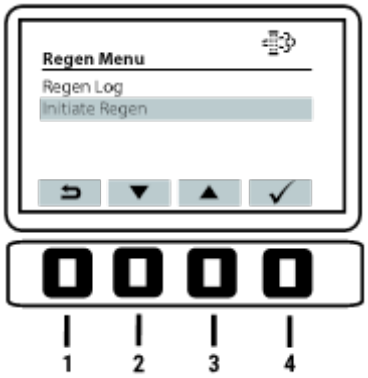



6 Using the control buttons 2 and 3 below the LCD screen, select "Regen Menu". Press the control button 4 to confirm the selection.

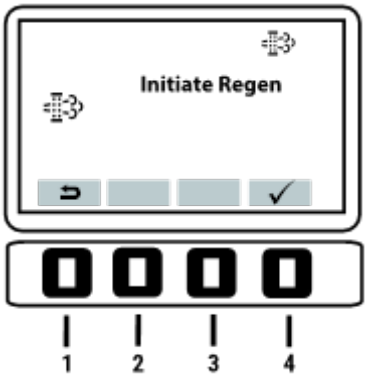


# Operating Instructions

7 Using the control buttons 2 and 3 below the LCD screen, select "Initiate Regen". Press the control button 4 to confirm the selection.




8 The LCD screen will display the message "Initiate Regen". Press the control button 4 to confirm.




9 The LCD screen will display the message " Warning: Machine must be in a nonflammable environment". Press the control button 4 to confirm.

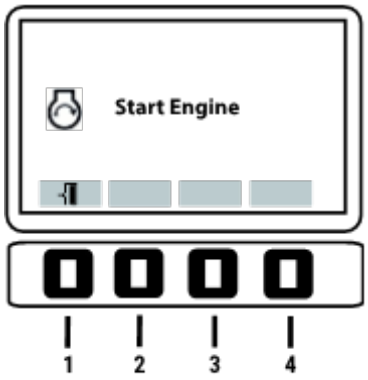



10 The LCD screen will display the message "Notice: All functions will lock. Regen takes approx 1 hour". Press the control button 4 to confirm.



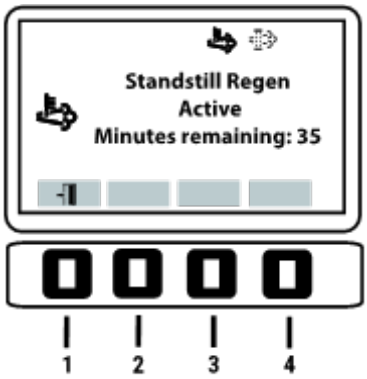
# Operating Instructions

11 If the engine is not already running, the LCD screen displays the message "Start Engine".

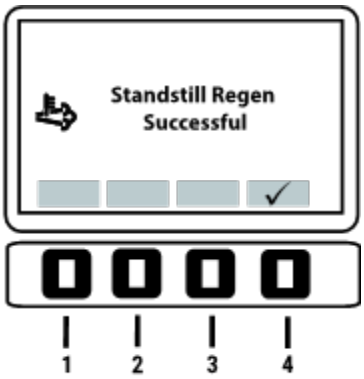



12 Start the engine. The engine will go into a pre-warm cycle.

13 The LCD screen will display the message "Standstill Regen Active Minutes remaining: 35".




14 The regeneration process auto-advances and once it is completed the LCD screen displays the message "Regen Successful".



# Operating Instructions

## After Each Use

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

2 Lower the platform.

3 Turn the key switch to the off position and remove the key to secure from unauthorized use.

## Machine Storage

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

1 See After Each Use section for basic machine stowing instructions.

2 Store the machine in a dry and well-ventilated location. Be sure machine is clean and dry.

3 Perform a complete Pre-Operation Inspection.

Models with Engines: fill the fuel tank.

4 Refer to the Scheduled Maintenance section in the appropriate Service Manual, and complete each lubrication procedure.

5 Remove and store the battery.

6 Models with Engines: Refer to the OEM engine manual for additional extended storage procedures. As needed, start and run the engine for 10 minutes.

# Transport and Lifting Instructions

## Observe and Obey:

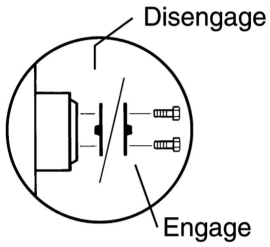
- ☑ Genie provides this securement information as a recommendation. Drivers are solely responsible for making sure machines are properly secured and the correct trailer is selected.
- ☑ Genie customers needing to containerize any lift or Genie product should source a qualified freight forwarder with 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.
- ☑ 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.

2WD models: Release the non-steer wheel brakes by turning over the drive hub disconnect caps.

4WD models: Release the wheel brakes by turning over all four torque 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 during normal operation.

# Transport and Lifting Instructions

## Securing to Truck or Trailer for Transit

Always chock the machine wheels in preparation for transport.

Retract and secure the extension deck(s).

Use the tie-down points on the chassis for anchoring down to the transport surface.

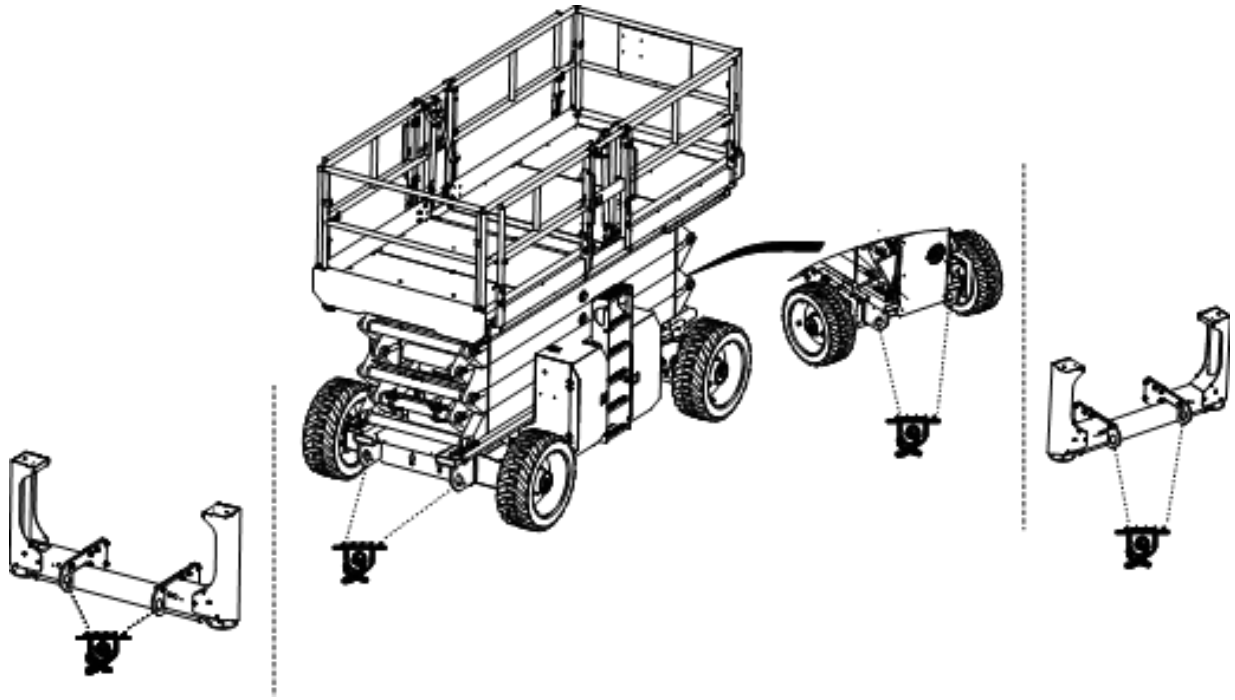
Use a minimum of 4 chains or straps.

Use chains or straps of ample load capacity.

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

Inspect the entire machine for loose or unsecured items.

If the railings have been folded down, secure them with straps before transporting.



# Transport and Lifting Instructions



## Observe and Obey:

- ☑ Only qualified riggers should rig and lift the machine.
- ☑ 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.

# Transport and Lifting Instructions

## Lifting Instructions

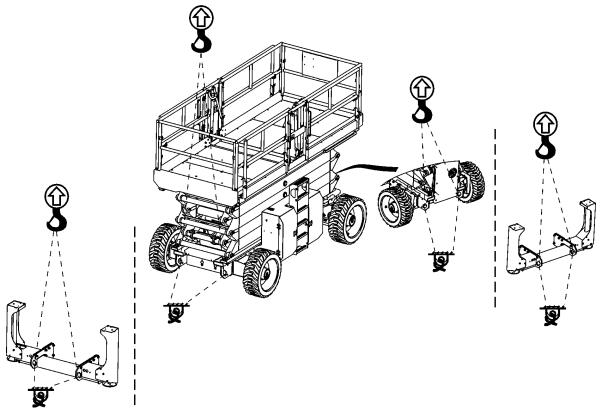
Fully lower the platform. Be sure the extension deck, controls and component trays are secure. Remove all loose items on the machine.

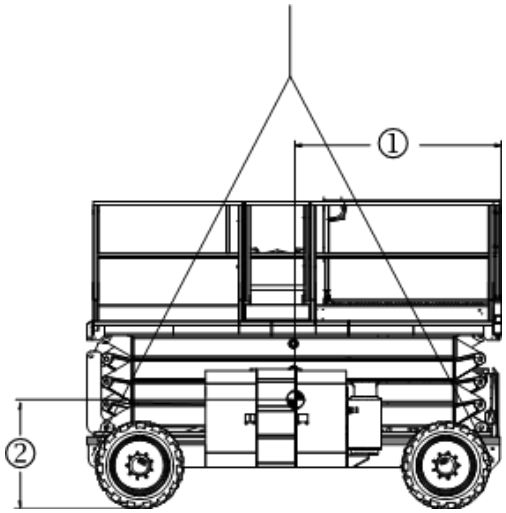
Determine the center of gravity of your machine using the table and the picture on this page.

Attach the rigging only to the designated lifting points on the machine.

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

| Center of gravity | X Axis | Y Axis |
|---|---|---|
| **GS-3390** without outriggers | 74.7 in<br>189.7 cm | 38.2 in<br>97.0 cm |
| **GS-4390** without outriggers | 74.7 in<br>189.7 cm | 42.1. in<br>106.9 cm |
| **GS-3390** with outriggers | 75.1 in<br>190.8 cm | 37.2 in<br>94.5 cm |
| **GS-4390** with outriggers | 75.1 in<br>190.8 cm | 39.8 in<br>101.1 cm |
| **GS-5390** | 76.0 in<br>193 cm | 42.7 in<br>108.5 cm |






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 performed by qualified service technicians, according to the manufacturer's specifications.
- ☑ Dispose of material in accordance with governmental regulations.
- ☑ Use only Genie approved replacement parts.

## Maintenance Symbols Legend

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



Indicates that tools will be required to perform this procedure.



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



Indicates that a cold engine is required before performing this procedure.

## Check the Batteries



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

⚠ Electrocution hazard. Contact with hot or live circuits may result in death or serious injury. Remove all rings, watches and other jewelry.

⚠ Bodily injury hazard. Batteries contain acid. Avoid spilling or contacting battery acid. Neutralize battery acid spills with baking soda and water.

Note: Perform this test after fully charging the batteries.

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.

## 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.

| | |
|---|---|
| **Deutz D2.9 L4 Engine** | |
| Oil type | 15W-40 |
| Oil type - cold conditions | 5W-40 |
| **Deutz DL2011 L03i Engine** | |
| Oil type | 15W-40 |
| Oil type - cold conditions | 5W-40 |
| **Deutz TD 2.2 49 HP Engine** | |
| Oil type | 15W-40 |
| Oil type - cold conditions | 5W-40 |
| **Ford MSG-425 EFI Engine** | |
| Oil type | 5W-20 |
| **Weichai WP3.2 Engine** | |
| Oil type | 15W-40 |
| **Deutz D436 Engine** | |
| Oil type | 15W-40 |
| Oil type - cold conditions | 5W-30 |

## 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.

| | |
|---|---|
| **Deutz D2011 L03i Engine** | |
| Fuel Type | Low Sulfur Diesel (LSD) |
| **Deutz D2.9 L4 Engine** | |
| Fuel Type | Ultra Low Sulfur Diesel (ULSD) |
| **Deutz TD 2.2 49 HP Engine** | |
| Fuel Type | Ultra Low Sulfur Diesel (ULSD) |
| **Deutz D436 Engine** | |
| Fuel Type | Low Sulfur Diesel (LSD) |
| **Weichai WP3.2 Engine** | |
| Fuel Type | Ultra Low Sulfur Diesel (ULSD) |

# Maintenance

## Check the Hydraulic Oil Level

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

1 Be sure that the platform is in the stowed position and the engine off.

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 |

## 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.

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

⊙ Result: The fluid level should be visible in the top tank of the radiator.

⚠ Burn hazard. Do not remove the radiator cap if the engine and/or radiator is warm. The engine and radiator should be cool to the touch before performing the coolant level inspection.

# 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

| GS-3390 | | |
|---|---|---|
| Height, working maximum | 39 ft | 11.9 m |
| Height, platform maximum | 33 ft | 10.1 m |
| Height, stowed maximum, rails up | 106.5 in | 271 cm |
| Height, stowed maximum, rails lowered | 79.75 in | 203 cm |
| Width, standard tires | 92 in | 234 cm |
| Width, high flotation tires | 101 in | 257 cm |
| Length, platform retracted Models with one extension deck | 155.25 in | 394 cm |
| Length, platform extended Models with one extension deck | 212.5 in | 540 cm |
| Length, platform retracted Models with two extension decks | 156.5 in | 398 cm |
| Length, platform extended Models with two extension decks | 258.5 in | 657 cm |
| Length, platform retracted Models with outriggers Models with two super decks | 192 in | 4.9 m |
| Length, platform extended Models with two super decks | 290.5 in | 7.4 m |
| Maximum load capacity | 2500 lbs | 1134 kg |
| Maximum wind speed | 28 mph | 12.5 m/s |
| Wheelbase | 112 in | 284 cm |
| Turning radius (outside) | 210 in | 533 cm |
| Turning radius (inside) | 85 in | 216 cm |
| Ground clearance | 14 in | 36 cm |

**Weight**
(Machine weights vary with option configurations. See serial label for specific machine weight.)

| Platform dimensions | | |
|---|---|---|
| Platform length x width, stowed, single deck | 155.25 in x 72 in | 3.8 x 1.8 m |
| Platform length x width, stowed, dual deck | 156.5 in x 72 in | 4 m x 1.8 m |
| Platform length x width, stowed, super deck | 189.5 in x 72 in | 4.8 m x 1.8 m |
| Platform extension length, front | 60 in | 1.5 m |
| Platform extension length, rear | 48 in | 1.2 m |
| **Ambient operating temperature** | | -20° F to 120° F -29° C to 49° C |

| Drive speeds | | |
|---|---|---|
| Stowed, maximum | 5.0 mph | 8.0 km/h |
| Platform raised, maximum | 0.7 mph 40 ft / 39 sec | 1.1 km/h 12.2 m / 39 sec |
| Controls | | Proportional |
| AC outlet in platform | | |
| Maximum hydraulic pressure (functions) | 3500 psi | 241 bar |
| Tire size | | 315/55D20-12 |
| Tire size, high flotation | | 33/16LL500, 10 ply |
| **Airborne noise emissions** | | |
| Sound pressure level at ground workstation | | <90 dBA |
| Maximum slope rating, stowed position | | <72 dBA |
| Guaranteed sound power level | | 105 dBA |

Total vibration value to which the hand/arm system is subjected does not exceed 2.5 $m/s^2$.

Highest root mean square value of weighted acceleration to which the whole body is subjected does not exceed 1.6 $ft/s^2$ or 0.5 $m/s^2$.

| | |
|---|---|
| **Maximum side slope rating, stowed position** | 50% (26°) |
| **Maximum slope rating, stowed position** | 50% (26°) |

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 |
| **Machine Classification** | Group A/Type 3 as defined by ISO 16368 |

| Floor loading information | | |
|---|---|---|
| Tire load maximum | 4734 lbs | 2147 kg |
| Outrigger load, maximum (If equipped) | 4734 lbs | 2147 kg |
| Tire contact pressure | 116 psi | 8.12 $kg/cm^2$ 796 kPa |
| Occupied floor pressure (on tires) | 167 psf | 816 $kg/m^2$ 8.00 kPa |
| Occupied floor pressure (on outriggers) | 146 psf | 713 kg/m^2 6.97 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

| GS-4390 | | |
|---|---|---|
| Height, working maximum | 49 ft | 14.9 m |
| Height, platform maximum | 43 ft | 13.1 m |
| Height, stowed maximum, rails up | 115.5 in | 293 cm |
| Height, stowed maximum, rails lowered | 88.75 in | 225 cm |
| Width, standard tires | 92 in | 234 cm |
| Width, high flotation tires | 101 in | 257 cm |
| Length, platform retracted Models with one extension deck | 155.25 in | 394 cm |
| Length, platform extended Models with one extension deck | 212.5 in | 540 cm |
| Length, platform retracted Models with two extension decks | 156.5 in | 398 cm |
| Length, platform extended Models with two extension decks | 258.5 in | 657 cm |
| Length, platform retracted Models with outriggers Models with two super decks | 192 in | 4.9 m |
| Length, platform extended Models with two super decks | 290.5 in | 7.4 m |
| Maximum load capacity | 1500 lbs | 680 kg |
| Maximum wind speed | 28 mph | 12.5 m/s |
| Wheelbase | 112 in | 284 cm |
| Turning radius (outside) | 210 in | 533 cm |
| Turning radius (inside) | 85 in | 216 cm |
| Ground clearance | 14 in | 36 cm |

**Weight**

(Machine weights vary with option configurations. See serial label for specific machine weight.)

| Platform dimensions | | |
|---|---|---|
| Platform length x width, stowed, single deck | 155.25 in x 72 in | 3.9 m x 1.8 m |
| Platform length x width, stowed, dual deck | 156.5 in x 72 in | 4 m x 1.8 m |
| Platform length x width, stowed, super deck | 189.5 in x 72 in | 4.8 m x 1.8 m |
| Platform extension length, front | 60 in | 1.5 m |
| Platform extension length, rear | 48 in | 1.2 m |
| **Ambient operating temperature** | -20° F to 120° F | -29° C to 49° C |

| Drive speeds | | |
|---|---|---|
| Stowed, maximum | 5.0 mph | 8.0 km/h |
| Platform raised, maximum | 0.7 mph 40 ft / 39 sec | 1.1 km/h 12.2 m / 39 sec |
| Controls | | Proportional |
| AC outlet in platform | | Standard |
| Maximum hydraulic pressure (functions) | 3500 psi | 241 bar |
| Tire size | | 315/55D20-12 |
| Tire size, high flotation | | 33/16LL500, 10 ply |
| **Airborne noise emissions** | | |
| Sound pressure level at ground workstation | | <90 dBA |
| Sound pressure level at platform workstation | | <72 dBA |
| Guaranteed sound power level | | 105 dBA |

Total vibration value to which the hand/arm system is subjected does not exceed 2.5 $m/s^2$.

Highest root mean square value of weighted acceleration to which the whole body is subjected does not exceed 1.6 $ft/s^2$ or 0.5 $m/s^2$.

| | |
|---|---|
| **Maximum side slope rating, stowed position** | 50% (26°) |
| **Maximum slope rating, stowed position** | 50% (26°) |

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 |
| **Machine Classification** | Group A/Type 3 as defined by ISO 16368 |

| Floor loading information | | |
|---|---|---|
| Tire load maximum | 4722 lbs | 2142 kg |
| Outrigger load, maximum (If equipped) | 4722 lbs | 2142 kg |
| Tire contact pressure | 115 psi | 8.09 $kg/cm^2$ 794 kPa |
| Occupied floor pressure (on tires) | 167 psf | 815 $kg/m^2$ 8.99 kPa |
| Occupied floor pressure (on outriggers) | 143 psf | 698 kg/m^2 6.87 KPa |

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

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# Specifications

| GS-5390 | | |
|---|---|---|
| Height, working maximum | 59 ft | 18 m |
| Height, platform maximum | 53 ft | 16.2 m |
| Height, stowed maximum, rails up | 124 in | 315 cm |
| Height, stowed maximum, rails lowered | 97.25 in | 247 cm |
| Width, standard tires | 92 in | 234 cm |
| Width, high flotation tires | 101 in | 257 cm |
| Length, platform retracted Models with one extension deck | 162 in | 4.9 m |
| Length, platform extended Models with one extension deck | 212.5 in | 540 cm |
| Length, platform retracted Models with two extension decks | 192 in | 488 cm |
| Length, platform extended Models with two extension decks | 258.5 in | 657 cm |
| Length, platform retracted Models with outriggers Models with two super decks | 192 in | 4.9 m |
| Length, platform extended Models with two super decks | 290.5 in | 7.4 m |
| Maximum load capacity | 1500 lbs | 680 kg |
| Maximum wind speed | 28 mph | 12.5 m/s |
| Wheelbase | 112 in | 284 cm |
| Turning radius (outside) | 210 in | 533 cm |
| Turning radius (inside) | 85 in | 216 cm |
| Ground clearance | 14 in | 36 cm |

**Weight**
(Machine weights vary with option configurations. See serial label for specific machine weight.)

| Platform dimensions | | |
|---|---|---|
| Platform length x width, stowed, single deck | 155.25 in x 72 in | 3.9 m x 1.8 m |
| Platform length x width, stowed, dual deck | 156.5 in x 72 in | 4 m x 1.8 m |
| Platform length x width, stowed, super deck | 189.5 in x 72 in | 4.8 m x 1.8 m |
| Platform extension length, front | 60 in | 1.5 m |
| Platform extension length, rear | 48 in | 1.2 m |
| **Ambient operating temperature** | -20° F to 120° F | -29° C to 49° C |

| Drive speeds | | |
|---|---|---|
| Stowed, maximum | 5.0 mph | 8.0 km/h |
| Platform raised, maximum | 0.7 mph 40 ft / 39 sec | 1.1 km/h 12.2 m / 39 sec |
| Controls | | Proportional |
| AC outlet in platform | | Standard |
| Maximum hydraulic pressure (functions) | 3500 psi | 241 bar |
| Tire size | | 315/55D20-12 |
| Tire size, high flotation | | 33/16LL500, 10 ply |

| Airborne noise emissions | |
|---|---|
| Sound pressure level at ground workstation | <90 dBA |
| Sound pressure level at platform workstation | <72 dBA |
| Guaranteed sound power level | 105 dBA |

Total vibration value to which the hand/arm system is subjected does not exceed 2.5 $m/s^2$.

Highest root mean square value of weighted acceleration to which the whole body is subjected does not exceed 1.6 $ft/s^2$ or 0.5 $m/s^2$.

| | |
|---|---|
| **Maximum side slope rating, stowed position** | 40% (22°) |
| **Maximum slope rating, stowed position** | 40% (22°) |

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 |
| **Machine Classification** | Group A/Type 3 as defined by ISO 16368 |

| Floor loading information | | |
|---|---|---|
| Tire load maximum | 5294 lbs | 2401 kg |
| Outrigger load, maximum (If equipped) | 5294 lbs | 2401 kg |
| Tire contact pressure | 129 psi | 9.08 $kg/cm^2$ 890 kPa |
| Occupied floor pressure (on tires) | 187 psf | 912 $kg/m^2$ 8.94 kPa |
| Occupied floor pressure (on outriggers) | 161 psf | 786 $kg/m^2$ 7.70 kPa |

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

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