

Operator's Manual

S-100

S-105

S-120

S-125

CE

with Maintenance Information

Original Instructions
Fifth Edition
Second Printing
Part No. T113597

Important

Read, understand and obey these safety rules and operating instructions before operating this machine. Only trained and authorized personnel shall be permitted to operate this 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, call Genie Industries.

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Contact us:

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

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Introduction

Owners, Users and Operators:

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. We feel that you make a major contribution to safety if you, as the equipment users and operators:

- Comply with employer, job site and governmental rules.
- 2 Read, understand and follow the instructions in this and other manuals supplied with this machine.
- 3 Use good safe work practices in a commonsense way.
- 4 Only have trained/certified operators, directed by informed and knowledgeable supervision, running the machine.

If there is anything in this manual that is not clear or which you believe should be added, please contact us.

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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 above principle 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.

Introduction

Hazard Classification

Genie uses 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.

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

AWARNINGOrange

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

ACAUTIONYellow

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

NOTICE

Indicates a property damage message.

Blue

Intended Use

This machine is intended to be used only to lift personnel, along with their tools and materials to an aerial work site.

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.

Symbol and Hazard Pictorials Definitions



Symbol and Hazard Pictorials Definitions

	ı			1
Lanyard attachment point	Wheel load	Fire Hazard	Have fire extinguisher near.	Voltage rating for power to platform
Electrocution Hazard	Avoid contact.	Tie-down instructions	Tie-down instructions	Pressure rating for air line to platform
Explosion Hazard	Do not use ether or other high energy starting aids on machines equipped with glow plugs.	Explosion / Burn Hazard	Keep all open flames and sparks away.	Read service manual.
Replace extension cylinder cover before operating machine.	Replace tires with same tire.			

General Safety



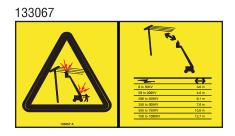






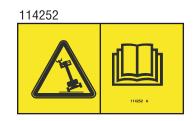
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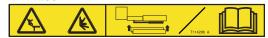


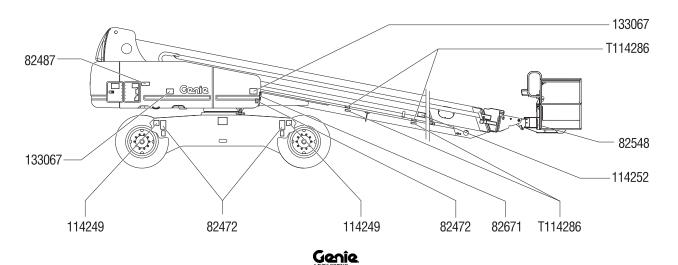
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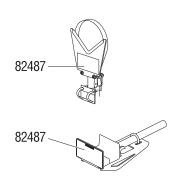
General Safety



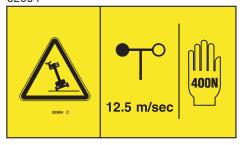


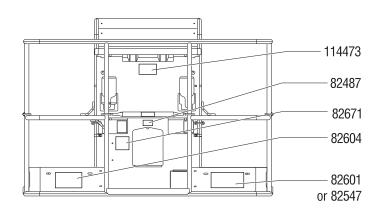
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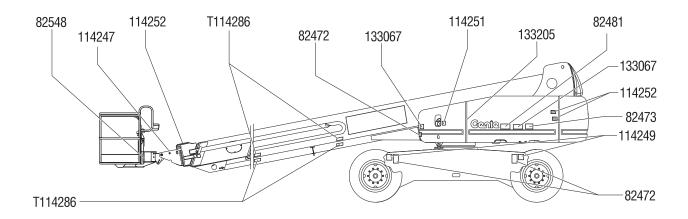








General Safety

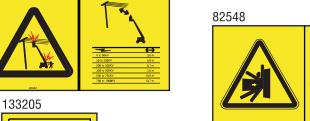












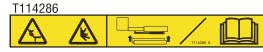












Personal Safety

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.

▲ Electrocution Hazards



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

Maintain safe distances from electrical power lines and apparatus in accordance with applicable governmental regulations and the following chart.

Line Voltage	Voltage Required Clearance	
0 to 50KV	3.0 m	
50KV to 200KV	4.6 m	
200KV to 350KV	6.1 m	
350KV to 500KV	7.6 m	
500KV to 750KV	10.6 m	
750KV to 1000KV	13.7 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 use the machine as a ground for welding unless the machine is equipped with the weld line to platform option and it is properly connected.

▲ Tip-over Hazards

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

Maximum occupants	2
S-125	227 kg
S-120	340 kg
S-105	227 kg
S-100	340 kg
Maximum platform capacity	

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



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

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

If the tilt alarm sounds while the boom is raised: Use extreme caution. 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: First lower the boom, then retract the boom.

If the tilt alarm sounds with the platform downhill: First retract the boom, then lower the boom.

Do not raise the boom when wind speeds may exceed 12.5 m/s. If wind speeds exceed 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.

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 dropoffs.

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 alter or disable the limit switches.

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

Maximum allowable manual force

400 N

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

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

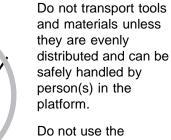


Do not modify or alter an aerial work platform without prior written permission from the manufacturer. Mounting attachments for holding tools or other materials onto the platform, toeboards or guard rail system can increase the weight in the platform and the surface area of the platform or the load.



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

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

Be sure all tires are in good condition, and lug nuts are properly tightened.

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

▲ 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 to machines in the stowed position.

Maximum slope rating, stowed position	
Platform downhill	40% (22°)
Platform uphill	40% (22°)
Side slope	25% (14°)

Note: Slope rating is subject to ground conditions and adequate traction.

▲ Fall Hazards







Occupants must wear a safety belt or harness in accordance with governmental regulations. Attach the lanyard to the anchorage point 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.

A 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 the use of personal protective equipment.

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





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

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

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

No stunt driving or horseplay while operating a machine.

▲ Bodily Injury Hazard

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

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

Do not operate the machine unless the secondary extend cylinder cover is properly installed.

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 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 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.

▲ 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 platform.

▲ 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.

▲ 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.

Explosion Hazard



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



The battery tray should remain open during the entire cycle.



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

▲ Electrocution/Burn Hazards

Avoid contact with electrical terminals.

▲ 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. The welder power supply weighs 34 kg.

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

▲ Weld Line to Platform 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.

Connect the positive lead to the twist-lock connector at the turntable and platform.

Clamp the negative lead to the ground post at the turntable and platform.

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 9.5 kg.

The maximum capacity of the pipe cradle assembly is 90.7 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 the 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 13.6 kg.

The maximum capacity of the panel cradles is 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: 1.2 m

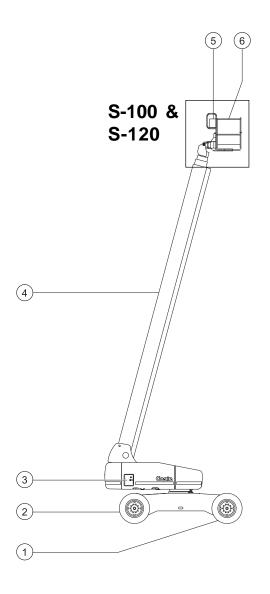
Maximum wind speed: 6.7 m/sec

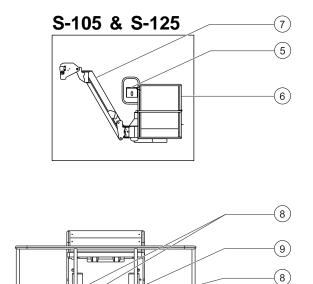
Maximum panel area: 3 m²

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 wheels at the circle end of the machine.
- 4 Turn the key switch to the off position and remove the key to secure from unauthorized use.
- 5 Chock the wheels.

Legend

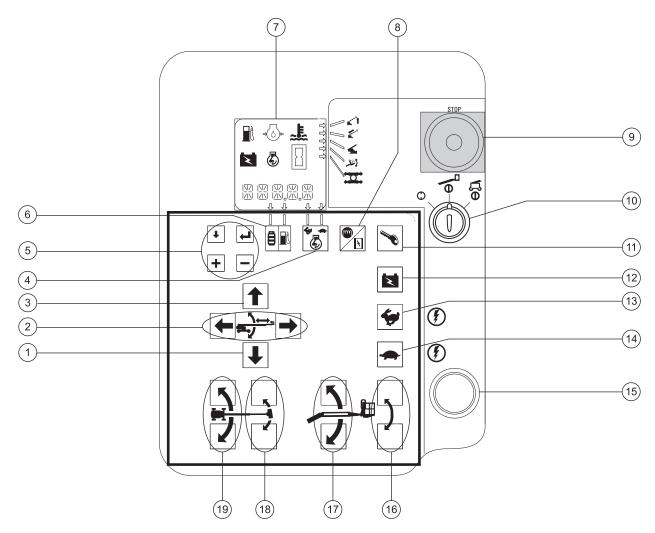




- 1 Circle-end tire (yellow arrow)
- 2 Square-end tire (blue arrow)
- 3 Ground controls
- 4 Boom
- 5 Platform controls
- 6 Platform
- 7 Jib boom (S-105 and S-125)

- 8 Lanyard anchorage point
- 9 Sliding mid-rail
- 10 Manual storage container
- 11 Foot switch

(10) (11)



Ground Control Panel

- 1 Boom down button
- 2 Boom extend/retract buttons
- 3 Boom up button
- 4 Engine speed select button
- 5 LCD screen control buttons
- 6 Gasoline/LPG select button
- 7 LCD readout screen
- 8 Diesel models: Glow plug button Gasoline/LPG models: Choke button
- 9 Red Emergency Stop button
- 10 Key switch for off/platform/ground selection

- 11 Engine start button
- 12 Emergency power button
- 13 High speed function enable button
- 14 Low speed function enable button
- 15 Alarm
- 16 Platform level up/down buttons
- 17 S-105 and S-125 models: Jib boom up/down buttons
- 18 Platform rotate left/right buttons
- 19 Turntable rotate left/right buttons

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1 Boom down button

Push the boom down button and the boom will lower.



2 Boom extend/retract buttons

button and the boom will extend. Push the boom retract button and the boom will retract.

Push the boom extend



3 Boom up button

Push the boom up button and the boom will raise.



4 Engine speed select button

Push the engine speed select button to select the engine speed. When the arrow above the rabbit is lit, the engine is in high idle speed. When the arrow above the turtle is lit, the engine is in low idle speed.

- 5 LCD screen control buttons
- 6 Gasoline/LPG select button

Push the fuel select button to select the engine fuel source. When the arrow above the LPG tank is lit, the engine will run on LPG. When the arrow above the gas tank is lit, the engine will run on gasoline. 7 LCD readout screen



- a low fuel indicator
- b engine oil pressure indicator
- c water temperature indicator
- d emergency power indicator
- e high engine rpm indicator
- f hour meter
- 8 Diesel models: Glow plug button Gasoline/LPG models: Choke button

Push the glow plug button and hold for 3 to 5 seconds.

9 Red Emergency Stop button

Push in 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.

10 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.

11 Engine start button

Push the engine start button and the engine will start.

12 Emergency power button

Use emergency power if the primary power source (engine) fails.
Simultaneously push the emergency power

button and activate the desired function.

13 High speed function enable button

Push the high speed function enable switch to enable the functions on the ground control panel to operate at high speed.

14 Low speed function enable button

Push the low speed function enable switch to enable the functions on the ground control panel to operate at low speed.

15 Alarm

16 Platform level up/down buttons

Push the platform level up button and the level of the platform will raise.
Push the platform level down button and the level of the platform will lower.

17 S-105 and S-125 models: Jib boom up/down buttons

Push the jib boom up button and the jib boom will raise.

Push the jib boom down button and the jib boom will lower.

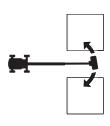


18 Platform rotate left/right buttons

Push the platform rotate left button and the platform will rotate to the left.

Push the platform

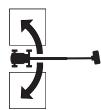
Push the platform rotate right button and the platform will rotate to the right.

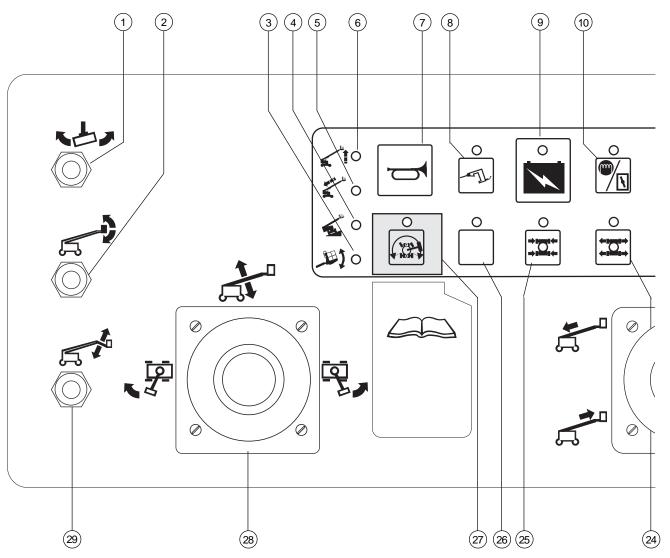


19 Turntable rotate left/right buttons

Push the turntable rotate left button and the turntable will rotate to the left.

to the left.
Push the turntable
rotate right button and
the turntable will rotate
to the right.



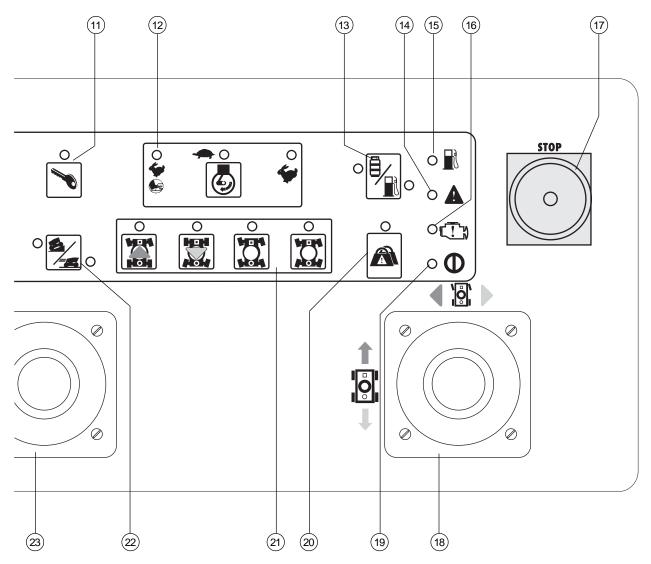


Platform Control Panel

- 1 Platform rotate switch
- 2 Platform level switch
- 3 Platform not level indicator light
- 4 Machine not level indicator light
- 5 Retract boom indicator light
- 6 Raise boom indicator light
- 7 Horn button
- 8 Generator button with indicator light (option)

- 9 Emergency power button with indicator light
- 10 Diesel models: Glow plug button with indicator light Gasoline/LPG models: Choke button with indicator light
- 11 Engine start button with indicator light
- 12 Engine idle (rpm) select button with indicator lights:
 - Rabbit & Foot Switch: foot switch activated high idle
 - · Turtle: low idle
 - · Rabbit: high idle
- 13 Gasoline/LPG models: Fuel select button with indicator lights
- 14 Fault indicator light
- 15 Low fuel indicator light
- 16 Check engine indicator light

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- 17 Red Emergency Stop button
- 18 Dual axis proportional control handle for drive and steer functions OR Proportional control handle for drive function and thumb rocker for steer function
- 19 Power indicator light
- 20 Platform overload indicator light
- 21 Steer mode select buttons with indicator lights
- 22 Drive select button with indicator lights:
 Machine on incline symbol:
 Low range operation for inclines
 Machine on level surface symbol: High range operation for maximum drive speed
- 23 Single axis proportional control handle for boom extend/retract function
- 24 Axle extend button with indicator light

- 25 Axle retract button with indicator light
- 26 Used for optional equipment
- 27 Drive enable button with indicator light
- 28 Dual axis proportional control handle for boom up/down and turntable rotate left/right functions
- 29 S-105 and S-125 models only: Jib boom up/down toggle switch

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Platform Control Panel

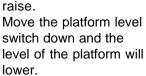
1 Platform rotate switch

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



2 Platform level switch

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





3 Platform not level indicator light

Light is on when the platform is not level. The tilt alarm will be sounding. The Platform Level switch will only work in the direction that will level the platform. Level the platform until the light goes off.

4 Machine not level indicator light

Light is on when the tilt alarm is sounding. Move the machine to level ground.

5 Retract boom indicator light

To continue lowering, retract boom until the indicator light goes out.

6 Raise boom indicator light

To continue extending, raise the boom until the indicator light goes out.

7 Horn button

Push the horn button and the horn will sound. Release the horn button and the horn will stop.

8 Generator button with indicator light (option)

Push the generator button to activate the generator. The light will be on. Push the button again to turn off the light and restore machine functions.

9 Emergency power button with indicator light

Use emergency power if the primary power source (engine) fails.

Simultaneously push the emergency power button and step on the foot switch. Activate the desired function. The indicator light will be on when emergency power is being used.

10 Diesel models: Glow plug button with indicator light

Push the glow plug button and hold for 3 to 5 seconds. The glow plug indicator light will be on when the glow plugs are being used.

Gasoline/LPG models: Choke button with indicator light

Push the choke button and hold for 3 to 5 seconds. The choke indicator light will be on when the choke is being used.

11 Engine start button with indicator light

Push the engine start button and the engine will start. The engine start button indicator light will be on when the button is being pushed.

12 Engine idle (rpm) select button with indicator lights

Push the engine idle select button to choose engine rpm setting. The indicator light next to the current setting will be on.

13 Gasoline/LPG models: Fuel select button with indicator lights

When the indicator light next to the LPG tank is lit, the engine will run on LPG. When the indicator light next to the gas tank is lit, the engine will run on gasoline.

14 Fault indicator light

Light on indicates the machine has one or more faults. Faults are abnormal conditions that exist due to component failure or system misuse. See the appropriate service manual.

15 Low fuel indicator light

Light on indicates the machine is low on fuel.

16 Check engine indicator light

Light on indicates an engine fault.

17 Red Emergency Stop button

Push in 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.

18 Dual axis proportional control handle for drive and steer functions

OR Proportional control handle for drive function and thumb rocker switch 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 rocker switch and the machine will steer to the left. Press the right side of the rocker switch and the machine will steer to the right.

19 Power indicator light

Light is on when the red Emergency Stop button is pulled out to the on position.

20 Platform overload indicator light

Flashing light indicates the platform is overloaded. The engine will stop and no functions will operate.

Remove the weight from the platform until the light goes off and then restart the engine.

21 Steer mode select buttons with indicator lights

Push the steer mode select button to choose steer mode. The indicator light next to the current steer mode will be on.

22 Drive select button with indicator lights

Push the drive select button to choose drive setting. The indicator light next to the current setting will be on.

23 Single axis proportional control handle for boom extend/retract function

Move the control handle up and the boom will retract.

Move the control handle down and the boom will extend.



24 Axle extend button with indicator light

Push the axle extend button to extend the axles. The indicator light will flash while the axles are extending and stay on when the axles are fully extended.

25 Axle retract button with indicator light

Push the axle retract button to retract the axles. The indicator light will flash while the axles are retracting and stay on when the axles are fully retracted.

- 26 Used for optional equipment.
- 27 Drive enable button with indicator light

Light on indicates that the primary boom has moved past either circle-end wheel and the drive function is turned off. To drive, push the drive enable button and slowly move the drive/ steer control handle off center. 28 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 left and the turntable will rotate to the left. Move the control handle to the right and the turntable will rotate to the right.



29 S-105 and S-125 models: Jib boom up/down toggle switch

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





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.

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 engine oil leaks and proper oil level.

 Add oil if needed. See Maintenance section.
- Check for hydraulic oil leaks and proper oil level. Add oil if needed. See Maintenance section.
- Check for engine coolant leaks and proper level of coolant. Add coolant if needed. See Maintenance section.
- Check for battery fluid leaks and proper fluid level. Add distilled water if needed. See Maintenance section.

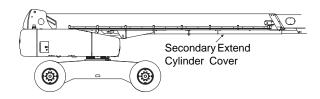
Check the following components or areas for damage, improperly installed or missing parts and unauthorized modifications:

- ☐ Electrical components, wiring and electrical cables
- ☐ Hydraulic hoses, fittings, cylinders and manifolds
- ☐ Fuel and hydraulic tanks
- ☐ Drive and turntable motors and drive hubs

- Boom and axle wear pads
- □ Tires and wheels
- ☐ Engine and related components
- ☐ Limit switches and horn
- ☐ Alarms and beacons (if equipped)
- Nuts, bolts and other fasteners
- ☐ Platform entry mid-rail or gate

Check the entire machine for:

- ☐ Cracks in welds or structural components
- Dents or damage to machine
- ☐ Excessive rust, corrosion or oxidation
- □ Be sure that all structural and other critical components are present and all associated fasteners and pins are in place and properly tightened.



- ☐ Be sure the secondary extend cylinder cover is properly installed.
- ☐ After you complete your inspection, be sure that all compartment covers are in place and latched.



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.

1 Select a test area that is firm, level and free of obstruction.

At the Ground Controls

- 2 Turn the key switch to ground control.
- 3 Pull out the red Emergency Stop button to the on position.
- Result: The LCD screen will come on and display no error messages. The beacon (if equipped) should flash.

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 turn off and no functions should operate.
- 6 Pull out the red Emergency Stop button to the on position and restart the engine.

Test the Hydraulic Oil Return Filter

- 7 Press the engine idle speed select button until the indicator light next to high idle (rabbit symbol) is on.
- 8 Lift the tank side turntable cover to locate and check the hydraulic filter condition indicator.
- Result: The indicator should be in the green area.
- 9 Close and secure the tank side turntable cover.
- 10 Press the engine idle speed select button until the indicator light next to low idle (turtle symbol) is on.

Test the Extendable Axles

Note: Start this test with the axles retracted.

11 At the ground controls, push and hold a function enable/ speed select button and push the boom up button.



• Result: The boom should raise to 10° above horizontal and then stop. The boom should not raise above the limit switch unless both axles are extended.



- 12 Push and hold a function enable/speed select button and push the boom down button.
- Result: The boom should lower and return to the stowed position.
- 13 Push and hold a function enable/speed select button and press the boom extend button.
- Result: The boom should not extend.
- 14 Turn the key switch to platform control. At the platform controls, step on the foot switch and move the drive control handle in the forward direction and push the extend axle button.



Result: The machine should drive and the axles should extend. The indicator light will flash while the axles are moving and stay on when the axles are fully extended.

Note: The extend axle function will only work while the machine is moving.

- 15 Return to the ground controls. Turn the key switch to ground control. Push and hold a function enable/speed select button and push the boom up button and then the boom down button.
- Result: The boom should raise and lower normally.
- 16 At the ground controls, push and hold a function enable/speed select button and push the boom extend button and the boom retract button.
- Result: The boom should extend and retract normally.

Test the Machine Functions

- 17 Do not press and hold a function enable/speed select button. Attempt to activate each boom and platform function button.
- Result: No boom and platform functions should operate.
- 18 Press and hold a function enable/speed select button and activate each boom and platform function button.
- Result: All boom and platform functions should operate through a full cycle. The descent alarm (if equipped) should sound while the boom is lowering.

Test Emergency Controls

- 19 Turn the key switch to ground control and shut the engine off.
- 20 Pull out the red Emergency Stop button to the on position.
- 21 Simultaneously push and hold the emergency power button and push each boom function button or activate each boom function toggle switch.



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

• Result: All boom functions should operate.

Test the Tilt Sensor

22 Push one of the LCD screen buttons until TURNTABLE LEVEL SENSOR X-DIRECTION appears.





- Result: The LCD screen should display the angle in degrees.
- 23 Push one of the LCD screen buttons until TURNTABLE LEVEL SENSOR Y-DIRECTION appears.
- Result: The LCD screen should display the angle in degrees.
- 24 Push one of the LCD screen buttons until PLATFORM LEVEL SENSOR DEGREES appears.
- Result: The LCD screen should display the angle in degrees.

Test the Operating Envelope

25 Simultaneously push and then release the LCD screen buttons shown to activate status mode.





26 Push one of the LCD screen buttons shown until BOOM ANGLE is displayed.





- 27 Raise the boom and observe the LCD screen.
- Result: The LCD screen should display:
 - < 10
 - >= 10
 - >= 53
 - > 68
- 28 Push one of the LCD screen buttons shown until BOOM LENGTH is displayed.





- 29 Extend the boom and observe the LCD screen.
- Result: The LCD screen should display:
 - at 0
 - > 0
 - > 75
 - = 100
 - > 100
- 30 Retract the boom.

At the Platform Controls

Test Emergency Stop

- 31 Turn the key switch to platform control.
- 32 Push in the platform red Emergency Stop button to the off position.
- Result: The engine should turn off and no functions should operate.
- 33 Pull out the red Emergency Stop button and restart the engine.

Test the Horn

- 34 Push the horn button.
- Result: The horn should sound.

Test the Tilt Sensor Alarm

- 35 Push a button, such as the engine RPM button or the fuel select button.
- Result: The alarm should sound at the platform controls.

Test the Foot Switch

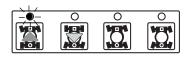
- 36 Push in the platform red Emergency Stop button to the off position.
- 37 Pull out the red Emergency Stop button to the on position but do not start the engine.
- 38 Press down the foot switch and attempt to start the engine by pushing the engine start button.
- Result: The engine should not start.
- 39 Do not press down the foot switch and restart the engine.
- 40 Do not press down the foot switch and test each machine function.
- Result: No machine functions should operate.

Test Machine Functions

- 41 Press down the foot switch.
- 42 Activate each machine function control handle, toggle switch or button.
- Result: All functions should operate through a full cycle.

Test the Steering

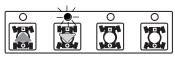
43 Push the steer mode select button for square-end (blue arrow) steer.



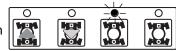
- 44 Press down the foot switch.
- 45 Slowly move the drive/steer control handle in the direction indicated by the blue triangle on the control panel OR press the thumb rocker switch in the direction indicated by the blue triangle.
- Result: The square-end wheels should turn in the direction that the blue triangles point on the drive chassis.

46 Push the steer mode select button for circle-end (yellow arrow)

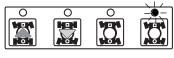
steer.



- 47 Press down the foot switch.
- 48 Slowly move the drive/steer control handle in the direction indicated by the yellow triangle on the control panel OR press the thumb rocker switch in the direction indicated by the yellow triangle.
- Result: The circle-end wheels should turn in the direction that the yellow triangles point on the drive chassis.
- 49 Push the steer mode select button for crab steer.



- 50 Press down the foot switch.
- 51 Slowly move the drive/steer control handle in the direction indicated by the blue triangle on the control panel OR press the thumb rocker switch in the direction indicated by the blue triangle.
- Result: All wheels should turn in the direction that the blue triangles point on the drive chassis.
- 52 Push the steer mode select button for coordinated steer.



53 Press down the foot switch.

- 54 Slowly move the drive/steer control handle in the direction indicated by the blue triangle on the control panel OR press the thumb rocker switch in the direction indicated by the blue triangle.
- Result: The square-end wheels should turn in the direction that the blue triangles point on the drive chassis. The circle-end wheels should turn in the direction that the yellow triangles point on the drive chassis.

Test Drive and Braking

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

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

Test the Drive Enable System

- 58 Press down the foot switch and lower the boom to the stowed position.
- 59 Rotate the turntable until the boom moves past one of the circle-end tires.
- Result: The drive enable indicator light should come on while the boom is anywhere in the range shown.

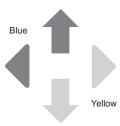


- 60 Move the drive/steer control handle off center.
- Result: No drive function should operate.
- 61 Push the drive enable button and slowly move the drive/steer control handle off center.
- Result: The drive function should operate.

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.

If the drive/steer control handle is not moved within two seconds of pushing the drive enable button, the drive function will not operate.



Test Limited Drive Speed

- 62 Press down the foot switch.
- 63 Raise the boom to 10° above horizontal.
- 64 Slowly move the drive control handle to the full drive position.
- Result: The maximum achievable drive speed with the boom raised should not exceed 30 cm per second.

Note: The machine will travel 12.2 m in 40 seconds.

- 65 Lower the boom to the stowed position.
- 66 Extend the boom 1.2 m.
- 67 Slowly move the drive control handle to the full drive position.
- Result: The maximum achievable drive speed with the boom extended should not exceed 30 cm per second.

Note: The machine will travel 12.2 m in 40 seconds.

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

- 68 Raise the boom to horizontal. Extend the boom as far as it will go.
- 69 Slowly move the drive control handle to the full drive position.
- Result: The maximum achievable drive speed with the boom fully extended should not exceed 18 cm per second.

Note: The machine will travel 12.2 meters in 70 seconds.

Test Emergency Controls

- 70 Shut off the engine.
- 71 Pull out the red Emergency Stop button to the on position.
- 72 Press down the foot switch.
- 73 Simultaneously press and hold the emergency power button and activate each function control handle, toggle switch or button.



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

Result: All boom and steer functions should operate.



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.

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

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

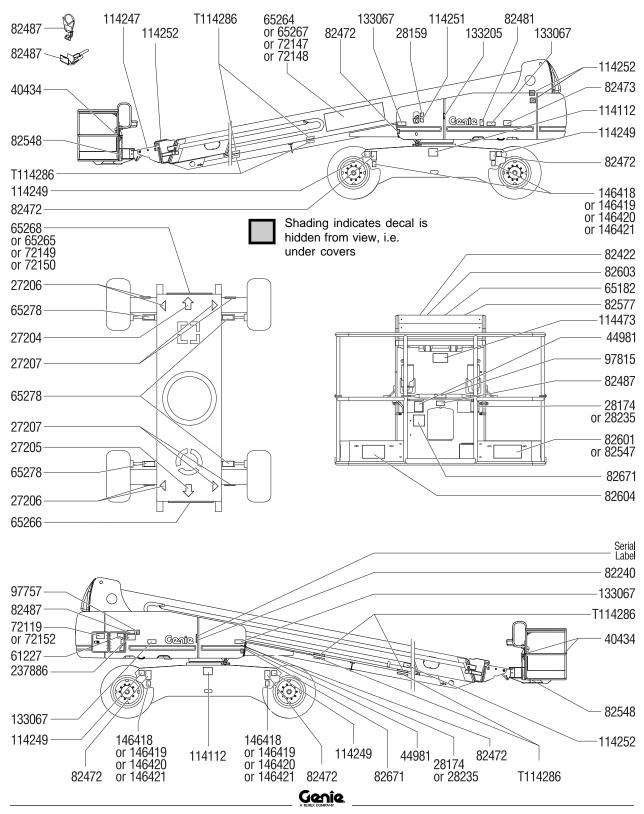
Inspection for Decals with Symbols

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.

Part No.	Description	Quantity
27204	Arrow - Blue	1
27205	Arrow - Yellow	1
27206	Triangle - Blue	4
27207	Triangle - Yellow	4
28159	Label - Diesel	1
28174	Label - Power to Platform, 230V	2
28235	Label - Power to Platform, 115V	2
40434	Label - Lanyard Anchorage Point	3
44981	Label - Air Line to Platform (option)	2
61227	Ground Control Panel	1
65182	Platform Control Panel	1
65264	Cosmetic - Genie S-125	1
65265	Cosmetic - S-125	1
65266	Cosmetic - 4 x 4	1
65267	Cosmetic - Genie S-120	1
65268	Cosmetic - S-120	1
65278	Label - No Step	4
72119	Label - Range of Motion, S-120 and S-125	1

Part No.	Description	Quantity
72147	Cosmetic - Genie S-100	1
72148	Cosmetic - Genie S-105	1
72149	Cosmetic - S-100	1
72150	Cosmetic - S-105	1
72152	Label - Range of Motion, S-100 and S-105	1
82240	Label, Noise Level	1
82422	Label - Work Lights or Driving Lights (option)	1
82472	Label - Crushing Hazard	6
82473	Label - Compartment Access	1
82481	Label - Battery Safety	1
82487	Label - Read the Manual	2
82487	Label - Read the Manual, Panel Cradle (option)	2
82487	Label - Read the Manual, Pipe Cradle (option)	2
82547	Label - Maximum Capacity, 340 kg, S-100/S-120	1
82548	Label - Crushing Hazard, Platform	2
82577	Label - Platform Overload Patch	1

This inspection continues on the next page.



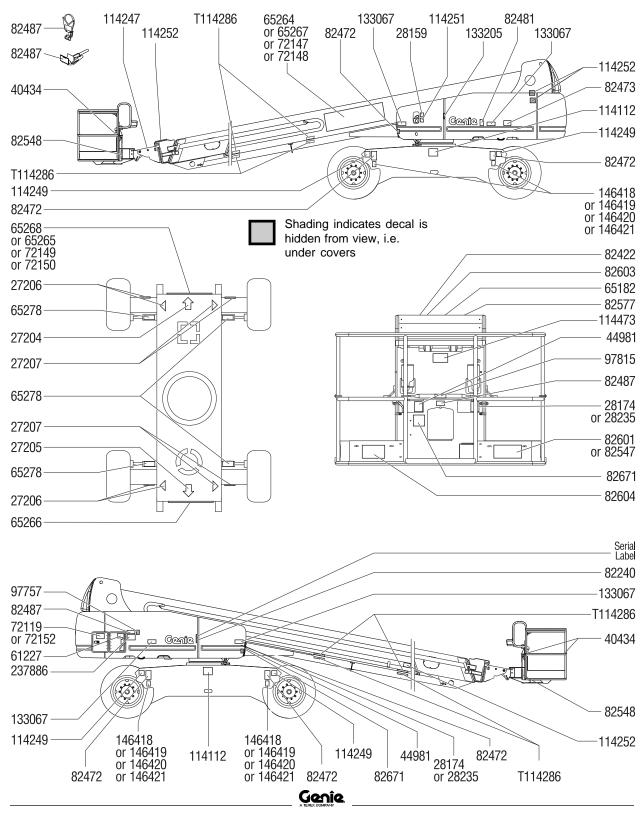
Inspection for Decals with Symbols

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.

This inspection is a continuation from the previous page.

Part No.	Description	Quantity
82601	Label - Maximum Capacity, 227 kg, S-105 and S-125	1
82603	Label - Drive Enable Patch	1
82604	Label - Max Manual Force, 400 N	1
82671	Label - Weld Line to Platform (option)) 2
97757	Label - Hydraulic Oil Level	1
97815	Label - Lower Mid-rail	1
114112	Label - Transport Diagram	2
114247	Label - No Step or Ride	1
114249	Label - Tip-Over Hazard, Tires	4
114251	Label - Explosion Hazard	1
114252	Label - Tip-Over Hazard, Limit Switc	h 4
114473	Label - Tip-Over Hazard, Tilt Alarm	1
133067	Label - Electrocution Hazard	4
133205	Label - Electrocution Hazard, Battery	/ 1

Part No.	Description Qu	antity
146418	Label - Wheel Load, S-100	4
146419	Label - Wheel Load, S-105	4
146420	Label - Wheel Load, S-120	4
146421	Label - Wheel Load, S-125	4
T114286	Label - Install Cover/Read the Manual	8
237886	Label - Emergency Lowering	1





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.

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.

Diesel models

3 Press the engine start button.

Note: In cold conditions, 10°C and below, push and hold the glow plug button for 10 to 20 seconds before starting the engine.



Gasoline/LPG models

- 3 Choose fuel by pressing the fuel select button.
- 4 Push the engine start button.

Note: In cold conditions, -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.

All models

If the engine fails to start or dies, the restart delay will disable the start switch for 3 seconds.

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, -6°C and below, warm the engine for 5 minutes before operating to prevent hydraulic system damage.

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

Emergency Stop

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

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

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

Emergency Controls

Use emergency power if the primary power source (engine) fails.

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



The drive function will not operate with emergency power.

Operation from Ground

- 1 Turn the key switch to ground control.
- 2 Pull out the red Emergency Stop button to the on position.
- 3 Gasoline/LPG models: Choose fuel by pressing the fuel select button.
- 4 Start the engine.

To Position Platform

- 1 Push and hold a function enable/ speed select button.
- 2 Push the appropriate function button according to the markings on the control panel.

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

Operation from Platform

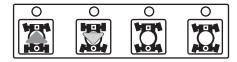
- 1 Turn the key switch to platform control.
- 2 Pull out both ground and platform red Emergency Stop buttons to the on position.
- 3 Gasoline/LPG models: Choose fuel by pressing the fuel select button.
- 4 Start the engine. Do not press down the foot switch when starting the engine.

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.

To Steer

- 1 Press down the foot switch.
- 2 Select the steer mode by pressing a steer mode button. The indicator light next to the current steer mode will be on.



3 Slowly move the drive/steer control handle in the direction of the blue or yellow triangle OR press the thumb rocker switch located on top of the drive control handle.

Use the color-coded direction triangles 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 drive/steer control in the blue or yellow arrow direction.

Decrease speed: Slowly move the drive/steer control handle toward center.

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

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



Machine travel speed is restricted when the boom is raised or extended.

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): 40% (22°)



Maximum slope rating, platform uphill: 40% (22°)



Maximum side slope rating: 25% (14°)

Note: Slope rating is subject to ground conditions and adequate traction. The term gradeability applies to the platform downhill configuration only.

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

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

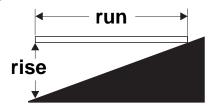
Lay the piece of wood on the slope.

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 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

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

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

Drive Enable

Light on indicates that the boom has moved past either circle-end wheel and drive function has been interrupted.



To drive, push the drive enable button and slowly move the drive/steer control handle off center.

If the drive/steer control handle is not moved within two seconds of pushing the drive enable button, the drive function will not operate. Release and push the drive enable button again.

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.

Engine Idle Select (rpm)

Select the engine idle (rpm) by pressing the select button. The indicator light next to the current setting will be on.



 Rabbit and foot switch symbol: foot switch activated high idle

Turtle symbol: low idle

· Rabbit symbol: high idle

Check Engine Light



Light on and engine stopped: Tag the machine and remove from service.

Light on and engine still running: Contact service personnel within 24 hours.

Operating Envelope Indicator Lights

The operating envelope indicator lights will come on to notify the operator that a function has been interrupted and/or an action is required by the operator.

Raise Boom indicator light flashing: To continue extending the boom, raise the boom until the indicator light is off.



Retract Boom indicator light flashing: To continue lowering the boom, retract the boom until the indicator light is off.



Machine Not Level indicator light flashing: The tilt alarm will be sounding when this light is flashing. Move the machine to a firm level surface.



Platform Not Level indicator light flashing: The tilt alarm will be sounding when this light is flashing. The Platform Level toggle switch will only work in the direction that will level the platform. Level the platform until the indicator light is off.



Platform Overload



Flashing light indicates the platform is overloaded. The engine will stop and no functions will operate.

Remove the weight from the platform until the light goes off and then restart the engine.

Out of Operational Envelope Recovery

If all functions stop operating, you may have exceeded the operational envelope.

Retract Boom indicator light is flashing: Use the Auxiliary Power Unit at the platform to retract the boom until the indicator light is off. Restart the engine to continue operation.

Raise Boom indicator light is flashing: Use the Auxiliary Power Unit at the platform to raise the boom until the indicator light is off. Restart the engine to continue operation.

If the Auxiliary Power Unit at the platform does not function, a trained operator on the ground will need to lower the platform from the ground controls. Please see the Service Bypass / Recovery Key Switch section in the service manual.

Generator (if equipped)

To operate the generator, press the generator button. The indicator light will come on and the engine will continue to run.

Plug power tools into the power to platform GFCI outlet.

To turn off the generator, push the generator button. The indicator light will turn off.

Fault Code Indicator Readout

If the ground controls LCD readout displays a fault code, the fault source will display as Fault XXX and fault type as xx Source. See example below.

Fault 006_12 Source

If a fault code is identified, the machine must be tagged, taken out of service and repaired by a qualified technician before the machine is used again.

	urce
ID	Description
6	Boom Up/Down Speed
8	Controller Area Network
9	Engine
18	Drive Controller - Controller Area Network
20	Boom Extend/Retract Joystick
21	Boom Up/Down Joystick
28	Boom Up/Down Direction Switch
29	Boom Extend/Retract Direction Switch
30	Propel Joystick
35	Propel Valve
39	Propel Valve - High Current
40	Turntable Rotate Joystick
48	Jib Valve
49	Jib Direction Switch
50	Jib Valve
52	Steer Joystick
53	Left Front Steer Sensor
54	Right Front Steer Sensor
55	Left Rear Steer Sensor
56	Right Rear Steer Sensor
61	Axle Direction Switch
62	Axle Valve
63	Turntable Level Sensor X-Direction
64	Turntable Level Sensor Y-Direction
70	Turntable Controller - Platform Controller
	Software Version
73	Engine Pressure Sensor
74	Engine Temperature Sensor
81	Boom Up/Down Valve
82	Boom Extend/Retract Valve
85	Boom Extend/Retract Speed
91	Turntable Rotate Direction Switch
92	Turntable Rotate Valve
94	Turntable Speed
98	Platform Controller - Platform Level Sensor
99	Platform Level Direction Switch
110	Platform Rotate Direction Switch
117	Platform Overload Switches
119	Multi Function Valve
120	Safety Switch P3
121	Safety Switch P6R1

Fault Type		
ID	Description	
11	Value at 5V	
12	Value too High	
13	No Response	
15	Value too Low	
16	Value at 0V	
17	Not Calibrated	
21	Fault	

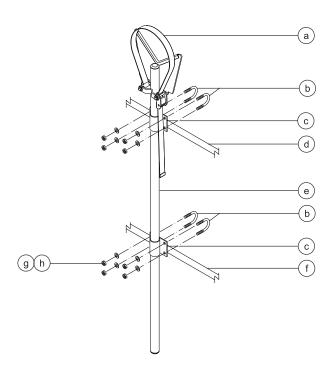
Fault Sou	irce
ID	Description
122	Safety Switch P6R2
123	Safety Switch P7
124	Safety Switch P7R
125	Safety Switch P9A
126	Safety Switch P9B
127	Safety Switch P10
128	Safety Switch P11
129	Safety Switch P12
130	Safety Switch P14
131	Safety Switch P18
132	Safety Switch P22
133	Safety Switch P22R
134	Drive Controller - Safety Switch P7R
135	Safety Switch LSB8AS
136	Safety Switch LSB9AS
137	Safety Switch LSB4ES
138	Safety Switch LSB2RS
141	Shut Down Mode
145	Turntable Clockwise Valve
146	Turntable Counter Clockwise Valve
147	Turntable Flow Valve
150	Boom Extend Valve
151	Boom Retract Valve
152	Boom Up Valve
153	Boom Down Valve
154	Boom Extend/Retract Flow Valve
155	Boom Up/Down Flow Valve
156	Primary Lockout P1 Valve
157	Primary Lockout P2 Valve
158	Boom Angle Switches
159	Boom Length Switches
160	Left Front Steer Valve(s)
161	Right Front Steer Valve(s)
162	Left Rear Steer Valve(s)
163	Right Rear Steer Valve(s)
165	Propel Valve – High Current Only
166	Brake Valve
167	Motor Coil Valve
175	Platform Level Valve
176	Platform Rotate Valve

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 circle-end wheels.
- 4 Turn the key switch to the off position and remove the key to secure from unauthorized use.
- 5 Chock the wheels.

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 ³/₈-inch 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

- 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.

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.



A 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.



A 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	90.7 kg	
Pipe Cradle Assembly Weight	9.5 kg	

Panel Cradle Assembly

- 1 Apply the warning decal to the front of each panel cradle (if needed).
- 2 Install rubber bumper 1 in the panel cradle base. See the illustration.
- 3 Secure the bumper with 2 high profile lock nuts and 2 washers.

Panel Cradle Installation

- 1 Insert the hook piece through the slots in the panel cradle base.
- 2 Hook the panel cradle to the bottom platform tube in the desired location.
- 3 Install rubber bumper 2 through the panel cradle base and the hook piece. See the illustration.
- 4 Secure with 2 low profile lock nuts.
- 5 If the panel cradle is installed at a platform floor support tube, insert the U-bolt through the floor, around the tube and into the panel cradle base.
- 6 Secure the U-bolt with 2 nuts and 2 washers. Proceed to step 9.
- 7 If the panel cradle is not installed at a platform floor support tube, use the aluminum tube provided.
- 8 Place the tube between the panel cradle and the platform floor. Insert the U-bolt through the floor, around the tube and into the panel cradle base.
- 9 Repeat above for the second set of parts.

Installation of Padding

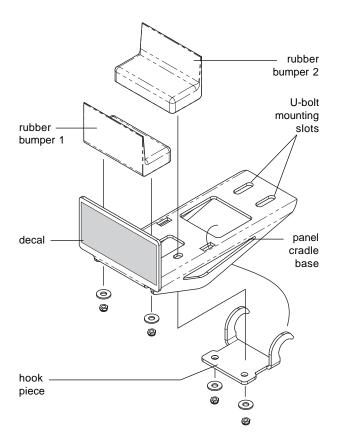
1 Install the 2 pieces of padding on the platform rails. Position the padding to protect the panels from contact with the platform rails.

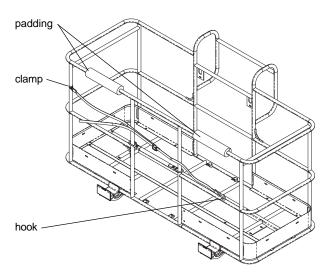
Installation of Strap

- 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.
- 5 Secure with a washer and a nut. Do not over-tighten. The strap assembly end plate should be able to slide on the platform rail.

Panel Cradle Operation

- 1 Secure both panel cradles to the platform.
- 2 Place the load so that it rests in both panel cradles.
- 3 Center the load on the platform.
- 4 Secure the load to the platform using the strap. Tighten the strap.





Transport and Lifting Instructions



Transport Instructions Observe and Obey:

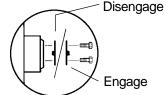
- Genie Industries provides this securement information as a recommendation. Drivers are solely responsible for making sure machines are properly secured and the correct trailer is selected pursuant to US Department of Transportation regulations, other localized regulations, and their company policy.
- 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 aerial lift operators should move the machine on or off the truck.
- ☑ Transport vehicle must be parked on a level surface.
- ☑ Transport vehicle must be secured to prevent rolling while machine is being loaded.
- ☑ Be sure vehicle capacity, loading surfaces and chains or straps are sufficient to withstand the machine weight. Genie lifts are very heavy relative to their size. See the serial label for the machine weight. See the Decals section for the serial label location.

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

Free-wheel Configuration for Winching

Chock the wheels to prevent the machine from rolling.

Release the wheel brakes by turning over all four torque hub disconnect caps.

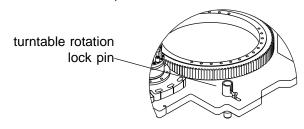


Be sure the winch line is properly secured to the drive chassis tie points and the path is clear of all obstructions.

Reverse the procedures described to re-engage the brakes.

▲ Securing to Truck or Trailer for Transit

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



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

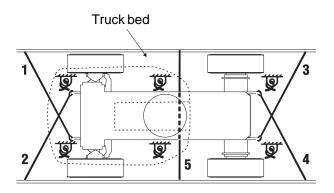
Inspect the entire machine for loose or unsecured items.

Securing the Chassis

Use chains of ample load capacity.

Use a minimum of 5 chains.

Adjust the rigging to prevent damage to the chains.



Transport and Lifting Instructions

Securing the Platform - S-100 and S-120

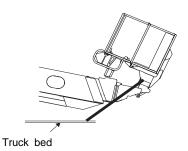
Lower the boom to the stowed position.

Raise the platform as far as it will go (see below).

Run a strap through the platform support between the plates next to the rotator.

Anchor the strap to each corner of the truck bed.

The platform will hang over the end of the truck.



Securing the Platform - S-105 and S-125

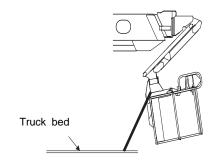
Lower the jib to the stowed position.

Lower the platform as far as it will go, so that the jib and platform are tucked underneath the boom.

Run a strap through the platform support between the plates next to the rotator.

Anchor the strap to each corner of the truck bed.

The platform will hang over the end of the truck.



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 plate for the machine weight.

Lifting Instructions

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

Use the turntable rotation lock to secure the turntable.

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

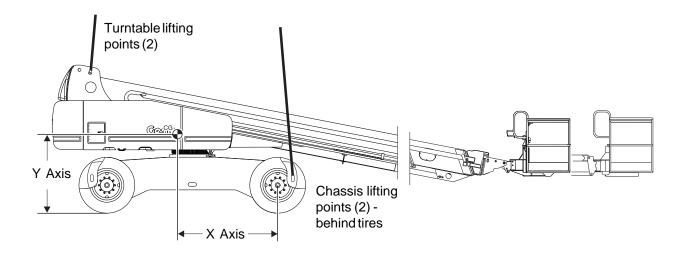
Attach the rigging only to the designated lifting points on the machine. There are two lifting points on the chassis and two on the turntable.

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

Use a spreader bar to keep the rigging from damaging the machine.

Center of Gravity Location

	X Axis	Y Axis
S-100	2.08 m	1.30 m
S-105	2.02 m	1.51 m
S-120	2.0 m	1.34 m
S-125	1.93 m	1.55 m



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.

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 engine oil dipstick. Add oil as needed.

Cummins B3.3C80 Engine	
Oil type	15W-40
Oil type - cold conditions	10W-30
Deutz TD2011L04i Engine	
Oil type	15W-40
Oil type - cold conditions	5W-30
Perkins 804D-33T Engine	
Oil type	15W-40
Oil type - cold conditions	5W-40

Maintenance

Check the Hydraulic Oil Level





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

- 1 Be sure that the boom is in the stowed position, then visually inspect the sight gauge located on the side of the hydraulic oil tank. Add oil as needed.
- Result: The hydraulic oil level should be within the top 5 cm of the sight gauge.

Hydraulic oil specifications

Hydraulic oil type

Chevron Rando equivalent

Check the Batteries





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



A 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: The controls battery is below the start battery.

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

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

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.



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

- 1 Check the fluid level in the coolant recovery tank. Add fluid as needed.
- Result: The fluid level should be at the FULL mark.

Note: Do not remove the radiator cap.

Scheduled Maintenance

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

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

S-100	
Height, working maximum	32.5 m
Height, platform maximum	30.5 m
Height, stowed maximum	3.1 m
Horizontal reach maximum	22.9 m
Width, axles retracted	2.5 m
Width, axles extended	3.35 m
Length, stowed	13 m
Maximum load capacity	340 kg
Maximum wind speed	12.5 m/s
Wheelbase	3.7 m
Turning radius, inside, axles extended	2.74 m
Turning radius, outside, axles extended	6.05 m
Turning radius, inside, axles retracted	4.14 m
Turning radius, outside, axles retracted	6.58 m
Turntable rotation (degrees)	360°, continuous
Turntable tailswing, axles retracted	1.68 m
Turntable tailswing axles extended	1.22 m
Controls	12V DC proportional
Platform dimensions, length x width	2.4 m x 91 cm
Platform leveling	self-leveling
Platform rotation	160°
AC outlet in platform	standard
Hydraulic pressure, maximum (drive functions)	293 bar
System voltage	12V
Vibration value does not exceed 2	.5 m/s ²

Tire size, foam-filled tires	385/65 D22.5 16 ply
Tire size, solid rubber tires	385/65 D24
Ground clearance	35.6 cm
Fuel tank capacity	151 liters
Weight (Machine weights vary with optio	18,008 kg n configurations)
Drive speeds	
Drive speed, stowed	4.8 km/h 12.2 m/9.1 sec
Drive speed, raised or extended	1.1 km/h 12.2 m/40 sec
Drive speed, fully extended	0.6 km/h 12.2 m/70 sec
Maximum slope rating, stowed	position
Platform downhill	40% (22°)
Platform uphill	40% (22°)
Side slope	25% (14°)
Note: Slope rating is subject to gradequate traction.	round conditions and
Floor loading information	
Tire load, maximum	8460 kg
Tire contact pressure	7.4 kg/cm² 724 kPa
Occupied floor pressure axles extended	1172 kg/m² 11.5 kPa
Occupied floor pressure axles retracted	1552 kg/m² 15.2 kPa
Note: Floor loading information is not incorporate different option co used only with adequate safety fa	onfigurations. It should be

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Genie

S-105	_
Height, working maximum	34 m
Height, platform maximum	32 m
Height, stowed maximum	3.1 m
Horizontal reach maximum	24.7 m
Width, axles retracted	2.5 m
Width, axles extended	3.35 m
Length, stowed	14 m
Maximum load capacity	227 kg
Maximum wind speed	12.5 m/s
Wheelbase	3.7 m
Turning radius, inside, axles extended	2.74 m
Turning radius, outside, axles extended	6.05 m
Turning radius, inside, axles retracted	4.14 m
Turning radius, outside, axles retracted	6.58 m
Turntable rotation (degrees)	360°, continuous
Turntable tailswing, axles retracted	1.68 m
Turntable tailswing axles extended	1.22 m
Controls	12V DC proportional
Platform dimensions, length x width	2.4 m x 91 cm
Platform leveling	self-leveling
Platform rotation	160°
AC outlet in platform	standard
Hydraulic pressure, maximum (drive functions)	293 bar
System voltage	12V
Vibration value does not exceed 2.5	m/s ²

Tire size, foam-filled tires	385/65 D22.5 16 ply
Tire size, solid rubber tires	385/65 D24
Ground clearance	35.6 cm
Fuel tank capacity	151 liters
Weight (Machine weights vary with option o	18,144 kg configurations)
Drive speed, stowed	4.8 km/r 12.2 m/9.1 sec
Drive speed, raised or extended	1.1 km/h 12.2 m/40 sec
Drive speed, fully extended	0.6 km/h 12.2 m/70 sec
Maximum slope rating, stowed p	osition
Platform downhill	40% (22°)
Platform uphill	40% (22°)
Side slope	25% (14°)
Note: Slope rating is subject to ground adequate traction.	und conditions and
Floor loading information	
Tire load, maximum	9617 kg
Tire contact pressure	7.4 kg/cm² 724 kPa
Occupied floor pressure axles extended	1172 kg/m² 11.5 kPa
Occupied floor pressure	1552 kg/m² 15.2 kPa

used only with adequate safety factors.

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S-120	
Height, working maximum	38.6 m
Height, platform maximum	36.6 m
Height, stowed maximum	3.1 m
Horizontal reach maximum	22.9 m
Width, axles retracted	2.5 m
Width, axles extended	3.35 m
Length, stowed	13 m
Maximum load capacity	340 kg
Maximum wind speed	12.5 m/s
Wheelbase	3.7 m
Turning radius, inside, axles extended	2.6 m
Turning radius, outside, axles extended	5.7 m
Turning radius, inside, axles retracted	4.01 m
Turning radius, outside, axles retracted	6.7 m
Turntable rotation (degrees)	360°, continuous
Turntable tailswing, axles retracted	1.68 m
Turntable tailswing axles extended	1.24 m
Controls	12V DC proportional
Platform dimensions, length x width	2.4 m x 91 cm
Platform leveling	self-leveling
Platform rotation	160°
AC outlet in platform	standard
Hydraulic pressure, maximum (drive functions)	293 bar
System voltage	12V
Vibration value does not exceed 2	2.5 m/s ²

Tire size, foam-filled tires	445/65 D22.5 18 ply
Tire size, solid rubber tires	445/65 D24
Ground clearance	35.6 cm
Fuel tank capacity	151 liters
Weight (Machine weights vary with optior	20,112 kg n configurations)
Drive speeds	
Drive speed, stowed	4.8 km/h 12.2 m/9.1 sec
Drive speed, raised or extended	1.1 km/h 12.2 m/40 sec
Drive speed, fully extended	0.6 km/h 12.2 m/70 sec
Maximum slope rating, stowed	position
Platform downhill	40% (22°)
Platform uphill	40% (22°)
Side slope	25% (14°)
Note: Slope rating is subject to gradequate traction.	ound conditions and
Floor loading information	
Tire load, maximum	9639 kg
Tire contact pressure	7.4 kg/cm² 724 kPa
Occupied floor pressure axles extended	1299 kg/m² 12.7 kPa
Occupied floor pressure axles retracted	1723 kg/m² 16.9 kPa
Note: Floor loading information is not incorporate different option coused only with adequate safety fa	onfigurations. It should be

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Genîe

S-125	
Height, working maximum	40.1 m
Height, platform maximum	38.1 m
Height, stowed maximum	3.1 m
Horizontal reach maximum	24.4 m
Width, axles retracted	2.5 m
Width, axles extended	3.35 m
Length, stowed	14.2 m
Maximum load capacity	227 kg
Maximum wind speed	12.5 m/s
Wheelbase	3.7 m
Turning radius, inside, axles extended	2.6 m
Turning radius, outside, axles extended	5.7 m
Turning radius, inside, axles retracted	4.01 m
Turning radius, outside, axles retracted	6.7 m
Turntable rotation (degrees)	360°, continuous
Turntable tailswing, axles retracted	1.68 m
Turntable tailswing axles extended	1.24 m
Controls	12V DC proportional
Platform dimensions, length x width	2.4 m x 91 cm
Platform leveling	self-leveling
Platform rotation	160°
AC outlet in platform	standard
Hydraulic pressure, maximum (drive functions)	293 bar
System voltage	12V
Vibration value does not exceed 2	2.5 m/s ²

Tire size, foam-filled tires	445/65 D22.5 18 ply
Tire size, solid rubber tires	445/65 D24
Ground clearance	35.6 cm
Fuel tank capacity	151 liters
Weight (Machine weights vary with optior	20,248 kg configurations)
Drive speeds	
Drive speed, stowed	4.8 km/h 12.2 m/9.1 sec
Drive speed, raised or extended	1.1 km/h 12.2 m/40 sec
Drive speed, fully extended	0.6 km/h 12.2 m/70 sec
Maximum slope rating, stowed	position
Platform downhill	40% (22°)
Platform uphill	40% (22°)
Side slope	25% (14°)
Note: Slope rating is subject to greated adequate traction.	ound conditions and
Floor loading information	
Tire load, maximum	10,773 kg
Tire contact pressure	7.4 kg/cm² 724 kPa
Occupied floor pressure axles extended	1294 kg/m² 12.7 kPa
Occupied floor pressure axles retracted	1723 kg/m² 16.9 kPa

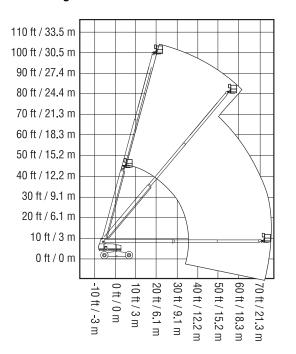
Note: Floor loading information is approximate and does not incorporate different option configurations. It should be used only with adequate safety factors.

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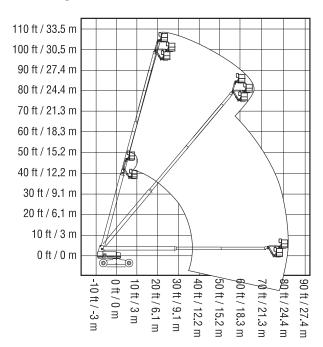
Genie

Airborne noise emissions	
Sound pressure level at ground workstation	83 dBA
Sound pressure level at platform workstation	71 dBA
Guaranteed sound power level	105 dBA

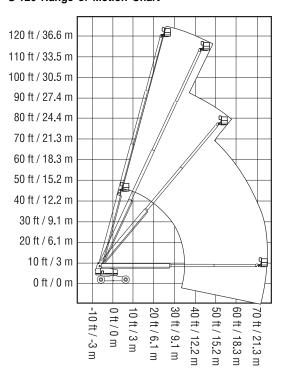
S-100 Range of Motion Chart



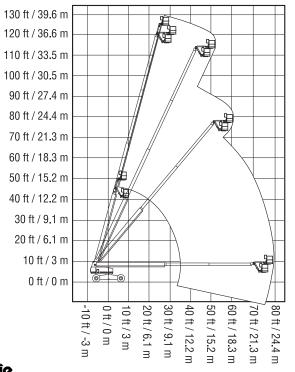
S-105 Range of Motion Chart



S-120 Range of Motion Chart



S-125 Range of Motion Chart



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