

Genie®



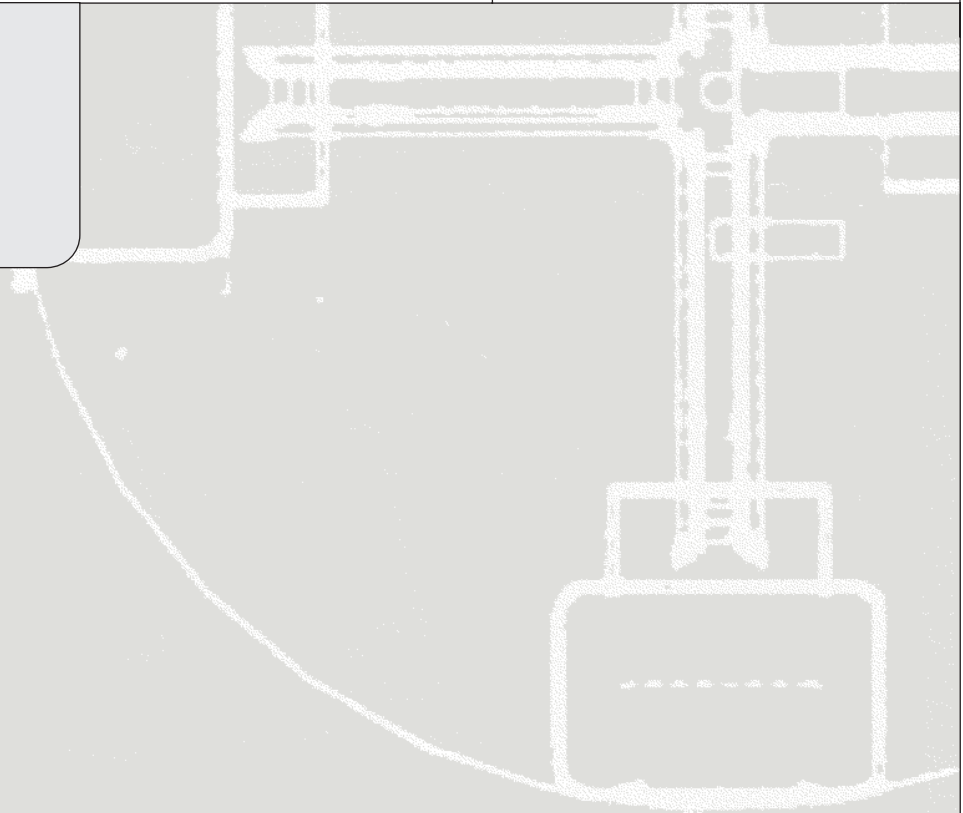
Operator's Manual

with Maintenance Information

First Edition
Seventh Printing
Part No. 62747

GS™-4390

GS™-5390



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, please call Genie Industries.

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First Edition: Seventh Printing, January 2003

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These machines comply with ANSI/SIA 92.6-1999.

 Printed on recycled paper

Printed in U.S.A.

Safety Rules



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:

Manufacturer's instructions and safety rules—safety and operator's manuals and machine decals

employer's safety rules and worksite regulations

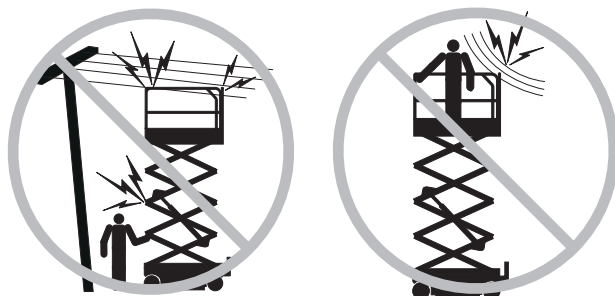
applicable governmental regulations

- You are properly trained to safely operate the machine.

SAFETY RULES

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.

Voltage Phase to Phase	Minimum Safe Approach Distance	
	Feet	Meters
0 to 300V	Avoid Contact	
300V to 50KV	10	3.05
50KV to 200KV	15	4.60
200KV to 350KV	20	6.10
350KV to 500KV	25	7.62
500KV to 750KV	35	10.67
750KV to 1000KV	45	13.72

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 capacity of the platform extension.

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		Platform only
500 lbs / 227 kg		1000 lbs / 454 kg

CE models with one platform extension and outriggers

Platform retracted	1800 lbs	816 kg
Platform only	1300 lbs	590 kg
Extension only	500 lbs	227 kg

Extension only		Platform only
500 lbs / 227 kg		1300 lbs / 590 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		Platform only	Extension only
500 lbs / 227 kg		500 lbs / 227 kg	500 lbs / 227 kg

SAFETY RULES

Maximum capacity - GS-5390

Maximum occupants - ANSI & CSA **6**

Maximum occupants - CE & Australia **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		Platform only
500 lbs / 227 kg		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	Platform only	Extension only
500 lbs / 227 kg	500 lbs / 227 kg	500 lbs / 227 kg

Do not alter or disable the limit switches.

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

Models without outriggers: Do not raise the platform unless the machine is on a firm, level surface.



Models with outriggers: 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.

Models with outriggers: 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.

Models with outriggers: Use common sense and planning when lowering the outriggers on a slope. The steer end outriggers must be lowered first.

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.

SAFETY RULES

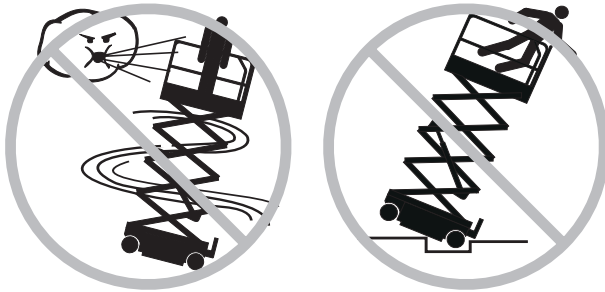
Do not depend on the tilt alarm as a level indicator. The tilt alarm sounds on the chassis and in the platform when the machine is on a slope.

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.

GS-5390 models: Do not raise the platform above 30 feet / 9.1 m unless the outriggers are lowered.

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 push off or pull toward any object outside of the platform.

Maximum allowable
side force - ANSI and CSA

GS-4390 350 lbs / 1557 N

GS-5390 300 lbs / 1335 N

**Maximum allowable
manual force - CE and
Australia**

90 lbs / 400 N



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

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

Do not modify or alter 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.

SAFETY RULES

Do not place or attach fixed or overhanging loads to 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 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.

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

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.

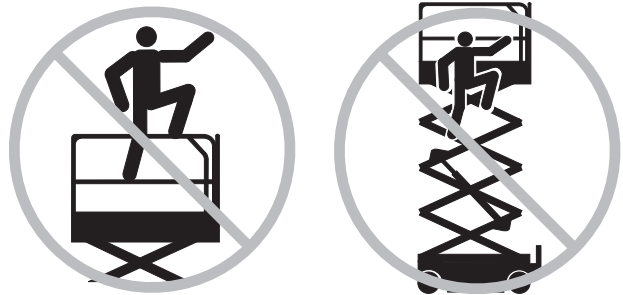
Do not tie the platform to adjacent structures.

Do not place loads outside the platform perimeter.

Fall Hazards

The guardrail 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 equipment and its use shall be in accordance with the PFPE manufacturer's instructions and applicable governmental requirements.

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



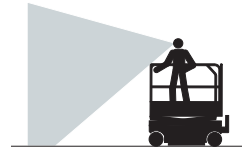
Do not climb down from the platform when raised.

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.

SAFETY RULES

Collision Hazards

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

Be aware of extended platform position(s) when moving the machine.

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

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.

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.

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.

Machines with hydraulic shutoff valves: Be sure the hydraulic shutoff valves (located by the pump under the engine side cover) are open before starting the engine.

SAFETY RULES

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.

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 in the platform.

Crushing Hazards

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 removing the rail pins. Do not allow the platform guard rails to fall.

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.

SAFETY RULES

Decal Legend

Genie product decals use symbols, color coding and signal words to identify the following:



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

▲ DANGER

Red—used to indicate the presence of an imminently hazardous situation which, if not avoided, will result in death or serious injury.

▲ WARNING

Orange—used to indicate the presence of a potentially hazardous situation which, if not avoided, could result in death or serious injury.

▲ CAUTION

Yellow with safety alert symbol—used to indicate the presence of a potentially hazardous situation which, if not avoided, may cause minor or moderate injury.

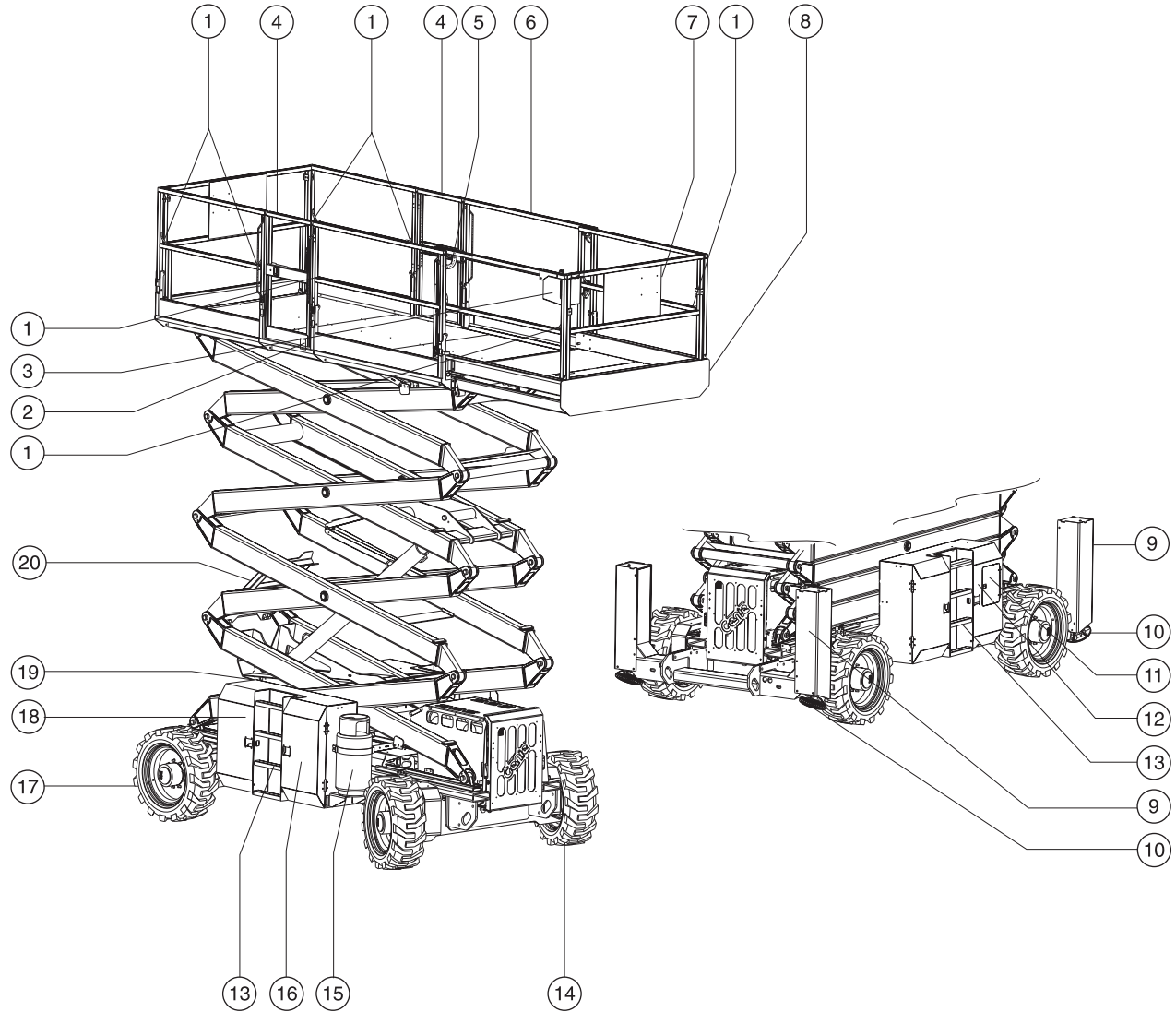
CAUTION

Yellow without safety alert symbol—used to indicate the presence of a potentially hazardous situation which, if not avoided, may result in property damage.

NOTICE

Green—used to indicate operation or maintenance information.

Legend

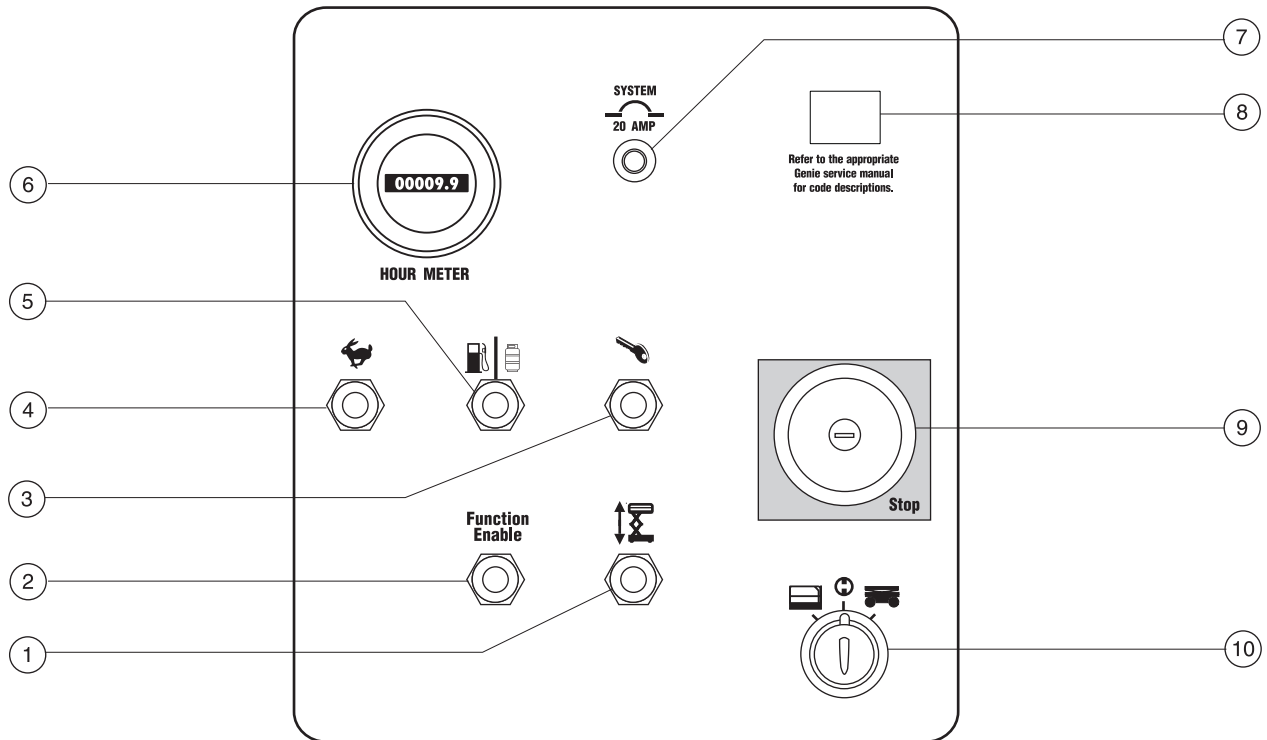


- 1 Lanyard anchorage point
- 2 GFCI outlet
- 3 Platform controls
- 4 Platform entry gate
- 5 Platform extension lock handle
- 6 Platform guard rails
- 7 Manual storage container
- 8 Platform extension

- 9 Outrigger housing (if equipped)
- 10 Outrigger footpad (if equipped)
- 11 Ground controls with LED diagnostic readout
- 12 Tilt alarm (behind ground control panel)
- 13 Entry ladder
- 14 Steer tire

- 15 LPG tank
- 16 Fuel tank (behind cover)
- 17 Non-steer tire
- 18 Hydraulic reservoir (behind cover)
- 19 Power to platform (hidden from view)
- 20 Safety arm (hidden from view)

Controls

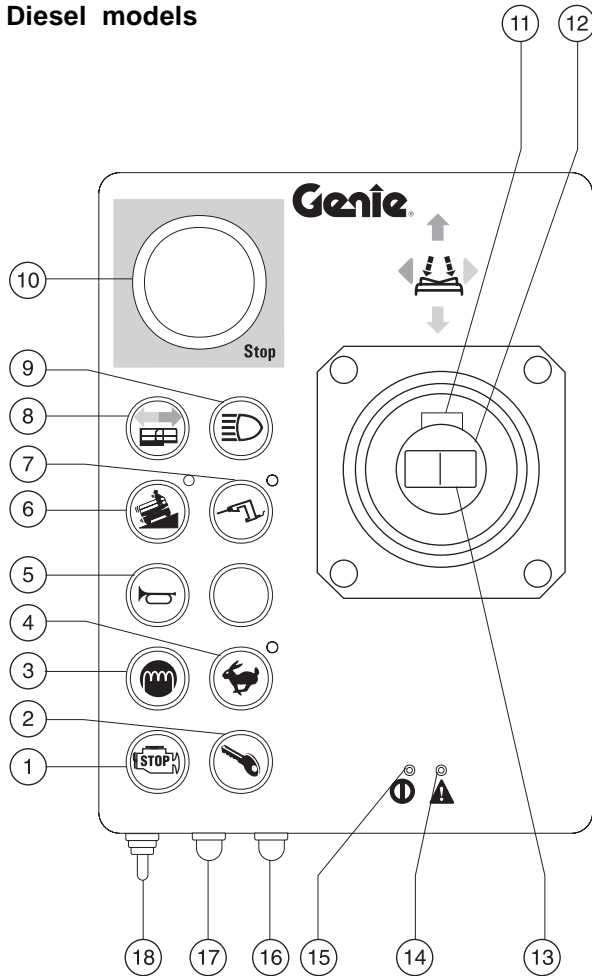


Ground Control Panel

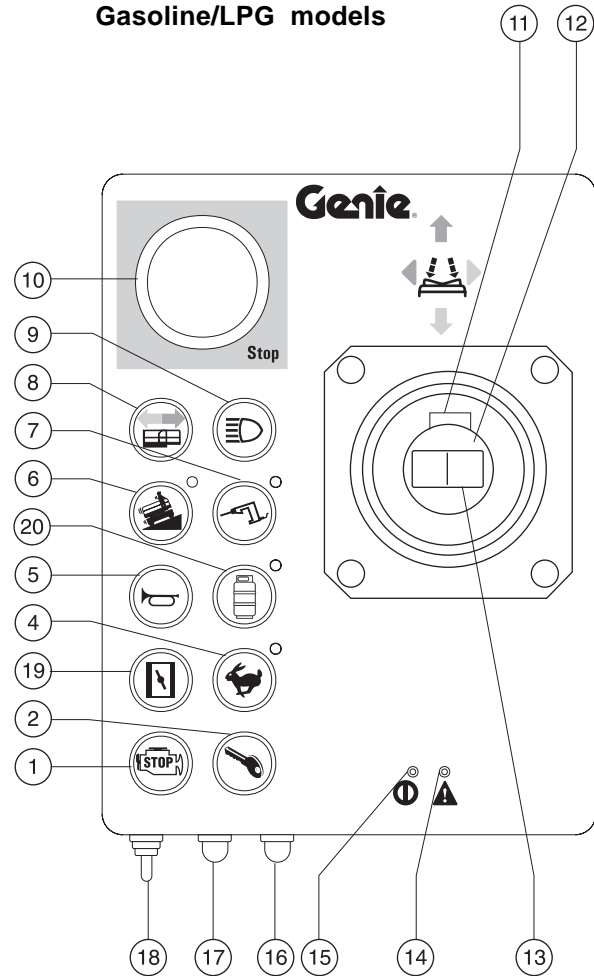
- | | |
|---|---|
| <ul style="list-style-type: none"> 1 Platform up/down toggle switch and auxiliary lowering switch 2 Function enable toggle switch 3 Engine start toggle switch 4 High idle select toggle switch 5 Gasoline/LPG models: Fuel select switch
Diesel models: Glow plug switch (option) | <ul style="list-style-type: none"> 6 Hour meter 7 20 amp circuit breaker for system circuit 8 LED diagnostic readout 9 Red Emergency Stop button 10 Key switch for platform/off/ground control selection |
|---|---|

CONTROLS

Diesel models



Gasoline/LPG models

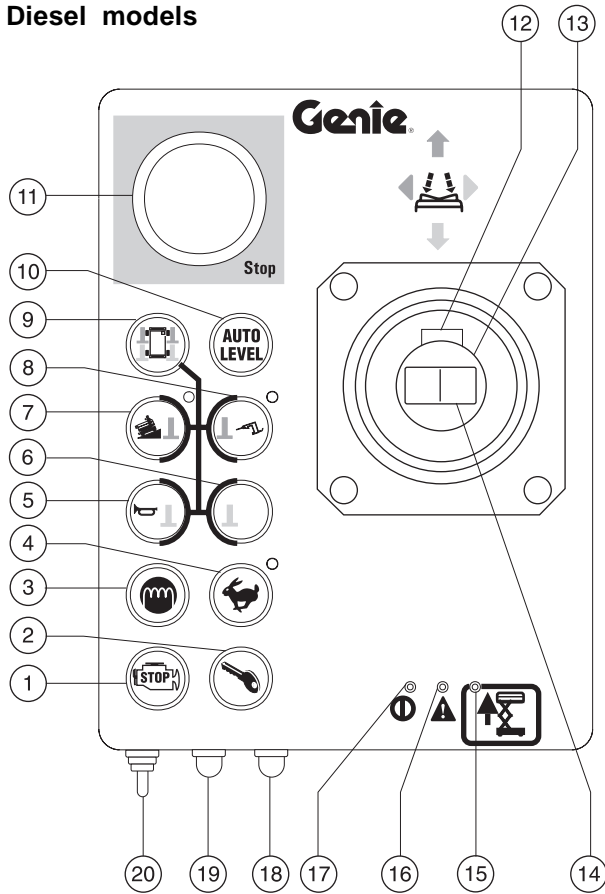


Platform Controls

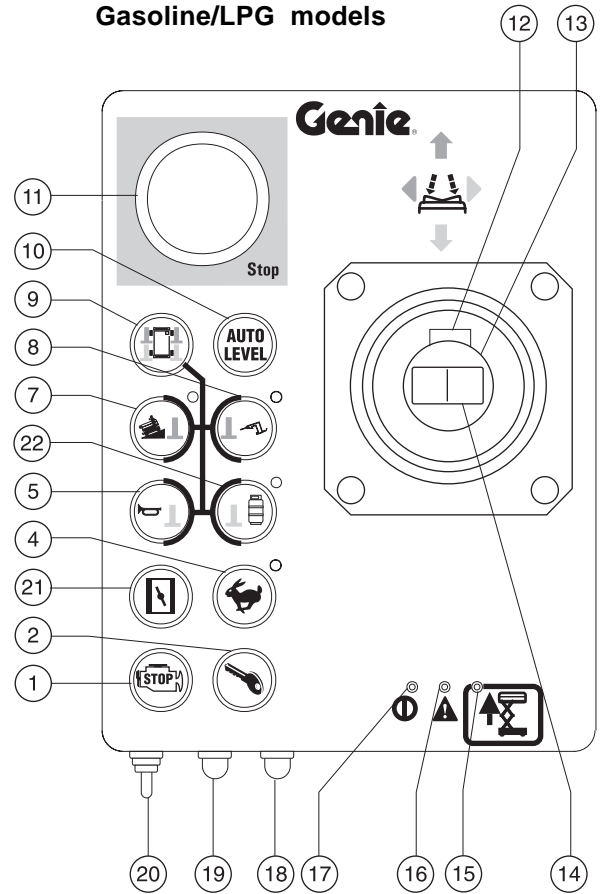
- | | | |
|---|--|--|
| 1 Engine stop button | 8 Platform extend/retract enable button (option) | 15 Power light |
| 2 Engine start button | 9 Headlight/taillight button (option) | 16 Function enable/high speed select button for up/down function |
| 3 Glow plug button (Diesel models) | 10 Red Emergency Stop button | 17 Function enable/low speed select button for up/down function |
| 4 High idle button with indicator light | 11 Function enable switch | 18 Platform up/down select switch |
| 5 Horn button | 12 Proportional control handle for drive functions and optional platform extend/retract function | 19 Choke button (Gasoline/LPG models) |
| 6 Machine on incline button: Low speed operation for inclines | 13 Thumb rocker switch for steer function | 20 LPG operation button with indicator light (Gasoline/LPG models) |
| 7 Generator select switch with indicator light | 14 Error indicator light | |

CONTROLS

Diesel models



Gasoline/LPG models



Platform Controls (if equipped with auto level outriggers)

- | | | | |
|---|--|--|--|
| 1 Engine stop button | 8 Outrigger and generator select button with indicator light | 13 Proportional control handle for drive functions | 19 Function enable/low speed select button for platform up/down function |
| 2 Engine start button | 9 Outrigger function enable button | 14 Thumb rocker switch for steer function | 20 Platform up/down and outrigger up/down toggle switch |
| 3 Glow plug button (Diesel models) | 10 Outrigger auto level button | 15 Lift error indicator light | 21 Choke button (Gasoline/LPG models) |
| 4 High idle button with indicator light | 11 Red Emergency Stop button | 16 Error indicator light | 22 Outrigger and LPG operation button with indicator light (Gasoline/LPG models) |
| 5 Outrigger and horn button | 12 Function enable switch | 17 Power light | |
| 6 Outrigger button | | 18 Function enable/high speed select button for up/down function | |
| 7 Outrigger and machine on incline button: Low speed operation for inclines | | | |

Pre-operation Inspection



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.

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 and locations for modifications, damage or loose or missing parts.

A damaged or modified machine must never be used. If damage or any 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

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 Decals 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, modifications and improperly installed or missing parts:

- Electrical components, wiring and electrical cables
- Hydraulic hoses, fittings, cylinders and manifolds
- Fuel and hydraulic tanks
- Drive motors
- Wear pads
- Tires and wheels
- Engine and related components
- Limit switches, alarms and horn
- Nuts, bolts and other fasteners

- Platform entry gate
- Beacon and alarms (if equipped)
- Safety arm
- Platform extension(s)
- Scissor pins and retaining fasteners
- Platform control joystick
- Generator (if equipped)
- Outrigger housing and footpads (if equipped)

Check entire machine for:

- Cracks in welds or structural components
- Dents or damage to machine
- Be sure that all structural and other critical components are present and all associated fasteners and pins are in place and properly tightened
- Side rails are installed and rail pins and bolts are fastened

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

NOTICE 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.

NOTICE Check the oil level with the engine off.

- 1 Check the oil level dipstick.

Ford models:

- ⊙ Result: The oil level should be between the **ADD** and **SAFE** marks. Add oil as needed.

Deutz models:

- ⊙ Result: The oil level should be within the two marks on the dipstick. Add oil as needed.

Ford LRG-425 EFI Engine

Oil viscosity requirements

below 60°F / 15.5°C	5W-30
-10° to 90°F / -23° to 32°C	5W-30
above -10°F / -23°C	5W-30
above 25°F / -4°C	10W-30

Use oils meeting API classification SH or SG grade. Units ship with 10-40 CC/SG.

Deutz F4L 1011F Engine

Oil viscosity requirements

below 60°F / 15.5°C (synthetic)	5W-30
-10° to 90°F / -23° to 32°C	10W-40
above -4°F / -20°C	15W-30

Engine oil should have properties of API classification CC/SE or CC/SF grades. Units ship with 10-40 CC/SG.

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.

NOTICE Perform this procedure with the platform in the stowed position and the engine off.

- 1 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.
- 2 Add oil if necessary. Do not overfill.

Hydraulic oil specifications

Hydraulic oil type	See machine decal
--------------------	-------------------

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.

NOTICE This procedure does not need to be performed on machines with sealed or maintenance-free batteries.

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

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

- 1 Put on protective clothing and eye wear.
- 2 Be sure that the battery cable connections are free of corrosion.
- 3 Be sure that the battery hold-down bars are 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.

MAINTENANCE

Check the Engine Coolant Level



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 in the NORMAL range.

⚠ WARNING Bodily injury hazard. Fluids in the radiator are under pressure and extremely hot. Use caution when removing cap and adding fluids.

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.

Function Tests



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.

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 Pull out the platform and ground red Emergency Stop buttons to the on position.
- 3 Turn the key switch to ground control.
- 4 Observe the diagnostic LED readout.
- ① Result: LED should look like the picture at right.
- 5 Start the engine. See Starting the Engine in the Operating Instructions section.



FUNCTION TESTS

Test Emergency Stop

- 6 Push in the ground red Emergency Stop button to the off position.
 - ⊙ Result: The engine should turn off and no functions should operate.
- 7 Pull out the red Emergency Stop button to the on position and restart the engine.

Test the Up/Down Functions and Function Enable

The audible warnings on this machine come from the same central alarm. 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.

- 8 Do not hold the function enable switch to either side and activate the platform up function.
 - ⊙ Result: No function should operate.
- 9 Hold the function enable switch to either side and activate the platform up function.
 - ⊙ Result: The platform should raise.
- 10 Hold the function enable switch to either side and activate the platform down function.
 - ⊙ Result: The platform should lower. The descent alarm should sound while the platform is lowering.

Test the Manual Lowering

- 11 Hold the function enable switch to either side and activate the platform up function and raise the platform approximately 2 feet / 60 cm.
- 12 Push in the red Emergency Stop button to shut off the engine.
- 13 Turn the key switch to ground control. Pull out the red Emergency Stop button to the on position.
- 14 Press and hold the function enable switch. Activate the down function.
 - ⊙ Result: The platform should lower. The descent alarm will not sound.
- 15 Turn the key switch to platform control and restart the engine.

At the Platform Controls**Test Emergency Stop**

- 16 Push in the platform red Emergency Stop button to the off position.
 - ⊙ Result: No functions should operate.
- 17 Pull the red Emergency Stop button out to the on position.
 - ⊙ Result: The green power light should come on.

Test the Horn

- 18 Push the horn button.
 - ⊙ Result: The horn should sound.

FUNCTION TESTS

Test the Up/Down Functions and the Function Enable Buttons

- 19 Start the engine.
- 20 Do not hold a function enable/speed select button. Activate the platform up function.
 - ⦿ Result: The platform should not raise.
- 21 Push and hold a function enable/speed select button.
 - ⦿ Result: The platform should raise.
- 22 Release the function enable button.
 - ⦿ Result: The platform should stop raising.
- 23 Push and hold a function enable/speed select button. Activate the platform down function.
 - ⦿ Result: The platform should lower. The descent alarm should sound while the platform is lowering.

Test the Manual Lowering

- 25 Push and hold a function enable/speed select switch and raise the platform approximately 2 feet / 60 cm.
- 26 Push in the red Emergency Stop button to shut off the engine, then pull the red Emergency Stop button out to the on position.
- 27 Push and hold a function enable/speed select button and lower the platform.
 - ⦿ Result: The platform should lower. The descent alarm will not sound.

Test the Steering

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

- 28 Press and hold the function enable switch.
- 29 Depress the thumb rocker switch on top of the control handle in the direction identified by the blue triangle on the control panel.
 - ⦿ Result: The steer wheels should turn in the direction that the blue triangle points on the control panel.
- 30 Depress the thumb rocker switch in the direction identified by the yellow triangle on the control panel.
 - ⦿ Result: The steer wheels should turn in the direction that the yellow triangle points on the control panel.

Test Drive and Braking

- 31 Press and hold the function enable switch.
- 32 Slowly move the 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.
- 33 Press and hold the function enable switch.
- 34 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.

FUNCTION TESTS

Test Limited Drive Speed

35 Move and hold a function enable/speed select switch. Raise the platform approximately 12 feet / 3.6 m from the ground.

36 Press and hold the function enable switch.

37 Slowly move the control handle to the full drive position.

- ⦿ Result: The maximum achievable drive speed with the platform raised should not exceed 1.03 feet / 31 cm per second.

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

Test the Tilt Sensor Operation

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

38 Fully lower the platform.

39 Drive both wheels on one side onto a 7 inch / 18 cm block.

40 Raise the platform approximately 12 feet / 3.6 m from the ground.

Machines produced before 01-01-02:

- ⦿ Result: The tilt alarm will sound at 180 beeps per minute.

CE and Australian models: The drive function and the lift function will not operate.

Proceed to step 42.

Machines produced after 12-31-01:

- ⦿ Result: The platform should stop and the tilt alarm will sound at 180 beeps per minute.

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

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

42 Lower the platform and drive the machine off the block.

Test the Up Limit Switch and the Outriggers - GS-5390 Models

43 Move and hold a function enable/speed select switch. Raise the platform.

- ⦿ Result: The platform should raise to 30 feet / 9.1 m and then stop. The platform should not raise above 30 feet / 9.1 m unless the outriggers are lowered.

44 Drive the machine forward.

- ⦿ Result: The drive function should not operate.

45 Lower the platform. If the platform is higher than 12 feet / 3.6 m from the ground, the outriggers will not lower.

46 Push and hold the auto level button.

47 Activate the outrigger up/down button in the down direction.

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

48 Raise the platform.

- ⦿ Result: The platform should raise to full height.

49 Lower the platform.

Workplace Inspection



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
- slopes that exceed the machine's leveling capability
- 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

Operating Instructions



Do Not Operate Unless:

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

Fundamentals

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

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

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

Emergency Stop

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

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

OPERATING INSTRUCTIONS

Manual Lowering

At the Ground Controls

Hold the function enable switch to either side and activate the down function.

In the event of a power failure, use the backup manual lowering switch under the ground controls side cover.

At the Platform Controls

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

Wait 10 seconds and pull the red Emergency Stop button out to the on position.

Push and hold a function enable/speed select button.

Activate the platform down function toggle switch.

Starting the Engine

- 1 At the ground controls, turn the key switch to the desired position.
- 2 Be sure both ground and platform red Emergency Stop buttons are pulled out to the on position.

At the Ground Controls

- 3 Gasoline/LPG models: Choose the fuel source by moving the fuel select toggle switch to the desired position.
- 4 Move the engine start toggle switch to either side.

At the Platform Controls

- 3 Gasoline/LPG models: Choose the fuel source. Push the LPG operation button to select LPG fuel source. The indicator light will come on.
- 4 Push the engine start button.

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.

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

Gasoline/LPG models: In extreme cold conditions, 20°F / -6°C and below, the machine should be started on gasoline, then switched to LPG.

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 Hold the function enable switch to either side.
- 2 Move the up/down toggle switch 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 the ground and platform red Emergency Stop buttons to the on position.
- 3 Start the engine.

To Position Platform

- 1 Push and hold a function enable/speed select button.
- 2 Move the up/down toggle switch according to the markings on the control box.

To Steer

- 1 Press and hold the function enable switch on the controller.
- 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 controller.
- 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 on the platform to identify the direction the machine will travel.

Machine travel speed is restricted when the platform is raised.

Drive Select Switch

Machine on incline symbol:
Low range operation for inclines

OPERATING INSTRUCTIONS

To Extend and Retract Platform

- 1 Lift the platform extension lock handle to the horizontal position.
- 2 Push the platform extension lock handle 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 handle.

Operation From Ground with Controller

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

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

Engine Stop Button


Press the engine stop button to turn off the engine. The down function and the horn will still operate.

After Each Use

- 1 Select a safe parking location—firm level surface, clear of obstructions and traffic.
- 2 Lower the platform.
- 3 Turn the key switch to the off position and remove the key to secure from unauthorized use.
- 4 Chock the wheels.

Auto Level Outriggers (if equipped)




These instructions apply to machines with the black auto level outrigger control box.

- 1 Position the machine below the desired work area.
 - 2 Pull out the red Emergency Stop buttons at the ground and platform controls.
 - 3 Push and hold the auto level button. 
 - 4 Activate the outrigger up/down toggle switch in the down direction.
- ⦿ **Result:** The outriggers will extend and level the machine. A beep will sound when the machine is level.

The red indicator light above the lift symbol on the outrigger control panel comes on when one but not all outriggers are down. All drive and lift functions are disabled.

The light turns off when all 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 the outrigger function enable button. 
- 2 Push and hold an outrigger button. 
- 3 Activate the outrigger up/down toggle switch in the desired direction to level the machine. 

Positioning machine on a slope

When setting the machine up on a slope, the steer-end outriggers must be lowered first.

OPERATING INSTRUCTIONS

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.

Decals

Decal Inspection

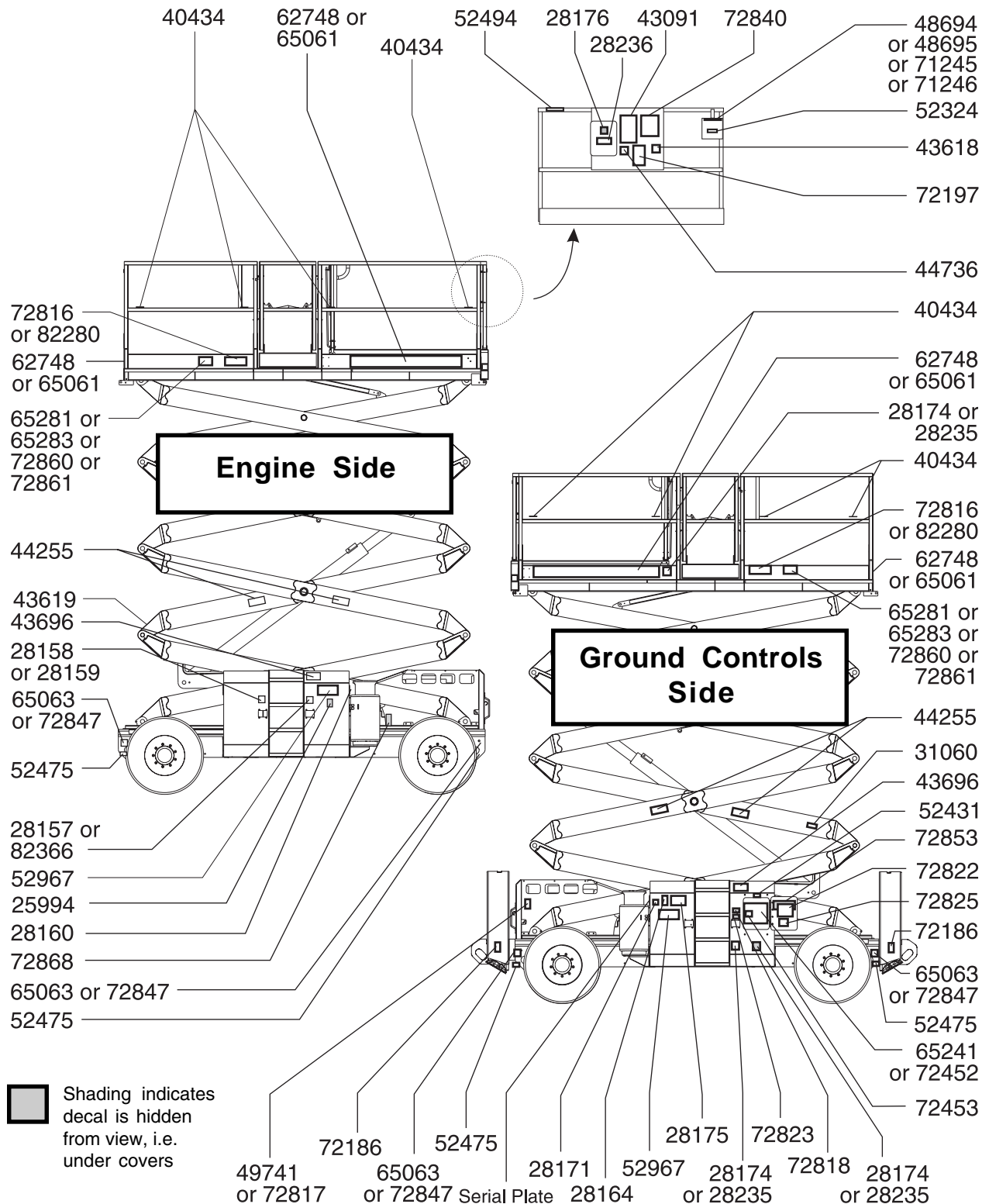
Use the pictures on the next page to verify that all decals are legible and in place.

Below is a numerical list with quantities and descriptions.

Part No.	Description	Quantity
25994	Caution - Component Damage	1
28157	Label - Dexron	1
28158	Label - Unleaded (Gasoline/LPG models)	1
28159	Label - Diesel (Diesel models)	1
28160	Label - LPG (Gasoline/LPG models) (1 additional with extra LPG tank option)	1
28164	Notice - Hazardous Materials	1
28171	Label - No Smoking	1
28174	Label - Power to Platform, 230V	3
28175	Caution - Compartment Access	1
28176	Notice - Missing Manuals	1
28235	Label - Power to Platform, 115V	3
28236	Warning - Failure To Read . . .	1
31060	Danger - Do Not Alter Limit Switch	1
40434	Label - Lanyard Anchorage	8
43091	Danger - General Safety Rules	1
43618	Label - Directional arrows	1
43619	Label - Safety Arm	1
43696	Danger - Electrocutation Hazard	2
44255	Danger - Crushing Hazard	4
44736	Danger - Tilt Alarm	1
48694	Platform Control Panel, Gas/LPG models	1
48695	Platform Control Panel, Diesel models	1
49741	Notice - Ford EFI Engine Specs	1
52324	Label - Up/Down & Function Enable	1
52431	Label, Ground Control Panel	1
52475	Label - Transport Tie-down	4

Part No.	Description	Quantity
52494	Caution - Crushing Hazard, Rails	1
52967	Cosmetic - 4x4	2
62748	Cosmetic - Genie GS-4390	4
65061	Cosmetic - Genie GS-5390	4
65063	Notice - Tire Specifications	4
65241	Ground Control Panel	1
65281	Notice - Max Side Force, ANSI & CSA - GS-4390	2
65283	Notice - Max Side Force, CE and Australia - GS-4390	2
71245	Platform Control Panel with Outriggers, Gas/LPG models	1
71246	Platform Control Panel with Outriggers, Diesel models	1
72816	Notice - Max Capacity, GS-90 with 2 decks	2
72817	Notice, Deutz Diesel Engine Specs	1
72452	Ground Control Panel	1
72453	Label - Glow Plugs	1
72186	Caution - Crushing Hazard	4
72197	Danger/Notice - Outrigger Safety	1
72818	Label - Test Mode Swtich	1
72822	Notice - Operating Instructions - Ground	1
72823	Label - Back up Manual Lowering	1
72825	Label - Fault Codes	1
72840	Notice - Operating Instructions - Platform	1
72847	Notice - Tire Specifications	4
72853	Danger - Improper Use Hazard	1
72860	Notice - Max Side Force, ANSI & CSA - GS-5390	2
72861	Notice - Max Side Force, CE and Australia - GS-5390	2
72868	Label - Engine Tray Prop	1
82280	Notice - Max Cap. 1800 lbs / 816 kg, CE GS-4390 with 1 deck and outriggers	2
82366	Label - Chevron Rykon	1

DECALS



Transport Instructions



Observe and Obey:

- ☑ Common sense and planning must be applied to control the movement of the machine when lifting it with a crane.
- ☑ 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. See the serial plate for machine weight.
- ☑ The machine must be on a level surface or secured before releasing the brakes.

Securing to Truck or Trailer for Transit

Always chock the machine wheels in preparation for transport.

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

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.

Secure the fold-down rails before transporting.

Free-wheel Configuration for Winching

Chock the wheels to prevent the machine from rolling.

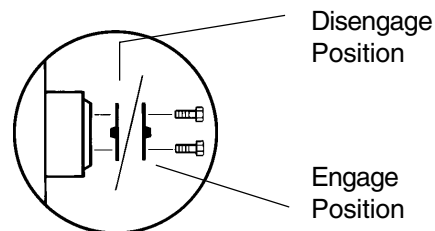
2WD models: Release the non-steer wheel brakes by turning over the torque hub disconnect caps (see below).

4WD models: Release the wheel brakes by turning over all four torque hub disconnect caps (see below).

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.



Specifications

GS-4390

Height, working maximum	49 ft	15.1 m
Height, platform maximum	43 ft	13.1 m
Height, stowed maximum Rails up	115 ¹ / ₂ in	2.9 m
Height, stowed maximum Rails lowered	88 ³ / ₄ in	2.9 m
Width, standard tires	90 in	2.3 m
Width, high-flotation tires	101 in	2.6 m
Length, platform retracted Models with one extension deck	155 ¹ / ₄ in	3.9 m
Length, platform extended Models with one extension deck	212 ¹ / ₂ in	5.4 m
Length, platform retracted Models with two extension decks	156 ¹ / ₂ in	3.9 m
Length, platform extended Models with two extension decks	258 ¹ / ₂ in	6.6 m
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 ¹ / ₂ in	7.4 m
Maximum load capacity All models except the model listed below	1500 lbs	680 kg
Maximum load capacity, CE only GS-4390 with one extension deck and outriggers	1800 lbs	816 kg
Wheelbase	115 in	2.9 m
Turning radius (outside)	210 in	5.3 m
Turning radius (inside)	85 in	2.2 m
Ground clearance	14 in	36 cm
Weight (Machine weights vary with option configurations)	See Serial Plate	

Airborne noise emissions Maximum sound level at normal operating workstations (A-weighted)	80 dB	
Power source	Ford LRG-425 EFI Gas/LPG OR Deutz Diesel L1011	
Controls	Proportional	
AC outlet in platform	standard	
Maximum hydraulic pressure (functions)	3500 psi	241.3 bar
Tire size - standard tires	12 x 21.5	
Tire size - high-flotation tires	33/16LL500, 10 ply	

Platform dimensions

Platform length x width	150 in x 72 in	3.8 x 1.8 m
Platform extension length	60 in	1.5 m

Drive speeds

Stowed, maximum	5 mph	8 km/h
Platform raised, maximum	0.7 mph	1.1 km/h 40 ft/39 sec 12.2 m/39 sec

Floor Loading Information

GVW+Rated Load	15280 lbs	6931 kg
Axle load, maximum	9000 lbs	4082 kg
Wheel load, maximum	4500 lbs	2041 kg
Localized pressure per tire	125 psi	8.8 kg/cm ² 862 kPa
Occupied pressure	158 psf	7.55 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-5390

Height, working maximum	59 ft	18.2 m
Height, platform maximum	53 ft	16.2 m
Height, stowed maximum Rails up	124 in	3.15 m
Height, stowed maximum Rails lowered	97 ¹ / ₄ in	2.5 m
Width, standard tires	90 in	2.3 m
Width, high-flotation tires	101 in	2.6 m
Length, platform retracted Models with one extension deck	192 in	4.9 m
Length, platform extended Models with one extension deck	231 ¹ / ₂ in	5.9 m
Length, platform retracted Models with two extension decks	192 in	4.9 m
Length, platform extended Models with two extension decks	258 ¹ / ₂ in	6.6 m
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 ¹ / ₂ in	7.4 m
Maximum load capacity	1500 lbs	680 kg
Wheelbase	115 in	2.9 m
Turning radius (outside)	210 in	5.3 m
Turning radius (inside)	85 in	2.2 m
Ground clearance	14 in	36 cm
Weight (Machine weights vary with option configurations)	See Serial Plate	
Airborne noise emissions Maximum sound level at normal operating workstations (A-weighted)	80 dB	

Power source	Ford LRG-425 EFI Gas/LPG OR Deutz Diesel L1011	
Controls	Proportional	
AC outlet in platform	standard	
Maximum hydraulic pressure (functions)	3500 psi	241.3 bar
Tire size	12 x 21.5	
Tire size - high-flotation tires	33/16LL500, 10 ply	

Platform dimensions

Platform length x width	150 in x 72 in	3.8 x 1.8 m
Platform extension length	60 in	1.5 m

Drive speeds

Stowed, maximum	5 mph	8 km/h
Platform raised, maximum	0.7 mph	1.1 km/h 40 ft/39 sec 12.2 m/39 sec

Floor Loading Information

GVW+Rated Load	18225 lbs	8267 kg
Axle load, maximum	10600 lbs	4808 kg
Wheel load, maximum	5300 lbs	2404 kg
Localized pressure per tire	147.2 psi	10.36 kg/cm ² 1015 kPa
Occupied pressure	188 psf	9.01 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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California Proposition 65

WARNING

The exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

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