

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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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 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.

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		mum Safe h Distance 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.

Maximum capacity

ANSI and CSA models	500 lbs	227 kg
CE models	440 lbs	200 kg
Maximum occupants		2

Do not raise the boom unless the machine is level.



Do not set the machine up on a surface where it cannot be leveled using only the outriggers.

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

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

Do not move the machine when the boom is raised.

Do not adjust or stow the outriggers when the boom is raised.

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

When the tilt alarm sounds, immediately lower the boom and adjust the outriggers to level the machine.

Do not alter or disable the limit switches.



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 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 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 properly inflated and in good condition and lug nuts are properly tightened.

Do not use the platform as a crane.

Do not place loads outside the platform perimeter.

Do not place or attach overhanging loads to any part of the platform.



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

Maximum allowable manual force, CE 400 N

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

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

Do not use batteries that weigh less than the original equipment. Four batteries are used as counterweight and are critical to machine stability. Each battery must weigh 65 pounds / 29.5 kg.

Do not contact adjacent structures with the boom.

Do not tie the boom or platform to adjacent structures.

Fall Hazards



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

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

Do not climb down from the platform when raised.

Keep the platform floor clear of debris.

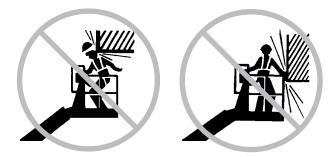
Lower the platform entry mid-rail or close the entry gate before operating.

Collision Hazards

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

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

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



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

Be aware of the boom position when rotating the turntable.

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

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 the machine.

Do not attempt to manually move a machine unless it is on a firm, level surface. Use the parking brake to control the speed of the machine when pushing a machine that is not attached to a tow vehicle.

Explosion and Fire Hazards

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

Models with engines: 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.

Component Damage Hazards

Do not use the machine as a ground for welding.

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 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.

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.

Models with engines: When the engine is running, operate the machine in a well-ventilated area to avoid carbon monoxide poisoning.

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.

Towing Hazards

Read, understand and obey all of your tow vehicle manufacturer's recommendations, warnings and instructions before towing this machine. Make sure your tow vehicle is properly maintained and capable of towing this machine.

Be sure the hitch is properly and securely attached to your tow vehicle.

Do not overload your tow vehicle. Observe the manufacturer's Gross Vehicle Weight Rating (GVWR).

Be sure all lights, mirrors and hitch components conform to federal and local regulations.

Be sure that all driving lights are operational.

Be sure the tires are properly inflated.

Do not tow the machine unless the boom is lowered into the chassis cradle and the hold-down latch is securely locked in place.

Do not load cargo on the machine. The TZ is not designed to carry any extra cargo.

Be sure the safety chains (if required) are securely attached to the tow vehicle. Cross the chains under the hitch. This will create a cradle to catch the tongue of the trailer if it becomes disconnected from the tow vehicle.

Do not tow the machine on public roads unless it meets all governmental regulations for towing.

Do not exceed 60 mph / 97 km/h. Obey all local and national towing speed laws.

Be sure to chock the wheels of the trailer when parking on a hill.

Optional Drive System Safety

Tip-over Hazards

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.

Collision Hazards

Do not drive the machine unless the parking brake on the tongue is set.

Do not drive the machine unless the platform is fully lowered.

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

Observe and use the color-coded direction arrows on the drive control box for drive and steer functions.

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

Use common sense and planning when operating the drive system from the ground. Remove the drive control box from its mounting and step away from the machine before driving. Maintain safe distances between the operator, the machine and fixed objects.

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.



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

AWARNING	

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



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

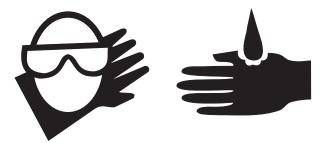
Yellow without safety alert symbol—used to indicate the presence of a potentially hazardous situation which, if not avoided, may result in property damage.

Green—used to indicate operation or maintenance information.

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 Hazards



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

The covers should be open during the entire charging cycle.

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

Component Damage Hazards

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

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

Electrocution Hazards

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



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

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

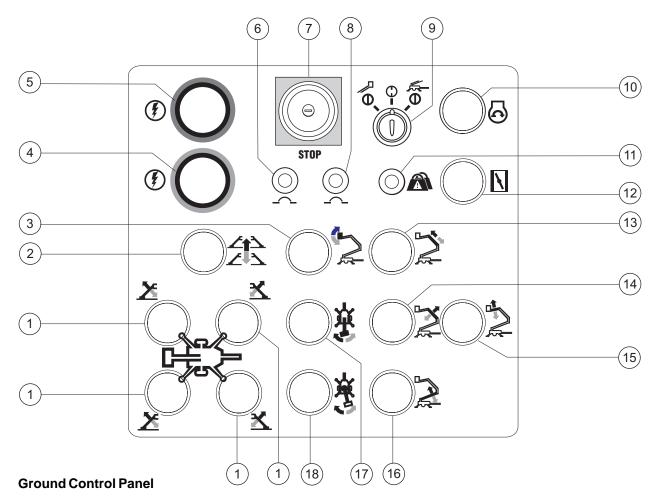
Tip-over Hazard

Do not use batteries that weigh less than the original equipment. Four batteries are used as counterweight and are critical to machine stability. Each battery must weigh 65 pounds / 29.5 kg.

Lifting Hazard

Use the appropriate number of people and proper lifting techniques when lifting batteries.

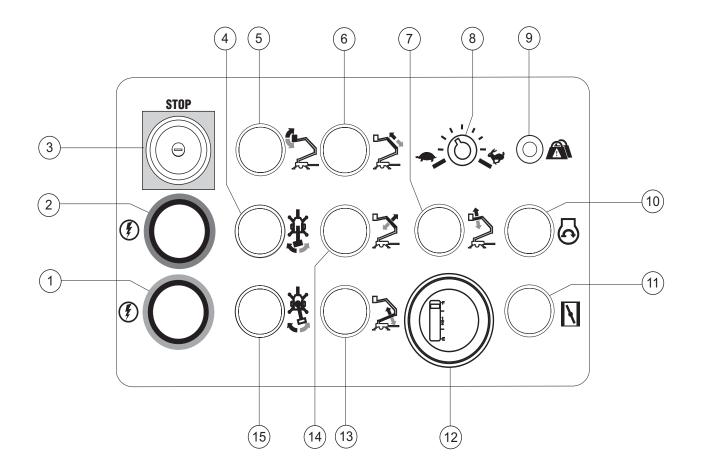
Controls



- 1 Outrigger raise/lower button and indicator light (individual outrigger)
- 2 Outrigger auto level button
- 3 Platform level button
- 4 Function enable button for: Platform down Primary boom down Primary boom retract Secondary boom down Jib boom down Turntable rotate right Platform rotate right Outrigger lower
- 5 Function enable button for: Platform up Primary boom up Primary boom extend Secondary boom up Jib boom up Turntable rotate left Platform rotate left Outrigger raise
- 6 15 amp breaker for controls circuits
- 7 Red Emergency Stop button
- 8 15 amp breaker for engine controls (if equipped)
- 9 Key switch for platform/off/ground selection
- 10 Engine start button (if equipped)

- 11 Platform overload indicator light (if equipped)
- 12 Engine choke button (if equipped)
- 13 Primary boom extend/ retract button
- 14 Primary boom up/down button
- 15 Jib boom up/down button
- 16 Secondary boom up/down button
- 17 Platform rotate button (if equipped)
- 18 Turntable rotate button

CONTROLS



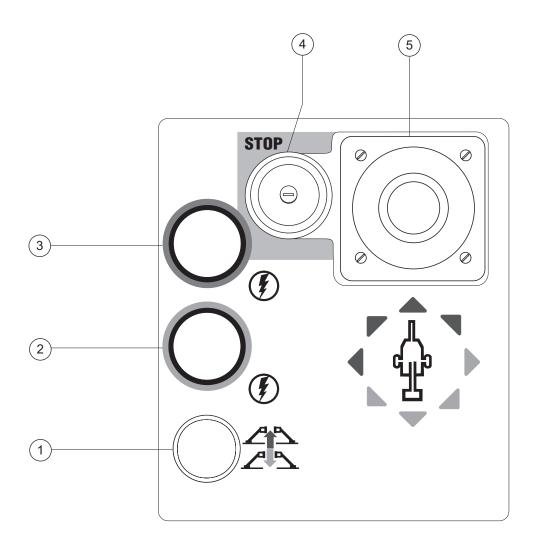
Platform Control Panel

- 1 Function enable button for: Platform down Primary boom down Primary boom retract Secondary boom down Jib boom down Turntable rotate right Platform rotate right (if equipped)
- 2 Function enable button for: Platform up Primary boom up Primary boom extend Secondary boom up Jib boom up Turntable rotate left Platform rotate left (if equipped)

- 3 Red Emergency Stop button
- 4 Platform rotate button (if equipped)
- 5 Platform level button
- 6 Primary boom extend/retract
- 7 Jib boom up/down button
- 8 Boom function speed controller
- 9 Platform overload indicator light (if equipped)

- 10 Engine start button (if equipped)
- 11 Engine choke button (if equipped)
- 12 Battery charge indicator
- 13 Secondary boom up/down button
- 14 Primary boom up/down button
- 15 Turntable rotate button

CONTROLS



Drive Control Panel (Option)

- 1 Outrigger auto level button (ANSI models)
- 2 Function enable button for outrigger lower (ANSI models)
- 3 Function enable button for outrigger raise (ANSI models)
- 4 Red Emergency Stop button
- 5 Proportional control handle for drive and steer functions

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.

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

Pre-operation Inspection

- Be sure that the operator's, safety and responsibilities manuals are complete, legible and in the storage container located on the platform.
- Be sure that all decals are legible and in place.
 See Decals section.
- □ Check for hydraulic oil leaks and proper oil level. Add oil if needed. See Maintenance section.
- Check for battery fluid leaks and proper fluid level. Add distilled water if needed. See Maintenance section.
- Check for proper tire pressure and lug nut torque. Add air to tires if needed. See Maintenance section.
- Models with engines: Check for engine oil leaks and proper fluid level. Add oil 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 power unit, reservoir, hoses, fittings, cylinders and manifolds
- Boom components and wear pads
- Tires and wheels
- □ Trailer lights and reflectors
- D Parking brake components
- Outriggers and foot pads
- Limit switch and alarms
- Nuts, bolts and other fasteners
- Platform entry mid-rail/gate
- D Platform ladder (if equipped)

- Surge brake components
- □ Safety chains (if required)
- Light and brake cables
- □ Engine and related components (if equipped)
- □ Mechanical brake components (if equipped)
- Axle components
- Beacon and alarms (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.
- Be sure that the batteries are in place and properly connected.
- Models equipped with hydraulic surge brake systems: Check the hydraulic oil level in the surge brake. Check for leaks.
- □ After you complete your inspection, be sure that all compartment covers are in place and latched.

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.

Check the Batteries

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

NOTICE

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

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

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

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

Bodily injury hazard. An overinflated tire can explode and may cause death or serious injury.

AWARNING Collision hazard. An excessively worn tire can cause poor handling and continued use could result in tire failure.

AWARNING Tip-over hazard. Do not use temporary flat tire repair products.

Maintaining the tires and wheels in good condition is essential to safe operation and good performance. Tire and/or wheel failure could result in a machine tip-over. Component damage may also result if problems are not discovered and repaired in a timely fashion.

- 1 Check the tire surface and sidewalls for cuts, cracks, punctures and uneven or excessive tread wear.
- Result: Replace the tire if uneven or excessive tread wear is found.

NOTICE

Tires and wheels must be replaced with tires and wheels of the specifications listed.

- 2 Check each wheel for damage, bends and cracks.
- Result: Replace the wheel if any damage is found.
- 3 Check each tire with an air pressure gauge and add air as needed.
- 4 Check the torque of each lug nut.

Tires and wheels - ANSI and CSA			
Tire size		225/75 R15 Load Range D	
Lug nut torque (dry)	80 ft-lbs	108 Nm	
Tire pressure (cold)	65 psi	4.5 bar	
Tires and wheels - CE			
Tire size		215/70 R14 Load Range C	
Lug nut torque (dry)	192 ft-lbs	260 Nm	
Tire pressure (cold)	66 psi	4.5 bar	

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 the boom is in the stowed position and the outriggers are raised.
- 2 Open the cover on the side of the machine opposite the ground controls.
- 3 Use the marks on the side of the hydraulic tank to determine the level of hydraulic oil.
- Result: The hydraulic oil level should be between the ADD and FULL marks.
- 4 Add hydraulic oil if necessary.

Hydraulic oil specifications

Hydraulic oil type

Chevron Rykon Premium MV equivalent

MAINTENANCE

Check the Engine Oil Level (if equipped)

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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.



Check the oil level with the engine off.

- 1 Check the oil level dipstick.
- Result: The oil must touch the dipstick.
- 2 If oil is low, fill to the edge of the oil filler hole.

Honda GX160K1

Oil viscosity requirements	
-4° to 100°F / -20° to 38°C	10W-30
Below 30°F / 0°C	5W-30
Above 50°F / 10°C	30W

Engine oil should have properties of API classification SJ.

Scheduled Maintenance

Maintenance performed quarterly, annually, semiannually 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.

Setup for Function Tests

- 1 Position the machine on a firm, level surface.
- 2 Set the parking brake.
- 3 Disconnect the trailer lights, safety chains and brake cables from the vehicle.
- 4 Open the latch on the ball coupler.
- 5 Pull the jack release handle and rotate the tongue jack to the lifting position.
- 6 Raise the tongue by turning the jack handle.
- 7 Be sure the boom hold-down latches are unlatched.
- 8 Be sure the batteries are connected.

FUNCTION TESTS

Test the Parking Brake

- 9 Release the parking brake.
- 10 Push the machine from the tongue until the road tires begin to move.
- 11 Set the parking brake.
- 12 Push the machine again.
- Result: The road tires should not move.

At the Ground Controls

- 13 Insert the key and turn to ground control.
- 14 Pull out the red Emergency Stop button to the on position.
- Result: The beacon (if equipped) should flash.
- 15 **Auto level:** Push and hold the yellow function enable button. Push and hold the auto level button. The outriggers will lower and adjust to level the machine and raise the wheels off the ground. Level the machine using only the outriggers. Use the bubble level located below the ground controls to make sure the machine is level.



Manual level: Push and hold the yellow function enable button. Push and hold each outrigger button to lower the outriggers. Adjust the outriggers to level the machine and raise the wheels off the ground. Level the machine using only the outriggers. Use the bubble level located below the ground controls to make sure the machine is level.

- 16 Check the lights on the individual outrigger buttons.
- Result: All four lights should be on.
- 17 Be sure the wheels on the tongue jack are not touching the ground.

Note: If the wheels on the tongue jack are touching the ground, turn the jack handle until the wheels are no longer on the ground.

Test Emergency Stop

- 18 Push in the red Emergency Stop button to the off position.
- Result: All ground and platform control functions should not operate.
- 19 Pull out the red Emergency Stop button to the on position.

Test Boom Functions and Function Enable

- 20 Do not push a function enable button. Attempt to activate each boom function button.
- Result: All boom functions should not operate.
- 21 Push and hold the blue function enable button. Activate each boom function button.
- Result: Primary boom up, primary boom extend, secondary boom up, platform level up, jib boom up, platform rotate left and turntable rotate right should all function.
- 22 Push and hold the yellow function enable button. Activate each boom function button.
- Result: Primary boom down, primary boom retract, secondary boom down, platform level down, jib boom down, platform rotate right and turntable rotate left should all function.

FUNCTIONTESTS

Test Outrigger Interlock

- 23 Place the boom in the stowed position.
- 24 Push and hold the blue function enable button. Push and hold one outrigger button and raise the outrigger off the ground.
- 25 Push and hold the blue function enable button and activate each boom function.
- Result: All boom functions should not operate.
- 26 Use the leveling buttons to lower the outrigger.
- 27 Repeat this procedure for each outrigger.
- 28 Use the function enable buttons and the auto level button or the outrigger leveling buttons to make sure the machine is level.
- 29 Raise the platform approximately 2 feet / 60 cm.
- 30 Push and hold the blue function enable button and attempt to raise each outrigger off the ground.
- Result: The outriggers should not raise.

Test the Tilt Sensor

- 31 Raise the boom 2 feet / 60 cm.
- 32 Turn the key switch to platform control.
- 33 Locate the tilt sensor below the ground control box. It is the sensor farthest to the left.
- 34 Press down one side of the tilt sensor.
- Result: The alarm should sound.
- 35 Lower the boom.



At the Platform Controls

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

Test Emergency Stop

- 37 Push in the platform red Emergency Stop button to the off position.
- Result: All platform control functions should not operate.
- 38 Pull out the platform red Emergency Stop button to the on position.

Test Boom Functions and Function Enable

- 39 Do not push a function enable button. Attempt to activate each boom function button.
- Result: All boom functions should not operate.
- 40 Push and hold the blue function enable button. Activate each boom function button.
- Result: Primary boom up, primary boom extend, secondary boom up, platform level up, jib boom up, platform rotate left and turntable rotate left should all function.
- 41 Push and hold the yellow function enable button. Activate each boom function button.
- Result: Primary boom down, primary boom retract, secondary boom down, platform level down, jib boom down, platform rotate right and turntable rotate right should all function.

FUNCTION TESTS

Test Drive and Brake System (if equipped)

ANSI models: Perform this test from the platform or the ground, using the drive control box located next to the platform.

CE models: Perform this test from the ground, using the drive control box mounted next to the ground controls.

Note: When operating the drive control system from the ground, remove the drive control box from its mounting and step away from the machine. Maintain safe distances between the operator, the machine and fixed objects.

- 42 Fully retract and lower the platform.
- 43 Manually engage the drive wheels by pulling the drive wheel lever toward the tire on each side of the machine.
- 44 **ANSI models:** At the drive control box mounted next to the platform controls, press and hold the blue function enable button and raise the outriggers.

CE models: At the ground controls, press and hold the blue function enable button and raise the outriggers.

- 45 Press and hold the function enable button on the drive control handle.
- 46 Slowly move the drive control handle in the direction that one of the blue arrows points 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, then come to an abrupt stop.
- 47 Repeat this procedure for each blue arrow.

- 48 Slowly move the drive control handle in the direction that one of the yellow arrows points 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, then come to an abrupt stop.
- 49 Repeat this procedure for each yellow arrow.

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

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 or platform controls to stop all machine functions.

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.

Setup for Operation

- 1 Position the machine below the desired work area.
- 2 Set the parking brake.
- 3 Disconnect the trailer lights, safety chains and brake cables from the vehicle.
- 4 Open the latch on the ball coupler.
- 5 Pull the jack release handle and rotate the tongue jack to the lifting position.
- 6 Raise the tongue by turning the jack handle.
- 7 Be sure the boom hold-down latches are unlatched.
- 8 Be sure the batteries are connected.

Operation from Ground

- 1 Turn the key switch to ground control.
- 2 Pull out the red Emergency Stop button to the on position.
- 3 Press and hold the yellow function enable button. Press and hold the auto level button or the individual outrigger buttons to lower the outriggers and level the machine.



4 Check the bubble level to make sure the machine is level.

To Position Platform

- 1 Push and hold the appropriate function enable button.
- 2 Push and hold the boom function buttons according to the markings on the control panel.

Operation from Platform

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

To Position Platform

- 1 Push and hold the appropriate function enable button.
- 2 Push and hold the coordinating boom function button according to the markings on the control panel.

Starting the Engine (if equipped)

The machine can be operated with or without the engine running.

- 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.
- 3 Be sure the key switch on the engine is turned to the on position.
- 4 Press 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.

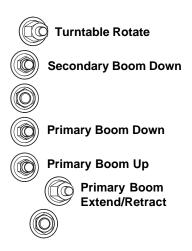
In cold conditions, hold the choke button and then start the engine.



Manual Operation of Functions

Manifold valves are located under the cover on the ground controls side of the machine.

Machine functions can be operated with the hand pump located on the manifold.



All models except Australia:

1 Open the valve of the desired function.

Turntable rotate right: Push in and hold. Turntable rotate left: Pull out and hold.

Platform extend: Push in and hold. Platform retract: Pull out and hold.

Secondary boom down and primary boom up/down: Push in and turn counterclockwise until the button pops into place.

- 2 Operate the hand pump.
- 3 Reset the valve. The machine will not function unless the valves are reset.

Turntable rotate and platform extend/retract: Let go.

Secondary boom down and primary boom up/ down: Push in and turn clockwise until the button pops into place.

Australian models only:

1 Open the valve of the desired function.

Turntable rotate right: Push in and turn clockwise. Turntable rotate left: Pull out and turn counterclockwise.

Platform extend: Push in and turn clockwise. Platform retract: Pull out and turn counterclockwise.

Secondary boom down, primary boom up/down: Push in and turn counterclockwise.

- 2 Operate the hand pump.
- 3 Reset the valve. The machine will not function unless the valves are reset.

Turntable rotate right: Turn counterclockwise. Turntable rotate left: Turn clockwise.

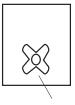
Platform extend: Turn counterclockwise. Platform retract: Turn clockwise.

Secondary boom down and primary boom up/ down: Push in and turn clockwise.

Manual Operation of Jib (Australian models only)

The jib boom lowering manifold is located on the primary extension boom.

- 1 Turn the jib manifold knob counterclockwise to lower the jib.
- 2 To reset, turn the knob clockwise as far as it will go.



Jib manifold knob

Platform Overload Indicator Light (if equipped)



Light flashing indicates the platform is overloaded and no functions will operate.

Remove weight from the platform until the light goes off.

Fall Protection

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

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

Optional Drive System Operation

- 1 Be sure the platform is fully lowered. The drive function will not operate unless the platform is fully lowered.
- 2 Set the parking brake on the tongue.
- 3 Manually engage the drive wheels by pulling the drive wheel lever toward the tire on each side of the machine.

ANSI models: Operate the drive system from the platform using the drive control box mounted next to the platform. Press and hold the blue function enable button. Press and hold the auto level button to raise the outriggers.

Note: The drive system control box can be detached from the machine and used while standing on the ground. Remove the drive control box from its mounting and step away from the machine to drive.

CE models: At the ground controls, press and hold the blue function enable button. Press and hold the auto level button or the individual outrigger buttons to raise the outriggers. Operate the drive controls from the ground using the control box mounted next to the ground controls. Remove the drive control box from its mounting and step away from the machine to drive.

- 4 Press and hold the function enable button on the drive control handle.
- 5 Move the drive control handle off center. Use the color-coded direction arrows on the control panel to determine the direction of machine travel.
- 6 Before raising the platform, lower the outriggers and adjust to level the machine and raise the wheels off the ground.

Note: Use the bubble level to make sure the machine is level.

After Each Use

- 1 Rotate the turntable so that the platform is opposite the tongue of the machine.
- 2 Lower the boom into the mast cradles.
- 3 Secure the boom with the hold-down latches.
- 4 Turn the key switch to the off position and remove the key to secure from unauthorized use.
- 5 Charge the batteries (if necessary).

Storage

- 1 Make sure the boom is properly stowed and the hold-down latches are secured.
- 2 Raise and stow the outriggers.
- 3 Select a safe parking location—firm level surface, clear of obstructions and traffic.
- 4 Turn the key switch to the off position and remove the key to secure from unauthorized use.
- 5 Chock the wheels.
- 6 Charge the batteries (if necessary).

Moving Machine Without a Tow Vehicle

Do not attempt to manually move a machine unless it is on a firm, level surface. Use the parking brake to control the speed of the machine while pushing it.

Towing

- 1 Set the parking brake.
- 2 Secure the boom with the hold-down latches.
- 3 Models with platform rotate: Make sure the platform is in the center position. If the platform is off center, the taillights may not be visible on the road.
- 4 Raise the tongue by turning the jack handle.
- 5 Position the ball of the transport vehicle directly under the ball coupler.
- 6 Open the latch on the ball coupler.
- 7 Lower the tongue by turning the jack handle.
- 8 Close the latch on the ball coupler.
- 9 Attach the safety chains (if required) and the brake cables to the vehicle. Cross the chains under the hitch.
- 10 Pull the jack release handle and rotate the tongue jack to the stowed position.
- 11 Connect and test the trailer lights.
- 12 Release the parking brake.

Backing Up with Hydraulic Surge Brake (ANSI models)

If your machine is equipped with a hydraulic surge brake, the system must be released before backing up.

Consult the surge brake system manual for specific instructions on each surge brake.

Be sure that the machine is returned to towing or operating configuration when finished.

Towing Information

Driving a vehicle that is pulling a trailer is different from driving a vehicle alone. Read the following instructions carefully.

Use the checklist on the back cover of this manual before towing and while on the road. Inspect all connections at each stop.

All tires must be properly inflated. Find the recommended cold tire pressures on the tire sidewall or trailer decal. Do not overinflate the tires. Tire pressures go up during driving. Checking the tire pressure when the tires are warm will give you an inaccurate pressure reading.

Increase the distance between your vehicle and the vehicle in front of you to twice the normal following distance when towing a trailer. Allow more following distance in adverse weather.

Slow down for downgrades and shift your transmission into a lower gear.

Slow down for curves, hazardous road conditions, freeway exits, and when driving in adverse weather.

When passing other vehicles, be sure to leave enough room for the extra length of the trailer. You will need to go much farther beyond the passed vehicle before you can return to your lane.

When turning with a trailer, avoid jerky or sudden movements.

Heavy winds, excessive speed, load shifting or passing vehicles can cause the trailer to sway while driving. If this occurs, do not brake, speed up or turn the steering wheel. Turning the steering wheel or applying the brakes can cause the vehicle and trailer to jackknife. Let up on the gas pedal and keep the steering wheel straight.

If the vehicle and/or trailer travels off the paved road, hold the steering wheel firmly and let up on the gas pedal. Do not apply the brakes. Do not turn sharply. Slow down to under 25 mph / 40 km/h. Gradually turn the steering wheel to get back on the road. Proceed with caution when entering traffic.



Battery Charging Instructions

Observe and Obey:

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

Use the engine or the AC battery charger to recharge the batteries.

Charging the Batteries with the Engine

Running the engine will automatically charge the batteries.

All lift and drive functions can be operated while the engine is running.

Charging the batteries with the engine does not fully charge the batteries. Periodically, use the AC battery charger to fully charge the batteries.

Charging the Batteries with the AC Charger

- 1 Be sure the engine (if equipped) is turned off.
- 2 Be sure the batteries are connected before charging the batteries.
- 3 Open the machine covers. The covers should remain open for the entire charging cycle.
- 4 Remove the battery vent caps and check the battery acid level. If necessary, add only enough distilled water to cover the plates. Do not overfill prior to the charge cycle.
- 5 Replace the battery vent caps.
- 6 Connect the battery charger to a grounded AC circuit.
- 7 Turn the battery charger on.
- 8 The charger will automatically shut off when the charging cycle is complete.
- 9 Check the battery acid level when the charging cycle is complete. Replenish with distilled water to the bottom of the fill tube. Do not overfill.

Transport and Lifting Instructions



Observe and Obey:

- ☑ 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 the machine weight.

Securing to Truck or Trailer for Transit

Fully lower and retract the boom. Make sure the boom and the mid-pivot rest securely in the mast cradles.

Securely latch the boom hold-down latches.

Raise all four outriggers to the stowed position.

Always chock the machine wheels in preparation for transport.

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

Place a block under the tongue.

Place a block underneath the axle between the two wheels.

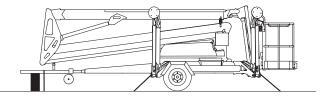
Use the four tie-down points on the chassis for anchoring down to the transport surface.

Use chains or straps of ample load capacity.

Use a minimum of 4 chains to secure the chassis.

Secure a strap over the tongue of the machine.

Adjust the rigging to prevent damage to the chains.



TRANSPORT AND LIFTING INSTRUCTIONS



Observe and Obey:

Tie-down point

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

Securely latch the boom hold-down latches.

Raise all four outriggers to the stowed position.

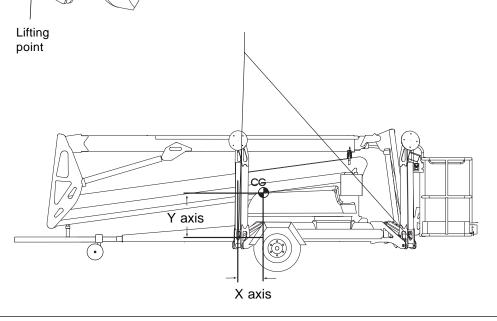
Remove all loose items on the machine.

Determine the center of gravity of your machine using the table and pictures on this page. Measure from one of the lifting points on the tongue end of the machine.

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

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

	X Axis	Y Axis
ANSI and CSA	13.5 in	16 in
	4.1m	4.9 m
CE	12.4 in	16 in
	3.8 m	4.9 m



Decals

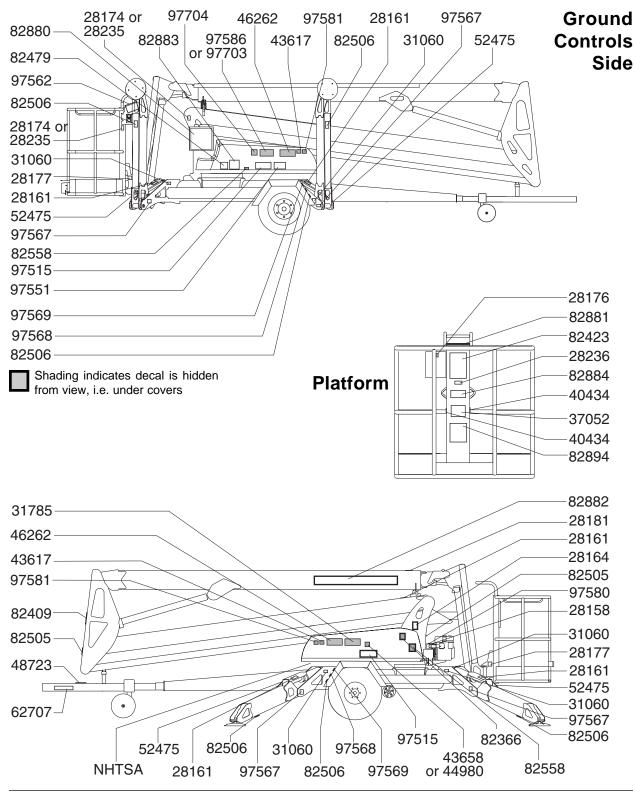
Inspection for Decals with Words

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

Part No.	Description Qu	uantity
28158	Label - Unleaded Fuel Only (models with engines)	1
28161	Warning - Crushing Hazard	4
28164	Notice - Hazardous Materials	1
28174	Label - Power to Platform, 230V	2
28176	Notice - Missing Manuals	1
28177	Warning - Platform Rotate	2
28181	Warning - No Step or Ride	1
28235	Label - Power to Platform, 115V	2
28236	Warning - Failure To Read	1
31060	Danger - Tip-over Hazard	4
31785	Notice - Battery Charger Operating Inst	tr. 1
37052	Notice - Max Capacity, 500 lbs / 227 kg	g 1
40434	Label - Lanyard Anchorage	2
43617	Danger - Tip-over (batteries)	2
43658	Label - Power to Battery Charger, 230	V 1
44980	Label - Power to Battery Charger, 115	V 1
46262	Danger - Battery/Charger Safety	2
48723	Label - Parking Brake	1
52475	Label - Transport Tie-down	4
62707	Warning - Towing Hazard	1
82366	Label - Chevron Rykon	1
82409	Warning - Transport Instructions	1
82423	Danger - General Safety, Platform	1

Part No.	Description Qu	uantity
82479	Danger - General Safety, Ground	1
82505	Danger - Crushing Hazard, Elevated Components	2
82506	Caution - Foot Crushing Hazard	6
82558	Warning - Skin Injection Hazard	2
82880	Ground Control Panel	1
82881	Platform Control Panel	1
82882	Cosmetic - Genie TZ-50	1
82883	Notice - Operating Instructions, Ground	1 1
82884	Notice - Operating Instructions, Platform	n 1
82894	Warning/Notice - Drive System Operation (option)	1
97515	Danger - Electrocution Hazard	2
97551	Caution - Compartment Access	1
97562	Drive Control Panel (option)	1
97567	Label - Outrigger Load	4
97568	Label - Wheel Load	2
97569	Notice - Tire Specifications	2
97580	Notice - Engine Specifications (models with engines)	1
97581	Notice - Battery Connection Diagram	2
97586	Notice - Manifold Valves	1
97703	Notice - Manifold Valves (Australia)	1
97704	Notice - Jib Manifold (Australia)	1

DECALS



DECALS

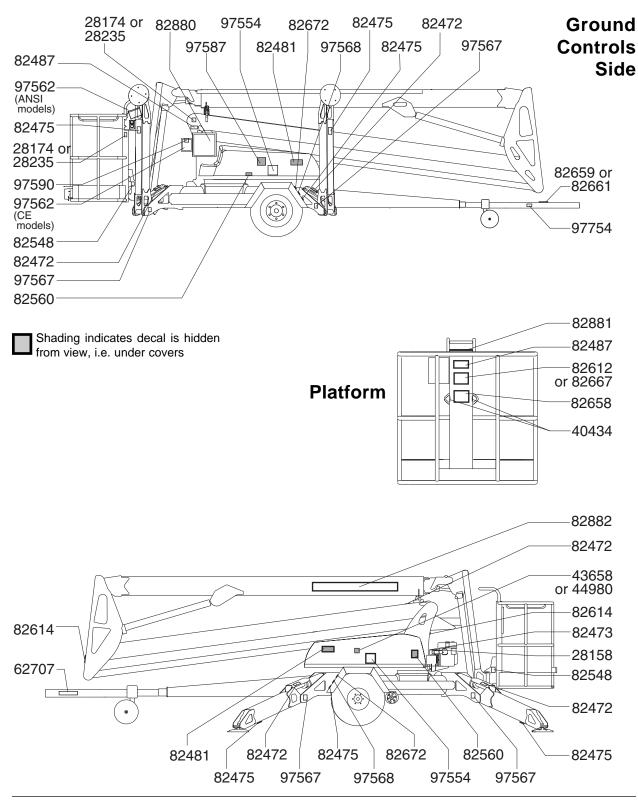
Inspection for Decals with Symbols

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 Qua	antity
28158	Label - Unleaded Fuel Only (models with engines)	1
28174	Label - Power to Platform, 230V	2
28235	Label - Power to Platform, 115V	2
40434	Label - Lanyard Anchorage	2
43658	Label - Power to Battery Charger, 230V	′ 1
44980	Label - Power to Battery Charger, 115V	′ 1
52475	Label - Transport Tie-down	4
82472	Warning - Crushing Hazard	5
82473	Caution - Compartment Access (models with engines)	1
82475	Caution - Foot Crushing Hazard	6
82481	Danger - Battery Safety	2
82487	Label - Read The Manual	2
82548	Warning - Platform Rotate	2
82560	Warning - Skin Injection Hazard	2
82612	Danger - Maximum Capacity, 200 kg, ANSI & CSA	1
82614	Danger - Crushing Hazard, Elevated Components	2

Part No.	Description Qu	antity
82658	Danger - Maximum Manual Force, 400 N, CE	1
82659	Label - Parking Brake, CE	1
82661	Label - Parking Brake, ANSI	1
82667	Danger - Maximum Capacity, 227 kg, ANSI & CSA	1
82672	Label - Tire Pressure, CE	2
82880	Ground Control Panel	1
82881	Platform Control Panel	1
82882	Cosmetic - Genie TZ-50	1
97554	Danger - Electrocution Hazard	2
97562	Drive Control Panel (models with drive system option)	e 1
97567	Label - Outrigger Load	4
97568	Label - Wheel Load	2
97587	Label - Manifold Valves	1
97590	Danger - Collision Hazards (optional drive system)	1





Specifications

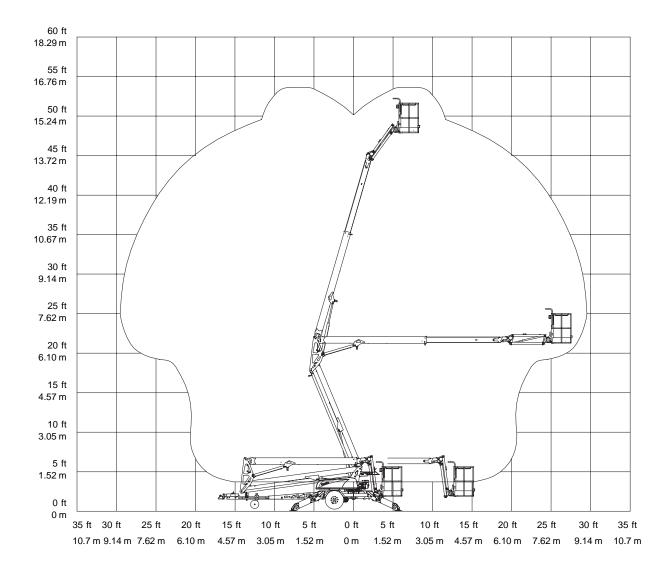
Height, working maximum	55 ft 6 in	16.9 m
Height, platform maximum	49 ft 6 in	15.1 m
Height, stowed maximum	6 ft 10 in	2 m
Horizontal working reach maximum from centerline of m	29 ft 2 in achine	8.9 m
Outrigger footprint (w x I)		14 ft 4 in 4.37 m
Maximum load capacity ANSI & CSA CE	500 lbs 440 lbs	227 kg 200 kg
Width, stowed	5 ft 6 in	1.68 m
Length, stowed	22 ft	6.7 m
Turntable rotation		359°
Platform rotation		160°
Platform dimensions		44 x 27 in 1.1 m x 68 cm
Platform leveling		self-leveling
AC outlet in platform		standard
Tire size, ANSI & CSA models	L	225/75 R15 oad Range D
Tire size, CE models	L	215/70 R14 oad Range C
Ground clearance	10 in	25.4 cm
Weight (Machine weights vary with op		e Serial Plate rations)
Maximum towing speed	60 mph	97 km/h
Maximum tongue weight ANSI & CSA CE	500 lbs 150 lbs	227 kg 68 kg
Airborne noise emissions Maximum sound level at norm (A-weighted)	al operating	70 dB workstations
Hydraulic pressure, maximum (boom functions)	3000 psi	207 bar
System voltage		24V

Power source		
Models without drive option	4 Group T-105 6V DC 225AH Batteries with optional Honda GX160K1 Gas Engine	
Models with drive option	4 Group T-145 6V DC 244AH Batteries with optional Honda GX160K1 Gas Engine	
Floor Loading Information (A	NSI and CS	4)
Tire load, maximum (without rated load)	2111 lbs	957 kg
Outrigger load, maximum (including rated load)	2837 lbs	1286 kg
Tire contact pressure (without rated load)	50 psi	3.5 kg/cm ² 347 kPa
Outrigger contact pressure (including rated load)	29 psi	2.0 kg/cm² 197 kPa
Occupied floor pressure (without rated load)	173 psf	846 kg/m² 8.30 kPa
Occupied floor pressure (including rated load)	26 psf	127 kg/m² 1.25 kPa
Floor Loading Information (C	E)	
Tire load, maximum (without rated load)	2469 lbs	1035 kg
Outrigger load, maximum (including rated load)	2831 lbs	1286 kg
Tire contact pressure (without rated load)	54 psi	3.8 kg/cm ² 375 kPa
Outrigger contact pressure (including rated load)	29 psi	2.0 kg/cm ² 197 kPa
Occupied floor pressure (without rated load)	205 psf	1002 kg/m² 9.83 kPa
Occupied floor pressure (including rated load)	26 psf	127 kg/m² 1.25 kPa

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

SPECIFICATIONS

Range of Motion Chart



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

Reporting Safety Defects

Genie Industries PO Box 97030 Redmond, WA 98073-9730

Reporting Safety Defects

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to Genie Industries.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in any individual problems between you, your dealer or Genie Industries.

To contact NHTSA you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (366-0123 in Washington DC area) or write to:

NHTSA

U.S. Department of Transportation 400 7th Street SW, (NSA-11) Washington DC 20590

You can also obtain information about motor vehicle safety from the Hotline.

Genie North America

 Phone
 425.881.1800

 Toll Free
 USA and Canada

 800.536.1800
 800.536.1800

 Fax
 425.883.3475

Genie Australia Pty Ltd. Phone 1 61 7 3375 1660 Fax 1 61 7 3375 1002

Genie China

 Phone
 86 21 53852570

 Fax
 86 21 53852569

Genie Malaysia

Phone604 228 1235Fax604 226 6872

Genie Japan

Phone 81 3 3453 6082 Fax 81 3 3453 6083

Genie Korea

Phone 82 2 558 7267 Fax 82 2 558 3910

Genie Africa

 Phone
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 0373

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 0355

Genie Latin America

Phone551140552499Fax551140431661

Genie Holland

Phone 31 70 51 78836 Fax 31 70 51 13993

Genie Scandinavia

Phone 46 31 3409612 Fax 46 31 3409613

Genie France

 Phone
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Genie Ibérica

 Phone
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 5042

 Fax
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 93
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 5059

Genie Germany

 Phone
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 4202
 8852-0

 Fax
 49
 4202
 8852-20

Genie U.K.

Phone 44 1476 584333 Fax 44 1476 584334

Genie Mexico City

 Phone
 52
 55
 5666
 5242

 Fax
 52
 55
 5666
 3241

Distributed By

	(Use at each stop)
Before Towing	 Boom hold-down latch is securely locked in place Towing hitch is properly secured to tow vehicle Safety chains (if required) are properly attached and secure (chains are crossed below hitch) All lights are connected and working Tires are properly inflated
Before Driving	 Fasten safety restraints Properly adjust mirrors
On The Road	 Do not exceed 60 mph / 97 km/h. Obey all local and national towing speed laws Check connections and tire pressure at each stop Slow down for hazardous conditions Allow extra distance for following and passing other vehicles

Towing Checklist