Genie®

Operator's Manual

with Maintenance Information

Second Edition
Eighth Printing
Part No. 43645

S™-40
S™-45

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.

Contents

Contact us:

Internet: http://www.genielift.com
E-mail: techpub@genieind.com

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These machines comply with ANSI/SIA 92.5-1992.

♻ 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

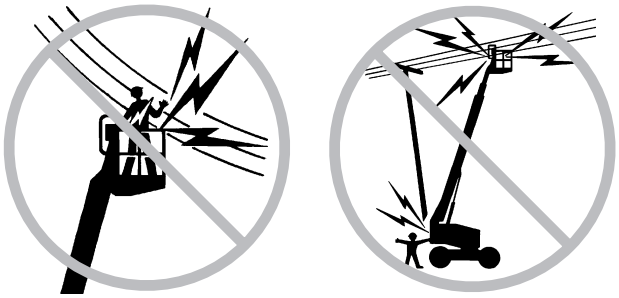
applicable governmental regulations

☑ 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.

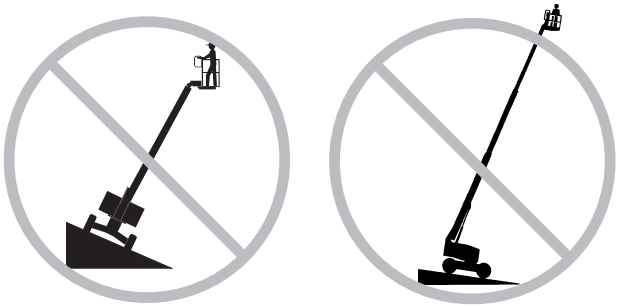
Do not operate the machine during storms or lightning.

Do not use the machine as a ground for welding.

Tip-over Hazards

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

Maximum platform capacity	500 lbs	227 kg
Maximum occupants		2



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

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

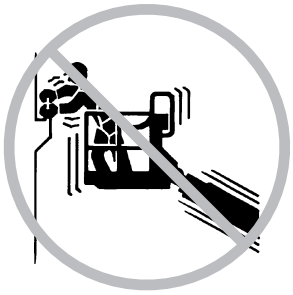
If the tilt alarm sounds:
Do not extend, rotate or raise the boom above horizontal. Move the machine to a firm, level surface before raising the platform. If the tilt alarm sounds when the platform is raised, use extreme caution to retract the boom and lower the platform. Do not rotate the boom while lowering. Move the machine to a firm, level surface before raising the platform.

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 operate the machine in strong or gusty winds. Do not increase the surface area of the platform or the load. Increasing the area exposed to the wind will decrease machine stability.

Use extreme care and slow speeds while driving the machine in stowed position across uneven terrain, debris, unstable or slippery surfaces and near holes and drop-offs.

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



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

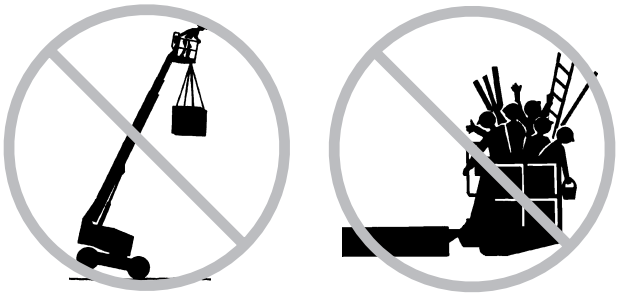
Maximum allowable side force - ANSI & CSA
150 lbs / 667 N

Maximum allowable side force - CE
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.



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

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

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

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

SAFETY RULES

Fall Hazards

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

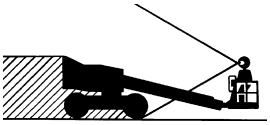
Do not sit, stand or climb on the platform guard rails. Maintain a firm footing on the platform floor at all times.

Do not climb down from the platform when raised.

Keep the platform floor clear of debris.

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

Collision Hazards



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

Be aware of boom position and tailswing when rotating turntable.

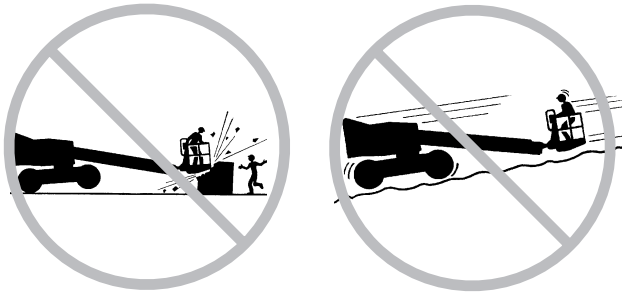
Operators must comply with employer, job site and governmental rules regarding the use of personal protective equipment.

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

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

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

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



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

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

No stunt driving or horseplay while operating a machine.

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.

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 service manual.

Be sure all decals are in place and legible.

Be sure that the operator's, safety and responsibilities manuals are complete, legible and in the storage container located in the platform.

SAFETY RULES

Bodily Injury Hazard

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

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

Battery Safety

Burn Hazards

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

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

Explosion Hazard

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

Electrocution Hazard

Avoid contact with electrical terminals.

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.

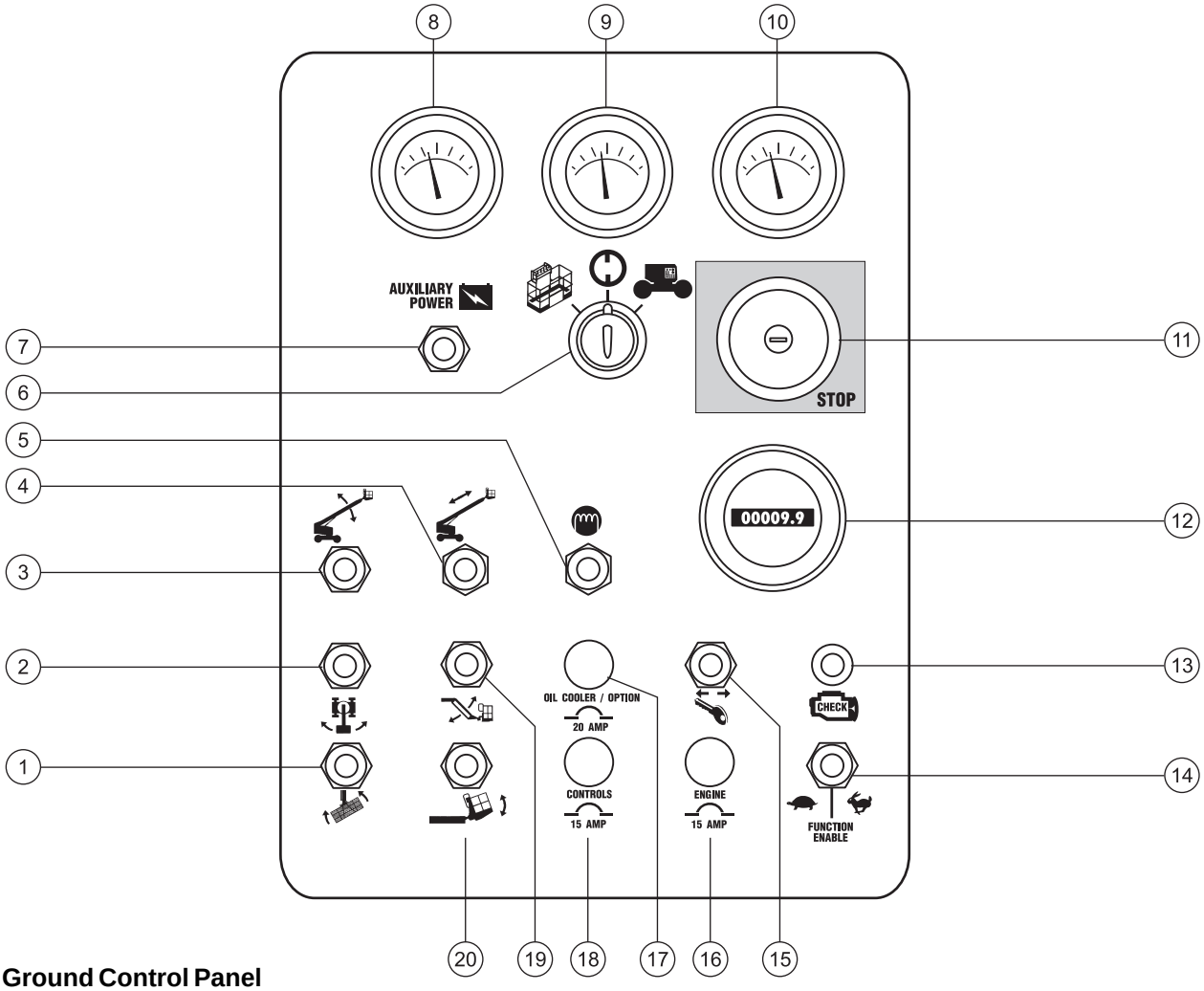
⚠WARNING Orange—used to indicate the presence of a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠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.

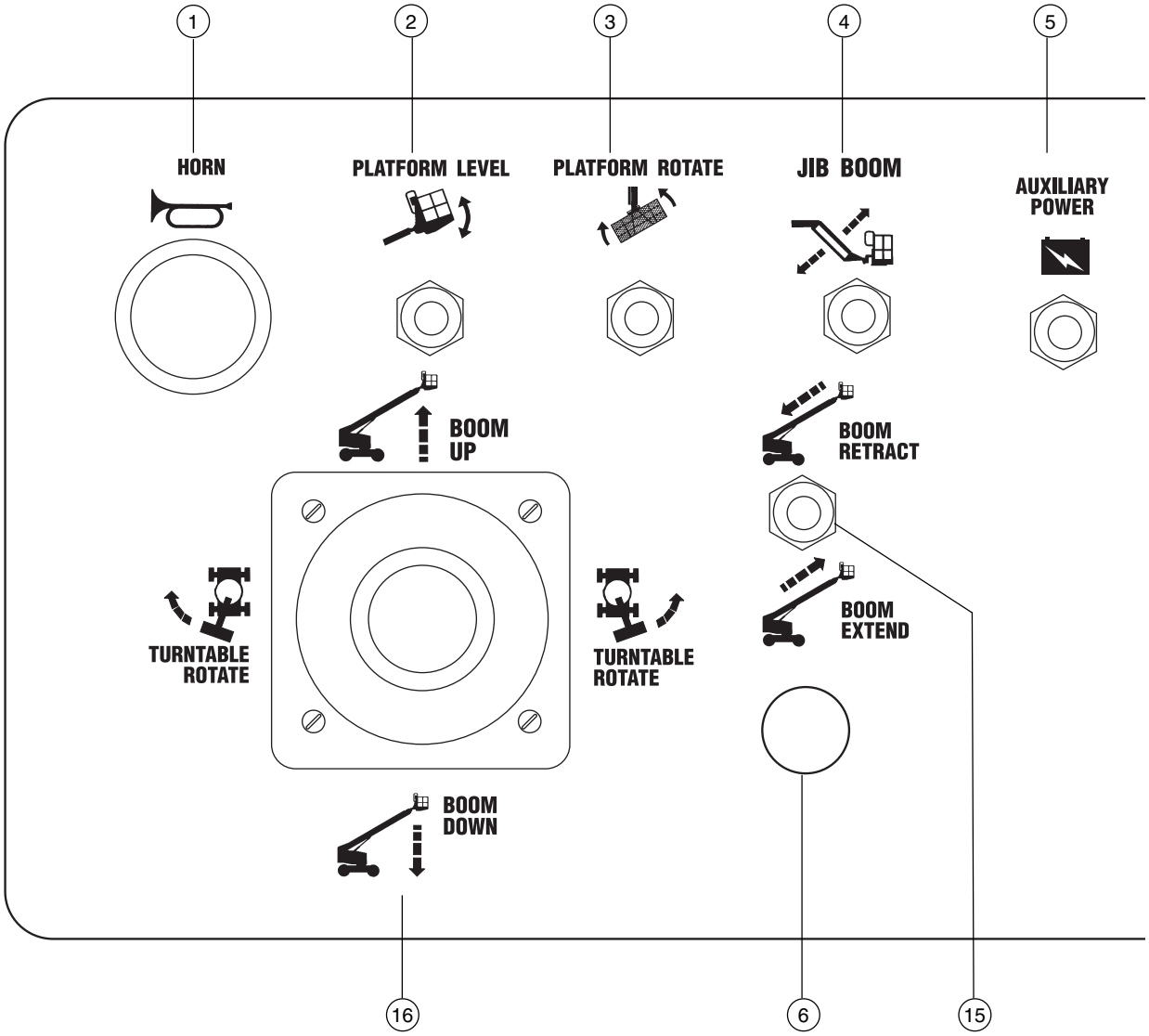
Controls



Ground Control Panel

1 Platform rotate switch
2 Turntable rotate switch
3 Boom up/down switch
4 Boom extend/retract switch
5 Diesel models: Glow plug switch (if equipped)
Gasoline/LPG models: Gasoline/LPG select switch
6 Key switch for platform/off/ground selection
7 Auxiliary power switch
8 Gasoline/LPG models: Water temperature gauge
Diesel models: Oil temperature gauge
9 Oil pressure gauge
10 Voltage gauge
11 Red Emergency Stop button
12 Hour meter
13 Gasoline/LPG models: Check engine light
14 Function enable switch
15 Engine start switch
16 15A breaker for engine electrical circuits
17 20A breaker for oil cooler and options
18 15A breaker for control electrical circuits
19 S-45 models: Jib boom up/down switch
20 Platform level switch

CONTROLS



Platform Control Panel

1 Horn button

2 Platform level switch

3 Platform rotate switch

4 S-45 models: Jib boom up/down switch

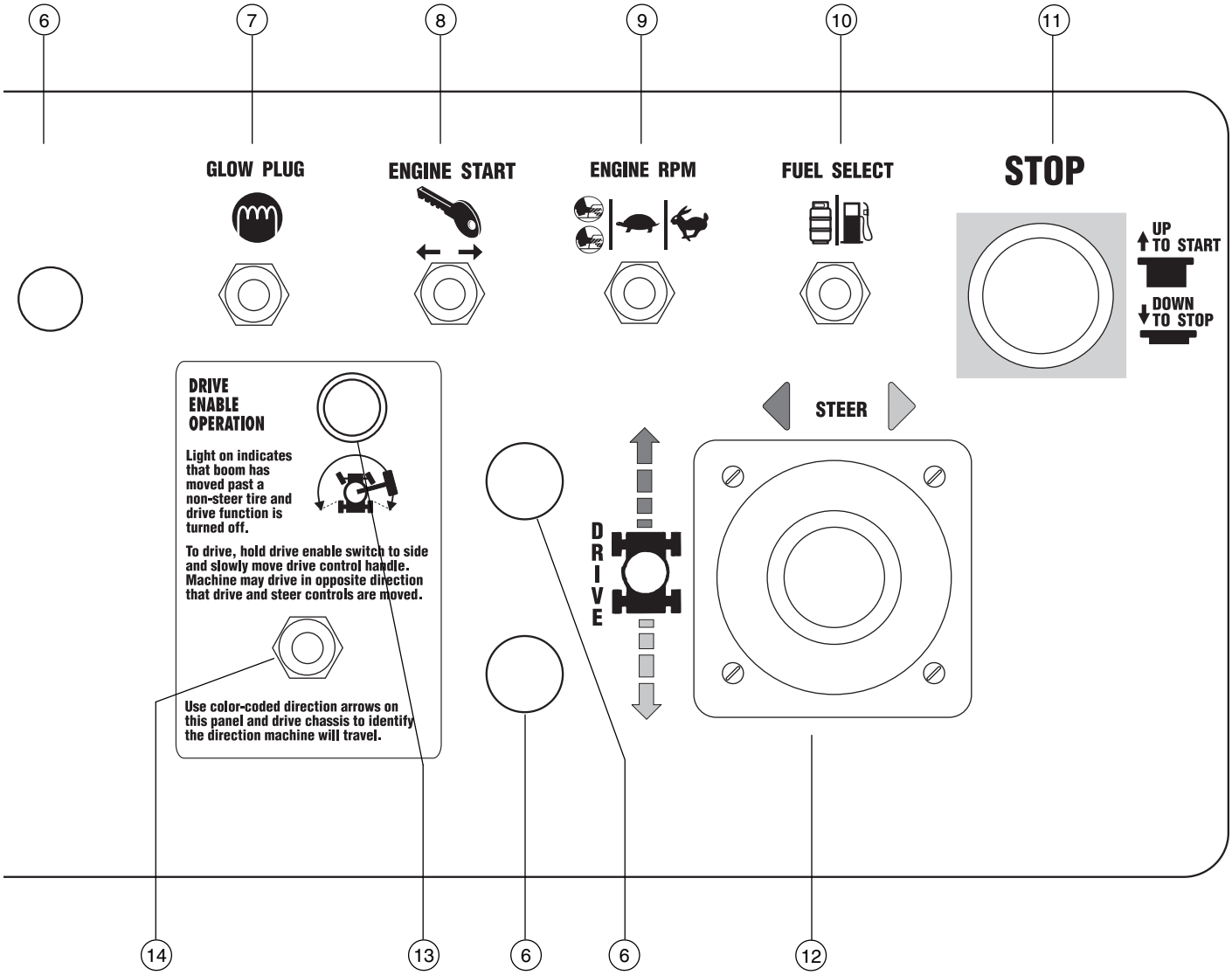
5 Auxiliary power switch

6 Optional equipment

7 Diesel models: Glow plug switch (if equipped)

8 Engine start switch

9 Engine idle (rpm) select switch
- Rabbit & Foot Switch: foot switch activated high idle
- Turtle: low idle
- Rabbit: high idle



10 Gasoline/LPG models: Gasoline/LPG select switch

11 Red Emergency Stop button

12 Proportional control handle for drive function and thumb rocker for steer function OR dual axis proportional control handle for drive and steer functions

13 Drive enable indicator light

14 Drive enable switch

15 Boom extend/retract switch

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

- ❑ 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 for proper tire pressure. Add air if needed. See Maintenance section.

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

- ❑ Electrical components, wiring and electrical cables
- ❑ Hydraulic hoses, fittings, cylinders and manifolds
- ❑ Fuel and hydraulic tanks
- ❑ Drive and turntable motors and drive hubs
- ❑ Boom wear pads
- ❑ Tires and wheels
- ❑ Engine and related components
- ❑ Limit switches and horn
- ❑ Alarms and beacons (if equipped)
- ❑ Nuts, bolts and other fasteners
- ❑ Platform entry mid-rail or gate

Check entire machine for:

- ❑ Crack 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.
- ❑ 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

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 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.

Perkins Models:

⊙ Result: The oil level should be within the two notches on the dipstick.

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 F3L 1011F Engine	
Oil viscosity requirements	
below 60°F / 15.5°C (synthetic)	5W-30
-10°F to 90°F / -23°C to 32°C	10W-40
above -4°F / -34°C	15W-40
Engine oil should have properties of API classification CC/SE or CC/SF grades. Units ship with 10-40 CC/SG.	

Perkins 704-30 Engine	
Oil viscosity requirements	
below 60°F / 15.5°C	15W-40
-10°F to 90°F / -23°C to 32°C	10W-30
above -4°F / -34°C	15W-40
Engine oil should have properties of API classification CF4 grade. Units ship with 10-40 CC/SG.	

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.

2 Visually inspect the sight gauge located on the side of the hydraulic oil tank. Add oil as needed.

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

Hydraulic oil specifications	
Hydraulic oil type	Refer to machine decal

Check the Engine Coolant Level - Liquid Cooled Models

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

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

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

⊙ Result: The fluid level should be at the FULL mark.

NOTICE Do not remove the radiator cap.

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.

⚠WARNING Electrocution 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 tight and free of corrosion.

3 Be sure that the battery hold-down bracket is secure.

4 Remove the battery vent caps.

5 Check the battery acid level. If needed, replenish with distilled water to the bottom of the battery fill tube. Do not overfill.

6 Install the vent caps.

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

Check the Tire Pressure

NOTICE This procedure does not need to be performed on machines equipped with the foam-filled tire option.

⚠WARNING Bodily injury hazard. An over-inflated tire can explode and could cause death or serious injury.

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

To safeguard maximum stability, achieve optimum machine handling and minimize tire wear, it is essential to maintain proper pressure in all air-filled tires.

1 Check each tire with an air pressure gauge. Add air as needed.

Tire pressure	45 psi 3.1 bar
High Flotation Tire Pressure	38 psi 2.6 bar

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 Turn the key switch to ground control.

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

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

4 Start the engine. See Operating Instructions section.

Test Emergency Stop

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

⊙ Result: The engine should turn off and all functions should not operate.

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

Test the Machine Functions

7 Do not hold the function enable switch to either side. Attempt to activate each boom and platform function toggle switch.

⊙ Result: All boom and platform functions should not operate.

8 Hold the function enable switch to either side and activate each boom and platform function toggle switch.

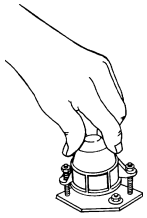
⊙ Result: All boom and platform functions should operate through a full cycle. The descent alarm (if equipped) should sound while the boom is lowering.

Machines equipped with Platform Level Control Disable Function: The platform level toggle switch will not operate when the boom is raised past the drive speed limit switch.

Test the Tilt Sensor

9 Pull out the platform red Emergency Stop button to the on position. Turn the key switch to platform control.

10 Open the tank side turntable cover and locate the tilt sensor next to the control box.



11 Press down one side of the tilt sensor.

⊙ Result: The alarm, located in the platform, should sound.

Test Auxiliary Controls

12 Turn the key switch to ground control and shut the engine off.

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

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

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

⊙ Result: All boom functions should operate.

At the Platform Controls

Test Emergency Stop

15 Turn the key switch to platform control and restart the engine.

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

⊙ Result: The engine should turn off and all functions should not operate.

17 Pull out the red Emergency Stop button and restart the engine.

Test the Hydraulic Oil Return Filter

18 Move the engine idle select switch to high idle (rabbit symbol).

19 Locate and check the hydraulic filter condition indicator.

⊙ Result: The filter should be operating with the plunger or the needle in the green area.

20 Move the engine idle select switch to foot switch activated high idle (rabbit and foot switch symbol).

Test the Horn

21 Push the horn button.

⊙ Result: The horn should sound.

FUNCTION TESTS

Test the Foot Switch

22 Push in the platform Emergency Stop button to the off position.

23 Pull out the red Emergency Stop button to the on position but do not start the engine.

24 Press down the foot switch and attempt to start the engine by moving the start toggle switch to either side.

⊙ Result: The engine should not start.

25 Do not press down the foot switch and restart the engine.

26 Move the lift/drive select switch to the lift position (if equipped).

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

⊙ Result: The machine functions should not operate.

Test Machine Functions

28 Move the lift/drive select switch to the lift position (if equipped).

29 Press down the foot switch.

30 Activate each machine function control handle or toggle switch.

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

Machines equipped with Platform Level Control Disable Function: The platform level toggle switch will not operate when the boom is raised past the drive speed limit switch.

Test the Steering

31 Move the lift/drive select switch to the drive position (if equipped).

32 Press down the foot switch.

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

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

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

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

Test Drive and Braking

35 Move the lift/drive select switch to the drive position (if equipped).

36 Press down the foot switch.

37 Slowly move the drive control handle in the direction indicated by the blue arrow on the control panel until the machine begins to move, then return the handle to the center position.

⊙ Result: The machine should move in the direction that the blue arrow points on the drive chassis, then come to an abrupt stop.

38 Slowly move the drive control handle in the direction indicated by the yellow arrow on the control panel until the machine begins to move, then return the handle to the center position.

⊙ Result: The machine should move in the direction that the yellow arrow points on the drive chassis, then come to an abrupt stop.

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

Test the Oscillate Axle (oscillating axle-equipped models)

39 Move the lift/drive select switch to the drive position (if equipped).

40 Start the engine from the platform controls.

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

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

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

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

43 Drive both steer tires up onto a 6 inch / 15 cm block or curb.

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

Test the Drive Enable System

44 Move the lift/drive select switch to the lift position (if equipped).

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

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

⊙ Result: The drive enable indicator light should come on and remain on while the boom is anywhere in the range shown.

47 Move the lift/drive select switch to the drive position (if equipped).

48 Move the drive control handle off center.

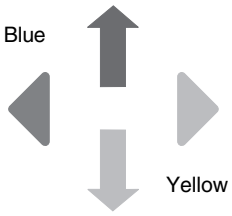
⊙ Result: The drive function should not operate.

49 Move and hold the drive enable toggle switch to either side and slowly move the drive control handle off center.

⊙ Result: The drive function should operate.

Note: When the drive enable system is in use, the machine may drive in the opposite direction that the drive and steer control handle is moved.

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



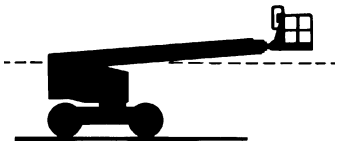
FUNCTION TESTS

Test Limited Drive Speed

50 Move the lift/drive select switch to the lift position (if equipped).

51 Press down the foot switch.

52 Raise the boom to just above horizontal.



53 Move the lift/drive select switch to the drive position (if equipped).

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

⊙ Result: The maximum achievable drive speed with the boom raised should not exceed 1 foot / 30 cm per second.

55 Move the lift/drive select switch to the lift position (if equipped).

56 Lower the boom to the stowed position.

57 Extend the boom 1 foot / 30 cm.

58 Move the lift/drive select switch to the drive position (if equipped).

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

⊙ Result: The maximum achievable drive speed with the boom extended should not exceed 1 foot / 30 cm per second.

If the drive speed with the boom raised or extended exceeds 1 foot / 30 cm per second, immediately tag and remove the machine from service.

Test Auxiliary Controls

60 Shut off the engine.

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

62 Move the lift/drive select switch to the lift position (if equipped).

63 Press down the foot switch.

64 Simultaneously hold the auxiliary power switch on and activate each function control handle or toggle switch.

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

⊙ Result: All boom and steer functions should operate. Drive functions should not operate with auxiliary power.

Test the Lift/Drive Select Function (CE models)

Machines with lift/drive select switch:

65 Move the lift/drive select switch to the lift position.

66 Press down the foot switch.

67 Move the drive control handle off center.

⊙ Result: No drive functions should operate.

68 Activate each boom function toggle switch.

⊙ Result: All boom functions should operate.

69 Move the lift/drive select switch to the drive position.

70 Press down the foot switch.

71 Activate each boom function toggle switch.

⊙ Result: No boom functions should operate.

72 Move the drive control handle off center.

⊙ Result: The drive functions should operate.

73 Repair any malfunctions before operating the machine.

Machines without lift/drive select switch:

74 Press down the foot switch.

75 Move the drive control handle off center and activate a boom function toggle switch.

⊙ Result: No boom functions should operate. The machine will move in the direction indicated on the control panel.

76 Repair any malfunctions before operating the machine.

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
- sloped surfaces
- unstable or slippery surfaces
- overhead obstructions and high voltage conductors
- hazardous locations
- inadequate surface support to withstand all load forces imposed by the machine
- wind and weather conditions
- the presence of unauthorized personnel
- other possible unsafe conditions

Operating Instructions

Do Not Operate Unless:

☑ You learn and practice the principles of safe machine operation contained in this operator's manual.

1 Avoid hazardous situations.

2 Always perform a pre-operation inspection.

3 Always perform function tests prior to use.

4 Inspect the workplace.

5 Only use the machine as it was intended.

Fundamentals

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

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

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

OPERATING INSTRUCTIONS

Starting the Engine

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

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

3 Gasoline/LPG models: Choose fuel by moving the fuel select switch to the desired position.

4 Move the engine start toggle switch to either side. If the engine fails to start or dies, the restart delay will disable the start switch for 3 seconds.

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

All models: In extreme cold conditions, 20°F / -6°C and below, warm the engine for 5 minutes 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.

Emergency Stop

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

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

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

Auxiliary Controls

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

1 Turn the key switch to ground or platform control.

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

3 Move the lift/drive select switch to the lift position (if equipped) when operating the auxiliary controls from the platform.

4 Press down the foot switch when operating the auxiliary controls from the platform.

5 Simultaneously hold the auxiliary power switch on and activate desired function.

The drive function will not operate with auxiliary power.

Operation from Ground

1 Turn the key switch to ground control.

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

3 Gasoline/LPG models: Choose fuel by moving the fuel select switch to the desired position.

4 Start the engine.

To Position Platform

1 Hold the function enable switch to either side.

2 Move the appropriate toggle switch according to the markings on the control panel.

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

Machines equipped with Platform Level Control Disable Function: The platform level toggle switch will not operate when the boom is raised past the drive speed limit switch.

Operation from Platform

1 Turn the key switch to platform control.

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

3 Gasoline/LPG models: Choose fuel by moving the fuel select switch to the desired position.

4 Start the engine. Do not press down the foot switch when starting the engine.

To Position Platform

1 Move the lift/drive select switch to the lift position (if equipped).

2 Press down the foot switch.

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

Machines equipped with Platform Level Control Disable Function: The platform level toggle switch will not operate when the boom is raised past the drive speed limit switch.

To Steer

1 Move the lift/drive select switch to the drive position (if equipped).

2 Press down the foot switch.

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

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

To Drive

1 Move the lift/drive select switch to the drive position (if equipped).

2 Press down the foot switch.

3 Increase speed: Slowly move the drive control handle off center.

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

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

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

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

Drive Enable

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

To drive, hold the drive enable switch to either side and slowly move the drive control handle off center.

Be aware that the machine may move in the opposite direction that the drive and steer controls are moved.

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

OPERATING INSTRUCTIONS

Generator

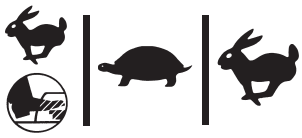
To operate the generator, move the generator toggle switch to the generator position. The engine will continue to run but no drive or platform functions will operate.

Plug power tools into the power to platform GFCI outlet.

To resume machine functions, move the generator toggle switch to the machine functions position. All functions will operate.

Engine Idle Select (rpm)

Select engine idle (rpm) using the symbols on the control panel.



- Rabbit and foot switch symbol: foot switch activated high idle
- Turtle symbol: low idle
- Rabbit symbol: high idle

Check Engine Light (if equipped)

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

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

Stopping the Engine

Push in the red Emergency Stop button and turn the key switch to the off position.

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.

After Each Use

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

2 Retract and lower the boom to the stowed position.

3 Rotate the turntable so that the boom is between the non-steer wheels.

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

5 Chock the wheels.

Transport and Lifting Instructions

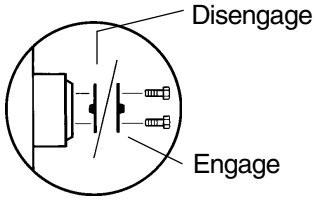
Observe and Obey:

- ☑ 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 straps or lines are sufficient to withstand the machine weight. See the serial plate for the machine weight.
- ☑ Be sure the turntable is secured with the turntable rotation lock before transporting. Be sure to unlock the turntable for operation.

Free-wheel Configuration for Winching

Chock the wheels to prevent the machine from rolling.

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



4WD models: Release the wheel brakes by turning over all four drive hub disconnect caps.

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

Reverse the procedures described to re-engage the brakes.

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

TRANSPORT AND LIFTING INSTRUCTIONS

Securing to Truck or Trailer for Transit

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

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

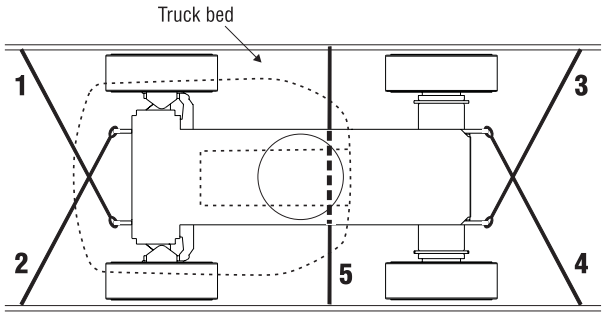
Inspect the entire machine for loose or unsecured items.

Securing the Chassis

Use chains of ample load capacity.

Use a minimum of 5 chains.

Adjust the rigging to prevent damage to the chains.



Securing the Platform - S-40

Place a block under the platform rotator. Do not allow the block to contact the platform cylinder.

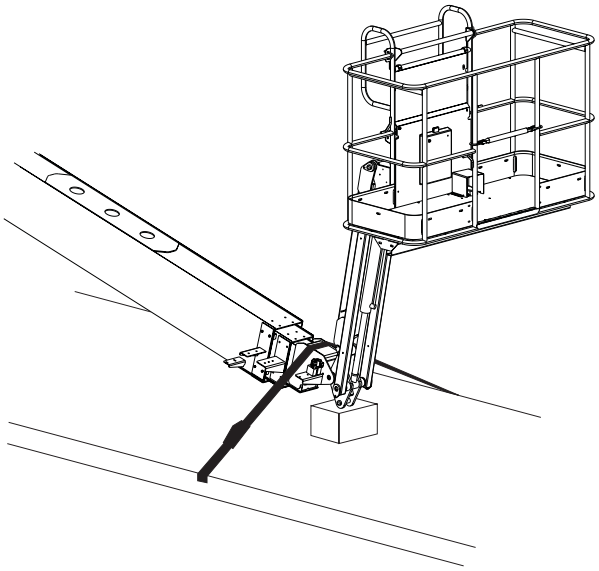
Secure the platform with a nylon strap placed through the lower platform support. Do not use excessive downward force when securing the boom section.

Securing the Platform - S-45

Place a block under the jib knuckle. Do not allow the block to contact the platform cylinder.

Secure the platform with a nylon strap placed over the jib knuckle. Do not use excessive downward force when securing the boom section.

Fully raise the jib for transport.



Observe and Obey:

- ☑ Only qualified riggers should rig and lift the machine.
- ☑ Be sure the crane capacity, loading surfaces and straps or lines are sufficient to withstand the machine weight. See the serial plate for the machine weight.

Lifting Instructions

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

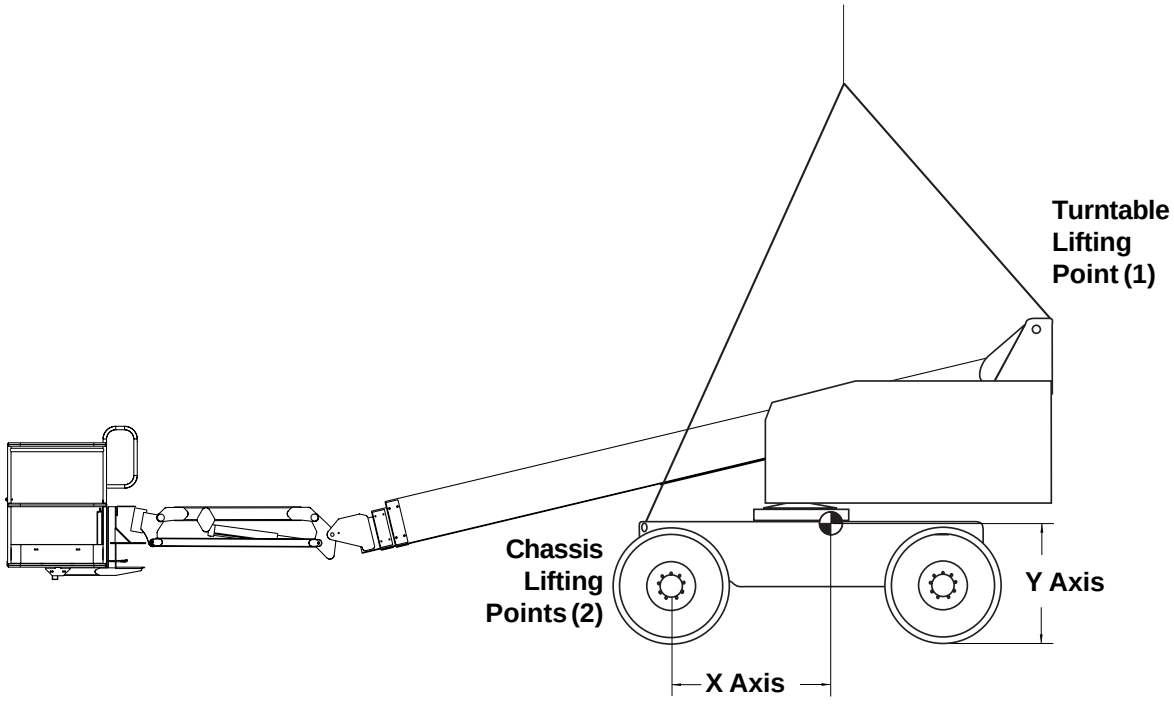
Use the turntable rotation lock to secure the turntable.

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

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

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

	X Axis	Y Axis
S-40	4.41 ft 1.34 m	3.23 ft 98 cm
S-45	3.86 ft 1.18 m	3.12 ft 95 cm



Decals

Decal Inspection

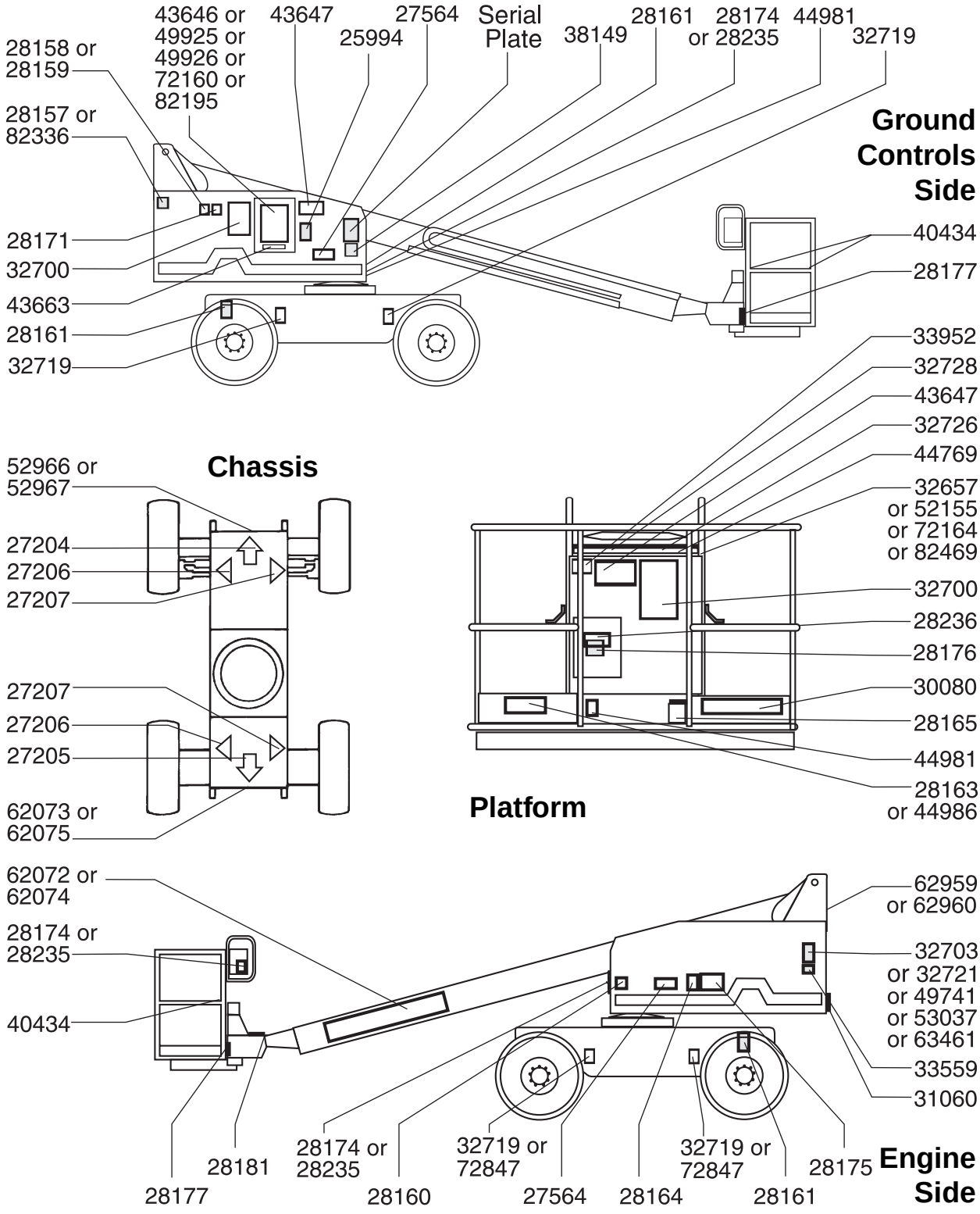
Use the pictures on the next page to verify that all decals are legible and in place.

Below is a numerical list with quantities and descriptions.

Part No.	Decal Description	Quantity
25994	Caution - Component Damage Hazard	1
27204	Arrow - Blue	1
27205	Arrow - Yellow	1
27206	Triangle- Blue	2
27207	Triangle - Yellow	2
27564	Danger - Electrocution Hazard	2
28157	Label - Dexron	1
28158	Label - Unleaded	1
28159	Label - Diesel	1
28160	Label - Liquid Petroleum Gas	2
28161	Danger - Crushing Hazard	3
28163	Notice - Max Side Force, 150 lbs / 667 N	1
28164	Notice - Hazardous Materials	1
28165	Notice - Foot Switch	1
28171	Label - No Smoking	1
28174	Label - Power to Platform, 230V	2
28175	Caution - Compartment Access	1
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
30080	Notice - Maximum Load	1
31060	Danger - Tip-over Hazard, Interlock	3
32657	Platform Control Panel	1
32700	Danger - Safety Rules	2
32703	Notice - Ford Engine Specs, LRG-423	1
32719	Notice - Tire Specifications	4
32721	Notice - Deutz Diesel Engine Specs	1
32726	Label - Glow Plug (option)	1
32728	Label - Generator (option)	1
33952	Danger - Tilt-Alarm	1
35599	Notice - Align Air Hoses	1
38149	Label - Patents	1
40434	Label - Lanyard Anchorage	3
43646	Ground Control Panel	1
43647	Notice - Operating Instructions	2
43663	Notice - Function Enable	1
49741	Notice - Ford Engine Specs, LRG-425 EFI	1
44769	Label - Lift/Drive Select (option)	1
44981	Label - Airline to Platform	2
44986	Notice - Max Manual Force, 90 lbs / 400 N	1
49925	Ground Control Panel	1
49926	Ground Control Panel	1
52155	Platform Control Panel	1
52966	Cosmetic - 4 x 2	1
52967	Cosmetic - 4 x 4	1
53037	Notice - Deutz Diesel Engine Specs	1
62072	Cosmetic - Genie S-40	1
62073	Cosmetic - S-40	1
62074	Cosmetic - Genie S-45	1
62075	Cosmetic - S-45	1
62959	Cosmetic - S-40	1
62960	Cosmetic - S-45	1
63461	Notice - Perkins Diesel Engine Specs	1
72160	Ground Control Panel	1
72164	Platform Control Panel	1
72847	Notice - Tire Specifications, Hi-Flotation	1
82195	Ground Control Panel	1
82336	Label - Chevron Rykon	1
82469	Platform Control Panel	1
82317	Notice - Operating Instructions	2

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

DECALS


43646 or
49925 or
49926 or
72160 or
82195
43647
27564
25994
Serial
Plate
38149
28161
28174
or 28235
44981
32719
28158 or
28159
28157 or
82336
Ground
Controls
Side
28171
32700
43663
28161
32719
40434
28177
33952
32728
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44769
32657
or 52155
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28236
28176
30080
28165
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28163
or 44986
Platform
52966 or
52967
Chassis
27204
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27207
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62073 or
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or 32721
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or 53037
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28174 or
28235
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32719 or
72847
27564
28164
32719 or
72847
28161
28175
Engine
Side

Specifications

Model - S-40		
Height, working maximum	46 ft	14 m
Height, platform maximum	40 ft	12.2 m
Height, stowed maximum	8 ft 2 in	2.49 m
Horizontal reach maximum	31 ft 8 in	9.65 m
Width	7 ft 6 in	2.29 m
Length, stowed	23 ft 11 in	7.29 m
Maximum load capacity 6 foot platform	500 lb	227 kg
Maximum load capacity 8 foot platform	500 lb	227 kg
Wheelbase	7 ft 3 in	2.2 m
Turning radius (outside)	15 ft 8 in	4.78 m
Turning radius (inside)	6 ft 8 in	2.03 m
Turntable rotation (degrees)		continuous
Turntable tailswing	34 in	86.4 cm
Power source (choice)	Ford 63 Hp Gasoline/LPG LRG-423 or LRG-425 EFI or Deutz 36 Hp Diesel F3L 1011 or Perkins 704-30 Diesel	
Controls		12V DC proportional
Platform dimensions, 6 foot (length x width)		72 in x 30 in 1.8 m x 76 cm
Platform dimensions, 8 foot (length x width)		96 in x 36 in 2.4 m x 91 cm
Platform leveling		self-leveling
Platform rotation		160°
AC outlet in platform		standard
Gradeability, stowed, 2WD		30%
Gradeability, stowed, 4WD		40%
Ground clearance	12 1/2 in	31.8 cm

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

Tire size, 2WD front tires only rear tires only		 12.5L-16SL 12-16.5 NHS
Tire size, 2WDRT & 4WD front & rear		12-16.5 NHS
Fuel tank capacity	30 gallons	114 liters
Hydraulic pressure (maximum) (boom functions)	2600 psi	179 bar
System voltage		12V
Weight (Machine weights vary with option configurations)		See Serial Plate
Airborne noise emissions Maximum sound level at normal operating workstations (A-weighted)		80 dB

Drive Speeds	2WD	4WD
Drive speed, stowed Gasoline/LPG models	4.0 mph 6.4 km/h 40 ft/6.8 sec 12.2 m/6.8 sec	3.5 mph 5.6 km/h 40 ft/7.8 sec 12.2 m/7.8 sec
Drive speed, stowed Diesel models	3.5 mph 5.6 km/h 40 ft/7.8 sec 12.2 m/7.8 sec	3 mph 4.8 km/h 40 ft/9.1 sec 12.2 m/9.1 sec
Drive speed, raised or extended - all models	0.68 mph 1.1 km/h 40 ft/40 sec 12.2 m/40 sec	0.68 mph 1.1 km/h 40 ft/40 sec 12.2 m/40 sec

Floor Loading Information		
GVW+Rated Load	12,364 lbs	5608 kg
Axle load, maximum	9000 lbs	4081 kg
Wheel load, maximum	4500 lbs	2041 kg
Localized pressure per tire	65 psi	4.6 kg/cm^2 448 kPa
Occupied pressure	172 psf	8.23 kPa

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

SPECIFICATIONS

Model - S-45		
Height, working maximum	51 ft	15.5 m
Height, platform maximum	45 ft	13.7 m
Height, stowed maximum	8 ft 2 in	2.49 m
Horizontal reach maximum	36 ft 8 in	11.2 m
Width	7 ft 6 in	2.29 m
Length, stowed	27 ft 10 in	8.5 m
Maximum load capacity 6 foot platform	500 lb	227 kg
Maximum load capacity 8 foot platform	500 lb	227 kg
Wheelbase	7 ft 3 in	2.2 m
Turning radius (outside)	15 ft 8 in	4.78 m
Turning radius (inside)	6 ft 8 in	2.03 m
Turntable rotation (degrees)		continuous
Turntable tailswing	34 in	86.4 cm
Power source (choice)	Ford 63 Hp Gasoline/LPG LRG-423 or LRG-425 EFI or Deutz 36 Hp Diesel F3L 1011 or Perkins 704-30 Diesel	
Controls		12V DC proportional
Platform dimensions, 6 foot (length x width)		72 in x 30 in 1.8 m x 76 cm
Platform dimensions, 8 foot (length x width)		96 in x 36 in 2.4 m x 91 cm
Platform leveling		self-leveling
Platform rotation		160°
AC outlet in platform		standard
Gradeability, stowed, 2WD		30%
Gradeability, stowed, 4WD		40%
Ground clearance	12 1/2 in	31.8 cm

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

Tire size, 2WD front tires only rear tires only		 12.5L-16SL 12-16.5 NHS
Tire size, 2WDRT & 4WD front & rear		12-16.5 NHS
Hydraulic pressure (maximum) (boom functions)	2600 psi	179 bar
Fuel tank capacity	30 gallons	114 liters
System voltage		12V
Weight (Machine weights vary with option configurations)		See Serial Plate
Airborne noise emissions Maximum sound level at normal operating workstations (A-weighted)		80 dB

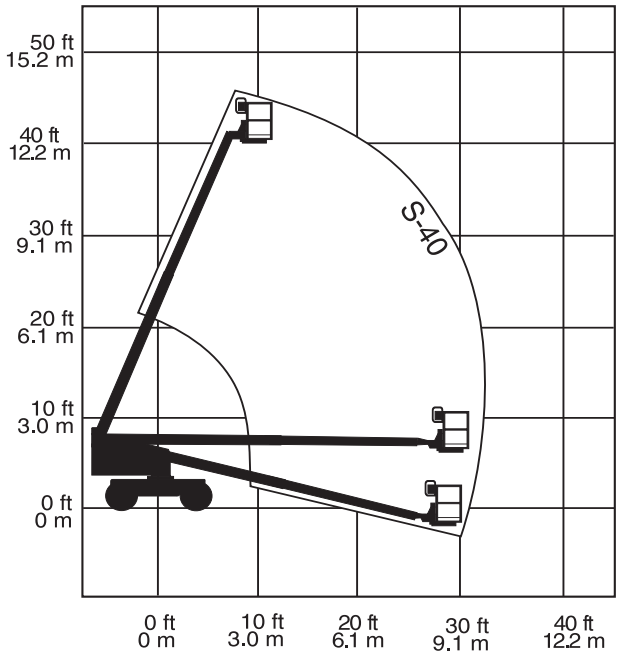
Drive Speeds	2WD	4WD
Drive speed, stowed Gasoline/LPG models	4.0 mph 6.4 km/h 40 ft/6.8 sec 12.2 m/6.8 sec	3.5 mph 5.6 km/h 40 ft/7.8 sec 12.2 m/7.8 sec
Drive speed, stowed Diesel models	3.5 mph 5.6 km/h 40 ft/7.8 sec 12.2 m/7.8 sec	3 mph 4.8 km/h 40 ft/9.1 sec 12.2 m/9.1 sec
Drive speed, raised or extended - all models	0.68 mph 1.1 km/h 40 ft/40 sec 12.2 m/40 sec	0.68 mph 1.1 km/h 40 ft/40 sec 12.2 m/40 sec

Floor Loading Information		
GVW+Rated Load	16,266 lbs	7378 kg
Axle load, maximum	13,900 lbs	6303 kg
Wheel load, maximum	6970 lbs	3160 kg
Localized pressure per tire	65 psi	4.6 kg/cm^2 448 kPa
Occupied pressure	219 psf	10.50 kPa

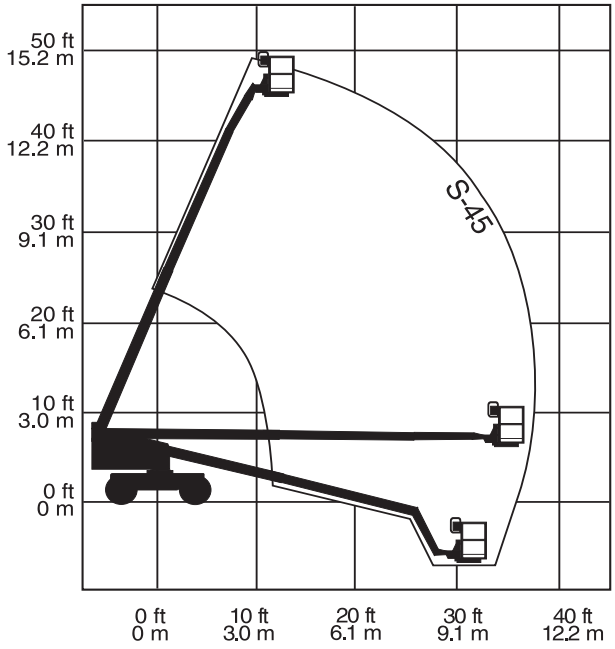
Note: Floor loading information is approximate and does not incorporate different option configurations. It should be used only with adequate safety factors.

SPECIFICATIONS

S-40 Range of Motion Chart



S-45 Range of Motion Chart



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.

Distributed By:

Genie North America
Phone 425.881.1800
Toll Free USA and Canada 800.536.1800
Fax 425.883.3475

Genie Holland
Phone +31 70 51 78836
Fax +31 70 51 13993

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

Genie Scandinavia
Phone +46 31 3409612
Fax +46 31 3409613

Genie China
Phone +86 21 53852570
Fax +86 21 53852569

Genie France
Phone +33 (0)2 37 26 09 99
Fax +33 (0)2 37 26 09 98

Genie Malaysia
Phone +60 4 228 1235
Fax +60 4 226 6872

Genie Ibérica
Phone +34 93 579 5042
Fax +34 93 579 5059

Genie Japan
Phone +81 3 3453 6082
Fax +81 3 3453 6083

Genie Germany
Phone +49 (0)4202 88520
Fax +49 (0)4202 8852-20

Genie Korea
Phone +82 2 558 7267
Fax +82 2 558 3910

Genie U.K.
Phone +44 (0)1476 584333
Fax +44 (0)1476 584334

Genie Africa
Phone +27 11 455 0373
Fax +27 11 455 0355

Genie Mexico City
Phone +52 55 5666 5242
Fax +52 55 5666 3241

Genie Latin America
Phone +55 11 4055 2499
Fax +55 11 4043 1661