A TEREX BRAND

Operator's Manual

Serial number range

GTH-1544 ***(Perkins Tier 4i)*** From GTH1516M-340 to GTH1516M-599

GTH-1544 ***(Deutz Tier 4i)*** From GTH1516M-340 to GTH1516M-599

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Introduction

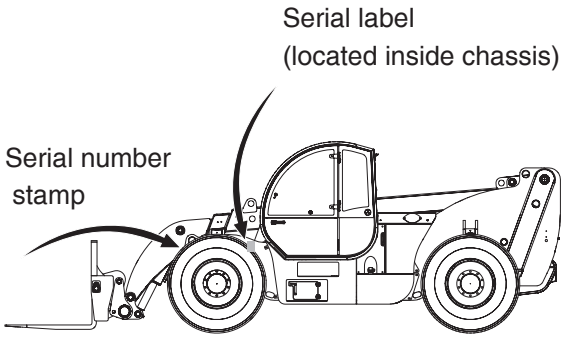
About This Manual

Genie appreciates your choice of our machine for your application. Our number one priority is user safety, which is best achieved by our joint efforts. This book is an operation and daily maintenance manual for the user or operator of a Genie machine.

This manual,along with the AEM Rough Terrain Forklift Safety Manual and the CCTV operator's manual, should be considered a permanent part of your machine and should remain with the machine at all times. If you have any questions, contact Genie.

Product Identification

The machine serial number is located on the serial label.



Intended Use

A variable reach rough terrain forklift truck is defined as a wheeled type truck with a pivoting boom, which may be equipped with various attachments for picking, transporting and placing loads with the established load range charts.

Use of this product in any other way is prohibited and contrary to its intended
use.

Bulletin Distribution and Compliance

Safety of product users is of paramount importance to Genie. Various bulletins are used by Genie to communicate important safety and product information to dealers and machine owners.

The information contained in the bulletins is tied to specific machines using the machine model and serial number.

Distribution of bulletins is based on the most current owner on record along with their associated dealer, so it is important to register your machine and keep your contact information up to date.

To ensure safety of personnel and the reliable continued operation of your machine, be sure to comply with the action indicated in a respective bulletin.

Introduction

Contacting the Manufacturer

At times it may be necessary to contact Genie.

When you do, be ready to supply the model number and serial number of your machine, along with your name and contact information.

At minimum, Genie should be contacted for:

- Accident reporting
- Questions regarding product applications and safety
- Standards and regulatory compliance information
- Questions regarding Product Modifications
- Current owner updates, such as changes in machine ownership or changes in your contact information. See Transfer of Ownership, below.

Transfer of Machine Ownership

Taking a few minutes to update owner information will ensure that you receive important safety, maintenance and operating information that applies to your machine.

Please register your machine by visiting us on the web at www.genielift.com or by calling us toll free at 1-800-536-1800.

Introduction



Danger

Failure to obey the instructions and safety rules in this manual will result in death or serious injury.

Do Not Operate Unless:

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

☑ You read, understand and obey the manufacturer's instructions and the safety rules, the safety and operator's manuals, and the decals applied on the machine.
☑ You read, understand and obey the employer's safety rules and worksite regulations.
☑ You read, understand and obey all applicable governmental regulations.
☑ You are properly trained to safely operate the machine.

Introduction

Hazard Classification



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

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

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

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

NOTICE Indicates a property damage message.

Standards

Many aspects of rough terrain forklift operation and testing are discussed in standards published by the American National Standards Institute and the Industrial Truck Standards Development Foundation. These standards are updated on a regular basis with addenda. It is recommended that you purchase and refer to the following standards.

ANSI/ITSDF B56.6 - Rough Terrain Forklift Trucks

The ANSI standard can be downloaded from www.ITSDF.org

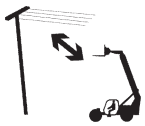
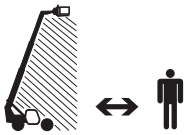
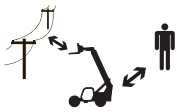
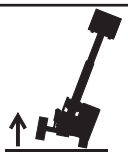
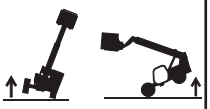
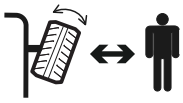
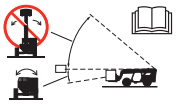
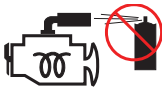
CSA B335 - Safety Standard for Lift Trucks

The CSA standard can be downloaded from www.csa.ca

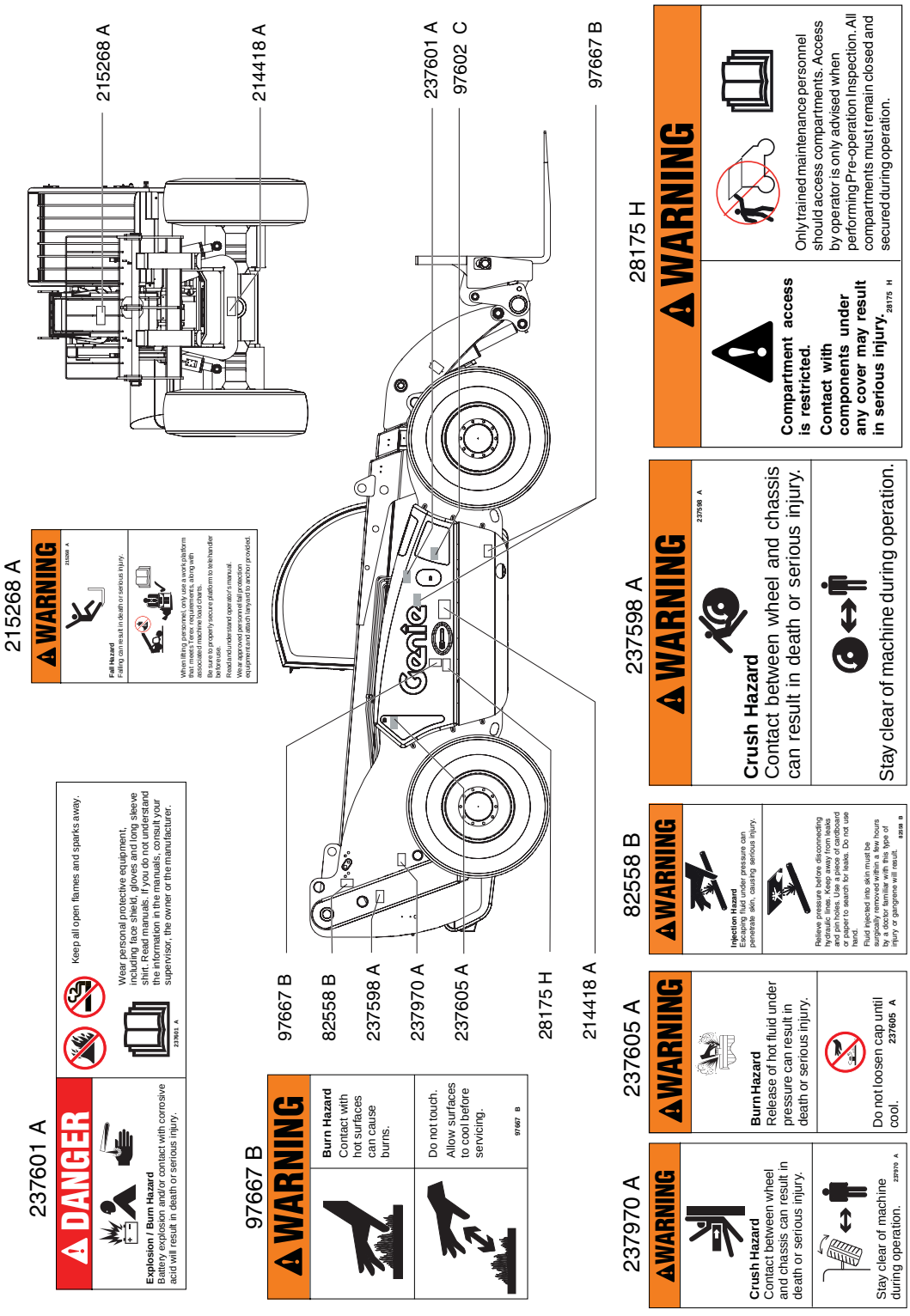
Safety Sign Maintenance

Safety signs are designed and fitted to the machine to warn of possible hazards. They must be replaced immediately if they become unreadable or lost. If the machine is repaired and parts have been replaced on which safety signs were attached, be sure new safety signs are installed before the machine is put into service. Use mild soap and water to clean safety signs. Do not use solvent based cleaners, which may damage the safety sign material.

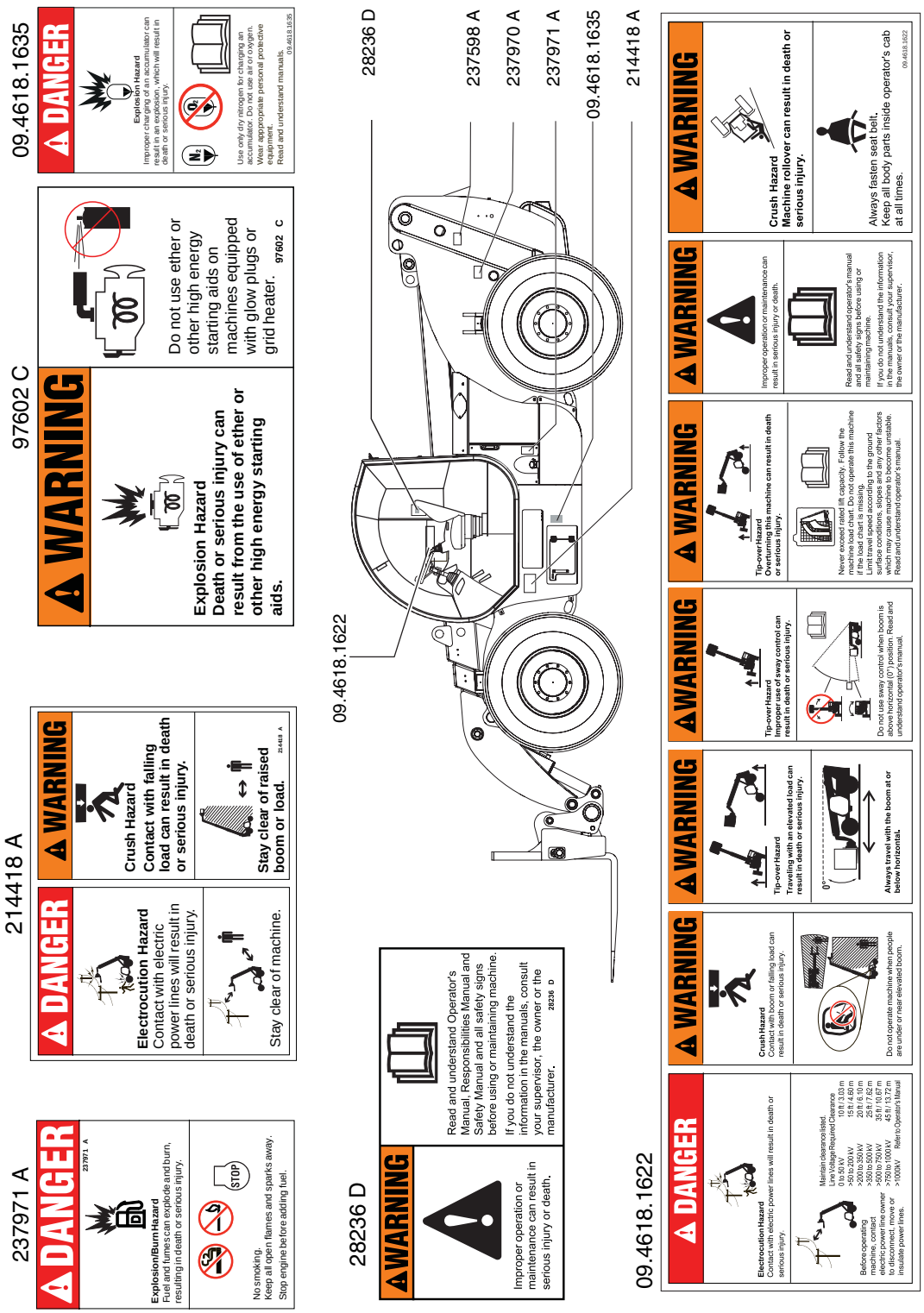
Symbol and Hazard Pictorials Definitions

 Electrocution hazard	 Maintain required clearance.	 Crush hazard.	 No people under load	 Read the operator's manual.	 Injection hazard
 Use a piece of cardboard or paper to search for leaks	 Maintain required clearance.	 Crush hazard.	 Always wear seat belt.	 Tip-over hazard	 Tip-over hazard
 Crush hazard.	 Keep away from moving parts.	 Crush Hazard	 Keep clear of moving parts.	 Burn hazard.	 Do not loosen cap until cool.
 Explosion/burn hazard	 No smoking. No open flame.	 Burn Hazard	 Allow surfaces to cool.	 Crush hazard	 Keep away from moving parts
 Allow engine compartment access	 Explosion/burn hazard	 No smoking. No open flame.	 Fall hazard	 Work platform use	 Refer to load charts and manual
 Sway operation	 Keep load low	 No use starting aids	 Explosion hazard	 Explosion hazard	 Use nitrogen. Not use oxygen.

General Safety



General Safety



Work Area Safety

⚠ Overturning Hazards



Using the load chart, confirm that the load is within the rated capacity of the machine. Do not exceed the rated load.

The load center of the fork (if equipped) must be equal to or less than the load center indicated on the load chart.

All loads shown on the load chart are based on the machine being on firm ground, the frame being level, the forks being positioned evenly on the carriage, the load being centered on the forks, the tires being properly sized and properly inflated, and the telehandler being in good operating condition.

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

Do not raise the load unless the ground can support all forces imposed by the machine.

Do not lower a load without retracting the boom first.

Do not operate the machine if the load chart is missing.

Do not exceed the rated capacity for each configuration.



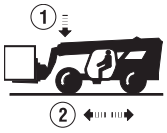
Do not raise the boom unless the machine is level. The machine level indicator should be at zero degrees.

Do not level the machine using the frame sway control unless the boom angle indicator is at zero degrees or less.



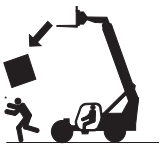
Do not use the sway control to position an elevated load.

Do not raise a load and then drive to position it.



When driving, keep the boom at or below horizontal and keep the load close to the ground.

Operate the machine at speeds that will keep the load under control. Start and stop movements smoothly.



Do not raise a load unless the load is properly positioned or secured on the forks or approved attachment.

Work Area Safety

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

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

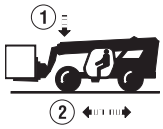
Do not alter or disable machine components that in any way affect safety and stability.

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

Do not replace factory-installed tires with tires of different specification or ply rating.

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

⚠ Traveling on Slopes Hazards



When driving, keep the boom at or below horizontal and keep the load close to the ground.

When the machine is loaded, always travel with the load uphill. When the machine is unloaded, travel with the forks or attachment downhill.

On steep terrain, drive only up and down a hill, and always keep the machine in gear. Do not turn across the slope when the machine is traveling up or down a slope.

Limit travel path and speed according to the condition of the ground surface, traction, slope, location of personnel and any other factors which may create a hazard. Never drive the machine unless the mast and equipment are in their proper travel position. Whether a machine will tip over during dynamic machine operation involves many factors that need to be considered. Among these are pavement/ground conditions, stability and slope, as well as machine equipment, operator skill, load position, tire inflation, machine speed, etc.

Additionally, tip-over of a machine is dependent in large part upon operator inputs such as the speed and smoothness of the operation, as well as the position of the attachment and its load.

Construction sites and roads will frequently change slope from place to place, can be hard and soft, and change due to construction activities and weather.

Operators should be properly trained and use their best judgment and experience to take the necessary precautions to prevent a tip-over.

Operators must assess the job site variables and avoid exceeding the machine's (or operator's) capabilities for terrain and conditions.

Work Area Safety

⚠ Fall Hazards



Always wear a seat belt when operating the machine.

Always remain completely inside the cab when operating the machine.

When getting in and out of the cab, face the machine, use the steps and handrails provided and always maintain three-point contact.

Do not use the steering wheel or any other controls as handrails.

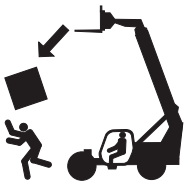


Do not allow riders on the machine or forks.



Do not lift personnel with this machine unless it is equipped with an approved work platform.

⚠ Collision Hazards



Keep people, equipment and material out of the work area. Do not operate the machine while people are under or near an elevated boom, whether it is loaded or unloaded.

Do not put the transmission into gear unless the parking brake is set.

Do not drive the machine if visibility is obstructed.

Do not raise the boom unless the parking brake is set.

Do not operate in conditions without fenders to protect debris from hitting the operator or accumulating on the cab windows.

Do not operate the machine with a faulty back-up alarm. The back-up alarm should sound when the machine is in reverse.

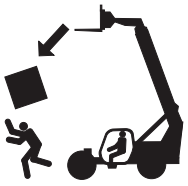
Do not operate the machine in low light conditions.

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

Do not drive the machine directly up to anyone.

⚠ Falling Object Hazards

Operate the machine at speeds that will keep the load under control. Start and stop movements smoothly.



Keep people, equipment and material out of the work area. Do not operate the machine while people are under or near an elevated boom, whether it is loaded or unloaded.

Be sure the load is secure before lifting it.

Work Area Safety

⚠ Bodily Injury Hazards



Always adjust the seat and fasten the seat belt before starting the engine.



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



Relieve pressure before disconnecting hydraulic lines. Keep away from leaks and pin holes. Use a piece of cardboard or paper to search for leaks. Do not use your hand.

Fluid injected into skin must be surgically removed within a few hours by a doctor familiar with this type of injury or gangrene will result.



Stay clear of belts and fans when the engine is running.

Always 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.

⚠ Damaged Machine Hazards

Do not use a damaged or malfunctioning machine.

Conduct a thorough pre-operation inspection of the machine and test all functions before each work shift. Immediately tag and remove from service a damaged or malfunctioning machine.

Be sure all maintenance has been performed as specified in this manual and the appropriate Genie service manual.

Be sure all decals are in place and legible.

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

Do not attempt to start the machine by towing or pushing.

Do not attempt to use the forks or attachments for prying wedged or frozen loads free.

Do not push or pull objects or loads with the forks, attachment or boom.

Do not exceed 22mph travelling speed when driving downhill.

Do not use the joystick during DPF regeneration. (***only for Deutz Configuration***)

Work Area Safety

⚠ Component Damage Hazards

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

Do not use the machine as a ground for welding.

Do not steer the front tires on dry pavement when the axle differential lock is activated.

Do not lock the axle differential when the machine is moving.

⚠ Crush Hazards

Keep clear of moving parts during machine operation.

Set the parking brake, put the transmission in neutral and lower the carriage or the attachment to the ground before leaving the machine.

Keep clear of elevated components.

Support components before performing service. Keep clear of moving parts during machine operation.

⚠ Burn Hazards



Allow hot surfaces to cool before touching or servicing.

⚠ Explosion and Fire Hazards

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

Do not refuel the machine with the engine running.



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

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

Do not spray ether into engines equipped with glow plugs or air intake grid heaters.

Do not use air or oxygen for charging the accumulators.

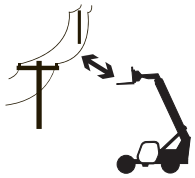
Work Area Safety

⚠ Electrocution Hazards

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



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



Line Voltage	Required Clearance	
0 to 50kV	10 ft	3.05 m
>50 to 200kV	15 ft	4.60 m
>200 to 350kV	20 ft	6.10 m
>350 to 500kV	25 ft	7.62 m
>500 to 750kV	35 ft	10.67 m
>750 to 1000kV	45 ft	13.72 m
over 1000kV		see below

For power lines over 1000kV, the minimum clearance distance must be established by the utility owner or operator or by a registered professional engineer who is a qualified person with respect to electrical power transmission and distribution.

Do not use the machine as a ground for welding.

Always contact the electrical power line owner. The electrical power shall be disconnected or the power lines moved or insulated before machine operations begin.

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.

Work Area Safety

⚠ Battery Safety

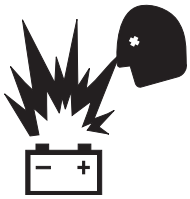
Burn Hazards



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

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

Explosion Hazards



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



Electrocution Hazard

Avoid contact with electrical terminal.

During maintenance or repair works, and while welding, disconnect the battery turning the cut-out switch (see Inspection for Decals section).

After turning off the cut-out switch, wait for 60 seconds before starting the engine (***only for Deutz Configuration***).

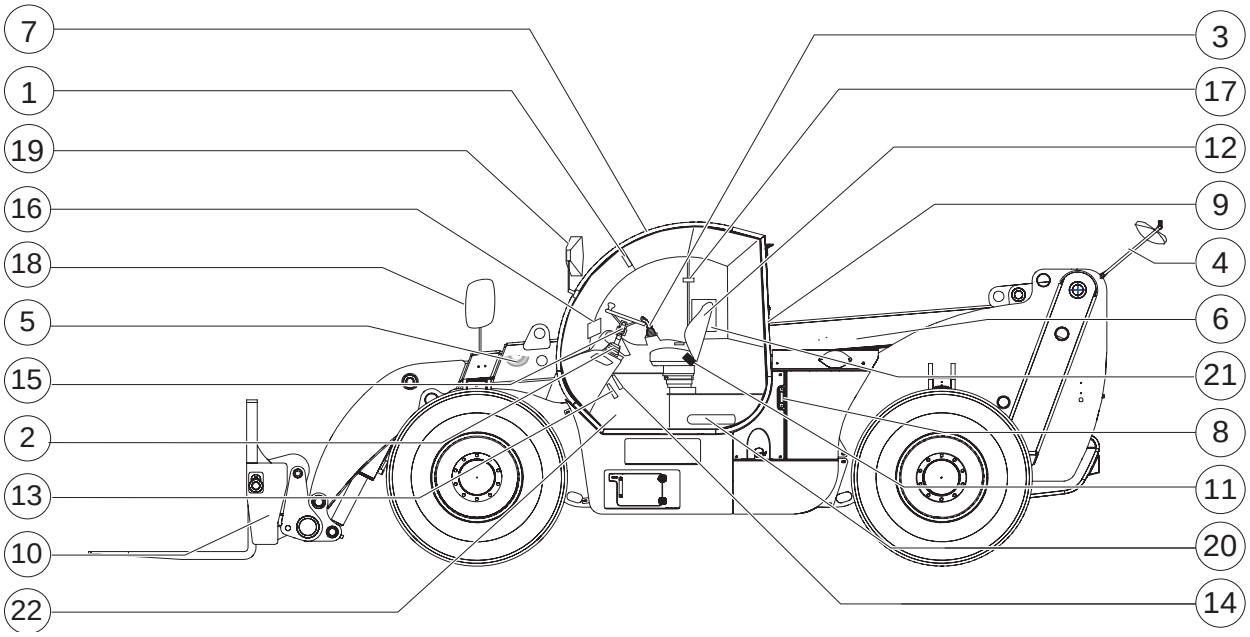
⚠ Employer's Responsibilities

Employers are responsible for providing a safe work environment and for complying with local and national governmental regulations.

⚠ Personal Safety

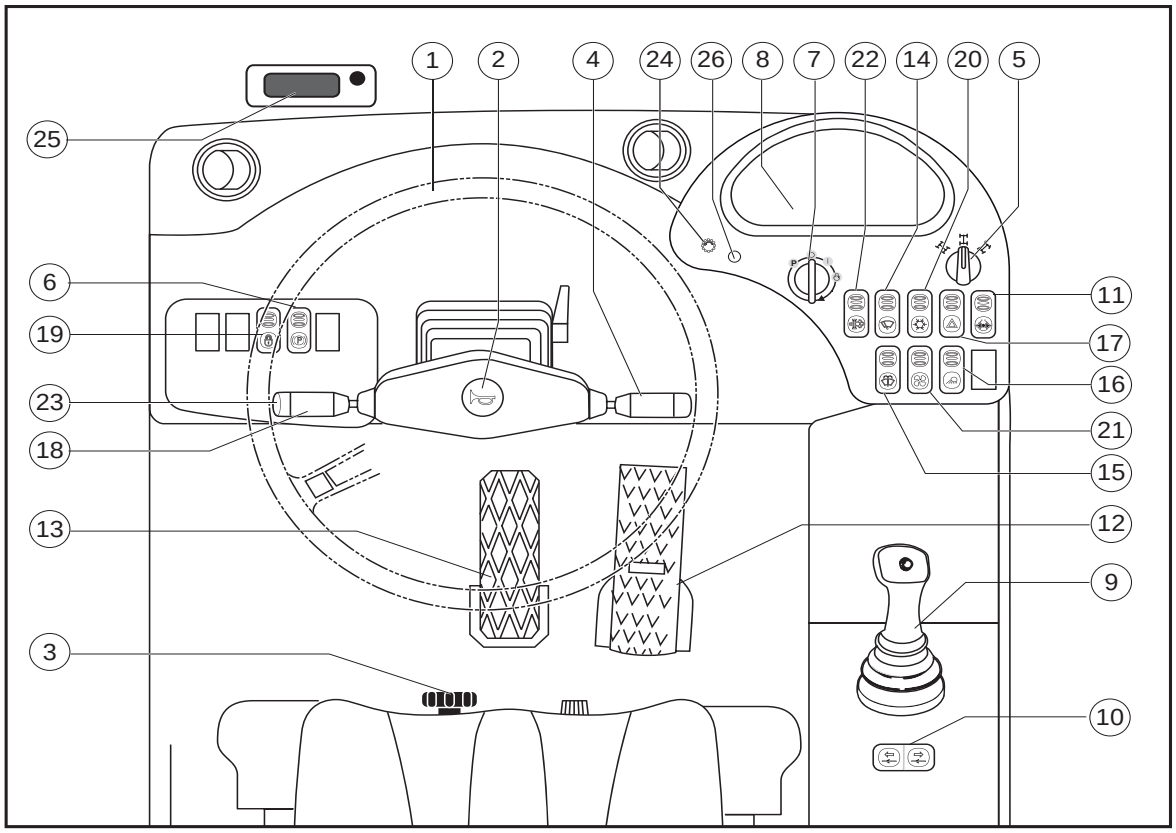
Be sure that everyone working on or near this machine is familiar with the applicable safety precautions.

Legend



1. Left/right level indicator
2. Steering wheel
3. Control handle
4. Rear convex mirror
5. Boom angle indicator
6. Boom
7. Cab
8. Hydraulic oil level gauge
9. Engine (on opposite side of machine)
10. Forks
11. Seat belt
12. Seat
13. Brake pedal
14. Accelerator pedal
15. Transmission control lever
16. Load charts
17. Front/rear level indicator
18. Right rear view mirror
19. Left rear view mirror
20. Fire extinguisher (if equipped)
21. Operator's manual location (canopy version)
22. Operator's manual location (closed cab version)

Controls



Control Panel

1. Steering wheel
2. Horn button
3. Heater and Air conditioning controls (if equipped)
4. Turn signal lever (if equipped)
5. Steer select switch
6. Parking brake switch
7. Ignition switch
8. Instrument panel
9. Control handle
10. Auxiliary hydraulics switch
11. Axle differential lock switch
12. Accelerator pedal
13. Brake pedal
14. Windshield washer switch (if equipped)
15. Windshield wiper switch (if equipped)
16. Work lights switch (if equipped)
17. Hazard warning lights switch (if equipped)
18. Transmission control lever
19. Lock/unlock enabling switch
20. A/ C switch (if equipped)
21. Cab heater fan switch (if equipped)
22. DPF switch (DEUTZ engine configuration)
23. “Shift-on-fly” button
24. “Shift-on-fly” indicator light
25. Rear Object Detection System (if equipped)
26. Diagnostic button

Controls

1 Steering wheel

Turn the steering wheel to the right to turn the front wheels to the right. Turn the steering wheel to the left to turn the front wheels to the left.

2 Horn button

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

3 Heater and air conditioning controls (if equipped)

4 Turn signal lever (if equipped)

Move the lever up to activate the right turn signal. Move the lever down to activate the left turn signal.

5 Steer select switch

Rotate the steer selector to the right side to select four-wheel steer. Rotate the steer selector to the middle position to select two-wheel steer. Rotate the steer selector to the left to select crab steer.

6 Parking brake switch

Push the bottom of the rocker switch to turn the parking brake on. Push the top of the switch to turn the parking brake off.

7 Ignition switch

Turn the key to the position and hold until the glow plugs preheating indicator light turns off; when released, key springs back to pos. **I** automatically. Position **P** is not active.

8 Instrument panel

9 Control handle (single)

Pull the control handle back and the boom will raise. Push the control handle forward and the boom will lower. Push the control handle to the right and the boom will extend. Pull the control handle to the left and the boom will retract. Hold down the grey thumb switch and pull the control handle back and the forks will tilt up. Hold down the grey thumb switch and push the control handle forward and the forks will tilt down. Hold the grey finger switch and push the control handle to the right and the machine will sway to the right. Hold the grey finger switch and pull the control handle to the left and the machine sway to the left.

10 Auxiliary hydraulics switch

Push the left side of the auxiliary hydraulics button and the carriage will swing or rotate to the left. Push the right side of the auxiliary hydraulics button and the carriage will swing or rotate to the right.

11 Axle differential lock switch

Push the switch to activate the axle differential lock. Release the switch to release the axle differential lock.

12 Accelerator pedal

13 Brake pedal

14 Windshield wiper switch (if equipped)

Push the switch to turn the wiper on: first position for low speed and second position for high speed. Release the switch to turn the wiper off.

15 Windshield washer switch (if equipped)

Push and hold the switch to turn the washer on. Release the switch to turn the washer off.

16 Work lights switch (if equipped)

Push the top of the rocker switch to turn the front & boom working lights on. Push the bottom of the switch to turn them of.

Controls

17 Hazard warning lights switch (if equipped)

Push the switch to turn the hazard warning lights on. Release the switch to turn the hazard warning lights off.

18 Transmission control lever

Move the transmission control lever forward you for forward gear. Move the lever toward you for reverse gear. Move the lever to the center position for neutral.

19 Lock/unlock enabling switch

Push and hold the switch to enable the coupling or the release of the attachment, managed by the ***Auxiliary hydraulics switch 10***.

20 A/C switch (if equipped)

Push the switch to turn the A/C on. Release the switch to turn the A/C off.

21 Cab heater fan switch (if equipped)

Push the switch to turn the cab heater fan on: first position for low speed and second position for high speed. Release the switch to turn the cab heater fan off.

22 DPF switch (DEUTZ engine configuration)

Push the switch to enable the DPF regeneration.

23 “Shift-on-fly” button

Push and hold the button to shift from one gear to another when the machine is travelling. Use this button only when the “Shift-on-fly” indicator light is lit with a solid light. While traveling less than 3 mph on slopes the shift on the fly system may not allow 2nd to 1st gear transition. Shift to 1st gear before ascending steep slopes. Come to a complete stop using the service brake before shifting from 2nd to 1st gear.

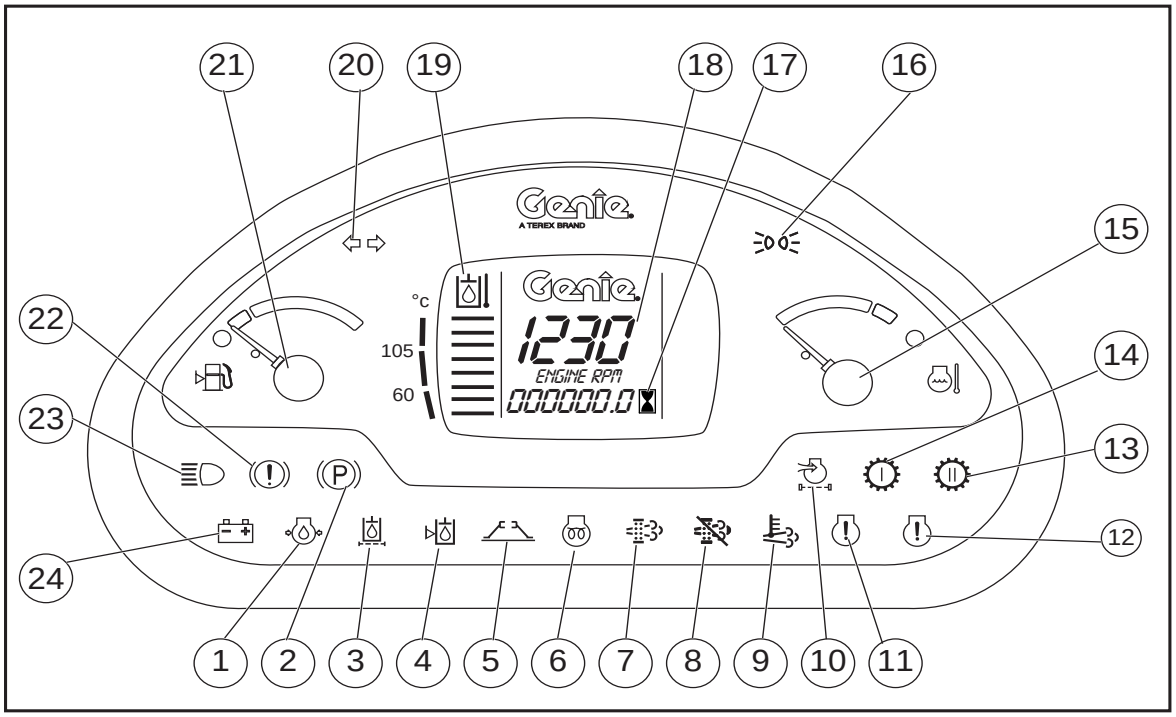
25 Rear Object Detection System (RODS) (if equipped)

Refer to supplemental operator’s manual

26 Diagnostic button

Push the button to scroll the LCD screen menu.

Controls



Instrument Panel

1. Low engine oil pressure indicator light
2. Parking brake engaged indicator light
3. Hydraulic oil filter clogged indicator light
4. Low hydraulic oil level indicator light
5. Not active
6. Glow plugs preheating indicator light
7. Diesel particulate filter indicator light (Deutz configuration)
8. Not active
9. Not active
10. Engine air filter restricted indicator light
11. DPF Alert indicator light
12. Engine Critical Fault indicator light
13. 2nd gear engaged indicator light
14. 1st gear engaged indicator light
15. High engine coolant temperature gauge
16. Position light indicator light
17. Hour-meter
18. Tachometer
19. High hydraulic oil temperature indicator light
20. Turn signal indicator light
21. Fuel level gauge with low fuel indicator light
22. Brake pressure low indicator light
23. High beam indicator light
24. Battery voltage low indicator light

Controls

1 Low engine oil pressure indicator light

When illuminated this light indicates that the engine oil pressure is too low which can lead to machine damage. Discontinue use of the machine and service.

3 Hydraulic oil filter clogged indicator light

When illuminated this light indicates that the hydraulic oil filter is clogged which can lead to machine damage. Discontinue use of the machine and service.

4 Low hydraulic oil level indicator light

When illuminated this light indicates that the hydraulic oil level is too low which can lead to machine damage. Replenish and eliminate the oil leak.

7 Diesel particulate filter indicator light

When illuminated this light indicates that the DPF is in need of regeneration. Park the machine in a safe location, press the DPF switch and refer to the DPF regeneration instructions in the supplemental operator's manual.

10 Engine air filter restricted indicator light

When this lamp comes on, the engine air filter is clogged proceed with cleaning or changing the air filter cartridge.

11 DPF Alert indicator light

This light flashes to warn of a problem of the engine. To identify the problem, see the two sections "Engine Lamp Logic"

12 Engine Critical Fault indicator light

This light comes on to warn of a problem of the engine. To identify the problem, see the two sections "Engine Lamp Logic"

15 High engine coolant temperature gauge

When gauge reaches red, the engine coolant is too hot which can lead to engine damage. Discontinue use and service the engine

19 High hydraulic oil temperature indicator light

This indicates the temperature of the hydraulic oil in the tank which can lead to machine damage. Discontinue use of the machine and service.

22 Brake pressure low indicator light

It lights when the pressure of the braking circuit is too low for a correct functioning which can lead to machine damage. Discontinue use of the machine and service.

Inspections



Do Not Operate Unless:

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

1. Avoid hazardous situations.

2. **Always perform a pre-operation inspection.**

   Know and understand the pre-operation inspection before going on to the next section.

3. Always perform function tests prior to use.

4. Inspect the workplace.

5. Only use the machine as it was intended.

Pre-operation Inspection Fundamentals

It is the responsibility of the operator to perform a pre-operation inspection and routine maintenance.

The pre-operation inspection is a visual inspection performed by the operator prior to each work shift. 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.

Inspections

Pre-operation Inspection

- ❑ Be sure that the operator's, safety and responsibilities manuals are complete, legible and in the storage container located in the platform.
- ❑ Be sure that all decals are legible and in place. See Inspections section.
- ❑ Check for hydraulic oil leaks and proper oil level. Add oil if needed. See Maintenance section.
- ❑ Check for battery fluid leaks and proper fluid level. Add distilled water if needed. See Maintenance section.
- ❑ Check for engine oil leaks and proper oil level. Add oil if needed. See Maintenance section.
- ❑ Air-filled tires models: 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 motors and drive hubs
- ❑ Boom wear pads
- ❑ Tires and wheels
- ❑ Mirrors and rear object detection system (if equipped)
- ❑ Engine and related components
- ❑ Limit switches
- ❑ Lights, alarms and beacons (if equipped)
- ❑ Pins, nuts, bolts and other fasteners
- ❑ Rear view mirrors

Check entire machine for:

- ❑ Cracks in welds or structural components
- ❑ Dents or damage to machine
- ❑ Excessive rust, corrosion or oxidation
- ❑ Be sure that all structural and other critical components are present and all associated fasteners and pins are in place and properly tightened.
- ❑ Be sure the windshield and windows (if equipped) are clean and free of obstructions that might limit visibility.
- ❑ After you complete your inspection, be sure that all guards, screens and compartment covers are in place and secured.

Inspections



Do Not Operate Unless:

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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.

Function Test Fundamentals

The function tests are designed to discover any malfunctions before the machine is put into service. The operator must follow the step-by-step instructions to test all machine functions.

A malfunctioning machine must never be used. If malfunctions are discovered, the machine must be tagged and removed from service. Repairs to the machine may only be made by a qualified service technician, according to the manufacturer's specifications.

After repairs are completed, the operator must perform a pre-operation inspection and function tests again before putting the machine into service.

Inspections

Function Tests

1 Select a test area that is firm, level and free of obstruction. Be sure there is no load on the forks or attachment.

2 Enter the cab and sit on the seat.

3 Adjust the seat and steering column, if needed.

4 Fasten and secure the seat belt around your waist.

5 Adjust the cab mounted mirror, the rear fish-eye mirror and the exterior right hand mirror, if required.

6 Be sure the parking brake is on and the transmission control is in neutral.

7 Start the engine. See Starting the Engine in the Operating Instructions section.

8 Rear object detection system (if equipped), when power is turned on, the display of the video camera on machine back (CCTV) runs a self-test.

Test the Ignition System

9 Set the transmision control lever in neutral position.

10 Step on the brake pedal. Push the top of the parking brake switch to turn it off

11 Insert the key in the ignition switch.

12 Turn the key to start the engine.

⊙ Result: The engine should not start.

13 Set the transmision control lever in gear.

14 Push the bottom of the parking brake switch to turn it on.

15 Insert the key in the ignition switch.

16 Turn the key to start the engine.

⊙ Result: The engine should not start.

Test the Control Handle

17 Start the machine with the parking brake on and the transmission control lever set to neutral position.

18 Using the control handle, momentarily raise the boom, extend the boom, retract the boom and lower the boom.

⊙ Result: All functions should operate smoothly.

19 Using the control handle and the grey thumb switch, momentarily tilt the forks up and tilt the forks down.

⊙ Result: All functions should operate smoothly.

20 Using the control handle and the grey finger switch, momentarily sway the machine to the right and to the left.

⊙ Result: The frame level function should operate smoothly.

Inspections

Test the Steering

21 Rotate the steer selector to the right side to select four-wheel steer.

22 Check the steering operation by turning the steering wheel approximately ¼ turn in each direction.

⊙ Result: The front wheels should turn in the same direction as the steering wheel. The rear wheels should turn in the opposite direction.

23 Straighten the wheels.

24 Rotate the steer selector to the middle position to select two-wheel steer.

25 Check the steering operation by turning the steering wheel approximately ¼ turn in each direction.

⊙ Result: The front wheels should turn in the same direction as the steering wheel. The rear wheels should not turn.

26 Straighten the wheels.

27 Rotate the steer selector to the left to select crab steer.

28 Check the steering operation by turning the steering wheel approximately ¼ turn in each direction.

⊙ Result: The front wheels and the rear wheels should turn in the same direction as the steering wheel.

Test the Transmission and Brakes

29 Be sure the boom is fully lowered and retracted.

30 Step on the brake pedal. Push the top of the parking brake switch to turn it off.

31 Move the transmission control lever to forward. Slowly let up on the brake pedal. As soon as the machine starts to move, push the brake pedal.

⊙ Result: The machine should move forward, and then come to an abrupt stop.

32 Move the transmission control lever to reverse. Slowly let up on the brake pedal. As soon as the machine starts to move, push the brake pedal.

⊙ Result: The machine should move in reverse, and then come to an abrupt stop. The back-up alarm should sound when the transmission control lever is in reverse.

33 Move the transmission control lever to neutral.

34 Push the bottom of the parking brake switch.

⊙ Result: The red parking brake indicator light should come on, indicating the parking brake is on.

35 Move the transmission control lever forward, and then in reverse.

⊙ Result: The machine should not move.

Inspections

Test the “Shift-on-fly” System

36 Be sure the boom is fully lowered and retracted.

37 Step on the brake pedal. Push the top of the parking brake switch to turn it off.

38 Move the transmission control lever to forward. Slowly let up on the brake pedal and step on the throttle pedal.

39 As soon as the “Shift-on-fly” indicator lits with a solid light, push and hold the “Shift -on-fly” button placed at the top end of the transmission control lever.

⊙ Result: The machine should shift from one gear to another.

40 When the “Shift-on-fly” indicator is off, push and hold the “Shift -on-fly” button placed at the top end of the transmission control lever.

⊙ Result: The machine should not shift from one gear to another.

Test the Drive and Sway Cutout

41 Raise the boom to 50°. Do not extend the boom.

42 Step on the brake pedal.

43 Push the top of the parking brake switch. The parking brake is off when the indicator light is off.

44 Put the transmission control lever in forward.

⚠ Slowly let up on the brake pedal.

⊙ Result: The drive function should not operate.

45 Put the transmission control lever in neutral.

46 Set parking brake.

⚠ Slowly sway the machine to the left and to the right.

⊙ Result: The sway function should not operate.

Test the Lights (if equipped)

47 Verify that all lights are functional.

Test the Rear Object Detection System (if equipped)

48 Verify that the system is operating properly according to the supplemental operator’s manual.

Inspections



Do Not Operate Unless:

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

1. Avoid hazardous situations.

2. **Always perform a pre-operation inspection.**

   Know and understand the pre-operation inspection before going on to the next section.

3. Always perform function tests prior to use.

4. Inspect the workplace.

5. Only use the machine as it was intended.

Workplace Inspection Fundamentals

The workplace inspection helps the operator determine if the workplace is suitable for safe machine operation. It should be performed by the operator prior to moving the machine to the workplace.

It is the operator's responsibility to read and remember the workplace hazards, then watch for and avoid them while moving, setting up and operating the machine.

Workplace Inspection Checklist

Be aware of and avoid the following hazardous situations:

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

Inspections

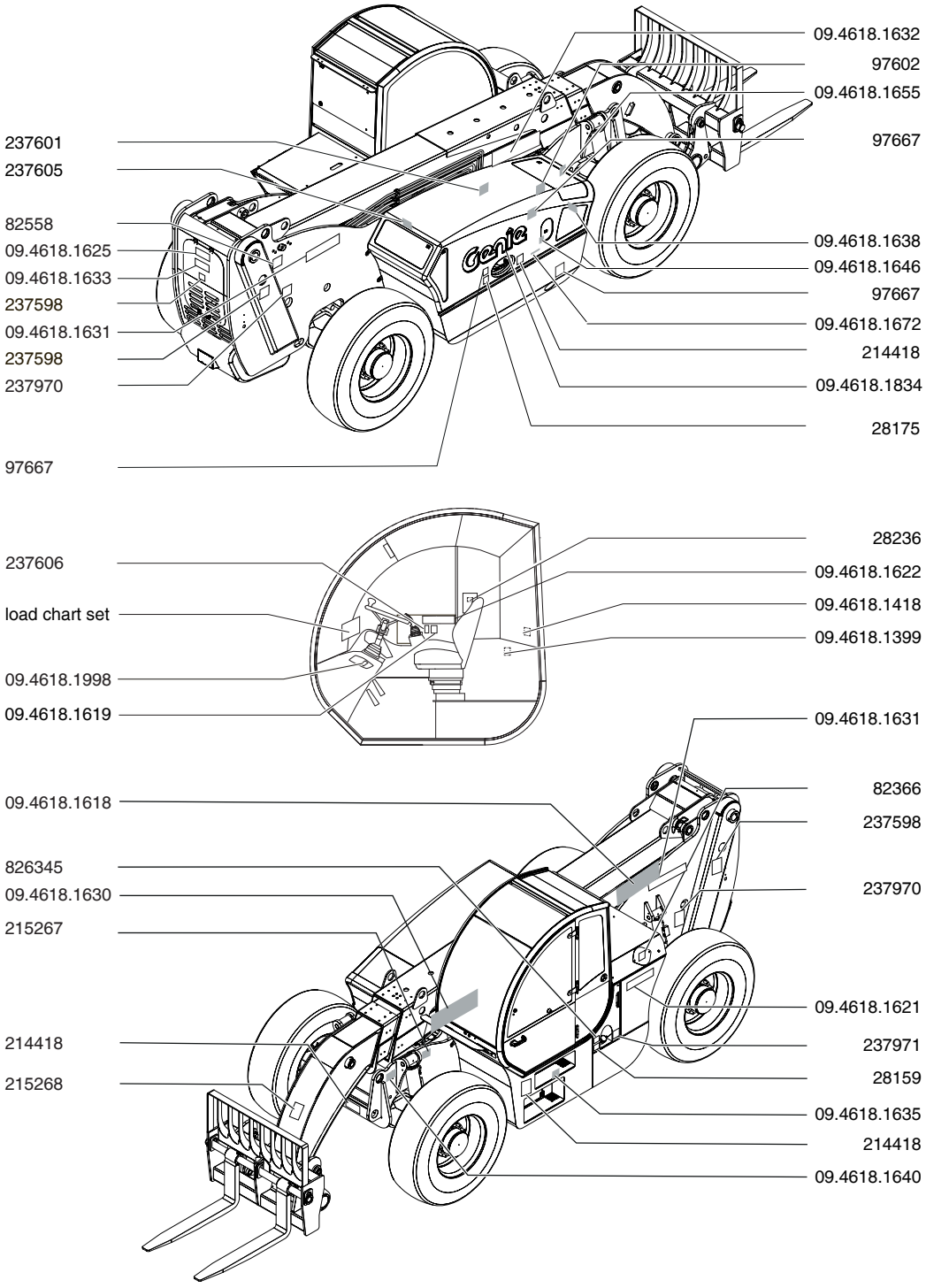
Inspection for Decals with Words

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.	Decal Description	Qty
28159	Label – Diesel	1
28175	Warning – Compartment Access	1
28236	Warning – Read Operator's Manual	1
82366	Label – Chevron Rando HD	1
82558	Warning – Skin Injection Hazard	1
97602	Warning – Explosion Hazard	1
97667	Warning – Burn Hazard	3
214418	Danger/Warning – 2 Decal Combination	3
215267	Label – Product Registration	1
215268	Warning – Fall Hazard, Work Platform	1
237598	Warning – Crush Hazard, Moving Machine	3
237601	Danger – Explosion/Burn Hazard	1
237605	Warning – Burn Hazard, Hot Parts	1
237606	Label – Single Controller	1
237970	Warning – Crush Hazard, Tires	2
237971	Danger – Explosion/Burn Hazard, Fueling	1
826345	Label – Ultra Low Sulfur Fuel Only	1
09.4618.1399	Label - Upper Door Unlock System	1
09.4618.1418	Label - Emergency Exit	1
09.4618.1618	Cosmetic - GTH-1544	1

Part No.	Decal Description	Qty
09.4618.1619	Notice - Driving Downhill	1
09.4618.1621	Cosmetic - Genie	1
09.4618.1622	Danger/Warning – 7 Decal Combination	1
09.4618.1625	Cosmetic - Genie	1
09.4618.1630	Cosmetic - Genie	1
09.4618.1631	Cosmetic - GTH-1544	2
09.4618.1632	Cosmetic - GTH-1544	1
09.4618.1633	Cosmetic - GTH-1544	1
09.4618.1635	Danger – Explosion/Burn Hazard	1
09.4618.1638	Label - Test Ports DEUTZ Configuration	1
09.4618.1672	Label - Test Ports PERKINS Configuration	1
09.4618.1640	Label – Transport and Lifting	1
09.4618.1646	Label - Inching Valve	1
09.4618.1834	Cosmetic - Genie low relief	1
09.4618.1652	Label - Load Chart, Standard Carriage	1
09.4618.1655	Notice - Cut-out Switch	1
09.4618.1659	Label - Load Chart, Rotate Carriage	1
09.4618.1660	Label - Load Chart, Rubbish Bucket	1
09.4618.1662	Label - Load Chart, 7 ft Truss Boom	1
09.4618.1868	Label - Shackle	1
09.4618.1998	Label - Shift on Fly	1

Inspections



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

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.

A variable reach rough terrain forklift truck is defined as a wheeled type truck designated primarily as a fork truck with a pivoted boom, which may be equipped with attachments for lifting material. Using it for any other use 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.

Additionally, everyone working on or near the product also needs to be familiar with the applicable safety precautions.

Operating Instructions

Parking Brake

Use the parking brake switch to apply the parking brake before raising the boom or leaving the machine.

Push the top of the rocker switch to turn the parking brake on.

Push the bottom of the switch to turn the parking brake off.

Brake Pedal

Use the brake pedal to control the machine speed and to stop the machine motion.

Push and hold the brake pedal to stop the machine.

Push and release the brake pedal to control the machine speed.

Starting the Engine

1 Be sure the parking brake is set and the transmission control lever is in the neutral position.

2 Insert the key in the ignition switch.

Turn the key until the engine starts.

If the engine fails to start after 30 seconds of cranking, determine the cause and repair any malfunction. Wait 120 seconds before trying to start again.

Starting in Cold Condition

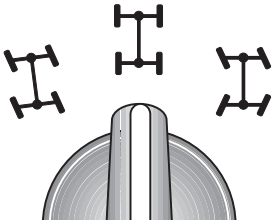
In cold conditions, 20°F / -6°C and below, warm the engine for 5 minutes before operating to prevent hydraulic system damage.

In extreme cold conditions, 0°F / -18°C and below, machines should be equipped with optional cold start kits. Attempting to start the engine when temperatures are below 0°F / -18°C may require the use of a booster battery.

Steer Select

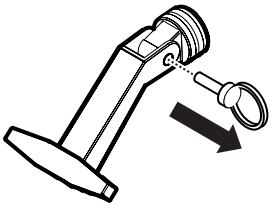
Always position all wheels in line with the machine before switching the steering mode.

Do not realign the wheels while driving.



Emergency Exit (if equipped)

Extract the retaining levers and push out the window.



Rear Object Detection System (if equipped)

The RODS system is intended to only augment, not replace, the operator's direct vision or indirect vision using the mirrors and to provide an additional means of hazard detection.

Follow the operating instructions in the supplemental operator's manual.

Fire Extinguisher (if equipped)

To operate an extinguisher:

1 Pull the pin

2 Aim nozzle at base of fire

3 Squeeze the handle

4 Sweep nozzle side to side

Operating Instructions

Transmission Control

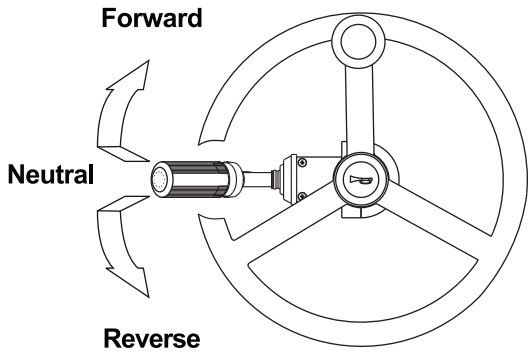
Use the transmission control lever to control the direction of machine travel.

Step on the service brake pedal before putting the transmission into gear.

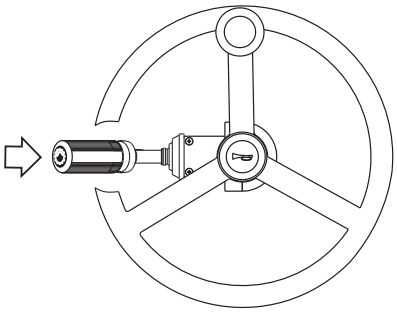
To drive forward, move the transmission control lever toward you and move it up.

To drive in reverse, move the transmission control lever toward you and move it down: the back-up alarm sounds and the rear working light turns on (if equipped).

To return to neutral, move the transmission control lever to the center position.



Push the “Shift-on-fly” button to shift from one gear to another when the machine is travelling.



Use this button only when the “Shift-on-fly” indicator light is lit with a solid light.

When the indicator light is OFF, the travelling speed is beyond the admissible speed range and, by pressing the switch, gear won’t be shifted.

If the indicator light flashes, there are errors or problems. Try to modulate the machine speed and check if the light comes on with a solid light.

The speed engagement is signalled by the dedicated indicator lights, according to the engaged speed.

While traveling less than 3 mph on slopes the shift on the fly system may not allow 2nd to 1st gear transition.

Shift to 1st gear before ascending steep slopes. Come to a complete stop using the service brake before shifting from 2nd to 1st gear.

Axle Differential Lock

Use the axle differential lock switch to lock the axle differential and gain added traction in certain types of terrain such as sand, mud or snow.

Come to a complete stop before activating the axle differential lock. Do not lock the axle when the machine is moving.

Push the switch to activate the axle differential lock. Release the switch to release the axle differential lock.

Frame Sway Control

Before raising the boom, the machine must be level.

1 Check the left to right level indicator. The left to right level indicator should be 0 degrees before raising the boom.

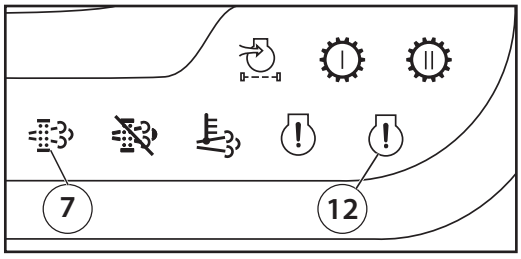
2 If the machine is not level, use the frame sway control function to level the machine.

⚠ Only use the frame sway control function if the boom angle indicator is at 0 degrees or less.

See Controller Movements section.

DPF Regeneration (Deutz configuration)

Based on the blinking combination of the DPF indicator lights, proceed as below:



1. When the Diesel Particulate Filter indicator light, 7, starts blinking but the Engine Critical Fault indicator light, 12, remain off, the operator has to start the DPF regeneration following these instructions:

   ii Select a safe outdoor parking location:
   - firm level surface
   - clear of obstruction and traffic
   - clear of fiammable material
   - clear of explosive atmospheres

   iii Set the parking brake.

   iv Move the transmission control lever to neutral.

   v Warm up the engine; the coolant temperature must reach at least 75°C.

   vi Keep the engine on.

   vii Activate the DPF regeneration pushing on the DPF switch: indicator light 7 becomes a solid light and the enigne revs up to 1,500/1,600 rpm.

   viii Keep clear of the exaust muffler area.

   ix Don't leave the machine unattended.

   x Signpost the area.

   xi Machine must remain parked outdoors for 30 minutes approximately.

   xii In case of need, regeneration can be stopped by pushing the DPF switch and then restarted.

   xiii Once the regeneration has been completed, the Diesel Particulate Filter indicator light, 7, will switch off and the engine will run at idle.

⚠ During DPF regeneration:
- steer clear of explosive atmospheres
- steer clear of fiammable material
- don't operate the machine;

2. When the Diesel Particulate Filter indicator light, 7, starts fast blinking and the Engine Critical Fault indicator light,12, becomes a solid red light, the operator has to contact a qualified service technician.

Operating Instructions

DPF Ash Load Monitoring (Deutz configuration)

During the whole engine lifetime, the DPF collects ash which cannot be removed by regeneration process.

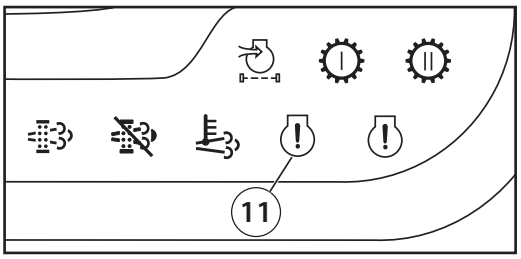
The ash load leads to shortened regeneration intervals and finally a filter replacement which is signaled by the word “REPLACE” which appears on the dashboard display.

Contact a qualified service technician to perform this task.DPF Regeneration

(Perkins configuration)

In this configuration regeneration always starts automatically.

Only when temperature is below -18°C, the system is not able to activate the regeneration by itself.



Dpf Alert indicator light, 11, starts blinking and the operator has to start the DPF regeneration following these instructions:

i Select a safe outdoor parking location firm level surface, clear of obstruction and traffic.

ii Set the parking brake.

iii Move the transmission control lever to neutral.

iv Warm up the engine stepping on the throttle pedal until the Dpf Alert indicator light comes off: this operation should take about 15 minutes.

Operating Instructions

Transporting a Load

Center the load on the forks. Position the load so that it is completely against the back of the fork frame.

The load should be kept as low to the ground as possible while traveling. Always move a loaded machine with the boom angle indicator at 0 degrees or less.

Tilt the forks back slightly to help keep the load secure.

Always bring the machine to a complete stop before applying the parking brake.

Raising and Placing a Load

The load chart in the cab shows the operating limits of a properly maintained and operated machine. To use the load chart, the operator must know the weight of the load, its load center and how far out and up it is to be placed.

This machine has more than one load chart. Be sure you are using the load chart that corresponds to the attachment on the machine.

If you determine that the weight of the load cannot be placed at the height and angle you want, these options can be used:

1 Move the machine closer to the loading or pick point so that the weight of the load will meet the load chart specifications.

2 Divide the load into smaller pieces so that each piece meets the load chart specifications.

3 Obtain a larger machine capable of handling the load within specifications.

Placing the load

1 Travel to the desired work site and carefully stop the machine.

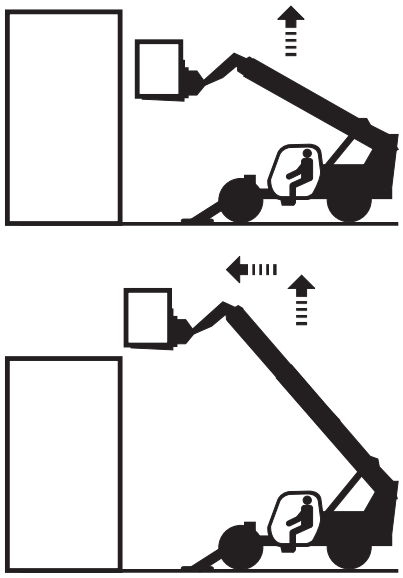
2 Put the transmission in neutral.

3 Apply the parking brake.

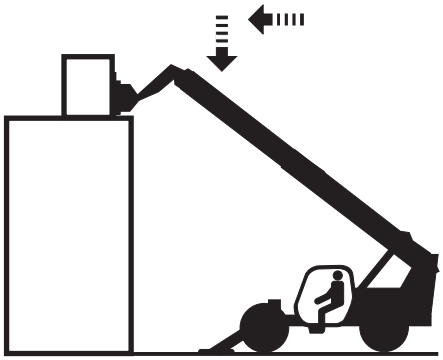
4 Level the frame, if the left to right level indicator or the front to back level indicator is not at 0 degrees.

Operating Instructions

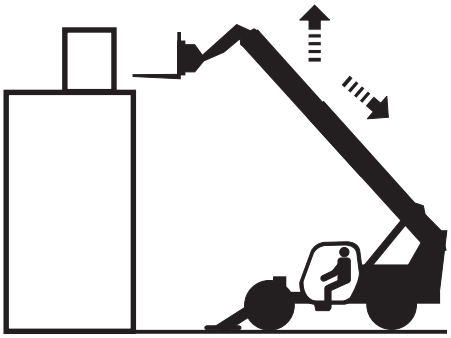
5 Gradually move the controller to raise and extend the boom to the required height.



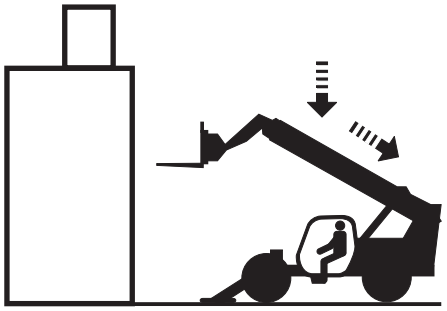
6 Gradually move the controller to lower and extend the boom into final position. Lower the load until the weight is completely off the forks. Do not apply a downward force with the forks.



7 Gradually move the controller to raise and retract the boom. This will bring the forks out of the load.

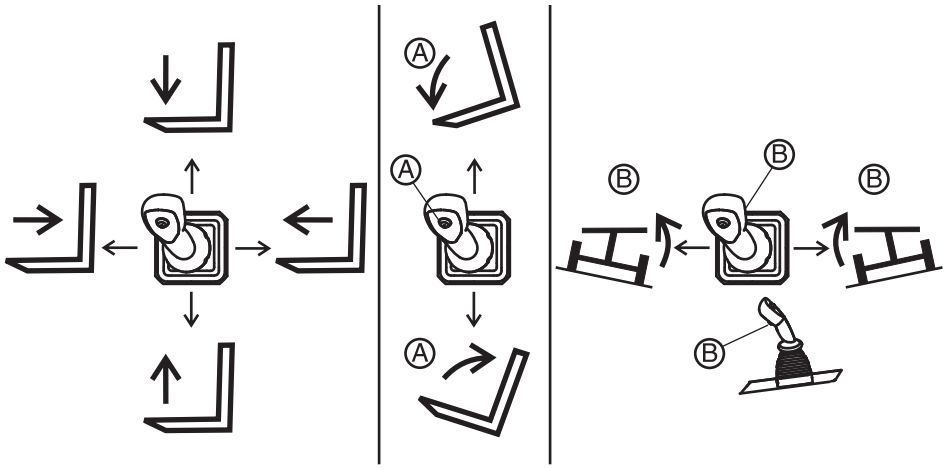


8 When the forks are clear of the load and the structure, the boom can be lowered and retracted.



Operating Instructions

Controller movements



Control handle only

Control handle only with grey thumb switch (A)

Control handle only with grey finger switch (B)

Operating Instructions

Rear Axle Lock

If the boom is raised above 50°, the transmission will shift to neutral and the frame sway function will not operate.

Boom and fork functions continue to operate.

To unlock the rear axle and to operate the frame sway function, lower the boom. When the boom is at or below 0°, the frame sway function will operate.

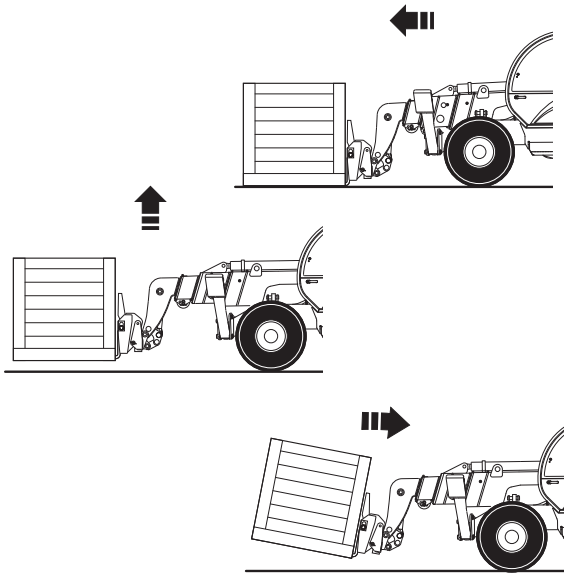
Quick Attach Instructions

Version with mechanical locking

1 Drive to the place where you will release the mounted attachment (when possible, a solid and sheltered site).
2 Disconnect the quick connectors of the attachment (if any).
3 Pull out the mechanical pin locking the attachment after removing the safety split-pin at its end.
4 Rest the attachment flat on the ground.
5 Pitch the attachment holding frame forward and lower the boom to release the attachment upper lock.
6 Move back with the machine and drive to the new attachment to be coupled.
7 Hold the frame pitched forward and hook the upper lock of the new attachment.
8 Retract and raise the attachment a small distance. It will centre automatically on the quick coupling frame.
9 Refit mechanical locking pin fixing it with its safety split-pin.
10 Re-couple the connectors of the attachment (if any).

Version with hydraulic locking *(optional)*

1. Drive to the place where you will release the mounted attachment (when possible, a solid and sheltered site).
2. Disconnect the quick connectors of the attachment (if any).
3. Rest the attachment flat on the ground.
4. Press the Lock/Unlock Enabling Switch and keep it pressed up to the end of the operation.
5. Free the attachment pressing the Auxiliary Line Switch towards right.
6. Pitch the attachment holding frame forward and lower the boom to release the attachment upper lock.
7. Move back with the machine and drive to the new attachment to be coupled.
8. Hold the frame pitched forward and hook the upper lock of the new attachment.
9. Retract and raise the attachment a small distance. It will centre automatically on the quick coupling frame.
10. Coupling the attachment pressing the Auxiliary Line Switch towards left together with the dashboard Lock/Unlock Enabling Switch.
11. Re-couple the connectors of the attachment (if any).



Operating Instructions

Engine Condition Indicator

If the DPF Alert indicator light and/or the Engine Critical Fault indicator light switch on, contact service personnel.

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 Move the transmission control lever to neutral.

4 Set the parking brake.

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

6 Chock the wheels.

Jump Starting the Machine

Jump starting at the battery or battery replacement is required when the battery is discharged to the point where the battery will not crank the starter.

Never jump start the machine directly to the starter or the starter solenoid. Serious injury or death could result from the machine moving forward or backward.

To avoid personal injury when jump starting with another machine, be certain that the machines are not touching.

Never jump start a frozen battery as it will explode.

Keep sparks and flames away from the battery. Lead acid batteries generate explosive gases when charging. Wear safety glasses when working near batteries.

The booster battery must be 12V. The machine used for jump starting must have a negative ground electrical system.

To jump start the machine

1 Connect the positive (+) jumper cable to the positive (+) post of the discharged battery.

2 Connect the other end of the same jumper cable to the positive (+) post of the booster battery.

3 Connect one end of the second jumper cable to the negative (-) post of the booster battery.

4 Make the final cable connection to the engine block or the furthest ground point away from the battery.

5 Start the engine.

Operating Instructions

⚠ Driving on a slope

When the machine is loaded, always travel with the load uphill. When the machine is unloaded, travel with the forks or attachment downhill.

On steep terrain, drive only up and down hill, and always keep the machine in gear. Do not turn across slope when machine is traveling up or down a slope.

Limit travel path and speed according to the condition of the ground surface, traction, slope, location of personnel and any other factors which may create a hazard. Never drive the machine unless the mast and equipment are in their proper travel position.

Whether a machine will tip over during dynamic machine operation involves many variables that need to be considered. Among these are pavement/ground conditions, stability and slope, as well as machine equipment, operator skill, load position, tire inflation, machine speed, etc.

Additionally, tip over of a machine is dependent in large part upon operator inputs such as the speed and smoothness of the operation as well as the position of the attachment and its load.

Construction sites and roads will frequently change slope from place to place, can be hard and soft, and change due to the construction activities and weather.

Operators should be properly trained and use their best judgment and experience to take the necessary precautions to prevent tip over. Operators must assess the jobsite variables and avoid exceeding the machine's (or operator's) capabilities for terrain and conditions.

Transport and Lifting Instructions



Observe and Obey:

- ☑ Genie provides this securement information as a recommendation. Drivers are solely responsible for making sure machines are properly secured and the correct trailer is selected pursuant to US Department of Transportation regulations, other localized regulations, and their company policy.
- ☑ Genie customers needing to containerize any lift or Genie product should source a qualified freight forwarder with expertise in preparing, loading and securing construction and lifting equipment for international shipment.
- ☑ Only qualified operators should move the machine on or off the truck.
- ☑ The transport vehicle must be parked on a level surface.
- ☑ The transport vehicle must be secured to prevent rolling while the machine is being loaded.
- ☑ Before loading for transport, make sure the deck, ramps and machine tires are free of mud, snow and ice. Failure to do so could cause the machine to slide.
- ☑ Be sure the vehicle capacity, loading surfaces and chains or straps are sufficient to withstand the machine weight. Genie telehandlers are very heavy relative to their size. See the serial label for the machine weight. See the Inspections section for the serial label location.

Transport and Lifting Instructions

Securing to Truck or Trailer for Transit

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

Inspect the entire machine for loose or unsecured items.

Be sure the door and the door windows are latched and secured (if equipped).

Prior to loading, level the telehandler and retract the boom.

Use a spotter to load and unload the telehandler. Keep the boom as low as possible when loading and unloading.

Set the parking brake.

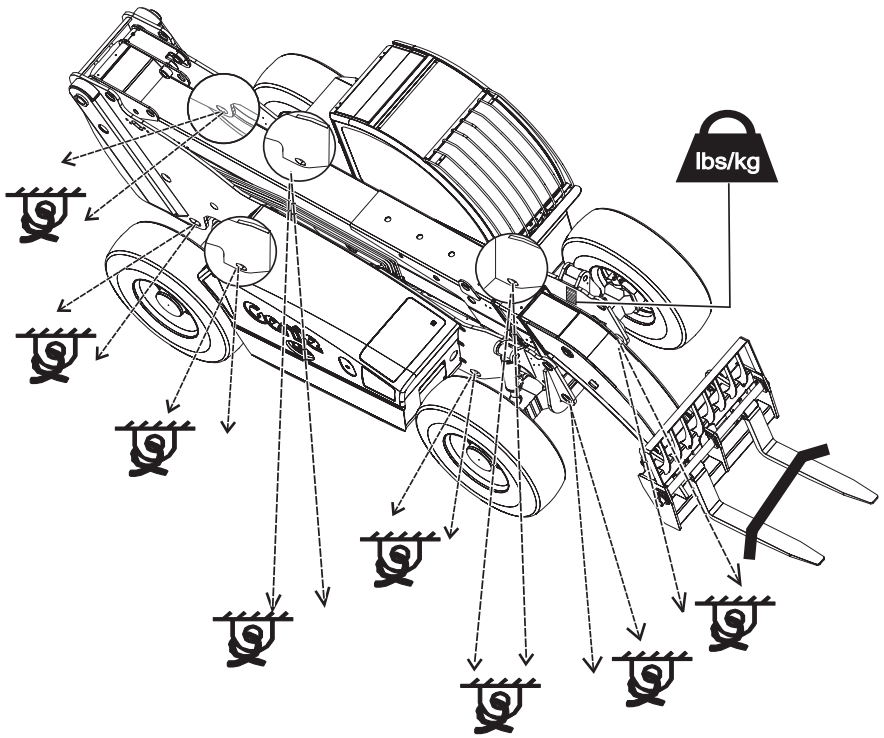
Securing the Chassis

Use chains of ample load capacity.

Use a minimum of 6 chains. There are 8 tie down points on the chassis, two in the front and three on each side of the machine.

Fully lower the forks or attachment onto the truck bed. Secure the forks or attachment with a suitable strap or chain to prevent movement.

Adjust the rigging to prevent damage to the chains.



Transport and Lifting Instructions

Observe and Obey:

- ☑ Only qualified riggers should rig the machine.
- ☑ Only certified crane operators should lift the machine and only in accordance with the applicable crane regulations.
- ☑ Be sure the crane capacity, loading surfaces and straps or lines are sufficient to withstand the machine weight. See the serial label for the machine weight.

Lifting Instructions

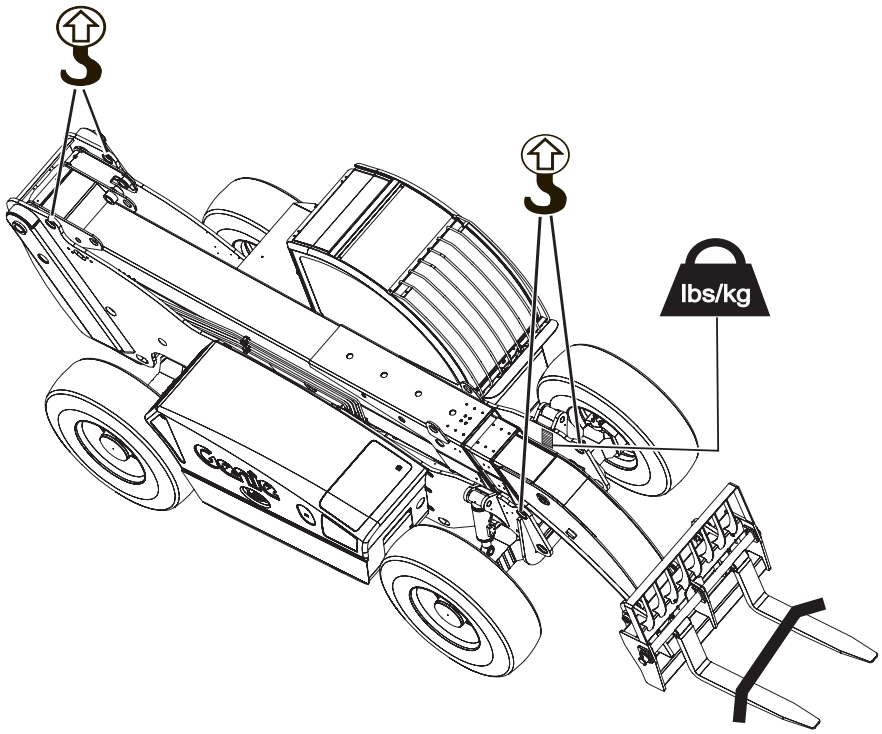
Fully lower and retract the boom.

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

Remove all loose items on 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.



Maintenance

Observe and Obey:

- ☑ Only routine maintenance items specified in this manual shall be performed by the operator.
- ☑ Scheduled maintenance inspections shall be completed by qualified service technicians, according to the manufacturer's specifications and the requirements specified in the responsibilities manual.

Maintenance Symbols Legend

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



Indicates that tools will be required to perform this procedure.



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



Indicates that a cold engine will be required to perform this procedure.

Moving a disabled machine

For towing procedure, please refer to the Service Manual ***Section 4, Repair Procedures.***

Diesel Fuel Requirements

Satisfactory engine performance is dependent on the use of a good quality fuel. The use of a good quality fuel will give the following result: long engine life and acceptable exhaust emissions levels.

The diesel engine must be operated using only Ultra Low Sulfur Fuel. The sulphur content of this fuel must be lower than 15 PPM.

Fuel		
Type	Ultra Low Sulfur Fuel (ULSD)	
Tank	48 gal	182 L

Maintenance

Check the Engine Oil Level



Maintaining the proper engine oil level is essential to good engine performance and service life. Operating the machine with an improper oil level can damage engine components.

Note: Check the oil level with the engine off.

1 Check the oil level dipstick. Add oil as needed.

Deutz 4.1TCD L4	
Oil type	SHELL RIMULA R4 L 15W-40

Perkins 1204E-E44TA	
Oil type	SHELL RIMULA R4 L 15W-40

Check the Hydraulic Oil Level



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

1 Be sure that the engine is off, the frame is level and the boom is in the stowed position.

2 Visually inspect the sight gauge located on the left side of the hydraulic oil tank.

⊙ Result: The hydraulic oil level should be halfway in the sight gauge.

3 Add oil as needed. Do not overfill.

Hydraulic oil specifications
Hydraulic Oil type
GAZPROMNEFT HYDRAULIC HDZ 46

Maintenance

Check the Engine Coolant Level - Liquid Cooled Models



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

1 Visually inspect the sight gauge located on the top side of the radiator.

⊙ Result: The fluid level should be halfway in the sight gauge.

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

Check Mirrors and RODS System

Maintaining the indirect visual aids is essential to workplace visibility.

1. Visually inspect all mirrors, the camera lens and monitor screen of the RODS system (if equipped) to ensure they are working properly and clean and free from debris.

Check the Tire Pressure



⚠ Tip-over hazard. An over-inflated tire can explode which may compromise machine stability and cause the machine to tip over.

⚠ Tip-over hazard. The use of temporary flat tire repair products may lead to tire failure which could compromise machine stability and cause the machine to tip over.

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

Note: This procedure does not need to be performed on machines equipped with foam-filled tires.

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

Tire pressure	87 psi	6 bar

Maintenance

Check the Battery



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

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

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

1 Put on protective clothing and eye wear.

2 Be sure that the battery cable connections are tight and free of corrosion.

3 Be sure that the battery hold-down brackets are in place and secure.

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

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.

Attachments

⚠ Work Platform Hazards

Work Area Safety

The telehandler shall not be used to lift people unless there is no other practical option. If a telehandler must be used to lift people, the following precautions for the protection of occupants shall be taken.

Use only a Genie approved personnel work platform which complies with the design requirements of ANSI/ITSDF B56.6.



Do not lift personnel with a telehandler unless it is equipped with an approved work platform.

The user or employer and the operator shall further investigate, and comply with, all applicable jobsite, local, state, provincial, or federal rules, regulations, and standards related to the use of the telehandler with a work platform.

Read, understand and obey all warnings and instructions provided with the attachment that is approved for elevating personnel.

The operator and the platform occupants must be instructed regarding the specific hazards associated with using the telehandler with the work platform, and utilize all means, including those provided by the user or employer, to avoid them.

Always perform a pre-operation inspection of the platform, per the manufacturer's instructions, prior to use.

If damage or any unauthorized variation from factory delivered condition is discovered, the platform must be tagged and removed from service.

Do not modify the platform without written approval by Genie and the platform manufacturer.

Do not use the telehandler with a work platform attached for any purpose other than positioning personnel with their tools, materials and equipment.

Provide overhead protection as required by the operating conditions.

Platform Occupant Fall Protection

Personal fall protection equipment (PFPE) is required for all occupants of the work platform.



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

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

Attachments

Occupying the Platform

Do not carry materials directly on platform railing unless approved by Genie.

Be certain that materials and tools are protected from falling out of the platform.



Be aware of crushing hazards when grasping the platform guard rail. During movement of the platform, occupants must keep all body parts inside the platform railing.



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

Do not enter or exit the platform unless the machine is in the stowed position and the platform is at ground level.

Occupants shall not climb on any part of the telehandler in attempting to enter and exit the platform.



Do not climb down from the platform when raised.

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



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

Do not tie the boom or platform to adjacent structures.

Do not place loads outside the platform perimeter.

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

Keep the platform floor clear of debris.

Never use ladders, boxes, steps, planks or similar items on the platform to provide additional reach.

Be certain that required personnel fall protection devices, such as guard rails and full body harness with lanyard, are in place and properly used.

Use the hand rails to maintain balance while the platform is in motion.

Do not increase the surface area of the platform or the load. Increasing the area exposed to the wind will decrease machine stability.

Attachments

Telehandler Operation

Be certain that the platform is securely attached to the telehandler, lifting carriage and forks.

Be certain that the lifting carriage and forks are secured to prevent them from pivoting freely.



Do not drive the telehandler when occupants are in the platform.

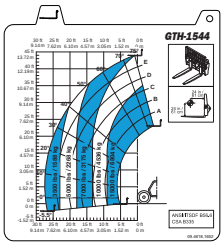
Always fully lower the platform and have occupants leave the platform before driving the telehandler.

Before elevating personnel, the area shall be marked to warn of work by elevated personnel.

Prior to lifting personnel, platform occupants and telehandler operator must establish a means of communication for positioning of the platform.

Be sure that operators of other overhead and floor level machines are aware of the machine's presence.

Lifting Personnel



Occupants, equipment and materials shall not exceed the maximum platform capacity. Distribute loads evenly on the platform floor.

The combined weight of the platform, load, and personnel shall not exceed one-third of the capacity at the related load center position (24 inches / 60 cm) as indicated on the load charts of the telehandler on which the platform is used.

Be certain that the path of platform travel is clear of hazards such as storage racks, scaffolds, overhead obstructions, and electrical wires.



Do not level the machine with the frame sway function when the platform is occupied.



Be certain that the platform is horizontal before lifting, and do not tilt the platform forward or backward when the occupied platform is elevated.

Attachments

Keep bystanders away while operating.

Do not place boom or platform against any structure to steady the platform or to support the structure.

Do not use the 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 controls.



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

Be certain that the path of platform travel is clear of hazards, such as storage racks, scaffolds, overhead obstructions, and electrical wires.

Do not allow personnel or bystanders to tamper with or operate the machine from the cab when occupants are in the platform except in an emergency or when directed by the occupants.

Always lift and lower personnel smoothly and with caution, and only at their request.

Operating Instructions

Preparation and Setup

Read, understand and obey all jobsite, local, state, federal and provincial rules, standards and regulations as they pertain to the use of a telehandler mounted personnel work platform (In the USA and Canada, reference ANSI/ITSDF B56.6 and CSA B335).

If the personnel work platform is equipped with safety instructions, make sure a copy is placed in the cab as well as in the work platform, if it is equipped with a manual holder.

Cordon off the area to warn of work by elevated personnel. Keep the area under the platform free of personnel.

Be sure the telehandler is on a firm level surface capable of supporting all forces imposed by the machine.

Without personnel in the platform, perform a simulated lift with the designated signal person on the ground as a spotter, to assure adequate telehandler range and attachment clearances and that the telehandler lifting mechanism is operating smoothly.

Attachments

Installing and securing the platform

Center the platform on the telehandler.

Properly secure the platform to the telehandler according to the manufacturer's instructions.

Be sure that the forks supporting the platform are secured to prevent them from pivoting forward.

If mounted to a rotating attachment, center the rotation of the attachment and then deactivate its rotation capability.

Level the platform, both side to side (frame sway function) and front to rear (attachment tilt function).

Entering, occupying and exiting the platform

Use three-point contact when entering or exiting a work platform.

Only enter and exit the platform when it is at ground level.

Only enter and exit the platform at the designated entry and exit locations.

Close and secure the entry point gate or railing before signaling to be lifted.

Attach PFPE to the designated lanyard anchor.

Occupants should use the guardrail to help stabilize themselves during movement. Be aware of crushing hazards when grasping the platform guardrail.

Lifting and lowering the platform

Set the parking brake and place the transmission into neutral.

Only allow personnel to enter and exit the platform when it is at ground level.

Establish and maintain a means of communication with the occupants.

Only move the platform at the request of a single designated occupant. Never tilt the platform forward or backward, or attempt to level the machine when the platform is occupied.

Sound the horn to alert occupants prior to lifting or lowering the platform.

Move the platform slowly, smoothly and with caution.

Keep hands and feet clear of all controls other than those in use.

When the platform is occupied, the telehandler operator must remain seated in the cab in the cab with the occupants in direct line of sight.

Attachments

⚠ Suspended Load Hazards

Work Area Safety

General Safety

Do not lift a suspended load without first understanding the local, state, federal, or provincial rules, standards and regulations related to the activity. In the USA requirements are set forth in ANSI/ITSDF B56.6 and OSHA 29 CFR 1926.1400-1442. Additional rules, standard and regulations may apply. Additional training may be required.

If a telehandler must be used to transport a load, the following precautions for the protection of the operator shall be taken.

Read, understand and obey all warnings and instructions provided with the attachment that is approved for suspending loads.

Only a properly designed, tested and approved attachment should be used to carry a suspended load.

The telehandler load charts are designed for loads where the load center is stationary. As a suspended load moves, the load center can change. As a result, extreme caution in transporting and lifting, or placing, the load must be observed to minimize the potential for the load to move.

Overturning Hazards

Do not lift a suspended load without the proper and legible load capacity chart for the attachment/ telehandler combination you are using.





Do not permit the load to swing freely. Always properly tether loads to restrict movement. Driving across grades, sudden starts, stops, and turns can cause the load to swing and create a hazard if not externally stabilized.

Keep the boom retracted as much as practical.

Do not lift suspended loads when wind speeds can cause an unsafe situation.

All movements of the load must be accomplished gradually and at the slowest practical speed to prevent the load from swinging.

Keep the heavy part of the load closest to the attachment.

Never drag or pull a load sideways.

Only lift a load vertically; do not pull a load horizontally as it could cause excessive swinging of the load.

The weight of all rigging (slings, shackles etc.) must be included as part of the load.

Attachments

Identify the proper lifting points of the load, taking into consideration the center of gravity and load stability.

Do not attempt to use the telehandler frame-leveling to compensate for a swinging load or to adjust the load after it has been raised.

Do not try to move fixed or obstructed loads.

Do not leave the telehandler unattended with a suspended load.

Keep the boom and load as low as practical while maintaining visibility in the direction of travel.

Do not exceed walking speed (2 mph / 3.2 km/h) with a suspended load.

Start, travel, turn and stop slowly to prevent the load from becoming unstable or swinging.

Do not use any controls to re-position the load when traveling. Come to a gradual and complete stop before attempting to re-position the load.

Do not attempt to cross inclines as the load center will move towards the tipping line, thereby reducing stability.

Only climb or descend inclines with extreme care as the load center will move towards the tipping line, thereby reducing stability

Do not park on a slope.

Fall Hazards

Do not lift or suspend personnel.

Collision Hazards

Be sure that the load is clear of any adjacent obstacles before lifting.

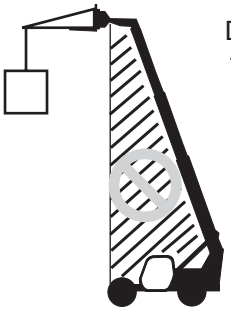
When visibility is or could be obstructed, near or at the load placement, the operator shall use alternative or additional means to safely lift the load, such as a qualified signal person.

Signal persons must remain in constant communication (verbal or hand) and be in visual contact with the operator at all times.

Crush Hazards

Never allow the signal person to come between the suspended load and another object (such as the telehandler itself).

Falling Object Hazards



Do not raise the load into the fall zone shown.

Do not operate the machine while people are under the load or in the fall zone.

Do not suspend loads using slings or chains from the forks or fork carriage.

Avoid lifting double tiered loads.

Attachments

Lifting a Suspended Load

Verify that landing point is level and can safely support the load.

Properly secure the attachment to the telehandler

Level the frame on the telehandler.

Rig the load as outlined in OSHA 29 CFR 1926.1401, 1926.1404, and 1926.1425, keeping the heaviest part of the load as close to the attachment as practical.

Tether the load to restrict movement.

Ask a signal person to assist with lifting the load if visibility will be obstructed at the point of operation.

Make sure that the signal person remains in constant communication and is in visual contact at all times.

With the boom retracted as far as practical, slowly and gradually raise the boom and load, making sure to keep the load and boom as low to the ground as practical.

Be sure that all boom and attachment movements are performed as slow as practical to avoid swinging of the load.

Travelling

Be sure that the path of travel is level and capable of supporting the telehandler with its load.

Keep the boom, and load, as low as practical while maintaining visibility in the direction of travel.

Ask a signal person to assist with your travel if visibility will be obstructed in the direction of travel.

Crush or Collision Hazard. Make sure that the signal person remains in constant communication and be in visual contact at all times.

Only make adjustments to the load after bringing the telehandler to a complete stop.

Start, stop, travel and turn slowly to prevent the load from becoming unstable or swinging.

Do not travel faster than walking speed (<2 mph / 3.2 km/h).

Attachments

Placing the Load

Ask a signal person to assist with placing the load if visibility will be obstructed at the point of operation.

Make sure that the signal person remains in constant communication and be in visual contact at all times.

Come to a complete stop near the landing point.

Set the parking brake and place the transmission into neutral.

Slowly, and gradually, place the load over the landing point and lower the load until it is safely supported.

Once the load has been landed, continue to lower the boom until the rigging and tethers can be removed.

Signal Person (from 1926.1419)

Per OSHA CFR 1926.1419, a signal person is required when:

The point of operation, meaning the load travel or the area near or at load placement, is not in full view of the operator.

When the equipment is traveling, the view in the direction of travel is obstructed.

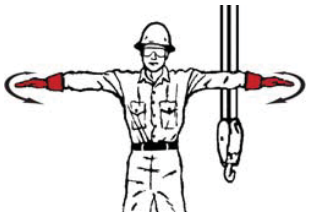
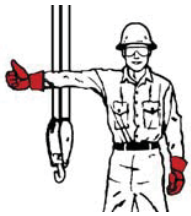
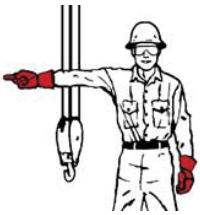
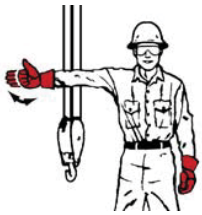
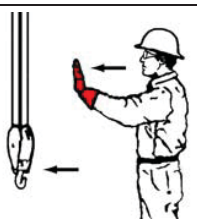
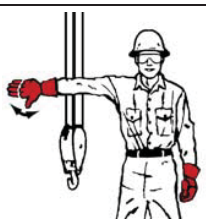
Due to site specific safety concerns, either the operator or the person handling the load determines that it is necessary.

Signal persons must remain in constant communication (verbal or hand) and be in visual contact with the operator at all times.

When using hand signals, follow the requirements set forth in OSHA CFR 1926.1419-1926.1422.

The hand signal chart below may be used in place of the Standard Method in Appendix A of Subpart CC of Part OSHA CFR 1926.

Attachments

 STOP. With arm extended horizontally to the side, palm down, arm is swung back and forth.	 EMERGENCY STOP. With both arms extended horizontally to the side, palms down, arms are swung back and forth.		 HOIST. With upper arm extended to the side, forearm and index finger pointing straight up, hand and finger make small circles.	 RAISE BOOM. With arm extended horizontally to the side, thumb points up with other fingers closed.
 SWING. With arm extended horizontally, index finger points in direction that boom is to swing.	 RETRACT TELESCOPING BOOM. With hands to the front at waist level, thumbs point at each other with other fingers closed.	 RAISE THE BOOM AND LOWER THE LOAD. With arm extended horizontally to the side and thumb pointing up, fingers open and close while load movement is desired.	 DOG EVERYTHING. Hands held together at waist level.	 LOWER. With arm and index finger pointing down, hand and finger make small circles.
 LOWER BOOM. With arm extended horizontally to the side, thumb points down with other fingers closed.	 EXTENDED TELESCOPING BOOM. With hands to the front at waist level, thumbs point outward with other fingers closed.	 TRAVEL/TOWER TRAVEL. With all fingers pointing up, arm is extended horizontally out and back to make a pushing motion in the direction of travel.	 LOWER THE BOOM AND RAISE THE LOAD. With arm extended horizontally to the side and thumb pointing down, fingers open and close while load movement is desired.	 MOVE SLOWLY. A hand is placed in front of the hand that is giving the action signal.

Attachments

⚠ Suspended Load Hazards

Rigger Requirements (from OSHA CFR 1926.404)

When employees are engaged in hooking, unhooking, or guiding the load, or in the initial connection of a load to a component or structure and are within the fall zone, all of the following criteria must be met:

The materials being hoisted must be rigged to prevent unintentional displacement.

Hooks with self-closing latches or their equivalent must be used. Exception: “J” hooks are permitted to be used for setting wooden trusses.

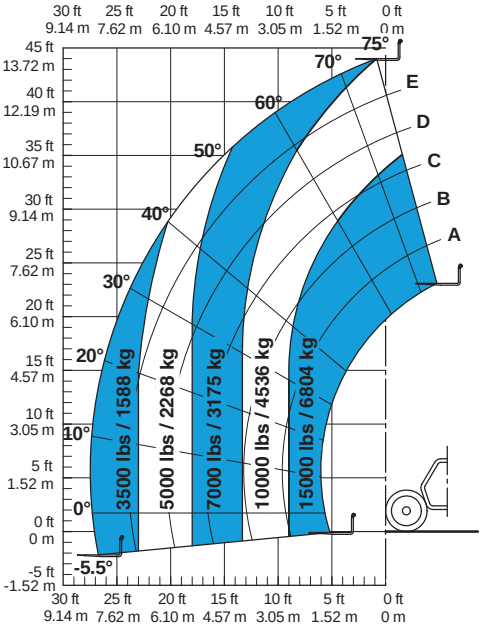
The materials must be rigged by a qualified rigger.

Specifications

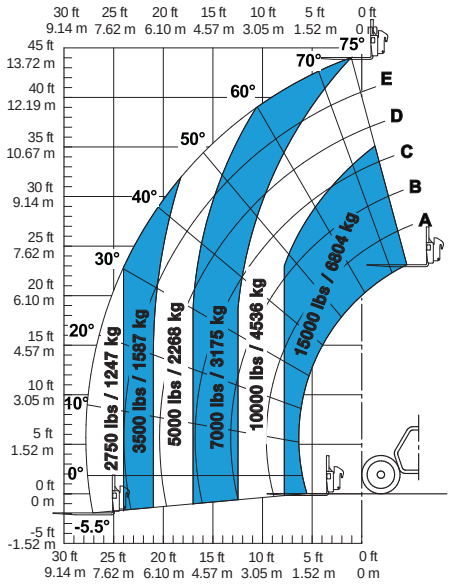
GTH-1544		
Height, stowed	8 ft 7 in	2.61 m
Length, stowed, without forks	20 ft 4 in	6.20 m
Width, standard tires	7 ft 11 in	2.42 m
Wheelbase	11 ft 6 in	3.50 m
Ground clearance, center	1 ft 3 in	0.37 m
Ground clearance, axle	1 ft 3 in	0.37 m
Weight	33,686 lbs	15,280 kg
Working fork height, maximum	44 ft	13.41 m
Horizontal reach maximum	27 ft 3 in	8.31 m
Reach at maximum height	10 in	0.25 m
Lift capacity, maximum height with 24 in / 61 cm load center	10,000 lbs	4,536 kg
Lift capacity, maximum reach with 24 in / 61 cm load center	3,500 lbs	1,587 kg
Maximum lift capacity	15,000 lbs	6,804 kg
Drive speed, maximum, Deutz engines	18 mph	29 km/h
Drive speed, maximum, Perkins engines	18 mph	29 km/h
Frame sway		+/- 7°
Tire size		17.5 x 25 in, 20 ply
Turning radius, outside, 2 wheel steer	22 ft 10 in	6.98 m
Turning radius, outside, 4 wheel steer	14 ft 7 in	4.45 m
Fuel tank capacity	47 gal	180 L
Maximum grade		41 %
Horn sound level, manufacturer's rating		110 dB
Backup alarm sound level, manufacturer's rating		97 dB
Rear Object Detection System		Refer to supplemental manuals
Floor loading information		
Tire load, maximum	18,518 lbs	8,400 kg
Occupied floor pressure	302 psf	14.46 kPa

Load Charts

GTH-1544, Standard Carriage

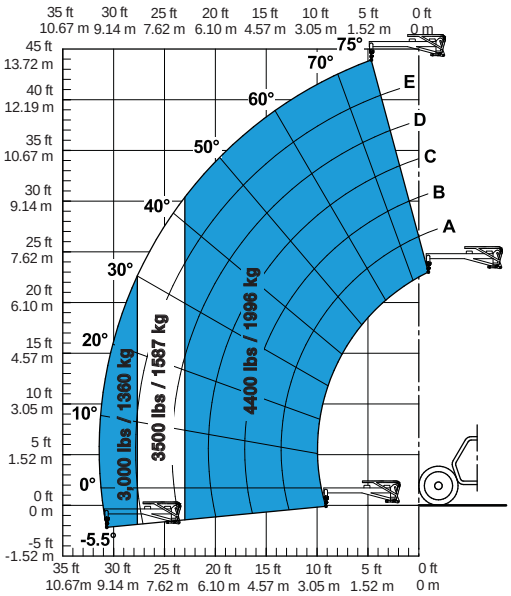


GTH-1544, Rotating Carriage

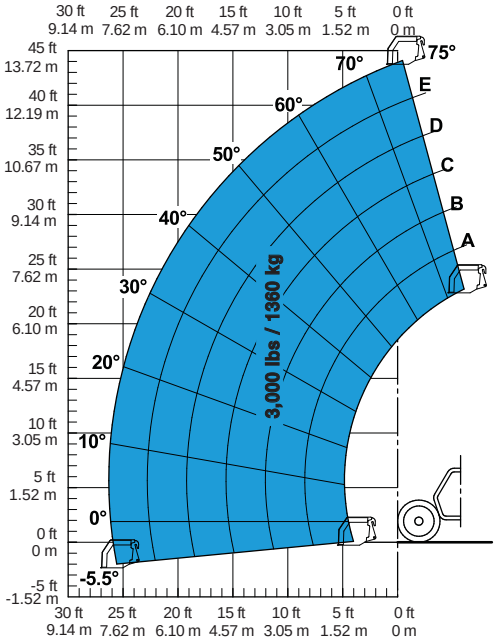


Load Charts

GTH-1544, 7 ft Truss Boom

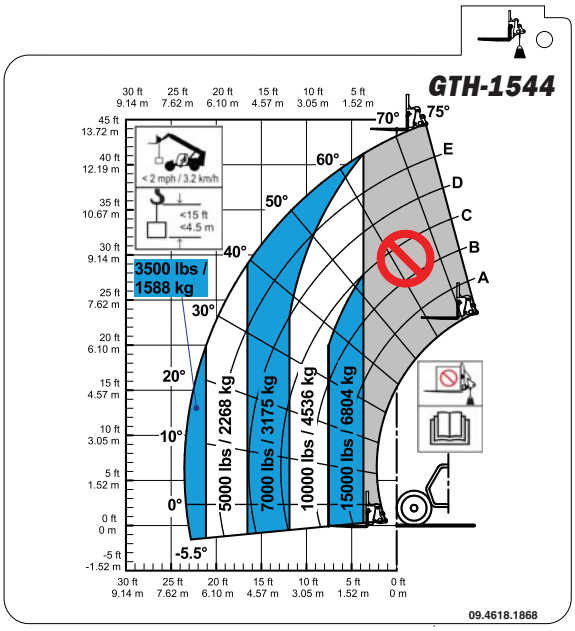


GTH-1544, Rubbish Bucket



Load Charts

GTH-1544, Shackle



California Proposition 65

Warning

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

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