Genie
A TEREX BRAND

Operator's Manual

Serial Number Range

GTH™-5519

from GTH55M-21405

Tier 4 Interim
Tier 4 Final

with
Maintenance
Information

Original Instructions
Sixth Edition
First Printing
Part No. 1405678GT

Introduction

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Introduction

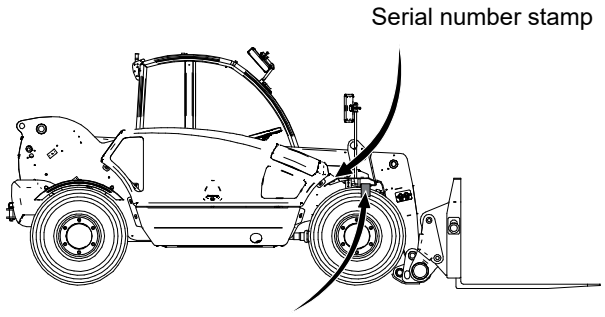
About this manual

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, 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.



Serial label (located inside chassis)

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.

Introduction

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.

To view any open bulletins for your machine, visit us on the web at www.genielift.com.

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 safety rules—safety and operator's manuals and machine decals.

☑ You read, understand and obey employer's safety rules and worksite regulations.

☑ You read, understand and obey all applicable governmental regulations.

☑ You are properly trained to safely operate the machine.

Hazard Classification

Decals on this machine use symbols, color coding, and signal words to identify the following:

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

⚠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.

Introduction

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

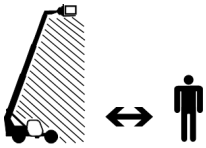
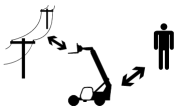
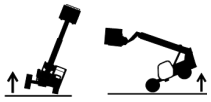
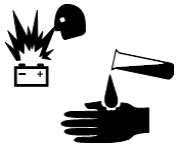
CSA B335 - Safety Standard for Lift Trucks

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

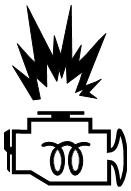
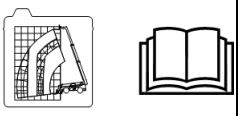
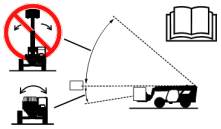
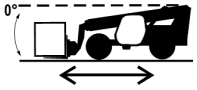
Safety Sign Maintenance

Replace any missing or damaged safety signs. Keep operator safety in mind at all times. Use mild soap and water to clean safety signs. Do not use solvent-based cleaners because they may damage the safety sign material.

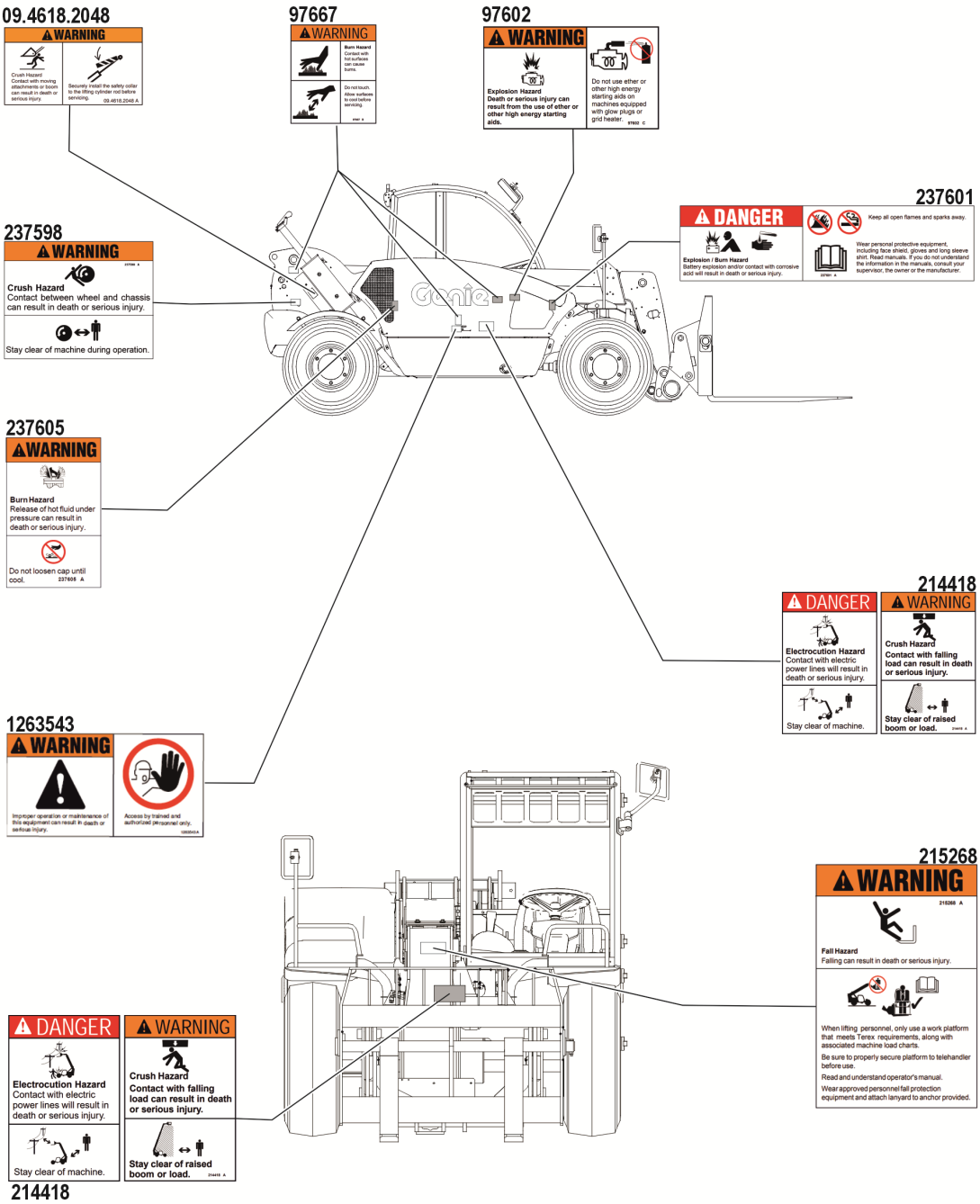
Symbol and Hazard Pictorials Definitions

 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 away from moving parts	 Burn hazard	 Do not loosen cap until cool.	 Explosion / Burn hazard	 No smoking. No open flame.

Symbol and Hazard Pictorials Definitions

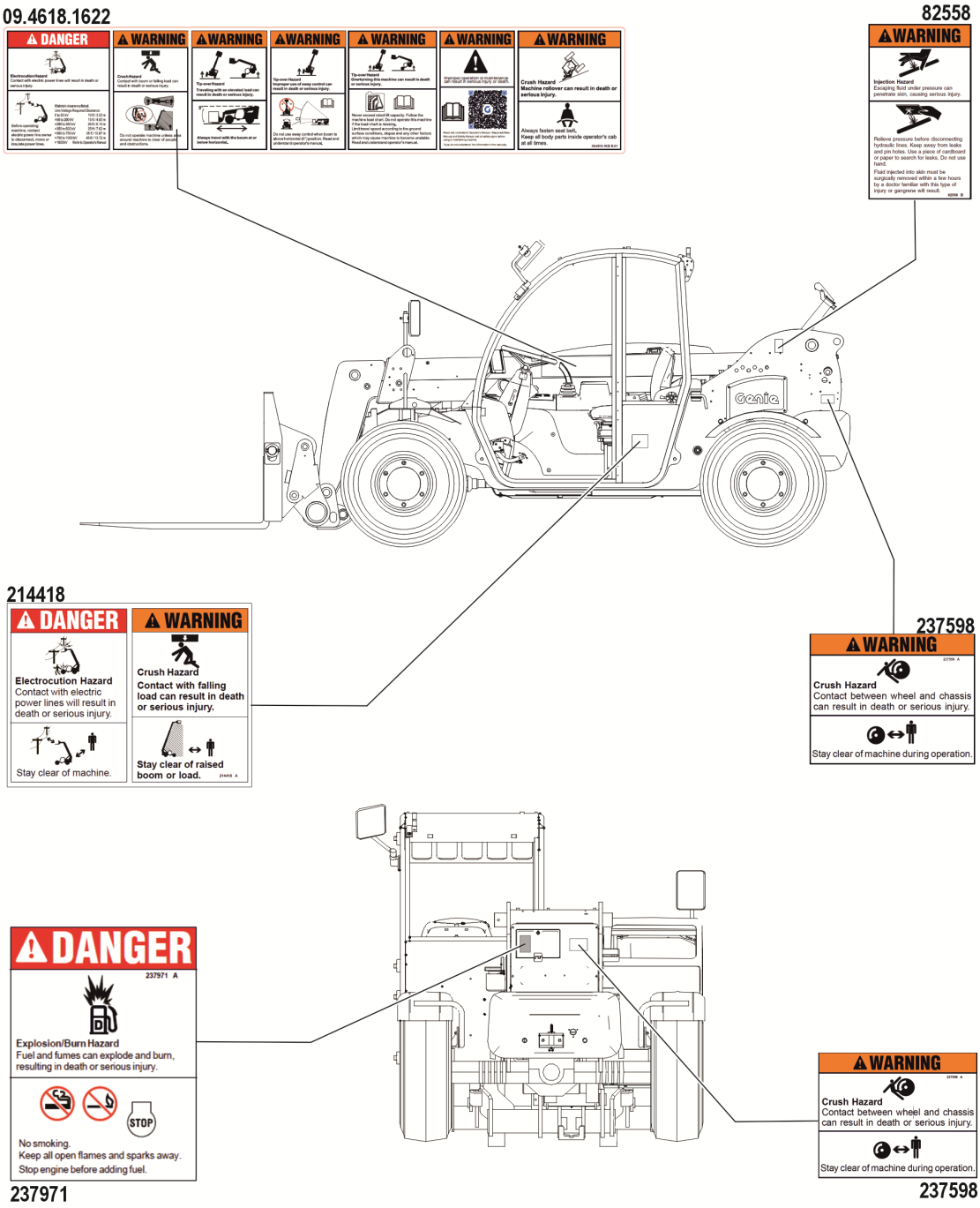
 Burn hazard	 Allow surfaces to cool	 Do not use starting aids	 Explosion hazard	 Access by trained and authorized personnel only
 Explosion / Burn hazard	 No smoking. No open flame.	 Fall hazard	 Work platform use	 Refer to load charts and manual.
 Sway operation	 Keep load low	 Apply maintenance collar		

General Safety for Tier 4 Interim

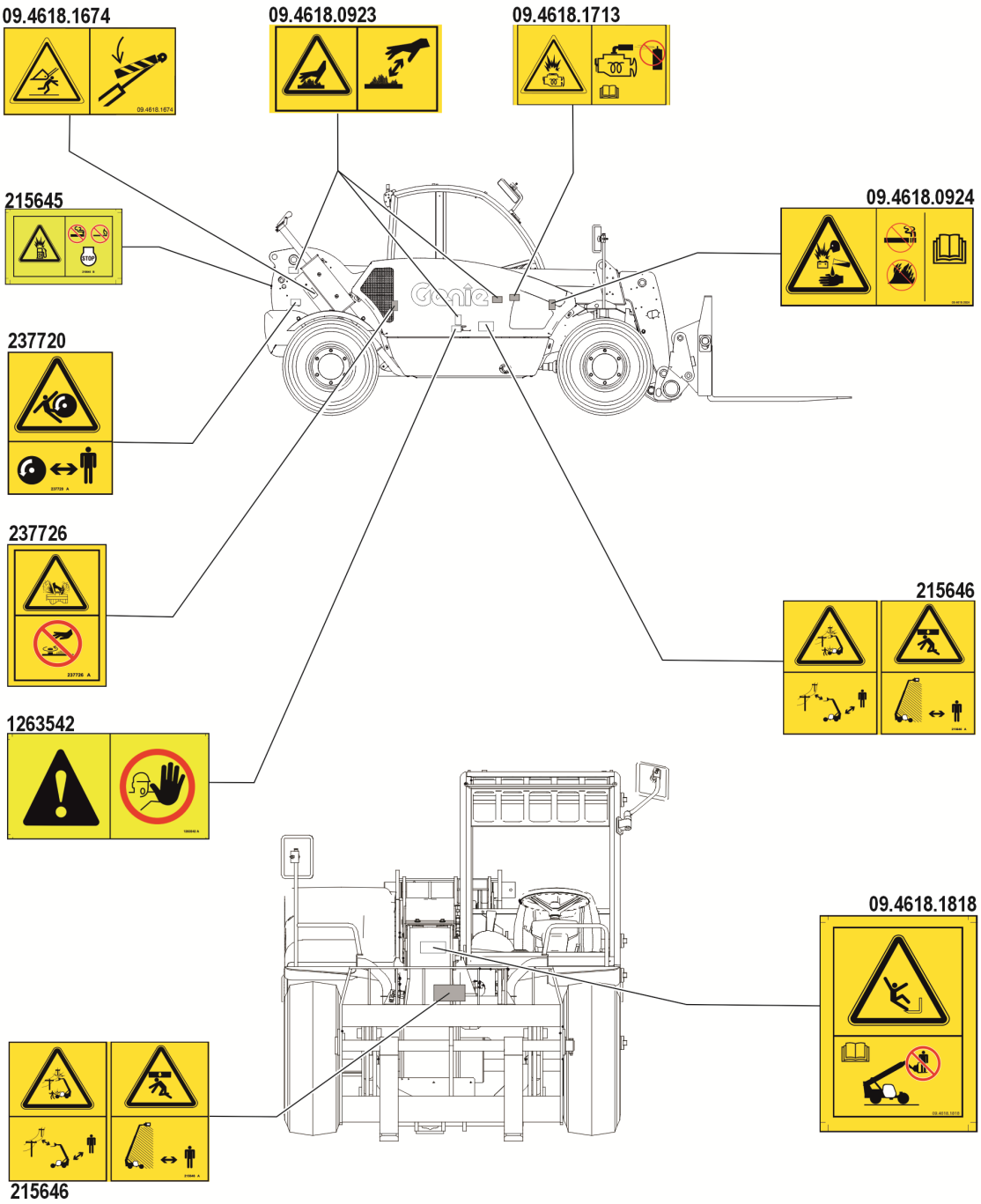


General Safety

General Safety for Tier 4 Interim

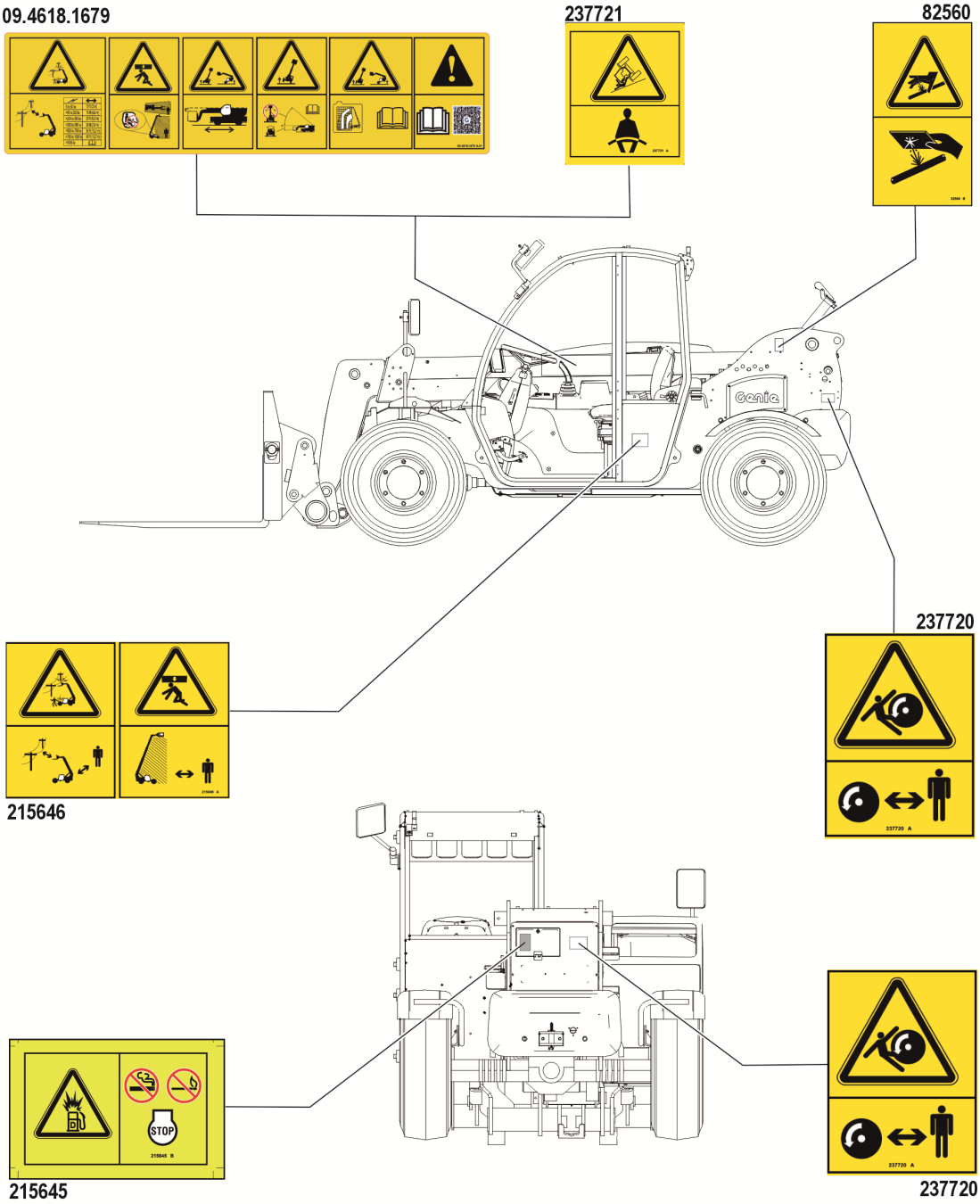


General Safety Symbol for Tier 4 Interim

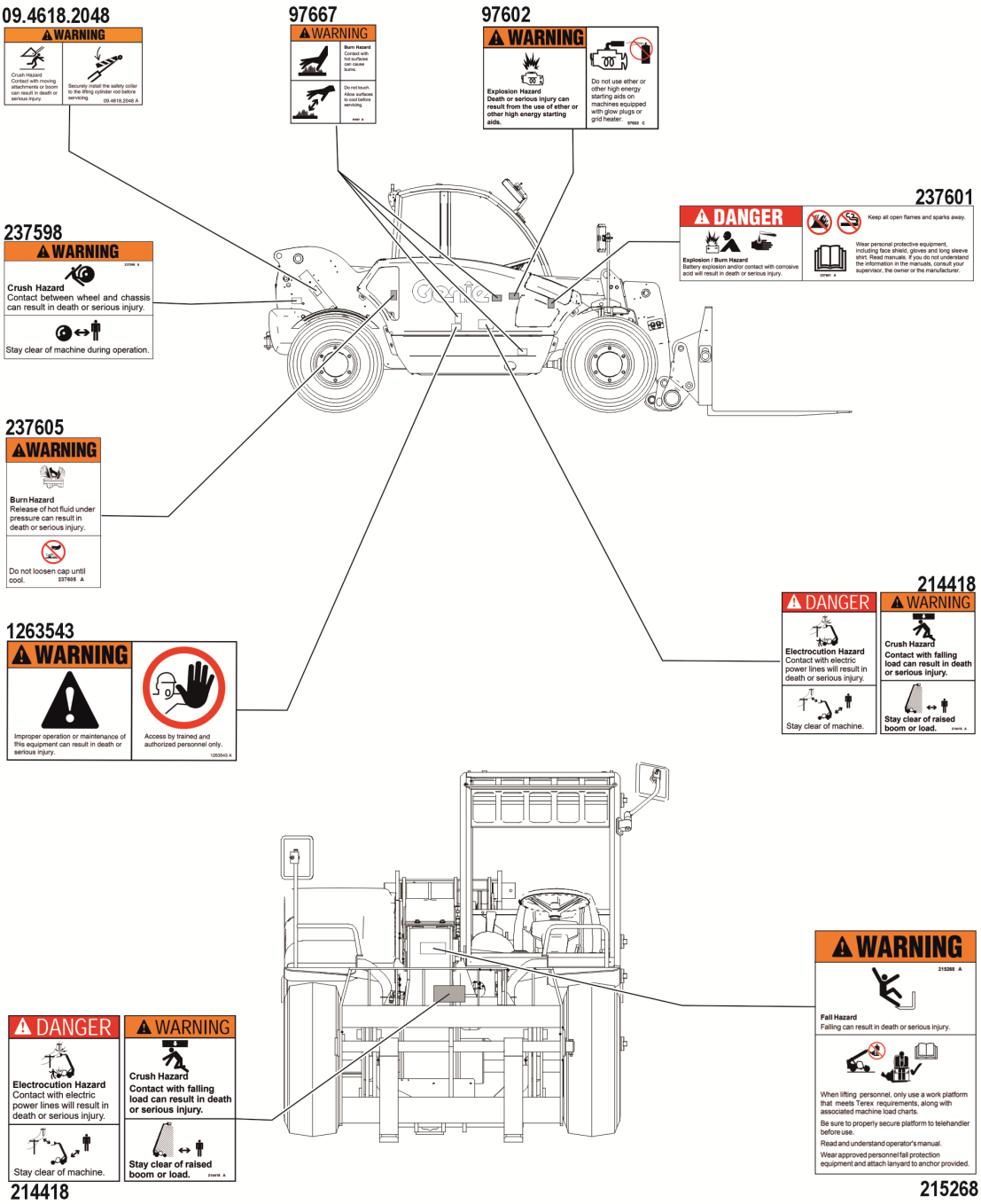


General Safety

General Safety Symbol for Tier 4 Interim

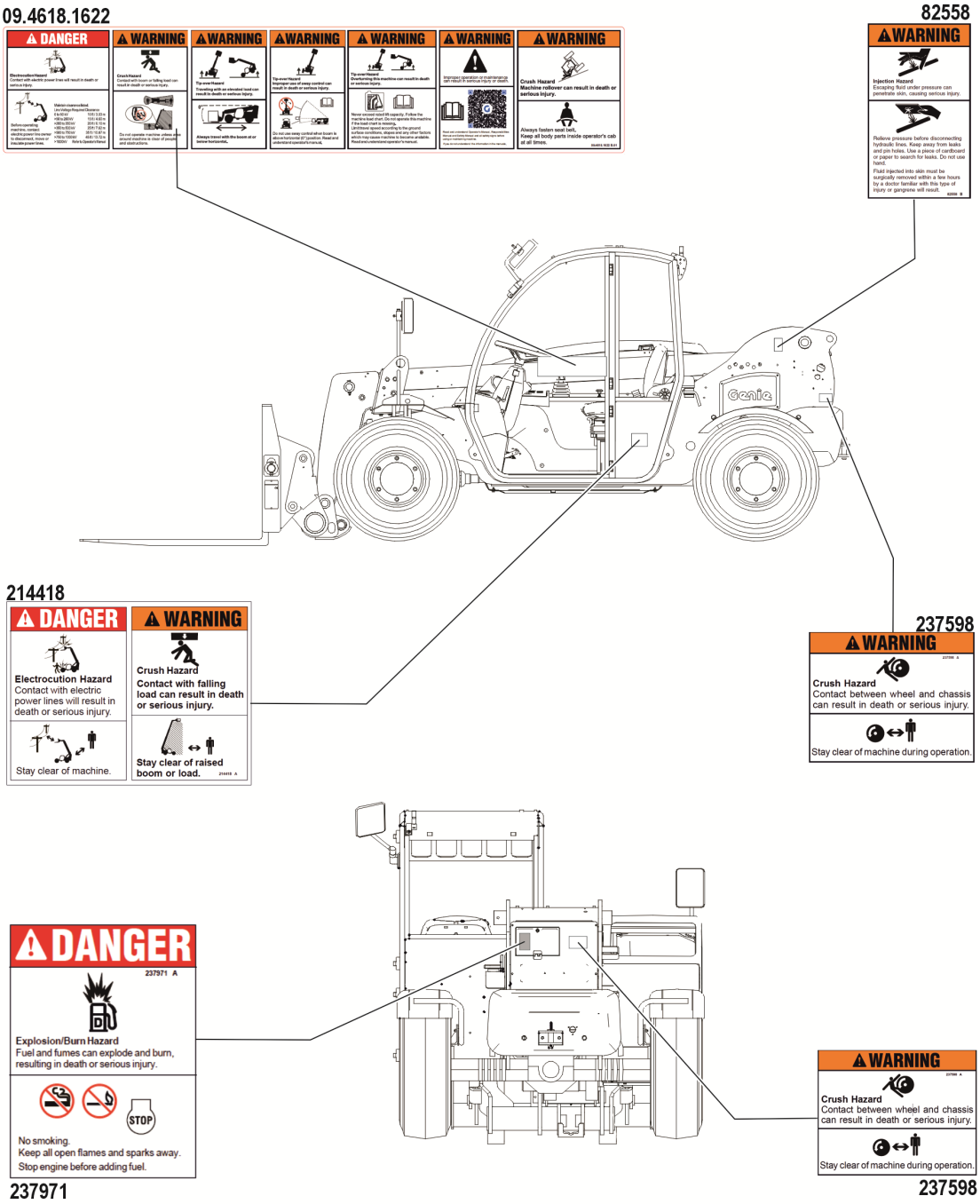


General Safety for Tier 4 Final



General Safety

General Safety for Tier 4 Final



Work Area Safety

⚠ Overturning Hazards



Using the appropriate load chart for the machine configuration, 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, level 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.

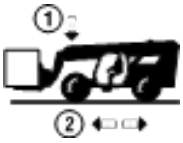
Do not operate the machine if the load chart is missing.

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 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.

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, steep grades, debris, unstable or slippery surfaces and near holes and drop-offs.

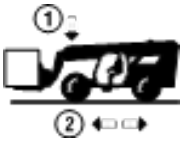
Do not alter or disable machine components that in any way affect safety and stability.

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.

Work Area Safety

⚠ 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.

⚠ 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. See Work Platform section.

Work Area Safety

⚠ 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 brake is applied and personnel and bystanders are clear of the machine and load.

Do not drive the machine if visibility is obstructed. Use a signal person when visibility is obstructed, and keep the signal person in view at all times. Use prearranged hand signals to communicate.

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

Do not operate, without fenders, in conditions where loose debris could hit the operator or accumulate 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.

Scan the area prior to operating the machine. Look in the direction of travel. Use mirrors to assist in checking all around the machine.

Keep windows and mirrors clean, adjusted and in good repair.

Be aware of the machine load swing area.

Do not rely on the rear proximity alarm system to determine if personnel or objects are behind the machine. The system has limitations due to maintenance practices, the size or shape of the object, composition, environmental conditions and operating range. This system is set up for detection at a reverse speed of a maximum of 3 feet per second / 0.9 meters per second (walking pace). Refer to the detection zone chart in the back of this manual.

⚠ 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.

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.

⚠ 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.

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 boom and attachment 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 cab 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 terminals.

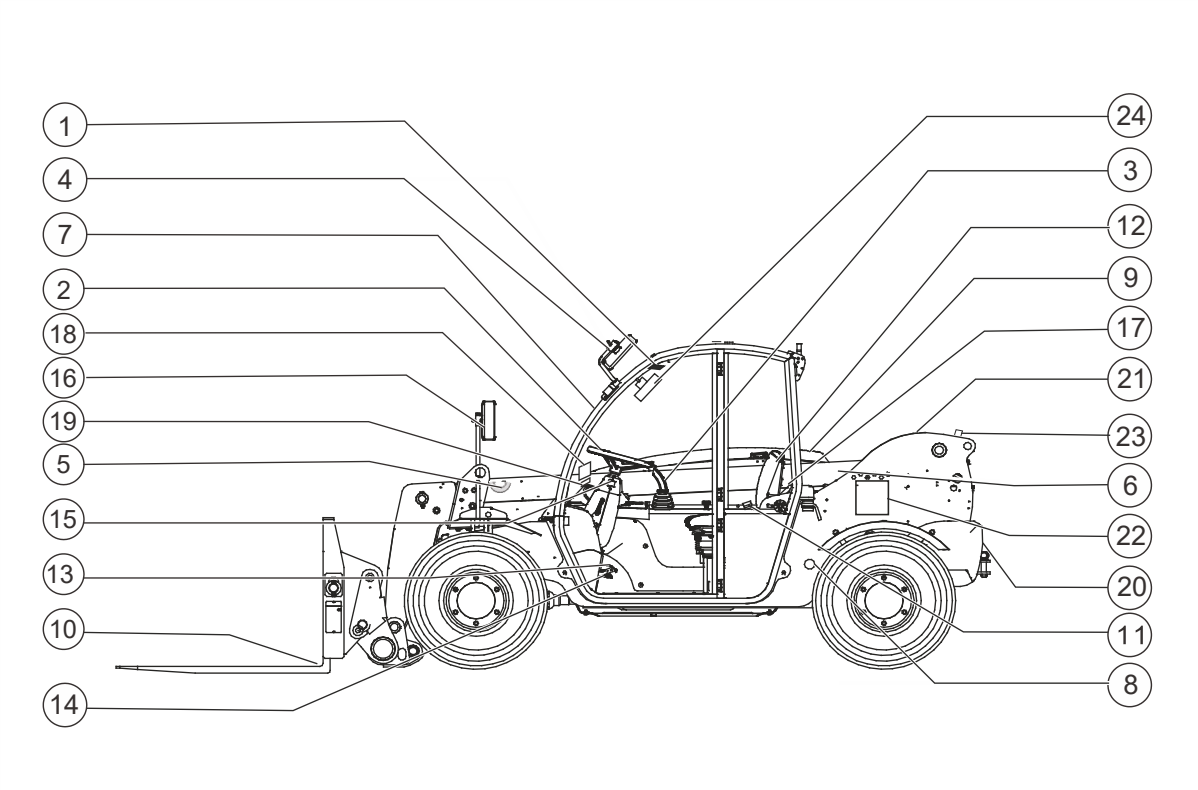
⚠ Employer's Responsibilities

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

⚠ Personal Safety

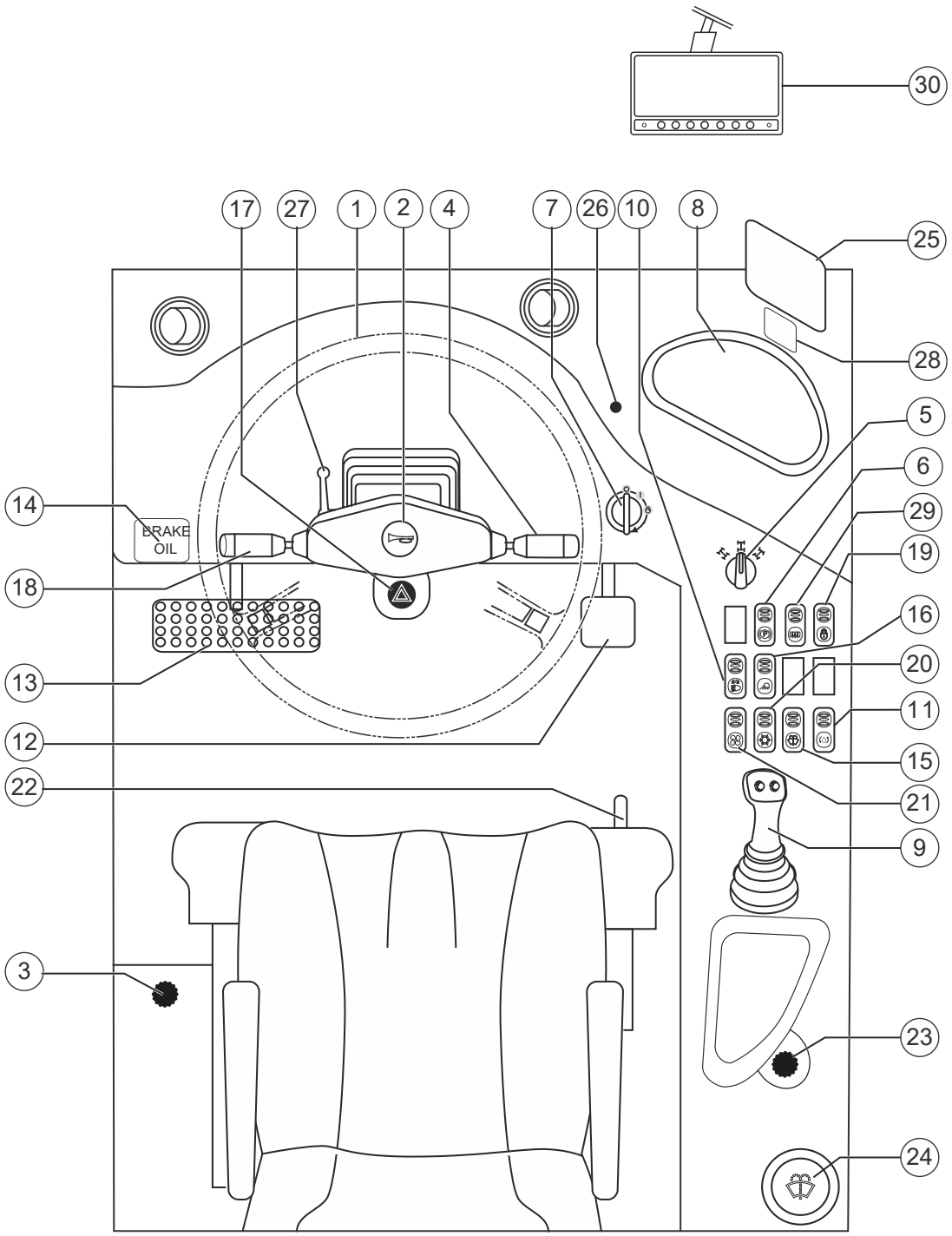
Be sure that everyone working on or near this machine is familiar with the applicable safety precautions.

Legend



1 Left/right level indicator
2 Steering wheel
3 Control handle
4 Left rear view mirror
5 Boom angle indicator
6 Boom
7 Cab
8 Hydraulic oil level gauge
9 Engine
10 Forks
11 Seat belt
12 Seat
13 Brake pedal
14 Accelerator pedal
15 Transmission control lever
16 Right rear view mirror
17 Operator's manual storage container
18 Load Charts
19 Rear proximity display and alarm (if equipped)
20 Rear proximity alarm sensor (if equipped)
21 Maintenance collar (on opposite side of machine)
22 Control Unit
23 Backup camera (if equipped)
24 Monitor, backup camera (if equipped)

Controls


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BRAKE
OIL
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24

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 - High beams (if equipped)

Move the lever forward to activate the left turn signal. Move the lever backward to activate the right turn signal.

Push the lever down to turn the high beams on (after pushing the Road lights switch 10). Push the lever up to use high beams for intermittent signalling.

5 Steer select switch

Push down the right side of the rocker switch to select four-wheel steer. Push the rocker switch to the middle position to select two-wheel steer. Push down the left side of the rocker switch to select crab steer.

6 Parking brake switch

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

7 Ignition switch

Turn the key to the right position and hold until the glow plugs preheating indicator light turns off; when released, key springs back to pos. I automatically.

8 Instrument panel

9 Control handle

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 yellow thumb switch and pull the control handle back and the forks will tilt up. Hold down the yellow thumb switch and push the control handle forward and the forks will tilt down. Hold the red thumb switch and push the control handle forward to lock the attachment. Hold the red thumb switch and push the control handle backward to unlock the attachment.

10 Road lights switch (if equipped)

Push the rocker switch to turn the road lights on: first position for position lights and second position for low beams.

11 Continuous oil flow switch

Push the switch to delivery or to return the oil flow from the used attachment.

12 Accelerator pedal

13 Brake pedal

14 Service brake oil reservoir

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 light switch (if equipped)

Push the center of the rocker switch to turn the cab & boom working lights on. Push the bottom of the switch to turn the cab, boom and rear working lights on. Push the top of the rocker switch to turn them off.

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 toward you and move it up for forward gear. Move the lever toward you and move it down for reverse gear. Move the lever to the center position for neutral.

19 Lock/unlock enabling switch (if equipped)

Push and hold the switch to enable the coupling or the release of the attachment, managed by the control lever.

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 Seat adjustment

23 Continuous oil flow potentiometer

Turn the potentiometer clockwise to increase the flow rate in the circuit feeding the attachments.

24 Windshield washer reservoir (if equipped)

25 Load charts holder

26 Diagnostic button

27 Steering column adjustment

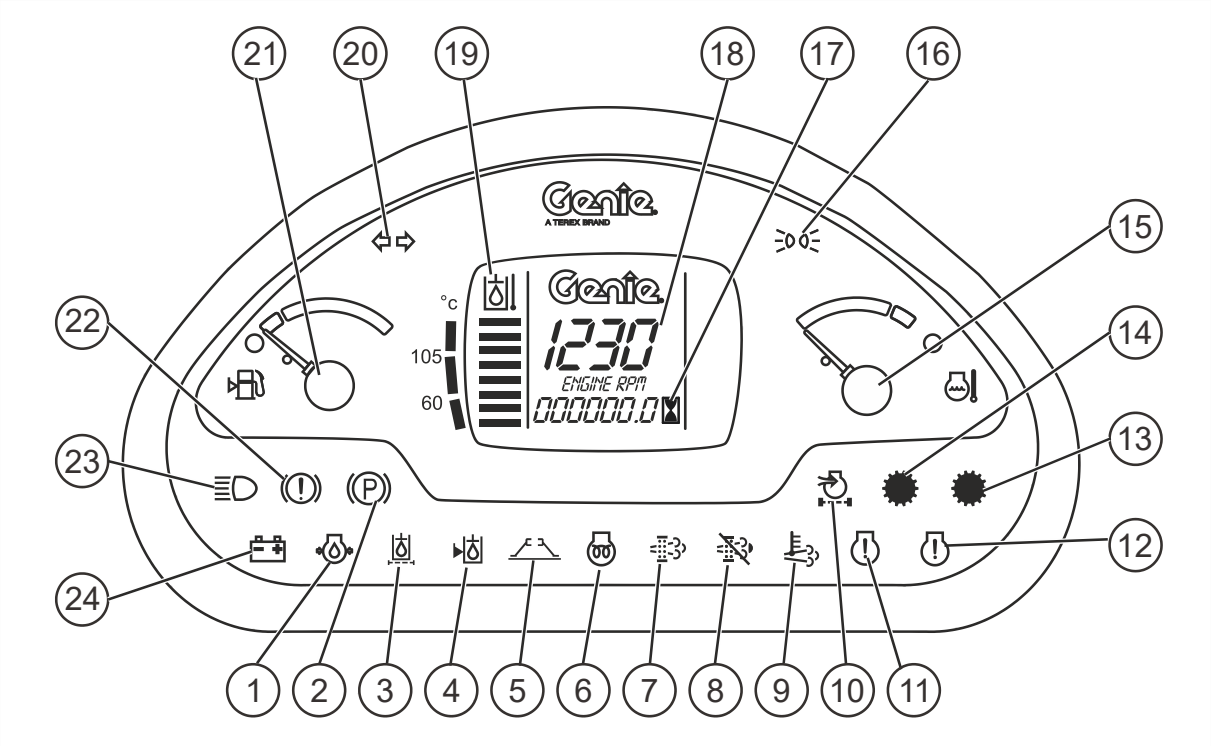
28 Rear proximity display and alarm (if equipped)

29 Rear glass defrost

Push the bottom of the switch to turn the rear glass defrost on. Push the top of the switch to turn the defrost off.

30 Rear monitor with integrated proximity alarm - backup camera. (if equipped)

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 Not active
8 Not active
9 Not active
10 Engine air filter restricted indicator light
11 Engine Alert indicator light
12 Engine Critical Fault indicator light
13 Not active
14 Not active
15 Engine coolant temperature gauge with high coolant temperatur indicator light
16 Parking lights indicator light
17 Hour-meter
18 Tachometer
19 High hydraulic oil temperature indicator light
20 Turn signal indicator lights
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 any oil leaks.

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 Engine Alert indicator light

This light flashes to warn of a problem with 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 with 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.

20 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 or change of operator. 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 cabin.
- ❑ 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
- ❑ Engine and related components
- ❑ Limit switches
- ❑ Lights, alarms and beacons (if equipped)
- ❑ Pins, nuts, bolts and other fasteners

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.
- ❑ Be sure the rear proximity alarm, display, monitor, camera and sensor (if equipped) are present, in place and clear of any dirt, mud, snow or debris.
- ❑ After you complete your inspection, be sure that all guards, screens and compartment covers are in place and secured.

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.

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 hazards. 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 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.

Test the Ignition System

8 Set the transmission control lever in neutral position.

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

10 Insert the key in the ignition switch.

11 Turn the key to start the engine.

⊙ Result: The engine should start.

12 Set the transmission control lever in gear.

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

14 Insert the key in the ignition switch.

15 Turn the key switch to start the engine.

⊙ Result: Depending on transmission type, engine could start but no movement is allowed. To restore movement, it is mandatory to pass through the neutral position and then reengage the gear.

Test the Control Handle

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

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

⊙ Result: All functions should operate smoothly.

18 Using the control handle and the yellow thumb switch, momentarily tilt the forks up and tilt the forks down.

⊙ Result: All functions should operate smoothly.

Test the Lock/Unlock Function (if equipped)

19 Push and hold the lock/unlock enabling switch.

20 Using the control handle and the red fing switch, momentarily coupling or releasing the attachment.

⊙ Result: All functions 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 a quarter 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 a quarter 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 cab steer.

28 Check the steering operation by turning the steering wheel approximately a quarter 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 top 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.

36 With the foot on the service brake, slowly release the service brake.

⊙ Result: The machine should not move.

Inspections

Test the Drive

37 Step on the brake pedal.

38 Push the bottom of the parking brake switch. The parking brake is off when the indicator light is off.

39 Put the transmission control lever in forward.

⚠ Slowly let up on the brake pedal.

⊙ Result: The drive function should not operate.

Test the Lights (if equipped)

40 Verify that all lights are functional.

Test the Rear Proximity Alarm System (if equipped)

The system provides a visible and audible indication of objects behind the machine, when they are within the detection range of the sensor and while in reverse gear.

If the backup camera option is installed, the rear proximity alarm is integrated in the backup camera monitor.

Be sure that there are no personnel and obstacles behind the machine which the sensor may detect on startup.

41 Locate a sizable item, like a safety cone or pallet of bricks, that the sensor will detect and position the rear of the telehandler about 15 feet/4.5 m in front of it. Do not perform the function test if there are people behind the machine.

42 Set the parking brake, place the transmission into neutral and start the engine. Press and hold the brake pedal and place the transmission in reverse.

⊙ Result: The green power light on the rear proximity display should be on. If the green power light is not on, the system needs to be repaired.

43 Release the parking brake and slowly let up on the brake pedal and slowly approach the object. Stop the machine before it reaches the object.

⊙ Result: The rear proximity display should show an orange light on. The alarm should sound with increased frequency as the machine approaches the object.

44 Place the transmission in forward and slowly drive away from the object.

⊙ Result: The rear proximity display should show an orange light on, and the alarm should sound with decreased frequency as the machine moves away from the object.

⊙ Result: As the machine moves away from the object, the display should show the green light on, and no alarm should be sounding.

45 Stop the machine, place the transmission in neutral and turn off the engine.

Inspections

Test the Rear Proximity Alarm when integrated on Backup Camera System (if equipped)

The system gives a visible and audible indication of objects behind the machine when they are within the detection range of the sensor and while in reverse gear. Access to the backup camera system requires a driver passcode (registration password).

Make sure that there are no personnel or obstacles behind the machine that the sensor can detect at startup.

46 Locate a large object, such as a safety cone or a pallet of bricks, that the sensor can detect. Position the rear of the telehandler 15 ft/4.5 m in front of the object. Do not perform the function test if there are persons behind the machine.

47 Set the parking brake, place the transmission in neutral, and start the engine. Wait for the backup camera system to show the login window and access the system with the four-digit password. Press and hold the brake pedal and place the transmission in reverse. The backup camera monitor should show the full screen view from the rear camera.

⊙ Result: The solid green detection symbol at the bottom side of the display of the backup camera monitor should be on and an alarm should sound at a frequency of 1 beep per second. If the solid green detection symbol is not on or the alarm does not sound, the system must be repaired.

48 Release the parking brake and slowly release the brake pedal and slowly approach the object. Stop the machine before it reaches the object.

⊙ Result: The backup camera monitor should show a yellow to red detection symbol depending on the object distance. The alarm should sound with increased frequencies from 2 to 8 beeps per second as the machine approaches the object.

49 Place the transmission in forward and slowly drive away from the object.

⊙ Result: The backup camera monitor should show, depending on the increasing object distance, the red, yellow and green detection symbols, successively, and the alarm should sound with decreased frequencies as the machine moves away from the object.

⊙ Result: As the machine moves away from the object and exceeds the detection zone, the backup camera monitor should not sound an alarm.

50 Stop the machine, place the transmission in neutral and turn off the engine.

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

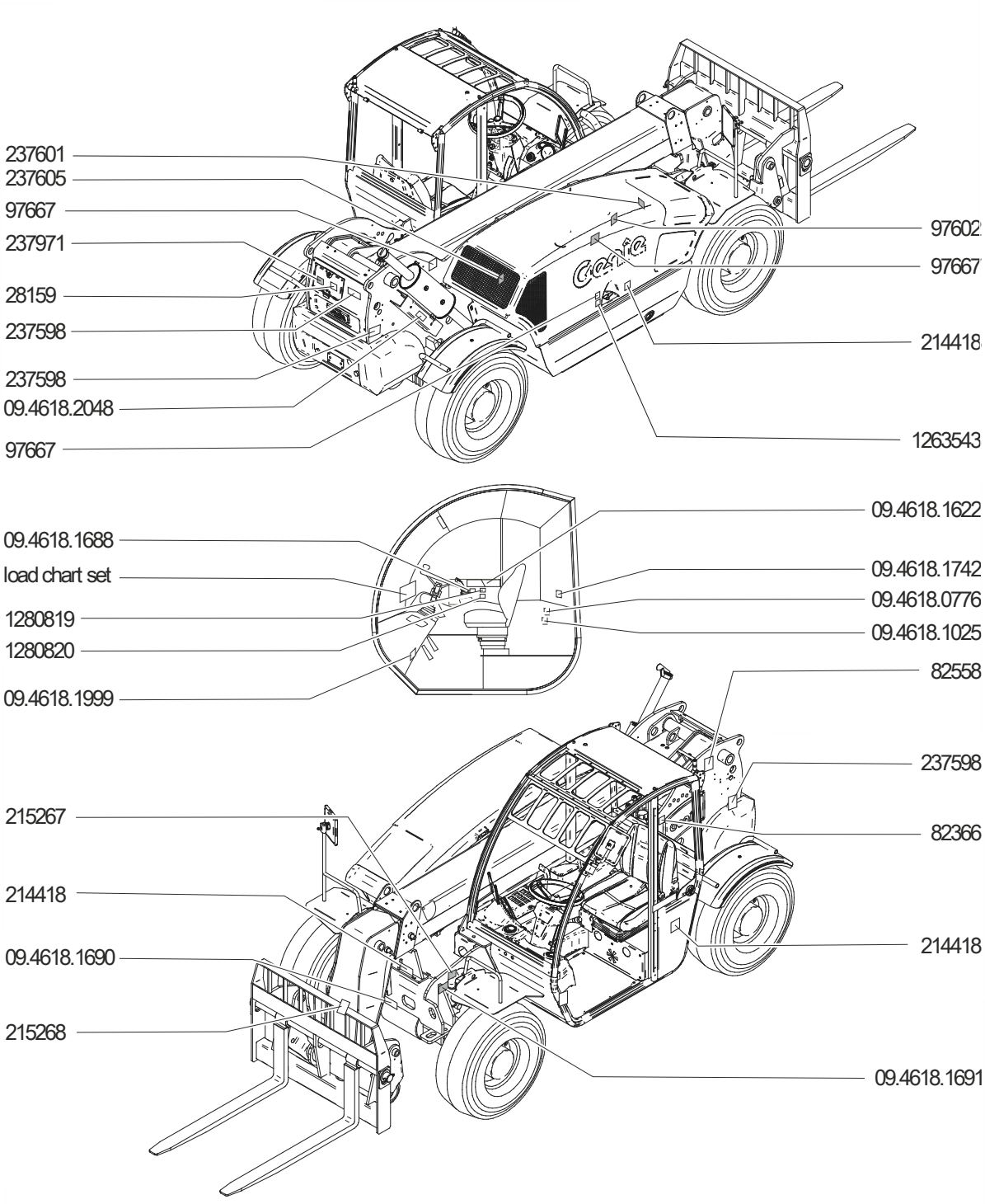
Inspections

Inspection for Decals with Words for Tier 4 Interim

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
1263543	Warning – Compartment Access	1
97602	Warning – Explosion Hazard	1
82366	Label – Chevron Rando	1
82558	Warning – Skin Injection 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
237971	Danger – Explosion/Burn Hazard, Fueling	1
09.4618.1622	Danger/Warning – 7 Decal Combination	1
09.4618.1634	Label - Hydraulic Flow	1
09.4618.1688	Label - Control Lever	1
09.4618.1690	Label - Lifting & Anchoring	1
09.4618.1691	Label - Testing Ports	1
09.4618.0776	Label - Door internal unlock system	1
09.4618.1025	Label - Upper Door External Unlock System	1
09.4618.1742	Label - Emergency Exit Handles	1
09.4618.1999	Decal - Brakes Oil Pan	1
09.4618.2048	Warning - Crush Hazard, Use Safety Collar	1
1280819	Label – Warning, Prop 65	1
1280820	Label – Fuel, Diesel Exhaust, Prop 65	1
09.4618.1738	Label - Load Chart, Standard Carriage	1
09.4618.0801	Label - Load Chart 60 And 66 Inch Bucket	1
09.4618.0802	Label - Load Chart Scrap Grapple Bucket	1
09.4618.0803	Label - Load Chart 72 Inch Forks, 60 Inch Forks - Optional 48 Inch Forks - 48 Inch Cubing Tines	1
09.4618.0804	Label - Load Chart Universal Attachment Adapter	1
09.4618.0805	Label - Load Chart Rotating Or Side Shift Fork Carriage - Standard Fork Tines	1
09.4618.0806	Label - Load Chart Truss Boom	1
09.4618.1680	Label - Load Chart Side Shift Fork Carriage - 60” Fork Tines	1
09.4618.1867	Label - Load Chart Shackle	1

Inspections



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

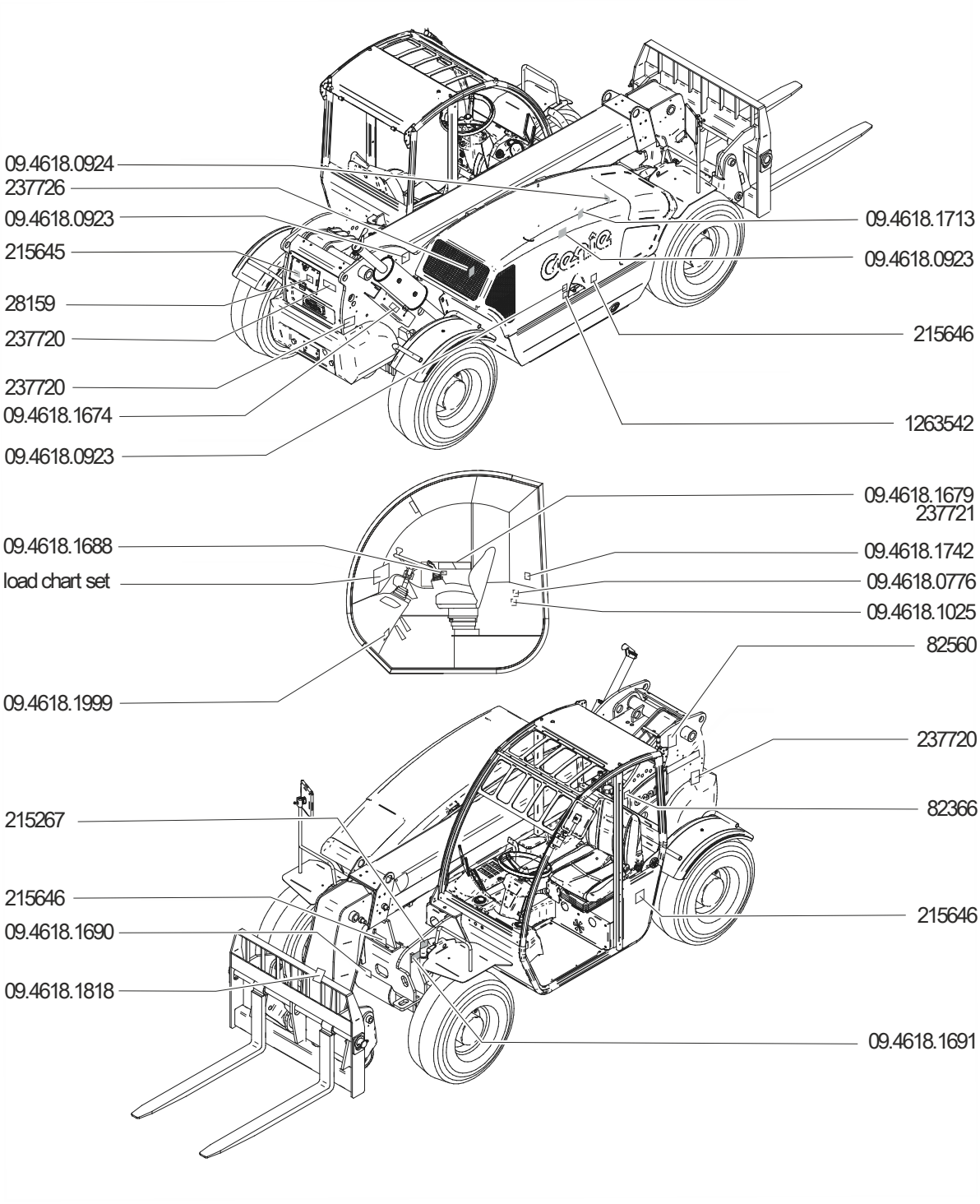
Inspections

Inspection for Decals with Symbol for Tier 4 Interim

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
1263542	Label – Compartment Access	1
09.4618.1713	Warning – Burn Hazard	1
82366	Label – Chevron Rando	1
82560	Label – Skin Injection Hazard	1
09.4618.0923	Warning – Burn Hazard, Hot Parts	3
215646	Label – 2 Decal Combination	3
215267	Label – Product Registration	1
09.4618.1818	Danger - No Riders on Fork	1
237720	Label – Crush Hazard, Moving Machine	3
09.4618.0924	Danger - No Riders on Fork	1
237726	Label – Burn Hazard, Hot Components	1
215645	Label – Explosion/Burn Hazard	1
09.4618.1679	Warning - 7 decals	1
237721	Label – Bodily Injury Hazard	1
09.4618.1634	Label - Hydraulic Flow	1
09.4618.1688	Label - Control Lever	1
09.4618.1690	Label - Lifting & Anchoring	1
09.4618.1691	Label - Testing Ports	1
09.4618.0776	Label - Door internal unlock system	1
09.4618.1025	Label - Upper Door External Unlock System	1
09.4618.1742	Label - Emergency Exit Handles	1
09.4618.1999	Decal - Brakes Oil Pan	1
09.4618.1674	Warning - Crush Hazard, Safety Collar	1
09.4618.1738	Label - Load Chart, Standard Carriage	1
09.4618.0801	Label - Load Chart 60 And 66 Inch Bucket	1
09.4618.0802	Label - Load Chart Scrap Grapple Bucket	1
09.4618.0803	Label - Load Chart 72 Inch Forks, 60 Inch Forks - Optional 48 Inch Forks - 48 Inch Cubing Tines	1
09.4618.0804	Label - Load Chart Universal Attachment Adapter	1
09.4618.0805	Label - Load Chart Rotating Or Side Shift Fork Carriage - Standard Fork Tines	1
09.4618.0806	Label - Load Chart Truss Boom	1
09.4618.1680	Label - Load Chart Side Shift Fork Carriage - 60” Fork Tines	1
09.4618.1867	Label - Load Chart Shackle	1

Inspections



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

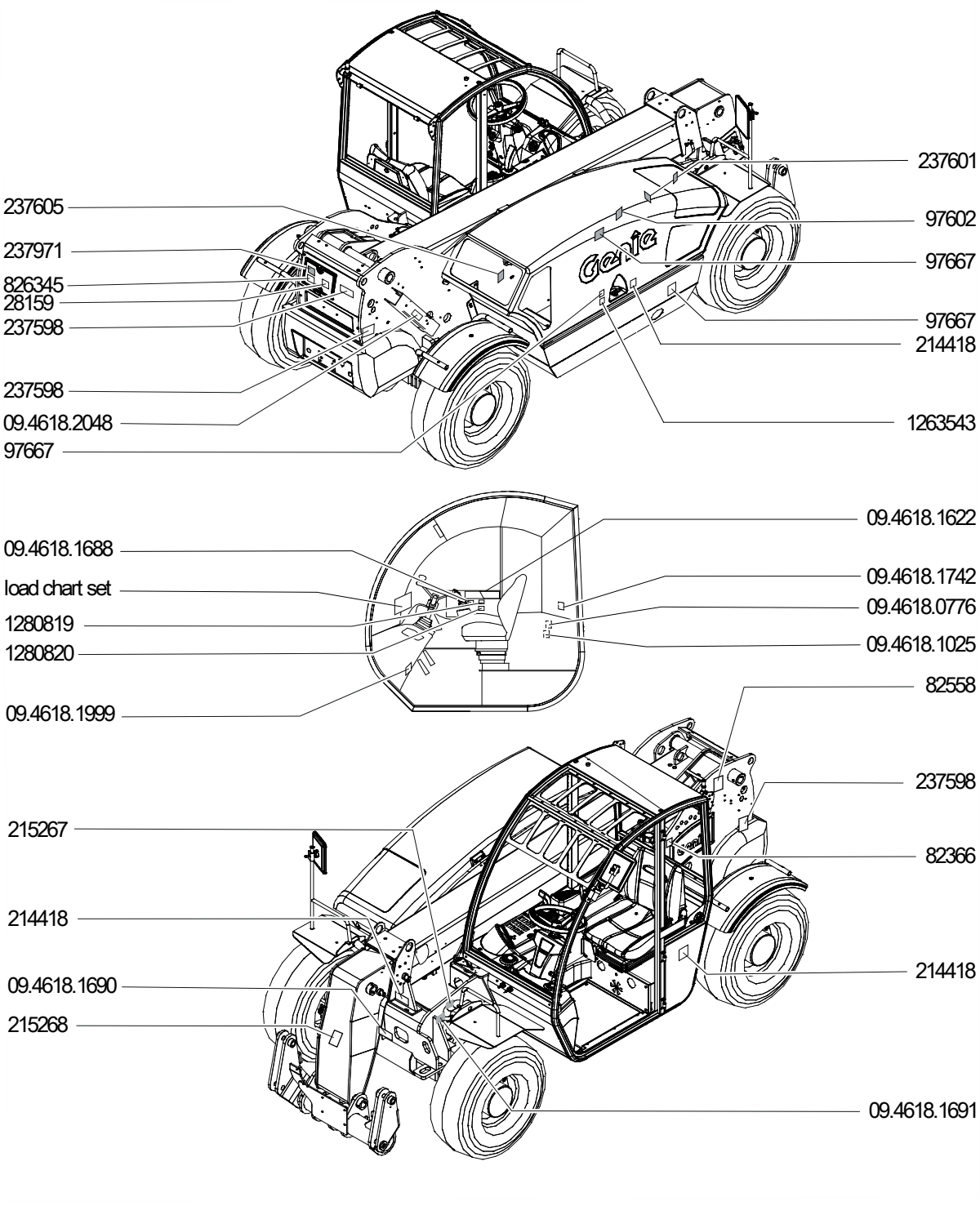
Inspections

Inspection for Decals with Words for Tier 4 Final

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
1263543	Warning – Compartment Access	1
97602	Warning – Explosion Hazard	1
82366	Label – Chevron Rando	1
82558	Warning – Skin Injection 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
237971	Danger – Explosion/Burn Hazard, Fueling	1
826345	Label – Ultra Low Sulfur Fuel Only (diesel models)	1
09.4618.1622	Danger/Warning – 7 Decal Combination	1
09.4618.1634	Label - Hydraulic Flow	1
09.4618.1688	Label - Control Lever	1
09.4618.1690	Label - Lifting & Anchoring	1
09.4618.1691	Label - Testing Ports	1
09.4618.0776	Label - Door internal unlock system	1
09.4618.1025	Label - Upper Door External Unlock System	1
09.4618.1742	Label - Emergency Exit Handles	1
09.4618.1999	Decal - Brakes Oil Pan	1
09.4618.2048	Warning - Crush Hazard, Use Safety Collar	1
1280819	Label – Warning, Prop 65	1
1280820	Label – Fuel, Diesel Exhaust, Prop 65	1
09.4618.1738	Label - Load Chart, Standard Carriage	1
09.4618.0801	Label - Load Chart 60 And 66 Inch Bucket	1
09.4618.0802	Label - Load Chart Scrap Grapple Bucket	1
09.4618.0803	Label - Load Chart 72 Inch Forks, 60 Inch Forks - Optional 48 Inch Forks - 48 Inch Cubing Tines	1
09.4618.0804	Label - Load Chart Universal Attachment Adapter	1
09.4618.0805	Label - Load Chart Rotating Or Side Shift Fork Carriage - Standard Fork Tines	1
09.4618.0806	Label - Load Chart Truss Boom	1
09.4618.1680	Label - Load Chart Side Shift Fork Carriage - 60” Fork Tines	1
09.4618.1867	Label - Load Chart Shackle	1

Inspections



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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.

3 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

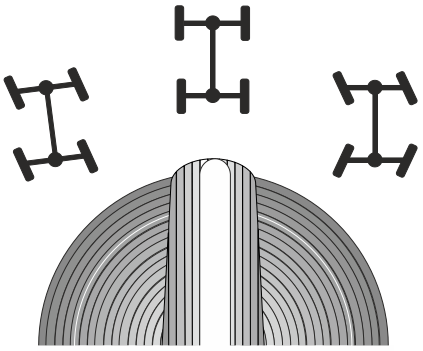
In cold conditions, 20°F/-6°C and below, warm the engine for 5 minutes before operating to prevent hydraulic system damage.

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

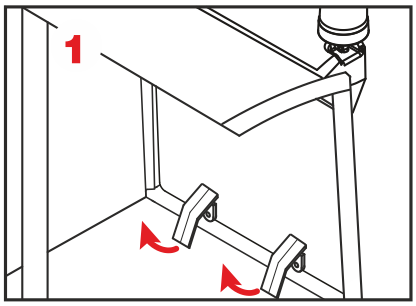
Always position all wheels in line with the machine before switching the steering mode.

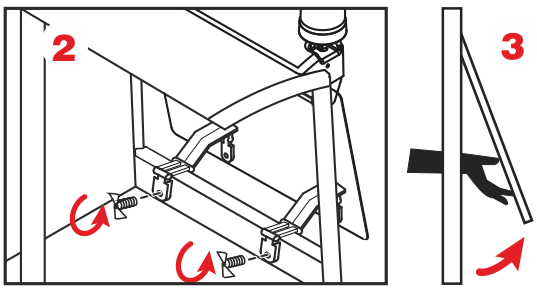
Do not realign the wheels while driving.



Emergency Exit (if equipped)

Lift up the two levers and remove the wing nuts securing the levers to the frame





Operating Instructions

Transmission Control

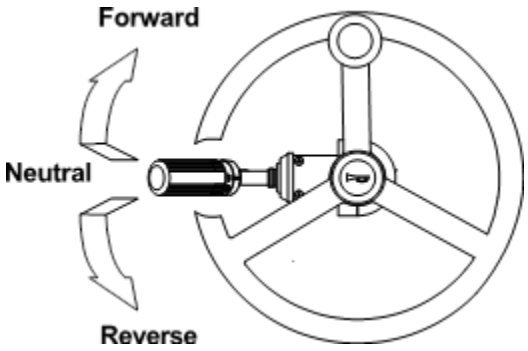
Use the transmission control lever to control the speed and direction of machine travel.

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.



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

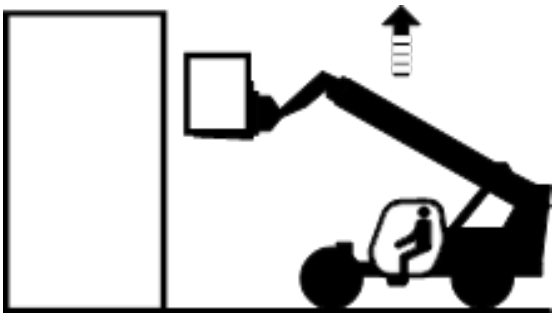
1 Travel to the desired work site and carefully stop the machine.

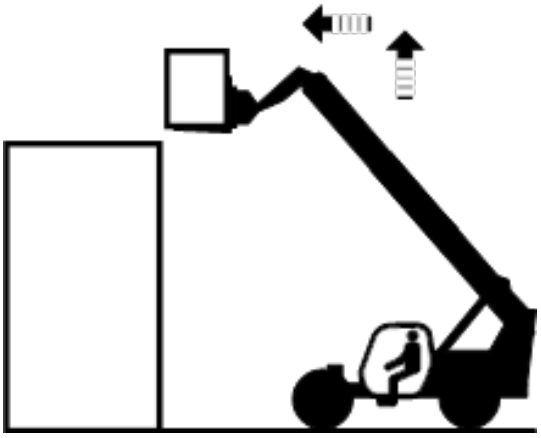
2 Put the transmission in neutral.

3 Apply the parking brake.

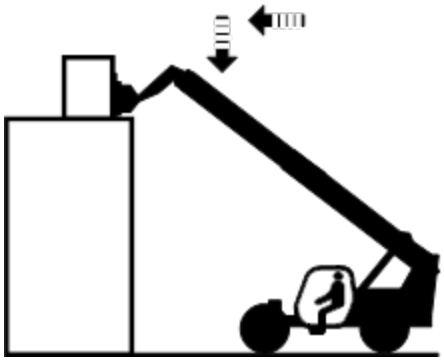
Operating Instructions

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

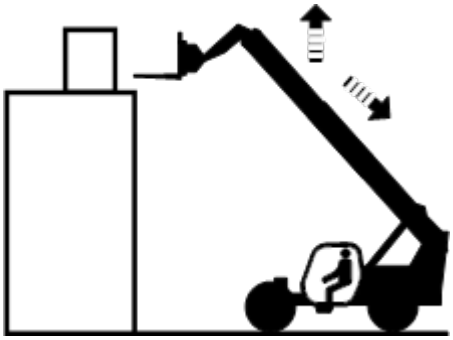




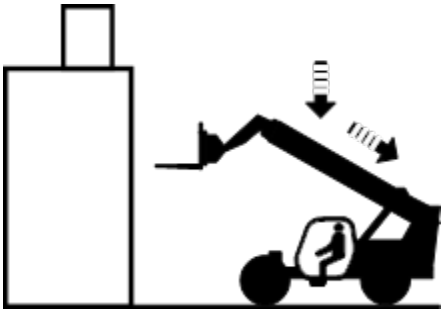
5 Gradually move the controller to lower and extend the boom into final position. Lower the load until the weight is completely off the forks. Do not apply a downward force with the forks.



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

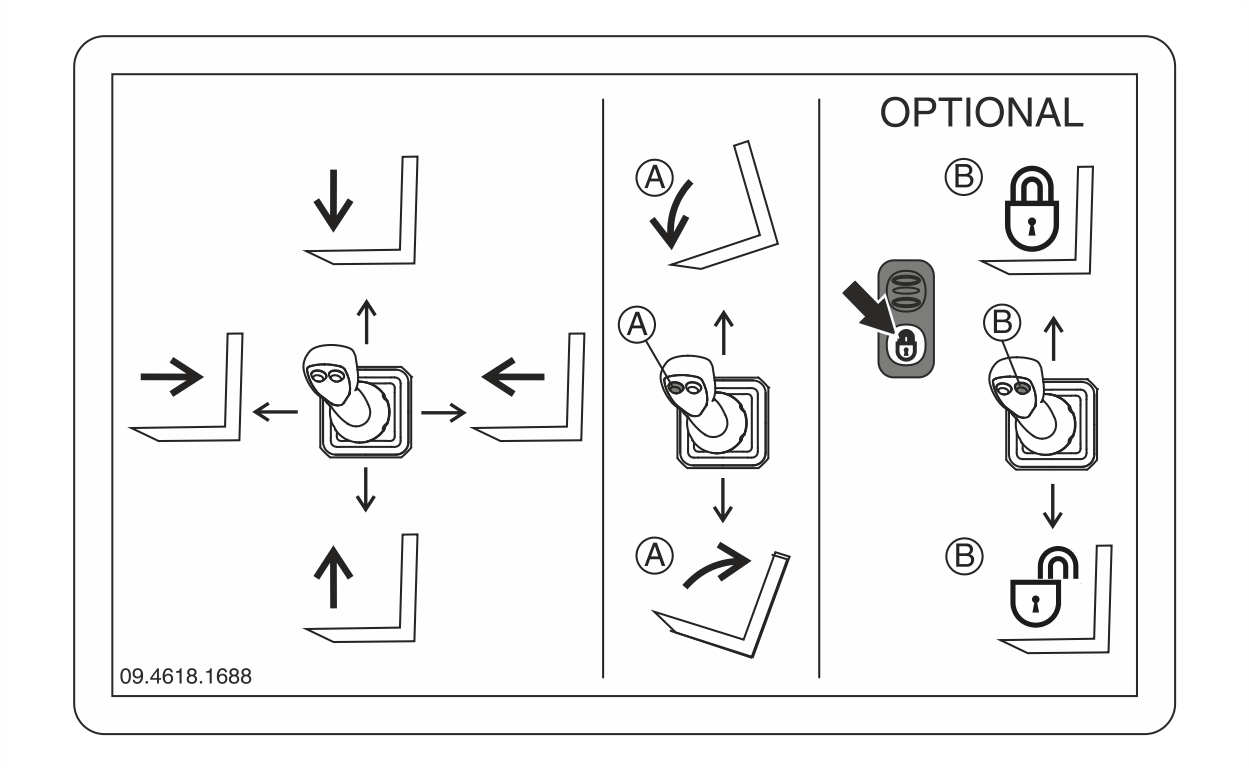


7 When the forks are clear of the load and the structure, the boom can be lowered and retracted.



Operating Instructions

Controller movements



Control handle only

Control handle only with yellow thumb switch (A)

Control handle only with red thumb switch (B)

Operating Instructions

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 center 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 Step 5.

5 Free the attachment using the control lever.

6 Pitch the attachment holding frame forward and lower the boom to release the attachment upper lock.

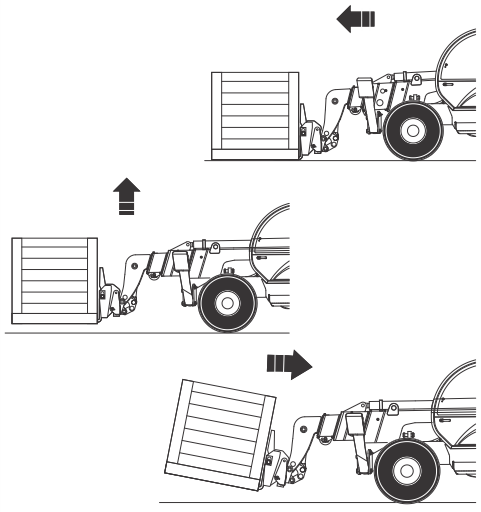
7 Move back with the machine and drive to the new attachment to be coupled.

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 center automatically on the quick coupling frame.

10 Coupling the attachment using the control lever 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 engine diagnostic display indicates an engine fault, 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.

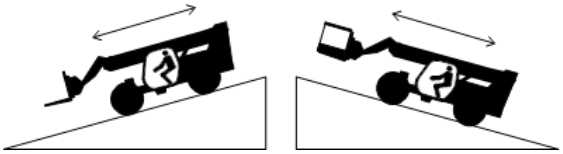
5 Turn the battery disconnect switch to the on position (if equipped)

6 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.

⚠ Rear Proximity Alarm (if equipped)

The system is designed to supplement other safety practices and systems such as signal person and mirrors, and is not intended to be used as the sole method of collision avoidance. It should be used in conjunction with established safety programs and procedures to augment the safe operation of the telehandler. The operator is always the first line of defense when safely operating the telehandler and should always use direct line of sight and indirect visual methods, like mirrors, to identify and avoid obstacles and collision hazards.

The system detects both moving and stationary objects in a pre-defined coverage area (see the specifications and chart in the back of this manual) and reports the distance of the closest object via visual range indicators and an audible signal to the operator.

The system can detect most objects within the detection zone. However, there are some instances where objects can go undetected. Obstacle size, shape, relative location, and composition are all factors determining if, when and where an object is detected. The system operates by transmitting a pulse of very low power electromagnetic energy. Any energy that strikes an object reflects a certain amount of this energy back to the sensor. If the returned energy is of sufficient magnitude, it is used to indicate object presence and determine the object’s distance. While the system can resolve multiple objects, only the object closest to the vehicle is reported to the display since it represents the nearest collision hazard.

Always look in the direction of travel. When the rear proximity alarm sounds, bring the machine to a controlled stop and verify the location of the obstacle. Only proceed when the obstacle is clear of the travel path.

Display range indications illuminate to give a relative distance measurement to the closest detected object. LEDs operate from left to right, with a closer object resulting in more LEDs illuminated.

Operating Instructions

Backup Camera Monitor (if equipped)

Backup Camera Monitor (if equipped)

The monitor switches to a full screen view of the rear camera when the vehicle is put into reverse. The reverse signal powers the sensor. The sensor gives detection information. Object detection information is only available when the sensors are powered ON.

NOTE: Access to the backup camera system will require a 4-digit password.

If the machine is equipped with a backup camera system, object detection symbols appear at the bottom of the display. The symbols are overlaid on the sensor view. The symbols give a relative distance to the closest detected object.

The detection symbols change color and flashing frequency based on the object distance. A closer object causes a higher flashing frequency.

GTH5519 Back-up Camera - Driver ID Setup

Driver ID Setup

The monitor requires a driver passcode (registration password) to be entered. You can store up to five passcodes. When you power ON the monitor, the system shows a prompt to enter driver passcode.

The driver must select the registration button to register for the first time.

To create a passcode:

1 Enter a four-digit number.

2 Select Register.

The first passcode registered will be assigned to driver number 0001, fifth registered passcode will be assigned 0005.

A driver passcode is required at each power ON of the monitor.

1 Enter four-digit passcode.

2 Select Confirmed.

The monitor shows the Driver ID number in the bottom left corner. The system records the Driver ID number (if recording is enabled).

Clearing Driver IDs

To clear the stored Driver IDs and passcodes:

1 Press and hold CH1 button for 10 seconds, then release.

2 Enter admin passcode 2351.

3 Confirm to delete all IDs.

Operating Instructions

Moving a disabled machine

Tow the machine only when no alternative is possible, since this operation may result in serious damage to the transmission. When possible, repair the machine on site.

When the machine must be towed:

1 Disable the parking brake.

2 Set the transmission to neutral.

3 Select the two-wheel steer.

4 Connect a rigid draw bar to one of the two tie down points present on the front axle.

5 When possible, start the engine and use the hydraulic drive and the braking system.

6 Tow the machine for short distances and at low speed (less than 5 km/h).

Disabling the parking brake

⚠ Use the wheel chokes on all wheels to prevent the vehicle moving once the parking brake is disabled.

⚠ Lock with mechanical system all wheels to prevent the vehicle moving once the parking brake is disabled.

To unlock the negative brake of a faulty machine:

1 On both sides unscrew the nuts (5).

2 Screw in the brake release bolts (6a) and (6b), 1/2 turn at a time, in sequence, until the torque drops off sharply (the wheels are free).

⚠ Clear the area of any personnel before remove the locking from each of the four tires and tow the vehicle to a suitable location.

Enabling the parking brake

⚠ Use wheel chokes on all wheels to prevent the vehicle from moving before executing any operation.

⚠ Lock with mechanical system all four wheels to prevent the vehicle from moving before execute any operation.

To re-activate the negative brake:

1 Apply a 20÷25 bar pressure to the parking brake release port (B).

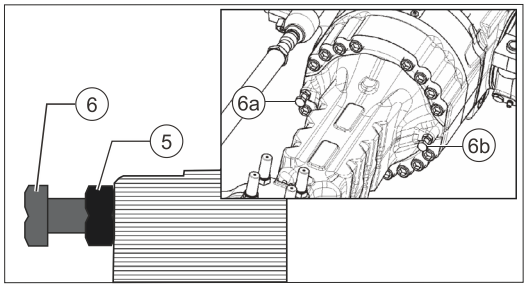
2 Unscrew brake release screws (6) on both sides

3 Adjust the screws (6) to 19.5±1 mm. Apply the B2 sealant on nuts (5) and tighten them to 45 Nm.

4 Release the pressure at the brakes port (B).

The parking brakes are now re-activated and the wheels are locked.

Clear the area of any personnel and verify that parking brake works properly.



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.

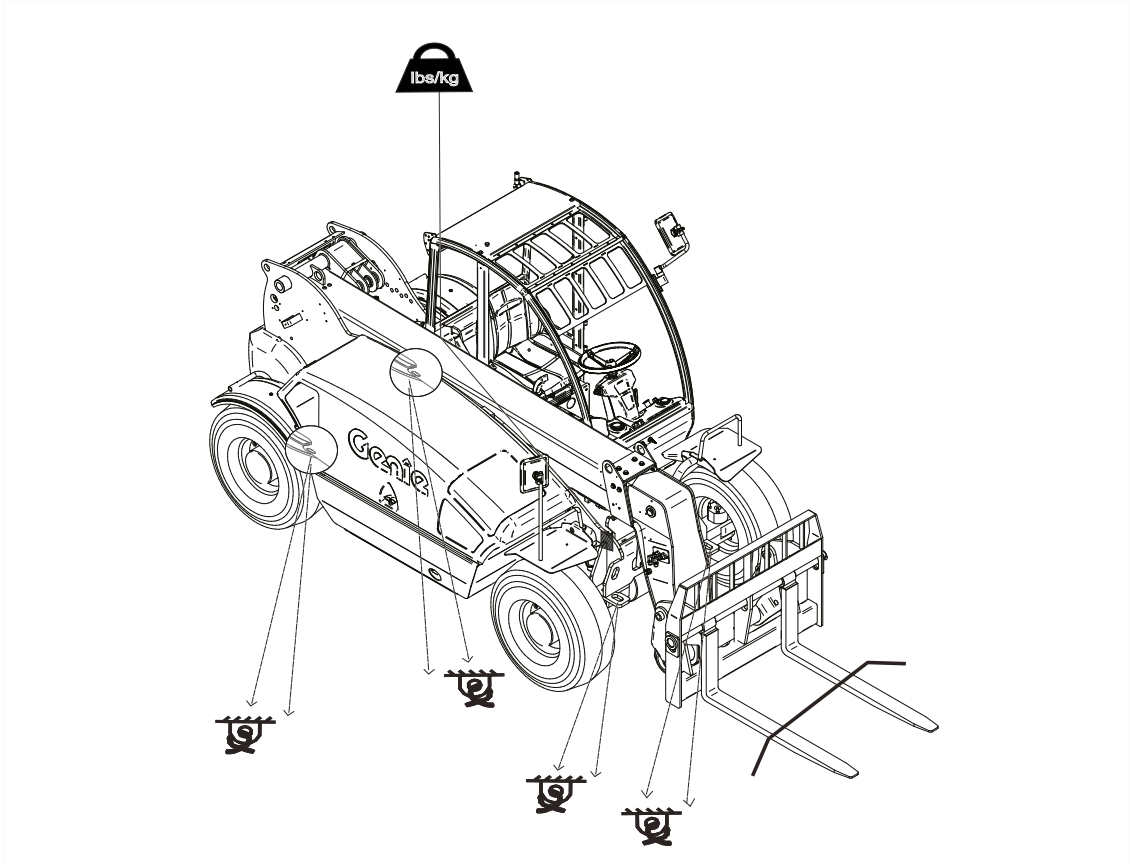
Securing the Chassis

Use chains of ample load capacity.

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

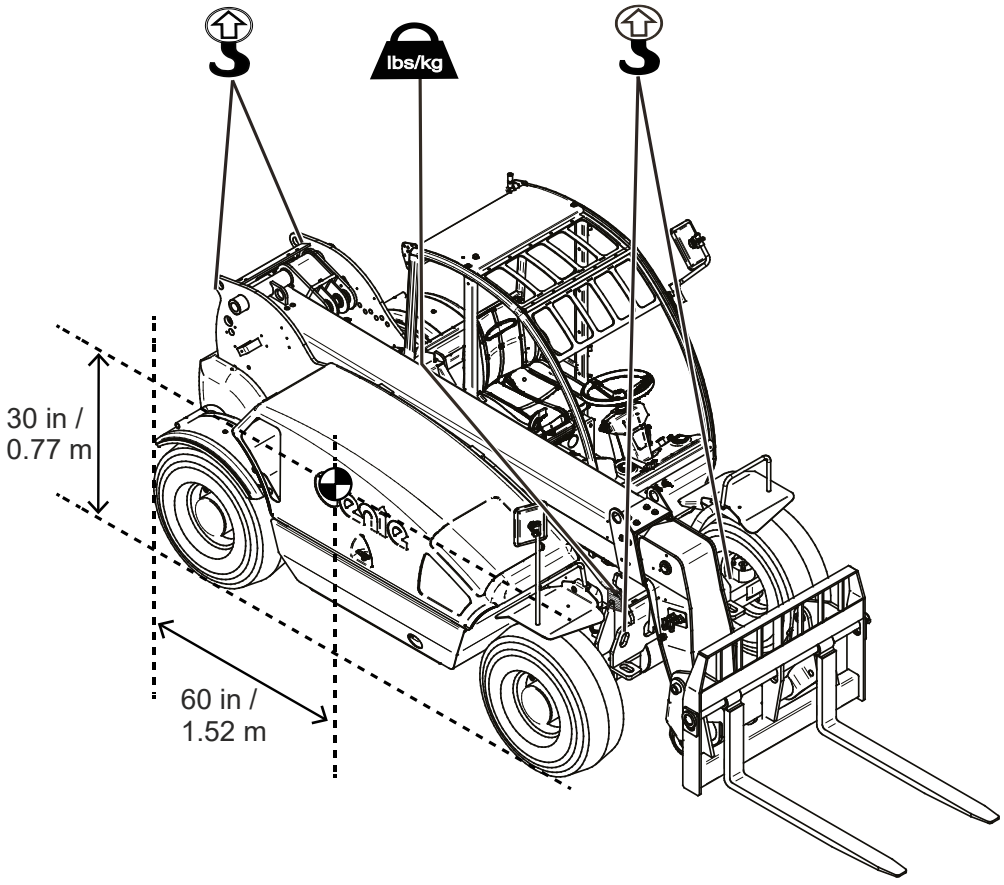
Fully lower and retract the boom.

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 is required before performing this procedure.

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 Tier 4 Final engine must be operated using only Ultra Low Sulfur Fuel. The sulphur content of this fuel must be lower than 15 PPM.

Tank	**15.9 gal**	**60 L**
Deutz 2.9 Tier 4 Final		
Fuel Type	Ultra Low Sulfur Diesel (ULSD)	
Deutz 2.9 Tier 4 Interim		
Fuel Type	Diesel	

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 2.9 Tier 4 Final	
Oil type	DELO GOLD ULTRA E SAE 15W-40
Deutz 2.9 Tier 4 Interim	
Oil type	DELO GOLD ULTRA E SAE15W-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 side of the hydraulic oil tank.

⊙ Result: The hydraulic oil level should be at the fill mark on the side gauge.

3 Add oil as needed. Do not overfill.

Hydraulic oil specifications	
Hydraulic oil type	RANDO HDZ 46 EQUIVALENT

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 Check the fluid level in the sight glass located on the radiator expansion tank.

⊙ Result: The fluid level should be at the half way mark of the sight glass when the engine is cold.

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

Check Mirrors

Maintaining the indirect visual aids is essential to workplace visibility.

1 Visually inspect all mirrors 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	**65 psi**	**4.5 bar**

Maintenance

Check the Batteries




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

⚠ 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 and the battery disconnect switch 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

⚠ 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 suspended 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 properly designed, tested and approved attachments, designated lifting points, and lifting accessories should be used to support 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.

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.

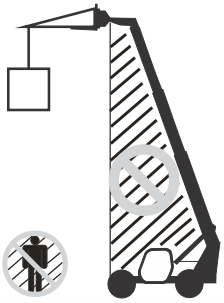
When visibility is or could be obstructed, near or at the load placement, the operator shall use alternative or additional means to safely lift the load, such as a qualified signal person.

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, 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.

Traveling

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.

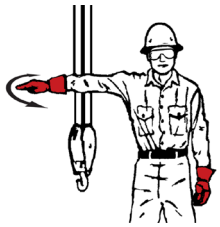
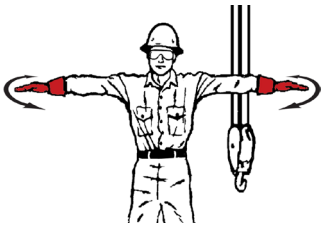
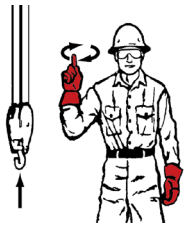
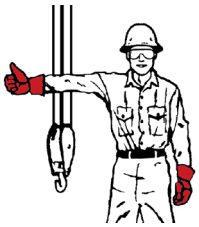
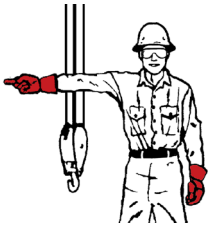
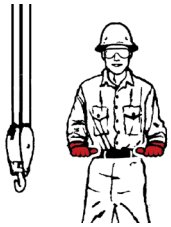
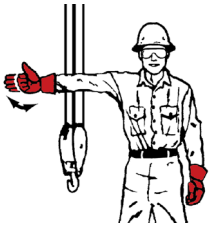
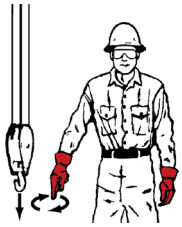
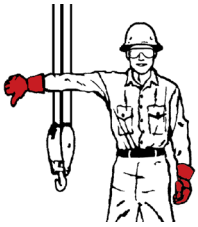
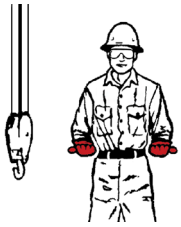
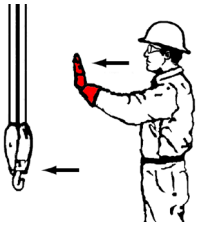
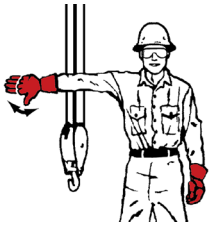
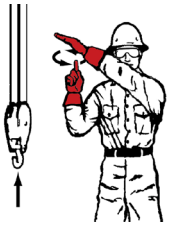
Due to site specific safety concerns, either the operator or the person handling the load determines that it is necessary.

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. Only approved lifting accessories should be used.

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.

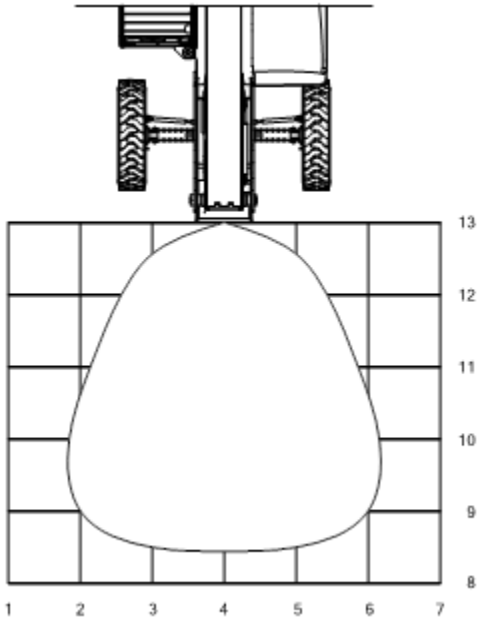
Specifications

GTH-5519		
Height, stowed	6 ft 4 in	1.92 m
Length, stowed, without forks	12 ft 2 in	3.70 m
Width, standard tires	5 ft 11 in	1.81 m
Wheelbase	7 ft 9 in	2.36 m
Ground clearance, center	1 ft 1 in	0.33 m
Ground clearance, axle	10 in	0.25m
Weight	10,360 lbs	4,700 kg
Working fork height, maximum	19 ft	5.79 m
Horizontal reach, maximum	11 ft	3.35 m
Reach at maximum height	2 ft	0.60 m
Lift capacity, maximum height with 24 in / 61 cm load center	4,400 lbs	1995 kg
Lift capacity, maximum reach with 24 in / 61 cm load center	2,000 lbs	907 kg
Maximum lift capacity	5,500 lbs	2,495 kg
Drive speed, maximum	16 mph	26 km/h

Tire size	12 x 16.5 in , 10 ply	
Turning radius (outside), 2 wheel steer	18 ft 8 in	5,70 m
Turning radius (outside), 4 wheel steer	10 ft 7 in	3,23 m
Fuel tank capacity	15.9 gal	60 L
Maximum grade	50%	50%
Horn sound level, manufacturer's rating	110 dB	110 dB
Backup alarm sound level, manufacturer's rating	95 dB	95 dB
Backup camera monitor sound level, manufacturer's rating	88 dB	88 dB
Floor loading information		
Tire load maximum	7,830 lbs	3,552 kg
Occupied floor pressure	237 psi	11.36 kPa
Tire contact pressure	59 psi	448 kPa

Specifications

Rear Proximity Sensor Range



Horizontal Values		
1	9.75 ft	3 m
2	6.5 ft	2 m
3	3.25 ft	1 m
4	0 ft	0 m
5	3.25 ft	1 m
6	6.5 ft	2 m
7	9.75 ft	3 m

Vertical Values		
8	16.25 ft	5 m
9	13 ft	4 m
10	9.75 ft	3 m
11	6.25 ft	2 m
12	3.25 ft	1 m
13	0 ft	0 m

Approximate detection range. Minimum rear proximity sensor detection height is 2 ft/0.6 m.

Load Charts

Load Capacity Field Calculations

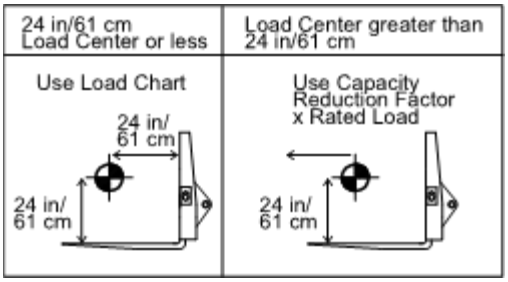
Always center the load on the forks. Position the load so that it is completely against the back of the fork frame. Fork length should always be at least 2/3 the load length.

All Genie telehandler fork carriage load charts are based on a horizontal load center that is 24 in/61 cm from the front vertical surface of the fork arm. For loads with a load center exceeding this value, refer to the table and instructions below to determine the reduced load capacity for a specific load zone. Note that this does not account for a load center that is not centered between the forks or a vertical load center exceeding 24 in/61 cm from the top face of the fork tine. Keep the load centered on the fork carriage.

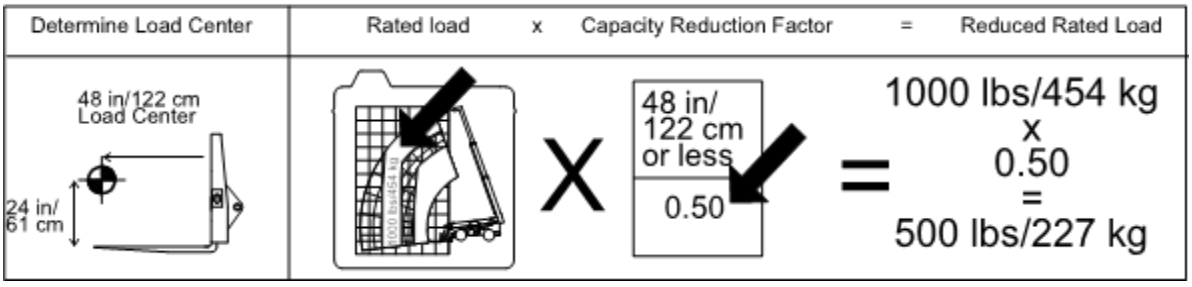
To calculate the new reduced load capacity at a load center greater than the standard 24 in/61 cm load center, multiply the zone capacity from the load chart by the appropriate reduction factor listed in the table below. Refer to the example.

New Horizontal Load Center, measured from front vertical surface of fork arm

	24 in/ 61 cm or less	28 in/ 71 cm or less	32 in/ 81 cm or less	36 in/ 91 cm or less	40 in/ 102 cm or less	44 in/ 112 cm or less	48 in/ 122 cm or less	54 in/ 137 cm or less
Capacity Reduction Factor	1.00	0.86	0.75	0.67	0.60	0.55	0.50	0.44

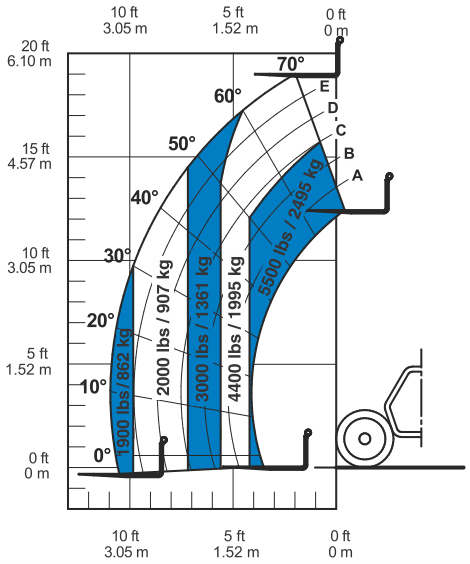


EXAMPLE

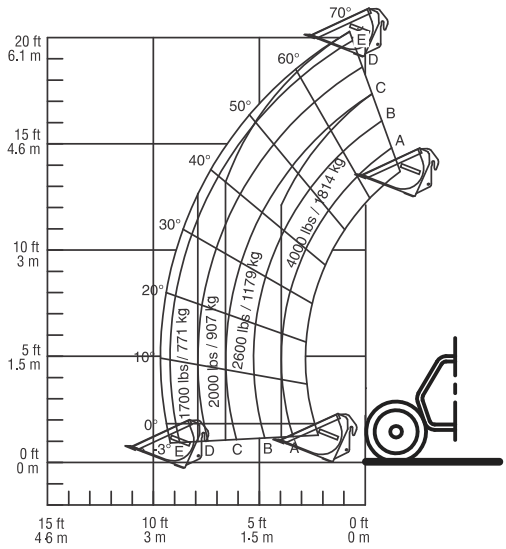


Load Charts

GTH-5519, Standard Carriage

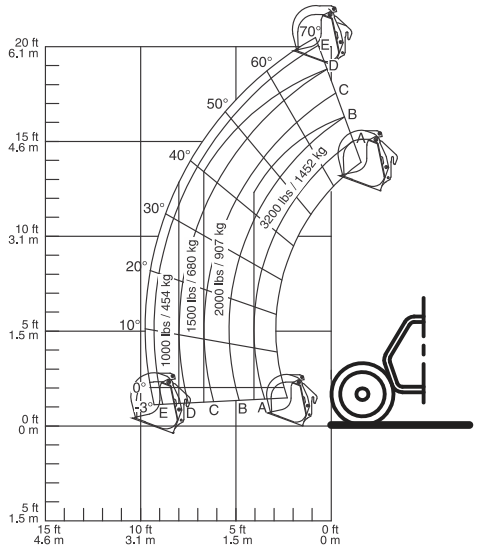


GTH-5519, 60 and 66 inch Bucket

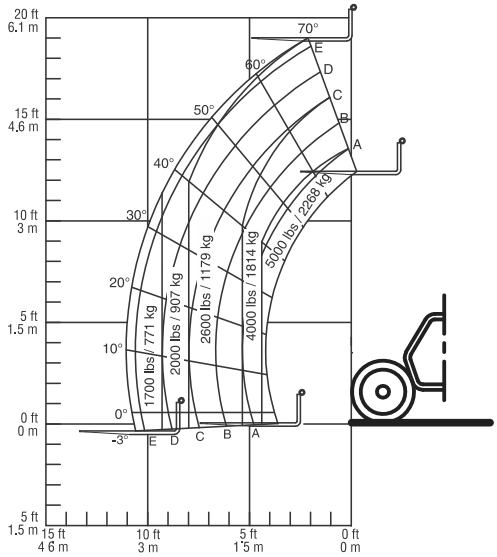


Load Charts

GTH-5519, Scrap Grapple Bucket

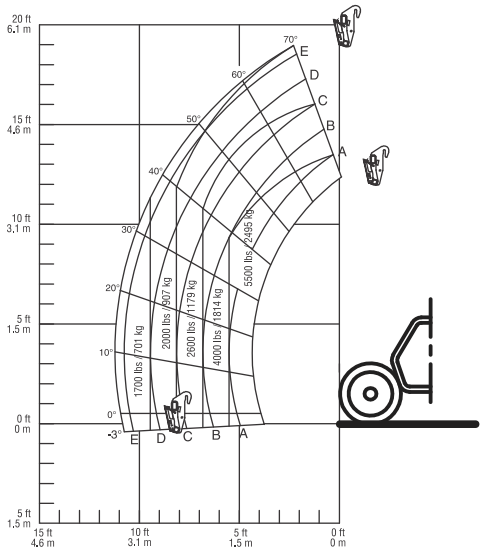


GTH-5519, 72 inch Forks, 60 inch Forks - optional 48 inch Forks - 48 inch cubing Tines

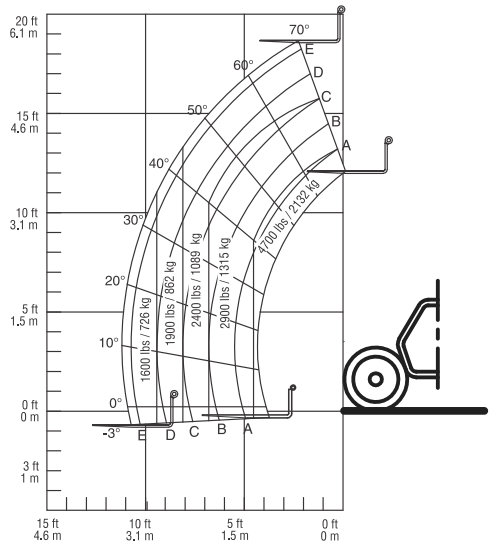


Load Charts

GTH-5519, Universal Attachment Adapter

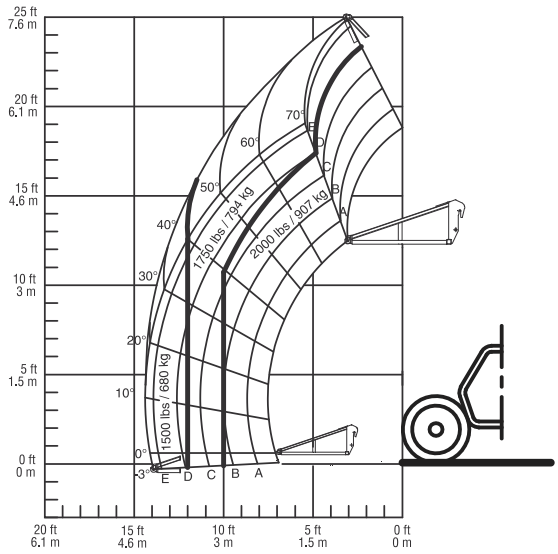


GTH-5519, Rotating Or Side Shift Fork Carriage - Standard Fork Tines

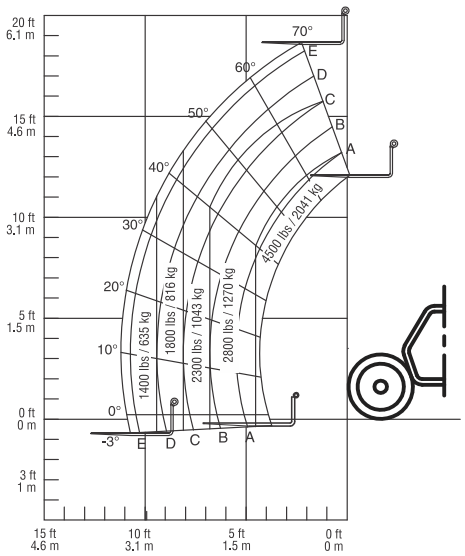


Load Charts

GTH-5519, Truss Boom

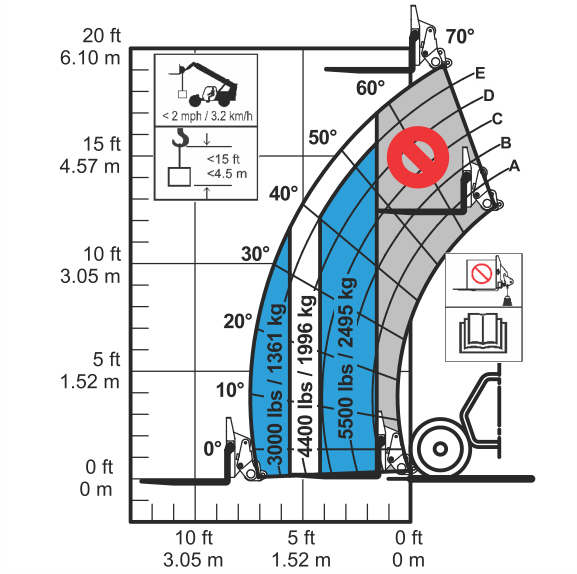


GTH-5519, Side Shift Fork Carriage - 60” Fork Tines

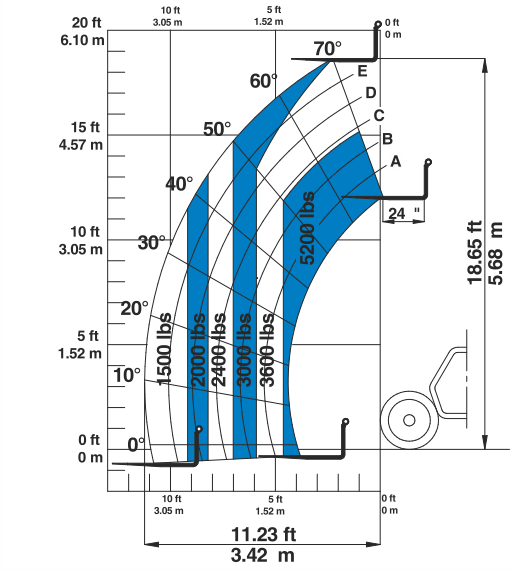


Load Charts

GTH-5519, Shackle



GTH-5519, 48” Fork Positioner



California Proposition 65

WARNING

Operating, servicing and maintaining this equipment can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. These chemicals can be emitted from or contained in other various parts and systems, fluids and some component wear by-products. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your equipment and vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your equipment or vehicle and after operation. For more information go to www.P65Warnings.ca.gov/passenger-vehicle.

Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information go to www.P65warnings.ca.gov/diesel.

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