Genie®
A TEREX COMPANY

Operator's Manual

Serial Number Range

GTH-1048
GTH-1056

from GTH1007B-7101

with
Maintenance
Information

Second Edition
First Printing
Part No. 114326

Important

Read, understand and obey these safety rules and operating instructions before operating this machine. Only trained and authorized personnel shall be permitted to operate this machine. This manual should be considered a permanent part of your machine and should remain with the machine at all times. If you have any questions, call Genie Industries.

Contents

Contact us:

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

Second Edition: First Printing, May 2007

Printed in U.S.A.

Introduction

Owners, Users and Operators:

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. We feel that you make a major contribution to safety if you, as the equipment users and operators:

1 **Comply** with employer, job site and governmental rules.

2 **Read, understand and follow** the instructions in this and other manuals supplied with this machine.

3 **Use good safe work practices** in a common sense way.

4 **Be alert** and free from the influences of alcohol, drugs or medications that might affect eyesight, hearing, reactions or judgement.

5 **Only have trained/certified operators,** directed by informed and knowledgeable supervision, running the machine.

If there is anything in this manual that is not clear or which you believe should be added, please contact us.

Internet: www.genielift.com

E-mail: techpub@genieind.com

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.

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. Genie recommends that you purchase and refer to the following standards.

ANSI/ITSDF B56.6 – Rough Terrain Fork Lifts

This Standard can be downloaded from www.ITSDF.org

ITSDF
1750 K Street NW
Site 460
Washington DC 20006

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 within the established load range charts.

Hazard Classification

Genie uses 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 Red — Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

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

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

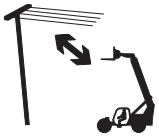
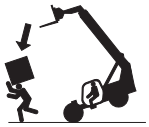
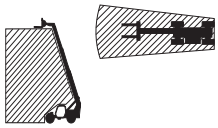
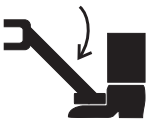
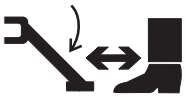
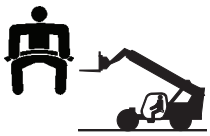
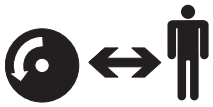
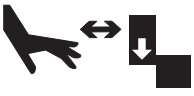
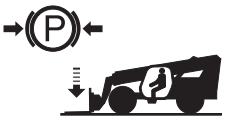
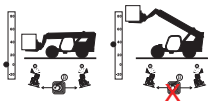
NOTICE Blue — Indicates a hazardous situation which, if not avoided, could result in property damage.

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.

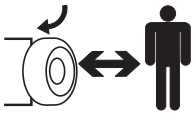
Symbol and Hazard Pictorials Definitions

Hazard Pictorial Descriptions

 Electrocution Hazard	 Maintain required clearance.	 Falling Object Hazard	 No people under load.	 Fall Hazard
 No riders.	 Crush Hazard	 Keep clear of moving outriggers.	 Bodily Injury Hazard	 Always wear seat belt.
 Injection Hazard	 Use cardboard to search for leaks.	 Overturning Hazard	 Read the operator's manual.	 Crush Hazard
 Keep away from moving parts.	 Crush Hazard	 Keep clear of moving parts.	 Crush Hazard	 Lower forks. Set parking brake.
 Burn Hazard	 Allow system to cool.	 Overturning Hazard	 Sway operation	 Explosion/Burn Hazard
 No smoking. No open flame.	 Burn Hazard	 Allow surfaces to cool.	 Crush Hazard	 Support boom when performing maintenance.

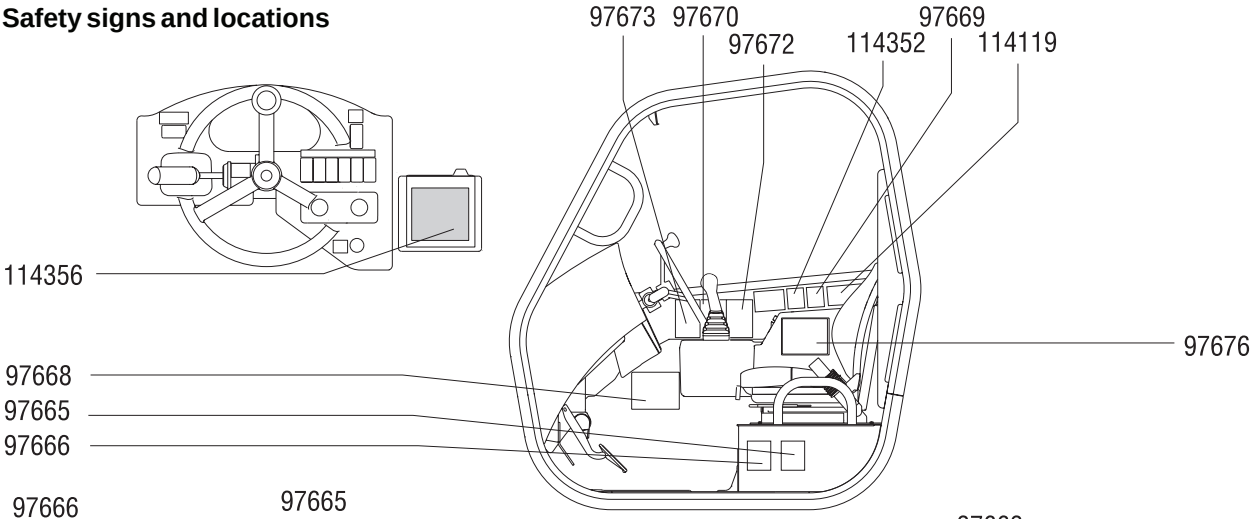
Symbol and Hazard Pictorials Definitions

Hazard Pictorial Descriptions

 Crush Hazard	 Keep away from moving parts.	 Overturning Hazard	 Keep load low.	
 Crush Hazard	 Operate from operator's station.			

General Safety

Safety signs and locations



97666

⚠ WARNING

Improper operation or maintenance can result in serious injury or death.

Read and understand operator's manual and all safety signs before using or maintaining machine.

If you do not understand the information in the manuals, consult your supervisor, the owner or the manufacturer.

97666 B

97665

⚠ WARNING

Bodily Injury Hazard
Death or serious injury can result from failure to wear seat belt.

This machine is equipped with a Roll Over Protection System (ROPS).

Always adjust seat and fasten seat belt before starting engine.

97665 B

97668

⚠ WARNING

Overturning Hazard
Death or Serious Injury can result from overturning forklift.

Never exceed published capacity or extend load beyond load chart band.

Never lower maximum load before retracting boom.

Do not travel on terrain or in areas that could cause machine to overturn.

Always level machine using sway control before raising boom above horizontal.

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

97668 B

97669

⚠ WARNING

Falling Object Hazard
Death or Serious Injury can result from falling objects.

Do not operate machine while people are under or near elevated boom whether boom is loaded or unloaded.

97669 C

97673

⚠ DANGER

Death or Serious Injury can result from handling of personnel with this machine.

97673 B

Never equip machine with any form of personnel platform or allow personnel to ride on attachment.

97672

⚠ DANGER

Crush Hazard
Death or Serious Injury can result from people riding on this machine other than at the operator's station.

No passengers are permitted to ride on this machine or any attachment.

97672 B

114119

⚠ WARNING

Overturning Hazard
Death or serious injury can result from overturning caused by improper use of the sway control.

Never operate sway control when boom is above horizontal position.

Do not use sway control to position an elevated load.

Read and understand operator's manual and all safety signs before using or maintaining machine.

114119 B

97676

⚠ DANGER

Electrocution Hazard
Death or serious injury can result from contacting electric power lines.

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

Maintain required clearance.

Power Line Required Voltage	Clearance
0 to 50 kV	10 ft / 3.03 m
50 to 200 kV	15 ft / 4.60 m
200 to 350 kV	20 ft / 6.10 m
350 to 500 kV	25 ft / 7.62 m
500 to 750 kV	35 ft / 10.67 m
750 to 1000 kV	45 ft / 13.72 m

97676 B

114352

⚠ WARNING

Overturning Hazard
Death or Serious Injury can result from traveling with an elevated load.

Always travel with the boom below horizontal.

114352 B

114356

⚠ WARNING

Overturning Hazard
Death or serious injury can result from using this machine without a load chart.

Never operate the machine if the load chart is missing.

114356 A

97670

⚠ DANGER

Crush Hazard
Death or serious injury could result from rolling of an unattended machine.

Set parking brake, lower carriage or attachment to ground before leaving machine.

97670 B

General Safety

Safety signs and locations

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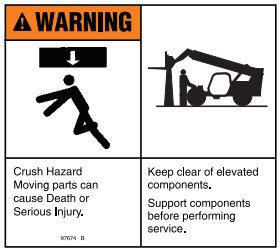

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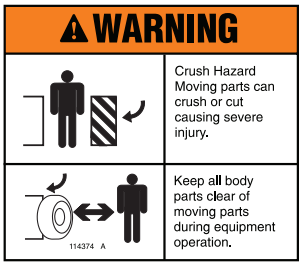

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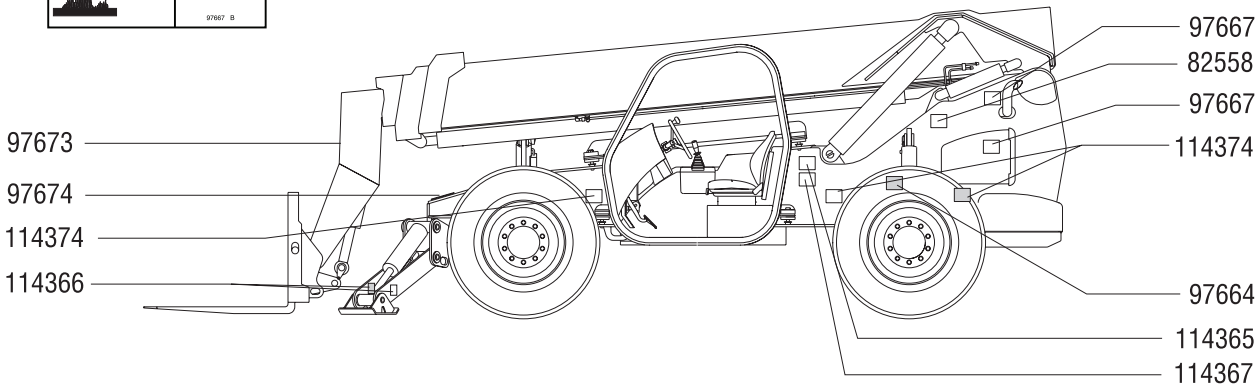

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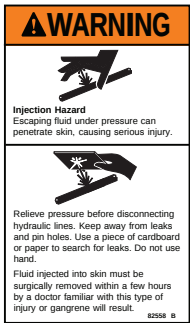

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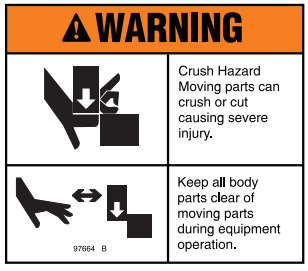

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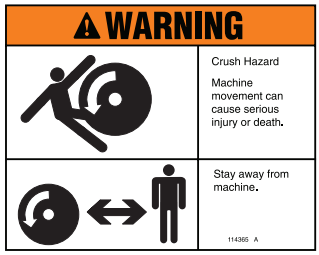

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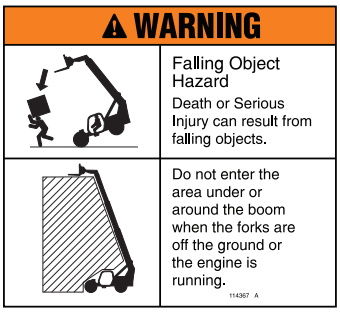

General Safety

Safety signs and locations

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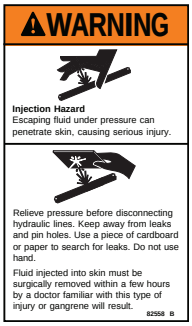

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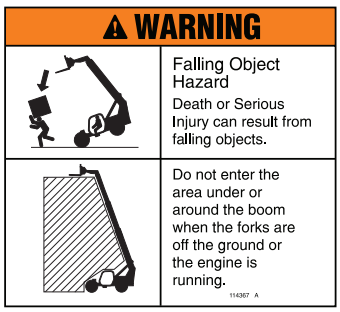

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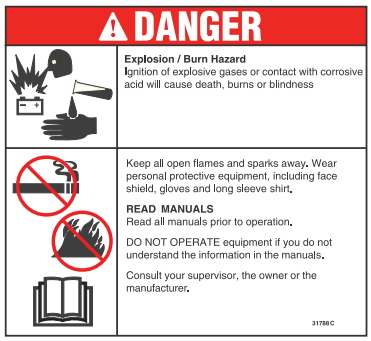

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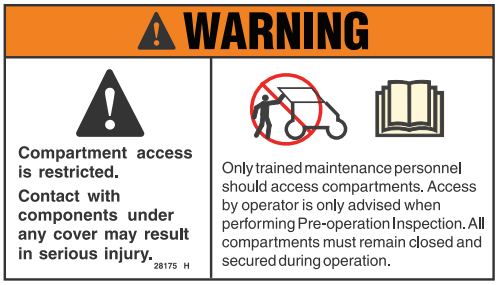

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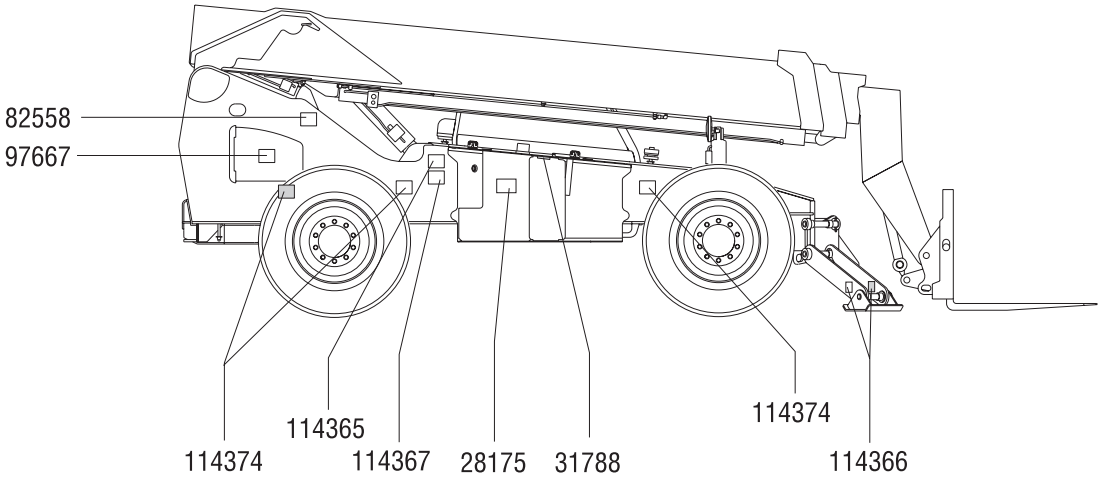


Work Area Safety

⚠ Overturning Hazards

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

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

Do not lower a load without retracting the boom first.

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

Do not exceed the rated capacity for each configuration.

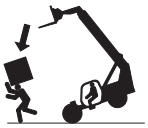
Do not raise the boom unless the machine is level. The machine level indicator should be at zero degrees.

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

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

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

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



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

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

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

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

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

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 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.

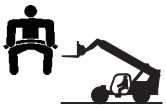
Whether a machine will tip over during dynamic machine operation involves many factors that need to be considered. Among these are pavement/ ground conditions, stability and slope, as well as machine equipment, operator skill, load position, tire inflation, machine speed, etc.

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 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.

⚠ 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 transport or lift personnel with this machine.

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 parking brake is set.

Do not drive the machine if visibility is obstructed.

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

Do not operate the machine with a faulty back-up alarm.

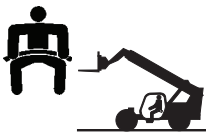
Operators must comply with employer, job site and governmental rules regarding the use of personal protective equipment.

⚠ 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.

⚠ Bodily Injury Hazard



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. Escaping fluid under pressure can penetrate skin, causing serious injury. 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.

Work Area Safety

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.

⚠ Component Damage Hazards

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

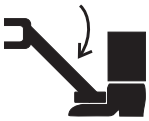
Do not use the machine as a ground for welding.

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

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

Do not drive the machine unless the stabilizers are fully retracted.

⚠ Crush Hazards



Keep clear of moving stabilizers.

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.

Work Area Safety

⚠ 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.

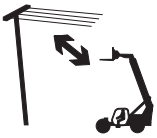
Refuel the machine and charge the battery only in an open, well-ventilated area away from sparks, flames and lighted tobacco.

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.

⚠ Electrocution Hazards

Maintain an appropriate clearance from electrical power lines. See the chart below for required clearance.



Line Voltage	Required Clearance	
0 to 50KV	10 ft	3.0 m
50 to 200KV	15 ft	4.6 m
200 to 350KV	20 ft	6.1 m
350 to 500KV	25 ft	7.6 m
500 to 750KV	35 ft	10.6 m
750 to 1000KV	45 ft	13.7 m

Do not use the machine as a ground for welding.

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

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 Hazard

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

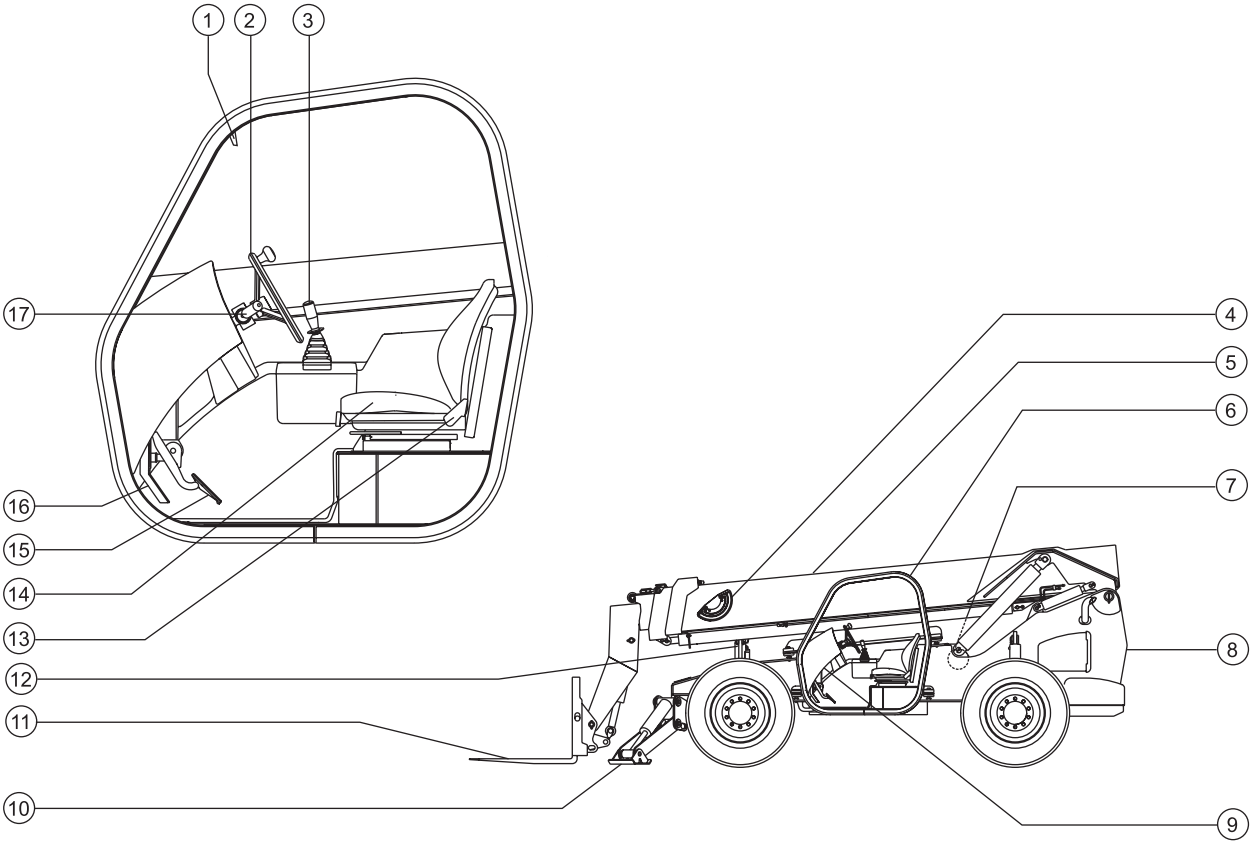
Electrocution Hazard

Avoid contact with electrical terminals.

Employer's Responsibilities

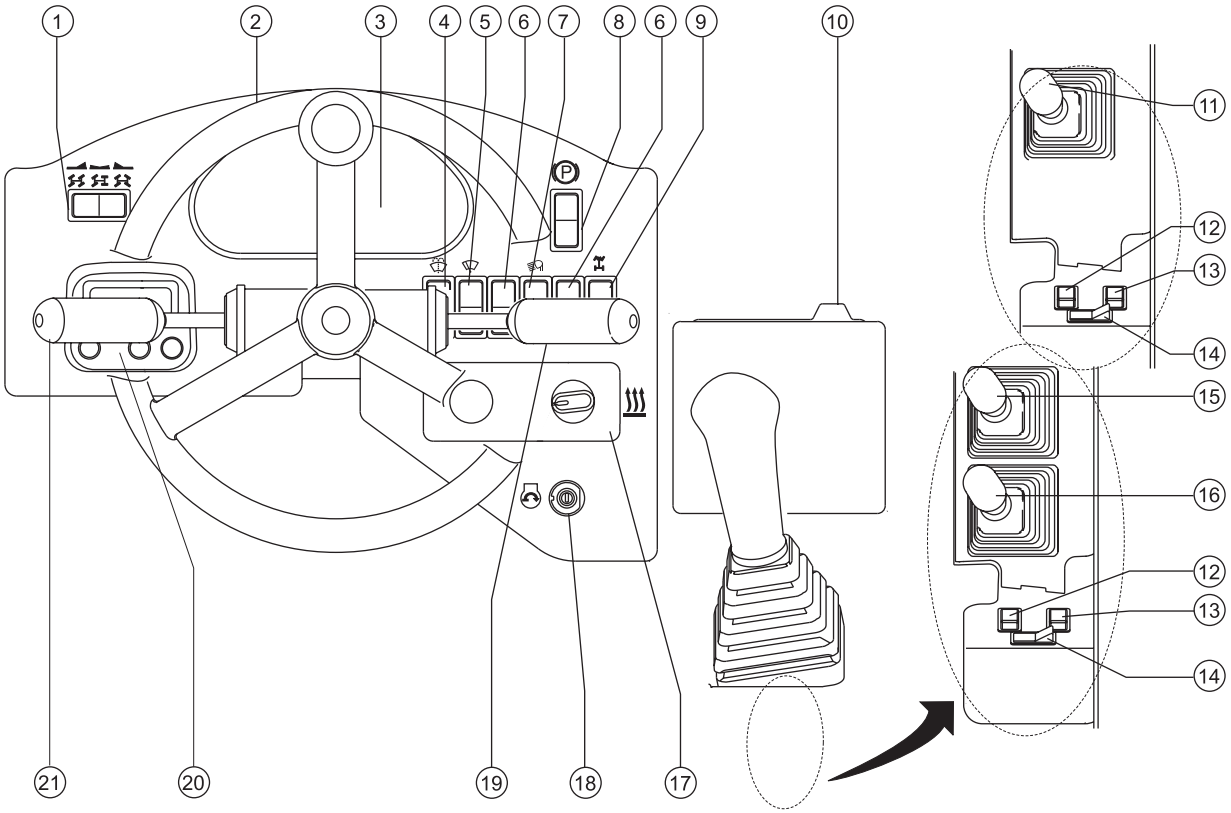
Employers are responsible for providing a safe work environment and for complying with local and national governmental regulations.

Legend



1 Interior rear view mirror and machine level indicator
2 Steering wheel
3 Control handle
4 Boom angle indicator
5 Boom
6 Cab
7 Hydraulic oil level gauge (on opposite side of machine)
8 Engine (under cover)
9 Fuse panel
10 Stabilizer
11 Forks
12 Exterior rear view mirror
13 Seat belt
14 Seat
15 Accelerator pedal
16 Service brake pedal
17 Transmission control lever

Controls



1 Steer select switch
2 Steering wheel
3 Instrument panel
4 Windshield washer switch (if equipped)
5 Windshield wiper switch (if equipped)
6 Not used
7 Work light switch (if equipped)
8 Parking brake switch
9 Axle differential lock switch (if equipped with dashboard switch)
10 Load chart holder
11 Control handle (single control handle option)
12 Left stabilizer switch
13 Right stabilizer switch
14 Auxiliary hydraulics switch
15 Boom control handle (dual control handle option)
16 Tilt and sway control handle (dual control handle option)
17 Heater controls (if equipped)
18 Ignition switch
19 Road lights lever
20 Engine condition indicators
21 Transmission control lever

Controls

1 Steer selector 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.

2 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.

3 Instrument panel

4 Windshield washer switch

Push the top of the rocker switch to turn the washer on. Release the rocker switch to turn the washer off.

5 Windshield wiper switch

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

6 Not used

7 Work light switch

Push the top of the rocker switch to turn the work lights on. Push the bottom of the rocker switch to turn the work lights off.

8 Parking brake switch

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.

9 Axle differential lock switch (if equipped with dashboard switch)

Push and hold the axle differential lock switch to lock the axle differential. Release the switch to unlock the axle differential.

10 Load chart holder

11 Control handle with red thumb switch and white finger switch

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 to the left and the boom will retract. Hold down the red thumb switch and pull the control handle back and the forks will tilt up. Hold down the red thumb switch and push the control handle forward and the forks will tilt down. Hold the white finger switch and push the control handle to the right and the machine will sway to the right. Hold the white finger switch and pull the control handle to the left and the machine will sway to the left.

12 Left stabilizer button

Push the top of the rocker switch to raise the left stabilizer. Push the bottom of the rocker switch to lower the left stabilizer.

13 Right stabilizer button

Push the top of the rocker switch to raise the right stabilizer. Push the bottom of the rocker switch to lower the right stabilizer.

14 Auxiliary hydraulics switch

Controls

15 Boom 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 to the left and the boom will retract.

16 Tilt and sway control handle

Pull the control handle back and the forks will tilt up. Push the control handle forward and the forks will tilt down. Push the control handle to the right and the machine will sway to the right. Pull the control handle to the left and the machine will sway to the left.

17 Heater switches

18 Ignition start switch

Turn the key to the left to turn on the accessories. Turn the key to the on position and hold to activate the glow plugs. Turn the key to the start position to start the engine.

19 Road lights lever

Move the road lights lever up to activate the left turn signal. Move the road lights lever down to activate the right turn signal. Turn the lever to turn on the road lights.

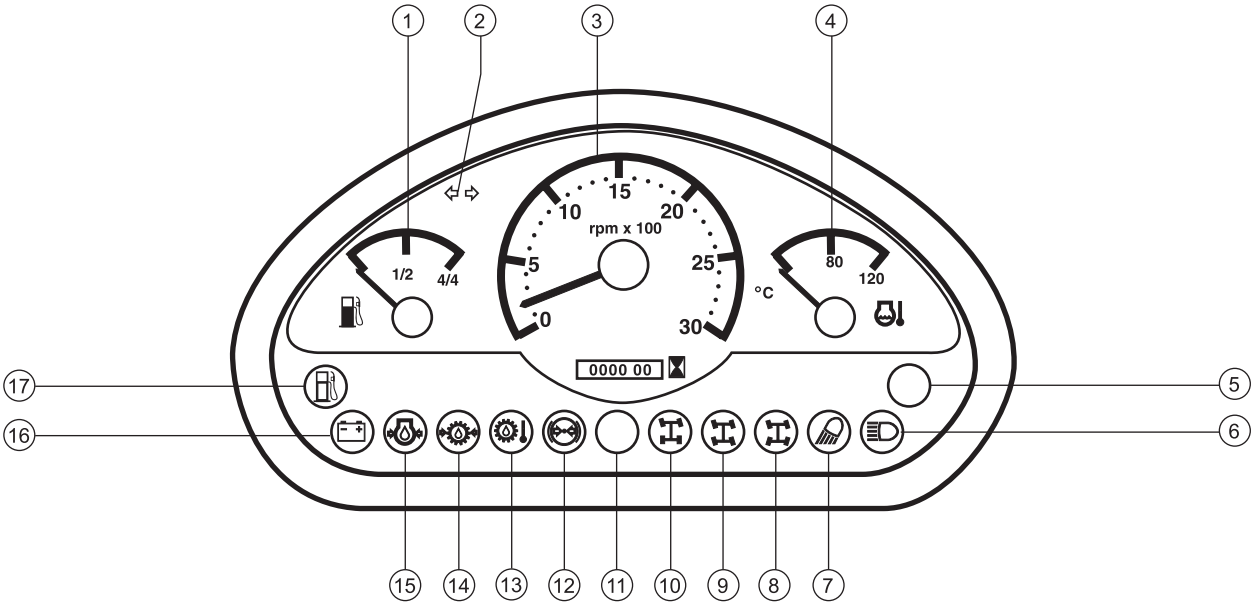
20 Engine condition indicators

21 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. Turn the lever clockwise to shift to a lower speed. Turn the lever counterclockwise to shift to a higher speed.

GTH-1056: If the boom is raised above 60° and extended until E is visible, the transmission will shift to neutral and the frame sway function will not operate.

Controls



Instrument panel

1 Fuel level gauge
2 Turn signal indicator lights
3 Techometer and hour meter
4 Engine coolant temperature gauge
5 Not used
6 Driving lights indicator light
7 Working lights indicator light
8 Four-wheel steer indicator light
9 Crab steer indicator light
10 Two-wheel steer indicator light
11 Not used
12 Parking brake indicator light
13 Transmission oil temperature indicator light
14 Transmission oil pressure indicator light
15 Engine oil pressure indicator light
16 Battery condition indicator light
17 Low fuel level indicator light

Inspections

Do Not Operate Unless:

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

1 Avoid hazardous situations.

2 Always perform a pre-operation inspection.

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

3 Always perform function tests prior to use.

4 Inspect the workplace.

5 Only use the machine as it was intended.

Pre-operation Inspection Fundamentals

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

The pre-operation inspection is a visual inspection performed by the operator prior to each work shift. The inspection is designed to discover if anything is apparently wrong with a machine before the operator performs the function tests.

The pre-operation inspection also serves to determine if routine maintenance procedures are required. Only routine maintenance items specified in this manual may be performed by the operator.

Refer to the list on the next page and check each of the items.

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

Repairs to the machine may only be made by a qualified service technician, according to the manufacturer's specifications. After repairs are completed, the operator must perform a pre-operation inspection again before going on to the function tests.

Scheduled maintenance inspections shall be performed by qualified service technicians, according to the manufacturer's specifications.

Inspections

Pre-operation Inspection

- ❑ Be sure that the operator's and safety manuals are complete, legible and in the storage container located in the operator's compartment.
- ❑ Be sure that all decals are legible and in place. See Inspections section.
- ❑ Check for engine oil leaks and proper oil level. Add oil if needed. See Maintenance section.
- ❑ Check for hydraulic oil leaks and proper oil level. Add oil if needed. See Maintenance section.
- ❑ Check for engine coolant leaks and proper level of coolant. Add coolant if needed. See Maintenance section.
- ❑ Check for battery fluid leaks and proper fluid level. Add distilled water if needed. See Maintenance section.
- ❑ Air-filled tire 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
- ❑ Engine and related components
- ❑ Limit switches
- ❑ Steer and axle sensors
- ❑ 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.
- ❑ 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.

3 Always perform function tests prior to use.

Know and understand the function tests before going on to the next section.

4 Inspect the workplace.

5 Only use the machine as it was intended.

Function Tests 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.

Function Tests

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

2 Enter the operator's compartment and sit on the seat.

3 Fasten the seat belt.

4 Adjust the interior rear view mirror and the exterior right hand mirror, if required.

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

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

Inspections

Test the Single Control Handle (if equipped)

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

⊙ Result: All functions should operate smoothly.

8 Using the control handle and the red thumb switch, momentarily tilt the forks up and tilt the forks down.

Result: The function should operate smoothly.

9 Using the control handle and the white finger switch, momentarily sway the machine to the right and to the left.

⊙ Result: The frame level function should operate smoothly.

Test the Dual Control Handles (if equipped)

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

⊙ Result: All functions should operate smoothly.

11 Using the tilt and sway control handle, momentarily tilt the forks up and tilt the forks down.

Result: The function should operate smoothly.

12 Using the tilt and sway control handle, momentarily sway the machine to the right and to the left.

⊙ Result: The frame level function should operate smoothly.

Test the Steering

13 Push the right side of the steer selector switch to select four-wheel steer.

14 Check the steering operation by turning the steering wheel approximately 1/4 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.

15 Straighten the wheels.

16 Push the steer selector switch to the middle position to select two-wheel steer.

17 Check the steering operation by turning the steering wheel approximately 1/4 turn in each direction.

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

18 Straighten the wheels.

19 Push the left side of the steer selector switch to select crab steer.

20 Check the steering operation by turning the steering wheel approximately 1/4 turn in each direction.

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

Inspections

Test the Transmission and Brakes

21 Be sure the boom is fully lowered and retracted.

22 Step on the service brake pedal.

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

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

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

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

25 Move the transmission control lever to neutral.

26 Push the top of the parking brake switch.

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

27 Move the transmission control lever forward, then in reverse.

⊙ Result: The machine should not move.

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

Test the Stabilizers

29 Push the right and left stabilizer buttons and fully lower and raise the stabilizers.

⊙ Result: The stabilizers should operate smoothly.

Test Auxilliary Hydraulics (if equipped with swing carriage)

30 Using the auxiliary hydraulics switch, momentarily rotate the carriage to the right and to the left.

⊙ Result: The function should operate smoothly.

Test the Drive and Sway Cutout (GTH-1056 only)

31 Raise the boom completely. Extend the boom until E is visible on the side of the boom.

32 Step on the service brake pedal.

33 Put the transmission control lever in forward. ⚠ Slowly let up on the service brake pedal.

⊙ Result: The drive function should not work.

34 Put the transmission lever in neutral.

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

⊙ Result: The sway function should not work.

Test the Road Lights

36 Verify that all lights are functional.

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.

3 Always perform function tests prior to use.

4 Inspect the workplace.

Know and understand the workplace inspection before going on to the next section.

5 Only use the machine as it was intended.

Fundamentals

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

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

Workplace Inspection

Be aware of and avoid the following hazardous situations:

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

Inspections

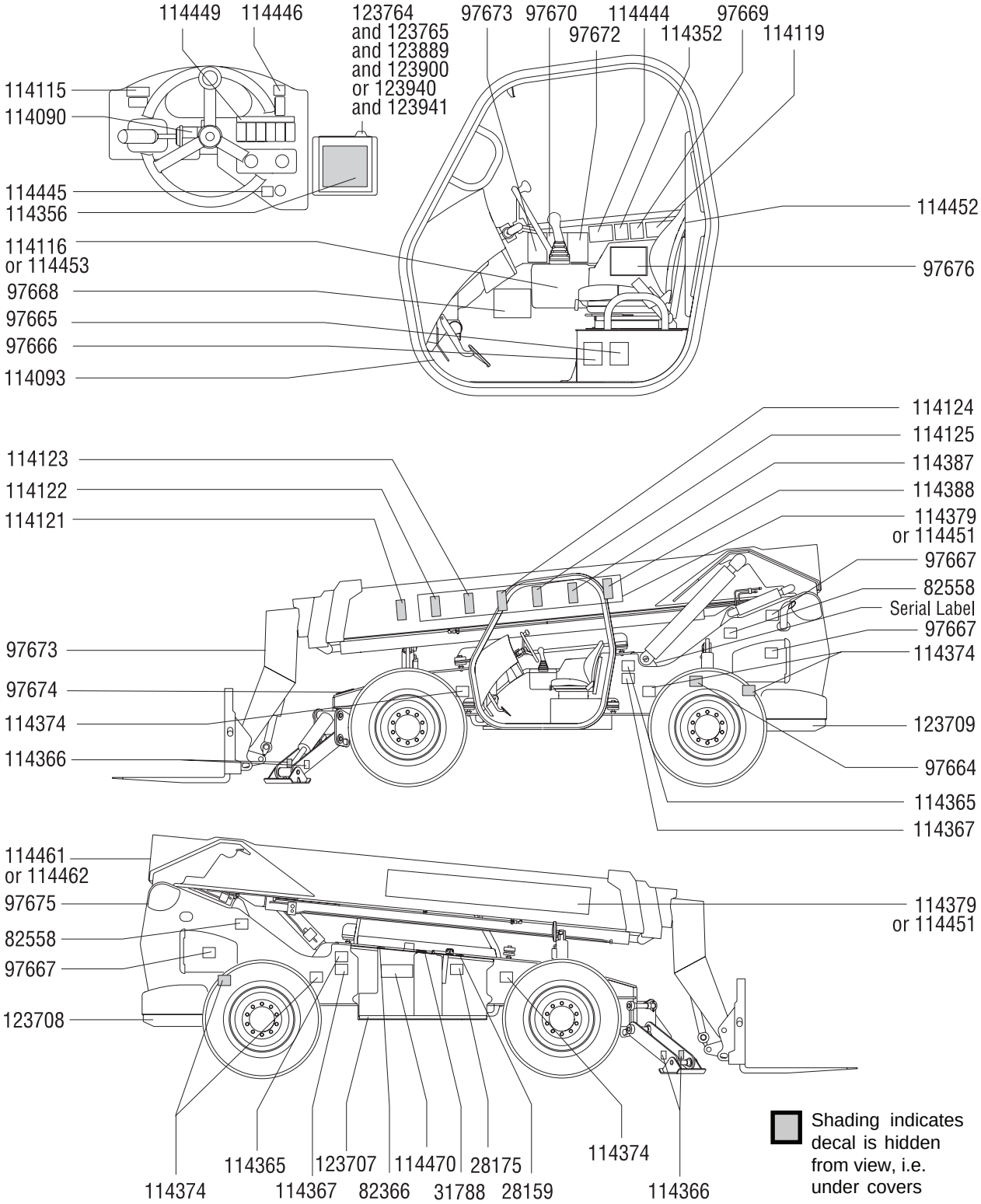
Decal Inspection

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

Below is a numerical list with quantities and descriptions.

Part No.	Decal Description	Quantity
28159	Label - Diesel	1
28175	Warning - Compartment Access	1
31788	Danger - Explosion/Burn Hazard	1
82366	Label - Chevron Rykon	1
82558	Warning - Injection Hazard	2
97664	Warning - Crush Hazard, Moving Parts	1
97665	Warning - Bodily Injury Hazard	1
97666	Warning - Improper Operation	1
97667	Warning - Burn Hazard	3
97668	Warning - Overturning Hazard	1
97669	Warning - Falling Object Hazard	1
97670	Warning - Crush Hazard, Parking Brake	1
97672	Danger - Crush Hazard, No Riders	1
97673	Danger - Fall Hazard, No Riders	2
97674	Warning - Crush Hazard, Overhead Parts	1
97675	Warning - Burn Hazard, Hot Components	1
97676	Danger - Electrocution Hazard	1
114090	Label - Transmission Control	1
114093	Notice - Axle Differential Lock	1
114115	Label - Steer Model Selector	1
114116	Label - Controller (Single)	1
114119	Warning - Overturning Hazard, Sway	1
114121	Label - A	1
114122	Label - B	1
114123	Label - C	1
114124	Label - D	1
114125	Label - E	1
114352	Warning - Overturning Hazard, Keep Load Low	1
114356	Warning - Overturning Hazard, Load Charts	1
114365	Warning - Crush Hazard, Moving Machine	2
114366	Danger - Crush Hazard, Stabilizers	4
114367	Warning - Falling Object Hazard	2
114374	Warning - Crush Hazard, Tires	6
114379	Cosmetic - Genie GTH-1056	2
114387	Label - F	
114388	Label - G	
114444	Label - Stabilizers and Auxiliary Hydraulics	1
114445	Label - Ignition Switch	1
114446	Label - Parking Brake Switch	1
114449	Label - Dashboard Accessories	1
114451	Cosmetic - Genie GTH-1048	2
114452	Label - ROPS FOPS	1
114453	Label - Controller (Dual)	1
114461	Cosmetic - GTH-1056	1
114462	Cosmetic - GTH-1048	1
114470	Cosmetic - Genie Logo, Blue	1
123707	Cosmetic - Grey Stripe, Tank	1
123708	Cosmetic - Grey Stripe, Left Side	1
123709	Cosmetic - Grey Stripe, Right Side	1
123764	Load Chart Card, Standard Carriage, Stabilizers Up, GTH-1056	1
123765	Load Chart Card, Standard Carriage, Stabilizers Down, GTH-1056	1
123899	Load Chart Card, Rotating Carriage, Stabilizers Up, GTH-1056	1
123900	Load Chart Card, Rotating Carriage, Stabilizers Down, GTH-1056	1
123764	Load Chart Card, Standard Carriage, Stabilizers Up, GTH-1048	1
123765	Load Chart Card, Standard Carriage, Stabilizers Down, GTH-1048	1

Inspections



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 designed primarily as a fork truck 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 and safety manuals. That means every new operator should perform a pre-operation inspection, function tests, and a workplace inspection before using the machine.

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.

Service Brake

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

Push and hold the service brake pedal to stop the machine.

Push and release the service 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.

Steer Select

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

Do not realign the wheels while driving.

Steer selector switch

Raising and Lowering the Stabilizers

Push the top of the rocker switch to raise the stabilizer. Push the bottom of the rocker switch to lower the stabilizer.

Lower each stabilizer until the footpad is in firm contact with the ground. The tires do not need to be off the ground.

Operating Instructions

Transmission Control

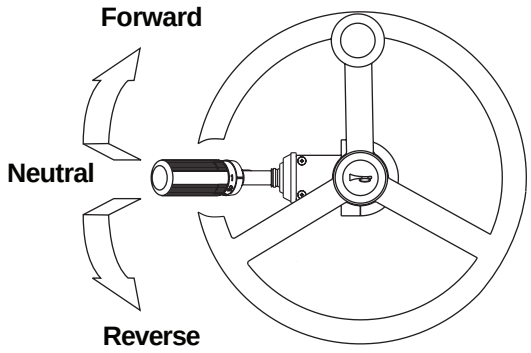
Use the transmission control lever to control the speed and direction of machine travel.

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.

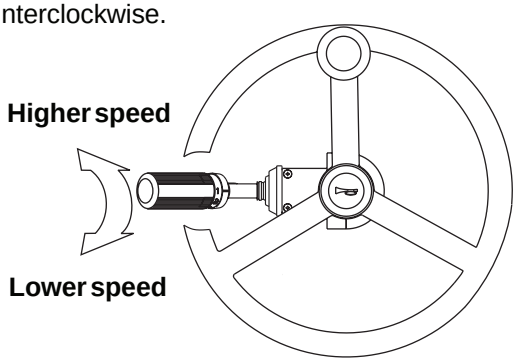
To return to neutral, move the transmission control lever to the center position.



The transmission control lever also controls the transmission speed.

To choose a lower speed, rotate the control lever clockwise.

To choose a higher speed, rotate the control lever counterclockwise.



When shifting the transmission from forward to reverse while the machine is in motion, the transmission control lever must be in 1st or 2nd gear only.

Forward / 1st gear: Low speed / high torque

Forward / 2nd gear: Medium speed / medium torque

Forward / 3rd gear: High speed / low torque

Axle Differential Lock

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

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

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

Operating Instructions

Frame Sway Control

Before raising the boom, the machine must be level.

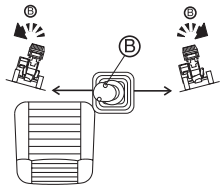
1 Check the machine level indicator. The machine level indicator should be at 0 degrees before raising the boom.

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

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

Single control handle

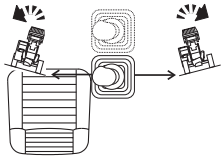
Hold the white finger switch and push the control handle to the right and the machine will sway to the right.



Hold the white finger switch and pull the control handle to the left and the machine will sway to the left.

Dual control handle

Push the control handle to the right and the machine will sway to the right.



Pull the control handle to the left and the machine will sway to the left.

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 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 and the configuration of the stabilizers.

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 If you have not lowered the stabilizers, lower the stabilizers and use the load chart for stabilizers down.

If the stabilizers are down:

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

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

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

Operating Instructions

Placing the load

1 Travel to the desired worksite and carefully stop the machine.

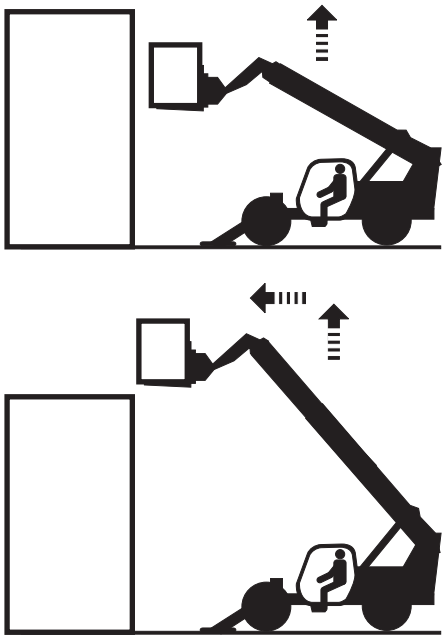
2 Put the transmission in neutral.

3 Apply the parking brake.

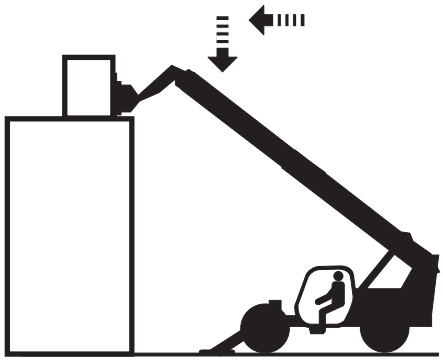
4 Lower the stabilizers, if your configuration requires it.

5 Level the frame, if the machine angle indicator is not at 0.

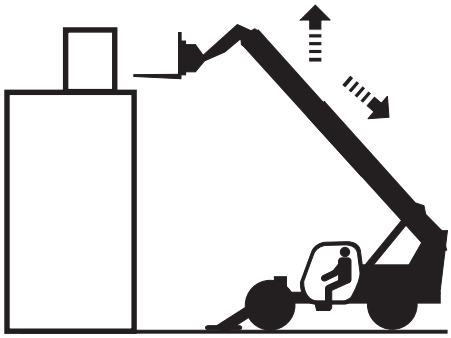
6 Gradually move the controller to raise and extend the boom to the required height.



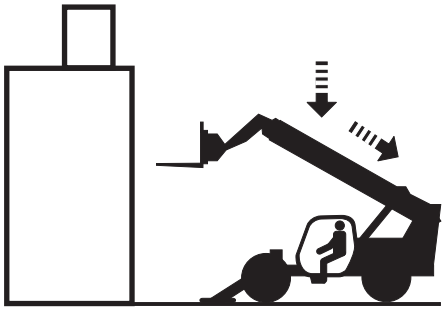
7 Gradually move the controller to lower and extend the boom into final position. Lower the load until the weight is completely off the forks. Do not apply a downward force with the forks.



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



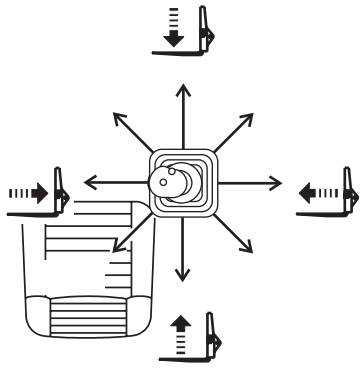
9 When the forks are clear of the load and the structure, the boom can be lowered.



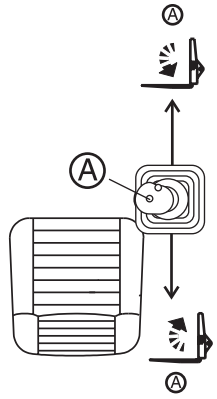
Operating Instructions

Controller movements - Single Control Handle

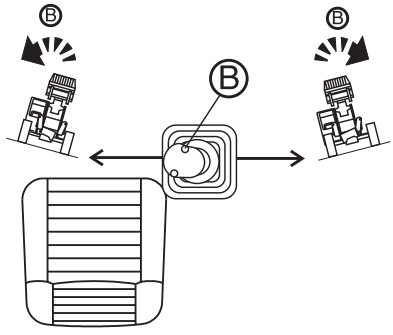
Control handle only



Control handle with red thumb switch

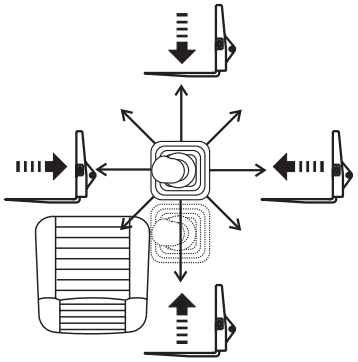


Control handle with white finger switch

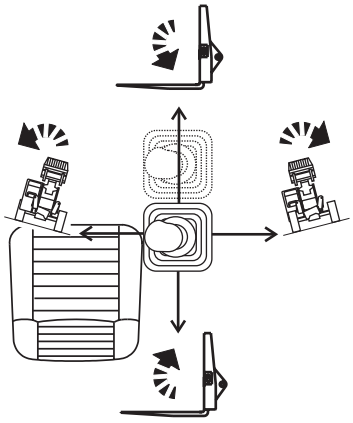


Controller movements - Dual Control Handles

Boom control handle



Tilt and sway control handle



Operating Instructions

Rear Axle Lock - GTH-1056

If the boom is raised above 60° and extended until E is visible, the transmission will shift to neutral and the frame sway function will not operate.

Boom and fork functions continue to operate.

Lower the boom or retract the boom to unlock the rear axle and to operate the frame sway function.

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

4 Chock the wheels.

Jump Starting the Machine

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

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

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

⚠ Never jump start a frozen battery as it will explode.

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

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

To jump start the machine

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

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

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

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

5 Start the engine.

Operating Instructions

⚠ Driving on a slope

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

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

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

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

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

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

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

Transport Instructions

Observe and Obey:

- ☑ Genie Industries 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.
- ☑ Be sure the vehicle capacity, loading surfaces and chains or straps are sufficient to withstand the machine weight. Genie lifts are very heavy relative to their size. See the serial label for the machine weight. See the Inspections section for the serial label location.

⚠ Securing to Truck or Trailer for Transit

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

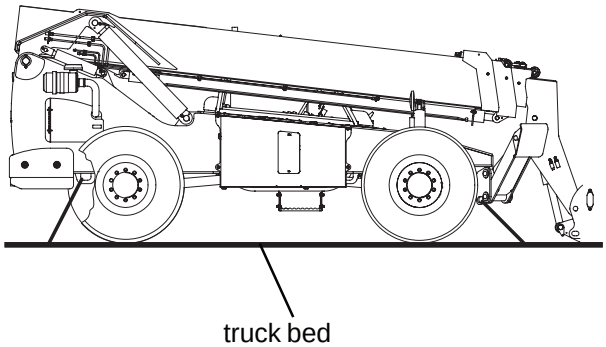
Inspect the entire machine for loose or unsecured items.

Securing the Chassis

Use chains of ample load capacity.

Use a minimum of 4 chains. There are 4 tie down points on the chassis.

Adjust the rigging to prevent damage to the chains.



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.

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.

Check the oil level with the engine off.

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

John Deere 4045TF270 Engine	
Oil type	15W-40
Perkins 1104D-E44TA	
Oil type	15W-40

Maintenance

Check the Hydraulic Oil Level

Maintaining the hydraulic oil at the proper level is essential to machine operation. Improper hydraulic oil levels can damage hydraulic components. Daily checks allow the inspector to identify changes in the 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 on the hydraulic tank. The hydraulic oil level should be halfway in the sight gauge.

3 Add oil as needed.

Hydraulic oil specifications	
Hydraulic oil type	Chevron Rykon® Premium MV equivalent

Check the Batteries

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

⚠ Electrocution/burn 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 Be sure that the battery cable connections are tight and free of corrosion.

2 Be sure that the battery hold-down bar is in place and secure.

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

Maintenance

Check the Engine Coolant Level - Liquid Cooled Models

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

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

⊙ Result: The fluid level should be visible in the top of the tank.

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

Check the Tire Pressure

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

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

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

Tire pressure	62 psi	4.3 bar

Scheduled Maintenance

Maintenance performed quarterly, annually and every two years must be completed by a person trained and qualified to perform maintenance on this machine according to the procedures found in the service manual for this machine.

Machines that have been out of service for more than three months must receive the quarterly inspection before they are put back into service.

Specifications

GTH-1048		
Height, stowed	8 ft 6 in	2.6 m
Length, stowed, without forks	22 ft	6.7 m
Width, standard tires	8 ft 6 in	2.6 m
Wheelbase	10 ft 8 in	3.3 m
Ground clearance, center	1 ft 10 in	56 cm
Ground clearance, axle	1 ft 6 in	46 cm
Weight	29,000 lbs	13182 kg
Working fork height, maximum	48 ft 10 in	14.0 m
Horizontal reach, maximum	33 ft 10 in	10.3 m
Reach at maximum height	4 ft 4 in	1.3 m
Lift capacity, maximum height	6000 lbs	2722 kg
Lift capacity, maximum reach	3000 lbs	1361 kg
Maximum lift capacity	10,000 lbs	4536 kg
Drive speed, maximum	18 mph	29 km/h
Tire size		14 x 24
Turning radius, outside, 2 wheel steer	24 ft	7.32 m
Turning radius, outside, 4 wheel steer	13 ft 3 in	4 m
Fuel tank capacity	35 gal	132 liter
Floor loading information		
Tire load, maximum	19,500 lbs	8845 kg
Occupied floor pressure	240 psf	2383 bar

GTH-1056		
Height, stowed	8 ft 6 in	2.6 m
Length, stowed, without forks	22 ft	6.7 m
Width, standard tires	8 ft 6 in	2.6 m
Wheelbase	10 ft 8 in	3.3 m
Ground clearance, center	1 ft 10 in	56 cm
Ground clearance, axle	1 ft 6 in	46 cm
Weight	30,000 lbs	13636 kg
Working fork height, maximum	56 ft 2 in	17.1 m
Horizontal reach, maximum	42 ft	12.8 m
Reach at maximum height	6 ft 4 in	1.9 m
Lift capacity, maximum height	4000 lbs	1814 kg
Lift capacity, maximum reach	3000 lbs	1361 kg
Maximum lift capacity	10,000 lbs	4536 kg
Drive speed, maximum	18 mph	29 km/h
Tire size		14 x 24
Turning radius, outside, 2 wheel steer	24 ft	7.32 m
Turning radius, outside, 4 wheel steer	13 ft 3 in	4 m
Fuel tank capacity	35 gal	132 liter
Floor loading information		
Tire load, maximum	19,500 lbs	8845 kg
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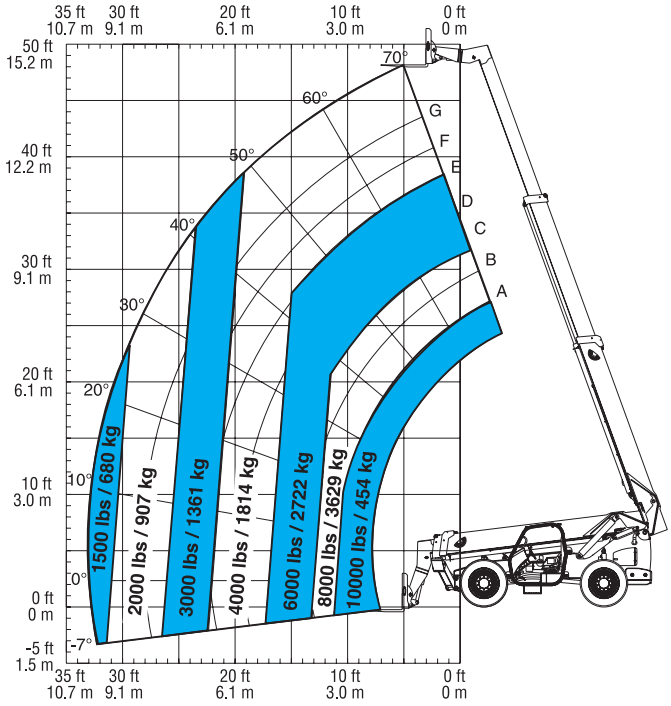
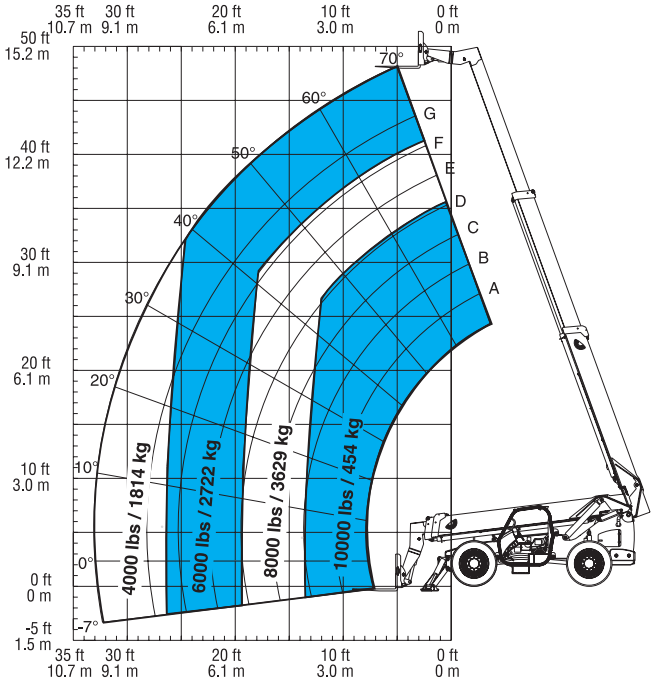
Load Charts

GTH-1048 Standard Carriage, Stabilizers Up

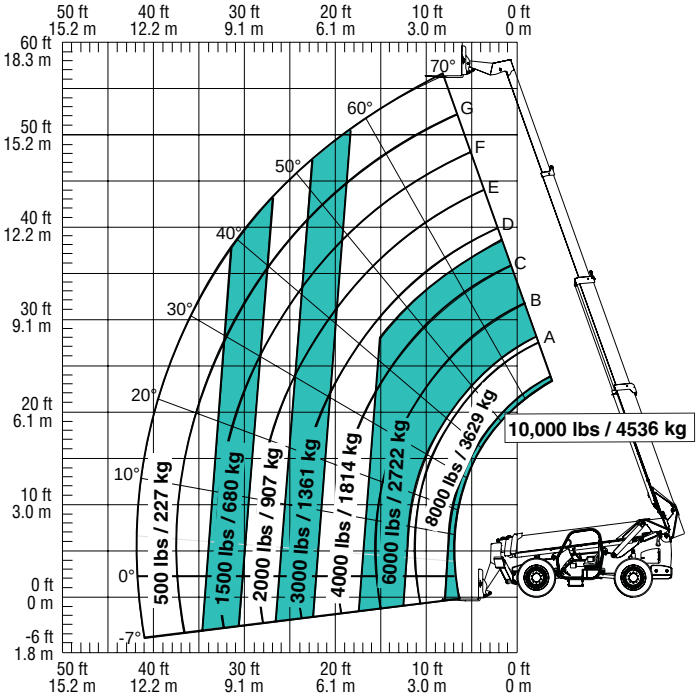


GTH-1048 Standard Carriage, Stabilizers Down

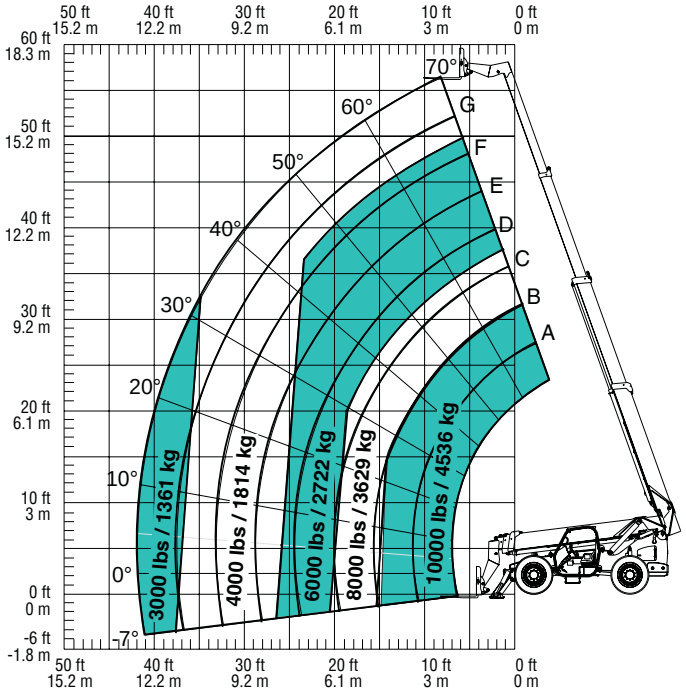


Load Charts

GTH-1056 Standard Carriage, Stabilizers Up

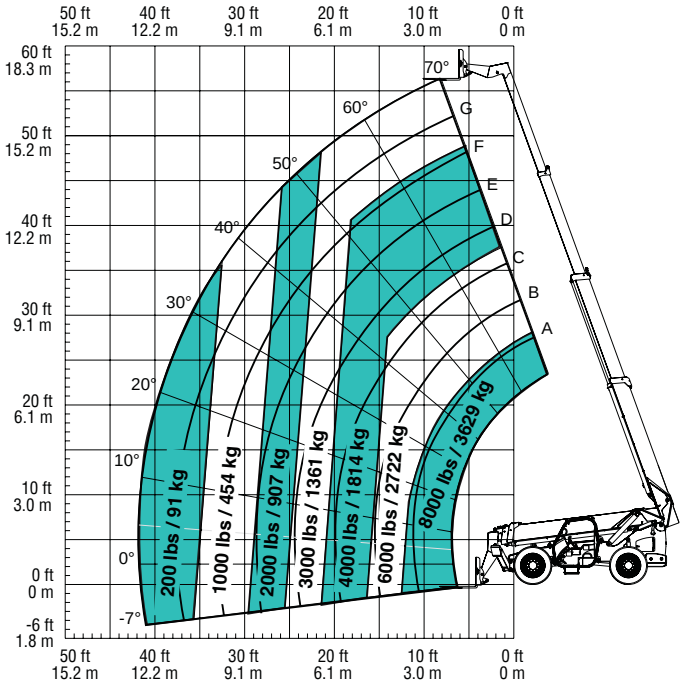


GTH-1056 Standard Carriage, Stabilizers Down

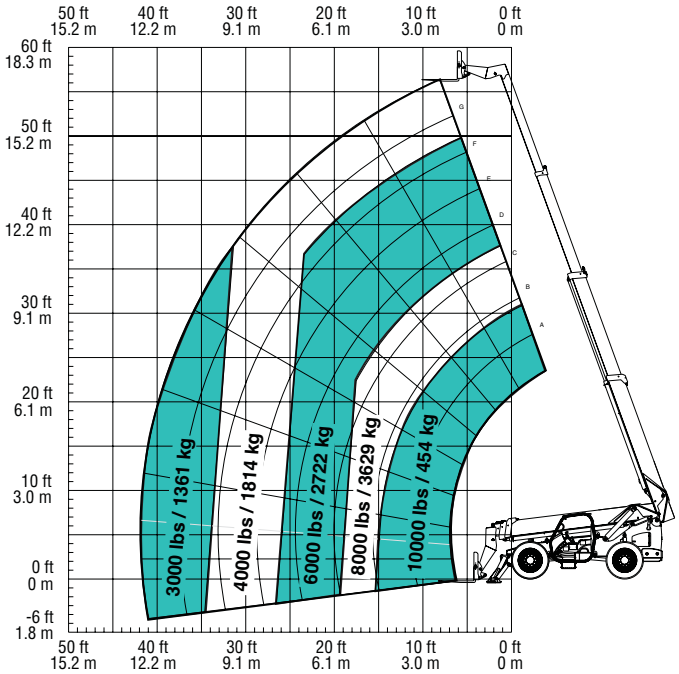


Load Charts

GTH-1056 Rotating Carriage, Stabilizers Up



GTH-1056 Rotating Carriage, Stabilizers Down



California Proposition 65

Warning

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

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