Operator's Manual

WPL 40

OM-1200

IMPORTANT! Do not remove this manual from the lift truck.

JUN 2022 | REV 1.3

Table of Contents

OM-1200

Information

Model	
Type	
Serial No.	
Capacity	
Empty Weight	
Gross Weight	

YOU can prevent accidents

First: Know the rules of safe lift truck operation and the safety rules specific to your work area.

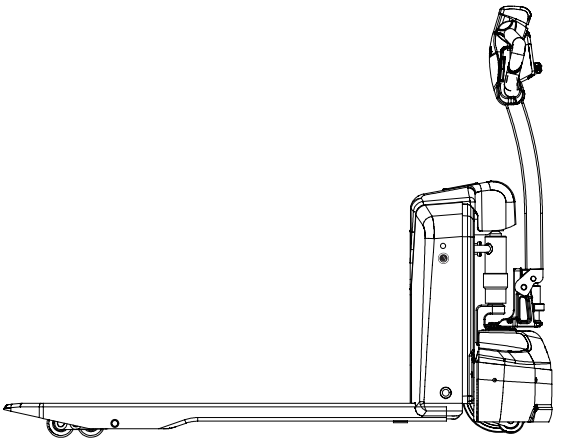
Next: Read the Operator's Manual. If you do not understand something, ask your supervisor.

LEARN about the lift truck you operate!

Know YOUR Lift Truck

Then: Operate your lift truck safely.

And: Keep your lift truck in a safe operating condition with correct and regular maintenance.



WARNING

If you do not follow these rules, there is a risk of injury or death.

IMPORTANT!

Do not expose this manual to hot water or steam.

A Message to Operators

Your CLARK lift truck is a specialized machine with unique operating characteristics, designed to perform a specific task. It requires specific instructions and rules for safe operation and maintenance.

It's function and operation is not like a car or ordinary passenger vehicle. Specialized instructions and rules are required to ensure safe and correct operation and maintenance.

The safe operation of our lift trucks is of the utmost importance to CLARK.

Lift truck accidents are most commonly caused by...

- **An incorrectly trained operator.**
- **An inexperienced operator.**
- **An operator not obeying basic lift truck safety rules.**
- **A damaged or malfunctioning lift truck.**

For these reasons, CLARK wants you to know how to safely operate and properly maintain your lift truck.

The primary function of this manual is to help you learn how to safely operate your lift truck. This manual gives the correct safety rules and hazards of lift truck operation. It also identifies the special components and features of your specific lift truck and tells their function.

This manual is not a training manual. It is a resource to assist trained and authorized operators how to safely operate their lift truck by showing the correct procedures.

This manual does not include information about every possible condition that may result in an accident. Be aware of all possible hazards in your specific work area and be certain to correct or avoid them.

Always make sure that the lift truck is maintained to a safe, working condition. Do not operate a damaged or malfunctioning lift truck. Practice safe operation each time you operate your lift truck.

Let's set high standards in safety together!

Before starting the lift truck, make sure you understand all safe and correct operating procedures. It is your responsibility to operate the lift truck safely and efficiently.

Know that the federal Occupational Safety and Health Act (OSHA) and state/provincial and local law, require operators to be trained and certified in the safe operation of their lift truck. It is an OSHA requirement that lift truck be inspected BEFORE every shift. If you have not been certified (or need recertification) to operate or inspect your lift truck, tell your supervisor.

All CLARK lift trucks are designed and built to handle hard work, but not abuse from an operator. They are designed and built to be dependable, but are only as safe and efficient as the operator(s) and person(s) responsible for using and maintaining them. Do not make repairs to any lift truck unless you have been authorized and properly trained to do so. For questions concerning the proper maintenance or repair of your CLARK lift truck, please contact your CLARK dealer.

Only use genuine CLARK replacement parts and accessories to ensure optimal performance of your lift truck!

Foreword

CLARK welcomes you to the growing group of professionals who own, operate, and maintain our lift trucks. We take pride in our tradition of quality product and superior value that the CLARK name represents.

This operator's manual has been specially prepared to help you use and maintain your CLARK lift truck in a safe and correct manner. It describes the safe operation, maintenance, and features unique to your CLARK lift truck.

The safe and productive operation of your lift truck depends on both skill and operator knowledge.

The operator must...

- **Read and understand the safety rules found in this manual.**
- **Read and practice the safe driving and safe load handling techniques shown in this manual.**
- **Know the construction and features of the lift truck and how they function.**
- **Know the capabilities and limitations of the lift truck.**
- **Ensure the lift truck is maintained to a safe working condition**

Your CLARK lift truck has been designed and built to be as safe and efficient as today's technology can allow. As manufactured, it meets all applicable and mandatory design and construction requirements of the ANSI / ITSDF B56.1 Safety Standard for Low Lift and High Lift Trucks.

Importance of Routine Inspection and Maintenance

The regular care and maintenance of your CLARK lift truck is absolutely necessary for your safety. It ensures a lower overall cost of ownership and optimal lift truck productivity. A damaged or malfunctioning lift truck is a potential source of danger to the operator, any personnel working nearby, and anyone else in the area.

Always keep your lift truck in a safe, operating condition by following the recommended service schedule described in the *Planned Maintenance* section of this manual.

Operator's Daily Inspection

You are required to inspect your lift truck daily and to ensure it is safe to operate. The importance of this *Daily Inspection* is described later in this manual. You can provide your own checklist sheet or your CLARK dealer can supply you with copies of a helpful **Operator's Daily Checklist**.

Planned Maintenance

In addition to the *Daily Inspection*, CLARK recommends that a *Planned Maintenance (PM)* program be performed by an authorized and properly trained technician. This safety and maintenance inspection and service will provide an opportunity to thoroughly examine the operating condition of your lift truck. Any *Planned Maintenance* can be scheduled through your CLARK dealer to meet your particular lift truck application and usage.

The periodic *Planned Maintenance* program covers inspections, operational checks, cleaning, lubrication, and minor adjustments. Any necessary adjustments and timely maintenance will be performed to maximize the service life of components and reduce unscheduled downtime. These procedures are outlined in this manual and described in detail in your specific lift truck's service manual. Your CLARK dealer can help with implementing a *Planned Maintenance* program and providing properly trained and authorized service technicians to keep your lift truck operating safely and efficiently.

Always Practice Safe Operation

Incorrect operation can cause accidents. Do not operate an improperly setup, damaged, or malfunctioning lift truck.

Read and understand the procedures for safe driving and maintenance described in this manual. If you have questions, ask for assistance.

Stay alert and follow the safety rules, regulations, and procedures for lift truck operation. Avoid accidents by identifying and avoiding potentially dangerous procedures or situations.

Drive and work safely and follow the safety messages in this manual and attached to your lift truck.

Safety Messages and Warnings

The **safety messages and warnings,** found in this manual and attached to the lift truck, identify specific areas where potential hazards exist. Make sure to **know and understand** the meaning of these instructions, symbols, and messages. Damage to the lift truck, serious injury, or death to you and/or other personnel may result if these messages are not followed.

NOTE
Provides helpful information related to procedures, equipment, tools, specifications, or other special data.

CAUTION
There is a risk of damage to the lift truck or nearby objects.

WARNING
There is a risk of injury or death to the operator or nearby personnel.

How to Use this Manual

The **Operator's Manual** contains important information about the safe operation, features, functions, and maintenance of your CLARK lift truck.

IMPORTANT!
Read the Operator's Manual before operating your lift truck.

- All descriptions, images, and specifications in this manual were correct at the time of printing.
- CLARK Material Handling Company reserves the right to make improvements and changes in specifications and/or design, without notice and without incurring obligation. Contact your authorized CLARK dealer for information on possible updates or revisions to this or other CLARK technical information.
- The examples, illustrations, and explanations in this manual are intended to help improve your skill and knowledge as a professional lift truck operator and to take full advantage of the capabilities and features of your new lift truck.
- Always read and understand the information located in *General Safety Rules* and *Operating Hazards*.
- Follow the instructions and procedures about how to correctly maintain your lift truck, including recommended service intervals and component capacities.
- Safe and careful driving is your responsibility! Drive defensively and be aware of other personnel who are working nearby. Know your lift truck's capabilities and limitations.
- Follow all IMPORTANT, CAUTION, WARNING, and DANGER messages to avoid damage to the lift truck and/or injury to yourself or others.
- OHSA requires that the Operator's Manual be permanently attached to your lift truck. Keep this manual on the lift truck as a reference for anyone who may operate or service it. If the lift truck you operate is not equipped with an Operator's Manual, tell your supervisor immediately.
- Your authorized CLARK dealer is ready to help! They can provide you with any additional information about the features, operation, and maintenance of your lift truck.

Safety Standards

IMPORTANT!

Familiarize yourself with the safety instructions contained in the following publications:

ANSI / ITSDF B56.1 Safety Standard for Low Lift and High Lift Trucks

Available from: Industrial Truck Standards Development Foundation, 1750 K Street NW Suite 460, Washington, DC 20006.

NFPA 505 Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance and Operations

Available from: National Fire Protection Association, Inc., 1 Batterymarch Park, Quincy, MA 02169.

OSHA 1910.178 Powered Industrial Trucks

Available from: Occupational Safety & Health Administration, 200 Constitution Ave NW, Washington, DC 20210.

UL 583 Standard for Electric-Battery-Powered Industrial Trucks

Available from: Underwriters Laboratory Headquarters, 333 Pfingsten Road, Northbrook, IL 60062.

IMPORTANT!

Your CLARK lift truck has been built to meet all applicable mandatory design and construction requirements of the **ANSI / ITSDF B56.1 Safety Standard for Low Lift and High Lift Trucks**. No additions, omissions, or modifications should be made to the lift truck that affect compliance to the above requirements or in any way minimize the effectiveness of it's safety devices.

Section 1. General Safety Rules

Contents

Do’s and Don’ts

DON’T mix drugs or alcohol with your job.

DO watch for pedestrians.

DON’T block safety equipment.

DO wear personal protective equipment.

DON’T smoke in NO SMOKING areas.

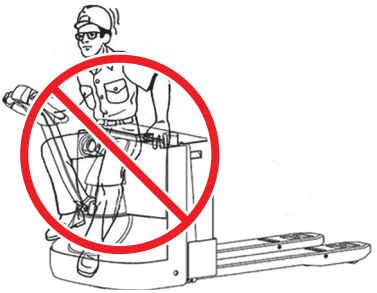
DON’T operate the lift truck outdoors during rainy conditions.

Pedestrians

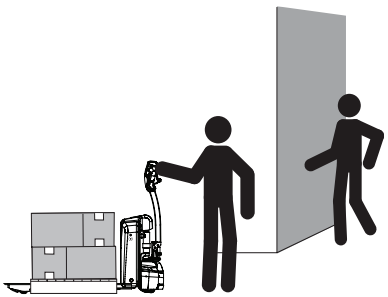
No Riders

WARNING
Do not transport personnel with the lift truck.

WARNING
Do not ride on the lift truck. The operator must always walk while operating the lift truck.



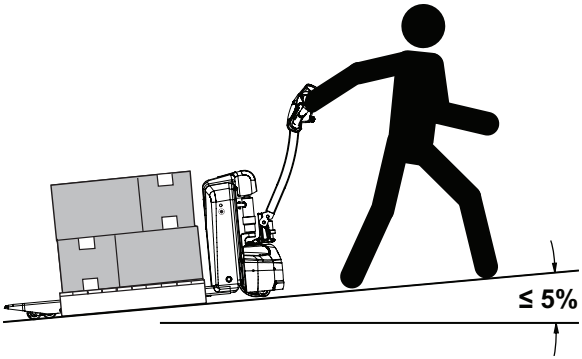
Personnel



WARNING

- Look in the direction you are traveling.
- Slow down and operate the horn at every intersection or location where visibility is limited.
- Tell personnel to stand back, even when parked.
- Be aware of all personnel in your work area.

Ramps and Grades



WARNING

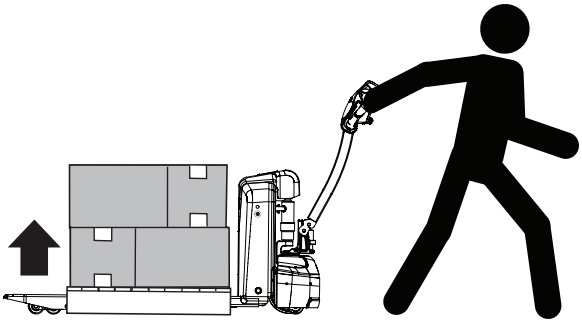
Always keep the forks pointed downgrade and in the raised position when operating on a grade or ramp.

Do not travel up or down a grade of 5% or more with a capacity load.

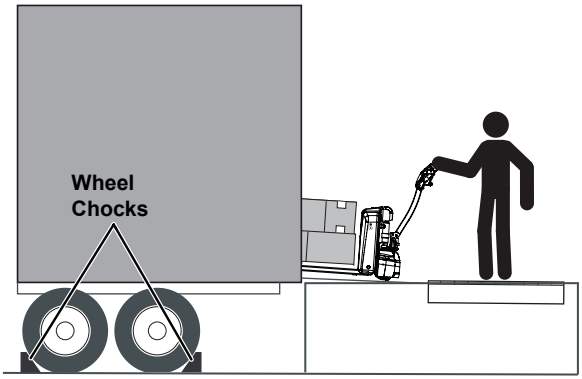
WARNING

Do not attempt to turn while on a ramp or grade.

Travel



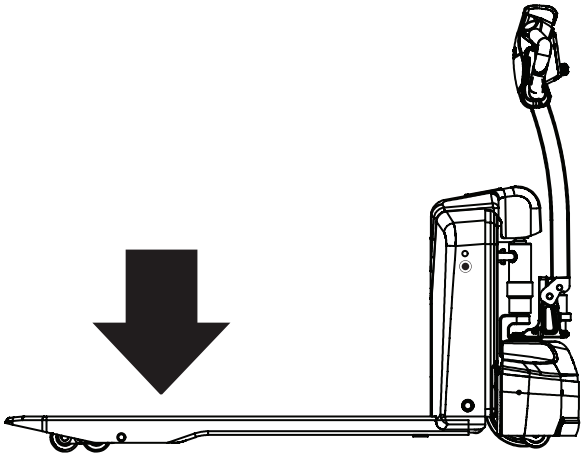
WARNING
Always carry a load in the raised position.



WARNING
Always enter confined areas loaded end first to minimize the maneuvering needed to exit. If the load blocks your view when traveling in reverse, make sure the path is clear of personnel and obstructions.

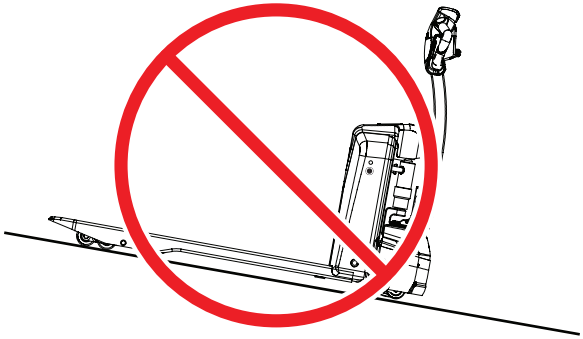
WARNING
Always allow enough room for yourself between any type of obstacle when operating in confined areas.

Parking



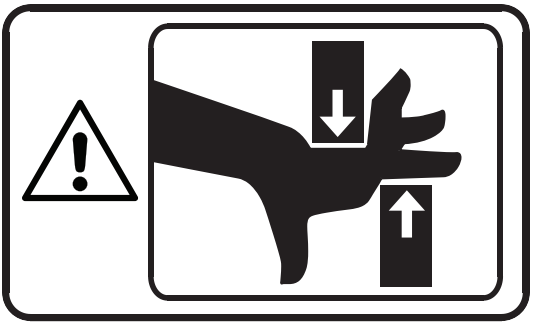
Parking Rules

- Fully lower the forks to the ground.
- Park the lift truck in authorized areas only.
- Do not block traffic lanes or aisles.
- Turn the lift truck off and disconnect the battery when leaving the lift truck unattended for an extended period.



WARNING
Do not park on a grade or ramp.

Pinch Points



WARNING
Do not place hands, feet, and legs near the moving components of the lift truck.

WARNING
Do not allow anyone to reach under or around the edge of the lift truck.

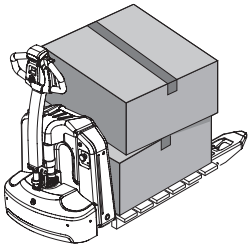
Section 2. Operating Hazards

Contents

Load Handling

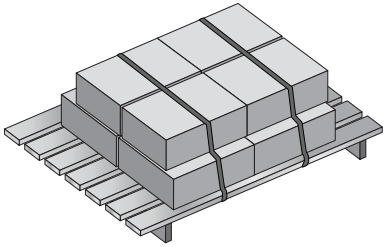
Unbalanced Loads

Do not lift or move uneven loads.



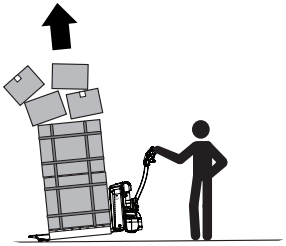
Loose Material

Stack and band loose material.



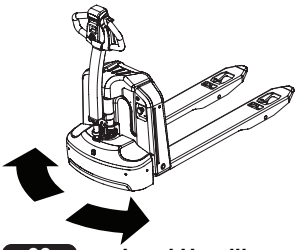
High Loads

Operate slowly and allow for extra clearance.



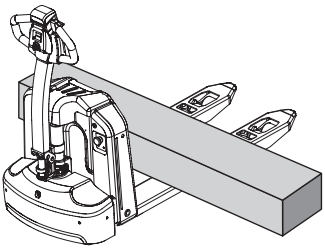
Fast Turns

Slow down when turning.



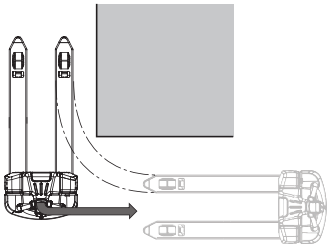
Wide Loads

Center wide loads on the forks.



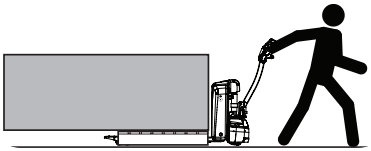
Cutting Corners

Avoid sharp turns and move slowly.



Long Loads

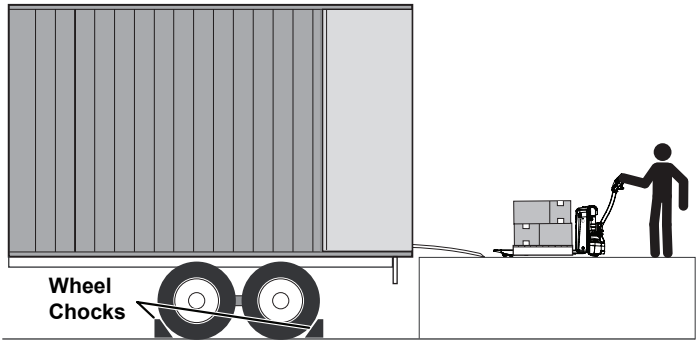
Long loads require more clearance.



WARNING
Always know the height of your lift truck when loaded or unloaded.

WARNING
The load wheels do not follow the same turn path of the drive wheel.

Drop-Offs



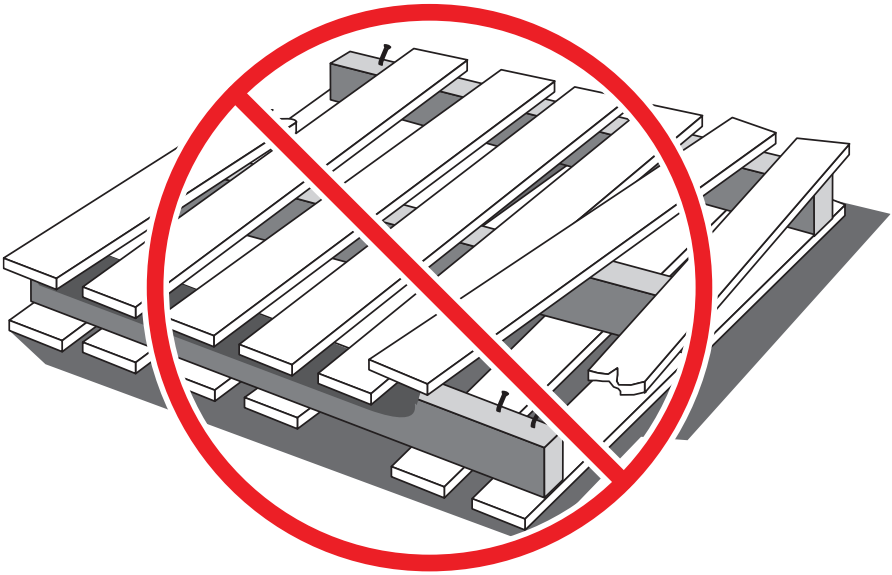
WARNING

When operating on a dock or drop-off, do the following:

- Tell the driver not to move the trailer.
- Use the trailer brakes.
- Install wheel chocks.
- Use a trailer-to-dock system if available.

The trailer may move unexpectedly while loading or unloading.

Pallets and Skids



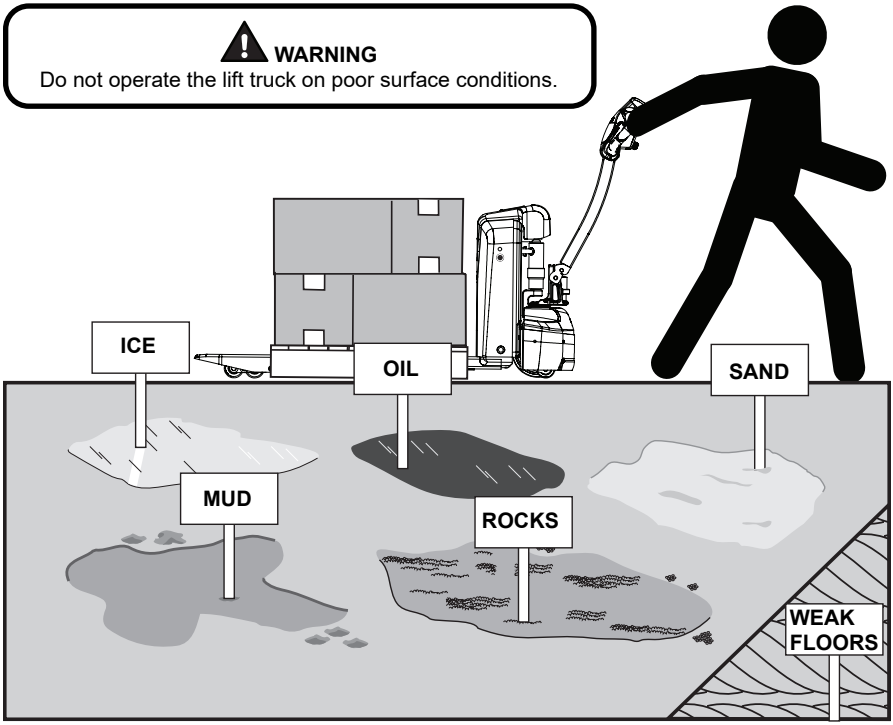
WARNING

Do not move or store material on damaged pallets or skids. Damaged skids and pallets can allow material to fall unexpectedly and cause severe personal injury or death.

Always use pallets or skids that are in good condition.

Surface and Capacity

WARNING
Do not operate the lift truck on poor surface conditions.



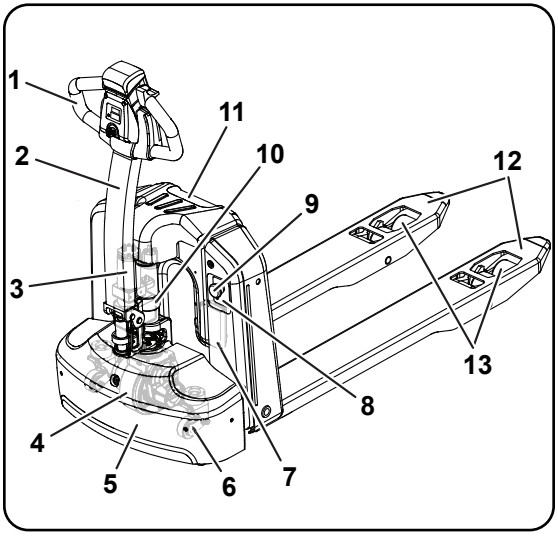
WARNING
Always know the combined weight of the load and the lift truck. Do not travel over a surface that cannot support the weight of a fully loaded lift truck. If applicable, know the capacity of the elevator you intend to use.

Section 3. Know Your Lift Truck

Contents

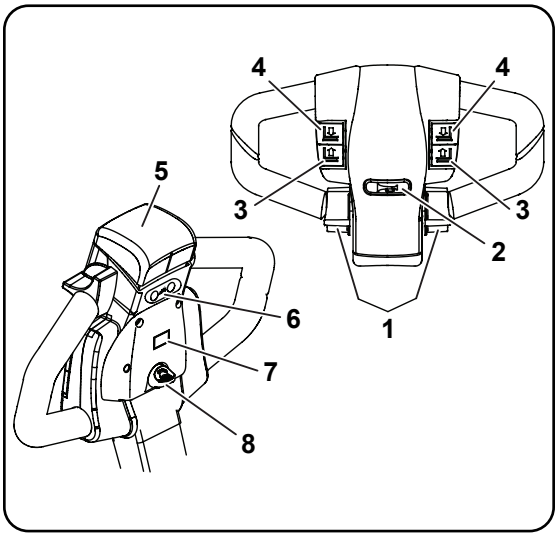
Overview

Lift Truck Components



1. Control Handle
2. Tiller Arm
3. Pump and Motor
4. Drive Wheel
5. Lower Cover
6. Stabilizer Wheels
7. Traction Controller
8. Fault Indicator
9. Emergency Disconnect
10. Lift Cylinder
11. Battery Cover
12. Forks
13. Load Wheels

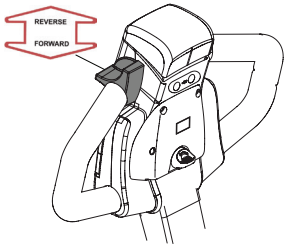
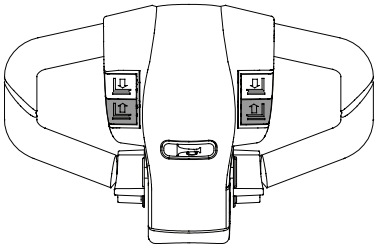
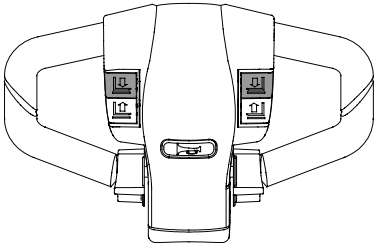
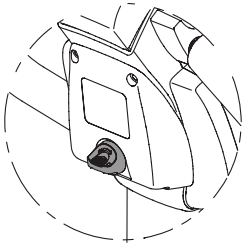
Control Handle

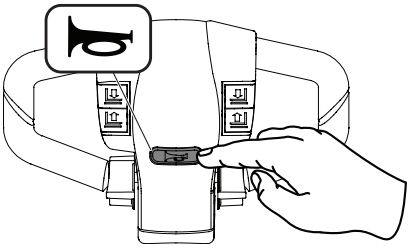
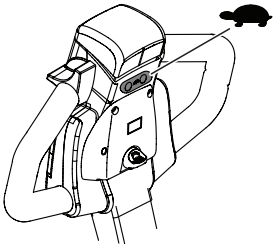
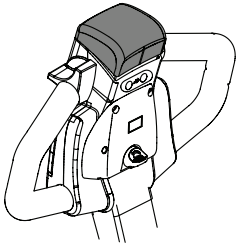
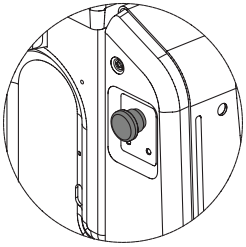


1. Directional Controls
2. Horn
3. Lift Buttons
4. Lower Buttons
5. Emergency Reverse
6. Low Speed Buttons
7. Display
8. Keyswitch

NOTE
Your lift truck may vary in appearance depending on model and optional equipment.

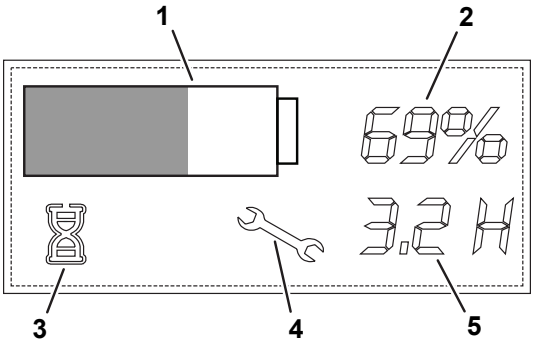
Operator Controls

Driving Controls		
Name	**Description**	**View**
Directional Controls	The directional switches are used to change the driving direction of the lift truck. There are three positions: forward, neutral, and reverse.	
Lift Buttons	The lift buttons control the raising of the forks.	
Lower Buttons	The lower buttons control the lowering of the forks.	
Keyswitch	The keyswitch turns the lift truck on or off. When the lift truck is off, travel and hydraulics are disabled.	

Driving Controls		
Name	**Description**	**View**
Horn	The horn is used to alert nearby personnel while operating the lift truck.	
Low Speed Buttons	The low speed buttons allow the operator to put the lift truck in low speed (turtle) mode.	
Emergency Reverse	When the emergency reverse button is depressed, the lift truck automatically drives in the reverse direction.	
Emergency Disconnect	The emergency disconnect switch enables the operator to immediately turn the lift truck power off. If depressed, it must be reset to resume operation.	

Display and Indicators

Display



NOTE
When the battery charge level is less than 15%, travel and hydraulic function is reduced (limp mode).

(1) Battery Charge Level: shows the remaining battery charge. This indicator will flash when the battery charge is less than 20%.

(2) Battery Charge Percentage: shows the remaining battery charge percentage.

(3) Hour Meter Status: shows when the hour meter is functioning.

(4) Fault: displayed when a controller alarm (error) has occurred. Refer to the lift trucks Service Manual.

(5) Hour Meter: shows the amount of hours the lift trucks traction controller has been in use.

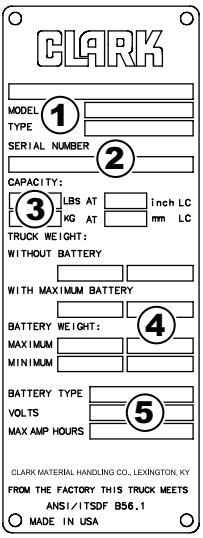
Indicator

(1) Fault Indicator:

- RED LED - SOLID: lift truck is ON and in normal mode.
- RED LED - FLASHING: A controller alarm has occurred and the lift truck is in fault (error) mode. Refer to the lift trucks service manual.

Data Plate

The data plate contains important information about the specifications and lifting capacity of your lift truck. If it is missing or damaged, remove the lift truck from service and contact your authorized CLARK dealer for a replacement.



(1) Model and Type: Identifies the model and type of lift truck. Certain types of lift trucks are not permitted in areas that contain fire hazards - watch for marked areas.

(2) Serial Number: A unique identification number assigned to your lift truck. It is also stamped on the frame of your lift truck. Use this number when requesting service information or ordering replacement parts to ensure accuracy.

(3) Capacity: Shows the maximum lifting capacity of the lift truck with respect to the load center and the fork height.

(4) Weight: The unloaded weight of the lift truck. It does not include the weight of the battery. Always use the total (loaded) weight of the lift truck when operating on elevators, dock boards, or floors with a limited capacity.

(5) Battery Type: Identifies the battery type, the battery voltage, and the maximum amperage.

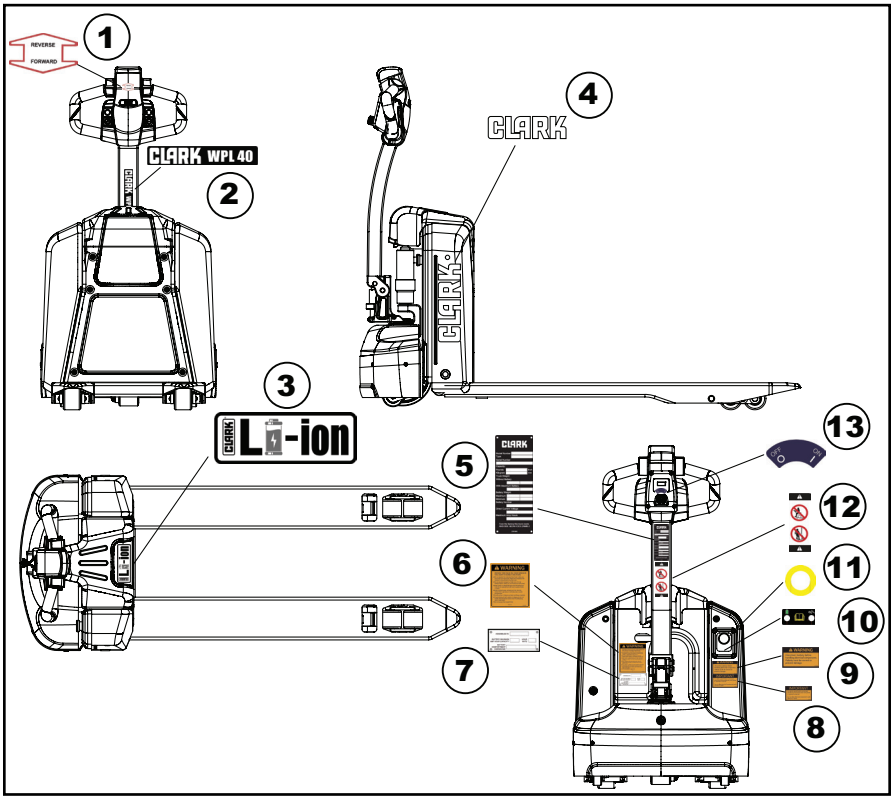
CAUTION

By law, all modifications affecting capacity or safety must be approved by the manufacturer before changes to the lift truck can be made.

A new data plate is required whenever modifications are made to the lift truck that may affect capacity, such as adding an attachment. Contact your authorized CLARK dealer for an updated data and capacity plate showing the correct capacity.

Decals

Decals



1. Travel Direction
2. WPL40
3. Li-Ion
4. CLARK
5. Date Plate
6. Operator Warning
7. Battery Specifications
8. Electrical Warning
9. Battery Warning
10. Manual/Fault Indicator
11. Emergency Disconnect
12. No Riders/Riding Warning
13. Keyswitch

WARNING

Safety or warning decals that are unreadable or missing should be replaced immediately.

Safety Decals		
Name	**Description**	**View**
Operator Warning	The operator warning decal describes how to safely operate the lift truck.	
Electrical Warning	This decal gives the operator information about the proper use and cleaning of the electrical components of the lift truck.	
Battery Warning	This decal warns the operator to disconnect the battery and to maintain correct battery polarity.	
No Riding OR Riders Warning	This decal warns the operator of the danger of attempting to ride lift truck or allowing other personnel to ride the lift truck.	

Section 4. Operating Your Lift Truck

Contents

Before Operating the Lift Truck

IMPORTANT!
Read the Operator's Manual before operating the lift truck.

WARNING

- Safe operation is always the responsibility of the operator!
- The operator must be trained and authorized to operate this lift truck.
- Only operate the lift truck in a safe and controlled manner. Improper use of a lift truck is dangerous and can cause injury or death to the operator or nearby personnel.
- Always inspect the lift truck before starting your shift. Make sure all controls and systems operate correctly and as intended from the manufacturer.
- Do not attempt to start or operate the lift truck from outside of the operator's position.
- Always use safe judgment and extra care when handling loads.

WARNING

Only operate in work areas that have been approved for your lift truck type. Always check the classification of the work area in which you intend to operate. The type designation for the lift truck is shown on the data plate.

Starting From a Safe Condition

Before operating the lift truck, do the following:

1. **Read and understand the Operator's Manual.**
2. **Perform the required Daily Inspection.**
3. **Check that the forks are fully lowered to the ground.**
4. **Check that all lift truck controls are in neutral.**
5. **Check that the emergency disconnect switch is not depressed.**
6. **Turn the keyswitch to the ON position.**
7. **Check that the brake and directional controls function correctly.**

Safe Operation

Look where you are going...

Check that your intended path of travel is clear of obstacles and pedestrians. Watch for other personnel, lift trucks, and any other obstructions in your path of travel and work area. Do not rely on your lift trucks warning lights or alarms to alert others while operating your lift truck. Use the horn at intersections and wherever your view is obstructed.

Protect yourself and those around you...

Do not operate the lift truck from outside the operator's position. Do not reach or place hands, arms, legs or head in or near the moving components of the lift truck. Do not allow personnel to stand near the lift truck while operating.

Do not allow riders...

Do not use the lift truck to carry other personnel. The operator is the only person allowed to use the lift truck.

Always have control of your lift truck...

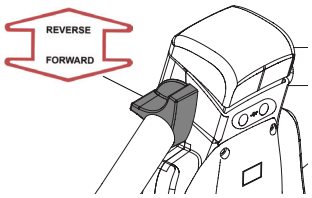
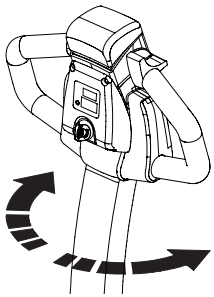
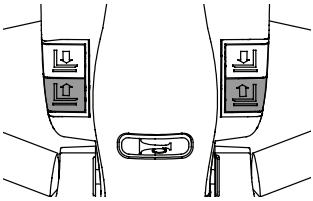
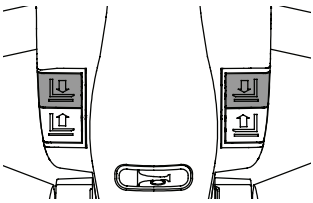
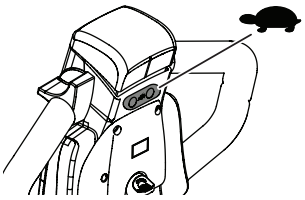
Do not operate a lift truck if your hands or feet are wet or greasy. Avoid bumps, holes, slick spots, and debris in your path that may cause the lift truck to lose traction or tipover. If unavoidable, slow down and carefully drive past them. Always reduce speed when traveling on wet or slick areas. Avoid sudden movements when operating the lift truck. Start, stop, travel, steer, and brake in a smooth and controlled way. Operate your lift truck at a speed that allows for safe, controlled stopping. Always travel slowly while turning.

Grades, ramps, and inclines...

Use care when operating on ramps, inclines, and uneven areas. Always travel straight up and down slowly when on a sloped surface. Do not attempt to turn or drive at an angle when on sloped surface.

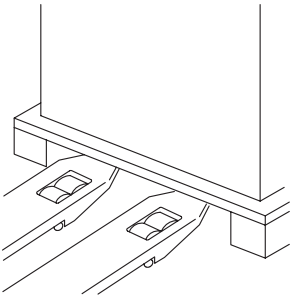
Practice safe operation every time...

It is your responsibility to safely operate your lift truck. Do not perform stunt driving or horseplay. Observe your work areas traffic rules. Always be in control of your lift truck. Read and understand the information in this Operator's Manual. Stay alert and look for warning icons and indicators that may appear on the display. If an error occurs, immediately stop operating the lift truck. Report the issue to your supervisor or lift truck technician. Do not operate a lift truck that is faulty or is in need of repair.

Operating the Controls		
Name	**Operation**	**View**
Traveling	Rotate either the left or right side directional control to either the forward or reverse direction. The tiller arm must be in the travel position (brake released) to travel The more the control is rotated, the faster the lift truck will travel.	
Steering	Rotate the control handle and tiller arm to the right or left direction to steer the lift truck.	
Raising the Forks	Press and hold either lift button to raise the forks.	
Lowering the Forks	Press and hold either lower button to lower the forks.	
Low Speed (Turtle Mode)	Press and hold one of the low speed buttons. Rotate the directional control to travel in low speed mode. Low speed mode can be used when the tiller arm is fully vertical.	

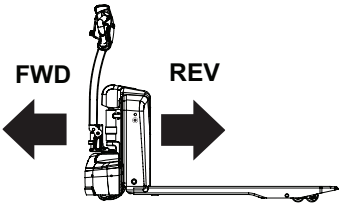
Load Handling

Picking Up a Load



- Approach the load slowly and carefully. Center the forks with the load.
- Adjust the height of the forks so that they are easily be inserted into the pallet.
- Engage the load as far as possible.
- Check that the lifting area is clear of any obstructions before lifting the load.
- If the forks are longer than the load, move back until they no longer extend beyond the load. Raise the load high enough to clear the floor. Move back slowly, enough to clear any obstacles, and set the load down. Move forward until the load is squarely positioned against the load backrest (if equipped).

Traveling With a Load



- Raise the load completely before moving the lift truck.
- Avoid any operating hazards and observe all general lift truck safety rules while operating with a load.
- Slow down and watch when turning. Be aware of the lift trucks rear-end swing.
- Always travel in the forward direction (forks ahead) when carrying a load.
- Only travel in the reverse direction (forks behind) to unload a load.

Dropping Off a Load

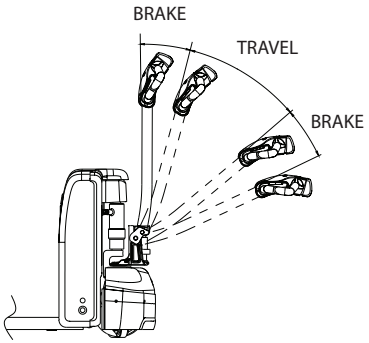
1. Move the load into the correction position.
2. Center the load with the drop off area and approach slowly.
3. Fully lower the load.
4. As needed, adjust the fork height and tilt the upright forward slightly to easily remove the forks from the load pallet.
5. Carefully move backward until the forks are clear from the load.

CAUTION
Make sure the forks do not extend past the load.

WARNING
When operating the lift truck, ascend or descend grades slowly, and with caution. Do not operate on grades or ramps greater than 5%.

Braking

Normal Braking



The braking system for the lift truck is electronically controlled. When the control handle is released (UP position) or fully rotated down (DOWN position), the electromagnetic (EM) brake is applied and the drive motor is stopped.

Stopping the Lift Truck:

(**1**) The preferred method of braking is by plugging (see description below).

(**2**) While traveling, rotate the control handle fully down or fully up to stop the lift truck.

Plugging

The lift truck can change direction, without braking, by plugging. Plugging is a method of braking the lift truck and changing direction quickly. While traveling forward or backward, move the directional control lever to the opposite direction. The lift truck will slow to a controlled stop and then begin to accelerate in the opposite direction.

The plugging distance is controlled using the directional control. The farther the directional control is rotated, the shorter the distance will be until the lift truck changes direction.

Emergency Reversal Switch

When the emergency reversal switch strikes an object or person (or pressed by the operator), the lift truck automatically propels itself in the **reverse** direction and stops. Reverse is defined as the direction in which the forks point. The lift truck will return to normal operation when the emergency reversal switch is released.

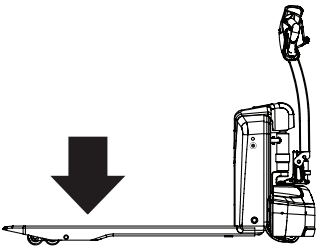
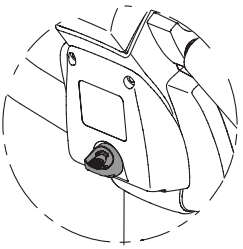
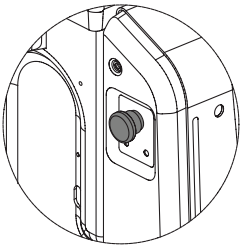
Emergency reversal is disabled when the slow speed buttons (turtle mode) are being used.

WARNING
Always stop the lift truck using smooth, controlled braking. Excessively hard braking can cause wheel sliding and loss of control, which can lead to a lost load or an accident.

WARNING
When plugging, be careful when changing direction to prevent a load from shifting or falling of the forks.

WARNING
The emergency reversing switch is disabled when the slow speed (turtle) buttons are depressed.

Parking

Parking the Lift Truck		
Step	**Procedure**	**View**
1	Stop the lift truck and lower the forks to the ground. Rotate the handle until it stops.	
2	Turn the key switch OFF.	
3	Press the emergency disconnect button. If leaving for an extended period, block the drive wheel	

WARNING

- Park away from high traffic areas.
- Do not block emergency exits or routes, stairways, or equipment.
- Do not park on a ramp or grade.

Section 5. Maintaining Your Lift Truck

Contents

WARNING

THIS SECTION IS INTENDED FOR SERVICE TECHNICIANS ONLY!
The following information is to be used as a reference for determining your lift trucks Planned Maintenance (PM) schedule. For complete maintenance and service information, refer to your Service Manual.

Safe Maintenance

The following instructions have been prepared from current industry and government safety standards applicable to industrial truck operation and maintenance. They are listed here for the reference and safety of all workers during inspection and maintenance operations. If you have any questions regarding the inspection or maintenance procedures for your lift truck, please contact your CLARK dealer.

1. Lift trucks can become hazardous if maintenance is neglected. Therefore, suitable maintenance facilities, trained personnel and procedures shall be provided.
2. Maintenance and inspection of all lift trucks shall conform with the manufacturer's recommendations.
3. A scheduled planned maintenance, lubrication, and inspection system shall be followed.
4. Properly ventilate all work areas and keep floor clean and dry.
5. Do have fire protection equipment present in the work area. Do not use an open flame to check the electrolyte level. Do not use open pans of fuel or flammable cleaning fluids for cleaning parts.
6. Operation of the lift truck to check performance must be conducted in an authorized, safe and clear area.
7. **Before Starting Maintenance or Repair**:
   - Raise and support the lift truck using an appropriate lifting device.
   - Use appropriate supports prior to beginning work.
   - Disconnect the battery before working on the electrical system.
   - Fully lower the forks and relieve the hydraulic pressure before working on the hydraulic system.
8. **Before Driving the Lift Truck**:
   - Install the battery.
   - Insert the key and turn the keyswitch to the on position.
   - Check that the path of travel is clear.
   - Check the function of the directional controls and the emergency disconnect switch.
   - Check the service and emergency brake functions.
9. **Before Leaving the Lift Truck**:
   - Park the lift truck in a designated area.
   - Fully lower the forks to the ground.
   - Turn the keyswitch to OFF and remove the key.
   - Remove the battery.
10. All brakes, steering mechanisms, control mechanisms, warning devices, lights, guards and safety devices, lift mechanisms, and frame members must be carefully and regularly inspected and maintained to a safe operating condition.
11. Specialized lift trucks or devices designed and approved for hazardous area operation must receive special attention to ensure that maintenance preserves the original, approved safe operating features.
12. The hydraulic system must be regularly inspected and maintained to ensure that excessive leakage (drift) has not developed to the extent that it creates a hazard.
13. All batteries, motors, controllers, switches, protective devices, electrical conductors and connections must be inspected and maintained.
14. Refer to the manufacturer's (CLARK) procedures for replacing battery contacts to avoid injury or damage to the equipment.
15. lift trucks must be kept clean to minimize the risk of fire and to aide in the detection of damaged or defective parts.
16. Always use replacement parts and fluids that are of a quality at least equal to that of the Original Equipment Manufacturer (OEM).

Operator's Daily Checklist

Operator's Daily Checklist

Date: _____

Truck Type: ☐ IC Ride (LPG/Diesel/Gas) ☐ Electric Ride ☐ Electric Narrow-Aisle ☐ Electric Walkie-Pallet-Stacker

Truck Serial Number: _____ Operator: _____ Supervisor's OK: _____

Current Hour Meter: _____

Do the following visual checks before the start of each shift:

- Mark each item accordingly: **OK** ☐ **NR** ☒ **NR** = Needs Repair
- Circle the problem and describe in detail using the space provided below.
- Notify your supervisor and/or maintenance department immediately if any issue is found.
- **NEVER OPERATE A DAMAGED OR FAULTY TRUCK!**

OK	NR	VISUAL CHECKS
		Body and Exterior (damaged, worn, missing)
		Wheels and Tires (damaged, worn, loose)
		Battery (damaged, electrolyte level, loose)
		Upright (damaged, loose, missing)
		Forks (damaged, worn, loose)
		Overhead Guard (damaged, loose, missing)
		Data Plate and Decals (damaged, missing)
		Operator's Manual (damaged, missing)
		Hydraulic Fluid (level, dirty, leaking)
		Drive Axle Fluid (level, dirty, leaking)
		Steer Axle Fluid (level, dirty, leaking)
		Brake Fluid (level, dirty, leaking)
		Engine Oil (IC) (level, dirty, leaking)
		Engine Coolant (IC) (level, dirty, leaking)
		Engine (IC) (rough idle, noisy, leaking)

OK	NR	VISUAL CHECKS
		Dash Display (damaged, operation)
		Gauges (damaged, operation)
		Alarm Codes (controller, DTCs)
		Seat Belt (damaged, worn, operation)
		Horn (damaged, operation)
		Lights (damaged, operation)
		Alarms (damaged, operation)
		Direction Control (loose, binding, operation)
		Steering (loose, binding, operation)
		Park Brake (loose, binding, operation, adjustment)
		Service Brake (loose, binding, operation, adjustment)
		Lift (loose, binding, operation, excessive drift)
		Lower (loose, binding, operation, excessive drift)
		Tilt (loose, binding, operation, excessive drift)
		Auxiliary (loose, binding, operation)

Description of Problem(s):

NOTE

CLARK has prepared an *Operator's Daily Checklist* to assist you in performing and documenting your daily inspections. This form is available from your CLARK dealer.

Daily Inspection

Daily Inspection Overview	8-10 Hours (Daily)	OK	NA	Explanation
CHECK				
Obvious damage	●			
Fluid leaks	●			
Drive and load wheels	●			
Data plate and warning decals	●			
Display operation	●			
Controller errors or alarms	●			
Horn operation	●			
Hydraulic operation	●			
Speed control operation	●			
Steering control operation	●			
Service brake operation	●			
Parking brake operation	●			
Emergency stop switch operation	●			
Loose fasteners	●			

WARNING

OSHA requires the operator to inspect the lift truck before beginning each shift to help ensure a safe operating condition.

Cleaning

Cleaning Rules

Always maintain a clean lift truck. Do not allow debris or contaminants to accumulate on the lift truck. Clean any excess or leaking grease and oil before operating the lift truck. Before attempting to clean the lift truck, all efforts to prevent shorting (arcing) of the electric circuits must be completed.

Your specific operating environment determines the amount and extent of cleaning required for your lift truck. For severe truck applications, frequent cleaning is required to allow for safe and optimal lift truck operation.

- Remove the battery before cleaning the lift truck.
- Use clean, dry low-pressure air and/or non-conductive, anti-static brushes to clean electrical components.
- Do not use pressurized water to clean the lift truck.
- Do not use flammable solvents to clean the lift truck.
- Clean the lift truck at least every PM interval.
- After cleaning, check all lift truck functions before operating.

CAUTION

Per OSHA, when using compressed air to clean the lift truck, air pressure must **not** be greater than 207 kPa (30 psi).

WARNING

Always wear appropriate eye protection when cleaning.

Operating Conditions

Planned maintenance intervals are mostly influenced by operating conditions. The service intervals specified in the following PM table are for normal operation. For severe or extreme operation, the maintenance intervals should be shortened to ensure optimal lift truck performance and reliability. Contact your authorized CLARK dealer if you have questions regarding the recommended service intervals for your specific application.

Normal Operation:

Standard 8 to 10 hour material handling operation in a clean, indoor location with smooth and level floors.

Severe Operation:

Extended operating hours, continuous operation, or routine capacity loads.

Extreme Operation:

High or low temperatures, sudden temperature changes, outdoor use on rough and uneven floors, or dirty environmental conditions.

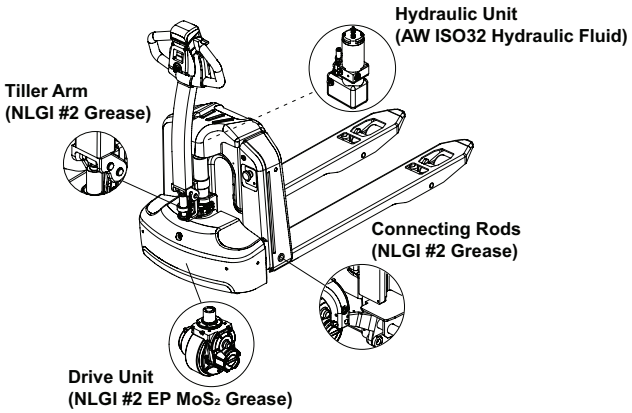
NOTE

The maintenance intervals described in this manual refer to lift truck operating hours and are intended for normal operating conditions.

NOTE

- Inspect your lift truck before each shift.
- Fill out a daily inspection sheet. Retain for your records.
- Report any issues to your supervisor or service technician.
- Do not operate your lift truck until all issues have been corrected.

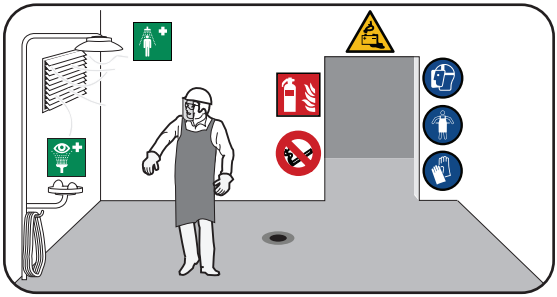
Lubrication Points



PM Service Intervals	250 Hours (3 Months)	500 Hours (6 Months)	1000 Hours (12 Months)	2000 Hours (1 Year)
CHECK				
Cables, wiring, and terminals	■			
Battery and battery compartment	■			
Lifting components	■			
Critical fasteners		■		
Wheel bearings		■		
Controller faults (stored)			■	
Battery cables			■	
Drive unit noise			■	
Hydraulic hoses and connections			■	
Hydraulic leaks			■	
EM-brake air gap			■	
Lifting parts binding or worn			■	
Chassis cracks or damage				■
Lifting and lowering speed				■
Travel speed				■
EM-brake function / distance				■
Controller connections				■
Bearing noise				■
CLEAN				
Drive unit	■			
Controllers	■			
Hydraulic unit	■			
LUBRICATE				
Drive unit / stabilizer wheel bearings	■			
Drive unit (check or add)		■		
Lifting / rod mechanism	■			
ADJUSTMENT				
Caster / stabilizer wheels		■		
Hydraulic relief pressure				■
REPLACE				
Hydraulic fluid				■

Battery

Battery Service Area



Li-Ion Battery Safety and Maintenance

- Do not drop, puncture, or crush the battery.
- Do not overcharge the battery.
- Do not submerge in water.
- Do not disassemble the battery.
- Do not use an unauthorized charging device.
- Do not short-circuit the battery.
- Do not store on the ground.
- Do not store in an enclosed area.
- Do not use the battery in series or parallel.
- Do not place the battery on a conductive object or surface.
- Keep the battery surface clean and free from debris.
- If the battery charge level reaches 10% or less, charge the battery within 48 hours.
- Avoid excessive battery discharge during operation.
- Only operate in ambient temperatures between 5ºC to 45ºC (41ºF to 113ºF).
- Keep the battery away from all heat sources, sparks, and open flames.
- When storing for an extended period, charge the battery to approximately 80% of full capacity every 2 to 3 months.
- Keep the battery clean and dry.
- Retain all battery service records.
- Keep fire prevention and protection equipment nearby.
- Keep battery charger(s) protected away from possible accidental collisions.
- Keep the battery away from contamination by water or corrosive liquid.

WARNING

Do not smoke or allow open flames or sparks near battery charging areas or batteries. Battery service must be performed by authorized personnel only.

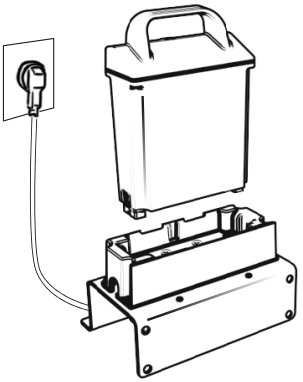
IMPORTANT!

Always follow the appropriate federal, state/provincial, and local laws and regulations on the proper disposal procedures for lithium-ion batteries.

Battery Charging

External Charger (110V):

1. Park the lift truck.
2. Remove the battery.
3. Install the battery to the external charger.



Battery Charge Indicator (external charger):

- RED WARNING - SOLID: charger in fault (error) mode. Refer to the Service Manual.
- AMBER WARNING - FLASHING: external fault (error). Refer to the Service Manual.
- GREEN WARNING - FLASHING: USB port active.
- GREEN WARNING - SOLID: safe to remove USB flash drive.
- GREEN BATTERY HALF - FLASHING: battery charging (low).
- GREEN BATTERY HALF - SOLID: battery charging (high).
- GREEN BATTERY WHOLE - FLASHING: battery charging (high).
- GREEN BATTERY WHOLE - SOLID: charging complete.
- BLUE - SOLID: AC power available (plugged in).

CAUTION

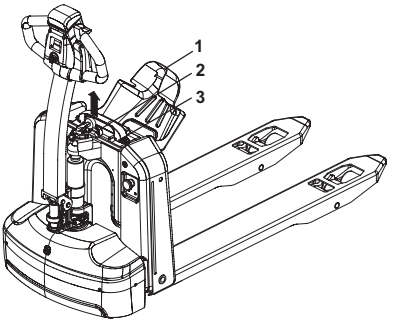
To improve battery life and avoid damaging the lithium-ion battery, charge the battery before lift truck function is reduced.

CAUTION

Do not attempt to charge the battery if the ambient temperature is below 5ºC (41ºF). If the battery is stored in a cold environment for an extended period, allow the battery to warm up to operating temperature before charging.

Battery Removal and Installation

1. Park the lift truck.
2. Turn the keyswitch to the OFF position.
3. Open the battery compartment cover (**1**).
4. Rotate the battery lock (**2**) to release the battery.
5. Pull up to remove the battery (**3**).
6. Store the battery in a dry, elevated, and temperature controlled area.
7. Installation is the reverse of removal.



Section 6. Storage and Towing

Contents

WARNING

THIS SECTION IS INTENDED FOR SERVICE TECHNICIANS ONLY!
The following information is to be used as a reference. For complete maintenance and service information, refer to the Service Manual.

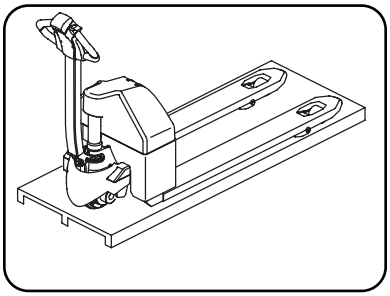
Storage

Storing

Perform the following if the lift truck is not used for one (1) week or longer:

- Li-Ion Battery: fully charge the battery and perform routine maintenance of the battery. Check the battery every two (2) months and charge to 80%, if needed. Do not store below 5ºC (41ºF). If removed, do not store the battery on a conductive surface.
- Hydraulic System: replace the hydraulic fluid when storing the lift truck for one (1) year or longer.
- Drive Unit: replace the drive unit gear grease when storing the lift truck for one (1) year or longer.
- Drive and Load Wheels: raise and support the frame of the lift truck with blocks to prevent extend loading of the wheels to prevent distortion when storing.

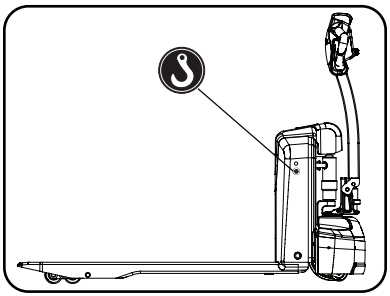
Returning to Service



Check the following after storing for an extended period:

- Lift truck damage or deterioration
- Wheels
- Horn operation
- Brake operation
- Control handle operation
- Lift and lower operation
- Speed and directional control operation
- Apply grease to lubrication points
- Battery electrolyte level and charging rate
- Battery connector, terminals, and receptacle
- Check hydraulic fluid and gear lubrication levels.

Lifting or Securing



Perform the following to secure the lift truck for transport or attach a lifting device:

1. Safely park the lift truck.
2. Press the emergency disconnect switch, turn the lift truck keyswitch to OFF, and remove the key.
3. Remove the battery.
4. Attach an appropriate lifting device or straps to the lifting points on either side of the lift truck frame.

WARNING

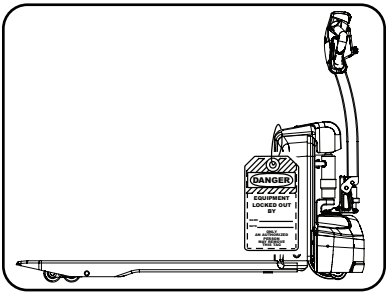
Avoid possible injury or death when lifting heavy components. Using defective or undersized lifting equipment could result in damage to equipment or serious injury and/or death. Make sure all lifting equipment is: free of defects, meets the load capacity requirements, and is OSHA certified (if applicable).

Towing

Disabled Lift Truck

If your lift truck becomes disabled...

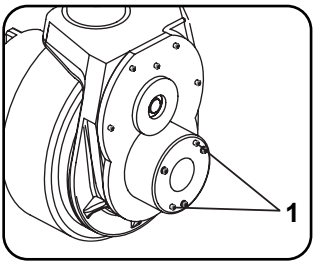
- Safely park the lift truck and remove the key.
- Attach an **OUT OF SERVICE** tag.
- Report the issue to your supervisor or certified lift truck technician.

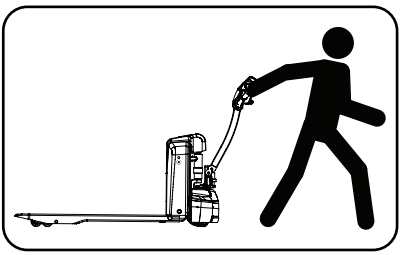


WARNING
Do not operate a lift truck that has requires service or repair.

Towing the Lift Truck:

1. Turn the keyswitch to the OFF position.
2. Press the emergency disconnect switch.
3. Block the drive wheel to prevent the lift truck from rolling away.
4. Release the parking brakes:
   a. Remove the cover.
   b. Position the drive unit so that the electromagnetic (EM) brake is accessible.
   c. Install the brake release bolts (**1**) to the EM brake as shown. The bolt size is M4x1.25x35 mm (not included).
   d. Tighten the bolts until the brake is fully released. Do not overtighten.
5. Tow the disabled lift truck to a designated area.
6. Remove the brake release bolts before returning the lift truck to service.





CAUTION
The brake release bolts must be removed before operating or damage will occur.

WARNING
Do not release the electromagnetic brake when parked on an incline or grade.

Section 7. Specifications

Contents

CAUTION

CLARK products and their specifications are subject to improvements and change without obligation of prior notice.

WPL40

Rated Load Capacity

Model	Maximum Load Capacity
	24" (609 mm) Load Center
WPL40	4000 lb (1814 kg)

Weight

Model	Gross Weight (Capacity Load)		Service Weight (No load, battery included)	
	kg	lb	kg	lb
WPL40	1984	4373	170	375

Battery

Model	Type	Weight		Rated Capacity	Rated Voltage	Charging Time	External Charger
		kg	lb	Ah	V	hr	V
WPL40	Li-Ion	14	30.8	20	48	2	110

Recommended Fluids and Lubricants

	Drive Unit	Hydraulic System	Lubrication Points
Type	NLGI #2 EP MoS_2	AW ISO 32	NLGI #2 EP Grease
Capacity	110 g (3.8 oz)	0.2 L (0.21 qt)	N/A
Specification	CLARK MS-107D	CLARK MS-68	CLARK MS-107C
Part Number	VV70112	1802155	VV608

IMPORTANT!
All capacities and weights are based on a standard equipped lift truck.

NOTE
Always use genuine CLARK replacement parts and fluids.

Scan Link Below

Safety Starts with You!

OM-1200

CLARK® Material Handling Company

700 Enterprise Drive
Lexington KY 40510