







### **WARNING**

It's the law, you must be trained and certified to operate this truck. (OSHA § 1910.178)

You or others around you can be seriously injured or even killed if you don't use this truck correctly.

Read and obey all warnings and instructions in this Manual\* and on the truck.

Head, arms, hands, legs or feet outside the operator area can be pinned or crushed whenever the truck is moving. Stay within the operator area and **stop the truck completely before getting on or off.** 

A dockboard can move or drop while you are on it. Or you could drive off a dock. Falls from docks or dockboards can cause serious injury or even death. **Make sure you are safe.** 

Inspect your truck before starting work, make sure it is in good working order.

\* Additional copies of this Operator Manual and all Truck Labels can be obtained from Crown Equipment Corporation, New Bremen, Ohio 45869 U.S.A. www.crown.com

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## You Must be Trained



### IT'S THE LAW, YOU MUST BE TRAINED AND CERTIFIED

Federal law states that only properly trained operators are permitted to operate a powered industrial truck and that your employer must train you and certify that you are qualified to operate this powered industrial truck. (OSHA §1910.178)



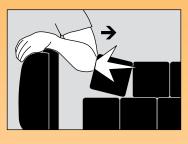
**Do not operate this truck** in your work place until you have been trained and certified by your employer.

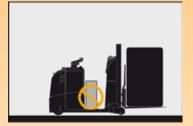


You could be killed or seriously injured if you are not adequately trained for lift truck operation!

## **Protect Yourself**

### **A** Know the Hazards





### **DRIVE CAREFULLY**

• Never stick a foot or any part of your body outside the truck, no matter how slow the truck is moving. You can not stop 4535 kg (10,000 lbs) with any part of your body. A foot or hand caught between the truck and a fixed object will be crushed or even cut off.

- Keep your hands on the controls and feet on the platform. Keep your body within the operator area.
- Don't put your hands or arms over or through the mast.
- Never place objects anywhere on the operator platform. They would be a trip hazard and could affect truck speed and steering.
- Stay away from the edge of docks and ramps. Make sure dockboards are secure. Check that trailer wheels are chocked or the trailer is locked to the dock.
- Keep your truck under control at all times. Drive at a speed that allows you to stop safely. Be even more careful on slippery or uneven surfaces. Do not drive over objects on the floor.
- Travel with the load or forks close to the ground. Watch for overhead obstructions. Perform all truck movements smoothly and at a speed that will give you time to react in an emergency.

### 4 Protect Yourself

## Know the Hazards





WARNING

Stay clear of all

moving parts.

Moving parts can

cut or crush hands, feet, arms or legs.

#### LOOK WHERE YOU'RE DRIVING

Always be alert to the area around you and watch where you are driving. You could be pinned or crushed by fixed objects, or by objects intruding or poking into the operator area.

#### **AVOID FALLS**

Falls are very serious accidents, you can be crushed or even killed. The best way to prevent injury is to know where you are at all times and follow the rules of safe truck operation. Unless you can safely jump completely clear of the falling truck, there is no sure way to avoid injury if you drop from a dock or dockboard.

Be extremely careful when working around docks, dockboards and trailers.

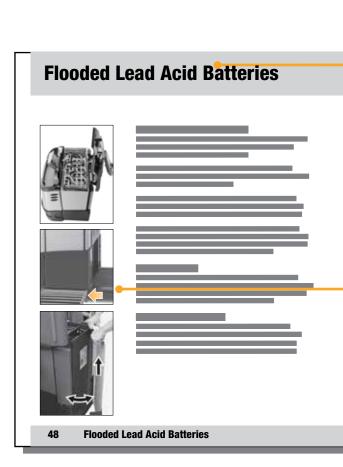
#### **USE YOUR TRUCK SAFELY**

- Keep your hands and feet away from all moving parts such as forks and wheels. Make sure the load backrest is in place.
- Never stand on or under the forks, or allow anyone else to stand on or under them. The only way to lift people is with an approved work platform. Never allow passengers on the truck. There is no safe place for them.
- Before you leave your truck:
  - Come to a complete stop.
  - Lower the forks to the floor.
  - Log out, turn off your truck, and remove the key.

### Protect Yourself 5

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### 6 Contents

## What's in it for You?

#### WHAT'S IN IT FOR YOU?

The better you understand your truck and how to use it, the better and safer operator you can be. Here are some guides to using this manual.

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A Know the	Hazards	W
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Do not smoke, use open flame, or create an arc or sparks near this battery. Ventilate well in enclosed		
areas and when charging. Batteries contain Sulfuric Acid which causes severe burns. Do not get in		C
causes severe burns. Do hot get in eyes, on skin, or clothing. In case of contact, flush immediately. Get medica attention if your eyes are affected.		p u
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	Flooded Lead Acid Batteries	

### **QUICK LOCATORS**

In addition to the "Contents" page you can use page headings to find topics. Some pages also have a picture of the truck in the corner showing features or functions covered on that page.

### **"KNOW THE HAZARDS"**

Watch for and read these special blocks. You will find information about possible safety hazards and how to avoid them.

### **HOW-TO-DRAWINGS**

On many pages you will find pictures as well as text to help you understand how to use your truck safely and productively.

## **Your Rider Pallet Truck**



### **RIDER PALLET TRUCKS**

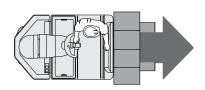
Your pallet truck is designed to lift, move, and stack loads.

### YOUR PALLET TRUCK IS NOT AN AUTOMOBILE

With a load it may weigh more than 3 automobiles.

- You don't steer the same.
- You don't brake the same.
- You don't accelerate the same.

### Path of Truck Recommended Walking Path



### HOW TO DRIVE WHEN WALKING OR COASTING

- Travel power unit first only. Do not turn. Stay to one side of the truck. Use the hand closest to the truck to operate the control handle.
- Watch your feet. Stay out of the path of the truck and load.
- Make certain the area ahead of you is clear.

### HOW TO DRIVE YOUR TRUCK POWER UNIT FIRST

Keep both feet on the platform. Place hands on the control handle and lean against the backrest. Keep your entire body within the operator area.

### HOW TO DRIVE YOUR TRUCK FORKS FIRST

Keep both feet on the platform. Place one hand on the backrest hand hold and the other on the control handle while leaning against the backrest. Keep your entire body within the operator area.

#### **GIVE YOUR BODY A BREAK**

Take advantage of stop time. Flex your arms and legs. Staying alert will help you be a better and safer driver.

#### **BUILT TO STANDARDS**

This truck was designed and built to current industry and government standards and guidelines. For more information see the following:

- American National Standards Institute (ANSI/ITSDF B56.1) Download free from itsdf.org
- Occupational Safety and Health Act (OSHA) §1910.178 Download free from osha.gov
- Underwriters Laboratory (ANSI/CAN/UL583)
- National Fire Prevention Association (NFPA 505)



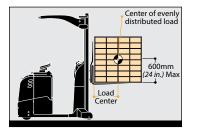
## **Pallet Truck Parts**





Pallet Truck Parts 11

## **Capacity & Load Center**



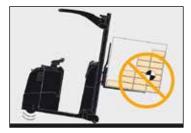
### WHAT IS YOUR TRUCK CAPACITY?

Capacity is the load (including pallet or container) that can be lifted to a given height at a given load center. See the capacity plate on your truck. Make certain you use the correct units of measure.

### WHAT IS LOAD CENTER?

Load center is the distance from the load backrest or vertical face of the fork to the center of an evenly distributed load.

**Note:** The Load center can differ from the visible center position on the forks.



### LOADS MUST BE EVENLY DISTRIBUTED

Your truck could tip over if a load is shifted to the front or side of a pallet or container. Make sure your load is resting against the load backrest or vertical face of the forks before you raise, lower, or travel.

The forks should be at least two-thirds (67%) the length of the load. Crown recommends the forks be three-fourths (75%) the length of the load. Make sure the forks do not extend beyond the load.

## **A** Know the Hazards



#### **KNOW YOUR LOAD**

Do not exceed the capacity shown on your truck's capacity plate. Do not handle unstable loads.

### **EXCEEDING TRUCK CAPACITY CAN CAUSE AN ACCIDENT**

Know the capacity of your truck as shown on your capacity plate. Pay attention to:

- Weight of load
- Load Center
- Lift height

### **CENTER THE LOAD**

Your truck could tip over, in any direction, if a load is shifted to the front or side of a pallet or container. Make sure your load is evenly distributed and centered over the forks.

## **Capacity Plate**

### **CAPACITY PLATE INFORMATION**

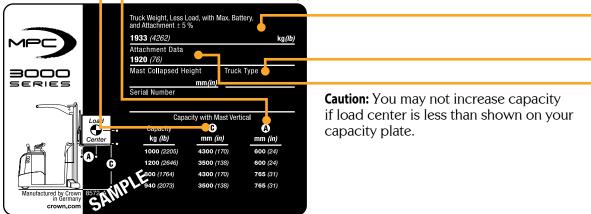
The capacity plate is located on the power unit cover. It contains:

- Serial Number
- Capacity information (load, load center and lift height)
- Truck Type (a fire safety rating)
- Truck Weight, Less Load, with Max Battery, and Attachment± 5 %
- Attachment information (if any)

### **READING YOUR CAPACITY PLATE**

Capacity may be reduced as lift height **(b)** increases. For example: On the sample plate, 1200 kg (2646 lb) can be lifted to 3500 mm (138 in). But above 3500 mm (138 in), to 4300 mm (170 in), capacity is reduced from 1200 kg (2646 lb) to 1000 kg (2205 lb).

Capacity is reduced as load center (A) increases. For example: On the sample plate, 1200 kg (2646 lb) can be lifted if the load center is 600 mm (24 in). But if the load center is increased to 765 mm (31 in), capacity is reduced from 1200 kg (2646 in) to 940 kg (2073 lb).



### OTHER LIFT HEIGHTS AND LOAD CENTERS

Contact Crown for capacities at lift heights or load centers not given on your capacity plate.

#### SAMPLE CAPACITY PLATE

The information shown on this sample plate does not apply to your truck.

### 14 Capacity Plate



#### **TRUCK WEIGHT**

Dockboards, elevators and some floors have limited capacity. Check your capacity plate for the weight of your truck. Remember to add the weight of the load you have on the forks. Make certain you use the correct units of measure.

#### **TRUCK TYPE**

Some truck types are not permitted in areas where there are fire hazards. Watch for marked areas. For example: You must not drive a type E or ES truck into an area restricted to EE or EX trucks.

#### ATTACHMENT DATA

If an attachment on your truck does not match the information given on your capacity plate, don't operate your truck. Your capacity plate may be wrong. Report the problem to your supervisor.

### Capacity Plate 15

## Display

### **BATTERY CHARGE DISPLAY**

The green bars show how much charge is left. Have the battery changed or recharged if the yellow light is flashing.

### PARKING BRAKE INDICATOR

Parking Brake is applied.

### **MESSAGE PANEL**

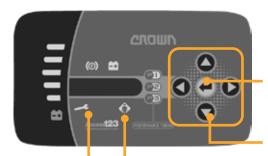
Displays truck information such as: hours of operation, event codes along with instructions, battery charge and other data. Anytime you hear a beep, or if the truck slows down or won't work, check the message panel for instructions.



### **PERFORMANCE SETTING**

Indicates the level that your company has programmed this truck to operate at.

### 16 Display



### ENTER OR RETURN BUTTON

Use to navigate in and out of menus and select inputs.

### NAVIGATION BUTTONS

Up, Down. Left and Right Arrows are used to scroll through menus.

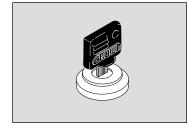
### EVENT CODE LIGHT (OPERATOR CORRECTABLE)

The display light shows a detected event which the operator can correct. See the display for instructions.

### SERVICE LIGHT (SERVICE REQUIRED)

The display shows the code for a detected event which requires service. Contact your supervisor or service department.

## Power On & Off



### **KEY SWITCH OPTION**

Turn the truck on by turning the key clockwise to ON. Check that all display lights are working.

Turn the truck off by turning the key counterclockwise to OFF.

Before leaving, turn off the truck and remove the key.



### **DISPLAY OPTION**

Press and hold the e button for two seconds to turn on the truck. Enter your user code when PIN appears on the display. Press and hold the e button for three seconds to turn off the truck.

Before leaving, log out and turn off the truck.



### **POWER DISCONNECT**

Pull up on the battery connector handle, to disconnect the battery and cut all power.

Always disconnect the battery any time the truck isn't working correctly. The key switch does not cut all power to the truck.

Don't use the truck if it's not working correctly. Notify your supervisor.

## **Braking**





#### BRAKING

To apply the brake, press the brake button on the end of the control handle. The truck will continue to brake to a stop even if the brake button is released.

### PARKING BRAKE

The parking brake is automatically applied after the truck comes to a stop.

The parking brake is released when the Forward/ Reverse rocker is moved in the direction of travel.

## Know the Hazards



### **MAKE SURE YOUR BRAKE WORKS**

Test the brake on your truck at the start of each shift. Know the distance it takes to stop before you start working.

If at any time the stopping distance is too long for you, do not drive your truck. Notify your supervisor.

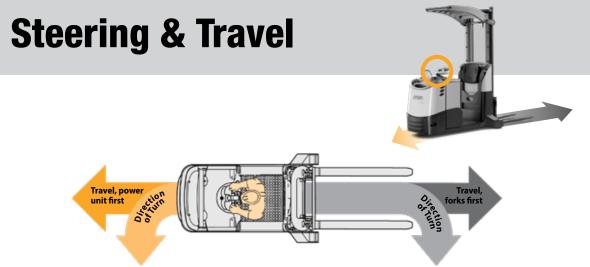
### **SIMILAR LOOKING TRUCKS CAN BE DIFFERENT**

Your company has selected the options which are best for your work area.

If you ever drive a different truck, even one that looks just like yours, be careful. It may not have the same controls, functions, or options.

Operation and performance may vary.

### Braking 19



### STEERING

You control steering by moving the control handle from side to side. *For example: This picture shows the directions the truck can turn when the control handle is moved to the approximate position shown.* 

### **A** Know the Hazards



### **POWER UNIT SWING**

Be careful turning while traveling forks first. The power unit will swing wide in the opposite direction. Make sure you have clearance, and watch out for people in the area.

Keep your hands and feet in the operator area.

**Warning:** Never place objects anywhere on the operator platform. They would be a trip hazard and could affect truck speed and steering.



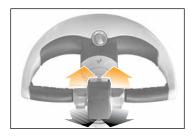
### **SLOW DOWN FOR SPILLS OR WET FLOORS**

Powder or liquid spills can cause slippery floors. Slow down or you could lose control of steering and braking. Be careful and allow for a longer stopping distance.

Don't run over objects on the floor.

### 20 Steering & Travel

# **Traveling & Plugging**



#### TRAVEL

Move the Forward/Reverse rocker in the direction you want to travel.

The farther you move the rocker from the neutral position, the faster the truck will move.



### **HIGH TRAVEL SPEED**

For high travel speed, turn the travel speed switch to the high speed position (), and move the Forward/ Reverse rocker to the maximum travel speed position.



### PLUGGING

Plugging is another way to slow down your truck. While the truck is moving, in either direction, move either Forward/Reverse rocker through neutral to the opposite direction of travel.

Plugging will not hurt your truck.



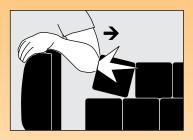
### HORN

Push the switch on the underside of either grip to sound the horn. Use it to warn pedestrians and other drivers.

Use your horn when you come to an intersection or a crosswalk.

## Traveling & Plugging continued

### **Know the Hazards**





#### WATCH YOUR FEET AND HANDS

• Keep your feet on the platform and hands on the controls at all times. This truck weighs over 4535kg (10,000 lbs.) You can not stop or even slow it down with your foot, hand or any part of your body, no matter how slow the truck is moving.

### LOOK WHERE YOU'RE GOING

- Don't use cell phones or similar devices while operating the truck.
- Travel in the direction where you have the best visibility.
- Always be alert to the area around you and watch where you are driving.
- Any part of your body caught between the truck or load, and any fixed object, can be crushed.
- You could also be seriously injured by objects intruding or poking into the operator area.
- Don't put your hands or arms over or through the mast.

### **BRAKING VS. PLUGGING**

Of the two, braking is designed to stop the truck in the shortest distance. Use braking in an emergency, on ramps or in busy areas.

### 22 Traveling & Plugging continued

## **QuickPick**<sup>®</sup>

### **QUICKPICK®**

This optional feature allows you to control travel and braking with a wireless remote or Ring. QuickPick is only active when you are off the platform.



At the start of a shift, snap a charged remote into the glove and pair with the truck.

### PAIRING THE REMOTE

- 1. Enter a valid ID number through the Access display keypad or InfoLink module.
- 2. Display shows the last paired remote
  - If the ID number displayed matches, enter "yes"
  - Enter "no" to pair a different remote
- 3. Follow display prompts
  - Press Brake and Horn buttons simultaneously and then release
  - Press the Go button and then release

**Note:** Pair the remote to the truck at initial power up. If the user code times out, you will need to pair the remote.

### **CHARGING THE REMOTE**

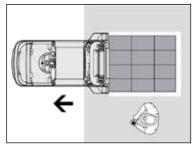
Snap the wireless remote into the charger. Lights on the charger will indicate charge status.



Remote Charger

### QuickPick® 23

## QuickPick<sup>®</sup> continued



Recommended Working Area for QuickPick Operation

### **HOW TO USE**

Align the truck in the aisle and always check that the aisle ahead is clear before pressing the Go Button.

- Keep your feet clear and don't walk in the path of your truck. Stay to the side, or behind the truck and load. Your feet and legs can be seriously injured.
- Operate within the recommended working area.

### Go Button (active when the operator is off the platform)

Double press and hold the Go Button and the truck will travel power unit first (an alert will sound and the strobe lights will flash). You may let go then simply press again to extend travel.

Release the Go Button and the brake is partially applied to the allow the truck to coast to a controlled stop.

#### **Horn Button**

Press to sound the horn.

### **Brake Button**

Press to stop the truck.

### Know the Hazards

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Standing or riding on the forks or pallet can cause a fall. You can be seriously injured or killed.

Never stand or ride on the forks or pallet for any reason.





**REMOTE OPERATION REQUIRES EVEN MORE CAUTION.** 

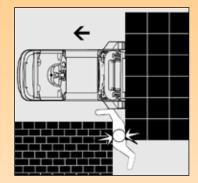
You must be constantly aware of everything around the truck, which includes the pallet and load, rack conditions and pedestrian safety, along with your own safety.

### **USE YOUR TRUCK SAFELY**

- Don't rely on the laser sensors to protect you or others, always stay alert to conditions around you.
- Don't use the remote in congested areas or intersections.
- Don't walk in the path of your truck. Stay to the side, or behind the truck and load.
- Never ride on any part of the truck other than the operator platform.

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### **Know the Hazards**

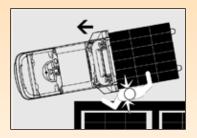


#### PALLET/LOAD WIDTH

Do not exceed the maximum pallet/load width specified on the capacity plate or display, depending on truck model.

Oversize pallets or loads can present a crush hazard.

If an oversize load must be moved, don't use the remote control. Operate the truck from the platform. Have a second person, or "spotter", assist in checking clearances, watching for obstructions and keeping personnel away.



### **USE YOUR TRUCK SAFELY**

- Floors must be level and free of objects.
- Maintain visual contact and stay within 7.6 meters (25 feet) of your truck while using QuickPick. Make certain the travel path is clear.
- Don't get on or off the truck while it is moving.
- Be safe, protect others. Log out, turn off your truck, and remove the key.
- Keep others away from your truck.

## QuickPick® continued



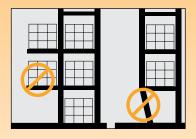
### LASER OPERATION

When active, the laser sensors are designed to stop the truck if stationary objects are detected in the travel path. The lasers are not active when standing on the platform or using the forward/reverse rockers on the control handle. **Be alert to the area around you and don't rely on the laser sensors to protect yourself and others.** The green light on the tower shows laser status.

### **TOWER STATUS LIGHT**

- Light off: operation and lasers are not active.
- Light on: operation is ready to use and lasers are active.
- Light flashing slow: is out of range or event is detected.
- Light flashing fast: an object has been detected.

## Know the Hazards



### **RACK CONFIGURATION**

The laser sensors are designed to work with racks that have vertical front uprights. If uprights are slanted at the bottom, or if the rack overhangs into the aisle, do not operate the truck in that aisle.

Check with your supervisor for approval to use this truck in your work area.

### 26 QuickPick® continued



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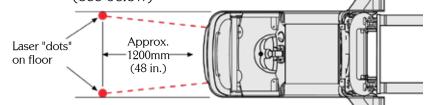
### LASER SAFETY

There are 4 classes of lasers, depending on power. This option uses low powered class 1 and class 2 laser sensors for object detection. Protect your eyes. Avoid direct eye exposure to the laser light.

### DAILY SAFETY CHECK

When performing daily safety check, (pages 34 & 35):

- Before turning on the truck, make certain there is no visual damage to any of the laser sensors, and they are clean and free of debris.
- Be sure strobes and status light are working.
- Check the Brake, Horn, and Go buttons.
- Check alignment of skirt mounted laser sensors. (See below)



#### FCC STATEMENT

**CAUTION:** Changes or modifications not expressly approved could void your authority to use this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### FCC COMPLIANCE

This remote control device has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Any modification made to this device that is not approved by Crown Equipment Corporation may void the authority granted to the user by the FCC to operate this equipment.

#### ISED STATEMENT

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

## Coasting

### COASTING

Coasting can make it easier for you to pick loads while walking to the side of the truck.

The ability to coast is standard. The coasting distance can be adjusted by your service personnel.

When you let go of the forward/ reverse rocker the brake is partially applied to allow the truck to coast to a controlled stop.

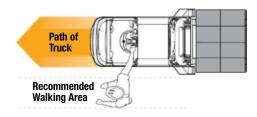
However you can apply the brake by pressing the brake button on the control handle.

Be even more careful when allowing the truck to coast. Make sure you understand the possible hazards. Don't place yourself or others at risk.

#### WHEN RIDING

When moving from the riding position to the walk beside or coast position, stop your truck completely before getting off.

Never get on or off the truck while it is moving.



### WHEN WALKING OR COASTING

- Travel power unit first only. Do not turn.
- Stay to the side of the truck and load. Keep your arm extended to give maximum clearance between you and the truck or load. Keep your feet clear.
- Make sure the area ahead of you is clear.

**Note:** When you are off the platform, travel is always in low speed, and steering is reduced to +/- 10 degrees.

### 28 Coasting

### **Know the Hazards**



### **COASTING REQUIRES EVEN MORE CAUTION**

- Floors must be level and free of obstacles.
- Never allow the truck to coast into a cross aisle.
- Do not coast in pedestrian walkways.
- Watch out for people and other trucks.
- Do not walk in the path of a coasting truck. Stay to the side of the truck and load. Keep your arm extended and your feet clear.
- When coasting, travel power unit first only. Do not turn.
- Always stop your truck completely before getting on or off.

### Coasting 29

# **Raising & Lowering**





### RAISE

Push the RAISE button until the forks are at the desired height.

**Note:** Travel speed is reduced when the forks are raised.



### LOWER

Push the LOWER button until the forks are at the desired height.



### **USING THE BACKREST BUTTONS**

You can raise and lower the forks using the buttons on either side of the backrest.

**Note:** While off the platform lower is limited. To fully lower the forks you must be on the platform.

### **Know the Hazards**

### WARNING

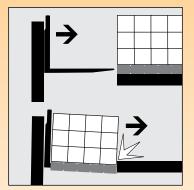
Stay clear of all moving parts. Moving parts can cut or crush hands, feet, arms or legs.

### WATCH YOUR HANDS AND ARMS

Your hand or arm could be pinned or crushed between the mast and a load.

Loads can shift and fall against the mast.

Keep your hands and arms on the power unit side of the mast.



### **CHECK FORK AND PALLET POSITION**

Make sure that the path of the forks and the load is clear.

Make sure that the forks are at the correct position and lift height to enter the pallet.

### Raising & Lowering 31

# **Additional Options**





### SECOND LEVEL STEP

For assistance reaching higher levels, swing the step down.

When the step is in the down position the brake is applied and you cannot travel.



#### PERCH

For extra support while standing, pull the handle under the perch and lift up. Pull the handle and push down to lower the perch.



### **SIMILAR LOOKING TRUCKS CAN BE DIFFERENT**

Your company has selected the options which are best for your work area.

If you ever drive a different truck, even one that looks just like yours, be careful. It may not have the same functions or options.

Operation and performance may vary.

### 32 Additional Options



COLD STORAGE OPTION

Your truck can be operated in cold storage areas only if it is marked with the freezer symbol.

# Know the Hazards

#### **BATTERIES CAN FREEZE AND RUPTURE**

- Do not park trucks in temperatures below freezing.
- Watch the charge status of the battery.
- Charge or replace the battery before the energy is too low.

#### WATCH OUT FOR EXCESS WATER ON THE TRUCK

Make sure that your truck is completely dry before reentering cold storage areas.

### Additional Options 33

# **Daily Safety Check**



### CHECK YOUR TRUCK BEFORE STARTING WORK

You must make sure your truck is safe to use.

### 1. Walk around your truck and check it over.

- Check to make sure the battery is charged.
- Check the battery connector, battery terminals, and battery cables for damage.

For flooded lead acid batteries:

- Check the battery compartment for spilled acid.
- After checking the water level, make sure that the vent caps are in place.
- Make certain the side covers on both sides of the truck are properly installed.
- See that all wheels are in good condition.
- Clean the control handle and hand holds.
- Make certain there are no objects placed anywhere on the operator platform.
- Check that forks are not bent, cracked or badly worn.
- See that the load backrest is in place and secure.
- Look under the truck for signs of hydraulic leaks.
- Try the horn.
- Make sure the power disconnect works.
- Check that all controls work smoothly.

#### 2. Test drive your truck in an uncongested area.

- Try all the hydraulic functions.
- Turn on your truck and check steering.
- Drive the truck slowly in both directions.
- Check braking distance in both directions. Load size and floor conditions can affect these distances.
- Drive through the full speed range in both directions.
- Know the distance it takes to stop before you start working. If the braking distance is too long for you, do not drive your truck. Notify your supervisor.
- Check parking brake operation.

### If anything does not look, work, feel, or sound right, do not operate your truck. Notify your supervisor.

You can get checklist forms from your Crown dealer (part no. OF3772). Used properly, this checklist can alert service people to needed repairs.

## **Be a Safe Driver**



The most

important

### component

is you.

### MAKE SURE YOU ARE READY TO DRIVE

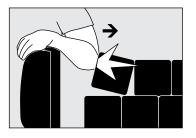
- Do not use this truck unless you are trained and certified.
- Be certain you understand how your truck works and the hazards that go with it. Don't drive the truck if you have any doubts.
- Know the capacity of your truck. Make certain you use the correct units of measure.
- Some trucks are not allowed in areas where there are fire hazards. Be certain your truck is the correct fire safety type for the area.
- Make sure your hands and shoes are clean and dry, and your clothing is proper for the job.

### MAKE SURE YOUR TRUCK IS READY

- Inspect your truck before using it (see pages 34 and 35). If it's not working correctly, or something is broken, notify your supervisor. Don't use the truck.
- In an open area, test the braking. Check at a slow travel speed first, then a faster one. Know the distance it takes to stop before you start work.
- Make certain there are no objects stored anywhere on the operator platform. They would be a trip hazard and could affect truck speed and steering.









### WHEN RIDING

- Never stick a foot or any part of your body outside the operator area, no matter how slow the truck is moving.
- Don't put your hands or arms over or through the mast. Keep your hands on the controls and feet on the platform.
- Never ride on any part of the truck other than the platform.
- Stop your truck before getting on or off.

### **DRIVE CAUTIOUSLY, BE ALERT**

- Look where you are going. Don't let any part of your body get pinned or crushed. Don't get caught between the truck, or load, and a fixed object.
- Travel in the direction that gives you the best view. Slow down in congested areas.
- Slow down for wet or slippery floors. Don't run over objects. Watch out for rough floors.
- Travel with the forks close to the floor and with the load resting against the vertical face of the forks or the load backrest.
- Look where you are going before you change direction of travel.
- Avoid sudden movement of controls. Learn to use them smoothly at a moderate, even rate.
- Be extra careful if you must use your truck in an area where there is a risk of falling objects.

Continued next page...

## Be a Safe Driver 37

# Be a Safe Driver continued

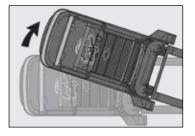


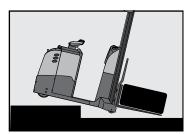
### WATCH OUT FOR OTHER PEOPLE

- Slow down. Yield or stop for pedestrians. Use your horn when you come to a crosswalk or intersection.
- Be careful that you don't pin or crush someone. For example: Never drive your truck toward anyone standing in front of a fixed object
- Be even more careful moving a wide load. Make certain you or someone around you doesn't get pinned or crushed. Have a helper or "spotter" assist you.
- Keep others away from your truck while you're working. Don't ever ride or allow anyone to ride on the load or forks.
- Don't let anyone use your truck unless they are trained and certified.
- Don't allow the truck to coast in a congested area or if there are people in aisle.
- Watch out for power unit swing. Slow down when making turns.
- Never allow passengers on your truck.

#### WHEN LEAVING YOUR TRUCK

- Lower the forks. Log out, turn off your truck, and remove the key.
- Come to a complete stop before leaving truck.
- Avoid parking on inclines. If you must park on an incline, chock the wheels to prevent the truck from moving.







### **AVOID FALLS AND TIPOVERS**

- Stay away from the edge of docks and ramps.
- Check that bridgeplates and dockboards are secure. Check that the trailer wheels are chocked or the trailer is locked to the dock. Check capacities. Be sure your truck, with load, isn't too heavy for where you are driving.
- Properly install jack stands under the front of the trailer when a tractor is not attached.
- Make sure the load you are moving is stable. Center the load. Be even more careful with long, high or wide loads. They can be less stable.
- Watch for overhead obstructions.
- Don't drive onto an elevator unless you are authorized. Check the capacity or load limit and make sure there are no people present. Enter load first and come to a complete stop.

#### **BE CAREFUL TRAVELING ON RAMPS AND GRADES**

- Always operate your truck from the rider position when traveling on a grade.
- With a load, drive with the forks pointed upgrade.
- Without a load, drive with forks downgrade.

Slow down and don't turn on ramps or grades.

# **Power Sources**



#### **POWER SOURCES**

Your truck can be designed to use the following power sources:

- Flooded Lead Acid Batteries
- Lithium-Ion Batteries

If your truck is equipped with a V-Force lithium-ion battery, see the data plate installed on your truck.

Only Crown approved power sources are permitted to be used in your truck. Only authorized service personnel are permitted to modify the power source installed in your truck.

See the power source data plate for the approved power source installed in your truck.

**Note:** Follow the manufacturer's specification and instructions when handling power sources.

#### WORKING WITH POWER SOURCES

Your company should provide an area for all power source work and charging.

Do not charge, refuel, remove, or install a power source unless you are trained and authorized.

#### **BEFORE CHARGING POWER SOURCES**

- Read the instructions for the charger and power source.
- Make sure that the charger has the correct voltage and amperage for the power source.
- Only charge a power source in an authorized area.

# **Charging Power Sources**

#### **CHARGING A FLOODED LEAD ACID BATTERY**

Be sure the charger is turned off before connecting the battery to the charger. Otherwise you might create a spark which could cause the battery to explode.

- 1. Turn off your truck.
- 2. Lift the latch and open the battery cover.
- 3. Unplug the battery connector from the truck.
- 4. Follow the charging instructions from the power source manufacturer. When charging is complete, unplug the charger and plug the battery connector into the truck.

#### CHARGING A V-FORCE™ LITHIUM-ION BATTERY

- 1. Turn off your truck.
- 2. Lift the latch and open the battery cover.
- 3. Plug the charger into the battery charge port.
- 4. Follow the charging instructions for the V-Force lithium-ion battery.

Opportunity charge during breaks or whenever the truck is not being used.

When opportunity charging is complete or the battery is fully charged, unplug the charger from the battery charge port.



#### AVOID DAMAGING THE TRUCK AND BATTERY CHARGER

Make sure that the battery charger is plugged into the battery connector, not the truck connector.

#### **AVOID DAMAGING THE BATTERY**

Batteries that are not properly maintained will fail prematurely.

Always follow the battery manufacturer's instructions.

## Charging Power Sources 41

# **Lithium-ion Batteries**

#### LITHIUM-ION BATTERIES

For trucks equipped with a V-Force lithium-ion battery, the energy status is shown on the truck display.

Trucks qualified and approved to operate with another lithium-ion battery can have a separate display. Use the display installed on the battery to see the energy status.



# 



A damaged lithium-ion battery can be highly flammable. Immediately exit the

area for leaking gas or excessive heat, flames, or

liquid, excessive heat, flames, or sudden noise coming from the battery.

Alert emergency personnel and notify your supervisor. In case of contact, get medical attention.

Do not smoke, use open flame, create an arc or sparks near this battery.

600125-900-004A

#### **TRUCK BATTERIES CAN BE DANGEROUS**

- Immediately exit the area for leaking gas or liquid, excessive heat, flames, or sudden noise coming from the battery.
- Alert emergency personnel or notify your supervisor. In case of contact, get medical attention.
- Do not smoke, use open flame, create an arc or sparks near the battery.

#### **AVOID DAMAGING THE POWER SOURCES**

Do not operate trucks with lithium-ion batteries in freezing temperatures. Do not leave trucks in freezing temperatures.

Always follow the battery manufacturer's instructions.

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# **Flooded Lead Acid Batteries**







### WHEN YOU INSTALL OR CHANGE BATTERIES

- Turn the truck OFF. Brake applies automatically when truck is turned OFF. Check that all controls are in neutral and disconnect the battery.
- Make certain you use the correct size and weight battery. Never operate a truck that has an underweight or undersize battery installed.
- Never let anything metal touch the top of the cells. You could cause sparks or do damage to the battery. Use an insulator (such as plywood) when necessary.
- Use an approved spreader bar to place a battery in, or remove it from, the battery compartment or a stand. Make sure you adjust the spreader bar hooks to fit the battery. Lift and move the battery carefully.

### **USING A ROLLER STAND**

If you use a roller stand to install or remove a battery make sure the roller stand is the same height as the rollers in the truck's battery compartment. Also make sure the roller stand is at least as long as your battery.

### AFTER INSTALLING YOUR BATTERY

- Replace the side cover. Make certain the side cover is in place.
- Connect the battery. Turn the truck ON and check truck operation.

# 44 Flooded Lead Acid Batteries

# Know the Hazards

# 



Batteries produce explosive gas. Do not smoke, use open flame, or create an arc or sparks near this battery. Ventilate well in enclosed areas and when charging.

Batteries contain **Sulfuric Acid** which causes severe burns. Do not get in eyes, on skin, or clothing. In case of contact, flush immediately. Get medical attention if your eyes are affected.

107

## 

Minimum battery size allowed 000 mm (00.00 in.) wide 000 mm (00.00 in.) long

Undersize battery can affect truck handling and stability. You could have an accident.

Use U.L. classified Type E battery.

#### **TRUCK BATTERIES CAN BE DANGEROUS**

Lead acid batteries produces gas that can explode. They also contain acid that could burn or disfigure you.

- Your company should provide an area where it is safe to work on batteries. Use that area for all battery work.
- Do not try to install, remove, charge or service your truck battery unless you are trained and authorized.
- Never smoke or use an open flame around batteries.
- Use protective equipment such as gloves, eye shields, aprons etc.
- See that the battery cells are filled to the proper level.

#### SIDE COVERS MUST BE IN PLACE

The battery could slide out if covers are not in place. Check that both covers are installed before operating your truck.

#### **BATTERY SIZE IS IMPORTANT**

Make certain you use the correct size, type and weight of battery. Never operate a truck that has an underweight or undersize battery installed.

# **Notes**

# Warning Labels



### EACH WARNING LABEL **ON YOUR TRUCK IS IMPORTANT**

Read and obey all of them to protect vourself and others.

#### A WARNING Operate this truck only with an approved electric power source.

This truck as designed and manufactured from the factory is gualified for use with a lead acid battery and if configured, Crown V-Force products.

Written approval must be obtained from Crown prior to installation of a new type of electric power source. OSHA 1910.178 (a)

#### **A**CAUTION

Connect charger properly or truck can be damaged.

Make certain charger is plugged into the plugged into the battery connector, not the truck connector.

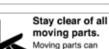
47-006A

## WARNING

112-0304

Stay clear of all moving parts.

Moving parts can cut or crush hands, feet, arms or legs.



or legs.

moving parts. Moving parts can cut or crush hands, feet, arms

DANGER

A damaged lithium-ion battery can be highly



Alert emergency personnel and notify your supervisor. In case of contact, seek medical attention.

Do not smoke, use open flames or create an arc or sparks ear this battery.

#### **A**WARNING

Objects placed on the operator platform could affect truck operation, or cause you to trip and be injured.

Keep operator platform clear. 870-A

#### A WARNING

it's the law, you must be trained and certified to operate this truck. STOP OGMA § 1910.178, Rev. 1998

fou or people around you could be seriously injured or even killed if you don't use this truck. correctly

Obey all instructions & warnings in the operator manual and on the truck.

Inspect your truck before starting work, make sure it's in good working order.

Additional copies of the Operators Manual and Truck Labels can be obtained from:

Crown Equipment Corporation crown.com

054-D

## A WARNING



can cause a fall. You can be seriously injured or killed. Never stand or ride on forks for any reason.

09-A

#### **WARNING**



Falling objects or lowering forks can cause serious injury or death. Never stand under the forks.

While servicing, block the forks so they won't fall. 10-A

### DANGER

Batteries can produce explosive gas. Do not smoke, use open flame, or create an arc or sparks near this battery. Ventilate well when in an enclosed area and when charging.

This bettery contains Sulphuric Acid which causes severe burns. Do not get in eyes, on skin, or clothing. In case of contact, flush immediately and thoroughly with water. Get medical attention if your eyes are affected.

20-006A

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## Warning Labels 47

Passengers could be seriously injured. There is no safe place for them.

WARNING

**WARNING** 

an accident

CAN ICES-2/NMB-2

068532-A

A WARNING

Minimum battery size allowed

000 mm ( 00.00 in.) wide

000 mm ( 00.00 in.) long

Undersize battery can affect truck handling and stability. You could have

Use U.L. classified Type XX battery.

77-06A

No Passengers.



CROWN



This operator manual has information for all models of series MPC 3000 plus some options and accessories. Some of the illustrations and information may not apply to your truck.

The most important component is you.

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