

CLARK®



Straddle Stacker

Operator's Manual **SSX12/16/18**

OM-992
December 2014

Do not remove this manual
from the truck.

Record the following information pertaining to your truck.

Model No. _____

Serial No. _____

Customer Truck Identification No. _____

Truck Weight, Empty _____

Truck Rated Capacity _____

Truck Gross Weight _____

Truck Gross Weight, Loaded w/ Rated Load _____

Special Equipment or Attachments _____

IMPORTANT

Do not expose this manual to hot water or steam.

Contents

	PAGE
Foreword.....	II
1. Safety Regulations.....	1.1
2. Know your Truck.....	2.1
3. Inspection and Maintenance.....	3.1
4. Lifting, Transport and Storage	4.1
5. Specifications.....	5.1



Foreword

**All technical data and all illustrations in these Operating Instructions are without obligation.
We reserve the right to make alterations in the interests of technical progress.**

The performance, economy and security of a truck depend to a great extent on its proper handling as well as on regular maintenance and care. The following Operator Instructions should help you to make the best use of your CLARK truck. Read through the instructions carefully and follow the given procedures strictly. Acquaint yourself with the controls and in particular observe all the safety regulations. Carry out all maintenance and care work at the recommended time intervals. CLARK trucks are characterized by their easy maintenance design. You will therefore be able to carry out this work in a short time and without too much effort.

Regular maintenance and care of your truck is recommended not just on economic ground because a faulty truck represents a source of potential danger.

In addition you should observe the national regulations which provide inspections at set intervals of time. The contents and volume of the regulations could be different from country to country.

For any checkup, repair, maintenance and all other work concerning your truck, please contact your CLARK dealer. Here, specially trained service personnel will be glad to help you at any time. Should you desire to carry out maintenance, repair and all other work on your truck yourself, you can of course obtain all required spare parts and all necessary materials from your CLARK dealer. Please note: Only original CLARK spare parts guarantee the trouble free functioning and optimum economy of your truck. Original CLARK spare parts are the best for your truck. With their dimensional stability as well as their high material quality due to a continuous and strict quality control, they correspond to those parts used in the series production of our trucks.

Finally we would like to draw your attention to the fact that any secondary damages due to improper handling, insufficient maintenance, wrong repairs or the use of other than original CLARK spare parts waive any liability by CLARK.



1. Safety Regulations

Warning symbols

Always follow the warnings given in this Operator's Manual and on the truck to avoid accidents from occurring.

Warning levels

Warning text is given in four levels and provides information on the risks, describe the consequences, and instruct how to avoid accidents.



DANGER

Warns that an accident will occur if you do not follow the instructions. The consequences are serious personal injury or possibly death, and/or extremely severe material damage.



WARNING

Warns that an accident can occur if the instructions are not followed. The consequences are serious personal injury or possibly death, and/or severe material damage.



CAUTION

Warns that an accident can occur if the instructions are not followed. The consequences are personal injury and/or material damage.

NOTE

Marks the risk of an accident or breakdown if the instructions are not followed.

1. Safety Regulations

1. Correct Use and Application

General

The industrial truck described in the present operating instructions is designed for lifting, lowering and transporting load units.



It must be used, operated and serviced in accordance with the present instructions. Any other type of use is beyond the scope of application and can result in damage to personnel, the industrial truck or property.

Correct operation



CAUTION

The maximum load and load distance are indicated on the capacity plate and must not be exceeded.

The load must rest on the load handler or be lifted by an attachment approved by the manufacturer.

The load must rest on the back of the fork carriage and centrally between the forks.

- Lifting and lowering of loads.
- Transporting lowered loads.
- Do not drive the truck with the fork excessively raised.
- Do not carry or lift passengers.
- Do not push or pull load units.

1. Safety Regulations

Conditions for operation

- Operation in industrial and commercial environments.
- Operation only on secure, level surfaces with sufficient load bearing capacity.
- Operation only on routes that are visible and approved by the proprietor.
- Negotiating inclines up to a maximum of 12 % at unloaded.
- Do not negotiate inclines crosswise or at an angle, or transport loads facing downhill.
- Operate in areas with limited public traffic.



CAUTION

Special equipment and authorization is required if the truck is to be used in extreme conditions. The truck is not authorized for use in areas at risk of explosion.

1. Safety Regulations

2. Safe driving

The truck is a power-driven truck using batteries. Therefore, unlike common trucks, an accident during battery charging may cause injury to the operator or adverse effects to electric components. Accordingly, it is important to pay special attention to the use of the batteries.

Basic requirements for safety

Prior to operating the truck for the first time, carefully read this operating manual to understand fully the functions of the truck and practice the driving function in a large area.



Never smoke in the vicinity of the truck while the battery is being charged. Take care against any spark or flame in the vicinity of the truck.

Make it a habit to check the truck prior to driving.

Carefully read the safety rules prior to operating the truck to ensure correct operation.



WARNING

Never drive the truck in intoxicated state.

Drunk-driving is the most serious cause of accidents; never drive the truck if you drank even a small amount.

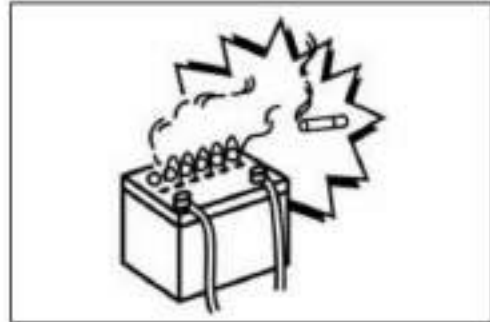


1. Safety Regulations

Removal of equipment subject to fire and explosion

Perform makeup or change of distilled water of the battery in a safe, well-ventilated place.

Gas emitted from the battery electrolyte is flammable. Keep away the battery from open fire when checking the electrolyte level.



Never store flammable materials or use open fire in the vicinity of the place of battery charging.

Fill the battery with distilled water; never add sulfuric acid.

Battery charging generates hydrogen and oxygen gases, which are highly likely to cause explosion. A large quantity of gas is generated particularly when battery charging is complete. Pay special attention to prevent contact between the battery and open fire such as flame.

Keep metal tools away from the top of the battery.

Prevent any bending of or impact on the battery since such may damage truck high-pressure lines such as tubes and hoses.

Carefully examine all lines such as tubes and hoses. Never check the battery for leaks with bare hands. Fasten all the connections to the specified torques.



CAUTION

Charge the battery at the specified place and have a fire extinguisher ready.

1. Safety Regulations

Getting ready to drive

Check the components of the truck including the brake, steering devices, and horn. If any of them is defective, repair the component prior to driving.

Fully understand how to operate the equipment as well as the operation and safety rules of the attachments.

Check the surroundings for any object or person prior to driving the truck.

Never attempt sudden starting, turning, or braking.

Precautions during driving

When driving the truck into a warehouse or a factory, check the truck width and access door width as well as the height of the access door.

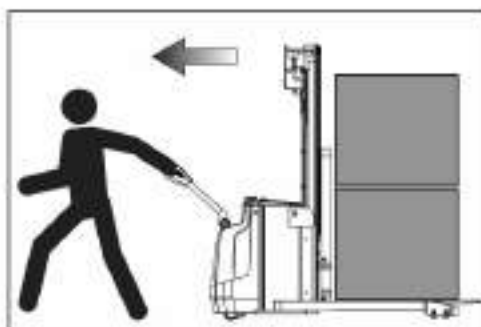
When loading cargo, check the stacked cargo for any items likely to fall.

Load cargo within the range of the forks, with the center of gravity aligned between left and right to prevent loads applied beyond the center of the forks.

Never perform work with loads applied on the tips of the forks.

Change the driving direction at a safe speed. Take care particularly when changing the driving direction with the load fully lowered.

If the cargo is so large that the operator's vision is blocked, drive the truck in the forward direction. Always remember to look in the driving direction while driving the truck.



1. Safety Regulations

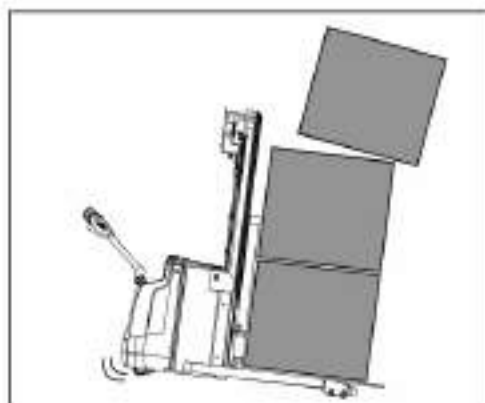
If driving the truck on a slope is inevitable, travel with the load facing up the slope. (refer to page 1.16 "gradients")

Sudden change of driving direction on a slope is very hazardous. Pay special attention when you have to do so.

Stability

CLARK the trucks are absolutely stable in the permitted working positions and when driving, if used with due care and attention and observing the maximum permissible loads.

Proof of sufficient stability is given by CLARK through tests on a tiltable platform corresponding to the related regulations (EC guideline No. 2006/42/EC)



Therefore, never overload your truck. Take care as to the correct weight and load center of your load. The mounting of extra counter weights to increase the load capacity is not permitted. Memorize the maximum permissible rated capacities of your truck and, if you use one or several attachments, also the remaining load capacities indicated separately for these attachments. The load capacity of a truck is influenced by the load center and also the lift height.

1. Safety Regulations

3. Inspection

Inspection prior to bringing into first use

The truck must be checked as to its functionality prior to taking it into operation. The working area to be used must be tested as to its ground conditions (carrying capacity, flatness, sufficient width).



Regular and statutory inspections

The trucks must be regularly checked by trained and authorized service personnel. The time intervals between the regular checks are often prescribed by a national authority. CLARK recommends an annual check-up based on an average operational performance.

Statutory inspections are required, if for instance the operator adds an attachment to his truck. Modifications to the truck are prohibited.

1. Safety Regulations

Truck modification

Unauthorized truck modification is not permitted.

- A) Except where provided in "B)", no modifications or alterations to a powered industrial truck, which may affect, for example, capacity, stability or safety requirements of the truck, shall be made without the prior written approval of the original truck manufacturer, its authorized representative, or a successor thereof.

This includes changes affecting, for example braking, steering, visibility and the addition of removable attachments. When the manufacturer or its successor approve a modification or alteration, they shall also make and approve appropriate changes to capacity plate, decals, tags and operation and maintenance handbooks.

- B) Only in the event that the truck manufacturer is no longer in business and there is no successor in the interest to the business, the user may arrange for a modification or alteration to a powered industrial truck, provided, however, that the user shall:

- Arrange for the modification or alteration to be designed, tested and implemented by an engineer(s) expert in industrial trucks and their safety
- Maintain a permanent record of the design, test(s) and implementation of the modification or alteration
- Approve and make appropriate changes to the capacity plate(s), decals, tags and instruction handbook
- Affix a permanent and readily visible label to the truck stating the manner in which the truck has been modified or altered together with the date of the modification or alteration, and the name and address of the organization that accomplished the tasks.

1. Safety Regulations

4. Operation

The driver

Only trained and authorized personnel may be charged with driving a truck. Please also observe the legal regulations in your country.



The authorization of the supervisor shall be obtained for each, use about which the operator is not sure if it conforms to the intended use. In particularly difficult cases such as a simultaneous use of two trucks for the transport of heavy or bulky loads, the supervisor himself shall be present at the site and, assume the responsibility and management for this transport.

Please carefully read this User Manual and understand the contents.

We strongly recommend that you wear safety clothes suited for your work. Any wide or loose clothing must be avoided. Always wear a hard hat, safety shoes and, if required, safety glasses.



Never drive your truck with wet or oily hands or shoes. If you slip off the controls or under the wheel, serious accidents and personal injury may occur.

1. Safety Regulations

Do not wear watches, rings, or accessories during the operation of the truck.

Never put your feet under the forks or touch the forks.



Never stand on the forks.



The working area

1) Operating aisles

Always drive and park the truck indoors.

Operate the truck in clean and tidy areas only. The operating aisles shall have no obstacles that block the vision of the operator. Carefully check the ground for flatness and for any obstacle. The ground of the work area for transporting the load shall be flat and even.

2) Hazard areas

Trucks which are to be used in flammable or explosive environments must be specially equipped for this purpose. The hazard areas must be identified accordingly.

3) Electrostatic charge

In case of any possible electrostatic charging between the floor and the tire, friction between them shall be reduced to prevent electrostatic charging.

1. Safety Regulations

Handling of loads

Picking up and placing of loads

The trucks must never be loaded in excess of their rated capacity. The values indicated on the name plate apply only when the upright is in a vertical position.

Always position the forks under the load as far as is practicable. The load shall not protrude significantly over the fork tips and the fork tips shall not extend substantially beyond the load. Take care that the load is correctly balanced (centered) on both forks. Check the stability and balance of the load. Never lift a load with one fork only.

When storing and stacking loads, correct placement is essential. Always place the loads carefully. Make sure that you do not exceed the maximum permissible stacking load when stacking and storing loads onto shelves.

There shall be an adequate clearance between the highest parts of the trucks or the load and the fixed parts of the surrounding areas.

Never move loads stacked higher than the carriage backrest. The simultaneous pickup of several unit loads is not advised. Defective unit loads should not be moved or stacked.

The following procedure shall always be observed :

- If another person comes close to the mast, the lifting or lowering movement shall be stopped immediately.
- Drive directly to the stack with a lowered.
- Raise the load to the stacking height
- Drive the truck carefully forward until the load has entered the stack and, if necessary, push the load forward
- Lower the load
- Look backwards

1. Safety Regulations

- Forward the truck so that the fork arms can be lowered without touching the stack

Transport of swinging loads

The transport of swinging loads is only permitted with the consent and approval of the truck manufacturer.

The following points must be observed when transporting swinging loads :



- The swinging of the load shall be prevented by the right selection of speed and the way of driving (careful braking and steering). Jerky movements should always be avoided.
- Driving on inclines or slopes with a hanging load is forbidden.
- The fastening means of the suspended load shall not be unintentionally moved or loosened.
- It shall be ensured that there are no persons in the driving lane and in the driving direction.
- It shall be ensured that no persons are in danger as a result of the swinging loads.
- If necessary, appropriate aids shall be made available (e.g. holding ropes or bars) and that they are used by the persons for guiding the load.
- A load restriction may be necessary depending on the length of the swinging load. The truck manufacturer shall be contacted for this purpose.

1. Safety Regulations

Transport of inflammable loads

The transport of molten loads is only permitted with the consent and approval of the truck manufacturer.

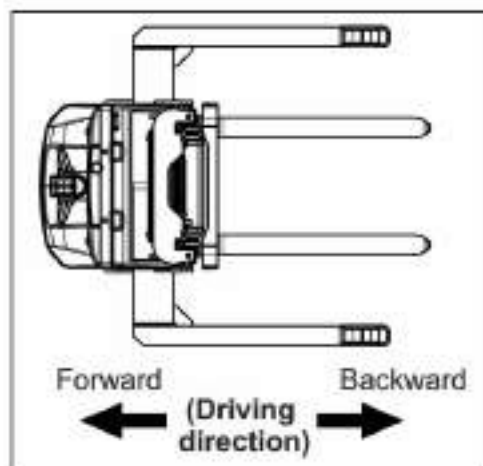
The following instructions must be observed if molten loads are being transported :

- A slopping over of the load must be prevented by a correct selection of speed and manner of driving (careful braking and steering). Jerky movements should always be avoided,
- Driving on inclines or slopes is forbidden with molten loads
- The lowering speed shall be limited if necessary.

When driving

1) Driving conduct

The operator shall comply with internal instructions on in-house traffic regulations and the relevant road traffic regulations on public roads. The speed of the truck has to be adjusted to local conditions. For example, the operator shall drive slowly in bends, at and in narrow passageways or gates, when driving through swinging doors,



at blind intersections or on uneven surfaces. He always shall keep a safe braking distance from vehicles or persons in front of him and he must always have his truck under control. Sudden stops, quick turns, overtaking at dangerous or blind intersections shall be avoided.

1. Safety Regulations

With the exception of the trucks specially fitted for this purpose, the trucks with a operator's seat or stand shall not be put in motion when the operator is not assuming the operating position.

Whilst driving, it is forbidden, amongst other things:

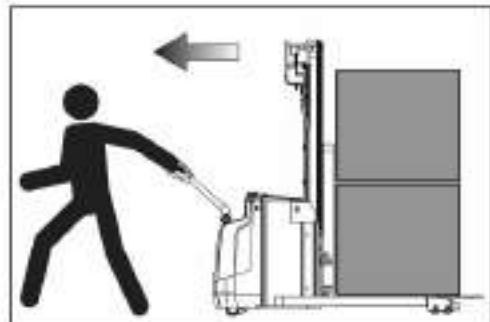
- For the driver to lean over the edge of the truck
- To move from one truck to another or to fixed parts of a building.

The driver shall bring his truck to a standstill as soon as possible if the steering or brake equipment is defective.

2) Visibility

Do not drive backwards if the load is hindering your view. In this instance, drive forwards.

The operator shall always look in the driving direction even when reversing over a short distance.



If, however, the view is still impaired, a banksman should be used to overcome the hindrance. The truck may then only be driven at walking speed and with particular caution, see also page 1.20 "Behavior during Operation".

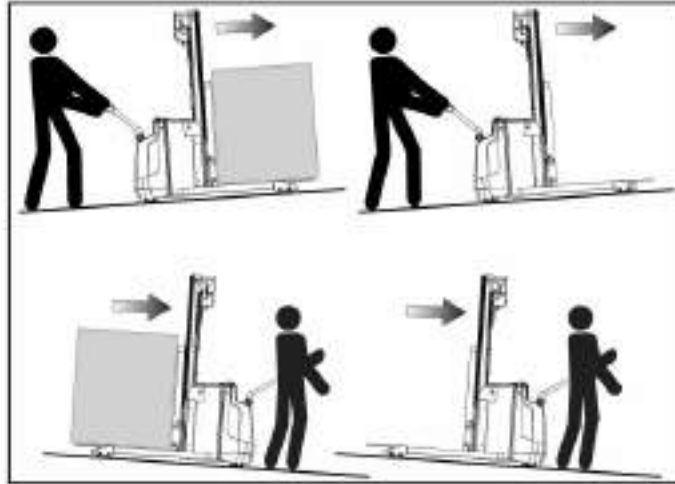
Ensure that the working area of your truck is adequately illuminated.

1. Safety Regulations

3) Gradients

Always keep the load on the upper-side on gradients.

This prevents the slipping of the load from the forks or the rolling over of the truck. In a laden condition, travel uphill in reverse direction and downhill in forward direction.



With restricted visibility always seek assistance when travelling on gradients. Do not turn when going up or down a ramp. Never drive diagonally across the gradient. The truck can easily roll over in this case. Always reduce your speed and drive with special care.

Gradients should always have a sufficiently rough surface. For smooth, and even travel avoid any load contact with the ground.

Gradients used by the trucks shall not exceed the limits specified by the manufacturer.

4) Braking

Always maintain the driving speed such that the forward braking distance is always adequate. Note that sudden braking increases the braking distance proportional to the driving speed, possibly causing the spinning of driving wheels or overturning of the truck.

The braking test shall be conducted after cleaning the truck.

1. Safety Regulations

5) Loading and unloading of vehicles

Always approach the vehicle carefully. Make sure that load distribution is well-balanced when loading or unloading. If you have to travel onto a vehicle for the loading or unloading process take particular care not to exceed the maximum permissible load capacity of the vehicle floor and the bridge plate. Both must be able to support



the weight of the truck and load. Bridge plates must be securely fixed and must not slip when being entered. Secure the vehicle you enter with blocks against rolling. When entering vehicles or traveling on bridge plates reduce speed and be particularly careful. Also be very careful when traveling on bridge plates, especially close to the ramp edges. Keep a safe distance from the ramp edges particularly if the surface is wet or slippery.

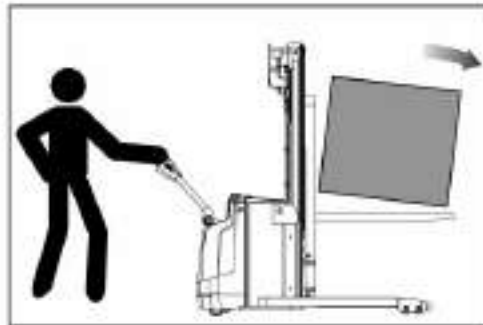
6) Conditions for keeping the truck inside a container

It shall be possible for the truck to be kept in a container. The driver shall verify that the container where the truck is loaded is securely fastened to prevent swaying, and that it is capable of withstanding the truck weight.

1. Safety Regulations

7) With raised forks

Never move your truck with the load raised. Your truck can lose stability in this condition. Only travel with the upright extended in the immediate area for picking up and stacking the loads. When raising the forks watch for obstacles above.



8) Climate conditions for operation

- Max. ambient temperature, short period (max. of 1 hour) : + 40 °C
- Mean average temperature under continuous operation conditions : + 25 °C
- Lowest ambient temperature : -10 °C
- Attitude for operation : Max. of 2000 m above sea level
- Relative humidity : 30 ~ 95% (non-condensing)

9) Tips for Operation according to the Weather

1. Hot weather

Driving in hot weather impairs driving ability and work efficiency. Take a rest at regular intervals.

1. Safety Regulations

2. Cold Weather



WARNING

Hydraulic systems respond to controls slowly in cold weather. It is strongly recommended to warm the equipment up before starting operation.

- Take utmost care when driving on an icy surface.
- Replace worn wheels immediately. Especially, worn wheels can cause serious accident on icy ground.
- Do not abruptly brake or start on icy ground.



WARNING

Do not expose bare skin to the cold, metal surface of the equipment. Otherwise, skin can be frozen and stick to the metal surface.

1. Safety Regulations

Behavior during operation

1) When driving

Avoid any abrupt starting, excessive traveling speeds and sudden directional changes.

Select the driving speed so that sufficient stopping distance is always available. It must be remembered that the net stopping distance increases by approximately the square of the speed and that sharp braking of the truck can cause the drive wheels to slip and the truck to tip over. Braking on curves further increases the danger of the truck tipping due to the tilting moment which occurs.

Reduce speed before curves and ramps, in narrow passageways, on wet roads and restricted visibility.

Always operate the truck carefully even without a load. An unladen truck can roll over more quickly on curves than a load truck. Always operate your truck safely and avoid accidents.

Always look in the driving direction.

2) Safety of people

Always make sure that there is nobody within the hazardous area of your truck. Ask these people to leave the area immediately.

Never use your truck with persons within this area. Never allow anyone to stand under the lifted load or to pass under the load.

Do not let other persons ride on the truck.



1. Safety Regulations

3) Truck tip over

The trucks can be tipped over if not operated properly. Teach your operators that there are a number of things they must watch for that can cause a truck to tip over.

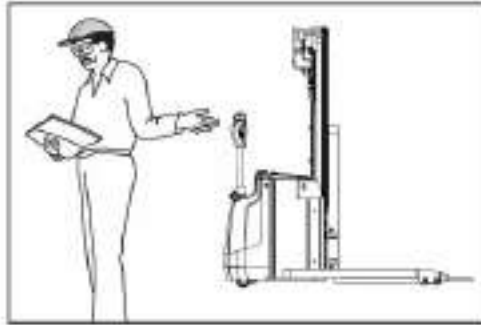
- Slow down before turning.
- Drive with the forks lowered enough to stabilize the load.
- Raising a load high moves the center of gravity and lowers the capacity.
- Check capacities; don't overload the truck.
- Do not move unstable loads.
- Do not turn on down- and upslopes
- Do not drive with the load downhill on down- and upslope
- Drive careful with swinging loads
- Drive careful and slowly at ramp edges or steps
- Move long, high, or wide loads slowly and carefully.
- Don't forget, your truck has front steering. A turn into a soft shoulder or off a dock can tip a truck over. Watch the steer end of your truck, and keep those steer wheel on the road.
- Turn too sharply with forks raised and your truck can tip over, even at slow speeds and with no load. So take your time; slow down.
- Transporting spacious loads may in the result the truck tipping over in strong winds.
- When transporting liquids, a change in the centre of gravity within a picked-up container can result in the truck tipping over as a result of the effects of inertia e.g. when starting or braking or cornering.

1. Safety Regulations

Troubleshooting

Daily inspection before operation

Before starting to work check your truck daily in accordance with the section "Daily Inspection". Always make sure that all safety systems are operating correctly. Never operate a truck which is damaged or not safe to operate. Check all warning and information signs. Any missing or damaged signs must be replaced immediately.



Safety devices and switches may not be removed or rendered unusable. Predetermined set values may only be changed in agreement with the manufacturer. Damage and other faults must be reported immediately to the person in charge.

Illumination

Drive the trucks in poorly illuminated areas must be install adequate lighting fixtures.



1. Safety Regulations

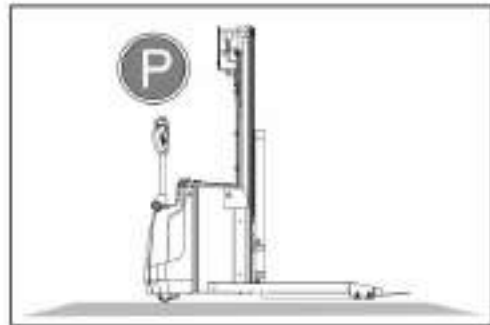
Leaving the truck

When leaving the truck, shall be turned key off.

Never leave the truck with the upright raised.

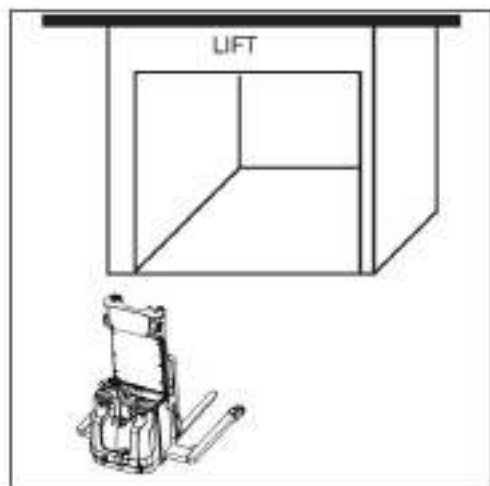
Lower the forks fully to the ground, apply the parking brake, put the tiller handle and directional lever in the neutral position and secure your truck against unauthorized use by third persons.

Never park your truck on gradients. But if this is necessary always secure the truck with wedges.



Transport of the trucks in elevators

The transport of the trucks in elevators is only permitted if the elevator has a sufficient load capacity and is designed for this purpose. The truck must be secured in a way that it cannot touch the elevator walls and may not move inadvertently. All persons travelling with the truck must enter the elevator after the truck and must leave before the truck.



1. Safety Regulations

Unauthorized mounting of electric device prohibited

IMPORTANT

Mounting electric parts on the truck at the discretion of users may have critical effects on the truck and peripheral devices.

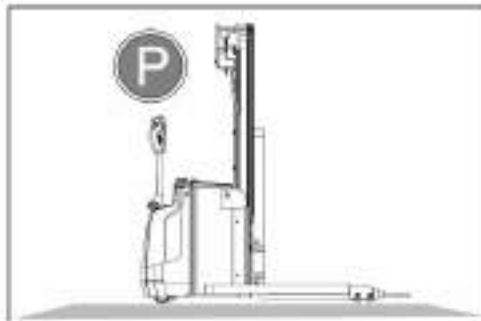
CLARK is not responsible for any issue arising from mounting electric parts without its approval.

Please consult with the engineering staff of CLARK when wishing to mount electric parts.



Parking the truck

- Park your truck in authorized areas only. For this purpose:
 - Fully lower the forks to the ground
 - Make sure that the directional lever is kept in neutral position
 - Turn the key to "Off" position
 - Remove the key.
 - In case of a need to park the truck for a prolonged period of time, turn power off



1. Safety Regulations

Charging batteries of electric trucks

The charging and maintenance of batteries may only be carried out in rooms particularly designed for this purpose by qualified personnel. In case of automatic charging devices the batteries may also be recharged by the driver himself. Please carefully read the operating instructions of the charging set manufacturer.



Smoking and handling of open fires in charging stations is prohibited. Please observe the valid legal regulations of your country.



Turn the key switch to OFF position and make sure that the power shut off switch is turned off prior to connecting the power cord to the charger-mounted truck.

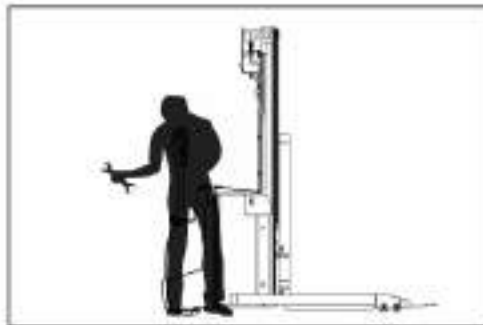
1. Safety Regulations

Repair

Never carry out any maintenance or repair work under the forks. If the carriage must be lifted for maintenance and repair work, the carriage and inner rails must always be secured against inadvertent lowering. This can be obtained by means of a crane or with suitably dimensioned wooden beams. The beams must be inserted under the inner rails in a way that they cannot tip over. Any maintenance and repair work may only be carried out by trained and authorized personnel.



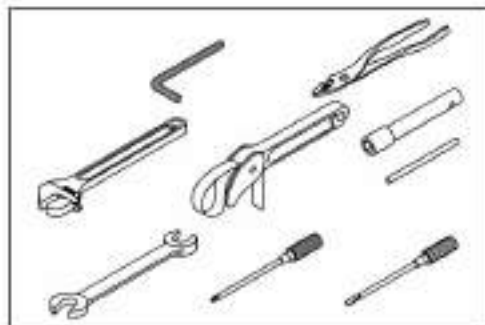
Safety equipment and switches may not be removed or made inefficient. Factory set adjustment values may not be changed.



For any checkup, repair, maintenance and all other work concerning your truck, please contact your CLARK dealer. Here, specially trained service personnel will be glad to help you at any time. Should you desire to carry out maintenance, repair and all other work on your truck yourself, you can of course obtain all required spare parts and all necessary materials from your CLARK dealer. Please note: Only original CLARK spare parts guarantee the trouble free functioning and optimum economy of your truck. Original CLARK spare parts are the best for your truck. With their dimensional stability as well as their high material quality due to a continuous and strict quality control, they correspond to those parts used in the series production of our trucks.

1. Safety Regulations

Finally we would like to draw your attention to the fact that any secondary damages due to improper handling, insufficient maintenance, wrong repairs or the use of other than original CLARK spare parts waive any liability by CLARK.



Fire Extinguisher

Prepare a fire extinguisher at the designated place and learn how to use it to prepare for a fire accident.

You must be well aware of the actions to take in a fire or other accident.

Define the emergency contact and prepare communication means and contact information.



Waste Disposal

Do not dump waste oil in sewer or river.

Collect drain oil in an oil pan.

Never spill waste oil on the ground.

The waste materials from oil, filter or battery must be classified and kept at designated places and disposed of by an authorized disposal service provider or nearest A/S center.



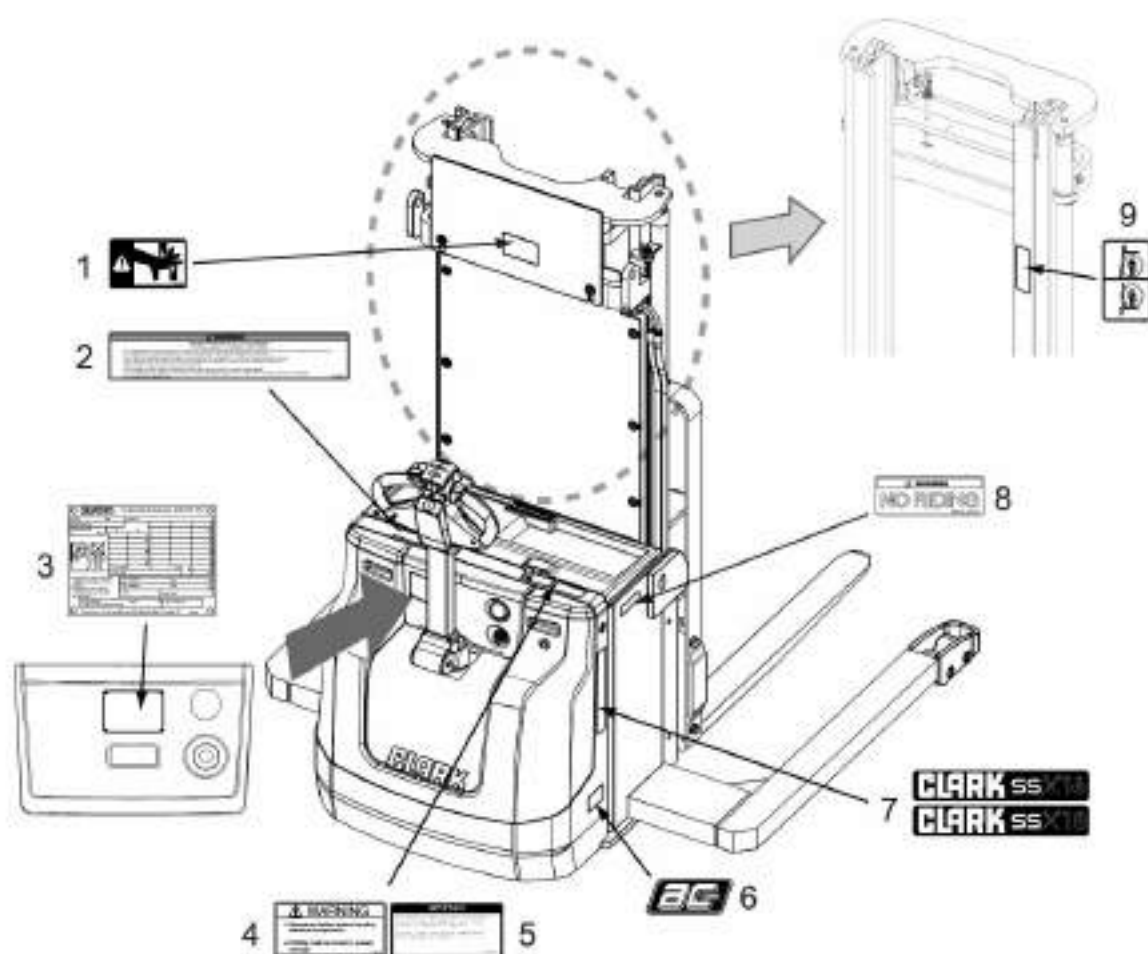
1. Safety Regulations

5. Warning and instruction decal

Names and positions of decals

The figure below shows the names and positions of the decals :

1. Decal - Hand Safety
2. Decal - Warning
3. Name Plate
4. Decal - Warning for Handling Electric Components
5. Decal - Importance of Handling Battery
6. Decal - AC Power Logo
7. Decal - Model
8. Decal - No Riding
9. Decal - Fork Safety



1. Safety Regulations

Affixing the warning decals

Any illegible safety and instruction decal shall be cleaned or replaced.

Only cloth and soapy water shall be used for cleaning the decals. Never use solvent.

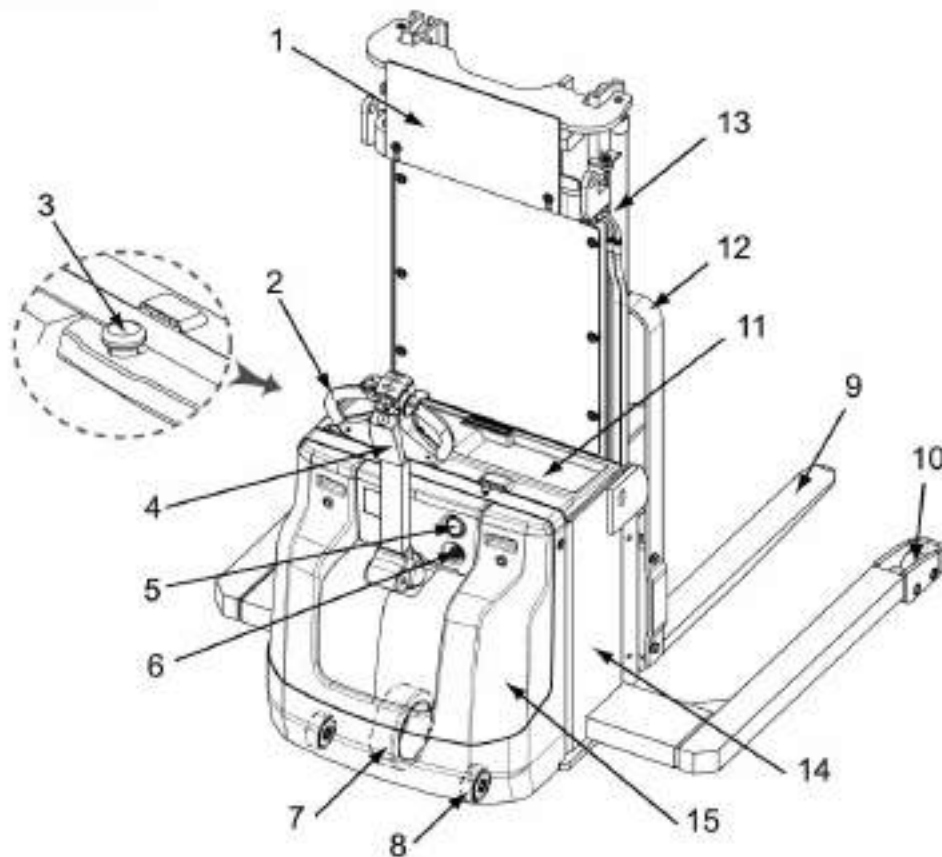
Replace damaged, loosened, or illegible decals with new ones.

New decals shall be affixed to new parts mounted as replacement. Contact the CLARK dealer for new warning decals.

2. Know your Truck

1. Truck description

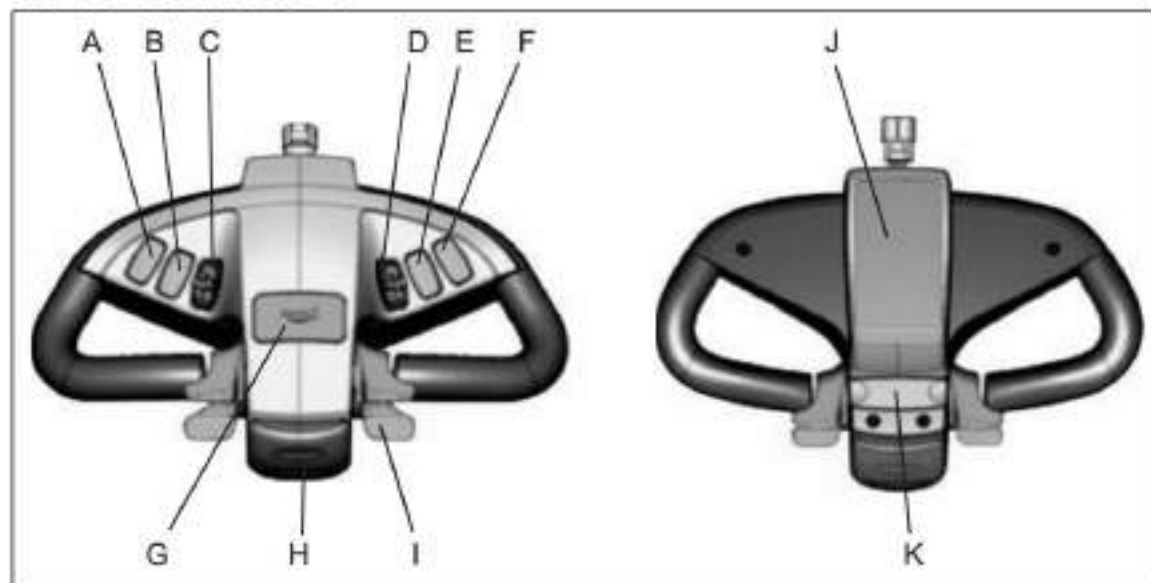
Truck name



1. Protection Guard
2. Tiller Handle(See page 2.2)
3. Emergency Shut off Switch
4. Keypad (Option, See page 2.6)
5. Instrument Panel (See page 2.10)
6. Key Switch
7. Drive Wheel
8. Caster
9. Fork
10. Load Wheel
11. Battery Cover
12. Carriage
13. Mast
14. Frame
15. Front Cover

2. Know your Truck

TILLER HANDLE



Designations and functions

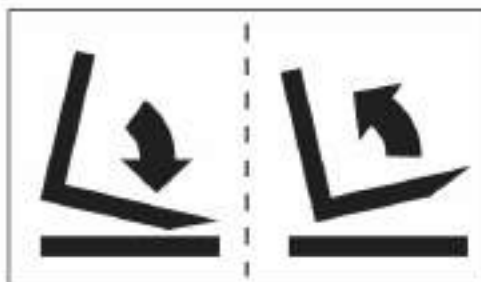
A : Blind cap

Cap used for blind holes

A : Tilt switch (option)

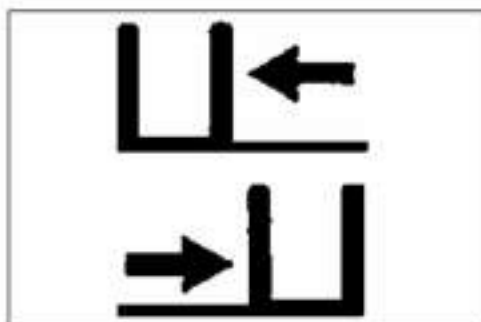
Pressing the switch forward inclines the forks forward.

Pressing the switch backward inclines the forks backward.



B, E : Side shift switch (option)

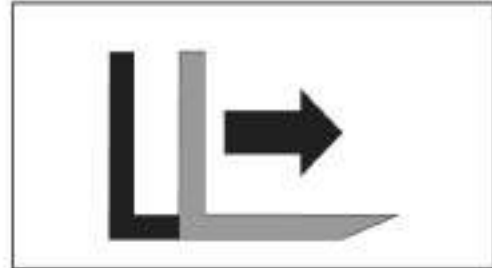
Operating the switch allows moving the forks to the left or right.



2. Know your Truck

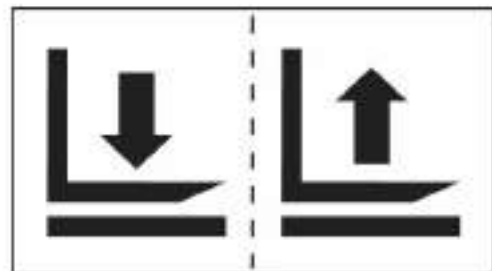
B, E : Reach switch (option)

Operating the switch allows moving the mast in or out.



C, D : Lift lever

Pushing the lever forward lowers the forks. Pulling it backward lifts the forks.



F : Constant speed switch (option)

This function limits the driving speed of the truck to a certain rate.

G : Horn

The switch is used for sounding a warning.



H : Emergency reverse button (Belly button)

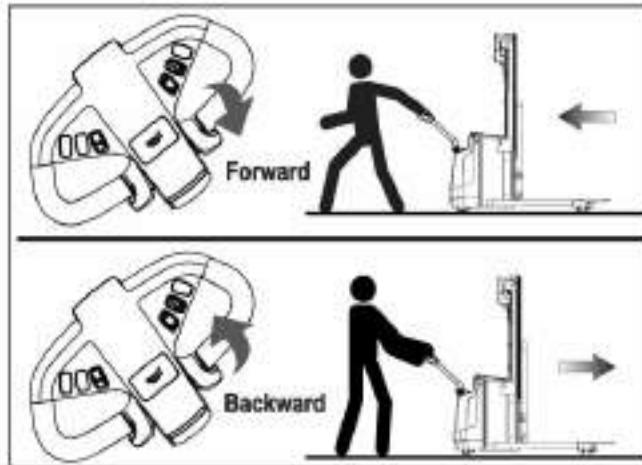
The button is part of safety equipment. Pressing the button drives the truck backward in the fork direction for three seconds.

2. Know your Truck

I : Directional lever

The lever is used for adjusting the forward and backward driving speed of the truck.

Turn the lever in the driving direction (forward or backward). The more the lever is turned, the higher the driving speed increases. When the directional lever is released, and the lever is within the work range, the truck is kept at the neutral position and stops.



J : Keypad (option)

The switch is used for the pin code functions.

The truck operates when codes are entered on the keypad in lieu of key switches. The settings are automatically switched to the settings configured for individual operators to customize the operation of the truck for the operators.

K : Pin wheel switch (option)

When the truck is in a space where the tiller arm operation is difficult, the truck can be driven forward and backward with the pin wheel switch without operating the accelerator. Pressing the switch once and holding it down drives the truck backward. Pressing the switch twice and holding it down drives the truck forward. (Forward and backward speed is limited to a certain speed. When the switch is held down, the truck operates even in a position beyond the operation zone of the tiller arm. Note, however, that the truck stops after operating for approx. 10 seconds.)

2. Know your Truck

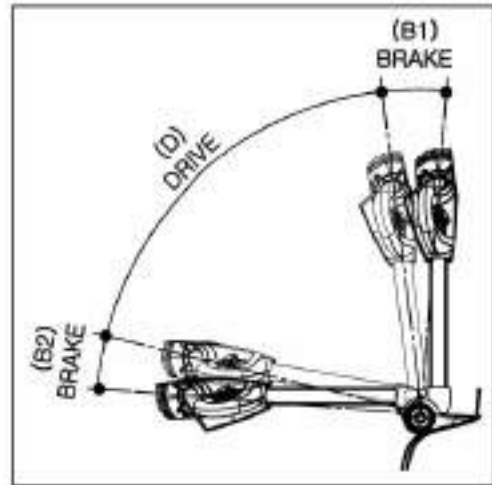
Tiller handle operation

Drive position : When the tiller handle is kept in the middle position (position D)

Brake position : When the tiller handle is kept at the top (position B1) or bottom (position B2)

NOTE

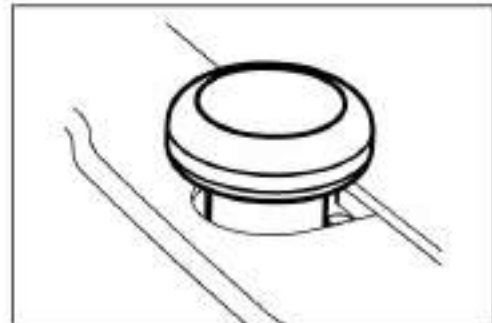
Releasing the tiller handle automatically moves it to the top position.



Emergency shut off switch

During the operation of the truck, power of the truck may be shut off completely by pressing the emergency shut off switch in an emergency situation.

The switch is installed on the top cover for easy access by the operator.



Make sure that the switch is kept turned off when charging the batteries with the truck-mounted battery charger.



CAUTION

Never use the emergency shut off switch as service brake.

2. Know your Truck

Keypad (option)



Keypad construction

The keypad consists of 10 digit keys (4), an Enter key (1) and ESC key (2) and LED indicator (3).

The LED indicates the starting up the truck operating statuses via a red/green LED;

When the correct password code is entered, the truck is ready for use.

You can allocate an individual code to each truck, operator or group of operators.

When the truck is supplied from the factory, the password code is set "0000".

Change the master and operator password code when you use the truck for the first time.

2. Know your Truck

Function

1) Starting the truck

The operator enters the four digit password code, followed by "Enter"

If the Enter key is pressed, the truck controller is powered up.

After establishing the CAN communication the four digits are sent to the truck controller.

The truck controller decides if the code is accepted or not.

Pressing the ESC-Key will reset the input sequence.

Entering more (or less) than four digits will not cause any action.

Procedure

- Switching on the emergency disconnect.
LED (3) flashes one time red and green for 1sec

- Enter the code.

Only a 4 Digit code will be accepted from Controller. After pressing "Enter" the Key pad relays will be closed and Controller could start up and flashes Green led at the handle controller.

When you enter the correct operator 4 digit code the flashes LED (3) flashes green.

If the LED (3) flashes red this means the wrong code has been entered.

If less or more than 4 digits and "Enter" are typed in, the Handle will not start up the Controller.

In this case the handle control also the flashes red LED.

Try again. 4 Digit code and "Enter" key. The truck is switched on.

2. Know your Truck

2) Switching the truck off

When the truck is operational, any key will not be sent to the truck controller.

If the "ESC" key is pressed, it will also be sent to the controller. After some delay the tiller head controller will disconnect the truck controller from power.

Procedure

- Press a ESC key (2).
- The truck is switched off.

3) Auto shutdown timer

After a certain time without use of the truck, the truck must shut down automatically.

Shutdown time is adjustable between 1 minute and 60 minutes with steps 1,2,5,10,15,20,30 and 60 Minutes.

If auto shutdown function is set to OFF, No shutdown will be automatically done.

A new action on the truck during shut down counting will reset the counter.

4) Key Code setting mode

The truck will start up to follow the operator profile according to the key code selected.

Operator profiles have power / normal / economy mode. Each mode can get a different performance as set by a supervisor.

The profile designates an operator as 0, 1, 2~14 and can provide the different truck speeds / accelerating rate / braking rates.

2. Know your Truck

Parameter settings

Setting values can be adjusted via handset programming. Refer to the brief menu for pin code functions.

Menu		Setting value range	Standard setting	Function
Operator profile	Operator number	0~14	0,1,2	Key Code setting Mode, Choose the operating profile mode
	Operator passage	0000~9999	0000 1111 2222	Starting the truck, Change the Pin code Number (0000 → mode 0, 1111 → mode 1, 2222 → mode 2)
	Operator mode	0~2	0,1,2	Truck running mode (0: Economy / 1: Normal / 2: Power)
Service Configuration	Auto shutdown function	OFF/ON	OFF	Auto shutdown Time setting mode
	Auto shutdown Time	1~60	1	Auto shutdown timer set It can be treated by service person only

2. Know your Truck

Instrument Panel

LED function

The MDI-CAN has only a LED. This LED is red and lights and blinks when an alarm is present.

Display function



1) Hour meter

An alpha-numeric liquid crystal display is fitted in the centre of the unit that shows the Hours Worked. The display is backlit (the backlight is normally on).

2) Alarms

The same display can also indicate the Alarm state, showing a Code corresponding to the type of Alarm. To attract attention, the Red LED will start blinking when an Alarm is generated.
(refer to 2.17 page)

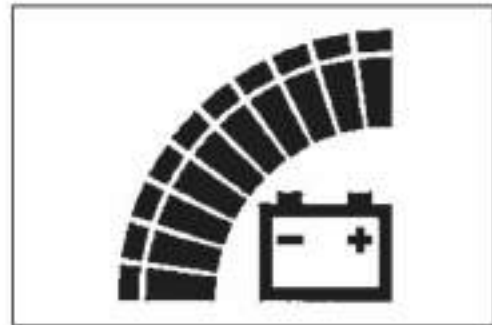
3) Software version

When the Key Switch is initially closed, the display shows the EPROM Version for a few seconds (EPXXX where XXX represents the version): MDI-CAN and then controller EPROM Version appears, each one for 2 seconds. Simultaneously the service symbol appears.

2. Know your Truck

4) Battery State of charge

The battery's State of Charge indication is integrated in the LCD display; it is shown by ten notches. Each notch represents the 10% of the battery charge. As the battery becomes discharged, the notches turn off progressively, one after the other, in proportion to the value



of the residual battery charge. This value, sent to the MDI-CAN by the controller via CAN-BUS, is displayed in the Tester Menu of the Zapi Console connected to the controller. When BATTERY LOW alarm appears on the controller, the battery symbol which is under the notches blinks. When the battery capacity is reduced to "Low," an alarm is triggered. In such case, the truck can still be driven; note, however, that mast lifting operation or initial operation is limited.

5) Other information

Three symbols inform the operator as follows :

Turtle Symbol :

It is normally off; when it appears (fixed) it shows activation of the "turtle" mode of the truck, in which maximum speed and acceleration are reduced.

