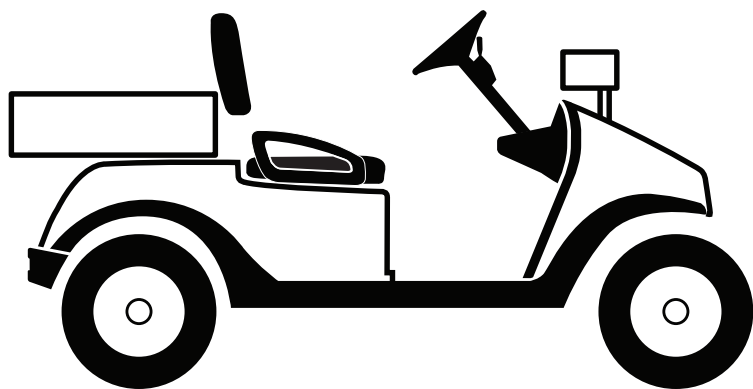


○ **CLARK**®



**ELECTRIC BURDEN CARRIER**

# **Operator's Manual**

**CBX, TRX and FBX**

OM-724  
October 2014

**Do not remove this manual  
from the truck.**

*Record the following information pertaining to your vehicle.*

Model No. \_\_\_\_\_

Serial No. \_\_\_\_\_

Customer Vehicle Identification No. \_\_\_\_\_

Vehicle Weight, Empty \_\_\_\_\_

Vehicle Rated Capacity \_\_\_\_\_

Vehicle Gross Weight \_\_\_\_\_

Special Equipment or Attachments \_\_\_\_\_

**IMPORTANT**

**Do not expose this manual to hot water or steam.**

# Foreword

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## Foreword

Federal and State laws require that operators be completely trained in the safe operation of burden carrier

Before you start operating this burden carrier, make sure that you understand all driving procedures. It is important to operate your vehicle safely and efficiently.

This manual will help you learn how to operate your burden carrier. This manual describes the controls, special features and the functions of each control.

This manual is not a training manual, it is a guide to help authorized operators safely operate a burden carrier. Illustrations in this manual show the operator correct procedures for checking, starting, operating and stopping the burden carrier.

CLARK Burden Carriers are built to take hard work, but not abuse. They are built to be dependable but as with any burden carrier, they are only as efficient as the operator and the persons responsible for maintaining them.

Do not make any repairs to this burden carrier unless you have been trained in repair procedures and authorized by your employer.

This Operator's Manual should help you to make the best use of your CLARK Burden Carrier. 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 Burden Carriers 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 burden carrier is recommended not just on economic grounds, but because a faulty burden carrier represents a source of potential danger.

In addition you should observe all Federal, State, Provincial and Local regulations which provide inspections at set intervals of time.

For any checkup, repair, maintenance and all other work concerning your burden carrier 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 burden carrier yourself, you can of course obtain all required spare parts and all necessary materials from your CLARK dealer.

## Foreword

Please note: To help assure trouble free functioning and optimum economy of your CLARK Burden Carrier, be sure to use only original CLARK spare parts.

Original CLARK spare parts are the best for your burden carrier. With their dimensional stability as well as their high material quality due to continuous and strict quality control, they correspond to those parts used in the series production of our burden carrier

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 and voids the warranty.

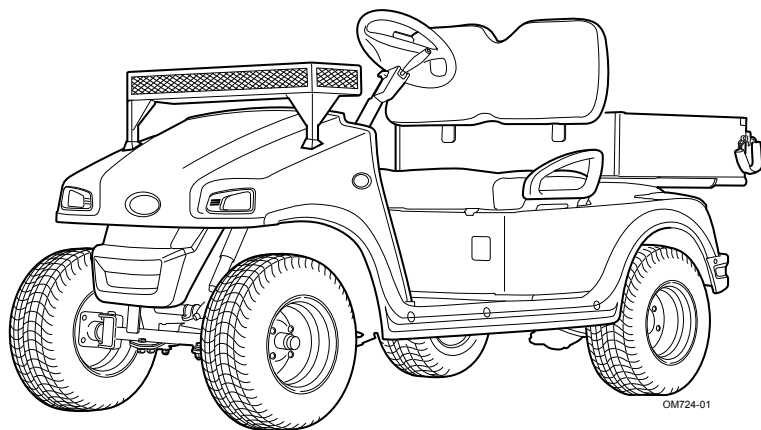
## Foreword

### YOU can prevent accidents

- First: Learn safe operating rules and your company rules.
- Next: Read your Operator's Manual. If you do not understand it, ask your supervisor for help.
- Learn about the unit you operate.

### KNOW YOUR BURDEN CARRIER

- Then: Practice operating your carrier safely.
- And: Keep your burden carrier in safe operating condition with correct and timely maintenance.



**Breaking these rules will cause serious or fatal injury to yourself and others.**

# Foreword

## Summary of Safe Operating Procedures

1. Do not operate this burden carrier unless you have been trained and authorized to do so. Read all warnings and instructions in the operator's manual of this truck.
2. Do not operate this burden carrier until you have checked it's condition. Give special attention to tires, horn, lights, battery, brakes, steering mechanism, and guards.
3. Operate only from designated operating position. Never place any part of your body outside of the confines of the vehicle.
4. Loads may only be carried in cargo box or flat bed. Do not handle unstable or loosely stacked loads. Use special care when handling long, high or wide loads to avoid losing the load, striking bystanders, or tipping the burden carrier. Loads on cargo box or flat bed must be evenly distributed and secure.
5. Do not overload the burden carrier. Check the capacity plate for load weight. The safe capacity is its stopping ability, not its potential payload.
6. Start, stop, travel, steer and brake smoothly. Slow down for turns and on uneven or slippery surfaces that could cause the burden carrier to slide or overturn.
7. When making a turn, allow for "corner-cutting" on longer wheel base models.
8. When moving in reverse, get assistance if vision is obstructed.
9. Make sure correct tire pressures are maintained.
10. Before driving over a dockboard or bridge plate, make sure it is correctly secured. Drive carefully and slowly across the dockboard or bridge plate, and never exceed its capacity.
11. Do not run over objects on the traveled surface.
12. Use special care when operating on ramps - travel slowly, and do not angle or turn.

## Foreword

13. If a burden carrier must be parked on an incline, put chocks at the wheels.
14. Observe applicable traffic regulations and YIELD the right-of-way to pedestrians. Slow down and sound horn at cross aisles and wherever vision is obstructed.
15. Make a report of all accidents involving personnel, building structures and equipment to the correct authority.
16. Before getting off the vehicle turn the ignition switch OFF. Set the parking brake.



## Foreword

### Safety Signs and Messages

Improper operation can cause accidents. Don't take chances with incorrect or damaged equipment. **Read** and **understand** the procedures for safe driving and maintenance outlined in this manual. Don't hesitate to ask for help. **Stay alert!** Follow safety rules, regulations, and procedures. Avoid accidents by recognizing dangerous procedures or situations before they occur. **Drive and work safely** and follow the safety signs and their messages on the burden carrier and in this manual.

**Safety signs and messages** are placed in this manual and on the burden carrier to provide instructions and identify specific areas where potential hazards exist and special precautions should be taken. Know and understand the meaning of these instructions, signs, and messages. Damage to the burden carrier, serious injury or death to you or other persons may result if these messages are not followed. If warning decals are damaged, they must be replaced. Contact your CLARK dealer for replacements.

#### NOTICE

**This message is used when special information, instructions or identification are required relating to procedures, equipment, tools, pressures, capacities and other special data.**

#### IMPORTANT

**This message is used when special precautions should be taken to ensure a correct action or to avoid damage to or malfunction of the vehicle or a component.**

#### CAUTION

**Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.**

#### WARNING

**Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.**

#### DANGER

**Indicates an imminently hazardous situation which, if not avoided, will result in death or injury.**

## Foreword

# General Safety Rules

## Contents

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# General Safety Rules

## The Burden Carrier

### Use in accordance with the regulations.

Burden carriers may only be used in accordance with these operating instructions.

- Burden carriers are designed to transport people, light loads, small or large loads depending on the model.
- If a burden carrier is to be used for other purposes, permission must be obtained from CLARK, in writing, and if necessary from the supervisory authorities responsible, in order to prevent hazards from arising.



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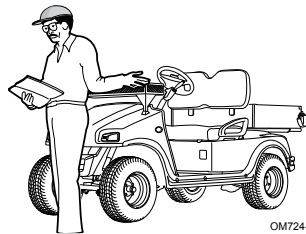
## Stability

- CLARK burden carriers are stable in both working positions and when being driven, so long as you operate and use properly and always observe (and never exceed) the maximum permissible load.

## Inspection

### Inspection prior to initial use

- The burden carrier must be checked for proper functionality prior to operation. The working area to be used must be inspected for its ground conditions (flatness, sufficient width and floor capacity).
- Burden carriers must be regularly checked by trained and authorized service personnel. CLARK recommends an annual check-up based on an average operational performance.



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# General Safety Rules

## Operation

### The driver

- Only trained and authorized personnel are allowed to operate a burden carrier. Observe all State, Federal and Provincial laws and regulations.
- Carefully read and understand the contents of this Operator's Manual.
- 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 operate your burden carrier with wet or oily hands or shoes. If you slip off the brake pedal or the steering wheel, serious accidents and personal injury may occur.



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## The working area

### Operating aisle

- Never drive in areas which are closed to burden carriers, but only use aisles cleared for burden carrier operation. Traveling aisles and loading areas must be clearly identified and free of obstacles.
- Burden carriers shall only be used on routes without sharp curves, excessive slopes and grades which are too narrow or too low. Watch the road surface - it must be sufficiently smooth and free of bumps. Observe all State, Federal and Provincial laws and regulations.



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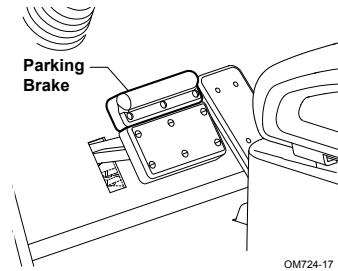
### Hazard areas

- Burden carriers are not to be used in flammable or explosive environments.

# General Safety Rules

## Getting ON/OFF the Burden Carrier

- It is very dangerous to jump on or off the equipment.
- To get on or off the equipment, stop the equipment.
- The general rule is that the operator shall always dismount when facing the vehicle.
- When getting on or off the equipment, do not grab the gear lever.
- Never park your burden carrier on grades. But if this is necessary always secure the vehicle with chocks.



## When Driving

### Driving conduct

- The operator shall comply with internal instructions on in-house traffic regulations and the relevant road traffic regulations on public roads if your burden carrier is rated for on-the-road use. The speed of the burden carrier has to be adjusted to local conditions.

For example: (sound horn when encountering)

- the operator shall drive slowly in bends.
- and in narrow passageways or grades.
- when driving through swinging doors.
- at blind intersections or on uneven surfaces.

The operator shall keep a safe braking distance from vehicles or persons in front of him and must always have his vehicle under control. Sudden stops, quick turns, overtaking at dangerous or blind intersections shall be avoided.

Burden carriers must not be put in motion when the operator is not in the operator's seat.

# General Safety Rules

While driving it is forbidden:

- to put arms or legs outside the vehicle.
- for the operator to lean over the edge of the Burden Carrier.
- to move from one vehicle to another or to fixed parts of a building.

The operator shall bring his vehicle to a complete stop as soon as possible if steering becomes defective.

## **Braking**

The driving speed must be selected so that there is always an adequate braking distance in front of the vehicle. It should be noted in this respect that the pure braking distance increases at a higher rate of speed and that the drive wheels may spin or the vehicle may overturn in case of sudden braking.

## **Grades**

- Always reduce your speed and drive with special care on grades.
- Always keep the load fixed if you drive on grades.
- With restricted visibility always seek assistance when traveling on grades.
- Do not turn when going up or down a grade. Never drive diagonally across the grade. The vehicle can easily roll over in this case.
- Grades should always have a sufficiently rough surface for good traction. Grades used by vehicles shall not exceed the limits specified by the manufacturer (see specifications).

# General Safety Rules

## Climatic condition for Operation

- Maximum ambient temperature, short term (up to 1h): +104°F (+ 40°C).
- Average ambient temperature for continuous duty: +77°F (+ 25°C).
- Lowest ambient temperature: -4°F (- 25°C) (in normal outdoor condition), +41°F (+ 5°C) (in normal indoor condition).
- Service altitude: up to 6560 ft (2000m) above sea level.
- Relative humidity: in the range 30% to 95% (non-condensing)

## Tips for Operation according to the Weather:

### 1) Hot Weather

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

### 2) Cold Weather

- Remove the ice, snow or frost on the weather enclosure window before start operation. (If weather enclosure installed)
- Take utmost care when driving on icy surface.
- Do not step on slippery surface when getting in or out of the equipment.
- Use an ice removing device equipped with a handle and ladder to remove ice, snow or frost.
- Replace worn tires immediately. Especially, worn tires can cause serious accident on icy ground.
- Do not apply abrupt braking or starting on icy ground.



**Do not expose bare skin to the cold, metal surface of the equipment.**



# General Safety Rules

## Operator's Responsibilities

### Read and understand operators' manual

- **Do not** operate burden carrier under the influence of drugs and alcohol.
- Watch for pedestrians at all times. **Do not** drive the burden carrier in a manner that could cause danger to others.
- Only operate burden carrier while seated in the operators position.
- Riding on the burden carrier by persons other than the operator is authorized only on personnel seat(s) provided by the manufacturer. **Keep all your body parts within the confines of the carrier.**
- When a burden carrier is to be left unattended, bring the carrier to a complete stop, turn the direction control to neutral, apply the parking brake. Turn the key switch to the off position and remove the key.
- Chock the wheels if the carrier is on an incline.
- Always park a safe distance from potential hazards, such as edges of ramps and platforms.
- Only use approved burden carriers in locations as defined by the appropriate safety standards.
- Burden carriers shall not be parked or left unattended. **Do not** block or obstruct fire aisles, access to stairways, or fire equipment.
- Report all accidents.

# General Safety Rules

## Traveling

- Observe all traffic regulations, including posted speed limits. Under normal traffic conditions keep to the right. Maintain a safe distance, based on speed of travel from a vehicle in front of you. Keep the burden carrier under control at all times.
- Yield the right of way to pedestrians, ambulances, fire trucks, or other carriers or vehicles in emergency situations.



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- Do not pass another burden carrier or vehicle traveling in the same direction at intersections, blind spots, or at other dangerous locations.
- Keep a clear view of the path of travel, observe other traffic and personnel, and maintain a safe clearance.
- Slow down or stop, as conditions dictate, sound horn or warning device at cross aisles and when visibility is obstructed at other locations.
- Travel up and down grades slowly.
- Avoid turning, if possible, and use caution on grades, ramps, or inclines, normally travel straight up and down.
- Under all travel conditions the carrier shall be operated at a speed that will permit it to be brought to a stop in a safe manner.
- Make starts, stops, turns, or direction reversals in a smooth manner so as not to shift the load, endanger passengers, or lose control of the carrier.
- Do not operate burden carrier in a dangerous manner.
- Slow down when approaching, or on, wet or slippery surfaces.
- Do not drive burden carrier onto any elevator unless specifically authorized to do so. Approach elevators slowly, and then enter squarely after the elevator car is properly leveled. Once on the elevator, place direction control in neutral, turn key switch to the off position and set parking brake.
- Avoid running over loose objects, potholes, and bumps.
- Slow down burden carrier when turning.

# General Safety Rules

## Loading

- Check the capacity of the burden carrier as specified by the manufacturer.
- If burden carrier is equipped with load handling capabilities handle only stable and safely arranged loads. When handling off-center loads, which cannot be centered, operate with extra caution.
- Handle only loads within the capacity of each cargo area of the carrier as specified by the manufacturer.
- Avoid material loads exceeding the physical dimensions of the vehicle or as specified by the manufacturer.

## Parking

- Never park on a grade.
- Always come to a complete stop before leaving truck.
- Be sure travel control is in NEUTRAL.
- Set parking brake.
- Turn key to OFF position.

## Passengers

Only carry passengers when there is adequate seating provided. Never allow passenger on a burden carrier without available seating.

## Pedestrains

Watch where you are going. Look in the direction of travel. Pedestrians may use the same roadway you do. Sound your horn at all intersections or blind spots. Watch for people in your work area even if your car has warning lights or alarms. People may not watch for you.

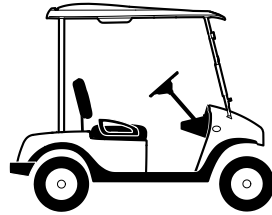
Make people stand back even when you are parked.

# General Safety Rules

## Operator Protection

Always keep your body within the confines of the carrier.

Keep your body within the confines of the optional canopy if installed.



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### IMPORTANT

**Optional canopy does not protect against falling objects and is not designed to provide roll-over protection.**

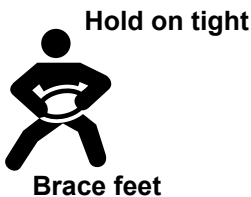
## Burden Carrier Tip Over

Burden carriers 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 vehicle to tip over.

- Slow down before turning. Go into and out of turns slowly, using a slow rotation of the steering wheel.
- Do not move unstable loads.
- Do not turn on down - and up - slopes
- Drive careful and slowly at ramp edges or steps
- You may find that you have some long runs where you operate the vehicle empty, close to its top speed. Slow down before turning.

The operator must follow the instructions to prevent serious personal injury if the equipment overturns.

- Hold the steering wheel firmly. Stiffen your legs to support yourself.
- Lean against the opposite side wall, as shown in the figure.



**Lean away**



# General Safety Rules

## Transport of Burden Carriers in Elevators

- The transport of burden carriers in elevators is only permitted, if the elevator has a sufficient load capacity and is designed for this purpose.
- The burden carrier must be secured in a way that it cannot touch the elevator walls and may not move inadvertently.
- All persons traveling with the burden carrier must enter the elevator after the vehicle and must exit before the burden carrier is removed.

## Additional Regulations for Special Tasks

### Burden Carriers used for Transporting People

- The transport of persons by the burden carrier is only allowed if the vehicle is designed for the transporting people and if the appropriate seating is available. Otherwise the transport of persons is prohibited.

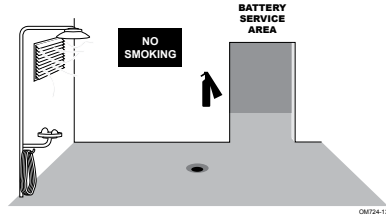
### Parking the Burden Carrier

- Park your burden carrier in authorized areas only.
  - apply the parking brake
  - put the directional control lever in neutral position
  - turn the key to “OFF” position
  - remove the key.

# General Safety Rules

## Charging Batteries of Electric Vehicles

- 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 operator.
- Please carefully read the operating instructions of the charger manufacturer.



### WARNING

Smoking and handling of open fires in charging stations is prohibited.



## 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.

# General Safety Rules

## General Tire Maintenance, Inspection and Repair

- Check for correct tire inflation air pressure. See specifications for correct tire pressure for your truck.
- Check tire pressure from a position facing the tread of the tire, not the side. Use a long-handled gauge to keep your body away from the side.
- If tires are low, have tires and wheels inspected by a person trained and authorized to do tire and wheel maintenance. The tires may require removal and repair.
- Incorrect (low) tire pressure can reduce the stability of a burden carrier and cause it to tip over.

### IMPORTANT

**Check wheels and tires for damage every time you check tire pressure. Make repairs when needed. Dirt can get into cuts and cause damage to the tire cord and tread. Remove debris from all cuts.**

## Repairs

- 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 burden carrier, 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 burden carrier yourself, you can of course obtain all required spare parts and all necessary materials from your CLARK dealer.
- Please note: To help assure trouble free functioning and optimum economy of your CLARK burden carrier, be sure to use only original CLARK spare parts.
- Original CLARK spare parts are the best for your burden carrier. 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 burden carriers.

# General Safety Rules



# Know Your Burden Carrier

## Contents

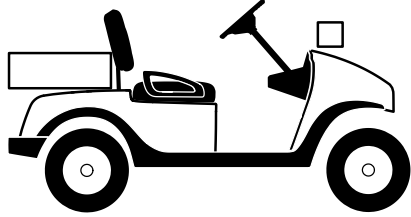
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# Know Your Burden Carrier

## Model Designation

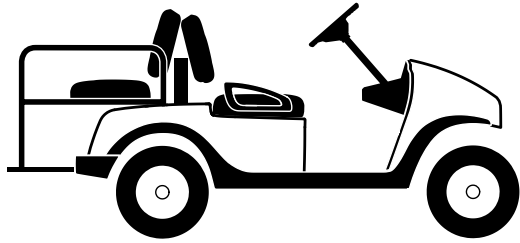
### **CBX** (Cargo Box)

Is designed for light hauling and carrying the operator and one passenger.



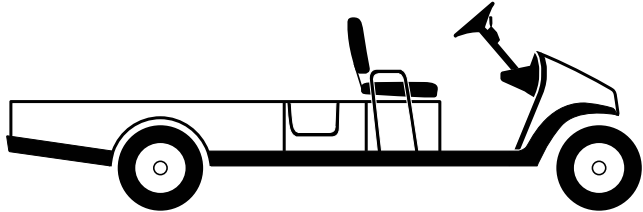
### **TRX** (Transport)

Is designed for carrying the operator and multiple passengers.



### **FBX** (Flatbed)

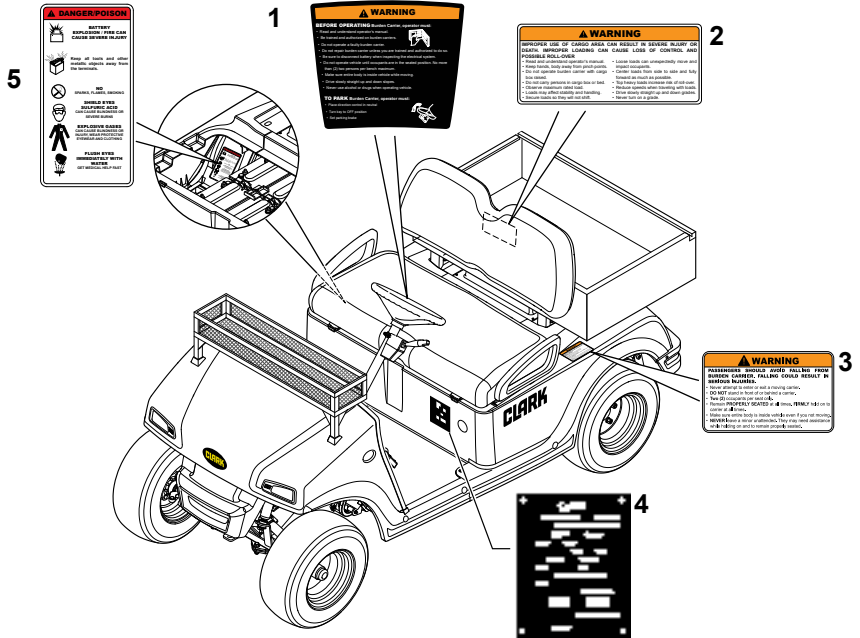
Is designed for hauling larger loads and carrying the operator and multiple passenger.



Each model has a number of configurations depending on application. See your CLARK dealer for a list of options.

# Know Your Burden Carrier

## Nameplates and Decal Location



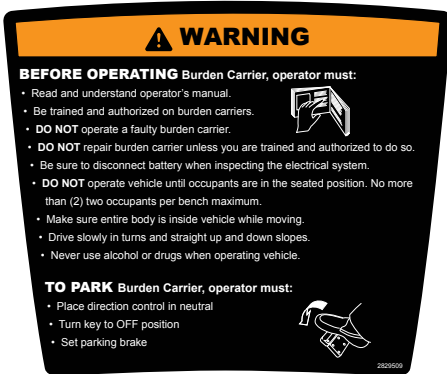
- 1 Operator Warning Decal
- 2 Cargo Area Warning Decal
- 3 Passenger Warning Decal
- 4 Data Plate
- 5 Battery Warning Decal

# Know Your Burden Carrier

## Nameplates and Decals

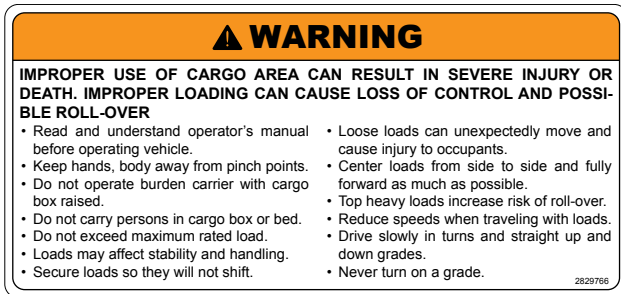
### Operator Warning Decal

This decal outlines the requirements for safe operation of a burden carrier.



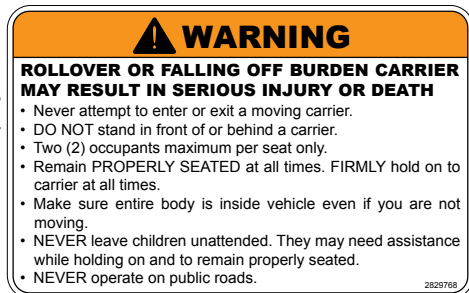
### Improper use of Cargo Box or Bed Warning Decal

This decal outlines the requirements for safe handling of loads.



### Passenger Warning Decal

This decal outlines the requirements for passenger safety of burden carriers.



# Know Your Burden Carrier

## Data Plate

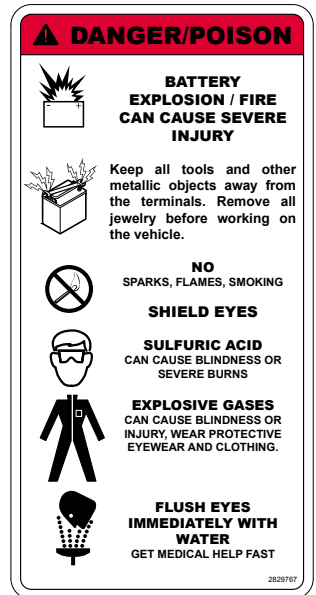
The data plate is designed to inform personnel of the burden carrier's capacity and other important vehicle information.

The operator should read and understand the data plate before using the vehicle.



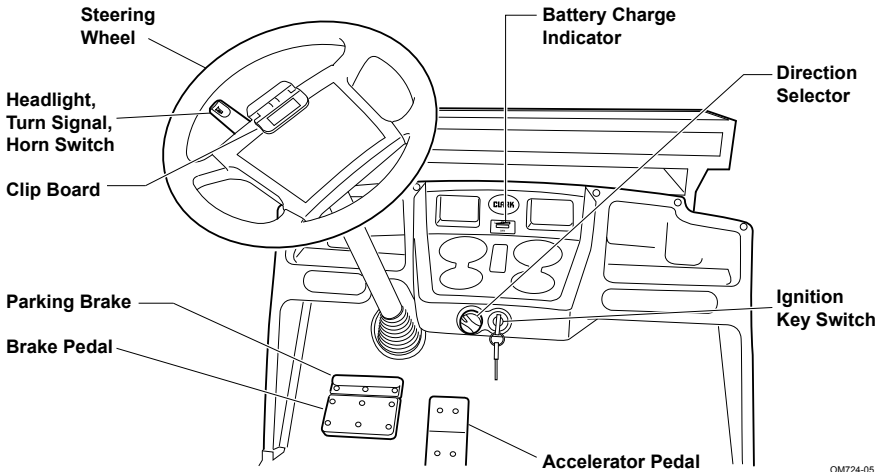
## Battery Danger Decal

This decal outlines the requirements for safe handling of batteries when charging or working in or around battery compartment.



# Know Your Burden Carrier

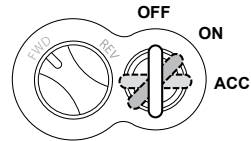
## Operator's Compartment



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### Ignition Key Switch

- When not in use, the key should remain in the **OFF** position with the parking brake latched.
- To activate the flow of power to the motor, the key should be turned to the **ON** position.
- The ignition key switch has a 3rd position **ACC** that activates the 12 volt system, lights, horn, and any other accessories wired to the DC/DC power converter.

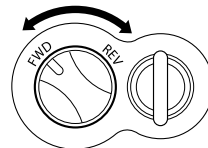


OM724-02

### Direction Selector

Use the FORWARD/REVERSE switch to select the desired direction of travel.

- If you want to travel forward, turn the switch to the **FWD** (left side).
- If you want to travel in reverse, turn the switch to the **REV** (right side).

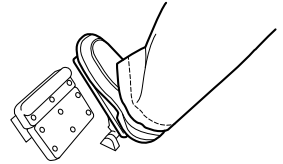


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# Know Your Burden Carrier

## Accelerator Pedal

This will control your speed. Press down slowly to increase speed. The vehicle will speed up with continued pressure applied to the pedal, eventually reaching full speed. The vehicle will slow down as you take pressure off the pedal. When the pedal is fully lifted the electronic brake feature will begin to function.

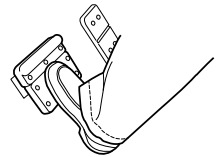


OM724-04

## Brake Pedal

Is used in deceleration or parking. By depressing the brake pedal slowly the burden carrier should come gentle stop. Avoid hard braking, allow yourself plenty of stopping distance.

- The travel distance of the brake pedal should be  $\frac{2}{3}$  of the distance from the pedal resting on the floor.



OM724-06

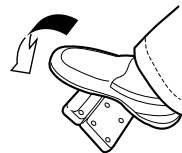
## IMPORTANT

**If the vehicle accelerates too quickly or the electronic brake function is not working properly, stop the vehicle immediately. Contact your Clark authorized dealer or trained mechanic immediately.**

## Parking Brake

Is used when the burden carrier is unattended or stopped on an incline.

- If the parking brake fails to remain in the down position, the parking brake is **NOT** set.
- Repeat the procedure again until the parking brake latches firmly into place.
- 



OM724-07

## **WARNING**

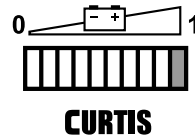
**If you accidentally set the parking brake while descending a slope, you should release the parking brake by depressing the service brake pedal. DO NOT release the parking brake by depressing the accelerator pedal in this situation as to prevent personal injury and vehicle damage.**

# Know Your Burden Carrier

## Battery Charge Indicator

The indicator is divided into 10% increments. The indicator will fall from the higher percentage (100% charge) to the lower percentage as the batteries discharge.

- When the battery is too low, the red indicator light will flash reminding you to recharge the battery. Allowing the battery to discharge below 20% could cause permanent damage to the batteries.
- It is best practice to charge the batteries after every use. See Battery Charging for complete instructions on how to recharge the electric batteries.

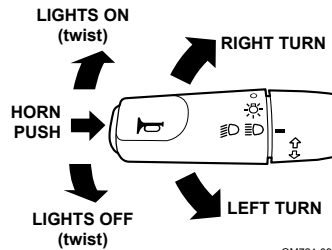


OM724-08

## Lights, Horn and Turn Signals

Located on the steering column just below the steering wheel. It becomes active when the key switch is turned to the 3rd position.

- Twisting the barrel switch forward illuminates the front and rear lights. Movement up and down activates the turn signals, and depressing the button at the end of the lever sounds the horn.



OM724-09



# Know Your Burden Carrier

## Operating Procedures

- Turn the ignition switch to either **ON** or **ACC** position.
- Select direction of travel, either **FWD** (forward) or **REV** (reverse).
- Gradually press down on the accelerator pedal to increase speed.
- Use turn indicators where necessary.
- When arrived at destination, engage parking break, roll the headlight switch to the **OFF** Position, and turn the ignition switch to the **OFF** position.

## **WARNING**

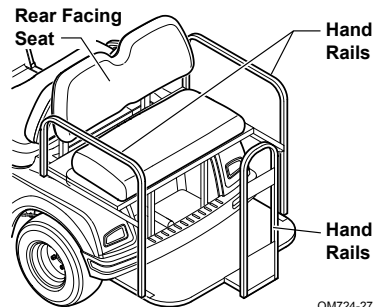
If you press down on the accelerator pedal before switching the ignition key to the **ON** position, the vehicle will **NOT** move. If this happens, release the accelerator pedal, then return the ignition to the **OFF** position and re-do the procedure. The vehicle should begin to operate properly.

## Burden Carrier Arrangement

### Rear Seating with Hand Rails (if equipped)

Burden Carriers with rear seating are equipped with handrails for passengers safety.

- Passengers must firmly hold onto handrails anytime vehicle is in motion.



# Know Your Burden Carrier

## Cargo Box (CBX) (if equipped)

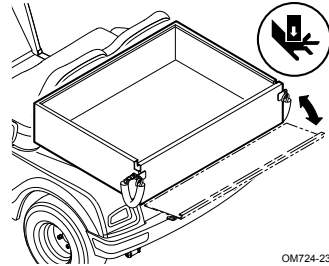
The cargo box is used primarily for transporting light loads. The tail gate open and closes for ease of loading.

### CAUTION

Keep hands and fingers clear when closing the tail gate.

### WARNING

Never allow people to ride in a cargo box! Serious injury or even death could occur.



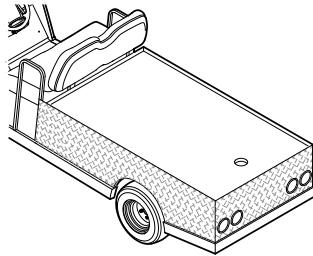
OM724-23

## FBX Model (flat bed)

The FBX is designed for hauling larger loads and carrying the operator and a single passenger. The FB model is not designed for towing.

### WARNING

Never allow people to ride in the cargo area! Serious injury or even death could occur.



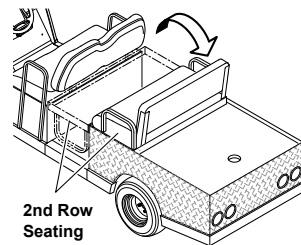
OM724-24

## FBX 2+2 Model (flat bed)

The FBX is designed for hauling larger loads and carrying the operator and multiple passengers. A second row of seats are provided. The second row can also be stored flat to allow more cargo space.

### CAUTION

Keep hands and fingers clear when opening/closing the second row seats.



OM724-25

### WARNING

Never allow people to ride in the cargo area! Serious injury or even death could occur.

# Daily Inspection

## Contents

<b>Inspecting Your Burden Carrier .....</b>	<b>3-2</b>
<b>Visual Checks .....</b>	<b>3-3</b>
<b>Functional Checks .....</b>	<b>3-4</b>
<b>Concluding the Inspection .....</b>	<b>3-5</b>

## Daily Inspection

### Inspecting Your Burden Carrier

Before using a burden carrier, **it is the operator's responsibility** to check its condition and be sure it is safe to operate.

Check for damage and maintenance problems; have repairs made before you operate the burden carrier. Unusual noises or problems must be reported immediately to your supervisor or other designated authority.

Do not make repairs yourself unless you are trained in burden carrier repair procedures and authorized by your employer. Have a qualified mechanic make repairs using genuine CLARK or CLARK-approved parts.

#### CAUTION

**Do not operate a burden carrier if it is in need of repair. If it is in an unsafe condition, remove the key and report the condition to the proper authority. If the truck becomes unsafe in any way while you are operating it, stop operating the vehicle, report the problem immediately, and have it corrected.**

Burden carriers should be inspected every eight hours, or at the start of each shift. In general, the daily inspection should include the visual and **functional checks** described on the following pages.

As an aid in carrying out this inspection, CLARK has prepared a form called the "**Operator's Daily Checklist**". We recommend that you use this form to make a daily record of your inspections and truck condition. You may obtain copies of this form from your CLARK dealer.



# Daily Inspection

## Visual Checks

First, perform a visual inspection of the burden carriers major components:

Walk around your burden carrier and take note of obvious damage that may have been caused by operation during the last shift.

Check that all capacity, safety, and warning plates or decals are attached and legible.

Check that the batteries are installed and secured in position correctly. Check battery connectors for safe condition.

Look for any external leakage around drive axle.

Be sure that the safety devices are in place, undamaged, and attached securely.

Check all of the critical components that handle or carry the load.

Check for obvious wear and maintenance problems such as damaged or missing parts, leaks, bent parts, and so on.

Inspect the wheels and tires for safe mounting and wear condition.

# Daily Inspection

## Functional Checks

Check the operation of the burden carrier as follows:

### NOTICE

**Before performing these checks, familiarize yourself with the operating procedures.**

1. With key switch off, be sure all controls and systems operate freely and return to neutral properly. Check the:
  - Service and parking brake
  - Accelerator control
  - Directional control
  - Steering system
2. Test warning devices, horn, lights, and other safety equipment and accessories.
3. With the burden carrier on, check the battery charge display. The display should show the charge remaining on the batteries.
4. When the functional checks are completed:
  - Bring vehicle to complete stop.
  - Put the directional control lever in the NEUTRAL position.
  - Apply the parking brake.
  - Turn the key switch to the OFF position.

If you are going to leave the burden carrier unattended:

- Remove the key.
- Block the wheels if the vehicle has any possibility of moving.

# Daily Inspection

## Concluding the Inspection

Make a record on the “Operator’s Daily Checklist” of all the operating and vehicles problems that you find. Review the checklist to be sure it has been completed and turn it in to the person responsible for maintenance. Be sure any unusual noises or problems are investigated immediately.

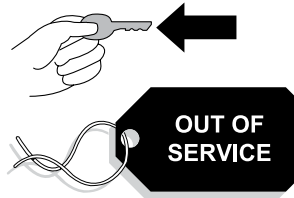
### NOTICE

**Do not operate a burden carrier that has a maintenance problem, or is not safe to operate.**

Remove the key from the ignition switch and put an “Out of Service” tag on the carrier.

### IMPORTANT

**If all of the Daily Inspection checks were normal or satisfactory, the burden carrier can be operated.**



OM724-14



# Operator Maintenance and Care

## Contents

<b>Maintenance Practices</b> .....	<b>4-2</b>
<b>Functional Checks</b> .....	<b>4-4</b>
<b>Battery Maintenance</b> .....	<b>4-4</b>
<b>Cleaning the Vehicle</b> .....	<b>4-6</b>

## NOTICE

The Occupational Safety and Health Act (OSHA) requires that burden carrier users examine their vehicles before each shift to be sure they are in safe working order. Defects when found shall be immediately reported and corrected. The burden carrier shall be taken out of service until it has been restored to safe operating condition.

# Operator Maintenance and Care

## MAINTENANCE PRACTICES

### CAUTION

**Burden carriers may become hazardous if maintenance is neglected.**

- Maintenance and inspection of burden carriers shall be performed in conformance with the following practices and should follow CLARK'S recommendations.
- Follow planned maintenance schedule.
- Only trained and authorized personnel shall be permitted to maintain, repair, adjust, and inspect carriers.
- Before undertaking maintenance or repair follow CLARK'S recommendations for disabling a burden carrier.
- Chock wheels and support burden carrier, before working underneath it.
- Operation to check performance of the burden carrier shall be conducted in an authorized area where suitable conditions exist, free of vehicular and pedestrian traffic.
- Avoid fire hazards and have fire protection equipment present in the work area. Do not use an open flame to check level or leakage of fuel, battery electrolyte, or coolant.
- Properly ventilate the work area in accordance with applicable regulations or local ordinance.
- Brakes, steering mechanisms, speed and directional control mechanisms, warning devices, lights, governors, guards, and safety devices shall be inspected regularly and maintained in accordance with CLARK'S recommendations.
- Special carriers or devices designed and approved for hazardous area operation shall be inspected to ensure that maintenance preserves the original approved safe operating features.
- Decals and plates must be legible and maintained as necessary.
- Batteries, motors, speed and directional controllers, protective devices, electrical devices must be inspected and maintained in good working order to minimize hazards and facilitate detection of components needing service.

## Operator Maintenance and Care

- Modifications and additions which affect capacity and safe carrier operation shall not be performed without CLARK'S prior written authorization; where authorized modifications have been made, the user shall ensure that capacity, operation, warning, and maintenance instruction plates, tags, or safety labels are changed accordingly.
- Care shall be taken to ensure that all replacement parts are interchangeable with the original parts and of a quality at least equal to that provided in the original equipment.
- Disconnect batteries, negative connection(s) first. When reconnecting, connect positive connection first.
- Your burden carrier is equipped with a ON-BOARD charging system. Make a visual check of the charger, cables and plug.

### **WARNING**

**Do not charge batteries if any damage to charger, cables or plugs are visible. Fire and/or explosion could occur. Have a trained and authorized mechanic inspect the charger.**

#### **IC Carriers Only**

- Before disconnecting any part of the engine fuel system, be sure the shutoff valve, if so equipped, is closed.
- Fuel systems shall be checked for leaks and condition of parts. If a leak is found it must be repaired immediately.

# Operator Maintenance and Care

## Functional Checks

Check the operation of the burden carrier as follows:

### NOTICE

**Before performing these checks, familiarize yourself with the operating procedures.**

1. With key switch off, be sure all controls and systems operate freely and return to neutral properly. Check the:
  - Service and parking brake
  - Accelerator control
  - Directional control
  - Steering system
2. Test warning devices, horn, lights, and other safety equipment and accessories.

When the functional checks are completed:

- Bring burden carrier to complete stop.
- Put the directional control lever in the NEUTRAL position.
- Apply the parking brake.
- Turn the key switch to the OFF position.

If you are going to leave the burden carrier unattended:

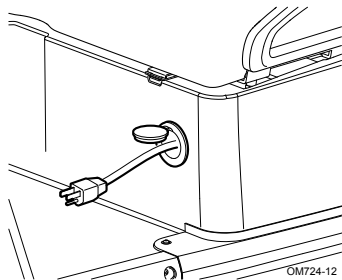
- Remove the key.
- Block the wheels if the burden carrier has any possibility of moving.

## Battery Maintenance

### WARNING

To reduce the possibility of electrical shock or possible electrocution, be sure that the on board charger plug is not damaged and is inserted into a proper grounded receptacle.

The power (AC) cord is equipped with a grounded plug, do not attempt to remove, cut or bend the ground post of the grounded plug.



OM724-12

# Operator Maintenance and Care

## Battery Watering System (if installed)

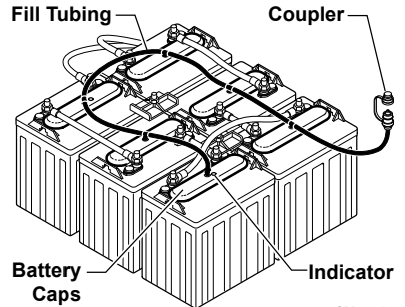
### WARNING

**EXPLOSIVE GASES:** Do not smoke or have open flames or sparks near batteries. An explosion can cause injury or death.

### IMPORTANT

**NEVER** add distilled water to a low battery. This could shorten the life of the battery. Only add distilled water after a battery is fully charged.

The on-board battery watering system works by replacing each of the battery's existing vent caps with vent cap and valve combinations. Each are interconnected with tubing, allowing the user to fill all cells of the battery from a single location. Each valve independently shuts off water flow to the cell when the proper electrolyte level is reached. This is critical to prevent overwatering cells.



OM724-22

### IMPORTANT

**Battery watering system caps are a one time use only. Once caps are removed you must replace with new cap.**

Each battery cap has an indicator to let you know when your battery is low and is in need of refilling. If the indicator shows “black” the battery is okay. If the indicator shows “white” the battery needs refilling. The caps fill with distilled water and will distribute to each cell.

## Operator Maintenance and Care

### CLEANING THE VEHICLE

Clark Burden Carrier bodies are hand-washable. Use only mild automotive cleaners with a sponge or soft cloth for normal cleaning. A garden hose at normal residential water pressure is adequate.

#### CAUTION

**CLARK does not recommend any type of pressure washing. Pressure washing could expose electrical components to moisture. Moisture entering electrical components can result in water damage and component failure.**

#### CAUTION

- **Never use abrasive rubbing compounds, this will permanently dull finish of vehicle.**

When cleaning seats use a solution of 10% liquid soap and warm water applied with a soft cloth. A soft bristle brush may be used for imbedded dirt.

**NOTE:** Dispose of waste water properly.

# Planned Maintenance and Lubrication

## Contents

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# Planned Maintenance and Lubrication

## Planned Maintenance

### NOTICE

**ONLY TRAINED AND AUTHORIZED PERSONNEL** should perform Planned Maintenance. Local CLARK dealers are prepared to help customers put in place a Planned Maintenance program for checking and maintaining their burden carrier according to applicable safety regulations.

### CAUTION

**Burden carriers may become hazardous if maintenance is neglected.**

The operator should make a safety inspection of the burden carrier before operating it. The purpose of this daily examination is to check for any obvious damage and maintenance problems, and to have minor adjustments and repairs made to correct any unsafe condition.

**In addition to the operator's daily inspection**, CLARK recommends that the owner set up and follow a periodic planned maintenance (PM) and inspection program. Performed on a regular basis by **trained personnel**, the program provides thorough inspections and checks of the safe operating condition of the burden carrier. The "PM" identifies needed adjustments, repairs, or replacements so they can be made before failure occurs. The specific schedule (frequency) for the PM inspections depends on the particular application and lift truck usage.

This section recommends typical Planned Maintenance and Lubrication Schedules for items essential to the safety, life, and performance of the vehicle. It also outlines safe maintenance practices and gives brief procedures for inspections, operational checks, cleaning, lubrication, and minor adjustments.

If you have need for more information on the care and repair of your vehicle, see your CLARK dealer.



## Planned Maintenance and Lubrication

The following instructions have been prepared from current industry and government safety standards applicable to burden carrier operation and maintenance. These recommended procedures specify conditions, methods, and accepted practices that aid in the safe maintenance of burden carriers. They are listed here for the reference and safety of all workers during maintenance operations.

Carefully read and understand these instructions and the specific maintenance procedures before attempting to do any repair work. When in doubt of any maintenance procedure, please contact your local CLARK dealer.

1. Burden carriers can become hazardous if maintenance is neglected. Therefore, suitable maintenance facilities and trained personnel and procedures shall be provided.
2. Maintenance and inspection of all burden carrier vehicles shall be performed in conformance with the manufacturer's recommendations.
3. Follow a scheduled or planned maintenance, lubrication, and inspection system.
4. Only trained and authorized personnel are permitted to maintain, repair, adjust in accordance with the manufacturer's specifications.
5. Always wear safety glasses. Wear a safety (hard) hat in industrial plants and in special work areas where protection is necessary and required.
6. Properly ventilate work area, vent exhaust fumes, and keep shop clean and floors dry.
7. Avoid fire hazards and have fire protection equipment present in the work area. Do not use an open flame to check for leakage. Do not use open pans of fuel or flammable cleaning fluids for cleaning parts.
8. Before starting work on burden carrier:
  - Raise drive wheels free of floor and use jack stands or other positive burden carrier positioning devices. (See CLARK Service Manual for proper Jacking and Blocking procedures.)
  - Remove all jewelry (watches, rings, bracelets, etc.).
  - Disconnect the battery ground cable (-) before working on the electrical system.

## Planned Maintenance and Lubrication

9. Operation of the burden carrier to check performance must be conducted in an authorized, safe, clear area.
10. Before starting to operate the burden carrier:
  - Be seated in a safe operating position.
  - Make sure parking brake is applied.
  - Put the direction control in NEUTRAL.
  - Check functioning of, direction and speed controls, steering, brakes, warning devices (if equipped).
11. Before leaving the burden carrier:
  - Stop the vehicle.
  - Put the directional control in NEUTRAL.
  - Apply the parking brake.
  - Turn the key switch to the OFF position.
  - Put blocks at the wheels if the burden carrier must be left on an incline.
12. Brakes, steering mechanisms, control mechanisms, warning devices, lights, canopy (if installed) and frame members must be carefully and regularly inspected and maintained in a safe operating condition.
13. Special trucks or devices designed and approved for hazardous area operation must receive special attention to insure that maintenance preserves the original approved safe operating features.
14. Fuel systems must be checked for leaks and condition of parts. Extra special consideration must be given in the case of a leak in the fuel system. Action must be taken to prevent the use of the burden carrier until the leak has been corrected.
15. The vehicle manufacturer's capacity, operation, and maintenance instruction plates, tags, or decals must be maintained in legible condition.
16. Batteries, limit switches, protective devices, electrical conductors, and connections must be maintained in conformance with good practice. Special attention must be paid to the condition of electrical insulation.
17. To avoid injury to personnel or damage to the equipment, consult the manufacturer's procedures in replacing contacts on any battery connection.

## Planned Maintenance and Lubrication

18. Burden carriers must be kept in a clean condition to minimize fire hazards and help in detection of loose or defective parts.
19. Modifications and additions that affect capacity and safe vehicle operation must not be done without the manufacturer's prior written approval. Capacity, operation, and maintenance instruction plates, tags, or decals must be changed accordingly.
20. Care must be taken to assure that all replacement parts, including tires, are interchangeable with the original parts and of a quality at least equal to that provided in the original equipment. Parts, including tires, are to be installed per the manufacturer's procedures. Always use genuine CLARK or CLARK-approved parts.

### **WARNING**

**When removing tires follow industry safety practices. Most importantly, deflate pneumatic tires completely prior to removal.**

21. Use special care when removing heavy components. Be sure that lifting and handling equipment is of the correct capacity and in good condition.

### **IMPORTANT**

**Your new CLARK burden carrier has been built to meet all applicable mandatory requirements of ANSI/ITSDF B56.8 and ISO/FDIS 3691-6 Safety Standard for Personnel and Burden Carriers.**

## Planned Maintenance and Lubrication

Time intervals between maintenances are largely determined by operating conditions. For example, operation in sandy, dusty locations requires shorter maintenance intervals than operation in clean warehouses. The indicated intervals are intended for normal operation.

The operating condition classifications are:

### **Normal Operation**

Eight-hours, mostly in buildings or in clean, open air on clean paved surfaces.

### **Severe Operation**

Prolonged operating hours or constant usage.

### **Extreme Operation**

- In sandy or dusty locations.
- High-temperature locations.
- Sudden temperature changes, such as constant trips from buildings into the open air.

If the burden carrier is used in severe or extreme operating conditions, you must shorten the maintenance intervals accordingly.

### **NOTICE**

**Since the operating environment of burden carrier varies widely, the above descriptions are highly generalized and should be applied as actual conditions dictate.**

The maintenance time intervals referred to in this manual relate to burden carrier operating hours as recorded on the hourmeter, and are based on experience CLARK has found to be convenient and suitable under typical (normal or average) operating conditions.

# Planned Maintenance and Lubrication

## PM Report Form

Make and keep records of your PM inspections. Use these records to help establish the correct PM intervals for the burden carrier application and to indicate maintenance required to prevent major problems from occurring during operation.

As an aid in performing and documenting your PM inspections, CLARK has prepared a ***Burden Carrier Planned Maintenance Report Form***. Copies of this form may be obtained from your authorized CLARK dealer. We recommend that you use this form as a checklist and record of your inspection and burden carrier condition.

The maintenance procedures outlined in this section are intended to be used in conjunction with the PM Report Form. They are arranged in a logical and efficient sequence.

You make a check mark or entry on the PM Report Form when the PM is performed. A special coding system for indicating the importance of needed repairs and/or adjustments appears on the form.

When you have finished the PM inspections, be sure to give a copy of the report to the designated authority or person responsible for burden carrier maintenance.

Do not make repairs or adjustments unless authorized to do so.

### CAUTION

**For safety, it is good practice to:**

- **Remove all jewelry (watch, rings, bracelets, etc.) before working on the truck.**
- **Disconnect the battery ground cable (-) from the battery before working on electrical components.**
- **Always wear safety glasses. Wear a safety (hard) hat in industrial plants and in special work areas where protection is necessary and required.**

# Planned Maintenance and Lubrication

## BURDEN CARRIER PLANNED MAINTENANCE REPORT

CUSTOMER \_\_\_\_\_

MODEL & SERIAL NO. \_\_\_\_\_

AUTHORIZED SIGNATURE \_\_\_\_\_

INSPECTOR \_\_\_\_\_

SPECIAL INSTRUCTIONS \_\_\_\_\_

CODE	✓ OK
OK	x Adjust (Not PM)
Delayed	r Repair or Replace
Urgent	s Reqs Shop Repair
Date _____	Hour Meter _____
Date Last PM _____	HRS. Last PM _____
CUST. PO. NO. _____	

Comments:

<b>A. TEST DRIVE MACHINE</b> a. Drive Train Noise b. Steering Operation c. Service Brake Operation d. Speed Control e. Regen Braking f. Pedal Pads and Linkage g. Parking Brake Operation h. Pedestrian Warning Devices (if equipped)	<b>19 ELECTRICAL TESTS</b> a. Ground Tests b. Cable & Terminal Condition c. Wire Harness Condition d. Speed Pot Test e. Contactor Assembly f. Contactor Tip Condition	<b>26 STEER AXLE</b> a. Security of Mounting b. Axle Stop Adjustment c. Drag Link Adjustment d. King Pins e. Check Wheel Bearings
<b>01 CLEANING &amp; LUBRICATION</b> a. Air Clean Truck b. Air Clean Electrical Controls c. Air Clean Motor d. Lubricate Truck	<b>20 DRIVE AXLE CONDITION</b> *a. Differential Fluid Level b. Clean Air Vent c. Security of Mounting	<b>26 STEERING SYSTEM</b> a. Security of Mounting
<b>12 BATTERY AND CABLES</b> a. Cable Condition b. Electrolyte Level c. Battery Load Test d. Battery Retention e. Specific Gravity	<b>23 WHEELS AND TIRES</b> a. Tighten Mounting Bolts b. Tire Condition c. Drive d. Steer e. Tire Pressure	<b>38 SHEET METAL</b> a. Decals - Missing / Conditions b. Data Plate Condition c. Seat Mounting & Operation d. Floor Mats
<b>16 MOTORS</b> a. Drive Motor Condition	<b>23 BRAKES</b> a. Service Brake Wear / Adjustment b. Park Brake Wear / Adjustment c. Brake Cable Condition d. Brake Linkage Check and Lubricate	* See Maintenance Interval in Service Manual

### Test Drive Burden Carrier

Walk around the vehicle and take note of any obvious damage or maintenance problems. If no visible damage, test drive the vehicle.

Make note of the following:

- Drive train noise
- Steering operation
- Brake operation
- Parking brake operation
- Speed control
- Regenerative braking
- Pedal pads and linkage
- Warning devices (if installed)

### Cleaning and Lubrication

- Air clean burden carrier
- Air clean electrical components
- Air clean motor
- Lubricate burden carrier (see lubrication chart)

### Check Battery and Cables

- Check cable condition
- Check electrolyte level
- Perform battery load test
- Check battery retention
- Test specific gravity

# Planned Maintenance and Lubrication

## Motor

- Drive motor condition

## Electrical Tests

- Check battery ground
- Check cable and terminal condition
- Check wire harness condition
- Perform speed pot test
- Check contactor assembly
- Check contactor tip condition

## Drive Axle Condition

- Check differential fluid level
- Clean air vent
- Check mounting bolts

## Wheels and Tires

- Tighten mounting bolts
- Check tire condition
- Check drive and steer wheels
- Check tire pressure

## Brakes

- Service brake wear / adjustment
- Check park brake wear / adjustment
- Check brake cable condition
- Brake linkage / check and lubricate

## Steer Axle

- Check mounting bolts
- Check king pins
- Check wheel bearings
- Drag link / check and adjust

## Motor

- Drive motor condition

## Steering System

- Check mounting bolts

## Sheet Metal

- Check decals - missing/condition
- Check data plate
- Check floor mats
- Check seat mounting

## Planned Maintenance and Lubrication

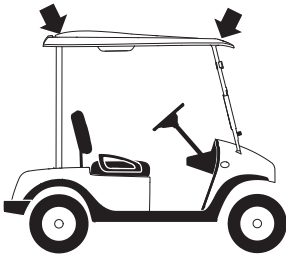
### Visual Inspection

First, perform a visual inspection of the burden carrier and its components. Walk around the vehicle and take note of any obvious damage or maintenance problems.

Check to be sure all capacity, safety, and warning plates are attached and legible.

### NOTICE

**NAME PLATES AND DECALS:** Do not operate a burden carrier with damaged or lost decals and nameplates. Replace them immediately. They contain important safety information.



### Canopy (if installed)

Be sure that the driver's canopy and any safety devices are in place, undamaged, and attached securely.

Check the canopy for damage. Be sure that it is properly positioned and all mounting fasteners are in place and tight.

### IMPORTANT

**Optional canopy does not protect against falling objects and is not designed to provide rollover protection.**

### Wheels and Tires

Check the condition of the drive and steer wheels and tires. Remove objects that are embedded in the tread. Inspect the tires for excessive wear.

Check all wheel lug nuts or bolts to be sure none are loose or missing. Replace missing bolts or lug nuts. Torque loose or replaced items to specifications.

### WARNING

**Check tire pressure from a position facing the tread of the tire, not from the side. Use a long-handled gauge to keep your body away from the side. If tires are low, do not operate and do not add air. Check with a mechanic. The tire may require removal and repair. Incorrect (low) tire pressure can reduce the stability of your vehicle. Do not operate with low tire pressure.**



## Planned Maintenance and Lubrication

### Horn

Press the horn button to check horn function. If the horn or any other part does not operate, report the failure and have it repaired before the truck is put into operation.

### Service Brake

With the direction control in NEUTRAL and the key switch in the "ON", push the service brake pedal fully down and hold. The brakes should apply before the pedal reaches the floorplate. If the pedal continues to creep downward, report the failure immediately. Do not operate the truck until the brakes are repaired.

### Parking Brake

Check the function of the parking brake. Release, then reapply. To check parking brake holding capability, park the burden carrier on a grade and apply the parking brake. The parking brake should hold a burden carrier on a 15% grade.



### CAUTION

**Do not operate burden carrier if the service or parking brakes are not operating properly.**

# Planned Maintenance and Lubrication

## Steering System

### NOTICE

**The steering system, steer axle, and steering linkage on your burden carrier should be inspected periodically for abnormal looseness and damage, leaking seals, etc. Also, be alert for any changes in steering action. Hard steering, excessive freeplay (looseness), or unusual sound when turning or maneuvering indicates a need for inspection or servicing.**

Check the steering system by moving the steering handwheel in a full right turn and then in a full left turn. Return the handwheel to the straight-ahead position. The steering system components should operate smoothly when the handwheel is turned. **Never operate a burden carrier that has a steering system fault.**

### Direction Control, Braking

Be sure that the travel area is clear in front of the burden carrier.

Release the parking brake.

1. Place the directional control switch to FORWARD
2. Remove your right foot from the brake pedal and put it on the accelerator pedal. Push down until the vehicle moves slowly forward. Remove your foot from the accelerator pedal and push down on the brake pedal to stop the truck. The brakes should apply smoothly and equally. Be sure the travel area is clear behind the carrier.
3. Put the directional control switch in the REVERSE travel position. Release the brake and push down on the accelerator pedal until the burden carrier moves slowly in the reverse direction. Remove your foot from the accelerator pedal and push down on the brake pedal to stop the burden carrier. The brakes should apply smoothly and equally.

### Report any problems.

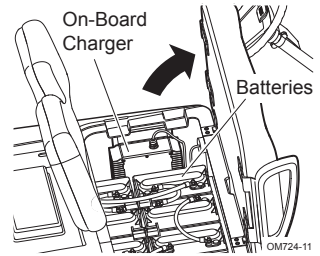
When you have completed the operational tests, park and leave the burden carrier according to standard shut down procedure as described in this manual. Be sure to make a record of all maintenance and operating problems you find.

# Planned Maintenance and Lubrication

## Battery/Charger Compartment

The battery compartment is typically located under the seat.

- To gain access raise the seat as shown in the illustration.



## Battery Inspection

Inspect the batteries for damage, cracks, leaking condition, etc. If the terminals are corroded, clean and protect them with CLARK Battery Saver (available from your CLARK dealer). If your batteries have removable cell caps, check to be sure the cells are all filled. Refill them with distilled water.

### IMPORTANT

**NEVER** add distilled water to a low battery. This could shorten the life of the battery. Only add distilled water after a battery is fully charged.

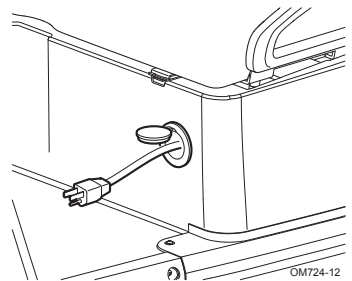
### WARNING

**EXPLOSIVE GASES:** Do not smoke or have open flames or sparks near batteries. An explosion can cause injury or death.

## On-Board Charger

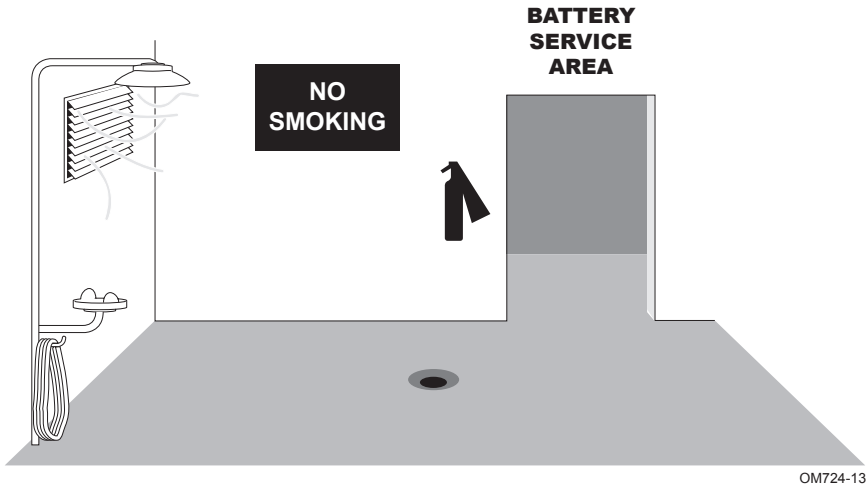
The on-board charger is located under the seat on the driver side of the vehicle. The charger is directly connected to the batteries, only requiring it be plugged into a dedicated 15 amp AC outlet to be operational.

When charging cycle is complete, replace cord around charger handle in area provided.



# Planned Maintenance and Lubrication

## Designated Charging Area



Battery charging must be done in areas designated for that purpose. These areas must be kept free of all non-essential combustible materials.

Facilities must be provided for:

- Flushing spilled electrolyte.
- Fire protection.
- Protecting charging apparatus from damage by vehicle.
- Adequate ventilation for dispersal of fumes from gassing batteries.

When handling acid concentrates greater than 50% acid (above 1.400 specific gravity), an eye wash fountain must be provided.

## Batteries

Clark Burden carriers are equipped with six or eight batteries (depending on vehicle configuration) mounted on the frame usually located under the drivers seat.

It is not necessary to remove the seat from the vehicle to charge the batteries.

## Planned Maintenance and Lubrication

A charging plug is provided for ease of connecting the proper charger to the burden carrier batteries.

### **WARNING**

The power (AC) cord is equipped with a grounded plug, do not attempt to remove, cut or bend the ground post of the grounded plug.

To reduce the possibility of electrical shock or possible electrocution, be sure that the on board charger plug is not damaged and is inserted into a proper grounded receptacle.

1. Change (remove) or service storage batteries only in an area designated for this purpose.
2. Be sure this area has provisions to flush and neutralize spillage, to ventilate fumes from gassing batteries, and for fire protection.
3. Keep all tools and other metallic objects away from terminals.

### **WARNING**

**BATTERY SERVICE must be done by trained and authorized personnel. Battery acid can cause severe burns and injury.**

### **Battery Charging**

1. Persons maintaining storage batteries must wear protective clothing such as face shield, long sleeves, and gloves.
2. Hydrogen emissions from charging batteries are explosive. No smoking is allowed in the charging area. Do not check the electrolyte level with an open flame. Do not allow open flame, sparks, or electric arcs in battery charging area.

### **WARNING**

**SULFURIC ACID: The battery contains corrosive acid that can cause injury. If acid contacts your eyes or skin, flush immediately with water and get medical assistance.**

### **WARNING**

**EXPLOSIVE GASES: Do not smoke or have open flames or sparks on battery charging areas or near batteries. An explosion can cause injury or death.**

## Planned Maintenance and Lubrication

3. When charging batteries, the vent caps must be kept in place to avoid electrolyte spray. Care must be taken to assure that vent caps are open (clean) and functioning.

### IMPORTANT

**If batteries discharge rapidly during normal operation or do not charge to the correct specifications, contact a qualified battery service technician to check the battery for you. Do not add electrolyte or attempt to service the battery.**

### Battery Removal from Burden Carrier

1. Check the designated service and charging area for fire protection, and be sure all sources of ignition are cleared from the area. **Do not smoke!** Be sure all adequate equipment is in the area, in good repair, and working properly. If batteries are to be serviced, be sure there are provisions to flush and neutralize spillage and to disperse (ventilate) fumes from gassing batteries on charge. And, be sure there are provisions for handling electrolyte.
2. Before attempting to remove or charge a storage battery, the truck should be positioned in the designated battery service area and the parking brake applied so the truck cannot move.
3. Press the battery disconnect switch.
4. Remove the top covers
5. Remove the battery and move it to a safe storage location. Store batteries either on an approved battery rack or on a wooden pallet.

### Battery Cleaning and Repair

Never wash the battery when it is in the truck. The easiest and most satisfactory method of cleaning a battery is to wash it occasionally with a low-pressure cold-water spray. The top can also be washed off with a solution of baking soda and water (add a box of baking soda to a pail of water and stir until dissolved) and rinsed with clean water. It is good practice to have this solution in a battery room at all times.

## Planned Maintenance and Lubrication

### IMPORTANT

**During cleaning, the battery vent caps must be tightly in place.**

Refer to the battery manufacturer or supplier for their recommended battery maintenance and care procedures.

BATTERY SAVER and CLEANER, may be used to clean and protect the truck battery. (Available from you local Clark Dealer)

New Truck Batteries: Apply a light coat of BATTERY SAVER and CLEANER to entire surface of battery. Allow to set for approximately 30 seconds, then wipe thoroughly with a wiping cloth or rag. Chemical action will dissolve rust and corrosion. After cleaning, apply a second coating for protection. This will prevent the start and growth of corrosion on battery terminals and cable connections.

### WARNING

**Disconnect battery before handling electrical components.  
Polarity must be correct to prevent damage.**

## Recycling Lead-Acid Batteries

### WARNING

**Lead-acid batteries contain lead (Pb), other metals, acids and other compounds. If improperly handled, they can contaminate both water and soil, causing environmental damage and personal injury.**

Lead-acid batteries are identified by the symbol shown and should be properly recycled. They cannot be disposed as common waste. Lead-acid batteries must be collected separately.



Responsibility for environmental protection must be shared, not only by the manufacturers of the batteries, but by people who use the batteries as well. Contact your nearest CLARK dealer or battery distributor for information on how to properly recycle your batteries.

# Planned Maintenance and Lubrication

## Lubrication

### Burden Carrier Chassis Inspection and Lubrication

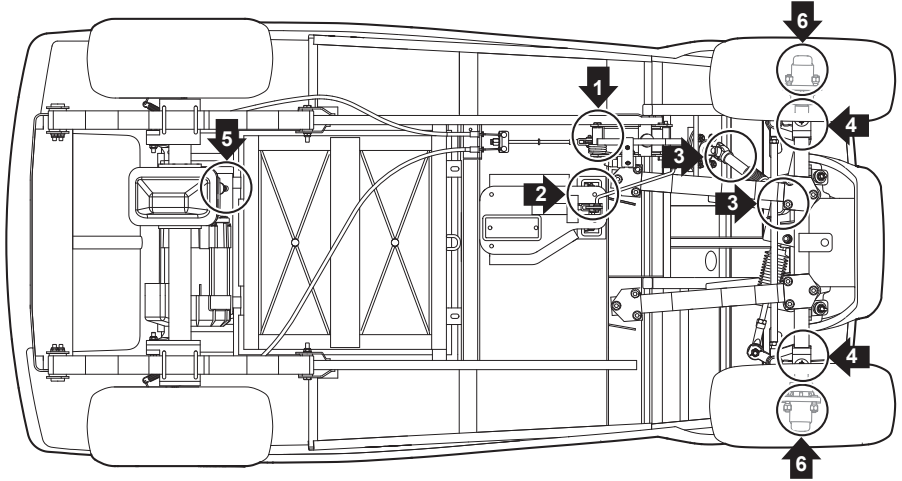
Lubrication and inspection of chassis components, including steer wheels, steer axle linkage, steering cylinder, and wheel bearings are easier if the burden carrier is raised and blocked up under the frame.

#### **WARNING**

**Inspect the steering system seals, and fasteners for damage, leaks, and looseness. Lubricate the steer axle linkage rod ends and linkage pivot points. Be sure to clean the grease fittings before lubricating, and remove the excess grease from all points after lubricating. Lubricate miscellaneous linkage as needed.**



# Planned Maintenance and Lubrication



## IMPORTANT

Inspection and servicing should be carried out by a trained and authorized mechanic.

Schedule	Inspection	Position	Recommended Lubricating Oil
Quarterly Inspection	Shaft, Brake Pedal	1	General Purpose Lithium Base Grease
	Shaft, Accelerator Pedal	2	High Quality Spray Lube
	Steering Gearbox and column	3	General Purpose Lithium Base Grease
	Spindle, King Pin	4	General Purpose Lithium Base Grease
Annual Inspection (per 200 rounds or 100 work hours)	Check Drive Axle, Fill Oil to Seal Position	5	Lucas 85-140
	Check Front Wheel Bearings	6	General Purpose Lithium Base Grease

# Planned Maintenance and Lubrication

## Recommended Periodic Service Schedule

This chart lists maintenance tasks that should be performed periodically, the suggested time intervals, and the service manual group in which the task is covered.

TASKS	DAILY	MONTHLY	QUARTERLY	SEMI ANNUAL	ANNUAL
<b>Group 12 — Battery</b>					
Battery recharge to full state after each use	•	•	•	•	•
Battery charger connector inspection/cleaning	•	•	•	•	•
Battery electrolyte level – check/add		•	•	•	•
Battery terminals/cables – clean/tighten		•	•	•	•
<b>Group 13 — Wiring, Switches, and Instruments</b>					
Buzzer warning device – check overall function	•	•	•	•	•
Wiring harness – inspect		•	•	•	•
Turn signal selector – check attachment, smooth operation		•	•	•	•
<b>Group 16 — Electrical Motors</b>					
Drive motor – check/air clean			•	•	•
<b>Group 19 — Motor Controls</b>					
Accelerator – check linkage for smooth movement		•	•	•	•
Check the motor electrical connectors – lubricate connectors with CLARK-recommended grease (■)			•	•	•

## Planned Maintenance and Lubrication

TASKS	DAILY	MONTHLY	QUARTERLY	SEMI ANNUAL	ANNUAL
<b>Group 20 — Drive Axle</b>					
Air vent – inspect, clean					•
Axle mounting bolts – inspect/tighten			•	•	•
Check wheel bearing play/tightness		•	•	•	•
Check for oil leakage	•	•	•	•	•
Fluid level/condition – check/condition add recommended oil (◆) as required			•	•	•
Replace the rear axle oil after the first 6 months of use. Drain and replace at yearly intervals.					•
<b>Group 22 — Wheels and Tires</b>					
Wheels – check for bent rims, missing or loose lug nuts	•	•	•	•	•
Tire pressure – check	•	•	•	•	•
Tire visual inspection – check for excessive wear	•	•	•	•	•
Front wheel alignment			•	•	•
<b>Group 23 — Brake System</b>					
Brake operation – check/adjust if required	•	•	•	•	•
Service brake – check wear/clean and adjust					•
Parking brake linkage – check for binding/bent linkage rod			•	•	•
Parking brake – check/adjust cables if required	•	•	•	•	•

## Planned Maintenance and Lubrication

TASKS	DAILY	MONTHLY	QUARTERLY	SEMI ANNUAL	ANNUAL
<b>Group 25 — Steering System</b>					
Steering operation – check for excessive play and tightness		•	•	•	•
Tie rod and drag link – check for excessive play and tightness, bent components, or loose connections		•	•	•	•
Tie rod and drag linkage – lubricate with recommended grease (▲)		•	•	•	•
Kingpins – check for excessive play and tightness – lubricate with recommended grease (▲)				•	•
Steering intermediate shaft – check for excessive play – lubricate with recommended grease (▲)				•	•
<b>Group 26 — Suspension</b>					
Front shock absorbers – check for oil leaks and loose fasteners			•	•	•
Front springs – check for loose hardware, cracks at attaching points			•	•	•
Front wheel bearings – repack bearings with recommended grease (s) and adjust					•
Front axle – check for damage to axle and loose or missing hardware			•	•	•
Rear shock absorbers – check for oil leaks and loose fasteners			•	•	•
Rear springs – check for loose hardware, cracks at attaching points, and bushing wear			•	•	•

## Planned Maintenance and Lubrication

TASKS	DAILY	MONTHLY	QUARTERLY	SEMI ANNUAL	ANNUAL
<b>Group 38 — Chassis</b>					
Body panels – clean/wash	•	•	•	•	•
Body front/middle and rear panels – check condition and alignment as necessary	•	•	•	•	•
Bottom plate and rocker panels – check overall condition	•	•	•	•	•
Seat cushions – check overall condition	•	•	•	•	•

(▲) Grease Grade NLGI#2, CLARK part # 915400

(◆) Gear Oil 80W-90, CLARK part #1808014

(■) Electrical Connector Grease, CLARK part #2819910

# Planned Maintenance and Lubrication

# Specifications

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# Specifications

Clark products and specifications are subject to improvements and changes without notice or obligation.

## Model Designation (Cargo Box)

	Series Model	CBX CBX 2	CBX CBX 4	CBX CBX 6
<b>Drive System</b>		Electric	Electric	Electric
<b>Motor</b>		AC	AC	AC
<b>HP</b>		6.0HP	6.0HP	6.0HP
<b>Voltage</b>		48V	48V	48V
<b>Controller</b>		450Amp	450Amp	450Amp
<b>Batteries (optional)</b>		6x8V / 8x6V	6x8V / 8x6V	6x8V / 8x6V
<b>Charger</b>		12A Hi Freq	12A Hi Freq	12A Hi Freq
<b>Range</b>		10-30mi	10-30mi	10-30mi
<b>Speed</b>		19.5mph	14-19 mph	15-17mph
<b>Grades</b>		14°	14°	14°
<b>Steering</b>		Rack and Pinion	Rack and Pinion	Rack and Pinion
<b>Suspension</b>	(rear)	Leaf Springs	Leaf Springs	Leaf Springs
	(front)	Gas Shocks	Gas Shocks	Gas Shocks
<b>Brakes</b>		Ausco Rear Disc	Ausco Rear Disc	Ausco Rear Disc
<b>Car Length</b>		105"	132"	152"
<b>Car Width</b>		47.25"	47.25"	47.25"
<b>Car Height</b>		79" with top	79" with top	79.5" with top
<b>Turning Radius</b>		9'8"	14'	17'2"
<b>Vehicle Capacity</b>		800lbs	1200lbs	1600lbs
<b>Windshield</b>		Optional	Optional	Optional
<b>Canopy</b>		Optional	Optional	Optional
<b>Wheels</b>		10" Steel	10" Steel	10" Steel
<b>Tires</b>		205/65-10	205/65-10	205/65-10
<b>Lights / Horn</b>		Head / Tail Lights	Head / Tail Lights	Head / Tail Lights
		Turn Signal, Horn	Turn Signal, Horn	Turn Signal, Horn
<b>DC-DC Converter</b>		48 Volt - 12 Volt	48 Volt - 12 Volt	48 Volt - 12 Volt
<b>Warranty</b>		One Year	One Year	One Year



# Specifications

Clark products and specifications are subject to improvements and changes without notice or obligation.

## Model Designation (Transport)

	Series Model	TRX TRX 2+2	TRX TRX 4+2	TRX TRX 6+2
<b>Drive System</b>		Electric	Electric	Electric
<b>Motor</b>		AC	AC	AC
<b>HP</b>		6.0HP	6.0HP	6.0HP
<b>Voltage</b>		48V	48V	48V
<b>Controller</b>		450Amp	450Amp	450Amp
<b>Batteries (optional)</b>		6x8V / 8x6V	6x8V / 8x6V	6x8V / 8x6V
<b>Charger</b>		12A Hi Freq	12A Hi Freq	12A Hi Freq
<b>Range</b>		10-30mi	10-30mi	10-30mi
<b>Speed</b>		19.5mph	14-19 mph	15-17mph
<b>Grades</b>		14°	14°	14°
<b>Steering</b>		Rack and Pinion	Rack and Pinion	Rack and Pinion
<b>Suspension</b>	(rear)	Leaf Springs	Leaf Springs	Leaf Springs
	(front)	Gas Shocks	Gas Shocks	Gas Shocks
<b>Brakes</b>		Ausco Rear Disc	Ausco Rear Disc	Ausco Rear Disc
<b>Car Length</b>		98"	128.5"	152"
<b>Car Width</b>		47.25"	47.25"	47.25"
<b>Car Height</b>		79" with top	79" with top	79.5" with top
<b>Turning Radius</b>		9'8"	14'	17.2"
<b>Vehicle Capacity</b>		800lbs	1200lbs	1600lbs
<b>Windshield</b>		Optional	Optional	Optional
<b>Canopy</b>		Optional	Optional	Optional
<b>Wheels</b>		10" Steel	10" Steel	10" Steel
<b>Tires</b>		205/65-10	205/65-10	205/65-10
<b>Lights / Horn</b>		Head / Tail Lights	Head / Tail Lights	Head / Tail Lights
		Turn Signal, Horn	Turn Signal, Horn	Turn Signal, Horn
<b>DC-DC Converter</b>		48 Volt - 12 Volt	48 Volt - 12 Volt	48 Volt - 12 Volt
<b>Warranty</b>		One Year	One Year	One Year

# Specifications

Clark products and specifications are subject to improvements and changes without notice or obligation.

## Model Designation (Flatbed)

	Series Model	FBX FBX 2	FBX FBX 2+2
<b>Drive System</b>		Electric	Electric
<b>Motor</b>		AC	AC
<b>HP</b>		6.0HP	6.0HP
<b>Voltage</b>		48V	48V
<b>Controller</b>		450Amp	450Amp
<b>Batteries (optional)</b>		6x8V / 8x6V	6x8V / 8x6V
<b>Charger</b>		12A Hi Freq	12A Hi Freq
<b>Range</b>		10-30mi	10-30mi
<b>Speed</b>		19.5mph	14-19 mph
<b>Grades</b>		14°	14°
<b>Steering</b>		Rack and Pinion	Rack and Pinion
<b>Suspension</b>	(rear)	Leaf Springs	Leaf Springs
	(front)	Gas Shocks	Gas Shocks
<b>Brakes</b>		Ausco Rear Disc	Ausco Rear Disc
<b>Car Length</b>		143"	156"
<b>Car Width</b>		47.25"	47.25"
<b>Car Height</b>		75.5" with top	75.5" with top
<b>Turning Radius</b>		13'3"	13'3"
<b>Vehicle Capacity</b>		1400lbs	1400lbs
<b>Windshield</b>		Optional	Optional
<b>Canopy</b>		Optional	Optional
<b>Wheels</b>		10" Steel	10" Steel
<b>Tires</b>		205/65-10	205/65-10
<b>Lights / Horn</b>		Head / Tail Lights Turn Signal, Horn	Head / Tail Lights Turn Signal, Horn
<b>DC-DC Converter</b>		48 Volt - 12 Volt	48 Volt - 12 Volt
<b>Warranty</b>		One Year	One Year

# WARRANTY

## ONE-YEAR PROTECTION

When you buy or lease the new CLARK Electric Car listed below from CLARK or an authorized CLARK dealer, CLARK warrants that its dealers will correct defects in material or workmanship under normal use and service as follows:

For the first twelve months after the product has been delivered to you, the CLARK dealer will, without charge, provide genuine CLARK parts and labor to replace or repair any covered part furnished by CLARK and found to be defective in material or workmanship.

**CONDITIONS, EXCLUSIONS AND LIMITATIONS:** During the above warranty periods, CLARK requires that the product receives normal use and recommended regular maintenance, that you give CLARK or a CLARK dealer reasonable notice of the defect, and that you permit the dealer to return defective parts to CLARK.

Replacement parts provided under this warranty are covered herein for the remainder of the warranty period applicable to the truck in which they are installed.

This warranty plan does not apply to the expense of the service call (travel time) nor the cartage of the unit to or from the dealership.

Naturally, this warranty does not apply to damage arising from accident, misuse or neglect, use of non-CLARK parts, or from alterations not authorized by CLARK; nor does it cover replacement of fuses, decals, lubricants, routine wear items such as; charger plug receptacle, brake shoes and pads, tires, brushes, bushings, cosmetic deterioration, upholstery and items which deteriorate, fade, or fail due to exposure or ordinary wear and tear. Also not covered are adjustments, including initial field set-up. Adjustments are considered normal maintenance procedures. The costs of rental units are also not covered.

CLARK may make design changes in the interest of improving the efficiency of its products, but shall not incur any obligation to incorporate such improvements in any products that have been shipped or are in service.

Unless CLARK otherwise agrees in writing, this warranty is in lieu of all other warranties (except the warranty of title) and states CLARK's entire obligation with respect to defects in new product made or sold by CLARK. THERE ARE NO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL CLARK BE LIABLE FOR INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES

As used in this warranty, "CLARK" means CLARK Material Handling Company for products sold or leased in North America.



**Serial Numbers**

Truck: \_\_\_\_\_

Control Panel: \_\_\_\_\_

Drive Motor: \_\_\_\_\_



OM-724

Additional copies of this manual may be purchased from  
YOUR AUTHORIZED CLARK DEALER

**CLARK** Material Handling  
Company

Lexington, KY. 40510  
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