



DRAKE

OWNER'S / OPERATOR'S MANUAL



READ THIS MANUAL CAREFULLY!
It contains important safety information.

LX L827 Series

48V Models

LX(R).2

LX(R).2+2

LX(R).4+2

LX(R).6+2

LX(R)U.H

INTRODUCTION

Congratulations on your purchase of your Drake L827 LX vehicle/cart. This manual contains information you will need for proper operation, maintenance and repair of your Drake vehicle. A thorough understanding of these simple instructions will help you to obtain maximum enjoyment from your new Drake vehicle.

Drake vehicles are designed and built to provide the ultimate in performance and efficiency, however proper maintenance and repair are essential for achieving maximum functionality & enjoyment from your new Drake vehicle.

This manual provides detailed information for the maintenance and repair of specific electric Drake vehicles, and should be thoroughly reviewed prior to servicing the vehicle. The procedures provided herein must be properly implemented, and the DANGER, WARNING, and CAUTION statements must be heeded.

This manual should be considered an essential accessory to your cart and should remain with the cart when borrowed to another individual or resold.

If you have any questions about the operation or maintenance of your Drake vehicle, please consult a DRAKE dealer.

LX Series OWNER'S/OPERATOR'S MANUAL

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IMPORTANT MANUAL INFORMATION

Particularly important information is highlighted in this manual by the following symbols and notes. It is important to note that this information relates to specific safety issues, and must be read, understood, and heeded before proceeding with any operational or servicing procedures.



SAFETY ALERT SYMBOL

Used to alert you to potential personal injury hazards. Obey all safety messages that follow this alert to avoid possible injury or death.



WARNING

A WARNING alert indicates an immediate hazard that could result in severe personal injury or death – please heed.

CAUTION

A CAUTION alert indicates precautions that must be taken to avoid damage to the vehicle.

NOTE

A NOTE alert provides additional information to make procedures easier or clearer to understand.

NOTE

DRAKE continually seeks advancements in product design and quality; while this manual represents the most current information at the time of publication, there may be minor discrepancies between your cart and this manual. If you have any questions concerning this manual, please consult your DRAKE dealer.

DRAKE reserves the right to change specifications and designs at any time without notice and without the obligation of making changes to units previously sold.



WARNING

Read and understand this manual completely before operating or servicing your cart. This manual should be permanently with your cart and should remain with the cart when resold.

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1 IMPORTANT LABELS

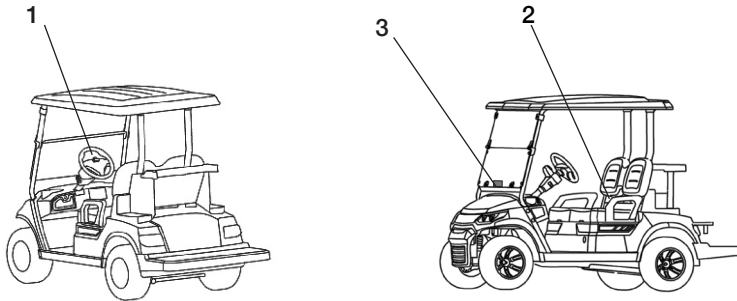


SAFETY AND INSTRUCTION LABELS

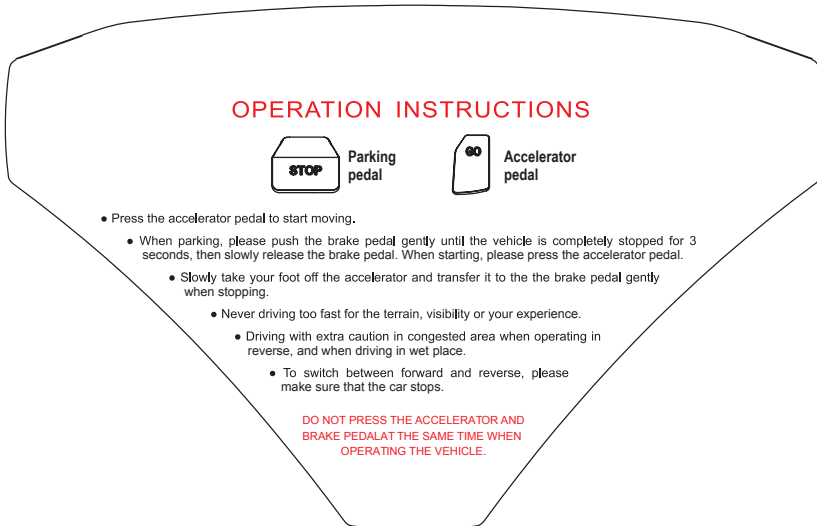


WARNING

Read the following labels carefully before operating your cart and replace any labels that are damaged or have been removed. Ignoring these safety labels can result in severe personal injury or even death.



1



2


⚠ WARNING

TOW SWITCH

Place the Tow Switch in the TOW position before:

- Disconnecting or connecting the batteries
- Towing
- Extended Storage
- Service & Maintenance

FAILURE TO FOLLOW THIS WARNING COULD RESULT IN A BATTERY EXPLOSION OR SEVERE PERSONAL INJURY



3

⚠ WARNING



Windshields do not provide protection from golf balls or other flying objects.

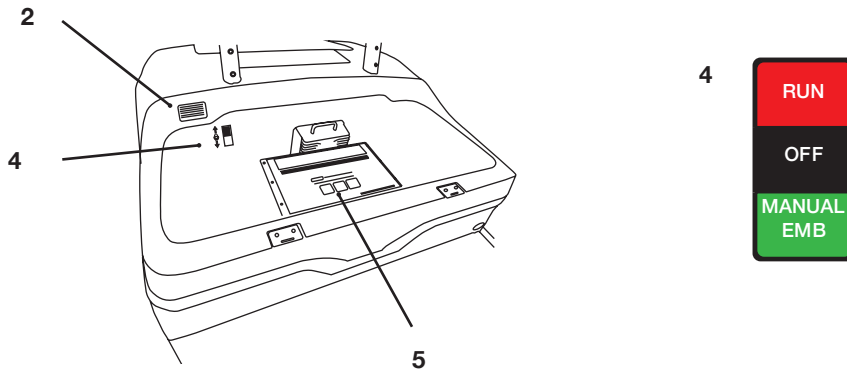
DRAKE

IMPORTANT LABELS

1

NOTE

The configuration for label “5” is specific to lithium models fitted with a RoyPow LiFePO4 lithium battery pack. The configuration for label “6” is specific for models with a magnetic parking brake assembly. If you have any questions regarding the configuration of your vehicle please consult your nearest dealer.



**SAFETY CONSIDERATIONS**

Many vehicles are used for a variety of tasks beyond the original intended use of the vehicle. No warnings can take the place of good common sense and prudent driving practices.

PRE-OPERATION SAFETY

Read this Owner's/Operator's manual and observe all warnings and operation instruction labels affixed to the vehicle.

Perform the pre-operation checks found in Section 6 of this manual.

Only authorized people should drive the vehicle, from the driver's side only, and only in designated areas.

Do not allow more than two occupants per seat.

Do not operate the golf car while under the influence of alcohol or drugs; their effect on vision and judgment make operating a vehicle dangerous.

Do not operate the vehicle on public streets, roads or highways unless allowed by law or local regulating authority.

DURING OPERATION

All persons must be seated. Keep entire body inside the vehicle and hold on while vehicle is in motion.

Avoid starting or stopping abruptly.

Reduce speed to compensate for poor terrain or conditions.

Apply service brake to control speed on steep gradients.

Reduce speed in wet areas.

Use extreme caution when approaching sharp or blind turns.

Use extreme caution when driving over loose terrain.

Use extreme caution in areas where pedestrians are present.

Do not make any modification or additions to the car which affects capacity or safe operation.

**WARNING**

The vehicle must come to a complete stop before engaging either the Forward or Reverse selector. Failure to do so will void the Warranty.

2.1 SAFETY



SAFETY CONSIDERATIONS

This section contains broad safety practices required for safe golf car operation. If you are responsible for the operation and maintenance of this golf car, we recommend you implement this golf car safety program.

Allow only authorized people to operate the vehicle. It is recommended that only people who possess a valid motor vehicle driver's license be allowed to operate DRAKE vehicles.

Place operation and safety instructions recommended by DRAKE, along with the golf course safety rules, in a highly visible place near the golf cart rental area or golf cart pick-up area.

It is also recommended that the following warnings be posted in a conspicuous location:



WARNING

Do not operate carts when under the influence of alcohol or drugs. Death or serious personal injury can result from failing to comply with the safety and warning instructions affixed to the cart.



WARNING

Descend steep gradients slowly with foot on brake. Death or serious personal injury can result from failing to comply with the safety and warning instructions affixed to the cart.



WARNING

Any modifications to the speed and/or acceleration of the vehicle by either Drake or an authorised dealer or distributor at the request of the customer is done at the customer's own risk. Driving at a speed beyond the driver's ability or not suitable for the current grade or terrain may result in serious personal injury. Please drive at a speed suitable to your ability, the weather conditions and the terrain.



MAINTENANCE REQUIRED FOR VEHICLE SAFETY

This section contains broad safety practices required for safe vehicle operation. If you are responsible for the operation and maintenance of this vehicle, we recommend you implement this cart safety program.

Preventative Maintenance: Perform all scheduled maintenance in accordance with manufacturer's recommendations to provide the private owner/golfing patron with a safe, properly operating golf cart.

Use insulated tools within the battery area to prevent sparks or battery explosion.

Use wheel blocks and support vehicle with jack stands. NEVER get below a vehicle that is supported by a jack.

Service the vehicle in an area away from open flame or sparks.

Keep complete records of the maintenance history of the vehicle.

Personnel: Allow only qualified, trained, and authorized personnel to inspect, adjust, and maintain golf carts.

Parts and Materials: Use only replacement parts and materials recommended by the manufacturer.

Ventilation: Properly ventilate all maintenance and storage areas in accordance with applicable fire codes and ordinances to avoid fire hazards.

2.3 SAFETY



SAFETY PRECAUTIONS DURING MAINTENANCE

When performing maintenance, follow all safety instructions contained in the manufacturer's operation and service manuals, as well as the following safety procedures:

Properly immobilize vehicle before beginning any maintenance to avoid any unexpected vehicle movement.

Properly lift & rest chassis before working underneath vehicle to avoid any unexpected vehicle movement.

When working on the battery, do not smoke, or allow any sparks or open flames near the vehicle, to avoid any fires or explosions.

Before working on an electric vehicle, disable the vehicle's electrical system in accordance with the manufacturer's instructions to avoid electrical shock or damage to the electrical system.

Use only properly insulated tools when working on electrically powered vehicles or around batteries to avoid electrical shock or damage to the electrical system.

Maintain all safety devices including brakes, steering mechanisms, warning devices, and default speed parameters, in a safe operating condition. Do not modify these safety devices as supplied by the manufacturer.

After each maintenance or repair, the car must be driven by a qualified, trained, and authorized person – in an area free of pedestrian traffic – to ensure proper operation and adjustment.

Record all maintenance performed in a maintenance record log by date, name of person performing maintenance, and type of maintenance. Periodically inspect maintenance log to ensure accurate and complete entries.

Provide operator comment cards to assist in identifying non-periodic maintenance needs for specific golf cars.

Maintain in a legible condition all nameplates, warnings, and instructions provided by the manufacturer.

If new nameplates, warnings, or instructions are needed, contact DRAKE or the nearest authorised Dealer or Distributor.

**BATTERY CHARGING**

The following precautions must be adhered to in order to ensure Maintenance worker safety.

Place the Tow/Run switch in the TOW position before disconnecting or connecting the batteries. Failure to heed this warning could result in a battery explosion or severe personal injury.

To avoid unintentionally starting an electric vehicle, disconnect the batteries and discharge the controller.

Only use battery charging facilities and procedures that are in accordance with applicable ordinances and regulations to avoid explosions, electrical shock or damage to the electrical system.

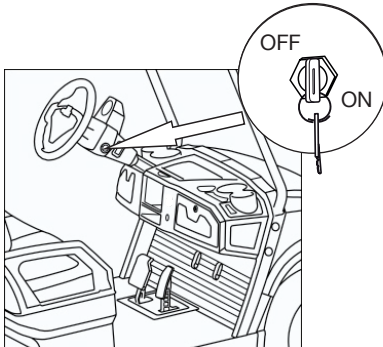
Periodically inspect charging facilities and procedures to be certain that applicable safety codes, regulations, and procedures are being followed to avoid any fires or explosions.

Provide Protection from the Elements**Do Not Block Airways**

3 CONTROLS



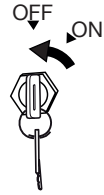
MAIN SWITCH



The main switch controls the following items:

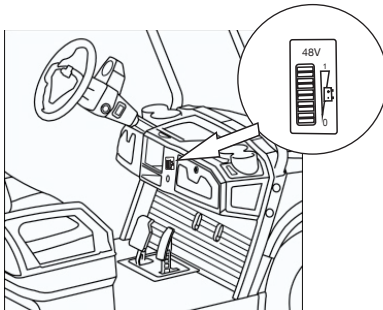
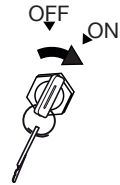
“OFF”

All electrical control circuits are switched off. The vehicle cannot be operated. The key can be removed only in this position.



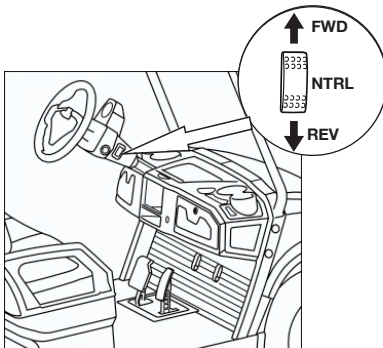
“ON”

Electrical circuits are switched on. The golf car can be driven.



VOLTAGE INDICATOR

The voltage indicator displays how much charge is left in the batteries. When the batteries are at full charge, either all the LEDs will be lit or just a single LED bar at the top, nearest the “1” will be lit. As the battery capacity decreases, the LEDs will move down toward the “0” bar. When the LED light is lit on or up to the second bar from bottom, battery capacity is significantly low, and the batteries must be charged as soon as possible.

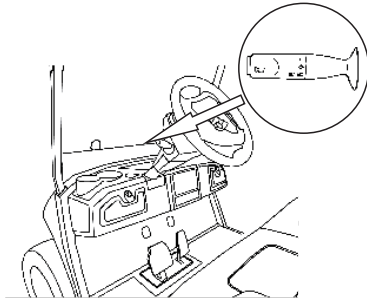


DRIVE SELECT SWITCH

The drive select switch is used to shift the golf car into FORWARD or REVERSE direction. ONLY after coming to a complete stop, toggle the switch to the desired position. When the Drive Select Switch is moved to the reverse “REV” position, the alarm will buzz. Middle position “NTRL” is NEUTRAL position. When parked, keep the drive select switch in the Neutral position.

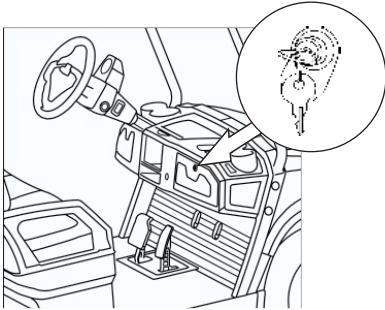
⚠ WARNING

Ensure the vehicle comes to a complete stop before shifting the position of the drive select switch. When shifting the position of the drive select switch, turn the drive select switch to the Neutral position for 2 seconds, then shift the position of the switch to the Forward or Reverse position. Failing to follow these instructions may cause damage to the vehicle.

**COMBINATION SWITCH**

The combination switch is used to apply the turn signals on the vehicle's headlights and taillights, as well as adjusting the cart's exterior lighting, headlight light beams and the taillight's brake lights. To apply the turn signal to indicate a left turn, shift the lever down. To apply the turn signal, to indicate a right turn, shift the lever up. The combination switch twists on the far end of the switch, and has 3 positions. Default position activates the daylight beams, but no headlights, and the brake lights are only activated when the brake pedal is depressed. First position from default dims the daylight beams, and the second position activates the night lamp low beams. In the second position you can shift the combination switch backwards, and the switch will click, and the brights will be activated. To deactivate the brights, whilst still in the second position, shift the combination switch backwards again, the switch will click, and the brights will be deactivated. The button on the end of the combination switch will activate the hooter for the duration that the button is depressed. The instrument cluster will represent the various positions of the combination switch for additional information.

3 CONTROLS

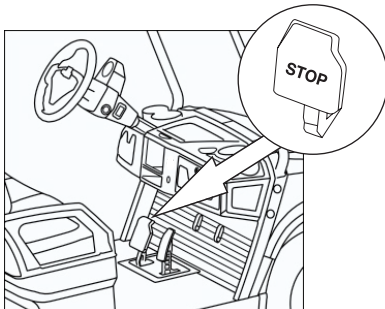


GLOVE BOX

There is one glove box on each side of the dashboard, which can be used for storage. When the glove box cover is not locked, press the lock head to open the cover.

Unlock: Insert the key into the lock, rotate in a clockwise direction to unlock the glove box, and then remove the key.

Locking: Close the glove box cover, insert the key and rotate in a counter-clockwise direction to lock, and then remove the key.



BRAKE PEDAL

The Brake Pedal is on the left hand side and is indicated by "STOP" on the pedal. The magnetic parking brake remains engaged whilst the vehicle is stationary, and engages automatically when the vehicle comes to a complete stop.

When the vehicle is in motion, depress the brake pedal till the vehicle comes to a complete stop, the magnetic parking brake will engage automatically with a "click" sound. Once the magnetic brake is engaged the cart will be locked in a stationary position and cannot be moved until the magnetic brake is released.

The magnetic brake is disengaged by depressing the accelerator pedal.

NOTE

If the vehicle's battery has been over-discharged, had a catastrophic battery or other failure and does not have the voltage required to disengage the magnetic brake, you may disengage the magnetic brake manually. See *maintenance* section for more information on how to disengage the magnetic brake manually. See the *following page* for more detailed information on the magnetic parking brake.

MAGNETIC PARKING BRAKE** WARNING**

The magnetic parking brake will automatically disengage if the accelerator pedal is depressed. If the main switch is in the “ON” position, depressing the accelerator may suddenly cause the vehicle to move. Death or serious personal injury can result from failing to comply with the safety instructions in this manual.

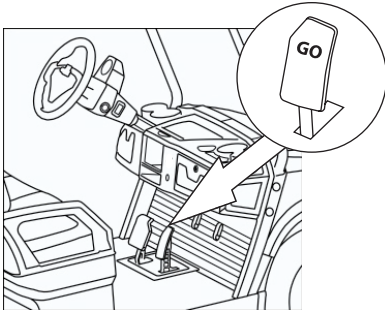
NOTE

If your vehicle is equipped with a magnetic parking brake, there are several things you need to be aware of.

1. The magnetic parking brake engages automatically every time your vehicle comes to a complete stop.
2. The magnetic brake is disengaged by stepping on the accelerator pedal.
3. In the event you need to manually push your vehicle, you can use the MANUAL EMB function. See the *following pages* regarding the tow switch for instructions on how to disengage the magnetic parking brake for manual pushing. Once the cart has been pushed to its desired location, flip the switch to either the OFF position, or the RUN position.

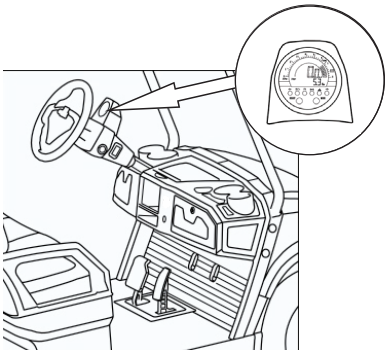
 WARNING

4. While the vehicle is in the MANUAL EMB setting, the vehicle will have no parking brake, and the vehicle will freely roll. Do not leave the vehicle unattended in the MANUAL EMB setting as the vehicle may roll and result in personal injury or death.
5. **DO NOT LEAVE THE SWITCH IN THE MANUAL EMB SETTING FOR AN EXTENDED PERIOD OF TIME.** This may result in damage to the magnetic brake.
6. If your vehicle has had a catastrophic battery or other failure and does not have the necessary 24 volts required to disengage the magnetic brake, you may disengage it manually. See *maintenance* section for more information on how to disengage the magnetic brake manually.



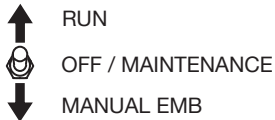
ACCELERATOR PEDAL

The accelerator pedal is on the right-hand side and is indicated by "GO" on the pedal. The accelerator pedal controls the speed of the cart. When depressed the speed will increase, when released the speed will decrease.



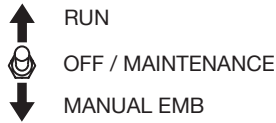
INSTRUMENT CLUSTER

The Instrument cluster displays key indicators relating to the vehicle's status. Light indicators include headlights, brights and turn signals. The instrument cluster displays the vehicles current speed, in km/h. It displays mileage (km). The instrument cluster will also display a fault code relating to any errors with the vehicle. If the instrument cluster displays a fault code please contact your nearest Drake dealer.



TOW SWITCH

The tow switch is a form of kill switch on the vehicle to allow for a more safe environment whilst performing maintenance on the vehicle, as well as to allow for safe towing of the vehicle. The tow switch can also be used to disengage the electro-magnetic brake



Before operating the car, make sure the tow switch is in the “RUN” position. Vehicles are equipped with a “Run-Tow/Maintenance” switch located underneath the seat. The “Tow/Maintenance” position allows the vehicle to roll freely without activating the warning beeper and eliminating potential damage to the controller or motor.

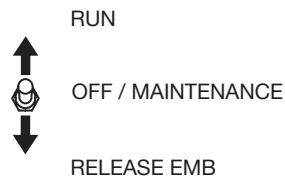
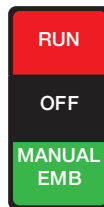
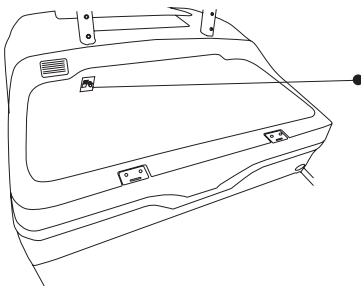
With the switch in “TOW/MAINTENANCE” position:

- the controller is deactivated
- the electronic braking system is deactivated which allows the vehicle to be towed or roll freely
- the warning beeper is deactivated

There is an additional setting for disengaging the electromagnetic parking brake which will allow the vehicle to roll freely for *manual pushing or towing*. It does this by providing current at least at the minimum voltage of 24V to the magnetic parking brake to be released. Prior to operating the vehicle, the tow switch is to be flipped **up** in the “RUN” position. When performing maintenance on the vehicle, the tow switch is to be flipped to the **middle** “MAINTENANCE” position. When preparing the vehicle to be towed or pushed freely, the tow switch is to be flipped **down** to the “RELEASE EMB” position”

NOTE

If the battery voltage is low, and will not turn on, the EMB will not be release when the toggle switch is flipped down to the “MANUAL EMB” position. You will then need to disengage the magnetic parking brake manually. See *maintenance* section for more information on how to disengage the magnetic parking brake manually.



3 CONTROLS

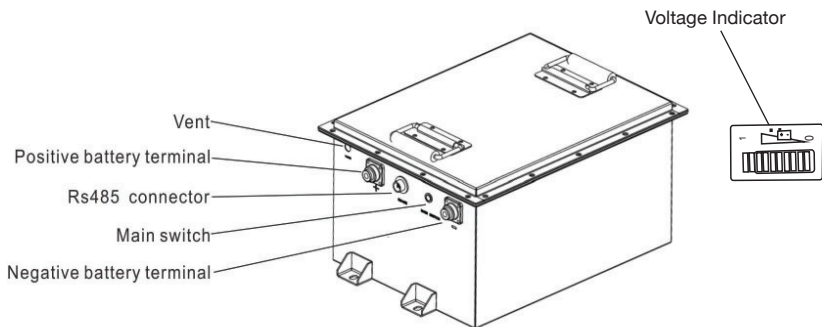
⚠ WARNING

Before attempting to tow the vehicle, move the *Tow Switch* to the “OFF” position. Then *disengage the magnetic parking manually*, see instructions in the *maintenance* section for more information on how to do this. It is **not recommended** to tow the vehicle with the tow switch in the “Manual EMB” position as this may cause damage to the magnetic parking brake.

Before disconnecting or connecting a battery, or any other wiring, move the Run-Tow/Maintenance switch to the “Tow/Maintenance” position.

After connecting a battery, or any other wiring, wait a minimum of 30 seconds before moving the Run-Tow/Maintenance switch to the “Run” position.

LITHIUM BATTERY



BATTERY MAIN SWITCH

Press the “Main switch” button to turn on the battery, an illuminated green light indicates that the battery is powered on. Press and hold the “Main switch” for 3 seconds or longer to turn off the battery.

OPERATION

1. Press the “Main switch” button to turn on the battery. Once the battery is on the terminals will be charged and current will flow through the vehicle’s system. The green light indicates power is on.
2. Once the battery is turned on, the meter will display the remaining battery power. There are ten bars in total and each bar represents 10%. When fully charged all ten bars will be illuminated. When 20% charge remaining, only two bars will be illuminated.

WARNING

ALARM

During operation the alarm within the battery may sound for one of the following reasons:

1. When the voltage indicator reaches the remaining two bars, 20% remaining, the battery will sound an under-voltage alarm, indicating that the battery needs to be charged.
2. When the voltage indicator reaches the last remaining bar, 10% charge remaining, the battery will sound an under-voltage alarm, indicating that the battery needs to be charged urgently. It is advised to stop driving the cart immediately and charge the battery as soon as possible.

CAUTION

When the battery sounds the under-voltage alarm, stop driving the vehicle and charge the battery as soon as possible. If you do not heed the warning and continue to drive the vehicle, the battery will switch off causing the golf cart to suddenly stop. We are not responsible for any loss caused by the sudden stop whilst driving.

WARNING

AUTOMATIC SWITCH-OFF DUE TO UNDER-VOLTAGE

The lithium battery will switch off due to under-voltage. There will be no power to the system, and the vehicle will not drive. All the electronic systems within the vehicle will be without power, rendering all accessories non-functional until power is restored to the battery by charging the vehicle at your nearest charging station.

If the vehicle is equipped with a magnetic parking brake:

- The magnetic parking brake will be engaged in park position and the rear wheels will not move. See the *maintenance section* for more information on how to manually disengage the magnetic parking brake.
- The vehicle may need to be towed to the nearest charging station, it is important to ensure the magnetic parking brake is disengaged, and the tow switch is in the “off” position.

3 CONTROLS

WARNING

AUTOMATIC SWITCH-OFF

The battery may switch off immediately whilst the cart is in motion due to over-temperature, over-current, under-voltage, or external short-circuit. You will be required to assess the vehicle's situation and the potential cause of the automatic switch-off. Some of the potential causes may be:

1. Too much current required by the vehicle due to a combination of high acceleration, high-load, and steep gradient.
2. High ambient temperature.
3. External short-circuit.
4. Fault within the battery pack.
5. Fault within the vehicle.

Contact your nearest dealer for additional support.

WARNING

AUTOMATIC SWITCH-OFF WITH A MAGNETIC PARKING BRAKE WHILST IN MOTION

If the vehicle is in motion whilst the magnetic parking brake is engaged the vehicle will brake suddenly and harshly, please be aware that passengers may be thrown forward toward the front of the vehicle due to the momentum of the vehicle which may cause injury or even death. It is important to continually monitor the voltage indicator to prevent the likelihood of the battery switching off suddenly and to drive at appropriate speeds when driving. The magnetic parking brake engages from a lack of voltage.

3 CONTROLS

LITHIUM BATTERY SPECIFICATIONS:

See the decal no. 5 or 6 for more information on the battery model in your vehicle.

Model	S51105L	S51105P	S51160P
Nominal Voltage	48V (51.2V)	48V (51.2V)	48V (51.2V)
Nominal Capacity	105ah	105ah	160ah
Stored Energy	5.37 kWh	5.37 kWh	8.19 kWh
Cycle Life	>3 500 times	>3 500 times	>3 500 times
Dimension (LxWxH)	490 × 334 × 234.5 mm	565 × 330 × 255 mm	800 × 320 × 232 mm
Weight	43kg	46.8kg	75kg
Typical Range per Full Charge	90 - 100km	50 - 60km	90-100km
Continuous Discharge	200amps	150amps	150amps
Maximum Discharge	250amps (120 seconds)	315amps (30 seconds)	315amps (30 seconds)
Standard Charge	5 hrs	5hrs	7.3hrs
IP Rating	IP67	IP67	IP67



OPERATOR SAFETY

Pre-operation checks should be made each time you use your golf car. Get into the habit of performing the following checks in the same way so that they become second nature.



WARNING

To keep cart from moving while performing pre-operation checks: Remove main switch key. Apply parking brake. Death or serious personal injury can result from failing to comply with the safety instructions in this manual.

BATTERIES

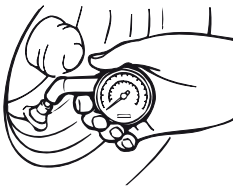
Check that the batteries are held securely in place to prevent them from being damaged from vibration or jarring. Also check that no battery caps are missing to prevent battery acid from spilling from the batteries. Check the battery terminals for corrosion.



WARNING

Battery electrolyte is poisonous and dangerous, causing severe burns, etc. It contains sulphuric acid. Avoid contact with skin, eyes or clothing. Ventilate when charging or using in an enclosed space. Always shield your eyes when working near batteries. **KEEP OUT OF REACH OF CHILDREN.**

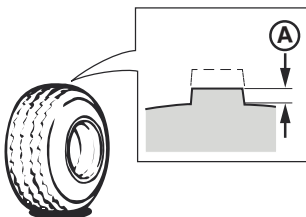
TYRES



Air Pressure

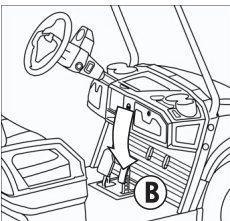
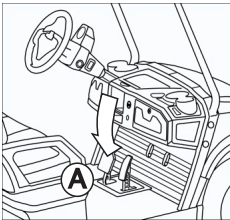
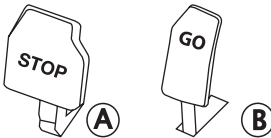
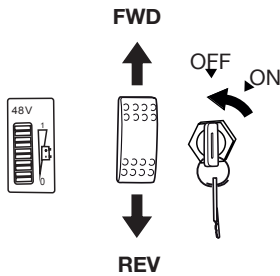
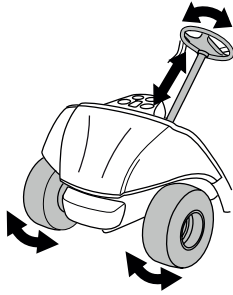
Check the tyre air pressure before operating the golf car.

Tyre pressure: 172 kPa, 25 psi, 1.5 bar



Wear Limit

Check the tyre surface for damage, cracks or embedded objects. When tire tread wears down to 1 mm (0.04 in.) see A in the diagram, replace the tyre.



STEERING SYSTEM

Check the steering system for excessive free play by:

- moving the steering wheel up and down, and back and forth.
- turning the steering wheel slightly to the right and left.

If you feel excessive free play, or hear rattling sounds which may indicate loose steering components, consult a DRAKE dealer.

REVERSE ALARM

Check the reverse alarm by moving the drive select switch to “REV” for reverse. The alarm should sound.

PEDAL OPERATION

Check the following pedal controls for proper operation. If a pedal does not work properly, consult a DRAKE dealer.

BRAKE PEDAL

Indicated by a single brake pedal with “STOP” molded into the pedal. Check the resistance of the brake pedal as its depressed, and that the pedal returns to its original position after being released. The magnetic parking brake will remain engaged.

ACCELERATOR PEDAL

⚠ WARNING

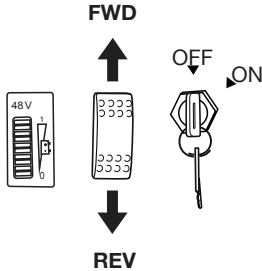
With the main switch in the “OFF” position, make sure the accelerator pedal operates smoothly. Depress the accelerator pedal and ensure that it returns to its original position after being released.

Whilst the main switch is “OFF” the magnetic brake will remain engaged. Depressing the accelerator pedal will not disengage the magnetic brake. See operation procedures for more information on how to disengage the magnetic parking brake whilst the main switch is “ON”.

4.1 OPERATION PROCEDURES

BEFORE STARTING THE VEHICLE

1. Study and understand the controls.
2. Make sure everyone is seated and holding onto the seat handles & handrails.
3. Read through the safety & information decals located on the vehicle.
4. Make sure the steering wheel is operating effectively and the wheels are in the desired direction.

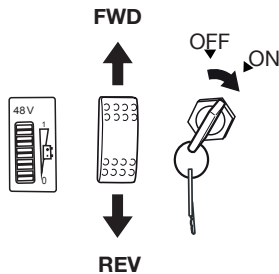


STARTING

1. The magnetic parking brake will automatically be engaged. Turn the drive select switch to “FWD” for forward, or “REV” for reverse. Check surroundings for hazards or obstacles.

CAUTION

Do not shift from “FWD” forward to “REV” reverse while the golf car is moving. Transmission damage can result.

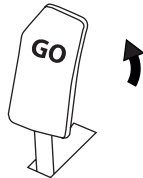


2. Turn the main switch to “ON”.

WARNING

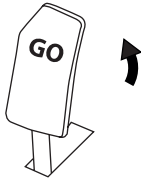
Do not depress the accelerator pedal when turning on the main switch or the golf car may start moving unexpectedly. Death or serious personal injury can result from failing to comply with the safety instructions in this manual.

3. Check that your path is not obstructed in the direction you plan to go, and slowly depress the accelerator pedal. The golf car will start to move.



NOTE

The magnetic parking brake will automatically release when the accelerator pedal is depressed.



ACCELERATING

The rate of acceleration is dependant on the extent at which the accelerator is depressed. The further the accelerator pedal is depressed the faster the rate of acceleration.

NOTE

Keep one foot on either the accelerator pedal whilst accelerating or on the brake pedal whilst braking. Do not place one foot on the accelerator pedal & one foot on the brake pedal as the cart will not move for safety reasons.

⚠ WARNING

Vehicle speed must be controlled when going downhill.

Motor braking can be used to control the speed when going downhill; however steep terrain and other conditions may require pedal braking in conjunction with motor braking. Motor braking engages when the accelerator pedal is released and the cart is moving.



STOPPING

1. To stop the golf car, gradually press down on the brake pedal until the vehicle comes to a complete stop.

NOTE

The parking brake will automatically release when the accelerator pedal is depressed.

2. When the car has come to a stop, apply the parking brake pedal and turn the main switch to "OFF."

CAUTION

When stopped on a hill use the brake pedal to hold your position. Do not use the accelerator pedal to hold your position as this may damage the vehicle.

5 MAINTENANCE

BATTERY CARE: LITHIUM BATTERY

Manufacturer: RoyPow Technology

NOTE

The battery is equipped with an integrated cell management system which features:

- Cell balancing
- Battery voltage monitoring
- Battery current monitoring
- Pre-warning when battery capacity reaches less than 20%
- Battery temperature monitoring (integrated temperature sensor)

⚠ WARNING

1. Do not disassemble, reassemble, or repair the battery. Incorrect reassembly may cause combustion or electric shock.
2. Do not short-circuit the battery, use it near heat or water sources, or allow it to become wet.
3. Do not use the battery if badly damaged or operate it with damaged cables or charging adaptors.
4. Do not operate this product in explosive atmospheres (i.e. flammable liquids, gases or dust).
5. Do not permit the battery to freeze. Never charge a frozen battery.
6. In case of skin or eye contact with any of the chemicals within the battery, rinse immediately with clean water and seek medical attention immediately.
7. A LiFePO₄ lithium battery should never be fully discharged.
8. LiFePO₄ lithium batteries can only be discharged down to 20% remaining capacity before irreversible damage occurs. In practice this means that you will only be able to use 80% of your battery capacity per charge & discharge cycle.

NOTE

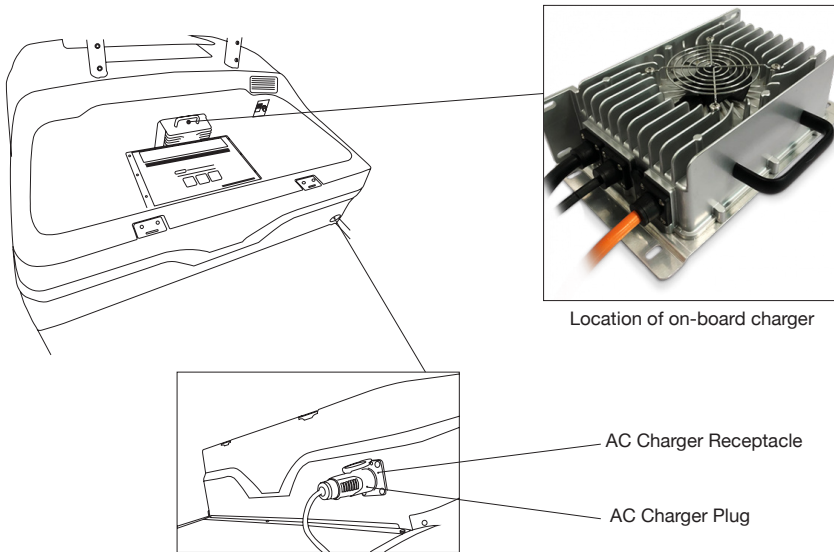


Lithium-ion batteries are recyclable. If you have any questions regarding battery disposal or recycling, please consult your nearest Drake dealer.

Li-ion

5 MAINTENANCE

BATTERY CHARGING (LITHIUM)

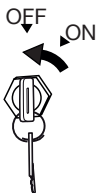


Location of on-board charger

AC Charger Receptacle

AC Charger Plug

The cart is equipped with a *RoyPow RP5622* on-board charger. It's location is illustrated above.



Charging the Cart:

1. Ensure that the cart is turned off by the main switch.
2. With the AC charger plug disconnected from the AC outlet, connect the AC charger plug to the AC charger receptacle.
3. Connect the power plug of the AC charger plug to an appropriate live AC outlet. The presence of AC power is represented by the green LED blinking green, indicating the charger is ready to charge.
4. The charger will start automatically indicated by the LED blinking red. The charger fan may turn on, depending on ambient temperature.
5. If the AC charger plug must be removed from the AC charger receptacle whilst a charge cycle is in progress, disconnect the AC power plug from the AC outlet before removing the AC charger plug from the AC charger receptacle.
6. The charger automatically terminates the charge cycle when a battery reaches full charge, which is indicated by the solid illumination of the green LED. The required charge time is affected by numerous factors, including battery amp-hour capacity, depth of discharge, battery temperature, and battery age/usage.

BATTERY CHARGING (LITHIUM)

7. Once the charge cycle is completed. Remove the power plug from the AC outlet before removing the AC charger plug from the AC receptacle.

NOTE

If the charger encounters an issue whilst within a charge cycle, the fan will stop rotating, and the red LED will blink in a sequence to indicate the error code. Disconnect the power plug from the AC outlet, and unplug the AC plug from the AC receptacle on the cart.

⚠ WARNING

- The charger is suitable for charging RoyPow LiFePO4 batteries with a nominal voltage of 51.2V only. Charging other batteries may cause fire or explosion.
- The allowable AC input voltage is 100-240V AC. Never connect it to a voltage not within this range.
- Never operate the charger in the vicinity of flammable material or gas.
- Ensure that there is an unrestricted airflow to and from the charger's cooling slots.

Storage Mode (LiFePO4 Lithium):

1. The battery charger is designed to fully charge the battery set. Once the charge cycle is completed, remove the cart from charge when convenient. **Do not leave the cart on charge** for extended periods.
2. If you don't intend to drive the vehicle for 5 days or longer, it is advisable to switch the battery off at the battery main switch to put the battery into storage mode. This will slow the batteries rate of discharge whilst in storage, and help prevent over-discharge of the battery. Thus maintaining the expected lifespan of the LiFePO4 battery.
3. Depending on the battery model, the battery may automatically switch off within 5 days of non-use and automatically enter storage mode.

⚠ WARNING

Do not disconnect the AC charger plug from the AC charger receptacle when the charger is on or an arc could occur that may cause an explosion.

5 MAINTENANCE

BATTERY CHARGING (LITHIUM)

NOTE

Charging program consists of 3 stages: constant current, constant voltage and float charging. The charger provides protection against overload, over-voltage, over-heating, short circuit and reverse polarity connections.

SPECIFICATIONS

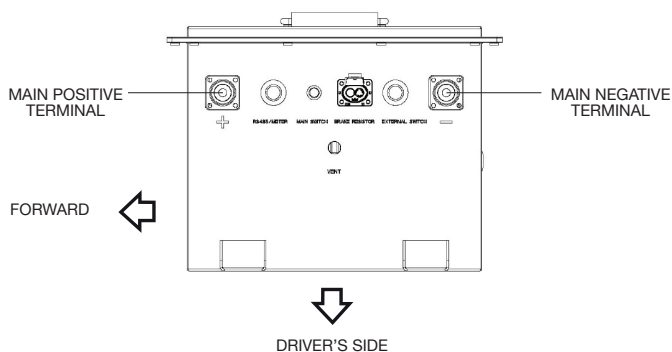
RP5622-LFP RoyPow Charger

DC Output	
Maximum DC output voltage	56.8V
Maximum DC output current	22A
Maximum DC output power	1250 W
Nominal DC output current	22A @ 110 VAC, 22A @ 220 VAC
Battery type	Lithium LiFePO4
AC Input	
AC input voltage range	85-270 VAC
Nominal AC input voltage	100-240 VAC
Nominal AC input frequency	50 / 60 Hz
Maximum AC input current	16 A
Nominal AC input current	11A
Power factor	>0.9
Mechanical	
Dimensions	28.2 x 16.7 x 11.4 cm (11.1 x 6.57 x 4.5")
Weight	10.4 lbs (4.7 kg)
Cooling	Active cooling with fan
Environmental	
Enclosure	IP66
Humidity	5% - 95%
Operating temperature	-40°C to +65°C (-40°F to 149°F), Derated at >40°C (104°F)
Storage temperature	-40°C to +85°C (-40°F to 185°F)

⚠ WARNING

When working with batteries, do not put wrenches or other metal objects across the battery terminals. An arc can occur causing an explosion or fire at the battery. Always remove the negative (-) cable to the motor controller first, and install it last. A spark can occur causing an explosion or fire at the battery.

Before installing or uninstalling any battery connections, ensure the main switch is turned off. Use care to connect the battery wires as shown below. Tighten the battery post hardware to 5 Nm torque. Do NOT overtighten as this may damage the battery post. Use M8 bolts as provided.

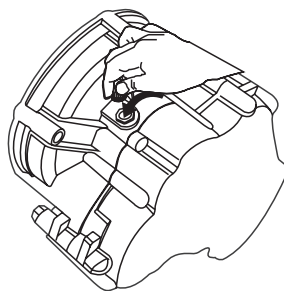


TRANSAXLE OIL

The only maintenance required for the first five years is the periodic inspection of the lubricant level. The rear axle is provided with a lubricant level check/fill plug located on the bottom of the differential. Unless leakage is evident, the lubricant need only be replaced after five years.

Replacing the lubricant:

- place the car on a flat, level surface
- lift the cushion
- clear the area around the oil plug
- remove the oil plug
- If required add 80W 90 gear box oil until it is level with the plug opening
- replace the oil plug

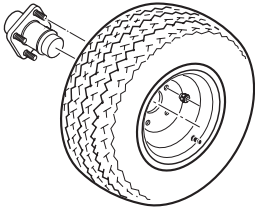


5 MAINTENANCE

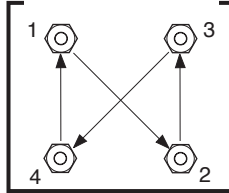
CAUTION

Do not allow foreign material to enter the transaxle. Serious transaxle damage can result.

WHEEL REPLACEMENT



Tyre style may vary



“Cross Sequence”

To remove and install a wheel on your golf car:

1. Block the wheels to prevent the golf car from moving, loosen the lug nuts.
2. Elevate the golf car with a jack and remove the lug nuts and the wheel.
3. Reverse the removal steps when installing the wheel using the “cross sequence” when tightening the lug nuts.
4. Wheel nut tightening torque: 80 Nm, 8.0 m.kg (58 ft.lb)

⚠ WARNING

Before performing wheel or brake maintenance, verify that the main switch is in the “OFF” position. Accidental starting of the vehicle could cause the vehicle to move, causing death or serious personal injury.

BRAKE ADJUSTMENT

The vehicle is fitted with hydraulic disc brakes on all four wheels that are self adjusting. Ensure the main switch is turned off. Whilst the vehicle is stationary, and the magnetic parking brake activated, use your foot to depress the brake pedal sufficiently, before releasing the brake pedal. You may need to do this a few times before the brakes are sufficiently adjusted. Make sure the brakes are functioning properly prior to use.

⚠ WARNING

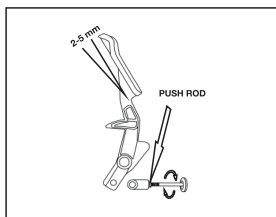
Consult your DRAKE dealer before using your vehicle if you suspect any brake problems. Brake failure could result in a serious accident. Death or serious personal injury can result from failing to comply with the safety instructions in this manual.

CAUTION

Over-tightening the brake cables will increase brake wear and affect overall performance of the braking function. Premature brake wear can result. Death or serious personal injury can result from failing to comply with the warning labels in this manual.

BRAKE PEDAL ADJUSTMENT

Check the brake pedal free play by pressing against the pedal with two fingers (using light force) and measuring the distance the pedal travels before resistance is felt.



To adjust the brake pedal free play:

1. To change the length of the push rod and thus increase the brake pedal free travel, firstly loosen the lock nut on the brake master cylinder push rod, then carefully turn the push rod in the counterclockwise direction. After adjusting the brake pedal travel properly, tighten the screw in time to prevent it from loosening.
2. The brake pedal free travel can be adjusted, but not frequently. It is recommended to adjust the distance between 2-5mm and increase the length of the push rod by 1-2mm.

⚠ WARNING

Too much play on the brake pedal, by over-loosening the brake pedal, can result in ineffective braking that could cause delayed braking that can result in harm, injury or death. Please consult your nearest Drake dealer for assistance if concerned regarding your vehicle's braking.

5 MAINTENANCE

MANUALLY DISENGAGING THE MAGNETIC PARKING BRAKE

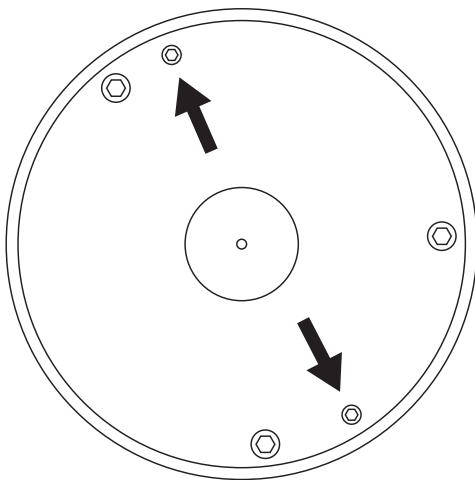
WARNING

Once the magnetic parking brake is manually disengaged the cart will roll freely and may cause injury or death. Place wheel blocks on the rear wheels before manually disengaging the magnetic parking brake.

The magnetic parking brake engages automatically. If the cart is stationary and cannot be driven, it may be required to manually disengage the magnetic parking brake to tow or roll the cart. To manually disengage the magnetic parking brake:

1. Locate the magnetic brake assembly behind the right rear wheel.
2. There are (5) five bolts on the face of magnetic brake assembly, locate the (2) two smaller bolts. See *illustration below* for reference.
3. With a T-25 Torx wrench, lightly tighten the (2) smaller bolts. (DO NOT over-tighten).
4. Once the smaller (2) bolts are tightened, the magnetic parking brake will be disengaged, and the vehicle may be manually pushed.
5. The magnetic brake will NOT be able to re-engage until the (2) small bolts are loosened back up.
6. Loosen the 2 small bolts to reengage the magnetic parking brake assembly and continue normal operation of the vehicle.

EMB Assembly Illustration:



TOWING

⚠ WARNING

OFF ON



FWD



NTRL



REV



RUN



TOW



RUN



OFF / MAINTENANCE

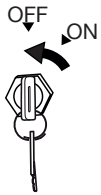


RELEASE EMB

- Do not tow the cart on public streets or highways.
- Use only approved & certified tow bars.
- Turn the key switch to OFF and place the Forward/Reverse switch in the NEUTRAL position before towing the cart.
- Release the manual parking brake. If the cart is equipped with a magnetic parking brake, it will be required to manually disengage the magnetic parking brake using the method described in the page “Manually disengaging the magnetic parking brake” in the *maintenance* section. Do not simply flip the tow switch to the “Release EMB” position. Towing in this setting may cause damage to the motor, magnetic brake assembly, controller & battery.
- Place the Tow/Run switch to the TOW or OFF position; otherwise, the cart will not roll freely while being towed.
- Extreme caution should be used when towing any cart.
- Do not exceed 8 km/h towing speed.
- Avoid sudden starts, sudden stops, and tight turns when towing.
- Avoid stopping on a hill when towing. If you must stop on a hill, avoid sudden starts or rolling backwards and stopping suddenly. Failure to heed this warning could cause the vehicle to overturn, possibly resulting in severe personal injury.
- Stay clear from the area between the tow vehicle and the towed cart or trailer.

5 MAINTENANCE

TRANSPORTATION ON A TRAILER



↑ FWD



NTRL

↓ REV



↑ RUN



↓ TOW

↑ RUN



OFF

↓ RELEASE
EMB

WARNING

- For use on public roads, the trailer must meet all national and provincial requirements regarding tail lights, brake lights, etc.
- Do not tow a Drake cart behind a passenger vehicle or truck on a public road unless it is on an approved & certified trailer.
- The cart to be towed should be tied securely to the trailer, with the Forward/Reverse switch in the NEUTRAL position, the key switch in the OFF position, and the parking brake firmly pressed and locked or the magnetic parking brake engaged to prevent free movement of the cart.
- Do not allow people in the trailer or vehicle being towed.
- Avoid sudden starts, sudden stops, and tight turns when towing.
- Avoid stopping on a hill when towing. If you must stop on a hill, avoid sudden starts or rolling backwards and stopping suddenly. Failure to heed this warning could cause the vehicle to overturn, possibly resulting in severe personal injury.
- When towing on a trailer, normal road speed of the tow vehicle should be reduced.
- Because of the added length of the trailer, use caution when making turns.
- The cart must be forward facing to prevent any damage to the windshield or windshield retain clips and secure the seat bottom before transporting the cart on a trailer.
- Stay clear from the area between the tow vehicle and the towed vehicle or trailer.

MAINTENANCE CHARTS

Regular maintenance is required to ensure the best performance and safe operation of your golf car.

WARNING

Turn off the main switch and apply the parking brake when you perform maintenance, unless otherwise specified. If you're not familiar with servicing the machine, death or serious personal injury can result. When in doubt the work should be done by a Drake dealer or other qualified mechanic.

CS – CHECK CA – CHECK & ADJUST R – REPLACE S – SERVICE CL – CLEAN & LUBRICATE L – LUBRICATE

	Remarks	Pre-Op	40 rounds 20 hours 160 kms (Every month)	250 rounds 125 hrs 1000 kms (Every 6 months)	500 rounds 250 hrs 2000 kms (Every year)	1000 rounds 500 hrs 4 000 kms (Every 2 years)	2000 rounds 1000 hrs 8 000 kms (Every 4 years)
PRE-OP	Charge	S	S	S	S	S	S
	Clean battery tops, check hold-down screws and terminals are tight	S	S	S	S	S	S
	Check brake pedal free play and adjust if necessary	CS	CA	CA	CA	CA	CA
	Check steering operation	CS	CS	CS	CS	CS	CS
	Check tyre pressure, tread depth and tyre surface for damage	CS	CA	CA	CA	CA	CA
	Check body and chassis for damage	CS	CS	CS	CS	CS	CS
	Check tightness of all bolts, nuts, screws and rivets	CS	CS	CS	CS	CS	CS
Check reverse alarm operation	CS	CS	CS	CS	CS	CS	
EVERY MONTH	Check electrolyte level		CS	CS	CS	CS	CS
	Check for loose or broken connections		CS	CS	CS	CS	CS
	Clean/lube pedal control area		CL				
EVERY 6 MONTHS	Check all wire insulation for cracks and/or worn spots			CS	CS	CS	CS
	Check shock absorbers for oil leaks and damaged springs			CS	CS	CS	CS
EVERY 12 MONTHS	Perform a discharge test				S	S	S
	Apply Terminal protectant				S	S	S
	Check rear axle bearing play for roughness or freplay				CS	CS	CS
	Check Steering knuckle bushing free play / Adjust wheel alignment				CA	CA	CA
	Check wheel nut tightness, front wheel front wheel bearing play				CS	CS	CS
	Check transaxle oil level and inspect for leakage				CS	CS	CS
	Check pedal stop operation and adjust if necessary				CA	CA	CA
EVERY 4 YEARS	Replace transaxle oil						R
	Inspect brake shoes and adjust or replace if necessary						CA

5 MAINTENANCE

CAUTION

Minor & Major service checklists are for reference only. All preventative maintenance and service work ought to be done by DRAKE or an authorised Dealer, Distributor or Service Agent.

Minor Service Checklist	✓	X
Check body panels and chassis for looseness/damage		
Check for any fluid leaks		
Check tightness of all bolts, nuts, screws & rivets. Adjust if necessary		
Check windscreen & retainer rubbers for chips / cracks		
Check that steering wheel is aligned straight, adjust if necessary		
Check & Grease steering universal joint		
Check rubber boot if cracked / worn. Quote replacement.		
Check spindle for play. Grease spindle. Quote replacement bearings.		
Inspect front hubs & bearings for damage. Quote replacement bearings.		
Check & Grease steering rack.		
Check Steering ball joints, and suspension ball joint for play. Quote replacement.		
Check bushes on A-Arms and Shocks. Quote replacement.		
Inspect battery bay for corrosion & loose terminals		
Check level of battery fluid. Refill when fully charged.		
Clean any corrosion & spray terminals with protectant		
Check play on battery cables & receptacles. Ensure connections are tight.		
Check charging unit - ensure operation is in order. Cart fully charged.		
Check all wire insulation for cracks and/or worn spots		
Check functionality of all 12V electronics (incl. F&R switch, headlights, taillights, reverse buzzer, SOC & hooter)		
Check headlight's aim, adjust if necessary Check headlight's aim, adjust if necessary		
MB - Adjust brake shoes and check brake drum for wear. Ensure wheel moves freely when wheel is suspended. Check brake pedal movement. Check parking brake resistance (2 -3 clicks)		
HB - Check brake pads and brake fluid. Top up fluids if necessary.		
Check wheel alignment. Adjust if necessary.		
Check tyre pressure, tread depth & surface for damage. Quote resolution.		
Check absorbers and coil springs functionality and for fluid leaks or damage		
Check bushes on shock absorbers. Quote replacement.		
Check rear bearings for play. Quote replacement.		
Check wheel nut tightness. Torqued to 70nm.		
Check absorbers and coil springs functionality and for fluid leaks or damage		
Harsh brake test & Test Drive		

MAINTENANCE

5

Major Service Checklist	✓	X
Check body panels and chassis for looseness/damage		
Check roof, handles & supports for damages		
Check seats & armrests for wear and tear		
Check caddie plate is straight with spacer, handle and grab bar is tight.		
Check for any fluid leaks		
Check tightness of all bolts, nuts, screws & rivets. Adjust if necessary		
Check windscreen & retainer rubbers for chips / cracks. Quote replacement.		
Check that steering wheel is aligned straight, adjust if necessary.		
Check & Grease steering universal joint		
Check rubber boot if cracked / worn. Quote replacement.		
Check spindle for play. Grease spindle. Quote replacement bearings.		
Inspect front hubs & bearings for damage. Quote replacement bearings.		
Check & Grease steering rack.		
Check Steering ball joints, and suspension ball joint for play. Quote replacement.		
Check bushes on A-Arms and Shocks. Quote replacement.		
Check front shocks and coils (springs) for damage. Quote replacement.		
Clean & Lubricate pedal control area: accelerator & brake joints.		
Inspect battery bay for corrosion & loose terminals		
Check level of battery fluid. Refill when fully charged.		
Clean any corrosion & spray terminals with protectant.		
Check play on battery cables & receptacles. Ensure connections are tight.		
Check charging unit - ensure operation is in order. Cart fully charged.		
Check all wire insulation for cracks and/or worn spots		
Check functionality of all 12V electronics (incl. F&R switch, headlights, taillights, reverse buzzer)		
Check headlight's aim, adjust if necessary		
MB - Adjust brake shoes and check brake drum for wear. Ensure wheel moves freely when wheel is suspended. Check brake pedal movement. Check parking brake resistance (2 -3 clicks).		
HB - Check brake pads and brake fluid. Top up fluids if necessary.		
Check brake cables if necessary		
Check wheel alignment. Adjust if necessary.		
Check tyre pressure, tread depth & surface for damage. Quote resolution.		
Check absorbers and coil springs functionality and for fluid leaks or damage		
Check bushes on rear shock absorbers & torsion bar. Quote replacement.		
Check rear bearings for play. Quote replacement.		
Check wheel nut tightness. Torqued to 70nm.		
Change transaxle oil. 80W90		
Check & clear fault history on controller		

MAINTENANCE

5

Major Service Checklist	✓	X
Check motor cables for play on terminals and/or significant wear. Replace lugs if necessary. Quote replacement of cable.		
RoyPow Lithium: Update BMS firmware		
Harsh brake test & Test Drive		

Perform the following preparations if your golf car is fitted with **lithium** batteries and when it's expected to be idle for extended periods of time:

NOTE

Turn the main switch key to the "OFF" position, lift the seat and move the tow switch into the "TOW" or "OFF" position. Remove the key from main key switch, and store key in a safe place.

BATTERY PREPARATION (LITHIUM)

In order to avoid over discharge, for long-term storage, the battery must be turned off at the "battery main switch" and the state of charge (SOC) kept above 60% to avoid over discharge of the battery. Charge the battery fully prior to storage and must be charged again every 3 months.

Do not leave the battery on charge for extended periods. Remove vehicle from charge when fully charged.

CAUTION

- Do not permit the battery to freeze. Never charge a frozen battery.
- Do not store near corrosive material, fire, and heat sources.
- Ensure the vehicle is in a dry ventilated room that is between 0°C and 35°C.
- To avoid exposing electrical components to moisture and subsequent damages, do not use any type of pressure washing or steam cleaning equipment to wash the vehicle.

CHASSIS PREPARATION

Verify that the air pressure in the tyre is 25psi or 172 kPa or 1.5 bar.

Clean exterior of the golf car and apply a rust inhibitor where necessary.

Cover the vehicle and store it in a dry, well-ventilated place.

7 LIMITED WARRANTY

Drake Golf Carts CC “DRAKE” hereby warrants that any new (non-fleet) lx model year 2023 or more recent, identified by the prefix “lx” in the model name “Vehicle”, and sold by DRAKE or an authorised Dealer or Distributor in South Africa, will be free from defects in material and workmanship subject to normal use and service for the periods stated below “Limited Warranty”.

This Limited Warranty covers the material & workmanship on the components listed below, based on the period of warranty specified below. Any component adjudged to be defective due to either faulty workmanship or materials, as determined by DRAKE, will be replaced by DRAKE or an authorised Dealer or Distributor. Removal, repair or reinstallation of the defective component(s) shall be performed only by DRAKE, its authorised Dealers or Distributors, or a service agency approved by DRAKE. For removal, repairs and reinstallation of components by a qualified technician other than DRAKE’s factory technicians or an authorised Dealer or Distributor, DRAKE will provide only the replacement parts or components.

The purchaser must provide the proof of the date of purchase such as an original tax invoice “Sales Receipt” with any warranty claim. Parts repaired or replaced under this Limited Warranty are warranted for the remainder of the length of the original Warranty Period. This Limited Warranty applies to the Vehicle regardless of the owner, and any subsequent change of ownership, that may arise during the warranty period. The original or subsequent owner is requested to present the initial Sales Receipt from DRAKE or the authorised Dealer or Distributor from which the Vehicle was originally purchased.

Component	Period
Main Frame	3 years
Electric Drivetrain: Transaxle & Motor	3 years
Major Electronics: Speed controller & Battery charger	2 years
Suspension: Steering & Suspension components	1 year
Deep Cycle Battery**	1 year
Lithium LiFePO4 Battery* “Lithium Battery”	5 years
All other parts & components	2 years

*The Lithium Battery is warranted under separate conditions & limitations (See details below)

** The Deep Cycle Battery is not warranted by DRAKE.

EXCLUSIONS:

Specific exclusions from this Limited Warranty:

- Ordinary wear & tear, routine maintenance parts, and damage to electrical components due to fluctuations in electrical current.
- Fading, rust, failure or deterioration due to exposure to the elements.
- Abnormal or unintended strain or use, neglect, accident or collision, improper maintenance or improper installation of accessories and installation of parts and accessories that are not DRAKE original parts and accessories.
- Non-approved alterations or modifications that alter the suspension, the weight distribution or balance of the cart.
- Acts of God or nature, including but not limited to lightning, hail damage, flooding and fire.
- Damage or loss resulting from vandalism, theft, war or other events in which DRAKE has no control.
- Warranty repairs made by a non-authorised service agency that is neither DRAKE nor an authorised dealer or distributor.- Any and all expenses incurred in transporting the vehicle to and from DRAKE or an authorised dealer or distributor for the purpose of fulfilling a warranty claim or service.
- Any and all expenses, fees or duties incurred relative to inbound freight, importation, or customs.

EXCLUSIONS CONTINUED.:

- Damaged charger plug, and/or resultant damage as the charger plug is a wear and tear item subject to abuse
- Battery damage due to improper charging practices or a defective charger
- The Deep Cycle batteries are held under a separate warranty and is not warranted in this Limited Warranty

THIS LIMITED WARRANTY MAY BE VOIDED OR LIMITED AT THE SOLE DISCRETION OF DRAKE IF THE VEHICLE:

- shows indications that the cart modified by an unauthorised service agent including but not limited to the controller's parameters relating to speed, acceleration and/or braking, the mechanical braking system, the steering system, the transaxle and other systems of the vehicle that may cause it to perform in a manner not intended by DRAKE or not within DRAKE's specifications.
- shows indications that routine or necessary maintenance was not performed as detailed within the Owner's Manual, or within the time or manner specified within the Owner's Manual.
- has electrical accessories not manufactured or sold by DRAKE for the normal functioning of the Vehicle or for external accessories which are energy consuming devices that would draw current directly from the battery pack.
- shows indications that the battery pack was opened, disassembled or tampered with in any way
- shows indications that attempts may have been made to intentionally reduce the life of the battery pack
- consists of batteries not approved by DRAKE

NO CONSEQUENTIAL DAMAGES

DRAKE will not under any circumstances be liable for any indirect, incidental or consequential damages including but not limited to, death, personal injury, property damage arising from or related to any alleged failure in a vehicle or battery charger, or any damage or loss to the purchaser or third party for loss of use, loss of time, inconvenience, or any other economic loss, whether or not DRAKE was apprised of the foreseeability of such damage or losses. Any legal claim or action arising that alleges breach of warranty must be brought within ninety (90) days from the date the warranty claim arises

The Limited Warranty for all parts and components of the Vehicle other than the batteries shall commence on the date of delivery to the purchaser or the date on which the Vehicle is placed in storage as requested by the purchaser. The warranty for Lithium Batteries shall commence on the earliest of the following dates:

- (a) of Vehicle delivery to the Purchaser,
- (b) on which the Vehicle is placed in storage as requested by the purchaser or
- (c) ninety (90) days from the date of sale or lease of the Vehicle by "DRAKE" to an authorized Dealer or Distributor.

Parts repaired or replaced under this limited warranty are warranted for the remainder of the length of the original warranty period. This Limited Warranty applies to the original purchaser and any subsequent owners of the cart, however the Sales Receipt with the original date of purchase from DRAKE or the authorised Dealer or Distributor is required when making a warranty claim with the warranty department.

7 LIMITED WARRANTY

LITHIUM BATTERY LIMITED WARRANTY

Lithium Battery			
Amperage	56ah	105ah	160ah
Years	5 Years	5 Years	5 Years
Limitation	Rated end of life	Rated end of life	Rated end of life

Lithium Battery Warranty Limitations, Conditions and Exceptions:

The warranty on the Lithium Battery is a pro-rata, return-to-base warranty "Pro-Rata Warranty" fulfilled not by "DRAKE" but RoyPow Technology Company Limited "the Manufacturer" of the lithium batteries. Under the Pro-Rata Warranty the manufacturer will repair, replace, or refund (subject to the limits explained below), at its own discretion, any Product deemed to be faulty under the terms of the Pro-Rata Warranty. Any replacement product supplied by the Manufacturer will consist for the remainder of the warranty period.

Exclusions:

This warranty is void if the Lithium Battery has been:

- Stored, installed, used or charged in any manner that is contrary to the Manufacturer's instructions or data sheets or generally accepted good industry practice
- Opened, modified or tampered with in any way, including the alteration or erasure of date codes etc
- Used for an application or in a manner for which they were not designed
- Stolen or at any time outside of the customer's control (except in the normal course of business)
- Subjected either during storage or use to extreme environmental conditions, including heat, cold and moisture, out with the limits defined in the Manufacturer's instructions and data sheets

Warranty claims on the Lithium Battery require specific testing and analysis prior to approving any such warranty claim. Contact DRAKE or the authorised distributor or dealer from whom the vehicle was purchased when making your warranty claim. It will be required that the vehicle, or in particular circumstances, the battery be taken to DRAKE, an authorised Dealer or Distributor or an authorised service agent nearest your location.

Storage & Operation Limitations	Time Allowed
Storage between charge cycles in normative conditions (0°C ~ 35°C)	6 months
Storage in extreme conditions (-20°C ~ 45°C)	1 month
Discharge cycling (less than -20°C or greater than 55°C)	Not Allowed
Charge cycling (less than 0°C or greater than 55°C)	Not Allowed

All consequential losses and/or damages arising from the malfunction of the Lithium Battery are expressly excluded.

The cost of transporting a Lithium Battery or it's relevant parts that is the subject of a warranty claim, or is being supplied by the Manufacturer in recompense for a Warranty claim, from the purchaser or DRAKE or an authorised Dealer or Distributor to the Manufacturer or from the Manufacturer to the purchaser or DRAKE or an authorised Dealer or Distributor is excluded and is the responsibility of the purchaser or DRAKE or an authorised Dealer or Distributor.

Limitations:

The value of any Warranty claim, whether recompensed in replacement goods, services or money, will be based on the price paid when the goods were originally purchased from the Manufacturer. Any replacement supplied in recompense will be the nearest equivalent that is available to the Lithium Battery in the Pro-Rata Warranty claim.

This is a Pro-Rata Warranty. This means that in the event that the Manufacturer upholds a claim under the terms of this Pro-Rata Warranty any recompense will take into account the number of months that have elapsed from the warranty Commencement Date to the date when the Manufacturer was first notified of the claim. The value of any recompense due will reduce by $100/(12 \times \text{Warranty duration in years})\%$ of the original purchase price from the Manufacturer per month from the date of commencement of the Pro-Rata Warranty to the date when the Manufacturer was first notified of the Pro-Rata Warranty claim. In the case of a product with a 5 year warranty the monthly reduction is 1.67% of the original purchase price; in the case of a 1 year warranty the monthly reduction is 8.33%.

Purchaser's Responsibility under this Limited Warranty shall be to:

- operate and maintain the Vehicle and battery charger as specified in the Owner's Manual.
- contact DRAKE or an authorised Dealer or Distributor with regards to any queries which may not be clear to the purchaser in the Owner's Manual.
- make DRAKE or an authorised Dealer or Distributor aware of any Warranty Claim within ninety (90) days in which the defect was discovered.

DRAKE MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATION AND TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY DRAKE AND EXCLUDED FROM THIS WARRANTY.

MAINTENANCE RECORD

<input type="checkbox"/> Yearly Maintenance <input type="checkbox"/> Minor Service <input type="checkbox"/> Major Service Date: _____ Job No.: _____ Mileage/Hours: _____ <p style="text-align: right;">Stamp here</p>	<input type="checkbox"/> Yearly Maintenance <input type="checkbox"/> Minor Service <input type="checkbox"/> Major Service Date: _____ Job No.: _____ Mileage/Hours: _____ <p style="text-align: right;">Stamp here</p>
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