

***Excalibur***  
*ELECTRIC VEHICLES*

**ELECTRIC VEHICLE  
USER MANUAL**

***EVO*** ***EV-X***

# **Excalibur**

## **ELECTRIC VEHICLES**

Congratulations on the purchase of your **EXCALIBUR Electric Vehicle**.

To ensure and maintain correct operation of your new electric vehicle, please read these instructions carefully before use. The information contained within this manual is essential to preserve your warranty and assure your new vehicle will function properly for years to come. Please keep this manual in a safe place and refer to it before each use.

**NOTE:** The use of after-market components other than OEM (Original Equipment Manufacturer) could void your warranty.

**NOTE:** Your vehicle may be equipped with optional features not covered in this manual.

### **▲ WARNING ▲**

Do NOT leave / store cart in TOW mode!

TOW mode will energize the parking brake to release it and eventually drain the battery pack.

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## 1. Turning ON the Vehicle

### IMPORTANT

- Ensure that the Forward/Reverse switch is in the Neutral Position (See STEP 2).
- Insert the key and rotate clockwise.

### PARKING BRAKE

- This vehicle is equipped with an Electric Parking Brake. The switch is located on the dash and can only be engaged/disengaged with the ignition turned **ON**.

### NOTES

- Two keys are provided. Please put the spare key in a safe place.
- DO NOT turn the key to the OFF position while the vehicle is in motion. This will result in a sudden stop that could result in injury to the occupants and/or damage to the vehicle.
- DO NOT leave the vehicle unattended with the key inserted.
- DO NOT leave children unattended in the vehicle.

## 2. Forward / Reverse Switch



*(D) - Forward*

*(N) - Neutral*

*(R) - Reverse*

### NOTES

- Always be sure to engage the parking brake when the vehicle is parked.
- Turn the key to the OFF position when the vehicle is stopped.
- Verify the vehicle has stopped completely before operating the Forward/Reverse switch.
- Ensure that the Forward/Reverse switch is in the Neutral Position before turning the key to the ON position.

### 3. Starting and Stopping

#### **FORWARD**

- Turn ON the ignition (key).
- Depress the brake pedal then disengage the parking brake if engaged (See SECTION 1) and set the Forward/Reverse Switch to F (Forward).
- Gently press the accelerator pedal.

#### **REVERSE**

- Turn ON the ignition (key).
- Depress the brake pedal then disengage the parking brake if engaged (See SECTION 1) and set the Forward/Reverse Switch to R (Reverse).
- Gently press the accelerator pedal.

#### **PARK BRAKE**

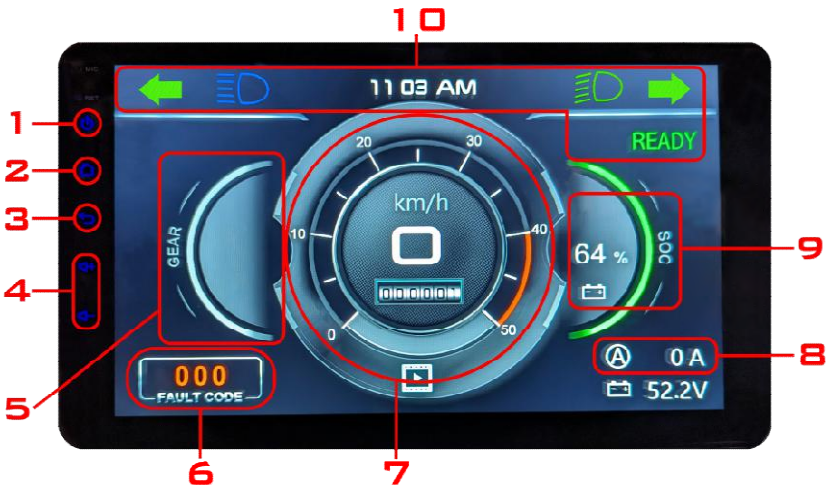
- This vehicle is equipped with an Electric Parking Brake system. The switch is located on the dash and can only be engaged/disengaged with the ignition turned **ON**.

## 4. Dashboard

### i. Digital Display

The digital display will provide important information about your vehicle. Additionally, It will control the built in stereo and display the backup camera image when the vehicle is put in to reverse.

### VEHICLE INFORMATION SCREEN



- 1) **ON/OFF** - Turns the display screen ON/OFF.
- 2) **HOME SCREEN** - Stereo controls, radio, phone, Bluetooth connections & settings menu (See details on page 9).
- 3) **BACK** - Return to previous screen.
- 4) **VOLUME** - Increase/decrease volume.
- 5) **FORWARD/REVERSE** – Displays “F” or “R” when the vehicle is in the respective gear.

## VEHICLE INFORMATION SCREEN - continued

### 6) **FAULT CODE INDICATOR**

**FAULT 06C - Cart Operation Lockout** – Lockout will occur when the ignition is turned on while the cart is in Forward or Reverse. The cart **MUST** be in Neutral(N) when the key is turned on. To reset the fault, turn the key off, place the cart in Neutral and turn the key back on.

**FAULT CODE 000** - No fault code present and the cart operation is normal.

### 7) **SPEEDOMETER / ODOMETER** - Current speed and odometer readings.

### 8) **AMP METER** - Real time motor amperage draw while the vehicle is in operation.

### 9) **BATTERY STATE OF CHARGE METER** - Current battery state of charge.

#### **\*IMPORTANT\***

Read the Battery Charging & Information section for more information regarding the lithium pack operation & state of charge meter synchronization.

### 10) **INDICATORS** - Vehicle ready status, high beams and turn signals.



## HOME SCREEN



- 1) **FM** - FM Tuner and presets.
- 2) **MUSIC** - Bluetooth music controls.
- 3) **BT** - Bluetooth devices.
- 4) **TELEPHONE** - Telephone controls.
- 5) **MOVIE** - Video player. Plays videos from a USB source. USB device must be plugged into the upper USB port on the vehicle.
- 6) **LANGUAGE** - Language preferences.
- 7) **PHOTO** - Image viewer. Displays images from a USB source. USB device must be plugged into the upper USB port on the vehicle.
- 8) **SETTINGS** - Settings menu.
- 9) **SUNSHINE** - Screen dimmer. Push to toggle.
- 10) **SPEEDOMETER** - Return to vehicle information screen.

i. USB Port



ii. Horn, Light Switch & High/Low Beam



## 5. Other Features

- i. Automotive style LED lights with daytime running light



- ii. Charging Port – Please see the **BATTERY & CHARGING INFORMATION** section



Protection from corrosion is of the utmost importance.

Corrosion can result from the following factors:

1. Accumulation of salt, dust, moisture or chemicals on the body, chassis or components of the vehicle.
2. Gravel, stone, dirt, etc. can lead to flaking, scratches, and/or damage.

Corrosion can be accelerated due to the following environmental conditions:

1. High humidity.
2. Accumulation of moisture on the body and/or components left to sit over a period of time.
3. Poor ventilation can restrict the vehicles ability to dry adequately and/or increase the relative temperature/humidity.

**NOTE: The above information indicates the importance of keeping the body, chassis and components dry. In addition, any damage to the body, chassis or components should be repaired as soon as possible.**

## **Corrosion Protection**

The most effective way to prevent corrosion is through regular cleaning of the vehicle. It is advisable to arrange a schedule of regular cleaning with special attention paid to cleaning before and after any periods of storage. It is important to remember to dry the vehicle's body, chassis and components completely after cleaning. The vehicle should always be parked and/or stored in dry, well ventilated areas.

## **Cleaning the Vehicle**

When cleaning the body and interior of the vehicle, you should use soap and water or a neutral detergent solution applied using a soft sponge. The soap and water or detergent can then be removed using a clean damp cloth. A mild leather cleaning solution should be used to clean the seats.

### **NOTE:**

- **Turn off the power to the vehicle before cleaning.**
- **DO NOT clean the vehicle in direct sunlight.**
- **Pressurized water can be used to clean wheels and floor but take care to avoid getting any electronic components wet.**

# PRE-TRIP CHECKLIST

1. Ensure the vehicle is fully charged.
2. Perform a visual inspection of the following components:
  - i. Tire tread depth
  - ii. Inspect tires for wear, cracks, damage, nails, stones or other foreign objects
  - iii. Ensure wheel nuts are tight
3. Check headlights, brake lights and horn are functioning as normal.
4. Check forward, reverse and braking operation is functioning as normal.

# BATTERY & CHARGING INFORMATION

Your new EXCALIBUR Golf Car is equipped with a High-Capacity Lithium (LiFePO) battery pack.

## **OPERATION**

To turn on/off the battery pack, press the main switch located on the side of the battery pack near the battery cable connections (under the seat). The switch will light up when turned on. Once the battery is turned on, the cart can be turned on with the ignition key switch and the battery state of charge will be displayed on the LCD dash screen.

## **WARNING**

The battery must only be charged with the supplied onboard charger. Charging with a charger that is not designed for a lithium battery will damage the battery and its internal components. Lithium batteries require a specific charger and use of a non-approved charger may void your warranty.

## **IMPORTANT**

The Lithium battery pack must be turned off if the cart is stored or not in use for more than 48 hours. Failure to turn off the battery will cause the BMS (Battery management system's computer) to slowly discharge the battery pack and put the battery state of charge meter out of synchronization resulting in inaccurate battery state of charge readings. Not knowing the true state of charge of the battery pack could cause the cart to be stranded with a discharged battery.

## NOTES

Fully recharging the lithium pack will reset the state of charge meter to read accurately. If you are low on battery power or the pack runs out of power, it is acceptable to “opportunity charge” the battery pack for a short period in order to drive the cart. Lithium batteries are **not** affected by partial charging. Please note that the state of charge is only accurately reset on a “FULL” charge.

If the Lithium pack runs out of energy, it will shut itself off to protect the internal components of the lithium cells as well as the battery management computer. The battery will need to be turned back on with the switch as described above in the “**OPERATION**” section.

The Lithium pack does not need to be turned on in order to charge it. The lithium pack’s internal computer will turn the pack on when the charger is plugged in.

As a rule of thumb, the cart should always be charged at the first opportunity when the state of charge is below 50%.

## LONG TERM STORAGE

- The Lithium Pack should be fully charged before storage.
- The Lithium Pack must be turned **OFF**.
- The Lithium Pack should be recharged every 3 months to prevent total discharge.

The charger **CAN** be left plugged in during the entire storage period and will maintain the lithium pack in a full state for the entire storage period. This is the recommended method for long-term storage of the vehicle.



## **BATTERY WARRANTY**

The Lithium battery pack and all of its internal components are warranted against defects in materials and workmanship as follows:

**YEARS 1 - 3:** Full repair or replacement at EXCALIBUR's sole discretion based on the failure situation.

**YEARS 4 - 5:** Pro-rated to maximum 25% of the replacement cost for full repair or replacement at EXCALIBUR's sole discretion based on the failure situation.

**YEARS 6 - 10:** Pro-rated to 50% of the replacement cost in year 6 and an additional 10% per year thereafter in the case of complete replacement.

### **NOTE:**

- This limited warranty is not transferable.
- This warranty is in lieu of all other express or implied warranties.
- EXCALIBUR is not liable for consequential or incidental damages.

The battery warranty is VOID for any of the following reasons (but not limited to):

- Failure to follow any instructions in the user manual.
- Accidental damage or unreasonable use, misuse, mishandling, modification, overcharging or overloading.
- Extended storage without recharging.
- Repairs or service performed by an unauthorized person.

## Regular Maintenance

- Check that the exposed wiring and connections are secure and free of dust and debris.
- Verify that the function of both the accelerator and direction switches is correct.
- Inspect the motor and confirm that the connection between the battery and the cables is secure.

### NOTE:

- The above checks should be conducted at least once every three months.
- DO NOT clean any electrical parts with water. They can be cleaned using a brush and compressed air.

## Regular Maintenance

- The braking system should be inspected monthly. If braking performance appears degraded, the vehicle should be brought in for service/maintenance.
- Re-apply fresh grease to all grease fittings once per year minimum.
- Check all components monthly for wear and to verify all fasteners remain secure.
- Check all fluids every 6 months and top up as necessary to ensure proper lubrication.

- Maintenance should be performed every 500 km.
- Check and top-up lubricants as necessary.
- Only use the original charger supplied with the vehicle to prevent shortened battery life and/or battery damage.
- DO NOT modify the charger in any way.
- Avoid sudden starts and stops to prevent injury to occupants.
- DO NOT overload the vehicle.
- DO NOT alter the vehicle's structure or modify the vehicle in any way or warranty will be void.
- Use extra caution driving in wet conditions to avoid water damage to motor and electrical components and/or reduced traction.
- DO NOT store valuables in an unattended vehicle.

**Your new EXCALIBUR Golf Car is warranted bumper to bumper for a period of 2 years or 2500km.**

The following occurrences will VOID the vehicle warranty:

1. Disassembly or modification of the vehicle and/or the use of non-genuine parts.
2. Operating the vehicle in a manner that causes damage, or continuing to operate a vehicle that has suffered damage.
3. Any damage related to traffic accidents.

The following components are covered under a 5 year / 5000km warranty from date of delivery:

- Controller, motor, drive axle, charger and chassis.

The following items are not covered under warranty as they are considered consumable items:

- Brake pads, housings, tires, windshields, carbon brushes, and any other consumable items.

## **LITHIUM BATTERY WARRANTY – See Battery Section**

### **NOTE:**

Damages or issues resulting from the installation or use of non-genuine parts, accessories or attachments, overloading, accidents, abuse, or neglect will not be covered under warranty.

**EXCALIBUR is not responsible for consequential or incidental damages.**

The use of genuine (OEM) parts is strongly recommended. Genuine parts are manufactured according to specifications of the highest quality and performance standards.

If parts other than genuine (OEM) parts are used to modify, upgrade or repair the vehicle, performance and life-span are likely to be affected and the vehicle will no longer be covered under warranty.

This manual contains the most up-to-date information available at the time of printing. Due to constant and regular improvements to the design of this vehicle, some inconsistencies may arise.

The company reserves the right to change the product without prior notice and do not assume the obligation to the same or similar changes to previously manufactured or sold vehicles.

**NOTE:**

**This vehicle is not designed for highway use. Please observe the relevant national, regional and local policies, laws and regulations for use of the vehicle. The company does not assume responsibility for any use of this vehicle outside of these policies or within them.**

**No person under the age of 16 should operate this vehicle or be left unattended on, in or near this vehicle.**

Thank you for your purchase of the  
**EXCALIBUR EV**

## NEED ASSISTANCE?

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**WWW.EXCALIBUR-EV.CA**

***Excalibur***  
**ELECTRIC VEHICLES**



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