



**EXCALIBUR**

***EVO* *EVT***

**ELECTRIC VEHICLE  
USER MANUAL**

Congratulations on the purchase of your **EXCALIBUR EV!**

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

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

### 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



(F) Forward

(•) Neutral

(R) Reverse

### NOTES:

- 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).
- Set the Forward/Reverse Switch to F (Forward).
- Gently press the accelerator pedal.

#### **REVERSE:**

- Turn ON the ignition (key).
- Set the Forward/Reverse Switch to R (Reverse).
- Gently press the accelerator pedal.

#### **PARK BRAKE:**

This vehicle utilizes an electromagnetic parking brake system. Within 1-3 seconds of release of the accelerator pedal and a full stop, the parking brakes will automatically engage.

#### **NOTES:**

The TOW switch must be set to TOW before pushing / pulling / towing the vehicle. See SECTION 5 – Part iii.

## 4. Dashboard

### i. Digital Display



### NOTES:

If the Battery Charge Indicator is flashing, please turn off the vehicle and charge as soon as possible. Failure to do so will cause damage to the batteries.

If Lithium batteries are installed in place of Lead Acid batteries, a separate charge meter will be installed.

ii. Accessory & USB Port



iii. Horn & Light Switch





## 5. Other Features

- i. Automotive style LED lights with daytime running light



- ii. Charging Port – Please see charger manual for charger operating instructions



### iii. RUN / TOW Mode



When you wish to push, pull or tow the vehicle, flip the switch under the front seat to TOW & the parking brake will disengage.

1. The batteries must be charged for the parking brake to disengage.
2. Do not leave the vehicle in TOW mode as the energized parking brake will eventually drain the batteries.
3. DO NOT store the vehicle in TOW mode.

#### **UPGRADED CONTROLLER**

If your vehicle has an alternate controller installed, the TOW/RUN switch may be in another location.

iv. Front Suspension: Independent A-Arms with Hydraulic Shock



v. Track Bar and Shock Absorber Spring



# BODY MAINTENANCE

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, backward and braking operation is functioning as normal.

# BATTERY INFORMATION

1. The battery surface, cables and bolts should be kept clean and dry.
2. The connections on each battery should be secure. Frequently check the connections on each battery to ensure they are secure to prevent electrical problems and/or damage.
3. NEVER connect the positive and negative terminals of the batteries together or the resulting short circuit will damage the batteries.
4. DO NOT leave the vehicle stored for any length of time with discharged batteries or battery life will be negatively affected.
5. When parking or storing the vehicle over a period of time, be sure to fully charge the batteries before doing so. Charge the batteries every two weeks to maintain full charge. Charge time is approximately nine hours.
6. When the batteries begin to discharge at an elevated rate, they should be replaced with new batteries of the same capacity and voltage.
7. Check the battery electrolyte (water) levels regularly. Use only distilled water to top up batteries. Fill battery enough to cover any exposed plates. Level should be about 3/4" below the top of the cell.

**NOTE: Batteries may leak if overfilled.**

## NOTE:

- Always keep batteries away from the reach of children and pets.
- Please do not use batteries for any other purpose than that which is specified or leakage, damage to the battery or explosion could occur.
- DO NOT dismantle, alter, destroy or impact the batteries or leakage, damage, heat generation or explosion could occur.
- DO NOT place the battery into or near water, fire or heat.
- DO NOT short-circuit the batteries.
- Use gloves when handling or working with batteries.
- Keep hands, face, body and clothing away from batteries while handling or working with batteries.
- The batteries contain sulfuric acid. If skin, eyes, or clothes come in contact with sulfuric acid, immediately rinse with water and seek medical attention.
- The batteries will function in a temperature range of (-20°C - 55°C) but optimal temperature for ideal battery life is between (5°C - 35°C).



## Regular Maintenance

- Check that the connections at the contactor 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 control module 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.
- Replace power-train fluid annually with hypoid gear oil.
- 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 AND SAFETY INFORMATION

- 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 change 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.

# WARRANTY

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 one year warranty from date of delivery:

- Controller, 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.

## **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.

## ADDITIONAL INFORMATION

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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**(866) 403-3334**



**WWW.EXCALIBUR-EV.CA**





**ONTARIO, CANADA**

**1.866.403.3334**