

***SOLANA***

# SolanaEV Owner's Manual

From Fairways to Pathways – Solana Leads the Way.



## Introduction

Dear Customer,

Thank you for choosing the Solana EV Golf Cart and placing your trust in us.

We are committed to delivering high-quality products that combine safety, comfort, performance, and efficiency, along with attentive and reliable service - all to enhance your mobility, lifestyle, and daily convenience.

To help you fully understand and enjoy the outstanding performance of this vehicle, we sincerely recommend reading this user manual carefully before operation. It contains important information regarding safe driving, daily use, and maintenance, which will enable you to operate the vehicle correctly and safely, and extend its service life.

Please note that due to configuration variations, the content in this manual may differ slightly from your actual vehicle. Kindly refer to the specifications of your own unit. The illustrations provided are for reference purposes only.

This manual forms an integral part of the vehicle. If the vehicle is sold or leased, please ensure that this manual is transferred to the new owner or user. The contents of this manual are based on the latest information available at the time of publication. Any future updates will be provided in accordance with relevant regulations.

If you have any questions or require additional support, please refer to the contact information on the cover of this manual. We are always here to assist you.

We wish you an enjoyable and smooth driving experience!

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## Special Notes

### ► Strict Compliance with the Manual

Please follow all operating instructions and guidelines provided in this user manual.

Solana EV shall not be held responsible for any malfunctions, damage, or losses resulting from improper operation, the use of non-certified parts, or services performed by unauthorized personnel. No warranty or support will be provided under such circumstances.

### ► Vehicle Label Notice

Important operational labels are affixed to the vehicle body. Please follow the instructions indicated on these labels strictly.





Do not remove or tamper with any labels. Loss or removal of safety labels may lead to unforeseen risks, including vehicle damage or personal injury.

### ► Proper Use of Seat Belts

Seat belts are the most fundamental safety device for both the driver and passengers during operation.

Please ensure that seat belts are worn correctly before starting the vehicle.

### ► Safety Instructions

Symbol	Meaning Description
	Caution: Failure to follow the operating instructions may result in vehicle damage.
	Warning: Failure to follow the operating instructions may result in minor accidents or personal injury.
	Danger: Failure to follow the operating instructions may lead to serious accidents, severe injury, or even death.
	Environmental Protection: Indicates that the operation poses minimal environmental risk and supports resource recycling and reuse.

### ► Driving Requirements

- Driver Qualification:

Only individuals with a valid driver's license who have completed safety operation training and passed the assessment for this vehicle are permitted to operate it.

- Compliance with Regulations:

Drivers must follow local traffic laws and regulations, practice courteous driving, and strictly avoid speeding or overloading.

## Special Notes

### - Prohibited Driving Conditions:

Driving under the influence of alcohol, controlled substances, or in an unfit physical or mental condition is strictly prohibited. These states can impair reaction time and judgment, leading to serious traffic accidents.

### - Attention and Focus:

To avoid distractions while driving, do not engage in the following activities:

- Operating interior controls
- Cleaning windows
- Making or answering phone calls
- Reading materials

These actions may cause accidents resulting in injury or even death.

### - Road Awareness:

Drivers should remain alert and continuously monitor road conditions and the behavior of other road users in order to respond promptly and safely.

### ► Environmental Protection

Please dispose of used parts, waste oil, and other hazardous materials generated during vehicle maintenance properly to prevent environmental pollution.

This vehicle is designed to support green mobility and encourages the use of eco-friendly materials and recycling practices.

### ► Prohibited Actions

Transporting flammable or explosive materials is strictly forbidden.

Any behavior that violates the instructions and standards outlined in this manual is strictly prohibited.

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## Important Labels



### ⚠ Warning

Please read all labels attached to the vehicle carefully before driving the golf cart, and promptly replace any that are damaged or missing.

### ① Operating Instructions

Before driving, please read the manual and safety instruction labels on the electric vehicle:

- Ensure all passengers are seated securely.
- Select the Forward or Reverse gear.
- Press the accelerator pedal to move; press the brake pedal to stop.
- Drive safely according to terrain, visibility, and your driving experience.
- Be cautious in crowded or slippery areas.
- When parking, release the brake pedal - the vehicle will automatically engage the parking mode.






Accelerator Pedal



Brake Pedal

### ② ⚠ Warning / Caution

Explosive Gases	Sulfuric Acid	Electrical Short Circuit
 <p>Keep them away from the battery. Presence near the battery may cause an explosion.</p>	 <p>Can burn skin and eyes. Do not tilt the battery. Keep the vent caps secure and level. In case of contact, flush immediately and seek medical attention.</p>	 <p>Do not create a connection between the positive and negative terminals. It may cause burns.</p>

## Safety Operation



### Warning

**Before operation, please read the safety and usage instructions on the steering wheel:**

- No additional passengers allowed.
- Do not start the vehicle until all passengers are seated.
- Press the brake pedal before leaving the vehicle.
- Turn off the main switch and remove the key when not in use.
- Passengers must remain seated and hold the handrails.
- Keep hands and feet inside the vehicle at all times.



### Warning



The windshield does not protect against other flying objects.

### ① Before Operation:

1. Read this manual and all other operational labels on the vehicle before operating.
2. Only authorized personnel may operate the vehicle in designated areas.
3. Do not overload the vehicle.
4. Do not operate the vehicle if you are under the influence of alcohol or any medication that may impair your vision or judgment.



### ② During Operation:

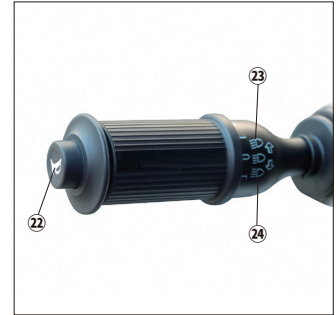
1. Remain seated with your body inside the vehicle when it begins to move.
2. Do not start the vehicle until all passengers are properly seated.
3. Keep both hands on the steering wheel and your eyes on the road ahead.
4. Use extra caution when reversing in crowded areas. Always look behind you and reverse slowly.
5. Avoid sudden starts, stops, or severe jolts. Adjust your speed according to road conditions.
6. Do not make sudden or excessive turns of the steering wheel at high speeds.
7. When driving on slopes, maintain a slow speed and proceed steadily uphill or downhill. Avoid driving at a fixed angle.
8. Do not overload the vehicle or install unauthorized accessories.
9. Do not modify or add to the safety instructions, load capacity, or contents of this manual in any way.



### Warning / Caution

1. Read the manual and labels before operation.
2. No overloading, modifications, or driving under the influence.
3. Start only after all passengers are seated.
4. Stay alert and operate smoothly.
5. Drive slowly and straight on slopes.

## Overall Structure and Specifications



### Overall Structure

- |                    |                         |                         |
|--------------------|-------------------------|-------------------------|
| ① Roof             | ⑨ Side Step             | ⑪ Accelerator Pedal     |
| ② Rear Fender      | ⑩ Rear Body Cover       | ⑫ Armrest               |
| ③ Rearview Mirror  | ⑪ Steering Wheel        | ⑬ Front Wheel           |
| ④ Windshield       | ⑫ Steering Column       | ⑭ Rear Wheel            |
| ⑤ Windshield Frame | ⑬ Dashboard             | ⑮ Taillight             |
| ⑥ Headlight        | ⑭ Brake Pedal           | ⑯ Horn (Press)          |
| ⑦ Front Bumper     | ⑮ Key Switch            | ⑰ High Beam (Push Down) |
| ⑧ Front Body Cover | ⑯ Gear Selector (D-N-R) | ⑱ Low Beam (Push Up)    |



## Operation and Controls



### ① Main Battery Switch

Before starting the vehicle, turn on the main battery switch located inside the seat compartment of the driver's area:

1. Power On: Press the switch. The power indicator light will illuminate when the system is on.
2. Power Off: After parking, press the switch again until the power indicator light turns off to cut the main power supply.



### ② Key Switch

1. Insert the key and turn it to the right to power on. (Note: Make sure the DNR switch is in the center position before turning on the main switch.)
2. Turn the key to the left to power off. The key can only be removed in this position.



### ③ Forward/Reverse Switch

The forward/reverse switch is used to set the vehicle to drive, reverse, or neutral.

- Turn right to "D" for forward
- Turn left to "R" for reverse
- Keep it in the center for neutral

When reverse is selected, the reverse buzzer will sound.

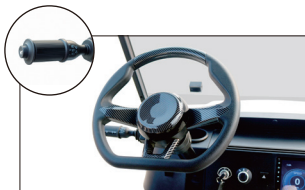
### Warning

Before shifting the DNR switch, the vehicle must come to a complete stop. When changing the DNR position, first turn the switch to the center position and hold it for 2 seconds, then select either forward or reverse. Do not shift the DNR switch hastily, as this may damage the sensor or cause switch malfunction.

## Operation and Controls



Voltage Indicator



Headlight and Turn Signal Switch

The voltage indicator displays the battery level and reminds the user to recharge in time.

After sufficient charging, the voltage will show a full battery.

1. The electronic display decreases as power is consumed during operation.
2. When the battery level approaches the low power warning, the indicator will move between the first and second segments.
3. When the battery enters the low voltage warning stage, the first segment in the upper left corner will flash.



Accelerator Pedal



Brake Pedal

Turn on the key switch, select forward or reverse, release the brake pedal, place your right foot on the accelerator pedal, and gently press down to start the vehicle.

**Note:** Do not press the accelerator pedal all the way down suddenly.

## Pre-Operation Inspection

Before each use of the electric vehicle, a pre-operation inspection should be performed. Make it a habit to carry out the following checks in the same manner each time to ensure good vehicle maintenance practices.

### Warning

Before performing the pre-operation inspection, make sure the main switch key is removed to prevent accidental startup, and press the parking brake to prevent the vehicle from moving.

### Pre-Operation Checklist

Before each use, please check the following:

- Battery
- Tire condition
- Steering system
- Reverse buzzer
- Pedal condition
- Body and chassis
- Seat

Lift the seat for inspection and maintenance.

### Battery

Before each use, charge the battery-see "Battery Charging" for details.

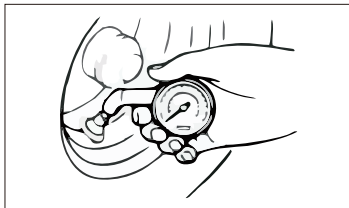
Check that the battery is securely fastened to prevent vibration or impact.

Also inspect the battery for any electrolyte leakage.

Check the battery terminals for signs of corrosion.

## Pre-Operation Inspection

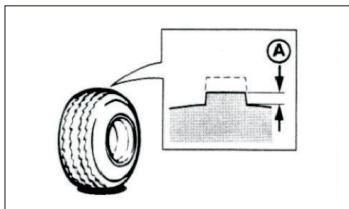
### Tire Pressure: 25 PSI



#### Tire Condition

Check tire pressure before operating the vehicle.

### Wear Limit



#### Tire Wear Limit

Inspect tires for damage, cracks, or embedded objects.

Replace the tires when the tread wears down to 0.04 inches (1 mm).



#### Reverse Alarm

Turn the DNR switch to "R" and check the pedal function.

If any abnormalities are found, contact your dealer immediately.

#### Steering System

Check for excessive play in the steering system. Move the steering wheel up and down, forward and backward, and turn it left and right.

If you notice excessive shaking or hear unusual noises, some components may be faulty. Please contact your dealer immediately.

#### A: Brake Pedal



When pressed, the pedal should feel firm. Once released, it should return to its original position.

#### B: Accelerator Pedal



Check for flexibility and reliability. When released, it should return to its original position.

#### Warning

Ensure the main switch is turned off before inspecting the accelerator pedal.

## Maintenance and Care

### Battery Usage

1. Use only the charger provided by the manufacturer. Using an incompatible charger may damage the battery or pose a fire hazard.
2. Lithium battery charging environment requirements: temperature between -5°C and 40°C, well-ventilated area with no flammable materials nearby.
3. Keep the battery pack away from heat sources, open flames, flammable or explosive gases (liquids), and hazardous chemicals.
4. Avoid exposing the battery pack to rain, submersion in water, or contact with corrosive liquids.
5. During winter charging, if the temperature falls below -5°C, the battery pack will enter low-temperature protection mode and charging will automatically stop.

### Storage

1. If the lithium battery will not be used for an extended period, charge it to approximately 50% and turn off the battery management system (for batteries with a power button, press and hold the button for 5 seconds, then release). **Check the battery level every month and recharge as needed.** Storing the battery with a low charge may lead to complete discharge and permanent damage (even when off, the battery management system consumes a small amount of power).
2. Store lithium batteries in a well-ventilated, cool, and dry place. Avoid exposure to water and moisture. The storage temperature should be below 40°C, with humidity between 5% and 85% RH. Do not store the battery in environments above 40°C, as this can cause irreversible capacity loss.

### Battery Charging

#### Warning

Before charging the lithium battery, please read and understand the user manual provided with the vehicle's lithium battery charger.

#### Warning

Charging the battery generates explosive hydrogen gas. Always charge in a well-ventilated area. It is recommended to ventilate the area at least 5 times per hour.

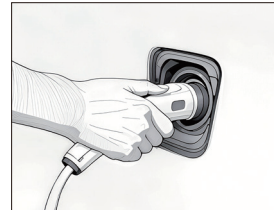
### Proper Charging Connection Procedure:

1. Connect the Charger to the Lithium Battery:

Use the DC output plug provided with the charger. Align the plug according to the markings and insert it into the lithium battery charging port of the golf cart until it clicks securely into place.

2. Connect the Charger to the Power Supply:

Insert the charger's AC input plug into a properly rated power outlet. Ensure the plug is fully inserted and has a secure connection.



### Power Disconnection Sequence:

After charging is complete, first unplug the charger's AC input from the power outlet, then disconnect the DC output plug from the lithium battery. This prevents reverse current surges during disconnection.

## Maintenance and Care

### **Lithium Battery Fire Response**

Before charging the lithium battery, please read and understand the user manual provided with the vehicle's lithium battery charger.

#### **1.Firefighting Procedure:**

If the fire is in its early stage, quickly use a suitable dry powder fire extinguisher. Maintain a safe distance (about 1-2 meters), aim at the base of the flames, and press the handle to extinguish the fire.

Do not use water or water-based extinguishers, as this may worsen the fire.

#### **2.Evacuation Procedure:**

Immediately stop any surrounding operations. Cover your nose and mouth with a wet towel, keep low, and quickly evacuate along a designated safe escape route. If in an enclosed space, do not attempt to fight the fire. Prioritize evacuating to an open, ventilated area and call emergency services.

### **Warning**

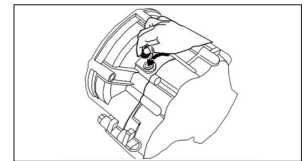
Do not disconnect the DC output cable from the battery socket while charging, as this may cause an explosion. The charger will automatically shut off when the battery is fully charged. After charging, hold the charging plug and unplug it directly from the vehicle's charging socket to disconnect the DC output from the battery.

### **Battery Installation Warning:**

When installing the lithium battery, do not place a wrench or any metal object on the battery terminals. This may cause arcing and lead to a battery explosion.

### **Differential Oil Level Check Procedure:**

- 1.Park the vehicle on a level surface.
- 2.Lift the seat.
- 3.Remove the gear oil filler cap.
- 4.Slowly add gear oil until it reaches the opening.
- 5.Fill with gear oil up to 0.65L. Stop immediately if the oil reaches the fill mark. Be careful not to let foreign objects enter the differential oil tank.



**Recommended Gear Oil: (GL-4) 74W/90 Gear Oil.**

## Maintenance and Care

### Owner Responsibility

To preserve lithium battery life and maintain warranty eligibility, the owner must follow proper charging practices:

- Keep the battery above 20% state of charge during storage and regular use.
- Avoid repeatedly discharging the battery below 10%.
- Do not leave the vehicle unplugged for extended periods with low battery charge.
- Failure to maintain these practices may result in denied warranty coverage for battery degradation due to improper maintenance.

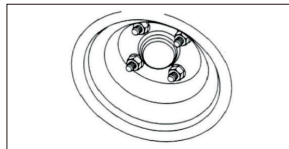
### Battery Warranty Exclusions

Battery capacity loss resulting from the following conditions is not covered under this warranty:

- Storage exceeding 14 days with battery charge below 20%.
- Frequent deep discharges below 10%.
- Overcharging or leaving the battery at 100% charge for extended periods without use.
- Improper storage or neglect of battery care guidelines.

### ⚠ Caution

Before inspecting wheels or the brake system, ensure the main switch is in the "OFF" position.



**Wheel Lug Nut Torque:**  
105Nm - 120Nm

### Tire Replacement

For removing or installing tires:

1. After the vehicle is completely stopped, remove the lug nuts. Use any suitable method to prevent the vehicle from moving.
2. Use a jack to lift the vehicle, then remove the tire and bolts.
3. To install the tire, reverse the above steps.

### Brake Adjustment

This vehicle is equipped with self-adjusting brakes. Press the brake pedal with your foot to ensure it operates properly.

### ⚠ Warning

If there are any issues with the brakes, consult your dealer before operating the vehicle, as brake failure can lead to serious accidents.

### Routine Maintenance Log

For optimal performance and safe operation, regular inspections and record-keeping are essential.

## Maintenance and Care

C = Check CA = Check Again R = Replace S = Service CL = Clean and Lubricate L = Lubricate

	Remarks	Pre-Operation Inspection	20 Rev 20 Hours 160 km (Monthly)	125 Rev 125 Hours 600 Miles 1000 km (Every 6 times)	250 Rev 250 Hours 1200 Miles 1000 km (Annually)	500 Rev 500 Hours 2500 Miles 4000 km (Every 2 years)	1000 Rev 1000 Hours 5000 Miles 8000 km (Every 4 times)	Page
Before Operation	Charge the battery							
	Clean the battery cover to ensure the fastening of screws and connection ports							
	Check the brake pedal travel and adjust if necessary							
	Inspect steering operation							
	Check tire pressure, tread depth, and tire surface for damage							
	Inspect the body and chassis for any damage							
	Check the tightness of all bolts, nuts, and screws							
	Test the reverse buzzer							
Monthly	Check electrolyte levels							
	Check for loose or broken connections							
	Clean and lubricate the pedal control area							
Every 4 Months	Replace transmission oil							
	Check for oil leaks; adjust the transmission if any leakage is found							
Every 6 Months	Inspect all wire insulation for cracks and/or wear							
	Check shock absorbers for oil leaks and damaged springs							
Annually	Perform discharge test							
	Check protective components							
	Inspect rear axle leaf spring rubber bush thickness and rear axle swing clearance							
	Check steering knuckle bushing free play / adjust wheel alignment							
	Inspect front wheel bearing clearance for tightness							
	Check transmission oil level and for leakage							
	Inspect brake operation; adjust the brake pedal if necessary							

Items not listed with page number references should be serviced by an authorized dealer or qualified technician.

These procedures are not included in this manual; they are covered in the service manual.

## Vehicle Storage

### If the Electric Vehicle Will Not Be Used for an Extended Period, Please Follow These Steps:

Note: Turn the main switch key to the "OFF" position, remove the key, and store it in a safe place.



### Chassis Preparation

- 1.Ensure tire pressure is 32 psi (2.25 kg/cm<sup>2</sup>)
- 2.Wipe down the exterior of the vehicle with anti-rust oil
- 3.Cover the vehicle and store it in a dry, well-ventilated area

### Battery Preparation

- 1.Charge and inspect the battery at least once a month
- 2.Disconnect the lithium battery power when storing the vehicle long term



Lithium Battery



Lithium Battery Power Switch

### ⚠ Caution

- Do not place cleaning products inside the battery compartment.
- Clean the battery top with a mixture of baking soda and water to prevent corrosion.



## Warranty and After-Sales Service

To ensure you receive quality after-sales service, please read the following carefully:



### 1. Authorized Service Only

Please visit our official dealers or designated service centers for after-sales support.

All product quality issues within the warranty period will be properly handled at these locations. Do not attempt to repair faults on your own.

Unauthorized or improper handling may void your warranty.

### 2. General Exclusions (All Components)

This warranty does not cover:

Regular maintenance items (brake pads, bulbs, tires, fluids, etc.).

Cosmetic wear, fading, or discoloration.

Damage caused by:

- Improper maintenance or neglect.
- Unauthorized repairs or modifications.
- Racing, commercial use, or overloading.

- Use of non-approved parts or fluids.
- Natural disasters, fire, collision, or theft.
- Improper storage or transportation.
- Incidental costs such as towing, lodging, or communication expenses.
- Damage resulting from continued use after a known issue arises.

### 3. Warranty Voiding Conditions

This warranty is void if:

- The vehicle is used in any competitive event.
- The vehicle is deemed a total loss or sold as salvage.
- The VIN is altered or unreadable.
- Non-approved performance accessories are installed, affecting vehicle function.

### 4. Transfer of Warranty

This limited warranty may be transferred to a second owner within the warranty period, provided the following conditions are met:

- A \$50 transfer fee is paid.
- A completed transfer form is submitted to Solana EV, LLC prior to the transfer.

### 5. Owner Responsibilities

To maintain warranty coverage, the vehicle owner must:

- Operate, maintain, and service the vehicle in accordance with the Solana EV Owner's Manual.
- Retain a complete Service Schedule and Record Sheet.
- Provide proof of maintenance when submitting warranty claims.
- Ensure all warranty repairs are performed by an authorized Solana EV dealer.

Use of non-genuine parts, improper maintenance, or modifications will void this warranty.

# Ride Bright. Ride Solana.

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