



ZIPPER GOLF CAR SERIES

ATOMIC ELECTRIC VEHICLES User Manual





Statement

Atomic Electric Vehicles Luxury Golf Cars come in two models. The 2 Seat model is named the ZIP & 4 Seat models named the ZIPPER.

This vehicle is not intended to be driven on public roads, it is intended for off road use only.

Check your local County and State Regulations as these vary from State to State.

Atomic Electric Vehicles LLC.



Preface

- ◆ Thank you for choosing Atomic Electric Vehicles.
- ◆ Please read this manual carefully before driving the vehicle. From here you can get the essential information about the vehicle handling and maintenance which will be helpful for your safe driving, traffic safety, and maintenance.
- ◆ If you want to resell your vehicle, please attach this manual with it because it is an important part of the vehicle.
- ◆ Please do not modify your vehicle, modification will affect the performance of the vehicle, in particular the safety and durability, and may even violate state regulations. Any the modification of the vehicle could affect performance or cause degradation. This could also impact the scope of the vehicle's warranty.
- ◆ When you buy the products, you can choose different configuration models. This manual describes all the models and configurations of the same series. Therefore, please understand that this manual includes other types of configurations that may not be installed on your vehicle.
- ◆ There will always be an ongoing process to find ways to improve the vehicle structure, configuration and performance of spare parts. This is also designed to ensure the company's products have a higher security and superior quality. But ongoing changes cannot completely avoid errors in this manual. Thank you for understanding. The company reserves the right to make changes without notice, and remind you that any data, illustrations and descriptions in this manual shall not be the basis for the claim. If you have any questions to inquiry, the company will be happy to serve you at any time.
- ◆ Please take a vehicle out for a test drive on an appropriate specified area or factory field.




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1. Important Note

The symbols used in this manual are as follows:

■ The symbol information suggests you how to use your vehicle the best;

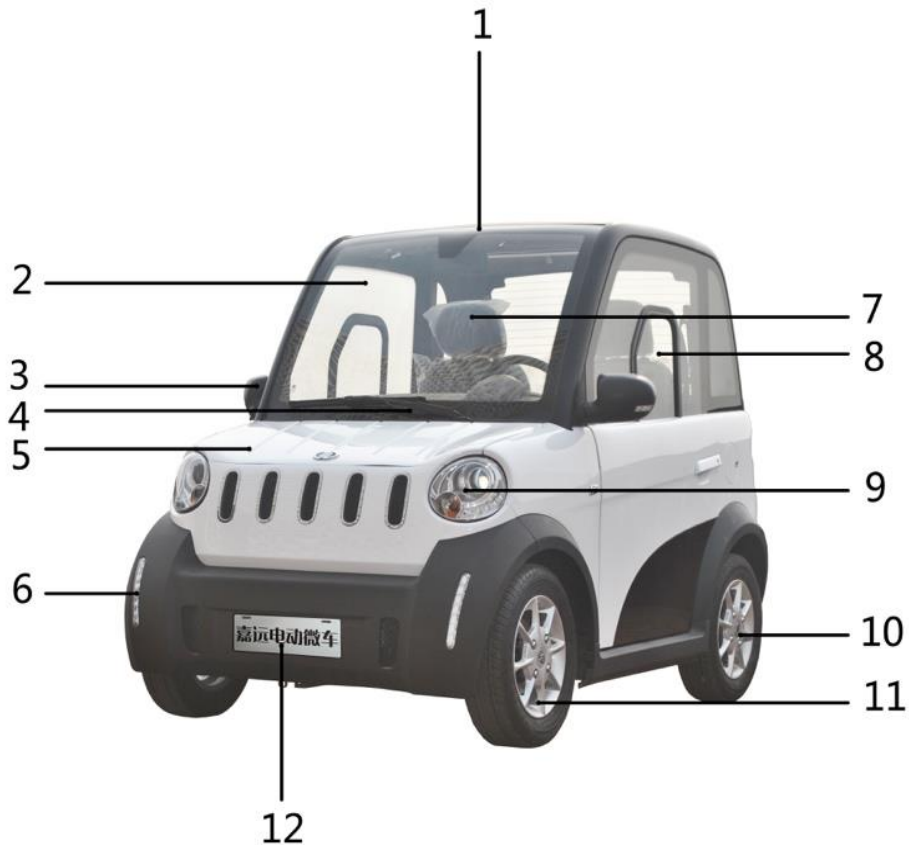
 The symbol warns you and others safety and avoid damage to your vehicle, you must read it.

 When you see the security label shown at left, "No...", "No doing..." or "Prohibit to do..."



2. Vehicle diagrams and dashboard

Vehicle diagram



1. Sun roof

2. Windshield

3. Rear view mirror

4. Wiper

5. Front cover

6. Daytime running lamp

7. Seat

8. Power window

9. Front lamp

10. Rear wheel

11. Front wheel

12. License



Vehicle Diagram (continued)



1. Rear View Window

3. Charge port

5. License plate lamp

7. Rear reversing lamp

8. Rear fog lamp

2. LED combined rear tail lamp

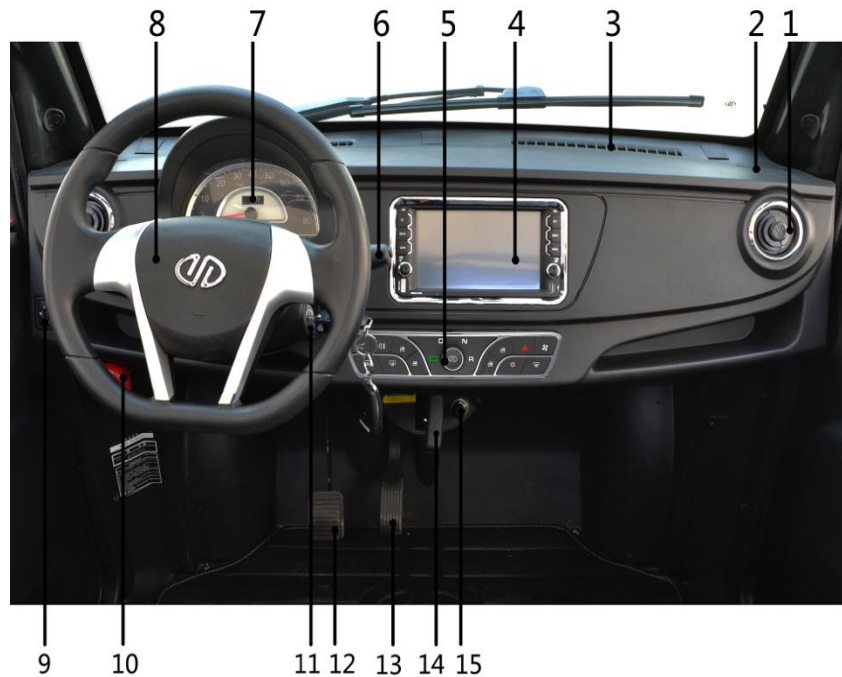
4. Rear-view Camera

6. License



Vehicle diagram and dashboard (continued)

Dashboard



- | | | |
|------------------------------|---------------------------|--|
| 1. Air outlet | 2. Speaker | 3. Right front windshield outlet |
| 4. MP5 | 5. Knob-style gear | 6. Wiper and Cleaning switch |
| 7. Instrument | 8. Steering Wheel | 9. Adjustable rear-view mirror button |
| 10. Emergency switch | 11. Ignition | 12. Brake pedal |
| 13. Accelerator pedal | 14. Hand brake | 15. 12V ACC Port |



Vehicle diagram and dashboard (continued)

Control Panel



1. Fan (Natural Wind)
2. Danger warning flashing lamp
3. Right lift window
4. Neutral gear
5. Drive gear
6. Left lift window
7. Rear fog lamp
8. Rear door opening
9. Outside rear view mirror defrost
10. Rear window defrosts
11. Left lift window
12. Economy gear
13. Reverse gear
14. Right lift down window
15. Air conditioner with cool function
16. Air conditioner with heat function/ front windshield glass defrost



3. Starting and driving

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Starting and driving (continued)

1. Starting note

- Make sure that the charging socket is disconnected.
- Put the shift knob into the neutral position.
- Turn the ignition switch on. Make sure that the instrument instructions and vehicle signal lights and other functions are in normal station.
- Make sure the emergency stop switch is in the run position. (pulled out)

2. Starting procedure

- (a) Turn the ignition switch on.
- (b) Move into the corresponding gear.
- (c) Release Parking Brake and press down the electric accelerator pedal slightly.



3. Stopping (turning off) the vehicle

Please operate as follows:

- (a) Move into the neutral gear, and turn off the ignition switch;**
- (b) If the car is parked, you need to apply the parking brake**
- (c) If leaving the vehicle for a long time, press the emergency switch, and cut off the general power (the central lock will not work now, you will need to use key to lock the doors).**
- (d) Do not leave the ignition key in the "ON" position to avoid discharge of the battery. In addition, remove the key when you leave the vehicle, and press the emergency switch;**
- (e) Do not allow children to stay in the vehicle without an adult present, remove the ignition key when leaving the vehicle and take it with you.**

4. Parking

- (a) Pull up the parking brake handle. Don't press the button of the handle;**
- (b) Before driving, you must fully release the parking brake handle. The specific method is: press the button of the handle, slightly turn the parking brake clockwise, push in to release the parking lever.**
 - ⚠ When parking, try to pull the hand brake tight, especially if parked on a slope to obtain the maximum braking force.**
 - ⚠ When the car is driving, and you did not release the parking brake handle completely, you will hear continuous tick-tock warnings until completely released.**



Starting and driving (continued)

(c) Parking notes:

* If parking on the road shoulder and/or uphill road, turn the steering wheel to the sidewalk, and lock the wheel:



* If parking in the road shoulder and/or downhill road, you should put the vehicle into the neutral position, apply the hand brake, and lock the steering wheel:



* Remove the ignition key when leaving the vehicle, lock all the doors, try to park in a place where there is light.



Starting and driving (continued)

5. Braking system

- (a) All parts of the braking system are safety parts. You will need to go to Atomic Electric Vehicles LLC. Special maintenance center regularly for repair service.
- (b) The braking system adopts a hydraulic braking system.

When a braking system failure occurs, please immediately stop driving, and contact the nearest Atomic Electric Vehicles LLC. Special maintenance center for repair service.

- (c) When driving in wet condition, the brake disc will form a layer of water film after passed through large puddles or washing, it will affect the normal braking effect. If this happens, the driver should drive slowly after starting to check the braking effect until it can be confirmed that there is no problem. Then normal driving can resume.

6. Use of gear shifting



⚠ When shifting gear, make sure the vehicle is stopped, then rotate the direction selector to the desired direction. The "D" gear (driving high speed gear) or "ECO" (driving low speed economy gear), vehicles can drive forward. Rotating to the "R" gear (reversing), vehicles can drive backwards. Pay attention, to ensure the service life of the motor, the controller has to do the corresponding protection function: make sure the vehicle is stationary before putting into driving or reversing gear.

7. Economic use speed

Driving at an even speed as much as possible, to ensure maximum continued mileage. The driver can adjust the speed according to the condition and load.



8. Preparation before driving

(a) To ensure your safe travel and reliability, it is necessary to make the following checks: seats and seat belts;

(b) Before driving, make sure that you and the other passengers are well seated and have properly fastened the seat belt.

(c) Check to be sure there is a no failure display on the instrument panel.

(d) If choosing the defrosting device mode, inspect to be sure whether you can feel the wind blowing to the windshield.

(e) Check the surface pattern and wear degree of all tires. Pay attention to the tire surface. Be sure there are no are rocks, nails, glass or other sharp objects visible and if there is bulge, scratch defect, abnormal wear, or any other defects. Once found, please immediately replace tires, and try to determine the cause of any abnormal wear. Also check the tire pressure to be sure the tire pressure is appropriate.

(f) Please check to be sure the external turning signals are working properly. Also check the turning lamp and other lights display on the instrument panel.

(g) Brake pedal:

Press down the brake pedal several times. You should be able to feel that the brake pedal has a certain resistance. If the brake pedal force is too light or brake pedal travel is too far, please check the brake system. Or have the brakes adjusted by your Authorized Atomic Vehicles Dealer. special service station.

9. Suggestions for break in period

(a) In the first 10 miles break in period, try to drive at low to medium speeds, it will extend the vehicle's life and ensure the excellent economy and optimum power performance.

(b) Avoiding rapid start, rapid acceleration, emergency braking, and longtime high-speed driving.

(c) Please do not exceed 20 miles/h while coasting down-hill during the break in period.

(d) Don't exceed the load limit.

(e) Avoid towing trailer.



10. Driving main points

Even though the vehicle is equipped with safety device, and you are safe to drive, the vehicle cannot guarantee that no accident or injury could possibly occur. It is recommended to give special attention to the following suggestions. It will be better to protect yourself and others.

(a) **Carefully driving:** Pay attention to the traffic, road and weather conditions, and keep sufficient distance from any car in front of you.

(b) When changing lanes, pay attention to observe the rear mirror and use of the turn signals.

(c) Observe the action and turn signals of other vehicles while driving, and pay attention to pedestrians, and people who ride bicycles.

(d) When there is an emergency stop, press the hazard warning light switch, turn on the hazard warning lights.

(e) Drive slowly on wet roads. If the water depth exceeds the height of wheel rim, don't drive across.

(f) Accelerate slowly and steadily and try to avoid any unnecessary rush or slamming the brake. Keep the same speed as far as possible.

(g) Always obey the traffic regulations and be a good, quick, response driver.

(h) Be careful when turning. Try to avoid an emergency turn or sudden movement. Improper operation could lead to you losing control of the vehicle or possible rollover.

(i) In the rollover accident, people who are not wearing safety are more likely to sustain a severe injury than those who wear a safety belt. So, make sure you and all passengers fasten safety belt correctly before driving.

(j) Check the status of the battery and cable. In wintry weather conditions, the energy of the battery will reduce.

(k) Choose washing liquid suitable for winter use if you live in a colder climate.

(l) **Driving if drinking and/or taking medicine:**

⚠ Taking certain medicines can cause a person to feel sleepy, thereby affecting the safety driving. Please consult your doctor or pharmacist before taking certain medicines to determine if any could cause drowsiness.

⚠ **Never drive if impaired or intoxicated!**



11. Vehicle inspection

Here are a few suggestions for saving maintenance cost and reducing harmful emissions:

(a) **Vehicle maintenance:** Be sure to inspect and maintain regular preventative maintenance.

(b) Tires

Regularly check if the tires to be sure they appear normal. At the same time check for any bulge, scratch defect, abnormal wear, or other defects. Once found, please immediately replace tires, and check the cause of abnormal wear. Meanwhile, you should also check the tire pressure frequently to be sure they are within the normal range.

(c) Surplus load

Don't load too much. The weight of vehicle, especially driving in the city, its steady state could directly affect the vehicle's stability.

(d) Electrical installations

Strictly limit working hours of electrical equipment. The front light, wiper, and Air Conditioning/heating device ventilator require a lot of power and can reduce the continued mileage.

(e) Driving

Keep an even speed with economic speed in driving. It can guarantee the lowest power consumption.

12. Winter tires

If you decide to use winter tires, all four wheels are required to use the matching specifications with the vehicles, and be sure to use the specified tire pressure.

(1) Due to its special characteristics, long time driving, even under the normal environmental conditions, the performance of these winter tires will be lower than normal equipped tire performance. Thorough tests have proved this. Therefore, it is recommended to limit the use of winter tires.

Assemble the same tire (brand and appearance) to the wheels to ensure the optimal safety operation, braking, and operability. Reminder: You can't reverse the direction of the tire rotation, and four tires must be replaced at the same time.

(2) **Tire anti-slip chain.** The use of tire anti-slip chains depends on the different current standards of different countries. Snow anti-slip chain should be installed on the driving wheel (rear). The vehicle speed cannot exceed 15 MPH or the maximum speed recommended by anti-slip chain provider.



13. Extended Non-use of vehicle

If you want to park the vehicle for more than one week, please park according to the following instructions:

- (a) Park the vehicle in the open, dry, and ventilated place.
- (b) Pay attention to insure the parking brake is tight.
- (c) Fully charge the battery and cut off the emergency switch.
- (d) Clean and protect the part of the painted protective wax.
- (e) Use special products to clean and protect metal parts.
- (f) Open the window slightly.
- (g) Cover the vehicle with silk or hollow plastic tarpaulin, do not use the dense plastic waterproof cloth, it will hinder the surface moisture evaporation.
- (h) Periodically check the tire pressure tire pressures.
- (i) In long time no use conditions, please press the emergency button. This cuts off the vehicle general power.

14. Notes

- (a) If the battery power alarm sounds, please charge the battery ASAP;
- (b) During driving, if the circuit system control is abnormal, please press the emergency switch, and take the vehicle to Atomic Electric Vehicles LLC. designated service department for inspection and repair.

Starting and driving Notes

- (a) Driving at an even economic speed as much as possible to ensure the maximum mileage and the service life of battery and motor.
- (b) In wintry weather conditions, the activity of the battery will decrease. Continued mileage will be shorter than that in summer, which is normal.



(c) The battery cannot be left dormant for a long time. If not in use for up to half a month, it is recommended to at least charge it once. A battery which has been used and discharged must be charged for storage. Otherwise it will greatly affect the service life of the battery and could lead to battery defective.

(d) When the power is exhausted, the system will be automatically cut off. After the power off, the battery will appear to rebound. ("virtual" voltage) (reactive voltage). Now, it must be charged. Otherwise it will cause the battery over-discharging. Then the battery will be irreparably damaged.

(e) The electric vehicle driving mileage is influenced by many factors such as heater, air conditioner, stereo and frequent brake, start, uneven road surface, slope, tire inflation problems, and overload.

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Instrument and control devices

(A) Speedometer





D When the "D" indicator light, indicating that the differential is in driving high speed gear position.


ECO When the "ECO" indicator light, indicating that the differential is in driving low speed economy gear position.

N When the "N" indicator light, indicating that the differential is in neutral gear position.

R When the "R" indicator light, indicating that the differential is in reverse gear position.

 **Turning indicator light:** the turning signal indicator light is the green light installed on the instrument panel, flashing indicates the front and rear signal lamp is working. If the bulb flashes too fast or does not flash, please inspect and repair it. When the switch is turned on, if the light is failed, please check the fuse, bulb and flash relay. Press the hazard switch, both the two turning signal indicator lights flash at the same time.

 **High beam indicator:** When the high beam indicator light, indicating that the headlamp is in high beam station.

 **Battery power indicator and alarm:** when the battery voltage is lower than a certain value, and the key in "ON" position. The last grid of power indicator on the instrument panel starts to flash, indicates the power is almost exhausted, continued driving will damage the battery.

(B) Ignition switch





Instrument and control devices (continued)

(C) Glass and rear windshield

When the rear windshield is in closed state, be sure to fully close, and keep latched to prevent damage.



Closed state



Open state

(D) Combined switches



(1) Headlamp and signal light switch

- (a) OFF:** All lights are off;
- (b) ☾☽:** Position light, tail light, license light is on;
- (c) ☾☽☽:** High beam light is on; position light is on continually;
- (d) ☾☽:** Dipped light is on; position light is on continually;

When the vehicle is not in use, do not let the headlamp and other lights remain lighted too long. This will cause excessive discharge of battery.

When it rains or washing vehicles, the light transmitting mirror may fog up. This is the same situation as glass that will fog up in wet weather. It's not the function problem. The heat from turning on lights can dispel the fog. However, if the water gathers in the inner lamp, please go to Atomic Electric Vehicles LLC special service station for inspection.



e. Turn/change lane signal

When the turning signal switch is turned on (the ignition switch is in "ON" position), the turning signal lamp is flashing, and the signal indicator light is flashing at the same time.

(2) Wiper



Windshield wiper and cleaning switch are divided into three gears: OFF -LO –HI

OFF : Close gear, the wiper is not working;

LO: Low speed gear, the wiper swings with low speed;

HI: High gear, the wiper swings with high speed;

Cleaning switch: Press the button and hold it on. The wiper nozzle will spray cleaning agent to the windshield.

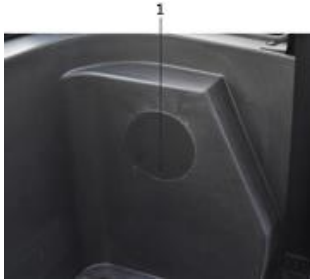
(E) Hazzard flashing light switch

When there is an emergency, it is necessary to stop or park the vehicle as far to the right side of the path as possible. Press this switch, to warn other vehicle drivers. At this point, all the turning signal lights will flicker. Do not use this switch when driving on the highway, unless forced by the environment. Otherwise driving too slow could lead to other traffic accidents. When using warning alarm switch, the turning signal will not work properly.

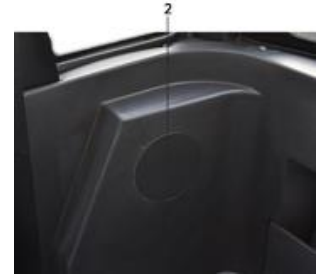




(F) Car Audio & Video



Left Speaker



Right Speaker

(1) ON, OFF

ON: In "OFF" state, press opening knob to start.

OFF: In "ON" state, long time press the opening knob to start.

(2) Mode switching

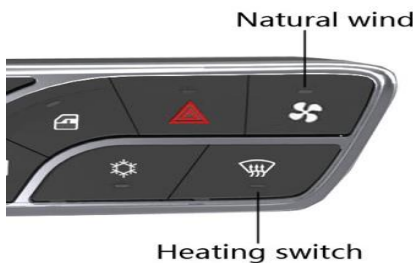
MIC: MIC inter port

RST: Reset key, recover the out of factory setting

MOD: Fast inter-change among the mode of Radio, Bluetooth, GPS12

(3) For detailed instructions, see "Car audio & video user manual"

(G) Natural wind Switch



Natural wind (fan) switch is in the first button from the right position on center stack.

When the ignition switch is in "ON" position, press the switch, the blower starts to work.

The defog and air outlet on the instrument panel blow out the natural wind.

(H) Heating System

Heating system switch is in the first button from the down right position on the center

stack. When the ignition switch is in "ON" position, press the natural wind button, the

blower and PTC start to work. The defog and air outlet on the instrument panel blow out the heating wind.



(I) Exterior rear-view mirror

Exterior rear-view mirror can be electric adjusted. Before the first driving you should sit in the cab position, adjust the lens surface around the left and right exterior rear-view mirrors and put it in the most appropriate position. In special road conditions, turn the rear-view mirror back and fold up. On rainy, snowy, or foggy days you can turn on the exterior rear-view mirror heating function to ensure the lens surface is clear.

(J) Other devices

(1) 12 Volt Acc. Power Port

When the ignition switch is in "ON" position, it can operate the 12V Acc. power port.

(2) Charging port

Use the key to open the charging cover situated on the back of the vehicle. You will see the charging port. Unscrew the charging port protective cover and then you can charge.





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5. Emergency

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Emergency (continued)

1. Unable to drive/flat tire

(a) If you need to stop the vehicle, move to the right side as far as possible.

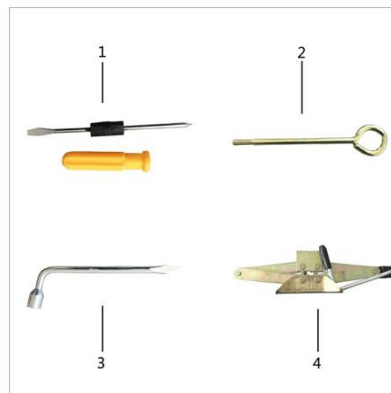
(b) Pull the hand brake tight, press the warning flashing button on the center panel so other vehicles can avoid you. If you cannot solve the problem by yourself, you need to call customer service telephone to get help.

When the tire is punctured and needs to replace, you must comply with the safety precautions. First; push the hazard warning flash light and park the vehicle on the flat ground in non-traffic main roads to ensure you safety and no potential damage to your vehicle. Pull the parking brake, change into neutral gear, and turn off the motor. Don't replace tires on the slope or uneven road, because this is very dangerous.

2. Tools

The following tools are included:

- (a) Cross head screw-driver (cross and slotted)
- (b) Traction hook
- (c) Socket wrench (Bend, hexagon, 19 in)
- (d) Lever jack





(3) Inspection and replacement of fuses

Use a cross head screw-driver to open the front panel placed in front of vehicle. You will see a fuse box inside that has several types of fuses. Unplug them one by one and check the fuse whether is in good condition.

If the lamp or other electrical components do not work, you need to check the fuse. If the fuse has been burned, it needs to be replaced. There are two spare fuses in the fuse box. Turn off the ignition switch and the non - acting parts. Pull out the problem fuse for inspection.

If the fuse has been burned, you need to install a new fuse in the original position. Fuses can only be installed the same AMPS specified on cover of fuse box. If you cannot find a fuse with the same number of AMPS, then use the lower number of fuses.

But you still need to replace it with the correct fuse as soon as possible. Then put the original fuse back to the original clip. It is recommended to buy a set of spare fuses for emergency use. If the new fuse is immediately burned again, the electrical system may exist problems, should go to Atomic Electric Vehicles LLC special service station for maintenance.

Never use a fuse which is higher than the rated AMPS, or use any other objects to replace the fuse, otherwise it will cause severe damage and may cause a fire.



(6) Cleaning and Self-maintenance

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1. Inspection

(a) Washer Fluid

The function of the glass cleaning liquid is to improve the visibility of vision. Check the liquid level of the cleaning liquid through the storage tank. (located under the front panel)

(b) Brake fluid filling port

Open front panel of the front cars with the cross double screwdriver in tools bag. Check if the height of the liquid in the cup is between the highest mark (MAX) and the lowest (MIN) mark. If you need to add the liquid, only use DOT4 synthetic brake fluid. Attn: Brake fluid will absorb moisture. Therefore, if the vehicle is mainly used in the region of high humidity, the frequency of replacement brake fluid is much greater than usual.



The brake fluid is harmful to human body and has the corrosive nature. If accidental contact occurs, immediately wash the relevant parts with water and neutral soap multiple times. If swallowed by mistake, seek medical advice immediately!

(c) Battery

The vehicle uses free-maintenance battery.

2. Lamp maintenance

(a) Instructions:

Operate the lamp’s switch to check that if all the lamps are working normally. If the lamp is not on, it is generally caused by the failure of the light bulb or the fuse. First check the fuse. If the fuse is not blown, then check the light bulb again.

The related content is for checking and replacing the fuse and light bulb. Please refer to "check and replace the fuse". If both the fuse and bulb is completely good, but the lamps still can’t work, please drive the vehicle to the special service station of Atomic Special Vehicles Manufacture Co., Ltd to repair.

It is important to keep up on the maintenance of instruments, indicator and warning lamps, operation of the motor to check if all the instruments, warning lamps’ function is normal. If there is any problem, drive the vehicle to the special service station of Electric Vehicles LLC for maintenance.

(1) combined headlamp lens.....	55W*2, white color
(2) combined headlamp position lamps.....	0.72W, white color
(3) combined headlamp turning lamps.....	21W, amber
(4) rear lamp turning lamps.....	0.48W, LED light
(5) rear lamp brake lamps	0.96W, LED light
(6) rear lamp position lamps.....	0.24W, LED light
(7) rear lamp fog lamp, reversing lamp.....	21W, white color
(8) license plate lamp.....	5W*4, white color
(9) daylight lamp.....	0.96W*2, LED light

(b) General rules

(1) Before replacing the light bulb, make sure that the light is off and check if the contact area is oxidized;


(2) The burned-out bulb should be replaced using the same type and same power new bulbs.

(3) After replacing the bulb, ensure safety check;

(4) In the morning, the inner surface of the lamp will be covered with a thin film layer. This is not abnormal, but a normal phenomenon in the low temperature and air humidity. After the lamp is on, it will quickly disappear. If inside the headlight is showing water droplets, it means that there is water infiltration, you can ask special service station of Atomic Electric Vehicles LLC. For help.



(5) Don't hold the bulb with hands, dirty gloves, etc. The grease in your hand will affect the clarity of the replacement lamp bulb. If the glass surface is dirty, you should use alcohol or thinners with a clean cloth to clean it. Re-install it after complete drying.

 If you make changes or repairs to the electrical device in the condition of incorrect operation and without consideration of the electrical characteristics, it can cause the abnormal function problem, and risk of fire.

3. Cleaning

Use a vacuum cleaner or a soft brush to clean the dust inner of vehicle, the plastic parts and the seat. Use clean soft cloth with leather and vinyl cleaner to clean the surface of vinyl plastic and leather, and then dry it with a dry soft cloth.

Before using any fiber protecting agent, please read the manufacturer's manual. Some fiber protective agents contain chemicals that can leave a stain on the seat or fade it. You can't use gas, solvent or another reagent.

4. Anti-corrosion measures

(1) The most common factors that cause corrosion of vehicle:

- a. Mud, dust, or debris that is left in the vehicle body's plate, holes, and other parts.**
- b. Damages of coating or other protective coating which caused by sand strike or slight accidents.**

(2) Environmental factors affecting corrosion rate:

a. Wet

The sand, dirt, and moisture accumulated under the lower part of the vehicle body will accelerate the corrosion. Places where there's accumulation of ice and snow under the floor of the vehicle are not easy to dry.

b. Relative humidity

 Corrosion will accelerate in the following circumstances: areas with high relative humidity, temperatures continue to be above freezing point, areas of air pollution and road salt.

c. Air pollution

Industrial pollution, too much salt in the air or on roads and road, and in the coastal regions, will accelerate the corrosion process of paint.



(3) Protect vehicles against corrosion

Clean vehicles often by Washing & Waxing to keep the vehicle clean. Always check if there is any small damage. Repair any damage as soon as possible. keep the drainage holes clear of debris at the vehicle door's bottom to avoid water buildup.

Check the under-vehicle body. If there's sand, dirt, and salt, wash it as soon as possible with clean water. Instead washing the dust, sand or other debris of the passenger compartment with a hose, you should use vacuum cleaner or brush to clean. You should not allow water or other liquids to contact the electronic components in the vehicle.

5. Self-maintenance

- ⚠ **Some routine and regular maintenance are necessary to maintain good mechanical performance, emission performance, and engine performance of the vehicle. Users should have special maintenance and general maintenance as stipulated.**

***** As the owner, you are the only one who can guarantee your vehicle's normal maintenance. You are the most important part of the maintenance process. *****

- ⚠ **General maintenance, including those items that you should check on normal daily driving. If your vehicle is in a normal and continuous driving state, this is the most basic requirement. In the daily use of the vehicle, should have a regular general maintenance. If you find any abnormal sound, vibration or smell, be sure to check the reason or quickly let the special service station of the Atomic company check the vehicle. In addition, if you think your vehicle needs a repair, please contact your supporting dealer.**

Below list maintenance items that should be carried out monthly unless there is a specific provision:

(a) Tires

Check the tire pressure regularly, adjust to the stated required pressure on tire.

(b) Wheel nut

Check the tires to ensure that the wheel nuts are not loose. In the first 1000 miles, regularly check the wheel nuts, tighten by the specified torque.

(c) Wheel adjustment and balance

When driving on flat road, if the vehicle is always on the side, or you are aware of unbalanced tire or abnormal wear, it is necessary to locate the affected wheel.

(d) Windshield wiper blade.

If it is not working properly, check to see if there are cracks or wear.



(e) **Lamp**

Confirm if the combination headlamp, rear lamp, and other lamps are working properly and the installation is reliable.

(f) **Warning lamps and buzzer**

Confirm if all warning lamps and buzzers are working properly.

(g) **Wiper and washer**

Check if wiper and washer can work normally, and wiper blades are without abrasions.

(h) **Defroster**

When using the heater, check if the air from the outlet of the defroster is normal and abundant.

(i) **Steering wheel**

Check if the steering situation is changed, such as the free play is too much, or has abnormal sound.

(j) **Electric accelerator pedal**

Ensure the electrical pedal to work smoothly, and check if the pedal motion is normal.

(k) **Brake**

Check if the vehicle has deviation when braking and if the brake lining is excessive wear.

(l) **Brake pedal**

Check to ensure the pedal can work smoothly, the free stroke is normal, and that when all the pedals are pressed down, they should have a reserve stroke.

(m) **Parking brake**

Check if the parking brake rod stroke is normal.

6. **Regular maintenance**

- (a) Regular maintenance items required to be performed within the specified time interval. It is a requirement to ensure that your vehicle's power system and mechanical system maintain a reliable performance status. This work should be done by the Atomic Electric Vehicles LLC Dealer. Please understand, when driving frequently in



adverse conditions, you will need additional or more frequent maintenance. Regular maintenance is your responsibility.

(b) Early compulsory maintenance

In the initial period of 1000 miles /3000 miles compulsory maintenance is one of the most important maintenance. It is very important to ensure that your new vehicle performs as it is intended.

(c) Determine which place to have a regular maintenance and repair:

It needs to have a regular maintenance annually. When you need maintenance or your vehicle has a failure, please go to special service station of Atomic Electric Vehicles LLC to inspect and adjust. The maintenance technicians of Atomic Company are well-trained professionals.

7. Battery maintenance

(a) Power battery is located below in the main driving and co-pilot seat. The battery compartment has a certain sealing effect to ensure that the outside of the dust will not enter. However, when cleaning the inside of the vehicle, it is forbidden to wash directly with water because it will have the risk of entering the battery compartment directly.

(b) Atomic Electric Vehicles LLC. provides a lot of internal battery safety and protection design inside the power battery. This can effectively ensure the safety of power battery and the use of reliability. Users do not need to open the battery compartment cover inspection and maintenance, and do not privately change the internal layout and design of the battery compartment.

(c) When driving vehicle, reducing the rapid acceleration (full throttle). This will greatly improve the battery life.

(d) The battery must be promptly charged after discharging (Regardless of vehicle driving time and mileage). Delay charging time shall not exceed 24 hours.

(e) In the process of battery use, driving range capacity affection by the temperature will be very large. If there is a sharp decline in winter, you can consider that it's the normal phenomenon. Generally, after the temperatures rise, the driving range capacity will reflect a corresponding rise.

(f) There is a self-discharge effect of the power battery. If the vehicle is not used for a long time, the battery should be stored after full charging and filled once each half of a month. If long time stored, after the battery electricity is depleted, the battery may have a risk of damage.

(g) Atomic Electric Vehicle charging system can be charged in the open-air environment. But on rainy or snowy days, charge indoors if possible.

(h) When the battery is near the service life, the battery capacity will decrease rapidly. At this point you should replace with new batteries. You will need to go to the nearby Atomic electric car after-sales service point for consultation and replacement.

(i) Power battery operating environment is - 20 ° - 45 °C. Do not allow vehicles to park for more than 8 hours in environments above 45 °C. Do not allow vehicles to park for more than 12 hours in environments below -20 °C. The maximum storage environment beyond the vehicle, will directly affect the performance of the vehicle and battery life.



8. Battery pack charging method

(a) Atomic Electric Vehicles LLC. Uses a class 2 charger for the vehicle. When charging battery, charging time and charging current is automatic controlled by the system fully, without human operation. After the battery is fully charged, the charger will automatically stop charging.

(b) As the required charger power is high, the charging cable plug should be inserted in the 15A outlet minimum.

Note: Atomic Company suggested that users charge the car after each using as far as possible to increase the battery life. As lead sulfate is a very easy crystallization material, lead-acid batteries in the case of loss of electricity, not timely charging will cause the plate sulfate crystallization, affecting the storage and discharge performance.

***** Allowing the vehicle and batteries to cool down sufficiently after use and before charging is highly recommended. *****

9. Maintenance of the battery charger

- (a) AC power supply socket must match with plug of the charger
- (b) AC charging range should be within the scope of 180-265V
- (c) Charge operation procedure:

(1) Cut off ignition of the vehicle

(2) Connect the charger power supply. It will start self-checking. The red light and the green indicator light flash alternately. If the red light and the green indicator light flash alternately for a long time, please check if the output line is connected or there's fault with the charger or not. The red light is always flashing means normally charging.

(3) When finished 80% charging, yellow light flashing. After it is fully charged and the instrument green indicator light is on, it means completely charged.

10. The maintenance of traction motor

Yearly remove the dirt and dust on the motor shell and to facilitate heat dissipation.

11. Rear axle maintenance (performed at service center)

- (a) Often remove the dirt and dust on the vent plug of rear axle housing.
- (b) Often inspect the bolt both on oil hole and oil hole release, for leaks.
- (c) Clean air vent for every 5000 miles driving: Check the height of gear oil in the axle housing. (Open the oil plug to check).



(d) Check the fastening of the left and right axle tubes for every 5000 miles of driving : Check the fastening of the "U" shape bolt of the left and right axle tubes.

(e) The first oil change mileage is 1000 miles, must replace gear oil again for every 5000 miles of driving.

They must be fully equipped with the ability to maintain Atomic Electric Vehicles LLC. vehicles before they repair your vehicle, rather that after the repairing. You can completely believe special service station of Atomic Electric Vehicles LLC. Can meet the vehicle maintenance requirements in the reliability and economic aspects.

12. Technical information

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A. Vehicle Identification

(1) Vehicle Serial Number is the only codes (17 -digit) that identifies the vehicle. This code is not only reflected in the vehicle nameplate, but also marked on the upper beams in the frame, just open the front panel you can see it.

(2) Vehicle nameplate

Several types of vehicles all have a nameplate mounted on the left bottom frame of the battery box.



B. Vehicle Parameters

2 Seats Electric Golf Car (ZIP)

Items	Technical parameters		Items	Technical parameters
Model	ZIP		Rated speed	3000r/min
Dimensions(in)(L×W×H)	88 x 50 x62		Insulation level	H
Wheelbase(in)	59		Maximum speed	19miles/h
Front / Rear wheel thread	43in/43in		Climbing ability	20%
Minimum ground	6"		Motor type	AC
Minimum turning radius (ft)	13		Optic: Lead acid battery	12V 120AH*5
Front wheel steering angle	25°		Tire specification	145/70R12
Curb weight(lbs) Optic Lead acid battery	1300 (Maintenance free)			
	925 (without battery)			
Steering maneuver type	Steering wheel		Hub-type	Aluminum Alloy
Motor power	3.5KW		Brake type	Disc Brake
Nominal voltage	12V		Maximum load	450kg
Tire pressure	Front /rear wheel	35 psi		0 ± 3in
		Front wheel obliquity	Front /rear wheel	
Camber angle	Front wheel	1°12'±5'		5°± 5'
	Rear wheel	0°24'±5'		
		Caster	Front wheel	



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4 Seats Electric Golf Car (ZIPPER)

Items		Technical parameters	Items		Technical parameters
Model		ZIPPER	Rated speed		3000r/min
Dimensions(in)(LxWxH)		100 x 50 x 65	Insulation level		H
Wheelbase(in)		65	Maximum speed		19 miles/h
Front / Rear wheel thread(in)		43in/43in	Climbing ability		20%
Minimum ground clearance(in)		6	Motor type		AC
Minimum turning radius (ft)		13	Optic: Lead acid battery		12V 120AH*5
Front wheel steering angle		25°	Tire specification		145/70R12
Curb weight (lbs) Optic Lead acid battery		1400 (Maintenance free) (include battery)			
		970 (without battery)			
Steering maneuver type		Steering wheel	Hub-type		Aluminum Alloy
Motor power		3.5KW	Brake type		Front disc, rear drum
Nominal voltage		12V	Maximum load		793 lbs
Tire pressure	Front /rear wheel	35 psi	Front wheel obliquity	Front /rear wheel	0 ± 3in
Camber angle	Front wheel	1°12'±5'	Caster	Front wheel	5° ± 5'
	Rear wheel	0°24'±5'			



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8. Future Options

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9. Three Year Limited Warranty

SEE SEPARATE WARRANTY FOR MORE DETAILED INFORMATION.

10. Maintenance

Compulsory maintenance is the "Three Warranties of Quality" service necessary for the new car and the provisions of the miles within that the user must go to the special service center for maintenance. If users do not go to special service center for maintenance, our company will not provide "Three Warranties claims "Service, which has caused all the consequences borne by the user. When the vehicle mileage reaches 1000 miles or within 30 days (whichever comes first), Please Schedule with the special service station or dealer in your area for free maintenance. Routine maintenance of the maintenance cycle is for every 3000 miles, and the cost paid by the customer.



11. Atomic Electric Vehicle Three Warranty Regulations

(a) Definition of Warranty Period

Warranty Period means quality guarantee time or driving mileage from purchasing day (take the vehicle purchasing receipt which issued by dealer unit) as standard, whichever comes first. Whatever exceeds the standard that is beyond the “Three Warranty Regulations”. If any problems indeed caused by the product’s quality under the condition of complying with maintenance rule and using instruction to install, according to the spare parts category, parts and different quality guarantee period to maintain. The maintenance mainly replaces the assembly, in principle cannot be split to replace.

(b) The following parts are wearing parts and do not belong to the range of Three Warranty Regulations.

- * Fuse (strip fuse, bulb and lampshade, appearance parts, wiper blade, various pads, glassware, various tapes, friction disk of front and rear brake.**
- * Plastic and rubber products (seal strip, seal taper, rubber plug, floor, buffer cushion).**
- * Vehicle fastener.**

Reasons for not belonging to the range of the Three Guarantees Regulation

- (1) Exceed the quality guarantee period.**
- (2) Damages caused by improper use as the instructions**
- (3) Normal wear.**
- (4) Damages caused by force majeure factors, such as earthquakes, fires, vehicle accidents, Hurricane.**
- (5) Damages caused by using non-company authorized spare parts specified.**
- (6) User finds failures and no timely repair leading to the vehicle out of the warranty.**
- (7) Self modification, demolition, improper repair.**
- (8) Purchasing vehicles used.**
- (9) Not presenting the Three Warranty Certificate and vehicle purchasing receipt.**
- (10) Loss of the certificate**



Part of Vehicle Spare Parts Replacement Standard

Serial No.	Spare Parts Name	Three Guarantees Standard	Not allowed for Three Guarantees	Three Guarantees Time Limit
1	Ignition	Ignition switch failure or even other key can also open	Man-made Damage	1 year or 20,000 miles
2	Combined Switch	Switch failure, Short circuit, Electrical connection	Man-made Damage	1 year or 20,000 miles
3	Front absorber	Breakage, Serious deformation, Invalid, Oil leak	Man-made Damage	1 year or 20,000 miles
4	Back absorber	Breakage, Serious deformation, Invalid, Oil leak	Man-made Damage	1 year or 20,000 miles
5	Instrument Cluster	Odometer not display, Mileage not go or Serious error when display	Man-made Damage	1 year or 20,000 miles
6	Vehicle body wiring harness	Take iron caused short circuit, Open circuit, Erosion, caused by hindering ,un-repairable	Man-made Damage	2 year or 20,000 miles
7	Brake pump	Breakage caused by material problems, Brake failure caused by hydraulic brake system	Damage caused by improper use	2 year or 20,000 miles
8	Heater	Motor no work, no warm wind, Tank leakage, PTC not be heated	Shell shake, Man-made Damage	1 year or 10,000 miles
9	Main drivers' seat	Breakage	Man-made Damage, Damages caused by many times adjustment	1 year or 20,000 miles
10	Vice drivers' seat	Breakage	Man-made Damage, Damages caused by many times adjustment	1 year or 20,000 miles
11	Driving motor	Not work or abnormal work	Man-made Damage	3 year or 15,000 miles



Part of Vehicle Spare Parts Replacement Standard

Serial No.	Spare Parts Name	Three Guarantees Standard	Not allow for Three Guarantees	Three Guarantees Time Limit
12	Controller	Not work or abnormal work	Man-made Damage	3 year or 15,000 miles
13	Gearbox	When driving obviously have teeth ground, serious oil spills	Man-made Damage	3 year or 20,000 miles
14	Charger	Not working Cannot be fully charged	Man-made Damage	2 year or 10,000 miles
15	DC/DC	No output voltage, Output voltage too low or too high	Man-made Damage	1 year or 10,000 miles
16	Lead acid battery (optional)	Liquid leakage, Crack, cannot charge, Electric power cannot be stored	Man-made Damage, Damages caused by non-irregular supplement, maintenance	18 Months or 10,000 miles
17	Lithium battery (Optional)	Liquid leakage, Crack, cannot charge, Electric power cannot be stored	Man-made Damage, Damages caused by non-irregular supplement, maintenance	4 year or 60,000 miles
17	Emergency switch	Unable to outage or Electrify abnormal	Man-made Damage	1 year or 20,000 miles
18	Electric accelerator pedal	Not work or abnormal work	Man-made Damage	1 year or 20,000 miles
19	Left and right drive shafts	Spline is polished and the output shaft is broken	Man-made Damage	1 year or 20,000 miles
20	Electric Shifting gear Device	Open Welding, Breakage, Beyond Repair	Man-made Damage	1 year or 20,000 miles
21	Steering Column	Failure, Bearing, Breakage	Irregular Maintenance	1 year or 20,000 miles
22	Steering Gear	Breakage, Direction failure	Man-made Damage	1 year or 20,000 miles
23	Front Arm	Breakage, Deformation	Man-made Damage	1 year or 20,000 miles



Part of Vehicle Spare Parts Replacement Standard

Serial No.	Spare Parts Name	Three Guarantees Standard	Not allowed for Three Guarantees	Three Guarantees Time Limit
24	Rear Arm	Breakage, Deformation	Man-made Damage	1 year or 20,000 miles
25	Radio	Not work	Man-made Damage	1 year or 20,000 miles
26	Horn	No sound	Man-made Damage	1 year or 20,000 miles
27	Wiper Motor	Motor not working	Man-made Damage	2 years or 50,000 miles
28	Front and Rear Wheel Brake	Breakage, Hydraulic brake system leak, Air Drag, Pumping Pressure, Decreasing Significantly, Clamping Stagnation Invalid	Man-made Damage	1 year or 20,000 miles
29	Rear whole bridge	Not working, working abnormally	Man-made Damage, Not maintenance normally	1 year or 15,000 miles
30	Compressor	Not working, or working abnormally	Man-made Damage	1 year or 10,000 miles
31	Vacuum pump	Not working, or working abnormally, big sounds	Man-made Damage	1 year or 10,000 miles
32	Brake	Brake failure, abnormal work	Man-made Damage	1 year or 10,000 miles
33	Accelerator	Not working, working abnormally	Man-made Damage	1 year or 10,000 miles
34	Lamp	Not working, working abnormally	Man-made Damage	1 year or 20,000 miles



NOTES:



DEDICATION
TO MOVING
PEOPLE
INTO THE
FUTURE

