

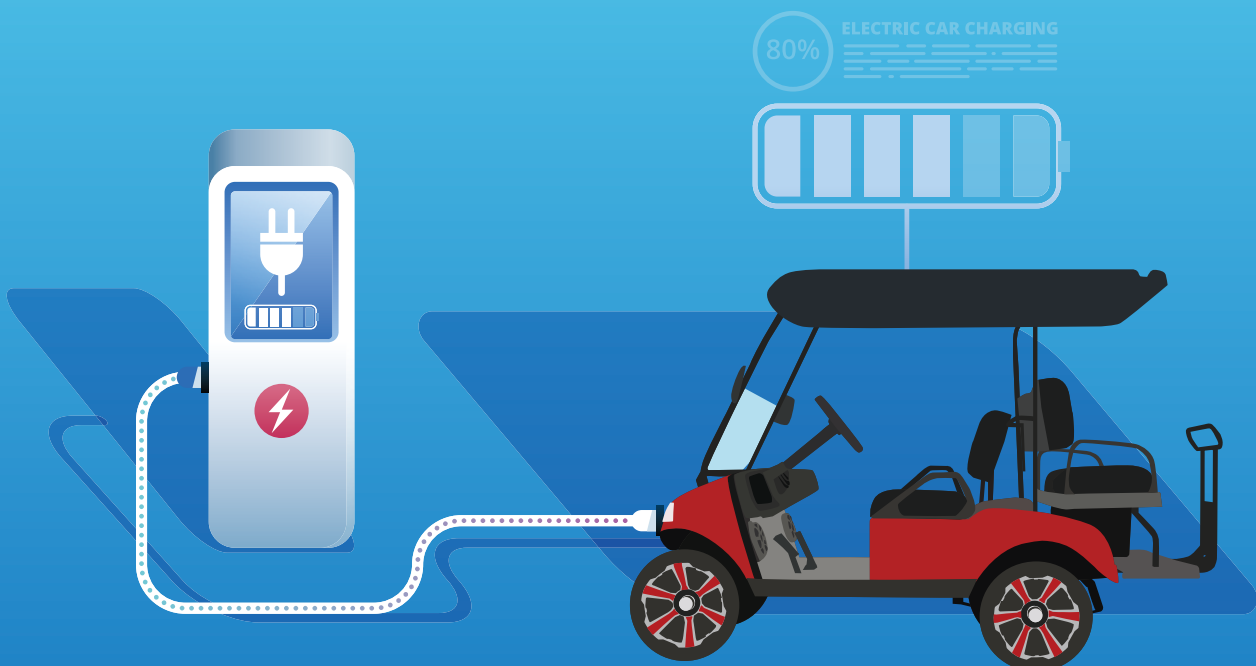


# EVOLUTION ELECTRIC VEHICLES

Basic Steps For Charging a Golf Cart

## HOW TO CHARGE GOLF CART BATTERIES?

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# HOW TO CHARGE GOLF CART BATTERY?

## How to Charge a Golf Cart Battery

Both lead-acid, as well as lithium-ion golf cart batteries, must be charged regularly for their effective operation, whether your cart features a 36 volts system or a 48 volts system. Both batteries have their advantages and disadvantages.

Whichever battery you have fixed in your golf cart, you must first read the instructions that came with it when you bought the battery.

Make sure you have understood the instructions thoroughly. In this guide I'll tell you the complete steps to be followed when you charge both 36 volt and 48 volt batteries.

### Charging Lead-Acid Batteries on a Golf Cart

- > Keep the golf cart where there is good ventilation to prevent gases from accumulating during the charging process.
- > Check if the surrounding temperature is very high. If so, you'll have to wait until it becomes normal.
- > Confirm that the voltage settings are as specified in the instructions and do the required compensation for temperatures over 80°F.
- > Check the water level in all the batteries.
- > Tighten the vent caps after making the above check.
- > It's a good practice to charge the batteries after using the cart every time so that it doesn't let you down. The charging process is not complicated and by doing it correctly, you can extend the life of your lead-acid cart batteries.

### Charging Lithium-ion Batteries on a Golf Cart

- > Check the temperature of the area where you have kept your golf cart. Postpone the charging process if the temperature is either too high or too low.
- > Make sure that the cart is turned off before you begin charging. This helps the battery to attain an ideal saturation point.
- > Avoid charging the batteries to the maximum extent. It's recommended that lithium-ion batteries are charged slightly less than their maximum limit.
- > Watch out for the batteries getting heated when the charging takes place. If you find this happening, stop charging for a while and resume once the batteries have cooled down.

### When to Charge Golf Cart Batteries

- > The best time to charge your golf cart batteries is before they are completely discharged. Thus, it's ideal to charge them even after using the cart for just a short amount of time.
- > Extensively used batteries that have attained half-cycle discharge and not been charged for a few weeks or months are prone to permanent damage. This is because of the self-discharge ability of the batteries.

# HOW TO CHARGE GOLF CART BATTERY?

- > You should keep the batteries plugged in for charging whenever the golf cart is stationary. Avoid disconnecting the charger for a long period.
- > The batteries charging time is directly related to the time they have discharged. Keep in mind that golf cart batteries discharge at a rapid rate in cold weather.
- > Golf cart battery chargers are designed to be automatic so that they turn on by themselves when it's time for the batteries to get charged. Similarly, they turn off on their own when the batteries are fully charged.
- > Diagnosing the condition of your batteries properly before replacing them can help you save both money and time in changing a battery that you don't have to. If you think that the battery is weak or the charger is not doing its job properly, then it's better to seek professional assistance.

## **Lead-Acid Golf Cart Battery Charging Tips**

Charging your golf cart batteries is not as challenging as it sounds. The following tips can help you charge your batteries:

- > Turn the ignition key of the golf cart to the OFF position. Although there is no battery draw when the key is left on, doing this is considered to be a safe practice.
- > Check for fluid accumulation above the batteries. If the top is wet, this means that the battery has been overwatered.
- > In gel or AGM cells, it indicates overcharging and can impact battery performance and life. If you use lead-acid batteries, keep in mind that they tend to gas resulting in the acid getting accumulated on top of the batteries and corroding the terminals. This is also a sign of impending damage.
- > Examine the external appearance of the batteries. Make sure that the top and terminal conditions are clean and dry, as well as free of corrosion and dirt. If the terminals appear messy, clean the tops as well as remove the debris and dirt on the terminals.
- > You can use a cleaning solution of baking soda and water along with a brush and a cloth to remove the accumulated dirt. Make sure that the solution doesn't enter the batteries. Follow up with a rinse using clean water. Dry the terminals and top well. Do the cleaning process once a month.
- > Check the electrolyte levels in all the batteries. Don't charge the battery if the level is between 1/4 inch to 1/2 inch above the battery plates. Use only distilled water to refill the battery. Over-charging or under-charging batteries and charging when the electrolyte is not at the desired levels can lessen the battery life and expectancy.

# HOW TO CHARGE GOLF CART BATTERY?

- > Ensure that the battery connections and cables are tight, corrosion-free, and clean. Corroded connections may result in a voltage drop between batteries causing a low-battery life. The cables may also overheat and fail because of high resistance.
- > Substitute the affected cables with new ones and apply a terminal protector coating after cleaning the corrosion and before you start the charging. You can also opt for a thin petroleum jelly coating.
- > Check if all the vent caps are secured firmly and apply some petroleum jelly or terminal protector around the batteries.
- > Allowing your golf cart batteries to die completely before charging them can do as much damage as overcharging them.
- > Also, do not turn on electrical parts like radios and lights in your cart when the cart is turned off.
- > If you notice that your batteries are expanding or bulging or have cracks on them, replace them at the earliest.

## **Lead-Acid Golf Cart Battery Charging Maintenance**

The following steps can help you with your golf cart battery maintenance.

- > Charge the batteries continuously for 8 to 10 hours, preferably overnight, using a compatible charger. This ensures that the batteries have at least a 20% charge when you charge the next.
- > New batteries must be charged fully before use and need at least 20 to 50 cycles before a full charge. Hence, use the cart as less as possible during this period.
- > Follow the steps given in the above section to keep the terminals and tops of your batteries clean and dry. Make a periodic check for tight and secure battery connectors and vent caps at all times.
- > Fill the batteries with distilled water after charging to the level specified above while making sure that they are neither corroded nor dirty.
- > Use only golf cart batteries and opt for a refresh charge once in 45 to 60 days. You may have to do this charge more often in hot weather.
- > Remember that as batteries become older, their water requirement and charging time increases accordingly.
- > Opt for an automatic golf cart charger to take care of the charging process so that the batteries are always fully charged.
- > Do not charge batteries in extremely cold weather.
- > Make a record of the golf cart battery voltage of each battery for later reference.
- > Remember that golf cart batteries tend to last for 5-6 years. After this period, they need to be replaced with new batteries.

# HOW TO CHARGE GOLF CART BATTERY?

## How to Charge a Lead-Acid Golf Cart Battery that is Completely Dead

You can charge your golf cart batteries that are completely dead in a few ways.

- >The best method depends on the size of the battery and the battery bank to get the juice back into it. Ideally you get the batteries geared up to their actual voltages before you activate the golf cart battery charger.
- >You can use a golf cart battery recovery unit to help you get the desired volts back into your dead batteries.
- >The charger is very simple to use and can be activated by just pushing a button. This action applies a huge voltage into the battery bank of the golf cart. This will in turn help in activating the charger and turning it on to resume the charging.
- >These battery recovery units are often readily available at golf stores. The Super Charger Battery Bank Recovering Unit is a trustworthy brand that you can consider investing in for emergency use.