

# Why do car batteries go flat?

By <u>Barnabas Gwarisa</u> 2 May 2018

The big question everyone has when they switch on their car to find that the battery is flat is: what could have caused it when it had been working perfectly the day before. Besides the immediate inconvenience, there also lurks the possibility of having to cough up more money for a new car battery.



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Here are some important tips that can help you avoid this potential problem:

## The four big no-nos

There are four main causes that will cause your battery to go flat: leaving the lights on, leaving the radio on while the engine charging system is off, having the car stand without running for an extended period of time, or electrical faults within the car itself.

If you leave your lights on for an extended period of time, this will definitely drain your battery.

Playing the radio while the engine is off has potential to drain the battery, especially if you do this repeatedly or over an extended period of time. Car radios can simply kill your battery - so don't use your car radio as the party music system otherwise you will be knocking on the dealership door for a new battery sooner than you think.



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A car that is stationary for long periods of time will experience a flat battery due to sulphation. Simply put, sulphation is a white salt layer that builds up inside the battery and settles around the battery's active material, blocking the pores of the separators. This is caused by long-standing times, so it is always recommended that the car be driven around periodically to ensure that the sulphates are continuously being broken down.

You can test yourself as to whether battery drainage is due to any of the above three battery draining reasons. Take the battery out of the car and charge it using the supplier's specifications. It is also a good idea to check that the battery contact cables are not loose, as this will also drain the battery.

### Check the battery voltage

If you suspect that there may be an electrical fault, you could take the following steps before going to see a qualified auto electrician: charge the battery of the car to full capacity according to suppliers' specification and then re-install it. After reinstallation, check the voltage of the battery and then check later, perhaps at the end of the day, to see if the voltage is dropping.

The instrument used to test the voltage in a battery is a voltmeter. You could borrow one from a neighbour or purchase one from any hardware store.

It is important to ascertain if the voltage is dropping because this could mean your charging system is not putting back enough charge and there could be an electrical fault somewhere. The problem here is that a continuously draining battery will eventually kill it due to the deep discharges, and you won't be able to charge the battery to full capacity.



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This type of fault is not an honoured warranty claim. This means that you could stand to lose your chance of getting a replacement warranty if you delay taking action.

## What to look for when checking voltage

Should there be no electrical problem and the charging system is 100% and the contact cables are working, a fully-charged battery will usually give around 12.6 volts. The battery should not drop much below this voltage as the car system maintains the voltage in the battery.

At the end of the day if you were to test the car and see a voltage that shows between 12 to 12.6 volts there shouldn't be anything to worry about.



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However, if you test the battery and see that it has dropped just below 12 volts but had given an initial reading when fully charged of around 12.6 volts, then there is a problem.

In this case, the car is drawing out more than what is being put back, or the charging system is faulty.

#### A visit to the 'car' doctor

If your voltage is dropping, you will need to visit an auto electrician quickly before the battery is damaged any further.

A qualified auto electrician should thoroughly check your vehicle to investigate why the battery continues to drain while the engine is off. In this instance, the charging system must be checked and confirmed as being okay, and any potential faults should be tested.

#### ABOUT THE AUTHOR

Barnabas Gwarisa heads up environmental and quality control at Probe - South Africa's largest exporter of premium, maintenance-free, fit and forget batteries and a leader in rotating electrics.

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