Will high-power batteries burn the motor

What causes a DC motor to burn out?
Over voltage. The windings in the coil have an insulation rating that will fail if the voltage is high enough causing arcing and again,burn out. Further,the brushes will arc more at higher voltages causing heat and faster wear. Over speed. DC motors are not the best mechanical beasts in the world.

Does a car battery have a high current?
A car battery is low voltage (low water pressure) and capable of high current(high water flow rate). However it doesn't matter that the car battery is capable of delivering high current it lacks the pressure to "push" high current through.

Why does a battery volt dip when a motor is running?
There will always be a dip in battery volts whilst the motor is running. It's possible that the beefier the battery, the less of a dip - which will mean more current flowing. I can understand the mechanic's reaction to the fault, even though I / we don't actually agree with his theory.

What happens if you replace a car battery with a higher capacity?
Therefore,answering the initial question,if we replace a car battery with a higher capacity one,we will be able to leave the elements that depend on the battery in operation for a longer time. In addition,with the same consumption the higher capacity battery will discharge less,which in the long run will result in a longer battery life.

What happens if a motor is overheating?
As I mentioned above,too high a current will overheat the coil and if it gets hot enough,it will burn out or seize the motor. Too much current can also affect the magnetics in the stator. Over voltage. The windings in the coil have an insulation rating that will fail if the voltage is high enough causing arcing and again,burn out.

Can a high capacitance battery damage a starter motor?
Only under that stalled fault condition,can continued use of the starter,with a high capacitance battery,damage a starter motor.

If the motor is seized hard, for example, no amount of starter torque is going to make it turn, but a higher-rated battery allows the possibility of a greater degree of incidental damage (overheated and burned out starter ...

Not true. Current is related to torque, voltage to speed. At higher voltage the speed increases proportionally. Current increases only to the extent the load (or motor mechanical losses) require higher torque at higher speed. The current increase can be nearly insignificant or drastic depending on load characteristics.

What you need to know is the maximum amps it will allow from the battery, which should be written on it.

Most 1000w ones are 25A at 48v, which is about 1300w. The big ...

In result, there"s not 12V across the winding resistance but less than 1V. The actual number depends on the speed of the rotor. That"s why you shouldn"t power a motor that is mechanically locked. It cannot build up that ...

Except that the motor is only a fixed resistance depending on it"s load. A motor with no load has lower resistance than a motor with a load, and a motor that is overloaded will stall out, having the highest resistance, drawing a stall current that (rule of thumb) is between 2 and 2.5 times the no-load current.

In result, there"s not 12V across the winding resistance but less than 1V. The actual number depends on the speed of the rotor. That"s why you shouldn"t power a motor that is mechanically locked. It cannot build up that counter voltage and will burn out quickly.

In short, if we install a higher capacity battery, we will increase battery life, improve starting and, in addition, we will be able to use the electronic equipment of our vehicle for a longer time. However, what happens if we don"t have a space to install a larger battery?

Exceeding the design voltage will eventually cause insulation breakdown or other arcing, exceeding the design current will eventually burn out some wire, exceeding the design power (wattage) will eventually overheat the motor. The idea is to work within the safe range that the motor was designed for and not look for the extreme limits. Your Answer.

To calculate how long a battery will last, we need two figures; the battery"s capacity and how much current will be drawn by the motor. Batteries measure their capacity in milliamp hours, mAh. This states how many hours the battery can supply 1 mA of current, or how many mA of current it can supply for one hour.

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Power Output Lithium Batteries maintain higher voltages for longer. Motors engineered to make the most of flooded lead acid batteries can be damaged by the higher power output. To prevent this damage when using Lithium batteries you should not run your motor at its highest speeds, staying at 85%/Speed 8.5 or lower.

The conclusion is that the batteries supply more power to run all of these functions at high speed, utilizing more energy, which affects the range. Also, high speed will result in a reduction in battery life. Electric cars also lose range over time as the battery wears. Due to internal resistance and other causes, consuming more power will also heat up the battery. As ...

That is, the same battery could give 4.75A for 20 hours (4.75A x 20 hours = 95Ah c20), 9A for 10 hours

(90Ah c10) or 17A for 5 hours. If we did not have the power losses, the battery should have been able to provide 19A for 5 hours (95Ah) or ...

2. Voltage fluctuations. Voltage fluctuations, such as high or low voltage, can cause the motor winding to overheat and burn. High voltage can cause the motor to draw excess current, while low voltage can cause the motor to stall and ...

This provides guidance on how to select the correct battery to run a motor and explains why using the correct battery voltage is important

I recently saw a tutorial on how to mod a stryfe so it won"t bog down when you use IMRs in it, but the comment section had a few people who advised not to. They said the IMRs would "1/4 its lifetime" or just burn out the motors entirely. The video only used 3 batteries and 1 dummy. So will it kill my stryfe? And if it is safe, where can I get ...

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