How to Self-Isolate Your Electrified Vehicle

The COVID-19 crisis means many of us are using our vehicles much less frequently, or in some cases not using them at all.

Owners of battery-powered vehicles might wonder how much charge they should keep in their batteries and whether their batteries will become depleted if their vehicle is not used and recharged regularly.

So we asked our battery expert Bob Taenaka, senior technical leader, Battery and Cell System Development, for some tips on how to keep an electrified vehicle in top condition while self-isolating.

Taenaka says, the most important thing is to make sure your 12-volt battery stays charged and that your high-voltage battery has adequate charge - 10 percent or more - to prevent it from potentially draining to zero percent. If you have driven and/or had your vehicle on plug for a total of at least 8 hours within the past month, the 12-volt battery should be adequately charged. For longer periods of time between driving, you should also take additional steps. We recommend you always consult your owner’s manual for specific instructions on “Vehicle Storage” for longer than 30 days.

If you’re storing your battery electric vehicle without plugging it in, Taenaka recommends keeping it at a state of charge between 10 percent and 80 percent. Ford hybrid and plug-in hybrid vehicles are designed to stay above a 10 percent state of charge during normal operation.

A high-voltage battery above 10 percent state of charge can go for more than six months without charging, but the 12-volt battery will drain much faster, especially when connected to the vehicle. If you do not plan to drive your electrified vehicle for longer than 30 days, Taenaka recommends following these steps for the sake of your 12-volt battery:

- Disconnect the negative terminal of the 12-volt battery if you are familiar with and comfortable doing so. If not, proceed to one of the following two approaches.
- If it is a plug-in hybrid or battery-electric vehicle, leave it on plug
- Connect your 12-volt battery to a standard 12-volt battery charger and leave it on a continuous slow charge

“If you are storing your vehicle for longer than 30 days without use, we recommend disconnecting the negative terminal of your 12-volt battery,” says Taenaka. “This avoids depletion and potential damage to the battery, which runs the internal systems such as heating -- without the need for monthly maintenance.”

If disconnecting the 12-volt battery, these details are important to know:

- Be sure to have your key fob and digital owner’s manual (on your smartphone/tablet or through prints) with you outside of the vehicle, because you may need to use the physical key (inside the fob) to lock and unlock the vehicle, plus the owner’s manual will be handy for further reference
- If the vehicle is in a locked garage and the 12-volt battery is in the trunk, leave the trunk open
- Once you have disconnected 12-volt power, you can lock and unlock your vehicle with the physical key
- And finally, if your 12-volt battery is in the trunk but you are not storing the vehicle in a locked garage, you will need another 12-volt source. Follow the “jump start” instructions in the owner’s manual to restore 12-volt power to the vehicle in order to reopen the trunk.

With warmer temperatures on the way, your vehicle and its batteries are designed to handle long-term storage outside in direct sunlight. Taenaka says that if you are experiencing extreme hot weather and the vehicle needs to be stored for
more than 30 days, if practical for you, store your vehicle in a garage or in the shade to preserve battery capacity and extend its life span.

*Always refer to your owner’s manual for important details about storing your vehicle and removing it from storage.*

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