



**Are you a
Hybrid Car user?**

**Poor Gas Mileage?
Lack of Power?
Frequent Engine Signal?**

If you are, you should read this.

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Hybrid cars have their own fan base due to better gas mileage and lower carbon emission. However, the hybrid car battery life could be a matter of concern. If your hybrid car started to show signs such as poor gas mileage, lack of power during your long drive, and frequent ICE engine signal, there is a high probability that your hybrid batteries need to be serviced. You can get back to the service centre and they will charge you around RM 6,680 to RM 8,700 for battery replacement.

Indications

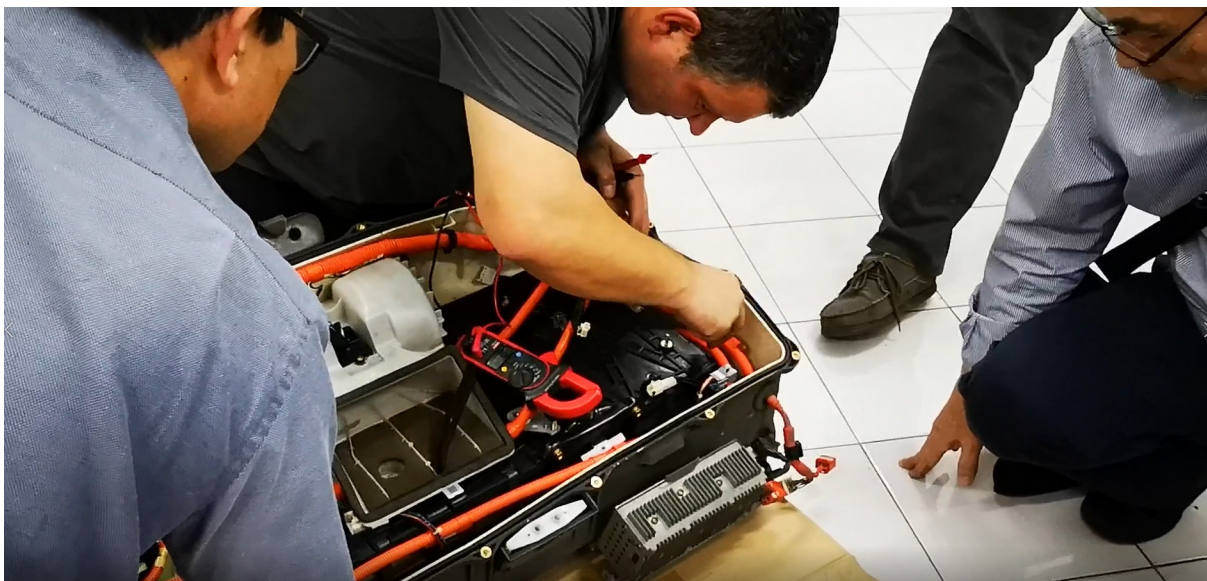


Poor Gas Mileage
Hybrid car is consuming more petrol

Lack of Power
Lack of power to drive over hills or to accelerate

Frequent Signal
The ICE engine signal will turn on more than usual

Hold on, your hybrid batteries can be saved by reconditioning! You can save thousands of ringgits while improving the battery performance instead of replacing them. There are two types of rechargeable batteries used for hybrid car which are Nickel Metal Hydride and Lithium Ion.

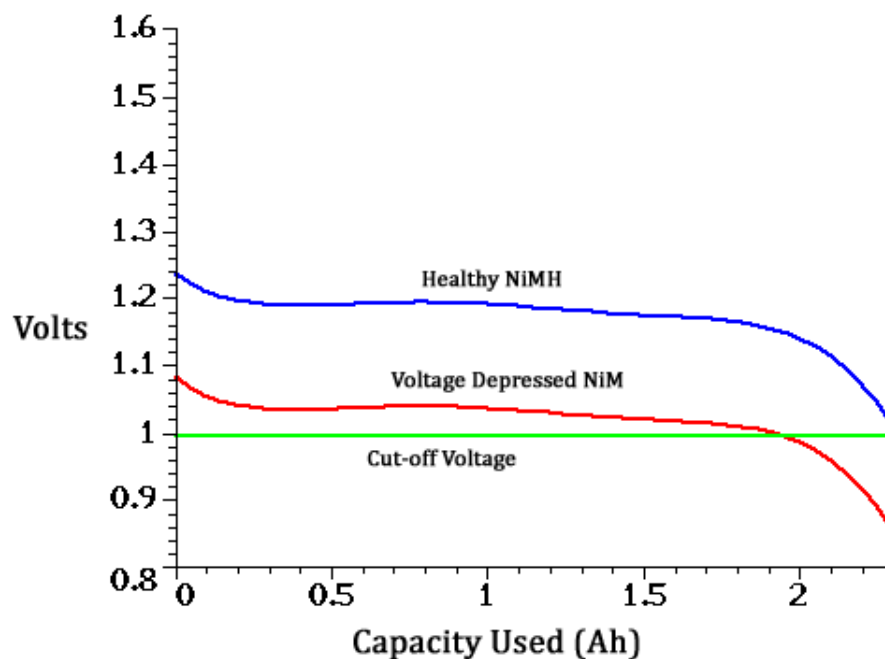


For Nickel Metal Hydride (NiMH) battery pack, the negative electrode is made from hydrogen absorbing alloy while the positive electrode is made from nickel-oxide hydroxide. Alkaline electrolyte

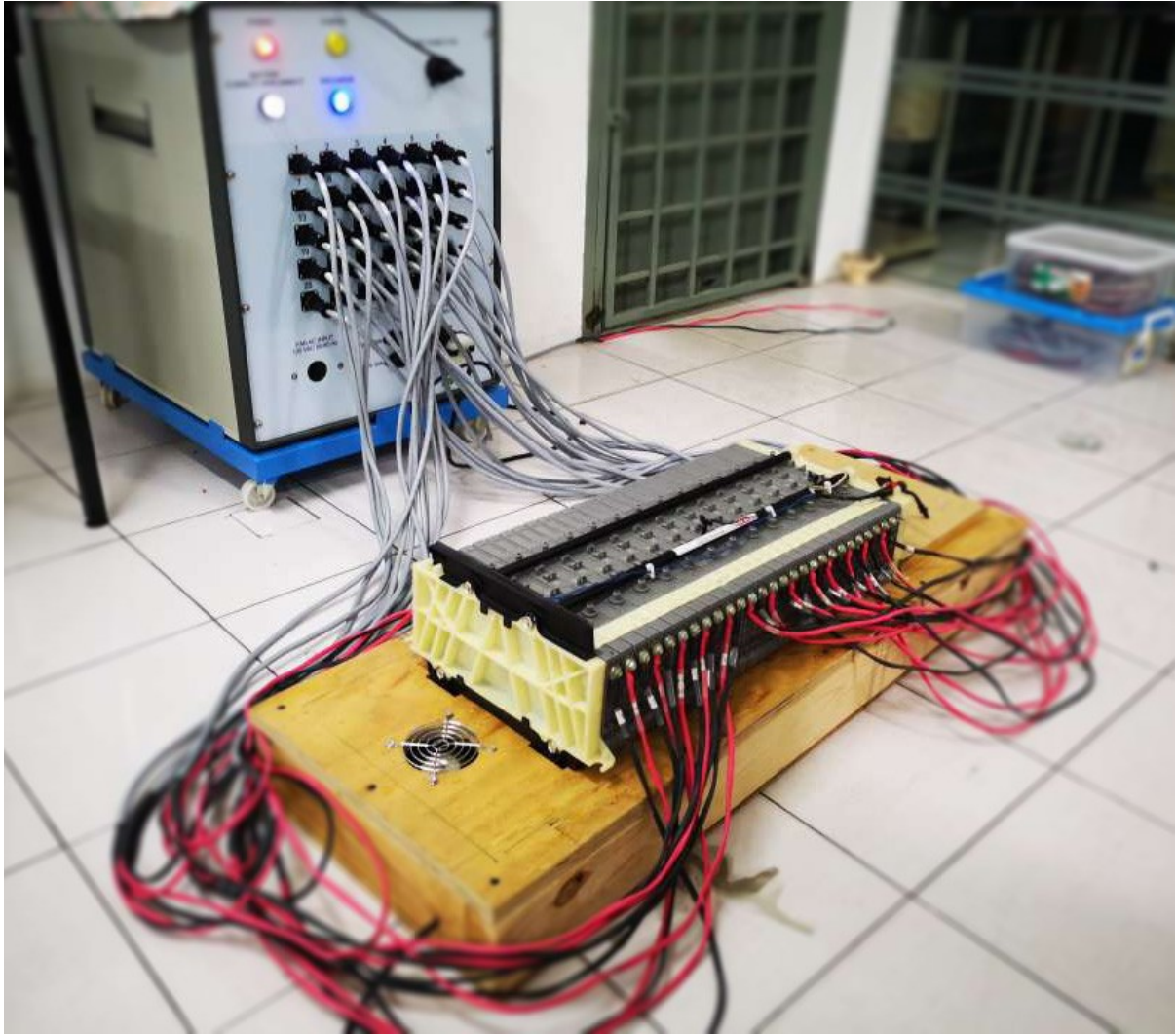
such as potassium hydroxide is used as electrolyte in NiMH cells. Hundred NiMH cells are connected in series to attain several hundred volts. How long do NiMH batteries last? Actually, it depends on the make, model, mileage, and car usage pattern. The expected lifespan could be minimum 5 years to more than a decade.

What is battery reconditioning actually? How does it work in saving the hybrid batteries?

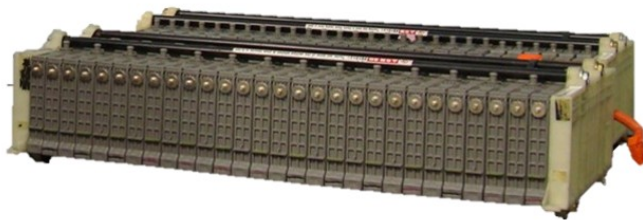
Reconditioning is the process of charging and discharging multiple times to recondition the Nickel Metal Hydride battery. There is a crystal layer formed within the battery cells which we called as Voltage Depression. This incident is caused by excessive over-charging which usually happened when the battery pack is subjected to repeated shallow depth of discharge of less than 10% of the battery capacity (short distance daily driving).



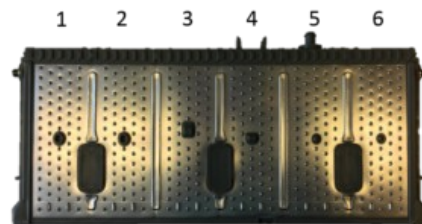
Therefore, we need to breakdown this formation by deep charge/discharge simultaneously and to equalize every each of cell voltage levels.



KGC have conducted few introductory courses in hybrid battery reconditioning. One of the courses is taught by NuVant Systems senior engineer, Dr. Bogdan Gurau, expertise in Electrochemical Energy Storage. In the introductory course, we will introduce you our flagship equipment in battery reconditioning which EVc-30 which is pioneered by NuVant Systems Inc, America. This equipment is designed for simplicity-of-use and no attendance required during reconditioning. It will recover the capacity and to balance your hybrid battery pack modules for both NiMH and Li-ion cells. The following is the example of Prius battery pack. It consists of 28 modules while each module has 6 cells.



Toyota Prius Battery Pack



Module consists of 6 cells

Currently, we have reconditioning plans for the following vehicles:



Are you interested to know more about hybrid battery reconditioning? You may contact us for further information and to bring you up to date knowledge regarding on rechargeable battery for hybrid vehicles!