

Re: Are existing batteries adequate for hybrid vehicles?

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Lansdale wrote:

- > *Most honored Science Priests I have a suggestion.*
- >
- > *There's an ass rightout in the courtyard, let's go count his teeth.*
- >
- > *I've been driving a hybrid Insight now for 4 years, over 70,000 miles*
- > *(58.9MPG).*
- >
- > *As far as I can tell, it's battery performance is close to new.*
- >
- > *I do know it's got Nickle Hydride D Cells in banks of 20 (I think 6)*
- > *and that they are controlled by a computer system. I think,*
- > *rather than charge / use all the batteries equally, the computer*
- > *shifts the load/discharge in the most effecient matter.*
- >
- > *Go back to your theory and decide how long a D cell will last*
- > *given ideal, high percision charging/discharging.*
- >
- > *Another important energy fact relating to hybrids is that the*
- > *electric power by it's self dosen't explain the cars high mileage.*
- > *It's only about 6hp in the Insight, but the sales manual says*
- > *most of the saving comes from the batteries.*
- > .
- > *1) Because of the electric motor's instant boost when accelerating,*
- > *the gas part of the enginee can be better tuned. Think of the ideal*
- > *pistonsiton size for initial acceleration vs cruising at 70mph. The*
- > *real theoretical quetion is that if a motor could be fine tunes for one*
- > *specific speed, (the vehicle would be propelled/towed to it) how*
- > *effecient would it be.*
- >
- > *2) The car is very light, 1800 lbs, aerodynamic (down to the funny*
- > *wheel covers), and has narrow, high pressure long rolling tires.*
- >
- > *3) The engine shuts off when the car is stopping (about 5mph)*
- > *and restarts instantly when the gas is peddle is pushed or 1st*

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> *gear is engaged. ie No waste sitting in a traffic jam or long light.*

>

> *Dan Insight*

These are excellent numbers, no question about that. I took the claim about 1000 recharges as marketing fluff, but if a computer optimized recharger does better, I'd love to know more. If the 1000 number IS fluff though, that still speaks well of NiMH batteries for cars, since they're hauling around excess capacity for when banks of batteries deteriorates. And the excess weight is manageable.

I do wonder how they scale up for trucks though, especially stop-and-go trucks like buses, delivery vehicles and dump trucks. The numbers on the Honda Insight imply a long commute with few stops, which doesn't really stress the batteries.

But again, those are excellent numbers.

Mike Ackerman