

Bigger batteries may increase mileage

BY SETH BORENSTEIN
Knight Ridder Newspapers

DETROIT – As Americans put more gadgets in their cars, from fax machines to microwave ovens, automakers are looking to build bigger batteries. And that may end up increasing auto mileage and decreasing pollution.

Here's how:

Automakers are close to agreeing on tripling the voltage of car batteries from 12 volts to 36 volts. That would enable a car's battery to run

more accessories with less power loss in its wiring.

A bigger battery also would allow companies to add a new electronic starting device that would automatically shut down the car's engine when it brakes and instantly turn it on when the accelerator is pressed.

That could increase gas mileage from 5 percent to 20 percent, with the average U.S. driver getting 10 percent better mileage, said Paul Nicastrì, a vehicle electronics project leader in Ford's research laboratory in Dearborn, Mich.

General Motors plans to introduce a so-called milder hybrid vehicle with an automatic engine shut-off this year, said Bob Purcell, executive director of GM's Advanced Technology Vehicles.

The bigger battery "system with mild hybrid designs looks very promising," Purcell said. "You will see a lot of these mild hybrid applications in the next 10 years."

Initially, Europeans took the lead in the technology, but Detroit is wisely catching up, said Tom Keim, a Massachusetts Institute of Technology researcher who co-directs an automaker/battery maker university consortium.

"I expect they'll eventually take over the marketplace," Keim said.

In addition to saving hundreds of millions of gallons of gas annually, the bigger battery could be used to heat fuel before starting, Nicastrì said. That would reduce pollution, Nicastrì said.

The instant-start function would allow automakers to reduce engine size slightly without reducing performance.

But first, everyone has to agree on the size. A 36-volt battery, which produces 42 volts while operating, is likely. That is as big as the battery can get without being hazardous to amateurs who fool around with it, Nicastrì said.

Mechanics would also have to change all their equipment, especially the jump-starting devices on tow trucks, Nicastrì said.

And there's price. It may cost an additional \$2,000 at first, and consumers may not buy it, Nicastrì said. But Keim said he thinks the cost could easily drop below \$1,000.