MOTORING Trends

Longevity depends on care your car gets

by Southam Newspapers

OTTAWA — How long should a car last?

The consensus is that neither the mileage on the dial nor whether the vehicle is used primarily for in-town or highway driving determines how long a car will live.

"That comes down to how you look after it," said David Leonhardt, manager of public and government relations for the Canadian Automobile Association's national office in Ottawa.

One statistic suggests that "a car should last roughly 12 years on the road, but that statistic is a few years old," he said.

Smart air bags are key to future safety plans

by ALISA PRIDDLE
Southam Newspapers

WINDSOR, Ont. — There is a technological solution to the 20-year-old debate over the safety of airbags. They're called smart airbags or intelligent airbag systems and all agree they would stop the debate in its tracks but for one problem:

Deaths and injuries from airbags are happening now and smart airbag systems are still works in progress.

Early renditions will debut in a couple of luxury European cars in 1997 but perfecting the technology could be 10 years down the road.

"It's new technology," said Mark Nantais, president of the Motor Vehicle Manufacturers Association of Canada. "It is still evolving and not fully tested or mature as yet."

Ultimately, automakers want an intelligent airbag system that detects the presence of someone in the passenger seat, their size, if the person is buckled in place, leaning forward or otherwise out of position, or if it is an infant car seat.

Based on that assessment, the system would deactivate the airbag or change the force and speed with which it deploys. The inflation would also be tailored to the speed and severity of the crash.

This would address the growing number of deaths and injuries, most in slow-speed collisions, where the airbag hit the victim in the head instead of the chest. That is because in many cases, the occupant was an infant in a rear-facing car seat, a child or small adult. Often what made the injuries so severe was the passenger was not wearing a seat belt, was sitting forward or out of position, or the seat was set too far forward, leaving little room for the bag to deploy.

Everyone is working towards smart airbags, recognizing depowering alone will not eliminate all risk.

There are some early entries: Mercedes-Benz and BMW will put weight sensors in a couple 1997s. The system in the Mercedes-Benz SLK roadster, which goes on sale next spring, uses a radio frequency that bounces off a specially tagged child seat and automatically turns off the passenger airbag.

"All believe this kind of technology is possible in three to five years," said Nicole Pageot of Transport Canada. And Friday the U.S. National Highway Traffic Safety Administration announced a plan that would require the installation of smart bags starting in 1999.

But that's for what automakers call low-functioning intelligent systems that sense an infant seat. The higher-functioning systems that can tell if a child is out of position are five to 10 years away.

There are a number of holdups.

Safety system suppliers are still sorting through technologies to do the sensing. Although much of the technology has been around a while, the trick is to use it in a system that is 100-percent reliable in identifying the type and position of passengers — and is still affordable.

And there are product development lead times to consider. Interior designs of the 1998 models have already been locked in and changing them would be a major and costly ordeal.

Time is getting tight to work sensors into designs for instrument panels and headliners for the 1999 model year, leaving 2000 as the most likely target year.

In the meantime, Ford and GM are bridging the way with manual cutoff switches for the passenger side airbag on pickups for owners with infants and no back seat.

U.S. safety legislation will require all vans and trucks to have dual airbags by the end of 1998.

This is the last group to embrace the technology. For most automakers, the only vehicles without a driver's side airbag are trucks with over 8,600-pounds gross vehicle weight, and big vans.

Bagging up the facts

by Southam Newspapers

WINDSOR, Ont. — If you don't already have a vehicle with an airbag, chances are your next one will be so equipped.

What you've got is technically called a supplementary restraint system and is meant to be a backup to the primary safety device, the seat belt.

The airbag is designed to inflate, creating a protective cushion between a person and the front of the car. It is activated in a front-end collision comparable to hitting a solid barrier at 16-22 km-h. It isn't designed to deploy in side impact, rear or rollover crashes. It will inflate automatically in a vehicle fire to prevent it from exploding.

That's because one of the system's three components, the module, has an inflator unit to fill the bag with nitrogen gas as well as a nylon airbag. On the driver's side the module is folded into the steering wheel hub and inflates to the size of a beach ball. The passenger-side module is in the instrument panel and is two to three times larger to cover the greater distance to the passenger.

A second component of the module is crash sensors, as many as five electronic switches in the front bumper to detect a crash. They are only activated by severe deceleration from a front-end collision - severe braking or a bumpy road won't trigger it.

The final component is the diagnostic unit, an electronic device which monitors the airbag system and is a backup against electric power failure. The unit is activated when the ignition is turned on and performs a readiness test.

The whole activation process takes about 1/20th of a second, faster than the blink of an eye. The bag begins deflating immediately by venting the nitrogen through holes in the bag. It allows the driver to maintain control of the vehicle if it is still moving and ensure the occupant isn't suffocated or trapped by the airbag.

Afterwards there may be dust-like particles in the air from the corn starch or talcum powder used to lubricate the airbag during deployment. There may also be small amounts of sodium hydroxide which can irritate eyes or affect asthmatics.

Once deployed, the airbag cannot be reused and should be replaced. The cost to replace two airbags can reach $2,000.

Electronic blitz

TROY, Mich. (AP) — With the help of waddling toasters, flying fans and an army of other appliances come to life, General Motors Corp. launches a media blitz this week to introduce its electric car to California and Arizona.

GM isn't saying how much it plans to spend on the campaign for the EV1 — a major technological breakthrough for the world's biggest company. But officials say the ads will saturate the four U.S. urban markets where the two-seater becomes available for lease today.

"If you're alive in these markets over the next few months, you'll see one of these ads," said Joe Kennedy, vice-president of sales, service and marketing for GM's Saturn Corp. subsidiary, which will market the EV1.

Tonight, television viewers in Los Angeles, San Diego, Phoenix and Tucson, Ariz., will see the introductory, 90-second EV1 commercial put together by Industrial Light and Magic, the special-effects studio started by Star Wars creator George Lucas.

It features dozens of electric appliances that come alive, squeaking and gurgling in anticipation as they hurriedly hop, roll and fly out of their suburban homes and onto the curb to witness the arrival of the EV1.

In the background is a score that sounds like a cut from the ET soundtrack.