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Buick Encore Uses ‘Magic Magnets’ To Improve Traction on Snow, Ice

by Jennifer Knightstep

What better place to test the Buick Encore’s “Active On-Demand” all-wheel drive than at the GM Proving Ground, and what better time than in winter, when ice and snow cover the notoriously tough test track?

That’s exactly the question Encore Chief Engineer Jim Danahy asked, when he set aside time this winter to test several refinements to the small crossover’s “Active On-Demand” all-wheel-drive system.

Most interesting is the Encore’s use of magnets to aid in slip avoidance.

Traditional all-wheel-drive systems don’t engage until slip is detected, but Encore’s system is uniquely proactive, using a magnetic charge to engage a clutch at the rear axle when slippage is most likely to occur – just as the vehicle begins to move.

If no slip is detected, the system is automatically disengaged once the Encore is under way, returning the system to a primarily front-drive operation – until the next stop, when the magnetic charge is used again.

What are the advantages to such an all-wheel-drive system? Buick’s Danahy explains that,

while the driver will notice less unintended slippage as the Encore begins to move after a stop, or as it corners, the rest of the ride will be as smooth, responsive, and comfortable as possible – something Buick owners have come to expect.

“A Buick all-wheel-drive system has to deliver the best traction possible, and it has to do it in a way that’s totally imperceptible to the driver,” said Danahy.

“We engineered Encore’s lightweight, responsive and refined system to deliver on the expecta-

tions of demanding luxury buyers.”

Other features include SAE-certified 138-hp (102 kW) Ecotec 1.4L power-dense turbocharged engine and six-speed automatic transmission along with standard Buick IntelliLink with seven-inch, high-resolution, full-color display radio with CD/SiriusXM satellite radio/USB, voice recognition and Bluetooth phone and audio. The vehicle also comes with 10 standard airbags and a StabiliTrak electronic stability enhancement system.



The 2013 Buick Encore, featuring a uniquely proactive “Active On-Demand” all-wheel-drive system.



2013 Cadillac ATS

ATS Most Significant Cadillac Since First CTS, Says Urban Wheel Juror; New Caddy Named Car of the Year

The Cadillac ATS has been named 2013 Urban Car of the Year by *Decisive* magazine. This award is part of the Urban Wheel Awards held annually in January at the North American International Auto Show.

The Urban Wheel Awards judging panel spent several months determining the best new vehicles for 2013 by driving and evaluating dozens of cars and trucks in a variety of North American urban settings before settling on the three winners – the ATS, Ram 1500 as Urban Truck of the Year, and Tesla Model S as Urban Green Vehicle of the Year.

Each of the three *Decisive* mag-

azine winners will be featured in the winter issue of the magazine, which will also be online at www.decisivemagazine.com, in addition to all contemporary mobile platforms.

The ATS was chosen in part for its performance when tested in urban environments for comfort, ease of maneuvering and technical sophistication.

According to Urban Wheel Awards juror and syndicated automotive reviewer Arv Voss of Auto Impressions: “The ATS is its own vehicle – the most significant Cadillac to be launched

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Ricardo Study Addresses Future Federal CAFE and GHG Regulations

by Ken Brown

No single “silver bullet” technology will achieve future CAFE and GHG emissions standards.

So said Mark Kuhn, manager of Ricardo Strategic Consulting, at a media briefing on the new federal and California corporate average fuel economy (CAFE) and greenhouse gas (GHG) emissions regulations for cars and light trucks that were approved earlier this year.

Kuhn added that a range of technologies will be needed to

enable varying types and sizes of vehicles to meet the targets.

The mid-November briefing was held at the Van Buren Township office of the Ricardo firm and covered the regulations that will be required starting with the 2017 model year and continuing, with increasing severity, through 2025.

Ricardo representatives also discussed how those regulations seem likely to affect vehicles in the U.S. market.

Included in the new rulings are

combined car and light truck CAFE standards of 35.5 mpg in 2017 and 54.5 mpg in 2025 (increases of 30 percent and 100 percent, respectively, from today’s 27.3 mpg level).

Even tougher standards are expected to apply through the 2040/2050 time frame, but none has been announced.

Ricardo representatives added that with tougher regulations known to be coming in Europe and Japan, as well as in the U.S., manufacturers and suppliers around the world have not been “sitting idle.”

As part of their study, Ricardo had met with ICCT (International Council on Clean Transportation) regarding progress in the European market.

In a series of presentations, Ricardo senior executives first explained that they had identified future technology packages and estimates of their effects on vehicle fuel consumption.

Then, the Ricardo team made projections on new technology needed for different types of vehicles, how much fuel consumption benefit to expect in each ve-

hicle class, the effects on consumer preferences and how the changes would affect the market.

Not surprisingly, much of the new technology focus is related to engine and transmission systems and configurations.

To meet the “short-term” requirements (2015-2017), the Ricardo team said it expected to see refinement and expanded availability of some features that are already offered on the market:

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From left: Cynthia M. LeBlanc, volunteer board chair, American Cancer Society; John R. Seffrin, chief executive officer, American Cancer Society; Cheri Ott, director, Human Resources Global Information Technology at General Motors; Tom Gilbert, Chevrolet regional marketing manager; and W. Phil Evans, volunteer president, American Cancer Society.

GM, Chevy Awarded for Their Aid in Fight Against Cancer

by Irena Granaas

General Motors Co. and Chevrolet were among 19 companies recently honored with the American Cancer Society’s “Excellence in Philanthropy” award for their support of the Society’s fight against cancer.

Part of the ACS’s Corporate Impact Awards, the award is presented annually by the Society’s Corporate & Systems Initiative.

The award goes to companies that have given \$1 million or more to ACS during the previous calendar year. Donations can include a combination of corporate contributions, in-kind support, cause marketing and sponsorship, employee giving and/or event fundraising.

Together, the 19 honorees contributed \$53.6 million in 2011 in support of the Society’s mission.

GM and Chevrolet contributions to ACS during 2011 were more than \$1.1 million, said Jill

Elder, a vice president with the American Cancer Society for the Southeast Michigan area.

She said GM and Chevrolet have been giving their support to the Society and its mission for more than 10 years.

Elder added GM and Chevrolet were also involved again this fall in support of Making Strides Against Breast Cancer, and have already topped the \$1 million mark for 2012, and will definitely be honored again by ACS for these efforts in 2013. She said their support of ACS has been a long-standing tradition.

“GM and Chevrolet have supported Making Strides Against Breast Cancer and our Detroit Cattle Baron’s Ball since 2003,” Elder said, “and then throughout the years, teams developed across the country in support of Making Strides Against Breast Cancer.”

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