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GM Employees to Show Off Special Rides at Tech Center

by Jim Stickford

GM employees will have the chance to put their money where their mouth is at the 24th annual UAW Local 160/GM Tech Center Car Show July 24.

This year's event will celebrate the 60th anniversary of the Corvette, honoring one of the great models in GM's storied history.

Committee chairman Bill Duncan works as a systems engineer with GM's Performance Group at the Tech Center.

He said the Tech Center Car Show began rather humbly.

"The event started off as a GM powertrain car show at the Tech Center," Duncan said. "I think there were only 10 or 15 cars at that first show."

But over time, the event grew and is now open to all GM employees and retirees. The definition of "GM employee" is meant to be inclusive, Duncan said.

"If you are a salaried employee, an hourly employee, a contractor, or even a resident engineer for a GM supplier, you can display a car at the show," Duncan said.

Duncan said he became chairman of the event a couple of years ago because the powers-

that-be at the UAW and GM decided that the UAW workers' time would be better spent concentrating on their core jobs.

Over the past few years, between 800 and 1,000 cars have been entered into the show, Duncan said. Last year, the figure was closer to 800.

"This year is the 60th anniversary of the Corvette," Duncan said. "So we will have a couple of guys on the lookout for outstanding examples of the Corvette. When they find one, they will have that vehicle parked in a special lot by the stage."

"We will have room for about 75 Corvettes. The GM Heritage Center will also have some cars at the show for people to look at."

While there is no strict rule as to what kind of cars people may bring to the event to show off, Duncan said they encourage people to bring older cars and leave the newer ones – that are just off the showroom floor – at home.

"Of course, the Corvette and Camaro people like to bring their cars because they think they're classics already," Duncan said.

There is no charge for entering a car or for viewing them, but do-

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Not-so-late-model Buicks line up for visitor viewing at the GM Heritage Center in Sterling Heights.

Buick Picks 'Best of Decades' for Anniversary

Despite 110 years not being as "cool" as 100 years, said Buick's Nick Richards, remaining in business for 11 decades requires constant innovation, and that deserves at least a little celebration.

That's the reason for this year's marking of the brand's 110th anniversary, said Richards, Buick's Communications manager.

He noted that Buick celebrated its history of making WWII military vehicles around the anniversary of V-E Day.

Richards said that while 110 years in business doesn't have the major milestone cache of,

say, 100 years or 125 years, the brand will be doing some things to celebrate 110 years in business.

Right now, the brand is celebrating the various Buick models that have made their mark during different 10-year periods of the car's shared automotive history, he said, adding that the trick is choosing one model to represent a decade of significance.

Among the hundreds of models designed and engineered for Buick, the 11 listed, Richards said, stand out as the most significant for their respective decades since May 17, 1903.

- 1903-1912: The first Buick ever is quite significant, so Buick's first decade honor goes to the 1904 Model B. The first one of the line was sold to Dr. Herbert H. Hills of Flint, decades before the brand developed its reputation as a "doctor's car."

- 1913-1922: The 1916 D-45 Touring was the top-selling model in 1916, a year when Buick switched its lineup from four- to six-cylinder engines. Sales tripled that year and reached six digits for the first time. Buick became the top-selling brand in the industry a few years later, with

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ELR 'Makes Energy-Efficient Driving Fun, Luxurious' – Cadillac's Chris Thomason

Going green and hi-tech shouldn't mean sacrificing high performance. At least, that's what the engineers at Cadillac believe.

Cadillac's upcoming electrified luxury coupe, the 2014 ELR, is designed to exceed the public's expectations of the performance of the vehicle by also providing engaging, responsive driving dynamics enabled by advanced suspension and steering systems, said Chris Thomason, ELR vehicle chief engineer.

The technologies include front HiPer Strut suspension, rear compound crank with Watt's link suspension, a premium ZF electric power steering system and ZF-Sachs continuous damping control.

"ELR's methodical use of advanced suspension and steering technologies front and rear has resulted in the quiet cabin, agile handling and superior ride that Cadillac customers have come to expect," Thomason said.

"ELR will redefine for many people what the electric car driving experience is all about. Not only does it make smart use of energy, it makes energy-efficient driving fun and luxurious."

ELR's Extended-Range Electric Vehicle (E-REV) propulsion system delivers 295 lb.-ft. of instantly available torque. In driver-selectable Sport mode, the reconfigured accelerator pedal is designed to provide quicker torque application and more sensitive feedback through altered suspension and steering settings. ELR also offers Tour, Hold and Mountain driving modes.

With so much torque available,

engineers relied on a HiPer Strut front suspension to eliminate torque steer and increase front axle grip while cornering due to optimized tire contact with the road, Thomason said. The HiPer Strut is meant to give the ELR a precise, communicative and linear steering feel, and to reduce unwanted steering system disturbances over rough roads and bumps for an overall smoother ride.

In its rear suspension, ELR uses a Watt's link design to center the car's rear axle during turns meant to provide a more balanced driving experience. When cornering, the Watt's link provides greater lateral stiffness that results in more positive vehicle response to steering inputs and helps keep the rear suspension aligned with the front suspension, Thomason said, adding that when the ELR is traveling on a straightaway, the Watt's link allows the suspension to travel up and down freely to make the ride more comfortable.

ELR's electric power steering system is engineered to provide excellent feedback while saving fuel, said Thomason, noting that the rack-mounted, dual-pinion system – one for steering and one for power assist – consumes energy only when the vehicle is actively steered.

A combined electric motor and sensing unit, he said, monitors steering angle and delivers appropriate assist to the steering gear at all times, correcting for crowned road surfaces and crosswinds, helping to reduce driver fatigue.

In driver-selectable Sport

mode, Thomason said, ELR's steering gear provides increased on-center sharpness and steering sensitivity for dynamic steering, while in the more relaxed Tour mode, it allows precise control with less driver steering efforts.

ELR's continuous damping control monitors sensors throughout the vehicle, vehicle speed and the driver's input, and adjusts damping accordingly for each 20-inch wheel every two milliseconds to maintain optimal vehicle ride control over varying road surfaces and profiles, Thomason said.

This reduces and controls vehicle roll, pitch and vertical motions for a flat "sky-hook" ride performance, he said, and responds to cornering maneuvers by automatically adjusting



2014 Cadillac ELR

dampers to a firmer level for superior handling and stability.

An isolated four-mount front cradle contributes to the ELR's overall quietness, noise and vibration performance, and ride-and-handling dynamics, said Thomason. Specifically tuned mounts are tailored to the engine's inherent torque axis, he said, decreasing the transfer of vibration and noise in the cabin.

Now in its final months of pre-launch engineering testing, the ELR is slated to reach showrooms in the U.S. by early 2014.

ELR is the first car by a full-line luxury brand to offer Extended Range Electric Vehicle technology. The E-REV propulsion technology provides full driving range exceeding 300 miles, combining pure electric driving and an efficient, range-extending generator.

Demand for Engineers Puts Retirees, Veterans, Students in the Catbird Seat

by Jim Stickford

The need for qualified automotive engineers is a good problem for OEMs and auto suppliers to have, but at the end of the day, it's still a problem.

Andrew Smart, director of Society Programs for the Society of Automotive Engineers (SAE), said the recent growth in car sales combined with the growing technical complexity of today's vehicles has greatly accelerated the demand for automotive engineers.

"There is a real need for engineers industry-wide," Smart said.

"But what's interesting is that a lot of the 'new' engineers that are being hired are actually old engineers."

Smart explained that during the recent downturn, a lot of managers who started out as engineers but moved up into manager positions took buyouts. These people were relatively young for retirement.

"The OEMs have their contact information in their files," Smart said. "So now these retired managers are being hired back as just engineers. These hires are glad to be just engineers again and not managers."

Smart said with car sales climbing again after years of decline and global competition fiercer than ever, the demand for good automotive engineers is as strong as it has ever been.

"But the problem is that there's not enough students in the engineer pipeline," Smart said. "In the next few years, there will be more than 500 global launch events in the auto industry. There are more models being launched and more models refreshed than any time in history."

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