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Chevy Donates 'Durable' Soccer Balls to Kids

Chevrolet will make a special delivery later this month of 1,350 virtually indestructible One World Futbols, bringing the "power of play" to children in Detroit with assistance from Big Brothers Big Sisters of Metropolitan Detroit.

"We're applying our very global partnership with the One World Futbol Project at a very local level," General Motors North America President Mark Reuss said last week. "Thousands of children right here in Detroit will benefit from this donation."

Chevrolet teamed up with Big Brothers Big Sisters of Metropolitan Detroit to donate balls to the Detroit Police Athletic League and 23 Detroit Public Schools. The balls will be distributed beginning April 27 at PAL's summer soccer kickoff event at Historic Fort Wayne.

Chevrolet and the GM Foundation are both committed to supporting the City of Detroit. Over the past three years, the GM Foundation has granted nearly $21.5 million to vital nonprofits and cultural institutions within the city, including United Way for Southeastern Michigan, Focus: HOPE, Karmanos Cancer Institute, the Detroit Symphony Orchestra, the Detroit Institute of Arts and the Michigan Science Center.

One World Futbols are designed to outlast and outplay hundreds of regular soccer balls, sustaining play in any environment. The ball never needs a pump and never deflates even when punctured, making it ideal for play in all types of terrain such as concrete, blacktop, dirt, rocky fields or grass, and harsh environments.

"Our mission at One World Futbol Project is to keep the spirit of play alive for youth around the world through the simple power of a durable ball," said Lisa Tarver, co-founder and chief operating officer at One World Futbol Project. "We are excited to join Chevrolet in making a positive difference for thousands of children around Detroit and witness-

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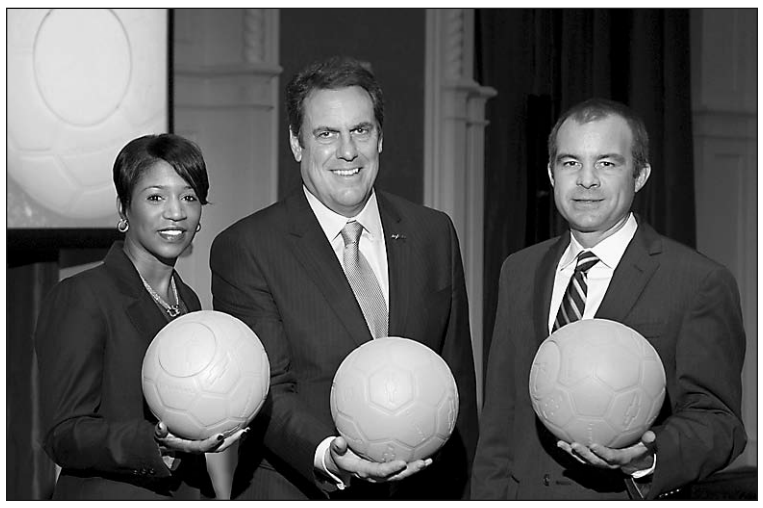

From left, President and CEO Big Brothers and Big Sisters Dara Munson, General Motors North America President Mark Reuss and CEO Think Detroit PAL Tim Richey show off some of the futbols Chevrolet will deliver BBBS of Metropolitan Detroit. The balls will be donated to the Detroit Police Athletic League and 23 Detroit Public Schools.

GM's New Gen-5 Engine Boosts Stingray, Silverado, Sierra Performance

by Jim Stickford

GM's booth at the 2013 Society of Automotive Engineers (SAE) Congress at the Cobo Center April 16-18 showed off the company's new gen-5 small-block V8 engine.

Jeff Jocsak, a combustion system design & analysis engineer out of the Pontiac Powertrain headquarters, said the new gen-5 replaces the gen-4 engines used in GM's full-sized trucks.

The gen-5 debuted late last year with the launch of the new Silverado and Sierra trucks. It is also used in the new 2014 Corvette Stingray.

"What we're highlighting here at the SAE Congress is the new gen-5 small block engine," Jocsak said. "This is an exciting engine. We've introduced new technology to the small-block engine. Things like gasoline direct injection. The gen-4 engine had used port-fuel injection."

Under a port-fuel injection system, Jocsak said, the fuel injectors on the intake manifolds have to be outside the cylinder to protect it from heat and pressure. But if it's possible to create a system where fuel is directly injected into the cylinder, "you get charge-cooling benefits," Jocsak said.

The fuel evaporates, producing lower engine temperatures, which then allows engineers to use higher compression ratios, Jocsak said.

The end result is that it increases horsepower. In this case, the gen-5 engine produces 450 hp versus the 430 hp produced by the gen-4 engine.

"We've also been able to pick up low-end torque. This is good because that's what helps 'launch' the vehicle when starting it up. And this technology has helped us with fuel economy as well."

Jocsak said what was nice about developing the gen-5 engine for the new Corvette Stingray is that now GM was able to use the technology in its high-volume sales vehicles such as the Silverado and the Sierra.

"This gen-5 engine is an improvement all around in terms of efficiency," Jocsak. "And it's been able to maintain its relatively small size and that's what sets it apart from other engines in other pickup trucks of similar size. It's certainly smaller than the engine used in Toyota's truck in the same category."

When asked where GM goes next, in terms of engine technolo-

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U.S. Steel's Surma: Steel Has Bright Future in Cars

by Jim Stickford

Steel can be lighter than plastic.

That was one of the messages that U.S. Steel CEO John Surma had for journalists attending the Automotive Press Association's (APA) luncheon at the Detroit Athletic Club April 11.

Surma spoke about the virtues of today's high-strength, lighter-weight steels and how they can help auto manufacturers achieve the needed vehicle weights required to meet stricter federal mileage standards.

Getting the word out about today's modern steels is an important part of his job, Surma said, and why he is speaking to groups like the APA.

"There was a car company that used plastic for its gas tank," Surma said. "That presented us with a challenge and we were able to design a gas tank made of steel that was 16 percent lighter than the plastic gas tank.

"'Steel lighter than plastic.' There's your headline for today."

Surma said that he understands that OEMs face problems. Their cars have to be lighter to get better gas mileage and that's why U.S. Steel has invested billions of dollars in research and development to create lighter-weight steels that still retain strength – while still being cost-efficient to produce.

He said he wants OEMs to know why they should use steel in their vehicles. One is that it is cost-efficient, he said.

Companies have been making steel for a long time and there is an infrastructure already built to

U.S. Steel CEO John Surma

mass-produce the metal.

The second fact Surma said he wants OEMs to understand is that steel is strong. Producers can now make types of steel five times stronger than steel of the past. It can be formed into the sophisticated shapes that automakers require when "lightweighting" their cars.

Third, he said, steel is truly a "green" metal. Last year, 70 million tons of steel was recycled. Steel can be recycled time and again, Surma said, without it losing the properties that make it attractive to automakers.

During the question-and-answer period, Surma was asked about steel losing out to materials like aluminum and carbon fiber during the OEMs' recent lightweighting efforts.

Surma said steel has won some and lost some. He noted that Audi created a vehicle that used a lot of aluminum, but it failed in the marketplace. Any OEM that picks steel or aluminum or carbon fiber must do so in a way that is cost-effective, and steel is cost-effective.

Surma added that by 2025,

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Cadillac ELR Makes Use of New Kind of Shifter Technology to Generate Energy

Paddle shifters take on new meaning in the Cadillac ELR, the brand's first electric vehicle with extended range capability that goes on sale in early 2014.

Unlike traditional performance vehicles where the steering-wheel-mounted paddles allow drivers to upshift and downshift the mechanical transmission, Cadillac ELR's paddle shifters enable the driver to temporarily regenerate energy and store it as electricity in the battery pack for later use.

ELR's Regen on Demand feature is unique to the compact luxury coupe.

"Regen on Demand enables ELR drivers to actively recapture energy when slowing down, such as when approaching slower traffic or setting up for a tight turn," said Chris Thomason, ELR chief engineer. "This allows the driver to take a more active role in the electric vehicle driving experience."

To engage Regen on Demand, the driver simply takes his or her foot off the accelerator and pulls back on either the left or right steering-wheel paddle to begin regenerating electricity.

When engaged, Regen on Demand provides vehicle deceleration that is more than what a typical vehicle experiences while coasting, providing control and dynamic performance characteristics similar to downshifting in a manual-transmission vehicle. The feature does not bring the vehicle to a full stop.

Releasing the paddle disengages Regen on Demand, allowing the vehicle to coast normally. The driver can engage and disengage Regen on Demand as desired and as traffic conditions allow.

"Pulling back on the paddle to slow down allows the ELR driver to keep (his or her) foot close to the throttle, ready to accelerate," Thomason said. "It provides a more engaged, satisfying driving experience, and when you consider the added benefit of recapturing energy, it's also a smart thing to do."

During regenerative braking, the system converts the vehicle's momentum to electrical power and stores the energy in the T-shaped battery pack located along the centerline of the vehi-

Cadillac ELR's paddle shifters

cle, between the front and rear wheels for optimal weight distribution.

The pack supplies energy to an advanced electric drive unit capable of 295 lb.-ft. of instant

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GM/Ford Team Will Develop New Line of Transmissions

Ford Motor Co. and General Motors Co. have signed an agreement under which both companies will jointly develop an all-new generation of advanced technology 9- and 10-speed automatic transmissions for cars, crossovers, SUVs and trucks.

The new transmissions, to be built in both front- and rear-wheel-drive variants, will improve vehicle performance and increase fuel economy, the automakers say.

The collaboration enables both automakers to design, develop, engineer, test, validate and deliver these new transmissions for their vehicles faster and at lower cost than if each company worked independently.

"Engineering teams from GM and Ford have already started initial design work on these new transmissions," said Jim Lanzon, GM vice president of Global Transmission Engineering.

"We expect these new transmissions to raise the standard of technology, performance and quality for our customers, while helping drive fuel economy improvements into both companies' future product portfolios."

This new agreement marks the third time in the past decade that GM and Ford have collaborated on transmissions. These collaborative efforts have enabled both companies together to deliver more than 8 million durable, high-quality 6-speed

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