# **Tech Center News**

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## **GM**, Led by Chevy and Buick, Earns Seven **Awards in JD Power Dependability Survey**

Ouality counts - and JD Power has counted GM's quality quite high.

Based on survey responses from more than 34,000 original owners of 2012 model-year vehicles, the 2015 Vehicle Dependability Study finds that the Chevrolet Malibu is the segment leader in the highly competitive Midsize Car segment.

And, for the third year in a row, the Chevrolet Camaro ranks highest in the Midsize Sporty Car segment.

Chevrolet ranked higher than ever in this study, said GM spokeswoman Susan Waun.

In addition, the GMC Sierra LD and Chevrolet Silverado LD rank first and second in the Large Light Duty Pickup segment and the Chevrolet Silverado HD and GMC Sierra HD rank first and second in the Large Heavy Duty Pickup segment.

Among all nameplates, and for the first time, Chevrolet, Buick, GMC and Cadillac all rank in the top 10 among brands in the study, said Waun.

Overall, Buick ranks second behind Lexus, and is followed by Toyota and Cadillac. Ram is among the nameplates seeing the highest increases in dependability compared with last year.

Among individual vehicle models, GM and Toyota lead the award count, each receiving a total of seven awards, said JD Power spokesman Jeff Young.

The 2015 study tracks 2012 model year vehicles in their third year of ownership, Waun said. GMC Yukon, Chevrolet Tahoe

and Suburban all rank in the Top 3 of the Large SUV segment. These models also filled the

Top 3 positions in the Large SUV segment in the 2014 JD Power Initial Quality Study, where the 2014 Chevrolet Suburban and 2014 GMC Yukon ranked highest in a tie, along with the 2014

Chevrolet Tahoe, Waun said.

"GM's customer-driven approach to quality and dependability is breaking through," said Grace Lieblein, vice president, Global Quality.

"Dependability is a top purchase consideration and key to customer loyalty. These awards reflect our commitment to provide customers with the best overall experience in the industry."

Jeff Wrona, executive director of Vehicle Engineering and Powertrain Quality for GM, echoed what Lieblein said.

"We are very proud of our ac-

#### 2012 Chevrolet Malibu

complishments," Wrona said. in our products," he said. 'We've working very hard across engineering, design and manufacturing to get these results.

"GM is on a relentless journey to get the voice of our customers' wants and embed them

The study, now in its 26th year, examines problems experienced during the past 12 months by original owners of 2012 model-

**CONTINUED ON PAGE 3** 



Craig Glidden

## Glidden Succeeds GM's Retiring Milliken

General Motors has appointed Craig B. Glidden as executive vice president and general counsel, effective March 1.

Glidden will lead a team of staff attorneys who are integrated into all of GM's regional and functional teams in more than 30 countries, said GM spokesman Pat Morrissey.

"Craig Glidden has had a distinguished career managing complex legal issues around the world, and his broad legal and senior management expertise fits

perfectly with our strategic priorities and plans for global growth," said GM CEO Mary Barra.

Glidden, 57, succeeds Michael Millikin, 66, who is retiring in July after a nearly four-decade legal career, including five years as GM's general counsel.

"I'm enthused to be joining General Motors and its management team to help drive the company forward," said Glidden. "The company has made significant progress in recent years and

I look forward to further advancing the business goals."

Before joining GM, Glidden was executive vice president and chief legal officer for Lyondell-Basell Industries, one of the world's largest plastics, chemicals and refining companies. He oversaw the company's global legal, communications, government affairs and compliance groups

Prior to joining LyondellBasell

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## From Out of the Past Comes The Newest Buick Concept

by Jim Stickford

As Shakespeare once wrote, "past is prologue." And that's certainly the case with the 2015 Buick Avenir concept car, which made its debut in January at the Detroit Auto Show.

The vehicle, in part, was based on six different Buick concept and production vehicles from the brand's storied history.

Greg Wallace, manager of GM's Heritage Center in Sterling Heights, said the first concept car ever built was a Buick.

"If you go back as far as 1927 with GM's LaSalle, you can see a car where its design isn't all based around function," Wallace said. "You can see that its form was influenced by the idea of

the cutting edge of technology in the 1930s – aircraft design.

Andrew Smith, the current chief designer for Buick, said he thinks its very "cool" that the first concept car was a Buick.

"The Y-Job gave the public a peek at the creativity that went on in the design room," Smith said. "Right now, the role of a concept car is to build excitement for the brand to show the public where we are taking Buick.

And that's where the Avenir comes in, Smith said. Part of building brand awareness for Buick is building on Buick's past as a brand that designed great concept cars and put into production beautiful vehicles that showed off the latest designs, he



1972 Riviera SilverArrow III, one of many past-year Buicks to influence the new concept Avenir

Buick is going as a brand," Smith said.

"It's showing the public just what we can do. Buick is a creative brand that doesn't limit where we can take our vehicles."

the ideas that designers came up concepts within the design dewith during the development process of various vehicles.

"People don't realize that we do lots of concepts as we develop production vehicles," Smith

partment to help build enthusiasm among the designers.

"But we're very strategic about what concepts we show the public. They don't get to see every

design.

GM was the first to hire a designer whose job it was to create beautiful cars, Wallace said. His name was Harley Earl and he was a legend at Buick and at GM for decades.

Earl was commissioned by Lawrence P. Fisher of Cadillac to design the 1927 LaSalle, Wallace said. This work proved to be so successful that Earl was hired to be the first director of GM's brand new Art and Color department.

This was an important step in the auto industry, Wallace said. It was signaling the fact that cars were more than just transportation, they were purchases where style played an important role in the consumer's decision to buy.

By 1938, Wallace said, GM created the first true concept car the Buick Y-Job. This vehicle, said Wallace, was influenced by

"The Avenir is showing where Smith said, is showing some of we do 'bake-offs' of our various

Part of the fun of a concept car, said. "As we develop these cars,

**CONTINUED ON PAGE 6** 

## **Golden Mousetrap Award Goes to Dow for Adhesive**

As the saying goes, build a better mousetrap and the world will beat a path to your door.

Well, Dow Automotive Systems has built that better mousetrap and has the award to prove it.

The company's BETAMATE 1630 structural adhesive has been selected as the winner of a 2015 Golden Mousetrap award in the category of Materials Assembly: Fastening, Joining and Assembly Components.

The Golden Mousetrap program recognizes design, engineering, and manufacturing in North America and was hosted by UBM Canon and Design News.

The Mousetrap awards were given out Feb. 12 at a special dinner in Anaheim, Calif. Used to bond the body structure of automobiles during assembly, BETAMATE 1630 enables the use of dissimilar substrates like carbon fiber composites. aluminum or lightweight steel to achieve weight savings, improved fuel and assembly efficiencies, and sustainability.

Dow Auto strategic marketing manager Ana Wagner said that it was an honor to win the award and be recognized for the work Dow chemists and engineers had done with adhesives.

"Adhesives have become very important in automobile manufacturing," Wagner said. "Lightweighting is the key. While adhe-

sives don't weigh much, what adhesives allow manufacturers to do results in vehicles weighing less.

Being able to bond dissimilar materials together makes it possible to reduce weight, Wagner said. And additional performance advantages include improved crash safety, vehicle durability, and design flexibility. The continuous bead of adhesive helps reduce noise and vibrations and the need for mechanical fasteners is reduced or eliminated.

The adhesive is also designed to be easy to apply, providing benefits on the assembly line as well as in the finished vehicle.

"BETAMATE 1630 is a global product," said Mansour Mirdamadi, chief engineer, Dow Automotive Systems. "This allows us to support global vehicle platforms and security of supply, while helping streamline the customer approval and specification process.

"Additionally, this structural adhesive provides sustainability benefits by supporting vehicle lightweighting, durability and longevity, and manufacturing efficiencies.

"It helps customers meet a wide variety of targets."

BETAMATE 1630 also received a 2014 R&D 100 award, said Dow spokeswoman Chris Swart.

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Whatever Volt Owners Want, Volt Owners Get, Say Execs

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#### Plastomer Earns GM's Award for Customer Care

Plastomer Corp. of Livonia has received the prestigious 2014 General Motors Customer Care and Aftersales On-Time Shipping Award.

Plastomer achieved Platinum Supplier Status that states that Plastomer played an important role in GM's effort to design, build, and sell world-class vehicles.

David Poole, general director of Supply Chain, said Plastomer's "dedication and commitment to consistently perform above expectations are very much appreciated by the entire General Motors team and we want to recognize your organization for its outstanding performance."

The award comes at the conclusion of Plastomer's 60th anniversary year, said Plastomer spokeswoman Kim Baughman.

"The family-owned company is proud of its heritage as a Hall of Fame member in the flexible foam and die-cutting industry. As such, Plastomer has pioneered standards of quality, customer satisfaction, and quick response for customers like GM.

"The company has a long relationship with GM that stretches back six decades. We were surprised to receive this award, and also proud. It's always nice to be recognized for the work you do."

Baughman said that Plastomer provides GM with foam and rubber parts such as HVAC gaskets and seat toppers.

"Seat toppers go over actual seats and provide protection to the person sitting in that seat in the case of heated or cooling seats," Baughman said. "We employ about 150 people, and have a plant in Livonia and warehouses in Tennessee and Mexico."

"At Plastomer," said George Baughman Jr., Plastomer's Sales and Marketing vice president, "we strive every day to delight our customers by going above and beyond what is required. For GM to acknowledge our efforts in this way is very special." To Sam Miller-Christiansen, his 2014 Chevrolet Volt is the best car he has owned.

And he was willing to tell anyone, including the team developing the next-generation Volt.

"I said that if they could improve the overall EV range, it would make one of my favorite cars even better," Miller-Christiansen said. "To my amazement, they've done it."

It is just one example of how the 2016 Volt was engineered with input from the collective voices of loyal owners.

Shortly after launching the first-generation Volt, Chevrolet convened and met once a month with a customer advisory board of 12 owners from across the country to understand how consumers were operating their Volts.

"The Volt represented a completely new classification of electric vehicles, and we were unsure of how people would react or how this vehicle would fit in their daily lives," said Darin Gesse, product manager of Electrified Vehicles.

"So, we began asking simple questions like how and when the owners plugged in their Volt, which directly impacted the development of the next generation.

"We talk about putting the customer at the center of everything we do, and we've literally done that with the 2016 Volt."

The Volt team also wanted to know what Volt features owners liked and what features might need improvement. The team talked with Volt owners through social media, plug-in events and Internet panels.

Chevrolet spokeswoman Courtney Moats said that some of the answers they received from customers surprised them.

"What we found out was that the most satisfying attribute of the Volt, according to our custoers, was how fun the vehicle is to drive," Moats said.

"They talked about the quiet propulsion, the instant torque and how it all combined to make the Volt a very fun car to drive."

The most surprising feedback that GM received, said Gesse, was that many Volt owners would drive the Volt with the transmission in "L" (or low gear) rather than in "D" (drive).

Owners wanted to maximize their regen braking efficiency by shifting into "L" to engage increased amount of regen braking when coasting as they approached slower traffic, Gesse said.

Consumers coined the term "one-pedal driving" to express how they could manipulate deceleration of the Volt without having to put their foot on the brake pedal.

"Both of these findings led the engineering team to develop Regen on Demand," Gesse said. "This feature allows the driver to engage regen braking without having to shift into 'L' or apply the brake pedal.

"It not only provides the ability to slow the vehicle down without touching the brakes, but also gives the driver more control, which makes the driving experience more engaging. It provides a more intuitive solution to what current owners are doing by shifting to 'L' while also making the vehicle more fun to drive."

The owners' constructive and candid feedback ultimately helped the engineering team decide in which direction to take the next-generation Volt, Moats said.

In addition to more EV range and improved fuel economy in extended range, customers also expressed a strong desire for a fifth seating position for short trips. The new Volt offers those features as well as increased space and available rear heated seats.

The 2016 Volt offers a GM-estimated 50 miles of EV range, and a total driving range of more than 400 miles between fill-ups. With regular charging, owners are expected to travel, on average, more than 1,000 miles between gas fill-ups, Moats said.

That range is based on GM-estimated fuel efficiency of 41 MPG and 102 MPGe, a measure of the average distance traveled per unit of energy consumed.

Chevrolet also learned customers wanted a more intuitive vehicle interface. So the 2016 Volt center stack is easier to use, with fewer icons, separate climate control knobs, and buttons below the center display designed to provide clear and convenient operation.

Moats said customers also influenced these features:

• Quieter engine at lower speeds;

• Light-emitting diode (LED) headlamps, providing a more visible, higher efficiency light;

• Reduced air dam scraping when entering or exiting drive-ways;

• Heated steering wheel;

• Regen on Demand – giving drivers more control over regenerative braking, which reclaims energy while the car slows; • Customization of vehicle information depending on driver's preference;

• Location-based charging selection, making vehicle charging at multiple locations easier to manage;

 More discrete charging notifications;

Charge door open reminder;

- Illuminated charge port;
- Available spare tire.

The current Volt enjoys some of the highest customer loyalty and quality scores in the industry, Moats said.

In just four years, he said, Volt has earned more accolades and more "best buy" awards than any other electric vehicle.

## Sam Miller-Christiansen with his 2014 Chevrolet Volt

## **Feds Demand Takata Parts**

DETROIT (AP) – U.S. safety regulators have ordered Japanese airbag maker Takata Corp. to preserve airbag parts from recalled cars for government investigators and attorneys who are suing the company.

The order issued Feb. 25 by the National Highway Traffic Safety Administration covers airbag inflator mechanisms that can explode with too much force, spewing metal shrapnel into drivers and passengers. At least six people have been killed and 64 others injured from the problem. Ten different automakers have recalled about 17 million cars and trucks in the U.S., and recovered inflators have been sent to Takata.

The order stops Takata from destroying inflators except when they are tested and requires the company to set aside 10 percent of them for testing by plaintiffs' lawyers. Takata also has to come up with a plan, to be approved by the government, for gathering and preserving the inflators.

And the company must make inflators available to the 10 automakers, who are close to hiring an outside company and a leader for their own investigation of the airbag problems.





MARCH 2, 2015

### GM Recalls 67,000 Cadillac ATSs for Sunroof Issues

DETROIT (AP) – General Motors is recalling about 67,000 Cadillac ATS compact sports sedans to fix a problem with the power sunroof controls.

The recall affects cars from the 2013-15 model years. GM says the sunroofs can automatically close if the non-recessed switches are even partly touched. The recall is being done because the switches can be activated with less force than allowed under federal safety standards.

GM found the problem in testing a 2016 model in January, but says it knows of no crashes or injuries. Repairs were made at the factory and dealers have been told to stop selling cars on their lots until they are fixed.

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COVERS THE TECH CENTER AND THE IMMEDIATE AREA

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Yukons have mirrors that allow parents to watch back seat passengers.

## Eyes in the Back of Parents' Heads Not Needed in Yukon

Your parents weren't joking mothers and fathers really do know how to keep an eye on their kids, at least when it comes to creating family-friendly features on new cars and trucks.

For example, the development team for the 2015 GMC Yukon and Yukon XL leveraged their own parental experiences, and added a conversation mirror – a secondary rear-view mirror that helps drivers keep an eye on kids seated in the second and third rows, said GM spokesman Brian Goebel.

The conversation mirror, standard on all 2015 Yukon and Yukon XL models, lets parents view the rear seats without using their rear-view mirror.

The additional mirror is integrated into the overhead console's sunglass holder. Push once, and the compartment fully opens, allowing access to an eyeglasses holder. Partially close the compartment, and the mirror latches in position, providing a wide view of the SUV's interior.

As roughly 30 percent of all Yukon and Yukon XL customers are parents with kids under the age of 16, Goebel said, incorporating family-oriented features is incredibly important to them. Keeping watch over younger passengers seated in the second or third rows of seats, however, can still prove challenging.

The idea for the mirror, said GM spokeswoman Kelly Wysocki came from a GM designer - Kay Jarboe – who is also a mother.

"As a mom, when it came time to design the next-generation Yukon and Yukon XL. I wanted to give our customers a better way of keeping tabs on their kids without forcing them to turn around and take their eyes off the road," said Jarboe, product manager for the 2015 Yukon and Yukon XL.

While aftermarket conversation mirrors are popular with parents, they lack the integration and sturdiness of a permanent fixture, Jarboe said.

that provided a wide, door-todoor field of vision, allowing drivers to quickly monitor both back seats in a single glance," said Jennifer Farah, an interior trim design engineer.

"At the same time, we didn't want the mirror to grow too large and eliminate room for a pair of glasses. As a mom, I can truly see the value in keeping a watch over my kids without turning my head away from the road."

Wysocki said that she's driven the Yukon with the mirror herself and said that it really works.

"I have two daughters -Samantha, who is three, and Alexandra, who is 12," Wysocki said. "So I know how parents want to keep an eye on their kids in the back seat when driving.

"I didn't find the mirror distracting at all. I could see what was happening in the back seat and still be able to concentrate on the road. It works.

"As far as I know, they weren't able to slip anything by me when I was driving.'

#### **Macomb County Treasury to Sell Retirement Bond**

Macomb County has received approval from the State of Michigan's Department of Treasury to sell bonds to fund retiree health care in an amount not to exceed \$263,755,000, said Macomb County spokesman John Cwikla.

'With this approval, the county has met the final requirement for fully funding its retiree health care liability," said Macomb County Executive Mark A. Hackel. "We anticipate that the bonds will be sold by the end of March.'

This funding approval follows the recent high ratings by the nation's two leading bond rating agencies, which have both reaffirmed Macomb County's superior bond rating - Aa1 from Moody's Investor Services and AA+ from Standard & Poor's, Cwikla said. "Let's not forget this was all made possible by strengthening the county's financial position over the past few years," said Hackel. "We wanted a mirror contour

## **GM**, Led by Chevy and Buick, Earns Seven **Awards in JD Power Dependability Survey**

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year vehicles, Young said.

Overall dependability is determined by the number of problems experienced per 100 vehicles (PP100), with a lower score reflecting higher quality.

The study has been enhanced in 2015 to better measure the quality of today's vehicles, particularly related to new technologies and features now being offered.

The study covers 177 specific problem symptoms grouped into eight major vehicle categories.

The top two problems reported by owners are Bluetooth pairing/connectivity and built-in voice recognition systems misinterpreting commands.

These are also the most frequent problems reported by owners at 90 days, according to the J.D. Power 2014 U.S. Initial **Ouality Study**.

"As we've seen in our Initial Quality Study, owners view in-vehicle technology issues as significant problems, and they typically don't go away after the ownership honeymoon period is over,' said Renee Stephens, vice president of U.S. automotive at J.D. Power.

"Furthermore, early indications from our upcoming 2015 U.S. Tech Choice Study show that vehicle owner expectations of advanced technology capabilities are growing.

"Owners clearly want the latest technology in their vehicles, and they don't hesitate to express their disapproval when it doesn't work.

"Their definition of dependability is increasingly influenced by usability.'

Because issues with technology impact overall dependability, they also impact repurchase intent.

of owners who report no problems with their vehicle say they "definitely will" purchase the same brand next time, compared with 43 percent of those who report three or more problems.

Together with the fact that 15 percent of new-vehicle buyers indicate they avoided a model because it lacked the latest technological features – up from just 4 percent in 2014 - technology clearly plays a key role in affecting future purchase decisions.

Among owners who experienced a Bluetooth pairing/connectivity problem, 55 percent say that their vehicle would not recognize their phone, and 31 percent say the phone would not automatically connect when entering their vehicle.

The number of engine/transmission problems remains high, Stephens said.

Nearly 30 percent of the reported powertrain problems are a result of automatic transmission hesitation and rough shifting.

Six of the top 10 problems are design-related as opposed to defects or malfunctions.

By vehicle category, Stephens said, the most frequently reported problems are related to exterior, followed by engine/transmission and audio/communication/entertainment/navigation.

Overall vehicle dependability industry-wide averages 147 PP100, or approximately 1.5 problems per vehicle.

"At the three-year point, many owners are thinking about replacing their vehicles, and we find that how they feel about their current vehicle's quality and dependability impacts their intent to consider purchasing the same brand again," said Stephens. "Oftentimes, the issues owners

The study finds that 56 percent experience can be resolved with a software update or, in the case of Bluetooth pairing problems, dealers can step in to help.

> "In cases such as these, proactively reaching out to owners presents an opportunity for automakers and their dealers to engage with customers in a positive way.'

#### **Glidden Succeeds Retiring Millikin** As GM's Exec VP, General Counsel CONTINUED FROM PAGE 1

in August 2009, Glidden served as senior vice president, general counsel and corporate secretary of Chevron Phillips Chemical Co. Before that, he was in private law practice.

Glidden received a Bachelor of Arts degree from Tulane University in 1980, graduating magna cum laude and Phi Beta Kappa. He obtained a juris doctor degree with high honors from Florida State University in 1983, where he served as editor-in-chief and managing editor of the Florida State University Law Review.

Glidden is licensed to practice law in Texas and Florida. He is a member and past chair of The General Counsel Forum and currently serves on the Board of the Houston Bar Foundation. He was based in Houston.

Barra praised Millikin for his years of service to GM. "I'd like to thank Mike for all he has done to support GM throughout his 38-year career, and especially in the time he served as general counsel. I wish him and his wife Karen all the best in retirement.





GM engineers found that licensing a design which integrates the mirror into the console's sunglass holder was the best option, but one that also posed some challenges.

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### Assembly Line Workers Key to F-150 Launch

production of the 2015 Ford F-150 pickup truck.

Since May 2013, more than 8,000 skilled trades and production workers at Ford's Dearborn Truck Plant and Kansas City Assembly Plant have undergone an intensive training program to support production of the new Ford F-150, said Ford spokesman Mike Levine.

Production at the Dearborn facility started last November. The company has started building pre-production trucks at the Kanas City facility. Levine said Ford should have full production at both plants up and running shortly.

The production training program to bring workers up to date at both plants was designed to support F-150's innovative manufacturing process, which incorporates the latest in advanced materials and forming and joining technologies, including a cutting-edge riveting operation system versus conventional welding, Levine said.

Totaling more than 400 hours of in-class and hands-on courses, the skilled trades program covers everything from installing and configuring new equipment for the production line to constructing the truck's advanced electrical control system.

Through this program, we have armed both our skilled trades and production workers area for corrosion resistance and

It's full speed ahead for the with the skills necessary to produce the next generation of vehicle technology," said Aris Janitens, Ford Launch Planning and Work Force Readiness manager.

> "Our workers now are able to deal with the latest in automotive manufacturing technology and, as a result, keep production on schedule to deliver best-in-class, quality trucks to our customers."

A unique element of the overall program is the "train the trainer' model, Janitens said, in which the workers become subject matter experts on the new equipment, enabling them to train the crew they work with on a daily basis.

The new manufacturing process called for the overhaul of both Dearborn Truck and Kansas City Assembly facilities, Janitens said.

Dearborn Truck saw its largest manufacturing transformation in decades wherein legacy manufacturing equipment was replaced with the latest in production technology, including:

• New press lines to help stamp four different types of aluminum alloys that assist with lightweighting the vehicle cab and box.

• New hydroforming lines to use fluid pressure to form metal tubes into structurally strong support rails.

• New chemical and heat treat

material hardening, which results in stronger, more durable materials.

· Implementation of a closedloop aluminum recycling system process in which all aluminum assembly scrap is collected and sorted so it can be used again in new F-150s - a process that saves energy and lowers cost.

• Investment in 500 new robots in the all-new body shops to conduct state-of-the-art joining technology, resulting in a tougher, more durable truck.

• Updated paint shops with dirt detection technology and increased automation for more durable paint application.

"An effective vehicle launch starts by understanding the current processes and constraints of an assembly plant to align them with the new parts and processes that are being rolled out," said Brian Miller, truck launch manager for Kansas City Assembly Plant.

"But the most important part of a successful launch is the people. The people on the assembly line are key to producing the best truck on the road today.

The training program has resulted in the successful launch of the 2015 F-150 at Dearborn Truck Plant, Janitens said. Kansas City Assembly Plant is on plan to start building production trucks by the end of the first quarter of 2015.

Combined, Dearborn Truck



Ford trains the trainers for production of the new F-150 pickup truck.

and Kansas City Assembly will ing faster than any other Ford vehave capacity to produce more than 700,000 Ford F-150 pickups per year for availability in 90 markets globally.

In January, Ford F-Series had its strongest sales month since 2004, the company's best sales year ever for F-150.

F-150 models sat just 12 days on dealer lots last month - turn-

#### **High School Students to Hand-Draw Future Dodge in Design Competition**

frame.

by Jim Stickford

What better place to show off just what young potential car designers can do than at the 2015 Autorama, which will be held at the Cobo Center in downtown Detroit March 6-8.

Fiat Chrysler spokeswoman Gabrielle Schulte said that the company is hosting its third annual student high school car design competition.

"We call it the 'Detroit Autorama High School Design Competition," Schulte said. "I know that's a mouthful to say. But for the past couple of years, Fiat Chrysler has been holding a competition at the Autorama show.

"We ask high school students who are interested in car design to submit a car design based on a criteria we give them. This year, students were asked to design a Dodge brand vehicle for model year 2025."

The first two competitions were local, Schulte said. This year's is, for the first time, national.

"We've asked students from across the country to submit their designs," Schulte said. "The only limits were the size of the

paper, and that the design be hand-drawn using actual writing tools, as opposed to being created on a computer. We think a student's real talent comes through when he or she puts pen or pencil to paper."

hicle, Levine said. In addition,

more than 1.5 million people

have built and priced F-150 con-

is the toughest, smartest and

most capable F-150 ever - boast-

ing a military-grade, aluminum-al-

loy body and high-strength steel

The all-new F-150, said Levine,

figurations online.

Schulte credits head of SRT and Mopar Design Mark Trostle for promoting this competition as well as other efforts to attract the young to automobile design.

"Mark really believes in attracting young people to this part of the business," Schulte said. "He wants them to know that they can use their full creative artistic talents working in the auto industry."

And, by making the competition national, Fiat Chrysler is able to cast a wider net, Schulte said.

"We've received more than 100 designs from high school students across the country,' Schulte said. "That's very encouraging, and we've also noticed that there's been a great mix of designs coming from high school boys and girls. It's very exciting to see these kids' designs. They're very talented."

The first prize award, which will be presented on Friday, March 6, is a \$60,000 scholarship to the Center for Creative Studies (CCS) in car design, Schulte said

Fiat Chrysler also will be giving out several MAC Book Pros and other winners will be sent to a special three-week summer course in car design at CCS. "This is good because these students will have the opportunity for three weeks to learn from and interact with real car design college teachers," Schulte said.

## Honda President Ito Soon to be Replaced

TOKYO (AP) - Honda Motor Co., the Japanese automaker at the center of an airbag defect scandal, said Feb. 23 its president Takanobu Ito will step aside and be replaced by another Honda executive.

The unexpected decision follows massive recalls by Honda of vehicles equipped with airbags made by Japan's Takata Corp. The airbags have inflators that can explode, expelling shards of metal and plastic. At least five deaths and dozens of injuries have been linked to the problem worldwide.

Takata airbags are used by many automakers, but Honda was the worst affected.

Tokyo-based Honda said in a statement that another Honda executive, Takahiro Hachigo, will succeed Ito, who will remain on the board as an adviser. The announcement did not mention the problems with the airbags and came amid a slew of other managerial changes.

All the new appointments are subject to board approval at the company's annual shareholders meeting in June.

Hachigo handled development of the U.S.-built Odyssey minivan and has guided the automaker's businesses in the U.S., Europe and China during his 33-year career with Honda.

Ito joined Honda in 1978 as a chassis design engineer and has been president and CEO since 2009. The company lauded him for helping to expand its global manufacturing in emerging markets such as Mexico, Brazil, China and Indonesia.

U.S. and Japanese authorities have been investigating the Takata airbags. The U.S. fined Honda \$70 million, which was the largest civil penalty levied against an automaker, for not reporting to U.S. regulators some 1,729 complaints that its vehicles caused deaths and injuries, and for not reporting warranty claims.

Takata refused the National Highway Traffic Safety Administration's demand to issue a nationwide recall of driver's side airbag inflators, though automakers have recalled the cars on their own.

The recalls have clouded the reputation of Honda and other Japanese automakers for quality and safety. They also raised costs for Honda, especially in North America, prompting the company to trim its annual earnings forecast after profit in the October-December quarter slipped 15 percent.

The maker of the Fit subcompact, Odyssey minivan and Asimo robot now expects a profit for the fiscal year through March of 545 billion yen (\$4.6 billion), down 5 percent from a year earli-

But it said it expects to sell 4.45 million vehicles in the fiscal year that runs through March, slightly above the previous fiscal year's total.

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#### **Old Chevrolet Site** To Become Park

FLINT, Mich. (AP) - The transformation of an eyesore in Flint begins this spring as the broken concrete of Chevy in the Hole is covered up and unwelcoming chain-link fences come down.

The former GM industrial site is slated to become Chevy Commons - a natural park along the Flint River that's expected to include wetlands, woodlands and grasslands.

The plan includes transforming a portion of the former Chevy site into a public park with walking paths intertwined in native plants, greens and wetlands to help minimize storm water management costs.

### **Chevrolet Earns Climate Leadership** Award for Reducing Carbon Footprint

GM has found that it's actually not that hard being green.

Chevrolet's efforts to help U.S. colleges further reduce their carbon footprint earned a Climate Leadership Award for Innovative Partnerships from the EPA Center for Corporate Climate Leadership.

The award recognizes organizations working collaboratively on leading-edge climate initiatives, said GM spokeswoman Sharon Basel.

The Chevrolet Clean Energy Campus Campaign engaged hundreds of stakeholders spanning the education, energy, carbon, auditing, and nonprofit sectors to develop a way for campuses to draw on a new source of funding - carbon credits from the voluntary carbon market – to help further their large-scale energy efficiency efforts.

"To make a

significant impact

... we need to

work together."

- Greg Martin,

GM

ful carbon pollution that's fueling climate change," said EPA administrator Gina McCarthy.

"Our winners are providing the leadership, commitment, and solutions needed to cut greenhouse gas emissions and meet the challenge of a changing climate head-on."

The fourth annual national awards program is a partnership with the EPA, Association of Climate Change Officers, the Center for Climate and Energy Solutions and The Climate Registry.

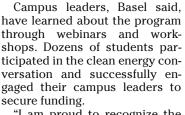
The Chevrolet Clean Energy Campus Campaign, Basel said, is part of the brand's voluntary initiative to reduce 8 million metric tons of carbon emissions.

"To make a significant impact in reducing the effects of climate change, we need to work together," said Greg Martin, GM executive director of Sustainability.

"The Clean Energy Campus Campaign is just one example of how a mix of different perspectives and talents can lead to new pathways to greater carbon reductions."

Primary campaign stakeholders include the American College and University Presidents' Climate Commitment managed by Second Nature, the U.S. Green Building Council, the Association for the Advancement of Sustainability in Higher Education, Bonneville Environmental Foundation, Climate Neutral Business Network, Verified Carbon Standard, DNV GL, Ball State University, Valencia College, Portland State University, Spelman Col-lege, University of Illinois at Chicago, University of Wisconsin Stevens Point, Boston University, Rochester Institute of Technology, University of Illinois at Urbana-Champaign, Grand Valley State University, and Southern





"I am proud to recognize the Chevrolet Clean Energy Campus Campaign and all of our Climate Leadership Award winners for their actions to reduce the harm-





\* 9

## From Out of the Past Comes the Newest **Buick Concept, Preparing for the Future**

CONTINUED FROM PAGE 1

concept we come up with."

And, Smith said, because Buick is known for its creative designs, young designers are enthusiastic about working for the brand.

Being creative in 1938, Wallace said, meant taking cues from the airplane industry.

That was the cutting edge back then," Wallace said. "While people knew that planes existed, most had never taken a plane flight. People used to have pictures taken of them next to airplanes just because it looked cool, even if they never rode in a plane.

'You can still see some strands of that airplane-influenced DNA in today's Buicks.'

The major airplane influence on the Avenir, Wallace said, was the Wildcat series, which was out between 1953 and 1955.

'This vehicle had the look of a jet fighter," Wallace said. "The art deco propeller plane designs were gone and Buick was in the space age.

"But beyond the look of a jet fighter, the Wildcat had the latest powertrain - compound carburetion. This was a really forwardlooking vehicle."

Wallace said features such as stand-alone headlight pods influenced other designers outside GM. He noted that the Chrysler Imperial of the early 1960s looked a lot like the Wildcat. The name was popular and in 1985 Buick used it for another concept car

"By this time, concept cars were a way of telling the pubic what was coming down the road in terms of development," Wallace said. "It was so modern it even had a telephone as one of its features."

The next concept vehicle to influence the Avenir, Wallace said, was the Riviera Silver Arrow III in 1972.

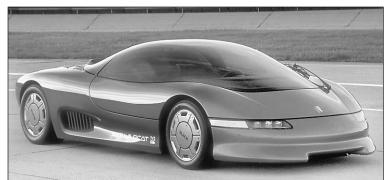
"This was a precursor to the 'boat-tailed' Buicks of that era," Wallace said. "It's one of my favorite concept cars. It had 'modern' features like traction control and when you look at the interior, it had pillow-top seats. It was just an outstanding-looking car

"It had halogen headlights, which were new then and are only now being replaced by LED lights. It even had moving seats and adjustable pedals, which would become popular later on in trucks and SUVs.

Wallace said the influences of the Centieme concept car of 2003 can be seen on proportion design cues on the Avenir. The Centieme also emphasized interior design, a concept that had taken a back



1938 Y Job reflected the art deco airplane designs of the era.



1985 Wildcat mirrored planes of the day - this time a "Stealth" fighter.



2004 Velite showed classic Buick beauty a decade before the Avenir.

can see Buick's DNA all over it," Wallace said. "You don't have to see the tri-shield logo to know that car was a Buick. And under the hood, it had a lot of horsepower. It wasn't just pretty, and this idea can be seen in the design of the Avenir."

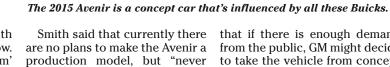
Smith said the Avenir reflects not only Buick's past, through design cues taken from a variety of concept cars made over decades, but also the brand's future.

"GM chief designer Ed Welburn pointed out that this is a vehicle that designers around the world worked on, and it's true," Smith said. "These days it's much easier for different design teams in different countries to collaborate. And at GM we all know each other.'

This possible, Smith said, because since about 2000, GM has made a concerted effort to have its designers work together. Smith, for example, is an Australian who's worked at GM's design center in Australia and Korea and is now based in Warren

He said his moving around for seat to other features. But four the job is not unique and, as a reyears later, some of that vehicle's sult, designers can use modern technology to communicate with people across the world they've worked with face-to-face.

versus them anymore," Smith said. "Really, it's all us now. There aren't enough of 'them' anymore.'



Smith said that currently there that if there is enough demand from the public, GM might decide to take the vehicle from concept say never." It is possible, he said, to reality.





1954 Wildcat II still influenced by planes, but this time jets of the 1950s.



2003 Centieme was a return to beautiful interiors for Buicks.



interior cues could be seen in other Buick production vehicles.

The last concept car to influence the Avenir, Wallace said, is the Velite, which came out in 2004. Besides using technology like turbocharged engines, this vehicle took its cues from previous Buicks and included features like portholes and front fenders whose look links back to the past.

Smith said that in the past there might be a "national" style of car design. Someone might be able to look at a vehicle and say it was designed in the United States or Germany or Korea. But now vehicles are more designed around the character of the brand.

"One look at the Velite and you "It's not us in the United States

#### The Lone Ranger Rides Again at MCC

WXYZ have a storied history in the radio industry and this will be celebrated by MCC through its "101 People, Places and Things that Made Michigan" exhibit.

Larry Zdeb, radio historian and Lone Ranger collector, will share the history of WXYZ radio shows, including the Lone Ranger.

Detroit and radio station Pate-Maylock, formerly Shirley Ann Russell, who was a performer on the Lone Ranger radio show.

> The presentation begins at 11 a.m. on Friday, March 13, at MCC's Lorenzo Cultural Center, located at 44575 Garfield Road in Clinton Township. Pre-registration is required to attend the event. Call 586-445-7348 to reserve a spot and return to the thrilling days of yesteryear.

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He will be joined by Shirley

#### GM Backs Vets Transition to Civilian Life

General Motors has become a supporter of the U.S. Department of State Veterans Innovation Partnership (VIP), which offers military veterans a one-year paid fellowship in a U.S. Government agency.

"We know that transitioning from military to civilian life can seem like a daunting task, and we want to do everything in our power to help them," said Ken Barrett, GM chief diversity officer.

"These men and women have given so much for our country that they deserve our best efforts to make a difference in their life."

Launched by the U.S. Department of State in support of Executive Order 13518 – Employment of Veterans in the Federal Government – VIP supports veterans' transition to diplomacy and development careers by assisting with educational opportunities to study international relations; establishes fellowship opportunities at U.S. Government foreign affairs agencies, and facilitates international public and private employment opportunities.

GM employs thousands of military veteran employees and has supported the U.S. armed forces for generations, said GM spokeswoman Laura Toole.

GM is a corporate sponsor of the U.S. Chamber of Commerce Foundation's "Hiring Our Heroes" program – which helps returning veterans and their spouses find jobs – and a partner in a coalition of private sector businesses dedicated to hiring 100,000 veterans by 2020.

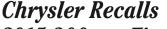
The company also established GM's Service Technical College, which offers free training to veterans and returning service members to prepare them for technical and non-technical entry-level roles in a dealership, Toole said.

GM also assists veterans by supporting The Achilles Freedom Team of Wounded Veterans, which helps wounded veterans overcome injuries through athletics.

"The Veterans Innovation Partnership is about recognizing not just how the State Department can help veterans, but about how veterans can help the State Department," said Andrew O'Brien, special representative for Global Partnerships.

"We want to tap into the important leadership and service experience that they offer.

"We are grateful to partners like General Motors for their commitment in making a program like this possible."







#### 2015 200s to Fix Transmissions

DETROIT (AP) – Fiat Chrysler is recalling nearly 26,000 midsize cars in North America to fix automatic transmissions that might not shift into park.

The recall covers the Chrysler 200 with V6 engines from the 2015 model year. The company said manufacturing issues at a parts supplier's factory can cause the transmissions to mal-function. Cars can roll away unexpectedly if the transmissions won't shift into park.

The company said Feb. 26 that owners should activate the parking brake before shutting off the engine, until repairs can be made. There have been five customer complaints about the problem, but no known crashes or injuries. Dealers will inspect and replace transmissions if needed. Customers will be told when they can bring the cars in.





\* Tax, title, license and dealer fees extra. No security deposit required. 30,000 miles with approved lease. Mileage charge of \$.25 per mile over 30,000 miles. Lessee pays for excess wear and tear charges. All applicable rebates to dealer. Photo may not represent actual vehicle. ATS, CTS, XTS & SRX must show proof of current lease of a 2004 or newer GM vehicle and lease eligible new 2014 Cadillac. MRSP's: ATS \$38,240, ATS Coupe \$41,440, CTS \$48,340, XTS \$45,595, Escalade \$82,245, SRX \$38,600. Due at signing ATS \$3,059, ATS Coupe \$3,819, CTS \$4,109, XTS \$3,179, Escalade \$3,974, SRX \$1,729. See dealer for details. Take delivery by 3/2/2015.

## **GM Saves Energy with New** Wind Turbines in Mexico

energy, sometimes the answer, my friend, is blowing in the wind. General Motors has an answer

to that old Bob Dylan song.

For the first time, GM is procuring wind to power its manufacturing operations, enabling one of its Mexico facilities' electricity needs to be run mostly on renewable energy.

This addition of 34 megawatts of wind power allows GM to achieve its corporate goal of renewable energy use four years early, said GM spokeswoman Sharon Basel.

Construction of the wind farm begins in the second quarter of this year. When complete, more than 12 percent of GM's North American energy consumption will come from renewable energy sources, up from 9 percent, Basel said.

The company's current renewable energy use - comprised of solar, landfill gas and waste to energy - totals 104 megawatts against a goal of 125 megawatts by 2020. The use of clean energy reduces greenhouse gas emissions and GM's impact on climate change.

Seventy-five percent of the energy coming from the wind turbines will power most of GM's Toluca Complex sitting on 104 acres, making it the company's largest user of renewable energy, Basel said.

The remaining capacity will help power its Silao, San Luis Potosi and Ramos Arizpe complexes. The use of renewable energy helps these facilities avoid nearly 40,000 tons of carbon dioxide emissions annually.

"Our commitment to sustainable manufacturing processes is one way we serve and improve

When it comes to renewable the communities in which we work and live," said Jim DeLuca, GM executive vice president of Global Manufacturing.

"Using more renewable energy to power our plants helps us reduce costs, minimize risk and leave a smaller carbon footprint."

It's a sign of the times when major companies commit so much to environmental awareness, DeLuca said.

GM signed a power purchase agreement with Enel Green Power, which is developing and constructing a massive wind farm in Palo Alto, Mexico, DeLuca said. The company's use of 34 megawatts of energy is equivalent to the power produced by 17 wind turbines.

"Mexico is an ideal location for our first wind project," said Rob Threlkeld, GM global manager of renewable energy.

"Energy is fed to a national grid, making it easier to reduce or add energy capacity at a facility. There's also a good business case as prices for traditional power are about a third greater than the United States.

"Once online, we'll evaluate the project to better understand how we can expand the use of wind power.'

GM, Basel said, is a founding member of the Business Renewables Center, a collaborative platform launched earlier this month by the Rocky Mountain Institute.

The center aims to accelerate corporate renewable energy procurement with a goal of nearly doubling U.S. capacity of wind and solar energy by 2025.

It's all new and it's for the environment as well as efficiency.

But, as Dylan said, "The Times They Are a-Changin'.'





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