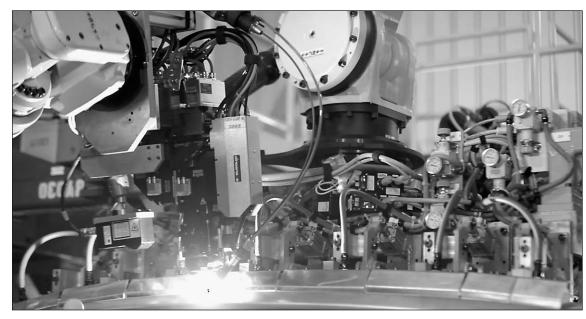
# **Tech Center News**

#### WARREN, MICHIGAN

VOL. 39 NO. 21



GM developed special robotic systems to weld unlike materials together for the upcoming Cadillac CT6.

## **Cadillac Uses New Construction Techniques To Produce Large Luxury Sedan – the CT6**

Cadillac will use the auto industry's most comprehensive and advanced mixed-material manufacturing techniques to build its new CT6 sedan, allowing creation of a top-of-range large luxury sedan with the agility and efficiency of a smaller vehicle

The CT6, which goes on sale in the fourth quarter of 2015, will be built at the Detroit-Hamtramck Assembly plant, using a unique combination of joining techniques, a first for any General Motors model, said Cadillac spokesman David Caldwell.

A new body shop with new tooling and advanced technologies – including 205 robots – has been added to the plant. The fully automated, roughly 138,000square-foot shop is dedicated to the manufacturing of the high-end luxury sedan.

When it launches, the CT6 will expand the Cadillac range upwards - adding rather than been a major priority for auto-

replacing a current product, Caldwell said. Positioned above today's CTS and XTS product lines, the CT6 aims to join the elite group of top-class large luxury cars.

"For the Cadillac CT6, we have developed additional new body construction techniques and technologies allowing various types of advanced and lightweight materials to be combined within the manufacturing environment like never before," Cadillac President Johan de Nysschen said last week at the Washington Auto Show.

"We have invested \$300 million in the Detroit-Hamtramck Assembly plant to make this possible," he said. "These actions will allow us to advance the art of manufacturing and take craftsmanship and manufacturing technology to a new level."

This is important, Caldwell said, because lighweighting has

makers over the past several years. In the past, engineers and designers had to decide if a vehicle was going to be constructed predominantly of either steel or aluminum. That's because it's very difficult to join unlike materials.

That meant that engineers faced a challenge in manufacturing the advanced mixed-material vehicle structure for the CT6. Combining different types of joining methods, the team overcame previous manufacturing difficulties involving the joining of traditionally dissimilar materials, while still allowing the engineering team to optimize every panel for its desired purpose.

Material joining techniques prominent in the body construction of the CT6 include: • Patented Aluminum Spot

Welding Technology; • Aluminum Laser Welding,

#### CONTINUED ON PAGE 8

# **Mustangs Selling Globally for First Time**

The phrase, "made in Michi- plan presents opportunities for gan," now has a worldwide meaning with the new Mustang officially going global.

For the first time in its 50-year history, Mustang will be available to customers around the world in more than 100 markets, said ample of the international de-

growth in global markets. Exporting Ford and Lincoln vehicles to Asia Pacific and beyond is an important part of Ford's global growth story.

"Mustang is just one more ex-Ford spokeswoman Amanda Zus- mand for Ford cars and trucks."

The new 2015 Mustang is supported by U.S. suppliers in 25 states.

In 2013, Flat Rock Assembly Plant, the car's production home, celebrated the 1 millionth Mustang built there.

The facility has approximately 3,000 employees working two shifts at full capacity to produce to global consumers supports Mustang and Fusion. In addition,

## GM Clay Sculptor by Day, **Detroit Tour Guide by Night**

by Jim Stickford

Who said the history of Detroit is a dry topic?

Not the people at Detroit History Tours, who will stop at some city bars on the new tours they're hosting.

The tour company will cover the city, employing history experts to explain backgound about the stops at major and minor Detroit locations - including many storied drinking spots.

The idea for the business started with Bailey Sisoy Isgro, an interior sculptor for Cadillac. She earned her degree at the Center for Creative Studies and works at the GM Tech Center.

She is also getting her PhD in women's studies from Sarah Lawrence College in New York.

"My thesis is women in the auto industry between the two world wars," Isgro said. "I do everything digitally and every three months fly out to the school for testing and thesis review.'

Besides working as a sculptor for GM, Isgro also worked for the Detroit Bus Company.

"My mother always called me an unofficial ambassador for Detroit," Isgro said. "And among one of the many things the De-



**Bailey Sisoy Isgro** 

troit Bus Company does is hold tours of Detroit. I loved working for them and left the company on very good terms."

But while the tours of the city were fun, they weren't exactly what Isgro wanted to do.

She mentioned this fact to her friend Dennis Borawki, who she knew from the Detroit art scene.

"We'd run into each other at various events and talk," Isgro said. "We obviously had an interest in the history of Detroit just from the events we'd attend.'

Isgro said she mentioned to

CONTINUED ON PAGE 3

## **Johnson Controls Debuts Vehicle Interior Concepts**

Global automotive industry trends like urban mobility, comfort, fuel economy and autonomous driving are the leading forces behind Johnson Controls' innovations in seating, interior and batteries that saw their debut at the 2015 North American International Auto Show (NAIAS) in Detroit earlier this month.

Johnson Controls showcased two vehicle interior concepts for the first time at NAIAS that address these global trends.

"The 2015 Automotive Seating Demonstrator 'SD15' and the Automotive Interiors Demonstrator 'ID15' display innovative new products that offer enhanced comfort, personalization options and other unique features addressing the megatrend of such as the new Loft rear seat autonomous driving," said John- and protective FreshPer4mance Controls spokeswoman son Mary Kay Dodero. The company also unveiled a new battery that Johnson Controls says will help automakers meet increasing fuel efficiency and emission reduction regulations. "At Johnson Controls, we are always thinking ahead to ensure we're offering the right solutions for vehicles that meet drivers' expectations today and in the future," said Beda Bolzenius, president of Johnson Controls Automotive Experience and vice chairman of Johnson Controls Asia Pacific. "Our seating, interior and battery solutions help advance our automaker customers' brands as well as enhance the overall driving experience."



SD15 Seat

SD15 and ID15, Johnson Controls lists these highlights of its 10,000-square-foot exhibit of Detroit's Cobo Center:

• Automotive seating systems that achieve lighter weight, allow for customization and improved performance through products seat coating and its innovative carbon-fiber-based seat back frame;

First shipments of the "highlyanticipated Mustang" are headed for Asia, with vehicles arriving in Europe midyear.

Ford spokesman Said Deep said in an email that the 2015 rear-wheel-drive Mustang has a new platform but does not have a name for it that the company uses externally.

The new Mustang – assembled in Flat Rock - now joins other Ford and Lincoln vehicles exported to countries abroad.

In 2013, Ford Motor Company shipped more than 380,000 vehicles from the United States, making the automaker a top U.S. exporter of vehicles.

"Henry Ford exported the sixth Model A assembled in 1903 and we continue this legacy today," said Joe Hinrichs, Ford president of The Americas.

"The success of our One Ford

Making Ford vehicles available thousands of jobs across the United States, Hinrichs said.

**CONTINUED ON PAGE 2** 



A Michigan-made Mustang getting ready for export

ers. In addition to the debut of

· Interior materials and flexible designs for door panels, instrument panels, floor consoles and overhead consoles that increase the consumer's perception of value across all vehicle segments through mass reduction and enhanced functionality;

• A full spectrum of battery systems for conventional, Start-Stop, Micro Hybrid, hybrid and electric vehicles that meet the evolving needs of the global market:

• The new Recaro Sport Seat Platform, an innovative, lightweight and highly modular sport car seat platform concept for original equipment manufactur-

#### go to TechCenterNews.com for Scrollable Version of this week's edition

**Colorado Gives 'Bang for Buck'- Cars.com** 

### **Tech Center News**

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#### **Mustangs Are Now Selling Globally**

CONTINUED FROM PAGE 1

100 jobs at the Port of Portland (in Oregon) have now been added to support Ford exports bound for Asia Pacific and other markets.

"Serving as a gateway for exports of new Ford vehicles to China and Korea has helped boost employment and bolster our local economy," said Bill Wyatt, executive director for the Port of Portland.

"Auto exports and imports support more than 500 jobs at our marine terminals, and they have been an important part of our diverse cargo portfolio since 1953.'

Mustangs exported from the United States undergo a series of steps to ensure compliance with vehicle standards in the destination countries, Hinrichs said.

At each port's homologation center, Ford and Lincoln vehicles receive finishing touches that follow specific engineering work completed in production at the plant.

Zusman said vehicles undergo proper customs documentation and tracking so Ford can ensure their progress and delivery. Certain vehicles receive an underbody coating and documents in the destination country language.

"Preparing these vehicles for shipment to their final destination is critical to satisfying both customer and regulatory requirements for our markets around the world," said Gerald Schoenle, director, Ford Trading Company.

We want our customers globally to know that their Ford vehicles will meet emissions, safety and road-worthiness requirements.'

The addition of a right-handdrive Mustang to Ford's global vehicle lineup will allow the iconic pony car to be exported to more than 25 of these markets around the world, including the United Kingdom, Australia and South Africa, Hinrichs said.

Mustang joins a lineup of Ford

The Chevrolet Colorado was named Cars.com's Best Pickup Truck of 2015 at a ceremony during the North American International Auto Show.

'The impressive, all-new 2015 Colorado jump-starts a category of trucks that was quickly fading away," said Mark Williams, Cars.com pickup truck editor.

"Midsize pickup trucks have long been a favorite of both Cars.com experts and truck shoppers, so we're thrilled to see them come back to life, starting with the new Colorado.

"This truck offers shoppers a lot of bang for their buck with great features and an impressive ride, all at an affordable price."

"Offering segment-leading capabilities and efficiency," said Colorado Marketing Manager Tony Johnson, "with the latest in convenience and safety features, is our goal with the Colorado. and the Cars.com's award affirms our instincts.

"It is an efficiently sized, maneuverable solution for customers who want the cargo-hauling and trailering versatility of a truck without the size of a fullsize pickup."

The Colorado starts at \$20,995, including destination charges, and is available in four-door extended- or crew-cab models.

It offers the segment's best horsepower and EPA-estimated fuel economy, said GM spokesman Otie McKinley, which is 200 horsepower and up to 27 mpg highway (2WD) from a standard 2.5L I-4. It's the most fuel-efficient gas pickup truck on the road and provides 305 horsepower and 26 mpg (2WD) from an available 3.6L V6, said McKinley.

V6 models also offer a segment-leading maximum trailering rating of 7,000 pounds, McKinley said, as well as the G80 locking rear differential for sure-footed track in slippery conditions and when trailering.

The Colorado is based on GM's GMT31XX platform and is a sister vehicle to the GMC Canyon. It's called the Chevrolet S10 in Brazil, and the Holden Colorado in Australia.

The Isuzu D-Max version is manufactured in Rayong, Thailand. The U.S. versions are made in GM's Wentzville, Mo., plant.



Williams, left, and Chevy Global Chief Marketing Officer Tim Mahoney

### Hackel to Honor Macomb County **Business Leaders**

County Executive Mark Hackel will join with an anticipated crowd of 400 company leaders to celebrate businesses that are thriving and growing in Macomb County.

The third annual Macomb County Business Awards recognizes businesses in six categories for their efforts to start a new business or build a strong workforce, diversify into new industries, create greater efficiency, celebrate diversity or give back to the communities where they do business. said county spokesman Stephen Cassin.

The event will be held 8-10 a.m. Tuesday, Feb. 10, at Cherry Creek Golf Club in Shelby Township. Tickets are \$25 and available for sale at www.Macomb-Business.com.

"Strong businesses are essential to the quality of life we enjoy here in Macomb County," said Hackel. "Their efforts to gain a competitive advantage through the execution of strategic planning makes them good neighbors and job providers for us."

In addition to Hackel, speakers will include Maj. Gen. Gwen Bingham, commanding general for U.S. Army TACOM Life Cycle Management Command, who will deliver a keynote address.

and manufacturing engineering,

who oversaw development of the

1986 Motor Trend Car of the Year

## Trade School Group Donates \$750,000 to Lawrence Tech

The Henry Ford Trade School LTU founder Russell Lawrence Alumni Association has donated \$750,000 to Lawrence Technological University.

The funds are intended to be used to create an endowed scholarship fund for undergraduate mechanical engineering students.

The donation is among the top 10 largest gifts ever received by the university to establish an endowed scholarship, said Lawrence Tech spokesman Eric Pope, and the largest for scholarships from an organization.

Interest income from the endowment will provide needbased scholarship assistance to recipients.

"Through this permanent fund, we will perpetuate and celebrate Henry Ford's legacy in education and create new generations of highly skilled new engineers who are so essential to sustaining American ingenuity and economic leadership," said John J. Graf, president of the Henry Ford Trade School Alumni Association

LTU and the Ford alumni group have a long history dating back to Lawrence Tech's creation in 1932 when one of the first acts of



was to create a scholarship fund to attract Trade School graduates, Pope said.

Ford Motor Company founder Henry Ford, and his son, Edsel, then Ford president, helped provide the first classroom building for Lawrence Tech.

One of the early advisors to

the university was Frederick Ford vice president of product Searle, director of education at Ford and director of the Ford Trade School.

LTU President Virinder Moudgil, in accepting the gift, said that numerous Ford Trade School alumni went on to also earn Lawrence Tech degrees. They included Lewis C. Veraldi,

- the first Taurus - and William D. Innes, who in the 1970s advanced to Ford executive vice president and led all of the Dearborn automaker's North American operations.



vehicles produced in the United States and exported around the world, Zusman said.

Ford Explorer is largely produced at Chicago Assembly Plant in Illinois and exported to a number of markets, including China. In 2012, Ford exported just 200 Explorers to China; in 2014, that number increased to more than 9,000, Zusman said.

HOURS: M-Sat. 10-3 Closed Sun.

# **Tech Center News**

**JANUARY 26, 2015** 

## **GM Clay Sculptor by Day, Detroit Tour Guide by Night**

CONTINUED FROM PAGE 1

Borawski at an event that she would really have liked to have given more detailed tours of the history of the city. It was Borawski who suggested immediately that they make that happen.

The end result was the creation of Detroit History Tours, a company that will take people on a bus tour of Detroit.

Customers will visit some of the city's most interstesting historical sites. And, there will also be cocktails because a lot of Detroit's history took place in bars.

Right now, three tours are planned, Isgro said, each with a particular theme. The first tour is titled, "Wild Women of Detroit."

Scheduled for Saturday, Feb. 7, it starts at 6:15 p.m. and will go to 11:30 p.m. The cost is \$40.

"Detroit may have been founded in 1701 by the French explorer Antoine Laumet de La Mothe Sirur de Cadillac, but it was his wife Marie who decided much of the town's original layout," Isgro said.

"From the very beginning, Detroit has been a dame's town."

The tour will take customers to various Detroit sites, including two bars, that will tell the history of the city from the female perspective.

The next tour, titled, "Tales of Detroit Cocktail Bus Tour," is set for Saturday, March 7, starting at 6:15 p.m. The cost is \$100.

Isgro said this tour looks at Detroit's drinking history. The city has been home to brewers and distillers and played a major role in Prohibition.

#### Local Orchestra Awarded Grant From MCACA

The Motor City Symphony Orchestra (MCSO) of Warren has been awarded a grant of \$15,000 from the State of Michigan Council for Arts and Cultural Affairs (MCACA).

grant was awarded The through the MCACA peer review process and was one of nearly 500 applications to compete for MCACA fiscal year 2015 funding

The grant will allow the Motor City Symphony Orchestra to present to the community an orchestra concert on April 19, fea-

Those taking the tour can sample "the booze that shaped the city's history," at five stops, she said.

The final tour scheduled is the Belle Isle Walking Tour and Picnic, Isgro said. The cost is \$40 and it takes place on Saturday, April 4, starting at 10:30 a.m.

"One of the women that will be talked about at this tour is Ann Scripps Whitcomb," Isgro said.

"She was an heiress of the Scripps newspaper fortune and at one time had the largest private collection of orchids in the world. She donated that collection to the city of Detroit and, as a result, the Belle Isle Conservatory was named after her.'

Isgro said one of the things that makes Detroit History Tours different is that the people behind it, as well as those conducting the tours, have a profound knowledge of the city and its history.

"Our guides won't be people who are just reading off a script,' Isgro said. "They will be experts in the particular topics of the tour. They will be speaking using their knowledge and will be able to answer questions and talk about the city's history.'

One thing that surprised Isgro when she began setting up the tours was just how much of the city's physical history is still standing.

"Not all of it is in great shape,"



A 1943 photo shows some of the women who came to Detroit from across the U.S. to learn skills like welding.

"She was born in the apart-Isgro said. "But there are still buildings around that people are ment above the bar that's now run by her grandson. It's the old-"For example, there is a bar est continuously run bar in the called Abick's in Detroit that city

"During WWII, when there was rationing, Manya would collect all the stray food ration coupons people had, and use them to buy food on Sundays.

"Then, she would use that food to feed the neighborhood at her bar on a Sunday afternoon.

"That's a great story and a great piece of Detroit's history that shouldn't be lost."

Those who are interested in learning more about Detroit History Tours can visit the Web site, www.detroithistorytours.com.

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turing works by Debussy, Glass & Rachmaninoff.

The concert will also feature the members of the Assembly Saxophone Ouartet.

The concert will start at 3 p.m., in the Warren Woods Tower High School Auditorium, 27900 Bunert Road in Warren.

Tickets are available by calling 586-754-2950, or through www.motorcitysymphony.org.

The grant will provide funding for the group's annual Youth Concerts to be held on Wednesday, April 29, Warren Woods Community Auditorium at Warren Woods Middle School, 13400 E. Twelve Mile Road, Warren.

The Motor City Symphony Orchestra, formerly known as the Warren Symphony Orchestra, is a nonprofit dedicated to providing cultural experiences and musical education to enrich lives throughout the tri-county area, said orchestra spokeswoman Jessica Trepton,

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## **Raptor 'Built to Live Off Road' – Hinrichs**

by Jim Stickford

Ford's F-150 Raptor pickup truck has taken technology from the racetrack and put it in the hands of the public.

The Raptor was built to live off the road," said Joe Hinrichs, Ford executive vice president and president, The Americas, before the world media at the 2015 NAIAS.

"This is just a neat vehicle that was born on the racetrack. Innovation drives everything we do at Ford. Just look at the new F-150.

Hinrichs said the Raptor is the toughest, smartest and most capable truck Ford has, and it doesn't sacrifice comfort.

The Raptor, Hinrichs said, starts with a purpose-built frame the backbone of the truck that is the strongest in the F-150 lineup, featuring more highstrength steel than the outgoing Raptor.

Forged from high-strength, military-grade, aluminum alloy that helps save more than 500 pounds of weight, Raptor's exterior design was inspired, Hinrichs said, by Ford's performance heritage in off-road racing that includes Best in the Desert, Lucas Oil Off-Road Racing Series and the famous Baja 1000.

"The result is one tough truck," he said.

Raptor is powered by Ford's new, second-generation, 3.5-liter EcoBoost engine that produces more power with greater efficiency than the current 6.2-liter V8, which is rated at 411 horsepower and 434 lb.-ft. of torque.

The first-generation 3.5-liter EcoBoost, Hinrichs said, proved its mettle off-road - racing in the original F-150 EcoBoost Torture Test truck in the 2010 Baja 1000, as well as notching repeated wins in off-road race series.

The high-output 3.5-liter Eco-Boost is a Raptor exclusive in the F-150 lineup.

It will be paired with a new 10speed transmission for improved efficiency.

А new

with an advanced, easier-to-use version of off-road mode driverassist technology, further improves Raptor's trail performance, said Hinrichs.

Raptor's new transfer case, which manages power distribution between the front and rear wheels, combines the best attributes, said Hinrichs, of clutchdriven, on-demand all-wheel drive with durable, mechanicallocking four-wheel drive.

"The new transfer case offers better traction for a greater variety of terrain at low and high speeds - both on-road and offroad," said Jamal Hameedi, chief engineer in Ford Performance.

Raptor's new off-road mode driving technology has evolved into an all-new Terrain Management System that enables the driver to select modes to optimize driving dynamics to environmental conditions - from snow to mud, sand and more, Hameedi said.

The new Raptor features calibration changes to its powertrain, driveline, traction control, ABS and AdvanceTrac stability control for optimal performance.

Six preset modes are available for the truck, depending on terrain and driving conditions:

 Normal mode for everyday driving;

• Street mode for higher-performance, on-road driving;

• Weather mode for rain, snow or ice;

• Mud and sand mode for muddy and sandy trails and terrain:

• Baja mode for high-speed desert running;

• Rock mode for low-speed rock crawling.

The result of all this technology, Hinrichs said, is a smart truck that uses technology from the race track to a very smart effect. An available Torsen front differential increases off-road capability further, Hinrichs said.

The system increases grip four-wheel-drive, significantly for the front end

torque-on-demand transfer case, of the truck and allows it to pull itself over obstacles and up steep grades - even when traction is split between the front tires.

> Building a high-performance off-road truck isn't just about engine power - more importantly, it's about the suspension, Hinrichs said.

The F-150 Raptor comes standard with new FOX Racing Shox with custom internal bypass technology that works to damp and stiffen suspension travel over rough terrain to help prevent the truck from bottoming out.

Front and rear shock canisters have grown from 2.5 inches to 3 inches in diameter for improved performance, said Hinrichs.

They feature more suspension travel than the current Raptor's 11.2 inches at the front and 12 inches at the rear offers, Hinrichs said.



2016 Ford F-150 Raptor

Advanced LED lighting and camera technology, said Hinrichs, contribute to improved visibility on the trail or street day and night.

takes Raptor performance to the next level," said Dave Pericak, director of Ford Performance.

The Raptor will be built at Dearborn Truck Plant. It goes on

"This all-new F-150 Raptor sale in the fall of 2016.

## Ford's Trend Report: 'Make Way for Gen Z'

Ford Motor Company's third annual trend report suggests 2015 will be marked by a broad desire to enact change for the good.

"Looking Further with Ford 2015" reveals data and insights about global consumer habits and behaviors expected to shape culture in 2015 and beyond.

One of the featured trends commented on in the report is "Make Way for Gen Z.'

Generation Z, which follows the Millennials, is the first truly global generation, born into an on-demand, technology-driven culture.

Expected to account for more than 20 percent of the world's population, these digitally savvy, socially conscious consumers, most of whom are still teenagers, are working to help define the trends of both today and tomorrow, said Ford spokeswoman Marisa Bradley.

"While demographics are invariably a factor in futuring work," said Shervl Connelly, Ford global consumer trend and futuring manager, "what's driving our report for 2015 is this emerging Generation Z consumer, who is already inspiring attitudes and behaviors in consumers of all ages.

"We saw similar traits with Millennials, but Gen Z consumers being much more connected and aware of the options available to them – are the global go-getters who have a link to each of our micro-trends for 2015."

Despite looming issues such as climate change, privacy threats, epidemic disease and geopolitical strife – there is optimism in the air, Connelly said.

Against this backdrop, "Looking Further with Ford 2015" high-

lights the modern-day rebel working to buck convention and set new standards, as well as people who are more motivated than ever to take risks in their search for success, which is beginning to erode the stigma of failure, Connelly said.

"In this spirit of determination, new forms of collaborative consumption and mobility are emerging - giving us more freedom to pursue ideas and passions," Connelly said.

In preparing trend reports, said Bradley, Ford experts monitor shifts in social, technological, economic, environmental and political arenas to understand what drives consumer attitudes and behaviors - and how this impacts the automotive category.

The insights gathered will guide Ford designers and engineers in developing future Ford products.

Ford marketers will also use this information to help anticipate in terms of the customer shopping and ownership experience of emerging generations, Bradley said.

"Looking Further with Ford 2015" focuses on a broad range of micro-trends affecting businesses and consumers, and reflects years of qualitative and quantitative research, as well as collaboration with thought leaders around the world.

"A rich understanding of our customers' ever-evolving needs, priorities and desires - both today and tomorrow - is key to our everyday business and global product development strategies," said Connelly.

"These trends and insights help us at Ford in our role as an innovator to create products that not only exceed expectations,

but push the boundaries of imagination."

As the Generation Z consumer evolves, Ford is looking at how these behaviors and trends will affect every part of the automotive business - from vehicle development to the experience customers will expect when the time comes to purchase or own a vehicle, Connelly said.

Some of the trends Ford expects to influence consumers and brands in 2015 and beyond:

• Make Way for Gen Z: With considerable pressure and high expectations, Gen Z's mantra is simple: "Good things come to those who act ?

• Rally for Renegades and Rebels: Society has always loved risk-takers, but the marketplace has never been more receptive to those who push boundaries and break molds.

• Flaunting Failure: The stigma of failure is quickly eroding; in an era of constant change, the only true failure is a failure to try, to improve, to evolve.

 Carryless Movement: Today's consumers don't want to carry things and, increasingly, don't need to.

New technologies such as wearable gadgets and smartphone apps are transforming the mechanics of how consumers pay for goods and services, how and where marketers reach their customers, and who people trust with their most valuable information.

• No Strings Attached: In a world where innovation moves so rapidly, no one wants to be left behind with a product that has become outdated or obsolete.

The result is an emerging a la carte mentality that trumpets access over ownership.



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ATTENTION

# Chevy's Amber Icon Warns: **Driver Following Too Closely**

Tailgating is great before foot- camera mounted behind the ball games, but in traffic, not so much.

Rear-end crashes make up more than one in four of collisions reported to police each year, according to the National Highway Traffic Safety Administration.

Many are preventable, said GM spokeswoman Jennifer Ecclestone, through technology such as GM's Forward Collision Alert available in several 2015 Chevrolet models, including the Silverado, Malibu, Equinox and Traverse.

Forward Collision Alert warns customers in everyday car-following situations if they may be seconds away from a crash or following much too closely.

And that's not the only technology GM has to help prevent collisions, Ecclestone said.

In the 2015 Chevrolet Impala, Tahoe and Suburban, available Front Automatic Braking goes beyond an alert to automatically slow or stop the vehicle under certain conditions, for example, if the driver does not respond quickly to an alert.

"Many of us have been in driving situations where the car ahead of us suddenly slows - or we momentarily look away at the wrong time - and we have to slam on the brakes to avoid a collision," said General Motors Active Safety Technical Fellow Raymond J. Kiefer.

'Front Automatic Braking provides a layer of driver assistance beyond Forward Collision Alert systems to help prevent this common crash situation."

Depending on the model, Chevrolet's Forward Collision Alert system uses a radar located in the front grille area or a windshield in front of the inside rearview mirror, Kiefer said. When activated, it produces a green icon when a vehicle is detected ahead and an amber one when a driver is following much too closely.

A red "Collision Alert" warning will flash - along with rapid, high-pitched beeping – when the driver is approaching a vehicle too quickly and may be seconds away from a potential crash.

In Chevrolet models equipped with the available Safety Alert Seat, the patented seat will quickly pulse five times on both sides instead of beeping.

Low-speed rear crashes cost millions of dollars annually in repair costs, Ecclestone said. Higher-speed rear crashes are responsible for severe injuries and even fatalities.

In a report earlier this year, the Insurance Institute for Highway Safety estimated that forward collision alert technology applied across the entire passenger vehicle fleet could prevent 879 fatal crashes a year.

The auto industry has focused on reducing rear crashes for decades. Systems such as the Center High Mounted Stop Lamp have been in effect since 1986 in passenger cars.

Over the long term, these have helped reduce rear crashes by about 4.3 percent annually, according to NHTSA.

GM's Forward Collision Alert technology is designed to encourage customers to accept and use it, Kiefer said.

"Our goal," he said, "is that our customers leave safety systems on every trip so they can take advantage of the potential safety benefits.'







## **Ram 1500 Rebel to be Built at Warren Truck**

by Jim Stickford

The Ram 1500 has been successful for Fiat Chrysler, but that doesn't mean there's no room for improvement.

And the public had a chance to see just what Ram's done with the 2015 Rebel model of the 1500 recently at the North American International Auto Show at Cobo Center.

"Offering an off-road-style package on the Ram 1500 has been on our to-do list for some time, but the right combination didn't present itself until now,' said Bob Hegbloom, president and CEO – Ram Truck Brand.

"The Rebel drops right into a core segment of the truck market with unique design cues and can-do attitude backed by Ram Truck engineering."

Rebel features an all-new grille with prominent billet silver "RAM" letter badge.

Departing from the brand's iconic "cross-hair" designs, the blacked-out Rebel grille tops a completely new black off-road front bumper design with a durable powder-coated surface, which incorporates a powdercoated, billet silver skid plate, new front tow hooks and new LED fog lamps. Black bezel bi-functional projector headlamps with LED marker lights beneath an aluminum, lie

twin-snorkel sport hood.

Rebel's blacked-out front end continues on the flanks with black Power Wagon wheel-arch moldings, flat-black badge, mirrors and lower body panels.

The new trim features a twotone paint scheme with black as a constant on the lower body, front to rear.

The Ram 1500 Rebel also features an all-new 17-inch aluminum wheel. Among the most elaborate designs found in mass production, the new one-piece wheel incorporates matte black painted accent pockets and multi-angled surfaces.

Continuing around to the rear view is a new "RAM" stamped tailgate with blacked-out lettering. The "Rebel" and "4X4" badge, Hegbloom said, emphasize the truck's uniqueness. The rear bumper is also treated with durable black powder coating with flared cutouts around dual chrome-tipped exhausts. Tail lamps incorporate black bezels to match forward lighting.

Rebel includes an optional backup camera, providing a better field of vision when maneuvering, Hegbloom said. A new trifold tonneau cover is embossed with the Ram logo.

The Ram 1500 Rebel will be available in five colors: Granite Crystal Metallic, Bright Silver Metallic, Flame Red, Bright White

and Brilliant Black. Both monotone and two-tone paint options are offered.

Becky Blanchard, newly-appointed director of the Ram brand, said there is a real demand for a truck like the Rebel 1500.

"We listened to our customers," Blanchard said. "This truck has both capability and looks. It has the same towing capacity as a regular 1500, and it will still be available at an affordable price.

"We're not saying how much it will cost right now. The price will be released closer to the release date, which is expected to be sometime close to the end of the second quarter.

"The Rebel will be manufactured at our Warren Truck facility and we expect the Rebel to comprise between 5 and 10 percent of the Ram brand.'

Blanchard said the Rebel was designed for the "bold customer." It allows them to express themselves, she said.

The truck has the capacity to tow dirt bikes to off-road locations, she said, or it can be used to drive off-road itself, adding that a lot of the features on the Rebel are the sorts of things people would normally have to get in after-market shops.

"We know that people like to customize their trucks, so we



Ram Brand Director Becky Blanchard and the Ram 1500 Rebel

just added those features to the forecast that it would get the 20 Rebel," Blanchard said. "The advantage here is that all our customized features are factory-tested and come with Ram warranties. I just hope we don't get SEMA too mad at us."

Blanchard said that the Rebel isn't Ram's only big announcement at this year's auto show. She said the brand also was able to announce that they upped the fuel efficiency of its "best-in-class mileage" engine from 28 to 29 mpg.

"The Ram EcoDiesel's mileage has improved," Blanchard said. "We knew demand for it would be strong when we introduced it. We expected sales to be about 10 percent of Ram sales, but no one percent it has now." Blanchard said she's been

asked a lot about how fluctuations in fuel prices affect EcoDiesel sales.

"I have to say not much," Blanchard said. "While gas prices are under \$2 a gallon now, only a couple of months ago, they were closer to \$4.

"Diesel fuel prices, on the other hand, tend to be very stable over a long period of time, so their sales aren't really affected by wild swings in fuel prices.

"Additionally, EcoDiesel owners like the fact that diesel trucks retain an additional 8 to 10 percent of value in the resale market.'

# **Catch the <u>Tech Center News</u>** when you're on the go.





2016 Lincoln MKX

## New Lincoln MKX to Reach U.S. Dealerships This Fall

makes.'

Those were the words Ford CEO Mark Fields used at the 2015 NAIAS auto show to describe where the Lincoln brand was.

"The proof of this is in our actions, not our words," Fields said. "Last year, we launched the Lincoln brand in China. The brand had its best sales year since 2008.'

And, Fields said, the brand also launched the MKC both here and in China as well. The new Lincoln Navigator was launched in 2014 and it doubled its marketshare in the luxury SUV segment. But 2014 was only one year in Lincoln's journey, Fields said. Granted, it was a year that had Oscar-winning actor Matthew McConaughey become a spokesman for the brand. "I think there should be some new kind of metric to measure a commercial's success based on the number of parodies done of it," Fields said. He said Lincoln's growth in the U.S. and China is important because, over the next few years, fully half of all luxury vehicles will be sold in those two countries. But that's 2014, Fields said. The next chapter of Lincoln features the new MKX. "We are focused on delivering engaging and refined luxury vehicles with innovative and thoughtful technologies," said Kumar Galhorta, president of Lincoln. "The all-new Lincoln MKX reflects that focus."

"What a difference a year four vehicles that Lincoln promised to introduce by 2016.

The new Lincoln MKX goes on sale first in the United States this fall, followed by other markets like China, Canada, the Middle East, Mexico and South Korea.

The Lincoln MKX, Galhorta said, further strengthens Lincoln's position in the global midsize premium utility segment, which represents 11 percent of the global automotive luxury market and is expected to grow to 12 percent by 2018. It is one of the largest luxury segments in

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He said the MKX is the third of

the United States, representing about one-quarter of the retail luxury automotive market.

Leading the engine choices for the new MKX is the available advanced 2.7-liter twin-turbocharged Ti-VCT EcoBoost V6. It is projected to deliver more than 330 horsepower and more than 370 lb.-ft. of torque, based on preliminary test data.

The standard engine, Galhorta said, is a 3.7-liter V6, projected to deliver 300 horsepower and 280 lb.-ft. of torque, based on preliminary test data.

Both engines are mated to a six-speed automatic transmission with push-button shift and SelectShift. Front-wheel drive is standard, with Intelligent All-Wheel Drive optional.

The addition of the integral link rear suspension, upgrades to the body structure and chassis components make the new model the best-handling, best-riding and quietest Lincoln MKX ever, Galhorta said.

# Faurecia Displays New Technologies at Show

Faurecia returned to the North American International Auto Show in Detroit earlier this month with nearly three dozen new technologies and processes.

The new methods help reduce vehicle weight while enabling automakers to offer more capability and performance to consumers, said Faurecia spokesman Tony Sapienza.

Pursuing a "Less Is More" perspective, Sapienza said, Faurecia features systems and components that weigh less, helping improve mileage and decrease emissions.

said, these technology advancements provide more comfort and roominess for passengers, more flexibility for vehicle designers and more natural materials for improved sustainability.

"Faurecia is dedicated to driving well-being for vehicle occupants, the environment and the automotive industry by making 'less' a central goal and 'more' a consistent result,' Sapienza said.

A wide range of new approaches to fashioning vehicle systems were also exhibited and demonstrated at Faurecia's display in the Crowne Plaza Detroit Downtown Riverfront, directly across from Detroit's Cobo Center, Sapienza said.

New applications of technology and materials inside, outside and under the vehicle were highlighted in products from all four of the company's business groups: Faurecia Interior Systems, Faurecia Emissions Control Technologies, Faurecia Automotive Seating and Faurecia Automotive Exteriors.

"At Faurecia, we consider our 'Driving Well-Being' approach to be a reinvention of the way the auto industry views traditional components and systems," said Faurecia North America President Michael Heneka.

"We are harmonizing desirable technology for the vehicle with the advanced manufacturing processes that bring them to life, all with the goal of demonstrating that less really can mean more for our customers and consumers.'

A centerpiece of the Faurecia exhibit was its "Less Is More' demonstrator that showed how Faurecia can integrate its innovations into a lighter, more comfortable vehicle.

The display had such inventions as:

• Thinner, roomier seats built on hybrid frames;

• A fiberglass composite rear floor and trunk;

\$**219** 

\$29,997

2014 Car Sales Up In Europe, But **OEMs** Cautious MILAN (AP) – Europe's automakers' association ACEA has confirmed that the industry's six-year decline ended last year, reporting a 5.7 percent increase in car sales in 2014 to 12.5 million vehicles. That was the continent's first positive full-year result since 2007, with December marking the 16th straight month of growth. Despite the upbeat performance reported last week, carmakers were cautious heading into 2015 amid new economic uncertainty Carlos Ghosn, the CEO of Nissan and Renault, said at the Detroit Auto Show that he expects European growth this year to be slow, around 1 percent to 2 percent. Jeff Schuster, executive vice president of forecasting for industry consultancy LMC Automotive, says the tamped-down forecasts are due in part to deflation concerns.

• A one-piece, injection-molded window lifter:

• A liftgate – made entirely of carbon-fiber composites - that weighs only half as much as a conventional steel liftgate.

Other Faurecia exhibits introduced a full-size premium trunk floor surface composed of lightweight natural wood materials, an industry award-winning active glove box that replaces separate knee-impact airbags, and a rear seat that folds flat and fully reopens with just the touch of a button.

"Faurecia extends its leader-At the same time, Sapienza ship in the use of natural materials within vehicle interiors to incorporate highperformance natural fibers into the instrument panel, center console and door panels," Heneka said.

The company also exhibited

three new approaches to producing a lighter cross-car beam using composites, hybrid materials or cold-metal transfer welding techniques.

Other Faurecia recent automotive innovations, Sapienza said, include:

• A universal docking station with Bluetooth and near-field communication capabilities;

• A family of new technologies to reduce nitrogen oxide emissions from diesel engines;

• A compact exhaust-heatrecovery system now extended from hybrids to all-gasoline engines;

• Technologies to control the levels and types of sound emitted by exhaust systems.

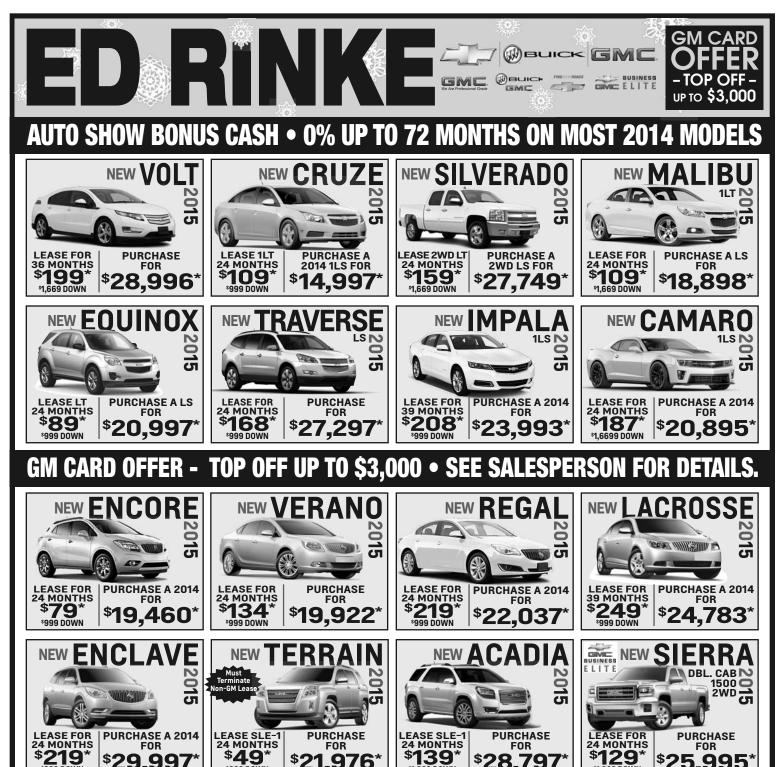
Faurecia this year made its second appearance at the annual North American Auto Show.



<sup>\$129</sup>

<sup>\$</sup>25.995

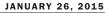
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#### COMPETITIVE LEASE BONUS UP TO \$2,500 & GM LOYALTY BONUS UP TO \$1,000 **ED RINKE Quick Oil Change EXPRESS BODY SHOP**

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## Cadillac's New Techniques Help to Produce CT6 Sedan

CONTINUED FROM PAGE 1

which creates a seamless joining of exterior panels;

• Self-Piercing Rivets, which are able to join different types of materials together with a clean appearance;

• Flow Drill Screws, which are able to join different types of materials and used in conjunction with adhesive;

• Aluminum arc welding and structural adhesive are also separately used for CT6 body assembly.

Among the five techniques, the CT6's engineers were able to select the best joining method depending on material combination and body location (for machine equipment access), Caldwell said.

To weld both the inner and outer vehicle frames, 28 robots descend on the vehicle body in two separate framing stations, joining the body-in-white together from all angles. The robots are mounted above and beside the vehicle and can also reach beneath it.

The two framing processes were choreographed to compensate for different microscopic vibrations, and CT6 body construction resembles an orchestra as the robotic arms move in and out around the vehicle.

"Never before has an automaker brought this combination of joining techniques together for a single vehicle," said Travis Hester, CT6 executive chief engineer.

"The manufacturing team has enabled body engineers to optimize the vehicle for mass, safety, stiffness and materials with more precision than ever.

"The result is a top-level large

luxury sedan, with class-leading body stiffness that generates excellent driving characteristics and impressive fuel economy without compromises to safety, comfort or quality."

Once the body construction is complete, a large robotic arm lifts the entire vehicle from one part of the assembly line to an upper-level conveyer – unheard of for a vehicle the size of CT6, Hester said – to be transferred across the plant.

Using these advanced manufacturing techniques allows for the CT6 to meet the highest standards in vehicle build quality, and to allow Cadillac to use the most mass-efficient materials while reducing fuel consumption and enhancing safety and driving dynamics, said Caldwell.

Details of the CT6 will be released to the media later this year, Caldwell said, but he added that the vehicle "is a larger car."

By using this new joining technology on the CT6, GM is able to build a bigger car that has the agility of a smaller vehicle.

Additionally, Caldwell said, the CT6 will be a premium car, and its buyers are the type of consumers that expect – and are willing to pay for – premium craftsmanship.

The CT6 marks the return of a full-size luxury sedan to Detroit-Hamtramck.

"It's kind of exciting that this 'hometown' invention of new building techniques will make their debut in the hometown Hamtramck factory," Caldwell said.

"These are 'made in Detroit' techniques GM created to be used in cars made in Detroit – leading-edge manufacturing done right at home."

