# **Tech Center News**

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# **GM to Improve Profits, Lose Market Share in Europe Deal**

by Angela Charlton and Tom Krisher Associated Press

PARIS (AP) – General Motors is selling its unprofitable European car business to the French maker of Peugeot, marking the American company's retreat from a major market and raising concerns of job cuts in the region.

With the 2.2 billion euro (\$2.33 billion) deal announced March 6, GM is giving up brands – Opel in Germany and Vauxhall in Britain - that have given it a foothold in the world's third-largest auto market since the 1920s. The brands, however, have lost \$20 billion since last making a fullyear profit in 1999.

For PSA Group, which makes Peugeot and Citroen cars, the acquisition will turn it into Europe's No. 2 automaker after Volkswagen and caps a remarkable turnaround after it was bailed out just three years ago.

The deal is "a game-changer for PSA," said its CEO, Carlos Tavares.

GM Chairman and CEO Marv Barra told analysts that the sale may not be GM's last. She said the company has work to do on some international businesses and could make a similar deal for them if they can't be fixed.

She told reporters in Paris that

Europe "was a difficult decision for General Motors but we are united in belief that it is the right one.

Britain's vote to leave the European Union, which caused a plunge in the pound, weighed on the decision, Barra said.

With Britain's exit from the European Union and stricter pollution regulations coming in Europe that will require massive investments in electric vehicles. the risks of staying in Europe outweighed the benefits, GM President Dan Ammann told analysts.

Increased regulatory costs will continue to be a burden for the foreseeable future" that

the decision to all but exit would be a drain on capital, Ammann said, adding that GM wants to focus its finite resources on places where it is more strongly positioned.

PSA will join with French bank BNP Paribas to run GM's European financial business. PSA also will take over 12 manufacturing facilities that employ about 40,000 people, according to a joint statement by the companies.

Executives insisted that no job cuts are currently foreseen, but analysts say they're inevitable over the long term.

GM will keep its manufacturing

**CONTINUED ON PAGE 2** 



Tavares and Barra



William Peirce

## Importance of Patents: They 'Reflect What GM Wants to Do for the Future' – Peirce

It's a new GM and one way to tell is how the company handles its intellectual property.

William Peirce, GM's director of Government Collaboration, works out of the Tech Center, which means he spends a lot of time working with GM's patents.

GM spokesman Alan Adler said that patents are a form of intellectual property and General Motors has had 45,000

patents issued during its history. Peirce said that during the 1950s, when GM was under threat of being broken up by the federal government, patents were a form of defense for the company. Now they are about running the business in a new way.

Technology strategies and approaches now include an intellectual property strategy," Peirce said. "The auto industry has changed and technology is an area where we compete with other automakers and suppliers. In the old days, there were 'gentlemen rules' where we could cross-license technology with other companies without too much legal fuss.'

But these days, intellectual

**CONTINUED ON PAGE 5** 

# **Opel Sale Makes Sense for GM, PSA Group**

by Jim Stickford

GM's sale of its European brands Opel and Vauxhall could have an effect on GM's global platforms.

Stephanie Brinley, a senior analyst for IHS Markit, said GM is in process of developing six new vehicle architecture sets due to underpin most production in the next decade. With the sale of Opel-Vauxhall, GM will have to some degree less production on these Vehicle Set (VSS) Strategy platforms. Opel/Vauxhall had been scheduled to see products on only three of the six planned architecture sets.

Based on the current IHS Markit production forecast, Brinley said the sale of Opel/Vauxhall will shift about 1.0-million units of production in 2024, as Opel/Vauxhall products move to PSA platforms rather than to GM's new vehicle set strategy (VSS) series of platforms. GM will lose some anticipated production output for its upcoming vehicle set strategy platforms, which may impact the ability to stretch costs across more units, Brinley said. However, GM will also be able to reallocate research and development, engineering, manufacturing, and marketing investment once required for Opel to brands and regions that offer more potential for profit. At the same time, the company retains the opportunity to sell what it lumps together as transformative technology - encompassing mobility services, self-driving or autonomous capability, and electrification – to the new PSA/Opel-Vauxhall or-

ganization. For PSA, this option can speed access to new technology and, for GM, it can help cushion some of the R&D costs.

on the future versions of GM's global architecture will have an impact on revenues, GM maintains that profitability will increase, Brinley said.

development of Opel products has been separated from the rest of GM brands; Opel/Vauxhall products are built in plants that focus on those brands.

Production of shared platform products for other brands is outside of Europe. Buick and Opel have seen concurrent design and platform development for some key products, including Regal and Encore.

However, production of the Buick-branded versions of these products has been independent of Opel-branded production. As a result, the development of GM's remaining stable of brands is not expected to be notably impacted by the divestiture of the Opel brand.

"GM production and product development is done worldwide nowadays," Brinley said. "Projects got input from Korea and China as well as Opel and such a network can function well without Opel. Now there will be some loss of institutional knowledge. There always is in situations like this. But GM people are smart and they understand that going in.'

Brinley said the deal between GM and PSA Group was put together relatively quickly, which shows that both sides wanted it to happen.

When I first heard about the possibility of the sale a few weeks ago, I was a bit surprised because I didn't think GM was in the market to sell Opel," Brinley said. "I knew they were looking at ways to network with PSA Group. They just came to the



System in this armored HMMWV gun-truck aids in preventing rollovers.

## System to Save Soldiers' Lives **By Reducing Truck Rollovers**

To limit the risk to soldiers and

The Ricardo/LIFT initiative has

While the reduction in volume

# Largely, production and final

conclusion that a sale was a good idea. But I don't believe that GM started working with PSA Group with the idea that it would result in a sale of assets."

CONTINUED ON PAGE 2



Under GM, Opel sold 1.7 million Kadett Cs between 1973 and 1979.

ensure mission successes, a system believed to reduce fatal rollovers in the field by up to 74 percent has been developed by Ricardo Defense Systems and LIFT (Lightweight Innovations For Tomorrow, a Manufacturing USA institute).

Van Buren Township-based Ricardo and LIFT recently announced the launch of the \$7.5 million joint project to address persistent rollover issues related to the High Mobility Multipur-Wheeled Vehicle pose (HMMWV), Ricardo said Defense Systems spokesman Tom Wegehaupt.

Manufacturing USA is a network of regional institutes, each with a specialized technology focus. The institutes share one goal: to secure the future of manufacturing in the U.S. through innovation, collaboration and education, Wegehaupt said.

identified and deployed a new, robust, reliable alternative to documented braking and stability problems in the current HMMWV configuration.

To this end, Wegehaupt said, Ricardo has developed a modified commercial off the shelf (COTS) ABS (Anti-lock Braking System)/ESC (Electronic Stability Control) system for the HMMWV.

The system includes ABS/ESC functionality and improved brake calipers, pads and rotors, which is expected to reduce fatal rollovers.

LIFT will help support further development of the Ricardo system while also examining lightweighting system components with advanced casting techniques and metal matrix parts. Every pound saved equates to improved mobility performance,

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#### Warren Library's April Promises Good Time

The next few weeks will be busy ones at the Arthur Miller branch of the Warren Public Library.

On Thursday, April 6, a talk about Michigan's role in arms production during WWI will be given by Christopher Causley, president of the Michigan Military Technical & Historical Society, said Warren librarian Amy Nelson.

April 6 is the 100th anniversary of the United States' entry into the war. The program will be held in the cafeteria of the Warren Community Center beginning at 6:30 p.m., Nelson said. To reserve a spot, call 586-751-5377.

On Tuesday, April 14, the library's book club – Books, Brew & Banter – will meet at the Falling Down Beer Co., 2270 East 10 Mile in Warren, to discuss Amy Chua's book, "Battle Hymn of the Tiger Mother," beginning at 7:30 p.m., Nelson said.

To learn more and to register and reserve a spot, call 586-751-5377. CONTINUED FROM PAGE 1 center in Turin, Italy. GM and PSA

will continue to collaborate on electric car technologies and maintain existing supply agreements on some Buick models.

GM can still offer ride-hailing and other new mobility services in Europe, and it will continue to sell some high-performance Chevrolets and Cadillacs there in low volumes. PSA will be able to sell cars in the U.S. if it wants, after Opel and Vauxhall models move to PSA-designed underpinnings.

For GM, the agreement indicates that Barra decided to focus on profits over market share.

Asked whether the arrival of the Trump administration played a role in GM's decision to sell, Barra said GM looked at "the changing landscape from a regulatory, a geopolitical and customer preference standpoint" before making a decision. GM will take proceeds from the sale and accelerate its stock buyback program. The move also frees about \$1 billion in capital spending which could go toward development of autonomous cars and ride-hailing services, as well as pension obligations.

Opel and Vauxhall last year sold just under 1.2 million vehicles, amounting to only 5.6 percent of the market, according to GM. GM has recently shown a willingness to pull out of unprofitable regions – it abandoned Russia in 2015.

"Unloading Opel-Vauxhall and the European part of the financing greatly improves GM's balance sheet, allowing investments in growing markets such as China and India," said Rebecca Lindland of *Kelley Blue Book*.

The deal marks a major recovery for PSA, rescued out just three years ago by Chinese in-

vestors and the French state. CEO Tavares, recalling PSA's "near-death experience," said he hopes to parlay his success to similar savings at Opel, cutting costs through scale and better use of factory capacity.

Amid uncertainty over Brexit, Vauxhall – and its 4,500 jobs – appears most vulnerable to any future cuts.

The leader of the Unite union in Britain said it will focus on persuading new management that it makes sense to continue "building in Britain."

In a sign of the importance of the deal to Britain's government, both Barra and Tavares discussed it with British Prime Minister Theresa May, who insisted on the importance of keeping Vauxhall jobs.

Factory closures are a concern in Germany as well, especially in

German Economy Minister

an election year.

Brigitte Zypries and the governors of three German states said in a statement that PSA made commitments regarding "locations, employment and investments." PSA executives also held talks with unions before finalizing the deal.

However, Christian Stadler of Warwick Business School warned: "I would expect job cuts. PSA has done it before and there is no other way to realistically achieve the cost savings they have in mind."

"The U.K. is definitely in a bad position as Brexit makes it less competitive than Germany and the unions are stronger in Germany," he said.

GM is picking up most of its \$6.5 billion in underfunded pensions in Europe. It may take a 4.5 billion euro writedown on the deal.

The deal, subject to regulatory approval, is expected to be completed at the end of this year.

## GM's Sale of Opel, Vauxhall Makes Sense for Both Parties

In Historic Move, GM Sells European Brands to PSA Group

#### CONTINUED FROM PAGE 1

In the end, the deal seems to make sense for both parties, Brinley said. PSA Group gets expanded capacity and market share and GM no longer has to put resources into a market that's been losing money for years.

"Comments made by the U.S. automaker's senior executives, showed a decreasing rationale for its involvement in Europe," Brinley said. "During the press conference, GM's president Dan Ammann noted the divergence in its product lineup with the rest of the world, and which would ultimately see only 20 percent of synergies with its global business over the coming years."

This situation is said not to

have been helped by the regulatory environment in the region in terms of emissions, as well as consumer demands for vehicles, which are advanced yet relatively compact, something where PSA is heavily involved, Brinley said.

This should save GM some time and money in the development process, Brinley said, because the company no longer has to factor in the cost of making vehicles comply with European regulations.

"By not continuing to focus investment on these markets," GM's CEO Mary Barra has said, "we are reshaping our company and delivering consistent, record results for our owners through disciplined capital allocation to our higher-return investments in our core automotive business and in new technologies that are enabling us to lead the future of personal mobility.

"Personal mobility is a field into which GM is already moving with the likes of Maven and Lyft. It has also mentioned improving returns to shareholders by accelerating share repurchases."

This will all be achieved by the immediate improvement in adjusted earnings before interest and tax (EBIT)-adjusted, adjusted EBIT margins and adjusted automotive free cash flow and de-risking the balance sheet, that will enable it to lower its cash balance requirement under

our core automotive business its capital allocation framework and in new technologies that are by \$2 billion, Brinley said.

Ultimately, PSA Group wants Opel to succeed as its own brand, Brinley said.

"The presentation of the deal is to have the Opel brand succeed under the PSA umbrella," Brinley said. "It doesn't appear that Opel will be turned into a French brand."

And that's good, because Opel and PSA Group fit well. Where Opel is strong, PSA tends to be weak and visa versa. As for Vauxhall, Brinley said that there's really no meaningful difference between Opel and Vauxhall. That's been true for a long time.

#### **T-shirts Helping Wheels on Meals**

The Office of Senior Services (OSS) has begun its annual March for Meals campaign and is actively seeking volunteers and donations for the Macomb County Meals on Wheels program, said Macomb County spokeswoman Roneeka Pleasant-Brown.

During the month of March, the Meals on Wheels program will raise money as well as public awareness on issues of senior hunger through the sale of T-shirts, Pleasant-Brown said.

"We are truly excited to be able to offer T-shirts as an option this year to those who want to give financial support to our program," said Nicole Urban, OSS program manager.

The T-shirts will be available March 15-29 for \$20 and can be purchased at booster.com/ March-for-Meals-Campaign.



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# **Tech Center News**

MARCH 13, 2017

COVERS THE TECH CENTER AND THE IMMEDIATE AREA



Keith Nattrass has earned Certified status from the National Ski Patrol.

## System to Save Soldiers' Lives **By Reducing Truck Rollovers**

CONTINUED FROM PAGE 1

fuel economy and logistics, said Wegehaupt.

"Ricardo has done tremendous work in developing these systems aimed at solving a critical problem," said Alan Taub, chief technology officer at LIFT. "Lightweighting a military platform is of vital importance to our military forces.

LIFT is a Detroit-based, publicprivate partnership committed to the development and deployment of advanced lightweight metal manufacturing technologies, and implementing education and training initiatives to better prepare the workforce today and in the future, Wegehaupt said. LIFT is one of the founding institutes of Manufacturing USA, and is funded in part by the Department of Defense with management through the Office of Naval Research.

The Ricardo system is currently being piloted in 10 vehicles with the Michigan National Guard. The project will expand the National Guard pilot program to include production grade components and processes developed, Taub said. The leadership of the Michigan National Guard, as well as in other states, is taking the rollover threat seriously.

"Solving the rollover issue and saving lives is mission-critical," said Chet Gryczan, president, Ricardo Defense Systems. "We're pleased to be working as a team with LIFT, investigating opportunities for lightweighting while taking the system forward to production.'

engineering group, is one of the technology partners on the project while Michigan Technological University and the University of Michigan Transportation Research Institute are participating as research partners.

"We are proud that this is a Michigan project providing a national solution to this ongoing problem," said Lawrence E. Brown, executive director, LIFT.

"Our goal is to bring our team to the table and enable creative solutions for problems across a range of manufacturing sectors, including defense.'

Going forward, training and additional workforce development will be conducted during integration of the brake kits onto Michigan National Guard HMMWVs, Wegehaupt said.

The project team is also working toward building additional test-dedicated HMMWVs to conduct shake, roll and abuse tests and road durability evaluation at the Chelsea Proving Grounds in Chelsea, and limited operational review at Camp Grayling.

### **Macomb's Miller** Joins Commission

Speaker of the Michigan House of Representatives Tom Leonard appointed Macomb County Public Works Commissioner Candice S. Miller to the Great Lakes Commission on March 7.

"Candice Miller is the best choice for the Great Lakes Commission," said Leonard. "She has the right experience working on international relations and border issues, she is deeply invested in our Great Lakes basin and local environmental policies, and she has recently taken on the role of cleaning up the waterways of Macomb County and protecting south-Wegehaupt said GKN, a global east Michigan's critical infra-

## **GM's Nattrass Earns Ski Patrol's Top Rank**

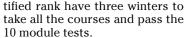
It was all downhill for Keith tified rank have three winters to event, Nattrass said. It goes from Nattrass, manager for Military and Veterans Affairs at GM, when he earned the highest level of certification from the National Ski Patrol.

Nattrass said he had been working toward the rank of Certified Ski Patroller for the past three winters.

"I'm 47 years old and started skiing 11 years ago," Nattrass said. "I was the oldest person in my group getting my Certified ranking.

Nattrass said that the National Ski Patrol holds classes around the country where skiers can earn one of three levels of certification for providing emergency aid to skiers. There's Junior, Senior and Certified.

To earn the Certified designation, a skier must take classes in 10 different modules. Nattrass said. The classes range from how to handle an avalanche to the transportation of injured skiers. Those seeking to earn the Cer-



"I think in the history of the program only one person was able to do that in one winter," Nattrass said. "That person was not me. I decided to go for the Certified ranking because it was the next challenge for me. You start taking the basic ski patrol courses and move up the ranks. Certified is the last stop.

"This rank really emphasizes high skills when it come to rescue work," Nattrass said. "We learned how to handle things like multiple injuries and how to make risk management assessments. This really is the highest credential in the land."

The final exam is a three-day

a Thursday and ends on a Saturday, usually during the last weekend in February. He took his test at the Marquette Mountain Ski Resort in the Upper Peninsula.

Distance is one reason why it's difficult for people to complete all 10 modules in a season. Next year, the program will be taught at a resort in Lutsen, Minn.

"I studied all this ski season to make sure I knew what I needed to know to earn the Certified rank," Nattrass said.

"I do volunteer work at Pine Knob as a ski patroller. The exams have three components the written part, the field work and the interview. This wasn't easy to do, but I am proud to say that I did it."



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structure.

The commission is made up of eight U.S. states and two Canadian provinces that border the Great Lakes. Its charter is to promote a strong economy and environment, Leonard said.



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#### **Mercedes** Issues Million-Car Recall **For Possible Fires**

DETROIT (AP) - Mercedes is recalling about 1 million cars and SUVs worldwide because a starter part can overheat and cause fires.

The recall covers certain C-Class, E-Class and CLA cars and GLA and GLC SUVs, all from 2015 through 2017, including nearly 308,000 in the U.S.

The German automaker reported 51 fires worldwide, with about 30 in the United States. The company has no reports of any injuries.

Mercedes said in U.S. government documents released March 3 that if for some reason the engine and transmission won't turn over, a current limiter in the starter motor can overheat from repeated attempts to start the vehicles.

That can cause the current limiter to overheat and melt nearby parts.

Mercedes began investigating the problem last June after getting field reports of "thermally damaged" current limiters.

Owners will be notified this month and again when replacement parts are available in July. It will take about an hour for dealers to install another fuse to prevent the problem. The repair will be done free of charge.

Mercedes-Benz makes available to customers a way to learn more about which of its vehicles are affected by recalls.

Owners just have to enter their 17-digit U.S.-based Vehicle Identification Number (VIN) at www.mbusa.com/mercedes/recall to get the most complete and up-to-date information available on current or previous recalls. This tool will not work for non-U.S. VINs, a Mercedes spokesman said.



These are just some of the Dodge vehicles that will be seen in "The Fate of the Furious," the latest movie in the Fast & Furious series.

## Upcoming Movie Teams Dodge Cars and Vin Diesel .... Again

Hollywood and the Motor City have combined forces for the latest Fast & Furious movie.

Dodge, which has been a part of the Fast & Furious franchise since its inception, has announced a promotional partnership with Universal Pictures for "The Fate of the Furious," in which Vin Diesel is joined by a returning all-star cast, said Fiat Chrysler spokeswoman Eileen Wunderlich. "The Fate of the Furious" arrives in theaters April 14.

In support of "The Fate of the Furious," Dodge is launching a multitier marketing campaign, including television ads, social media and digital extensions, and licensed products.

The co-branded campaign promotes the blockbuster Fast & Furious franchise and Dodge//SRT, the mainstream and ultimate performance brands of FCA US. Dodge and SRT Chargers and Challengers, are prominently featured in the upcoming movie.

"Fast Dodge cars, adrenalinefilled action and family have fueled the Fast & Furious franchise from the beginning," said Tim Kuniskis, head of Passenger Car Brands - Dodge, SRT, Chrysler and FIAT, FCA-North America.

"For more than 15 years, the Fast & Furious series has showcased some of the world's most iconic and significant performance vehicles, and 'The Fate of the Furious' will continue this tradition.'

"The Fast & Furious franchise provides a natural extension for showcasing Dodge's most powerful performance vehicles to movie and car enthusiasts everywhere," said Olivier Francois, chief Marketing officer, FCA -Global.

"The best co-branded promotional spots are those in which the world of the Fast & Furious films and our world merge perfectly to create a unique piece of creative that resonates and connects with people who like 'The Fate of the Furious' and Dodge fans alike.'

"The world of Fast & Furious is inextricably linked to our partners at Dodge," added David O'Connor, executive vice president of Global Franchise Management and Brand Strategy, Universal Pictures.

"Time and again, they have proven their commitment to ensuring that the cars are just as beloved characters as the family

members who form the heart of clude one spot for the Dodge the series."

Dodge created new television commercials to promote "The Fate of the Furious," including national, dealer and multicultural spots.

All ads feature clips from the movie, seamlessly blended with new scenes of Dodge's and SRT's ultimate performance vehicles. The first ads began airing Friday, March 3.

The 30-second national "Muscle Heaven" spot primarily features the 2017 Dodge Challenger. Dealer versions of the ads in-

Charger and Challenger, and another for the Dodge Durango and Journey.

The spots will air on network programming, including primetime, late-night, morning news, sports, and NASCAR, as well as cable entertainment and sports programs.

They were created in partnership with Austin, Texas-based GSD&M.

A Spanish-language co-branded "Muscle Heaven" spot has also been created and will run in key Hispanic markets.

### **EPA Could See Mileage, Emission Standards Rolled Back in Future**

WASHINGTON (AP) – The fleet of new cars to average a Trump administration is moving to roll back federal fuel-economy requirements that would have forced automakers to increase significantly the efficiency of new cars and trucks, a key part of former President Barack Obama's strategy to combat global warming.

The Environmental Protection Agency is close to an announcement reversing a decision made in the waning days of the Obama administration to lock in strict gas mileage requirements for cars and light trucks through 2025.

Automakers asked EPA Administrator Scott Pruitt to discard a Jan. 13 decision that requires the

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real-world figure of 36 miles per gallon OEMs said the Obama rules could add thousands of dollars to the price of new cars and cost

more than a million jobs. Lawmakers, industry groups and environmentalists say the administration has signaled it plans to take this step. An announcement could come any time.

A decision to review the Obama rule sets up a potential legal battle with California and other states that have adopted tough tailpipe standards for drivers. California has received a waiver allowing the state to enforce its standards, which have also been adopted by 12 other states.

The White House and the EPA declined to comment.

"Attacking the California waiver is a recipe for chaos," said Sen. Edward Markey, D-Mass., who has pushed for higher fuel standards. California and other states that have adopted its standard will almost certainly file a legal challenge if pushed by the EPA, Markey said. "The auto companies don't want 50 state

Manufacturers, which represents



We're not the same old Quality Inn... "Come see our Vision"



## Importance of Patents: They 'Reflect What GM Wants to Do for the Future' – Peirce

CONTINUED FROM PAGE 1

property is often the main asset owned by startups. Patent protection has become a much more important issue for everyone in the industry.

"You need to protect your patent portfolio so that a company can protect its plans for the future," Peirce said. "For example, one technology we like to talk about is OnStar Proactive Alert. We've figured out how to have a car look ahead and see what could go wrong with, say, an engine. The owner is sent a notification saying that a particular part might break down within three months.'

That's new tech and patents protect it, Peirce said. And the importance of patents is reflected in the hiring of Carlos Herrara, GM's chief counsel on Intellectual Property. GM always had patent attorneys, but Herrara is much more integrated in the development process than past counsels. That's because patents, said Peirce, reflect what GM wants to do for the future.

And GM is developing new technology in ways that are new to the company, Peirce said. For example, GM now has an Invention Review Board. Employees are encouraged to develop new ideas and then submit the ideas to the review board. Its members include Mark Reuss, president of GM North America, and Gary Smythe, executive director of Global Research and Development at GM.

"Think of the TV show, 'Shark Tank," Peirce said. "Employees present a 10-minute pitch to the review board about what their idea can do for the company and

from the board."

If they get a thumbs up, they get funding to make the pitched idea a reality. And those who get funding are expected to show results. If a project doesn't produce as planned, it gets shut down, Peirce said. It's part of the company's shift in R&D priorities. In the past, a lot of research was more in vein of research for the sake of research. Now R&D is much more oriented toward the practical. It's meant to get results for the company.

One interesting aspect of how GM treats its intellectual property is how it's shared, Adler said. Through GM Ventures, GM can license technology protected by its patents to other companies.

A perfect example of that is the roboglove. It's technology GM developed, but it's licensed to a Scandinavian company that is taking the tech and developing the roboglove into something that GM can use during the manufacturing process. And GM gets to benefit from the royalties generated from such arrangements.

This represents a real change in attitude from the past, Adler said.

"We now have leadership that believes effectively using intellectual property is very important," Adler said. "It's much more focused on large, strategic business properties. Jon Lauckner is our chief technology officer and serves on the review board. He likens it to the Internet start-up mentality you usually see in new Silicon Valley companies.

'That's a change for GM. Jon and the people at GM Venture have brought a real venture capital perspective to the company. In the past five years, the compa-

they get a thumbs up or down ny has become more about results and what technology can do to improve the final product."

The result of this change, Peirce said, is that GM is a very exciting and creative company to work for.

And the people who generate new patents can receive recognition in form of Kettering Awards, as well as substantial financial rewards for their work, Peirce said, adding that GM really wants to be a company that encourages new and creative thinking.

### **Macomb Board of Commissioners Extends** Deadline

The Macomb County Board of Commissioners is extending the deadline for nominations of volunteers to be recognized for their valuable contributions to the community during "National Volunteer Recognition Month" in April, said Macomb County spokesman Michael O'Meara.

They are accepting nominations for exceptional volunteers who either reside in, or whose efforts benefit, Macomb County. The board will invite each honoree to attend an upcoming Full Board meeting and they will be recognized for their outstanding volunteer efforts.

The new deadline for nominations is 5 p.m. on Wednesday, March 22, 2017. Information on how to nominate and the forms can be found on the Board's website at boc.macombgov.org/ BOC-VolunteerRecognitionProgram.

The Board of Commissioners office can also be reached at 586-469-5125.



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### Supplier Inteva Will Lay Off 200 From Adrian Plant

ADRIAN, Mich. (AP) - A Michigan auto supplier said it plans to lay off nearly 200 people from its Adrian factory, despite the announcement of a more than \$23 million expansion plan just six months ago.

Troy-based Inteva Products, formerly known as Delphi Interiors, has planned the layoffs to last for at least six months starting in May, MLive reported on March 8.

Human Resources manager Ken Smith said the layoffs "are necessitated by the cancellation of our agreement with one of our largest customers and the loss of business associated with the cancellation of that agreement."

New business was cited as the reason Inteva received a nearly

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FT 400 Ranking March 2016

Presented by: James B. Kruzan, CFP®, CRPC®

Join us for a 45-minute informative discussion on tips, techniques and strategies to get the most out of your GM sponsored benefits, and more!

Our nuts and bolts presentation answers:

Effective ways to maximize post retirement tax free distribution without giving up current year tax

#### THURSDAY, MARCH 30, 2017

TIME: 11:45 a.m. - 12:30 p.m. (lunch included)

LOCATION: Courtyard Downtown Detroit 333 E. Jefferson Ave., Detroit, MI 48226 (Room: Cascade Ballroom D)

\$1.3 million incentive from the Michigan Strategic Fund last August.

At the time, the company planned to invest \$23.3 million in new equipment and expected to increase its workforce with 127 new jobs by 2019.

The company employed 474 people at the 980,000-squarefoot Adrian plant when the expansion was announced last August.

Overall, Inteva employs appeople proximately 15.000worldwide.

The reason for the announced expansion was to build components for the popular Chevy Silverado and GMC Sierra pickup trucks manufactured by General Motors.

Inteva supplies the auto industry and provides highly engineered components and systems to defense, consumer and other markets, according to the Michigan Economic Development Corporation.

deductibility.

- Effective positioning for the challenges and opportunities of a Trump presidency.
- Construct a satellite strategy centered around your Retirement Savings Plan.
- And more!

All attendees will be offered a complimentary retirement stress test.

#### THURSDAY, MARCH 30, 2017

TIME: 4:00 p.m. - 4:45 p.m. (refreshments included)

LOCATION: Courtvard Downtown Detroit 333 E. Jefferson Ave., Detroit, MI 48226 (Room: Cascade Ballroom D)

#### **REGISTRATION REQUIRED. SPACE LIMITED: 20 SEATS.**

To reserve your seat, contact Danielle Howard at (810) 593.1630 or email danielle.howard@raymondjames.com.



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Varvatos store in Detroit, the

commemorative poster artwork

for the 30th annual EyesOn De-

sign Automotive Design Exhibi-

EyesOn Design spokeswoman

Kathy Lightbody said the selec-

tion was made as a nod to the

universality of design across

ed by the renowned visual futur-

ist Syd Mead, who was chal-

lenged to create artwork for the

show as he envisions it 30 years

in the future, Lightbody said.

Mead will sign copies of the

The poster artwork was creat-

many professions.

tion was revealed last month.



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Suheb Haq



#### **General Motors, Honda Name Team** Leaders on Hydrogen Cell Project

General Motors Co. and Honda on March 7 unveiled the executive structure for their recently established joint venture company, Fuel Cell System Manufacturing, LLC (FCSM).

Suheb Haq of GM will serve as the first president of FCSM, and Tomomi Kosaka of Honda will be the new company's vice president, said GM spokesman Alan Adler.

Haq and Kosaka will be responsible for operations, overseeing the start-up of the JV and ongoing manufacturing operations. GM and Honda plan to rotate the positions of president and vice president every two vears

Haq most recently was director of GM Operational Excellence. Kosaka was president and CEO of Honda of America Mfg., responsible for manufacturing operations of three auto plants and an engine plant in Ohio.

Further, FCSM will include a board of directors consisting of three executives from each company that will include a rotating chairperson.

Representing Honda on the FCSM board of directors are:

• Takashi Sekiguchi, managing officer and director/chief operating officer, Automobile Operations, Honda Motor Co., Ltd.

Tomomi Kosaka

• Mitsugu Matsukawa, operating officer/chief operating officer, IT Operations/head of Production Planning Supervisory Unit, Production Operations, Honda Motor Co., Ltd.

• Rick Schostek, executive vice president, Honda North America, Inc.

Sekiguchi will serve as the first chairperson of the FCSM board of directors.

Representing GM on the FCSM board of directors are:

· Charles Freese, executive director, Global Fuel Cell Business. · David Maday, executive di-

rector, Corporate Development. • Robert Portugaise, executive director, Manufacturing Engineering.

FCSM was established with equal investments from Honda and GM totaling \$85 million, creating the auto industry's first manufacturing joint venture to mass-produce an advanced hydrogen fuel cell system that will be used in future products from each company.

poster at the EyesOn Design car show this summer when he will be in Detroit to accept the EyesOn Design Lifetime Design Achievement Award.

#### Besides his illustrations of cars, Lightbody said Mead is renowned for his conceptual contributions to such movies as

"Blade Runner," "Aliens," "Star Trek: The Motion Picture," "Time Cop," "Elysium" and "Tomorrowland."

The poster shows an image set in a multi-level park with an enormous sculpture as a backdrop. Mead's illustration showcases the imagined vehicles of the future while paying homage to the classic cars of the past.

In the foreground sit the featured vehicles of 2047. Both have sliding roofs for an "open air" feel that recalls a luxury car body style from the early 1900s called a "landaulet."

Similar to vehicles of that early period, they have their wheels at the end of their chassis. But by 2047, Mead envisions these as two large hub-less wheels in front and a large "power ball" drive wheel in the rear, suspended magnetically in the curved retainer bay. Thirty years from now, these vehicles, like all oth-

At a celebration at the John ers, would be autonomously self-driven and equipped with the latest anti-gravity suspension

**EyesOn Design Unveils Its 2017 Poster** 

Other future vehicles pictured include a floating car with a transparent bubble body shell in the middle background, near an outdoor restaurant called the Dorado. Across from that on the right are pictured two more-traditional vehicles from the classic car era of the 1930s.

In the far background, two enormous space liners are lifting off while a faint image of an early acetylene gas lamp floats in the sky in a tribute to cars of the pre-1915 brass era.

This is the third EyesOn Design poster created by Mead, Lightbody said. The others were done in 1991 and 2011. A limited quantity of the prior year posters, as well as the 2017 poster, will be available for sale at the car show.

Recognized as one of the Top Five car shows in the country by U.S.A. Today, the EyesOn Design car show will take place Father's Day - Sunday, June 18, 2017 - at the Edsel and Eleanor Ford House in Grosse Pointe Shores, Lightbody said.



The EyesOn Design poster for 2017

#### State Fights Invasion of the Carp

with the threat that Asian carp could enter the Great Lakes, Michigan is turning to the public for new ideas and plans to offer a prize to whoever comes up with a way to stop the voracious fish.

Michigan's global search challenge comes after the U.S. government and others have spent hundreds of millions searching for a solution to stop the carp from entering the world's largest freshwater system.

If they aren't stopped, officials fear the aggressive fish will crowd out prize native fish and

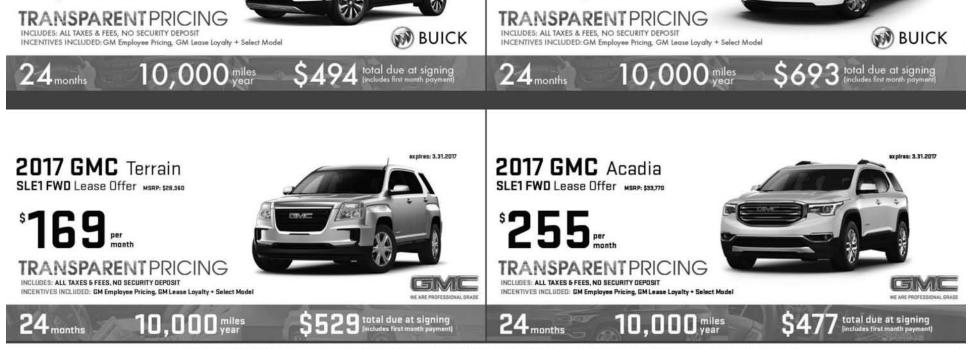
LANSING, Mich. (AP) - Faced hamper recreational boating in large sections of the lakes.

> Michigan alone has a \$38 billion tourism industry, much of it focused on the outdoors, and the Great Lakes region has a \$7 billion fishing industry. Asian carp have been spotted 45 miles from Lake Michigan.

> Details on how much prize money will be offered are still being worked out. Officials also haven't determined how many winners might be chosen.

> If the fish make it into that lake, they could make their way into the other Great Lakes.





Offers include: Tax, Title, Plate, Transfer, CVR, Doc Fee, GM Employee Pricing, GM Lease Loyalty (must have a 1999 or newer GM lease in household), Select Model and 1st Month's Payment. No security deposit required. See dealer for details.





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\*Pictures may not represent actual sale vehicle. All applicable incentives including bonus cash, bonus tags, competitive lease, lease conquest and/or lease loyalty offers have been deducted from Sale Prices/Payments and are subject to change by the manufacturer without notice and are plus title, tax, plate, doc and CVR fees and were valid at time of printing. GM Employee discount is required except where noted. Leases are 10,000 miles per year. Disposition fee may be required at lease turn in. \$1000 over KBB guarantee is on 2004 thru 2014 model year vehicles, less reasonable reconditioning. No branded titles. Certain restrictions apply, see dealer for complete details on all incentives/offers. Sale ends 3/17/2017 @ 6:00PM.



## **Anthony Receives Honor**

Showcasing the accomplishments of female manufacturing leaders, Novi-based Cooper Standard's Brigit R. Anthony, vice president, engineering and technology, North America, was recently recognized by The Manufacturing Institute as one of its 2017 STEP Ahead Award Honorees and by Profiles in Diversity Journal, which named her a winner of the 2017 Women Worth Watching in STEM Award.

"The entire Cooper Standard team is proud of Brigit's recent honors and applauds her advocacy surrounding the importance of fostering the next generation of manufacturing leaders," said Bill Pumphrey, president, North America.

"With her dedicated promotion of science, technology, engineering and math opportunities, she has become a true ambassador of manufacturing education."

Through its STEP (Science, Technology, Engineering, and Production) Ahead awards, The Manufacturing Institute honors women who have demonstrated excellence and leadership in their careers and represent all levels of the manufacturing industry, from the factory-floor to the C-suite.

The STEP Ahead Awards are part of the larger STEP Ahead initiative, launched to examine and promote the role of women in the manufacturing industry through recognition, research and leadership for attracting, advancing and retaining strong female talent.

On April 20, The Manufacturing Institute will recognize and highlight Anthony's manufacturing leadership and accomplishments at an awards reception in Washington, D.C.

The Women Worth Watching in STEM Award recognizes leaders who are breaking barriers for



**Brigit Anthony** 

women in STEM (science, technology, engineering and math) careers as part of a worldwide strategy to innovate, educate and build a more connected world, according to the publication.

Anthony will be profiled in a special STEM Women Worth Watching edition of Profiles in Diversity Journal aimed at celebrating and enhancing the visibility and reputations of the companies empowering, supporting and employing the winners.

In addition to leading Cooper Standard's North American team of over 300 engineers, scientists and technicians in Southeast Michigan, Anthony is involved in a number of initiatives working to engage the next generation of the manufacturing workforce.

Since her appointment as the North American champion for Cooper Standard's STEM Affinity Group in 2015, Anthony has helped establish the program that trains and coordinates the company's STEM Accelerator employee volunteers that offer tutoring, science demonstrations and career information to children.





**TECH CENTER NEWS - WARREN** 



### – NO APPOINTMENTS NECESSARY FOR OIL CHANGES –



# **OPEL AND VAUXHALL: A RETROSPECTIVE** 1899 – First Opel; 1929 – GM Becomes Major Shareholder

GM's sale of the Opel and Vauxhall brands to the French company PSA Group ends a long tradition of GM operating on the continent of Europe.

Here is a brief history of GM in Europe:

• 1862 – After years of employment as a journeyman metalworker, Adam Opel goes into business in his hometown of Rüsselsheim: he builds his first sewing machine, laying the foundation for the Opel company.

• 1886 – By entering the booming business of bicycle manufacture, Opel secures a second foothold for his company. In less than 40 years, Opel becomes the world's largest bicycle producer. • 1895 – Adam Opel dies at the

age of 58.

• 1899 – "Opel Patent Motor Car, System Lutzmann" is the name given to the first Opel automobile. It marks the beginning of production in Rüsselsheim, and forms the basis for building the first utility vehicles.

• 1901 – A contract is finalized with the French manufacturer Alexandre Darracq, authorizing Opel to produce Darracq automobiles under license. Opel builds its first motorcycle.

• 1902 – The first Darraco chassis are outfitted with Opel bodies in Rüsselsheim. The vehicles are marketed under the brand name Opel Darracq. The first model built entirely by Opel, with a newly developed 10/12 hp, two-cylinder engine, is completed in fall of the same year.

• 1903 – Opel develops its first four-cylinder engine, with 20/24 hp output.

• 1906 – The one-thousandth Opel automobile leaves the factory. Opel establishes a branch factory in Berlin.

• 1907 – Opel is awarded the Kaiser's Prize for the best German automobile and is designated purveyor to the court.

1909 – Opel introduces an affordable compact car. The 4 kW (8 hp) two-seater, designed for customers who place great importance on dependability, becomes known as the "Doktorwagen" (Doctor's Car).

• 1910 – A modular production system is implemented: prefabricated car bodies are combined with various chassis and engines.



• 1911 – With a 6/16 hp model, Opel adopts the new "torpedo" body form. Sewing-machine pro-

duction ends with the manufacture of the one-millionth unit. • 1912 - Opel celebrates its fiftieth anniversary. The tenthousandth Opel motorcar rolls

out of the plant. A new flagship model is introduced: a substantial 40/100 hp four-cylinder vehicle.

• 1916 – In a 18/50 hp model, Opel introduces its first six-cylinder engine, with a displacement of 4.7 liters.

• 1924 – Investing one million gold marks, Opel completely modernizes its automobile production. The Rüsselsheim plant is the first German manufacturer to introduce the high-volume production methods of the future, including assembly-line processes.

The first car to roll out of the updated plant: the legendary 4/12 hp model, best known as the "Laubfrosch" (Tree Frog), in reference to its green body paint and protruding headlamps.

• 1926 - Thanks to state-ofthe-art production methods and strong demand, the price for the "Tree Frog" sinks from its original 4,500 marks to 2,980 marks, eventually dropping as low as 1,990 marks. This makes automobiles affordable for even broader sections of the public.

• 1928 – With a market share of 37.5 percent, Opel is by far the largest German carmaker. In preparation for an alliance with General Motors, the company is converted into a listed stock corporation.

A new flagship model is christened: the Regent Limousine, powered by a 24/110 hp, eightcylinder engine.

• 1929 - General Motors acquires 80 percent of shares in the company Adam Opel AG for just under 26 million dollars, becoming majority stockholder.

• 1931 – The Rüsselsheim plant builds the first "people's automobile," an affordable vehicle equipped with a 1.2-liter engine. Between 1931 and 1935, 100,000 units are built – a volume never before reached with a single model in Germany.

General Motors acquires the remaining 20 percent of shares in the Opel corporation.

• 1935 – Opel unveils the Olympia, Germany's first massproduced car with an all-steel integral body and frame. Advantages: low weight, greater passive safety and improved aerodynamics.

Truck production facilities officially open in Brandenburg. The new plant, which began building trucks as early as November 1934, boasts an annual capacity of 25,000 Blitz models.

Opel becomes the first German carmaker to manufacture more than 100,000 vehicles per year.

With the P4, Opel introduces a compact car at an unbeatable price.

• 1937 – The company focuses on automobile manufacture, selling its bicycle production to NSU - after building 2.6 million bicycles. The Opel Admiral, the new flagship powered by a 3.6-liter six-cylinder engine, is unveiled.

• 1951 – Production of the third postwar generation of the Opel Olympia begins on the assembly lines in Rüsselsheim.

• 1956 – The two-millionth Opel, a Kapitän, leaves the plant.

• 1962 - Opel celebrates its one-hundredth anniversary. A plant opens in Bochum for production of the new Opel Kadett.

• 1966 – The Bochum plant celebrates a milestone: the onemillionth Kadett leaves the assembly lines. The Rekord C goes into production, and the legendary Rallye Kadett is introduced to the market.

• 1971 – The ten-millionth Opel rolls off the assembly line in the Rüsselsheim plant. The Rekord D goes into production, also in Rüsselsheim. The Commodore GS/E with electronic fuel injection goes into production.

• 1982 – A new plant is commissioned in Saragossa, Spain, for the production of the Opel Corsa. The compact model rapidly advances to become the bestselling vehicle in its class.

• 1983 – Opel's 20-millionth vehicle, a Senator, leaves the Rüsselsheim production facilities.

1989 - The Opel Calibra is launched, with a world-best drag coefficient of 0.26. The 25-millionth Opel rolls off the production line in Rüsselsheim.

• 1991 - After years of outstanding performance on the road and in the market, Kadett production comes to an end. Its successor: the Astra. The company launches its first off-road vehicle, the Frontera, which becomes European market leader in its class within a year.

• 1994 – The off-road vehicle Opel Monterey and the light utility vehicle Campo Sports Cap are launched.

• 1996 – Production of the Cadillac Catera, based on the Omega, begins in Rüsselsheim.

• 1998 – Expansion continues in the commercial vehicle sector with the Movano. New Astra models go into production.

• 1999 – The 50-millionth Opel, an Omega, rolls off the assembly line in Rüsselsheim. With the Zafira, Opel launches a new class of compact vans, featuring the widely versatile interior concept Flex-7.

• 2009 – The global economic crisis affects GM and Opel.

# Vauxhall and Its British Heritage

The sale of Vauxhall by GM to the French-based PSA Group is encouraged by GM President Aljust the latest event in the com- fred P. Sloan Jr. The first Vauxhall pany's long history.

Here are some of the historical wheelbase 21HP model. highlights for Vauxhall:

car was the 6HP with its slow- fect with the introduction of the revving single cylinder engine and a chassis that was Forward Thinking – amalgamating the chassis and lower body into a composite steel-and-wood structure. • 1908 – The A-type grew out of the Y-type prototype that beat Rolls Royce on a 200-mile speed test at the newly opened Brooklands track, laving more foundations for a dynasty of sporting Vauxhalls. The A-type sported a wide range of formal, touring and sporting coachwork.

Vauxhall for \$2.5 million in a deal made under GM was a short-

• 1930 – GM's policy of widen-• 1903 – The first-ever Vauxhall ing Vauxhall production took ef-Cadet at the 1930 Motor Show. It boasted leather trim, and a smooth 6-sylinder engine. Noting its American GM parentage, Motor Sport magazine said, "It is meant to be driven by lazy people with a long way to go." • 1938 – A notable milestone in automotive engineering, the Vauxhall Ten-Four was the first British car with unitary construction. It also came with torsion bar independent suspension and hydraulic brakes. Not surprisingly, it sold 10,000 units inside five months.

Viva's 1057cc engine found huge success. It was cheap to make, cheap to run, simple, reliable and strong. And of course, the early HA Viva gave way to HB and HC, which lasted until 1979 after a 640,000 production run.

• 1975 – The most important,



• 1910 – The Prince Henry, with its distinctive pointed radiator was the most famous Edwardian Vauxhall of all.

• 1923 – With its overhead valve engine, the Vauxhall E-type 30-98 became the fastest catalogued car in Britain. Bodies included an elegant 4-seat Velox open tourer and a dramatic nautical-looking 'boat-tailed' Wensum with polished wood paneling.

• 1925 – General Motors buys

• 1939-1945 - Four years of work was compressed into one in the design and development of Vauxhall's war-time production tank – the Churchill Marks I-III.

• 1948 – The first proper postwar Vauxhalls were the 6-cylinder Velox and 4-cylinder Wyvern, sharing a common body shell with its 'alligator' bonnet-opening.

• 1963 – Vauxhall had never made anything so small, yet the

and one of the most successful Vauxhall cars ever launched, Cavalier started life in 1975, and quickly became one of Britain's best-selling and best-loved cars. By the time Cavalier III bowed out in 1995, it had debuted 'platform' engineering, and SRi sporting models, 4x4 traction and the first V6 Vauxhall engine, and overseen the end of Opel/Vauxhall dual branding in the United Kingdom.

• 1980 – The all-new Astra, Vauxhall's first transverse-engined, front-wheel-drive car, made a quiet introduction, considering what a huge success it would later become. Only the 5door models were launched at first and there was no Astra diesel until 1982. In 1988, the 16v Astra GTE debuted, a car with direct lineage to the Astra hot hatches of today.

• 1982 – Built in Zaragoza, Spain, the new Vauxhall Nova, was a long time coming (after a first design phase in 1976), yet

#### 1980 Vauxhall Astra

Vauzhall produced 500,000 units before the Corsa came along some 11 years later. • 1987 – The new 1987 Carton II (Car of the Year) and the beautifully appointed Senator took Vauxhall into a new era of executive transport. In 1989, the Lotus Carlton raised more than a few eyebrows, not just with its \$48,000 price tag, but Lotus-developed suspension, 377hp twinturbo straight-six and 176mp top end.

• 1993 – By 1993, the small car sector was ready for a mouldbreaking new entrant, and the new Corsa brought features like power steering, anti-lock brakes and a car alarm - all available. • 2005 - The launch of Vaux-

almost hall VXR and a list of Vauxhall cars that have all gained status with enthusiasts and press alike. In the same year, journalists name the 1.3 CDTi ECOTEC powerplant "Engine of the Year 2005."

> • 2008 - With its design and sophisticated technology, Insignia's launch led the way for a series of new cars that pushed Vauxhall brand values further than ever before.

> • 2012 – In the gloomy European automotive market of 2012, Vauxhall introduced six new models - Zafira Tourer, Mokka, ADAM, Astra VXR, Combo Van and Ampera, the revolutionary extended-range electric vehicle (E-REV).

spokesman Phil Colley.

Colley said.

downtime.

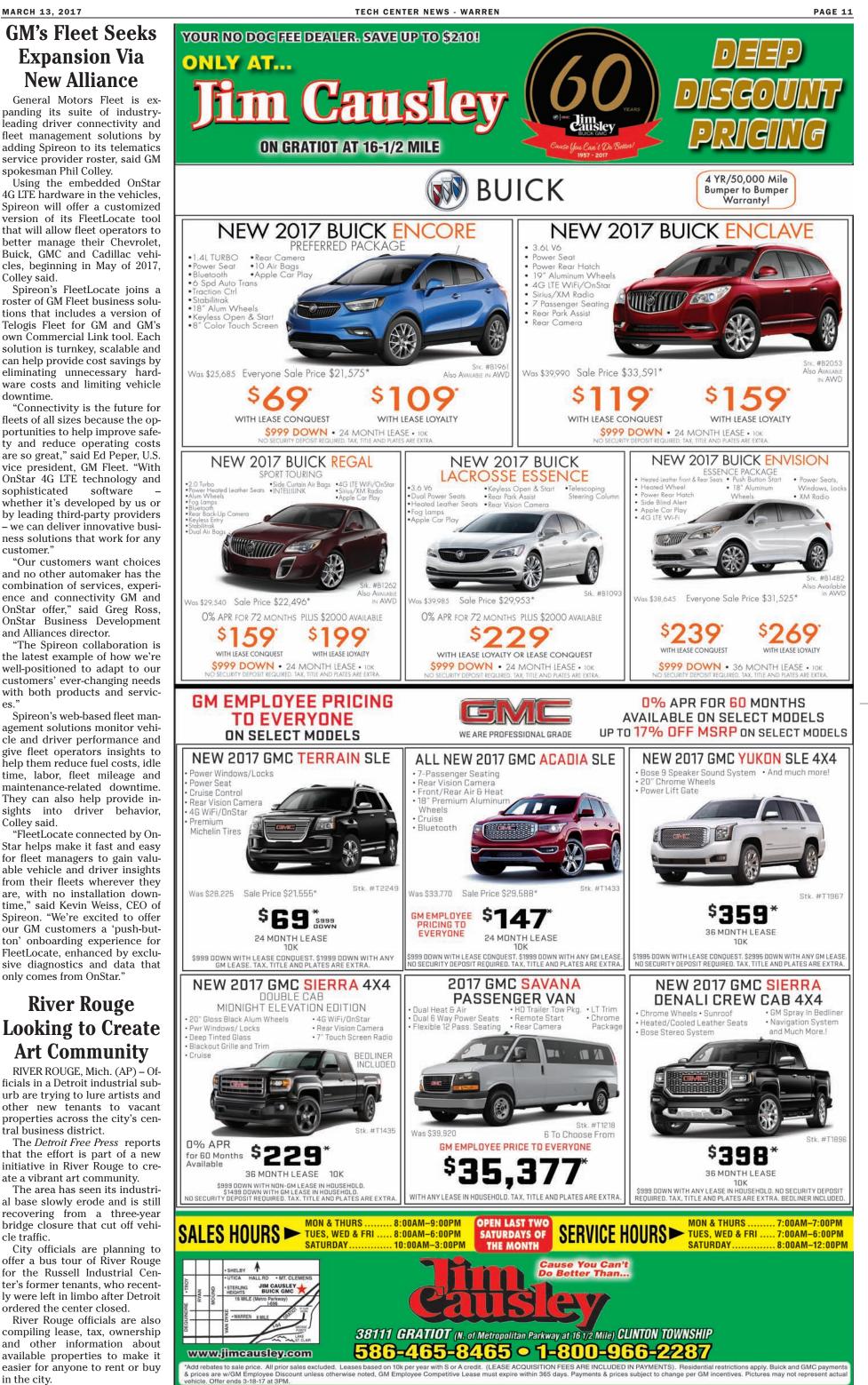
sophisticated

customer.'

es.'

Collev said.

and Alliances director.



#### Art Community

only comes from OnStar.'

RIVER ROUGE, Mich. (AP) - Officials in a Detroit industrial suburb are trying to lure artists and other new tenants to vacant properties across the city's central business district.

The Detroit Free Press reports that the effort is part of a new initiative in River Rouge to create a vibrant art community.

The area has seen its industrial base slowly erode and is still recovering from a three-year bridge closure that cut off vehicle traffic.

City officials are planning to offer a bus tour of River Rouge for the Russell Industrial Center's former tenants, who recently were left in limbo after Detroit ordered the center closed.

River Rouge officials are also compiling lease, tax, ownership and other information about available properties to make it easier for anyone to rent or buy in the city.

