# Tech Center News.

WARREN, MICHIGAN

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MAY 20, 2019

# 2019 'Vette Sets Pace for Indy 500

When they developed the 2019 said. "The pace car will use the Corvette Grand Sport, it was off to the races - literally.

The vehicle will serve as the Official Pace Car for the 2019 Indianapolis 500 presented by Gainbridge, leading 33 drivers to the green flag on May 26 for the 103rd running of the legendary race.

"In general, racing has really helped Chevrolet," said GM spokesman Stefan Cross. "It doesn't matter what racing, whether it's Formula One, Indy or drag racing. We are able to build better engines for our showroom vehicles because we're able to use some of the racing engine technology that translates into something for consumers."

It marks the 16th time a Corvette has served as the Pace Car, starting in 1978, and the 30th time a Chevrolet has led the field dating back to 1948, when a 1948 Fleetmaster Six convertible paced the race. No other brand or vehicle has served as the 500 Pace Car more than Chevrolet and the Corvette, respectively.

Past pace cars have included the Cadillac El Dorado, Dodge Viper and the Ford Shelby Mustang.

"The people at Indy have a lot of partnerships, but GM has provided the majority of pace cars standard 6.2L V8 aluminum engine. That should tell you something about the Grand Sports engine and the power that it produces.

'Chevrolet is honored to lead the way for the 500 once again," said Steve Majoros, director of Chevrolet passenger car and crossover marketing. "The Grand Sport is a particularly excellent choice as its wide body and aerodynamic features are steeped in racing heritage."

Indianapolis 500 fans also will see 33 2019 Corvette Stingrays on the roads of Central Indiana this spring and in the IPL 500 Festival Parade on May 25 in downtown Indianapolis, Cross said. The cars are provided to central Indiana business leaders and dignitaries and serve an important promotional role for the race, Chevrolet and Corvette. This is the first time since 2007 that matching Corvettes are serving as the 500 Pace Car and festival cars.

"We continue to be grateful for partnership our long-running with Chevrolet," Indianapolis Motor Speedway President J.

**CONTINUED ON PAGE 3** 



over the past 30 years," Cross This Corvette will be the pace car at the upcoming Indy 500 race.

# **Public Acceptance of EVs** Still Has a Way to Go

The 2019 Chevrolet Bolt was one of the EVs AAA rated highly.

dollars in the development of eletcric vehicle technology, yet AAA's latest survey reveals that despite many Americans having interest in electric vehicles, when asked if most vehicles will be electric by 2029, only four in 10 said yes.

Yet, a separate study AAA conducted earlier this year found that more than half of Americans believe that in this same timeframe most cars will have the ability to drive themselves - a reality that is much less likely to

OEMs are investing billions of happen, said AAA spokeswoman Adrienne Woodland.

AAA believes that similar to other emerging technologies, a lack of knowledge and experience may be contributing to the slow adoption of electric vehicles despite Americans' desire to go green, said Greg Brannon, AAA's director of Automotive Engineering and Industry Relations.

"Today, more than 200,000 electric cars can be found on roads across the country as al-

CONTINUED ON PAGE 4

## **Education Key to Succeeding in New Automotive World**

#### by Jim Stickford

In an era of rapidly changing technology, smart companies can learn something from the past.

That was the message given by Jeff Lowinger, president of eMobility at Eaton in Southfield, when he spoke at the recent Center for Advanced Automotive Technology (CAAT) conference held at Macomb Community College.

Lowinger said that today's international companies, automakers included, have to design technology on a global scale. That's quite different from the way things were done in the past. are cultural and educational dif-

In 1960, it took just 39 months ferences. Designers from differto complete a new airplane design, Lowinger said.

"This is an era where they didn't have computers," he said. 'They still used slide rules and did everything on paper. What's different between then and now was that they made decisions faster. People all tended to be in the same building. Now designers are spread across the globe in different time zones."

That physical separation can result in the slowing down of decision-making process, the Lowinger said. And then there

ent countries have different cultural approaches, and they have different languages and education levels.

These differences can cost time. So what's the solution?

"I think most companies get that they have to be able to make decisions quickly," Lowinger said. "Look at electric vehicles. At first there were just a couple of companies producing EVs, but now we see companies like VW and Audi entering the market.





Jeff Lowinger

## Lincoln's Aviator Builds in the Sound of Luxury

What does luxury sound like? want the music to envelop them acoustically expanding the feel- acoustics. "As you increase the

That's a question that the design-ers and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and engineers of the 2020 The addition of the height speak-inters and the addition of the height speak-inters and the addition of

## **Doubts** Cast on **GM** Sale of Its Lordstown Site

by JOHN SEEWER and TOM KR-ISHER

Associated Press

The fate of a shuttered General Motors plant in Ohio remains very much up in the air even after a tweet from President Donald Trump heralded the potential sale of a factory he has shown an intense interest in saving.

That's because the buyer is a fledgling electric vehicle maker that has never posted a profit, has only about 100 employees and warned this year that it might not have enough money to stay in business.

What the potential deal does signal is the likely end of a halfcentury of car manufacturing for GM at its factory near Youngstown and continued uncertainty for a battered Rust Belt community that has seen plenty of empty promises. GM confirmed this past week that it's negotiating the sale of its massive assembly plant in Lordstown, where production ended in March as part of a major restructuring for the automaker. Cincinnati-based Workhorse Group intends to make a commercial electric pickup truck at the facility. Its only production plant is in Union City, Ind., where it has built about 400 delivery trucks. It has started supplying UPS with electric vehicles and is one of five companies competing to land a \$6 billion contract to make a new generation of mail trucks for the U.S. Postal Service.

Lincoln Navigator spent a lot of time answering.

The new 2020 Lincoln Aviator features an audio system worthy of its show-stopping looks - one that allows clients to relax, unwind, and truly immerse themselves in a sanctuary of sound, said Lincoln spokeswoman Anika Salceda-Wycoco.

Making its debut in Lincoln's new three-row SUV, the new Revel Ultima 3D sound system offers clients a choice between three listening modes - stereo, audience and on-stage.

But it takes the listening experience to a whole new dimension by adding an immersion control slider in the center stack and four sets of dual-height speakers headliner, in the Aviator's Salceda-Wycoco said.

The slider allows clients to personalize the audio experience by determining how much they

ers allows for a 360-degree listening experience, transforming the Aviator cabin into a true concert hall for the road, she said.

Revel Ultima 3D transforms the environment of the vehicle with custom speaker placements for Aviator, acoustically expanding the feeling of the cabin while offering an intimate and personalized listening experience from all around.

With this new system, the listening experience is immersive and designed around the client no matter where they're seated in the Aviator," said Joe Kafati, Lincoln's multimedia supervisor. "Our engineers obsessed over the interior quietness and sound quality in the vehicle, just like all other aspects to truly transform Aviator into a sanctuary on the road.'

Revel Ultima 3D transforms the environment of the vehicle,

ing experience from all around, said Kafati.

"Our goal is to break down walls," said Brandon Wheeler, Revel's manager of customer

tening environment - one that seems to extend beyond the vehicle interior. Guitars, left and

#### **CONTINUED ON PAGE 4**



The Aviator's sound system was designed for optimum listening.

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## State, Macomb **Get Grant to Study Opioids**

The State of Michigan Talent Investment Agency, through a grant from the U.S. Department of Labor, has awarded Macomb/St. Clair Michigan Works! \$1,770,000 to address the workforce impacts of the nation's opioid crisis in Macomb County by providing employment services to eligible individuals affected by the health and economic effects resulting from opioid use, addiction, and overdose, said Macomb County spokeswoman Patty Madigan.

'Macomb County Community Corrections is very excited to partner with Michigan Works!, CARE of Southeastern Michigan, and the Michigan Talent Investment Agency to provide Employment services to those affected by opioid use and addiction." said Barb Caskey, director of Macomb County Community Corrections.

'We know that employment substantially increases the likelihood of success in the community and with this opportunity from the Department of Labor, we can provide additional support and guidance through peer recovery coaches, individualized employment plans, on-the-job trainings, and more for those working towards recovery."

FCA does more than talk the talk when it comes to diversity. The company takes action and follows through on the issue.

The editors of DiversityInc magazine have named FCA US to the magazine's 2019 list of "Noteworthy Companies for Diversity" and to the specialty list of "Top Companies for Veterans."

This is the 11th year the automaker has earned a place among the magazine's top 50 or most noteworthy companies for diversity since the benchmarks were established in 2001, said FCA spokesman Mike Palese. It is the third consecutive year that FCA US earned a position on the magazine's top companies for veterans list, which was established in 2017.

These annual benchmarks recognize the best diversity-management leaders in the U.S. Selected companies excel in such areas as hiring, retaining and promoting women, minorities, people with disabilities, LGBTQ employees and veterans, as well as programs that support supplier diversity, DiversityInc editors said. More than 1,000 companies participated in the 2019 evaluation.

"FCA US values the recognition and feedback we receive from influential organizations like DiversityInc," said Alisa Nagle, head of Human Resources at FCA - North America. "Our company has a longstanding, enterprise-wide commitment to diversity and inclusion and believes that we can create the necessary conditions that enable every employee to perform at their potential. This is how we will continue to deliver on our commitments and achieve desired business results."

Examples of the company's recent diversity accomplishments include the Silver Status that FCA US received as a Michigan Friendly Employer by the Michigan Veterans Affairs Agency in recognition of recruitment strategies aimed at veterans, Nagle said. The company also supports various organizations that advance women's involvement in STEM professions, including Michigan Council of Women in Technology and Society of Women Engineers.

ports seven business resource groups representing a range of affinity communities, including African-American, Hispanic, Asian, LGBTQ, veteran, Native American and women.

employee-directed These groups are each assigned an executive sponsor, and individually and collectively pursue initiatives that enhance the FCA US work culture by focusing on career development of members, celebrating multicultural differences and bringing value to the company and external communities through volunteer, charitable and strategic activities, said Nagle

FCA US continues its leadership in promoting and providing opportunities for diverse suppliers, she said.

Since 1983, the company has purchased nearly \$80 billion from minority-owned, womenowned and veteran-owned suppliers, said Brian Johnson, head of FCA US's Diversity & Inclusion Office. FCA US spent \$9 billion with more than 300 diverse suppliers in 2018, he said.

"FCA is and will always be a champion of a strong, diverse supplier network," said Scott Thiele, head of Purchasing and Supply Chain Management at FCA - North America. "As we design, engineer and manufacture vehicles for today's customers. we continue to embrace the ingenuity that comes from having every perspective at the table."

FCA US supplier diversity goals require that up to 8.5 percent of a Tier I supplier's buy be sourced to certified minority-owned businesses, three percent sourced with women-owned businesses and one percent sourced with veteran-owned businesses, Thiele said. The company provides advocacy and consulting services to certified LGBT-owned and disabled-owned suppliers.

In 2018, FCA US received the following honors for its supplier



diversity efforts, said Nagle: Best Tier II Program from the National Minority Supplier Diversity Coun-Internally, the company supcil, Corporation of the Year from the Michigan Hispanic Chamber

FCA Honored – Again – for Its Diverse Workforce Efforts

of Commerce, Best-In-Class for Excellence in Supplier Diversity from the Great Lakes Women Business Council, Top Corporation Gold from the Women's Business Enterprise National Council, and Advocate of the Year from the Michigan Hispanic Chamber of Commerce.

> "Events of the past year have demonstrated that decisive ethical leadership is necessary to guide any organization to success," said Luke Visconti, founder and CEO of *DiversityInc*.

> "Successful leaders hold themselves accountable to be culturally competent, a skill that re

quires constant learning. DiversityInc Top 50 and Noteworthy companies have a metrics-evidenced ability to treat people more fairly than other large companies. They also have a greaterthan-average return for their shareholders.

The mission of DiversityInc is to bring education and clarity to the business benefits of diversity, Visconti said. The DiversityInc Top 50 and Noteworthy Companies for Diversity list began in 2001, when many corporations were beginning to understand the business value of diversitymanagement initiatives.

The 2018 Top 50 and Noteworthy Companies for Diversity results will be featured on DiversityInc.com and in DiversityInc magazine.



# Macomb Cleans Up River

The Macomb County Public Works Office has put an absorbent boom in place on the Red Run Drain in Warren to capture a petroleum sheen on the surface of the water, said Macomb County spokesman Dan Heaton.

MCPWO personnel were initially alerted to the sheen at 9:30 a.m. on May 13. The sheen was seen between Dequindre and Ryan Roads on the drain, which flows on an easterly route roughly from Dequindre and Chicago roads before entering the Clinton River.

The source of the sheen is unknown, Heaton said. Several times over the past two years, a sheen has been seen coming from the underground portion of the Red Run in Oakland County after a heavy rain. The drain enters Macomb County at Dequindre and Chicago Road and becomes an above-ground waterway in Warren. It is not known if the May 13 sheen originated in Oakland County.

An investigation of a sheen on the Red Run earlier this year determined that the product creating the sheen was diesel fuel that was entering the Henry Graham Drain in Madison Heights and then depositing into the Red Run, but the exact location of that diesel source has eluded detection.

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# **Tech Center News**

MAY 20, 2019

COVERS THE TECH CENTER AND THE IMMEDIATE AREA

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# SEG Automotive Emissions Tech Meets High Standards

Reducing CO2 emissions from passenger cars and commercial vehicles is a huge challenge for the automotive industry.

One way to help fight emissions is through the development of EVs, and SEG Automotive of Novi has developed technology to help drive the EV revolution, said SEG spokesman Pat Liebler. As a result, the Boost Recuperation Machine (BRM) has been recognized by the European Union as an "eco innovation.

In the gradual switch to electric vehicles, it is also important to limit emissions from combustion engines. Liebler said.

The BRM converts conventional combustion engines into 48V mild hybrids and thus saves up to 15 percent on both fuel and CO2 emissions. This product has now been recognized by the European Union as an "eco innovation," the only 48V hybrid technology to earn this distinction.

The EU, which has the strictest CO2 legislation in the world, recognizes proven environmentally efficient technologies with CO2 credits, Liebler said. The SEG Boost Recuperation Machine converts conventional combustion engines into 48V mild hybrids by efficiently "recuperating" braking energy and using it for increased torque output. The technology saves up to 15 percent on both fuel and CO2 emissions, while also improving overall driving dynamics.

"Comparing possible savings on government mandated fines, along with the low system costs, a switch from conventional 12V to 48V mild hybrid practically finances itself for most manufacturers," says Jon Husby, president of SEG's North American operations. "In addition, the driver benefits from fuel savings, comfort start and additional torque." Although these credits are only currently available in the European Union, similar incentives may become available in North America as governments seek innovative and effective ways to lower CO2 emissions and fuel consumption.

The business case supporting 48V mild hybridization is clear regardless of governmental incentives due to its low system cost, proven performance and operational efficiencies, Husby said. The BRM simply replaces



The SEG BRM

the conventional generator in its space on the belt and transforms the vehicle into a 48V mild hybrid, seamlessly helping vehicle manufacturers further improve their fleet consumption values.

The BRM is part of SEG's consistent overall strategy for sustainable and profitable growth while significantly reducing emissions from passenger cars and commercial vehicles. "The BRM is an ideal solution to make current combustion engines more efficient today while other forms of electrification are developed and accepted. The 'Transformation of the Powertrain' is at the heart of everything we do," Husby said.

SEG Automotive is closely linked to the history of the automobile, Liebler said. Emerged from the BOSCH Starter Motors & Generators division in January 2018, the company stands for more than a century of innovations in its product sector: from the invention of the starter motor and generator to Start/Stop and mild-hybridization.

SEG Automotive makes a significant contribution to climate protection by reducing emissions across powertrain technologies, Husby said.

# **Corvettes Sets Pace at 2019 Indy 500 Race**

CONTINUED FROM PAGE 1

Douglas Boles said. "It's such a strong bond that has proven integral to the success of our events.

"The 2019 Corvette Grand Sport is a world-class machine that exudes speed, performance and excitement, a perfect fit to lead the 500 field.

"Personally, there is nothing quite like driving an Indianapolis 500 Chevrolet Corvette around Indiana in May, and I know our fans also will enjoy seeing the Corvette Stingray festival cars around town throughout the Month of May.

The Corvette Grand Sport Pace Car can accelerate from 0-60 mph in 3.6 seconds, said Cross, adding that the car also has an available cornering capa- taking the checkered flag with bility of 1.2 g, thanks to the Corvette Z06's many advanced aerodynamic components.

Chevrolet has a storied history with the Indianapolis Motor Speedway, Cross said, Chevrolet was founded in 1911, the year of the inaugural 500-mile race, and co-founder Louis company Chevrolet, along with brothers Arthur and Gaston, competed in early Indy 500 races. Arthur competed in the 1911 race and Gaston won in 1920.

Eight drivers with Chevrolet engines have combined to win "The Greatest Spectacle in Racing" 10 times, with Rick Mears, Emerson Fittipaldi, Arie Luyendyk, Al Unser Jr., Helio Castroneves, Tony Kanaan, Juan Pablo Montoya and Will Power bowtie power.

Power drove the No. 12 Verizon Team Penske Chevrolet to victory in the INDYCAR Grand Prix and the 102nd Indianapolis 500 last May, the first time a driver has swept both of these events in the same year.

Chevrolet also was on the pole for both races, with Power leading the way in the INDYCAR Grand Prix and Ed Carpenter taking the top spot for the Indy 500.

Team Chevy also has won the NTT IndyCar Series manufacturer championship in six of the last seven seasons.

The race will be televised live on NBC for the first time, with the pre-race show starting at 11 a.m. EDT on May 26.

## **OEMs Need Education to Adapt to Times**

### CONTINUED FROM PAGE 1

'That tells us that things are accelerating. These OEMs are looking for suppliers who can keep up with them. So when I am asked what the solution is, I say that it starts with education.'

Lowinger is working with universities to help them design a curriculum that takes into account the way the world operates today.

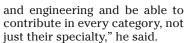
That includes getting students and scientists out of their comfort zones.

"We like to rotate our engineers between specialties,' Lowinger said. "As they move between different disciplines, they learn to see things from a different point of view, and learn how people in different disciplines operate."

This knowledge gives bosses and managers the broad perspective they need to make decisions in a more timely fashion, Lowinger said.

"We want our people to be able to go to table talks about design





By having designers and engineers who have been exposed to the different disciplines, they'll be able to promote a more efficient design and engineering process.

"The companies that can do this will have a much better chance of prospering in an era when products are now being designed globally for a global market.

"For today's companies, it's adapt or die, and the adaptation process starts at school.'

GENUINE



## **Honda Closing English Site In Year 2021**

LONDON (AP) - Honda has confirmed its western England car factory, which employs 3.500 people, will close in 2021.

The Japanese carmaker announced May 13 that the Swindon plant will shut in two years, "at the end of the current model's production life cycle."

Honda makes its popular Civic model at the factory, 70 miles west of London. Reports of the closure first emerged in February, heightening concerns about the impact of Brexit-related uncertainty on the U.K. economy.

Honda said the closure is not Brexit-driven but is part of Honbroader response to da's changes to the automotive industry. It said no viable alternatives to the closure of the Swindon plant have been identified.

## **DuPont Gets** Award for **New Polymer**

innovative composite An bonding adhesive from DuPont earned silver honors at the 2019 Edison Awards celebration in New York City in April.

The Edison Awards, named after Thomas Alva Edison, recognize and honor the world's best innovators and innovations, said DuPont spokeswoman Christina Zinck.

Developed with a team at Audi, BETAFORCE 9050M composite bonding adhesive for automotive mass production and multi-material substrates enables significant weight reduction and improves torsional stiffness of the vehicle.

These characteristics result in better fuel efficiency, safety, handling, comfort and carbon dioxide reduction.

"We are honored to be recognized by the Edison Awards judges for this innovative solution," said Scott Collick, Global Research and Development director of DuPont Transportation & Advanced Polymers.

"BETAFORCE 9050M provides economic benefits for our customers by enabling lightweight substrates like carbon fiber to be incorporated more widely into vehicles.

This then helps OEMs meet and exceed regulations. The improved fuel economy also benefits consumers.<sup>3</sup>

# AAA Study Says Public Not Ready for EV Tech

#### CONTINUED FROM PAGE 1

most every manufacturer sells them," said Brannon. "But, like other new vehicle technologies, Americans don't have the full story and that could be causing the gap between interest and action.

AAA's annual survey that tracks opinions regarding electric and hybrid vehicles found that, while consumer interest remains steady, Americans may not have a solid understanding of electric vehicle performance, which may be giving consumers pause when it comes to considering electric for their next purchase. For instance, electric vehicles, unlike those running on gas, do better in stop-and-go traffic because the car can recapture energy to charge the battery when decelerating.

However, AAA's survey found that a majority of Americans (59 percent) were unsure of whether electric vehicles have better range when driving at highway speeds or in stop-and-go traffic. This demonstrates that many consumers are not sure what to expect from an electric vehicle in two of the most common driving scenarios, Brannon said.

Although most Americans don't believe electric vehicles will be on the road in masses in the next 10 years, AAA did find that 40 million Americans say they would be likely to consider an electric vehicle for their next car purchase, with Millennials leading the pack.

Concern for the environment and lower long-term costs remain the leading reasons to go green (74 percent and 56 percent respectively). Previous objections to buying electric with regards to price and range anxiety continue to ease and have trended downward significantly:

- Concern that there are not enough places to charge down 11 percent from 2017.
- Concern about running out of charge when driving down 11 percent from 2017.
- Higher cost of battery repair or replacement - down 8 percent from 2017.
- Higher purchase price down 6 percent from 2017.

These vehicles are a big part of the future of transportation since self-driving cars, when they do arrive, will likely be electric," said Brannon. "The difference, of course, is that electric vehicles are already here and with the advancements in style and range that have been made over the last few years, they have become an even more viable option for many Americans."

Consumers interested in electric vehicles, but still unsure, should research and learn as much as possible about these types of cars, Brannon said. AAA also recommends drivers visit a dealership, test drive an electric



The 2019 Jaguar I-Pace rated highly in a recent AAA study on EV cars.

vehicle and ask as many ques- cars based on criteria such as tions as possible of the dealer and other electric vehicle owners

It is also important to understand charging options available at home to ensure consumers can take full advantage of electric vehicle technology with the least inconvenience.

Each year, AAA (Automobile Club of Southern California Automotive Research Center) produces its Green Car Guide, which rates electric vehicles as well as hybrids and highly fuel-efficient ride quality, safety and performance

This comprehensive guide can serve as a resource to consumers since it not only provides detailed reviews of each car tested, but also offers robust information on green vehicles, Brannon said.

Consumers who are on the fence will find that this guide can be a valuable resource for learning more about electric and other environmentally friendly vehicles.

## **Lincoln Building Luxury Sound Into New Aviator**

#### CONTINUED FROM PAGE 1

right, are very wide. The vocals are incredible. It's really changing the norm of what you'd expect from sound in terms of reinforcement and position."

The additional speakers and immersion slider availability add to the already advanced modes. In stereo mode, clients are sitting in the sweet spot between a pair of Revel Ultima speakers.

In audience mode, clients enjoy the best seat in a concert hall as the stage widens in all directions.

In on-stage mode, clients are seemingly on stage with the musical performance; immersed in 360-degree sound.

"Music is a mood changer - it relaxes you, rejuvenates you or energizes you based on music preferences," said Kafati. "Music is a breather from a hectic day, and this audio system allows clients to tailor that experience and create their own world inside Aviator's spacious and airy cabin.'

The placement, tuning, calibration and the number of Revel speakers are unique to each Lincoln vehicle, designed to ensure superior audio quality and accuracy.

In Aviator, new dual 40-millimeter speakers are located above each occupant in the front and second-row seats for a total of eight speakers in the ceiling. They are meticulously integrated with the three-way speakers in the doors and two-way front and rear speakers. In the Aviator, even the alerts are music to the driver's ears, Salceda-Wycoco said. Precise, crystalline notes recorded by the Detroit Symphony Orchestra, she said, provide distinct musical alerts for about 25 features in the vehicles, enhancing the overall experience.

Revel engineers maintain the same standard in their luxury home theaters by designing the vehicle with an architectural structure that ensures every detail of a song reaches an occupant's ears at the precise time and level, delivering the most authentic listening experience, Kafati said, adding that the design is crucial to delivering the award-winning sound quality for which Revel is known.

Revel Ultima systems also include Clari-Fi, a patented HARMAN technology that works in real-time to rebuild audio details lost in digitally compressed music. Clari-Fi reconstructs it for an enhanced listening experience regardless of source.

The creation of the system is a team effort - Lincoln engineers worked tirelessly on Aviator's cabin to ensure the listening experience is optimized, including adding a wealth of interior and exterior noise control strategies to minimize unwanted noise, said Kafati.

Acoustic laminated windshield and side glass, as well as acoustic underbody shields and wheel arch liners are featured. The doors are built for quiet, solid closure, and the chassis was tuned to reduce road-induced low-frequency rumble Wheeler said. A dual-wall dash system provides an additional barrier and air gap between passengers and the engine compartment, serving as a separation to keep vibrations and noise out of the cabin. Also, 360-degree hood sealing is included. The audio system has been meticulously integrated into the spacious, streamlined cabin, said Wheeler, with the team carrying out multiple levels of checking and tuning to make sure it sounds great at different speeds.



FORBES 2019 **BEST-IN-STATE** WEALTH ADVISORS

### Powered by SHOOK Research

The Forbes ranking of Best-In-State Wealth Advisors, developed by SHOOK Research is based on an algorithm of qualitative criteria and quantitative data. Those advisors that are considered have a minimum of 7 years of experience, and the algorithm weighs factors like revenue trends. AUM, compliance records, industry experience and those that encompass best practices in their practices and to working with client Portfolio performance is not a criteria due to varying client objectives and lack of audited data. Out of 29,334 advisors nominated by their firms, 3,477 received the award. This ranking is not indicative of advisor's future performance, is not an endorsement, and may not be representative of individual clients' experience. Neither Raymond James nor any of its Financial Advisors or RIA firms pay a fee in exchange for this award/rating. Raymond James is not affiliated with Forbes or Shook Research, LLC Kaydan Wealth Management, Inc. is not a registered broker/dealer and is independent of Raymond James Financial Services, Inc. Securities offered through Raymond James Financial Services, Inc., member FINRA/ SIPC. Investment Advisory Services offered through Raymond James Financial Services Advisors, Inc. and Kaydan Wealth Management, Inc.

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Our nuts and bolts presentation outlines:

- Help to maximize post-retirement distribution without giving up current year tax deductibility.
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- Social Security maximization strategies.
- And more!

**RSVP REQUIRED.** Space limited to 20 seats. RSVP to Evan Lian at (810) 593-1630 or events@kaydanwealth.com.

# SUCCESSFUL RETIREMENT

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**TUESDAY, MAY 14, 2019** 

Meeting 1: 7:00 - 7:50 a.m. (breakfast included) Meeting 2: 11:30 a.m. - 12:20 p.m. (lunch included)

Location: Courtyard by Marriott Detroit Warren (30190 Van Dyke Ave., Warren, MI 48093)

### **TUESDAY, MAY 21, 2019**

Meeting 1: 7:00 - 7:50 a.m. (breakfast included) Meeting 2: 11:30 a.m. - 12:20 p.m. (lunch included)

Location: Detroit Marriott at the Renaissance Center (400 Renaissance Dr., Detroit, MI 48243)

Visit www.KaydanWealthManagement.com for a complete list of all future meetings and events.



Raymond James and its advisors do not offer tax or legal advice. You should discuss any tax or legal matters with the appropriate professional.

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### Judge Keeps UAW Lordstown Lawsuit Alive

federal judge has ruled that a lawsuit filed by the United Auto Workers against General Motors over the closing of three plants should be heard in Ohio.

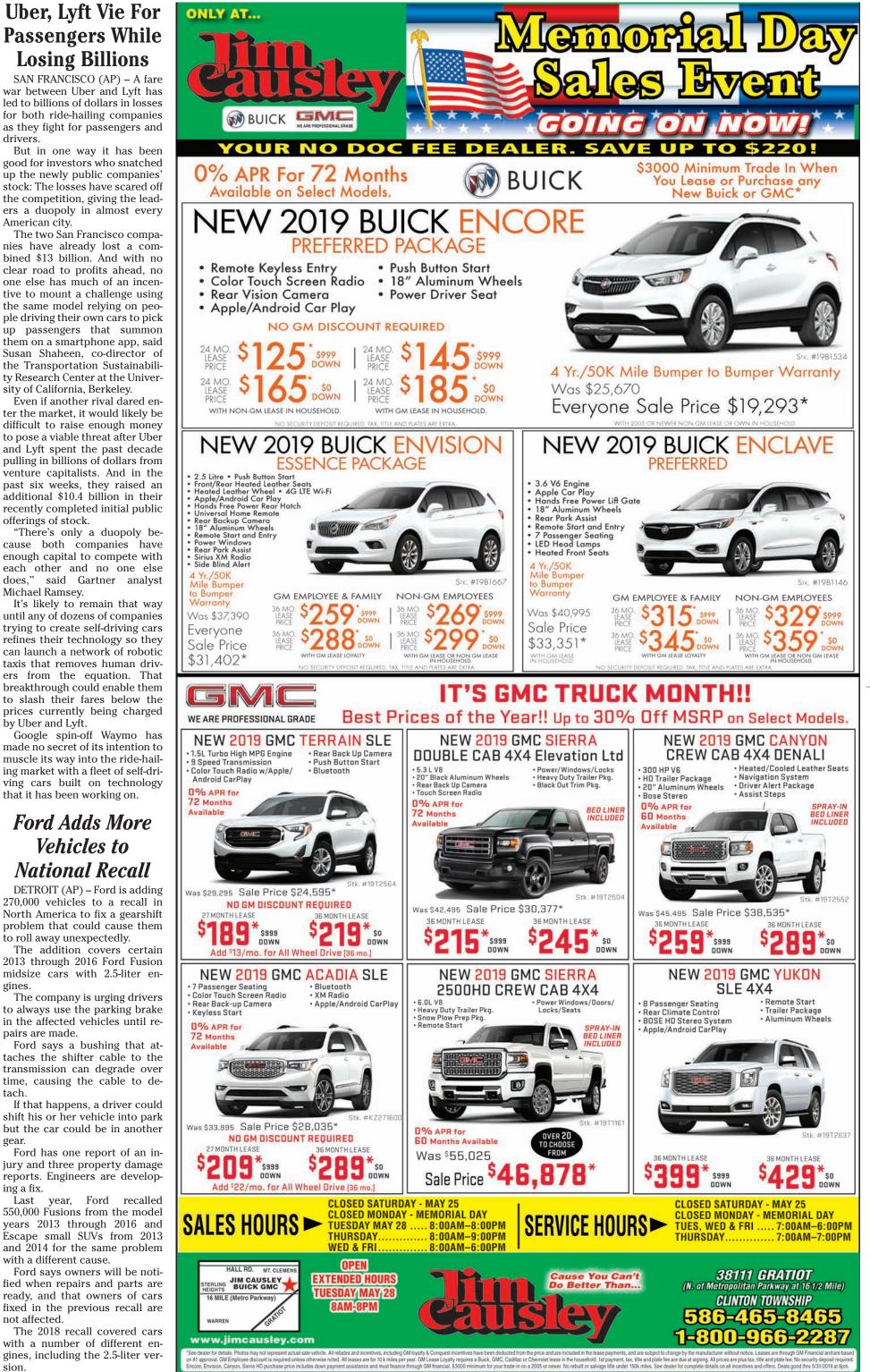
The Warren Tribune Chronicle reports U.S. District Judge Benita Pearson, who is based in

YOUNGSTOWN, Ohio (AP) - A Youngstown, on May 10 dismissed GM's arguments that the case should be moved to a federal court in Detroit for the convenience of parties and witnesses in the case. The headquarters for GM and the UAW are in Detroit. A GM spokesman declined to comment.

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pairs are made.

Ford says a bushing that attaches the shifter cable to the transmission can degrade over time, causing the cable to detach.

If that happens, a driver could shift his or her vehicle into park but the car could be in another gear.

Ford has one report of an injury and three property damage reports. Engineers are developing a fix.

Last year, Ford recalled 550,000 Fusions from the model years 2013 through 2016 and Escape small SUVs from 2013 and 2014 for the same problem with a different cause.

Ford says owners will be notified when repairs and parts are ready, and that owners of cars fixed in the previous recall are not affected.

The 2018 recall covered cars with a number of different engines, including the 2.5-liter version.

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# **Some Experts Expressing Doubts on Lordstown Sale**

#### CONTINUED FROM PAGE 1

But there are major questions about its financial footing.

Workhorse has poured most of its money into research and development, with limited sales, losing \$36.5 million last year. It warned in its most recent quarterly filing that it didn't have enough money to pay for its operations through the first half of this year and needed additional financing to stay afloat.

But the publicly traded company, whose stock soared after Trump's tweet, also said it believes it can raise enough money to keep going.

Still, it doesn't yet appear to have backing like one of its competitors, Rivian, which just got a \$500 million investment from Ford to develop a new electric vehicle.

The plan Workhorse laid out this week is for it to be a minority investor in a new entity that would own the Lordstown plant. No other investors have been announced, and it's still looking for partners.

GM spokesman Jim Cain said it was too early to tell whether the automaker would be one of them. GM sees the startup as a way to preserve the Lordstown plant and thinks Workhorse has the technology and a product to build there, Cain said.

Tesla Inc. and other startup companies were small businesses at one time, he pointed out.

If Workhorse does begin production there, it would likely start out with a few hundred workers, far less than the 4,500 people GM employed just two years ago before it began cutting shifts.

Democratic Rep. Tim Ryan, whose district includes the plant. said a sale won't help GM workers

in the area who would need to transfer if they want to keep their pension and benefits with the automaker.

Any long-term job growth for the region would be years away, he said, but "it's better than the plant being empty."

Trump has repeatedly called on GM to find another owner or reopen the plant, which is in an area of the state that will be important to him in the 2020 election and where he has promised a revival of manufacturing jobs.

Some GM workers in Lordstown who have been holding out hope the automaker would reopen the factory with a new vehicle to build there were skeptical about the new plans.

Since the area's steel mills began closing in the 1970s, investors have come into the Mahoning Valley pledging to build factories that would make blimps, commuter airplanes and a new version of the Studebaker, said Tim O'Hara, who worked at the Lordstown plant for 41 years.

Nothing ever came of it," he said. "We've been through this in the valley. We've had these false promises. We're kind of used to it, at least we should be."

O'Hara, who is vice president of the United Auto Workers local at the plant, noted that any sale still needs to be negotiated during upcoming contract talks with the union, which still wants GM to stay and keep the plant open.

"We're telling our members to hope for the best, prepare for the worst," he said.

Republican Gov. Mike DeWine, who has called for GM to sell the plant if it doesn't intend to keep it running, said it was too early to celebrate because many details must still be worked out.









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