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GM Tech Center Campus to Add 3,000 Engineers

by Jim Stickford

About 3,000 employees from GM's Global Propulsion Systems facility in Pontiac will begin the trek to the company's Tech Center in Warren, starting this

GM spokesman Mike Albano said the decision to move 3,000 engineers from the Pontiac facility to Warren was made only recently.

"The idea to move the employees was made by Mark Reuss' leadership team," Albano said. "He's executive vice president of Global Product Development, Purchasing and Supply Chain and the decision was made in the last month.

"We're moving fast and it's a part of our continuing efforts to transform the company into a more nimble and forward-thinking company.'

Because the move was approved so recently, the plans for moving the employees haven't been finalized, Albano said. But he expects the first batch of engineers to move by the end of the vear, and all engineers to be in Warren by the end of 2019.

"We will be moving people to various sites around the Warren campus in phases as appropriate to their jobs," Albano said. "By

having more engineers close together, we'll be able to reduce redundancies that might exist."

For example, GM engineers can now avoid testing in Pontiac and retesting in Warren.

And just by having more staff physically close to each other, they can collaborate easier and that makes the spreading of ideas that much more efficient, Albano said.

"Now just because we are moving engineers to Warren doesn't mean that we're closing up the Pontiac facility," Albano said. "There will still be about 1,000

CONTINUED ON PAGE 3



GM's Warren Tech Center will contine to grow as a GM engineering hub.



Buick drivers can use Yelp Reservations at thousands of restaurants.

Buick Yelp App Connects with Restaurants

Buick drivers can get a good using connectivity to enhance as Seafood or Mexican, and view seat in a restaurant without ever leaving the driver's seat, thanks to a new app.

Drivers of properly equipped Buick vehicles can now make onthe-go reservations at a variety of restaurants with just a few taps on their infotainment touchscreen. Part of a recent update to Buick Marketplace, Yelp Reservations gives drivers access to thousands of restaurants nationwide.

Marketplace, the industry's first in-vehicle commerce platform, is one more way Buick is

vehicles and create new and convenient customer experiences, said GM spokesman Stefan Cross.

Within the Marketplace app, Yelp Reservations allows customers to search for restaurants in a 25-mile radius of their vehicle's location and reserve a table for up to 10 people.

This is the first time Yelp Reservations has been embedded in vehicles, Cross said.

Users can even segment their search by types of cuisine, such

the restaurant's rating and general price range. The app also lets drivers call a restaurant directly.

"Whether drivers want to make a dinner reservation on the go, or get recommendations for restaurants in a new city, the newly added Yelp Reservations brings simple convenience to the car,' said Sam Russell, director of Buick Marketing.

"Making new features like this available for vehicles already on

CONTINUED ON PAGE 3

BorgWarner's Latest Tech Debuts at Propulsion Center

by Jim Stickford

BorgWarner unveiled its latest technology at a special press preview held at the company's propulsion tech center in Auburn

The Nov. 13 event was meant to show how the company has continued to evolve along with the auto industry, said Scott Gallett, vice president of Marketing for BorgWarner.

The marketplace has changed and we've changed to keep up," Gallett said. "We consider ourselves a worldwide propulsions systems maker now. And we want to make sure that the world knows about our new hybrid

and electric vehicle technology."

BorgWarner has its products in half of all internal combustion engine (ICE) vehicles in the world, Gallett said. But that's just the beginning of BorgWarner's efforts, he said.

"By the year 2023, we'll have our products in half the ICE vehicles in the world as well as in half the hybrid and a third of the pure electric vehicles (EVs). This is based on bookings we have recently received from OEMs. This is totally different from saying we make ICE parts and want to get into EV technology.'

This broad portfolio gives

CONTINUED ON PAGE 5



Fulton talks about BorgWarner's integrated electric-drive module.

Ford Planning for Upcoming Self-Driving Vehicle Service

cars, the question that most often comes up is when they will

take to the streets. While that is important, there's so much required for wide-scale deployment beyond just having Sherif Marakby, CEO of Ford

Autonomous Vehicles. "Aside from delivering safe and reliable technology, what does it take to operate a successful self-driving vehicle service, especially one that customers want to use and makes their lives better?" Marakby asked. "And one that is a profitable business that also benefits the community?

These aren't questions we're willing to put off until some later date. In fact, we've been thinking about them for a long time.

"We want our self-driving vehicles to solve real-world problems with levels of accessiience that aren't possible now.

Self-driving vehicles are simply an enabler for a new kind of business they're building at Ford, Marakby said.

"The company," he said, "is althe self-driving vehicle itself, said ready designing, testing and operating an ecosystem of services today that is required for our self-driving business in the future - building the capabilities that will make scaling our business and delivering sustainable revenue streams much easier in the

> "We believe a successful selfdriving services business is built around the principles of supply, operations, and demand. Seems fairly obvious, but the devil is in executing the details."

For supply, Marakby said, they need access to vehicles and selfdriving technology. Then there's operations, which doesn't get a lot of attention compared with

When discussing self-driving bility, affordability and convent he intriguing story of self-driving Dearborn automaker needs to technology development, but it's identify where customers are what will make the difference in that can be served by their busirunning a viable business.

> And, of course, customers are the source of demand, so the

ness.

CONTINUED ON PAGE 4



Ford is working with companies that have existing customer bases.

Troy's AxleTech **Gettting Into** Electronic Parts Trov-based AxleTech is ex-

tending its product offerings by entering the world of complex electronics and mechatronics remanufacturing.

The company has assembled an in-house team of experts and brought in state-of-the-art testing systems to support this effort, which were introduced at the APPEX show in Las Vegas, said AxleTech spokeswoman Cynthia Norris.

For the last 40 years, AxleTech has remanufactured its axles and transfer cases for the off-highway and defense markets, and recently launched an air disc brake remanufacturing product

The company is now launching electronics and mechatronics remanufacturing based on the expected exponential growth of electronics content in vehicles in the next five years, Norris

"As autonomy, electrification, sustainable manufacturing become increasingly more important in the mobility sector, the industry will require experienced and knowledgeable complex electronics and mechatronics remanufacturing specialists," said Raji El-Kassouf, director of AxleTech Business Development, Remanufacturing.

"With this new program, AxleTech will be able to provide customers with a viable, cost-effective option for quality remanelectronics ufactured mechatronics, as well as ensure the serviceability of these products and help manage lifecycle

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Warren Offers Blight Relief

The city of Warren is urging citizens with blight complaints in their neighborhoods to contact city hall.

The blight hotline telephone number is 586-574-4662. It is operational 24 hours a day, seven days a week.

Those reporting any blight are asked to leave the address of the property in question. To protect privacy, anyone reporting blight does not have to leave his or her name.

Fans of the Colorado to Get Two Anniversary Editions

Sometimes success deserves to be recognized and this November marks the four-year anniversary of the return of the segment-redefining Colorado midsize truck. Introduced as a 2015 model, the Colorado recorded its first full month of sales in October 2014. Since then, U.S. customers have bought more than 428,792 Colorados.

To celebrate, Chevrolet is expanding the Colorado range with two new special editions, the off-road Z71 Trail Runner and street-focused RST, that offer options to match customer interests on the trails and on the street, said GM spokesman Monte Doran.

"The success of Colorado helped reignite the midsize truck segment, which increased 27 percent from 2015 to 2017," said Sandor Piszar, director of Marketing for Chevrolet Trucks. "It changed what customers expected from a midsize truck, brought new customers to Chevrolet and has inspired competitors to follow Chevy's lead."

The Colorado also helped make GM the most successful truck company for four consecutive years, selling 634,505 more midsize pickups than the closest manufacturer from 2013 through

the first three quarters of 2018, Piszar said.

Colorado's success has been fueled by one of the broadest lineups in the midsize segment – including three powertrains, three configurations and a wide range of models and special editions – with a steady cadence of innova-

Upon its introduction as a 2015 model, Colorado brought a new standard to the segment with three powertrain options, an EPA-estimated 27 mpg highway and 7,000 pounds of towing capability, and it introduced features such as the built-in Wi-Fi Hotspot with available 4G LTE data, Piszar said.

Since then, Colorado has made updates every calendar year, including:

• 2015: First available diesel engine offered in the segment (excluding other GM brands).

Four years after it was introduced, no other competitor offers a diesel engine, with class-leading 30 mpg highway fuel economy and class-leading towing capacity of 7,700 pounds.

- 2016: New V6 gas engine and segment-first eight-speed transmission.
- 2017: ZR2 model with wider track, lifted suspension from the factory, revolutionary

Multimatic DSSV dampers and class-exclusive standard front and rear electronic locking differentials.

- 2018: ZR2 Bison performance variant developed in partnership with AEV that will reach dealers in early 2019.
- 2019: Two new special editions added to the lineup: RST and Z71 Trail Runner.

Both new special editions feature the flow-through "CHEVRO-LET"-lettered grille first introduced on the Colorado ZR2 Bison, Doran said. The grille is also available as an accessory for an MSRP of \$395, not including installation or tax.

The Colorado RST builds on the successful street-focused RST models offered on Tahoe, Suburban and the new Silverado.

For Colorado, the RST is based on the LT trim and adds monochromatic exterior offset with black beltline and body side moldings, Doran said.

It also adds a black tailgate bowtie, Colorado and RST badges.



The street-focused Colorado 2019 RST is based on the LT trim.

New EPA Regs Might Affect Heavy Trucks

by TOM KRISHER AP Auto Writer

DETROIT (AP) – The Trump administration's Environmental Protection Agency is proposing to rewrite rules that limit pollution from heavy trucks but that the EPA says slow the economy.

Acting EPA Administrator Åndrew Wheeler argues that new technology can help improve air quality, noting that the regulation of harmful nitrogen oxide emissions hasn't been revamped since 2000.

EPA officials announced the plans on Nov. 13 but offered few details and said they were just beginning a regulatory process that can take years.

"We are doing it because it's good for the environment," said Wheeler, who notes that the EPA is under no requirement to redo the regulation. "Our goal is to update our standards so that we can get these new technologies in use across the country."

The proposed "Cleaner Trucks Initiative" is drawing expressions of hope but skepticism from some environmental groups, especially because the EPA under President Donald Trump already has proposed relaxing emissions requirements for light passenger cars and trucks by freezing them at 2020 levels.

Andrew Linhardt, the Sierra Club's deputy director for clean transportation, said his group is

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wary, and it wants to see details. Linhardt said he would favor the adoption of rules that would reduce nitrogen oxide emissions but doubts that the administration wants to do that.

"Unfortunately, this administration and this leadership of the EPA do not fill us with much confidence that this will be a real air pollution reduction measure," Linhardt said.

Paul Billings of the American Lung Association said he thinks the idea is encouraging but depends on exactly what the proposal looks like.

"The devil's always in the details," Billings said. "If they were not to tighten the (nitrogen oxide) standards, it'd be a bait-and-switch."

Nitrogen oxides can worsen existing lung disease, contribute to the development of asthma and increase susceptibility to respiratory infections.

Since the emissions regulations were last updated in 2000, regulatory requirements have been added piecemeal, resulting in what Wheeler calls "overly complex and costly" requirements that don't benefit the environment.

The goal of the regulatory change would be to root out inefficiencies and perhaps use onboard diagnostic computers to ensure compliance over the life of trucks, Wheeler said.

The share of overall pollution

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contributed by heavy trucks has grown over the years, especially in urban areas and port cities with significant truck traffic, said Bill Wehrum, assistant administrator of the EPA's Office of Air and Radiation.

Wehrum said the EPA doesn't have a proposed target for setting new nitrogen oxide standards because it's at the beginning of a rule-making process. He said vehicles are now tested for emissions on a treadmill-like dynamometer, which might not capture all high-emissions phases of engine operation. The new standards could cut emissions during high-pollution phases, he said.

California already is working on more stringent heavy truck emissions standards, and new federal standards could conflict with them. Wehrum said the EPA isn't drawing up its own standards to set up a confrontation with California, and it will work with the state on the new regulation.

The EPA's plan to freeze passenger vehicle fuel economy standards at 2020 levels would relax a regulation enacted at the end of the Obama administra-

But that plan already has touched off a legal fight with California and about a dozen other states that follow its rules. California wants the requirements to become progressively more stringent through 2026.

For now, the United States and California standards match, and the auto industry fears they could be split in two, forcing them to make costly design changes for California and the other states.

The EPA is still considering the light-vehicle standards. Its preferred option would freeze them so the fleet would be required to average 30 miles a gallon in realworld driving from 2021 to 2026.



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COVERS THE TECH CENTER AND THE IMMEDIATE AREA NOVEMBER 19, 2018

Buick Has No Reservations Connecting with Restaurants

CONTINUED FROM PAGE 1

the road enhances our vehicles with unexpected new benefits for our customers.'

With more than 160 million reviews, Yelp is a trusted resource for connecting consumers with great local businesses.

With the availability of Yelp Reservations, Buick drivers can learn about the best restaurants nearby and easily book a table at participating restau-

In beta testing, drivers using Yelp Reservations most frequently searched for restaurants within the American/Burgers cuisine category, closely followed by Asian/Vegetarian and Mexican cuisines.

"Getting a table at an amazing restaurant should be easy, and we're excited to be making that possible by bringing Yelp Reservations directly into vehicles across the country," said Natarajan Subbiah, vice president of Products, Marketplaces at Yelp.

"By embedding the Yelp Reservations booking experience into Buick vehicles, drivers have a fun, easy way to discover and secure a table at the best restaurants in their area."

Buick Marketplace is available on all 2017 and newer models in the U.S., depending on vehicle trim level, Cross said.

In addition to Yelp Reservations, Marketplace also allows Buick drivers to place mobile food and drink orders.

They can also pay for fuel at gas stations and find dealer offers for vehicle service and the latest vehicle accessories.

All of these connections come from the convenience, safety and security of drivers' vehicle touchscreens.



Mark Reuss

Macomb Needs Volunteers

Office of Senior Services is in urgent need of support for its Meals on Wheels (MOW) initiative. Leaders have asked for assistance with its general volunteer program and for a special one-time delivery on Saturday, Dec. 1 - where 130 individuals are needed, said county spokeswoman Roneeka Pleasant-Brown.

On this day, the agency will pack and deliver boxes of shelfstable meals for times when unsafe weather or other emergency circumstances prevent the normal delivery of hot meals to Macomb County seniors. Volunteers are needed to help pack or deliver food boxes between 9 a.m. and 11 a.m. at the Macomb County warehouse, located on 44900 Vic Wertz Drive (near Hall Road and Groesbeck Highway).

If delivering meals, personal

Macomb Community Action vehicles must be used and individuals should allow approximately two hours for the task. Organizers have asked those interested in volunteering to sign up by Nov. 26.

In addition to the 130 volunteers needed for the special delivery, due to a large decline. MOW is sending out a call for help to Macomb County residents and businesses asking them to consider being a volunteer for the program at large, Brown said.

Meals are delivered Monday through Friday to more than 1,800 seniors throughout Macomb County. Volunteers are needed to ensure that all participants receive their meals and that they are delivered in a timely manner. To volunteer, call 586-469-5228 or register online at mca.macombgov.org.

3,000 Engineers Moving to **GM's Warren Tech Center**

CONTINUED FROM PAGE 1

engineers there working, and we will still be using Pontiac's test facilities. So all the people involved in test work will still be there working.'

So, the Global Propulsion site will still remain a vital link in GM's development chain and engineering system, Albano said. And GM will still be developing racing engines at Pontiac. So there will still be a lot of engineering going on there.

"This is all happening pretty fast," Albano said. "By moving quickly, we will be better able to achieve GM's goal of better em-

ployee integration to speed up the process of developing electrification technology.'

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Albano said that General Motors has invested heavily in building new lab and office space at the Tech Center in recent years, so finding space for the 3,000 transferrred engineers shouldn't be a problem for the company.

"It's all part of the process of making GM a more efficient company. These are exciting times, with automotive technology changing rapidly and GM needs to be able to keep up with this change. This move is part of that

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Ford Plans Upcoming Self-Driving Service

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"These foundational elements are crucial for any viable self-driving service," Marakby said, "and we're tackling each one now, in unison, so we're ready to activate a commercial service with solid business fundamentals."

Here is what Ford is doing, Marakby said, in the key areas of the vehicle, self-driving systems, fleet management, ride-hailing and goods delivery, and Ford's self-driving service platform.

Ford's strength, Marakby said, is optimizing self-driving vehicles to help meet the needs of people and businesses. This includes making sure they're durable enough to handle tough urban environments, making use of hybrid-electric technology to maximize their use, and ensuring they are integrated for safety from the outset.

Ford's advantage, he said, is that the company can engineer manufacture custom-designed and purpose-built vehi-Self-driving cles. services, whether ride-hailing or goods delivery, are all new, so, he said, we need to design for the future, versus just repurposing what's on the road today.

As for Self-Driving Systems, said Marakby, Ford is working closely with our partners at Argo Al to develop the brains behind our self-driving vehicles.

This relationship features deep integration across all areas, including hardware and software teams.

The software team at Argo AI works directly with the chassis and powertrain teams at Ford, he said, to gain a thorough understanding of vehicle dynamics, to help improve controls and ensure the sensors have automotive grade durability and reliabili-

Fleet Management and the managing of all of these self-driving vehicles is going to be crucial once they are ready for prime time, Marakby said.

"We've been working with fleet owners and operators since the early days of our company, and this year we took that experience and launched Ford Commercial Solutions (FCS) to help other businesses manage their fleets by providing connected vehicle data, like fuel efficiency and other diagnostics, to improve operational effectiveness," Marakby said. "FCS is also going to be critical in helping us manage our own fleets of self-driving vehicles.'

To prepare for the future, he said, FCS is already conducting fleet management for us in Miami and has modeled scaled self-driving vehicle operations in detail. Today, the team is using its software and supporting fleet management for services such as Chariot and GoRide.

The use of ride-hailing and goods delivery is growing due to the ease of smartphone apps and availability of internet connectivity, Marakby said. These are sectors where self-driving vehicles can help, so Ford's demand strategy is to work with the leading companies that have built-in customer bases already utilizing these services.

Many companies want additional support in order to grow, such as Domino's, which has an opportunity to deliver more pizzas but often can't secure enough drivers. A self-driving service could supplement its business during those peak order times when it may be short on staff. Meanwhile, companies like Walmart are expanding by offering delivery services, and selfdriving vehicles can enhance their ability to reach more customers.

Finally, Ford's self-driving service platform could provide solutions to small and medium-size businesses that may want to offer delivery, or currently do, but actually face a financial drain due to the resources involved, Marakby said.

As the need for driving is removed, there's great opportunity to customize and personalize the ride-hailing experience inside the vehicle, especially with connected, digital services, he said.

Commutes can become more productive, enjoyable and Marakby said. People could order an autonomous vehicle from an app, order coffee from a recommended location along the way, and then have their ride stop to pick up their drink on the way to work.

Ford is beginning to explore additional collaborations across entertainment, audio, gaming, touring and commerce fields, so that the company can build out an entire customer experience before, during and after their vehicle rides.

Serving as the foundation connecting all of the capabilities required to run a self-driving service will be the Transportation Mobility Cloud that Autonomic has developed.

The Henry Ford to Sell Fresh Christmas Trees

The Henry Ford Holiday Greens and Tree lot is opening for business on Friday, Nov. 23.

Also known as Greenfield Village, the living museum will offer a number of Christmas trees and wreaths for sale while supplies last. Balsam tree prices range from \$29.75 to \$59.50. Boxwood or balsam wreath prices will range from \$17 to \$25.50. Go to thehenryford.org for more info.



Ford has hired architect, construction firms to restore Michigan Central.

Ford's Train Station Rebuild **Entering the Next Phase**

So it begins. Ford Motor Company is advancing its Corktown campus plans with the selection of its first architectural and construction partners that will work on restoring Michigan Central Station to its original grandeur, said Ford spokeswoman Christina Twelftree.

Ouinn Evans Architects will lead the design work, while Christman and Brinker are teamed up in a joint venture to serve as construction manager for the Corktown transformation project.

Construction will get underway before the end of this year, contingent on receiving all necessary government approvals. It is expected to be complete in

Ford announced it had purchased the iconic train station building in June and plans to transform it into the centerpiece of a new 1.2 million-square-foot campus in Corktown, including several surrounding properties.

The campus will be an innovation hub where Ford and its partners can work to define the future of transportation, including building autonomous and electric vehicles, and designing mobility services and solutions for urban environments, Twelftree said. Detroit-based Ouinn Evans Architects is one of the nation's leading architectural practices specializing in historic preserva-

The firm has worked on numerous landmark preservation right here in Detroit."

projects, including the Michigan State Capitol, the Lincoln Memorial, the National Academy of Sciences on the National Mall and Baltimore's Penn Station.

Corktown Transformation Joint Venture, a Detroit-based certified minority enterprise, is made up of Christman and Brinker. The two companies have worked together for more than 30 years on multiple high-profile projects, including the campus expansion of Little Caesars World Headquarters, Wayne State University Mike Ilitch School of Business, multiple Detroit Public Schools, and Blue Cross Blue Shield of Michigan BLUEnite headquarters.

The joint team of professionals assigned to Michigan Central Station has amassed 235 years of combined historic preservation experience on projects totaling more than \$2 billion.

"Quinn Evans Architects and Christman Brinker have a strong track record of working together on restoring historic buildings, so we felt they were the right partners to help us begin this transformation project," said Todd Brooks, program manager at Ford Land, the company's real estate arm overseeing Ford's Corktown campus.

"They share Ford's passion for redeveloping Detroit's landmark train station, ensuring the local community benefits from our presence and building the future of the transportation industry

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Perttola explains how BorgWarner's EMOD transfer case sends torque.

tem, which enables the truck's

four-wheel drive systems to func-

transmission and front rear axles

and decides where to send

actuator that is electronically

controlled and looks at such fac-

tors as vehicle speed, throttle

position and even the steering

wheel angle and sends torque where needed based on special

This gives the 2019 Ram 1500

enhanced vehicle traction and

stability control as well as re-

duced weight and a wide range

of tunable vehicle handling char-

Chris Spangler, senior engi-

neering manager for Systems

Integration, showed off the

company's 48-volt Efficiency

Motor/Generator with Integrated

siderably reduces the cost of

electrification when compared

with high-voltage hybridization

and pure EV, Spangler said. The

48-volt technology provides

higher system efficiency and im-

proved energy recovery capabili-

ty to meet increasing power de-

This micro or mild hybrid con-

acteristics, Perttola said.

"It's bolted on the back of the

"It has an electric mechanical

tion as well as it does.

torque," Perttola said.

algorithms."

Electronics.

BorgWarner Debuts Latest Tech at Propulsion Center

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BorgWarner credibility when governments and OEMs around the world ask what the best mix of propulsion systems is to achieve stated goals, as well as meet consumer needs, Gallett said.

And in addition to creating new technology in different propulsion systems, BorgWarner has also started getting involved in venture capital, Gallett said. That means the company will fund other projects by startups as a way to keep abreast of the latest tech changes, and if they see a project they like, Borg-Warner might even take up the work itself.

"We have a global reach and we will listen to startups with a pitch," Gallett said.

"We have the option to be at the table and work with companies with ideas we find interesting. We're making sure that we maintain a startup mentality that seeps into our work culture"

In addition to BorgWarner's new EV tech, OEMs continue to work with the company because of its mastery of old school technology, such as clutches, Gallett said

"We have years of experience with this technology and that is very useful for hybrids, where different propulsion systems switch off and on, depending on driving circumstances," Gallett

Among the technology shown off to the media was BorgWarner's Integrated Drive Module. David Fulton, director of Electric Mach Innovation, said the module is a complete system with motor, transmission, power electronics and controls to optimize weight, cut costs and focus on low Noise Vibration and Harshness (NVH) with full torque for electric vehicles.

Todd Perttola, director of Engineering, showed off the company's Electro-Mechanical On-Demand (EMOD) system, which is used in FCA's 2019 Ram 1500 pickup truck.

Perttola said that BorgWarner worked on the system for about a year and then entered into a joint venture agreement with FCA. Overall, it took about three years to create the EMOD sys-

Warren City Hall Holiday Hours

Due to the upcoming Thanksgiving holiday, Warren city offices will be closed.

The city's libraries close at 5 p.m. on Wednesday, Nov. 21. They will remain closed on Friday, Nov. 23, as will regular city offices and city recreation centers.

The library branches will remain closed on Saturday, Nov. 24, and Sunday, Nov. 25. Regular hours will resume as of Monday, Nov. 26. Call city hall at 586-574-4557 for more information.

Detroit Readies for Thanksgiving Parade

Detroit's annual Thanksgiving parade is set for Nov. 22.

Now called America's Thanksgiving Parade presented by Art Van, the parade has a storied history.

The Michigan Thanksgiving Parade Foundation was founded in 1982 for the purpose of staging and perpetuating America's Thanksgiving Parade.

It was founded in 1924. For more than 75 years, the parade has been a one-of-a-kind spectacle of fantasy, holiday spirit and community enthusiasm. The parade has grown to include more than 75 parade units, including floats, balloons and marching bands in procession.

Founded by J.L. Hudson's, downtown Detroit's legendary department store, the parade first rolled down Woodward Avenue in 1924, the same year that Macy's began its parade in New York City.

In describing the parade on its Web site, the Detroit Historical Society wrote that "for generations of Michigan families, the official holiday season did not start until 'the real Santa Claus' stepped from the parade's final float onto the Woodward marquee of Hudson's to accept the key to both the city 'and the hearts of good children everywhere.' The next day, elevators whisked throngs of parents and children up to the store's magnificently-decorated toyland for a personal visit with the man in red velvet.

"Detroit's first Thanksgiving parade featured horses pulling a float decorated with Mother Goose, four papier-mâché heads and seven marching bands. Over the years, the parade's size and scope has grown significantly, as it has entertained millions of bundled-up fans along its two-mile route down Woodward with giant balloons, floats, marching bands, cartoon characters, celebrities and more."

The parade was first televised locally in 1948. Now, it's broadcast nationally to more than 100 million viewers.



As in previous years, kids will enjoy Detroit's Thanksgiving Parade.

The Historical Society's history reports that Hudson's stopped sponsoring the parade in 1979, four years before closing its mammoth downtown store for good, adding, "But America's Thanksgiving Parade, supported by area corporations and the Michigan Thanksgiving Parade Foundation, whose nonprofit Parade Company organizes the event with the help of hundreds of volunteers."

This year, the parade begins at the intersection of Kirby and Woodward Avenue in downtown Detroit starting at 8:45 a.m. It will travel south on Woodward, passing through the TV zone at Grand River and Woodward where WDIV Local 4 and other broadcast media will have booths set up to telecast the parade.

Finally, the parade will end at Woodward and Congress. In addition to TV coverage, radio coverage will begin with "A Prelude to The Parade" hosted by Paul W. Smith on News/Talk 760 WJR running from 6 a.m. until 9:30 a.m.

The LIVE play-by-play of the parade will be on WOMC (104.3-FM) from 10 a.m. until noon.

To learn more about the parade, see theparade.org/americ-as-thanksgiving-parade/parade-info.

Warren Library Hosting Auction Appraisers

The Miller Library will be hosting Dan and Judy Landino of D & J Auction and Appraisal Services 6-7:30 p.m. on Thursday, Dec. 6.

They will provide an overview of the collectibles and antiques market, with a brief verbal appraisal of audience members' treasures, said Warren librarian Amy Nelson. Not all attendees will get appraisals. Items will be publicly appraised and limited to one per person. Items must be small enough to carry and will not necessarily be appraised in order. Bring any item 30 minutes before the program begins.

The program will be held in the cafeteria (room 420) of the Warren Community Center. Registration is required.

Register at warrenlibrary.net or call the Miller Library at 586-751-5377.

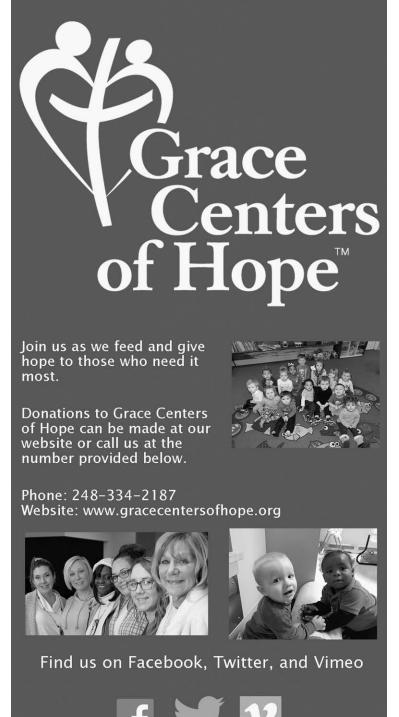


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Chevy Offering New Racing Parts for ZR2

Who says pickup trucks have to be only rugged and tough? Not Chevrolet.

The brand is continuing to expand the Colorado ZR2 midsize truck's performance envelope with the introduction of 15 factory race components developed and validated over 10,000 miles of off-road racing, said GM spokesman Monte Doran.

The parts were developed by Chevrolet Performance engineering in collaboration with Multimatic and Hall Racing.

Off-road driver Chad Hall competed in a Colorado ZR2 equipped with these components throughout 2017 and 2018 to develop and validate them in desert racing conditions, Doran

During that time, the team completed every mile of every race in the "Best in the Desert" series. Hall Racing also used the Colorado ZR2 to pre-run the grueling Baja 1000 race.

"Off-road racing is a brutal test of a vehicle, and especially its suspension components," said Mark Dickens, executive director of Chevrolet Performance Variants, Parts and Accessories and Motorsports. "Over two years, Chad mercilessly pushed these ZR2 parts to the limit for the ultimate in development and valida-

"After seeing the success of the Colorado ZR2, customers have been hounding Chad for help building their own 'Hall Racing, ZR2. For the first time, you can buy the same Chevy Performance Parts that raced and won in the desert.

"All you need to add is the required safety equipment to build a pre-runner for scouting the Baja 1000 or a full-blown race truck capable of competing in the race itself."

The production Colorado ZR2



Chevy's factory parts were developed with Multimatic and Hall Racing.

is effectively a segment of one, combining the nimbleness and maneuverability of a midsize pickup with a host of new offroad features and the most offroad technology of any vehicle in its segment, Doran said.

Compared to a standard Colorado, the ZR2 features front and rear tracks that have been widened by 3.5 inches and a suspension lifted by 2 inches. Functional rock sliders provide better performance over rocks and obstacles, and the front and rear bumpers have been modified for better off-road clearance.

Class-exclusive features include standard front and rear electronic locking differentials, an available diesel engine and the first off-road application of Multimatic Dynamic Suspensions Spool Valve (DSSV) damper technology, said Doran.

While the stock ZR2 comes factory-equipped with "segment of one" capability, said Doran, for both low- and high-speed offroading, these factory race parts focus on desert running while preserving low-speed off-road performance.

Some of their many benefits include an additional 1-inch suspension lift and a 1.5-inch Body Lift on top of the ZR2's factory ride height and up to 15 percent more suspension travel for extreme high-speed off-roading.

Available Multimatic Front Long Travel DSSV Shocks provide customers with as much as a 15 percent increase in overall front suspension travel, while the Multimatic long travel rear shocks can increase rear suspension travel by up to 10 percent.

Other components include front and rear jounce shocks to absorb large suspension inputs, using the same technology found on Trophy Trucks, and reinforced components including steel drive shafts, half shafts and tie rods

"These parts can be purchased individually to suit each customer's needs, or as a complete package," said Dickens. "This gives customers the flexibility to build their truck up over time, purchase only the parts they need for their particular interest, or buy the complete set to build their own 'Hall Racing' ZR2."

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