Tech Center News.

WARREN, MICHIGAN

VOL. 44 NO. 9

"by the publisher of Detroit Auto Scene"

NOVEMBER 11, 2019

Chevrolet Shows Off Concept E-10 EV at SEMA

Who says EVs have to be dulllooking?

Not Chevrolet, said Jim Campbell, vice president of Chevrolet Performance and Motorsport.

The brand's E-10 Concept imagines the future of hot rodding at the SEMA Show in Las Vegas, with a 1962 C-10 pickup truck powered by an electric Connect & Cruise concept crate propulsion package offering approximately 450 horsepower, using proven components from the Chevrolet Bolt EV.

The Chevrolet E-10 electrified Connect & Cruise concept system reimagines the performance crate engine for hot rodders," said Campbell.

"As General Motors continues to work toward our vision of a zero-emissions world, concepts such as this help us get there, while still supporting the enthusiasts who love to drive vintage vehicles.

Highlighting the company's electric capabilities, using production-based components, Campbell said the E-10 demonstrates electric conversion possibilities for classic vehicles, blending vintage styling and high performance with zero-emissions driving.

The E-10's Connect & Cruise concept propulsion system is Chevrolet Performance concept electric crate motors (eCrate), two 400-volt batteries and a conventional SuperMatic 4L75-E automatic transmission.

The double stack eCrate motor replaces the truck's original gas engine under the hood and is connected to the automatic transmission, which transfers

torque to the rear axle. Power to the drive stack comes from the pair of independent Chevrolet Bolt EV power electronics and two production Bolt EV battery packs. Mounted in the truck's bed, each offers 60 kWh of usable energy under a hard tonneau cover.

"General Motors has the in-

house talent required to create a concept like the E-10," said Campbell.

"With the innovative thinking and expertise our performance team, electrification team and many others at GM bring, this project went from concept to

CONTINUED ON PAGE 2



Chevy SP383 EFI engine

New Small Block Engine by Chevy Makes Debut

At the SEMA Show in Las Vegas last week, Chevrolet Performance celebrated 65 years of Small Block innovation with a its new SP383 EFI.

A contemporary twist on the classic 383 Small Block "stroker" combination, the SP383 EFI melds the big torque of the longstroke 383 with the drivability of electronic fuel injection, said Kris Mayer, general director for Chevrolet Performance.

"Chevrolet Performance's newest crate engine builds on a pioneering legacy of engine innovation," said Mayer. "It also expands our unmatched crate engine portfolio, offering customers opportunities to build the project vehicle of their dreams.

Since 1955, Chevrolet Performance's Small Block engines have powered everything from vintage pickup trucks and muscle cars to motor homes and boats. Maver said.

Chevrolet Performance's new SP383 EFI is based on the ZZ6 EFI crate engine - including its highflow, Fast Burn-type cylinder heads with modern valvetrain technology - but features a longer, 3.800-inch stroke to help build more torque.

Like the ZZ6 EFI, the SP383 EFI features a port-style injection system, with the injectors plumbed in the carburetor-style intake manifold. The throttle body is mounted in the conventional position of the carburetor, which supports a classic appearance that looks at home under the hood of vintage vehicles.

Chevrolet rates output for the new SP383 EFI at 450 horsepower and 436 lb.-ft. of torque.

Two versions are offered: the SP383 EFI Deluxe (P/N 19418640) and the SP383 EFI Turn Key (P/N



composed of a double stack of This E-10 concept EV by Chevy is meant to offer power and capability while still having a stylish look.

Roger Penske Surprises Public, Buys IndyCar Racing Group

by JENNA FRYER AP Auto Racing Writer

Roger Penske spent part of Nov. 5 walking Indianapolis Motor Speedway, using a cool, sunny day to look over the historic venue that will soon be his.

There is work to be done at the speedway, lots of work before it can be the entertainment mecca he envisions. But more than that, there is a legacy to worry about and not just his.

The hulking grey structure had been in the Hulman family since Tony Hulman purchased it in 1945, and over seven decades since have poured everything into the speedway to uphold its status as a beloved slice of Americana, a place where champi-

break, even death, is familiar. Hulman's grandson.

Indianapolis 500 race, the sprawling speedway and all things racing that the family treasures. After painstaking research, the family decided the time had come to give it all up - and George was uneasy turning it over to a corporation or conglomerate that might very well ignore 110 years of history and tradition.

He sought out the only person he knew who not only shared his love and respect for the speedway but had the resources and unwavering desire to preserve the Indy 500 as a global spectacle:

Roger Penske, the billionaire businessman and racing enthusiast with a long history of excellence in motorsports.

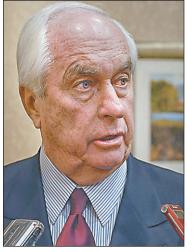
Penske was approached by onships are earned every Memo-George at the Sept. 22 IndyCar rial Day weekend and heartseason finale and asked if he was willing to discuss future "stew-Tony ardship" of the speedway, the In- this where the Hulman-George George, now runs the showcase dy 500 and the open-wheel series family would come to me - I did-

that has enjoyed a recent uptick in popularity. In a stunning deal that took only six weeks to work out, Hulman & Co. announced Nov. 4 it was selling its racing portfolio to the man with a record 18 Indy 500 victories. Penske, who last month received the Presidential Medal of Freedom from President Donald Trump, will be the official owner by January.

But first, that walk.

The 82-year-old Penske knows IMS better than most, but he wanted to get a closer look at what is likely the crowning achievement of his lifelong devotion to motorsports.

"This demonstrates if you have something in your mind and your DNA, that if you work on it, and you are committed and you've got a good team around you, you can come to an intersection like



Roger Penske

n't solicit them - and say,

'There's an opportunity here,"

The Associated Press.

Penske said in an interview with

CONTINUED ON PAGE 4

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2020 Stingray Receives SPE Honor for Composites Use

The composites-intensive 2020 ers and engineers, tier integramodel year Chevrolet Corvette panel of industry experts as the winner of this year's Vehicle Engineering Team Award (VETA).

The team was honored by the Automotive Division of the Societv of Plastics Engineers (SPE) at the group's 49th annual SPE Automotive Innovation Awards Gala on Nov. 6, said SPE spokeswoman Teri Chouinard.

The VETA award was created in 2004 to recognize the technical achievements of entire teams - comprising automotive design-

tors, materials suppliers, tool-Stingray has been selected by a makers, and others - whose work in research, design, engineering, and/or manufacturing has led to significant integration of polymeric materials on a notable vehicle.

> For 67 years, the Corvette has been a composites-intensive sports car, Chouinard said. The eighth-generation Corvette, he said, features a host of innovative new composites technologies, many of which were nomi-

CONTINUED ON PAGE 2

The 2020 Corvette Stingray's use of new plastics and composite materials shows its design sophistication.

view this week's edition at TechCenterNews.com

was the one that worked, result-

ing in her winning the truck, said

Art Van spokeswoman Diane

Afterward, there were lots of

festive family fun, including hot

chocolate, refreshments, face

painting and crafts as well as pic-

tures with Santa Claus in the re-

tailer's holiday-themed show-

The evening's holiday celebra-

The event was open to the

public and meant to start off the

holiday season with a bang.

tion was topped off with fire-

room, Charles said.

works, Charles said.

Art Van Furniture Gives

Away Truck to Woman

Thanks to Art Van Furniture, to start the truck. Morris' key

Charles.

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Deadline: Thursday 5:00 p.m. for the next edition of Monday

William Springer II, publisher Lisa A. Torretta, operations Jim Stickford, editor

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SPE Honors 2020 Stingray for **Composites Use** CONTINUED FROM PAGE 1

nated in other categories of SPE's competition. Some notable applications on the vehicle include:

Body Exterior Category Nomination: Rear Bulkhead Window Frame - Made from a customblended unsaturated polyester/vinyl ester resin system using beryllium graphite fillers to deaden sound on the rear bulkhead window frame. The part meets twin thermal and acoustic challenges seen when moving to a mid-engine architecture on the new Corvette.

This 2.2 specific gravity (SG), low-volatile organic compound (VOC), compression moldable sheet molding compound (SMC) eliminates the need for secondary stampings/baffles, die-cut foam, lofted fabrics, gaskets, and other sound deadeners, reducing costs while increasing interior package space and improving body sealing and noise/vibration/harshness (NVH).

Body Exterior Category Nomination: Rear Fascia Assembly -This is the first use of a low-density (1.2 SG), Class A SMC for a rear fascia on vehicles with high production volumes.

Versus thermoplastic polyolefins (TPO) more commonly used on vehicle fascias, the SMC's superior thermal stability enables it to be used next to hot exhaust tips. Its higher mechanical performance allows for the design of a short rear overhang and larger spacings between attachments.

The SMC also does a better job of spreading loads over a larger area in low-speed rear crashes. Brackets and rear-parking assist sensors were bonded to the SMC

Body Exterior Category Nomination: Rear Surround Frame -A low-density (1.2 SG) toughened structural SMC with both carbon and glass fiber reinforcement enabled a large (64 x 69 x 24 inch/163 x 175 x 61 centimeter) rear-surround frame assembly to be compression molded for mass savings of 15 percent vs. previously used structural SMC and cost savings due to parts consolidation.



Morris won this 1959 Ford F-100 at Art Van's holiday lights ceremony.

Chevrolet Concept EV Truck Has Horsepower and Styling

CONTINUED FROM PAGE 1

running vehicle in 18 weeks to demonstrate what the future of an eCrate propulsion system and hot rodding could look like.'

With an estimated 450 horsepower to the rear wheels, the concept electric propulsion system helps the E-10 deliver 0-60 mph times of around 5 seconds; and quarter-mile times in the high 13-second range.

To fit in with other hot rods on the road, the E-10 has a sound emulator complete with three speakers to simulate an induction sound in the front and two banks of a V8 engine in the back of the vehicle, Campbell said.

The driver can select one of five modes on the emulator, including: LS7 Z28 track tuning, LS7 Z28 touring turning, a V8 engine, a futuristic sound or silent - and the sounds will automatically adjust to the changing of the gears, truly mimicking an internal combustion engine.

"The E-10 Concept builds on the experience and momentum generated by last year's eCOPO Concept, taking the idea of a 'crate' electric propulsion system further by leveraging actual production components," said Russ O'Blenes, director of Performance Variants, Parts & Motorsports. "It's all still in the testing stage, but this concept brings the electric option for hot rodders much closer to reality.'

In classic hot rodding fashion, Chevrolet designers and engineers for the E-10 Concept leveraged production components from other vehicles - the Bolt EV battery packs - and fabricated custom solutions to bring the idea to life.

The motor stack is a unique assembly that houses a pair of high-efficiency motors.

They're built into a modular housing that enables up to three motor assemblies to be stacked and linked together for greater power delivery, while the Bolt EV's modular battery packs enable range for long-distance driving.

Becky Morris of Ann Arbor was

the winner of a classic 1959 Ford

The vehicle was given away at

the Art Van holiday lights reveal

held on Nov. 7 at the company's

away, attendees were treated to

a fireworks display as well as the

official lighting of Art Van holiday

lights in the company's holiday-

Three finalists were chosen

from among those attending the

event and were given a key. Each

finalist then tried to use that key

In addition to the truck give-

F-100 pickup truck.

themed showroom.

headquarters in Warren.

Additionally, the independent setup of the two battery packs allows for simultaneous charging, more range and more power. In fact, the system more than doubles the available power in a production Bolt EV.

"We designed this system to deliver both power and range," said O'Blenes. "The exciting part is that we're just getting started. Just as we have done over the years with our performance crate engines, we will continue to refine and improve electric propulsion Connect & Cruise concept systems.

"Our goal is to provide greater power with greater range, suiting the different needs and priorities of all types of enthusiasts. In this case, we will use higher current and voltage-capable inverters, batteries and related components rather than carburetors and cylinder heads.'

Along with its zero-emissions performance, the E-10 Concept makes a design statement by blending vintage style with modern EV technologies, Campbell said.

The truck's silhouette, with its pronounced hood and forwardleaning A-pillars, remains instantly recognizable, while contemporary enhancements include an illuminated Bowtie emblem in the grille, LED headlamps and taillamps, and a lowered stance accented with 20 x 9-inch front and 22 x 10-inch rear wheels.

Inside, the original instrument panel is updated with digital displays for the electric propulsion system; and the rest of the cabin is restored and features leathertrimmed seats.

The Chevrolet E-10 Concept joined the John Force Edition 2020 COPO Camaro race car and nearly two dozen additional Chevrolet concepts and show vehicles at the recent Las Vegas SE-MA Show.

Get Mailboxes **Ready for** Winter Snow

The Macomb County Department of Roads (MCDR) is preparing for snow ahead of the unavoidable winter season, said Macomb County spokesman Eric Dimoff.

MCDR is reminding residents to check the location, stability and durability of their mailboxes by shaking them.

To prevent damage from snow thrown by passing plow trucks, residents are encouraged to prepare mailboxes for winter by tightening screws and ensuring the post and mailbox are secure enough to withstand large amounts of thrown snow, Dimoff said.

"Mailbox damage caused by snow being pushed to the side of the road is the homeowner's responsibility to repair. Taking a few minutes to ensure your mailbox is properly secured will save you time and hassle later on," said Eric Dimoff, MCDR Coordinator of Communication and Public Relations.





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NOVEMBER 11, 2019

COVERS THE TECH CENTER AND THE IMMEDIATE AREA

PAGE 3

Wolverine Die Cast Keeps Up With the Times

by Jim Stickford

Through good times and bad, Wolverine Die Cast has managed to stay in business for 65 years.

The Warren-based company is now owned by Mike Karadimas, who said the company is something of a family business. It got its start in 1954 and his father Paul started working there in 1958.

"The company was started by two Chrysler executives who went out on their own and did very well for themselves," Karadimas said. "My father was fresh off the boat from Greece and started working here sweeping floors. He did his training here and stayed on and ended up as an owner in 1994. I became an owner in 2008 and bought out my final partner in 2014."

Karadimas said that he became a partner right before the economy collapsed in 2008.

"When the economy went bad, we were down to nine people operating in two buildings," Karadimas said. "It was a very weird period of time for the business."

Karadimas said Wolverine Die Cast makes die casts out aluminum and zinc. Products include housings for Hellcats as a well as brackets, nameplates and truck parts.

The company is also a producer of parts for vehicles that have been discontinued.

Wolverine Die Cast has been at its current location on Nagel off

of Nine Mile in Warren since 1965, Karadimas said.

At the time the company was making original parts for Detroit automakers. But in 1970, they entered in the service side of production.

That means that they make spare parts for vehicles that are no longer in production, Karadimas said. Automakers are required by law to keep spare parts available for up to 15 years after a particular model was discontinued.

By outsourcing the spare parts to a company like Wolverine Die Cast OEMs can use their parts production contracts and capacity for vehicles they are currently making.

"We currently employ about 30 people as die cast makers," Karadimas said. "At the business' height, we employed about 350. But over the years, the Detroit Three have outsourced more and more of their business to firms out of the country, so little by little we've downsized."

Karadimas said that "to my shock and surprise" the trade policies of President Trump have had a positive effect on his business.

The OEMs are keeping more work in the U.S. as a response to the president.

"There is a huge demand for aftermarket parts," Karadimas said. "I've seen a lot of foreign parts makers send parts here, but because of muscle car enthu-



Karadimas holds a replica of a Chevy bumper made by his company.

siasts, I've been able to maintain a steady customer base. With the new quotas, there's opportunity to grow the business. But we're having trouble finding people with the proper skill set to work in the business."

In the old days, there were plenty of die cast companies operating in Detroit, Karadimas said.

These companies found and trained people. But over the years most of those firms have gone out of business, so there's not a large trained labor pool to draw from to get employees.

"If someone wants to get into t e business, they don't know where to go to get the training. There are classes taught by the North American Dice Cast Association (NADCA), but most civilians don't know about it. So if we want to expand, we will have to train the people ourselves," Karadimas said. "That takes time and money."

But Karadimas said that should they want to expand, their being debt-free will allow them to go forward with relative ease.

"So being debt free is a huge advantage when it comes to the question of what's next," Karadimas said.

"We have the opportunity to invest in the company if opportunities arise. Right now we can produce about 3,000 different parts at any given time."

Purdue's Fort Wayne, MCC Reach Deal

Purdue University Fort Wayne and Macomb Community College have signed an agreement that allows Macomb students to completely transfer their associate of applied science degree in the areas of business, IT and health toward a bachelor of applied science degree from Purdue University Fort Wayne.

"This is a game changer in efforts to simplify and streamline bachelor-degree completion for Macomb Community College students," said Don Ritzenhein, provost and vice president, Learning Unit, Macomb Community College.

Macomb students will able to transfer up to a total of 88 credits toward their bachelor's degree, said Sean Patrick, manager of Media Relations for Macomb Community College. While students will be required to complete a minimum of 32 credits through Purdue Fort Wayne, the coursework may be taken completely online, Patrick said.

"We are excited to enter into this partnership that provides opportunities for graduates of technical programs at Macomb Community College to complete their undergraduate education with a Purdue University degree," said Carl Drummond, vice chancellor for Academic Affairs and Enrollment Management, Purdue University Fort Wayne.



through clothing, lights and technology would reduce the number of cyclist deaths.

The agency wrote in its report that head injuries are the leading cause of bicycle fatalities, and that use of a helmet is the most effective way for riders to reduce their chance of getting a serious head injury. Research shows fewer than half of bicyclists wear helmets, according to the NTSB.

"If we do not mitigate head injury for more bicyclists, additional bicyclists will die," NTSB Chairman Robert Sumwalt said.

Such a requirement may prove difficult politically. Currently no states require all bicyclists to wear helmets, but many require them for younger riders, according to the Governors Highway Safety Association.

Nineteen states plus Washington, D.C., require motorcyclists to wear helmets, while 28 require them mainly for younger riders and three states have no requirement, the association said.



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Roger Penske Surprises Public, Buys IndyCar Race Group

CONTINUED FROM PAGE 1

PAGE 4

"When you walk around here and stand out there with no people, you have to pinch yourself to understand what has really happened. To think about how our family, all of our family, hopefully we'll be here 70 years, I won't obviously, but we'll have the same impact and give the same support," he said. "We support the Hoosiers in the state, the governor, the city, the county, the region and certainly the town of Speedway.

'We want to make a difference. That means more than the money or more than anything else. We give ourselves our own report card and it's not always about the bottom line. It's about we have done something to create a brand around the world and the fact we've been able to make this iconic race continue in a way that can't be tarnished."

When matriarch Mari Hulman George, daughter of Tony Hulman, died last November, her four children began to divest the family portfolio. First was the \$80 million sale of baking soda company Clabber Girl in May, followed by search for a buyer for the racing properties.

Penske and Hulman declined to discuss details of the transaction, though Mark Miles, CEO of Hulman & Co., confirmed to the AP there was at least one interested party before Penske was sought out.

Three people with knowledge of the sale, speaking to AP on condition of anonymity because the details are intended to be private, said investment bank Allen & Co. was tasked with finding either a buyer or strategic partner. Two of the people said Liberty Media, the media giant with ownership stakes in Formula One, the Atlanta Braves and the Sirius XM Group among others, was interested. So was Liberty Global, a communications company whose holdings include the Formula E racing series, according to the third person who spoke with AP.

George was uncomfortable with unknown executives from a corporation taking over the family business.

The family decided to see what Penske thought and "The Captain" was certain he wanted to steer the ship. One person familiar with Liberty's talks said the company balked at an initial asking price of \$250 million and walked away from any potential

Tesla, Walmart **Settle Solar Panel Lawsuit**

NEW YORK (AP) - Walmart

deal when told there was another buyer in the buying game.

There was a third group of investors who expressed interest, and just last week, a fourth individual tried to enter the bidding with a letter of credit for \$250 million but was told by Allen & Co. it was too late.

"In the last few months, it felt like the family was reaching a place where they were thinking about an exit, and then there was Roger and that was it," Miles told AP. "It was hugely important to them that they found someone they knew they could entrust with what they think of as their baby."

Industry insiders estimate Penske got it all for roughly \$300 million, plus promised additional capital improvements to the speedway.

Penske and Miles declined repeated requests from AP to discuss financials.

Penske began talks on the purchase the day after Josef Newgarden gave him a 15th IndyCar title and signed a nondisclosure agreement four days after the season finale, Miles said. When the Hulman group arrived at Penske's offices in Detroit for a clandestine meeting, Miles said Penske was already armed with "thousands of pages of due diligence.'

The groups usually met on Saturday mornings or Sunday evenings and Penske kept the deal under wraps in an industry where almost everything is an open secret. He deliberately had a news advisory sent at 8 a.m. Eastern on Nov. 4 in an effort to catch everyone by surprise.

As is his buttoned-up style, Penske controlled the news until he was ready and he told AP it was his most furtive move since showing up at the 1994 Indianapolis 500 with a controversial pushrod Mercedes-Benz engine designed and developed for that single race.

Penske's operation is the gold standard of motorsports and his 18 Indy 500 victories dwarf the competition. He called this year's race for Helio Castroneves and spends the regular season as race strategist for Will Power.

To avoid appearances of a conflict of interest, Penske said he will step down from the pit stand next season. He told AP he will begin watching races the way he watches his NASCAR teams, from a luxury suite with scanners to hear all team communications.

owners who have angered fans by suggesting that IndyCar's regular participants should be guaranteed spots in the Indy 500, but said it is far too early to talk any potential changes. Penske is revered for his integrity and professionalism, and rival team owners and drivers seemed to be the least concerned about potential conflicts after the sale was announced.

"If you know anything about Mr. Penske, it's that he holds his work to the highest standards.' said driver Graham Rahal.

Added four-time Indy 500 winner A.J. Foyt, a current team owner and one of the first people

He's among a handful of team Penske called after announcing the sale, "The one thing about Roger is that when he goes and does something, he does it first class.'

> Penske plans to keep the current executive team of both the speedway and IndyCar. He will put his own board in place, and Tony George will likely have a role in some fashion: Penske offered and George, who fought back tears at the news conference to discuss the sale, said he would accept. Penske will likely include many of his top lieutenants from the Penske Corp. in the process, and his son, Greg, as well as Bud Denker, a longtime Penske executive.



Members of the IndyCar race circuit praised Penske race teams and his purchasing of the IndyCar group.

Chevrolet Unveils New Small Block Engine at 2019 SEMA

CONTINUED FROM PAGE 1

19419199). The Deluxe kit includes the throttle body, distributor, damper and flexplate, while the Turn Key assembly takes the content of the Deluxe and adds an air cleaner, front-end accessory drive, breather, PCV valve and starter.

Both crate engine kits include "plug and play" engine conа troller and harness, Mayer said.

Chevrolet began offering highperformance, factory-engineered crate engines to racers in the late sixties, including the all-aluminum ZL-1 Big Block engine that would become the focal feature of the 1969 COPO Camaro. In the late eighties, the "ZZ" series of Small Block engines was introduced, ushering in the modern era of ready-built performance crate engines developed for vintage vehicles.

Today, the Chevrolet Performance portfolio features the industry's largest OEM crate engine lineup, including nearly 50 Small Block, Big Block, LS, LSX and LT crate engine packages, as well as LS- and LT-based E-ROD packages that carry CARB Executive Order

for installation in millions of pre-1996 vehicles in California, Mayer

Chevrolet is the only manufacturer to offer 50-state street-legal crate E-ROD engine systems, while the range of LS, LSX and LT crate engines has grown in recent years to match customer demand.

Additionally, Chevrolet Performance offers approximately a dozen performance four-, sixand eight-speed automatic transmission systems, as well as sixspeed manual gearboxes, torque converters, installation and adaption kits, and the electronic controllers to match them with every offering in the crate engine portfolio.

In fact, the wide array of engine and transmission offerings inspired Chevrolet engineers to develop the groundbreaking and industry-exclusive Connect & Cruise systems, which pair crate engines with recommendations for complementing transmissions and all the necessary controller kits, Mayer said. A detailed chart in the Chevrolet Performance catalog outlines the

numbers that make them legal matched components and their It's an E six-speed automatic part numbers for at-a-glance comparisons and easier ordering

> "Connect & Cruise systems eliminate the guesswork in selecting the right engine-andtransmission combination for your project," said Mayer. "Once you've selected the engine, our factory-matched combinations match it with a Chevrolet-recommended transmission and identify the necessary controllers, harnesses and other supporting components you need to help get it all installed and running quicker – and with the confidence it's the right combo for your classic vehicle.'

All of Chevrolet Performance's crate engine and transmission systems, including E-ROD and Connect & Cruise systems, are identified in the all-new 2020 Chevrolet Performance catalog, which is available from Chevrolet dealers and other Chevrolet Performance retailers. It is also available online at www.chevroletperformance.com site. More new products at SEMA included the SuperMatic 6L80-E.

transmission that offers a technologically advanced balance of performance and efficiency when matched with Chevrolet Performance's LS and LSX crate engines.

It's based on the same robust transmission offered in a number of rear-wheel-drive production vehicles, including the Camaro and Chevy trucks, but enhanced with specific internal components that contribute to a higher output torque rating of 650 lb.-ft. - a 45 percent increase over the regular production six-speed transmission.

A "deep" 4.02 first gear ratio helps deliver strong standingstart performance, while a 0.67 top gear helps reduce engine speed on the highway, said Mayer.

Additionally, there's the new LSX-SC cylinder head. It's inspired by the COPO Camaro. and is based on Chevrolet Performance's proven, high-flow LSX-LS7 design, but optimized in key areas to enhance strength and cylinder sealing for supercharged and turbocharged engines.

said.

and Tesla have settled a lawsuit filed by the retail giant alleging that Tesla installed rooftop solar panels that caught fire.

Lawyers for both sides filed documents in New York Supreme Court discontinuing the legal action.

The companies say in a joint statement that both sides have resolved issues raised by Walmart in the case.

In the lawsuit filed back in August, Walmart said Tesla installed solar panels that went up in flames on seven of its store rooftops from 2012 to 2018, causing millions of dollars in damage to Walmart buildings.

The statement issued Nov. 6 says safety is a priority for both companies and they look forward to reactivating the systems.

The companies said in late August that they were working to resolve the dispute. Terms of the settlement weren't disclosed to the public.



Autotrader Praise Chevy Bolt in its Top EV List

In an era where the electric car is rapidly becoming a reality, Autotrader, for the first time, named the 12 best EVs, and the news was good for Detroit automakers.

Among Autotrader's selection are the 2019 Chrysler Pacifica Hybrid Limited (PHEV) minivan, 2020 Chevrolet Bolt Premier (EV) and the 2020 Lincoln Aviator Grand Touring (PHEV).

Autotrader's Executive Editor Brian Moody said car shopping is involved enough, making a pick from among all the electric vehicles out there can be an even greater challenge. This is particularly true for first-time EV buyers. There are a lot of terms to master and information to digest, Moody said.

We understand that there's a degree of altruism and that many EV purchases are motivated by environmental, political or fossilfuel concerns," Moody said. "However, EVs are not cheap and often cost much more than a gasoline-powered car of the same size.

"With this list, we're not trying to determine why you should opt for an EV. Our job is simply to help you in your search for the right EV, no matter why you want one – and there are some very good electric cars available today, at a wide variety of price points.

Moody said this is Autotrader's first annual list of the best EVs and judges expect the cars on this list to change dramatically over the years since the technology is still evolving.

The main things to remember about EVs, Moody said, are that, for the most part, they're more rewarding to drive and require less maintenance than a traditional automobile. Keep that in mind, he said, when you're looking for a new or used EV.

The editors considered a variety of important criteria, moody said, such as maximum range, electriconly range (for PHEVs), price, drivability and value, to help determine their "best of" list.

Autotrader judges also had kind things to say about the Chevy Bolt. They wrote, "For 2020, the Bolt Opens in New Window gets a 21-mile increase in range. Two new color choices are available: Cayenne Orange Metallic (additional cost option) and Oasis Blue. You can get into the entry-level Bolt LT for about \$4,500 less, but we went with the Premier because it provides scads of additional standard equipment like leather seating, heated front seats, blind spot monitoring, lane departure warning, rear parking sensors and much more.

"It's \$4,500 well spent. The electric motor generates 200 horsepower and 266 lb.-ft. of torque. The Bolt's range is on par with EVs costing much more. Something that sets the Bolt apart is the fact that it feels a little quicker than other small EVs like the Nissan Leaf Opens in New Window and it has TONS of cool tech features accessible from the very large touch screen."

Autotrader also had nice things to say about Chrysler's Pacifica minivan, including that it's in a league of its own.

The Pacifica Hybrid is currently ranked among the top five bestselling PHEVs in the industry for delivering 82 miles per gallon equivalent (MPGe) in electric-only mode with an all-electric range of 32 miles and a total range of more than 500 miles, Moody said.

The minivan segment's first hybrid vehicle also features an FCAdesigned, innovative dual-motor eFlite electrically variable transmission (EVT) that's paired with a



2020 Chevrolet Bolt

specially modified version of the 3.6-liter Pentastar V6 gasoline engine.

Autotrader judges stated that the only minivan on the list "brings plug-in electric technology to the quintessential family hauler. The Limited is the totally tricked-out grade with a handsfree power lift gate and sliding doors to a 20-speaker Harman Kardon audio system. A variation of the regular van's 3.6-liter V6 Opens in New Window joins two motor/generators to make 287 hp.

"If you're surprised or put off by the Pacifica Hybrid's price, check out the price of other nicely equipped minivans without a plug-in hybrid option, said Moody, they're all about the same price.'

Autotrader judges didn't forget about the SUV segment, which is quickly growing in consumer preference.

Autotrader judges said the Lincoln Aviator Grand Touring "is the plug-in-hybrid version of the all-new Aviator. It pairs the twinturbo Opens in New Window V6 found in other Aviator models with an electric motor for a combined 494 hp and 630 lb.-ft. of torque. These astonishing numbers are more in line with a highperformance sports car than a 3row SUV. The result is a shockingly quick family SUV.

"A 10-speed automatic transmission delivers output to all four wheels with standard AWD. This is the ideal platform for Lincoln Opens in New Window to show off the bulk of its connectivity and driver-assist/safety technologies. Leading the coolfeature list is the capability of linking up to four smartphones to act as your 'car key.'

"One little note – Lincoln says the EV only has a range of 18 miles. However, on a recent drive we were getting 20-25 miles of EV range on the highway in 100+ degree temperatures - the worst kind of conditions for a batterypowered SUV like the Aviator. We think the actual EV-only range is higher but Lincoln says 18 is the official number so we're going with that."

Toyota Maintains Earnings With Strong Yen

TOKYO (AP) - Japan's top automaker Toyota said Nov. 7 its net profit edged 1 percent higher in July-September as vehicle sales grew around the world.

Toyota Motor Corp.'s profit for the second fiscal quarter totaled 592 billion yen (\$5.4 billion), up from 585 billion yen last year.

Toyota, which makes the Prius hybrid, Corolla subcompact and Lexus luxury models, stuck to its net profit forecast for the fiscal year through March 2020, at 2.15 trillion yen (\$20 billion).

That would be an improvement over the 1.88 trillion yen earned in the year ended in March. Vehicle sales for the latest quarter grew both in Japan and overseas, including in the U.S., the rest of Asia and Europe.

Quarterly sales rose 4 percent to 7.6 trillion yen (\$70 billion), compared to the previous year.

Toyota said it expects to sell 10.7 million vehicles globally for the fiscal year through March 2020, up from 10.6 million vehicles the previous fiscal year.

Like most Japanese exporters, Tovota has been hurt by a strengthening yen. But the results show Toyota is holding up despite such negatives.

For the fiscal first half, cost cuts and marketing efforts offset the impact of an unfavorable exchange rate, it said. Toyota also said it will buy back up to 200 billion yen (\$1.8 billion) worth, or 34 million shares, of the company's common stock.

Toyota officials have stressed the company is focused on becoming a "mobility company" for a future when consumers may opt for new ways of car ownership like car-sharing, or choose futuristic EVs instead of gas cars common today.



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Dennis Thacker



Feds Continue UAW Probe

president of the United Auto Workers said Nov. 6 that a corruption scandal plaguing the union will get worse before it gets better, but that he's confident he can fix the mess and turn over a clean house to the next leader.

Rory Gamble, a union vice president who successfully negotiated a tentative contract with Ford, took over as acting president Nov. 2 when Gary Jones took a paid leave of absence.

In an interview with The Associated Press, Gamble pledged to put financial controls in place to stop the bribery and embezzlement uncovered in a widening federal investigation that has so far snared 13 people.

We're going to plan for going forward and how we fix this great union," Gamble said. "Right now, that's my charge and what I came to this job to do, to make sure I hand to the next president a very clean and uncorrupted union."

Gamble, a former director of a union region based in Detroit, has a tough job to do. Earlier Nov. 6, a retired union vice president became the 13th person to be charged in the federal probe of the union and auto companies.

Joe Ashton is accused of receiving thousands of dollars in kickbacks from a contractor who made watches for union members. The 58,000 watches are still in storage five years later.

Ashton was charged with conspiracy to commit wire fraud and conspiring to commit money laundering. The case is filed in Detroit federal court as a "criminal information," which means a guilty plea is expected.

The Associated Press left a message seeking comment from Ashton's lawyer, Jerry Ballarotto.

Ashton was a powerful official who headed the UAW's General

DETROIT (AP) - The acting Motors department. He also was a member of the GM board but resigned in 2017 after being implicated in the corruption probe.

The federal charges against Ashton are the latest fallout in the mounting corruption investigation. Federal agents have also searched the Detroit-area home of Jones, the union president, and the Corona, California, home of former president Dennis Williams.

According to court papers filed by prosecutors Nov. 6, Ashton and two other officials of a joint GM-UAW training center, Michael Grimes and Jeffrey Pietrzyk, used their positions to get hundreds of thousands of dollars in bribes and kickbacks from 2012 until July 2016 in a scheme involving the purchase of watches worth \$3.97 million.

Ashton convinced a Philadelphia chiropractor identified only as "Vendor B" to loan \$250,000 to a construction company owned by an Ashton associate in 2010, prosecutors allege.

Two years later, the company stopped making payments on the loan.

Prosecutors say Ashton then proposed a way for the chiropractor to be repaid, by setting up a company that would supply the UAW with 58,000 watches. The chiropractor found a company to provide the watches, with Ashton taking part in the design, production and pricing. They say he negotiated a deal for the chiropractor to buy the watches for \$2.29 million, or \$42.90 per watch. Then Ashton told the chiropractor to submit a bid to Pietrzyk for a total price of \$3.97 million, or \$68.50 per watch, the documents allege.

Ashton and Pietrzyk steered the watch contract to the chiropractor, with Ashton demanding a \$250,000 kickback.



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