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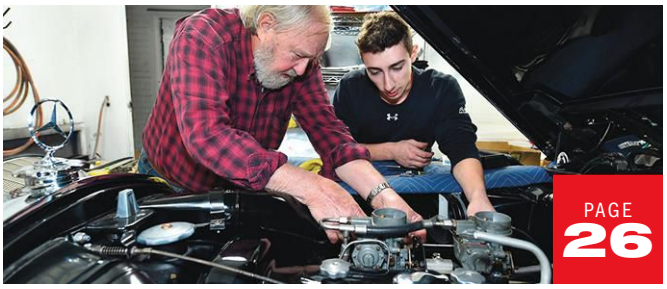
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ON THE COVER
From simple leveling kits designed to help with everyday hauling to complete off-road suspensions tasked with tackling the toughest terrain, today's lift and leveling kits cover a lot of ground. *See article on page 38.*
(Photo courtesy Carli Suspension)

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Jef White
Editor
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Vehicle Thefts Surging Nationwide

Vehicle thefts continue to surge nationwide.

A new report released by the not-for-profit National Insurance Crime Bureau (NICB) shows another record-breaking year for vehicle thefts in 2023, with more than 1 million vehicles reported stolen—an approximately 1% overall increase in the U.S. from 2022.

With the news, aftermarket shops can look into offering advanced theft deterrent products and systems, even while paying better attention to how and where they keep customer vehicles under lock and key.

"Criminals are employing increasingly sophisticated methods to steal vehicles, including the use of advanced technology to bypass security systems," said David J. Glawe, president and CEO of NICB. "From keyless entry hacks to relay attacks on key fobs, perpetrators are exploiting vulnerabilities in modern vehicle security measures with alarming success rates."

Vehicle theft rates have risen steadily since 2019, and last year California accounted for the highest number of vehicle thefts nationwide. The District of Columbia had the highest theft rate across the nation in 2023 with 1,149.71 thefts per 100,000 people, which is over three times the national theft rate average.

While some regions witnessed a decline in vehicle theft rates, others experienced notable upticks. Urban centers and densely populated areas remained hotspots for auto theft, with metropolitan regions such as the Washington, D.C., metro area reporting increased incidents compared to suburban or rural areas.

The District of Columbia and Maryland each saw a drastic rise in thefts in 2023, with theft percentage increases of 64% and 63%, respectively.

The top ten states by volume of vehicle thefts remained consistent in each quarter of 2023, reaching these yearly totals:

1. California (208,668 vehicles reported stolen)
2. Texas (115,013)
3. Florida (46,213)
4. Washington (43,160)
5. Illinois (41,528)
6. Colorado (34,068)
7. New York (32,715)
8. Ohio (31,647)
9. Georgia (28,171)
10. Missouri (27,279)

"Addressing the rising tide of vehicle thefts demands collaborative partnerships involving law enforcement agencies, government bodies, automotive manufacturers and the community at large," says Glawe. "The repercussions of vehicle theft extend beyond financial losses, causing significant distress and inconvenience for affected individuals. Beyond the financial burden of replacing stolen vehicles and repairing damages, victims often endure emotional stress and disruption to their daily routines."

NICB partners with state and federal law enforcement agencies to disrupt criminal networks and help recover stolen vehicles for member companies, it says. It also participates in federal, state and local task forces, fusion centers, and intelligence groups to deter vehicle theft and works strategically with lawmakers and regulators in all 50 states to boost efforts by insurers and law enforcement to fight crime trends like rising vehicle thefts.

More information is available at nicb.org. ***TS***

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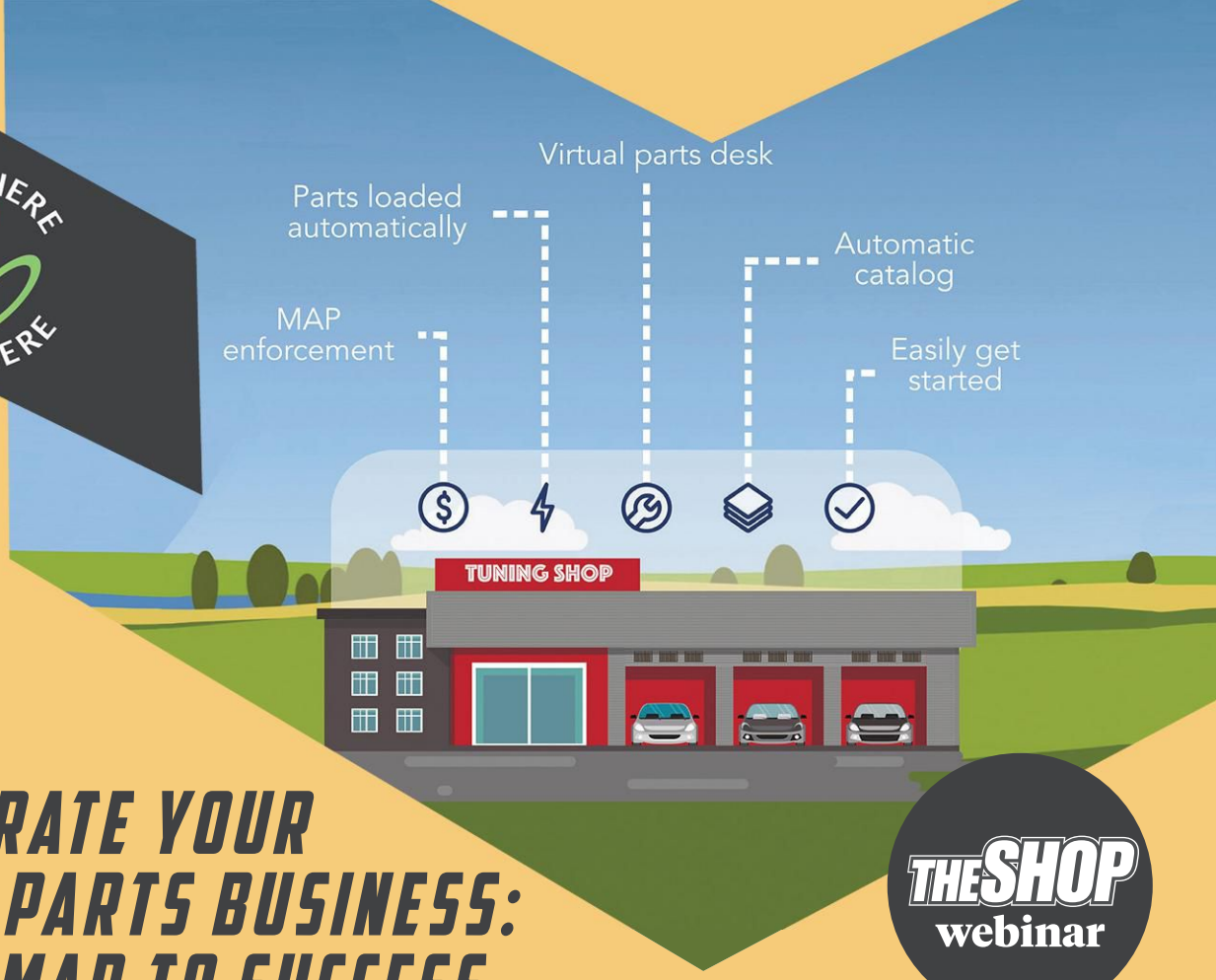
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Stephanie Benger
Marketing Director
Data Here-to-There

Stephanie has been an automotive e-commerce automation specialist since 2014. She studied data science at the University of Alberta while obtaining her master's degree in Library and Information Studies. Stephanie believes that automation is the way of the future and encourages anyone with an online store or marketplace to take in all that automation has to offer.

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OVERCOMING THE HIGH COST OF FUNDING

Ways to get the money you need to build your business.

By Mark E. Battersby

Image credit: naum - stock.adobe.com

Today's high interest rates have put that all-so-necessary funding out of reach for many specialty automotive aftermarket businesses.

The situation is compounded by the reluctance of many traditional lenders to provide working capital, while actions of the Federal Reserve have contributed to an increase in inflation and raised interest rates, with no indication of substantial relief in sight.

Combine those higher interest rates with leasing and purchase prices essentially doubling in the last few years and funding any business today is challenging.

FIRST STOP—BANKS

With the well-documented reluctance of banks to provide the funds needed by small businesses, it may seem strange to suggest that a search for affordable funding should begin with the operation's bank. Although numerous factors will impact the type of lender eventually chosen, the best option is usually to start with the bank the shop currently uses.

Even without a personal relationship with the banker, an existing bank often has a broader perspective of your operation's debt, spending and cash flow. If your shop is already in the bank's system, that puts you one step ahead—even with a reluctant bank.

Obviously, if a relationship with the operation's current bank, as faint as it might be, isn't sufficient to overcome the bank's reluctance to provide the needed funds or render advice, a new bank might be necessary. Since banks are often the source for the



Every performance, restyling and customization professional seeking to borrow money faces challenges such as where is funding available and at what interest rate? (Photo credit: Vlad Kochelaevskiy - stock.adobe.com)

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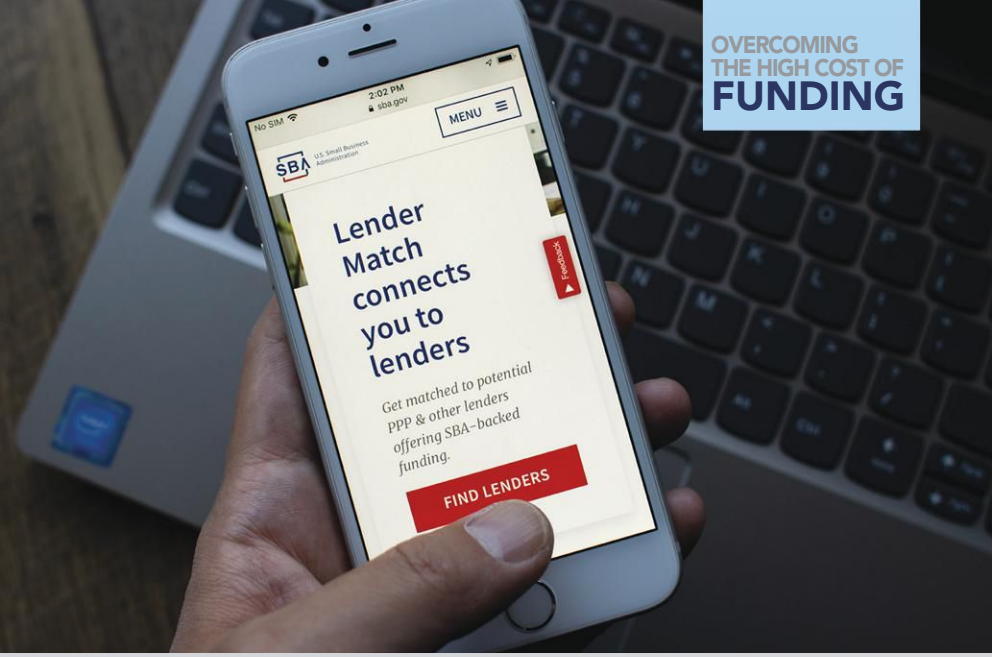
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Online lenders are enjoying a surge in popularity. (Photo credit: Tada Images - stock.adobe.com)

most economical financing, a community bank might be the answer.

Establishing relationships with community banks is often easy, with them considering the operation as a whole alongside cash flow, credit and collateral factors.

NEEDS VERSUS COST

In general, all banks are looking for businesses with collateral and strong credit. Often, while not interested in providing long-term funding, banking offerings such as cash management, payroll services, merchant services and lines of credit may be available.

Every specialty automotive aftermarket shop should already have a line of credit to help tide it over short-term. A company's line of credit provides access to funds up to a preset limit, with the shop paying interest only on the funds withdrawn. Fees for having the funds readily available are usually competitive.

However, as finding capital becomes more difficult, it's more important than ever to determine why the shop needs capital, how fast it is needed and, most importantly, what it can afford to pay for that capital.

While banks, even community banks, typically have low interest rates and offer competitive terms, it may be difficult to qualify for financing. Thus, an incentive such as a guarantee by the Small Business Administration (SBA) might be beneficial to help obtain the needed funding.

THE SBA

SBA loans make it easier for performance, restyling and customization businesses to get needed funding. The SBA offers lenders—mostly traditional lenders—a federal loan guarantee.

This makes it less risky for banks to lend and often means more favorable interest rates and terms for the borrower.

Repayment periods for SBA loans are based on funds usage. They range from seven years for working capital to 10 years for equipment purchases and 25 years for real estate purchases. There are a number of SBA loan guarantee programs available, including:

- SBA 7(a) loans, the most popular program, provide funds for many purposes and are available in amounts up to $5 million.
- SBA 504 loans offer long-term, fixed-rate financing to purchase or repair real estate, equipment, machinery or other assets.
- SBA Microloans are the smallest loan program offered and provide $50,000 or less to help businesses expand.

When traditional sources, even with guarantees, fail to provide affordable needed financing, it might be time to explore a relatively new option: online funding.

GOING ONLINE

With the reluctance of traditional banks to lend, online lenders are enjoying a surge in popularity. Best of all, online banking eliminates the cost of brick-and-mortar branches, thereby generating cost savings to be passed on to borrowers.

Fintech, or financial technology, consists of two areas: interacting with a bank minus the human element and independent lenders working outside the traditional banks. Applying for an online business loan can be accomplished entirely online.

While online banking is best for those with bad credit and those seeking fast funding and easy applications, under-qualified borrowers are not always the only applicants paying extra.

THE ESOP OPTION

An effective strategy for minimizing the cost of funds needed by a business involves selling the business. An employee stock



An employee stock ownership plan involves selling the business to workers. (Image credit: trueffelpix.com - stock.adobe.com)

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ownership plan (ESOP) is a tax-effective way to transfer ownership of a small, incorporated shop to its employees while raising the funds needed for the operation's growth.

With an ESOP, the business issues new shares of stock and sells them to the ESOP. The ESOP then borrows funds to buy the stock. The shop can use the proceeds from the stock sale to its own benefit—growth or expansion.

The shop repays the loan by making tax-deductible contributions to the ESOP. Interest and principal on ESOP loans are tax-deductible, which can reduce the number of pretax dollars needed to repay the principal by as much as 34%, depending on the operation's tax bracket.

Unfortunately, the tax shield does not help with S corporations since they don't pay corporate income taxes. Capital gains deferral, however, can make ESOPs attractive to these pass-through business entities.

BOOTSTRAPPING & SELF-FUNDING

It can be wise for every business owner to have at least some personal funds at risk, since this shows potential lenders and investors that the owner is committed to the success of the business.

Unfortunately, our tax laws make self-funding a touchy—and complex—strategy.

The most basic, affordable funding strategy, called "bootstrapping," means using personal or family funds to finance the business. Offsetting the convenience of bootstrapping is the necessity for the owner or shareholders to often give up equity in the specialty automotive aftermarket business.

What's more, whenever a loan is made between related entities, or when a shareholder makes a loan to his or her incorporated shop, tax laws require a fair market rate of interest be included. If not, the IRS will step in and make adjustments to the below-market (interest) rate transaction in order to properly reflect "imputed" interest.

BORROWERS BEWARE

Dealing with an economical but unfamiliar lender isn't always trouble-free. A loan agreement might, for instance, contain a provision requiring the loan to be repaid if the buyer misses several payments, fails to maintain certain debt service coverage, etc.

Some lenders want delayed payments made up in a single payment; some will modify and extend the loan with minimal paperwork with others treating it as refinancing—complete with the associated costs.

And, speaking of loan terms, every borrower should generally match the term of a loan to the life of the item to be financed.



Every specialty automotive aftermarket shop should already have a line of credit to help tide it over. (Photo credit: andreyphoto63 - stock.adobe.com)

If the financing is for equipment, the loan shouldn't be longer than the expected life of that equipment.

Don't forget that many commercial loans require only payment of interest. When the loan period ends, every borrower should have a clear picture of what the lender intends to do at the end of that period.

On a similar note, a fixed interest rate stays the same throughout the term of the loan, while business loan rates can fluctuate, making them more expensive.

AVOID AT ALL COSTS

In the search for capital, the easiest options may be the most expensive and therefore the least desirable:

- ***Credit card debt.*** Business credit cards often offer more flexible repayment terms but typically have higher interest rates than traditional financing. Designed to appeal to businesses with irregular cash flow, the higher cost of business card debt results because the debt is usually unsecured, making it riskier for lenders.
- ***Email solicitations.*** Answering those "We Lend Money to Businesses" ads means leaving the banking sector with its various protections and borrowing from a private lender.

THE ADDED COST OF TAXES

When funds have been obtained at a favorable cost, it doesn't mean that the interest is automatically tax-deductible. There is something called the "tracing rule" where interest is traced to its use to determine whether or not it's deductible.

Suppose, for example, a business borrows money but only a portion is used to purchase needed equipment. The balance goes to a key employee or even the owner to purchase a personal vehicle.

Obviously, the interest on the borrowed funds used for equipment, supplies or other business expenses is deductible. The portion of those borrowed funds distributed as a loan or bonus is not tax-deductible.

Every performance, restyling and customization professional seeking to borrow money faces challenges such as where is funding available and at what interest rate? What is the total cost including fees? Is the funding good for an extended period, or can payment be demanded early?

Guidance from a professional adviser may be necessary. **TS**

MARK E. BATTERSBY *writes on financial and tax-related topics. Learn more by visiting thetaxscribe.com.*



In the search for capital, the easiest options may be the most expensive and therefore the least desirable. (Photo credit: zentilia - stock.adobe.com)

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OEMs & the Aftermarket p.18 | Performance Products p. 24

DATA DRIVEN

The latest tuning & programming devices deliver the experience drivers crave.

By John Carollo



Performance tunes offer customers an enhanced driving experience. (Photo courtesy SCT/Bully Dog)

Handheld and plug-in tuners and programmers and similar products have gone from a niche device to an important part of any modern performance project.

With pretty much any component in a car or truck having a wire coming out of it, certain offerings can collect information for troubleshooting as well as for increasing power output and can also be used to tap into, reset or even work around specific vehicle systems or features.

It's safe to say that tuning and programming devices are not a fad and are not going away anytime soon. Suppliers offer insider information to get shops up to speed on the evolution of these data-driven components.

RULES TO FOLLOW

The most important thing to follow with tuning and programming devices, of course, are the emissions rules and regulations governing what can and cannot be done to a vehicle.

"For the diesel tuning space, the biggest obstacle the last few years has been EPA and emissions regulations. Edge Products has been offering 100% emissions-compliant tuning solutions for over 10 years now," says Jacob White, product brand manager for Edge Products. "But it's still a challenge convincing truck owners of the benefits compliant tuning can offer for their towing and daily driving needs."

White says shops may have to battle consumer misconceptions that deleting emissions equipment (which is federally illegal) is the only way to improve a truck's performance.

"This couldn't be further from the truth," he notes. "Our emissions-compliant tuning options can increase power and torque, improve towing performance and even increase fuel mileage while still being completely safe in an otherwise stock truck application."

Mike Litsch, senior product manager, domestic tuning, for DiabloSport and Superchips, notes suppliers are constantly working on meeting what's required.

"Resellers want to know that the tuning products they sell are safe and compliant."

Chris Fairless, Hypertech director of sales, agrees that EPA CARB certifications can be a challenge, as can the increasingly complex computer systems coming from the original equipment manufacturers (OEMs).

"The tuning market is an intricate and necessary product for many aftermarket accessories companies," he notes.

Engine Control Unit (ECU) technology has advanced exponentially in recent years, says Arin Ahnell, director, European vertical for APR and Dinan.

"For end consumers this often means that when a new ECU platform is released, it may take several years for the encryption to be broken. Once we're in, the tuning begins, which has also increased in complexity substantially in recent years. We've gone from ECUs with only a few hundred maps to ECUs with tens of thousands of maps, all which interact with each other. To tune correctly and account for all the variables an end user may see, our team will spend months on a single calibration."

David Griffin, business development manager for HP Tuners, also sees new vehicle systems as a hurdle the aftermarket must clear.

"New OEM security protocols for the latest control modules are the biggest outside factor we face. There is always a new challenge for us to overcome and that is what keeps this work interesting," he explains.

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DATA DRIVEN

TUNERS & PROGRAMMERS



Plug-and-play power modules deliver plenty of horsepower-per-dollar benefits. (Photo courtesy aFe POWER)

HOT PRODUCT: Scorcher BLUE Power Module

FEATURES & BENEFITS: Carries four different maps with the ability to select modes and custom tuning straight from a smartphone; Bluetooth-enabled apps also allow for monitoring of boost pressure or fuel pressure, depending on the application.

aFe POWER
Loc Nguyen
Application Engineer – Electronic Products

HOT PRODUCT: APR Ultralink

FEATURES & BENEFITS: New platform for APR ECU and TCU upgrades; real-time access to tens of thousands of tunes that can be loaded, configured, bought and installed from home.

APR and Dinan
Arin Ahnell
Director, European Vertical

HOT PRODUCTS: Unlock and Tune Kits for 2019-22 5.3L/6.2L GM Gas Trucks

FEATURES & BENEFITS: Allow the user to unlock both the ECM and TCM in their driveway without removing modules and sending them out for unlock.

DiabloSport
Mike Litsch
Senior Product Manager Domestic Tuning

HOT PRODUCTS: PowerControl X

FEATURES & BENEFITS: Dyno-tested for proven results; available for over 15,000 vehicle types; reliable and safe with DTE technology; easy plug-and-play installation; chip tuning via app control.

DTE Systems GmbH
Matt Ringgold
Director of Sales

HOT PRODUCTS: EZX Inline Modules

FEATURES & BENEFITS: Plug-and-play modules available for 2013-24 Ram Cummins, 2017-22 Ford Power Stroke and 2019-22 GM 1500 3.0L Duramax models; emissions-compliant tuning with gains of up to 65 hp and 130 pound-feet of torque with on-the-fly power adjustment.

Edge Products
Jacob White
Product Brand Manager

HOT PRODUCT: Private Label RTD (Remote Tuning Device)

FEATURES & BENEFITS: Pairs with the TDN (Tune Delivery Network) smartphone app; can include a shop's logo on the device, packaging and phone app home screen; exchanges calibrations and data logs using the TDN with no need for a laptop.

HP Tuners
David Griffin
Business Development Manager

HOT PRODUCTS: Max Energy Spectrum Tuners

FEATURES & BENEFITS: Offer optimized engine tuning; increase torque for towing; control speedometer calibration, automatic transmission adjustments, fuel management systems (V4/V8) and TPMS threshold.

Hypertech
Chris Fairless
Director of Sales

HOT PRODUCTS: SCT X4 & Bully Dog BDX Programmers

FEATURES & BENEFITS: The SCT X4 offers comprehensive tuning options that cater to a wide array of performance goals, featuring a straightforward interface; the sleek Bully Dog BDX steps up with cutting-edge technology, offering cloud-based tune delivery and wireless updates.

SCT/Bully Dog
Jay Payson
CRO

HOT PRODUCT: Pulsar XT for Bronco & F-150

FEATURES & BENEFITS: Available for 2.3L/2.7L Ford Bronco and 2021-23 2.7L/3.5L F-150 applications; app-based inline controller with multiple power levels that can be adjusted on the fly; user-adjustable features and options.

Superchips
Mike Litsch
Senior Product Manager Domestic Tuning



Today's offerings are designed to work with the latest new vehicle systems. (Photo courtesy HP Tuners)

For enthusiasts, this can require removing their module(s) and mailing them in for an upgrade.

"An added fee may also be associated with this upgrade as well," Griffin continues. "After the upgrade is completed, the end user can then read and write the module to ensure the vehicle maintains its compliance with emissions regulations."

Such scenarios are shaping the future of the industry, says Jay Payson, CRO at SCT/Bully Dog.

"In today's market, the surge in technological advancements, alongside increasing demands for enhanced vehicle performance and fuel efficiency, shape the evolution. An emerging challenge is the complexity of accessing and modifying OEM vehicle computers, a task made increasingly difficult by manufacturers. Our engineers tirelessly work to simplify this process, ensuring our products not only boost vehicle performance but also meet the rigorous emissions and modification standards, making it a seamless experience for shop owners to offer these advancements."

Where applicable, factory warranty claims should be taken into consideration when choosing which product to install, adds Loc Nguyen, application engineer – electronic products for aFe POWER.

"Flashing a vehicle's ECU will void its warranty if the dealership has to pull data from the PCM. But having a power module that can be easily and quickly disconnected does not void the warranty, allowing the customer or the shop to restore the vehicle back to stock before taking the vehicle in for service."

And costs should also be taken into account, notes Matt Ringgold, director of sales for DTE Systems, who explains that customers feeling the effects of cost of living increases and inflation are affected by "manufacturing costs that result in increases of MSRP and MAP prices."



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DATA DRIVEN





When it comes to tuning and programming, not all customers are looking for the same thing. (Photos courtesy Hypertech)

THIS OR THAT

Nguyen continues that as the market has grown and evolved, references have sometimes come to mean different things to different people.

"Tuners/programmers and power modules are not in the same category," he explains. "While tuners/programmers require you to flash your ECU, a plug-and-play power module does not leave a trace. Power modules are not complicated to install, and the old adage of dollar-per-horsepower goes a very long way when it comes to plug-and play-modules."

Accurate information is extremely important for shops dealing in these devices, suppliers say, as is ease of use.

"A common misconception professionals may face is that the software is difficult to use and navigate," Griffin says. "We have spent a lot of time to make our software user-friendly and organize it in a way that makes navigation simple."

On the diesel side, White again stresses the value of non-DPF delete options.

"Our emissions-compliant products can completely change your driving experience."

Litsch agrees.

"There is some misconception that you can't add power and stay emissions compliant, but that isn't the case. We offer safe and powerful tunes that are either 50-state-legal or have been self-certified for compliance," he notes.

Fairless says everything starts with giving customers what they need for their specific application and goals, which includes options for a better driving experience.

"With the cost of new vehicles, most sales staff professionals avoid selling engine tuning, which is understandable. But they sometimes overlook other tuning products that make that vehicle feel more powerful and give it an overall better driving experience—things like throttle optimization and Start-Stop and/or V4 mode disabling."

Like everything from chrome valve covers to cams, parts need to be matched correctly. Payson points out that a prevailing notion in the tuning community is that all tuning and programming devices deliver similar results across various vehicles.

"Our products distinguish themselves by meeting the specific needs of each vehicle, considering its make, model and any existing modifications. This approach ensures optimal performance outcomes tailored to each vehicle's unique profile, dispelling the myth that tuning is a one-size-fits-all affair."

Customers can come in looking for a particular product or tune without understanding the differences in their vehicle, Ringgold agrees.

"Some individuals are biased and have a sole focus on a particular brand."

To do things right takes time and intelligence, says Ahnell.

"We hear a lot of myths around custom tuning. The misconceptions are astounding. There's this wild belief that someone can custom tune a car on the dyno in only a few dyno pulls, with minimal effort. Most don't understand that a proper calibration can take months to perfect."

HANDS ON

Shops offering tuner and programmer products and services will want to get comfortable on both the selling and installation sides of the business.

"When selling, ask questions and listen to your customers," recommends Hypertech's Fairless. "Not all customers are looking for the same thing. If they are looking for performance horsepower and torque, offer them a full tuner. If they are looking for just throttle optimization, sell them a throttle optimizer. If the customer purchases larger tires, sell them a speed calibrator. All too often, sales staff relates 'tuners' as engine tuning only."

Noting that tech professionals are becoming well-versed in the products, he offers two installation tips as well.

"First, do the tuner update before doing the installation. This will upload the latest programming in the tuner," he says. "And



A lot can still be done legally to add power to diesel vehicles. (Photo courtesy Edge Products)



Tuning is an important part of any power project. (Photo courtesy APR)





Resellers want to know that the tuning products they offer are safe and compliant. (Photos courtesy DiabloSport)

second, when installing a speed calibrator, do the calibrator update and then install the calibrator before installing other accessories on the vehicle. This way, if there is a calibration update that the manufacturer has not seen yet, that opens some time to get that calibration updated."

Other suppliers agree that flash tuning devices offer straightforward installations.

"We'll walk a tech through the process step-by-step on the screen of the device," White from Edge Products says. "Our inline modules may require some additional installation steps, but we pride ourselves on offering step-by-step instructions and installation videos to help ease the concerns about installing such devices. We use factory-style connectors on all our harnesses so we can maintain a true plug-and-play tuning solution for most late-model diesel applications."

Nguyen reports that aFe's power modules are designed for everyday users, with installs that don't require modifications to stock connectors or wiring.

"If a shop can perform an oil change and a tire rotation, they can install our power module," Nguyen says. "All connectors and their locations are highly detailed in our installation instructions, making it easy for shops to complete the job."

Plug-and-play offerings are, of course, fairly straightforward in most all instances.

"Our systems have been designed so any installer, be it a performance shop or end user, can simply plug into their vehicle, run through a few options on the screen and load the tune without any advanced vehicle knowledge necessary," says Ahnell from APR and Dinan.

Nevertheless, common engine knowledge is always extremely helpful for technicians as well.

"To confidently and successfully calibrate a vehicle that maintains compliance, an aftermarket shop must have a full understanding of how an engine and transmission works mechanically and a full understanding of how the system that controls the engine and transmission work," HP Tuners' Griffin says. "For example, if the calibrator is advancing the ignition timing by 3 degrees under a specific operating condition (i.e. engine rpm and cylinder airmass range), what is that actually doing inside the cylinders? This is just one very basic example that demonstrates the importance of a full understanding of the control system and specific OEM methodology.





Shops will find success employing technicians with a strong overall knowledge of engine/chassis limitations and an understanding of technical and diagnostic tools. (Photos courtesy DTE Systems)

Many aftermarket shops will contract experienced calibrators to do this work for them."

Ringgold from DTE Systems says shops will find success by employing technicians with a strong overall knowledge of engine/chassis limitations and an understanding of technical and diagnostic tools who also spend time communicating with customers.

"They need to know the exact want or need of the client and recommend necessary upgrades required by the tune or to complement it," he says.

It's important to keep customers in the loop, agrees Litsch from DiabloSport and Superchips.

"Most tuning products are relatively easy to install, but conveying how to use the product to the consumer after it is installed is important," he explains.

Ultimately, a strong shop/supplier partnership makes things much easier, Payson says.

"SCT and Bully Dog have streamlined the process for aftermarket shops to offer and install performance tunes, making it significantly easier to enhance vehicle performance for customers," he explains. "With tools designed for user-friendly operation and comprehensive support, shops can effortlessly navigate vehicle electronics and engine management systems."

An emphasis on simplifying diagnostics, troubleshooting and custom tuning for each vehicle's specific needs is a good place to start, he concludes.

"Shops can quickly become experts in optimizing vehicle performance." ***TS***



OEMS & THE AFTERMARKET

With an uneasy alliance at times, the two sides nonetheless need each other with industry challenges looming. /////// **By Jef White**

When it comes to the long-term relationship status between the specialty automotive aftermarket and original equipment manufacturers, it's fair to say representatives from both sides would agree "it's complicated."

For the OEMs—sometimes referred to as OEs—a lot of time, effort and investment go into creating specific models for specific markets. The ranks of carmakers are often staffed with enthusiasts who recognize the benefits of highly accessorized models and their positive influence on buyers, but they often work for executive team members who believe that each unit that rolls off the assembly line is a pristine work of art that should be left exactly as-is for eternity.

And those who would like to embrace customization still have concerns, real or imagined, over the extreme bottom level of subpar aftermarket products that can have a negative effect on brand reputation and at times lead unhappy customers to return to dealerships demanding fixes for problems that did not come from the factory.



The automotive aftermarket can benefit from OEM involvement and vice versa. (Photos courtesy Keystone Automotive BIG Show)

Understanding that it relies on those vehicles for its very existence—and with well thought-out and research-backed responses to those and other objections—the aftermarket nevertheless remains suspicious of OEMs and their intentions as well, wary that its best ideas will be scooped up and included on new models after years of research and investment.

And that's if the carmakers aren't actively working against their efforts, locking electronic access points and making parts and



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OEMS & THE AFTERMARKET



The "Revolutionizing the Ride: The Relationship Between OEMs & Aftermarket Accessories in the Automotive Landscape" seminar kicked off the Keystone Automotive BIG Show in February. The panel included, from left, Brad Akins from Akins Ford and Wild Willies Custom Accessories; Steve Gilmore, vehicle personalization chief designer, Ford Motor Co.; Mike Spagnola, SEMA president; Tony Ambroza, RealTruck chief growth officer; and moderator Sean Holman, automotive journalist and podcast host. (Photo courtesy Keystone Automotive BIG Show)

systems difficult, if not impossible, to bypass or replace.

It's been about two decades since many of the major automakers began exhibiting at the SEMA Show, and at the time the development was met with some resistance from longtime association members and showgoers.

But even as the OEM presence has scaled back some over the past couple of years, few would argue their participation at the show has led to a better sense of cooperation and camaraderie, along with real-world benefits for both sides.

Carmakers have forged strong relationships with top builders to create special editions and projects that enhance their brands, their presence has brought added consumer awareness to the aftermarket and its solutions through mainstream media, and technical staff have shared their knowledge and ideas in seminars and other programs open to all.

Partnerships ranging from measuring sessions and dealer programs to teaming up on important efforts such as emissions compliance research and ADAS development have benefited aftermarket companies, and in many places common ground has been reached.

And their fates remain linked.

There's little doubt the two sides will need each other in the face of current challenges. From electric, hybrid and other new propulsion developments to stricter government regulations and even the new consumer "mobility" mindset, the automotive industry is facing waves of change.

A united front by the automotive aftermarket and the OEMs will help specialty shops survive and thrive as the industry enters a new era.

SPIRIT OF COOPERATION

That spirit of cooperation was highlighted during an opening night kickoff presentation at the Keystone Automotive BIG Show held in late February at the Gaylord Palms Resort and Convention Center in Kissimmee, Florida.

"Revolutionizing the Ride: The Relationship Between OEMs & Aftermarket Accessories in the Automotive Landscape" was presented by the Specialty Equipment Market Association's (SEMA) Truck and Off-Road Alliance (TORA) council and moderated by automotive journalist and podcast host Sean Holman.

Panelists included:

- Brad Akins from Akins Ford Corp. and Wild Willies Custom Accessories in Winder, Georgia
- Steve Gilmore, Ford Motor Co. vehicle personalization chief designer
- Mike Spagnola, SEMA president
- Tony Ambroza, RealTruck chief growth officer

"The one development we've seen more and more recently is the deepening relationship between the manufacturers that build the vehicles that we can't wait to get our hands on and the aftermarket suppliers—the ones that manufacture and provide the products we sell and install every day," Holman says. "The internet, e-commerce, electric vehicles, advanced engineering and new material technology are just a few of the factors contributing to what seems to be a constantly evolving and changing automotive aftermarket landscape."

And the stakes are high.

"We see over $50 billion in specialty

annual sales, and over $351 billion in total economic impact," says Spagnola. "We're a big deal. The industry is huge."

So, when it comes to accessorization trends and personalization, Gilmore says Ford starts by conducting in-house research, attending events, and talking with everyone from dealers to customers when creating its special vehicle packages.

"We have a lot of people at Ford who are automotive enthusiasts—who race and (accessorize)," he notes. "So, we look at the products, we look at what's in the aftermarket, we think about that for our future, and we use those products where we can."

As a member of SEMA's Professional Restylers Organization (PRO), Gilmore works to showcase the benefits of OEM exposure to fellow council members.

"If I can get a win on any Ford vehicle that I'm putting accessories on to upgrade it, everybody else wins," he explains. "I'm not exactly your competition—I'm trying to be your friend."

Past Ford special vehicles such as Harley-Davidson and King Ranch trucks raised



An increased OEM presence at the SEMA Show has led to a better sense of cooperation and partnership, along with real-world benefits for carmakers and the aftermarket.



SEMA Garage is a place where OEMs and the aftermarket can cooperate on important issues such as emissions regulations testing and ADAS research. (Photo courtesy SEMA Garage)

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OEMS & THE AFTERMARKET



Ford Raptor is an example of a "halo" vehicle that showcases specialty upgrades and drives consumer awareness. (Photo courtesy Ford Motor Co.)



The Ford Bronco Badlands Sasquatch 2-Door Concept shows that when OEM vehicles get factory accessory upgrades, everyone wins. (Photo courtesy Ford Motor Co.)

awareness for those companies, Gilmore notes. Recent Ford collaborations with aftermarket brands such as Warn Industries and FOX have proven equally successful.

"We see value in what the enthusiasts put onto their own vehicles," he says. "We also have to rely on (aftermarket manufacturers) to do a lot of engineering. We both learn a lot."

Ambroza notes that OEM/aftermarket partnerships are "vigorous. They are not easy."

And they need to work for both sides.

"The aftermarket product that we make has to be better as a result of it," he says. "We've found that over the last 10-20 years, when we do offer products to the OEM, it lifts the overall market."

Maybe the biggest win, he notes, comes in terms of product and market awareness.

"Our research tells us that, quite honestly, most truck owners don't even know that they can accessorize their vehicles beyond maybe floor liners and a couple of other (items). It's scary, yet at the same time, that's why we're so excited about pursuing the market," he says.

Carmakers can help aftermarket companies get where they want to go, Ambroza believes.

"When you get great collabs, it helps. How do you inspire a new audience and get them thinking about what could be done that they've never seen happen before? It makes one aware that they can absolutely outfit their vehicle and pursue that dream with aftermarket accessories."

INSPIRATION & MOTIVATION

Akins Ford and Wild Willies Custom Accessories are an example of how new vehicle sales can spur aftermarket upgrades. The Wild Willies customization shop is located on the Akins Ford dealership campus.

"We took accessories about 10 years ago and looked at it as a department," says Akins. "Through trial and error, we've been able to grow it into a $1-million-per-month department, with the majority of that being aftermarket accessories."

Instead of being at odds, the factory and aftermarket combine to give car buyers the unique rides they're looking for, he says.

"What we see as a dealer and also as an accessory partner is that they complement each other," he says. "We keep the branding separate. We use it as a complement. The OE side carries over to the accessory side. (Drivers) come back to the dealer for the accessory side."

New-car buyers want to "differentiate," he explains, with products including custom badging, colored lighting, blackout packages and technology upgrades joining traditional aftermarket favorites such as wheels and tires, running boards and exhausts.

Another big advantage is the built-in trust carmakers and dealerships have with their clients, he notes.

"OEs bring in the awareness and credibility. Customers recognize the name. They see we are OE-affiliated and (understand) we can build that vehicle that may look like a $100,000 vehicle they've seen in their neighborhood, but it's really not."

Also attractive to the aftermarket is the "massive war chest of marketing dollars" the carmakers have, adds Ambroza from RealTruck.

"It brings consumer awareness, relevance to the vehicle and the fact that it will fit," he says of specific accessory categories found on OEM vehicles. "And let's not pretend that warranty isn't always a concern. So, if an OE is saying 'This is a product we can stand by and support,' that also overcomes an issue that a lot of people have."

The panel used the Ford Raptor and Raptor R as examples of "halo" vehicles that spur enthusiasts' dreams, leading to aftermarket involvement.

"If you think about Ford Raptors, they are gorgeous trucks, but not everybody can afford an $85,000 vehicle," says Spagnola. "It's aspirational. They maybe can't afford the Raptor, but they can afford the $40,000 Ford F-150 and they still want to add, say, tires and wheels and running boards. We find time and again that Raptors and Raptor Rs set the bar for what's possible, and then buyers start looking at their own trucks and say, 'I can do this and this and this.'"

That motivation is also there for Raptor and Raptor R customers as well.

"The people who are buying these vehicles have money," says Akins. "We've been surprised at the opportunity to personalize those top-end vehicles. You wouldn't think a Raptor R (would need more), but people personalize to their liking."

DRIVING TOWARD THE FUTURE

Host Holman prompted that "there are probably thousands of brands out there that wish they had that OE experience relationship."

When it comes to what the carmakers are looking for in a partner, Gilmore from Ford says quality manufacturers in relevant categories who are willing to collaborate—and can be patient.

"The process takes forever," he notes. "We go from 'We like your product. We like your idea,' to 'Hey, let's pull it in. We'll take your engineering, take your test data,' and then we start looking at it and we do our own testing."

Then it's plenty of back and forth between the companies until something happens—or doesn't.

"Sometimes we never get there," he admits. "There are times we just can't (work together). There might be regulations that pull us away from it. Or there might be something else that says, 'This doesn't work for us.' But we look for (collaborations) all the time. There's always a trend going on."

Taking the aftermarket as a whole, SEMA and the OEMs continue to work behind the scenes to promote and protect the entire industry, Spagnola reveals.

"It is a relationship," he says. "We do a lot more work with the OEs than probably everybody knows. We have measuring sessions at SEMA Garage, ADAS calibrations right now, those sorts of things. There's a lot of work that goes on."

Pressing issues on the horizon will require an even greater commitment between the two sides as the transportation stakes are continually raised, Spagnola adds, using ADAS testing as an example.

"Even some of the OEs were wondering what happens with these systems when we lift a vehicle to a certain height. We took a Chevy Silverado and tested it both statically and dynamically," he says. "Those tests are over $100,000 each, but SEMA has dedicated that kind of money. It take collaboration of both aftermarket products and the OEs on the ability to recalibrate. At some point there will be standards created."

Meanwhile, it's no surprise that government regulations are always looming.

"There are times when (lawmakers) just see us as mass transportation. So, making sure that we are up to speed on emissions regulations and those types of things is really critical," he says.

Noting that the market is driven by passionate enthusiasts, he encourages professionals from all sides of the automotive industry to do what they can, as the OEMs and the aftermarket work side by side to "find ways to improve, grow and modify."

"Please get involved," says Spagnola. "We're getting challenged every day."

But, as the OEMs and the aftermarket have shown time and again, that's nothing they can't overcome. **TS**



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EV Dual Motor TorqueBox

Torque Trends Inc., Wittmann, Arizona, introduces the Torque Vectoring Capable Dual Motor TorqueBox. Offering EV horsepower and torque improvements, the transaxle-based Dual Motor TorqueBox is available with spools or a differential and can be mounted like a traditional transaxle or placed perpendicular to drive both front and rear axles in an all-wheel drive configuration. Models are available to fit most popular electric motors.

Explorer ST Exhaust

AWE, Horsham, Pennsylvania, presents its new Touring Edition Cat-Back Exhaust Suite for Ford Explorer ST models. The system features patented drone-canceling 180 Technology; a 50-state-legal, emissions-friendly, dual 3-inch cat-back configuration; and slip-fit inlet adapters for factory downpipe fitment while leaving an open 3-inch connection for aftermarket complements upstream. A precision X-pipe unlocks a clean, exotic EcoBoost exhaust note while keeping rasp in check.





LS Injector Kits

DeatschWerks, Oklahoma City, offers its LS Injector Kits for LS1, LS2, LS3, LS6, LS7, LS9 and LSA applications. Kits include adapter harnesses, tall adapters, short adapters, adapter clips, non-flex fuel or truck rail spacers, injectors and O-rings.

Classic Vehicle Radio



Custom Autosound Mfg., Fullerton, California, presents the USA-850 DigaDial Radio featuring patent-pending virtual analog screen technology. The radio offers a choice of four distinct one-of-a-kind displays—three displays feature a classic 1960s-style analog setting with a red needle that glides across the dial to tune to AM/FM radio stations, while the other is an all-digital display with station, song and artist information. The USA-850 radio fits over 450 different classic vehicle applications without having to alter or cut the original dash.



High-Performance Lithium Battery Charger

TecMate North America, Oakville, Ontario, presents the OptiMate Lithium LFP Select high-performance battery charger. Offering charge voltages of 12.8V for 4s lithium batteries or 16V for 5s lithium batteries, the selection remains in memory even if AC power is lost. The professional battery charger is designed for high-performance and track use, with a fully automatic multistep program that brings the battery safely to full charge. Simply connect to the battery and charge, with no supervision required.

Camaro 6-Speed Transmission Conversion Kit



American Powertrain, Cookeville, Tennessee, offers a **TREMEC** GM Magnum XL 6-speed Transmission Conversion Kit for 2010-15 fifth-gen Chevrolet Camaro (SS) models equipped with V-8 engines. Offered with a choice of two gear sets as a replacement for the TR-6060, the kit is rated at more than 700 pound-feet of torque with close to 8,000-rpm shift capacity. Developed as a performance upgrade, it features a direct-mounted shifter that replaces the factory shifter linkage for fast gearing and acceleration in street and racing applications.



Kia K5 LX/EX/GT Line Cat-Back Exhaust

BORLA Performance Industries, Johnson City, Tennessee, presents its Cat-Back Exhaust System for the 2021-23 Kia K5 LX/EX/GT line that improves horsepower and torque. System 140920 delivers a classic S-Type sound without any drone or resonance inside the vehicle. The system is made from T-304 stainless steel and features all-welded construction for durability and long life. It features a T-304 stainless steel turn-down spout and reuses the OE tip/valance.

Full-Size Ford Brake Kits

LEED Brakes, Cheektowaga, New York, presents new MaxGrip Lite 4 Piston Aluminum Caliper Brake Kits for Galaxie, Fairlane and related full-size Ford applications. The direct bolt-on kits are specifically engineered to mount to stock drum brake spindles and clear both FE and Y-block engines. Three kit options are available for easy installation, featuring MaxGrip Lite 4 Piston aluminum calipers, MaxGrip XDS rotors, caliper brackets and hardware, and Power Booster and/or master cylinder upgrades.





Ford Truck Transmission

BD Diesel, Abbotsford, British Columbia, offers its RoadMaster Ford 4R100 Transmission for 1999-2003 2WD/4WD 7.3L Power Stroke applications. Designed for use in stock and lightly modified trucks seeking enhanced reliability and endurance, the transmission is engineered with OEM clutch counts, a remanufactured valve body, and BD's deep transmission pan. It's equipped with a ProForce torque converter for smooth operation and durability. Highlights include increased line pressure, a shift kit for quicker, firmer shifts, and an on/off lockup kit.



WRX Clutch Kits

Advanced Clutch Technology (ACT), Lancaster, California, presents a full range of 225 Mod-Twin Clutch Kits (Push-Type) for Subaru WRX applications. The ultra-durable, customer-serviceable, long-lasting clutches are designed to deliver high torque capacity without the trade-offs often associated with a twin-disc clutch. Made to handle higher power levels, the kits feature a forged aluminum cover with Streetlite flywheel.

Mustang Performance Flywheels

Centerforce, Prescott, Arizona, presents new Performance Aluminum Flywheels, available for a wide array of 1996-2017 Ford Mustang models. Designed to replace the stock unit with a lightweight and low-inertia flywheel made from aircraft-grade billet aluminum for improved performance and bolt-on installation, the units are lighter than stock, delivering upgrades during spirited driving sessions while maintaining usability for daily drivers. Mechanically retained starter ring gears and replaceable steel friction surfaces are heat-treated for long life.





Dodge Supercharger Systems

ProCharger, Lenexa, Kansas, presents Supercharger Systems for 2023 Dodge Challenger and Charger 5.7L and 6.4L applications. Complete systems and tuner kits deliver power, performance and boost upgrades with cooler charge air temperatures. ***TS***



THE PISTON FOUNDATION

Supporting the development of the industry's next generation of workers.

By Maura Keller

The Piston Foundation was launched in January 2021 by Robert Minnick, a lifelong car aficionado and retired entrepreneur. For years, Minnick had been hearing from friends in the collector car industry about how difficult it was to find skilled technicians to hire, so he started looking at how to solve the problem.

"It stood out to Robert that there was no national organization focused on training and workforce development in the trades of auto restoration," says Jeff Mason, president and COO of The Piston Foundation.

Knowing that the automotive aftermarket is a multibillion-dollar industry (recently surpassing $51 billion in sales, according to the 2023 SEMA Market Report) and that there are at least 25 million car enthusiasts in the U.S., Minnick was surprised to learn how few dollars were being put back into the vehicle community to fund skilled trade education, preserve car-craft skills and train the next generation.

As Mason explains, Minnick's solution was the creation of The Piston Foundation (Piston), a public charity dedicated to supporting skilled trade education and hands-on training for young car enthusiasts who want to become classic car technicians.

"When car enthusiasts and the car industry support Piston, they are giving to meet the grassroots needs of their own car community" Mason says.

Now in its fourth year, The Piston Foundation supports skilled trade education and hands-on training for young car enthusiasts who want to become classic car technicians. (Photo courtesy Chris McNeil Photography)

Piston is a virtual organization based in Greenwich, Connecticut, with volunteers, ambassadors and partners across the country.

"We have a small staff and a growing group of volunteers who help us run our programs," Mason says. "While many people think Piston has been around a long time, we're really still a startup and just starting our fourth year."

CREATING SKILLED WORKERS

The mission of The Piston Foundation is to help more young people become classic car technicians. The organization is building a career path into these jobs so that all interested car enthusiasts can learn the skills that unlock rewarding careers.

According to Mason, the organization is striving to solve the skilled technician shortage and make classic car careers accessible to everyone. It's also working to preserve car-craft skills by helping today's craftspeople transfer their skills to the next generation.

"The trade skills of auto restoration are valuable and in-demand," Mason says. "Restoration technician wages are higher and job mobility is greater. The collector car industry is entrepreneurial and offers many career pathways for technicians to pursue."

The foundation has two career path programs, Piston Scholarships and Piston Academy Apprenticeships, that can help enthusiasts turn their interest in classic cars into a career.

As Mason explains, Piston scholarships support basic automotive education and Piston Academy apprenticeships support on-the-job experience.

"In 2024, we will award scholarships to just our third class of Piston Scholars. We are also running a pilot of our apprenticeship program, with hopes of launching it publicly in 2025," Mason says.

The goal of the Piston scholarships is to reduce the financial barriers to technical education and make skilled trade classic car careers available to people from all backgrounds.

A Piston scholarship awards up to $5,000 per year of tuition assistance.

According to Mason, Piston scholarships are awarded to young car enthusiasts who have an interest in becoming classic car technicians and are enrolled in an auto tech or automotive restoration program at a two- to four-year college.

There are approximately 600 schools in



Piston scholarships make a real difference in the lives of scholars and apprentices. (Photo courtesy Julian Castillo Photography)

THE PISTON FOUNDATION EXPANDS PARTNERSHIP WITH BRING A TRAILER

The Piston Foundation has expanded its partnership with the Bring a Trailer (BaT) digital auction platform for 2024.

Last year, BaT's charity auction program helped raise $243,000 for The Piston Foundation's Cars for Piston Scholars initiative through sales of four donated vehicles. The money was used for more than 40 scholarships—23 of which were awarded last year.

"We at The Piston Foundation are thrilled to expand our partnership with Bring a Trailer. BaT's presence in the industry is unsurpassed, and BaT's charitable support of our initiatives is fuel for our mission," said Jeff Mason, Piston president and COO. "We are also proud to support BaT and all of its outstanding charitable contributions within the automotive community."

Ten inaugural scholarships were awarded in 2022, using funds raised through private donations. The organization stated that 100% of the proceeds of the auctions, including buyer's fees donated by BaT, go to Piston programs.

"The Piston Foundation does incredible work. We were proud to choose them as the beneficiary of our 100,000th BaT auction last year, and we know this expanded partnership will make a lasting impact on our community," said Randy Nonnenberg, BaT co-founder. "Our industry is born from passion. Expanding our partnership with The Piston Foundation helps ensure that passion carries on through the next generation of automotive professionals."

Piston's new and continuing partnership with BaT includes coordination of promotional efforts to help grow awareness of The Piston Foundation's scholarship and apprenticeship programs among BaT members, officials note. In return, The Piston Foundation, through its media resources, will continue its efforts to recognize BaT's charitable work in the car community.

The Piston Foundation accepts donations of classic, historic and vintage cars to be auctioned off to benefit the foundation's programs.

The form is available online at pistonfoundation.org.

The Piston Foundation has expanded its partnership with the Bring a Trailer (BaT) digital auction platform.





Piston is a virtual organization based in Greenwich, Connecticut, with volunteers, ambassadors and partners across the country. (Photo courtesy Chris McNeil Photography)

the U.S. with programs in auto tech, auto performance, motorsports and restoration, officials estimate. Students who receive a Piston scholarship can be enrolled in any accredited auto program.

In addition to the scholarship program, the Piston Academy Apprenticeship program's goal is to make auto restoration careers accessible, to transfer car-craft skills to a new generation and to solve the workforce shortage in the industry.

The foundation envisions creating a national auto restoration apprenticeship program called the Piston Academy.

"The academy will place qualified apprentices in jobs at shops across the country and support them with direct grants and mentoring while they acquire the skills and experience needed to become fully billable

technicians earning a living wage, seeding the next generation of skilled technicians," Mason says.

In 2024, the Piston Foundation took the first step to realizing this vision by launching the Piston Academy pilot program by placing its first apprentice, Franko Montoya, at Paul Russel and Co. in Essex, Massachusetts.

"To complete the pilot in 2024 and launch the program in 2025, we are seeking the support of industry partners who want to help build a national auto restoration apprenticeship program that provides a career path for future technicians," Mason says.



The foundation is looking for aftermarket partnerships with companies dedicated to the cause of building the industry's workforce. (Photo courtesy Julian Castillo Photography)

CAREER STARTERS

Piston (pistonfoundation.org) awarded its inaugural scholarships in 2022 to 10 top auto restoration students. In 2023, the foundation awarded another 23 scholarships.

To date, it's given $147,500 to 26 students pursuing careers in automotive restoration.

Beginning this year, Piston will award scholarships twice a year, for fall and spring semester starts.

"Piston scholarships make a huge difference in the lives of our scholars and apprentices," Mason says. "Scholarship awards can be the dollars that make tech school possible and keep a young person on a career path into the collector car industry."

Piston scholarships also provide financial

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breathing space that lets students focus on learning their skills, he adds.

"One scholar said, 'It's helped me not to worry about going to work so much. It's allowed me to study more at school and learn more because I'm not so worried about my finances. It's been a real blessing to have the support of the Piston Foundation,'" Mason reveals.

On top of the financial assistance, Piston scholarships also create a sense of community and belonging for students that haven't always feel valued for their mechanical skills.

"Getting the Piston Scholarship to me means that I'm a valued part of the collector car world and that I'm worth something to someone. I'm not just here on my own. I'm like the kind of person the industry is looking for," says a scholarship recipient.

For Montoya, the foundation's first Piston Academy apprentice, the support unlocked the chance at a lifelong career.

With a dream of becoming a paint and body specialist, he began his journey at a racing shop to gain experience until a position opened up at a leading restoration shop.

"It was the opportunity of a lifetime, but I didn't know if I could take it" Montoya recalls.

However, the Piston training grant Montoya received made apprenticeship financially possible and gave him the opportunity to start learning the trade.

IGNITING INTEREST

Mason says that one of the industry's prevailing myths is that young people aren't interested in classic car jobs anymore.

The truth is that automotive students can face daunting education costs. Meanwhile, aspiring classic car technicians without years of experience struggle to get hired.

"It's not a lack of interest keeping young people from becoming classic car technicians—it's a lack of access," Mason says. "Piston scholarship and apprenticeship programs remove barriers to make classic car careers more accessible."

Research shows that Piston's scholarships of up to $5,000 are the right amount to ensure students can complete their technical education program and be ready to move into the workforce. Both career interest and financial need is considered, to focus the foundation's support on deserving and motivated students.

"Apprenticeship grants up to $15,000 also create access. We have found the gap between average apprentice pay and a sustaining wage is about $15,000 per year," Mason says.

The lower wages reflect the lack of billable skills and experience at the start of an apprenticeship. Piston Academy training grants provide financial assistance for tools and other necessities while apprentices gain the experience they need to become fully billable technicians earning a living wage.

"From the beginning, Minnick's idea to build a national car charity was a big one. We're not afraid to do hard things, and piece by piece we're building his vision."

A next step is for the foundation to begin locating aftermarket partners, which Mason calls "a natural fit."



The goal of the foundation's new national apprenticeship program is to change the workforce story from graying to growing. (Photo courtesy Chris McNeil Photography & JM Wright Technical High School)

"We would welcome the opportunity with any company that sees the value of building a career path for future technicians," he says.

For now, The Piston Foundation's immediate goal is to launch the national apprenticeship program and start changing the workforce story from graying to growing.

"As we build a career path that attracts and supports future technicians, The Piston Foundation will continue to focus on the grassroots needs of the car community and the collector car industry," Mason says. "We hope to connect with car enthusiasts everywhere to share the passion we all have for car culture and build an organization that is of and for the community. We hope to build deep and lasting partnerships with the collector car industry and help it attract talented people that will keep it vital and strong." ***TS***

MAURA KELLER *is a freelance writer based in Minnesota. She can be reached via email at maurakeller@yahoo.com.*



Piston now awards scholarships twice a year, for fall and spring semester starts. (Photo courtesy Zack Wiernusz)



SPIRIT OF GIVING



The specialty automotive aftermarket takes care of its own & others.

Whether it's fundraising for a worthy cause, aiding in efforts surrounding diversity and inclusion, or supporting educational programs for the next generation of professionals, the specialty aftermarket isn't shy when it comes to giving back.

Donating time, money and/or resources is nothing new in an industry known for having a big heart. Efforts large and small are made every day.

Here's a sampling of recent examples.

AUTO SHOW FUNDRAISING





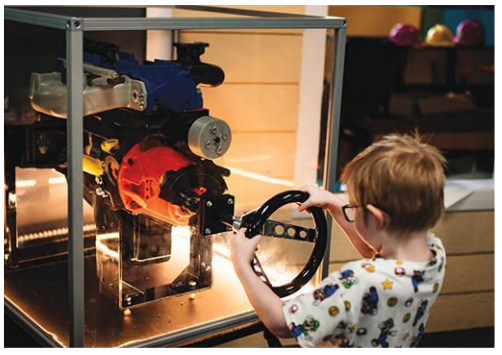
This year marked the 10th anniversary for The D Lot, part of the Detroit Autorama Hot Rod Show held in March at Huntington Place (formerly Cobo Center) in Michigan.

Over the years The D Lot has raised more than $135,000 for charitable causes, given away nearly $320,000 in prizes, generated close to 200,000 meals for the hungry, and helped valuable wishes of children in need become reality.

The D Lot was inspired by Murray Pfaff of Pfaff Designs. It is an outward extension of his passion for designing cars, and the D Lot creates an opportunity for the automotive industry to give back to the community through its charity auction and The D Lot "Pick-A-Prize" product raffle.

MUSEUM'S 'AUTO ALLEY' FUELS STEM EDUCATION





BluePrint Engines founders Norris and Lori Marshall recently led an effort along with other donors to establish the interactive Auto Alley exhibit at the Kearney Area Children's Museum in Nebraska.

The exhibit features engaging hands-on displays to inspire the next generation of automotive enthusiasts, according to the company.

"We are thrilled to contribute to our local community by supporting STEM education initiatives," says Norris Marshall. "Auto Alley represents our commitment to innovation and our passion for nurturing young minds. We hope the exhibit will spark curiosity and inspire the future leaders of the automotive industry."

The exhibit features a fully functional 3D-printed cutaway engine, designed and manufactured by BluePrint Engines' engineering team. The intricate piece showcases the inner workings of an engine, providing a hands-on learning experience.

Also included in the exhibit is a serviceable car (designed by creative group BIG) as well as an interactive gas pump and service parts crib.

"The all-new, $65,000 Auto Alley is more than just a museum exhibit—it is a gateway to inspiration for the next generation of gearheads," the company adds. "By providing children in the Kearney area with access to hands-on STEM (Science, Technology, Engineering, Math) education, BluePrint Engines aims to ignite a passion for engine technology, engineering and automotive technology."

HYPERTHERM HOPES TO 'SPARK SOMETHING GREAT'







Industrial cutting products and software company Hypertherm Associates is celebrating 10 years of its Spark Something Great educational grant program.

"The Spark Something Great grant program is meant to support the next generation of welders and metal fabricators by making the newest generation of plasma cutting equipment and standardized instruction available to schools," the company states in a press release announcing this year's program.

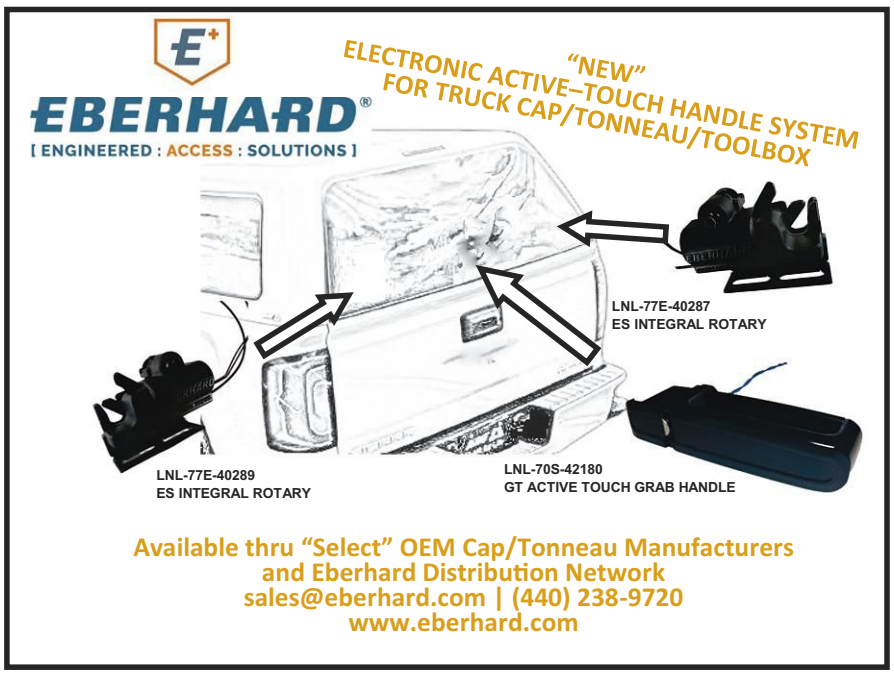
For 2024, the program will provide 12 North American schools with a Powermax45 XP air plasma system and in-person training from a Hypertherm product expert.

To date, the company has awarded systems to 88 schools.

"The current skills gap and labor shortage has placed increased demand on North American vocational schools," says Stephen Bruner, program manager. "An influx of new students coupled with teacher shortages means you have fewer instructors teaching more students without a corresponding increase in equipment. We've encountered numerous programs in which dozens, and sometimes hundreds, of students are forced to share a single system. Our program hopes to help those schools by providing a versatile system instructors can use to teach handheld and mechanized cutting, as well as applications such as gouging, flush cutting and marking."

In addition to the grant program, Hypertherm Associates will continue to make all 10 hours of its AWS SENSE-approved Plasma Cutting Technology: Theory and Practice curriculum available for free download to teachers.

The curriculum covers the plasma cutting process, common industrial uses for plasma systems, the differences between various cutting methods, safety procedures, and proper setup and operation. Electronic versions of each lesson, a facilitator's guide, student workbook and supporting reference materials are all available online at hypertherm.com.



CLASSIC RECREATIONS LAUNCHES $1 MILLION 'LIFE IS WHY' FUNDRAISER









High-performance vehicle creator Classic Recreations has launched a $1 million campaign for 2024 to support Life is Why, a cause marketing campaign benefitting the American Heart Association.

The company's first support of the Life is Why campaign features an exclusive line of custom-built, one-of-a-kind supercars set to generate $1 million in donations through sales of a limited edition, iconic muscle car.

"We are truly honored to be supporting the American Heart Association's Life is Why campaign to help fuel the fight against heart disease and stroke. The values of the American Heart Association align perfectly with our family-owned car manufacturing company, and we believe Carroll Shelby would be proud of our joining the fight against a disease that drove him out of racing on the heels of what would have been his 100th birthday," says Jeff Stone, CEO at Classic Recreations. "We are joining this campaign on behalf of our valued Classic Recreations employees and their families, our partners and our growing list of customers."

Classic Recreations recently introduced the limited-edition American Heart Association Life is Why Centennial Edition Carbon Fiber Shelby GT500CR, customized to commemorate the AHA's 100th birthday.

For every vehicle sold this year, Classic Recreations will donate $100,000 of the purchase price to the Life Is Why campaign.

"The 10 Centennial American Heart Association Carbon Fiber Shelby GT500CR Mustangs fueling this effort embody the legacy and vision of one of the world's greatest car builders," says Bryan Stone, principal and chief marketing officer at Classic Recreations. "The Carbon Fiber Shelby GT500CR Mustang is a favorite among serious car collectors. This historic campaign offers collectors a chance to own a true collectible heritage piece and an iconic part of motorsports history while supporting one of the nation's most valuable healthcare organizations during its 100th birthday year."

Mark Sanders, Dallas board chair, says the American Heart Association is committed to fighting heart disease and stroke and improving the quality of life for all Americans.

"This unique fundraiser helps make it possible to continue to fund vital research, train millions in CPR annually and support organizations in improving health outcomes in under-resourced communities," he says. "Our work would not be possible without the generous support of committed organizations like Classic Recreations, providing donation opportunities to their clients and brand enthusiasts."

More information is available online at heritage.classic-recreations.com/.

AACF LAUNCHES 65TH ANNIVERSARY FUNDRAISING INITIATIVE

The Automotive Aftermarket Charitable Foundation (AACF), a 501c3 supporting people in the automotive aftermarket industry and their families during the hardest moments of their lives, has launched its 65th anniversary fundraising initiative.

Running through July 1, the ambitious campaign aims to raise $65,000 through 1,000 donations of $65 each.

"Over the past 65 years, AACF has remained unwavering in its commitment to supporting members of the automotive aftermarket community during their most challenging moments," says Joel Ayres, AACF executive director. "As we embark on this historic fundraising initiative, we are inspired by the generosity and compassion of our supporters. Together, we can make a profound difference in the lives of those facing adversity, demonstrating the aftermarket industry's unwavering dedication to taking care of its own."

From sudden illness and death to natural disasters, the foundation has aided industry professionals and their families during times of need, the organization states in a press release announcing the initiative.

Donation information is available at aftermarketcharity.org/donation-campaigns.

MAVIX COMMUNITY OUTREACH CONNECTS YOUTH & MOTORSPORTS



Blending the spirit of motorsports with the foundations of growth and learning, Mavix Community Outreach is a nonprofit collaboration looking to introduce foster children and troubled teens "to the transformative power of community, passion and opportunity."

The effort looks to offer scholarships or entry into trade schools within the performance industry to young individuals passionate about motorsports but lacking chances to get involved, says Kelly Anderson, Mavix Community Outreach founder.

"We see potential where others see challenge and we invest in that potential to gear up our youth for the race of life," she says. "Mavix Community Outreach recognized the rich learning environment that motorsports provided—a unique blend of technology, teamwork and tenacity."

The group's mission is "to accelerate the potential within every child and teen that steps through our doors by providing them with the tools, knowledge, and opportunities to succeed in motorsports and beyond."

The group enjoyed a successful first event of the season in March at Irwindale Dragstrip.

More information is available at mavixcommunity.org. ***TS***

THE BENEFITS OF VOLUNTEERISM

Helping others helps you, too.

By Josh Poulson



A trail cleanup by Tread Lightly! at the 2024 King of the Hammers was funded by Can-Am Off-Road and showed the power of volunteerism. (Photo courtesy Tread Lightly!)

On April 12, 1776, a man named Paul Revere went racing across the Massachusetts countryside shouting "the British are coming, the British are coming!"

Historically, we know this as "Paul Revere's Midnight Ride." But the funny thing about it is that Paul Revere wasn't a professional horse rider, nor was he a member of the media. In fact, he wasn't even part of the Colonial Army.

He was simply a willing volunteer who felt strongly about a cause and, at the late hour of midnight, was ready to do his duty and warn his fellow citizens of oncoming danger.

Thus, the value of volunteering your time and efforts for a greater cause.

THE BENEFITS OF GIVING

Giving of your resources—whether it's money, time or participation—can be a rewarding venture. How many times have you done something nice for someone and felt good about it? It's human nature.

In our businesses giving can be ongoing, but at times we need to diversify how we give back to keep things fresh. No doubt you have many times done something nice for an employee that they appreciated but later quickly forgot. That's not the type of giving I am referring to.

Nor is it the countless charity or sponsorship opportunities that come across your desk from people and organizations asking for some type of financial help.

We all have chances to pitch in where we can with efforts that are important

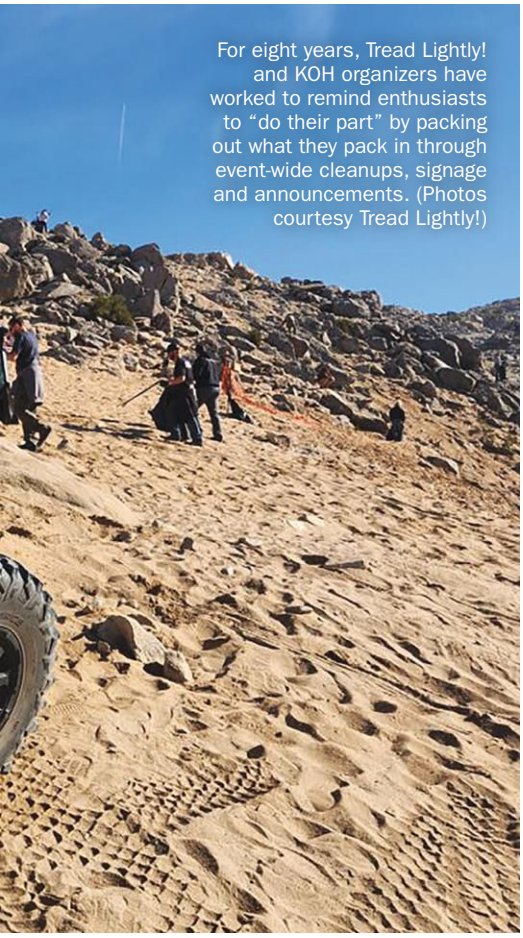


to us and our companies. But let's focus on how you can give back directly to the industry that has afforded you a lifestyle to do something you like while being able to pay your bills.

All of us focus on ways to grow or maintain our businesses and continually look for advantages. Well, in my experience, if you take some time out of your shop to help other individuals or organizations in your industry, you gain life lessons and a mindset that pays dividends when you go back to your own company.

The aftermarket includes many associations, councils and networks that can allow you to volunteer and give back. Industry organizations such as SEMA (Specialty Equipment Market Association), MEMA (Motor & Equipment Manufacturers Association) and others are looking for knowledgeable industry professionals to help move us all forward.

For years I didn't even realize there were opportunities to help out and volunteer. Once I did find out, however, it was a natural fit for me to get more involved and give back.



For eight years, Tread Lightly! and KOH organizers have worked to remind enthusiasts to "do their part" by packing out what they pack in through event-wide cleanups, signage and announcements. (Photos courtesy Tread Lightly!)

At first, I was worried about the time and travel commitments, but quickly realized I could do as much or as little as my schedule and life allow at the moment. Being a volunteer is great because no matter how much you give, it is always appreciated.

The other positive thing about volunteering in the aftermarket is that the biggest thing these organizations are looking for is simply your knowledge and opinions. Getting a group of industry professionals together to discuss problems, successes and goals benefits everyone in the industry, whether they realize it or not.

Any organization that is made up of volunteers involved in the daily workings of an industry and who care about the direction it is heading is bound for success.

The question is, can you make yourself available?

SMALL EFFORTS ADD UP

Do you have even one hour a month you could dedicate to a conference call or an interview, or could you jump on a webinar and possibly help with giving your insight into existing issues?

If so, then reach out to the organization you are most associated with and ask them about volunteer opportunities.

Also, if you enjoy giving back to your industry, then entertain the idea of expanding your volunteerism to other parts of your life that bring you joy and satisfaction as well. It could be helping young people through sports or art. It could be helping the elderly community or charities looking to raise money. It could be for something related to your religion or faith.

Regardless, once you start, look to find something you believe in and then see how you can further the cause. Doing this will always add to your joy and quality of life.

Another interesting thing about Paul Revere is what he is known for today.

Sure, some of you have heard of "Revere Ware" (pots and pans), which really did grow out of a company he founded. It turns out he was a silversmith by trade and helped develop the country's first currency. He's also credited with creating the first copper mill, which is said to still be in business today.

Despite all of these interesting and important things he accomplished in his life, however, Paul Revere is best-known for his volunteer actions that greatly benefited his countrymen—something he will forever be *Revered* for! **TS**

VOLUNTEER OPPORTUNITIES WITH SEMA

The Specialty Equipment Market Association includes nine different councils and networks that are extensions of the SEMA board of directors. These groups assist on issues and ideas to help the industry and businesses like ours.

The board of directors and SEMA staff members work hard on ways to help our companies grow, including recognizing challenges early-on so as not to allow any long-term damage. For more than 50 years, SEMA has grown and become the voice of our industry.

If you would like to volunteer, it is a great place to start. Go to sema.org and scroll down to see which of the councils and networks most relates to your type of business. Whether you are a hot rod, wheel and tire business or a restyler, there's a group for you.

Also, networks such as SEMA Businesswomen's Network (SBN) and Future Leaders Network (FLN) are great ways to reach out and connect to peers in the industry in the spirit of giving back.

Each of the nine councils and networks have a select committee that is elected to office for two-year terms by their peers. Each select committee has a chairperson who also serves a two-year term.

These groups are large, important voices for you and your peers. They get together via phone, web or face to face at different times throughout the year to discuss relevant happenings and trends in their markets. They then keep the SEMA board of directors up to date on important issues or causes.

Visit the website and learn more about how you can join today. Even if it is just as a general member, you will have the inside scoop of what's going on.



The cleanup efforts removed thousands of pounds of trash during and after KOH.



Named the 2022-23 SEMA Person of the Year, ***JOSH POULSON*** *is the principal of Auto Additions in Columbus, Ohio, which was named Restyler of the Year, 2012-13. Auto Additions offers a complete line of product upgrades including 12V and appearance packages with a specific focus on the dealership segment. Josh is immediate past-chairman of the SEMA PRO council.*

Restyling
AFTERMARKET ACCESSORIES

Legacy EV Profile p. 46 | Restyling Products p. 50



LEVEL UP

By Jef White

Truck owners are high on the latest lift & leveling kits.

From simple leveling kits designed to help with everyday hauling to complete off-road suspensions tasked with tackling the toughest terrain, today's lift and leveling kits cover a lot of ground.

With a wide variety of applications and kit designs to choose from, enthusiasts often turn to their local professional for knowledge, guidance and installation services. Therefore, the more shops put into the market, the more they get out of it.

A deeper understanding reveals the opportunities provided by this popular product niche and what's required to make the most of them. Suppliers pitch in with observations on market trends, sales approaches and updates on new products to help you and your customers level up.

HIGH & MIGHTY

The first thing to know about today's lift and leveling kits is that customers expect them to do more than simply raise the vehicle.

"Gone are the days of just wanting a bigger truck to fit X-size tires," says Justin Mclean, brand marketing manager for BDS Suspension/Zone Off-Road. "We now have the ability to tune these things like true performance vehicles, improving the ride quality, off-road performance and looks. Bushing, shock and spring technology, as well as improved base geometry from manufacturers, has played a big role in this."

Enthusiasts must also navigate a crowded market, notes Sean Ting, product manager for Elite Buffer LLC, aka RubberShox.

"One of the biggest changes we have observed in the last decade is the number of options available to consumers. A consumer is concurrently bombarded with a plethora of choices in types of vehicles, different manufacturers, leveling kits and, of course, this newer emphasis on electric vehicles as well. So, to reflect this change, we offer our one-of-a-kind modular coil spring series, a single solution for a variety of needs."

Jesse Brown, director of marketing for RSO Suspension, also sees a competitive field with established and newer brands seeking market share.

"This has pushed all manufacturers to become innovative, deliver more competitive pricing and really dial in attention to product quality to differentiate themselves from other competitors."

Today's high-tech factory suspensions require advanced kits and components to match, notes Mark Krumme, head of

Partner with lift manufacturers and local enthusiasts to make the most of the lift and leveling kits market. (Photo courtesy BDS Suspension/Zone Off-Road)



ELEVATE THE ADVENTURE.

Built upon decades of off-road racing victories, the Eibach PRO-TRUCK-LIFT combines a series of PRO-LIFT-KIT springs and PRO-TRUCK Sport shocks to create a perfectly tuned suspension system engineered for both on and off-road performance. The Stage 1 kit features adjustable clip heights for either lift or leveling.

PRO-TRUCK-LIFT Stage 1 Available for the 2022+ Toyota Tundra



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LEVEL UP

LIFTS & LEVELING KITS

HOT PRODUCTS: Performance 0- to 3-Inch Lift Systems
FEATURES & BENEFITS: Lower heights with better features are the hot trend; dual-rate springs paired with an adjustable shock; stored energy and plush spring rate, combined with a shock that a user can tune to their personal preference, is a game changer.

BDS Suspension/Zone Off-Road
Justin Mclean
Brand Marketing Manager

HOT PRODUCTS: Dominator Pre-Load Systems
FEATURES & BENEFITS: Spring pre-load system replaces the factory top-hat; pre-loads coil springs for more compression wheel travel and reduced body roll; loses droop but gains compression; strengthens suspension for bigger, heavier wheels and tires.

Camburg Engineering
Jerry Zaiden

HOT PRODUCTS: Ram & Ford Leveling Kits With FOX Racing Shocks
FEATURES & BENEFITS: Available for 2003-up Ram 2500/3500 and 2005-up Ford F-250, F-350, F-450 and F-550 models; USA-made progressively wound coil springs; specifically tuned FOX Racing monotube shocks.

Synergy Manufacturing Inc.
Dave Schlossberg
CEO

HOT PRODUCTS: Performance Truck 4 Spring Lift Kits
FEATURES & BENEFITS: Popular for Ram TRX, Ford Raptor and Bronco and similar four-spring truck applications; opportunity to create multiple lift heights or preferred leveling; front and rear components offered individually or as complete kits; HD rear option available.

Eibach Inc.
Mark Krumme
Head of Marketing, North America

HOT PRODUCTS: Patented UCSB Modular Coil Spring Buffers
FEATURES & BENEFITS: Designed to support and level a wide array of vehicles; increase ground clearance; shock-absorbent properties contribute to a more solid and durable suspension system; effectively absorb and dissipate shocks from rough road surfaces.

Elite Buffer LLC, aka RubberShox
Sean Ting
Product Manager

HOT PRODUCT: 2.5-Inch Stage 3.1 Lift Kit for Jeep JL
FEATURES & BENEFITS: Includes rebuildable front and rear adjustable reservoir shocks, front lower adjustable control arms, front adjustable forged track bar, rear track bar relocation bracket, front and rear coil springs, bump stop extensions and adjustable sway bar end links.

RSO Suspension
Jesse Brown
Director of Marketing

HOT PRODUCTS: Late-Model Ford Super Duty 4- to 6-Inch Lifts
FEATURES & BENEFITS: Deliver improved ride quality with various setups from standard style; replacement radius arms; four-link conversion to coil-over conversions so customers can personalize vehicles to their specific tastes and requirements.

Superlift Suspension
A RealTruck brand
Mike Morris
General Manager

HOT PRODUCT:
Journey Better Leveling Kit
FEATURES & BENEFITS: Ability to maintain a level stance under load for towing applications; allows for the installation of larger tires, enhancing off-road capabilities and overall vehicle aesthetics.

SuperSprings International
Alex Hodschayan
Director of Marketing

HOT PRODUCT: 2017-Up Ford Pintop Leveling System
FEATURES & BENEFITS: 3.5-inch lift; includes King 2.5-inch-diameter remote reservoir shocks with Carli customer shock pistons and tuning.

Carli Suspension
Dan Tourino
Vice President



Consumers want legitimate products they can count on in any situation. (Photos courtesy Camburg Engineering)



marketing, North America, for Eibach Inc.

"What once was a spacer lift is now a coil lift with proper geometry," he says. "In our systems, we're keeping the OE components within a safe range of operation and improving ride quality by way of the coil spring itself. We take special care to develop and test each kit to get the best balance of lift and ride quality."

And the market is growing, he adds.

"We're also lifting CUVs and cars. That's been a big change."

The top of the market is the place where quality kits can shine, says Jerry Zaiden of Camburg Engineering.

"What's changed is consumers wanting a higher-end, more legitimate product," he notes. "Buyers of higher-end vehicles want systems to match."

Overall, kit and component quality is continually improving, adds Dave Schlossberg, CEO of Synergy Manufacturing Inc.

"The leveling kit market has changed for the better over the past 10 years. Today, manufacturers like Synergy manufacture kits that have proprietarily designed coil springs matched with specifically tuned long-travel FOX shocks. This combination

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- Premium carpet headliner
- Wall mount hardware
- Easy no-drill installation
- Lifetime limited warranty

*Still in development and will be offered in Q2 2024

4ARE.COM



Today's high-tech factory suspensions require advanced kits and components to match. (Photos courtesy Eibach Inc.)

not only levels the front of these vehicles but will also dramatically improve the suspension performance by adding more front wheel travel and improved dampening."

Alex Hodschayan, director of marketing for SuperSprings International, has seen the same.

"Over the past decade the lift and leveling kit market has undergone a transformation with advancements in technology and design, leading to more sophisticated and easier-to-install kits. A notable trend has been the shift toward vehicle-specific solutions, ensuring a tailored fit and improved functionality for various makes and models."

Mike Morris, general manager for Superlift Suspension, a RealTruck brand, sees a trend toward more moderate height increases.

"Trucks and Jeeps do not need as much lift height to clear 35- to 37-inch tires as they did in previous generations."

And larger vehicles are now in play, says Dan Tourino, vice president of Carli Suspension.

"We've been along for the ride as heavy-duty diesel trucks have turned from $40,000 rugged, no-frills workhorses into polished, $100,000-plus luxury tow rigs. As the trucks have improved, so has our engineering and capability. We're now offering semi-active suspension systems to take these refined HD trucks to the next level."

STEERED IN THE RIGHT DIRECTION

Mclean has heard buyers say they don't need a quality system because they don't take their vehicle off-road.

"That could not be farther from the truth, but we hear it from consumers all the time. Poor geometry and bad ride quality are not that big of a deal on a trail ride. Driving it daily, or to and from the trail, requires much better components, geometry and attention to detail."

Still, drivers should expect some differences with their new suspension, says Ting.

"Raising the vehicle by a few inches will shift its center of gravity, thus affecting performance and giving an effect that is only meant for off-road use. Realistically, however, a vehicle will gain more clearance, as this will prevent tires from rubbing against fenders when turning, and heavy loads will be handled better, resulting in a more enjoyable driving experience."

With the performance attributes delivered by quality components, the systems are about more than just looks.

"While they do enhance the appearance of the vehicle, their primary function is to improve off-road performance, towing stability and overall vehicle handling," says Hodschayan.

And height is not always a differentiator, says Tourino.

"There's a misconception that low lifts are cheap; tall lifts are expensive. In the performance suspension world, the short lifts and taller lifts often include the same componentry of slightly different design to correct geometry at the respective lift height."

For shops, the projects are usually fairly straightforward and repeatable, Morris notes.





As vehicles have improved, so have lift and leveling kit designs and engineering. (Photos courtesy Carli Suspension)





General knowledge of suspension functionality and alignment are keys to successful installations. (Photos courtesy Superlift Suspension/RealTruck)

"A common misconception is the install is very labor-intensive and specialized," he says. "Most leveling and moderate-height lift kits are an easy install if technicians follow the instructions."

Projects must match the quality and performance drivers seek, Schlossberg notes.

"There is a huge difference between kits that consist of low-tech coil spring spacers and shock relocation brackets compared to kits that consist of replacement coils and longer-travel shocks," he says.

Zaiden warns against shops settling for faster, easier installs when a more substantial system is required for the driver's planned usage.

"Gain customers' trust by installing high-end, quality suspensions," he recommends. "This approach creates a better relationship with customers and allows the shop to sell higher-end parts. For professionals, profit is important. With quality systems, you'll be able to charge more labor to do things correctly and make more profits on the kit itself."

Brown suggests spending the time needed to help buyers get comfortable with their purchase.

"Consumers often don't fully understand the differences between the different kits that are offered to them and how the kit they choose may ultimately affect their ride quality post-installation. Understanding the pros and cons of what each kit is going to deliver for them is crucial to ensuring you get the kit that will work best for your specific needs."

Upsell opportunities then start with the important inclusion of an alignment, says Krumme.

"Just like when lowering a vehicle, when you lift a vehicle, it needs to be aligned or realigned. Upsell for the alignment itself and/or alignment parts. When a vehicle is lifted you will gain positive camber, which means burning out the outer shoulder of the tire."

RIDING HIGH

Ready to begin offering lift and leveling kits? Not until you've done your homework first.

"General knowledge of suspension functionality and alignment are the keys to successful installations," explains Morris from Superlift Suspension.

A thorough understanding of suspension systems and the specific requirements of different vehicle models is crucial, adds Hodschayan from SuperSprings International.

"Technical knowledge, attention to detail and the ability to provide customized solutions based on the customer's needs and

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Understanding the pros and cons of what each kit delivers is important. (Photo courtesy RSO Suspension)





Suspension upgrades can have a positive effect on handling performance. (Photos courtesy RubberShox)



Projects must match the quality and performance drivers seek. (Photos courtesy Synergy Manufacturing Inc.)

vehicle specifications are essential skills for professionals in this field."

Knowledgeable technicians are another must, says Brown from RSO Suspension.

"There are so many different factors to consider when dealing with suspension that you need to ensure your staff is trained to make the best decisions on behalf of your company, resulting in better customer feedback and fewer problems down the road."

Tourino from Carli Suspension offers a three-point checklist.

"Straight axle knowledge, alignment understanding and partnerships with premium manufacturers who address all necessary components respective to the lift being installed to ensure no post-installation issues or customer gripes."

Time factors can then come into play, depending upon the customer or project, says Ting from RubberShox.

"Our UCSB modular coil spring buffer offers shops a hassle-free installation process, eliminating the need to lift the vehicle or take any pre-measurements of the coil spring."

For in-depth projects, Camburg's Zaiden explains that off-roaders will want to have full trust in the shop they visit for upgrades.

"Education is the most important thing. You want to sell them a high-quality sus-



A notable trend has been the shift toward vehicle-specific solutions. (Photo courtesy SuperSprings International)

pension with real, high-quality, proven components that won't come back."

And you don't have to stop there, says Synergy Manufacturing's Schlossberg.

"At the time these customers are doing these kits, it's very common to upsell additional items such as new aftermarket wheels and tires, tonneau covers, running boards and steps, auxiliary lighting, and towing accessories such as hitches," he says.

When it comes to communicating with customers about lifts and leveling kits, it's important to remember you're talking about a vehicle's total suspension performance.

"Salespeople that can really connect with a consumer about how they plan to use their vehicle and their goals for it when completed are always going to close on a better product and a happier consumer," says Mclean from BDS Suspension/Zone Off-Road. "We find that when you are scared to lose the sale and dip the price to either a cheaper product or lesser shop rate, the success and consumer experience really fall off."

He also suggests going out and meeting customers in real-world situations.

"Getting integrated into the local scene, especially with Jeeps, is massive for consumer traffic," Mclean adds. "Partnering with manufacturers is also key. Speaking for us, we love working with our dealers on consumer opportunities, and education sessions always result in better overall sales."

Finally, strong relationships with suppliers can help with kit and component selection and installation questions before mistakes are made, says Eibach's Krumme.

"Shops will want to be communicative and not be afraid to ask questions or hop onto our portal and use the tools provided. We've taken extra time to create systems that make things faster and easier for our customers. We'd rather have the consultation with the shop prior to installation than post-installation. It helps provide the best customer experience, which builds trust and retention." ***TS***





LEAVING AN ELECTRIC LEGACY



Legacy EV is a leader in electric vehicle aftermarket applications and education programs.

Legacy EV looks to keep classics & the industry moving toward the future. ///// **By Brett Solomon**

There is growing acceptance of taking classic vehicles with ICE powertrains and swapping them with electric ones, but regardless of which side you fall on, as industry professionals I think we all would rather see a vehicle on the road being driven than in a garage collecting dust.

While there's certainly still a place for keeping a Ferrari V-12 with a half-dozen Weber carburetors singing, there are some less-popular classics where the old drivetrain parts are becoming harder and harder to find.

The Gas Monkey Garage Testarossa EV swap with parts from Legacy EV is an example of how taking a classic car and converting it to EV makes sense in some situations. Keeping the dust off of cool rides and bringing smiles to owners and onlookers is what drives our industry.



The Gas Monkey Garage Testarossa EV swap with parts from Legacy EV is an example of how taking a classic and converting it to electric makes sense in some situations.

ALL-ELECTRIC FORD EXPLORER COMPLETES RECORD-SETTING DRIVE

Adventurer Lexie Alford (@LexieLimitless) has set the official record for being the first person to circumnavigate the globe in an electric vehicle, using the new, all-electric Ford Explorer.

Six continents, 27 countries and more than 30,000 kilometers (18,641 miles) were traveled on electric power alone, ahead of the finish line in Nice, France.

"On this epic adventure, I met incredible people from many corners of the world and experienced 27 countries while behind the wheel. But this journey came with a unique set of challenges," says Alford, who also holds the world record for being the youngest person to visit every country in the world. "It has been the honor of a lifetime to be trusted by Ford to circumnavigate the globe in the electric Explorer, which has been like home for the last six months. I had the goal of pushing the limits of what's possible to do in an EV, and I'm proud to say I have."

To mark the achievement, Ford put the new Ford Explorer on sale in Europe. Designed and developed there, it is Ford's second all-electric passenger vehicle and the first to be assembled at the Ford Cologne EV Centre following a $2 billion investment, according to the company.

Officials say the EV can achieve a driving range of more than 370 miles on a single charge and is able to charge from 10% to 80% in approximately 26 minutes using DC charging.

Adventurer Lexie Alford set the official record for being the first person to circumnavigate the globe in an electric vehicle, using the new, all-electric Ford Explorer.



"Lexie's journey has been the ultimate test drive for our new Ford Explorer, taking on every kind of weather and road condition, and dealing with just about every charging scenario," says Martin Sander, general manager, Ford Model e Europe. "It embodies the true can-do spirit of this company, seizing this great opportunity to not only test ourselves but also the world's charging infrastructure. Crossing the finish line proves just what you can do in the new all-electric Ford Explorer, and we're delighted that customers will soon be able to find out for themselves."

Alford's journey mirrors that of Aloha Wanderwell, the first woman to drive around the world 100 years ago, also in a Ford. Wanderwell began her journey in Nice, where Alford's journey also began and finished.

It turns out that Legacy EV is a company of auto enthusiasts who want to see classics on the road and is looking to help shops do it profitably.

The company is a leader in electric vehicle (EV) aftermarket applications and education programs, and is looking to share its professional knowledge.

Legacy EV offers complete EV conversion kits, EV components, training courses and technical build support. Products from different EV component manufacturers are available, so customers don't have to be pigeonholed into a one-size-fits-all solution.

In addition to making cool products, Legacy EV also wants the next generation of techs to be able to integrate EV components safely and profitably. The company's stance is to provide training to mechanics to ensure the transition to electric doesn't result in the loss of ICE vehicles and trusted auto mechanics.

It's fitting that the president and co-founder is named Mavrick. He certainly is one.

STARTING WITH SAFETY

As this fledgling industry begins to take flight, it will need trained technicians and proven best practices.

Legacy's Mavrick Knoles says, "We helped to create the Electric Vehicle Technician Education Council (EVTEC). Newly established EV technician standards for EV production and training will help get novices up to speed quickly on safety and procedures."

There are also programs for techs coming from the gasoline world, starting with the EV Fundamentals Certification program that focuses on High Voltage Safety and trains new techs on the proper use of protective gloves when working with batteries capable of delivering high voltage and current outputs.

Next is instruction on systematic safety and procedural safety. Knoles notes Legacy EV batteries feature internal fire suppression. Once techs have the knowledge foundation for a safe build, they can then turn to the company for a multitude of battery, motor and controller solutions.

"One of the most popular swaps commonplace in our world is using Tesla equipment, which we are happy to help with," says Rob Ward of Legacy EV.

However, Tesla does not sell its products a la carte, meaning supplies can be limited.

"There are only so many Teslas with bad drivers that are going to wrap themselves around a telephone pole and become a suitable donor drivetrain for a project build," Ward laughs.

So Legacy EV also offers solutions from Cascadia, Fellten, Revolt and Zonic, each with their own benefits. In all, the company works with more than 60 smaller suppliers to make sure customers can get everything needed for a successful EV conversion.

"It's our job to weed through the vaporware for solid products with brand-agnostic product support," Ward explains.

The company is even working with the Carroll Shelby Automotive Program at Northeast Texas Community College to help automotive technician students earn an EV certification. It is the nation's first program offered by an accredited college

LEAVING AN ELECTRIC LEGACY





The company offers complete EV conversion kits, components, training courses and technical build support. Products from different product manufacturers are available, so customers don't have to be pigeonholed into a one-size-fits-all solution.

to prepare students to work on EV systems and conversions through a comprehensive curriculum and hands-on training, program officials believe.

"We're thrilled to announce this new Legacy EV certification program for the students at the Carroll Shelby Automotive Program," says Knoles. "As EVs continue to make up greater market share among drivers, the demand for technicians trained in repair and maintenance is critical. Working with the Carroll Shelby Automotive Program, we are establishing a new standard for EV education as we train the next generation of auto mechanics."

Legacy EV's certification for the program will include a five-part curriculum that offers an in-depth education on EV history and technology including motors, batteries, chargers and converters. During the hands-on training portion of the course, students will work on EV motors and learn how to apply what they already know about gas engines to electric motors.

Jon McCullough, EVP for advancement at Northeast Texas Community College, says, "Carroll Shelby was committed to embracing new technologies and blazing new trails. Before he passed, Carroll forecasted the automotive industry's embrace of electric technology. That future is coming to fruition, and we're honored that his automotive program will be the first in the country to offer an on-campus EV certification from an accredited college."



Legacy EV is a company of auto enthusiasts who want to see classics on the road and is looking to help shops do it profitably.

GET ON THE BENCH

It can be tricky for students new to EVs to visualize abstract ideas, so Legacy EV has created a training bench suitable for educators.

The 100V Electric Vehicle Training Bench is designed to teach hands-on EV fundamentals that prepare students for careers in the e-mobility industry and enable those who are already working in the space to gain valuable industry knowledge. It allows students to understand the fundamentals of EV powertrains and safety functions of various components and systems.

"We are thrilled to unveil the 100V EV Training Bench, which is designed to create a foundational understanding of EV technology without limiting students to any one OEM platform, which in turn helps prepare students for a dynamic career in the growing EV industry," says Knoles. "Students can use this bench to gain invaluable hands-on experience in a structured setting, before moving on to become EV technicians."

A number of colleges, including Heartland Community College, J.F. Drake State Community and Technical College, and Saddleback College, have purchased the benches. The systems include a designated space for a laptop for real-time programming and datalogging, a programmable motor controller to commission, test and tune the motor system, and a programmable battery management

and charging system. They can connect to a controller area network (CAN) to interpret data.

HOW ABOUT MY BUILD?

The company always has EV solutions at its disposal in its Tempe, Arizona, headquarters and warehouse, where 25 people are working to put systems together, and the team is growing. Legacy EV (legacyev.com) can ship internationally to 22 countries.

To showcase the differences among various EV solutions, Legacy is embarking on a High/Low series of builds of a 1966 Chevy C10 using both premium, cost-no-object components and the first EV conversion kit with everything you need to get the wheels spinning for under $10,000.

For higher-end builds for those who want creature comforts such as air conditioning or power steering, Knoles notes, "any accessory on a pulley just needs to be replaced with a 12V version."

ARMING TECHS WITH PARTS & SMARTS

Recently, Legacy EV partnered with UK-based Fellten to offer products that can convert older vehicles to EVs. At last year's SEMA Show, the two companies announced the collaboration, calling it a new era for the e-conversion industry in the U.S.

Leveraging Fellten's advanced conversion solutions and Legacy EV's leading position in U.S.-wide distribution and dedicated training, the partnership is poised to bridge the past's automotive legacy with the future of electric propulsion, officials noted.

Legacy EV will serve as the exclusive U.S. distributor for Fellten's state-of-the-art components, e-motors, battery packs, and its complete bolt-on, plug-in conversion systems.

Because the company is based in England, it has some Land Rover applications that are already pre-engineered to work out of the box. Classic Land Rovers have become wildly popular, but their classic drivetrains are lackluster, and it is very challenging keeping oil drippings off of the floors of customer garages.

Legacy now has access to "an everything you need in one box solution" for the off-road platform. The deal also encompasses coverage for Fellten's three-year warranty.

To ensure optimal product utilization and consumer satisfaction, Legacy EV will harness its network, providing rigorous training for technicians in all 50 states.



The company is working with the Carroll Shelby Automotive Program at Northeast Texas Community College to help automotive technician students earn an EV certification.



Legacy EV has created a training bench suitable for educators.

"By joining forces with Legacy EV, we're not just introducing our products to the U.S. market; we're ensuring they're backed by the gold-standard of EV conversion expertise. It's a testament to the potential we see in this partnership," says Chris Hazell of Fellten.

Also at SEMA, teams from both companies performed a swap in a 1930 Ford Model A hot rod. It was wild to watch a vehicle drive into the Las Vegas Convention Center with gas in the tank and then leave under electric power.

"The transition to electric doesn't require abandoning our automotive heritage," Knoles believes. "With innovative solutions and our expertise, we can preserve classics for a new generation in the most straightforward way possible." ***TS***

BRETT SOLOMON *is a freelance writer based in New York City, specializing in the mobile electronics market.*



LED Lighting

KC, Flagstaff, Arizona, introduces its SLIMLITE 8 LED lighting line, the latest in its SlimLite family. Available for Jeep, classic Toyota truck, tow rig and full-size truck applications, the 8-inch lights offer a blend of innovation and off-road style. Highlights include a direct front cooling design, slim profile, and a wiring plug built directly into the housing featuring MoistureBlock technology for a secure, weatherproof connection. The lights shine 12,384 lumens through a durable polycarbonate lens embedded within a sturdy aluminum housing.

Windshield Protection Film

ExoShield, Ontario, Canada, introduces its GT3+ Windshield Protection Film, an upgraded version of its ExoShield GT3 WPF. Powered by cutting-edge nano-technology advancements, the elevated stability of the GT3+ hard coat technology offers improved resistance against delamination, heightened UV stability and extended film lifespan.





New-Model Vehicle Locks

BOLT Lock, Milwaukee, presents its complete line of Vehicle Locking products, now available for the newest-model Ford, GM, Dodge, Ram, Jeep, Chrysler, Fiat, Toyota and Nissan vehicles. Products include 5/8- and 1/2-inch Receiver Locks, Coupler Pin Locks, Padlocks, Cable Locks, Kingpin Locking System and Coupler Locks, plus Hood Locks, Spare Tire Locks and J-Mount Locks for Jeep applications. The technology allows the vehicle's ignition key to be permanently programmed to operate all BOLT Lock products.

Silverado/Sierra Lift Kit

BDS Suspension, Coldwater, Michigan, presents its 3.5-Inch XT Series Lift Kit with FOX 3.0 Shocks, available for 2019-24 Chevy Silverado 1500/GMC Sierra 1500 models. The mid-travel kit takes advantage of the factory suspension geometry to optimize ground clearance, adding front FOX 3.0 Factory Race Series coil-overs, heavy-duty tubular upper control arms, resi mounts, rear fabricated steel lift blocks, longer U-bolts and a matching set of FOX Factory Race Series 3.0 shocks for the rear. The setup clears up to 35-inch tires.





Ram Suspension System

Synergy MFG, San Luis Obispo, California, presents its Synergy Stage 1 Suspension System for 2014-up Ram 2500 models. Designed for tough terrains, the kit delivers improved off-road performance and handling. Precision-engineered components provide increased articulation, with coil springs tuned for optimal balance between comfort and off-road capability. Kits are created using a synergistic approach, matching springs, shocks and related products for overall ride quality.



Onboard Compressor Kits

Firestone Industrial Products, Nashville, presents Firestone Airide Air Command Onboard Compressor Kits with remote and smartphone functionality. Providing dual-path control for air helper springs, Air Command is designed to make towing and hauling easier, safer and more comfortable. The system allows users to control air helper springs from a Bluetooth-based smartphone app or wireless remote. Live system monitoring and adjust-on-the-fly capabilities are handled with a screen tap. Dual-path control can inflate left- and righthand air springs individually.



JT Diesel Lift Kit

AccuAir Suspension, Merritt Island, Florida, presents an all-new Lift Kit for 2019-up Jeep JT diesel models. Kit AA-4477 lifts the vehicle 4 inches to clear up to 37-inch tires. Designed for 100% bolt-on installation, the systems automatically compensate for heavy off-road bumpers, winches or side loads from heavy overlanding equipment. They increase load capabilities and handling while towing, and auto-leveling technology ensures the Jeep maintains a balanced alignment.

Tacoma Front & Rear Bumpers



ICON Vehicle Dynamics, Riverside, California, presents Front and Rear Bumpers for 2016-up Toyota Tacoma applications, the latest in its Impact product line of armor and accessories. The ICON Impact Sport Front Bumper is engineered and designed to complement the factory look and includes an integrated light bar window and a recessed hidden winch mount that accommodates up to a 12,000-pound winch. The ICON Impact Rear Bumper is designed to deliver strength, clearance and functionality, and to work with the factory tow hitch.



Hard Roll-Up Bed Cover

RealTruck Inc., Ann Arbor, Michigan, presents the BAK Revolver X4ts hard roll-up bed cover. Available for various pickup applications, the cover was awarded Best New Product Exterior Accessory at the 2023 SEMA Show. Constructed from durable marine-grade vinyl atop heavy-duty, cut-resistant aluminum slats and made in the U.S. from global materials, the new bed cover is easy to operate and features full matte-black styling. Features include integrated T-slot channels in the bed rails for mounting racks, carriers and cargo management accessories.



Receiver Hitches

Blue Ox, Pender, Nebraska, presents its custom-designed Receiver Hitches. Created with the end-user in mind, the hitches are specifically engineered to meet the precise specifications of each make and model, ensuring an efficient towing experience without compromising the vehicle's appearance. Manufactured in the USA, the units include a premium textured black powder-coat over an electrocoat finish for rust and corrosion protection. The hitches adhere to rigorous SAE J684 standards.

License Plate Pad



Design Engineering Inc. (DEI), Avon Lake, Ohio, presents a License Plate Pad designed to offer a comprehensive solution for noise reduction, paint protection and rust prevention. The specially engineered pad fits seamlessly behind a metal license plate. Crafted with precision and quality materials, it effectively reduces noise and vibrations caused by the rattling of the license plate, ensuring a smoother and quieter driving experience for motorists.



Truck Bed System

Fas-Top, Bismarck, North Dakota, presents the Fas-Top Traveler patented truck bed system that combines both a premium roll-up cover and a fabric topper into one modular unit. The fabric topper is made with a combination of exclusive high-performance marine- and industrial-grade materials, and the black aircraft-grade aluminum X-frame is designed so it can be quickly deployed and/or stored beneath the roll-up cover in minutes. The rail design secures both the tonneau and topper. Dealer displays are available. ***TS***

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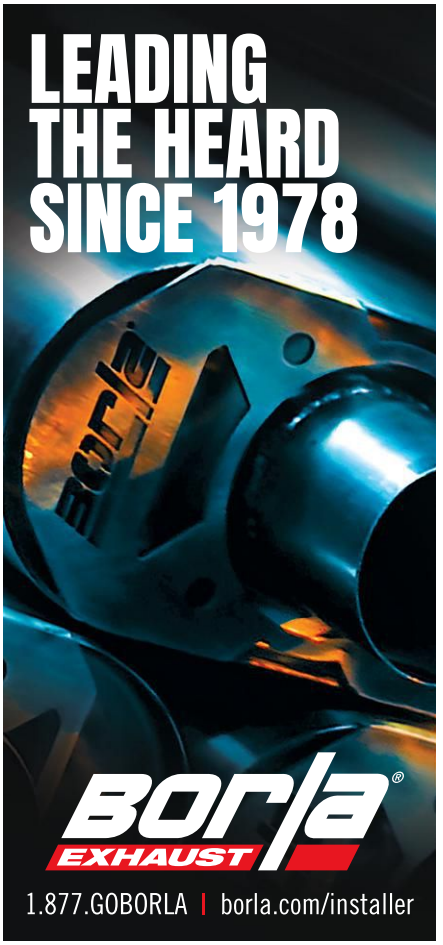
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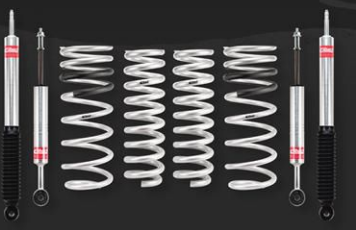
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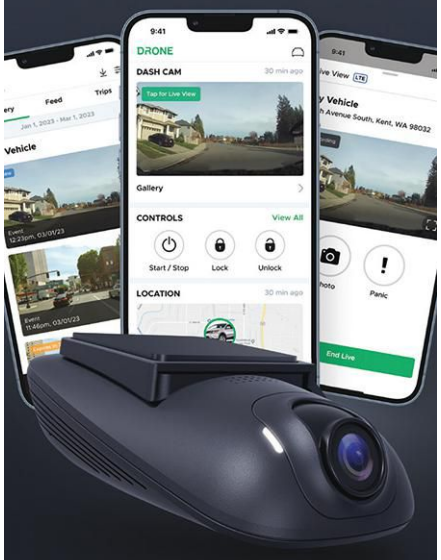
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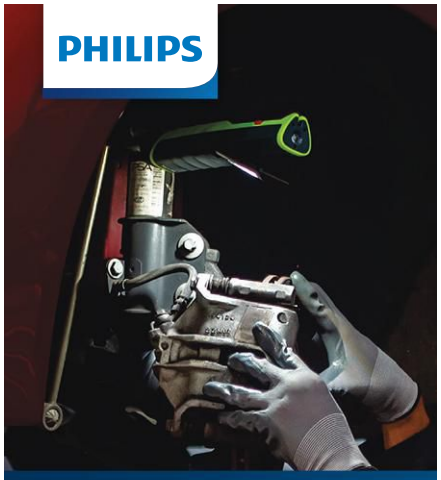


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Mercedes-Benz Places in Miami Promises Unique Urban Living

There's car camping—and then there's living in a community developed by your favorite automaker.

JDS Development Group, a U.S.-based real-estate company, and Mercedes-Benz recently revealed Mercedes-Benz Places in Miami. The 67-story, mixed-use residential project covering more than 2.5 million square feet is one of the largest projects currently under construction in Florida.

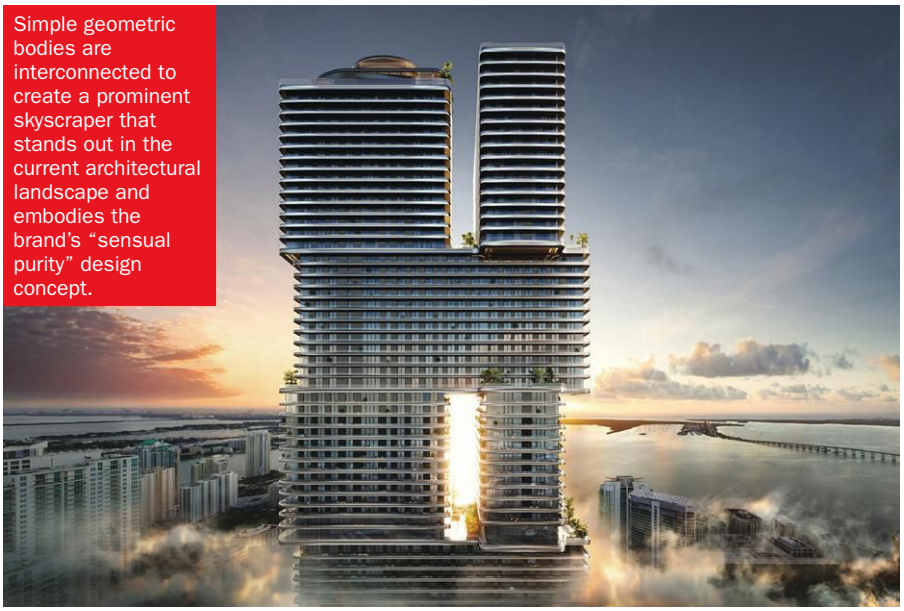
It is also the first branded real estate project for Mercedes-Benz in the United States, officials note, centered around the theme of Timeless Design, Inspired by Miami.

"It is a privilege to work with Mercedes-Benz and move beyond a traditional residential building to create a new community for the future," says Michael Stern, founder & CEO of JDS Development Group. "Underpinned by sustainable building methods and design, Mercedes-Benz Places in Miami will create a legacy not just for Brickell, but Florida as a whole."

Noting that the Mercedes-Benz design team has worked in collaboration with award-winning SHoP Architects to ensure the structure embodies the brand's design philosophy of "sensual purity," the residential tower will be built in the Brickell neighborhood at 1 Southside Park, comprising 791 Mercedes-Benz residences, from studios to three-bedroom condominiums.

It's said occupants will enjoy views of Miami, Biscayne Bay, the Atlantic Ocean and beyond. Foundation work is under way and initial occupancy is planned to start in 2027.

"Our branded real estate venture in Miami embodies the strategy behind Mercedes-Benz Places," says Eva Wiese, head of Mercedes-Benz Customer Solutions GmbH. "We want to develop exclusive residences with our partner that are undeniably Mercedes-Benz and create a new mode of urban living with vibrant communities. Ultimately, we want to create places to come home to, in a location worth living in."



Simple geometric bodies are interconnected to create a prominent skyscraper that stands out in the current architectural landscape and embodies the brand's "sensual purity" design concept.

The design of Mercedes-Benz Places in Miami centers around an eye-catching, cube-shaped mixed-use tower. Simple geometric bodies are interconnected to create a prominent skyscraper that stands out in the current architectural landscape of Miami, company officials state.

"Our distinctive style is 'sensual purity.' This philosophy, based on the duality of emotion and intelligence, consists of a hot and a cool pole," explains Gorden Wagener, chief design officer, Mercedes-Benz AG. "The cool aspect represents very much the tradition of geometric German long live design originated in the Bauhaus. This crucial part of our brand was the inspiration for the architecture of this extraordinary new Mercedes-Benz Places landmark in Miami."

Technical silver is the dominant color, complemented by the classic Mercedes-Benz black and white, to create opportunities for distinctive highlights and stimulating contrasts, officials add. Residents will enjoy more than 130,000 square feet of amenities and hospitality space; 200,000 square feet of office space plus health and fitness facilities; a 174-key hotel; retail outlets; and on-site parking.





The design of Mercedes-Benz Places in Miami centers around an eye-catching, cube-shaped mixed-use tower.

Innovative mobility solutions will also play a key role, with space for EV charging stations, valet parking, a car fleet for occupants, plus bicycle and scooter sharing. Mobility and innovative digital solutions will be developed in collaboration with ReWyre, a leading commercial property technology platform. ***TS***

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