MAY 2023

THE SHOP

For performance, restyling & customization professionals

PROJECT VEHICLE SKETCHBOOK

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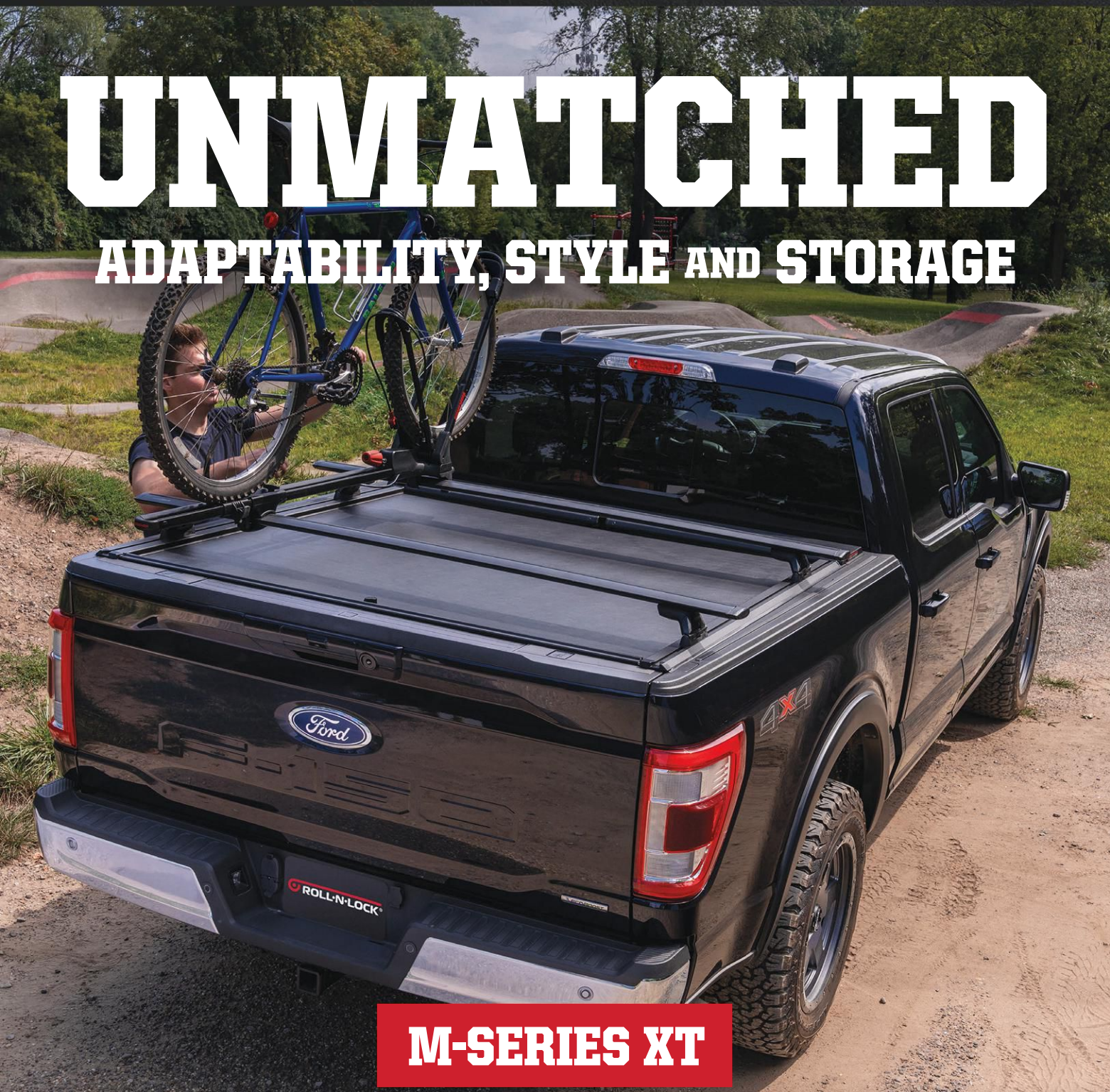
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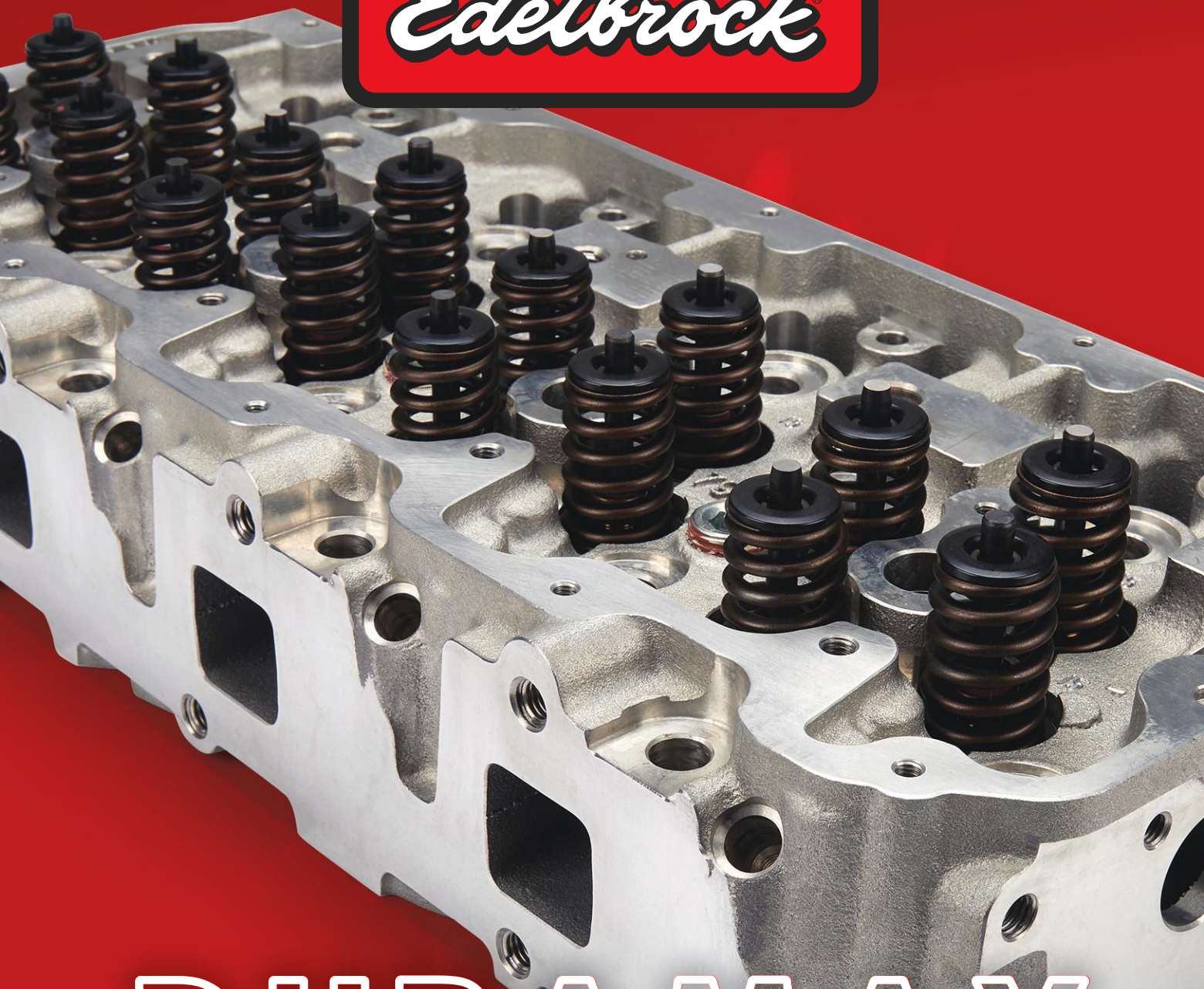


ON THE COVER

For many builders, project vehicles are the ultimate goal—to create something that's unique, familiar and memorable, all at the same time. Maybe something like the "AWDROLA" 1989 Toyota Corolla GTS conversion from KC HiLites. Find it and more inspiration in this spring's Project Vehicle Sketchbook. *See article on page 6.*

(Photo by @GXSPICE/courtesy KC HiLites; inset photo courtesy Consumer Technology Association.)

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Jef White
Editor
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Roadway Safety: Still Room for Improvement

The influx of Advanced Driver-Assistance Systems products and related technology has helped bring added attention to roadway safety. New statistics, however, show that there's still plenty of room for improvement.

For a second consecutive year, preliminary estimates from the National Safety Council indicate that more than 46,000 people lost their lives in preventable traffic crashes in the U.S. last year. Maybe even more alarming: Compared to pre-pandemic 2019 numbers, the mileage death rate in 2022 increased nearly 22%, showing just how dangerous American roads can be.

"From drivers and passengers to pedestrians and cyclists, road users of all ages are perishing in preventable crashes in the United States," says Lorraine Martin, president and CEO of the National Safety Council. "Words matter, and as a country, we need to learn and understand that there are no vehicle 'accidents.' Each crash that occurs on America's roads is entirely preventable and unacceptable. We must change the way we think about designing and moving around in our communities, understanding that people will make mistakes and the cost of those mistakes should not be serious injury or death."

The council is asking policymakers, employers and individuals to come together to emphasize safe driving in various ways. For example, the bipartisan Infrastructure Investment and Jobs Act recently updated its language to change the term "accidents" to "crashes."

A few months later, the U.S. Department of Transportation released its National Roadway Safety Strategy, setting a goal of zero fatalities for U.S. roads—a first for the federal government—and adopting the Safe System approach, which takes a holistic look at road safety.

Recently, the DOT announced the Safe Streets and Roads For All grant program. The grants, which are aimed at aiding regional, local and tribal communities, plan for and help make necessary safety improvements.

Many companies in the specialty aftermarket already support and participate in Road to Zero programs and initiatives designed to combat roadway fatalities. Installing, properly calibrating and maintaining ADAS products and reminding customers about safe driving habits are among the small steps shops can take to help do their part.

According to the council's preliminary estimates, eight states and the District of Columbia trended in the right direction in 2022, seeing a 10% or higher drop in traffic deaths. They were Oklahoma (25% drop), Idaho (19%), Rhode Island (17%), District of Columbia (15%), West Virginia (15%), Montana (14%), Minnesota (12%), South Dakota (12%) and Arizona (10%).

Meanwhile, 10 states experienced a rise in deaths of 14% or more last year: Alaska (27% increase), Hawaii (24%), Wyoming (20%), Maine (20%), New Hampshire (19%), Delaware (19%), Connecticut (17%), Nebraska (16%), Washington (14%) and Indiana (14%). ***TS***

THE SHOP

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1900 28th Avenue South, Suite 200
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PRINTED WITH SOY INK · BPA WORLDWIDE · CERTIFIED AUDIENCE · TORA TRUCK & OFF-ROAD ALLIANCE · SEMA · CAN MEMBER · PRO PROFESSIONAL RESTYLERS ORGANIZATION

THE SHOP (ISSN 2380-7415) is published monthly by Cahaba Media Group, 1900 28th Ave S, Ste 200, Birmingham, AL 35209-2642. Periodicals postage paid at Birmingham, AL and additional mailing offices. Free to qualified recipients within the United States and U.S. Possessions. Publisher reserves the right to determine qualifications. Annual Subscription Prices: U.S. – one year, $45; two years, $80; three years, $108. Canada – one year, $76; two years, $142, three years, $201 (U.S. Funds); All other countries – one year $98, two years $186, three years, $267 (U.S. funds). Customer Service, call 800-256-2785. POSTMASTER: Please send address changes to THE SHOP, PO Box 271, Lincolnshire, IL 60069-9835.
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PROJECT VEHICLE SKETCHBOOK: SPRING 2023

Success doesn't happen overnight.

Intro by A.J. Hecht



Finalists from last year's Battle of the Builders contest shared secrets and advice during a panel discussion at the Keystone BIG Show. (Photo courtesy Keystone Automotive Operations/Keystone BIG Show)

For many builders, project vehicles are the ultimate goal—to create something that's unique, familiar and memorable all at the same time.

If one thing's for sure, however, it's that success doesn't happen overnight—at least according to some of the industry's top customizers.

Gathered at the annual Keystone BIG Show customer event in Colorado to talk about last year's Battle of the Builders competition, four aftermarket pros—some new, some experienced—discussed not only the impact of the SEMA Show's annual build competition, but what it takes to get there.

Hosted by television personality Chris Jacobs, the panel included the four finalists from the 2022 contest: winners Jim and Mike Ring of Ringbrothers fame; TJ Russell, proprietor of Russell Built Fabrication; and Josh Michels, the 22-year-old owner of Michels Auto Design who won the Young Guns category with his 1966 Corvette restomod.

SEMA VP of Marketing RJ de Vera also joined in the conversation, offering an industry insider's perspective on how to make a name for yourself as a builder.

"There's this idea that fortune favors the brave," de Vera says. "All of these people (on stage) were very brave with what they did. It's taking every advantage of the opportunities and the platforms the industry has, including shows like (The BIG Show)."

The plan is to promote your business whenever you can, every way you can.

"You all have passion. You're all looking for opportunity. You're all trying to be innovators," de Vera continues. "How do you put all of those together? It's really just going out there, being brave and not expecting it to come to you."

That also applies to supplier relationships, the Rings add.

"We're lucky in that people answer the phone when we call, and I think that's the biggest part of networking—getting to know a face within a company," Mike Ring says. "Get a name, get a card, and hopefully say something to them that they'll remember you. You'll find the ones that work. And you'll use them over and over."

Russell stresses the importance of creativity and imagination, which helped drive his BOTB build, a rally-inspired 1991 Porsche 911.

"Everything's been done multiple times. You want to branch out and be different and (create) a brand that says something different," he suggests. "You have to push well beyond your comfort zone and the times you want to quit. You've got to keep going."

For further inspiration, check out the custom projects, limited editions and concept vehicles highlighted on the following pages, and then make your own mark.

An extended version of this article appears at theshopmag.com. Visit today and sign up for the free daily eNewsletter. **TS**

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1948 CHEVROLET SUPER TRUCK



The **1948 Chevrolet Super Truck "ENYO"** is the most outrageous creation yet from the **Ringbrothers** garage, and winner of the **2022 Battle of the Builders** contest. The result of more than 10,000 build hours required to mate a big-box truck cab and massive drivetrain on a low-slung, open-wheeled, car-style chassis, it's powered by a **Goodwin** 1,000-hp tall-deck racing engine and crafted using extensive carbon fiber components.

Highlights of the "anti-street rod" include: a chopped, channeled and sectioned body; state-of-the-art chassis and suspension design; carbon fiber parts; aero management with wings and splitters; and CAD-designed trim and parts cut in-house.

Participants include: **Kinsler** (eight-stack injection); **Holley** (fuel management system); **Bowler Performance Transmissions** (Corvette torque-tube 4L80 automatic transaxle); **Öhlins** (shocks); **HRE Wheels**; **Nuke Performance** (air jack system); **Brembo** (brakes); **Scott Ahlman/Ahlman Engineering** (one-off chassis in conjunction with **Roadster Shop**); **Rick's Tanks** (custom stainless steel gas tank); **Vintage Air** (Gen II compact air-conditioning system); and **Upholstery Unlimited** and **Gemini Technology Systems** (custom interior collaboration).

1969 CHEVROLET CAMARO





Custom car builder and parts manufacturer **Ringbrothers** presents **"STRODE,"** a thorough reengineering of a **1969 Chevy Camaro**. The complete ground-up build utilizes extensive carbon fiber construction and components merged with a modern drivetrain, chassis and suspension—only two parts of the original Camaro remain.

Highlights include: more than 6,500 design, engineering and build hours; widened by 5 inches; **BASF** Glasurit Ghost White paint; fully custom interior by **Upholstery Unlimited**; **JL Audio** sound system; **Dakota Digital** gauges; **Vintage Air** Gen IV climate control system; hand-fabricated roll cage; **Wegner Motorsports** LS3 topped with a **Whipple** supercharger to reach 1,010 hp; **Holley** Dominator EFI system; **Flowmaster** mufflers; **TREMEC** T-56 Magnum 6-speed manual transmission from **Bowler Performance Transmissions**; **John's Industries** 9-inch rear end; **Detroit Speed Engineering** hydroformed subframe; FAST TRACK independent front and rear suspension from **Roadster Shop**; **QA1** MOD Series coil-overs; Ringbrothers G-Code Edition wheels from **HRE Wheels** wrapped with **Michelin** Pilot Sport 4S tires; and **Baer Brakes**.



Other participants include **Motul** and **Miller Electric**.



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1953 CHEVROLET PICKUP

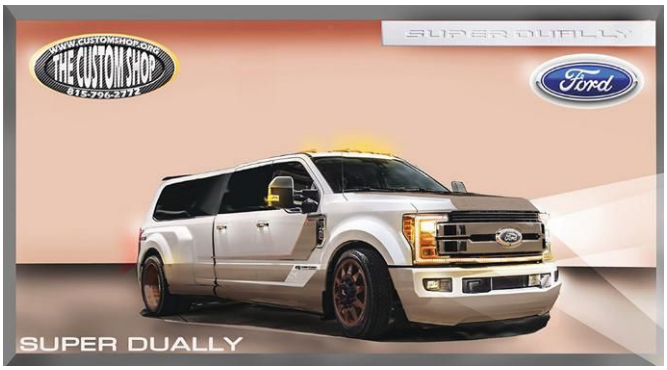


John Wargo and the team at **The Custom Shop** in Flanagan, Illinois, are building a **1953 Chevy** truck named **"GrandPa Dave."** The owner's grandfather is the truck's original owner.

Highlights include a **Roadster Shop** chassis, **Prismatic Powder Coating**, LS3 engine enhanced by **COMP Cams** and **Holley EFI** components and a **Pypes Performance Exhaust**, rolling on **Toyo Tires** and **Schott Wheels**, lots of minor body mods painted in a **Porsche** Neptune Blue using **ProSpray** paint, **Apex Leather**, **Sony** audio, custom wood in the bed and a one-piece, custom curved **Auto City Glass** windshield.

Participants include: **AMSOIL**, **Covercraft**, **Dakota Digital**, **DiabloSport**, **Entropy Radiator**, **Fairchild Industries**, **Flaming River**, **HushMat**, **Malco Products**, **NGK Spark Plugs**, **Nu-Relics Power Windows**, **ODYSSEY Battery**, **Painless Performance Products**, **POR-15**, **RainGear Wiper Systems**, **Scosche**, **Sony**, **Sherwin-Williams** and **Vintage Air**.

FORD F-450



John Wargo and **The Custom Shop** team in Illinois took a custom **Ford F-450 "Super Dually"** project pickup to the **2022 SEMA Show**, displaying it in the **Sony** booth. The lowered truck included a custom cowl hood and chin spoiler, a **LEER** topper, bronze accents on custom wheels, and a Pearl White base and bronze accent paint job courtesy of **ProSpray** products.

Heavy-duty tow features included **Westin** bumpers and nerf bars, **SuperSprings** suspension enhancements and a **Superwinch**.

Participants include: **Badger Air-Brush Co.**, **BedRug**, **BOLT Lock**, **Cerakote**, **Covercraft**, **C-Tek**, **Draw-Tite**, **Eastwood**, **EBC Brakes**, **Fairchild Industries**, **Firestone Airide**, **Green Filter**, **Metra Electronics**, **ODYSSEY Battery**, **Presta Products**, **POR-15**, **RKSport, SATA**, **Sony**, **Toyo Tires**, **TRIMAX Locks** and **XKGLOW.**

1989 TOYOTA COROLLA (Photos by @GXSPICE/courtesy KC HiLites)



Randy Wimenta of **KC HiLites** shares a fun build that celebrates legendary off-roader **Ivan Stewart**. The project converted a **1989 Toyota Corolla GTS** (AE92) to all-wheel drive using a driveline from a **1989 Toyota Corolla All-Trac Wagon** (AE95).

With a livery tribute to Stewart, the **AWDROLA** ("Odd Rolla") has shown up at the **SEMA Show** and various off-road events, and even took a turn at a **HooptieX** course. It features a variety of KC lighting products including a Gravity Pro6 light bar, FLEX ERA 4 combo light system, clear Cyclone universal rock light kit, amber Cyclone chase light with magnetic mounts and a diffused Cyclone dome light with magnetic mounts.

Participants include: **FS Racing** (custom clutch and flywheel); **Dana** (Spicer custom front CV axles); **Barnes 4WD** (custom 4-link to rear axle); **Stinger Off-Road** (battery, fuses, display unit, speakers); **Auxbeam** (switch controls); **Dempsey Fabrication** (custom roll cage and subframe, custom roof rack and tire carrier); **Imagination Works** (decals); **Fast Friends** (decals); **Raceline Wheels**; **BFGoodrich** (tires); **SpeedStrap** (tire bonnet); **Eibach** (dual-spring suspension setup); **Streetwise/Bilstein** (custom front strut system); Bilstein (rear coil-overs); **Warn Industries** (Axon powersport winch); **Factor 55** (Hawse fairlead and flat link); **Deadman Off-Road** (recovery anchor); **Rugged Radios** (intercom system); and **PRP Seats**.

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1969 CHEVROLET CAMARO



"Viral" is a production-ready **1969 Chevrolet Camaro** from premier custom car manufacturer and restorer **Finale Speed** in Yukon, Oklahoma. Billed as the world's first exposed-weave carbon fiber '69 Camaro, it merges classic lines with modern materials, drivetrain, chassis and suspension, and made its debut at the 2023 **Barrett-Jackson** Scottsdale Auction in January.

Wrapped around a **GM Performance** LT4 crate engine with a **Wegner Automotive** pulley system that delivers 650 hp, the fully custom carbon fiber body is engineered to OE specifications using prepreg autoclave-cured carbon fiber for maximum lightness while retaining rigidity and strength. It's covered with **BASF** Glasurit Clear to show off its modern craftsmanship, while LED lighting, flush-mounted glass and billet hinges and handles round out the exterior finishes.

The custom interior is appointed with VXR seats and Alcantara-covered door panels from **TMI**, an Alcantara headliner, gauges by **Classic Instruments** and an **Old Air Products** climate control system. Entertainment includes an **Alpine** head unit with a **Mosconi** five-channel amp and **Focal** speakers and subwoofer.

Participants include: **GM** (fuel management, ignition); **VaporWorx** (fuel pump); **OPTIMA** (trunk-mounted battery); **American Autowire** (harness); **Ultimate Headers**; **MagnaFlow** (mufflers); **TREMEC** (T-56 Super Magnum 6-speed manual transmission); **Dutchman** (axles); **Speedtech Performance** (subframes); **JRi** (coil-overs); **Forgeline** (three-piece wheels); **Toyo Tires**; and **Wilwood** (calipers with 14-inch slotted, cross-drilled and vented rotors).

2022 JEEP WAGONEER



Oil and lubricants company **Motul** celebrates the 45th edition of the **Dakar Rally** and its fifth year as the event's official lubricant partner with a customized, rally-inspired **2022 Jeep Wagoneer**.

Custom upgrades include a fifth-generation **Ram 1500** 3.5-inch **ReadyLIFT** suspension kit modified and installed by **Rad Rides** of Huntington Beach, California, along with custom-fabricated 2-inch spacers in the rear. The four-wheel drive Wagoneer rides on a set of matte black CHASE 18x8.5-inch wheels provided by **Black Rhino Wheels** wrapped in **BFGoodrich**-provided 35x12.50R18 All-Terrain T/A KO2 tires.

Highlights include: UltraSwing Multi-Fit spare tire hitch mount from **RIGd Supply**; Dakar-inspired vinyl wrap completed by **Sticky Fingers Design**; **AreaBFE** Black Series aluminum hard-shell rooftop tent; and **Gobi Racks** Stealth roof rack.

See it at off-road events throughout the summer.

C8 CORVETTE



Caravaggio Corvettes, Concord, Ontario, introduces **Unica Series 1**, a limited-edition sports car with an elegant, redesigned carbon fiber body based on the **Stingray** and **Z06 C8 Corvette**.

"Our new Unica Series 1 is a natural evolution for Caravaggio Corvettes," says **John Caravaggio**, founder and CEO. "We will offer 30 carbon fiber-bodied C8 Corvettes with a sophisticated design that builds upon the current car's design. The reimagined car has organic styling that combines the best of American sports car culture with the cultured lines of a European exotic."

With each car completely individualized from top to bottom, options include a choice of fabrics, leathers, carbons, colors and finishes, and performance upgrades such as a supercharger, **Brembo** brakes, additional cooling, various wheel designs and engine tuning.

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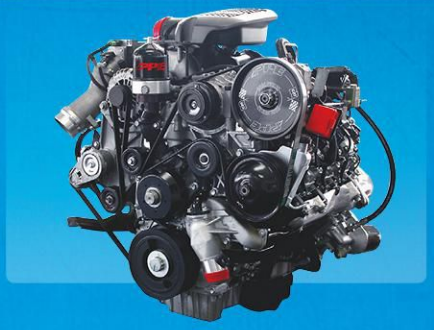
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WHSE23TS

2016 TESLA MODEL X P90



Joshua Marquardt of **Art City Wraps** in Oshkosh, Wisconsin, relays the story behind a 2016 **Tesla Model X P90** wrap project for the **Ketones** brand.

"We printed and laminated this large format print in-house using a **Mimaki** CJV-300 printer on **Avery Dennison** MPI 1105 EZRS with DOL 1360Z overlaminate. Our designer, **Carla Marquardt**, was inspired after meetings with the local client. She determined that the design of the wrap was to be fun with movement and flow and a logo that needed to be bold and pop."

The background is a grayscale pattern remixed with a cross-fade into the white.

"Black swoosh patterns in the design imply movement and create more contrast," Marquardt continues. "The gradient logos add that extra Art City flair and really make them pop. This particular gradient had been chosen to incorporate Color Therapy, per the client's branding: green for health and orange for a friendly and cheerful pop."

BRABUS ROLLS-ROYCE GHOST



BRABUS presents a sporty customization range for the **Rolls-Royce Ghost**, featuring suspension and appearance enhancements, plus a power improvement for the twin-turbo V-12.

Carbon bodywork components deliver a combination of sporty styling and aerodynamic efficiency, available in glossy or matte finishes, or painted. Enhancements include a front spoiler, carbon diffuser, badges and bodywork, plus refined wheels, interior components and more.

The BRABUS PowerXtra RR68-700 performance upgrade includes new maps for injection and ignition, reprogrammed electronic boost pressure control and an exhaust upgrade. The new plug-and-play engine control module is adapted to the electronic engine control unit, increasing peak power by127 bhp.

HENNESSEY VELOCIRAPTOR 600



The **Hennessey VelociRaptor 600 Sherco Edition** combines the off-road power of a 558-bhp 4x4 **VelociRaptor 600** pickup with the agility and exploration capabilities of high-performance **Sherco** enduro motorcycles.

Both the truck and motorcycles have been configured for the pairing by Texas-based hypercar manufacturer Hennessey. The VelociRaptor 600 is enhanced with a distinctive Sherco racing livery, six-piston **Brembo** brakes, a bed rack from **Risk Racing** for securely transporting two bikes, a 5-gallon fuel jug and mount, plus a bed extender that doubles as a bike loading ramp.

"Our customers drive our trucks hard, both on- and off-road, participating in a variety of motorsports activities," says **John Hennessey**, founder and CEO. "The collaboration with Sherco aligns our high-performance VelociRaptor 600 with equally capable enduro bikes."

The Sherco bikes, including the available two-stroke 300 SE and four-stroke 300 SEF, feature single-cylinder liquid-cooled engines. As part of the Hennessey package, the SE has an upgraded compression head, while the SEF employs a **Race Tech** race head.

In addition, both bikes feature upgraded radiators and rear rotor guards from **Bullet Proof Designs**, skid plates with linkage protection from **AXP Racing**, enduro grips and S3 perch clamps.

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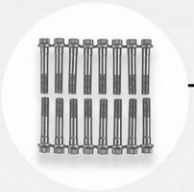
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POLARIS RZR 200S



Polaris introduces two show-stopping, limited edition side-by-side UTVs in partnership with motocross, mountain bike and action sports brand **Troy Lee Designs** (TLD). The **2023 Polaris RZR Pro R Troy Lee Designs Edition** and matching **RZR 200 EFI Troy Lee Designs Edition** mark Polaris' first-ever limited edition RZR 200s.

Carrying a vivid, race-inspired design aesthetic that's distinctively TLD, the Pro R features a 2.0L, 225-hp four-cylinder engine and an all-new Max-Link suspension. It sports TLD graphics with electric blue and orange retro-styling, custom-embroidered seats and limited edition interior identification badging displaying the unit number. Each unit also showcases color-matched factory accessories including front and rear bumpers, rock sliders, A-arms, trailing arms and springs.

Participants include: **Rockford Fosgate** (Stage 4 high-output audio); **Pro Armor** (5302 beadlock wheels); **Maxxis** (Rampage Fury tires); and **RIGID** (SR-Series 32-inch combo LED light bar).

Meanwhile, Polaris is offering the companion RZR 200 EFI Troy Lee Designs Edition for young riders, featuring kid-friendly performance and adjustability to grow with the machine.

BRABUS MERCEDES-AMG G 63







The **BRABUS 800 Adventure XLP SUPERWHITE** high-performance pickup is based on the **Mercedes-AMG G 63**. Engineers employed state-of-the-art CAD technology to develop a new rear cab wall with heated window for the passenger compartment, while a cargo bed with a **Flexiteek** bedliner takes the place of the trunk.

To accommodate the bed, BRABUS developed a special, high-strength frame module for the off-roader that allowed moving the rear suspension farther back. As a result, the wheelbase grew by 20 inches, requiring a longer driveshaft.

Extensive refinements include carbon enhancements as well as suspension, fascia, wheel, engine, exhaust, transmission and interior upgrades.

FERRARI SF90



Custom exotics company **1016 Industries** presents its all-new carbon fiber **SF90**. Celebrated as **Ferrari's** ultimate road car and first to use EV power, the custom features a full suite of state-of-the-art carbon fiber designs interlaced throughout the 986-hp vehicle to further enhance performance and deliver a unique silhouette and stance.

Available in a 1x1 weave or super-premium 2x2 twill pattern that 1016 Industries can color tint, limited edition SF90 upgrades include front bumper flaps, front lip, hood vent system, side skirts, rear diffuser, trunk spoiler and roof spoiler.

The carbon fiber designs throughout the car provide a lighter, stronger baseline for the SF90, allowing for nimbler handling and improved performance for the 211-mph exotic.

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LAND ROVER DEFENDER 110



A convertible **Land Rover Defender 110** build dubbed **"Project Pivot"** is the latest from **E.C.D. Automotive Design**. The **Subaru** Sunshine Orange soft-top off-roader includes a matching orange grille and inserts, light surrounds, hinges and vents.

Powered by a **GM** LS3 engine, it rides on 16-inch black Sawtooth-style wheels and **BFGoodrich** all-terrain tires. In the back, the build removes the traditional swing-away tire carrier.

Inside, **Garrett** Torino Tierratan leather accents heated **Exmoor** Modular seats with horizontal stitching and a custom center console. The Puma dash features a black **MOMO** Prototipo steering wheel, vintage gauges and a touchscreen radio system.

Participants include: **JL Audio** (sound system); **Apple** CarPlay; and **BORLA Performance Industries** (stainless sport exhaust).

OETTINGER GOLF 8 R



The storied history between **OETTINGER** and **Volkswagen Golf** models is strengthened with a lowered **Golf 8 R** with a customized aerodynamics package on proprietary OETTINGER forged wheels.

The complete aerodynamics package includes a front spoiler and dive planes, a side skirt set that fits below the standard skirts, and a rear diffuser wing specially designed for R models without a tow hitch.

For Golf R models with the R-Performance package, the Friedrichsdorf-based company also offers an additional wing. Models without the R-Performance package can be optionally upgraded with a roof spoiler that is already available for the basic GTI model.

LEXUS RX 500H F SPORT



Lexus joined forces with **adidas**, **adidas S.E.E.D.**, **Calty Design Research** and 3D printing company **Carbon** to transform an all-new **Lexus RX 500h F SPORT** into an eye-catching crossover inspired by **Marvel Studios' "Black Panther: Wakanda Forever**."

The re-imagined exterior of the RX features a Wakandan-themed print and purple colorway used throughout the adidas sportswear collection that also celebrates the movie. A diamond pattern inlaid across the hood hints at the Black Panther's claw necklace, while gold details—tying in with the new Black Panther's suit—accent the exterior.

Highlights include "F" center caps, F SPORT on the wheels and Lexus badging that are reimagined using the fictional Wakandan alphabet, and "Vibe-Branium" spelled in the Wakandan alphabet on the rear badging as part of its unique name: the **Lexus RX 500h Vibe-Branium AWD DIRECT4**.

Students at adidas S.E.E.D (School for Experiential Education in Design) embraced the challenge of remaking the interior by using the much-anticipated sequel as their source of inspiration. To help guide them through the design process, Calty Design Research led the students through a series of workshops exploring automotive design, Lexus design, creative processes, color and materials and the power of collaboration. The result is an interior with future-focused designs, textures and materials.

1991 WOLF GELANDEWAGEN





Expedition Motor Company unveils the newest edition of its **Wolf Gelandewagen** with a striking Gulf Blue **1991 250GD**. Representing more than 1,400 hours of restoration, the **2022 250GD Wolf** restomod is highlighted by the company's new automatic transmission as an option that allows the military-grade workhorse more versatility in everyday driving conditions.

The original 1991 250GD Wolf donor truck was updated with a 0M602 diesel engine paired with a **Mercedes-Benz** five-speed 722.6 automatic transmission and an original gear-shift lever found in performance-oriented S-Class vehicles.

EMC used modern Gulf Blue paint to artfully contrast the durable all-weather praline vinyl seats installed in the open-air cabin. A modern HVAC system with heat and A/C adds comfort. Other amenities include a modernized entertainment system with **Apple** CarPlay, front and rear seat heaters, front and rear locking-differentials, all-new fuel and brake lines, reengineered brake calipers and upgraded springs, shocks and custom polyurethane bushings.



PORSCHE 911



Porsche and **Pixar Animation Studios** revealed a special Porsche inspired by one of the most beloved **911** models of all time—**Sally Carrera**, from **Disney** and Pixar's movie **"Cars."** Named the **"911 Sally Special,"** the project reunited members of the original film team who created both the movie car and the life-size Sally Carrera based on a **2002 Porsche 911 Carrera** two decades ago.

"We decided early on that we wanted to make a drivable 911, inspired by, but not a direct copy of Sally Carrera. After all, she loved to drive—and this helped guide us. 'If Sally Carrera was built today in life size, for the road, what would she look like?'" asks **Jay Ward**, creative director of franchise of Pixar Animation Studios.

Based on the 473-hp 911 Carrera GTS equipped with a manual gearbox, the build features many unique touches, from special blue paint to custom wheels.

LAND ROVER DEFENDER 90



E.C.D. Automotive Design introduces **"Project Mr. O,"** a custom **Land Rover Defender 90** with a powerful **Corvette** LT1 engine. It's inside where the project truly shines, showcasing **Spinneybeck Copenhagen** leather complemented by splashes of Moss Green tweed from **The Merchant Fox**, vintage fluted-style stitching and expert touches on the **Recaro** seats, **Exmoor** Williams steering wheel and doors.

Painted in a gloss Night Mission green with a Rice Grain white hardtop roof and silver accents, the "gentleman chic" Defender sits on **Goodyear** Wrangler DuraTrac tires with 16-inch heavy-duty steel **Wolf Wheels**. Fold-down side steps made of teak wood and stamped with the Land Rover logo are among the build's many custom elements.

Participants include: **Smiths Replica** (gauge set, custom seat belts); **Alpine** (infotainment center with **Apple** CarPlay); **JL Audio** (sound system); **EBC Brakes**; **BORLA Performance Industries** (stainless steel dual sport exhausts); **Nakatanenga** (silver mesh grille); and **KENWOOD** (subwoofer). ***TS***

Restyling AFTERMARKET ACCESSORIES

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APPROACH ANGLES PART 1

Aim high with aftermarket bumper sales.

By Jef White

Editor's note: *This is the first in a two-part article highlighting trends and sales techniques related to aftermarket bumpers.*

When selling aftermarket bumpers, the approach is simple—the products work better, look better and offer a touch of personalization over stock options.

Available for the front and rear of a wide variety of off-road, 4x4 and daily-driver trucks and SUVs, aftermarket bumpers can be further customized with winches, LEDs, shackles and other accessories to keep drivers safe and secure at the jobsite or on the trail.

The products are currently very popular, as shown by the number of manufacturers found in the market. Several of them step up with advice and observations to help shops sell and install aftermarket bumpers with confidence.

MAKE YOUR CHOICE

With aftermarket bumpers in high demand, shops will first need to choose their preferred suppliers from a growing number of manufacturers entering the market.

"We're continuing to see a surge in new brands coming into the industry that are essentially manufacturing products that have small variations to options that are already available," says Jesse Brown, director of marketing for Magnum. "I would suggest continuing to build on relationships with manufacturers and seek out those who have credibility so you can ensure you're choosing the right brands for your customers."



Build on manufacturer relationships to acquire the bumpers your customers want. (Photo courtesy Magnum)

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Available for popular Toyota truck/SUV models; sleek, low-profile design that includes all the necessities; accommodate a 10K winch; welded or bolt-on bull bar; fit a 20-inch light bar; integrated shackle recovery points; no-drill application.

Body Armor 4x4
Nupesh Patel
Brand Manager

HOT PRODUCT:
HD Replacement Bumper
FEATURES & BENEFITS:
Four-stage powder-coating system; fully welded one-piece design; diamond plate and Schedule 40 pipe used in production for strength; keeps all factory accessories such as tow hooks, fog lights, sensors, etc.; front receiver; punch plate grille.

Steelcraft Automotive
Rick Sanchez
Director of Sales and Marketing

HOT PRODUCTS: Toyota 4Runner & Tacoma Front RT Style Winch Bumpers
FEATURES & BENEFITS:
High clearance for better approach angles; direct bolt-on design using factory mounting locations; optional bolt-on RT bar included; integrated shackle mounts; compatible with up to 10K winch and synthetic rope fairlead; cold rolled steel construction.

Magnum
Jesse Brown
Director of Marketing

HOT PRODUCTS:
Matrix Bumper Series
FEATURES & BENEFITS:
Compatible with current technology; integrated D-ring mounts; winch-compatible; accommodate multiple lighting options; high and tight design.

Fab Fours Inc.
Autumn Hauck
Director of Sales

HOT PRODUCT: Ford Bronco Front & Rear Package
FEATURES & BENEFITS:
Available in two styles—one with a winch plate and prominent pre-runner bar and one with a slightly less aggressive profile; both front bumpers match a contoured rear bumper that can also be paired with a direct-mount or hinged spare tire carrier.

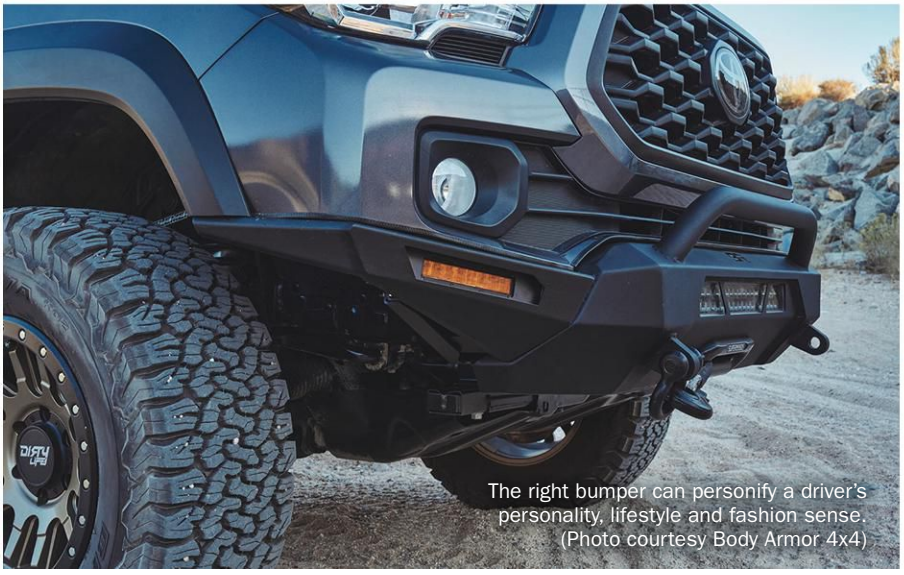
TrailFX
Jane Donnelly
Marketing Director

HOT PRODUCT:
Minimalist Low-Profile Bumper
FEATURES & BENEFITS:
Winch-mount design; includes recovery points; flows with the vehicle for an attractive appearance.

RealTruck
Jason Gauci
Vice President of Product Development

HOT PRODUCT: ACE Engineering Expedition Series Stubby Bumper
FEATURES & BENEFITS:
Fits 2018-up Jeep JL/JLU Wrangler and JT Gladiator models; constructed of 3/16-inch mild steel; designed for bolt-on installation; open, recessed winch design; fog light provisions; textured black powder-coat finish; made in USA.

Steinjager Inc./ACE Engineering
Adam Morrow
Sales Manager/Dealer Support



The right bumper can personify a driver's personality, lifestyle and fashion sense. (Photo courtesy Body Armor 4x4)

Steinjager Inc. purchased ACE Engineering in 2021 in what Adam Morrow, sales manager/dealer support, calls a "competitive arena."

"The manufacturing industry has seen raw material costs to manufacture bumpers skyrocket, along with the need to keep increasing labor costs to keep quality manufacturing personnel," he observes.

As the space continues to evolve, established manufacturers are looking to provide a wider range of choices for consumers, including more affordable options, says Autumn Hauck, director of sales for Fab Fours Inc.

"The evolution of bumpers has vastly changed with the popularity of more eco-friendly and EV platforms," she says. "We're seeing more lightweight and tech-compatible options that are also functional without compromising the strength and reliability of the product."

Application availability and trim level compatibility are key factors to look for, says Nupesh Patel, brand manager for Body Armor 4x4.

"Not every application is treated equally, so things such as grilles, bumpers and bodylines can play a huge part in whether a bumper is going to fit," he explains. "A little homework and research go a long way, and when in doubt shoot an email or call the manufacturer to get those specs."

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APPROACH ANGLES PART 1



Application availability and trim level compatibility are key factors. (Photo courtesy Body Armor 4x4)



Established manufacturers provide a wide range of choices for consumers. (Photos courtesy Fab Fours Inc.)



Sell aftermarket bumpers on their durability and features. (Photo courtesy RealTruck)

STYLES & SELECTION

As new vehicle styles emerge, today's aftermarket bumpers continue to receive updates of their own.

"We've seen a shift away from the heavy plate steel bumpers that were very popular about five years ago to preferences for lighter-weight, more streamlined designs," observes Jane Donnelly, marketing director for TrailFX.

New designs mean different areas of focus, says Jason Gauci, vice president of product development for RealTruck.

"While the majority of aftermarket bumpers are pretty straightforward to mount, fog light and sensor relocation are oftentimes overlooked," he says. "Also, skid plates are often afterthoughts and can sometimes interfere with the bumper."

When the right choice is made, the products can be an automotive representation of a driver's personality, lifestyle and fashion sense, Patel believes.

"Through the years, bumpers have evolved from what was once a plain, archaic look prioritizing only functionality to a fashionable statement, but still preserving that functionality," he says. "With all these factors and still being able to work with the OE sensors, bumpers have come a long way."

Drivers appreciate those that look good and work well.

"While aesthetics continues to be important, consumers are looking for bumpers that offer improved protection, better off-road performance and greater functionality," says Hauck. "Aftermarket bumpers are typically heavier-duty and more rugged than standard OEM bumpers, providing greater protection to the vehicle and allowing for the installation of accessories such as winches, lights and other bumper recovery accessories—what we refer to as 'bumper jewelry.'"

Installations are mostly straightforward, but there are always tips and tricks to make life easier.

"One of the very few challenges we hear about are misaligned bumpers after installation is complete. This is caused by completely torquing down the bumper while installing, leaving no option to adjust the bumper," says Rick Sanchez, director of sales and marketing for Steelcraft Automotive. "We recommend during installation to lightly tighten down bolts to allow for adjustment. Once it's fully installed and aligned correctly, you can move forward with torquing everything down."

WORKS WELL WITH OTHERS

Drivers want the ADAS systems and related electronics found on today's off-road vehicles to work flawlessly with their new aftermarket bumpers, meaning manufacturers must constantly step up their games.

"As technology advances with newer vehicles, it's increasingly challenging to engineer aftermarket bumpers to work with all the sensors that come as a stock option. For example, if you have parking assist, adaptive cruise control, etc., our engineers must constantly adapt to design new prod-

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APPROACH ANGLES PART 1



Use technology to help customers make a proper buying decision. (Photo courtesy TrailFX)



Let manufacturers help with any tech questions regarding today's newest bumper offerings. (Photo courtesy Steelcraft Automotive)



Add a touch of personalization over stock options. (Photo courtesy Steinjager Inc./ ACE Engineering)

ucts that will work seamlessly with all that technology," Brown explains. "Do your research and make sure that these key elements that are needed for your bumper to be compatible with your vehicle are being met so that you don't end up with a dissatisfied customer."

Donnelly agrees.

"Compatibility with OE technology like front collision and back-up sensors remains very important."

Gauci explains some of the manufacturing challenges.

"With ADAS, it's critical to not interfere with radars, and sensors must be at the same angles as the original design to maintain the same field of view," he says.

It keeps bumper designers busy.

"We have in-house engineers, so we are quick to implement support for these vehicle technological advancements like adaptive cruise control, cameras, etc.," says Sanchez.

It can all add up to more homework for shops, Hauck notes.

"The more information you gather on the specific lines you carry, the better the customer experience. We've run into jobbers purchasing products that aren't compatible with certain platforms," she says. "There are so many different trim packages and variations to those trim packages that it's important to educate yourself on those trims so you can pick the right products."

TEAM APPROACH

As your shop works to increase aftermarket bumper sales, don't forget to seek out your top brands for assistance, says Magnum's Brown.

"Check with your manufacturers to ensure that you have the latest P.O.P. available to help you be successful with their bumpers," he says. "For example, we have new Interactive QR Code posters that shops can hang in their showrooms and customers can interact with by scanning the QR code to watch a product video that highlights the features and benefits of our bumpers. Let the folks who know their products best help you be successful."

Manufacturers have many tools to help, says Steelcraft's Sanchez.

"Get familiar with our website and catalog," he says. "P.O.P. banners, catalogs and trifolds are available through your local distributor."

Dealer discount programs and promotional kits featuring catalogs and stands, banners and social media offerings help Steinjager/ACE Engineering connect with shops, says Morrow, offering access "to a great-selling product line that can add new revenue by adding new brand products to their existing offerings."

Meanwhile, a bumper trend that's extremely popular right now is including some type of aftermarket illumination.

"Suggest LED lighting options that are compatible with the bumpers that a customer chooses," says Donnelly. "Not only is it a product sale opportunity, but it can be turned into an installation opportunity as well when the bumpers are going on."

Custom configurators such as those offered by Interactive Garage allow customers to see what different bumpers will look like on a vehicle before purchase and installation, she adds, noting all TrailFX bumper designs are available to view in the IG database.

A strong selling point is that the products really do work, says RealTruck's Gauci.

"Sell the durability and features versus an OE bumper—improved protection, recovery mounting points, lights, winch-mount and a more aggressive appearance," he suggests. "Stock bumpers used to be real bumpers 20 years ago. OEs have now made weight reduction and aerodynamics the priorities in their designs over protection."

Shops that understand their customer base will be a step ahead, says Hauck from Fab Fours.

"Identify your target market. Create an environment that provides products that meet the needs of those customers. Offering a range of aftermarket bumper options can cater to different preferences and budgets," she explains. "Good customer service can make all the difference in attracting and retaining customers. Educate yourself on product offerings, including materials, functionality and warranty coverage. Provide a seamless and efficient purchasing process, offer clear and timely communication, and address any concerns or issues promptly."

Also, upsell opportunities are plentiful, says Patel from Body Armor 4x4.

"Consider the add-on accessories such as winches, D-rings and lights on the bumpers, and further accessorization of the entire vehicle," he says. "This can lead to repeat business, as most people have more than one vehicle they'd like to accessorize. All these are proven recipes to increase a shop's business." **TS**

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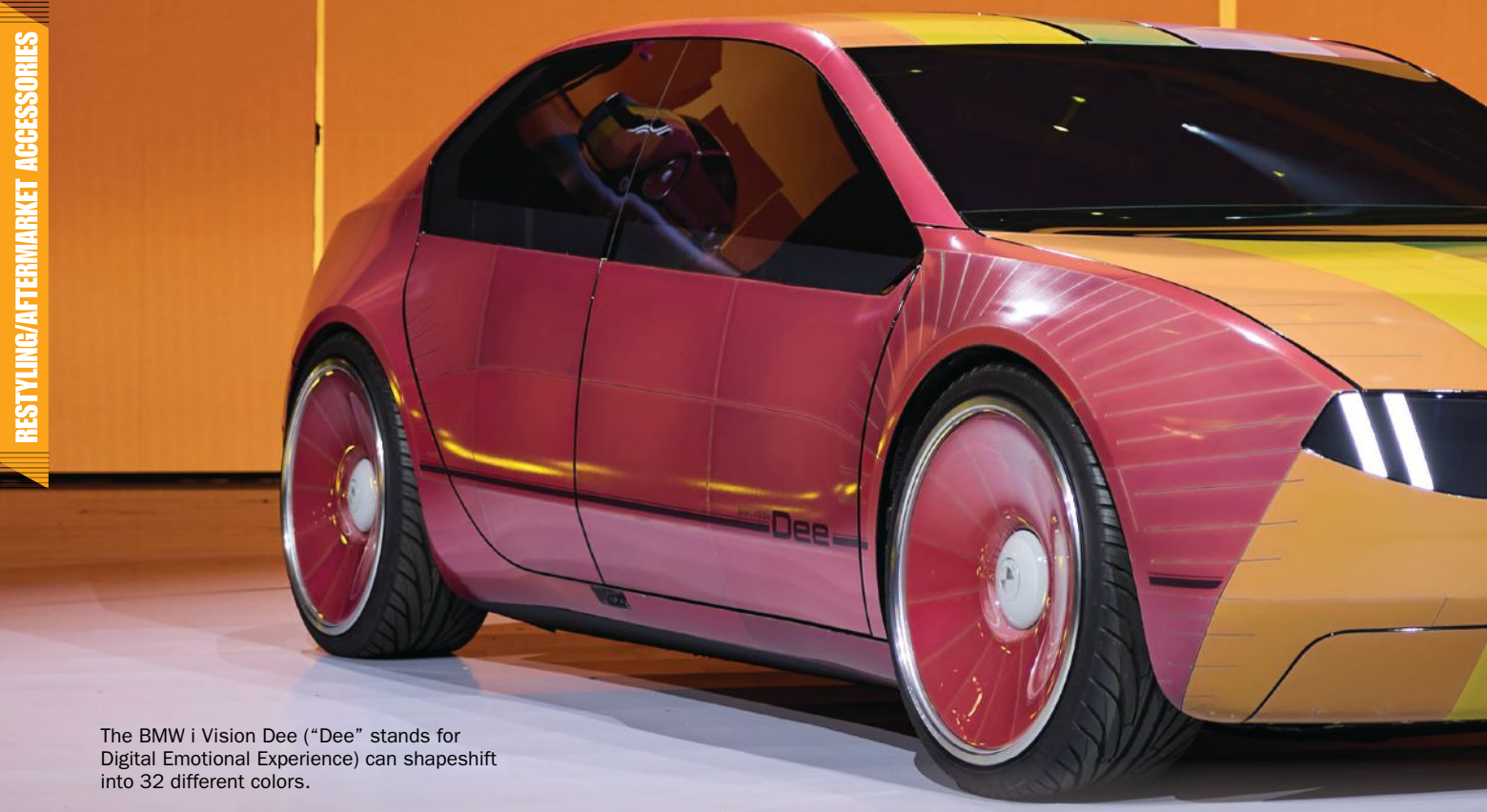
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TECHNOLOGY & THE AUTOMOBILE



The BMW i Vision Dee ("Dee" stands for Digital Emotional Experience) can shapeshift into 32 different colors.

There's no doubt that as cars go electric and become laden with more tech, it may be more accurate to consider them electronic devices with tires. That's why the Consumer Electronics Show in Las Vegas is such a hotbed for automakers.

While CES may not be the next SEMA Show, the tremendous support by OEM automakers is bringing in new attendees. That growth is also allowing legacy consumer electronics companies to partner with automakers in unique and exciting ways.

CES 2023 attracted a lot of names you might not have expected. There were more than 300 vehicle tech exhibitors in all, turning the convention center into one of the largest auto shows in the world.

Keynotes from BMW, John Deere and Stellantis, and product launches from global companies focused on self-driving tech, electric vehicles and personal mobility devices for land, air and sea, all brought an automotive slant to the techie world.

Some notable vehicle-tech exhibitors this year included Candela Marine Technology, GM, Italdesign Giugiaro, Magna, Mercedes-Benz, MobilEye, Waymo, RYSE and Volvo Penta. All of them and others had stories to share.

EVS ARE WHERE IT'S AT

According to Consumer Technology Association research, drivers are increasingly embracing the EV experience.

In CTA's 2021 Electric Vehicle Landscape and Consumer Sentiment Research report, 100% of current owners said their EVs have met or exceeded their expectations on being fun to drive, and 92% indicated they were "likely or very likely" to consider an EV for their next purchase.

The secondary facet is environmental responsibility. While there's still a lot to be said regarding creating the energy for EV production and the harvesting process for rare earth metals, most agree that EVs are a good thing—especially in populated city centers to reduce idling fumes.

CTA notes that CES exhibitors Stellantis and Hyundai-Kia have committed to significant EV rollouts. Hyundai will have 23 EV and hydrogen car models available by 2025, while Stellantis plans to offer 55 electrified cars and trucks in the U.S. and Europe in that same timeframe.

Carlos Tavares, CEO of Stellantis, notes, "We're spotlighting our most advanced technologies that serve as a force for good as we work to achieve carbon net zero emissions by 2038. At CES, you'll see how our startup soul and global scale guide us as we reimagine mobility, shift all paradigms and lead the way the world moves."

Vehicle trends from CES 2023.

By Brett Solomon





The Consumer Electronics Show in Las Vegas highlights the space where automobiles and technology converge. (Photo courtesy Consumer Technology Association)

HONDA PARTNERS WITH SONY

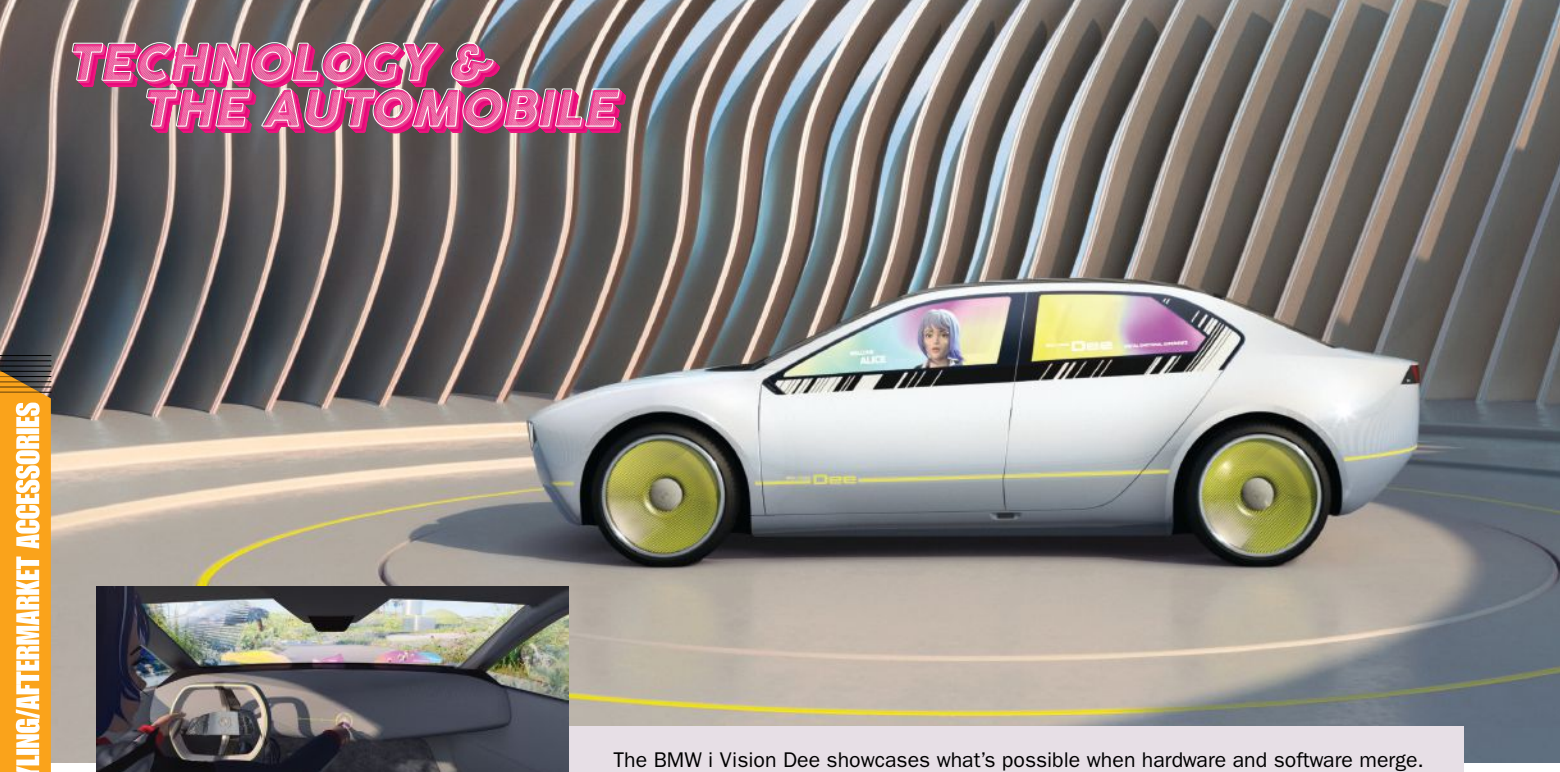
One of the bigger pieces of automotive news to come out of the show introduced a partnership between industry powerhouses Honda and Sony. The companies announced the development of a new electric vehicle called Afeela—a play on the word "feel," which they say is at the center of their mobility experience.

The basis of the Sony Honda Mobility (SMH) mission statement is to "move people," the companies explain.

"Through the pursuit of innovation with diverse inspirations, we aim to create a new mobility lifestyle by leading people's hearts and minds toward an open, pleasant and exciting experience. To realize this, we aim to revolutionize the mobility space as a Mobility Tech Company, alongside like-minded people who are pioneering a new future with creativity, through cutting-edge technology, and with passion."

Although that sounds like the boilerplate for most new EV car companies, the Sony part of the equation injects infotainment as part of the experience. Those of us in the 12V aftermarket learned long ago to never underestimate the value of good infotainment.

As for the vehicle itself, the front end of the Afeela includes a light bar that can help communicate with drivers and pedestrians,



The BMW i Vision Dee showcases what's possible when hardware and software merge. (Below photo courtesy Consumer Technology Association)



while the interior features screens that wrap from A-pillar to B-pillar in an otherwise minimalistic environment with a lack of hard buttons like Tesla.

The announcement says the goal is for Afeela to have Level 3 autonomy under the correct limited conditions (mapped highways), thanks to 45 cameras and sensors flanked around the vehicle.

Meanwhile, Sony developed a new Human Machine Interface (HMI) that will be constantly updated through the cloud. The HMI goes places that are strange to us today, but could very well be the future.

"We aim to evolve mobility space into entertainment and emotional space by seamlessly integrating real and virtual worlds and exploring new entertainment possibilities through digital innovations such as the metaverse," according to the announcement. "We have started to build new values and concepts for mobility with Epic Games. We aim to provide intuitive navigation through augmented reality (AR) using our sensing technology. We will build an open community for not only customers, but our automotive industry partners, leading players in other industries, and the creative community, which will take on the challenge with us to create new mobility entertainment."

How the affiliation with Epic Games will be implemented will be interesting to see, but passengers should be able to game while in motion, with their surroundings becoming part of the experience.

Delivery of Afeela is scheduled for 2026. Just like Tesla's Cybertruck, the date could be subject to change. Honda does have the capabilities of scale and the factories to make something happen in a reasonable timeframe, however, so stay tuned.

BMW I VISION DEE

Last year, BMW showed a car that could change from white to black to different shades of gray. This year it took the technology to the next level and developed a color-changing vehicle.

The BMW i Vision Dee ("Dee" stands for Digital Emotional Experience) can shapeshift into 32 different colors.

"With the BMW i Vision Dee, we are showcasing what is possible when hardware and software merge," says Oliver Zipse, BMW chairman. "In this way, we are able to exploit the full potential of digitalization to transform the car into an intelligent companion. That is the future for automotive manufacturers, and also for BMW: the fusion of the virtual experience with genuine driving pleasure. At the same time, BMW i Vision Dee is another step on the road to the *Neue Klasse*."

("Neue Klasse" translates to "New Class.")

This new BMW platform is developed strictly for electric cars, versus older platforms that could be gas, hybrid or EV.

"With this vision, we are looking far into the future and underlining the tremendous importance of digitalization for our upcoming product generations," Zipse continues.

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Stellantis has been waiting for the right time to launch the electric Ram pickup. "The Ram 1500 Revolution BEV Concept is our clearest signal yet that we're on the precipice of something extraordinary," the company proclaims.







Along with the color-shifting aspect, the digital instrument cluster and massive heads-up display also stand out. The driver can use a slider to determine how much digital content and what kind of content comes up on the extra-large HUD.

Rather than being confined to a small area above the steering wheel, the HUD on the i Vision Dee extends the entire length of the windshield. The steering wheel features a thumb-operated central vertical spoke that creates touchpoints that come to life when approached or touched.

These physical touchpoints control selection of the content projected onto the windshield and, together with the mega heads-up display, support the principle of "hands on the wheel, eyes on the road."

In addition to the steering wheel, content can also be controlled by swiping the area where an infotainment screen would traditionally reside. This controls the information projected on the HUD.

The system highlights the potential of aftermarket HUDs. Imagine having engine data being projected on the windshield without having to fabricate an instrument cluster binnacle.

HARMAN HELPING BRING IT TOGETHER

With so much technology being brought to infotainment screens and HUDs, HARMAN (the electronics company recently acquired by Samsung) showed off its new display technology at CES. It combines AR software coupled to a HUD projector with a sleek new shape (versus the old wedge-shaped HUD projectors).

HARMAN Ready Vision delivers turn-by-turn directions onto the windshield. It also encompasses 3D object recognition. The computer and software can then deliver ADAS alerts such as collision warn-



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Honda and Sony have partnered on Afeela, a new EV that knows the value of high-level infotainment.

ings, blind spot warnings, low speed alerts and lane change assist.

"This launch is a key component of HARMAN's mission to enhance the safety of drivers, passengers and pedestrians, while cultivating transformative in-cabin experiences," says Armin Prommersberger, senior vice president of product management, HARMAN International. "Ready Vision solves key industry challenges around driver safety by helping drivers better understand their surroundings and enabling an eyes-forward, focused journey. Our new product empowers the driver with the right information at the right time, even in the most unfamiliar driving scenarios, making their time on the road more intuitive and safer."

Automakers will be able to purchase the technology from HARMAN as a supplier.

RAM-CHARGER

Stellantis has been waiting for the right time to launch the electric Ram pickup. If you saw its Super Bowl ad, you know now's the time.

"The Ram 1500 Revolution BEV Concept is our clearest signal yet that we're on the precipice of something extraordinary at Ram and points directly to where we're going on our electrified journey," says Mike Koval Jr., Ram brand CEO – Stellantis.

The concept features an exterior design the company calls "brutiful—brutal yet beautiful." An animated and modernized R-A-M badge adorns the all-new face, which features a fully animated LED "tuning fork" design. The doors have been reimagined in a grand saloon-style opening that showcases a cavernous occupant space



HARMAN technology combines AR software coupled to a HUD projector with a sleek new shape.



AVL representatives explain how technology is driving the "mobility" movement. (Photo courtesy Consumer Technology Association)

without a B-pillar.

Bright LED lights integrated into the front bumper flares and fully animated LED taillamps and badging grab attention, while an integrated fascia design includes a skid plate and pivoting tow hooks that can sit flush.

The powered frunk has one-touch open-and-close functionality. Other powered features include a charge-port door situated on the driver's side front quarter panel, a powered tailgate, flush-mounted door handles, powered side steps and a powered rear step with active diffuser.

The acute hourglass body design and fender wells clear 35-inch tires, and a new interior boasts sustainable materials and increased levels of flexibility, comfort and innovation. ***TS***

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

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COMFORT ZONE

By Jef White

Heat & sound control products help drivers find their happy place.

For many drivers, there's no place better than behind the wheel of their favorite vehicle.

Is it possible for custom shops to further enhance that experience? Heat and sound control products deliver a safer, more comfortable cruise.

Separately or combined, thermal and acoustic suppression materials make a real difference in classics, customs and daily drivers. Unwanted heat and annoying rattles are diminished, whether in the cabin or under the hood. Stereos sound better. Road noise and distractions are reduced.

Shops that offer these products enjoy straightforward installations, application-specific solutions and the complementary sales they generate. Heat and sound control suppliers explain just how easy it is to help drivers find their happy place.



Quality thermal and sound control products appeal to the customers you see every day. (Photos courtesy HushMat)

TARGETED APPLICATIONS

If your customers are unsure about adding heat and sound control to their projects, it may help them to know that the OEMs are incorporating these products into the latest vehicle designs.

"Modern automobiles have better insulation to reduce heat and noise inside the cabin. This insulation can be made from a variety of materials, including foam, fiberglass and composite materials," says Randy Pugh, marketing coordinator for Thermo-Tec Automotive. "Automakers are using more advanced sound deadening materials such as acoustic foam and noise-canceling technology to reduce road noise and other sounds from outside the vehicle."

The results?

"Overall, these changes have led to quieter, more comfortable and more energy-efficient vehicles that better meet the needs of modern drivers," he says.

Michael Good, CEO of Dynamat Inc., notes that innovation is front and center.

"Moreso than in previous decades, manufacturers are taking sound and heat control seriously and building better vehicles that take these into consideration," he notes.

It seems to be what everybody wants these days.

"Drivers have become accustomed to modern vehicles, which are very quiet and have heat management under better control than ever before," says Cole Quinnell, marketing director at Heatshield Products. "Customers want that same level of quality in their older vehicles, and we are able to deliver that using modern advanced technology."

While there was a time when the aftermarket took a one-size-fits-all approach to creating a comfortable vehicle interior, now there are specialized products for specific applications.

"In the past, you would use one material to try and control heat and sound," says Mike Buca, product manager for Design Engineering Inc. (DEI). "We have materials that are designed for specific areas of the vehicle, providing the best performance for the application."

Quality products appeal to the customers you see every day, says Tim McCarthy, founder/CEO of HushMat.

"We developed constrained layer



Take the initiative instead of waiting for customers to ask about heat and sound control solutions. (Photos courtesy HushMat)

damping material (rubber extrusion with metal laminate) for the North American automotive industry in the late 1980s," he says. "Heat is the enemy of speed, while noise is the enemy of driver comfort—HushMat treats them both."

And as customer demographics change, the industry is keeping pace.

"Within the restoration segment we continue to see a larger increase in the 25-34 age group when compared to older demographics. As a result, vehicles from the 1970s and '80s are becoming more popular to restore than earlier models," observes Kenley Harrington, director of sales and marketing for Retro Manufacturing. "Changing our definition of a classic car and developing products for those vehicles are necessary to align with this evolving customer base."

EXPERIENCE COUNTS

When it comes to common mistakes he's seen installers make, Buca references selecting the wrong material for the application and/or not using the correct amount. He also cautions against choosing lesser-quality products.

"Trying to save when it comes to the comfort of the customer is really doing your customer a disservice," he states.

If price becomes a deciding factor, he notes that damping material does not have to be installed over 100% of the interior to get the job done.

"Using a high-quality damping product in lesser amounts, but in the correct loca-



Innovation is front and center in the market. (Photo courtesy Dynamat Inc.)



Heat and sound control products are revenue generators for shops. (Photos courtesy Dynamat Inc.)



HEAT & SOUND CONTROL PRODUCTS

■ HOT PRODUCTS:
Custom Pre-Cut Kits
■ FEATURES & BENEFITS:
Take the guesswork out of knowing what type of material and how much to buy; kits can include insulation and damping material, along with detailed instructions of where to place the product; include everything needed to complete the job in one part number.

Design Engineering Inc.
Mike Buca
Product Manager

■ HOT PRODUCT:
Dynamat Xtreme
■ FEATURES & BENEFITS:
Three decades of performance, balancing overall impact, adhesion, ease of use and functionality; proprietary butyl formulation ensures maximum adhesion; peel-and-stick sheets can easily be cut to size; made entirely in the USA.

Dynamat Inc.
Michael Good
CEO

■ HOT PRODUCTS:
Heatshield Armor Heat Insulation Line
■ FEATURES & BENEFITS:
Exhaust heat shields stop up to 70% of radiant heat from exhaust pipes and components; easy to work with; insulate headers and exhaust components without voiding warranties; incorporate BioCool insulation; no smoke after installation; resist moisture.

Heatshield Products
Cole Quinnell
Marketing Director

■ HOT PRODUCT:
HushMat Ultra Sound Deadening & Thermal Insulation Material
■ FEATURES & BENEFITS:
Manufactured in the USA for 33 years; sound deadening and thermal insulation in one easy-to-install product; higher density butyl rubber equates to higher performance per square foot; flexible and moldable; doesn't slice up installers' hands.

HushMat
Tim McCarthy
Founder/CEO





Targeted materials alleviate specific problems. (Photos courtesy Design Engineering Inc.)

■ HOT PRODUCT:
RetroMat Noise Cancelling Material
■ FEATURES & BENEFITS:
Reduces vibrations and noise from the exterior of a classic vehicle to provide an optimal listening environment; 1.6mm-thick sheets have a 2-ply construction consisting of a butyl rubber membrane and aluminum sheeting; self-adhesive backing.

Retro Manufacturing
Kenley Harrington
Director of Sales and Marketing

■ HOT PRODUCT:
Adhesive-Backed Heat Barrier
■ FEATURES & BENEFITS:
Lightweight; easy to install; multiple uses; can handle high-temp radiant heat; clean, professional appearance; "the brand that started it all."

Thermo-Tec Automotive
Randy Pugh
Marketing Coordinator

tions, will perform just as well, but costs less and saves weight," he reveals. "You can then use the proper material to control heat. In the end, you will end up with a better result and a happy customer."

Of course, you can take the minimalistic approach too far, Quinnell warns.

"Whether it is an exhaust system being wrapped or protected components such as fuel lines, brake lines or the underside of the floor, people sometimes try to apply the minimum amount required, leaving too much exposed and not getting the full effectiveness from the heat insulation."

There are real differences in available products that shops should recognize, McCarthy explains.

"The assumption that all sound deadening and thermal insulation materials are



(Above) Trying to save when it comes to their comfort is really doing your customer a disservice. (Photo courtesy Design Engineering Inc.)

the same is simply not true," he says. "Several brands have entered the market with products sourced overseas. These materials are not specified and approved for the rigors of North American automotive industry standards. Test data against relevant automotive specifications should be the starting point of product evaluation."

Lack of adhesion, melting and overall poor performance are hallmarks of these low-quality products, according to Good.

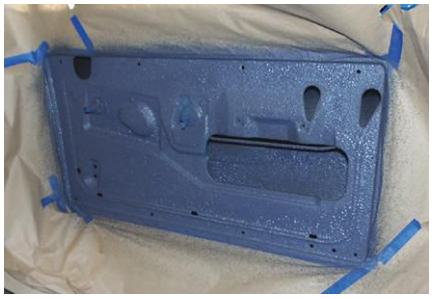
"We are now truly witnessing a 'you get what you pay for' marketplace," he says.

This type of knowledge is vital for shops wanting to make the most out of the product category, Pugh says.

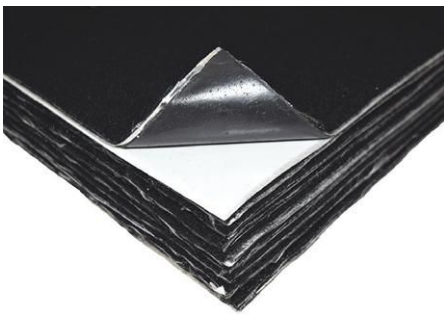
"Oftentimes, shops will recommend a specific product or service without fully understanding the unique requirements and preferences of their clients," he says. "For example, a shop may recommend a heat control product that is not suitable for the specific vehicle or application, or may install a sound control product that does not adequately meet the customer's expectations. This can result in dissatisfaction with the product or service, as well as wasted time and money."

Another common mistake is not properly training staff on the proper installation techniques for the specific products being











Thermal and sound control products diminish unwanted heat and annoying rattles, whether in the cabin or under the hood. (Photos courtesy Heatshield Products)



COMFORT ZONE



Customers expect support from the start of their buying journey. (Photo courtesy Retro Manufacturing)



Thermo-Tec's Adhesive-Backed Heat Barrier is used throughout the workings of the Iron Dinosaur land speed car. (Photos courtesy Thermo-Tec Automotive)

sold, he adds, which can lead to improper installation and/or the product not working as intended.

"To avoid these mistakes, shops should take the time to properly assess the needs of their customers, provide personalized recommendations and ensure their staff is well-trained on the products and installation techniques," Pugh suggests. "This will result in happier customers and a better reputation for the shop."



When it all comes together, customers notice.

"Shops that provide a high level of tech support on the products they install tend to sell more," says Harrington. "Customers expect support from the start of their buying journey and continue to need support even after products are installed in their vehicles. Providing quick solutions and answering simple questions builds trust and leads to returning customers and product retention."

DEMONSTRATION MOTIVATION

Want to increase your sales of heat and sound control products? Buca from DEI says show, don't just tell.

"Have display products on hand for the customer to see and feel," he says. "Take a small piece of sheet metal and install some sample products, so the customer can really understand the difference this product can make. Planning heat and sound control in any build will benefit the shop and the customer."

Quinnell from Heatshield Products agrees with the show-me approach.

"Demonstrations and testimonials. We have immense success at trade shows using a propane torch to apply heat to one side of a heat shield and using a heat gun to measure the temperature on the other side. The difference is amazing and easy for a customer to understand."

After all, if drivers don't know about the products or their benefits, they aren't likely to understand their value.



Protecting a carbon fiber hood from engine heat. (Photo courtesy Thermo-Tec Automotive)

"Shops need to merchandize to allow customers to experience the brands. Too many shops and installers wait for the customer to ask for products, which happens very infrequently," says McCarthy, noting HushMat offers a library of features and benefits, installation videos and a dedicated dealer portal.

Electronic information is also crucial for potential customers who start their research somewhere other than the showroom.

"Online sales today account for almost 15% of all retail sales in the U.S. Customers are shopping online more than ever for household items and expect the same experience when purchasing auto parts," says Retro's Harrington. "Neglecting product listings will have a direct effect on your sales. Ensure all product listings are accurate and updated with the latest dealer resources from your manufacturers and communicate your services clearly. Customers should have a fast and memorable experience on your website."

When it comes to heat and sound control, it's all about how the driver feels behind the wheel.

"It's important to highlight the specific ways in which these products can improve the comfort and performance of a vehicle or building, such as reducing noise, improving temperature control and increasing energy efficiency," says Thermo-Tec's Pugh. "Another effective strategy is to offer promotions and discounts on heat and sound control products, particularly during peak sales periods or as part of a bundled package with related products such as audio systems or window tinting."

And the relationship shouldn't end at the sale, he adds.

"Provide excellent customer service and follow-up support, such as offering installation services or answering any questions customers may have about the products. This builds trust and confidence, leading to increased sales and customer satisfaction."

Put it all together, and heat and sound control products become an attractive offering for restylers, 12V specialists and performance outlets.

"A lot of shops don't realize how much of a revenue-generator these products can be when positioned as complementary products to other modifications such as sound systems or exhaust systems," says Good from Dynamat. "These products make the car a better car. For shops, they are revenue generators." ***TS***







Ways to combat the technician shortage. ///// **By Josh Poulson**

One of the constant issues I hear about from all shops is a shortage of skilled technicians and/or installers.

Why is this and how can we work around or with it? Let's dive in!

WHY IS IT SO HARD TO FIND & RETAIN GOOD EMPLOYEES?

We all know that the pandemic has brought about a labor shortage for numerous reasons, and you can blame whomever and/or whatever you want as the main culprit. Still, the fact remains that it is difficult to find help for many businesses, let alone specialty shops like ours.

Pay rate is a factor because it used to be you could hire a technician at a modest hourly rate and let them grow and become more valuable over time. Now the pool of individuals who are interested in working with their hands and with vehicles is smaller than ever, and the workers are expecting more.

Out of this smaller pool you must compete with car dealers, repair facilities and body shops—all of which are also struggling to find help and may be willing to pay sign-on bonuses and offer hefty compensation packages with excellent benefits to sweeten the deal. Small businesses like ours may not be able to match those offers.

Meanwhile, the pool of potential employees gets even smaller as more and more young workers these days focus their attention on tech companies or remote positions that allow them to work from home. In other words, the struggle is real—it is more difficult than ever to find workers to fill our vacant positions.

The other half of that is why it's hard to retain the employees we do have. This can be an issue because of some of the things previously mentioned, but also because of what younger technicians are looking for



Not everyone knows there are great careers to be had in restyling, so be sure to highlight them on social media and at every in-person opportunity.



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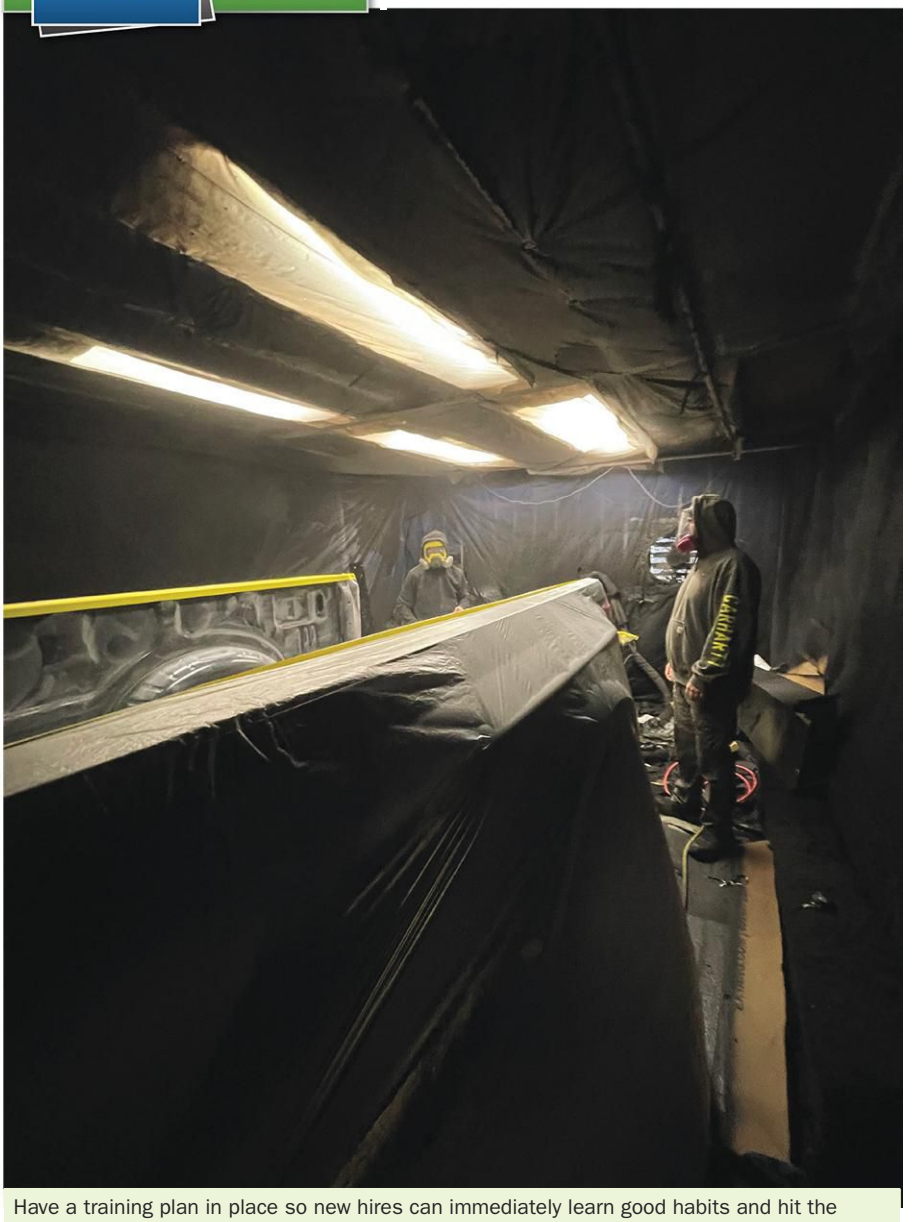
JL rear kit





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LIPPERT



Have a training plan in place so new hires can immediately learn good habits and hit the ground running.

in a job these days.

You have likely read many articles on how the younger generations (Gen Z and younger millennials) are not as interested in money as a motivator as they are in other benefits such as time off, flexibility or growth within a company. When viewed that way, how do the positions at your shop compare?

SO, WHAT DO WE HAVE WORKING IN OUR FAVOR?

We have a lot in our corner if you look at the big picture. You just need to use what you can do to your advantage to keep your shop staffed and motivated.

First, we have cool jobs to offer—it's just that not everyone knows about them. Many young people don't realize they can make a good living upgrading and restyling vehicles to make them faster, louder or just plain cooler.

So, use this to your advantage, especially on your social media channels. Mention that you are always looking for people to help build these vehicles and that you offer complete training. Our line of work can be much more appealing than getting all greasy every day while changing oil or rotating tires.

Second, being a small business has its advantages over larger companies. Usually with a small company, employees are more than just a number. They can make a difference every day and when they do, it's noticeable.

I always tell any potential new hire that we don't work off seniority; instead, we work off production. So, if you are a producer, there is a good chance you will get more money or more perks than those who may have been here longer but don't produce as much.

This allows potential new hires to feel like they are stepping onto a more level playing field when they get started, and it also sends the message that you are more interested in production than someone just putting in the hours.

Also, a small shop's family-type atmosphere can be attractive to candidates looking for a place to fit in and feel appreciated. It also lets them get started on a career right away.

More and more young people are realizing that college isn't necessarily for everyone. It could be because they see so many of their older peers carrying thousands of dollars of debt, at times with nothing really to show for it.

Find those young people looking to jump into a career and learn as they go. Explain that training can be at your shop as well as offsite through manufacturer partners and other industry programs. Then, once they learn one skill set, try to get them cross-trained on something else.

The goal is to find a good person with a good work ethic, and then train them in the skills they need. I much prefer this method to finding someone with skills but who also comes with baggage or bad habits that don't fit your culture or that can damage the morale of your other employees.

KEEP THEM TRAINED & MOTIVATED.

Once you do find someone (and yes, they are still out there!) then you have to immediately start planning not only how to train them, but how to keep them motivated.

Training isn't always easy, but here are a few suggestions. First, look in-house for employees who can train the new person. Have the new hire learn the ropes from a tech who has the skills and embodies the habits you value.

A second option is to work with your

manufacturers. Which suppliers provide trainers to come support your new tech and teach them hands-on processes? Do any offer training courses that your tech can attend? Do they have online learning to help get new hires up to speed?

More and more manufacturers are seeing the value in this type of training, so ask around.

A third approach is to find another restyling shop to loan your tech to for training. Ask around if you know other restylers or check with your manufacturer's rep—they will probably have someone in mind that may be willing to help a fellow restyler.

It really can be a win/win because your tech is getting training and the other shop is getting free labor out of a new person (even if he or she is slowing the trainer down a little bit). Also, the relationship is better if ever there is a favor that needs reciprocated.

Finally, don't forget to look to SEMA and other industry organizations for training. We at SEMA PRO (Professional Restylers Organization) have been doing some hands-on training regionally throughout the country and are hoping to expand the program.

We are looking to host sessions where a few different manufacturer trainers gather at a local restyling shop that also provides some of its own techs to share their tricks of the trade. Other shop techs can attend for free and hopefully pick up a new skill or two in three to five days.

If that's of interest, stay tuned and follow SEMA PRO on our social media channels, or join at sema.org/pro and become a member so you are in the loop on these upcoming trainings.

Thankfully, the motivation part for a new hire can be a little easier because you just need to figure out what it is that motivates them as a person. A simple conversation may put you on the right path, followed by a line of questions to help you discover the type of person they are and what they find meaningful.

Is it money? Is it more time off? Is it growth? Is it recognition? Is it having a voice? Everyone is different, and if you remain too stuck in your ways and expect to treat every employee exactly the same way, it probably won't work out in the long run.

So, be creative and try some different things to keep your employees engaged and motivated. Yes, we are facing a shortage of technicians. However, we have some advantages to make sure we keep our industry thriving for many years to come. **TS**



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 chairman of the SEMA PRO council.*





Bronco Forged Tie Rods

ICON Vehicle Dynamics, Riverside, California, introduces an XD Forged Tie Rod Kit for sixth-generation Ford Bronco applications. Featuring stronger materials and larger dimensions than the stock units, the kit's inner tie rod and ball stud are CNC-machined from 4140 chromoly while the outer tie rod is made from forged steel and matches the shape of the OE part. Adjustment threads are 18mm, and the setup is created to fit around factory wheel offsets. Replacement tie rod boots are included.



Tundra Suspension Enhancement

Timbren Industries, Toronto, presents the Timbren SES Severe Service upgrade for the rear suspension on 2022 Toyota Tundra models. Kit TORTTNDR mounts to the frame using existing holes. The no-maintenance upgrade is designed to prevent sag, reduce sway and enhance ride quality under load without compromising unloaded ride quality.

Maverick Pickup Accessories



EGR USA, Ontario, California, introduces multiple accessory options for 2022-up Ford Maverick crew cab models, including Superguard Hood Guards, Premium Rugged Fender Flares and In-Channel Window Visors. No-drill hood guards are available in dark smoke and matte black finishes and are molded from durable, high-grade acrylic. Dark smoke and matte black window visors promote fresh air circulation inside the vehicle. And fender flare sets with a black matte finish offer 1-3/4 inches of additional tire coverage.



Headlights with Integrated Camera

PROJECT X, Costa Mesa, California, presents ELITE OPTX headlights that include a pair of integrated UHD cameras. Offering the opportunity to view travels in true 4K UHD, the headlights feature OEM fit and quality combined with a 3,000 raw lumen output (high beam). Users can control the cameras via the PROJECT X mobile app (available on Android and Apple) where they can view, record and replay. Designed with the Jeep Wrangler JK in mind, the plug-and-play units include an integrated CAN bus/anti-flicker module.



Ford & Chevy Upper Control Arms

Tuff Country, West Jordan, Utah, one of the **DPI Off-Road Brands**, presents Upper Control Arms for a variety of Ford and Chevrolet truck applications. Designed to improve suspension travel and eliminate binding that can be caused by factory ball joints, the UCAs are made in the USA for vehicles with 1 to 4 inches of front lift and help restore proper geometry to improve driving and handling characteristics.

New Seats



TMI Products, Corona, California, presents its new Cruiser Collection line of seats, now with available matching rear seat upholstery for Chevelle, early Mustang, Camaro, Nova and 1966-67 GTO applications. The upholstery features matching black vinyl and the same pattern as the front seats.



Satellite Radio Adapters

VAIS Technology, Englewood, Colorado, presents its latest SXM Satellite Radio Adapters, including applications for Mercedes-Benz models. Available units include GSR-UV01 (flash required) and GSR-MB04 (plug-and-play). More vehicle models will be introduced soon.



Aftermarket Sunroof

DONMAR Enterprises, Jacksonville, Florida, introduces an all-new premium Manual Sunroof. Updating old technology, SKYROOF Gen.Z combines modern materials, styling and function with the simplicity of an affordable pop-up sunroof. Features include a reinforced polymer frame that will not rust, chip or peel, and a long-lasting, 100% silicone seal that keeps the unit weathertight. An integral flexible trim bezel works with a variety of headliner types, and a rotary twist latch allows for infinite venting options. ***TS***

Jeep HD Track Bars

Quadratec, West Chester, Pennsylvania, presents its new Lynx Performance Suspension Front and Rear Adjustable Track Bars for 2007-23 Jeep Wrangler JK, JL and Gladiator vehicles. Engineered as an affordable way to safely correct suspension geometry in lifted Jeep off-roaders, the fully adjustable track bars include dual-durometer Quadraflex bushings and efficiently center axles while alleviating unwanted noise, vibration, harshness and bump steer. Both front and rear Lynx track bar options feature 1.25-inch, heavy-duty 1026 carbon steel DOM tubing.





Ram Track Bar Conversion Kit

Synergy MFG, San Luis Obispo, California, presents a Track Bar Conversion Kit for 1994-2002 Dodge Ram 1500/2500/3500 4x4 applications that replaces the stock second-gen, ball joint-style track bar and mount with a newer, improved third-gen, bushing-style track bar. The kit includes a Synergy Ram heavy-duty track bar and conversion bracket that helps retain factory steering geometry and reduces side-to-side movement of the axle by stiffening the frame-side track bar mount. The system is fully adjustable for 0- to 6-inch ride height lifts.



PERFORMANCE

Prestige Profile p. 54 / Performance Products p. 58



SEVEN DAYS A WEEK

For work or play, the performance diesel market has you covered. ★★★ **By John Carollo**

Performance diesel enthusiasts are a dedicated, active part of the aftermarket who love their vehicles and are excited by what they can do.

For work or play, diesels offer plenty of potential when it comes to professional upgrades. Combining bolt-on parts, tuning and accessorization, it's no wonder the industry is riding high and maintaining momentum.

Government rules and regulations continue to help shape the market, meaning performance diesel shops need to keep up on their education. With that in mind, parts suppliers offer an update on what's new, what's hot and what's working in this powerful industry.

RULES OF THE ROAD

Maybe no other section of the automotive industry pays more attention to local, state and national rules, regulations and laws than performance diesel.

Asked about the outside factor having the greatest impact on the market, Josh Thornton, who conducts research and development for FASS Diesel Fuel Systems, simply states, "the Environmental Protection Agency."

Edge Products, a Holley brand, has been engineering and producing-emissions compliant products since 2011, says Jacob White, brand manager. Over the years,

DIESELS & THE EPA

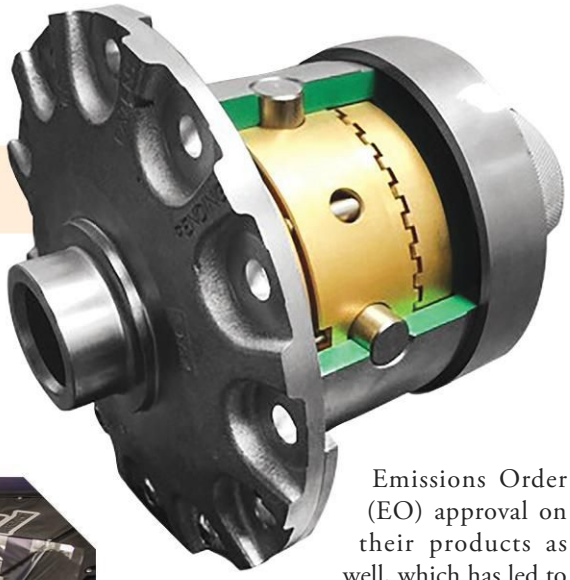
This discussion references the EPA and some of its positions, programs and policies regarding diesel vehicle emissions. Learn more at: epa.gov/dera.

Offer complete diesel services to capture your share of the market. (Photos courtesy FASS Diesel Fuel Systems)



officials have seen an uptick in enforcement of EPA standards and CARB compliance, forcing manufacturers to understand the rules and follow them to the letter.

"We have multiple state-of-the-art emissions testing facilities within our company around the country so that we can ensure our products meet all CARB requirements before we release them to market," he explains. "But there are hundreds of aftermarket companies that are now being forced to navigate through SEMA Garage and CARB to get Emissions Order (EO) approval on their products as well, which has led to quite the bottleneck processing submissions for EOs. These delays at CARB continue to plague us, but we continue to work through them."



Many customers are interested in total power packages. (Photo courtesy Auburn Gear)



With higher diesel prices, customers are looking to increase both performance and fuel economy. (Photo courtesy Hot Shot's Secret)

Other factors affect the market as well, he adds, including the economy, inflation and fuel prices.

Add it up and patience is definitely required, states Jay Crouch, director of global business for Injen Technology.

"It is very expensive for companies to apply for and receive CARB exemptions

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SEVEN DAYS A WEEK

PERFORMANCE DIESEL PRODUCTS

■ **HOT PRODUCT:** Electronic Select-A-Loc (Open to Lock) Performance Differential
■ **FEATURES & BENEFITS:**
Made for 2003-current Ram HD 2500/3500 11.5-inch 14-bolt and 1999-current GM 11.5-inch 2500/2500 single- and dual-wheel OE axles; made in the USA; transfers 100% of the driveline directly to the axle; heat-treated SAE 9310 aircraft-grade gears.

Auburn Gear
Greg Milentis
Business Unit Manager, Aftermarket Differentials

■ **HOT PRODUCT:**
Titanium Signature Series Performance Fuel System
■ **FEATURES & BENEFITS:**
Capable of flow rates from 100 to 290 gph; outperforms similar systems in filtration, longevity and quietness.

FASS Diesel Fuel Systems
Josh Thornton
Research and Development

■ **HOT PRODUCTS:** Pulsar V3 + Insight CTS3 Kits
■ **FEATURES & BENEFITS:**
Applications for 2017-23 L5P Duramax diesel models; plug-in module adds up to 136 hp; power levels adjustable on the fly; throttle pedal sensitivity adjustments; tire size calibration.

Holley/Edge Products
Jacob White
Brand Manager

■ **HOT PRODUCT:** Diesel Extreme
■ **FEATURES & BENEFITS:**
Premium 6-in-1 diesel additive; concentrated detergent formula; resolves issues related to ultra-low-sulfur diesel by greatly improving diesel engine performance and fuel economy.

Hot Shot's Secret
Josh Steinmetz
Brand Manager

■ **HOT PRODUCT:** 6.0L Bead-O-Seal Cylinder Head Gasket
■ **FEATURES & BENEFITS:**
A specially coated steel sheet seals coolant; a solid wire ring seals combustion; machine work is not required.

Hypermax Engineering
Ron Olsen
Director of Motorsports

■ **HOT PRODUCTS:** Evolution Cold Air Intake Line
■ **FEATURES & BENEFITS:**
Popular applications include 2017-19 GM 6.6L Duramax and 2019-22 Ram 6.7L Cummins fitments; patented manipulation of MAF signals to the ECU to achieve maximum power; dedicated 3D design process allows for a seamless fit.

Injen Technology
Jay Crouch
Director of Global Business



Drivers appreciate a mix of power and adjustability. (Photo courtesy Edge Products)

on their performance parts," he says. "Injen prides itself on submitting CARB exemption applications for all of our products, and while it takes time for the government to issue these exemptions at times, we do our best to help our business and our customers stay within compliance of all EPA regulations."

Meanwhile, pain at the pump has prompted demand for professional recommendations to improve engine efficiency, notes Josh Steinmetz, brand manager at Hot Shot's Secret.

"With higher fuel prices, customers are looking to increase performance and fuel economy. Longevity is also an important factor, with (current) replacement part availability issues."

It can be a deciding factor for customers on a budget, agrees Greg Milentis, business unit manager, aftermarket differentials for Auburn Gear Specialty & Diff Axle, a division of Auburn Gear.

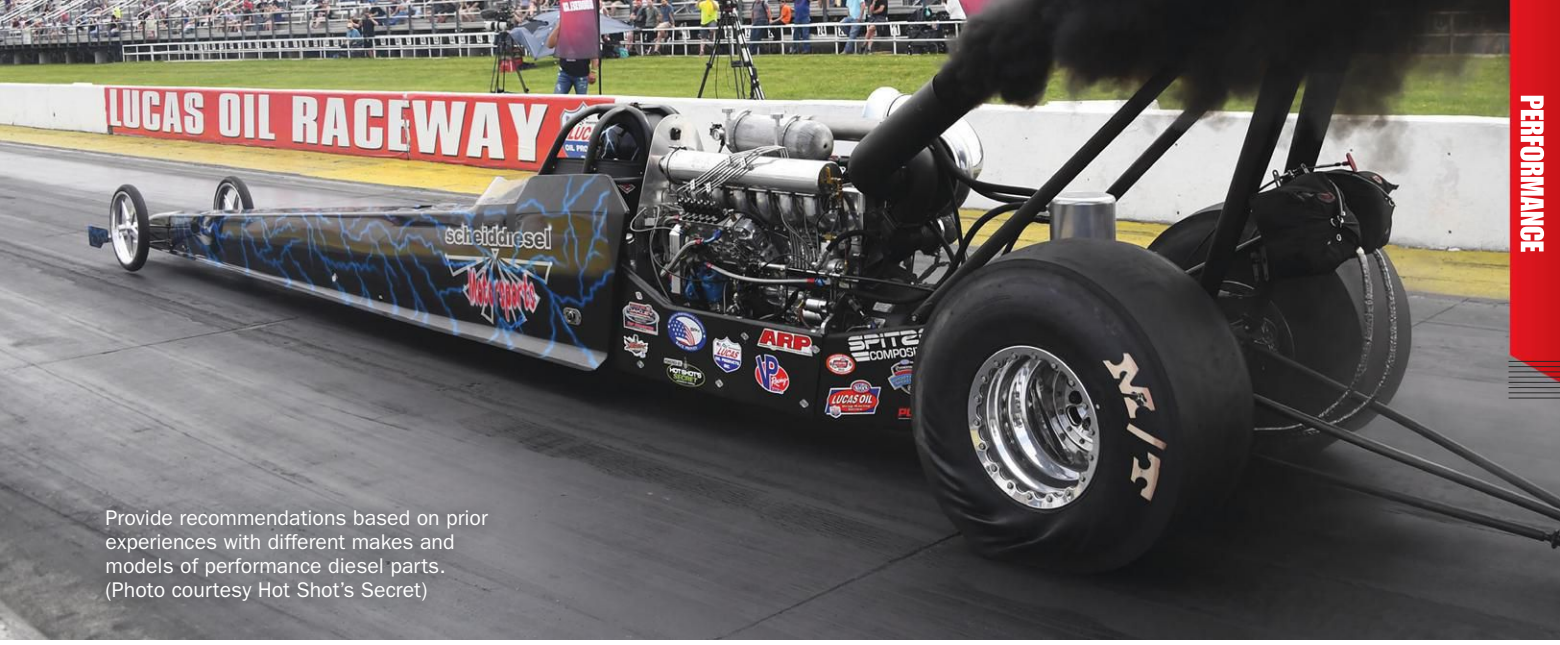
"The price of diesel fuel is a continued consideration when a shop recommends available aftermarket options," he says. "As fuel prices increase, there is an interest in fuel-saving upgrades, and as they decrease, the opportunity is open to offer a much broader set of products."

As oftentimes a want and not a need, says Ron Olsen, director of motorsports for Hypermax Engineering, the outside factor that most affects the market is "disposable income."

NICE TO KNOW

All the outside attention may lead shops to believe the performance diesel market is particularly complicated, but the knowledge and skill required to succeed is on par with other niches, manufacturers say.

"There has been a misconception created within the industry that diesel trucks require 'custom tuning,' when 90% of the trucks being modified are just simple bolts-ons (intake/exhaust) and our



Provide recommendations based on prior experiences with different makes and models of performance diesel parts. (Photo courtesy Hot Shot's Secret)

preloaded tuning devices work incredibly well for these applications," says White. "While custom tuning devices have their place, for a relatively 'stock' truck you'd be paying a much larger price up front with negligible gains over our precalibrated devices."

The more you know, the better you can serve your customers, adds Steinmetz.

"Shops should provide recommendations based on prior experiences with makes and models of performance parts. This can lead to better overall customer satisfaction," he reveals.

Even for clients who have done their research, you can often lead them to total power packages, says Milentis.

"When a truck owner comes to a shop or searches YouTube for recommended options for obtaining peak horsepower performance, the following aftermarket items are commonly recommended: cold air intake, inline tuner, pedal modifier, and air (versus flatback) differential cover," he says. "This list leaves out performance differential upgrades."

It's a reminder to keep plenty of inven-



SEVEN DAYS A WEEK



Pikes Peak diesel record holder Scott Birdsall and his 1949 Ford F1 "Old Smokey" showcase the power potential of performance diesel builds. (Photos courtesy AMSOIL)



Be sure you have access to all of the performance diesel parts the market has to offer. (Photo courtesy Injen Technology)



Shops can sell on performance and value. (Photo courtesy Injen Technology)

tory on hand, says Olsen.

"If you don't have it, you can't sell it. Manufacturers are running a several-month backlog."

Crouch says the products are out there—though you may want some help finding them.

"Sometimes smaller shops are fooled into thinking they can't carry a brand without a huge investment in inventory. Signing up with a large distribution house is key," he says. "Not only will this give you access to numerous brands, but most are set up for fast and reliable dropship services. Don't get me wrong—I would love to sell direct to everyone, but that model just doesn't work in every instance."

BACK FOR MORE

To increase sales of performance diesel products and services, it pays to know your clientele and build relationships, says Hot Shot's Steinmetz.

"Many customers trust their performance shops to recommend the right products to protect their vehicles. Selling a high-quality product will lead them back to you



Diesel enthusiasts love their vehicles and are excited by what they can do. (Photo courtesy Hot Shot's Secret)

for more recommendations in the future," he says. "There are opportunities to show that with the right diesel fuel additive, for example, the savings acquired during (times of) high diesel fuel prices can almost or will completely pay for the product, making it an easy upsell."

It can also help to shine the spotlight on the diesel market from time to time, notes Olsen from Hypermax.

"Offer sales and special promotions," he suggests.

And remember, when it comes to diesels, it's not all play and no work.

"Don't overlook the importance of a truck's driveline as it, too, impacts the peak performance of an upgraded pickup," says Milentis, referencing the Auburn Gear AAM 11.5-inch electronic locking differential as an example. "This work truck upgrade is an economical driveline consideration when optimal performance is expected."

Education can be a two-way street, White from Edge Products notes.

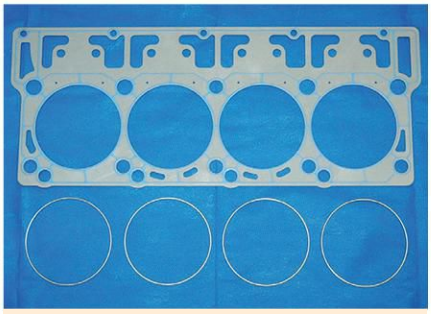
"For the latest-model diesel trucks, we've seen a drop in demand for more power, with a lot of owners now content with the power output from their factory trucks," he says. "Instead, there has been a shift in the desire for more feature control and adjustability for the end user to fine-tune that truck to their specific needs, including throttle sensitivity, speedometer calibration for lifts/tires, manual DPF regeneration and many more to give the truck owner control of their experience."

In this market, shops also don't have to stop at enhancements.

"Many of our most successful dealers emphasize maintenance as much as they do upgrades," Thornton says. "For example, consistent FASS filter changes are a great source of revenue, and increased opportunities for add-on items."

A holistic approach to the vehicle may serve customers best, says Crouch from Injen Technology.

"While it's great to focus on power and sound, today's economic climate demands that you sell on value as well. By value, it doesn't just stop at price point—shops need to discuss how increased engine efficiency also has the opportunity to reduce fuel consumption," he says. "That reduced fuel consumption will directly correlate to money in the customer's pocket down the road, and this is especially true with end users who tow with their vehicles." ***TS***



Plan sales and promotions to showcase top-performing diesel products. (Photo courtesy gohypermax.com)



TURNKEY ENGINE PACKAGES & More

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Prestige Motorsports is a one-stop shop for all-American muscle.

By Maura Keller



For more than 14 years, Prestige Motorsports in Concord, North Carolina, has been building personalized performance crate engines tailored to each customer's vision. As with many small companies, its journey began in a small, two-car garage.

Starting with the bare minimum, Prestige Motorsports now houses a full machine shop with state-of-the-art CNC equipment, an in-house dyno testing and development lab, and a performance installation center.

"With a dream and a passion, along with continued requests for more than just an engine package, we have pioneered what is called the Ultimate Turn-Key Package," says Shawn Meekhof, marketing and events specialist. "Ford, Chevy, LS, Mopar; street, race and marine—we build all-American muscle."

Every engine is dyno-tested, he notes, "as it is the best way to verify the quality of our work, the integrity of each component and the reliability of every engine we construct."

The packages he references include a cooling system, engine, transmission and fuel tank ready to drop in—shipped in one crate to a customer's door.

Meanwhile, back in Concord, Prestige Motorsports' installation shop handles complete restorations, engine installs, suspension and brake upgrades, custom fabrication and related projects. It also offers remote EFI tuning to engine shops and other clients at an hourly rate.

So, who are Prestige Motorsports' key customers? Essentially, they are enthusiasts



For more than 14 years Prestige Motorsports in Concord, North Carolina, has been building personalized performance crate engines tailored to each customer's vision.

The installation shop handles complete restorations, engine installs, suspension and brake upgrades, custom fabrication and related projects.



looking for a custom-built power plant personalized and tailored to their individual needs.

"These engine packages are not cheap, so our customer base generally has disposable income to spend," Meekhof says. "Since everyone wants to make sure they are getting a good deal, we generate educational videos and provide the best service possible to ensure the added value doesn't go unnoticed."

A TEAM EFFORT

Over the years, the Prestige Motorsports team has worked on a variety of collaborative projects, including a 1964 Ford Galaxie restomod and a 665-ci big-block Chevy air boat engine in conjunction with Air Flow Research.

"As part of the Holley promotional sweepstakes engine giveaway program, we have now built six different engine combinations as free giveaways, working with the great team at Holley Performance," Meekhof adds. "We are very proud to work so closely with Holley and are pleased that they trust our team to get these custom-built engines together and delivered to the winners, with great coverage throughout."



The shop is constantly working on new combinations to improve products for the end user.

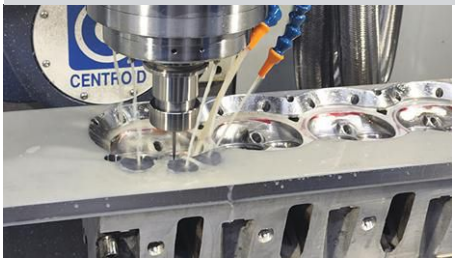
While highly visible projects are satisfying, Meekhof also enjoys updating the shop's retail customers on their engine builds with images and videos in real time.

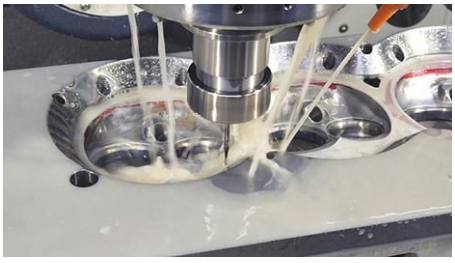
"We set up all of our customers with a shared file and whenever we make progress on their build, we add an image or video to their folder and it sends (a notice) directly to the customer's email," Meekhof says. "We love getting replies from customers when they see their engines coming together while they are at work. It literally makes their entire day."



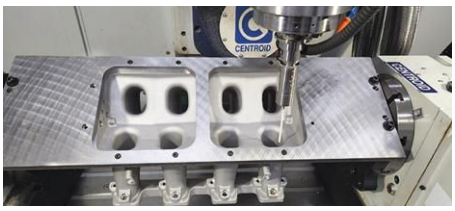


Prestige Motorsports now houses a full machine shop with state-of-the-art CNC equipment, an in-house dyno testing and development lab, and a performance installation center.









With so much positive energy, what is the best part of working at Prestige? Meekhof says it's coming in each day and seeing something new.

"We never stop and are always working on a new engine combination to improve our products for the end user. The leadership at the top is extremely driven to progress the business and not rest on our laurels at all," he says. "We know in order to keep the doors open in a highly competitive industry like this, we need to keep innovating and improving our products day-in and day-out, so that is our goal each day."

Of course, walking into work and hearing a big-block revving on the engine dyno or watching a turbocharged small-block on the hub dyno is a great added benefit.

"Every day is something new at Prestige and there is always something cool going on," he adds.

EMBRACING CHALLENGES

Operating a small business in a 10,000-square-foot facility comes with its share of challenges—especially with the recent COVID-19 pandemic and today's ongoing supply chain issues.

"The pandemic really hindered our ability to get the parts here to continue building custom engines," Meekhof recalls. "That said, we became busier than ever with many new orders, yet we had some employees out sick for extended periods of time that put us behind as well. We also have quite a few shows and events that we like to attend and support that were canceled in 2020 that affected our marketing efforts."

While ongoing supply chain interruptions have created new challenges, it's also an area where the Prestige Motorsports' team truly shines.

"We are out-of-the-box thinkers; therefore, when certain products were unavailable, we immediately searched for quality alternatives," Meekhof reports. "We also made a large investment to house more inventory to reduce downtime waiting on parts."

The company keeps plenty of inventory stocked and ready to go, including frequent movers and hard-to-find "one-offs" it knows will be needed for a specific project.

Prestige Motorsports also monitors its production very closely, along with vendor pricing. This practice has been more time-consuming than ever over the last two years as supply chain prices have risen drastically.

"We look at what similar competitors are offering and take feedback from current and potential customers to understand what the market demands," Meekhof says. "To better maintain pricing, we have started manufacturing more components in-house while continuously looking at ways to improve productivity and efficiency within our manufacturing."

The 20 employees who make up the Prestige Motorsports team are truly the backbone of the company's success. As Meekhof explains, the company is thankful to be in an area where talent isn't too hard to find.

"As with anything, sometimes it's who you know and what industry contacts you have. Nonetheless, providing a good working environment, proper onboarding and training, as well as offering continuing education and room for growth all helps in retaining great employees," he says. "We offer vacation and benefit packages along with flexibility to adapt to the everchanging world. It is all about our employees, because without them we are unable to grow or sustain."

MAKING CONNECTIONS

As part of the company's marketing efforts, Prestige (prestigemoto.com) advertises



The company's Ultimate Turn-Key Package includes everything customers need to get out and enjoy their hot rod, race car or boat.

mainly on Facebook with boosted posts and targeted ads. The company is back up to around 17,000 followers after its page was hacked in March 2022, prompting a total shutdown and reset.

"We use social media extensively here at Prestige. This includes daily posts on Facebook and Instagram (33,000 followers), and we also have hundreds of videos on YouTube. We showcase all our engines on the dyno with more in-depth information on custom projects. We also have a TikTok page to post more fun videos of engine builds that is different from our other social media," Meekhof says. "We want it to be very professional but really show people what we do here on a day-to-day basis—not just a Photoshopped image of one perfect day at the shop."

Meekhof finds that the company's educational videos with technical information are well-received. They are designed to instill confidence and provide potential clients with the tools to make more informed decisions, while encouraging follow-up contact with the shop for additional information.

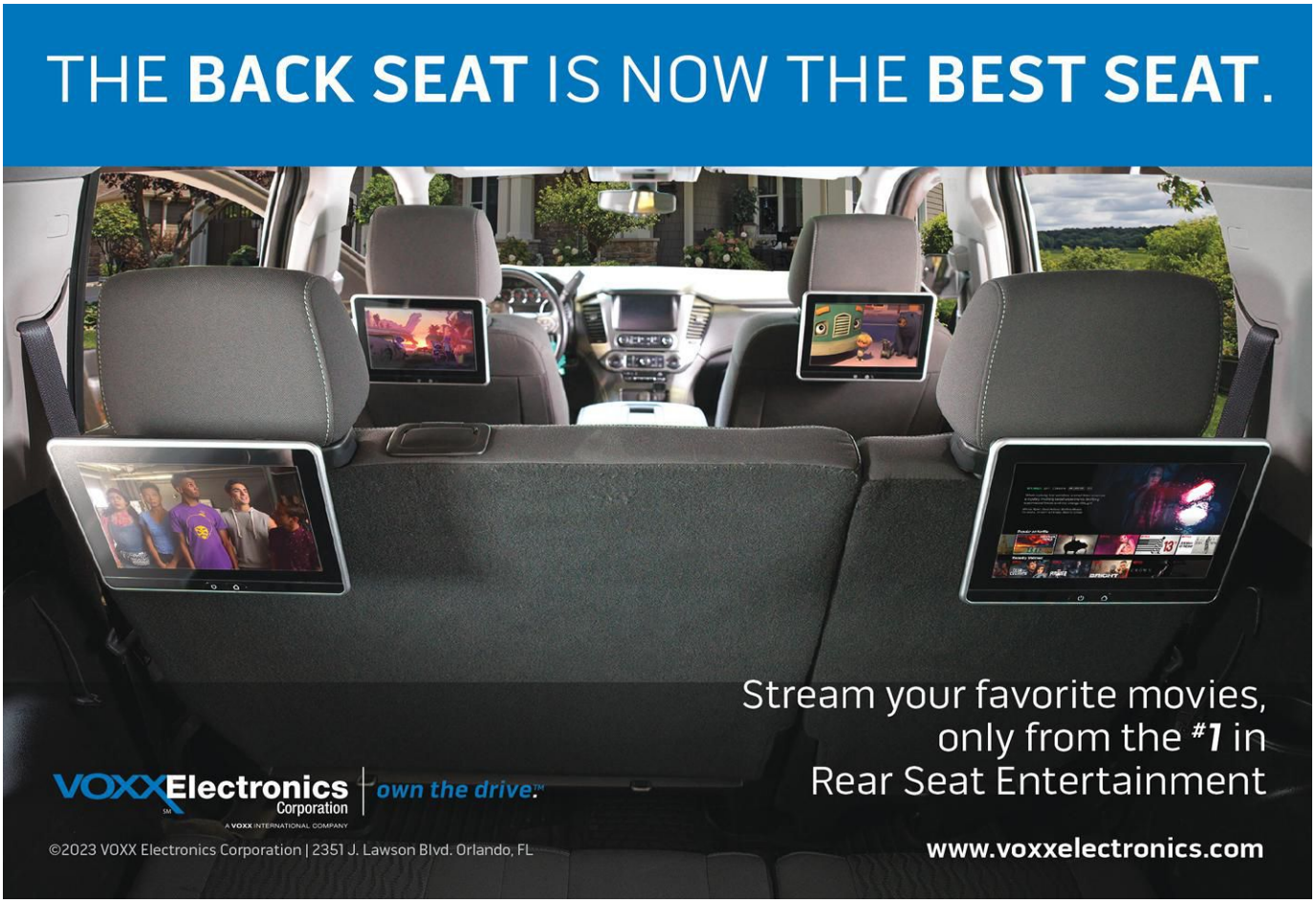
Team members also attend many events throughout the year promoting the company and its products.

"We believe it's important to support events in our industry to keep it moving forward and to keep our name out there as much as possible," Meekhof adds. "We are also a sponsor of the local FoxtoberFest car show in Concord and we host an open house at our shop for FoxtoberFest guests in town with free food and drinks and shop tours. We offer visitors a chance to watch an engine on the dyno and more."

Prestige Motorsports also works with multiple nearby shops, including locals who offer body and paint, interior restoration and related services.

"We provide them with vehicle-specific packages for their builds," Meekhof says. "These are great relationships that we are constantly cultivating." **TS**

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





Jeep 2-Barrel EFI

ACES EFI, Dayton, Tennessee, introduces the Deuces Wild 2-BBL TBI Electronic Fuel Injection System. Designed for Jeep 2-barrel carburetor applications up to 350 hp, the system can be easily installed with no special tools or advanced tuning required. It runs on the ACES 32-Bit Power Architecture that allows the ECU to monitor engine parameters and make calibration changes in real time. The throttle body fits any Jeep engine with a 2300 intake flange and features two integrated 100-pound-per-hour fuel injectors, a TMAP sensor and more.

Jeep Grand Cherokee L Cat-Back System

BORLA Performance Industries, Johnson City, Tennessee, presents its Cat-Back Exhaust System for 2021-23 Jeep Grand Cherokee L 3.6L models that improves horsepower and torque. System 140906 delivers a classic BORLA S-Type sound without any drone or resonance inside the vehicle. The system is made from T304 stainless steel and features all-welded construction for durability and long life.





Silverado/Sierra Supercharger

ProCharger, Lenexa, Kansas, offers a Supercharger System for 2019-21 Chevrolet Silverado/GMC Sierra applications. Power gains are achieved through a combination of highly effective air-to-air intercooling and the efficient P-1SC-1 ProCharger unit. The high-output (HO) intercooled system is designed to last and provides 7-8 psi of engine-friendly boost. Optimal mounting locations help avoid heat soak.



Chevy Truck Clutch Pedal Conversion Kit

Silver Sport Transmissions (SST), Rockford, Tennessee, offers a made-in-the-USA Clutch Pedal Conversion Kit for 1973-91 Chevrolet truck models. The easy conversion kit allows installers to add a clutch pedal to the existing pedal support with no welding required. Simply use the template to cut the brake pedal to size. The kit is compatible with 1985-91 OE master cylinders, or builders can swap to SST's hydraulic system conversion.



Raptor Exhaust

MagnaFlow, Oceanside, California, introduces an Exhaust System for 2021-23 Ford F-150 Raptor models. Designed to boost sound and power, the premium modular xMOD Series exhaust system is developed with enthusiasts in mind, featuring interchangeable parts that allow owners to customize exhaust tone and volume while improving performance. No Drone Technology (NDT) resonators suppress unpleasant sound frequencies inside the cabin.

F-Series Climate Control

Vintage Air, San Antonio, presents an all-new Gen 5 SureFit Climate Control System for 1980-86 Ford F-Series trucks and Broncos. The electronically controlled systems feature OEM-quality injection-molded cases and block-type expansion valves. Available as either a Complete Kit or an Evaporator Kit, they are designed to install with minimal modifications to the original firewall and include new, higher-torque actuator motors and rubber over-molded blend air doors.



Mustang Fuel Pumps



Aeromotive Inc., Lenexa, Kansas, presents Direct Drop-In Brushless Fuel Pumps for 2011-20 Ford Mustangs, excluding GT500 models. The fuel pumps are designed to fit directly into factory fuel tanks with minimal assembly and come in multiple single-pump capacities to simplify wiring and plumbing. They are engineered to reliably deliver the proper amount of fuel to high-performance street and racing applications. Each pump utilizes the stock fuel level sensor and factory lock ring, and includes a remote True Variable Speed Controller and top hat.



Cummins Rocker Arm Systems

PRW Industries, Perris, California, presents High-Performance Rocker Arm Assemblies, including Dodge Cummins applications. Designed to add power and efficiency to diesel engines, each rocker is made from alloy steel. The shaft systems are manufactured to exceed OEM specifications as a “drop-in” assembly using the factory rocker arm ratios.

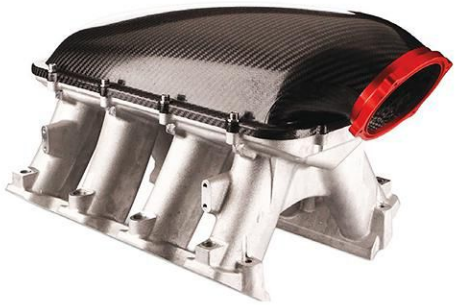
Mustang Lowering Springs



Aldan American, Signal Hill, California, offers a Lowering Springs Kit for 2008-20 Ford Mustang applications. Designed to convert the OEM suspension to a coil-over setup, the kit includes four black powder-coated springs and lowers the vehicle’s front and rear up to 1.25 inches. The components use factory mounts for a direct fit and are designed to work with OEM shocks.

Carbon HR Intake Manifold Lid

Performance Design, Auburn Hills, Michigan, presents its Carbon HR Intake Manifold Lid that offers owners of a **Holley** Hi-Ram intake a lightweight carbon fiber plenum upper to reduce weight and heat soak while adding a unique engine aesthetic with exposed weave cloth. Constructed from high-strength carbon fiber with high-temp epoxy and bonded with high-temp aerospace structural adhesive, the lid saves approximately 3.5 pounds versus the cast original. The throttle is moved up and rearward to improve the flow transition into the plenum.



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Aftermarket Wheel Studs



ARP, Ventura, California, offers Screw-In Studs for aftermarket axles, including an application with a 1/2-20 thread and an under-head length of 1.950 inches. Manufactured from 8740 chromoly steel, heat-treated to a nominal tensile strength of 190,000 psi and cadmium plated for extra durability, the studs include rolled threads to provide increased fatigue life and can be used in a variety of racing applications.

Advanced Diesel Piston Technology



Speed of Air (SoA) Engine Technologies, Reno, Nevada, introduces patented Piston technology to enhance the efficiency of medium-duty Cummins, Power Stroke and Duramax engines. Providing measurable performance and fiscal benefits, the patented treatment on the company's Hyperformance Pistons increases torque and horsepower, reduces emissions and improves fuel efficiency. The technology primarily consists of precise, CNC-machined indentations on the piston top, called "turbulators."

Interior Insulation



Heatshield Products, Escondido, California, presents db Stealth Shield sound-damping and heat-blocking interior insulation. Combining the heat insulation effectiveness of Stealth Shield interior insulation with db Armor sound-damping material, shields measure 0.176-inch thick, allowing them to easily fit under carpet. Offered in 21-by-19.5-inch squares that are easily cut and shaped to fit any floor, the insulation includes adhesive backing and is made in the USA. ***TS***

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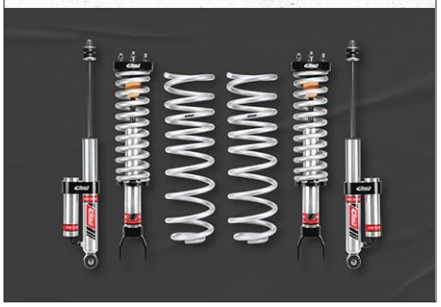
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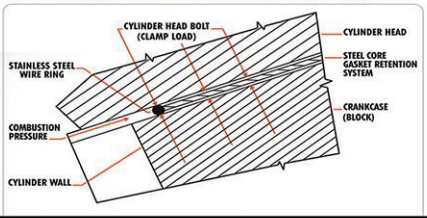
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Honda Unveils CR-V Hybrid Racer



While hybrid power units won't officially debut in the NTT INDYCAR series until 2024, race fans and car enthusiasts were treated to a sneak preview of the incoming technology with the debut of the Honda CR-V Hybrid Racer at the season-opening Firestone Grand Prix of St. Petersburg in March.

"This project vehicle is an IndyCar beast in Honda CR-V sheep's clothing," says David Salters, president and technical director for Honda Performance Development, the North American racing arm of American Honda and Acura. "The CR-V Hybrid Racer is our 'rolling electrified laboratory' to investigate where the talented men and women of HPD and Honda could go with electrification, hybrid technology and 100% renewable fuels. It epitomizes Honda's fun-to-drive ethos, showcases electrification and it just rocks our car culture roots and racing heritage."

Conceived and designed by HPD engineers in California and designers from the North America Auto Design Division (NAAD) of American Honda, the vehicle was built at Honda Automotive Development Center (ADC) in Ohio by the Honda of America Racing Team (HART).

The CR-V Hybrid Racer places a 2.2L twin-turbocharged, electrified Honda V-6 INDYCAR power unit and transmission under 2023 Honda CR-V Hybrid bodywork.

It runs on Shell's 100% renewable race fuel and features Skeleton Supercapacitors and Empel MGU hybrid motor technology.

The chromoly steel tube chassis is clothed in suitably hybrid bodywork designed by NAAD. From the beltline up, the Hybrid Racer utilizes a standard-production, sixth-generation CR-V steel body, including the glass windshield, windows and even the sunroof. The lower half features carbon composite construction incorporating a massive front splitter and louvered, flared fenders.

An equally large rear wing and butterfly half-cut doors complete the bodywork.

"When the Design Studio learned about this project, we had already established a great relationship with HPD through other projects, including the ACURA ARX-06," says Dave Marek, executive creative director. "It became a 'what-if?' of keeping the CRV as-is but adding some serious attitude with parts indicative of an IndyCar. Then it was back to my childhood of never building model cars right out of the box by manipulating areas with DTM or Japanese Super GT cars in mind. I basically mocked up the idea in 3D, then our amazing digital modelers made it work."



The Honda CR-V Hybrid Racer offers a preview of the technology coming to the NTT INDYCAR series in 2024.

The finished racer is clothed in a one-of-a-kind wrap designed by Lili Melikian, senior exterior designer.

"The graphics were inspired by the hybrid powertrain, radiating from Honda Hybrid Blue to Honda Racing Red to symbolize the duality of the drivetrain," Melikian explains, "while the 'speed squirkles' add a dynamic, fun layer and showcase the playful side of the 'Power of Dreams.' We have also sprinkled easter eggs throughout the wrap, like ghosted outlines of Honda-sponsored tracks and an overhead view of the engine that powers the Honda CR-V Hybrid Racer."

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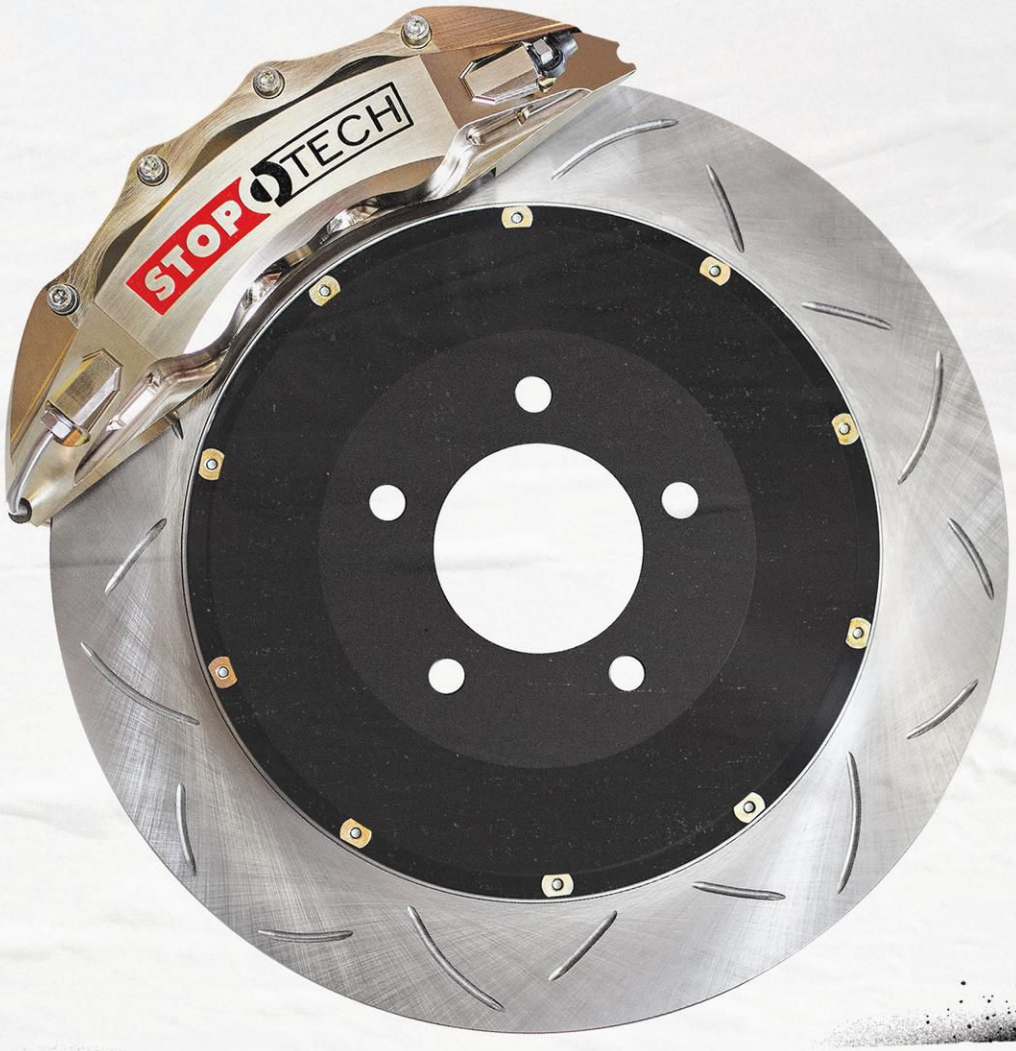




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