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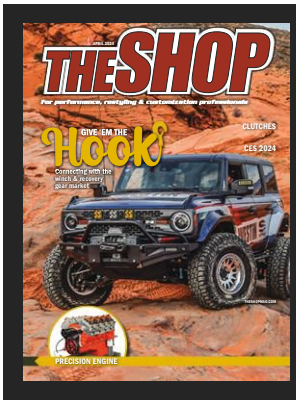
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Jef White
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New-Vehicle Prices on the Decline

In a time where seemingly everything costs more, shoppers are finding relief in an unexpected area—new-car prices.

The U.S. new-vehicle market sales pace slowed in January, despite lower prices and higher incentives. According to an analysis by Kelley Blue Book, a Cox Automotive company, the U.S. new-vehicle average transaction price (ATP) to start the year was $47,401, down 2.6% from December 2023 and down a remarkable 3.5% compared to January 2023.

Despite lower prices, the seasonally adjusted annual rate (SAAR), or sales pace, was 15.0 million in January 2024, down from 16.1 million in December 2023 and below the 15.1 million recorded in January 2023.

"It is common to see lower transaction prices and sales in January, as December typically is a hot month for luxury vehicle sales," said Erin Keating, executive analyst for Cox Automotive. "However, the year-over-year new-vehicle ATP decline of 3.5% is notable. Prices have been trending downward for roughly six months now as automakers are sweetening deals to keep the sales flowing."

Discounts and incentives in January averaged 5.7% of ATP, up from 5.5% in December and higher year-over-year by nearly 100%. In January 2023, when new-vehicle inventory was lower by roughly 750,000 units, incentive packages averaged just 2.8% of ATP.

Luxury vehicles and full-size pickups had some of the highest discounts in January. Conversely, incentives for small pickups, full-size SUVs and minivans were below the industry average at less than 3% of ATP.

According to the KBB analysis, the average price paid for a luxury brand vehicle in January was $60,978, down from $62,834 in December and the lowest average transaction price since the summer of 2021.

Luxury car prices in January were down 9.7% year-over-year; luxury compact SUVs saw price declines of 11.9% compared to January 2023.

Sales incentives for luxury vehicles averaged 6.2% of ATP in January, down slightly from December but higher by 123% compared to January 2023. In January 2024, luxury brands accounted for 19.8% of industry sales, down from 20.6% in December—a month that typically sees strong luxury sales.

Prices for non-luxury brand vehicles also decreased month-over-month in January. At $44,052, non-luxury vehicle prices were lower in January 2024 by 2.1% year-over-year.

Incentives for non-luxury vehicles averaged 5.5%, an increase from December. In comparison, one year ago, non-luxury incentives averaged 2.9% of ATP in January 2023.

Inventory levels have been increasing for the past year, shifting the market to favor buyers who are enjoying more choices, more discounts and lower prices.

The trend even includes electric vehicles. KBB says EV prices have tumbled 10.8% in 12 months, with the average price paid for a new electric vehicle in January 2024 at $55,353. ***TS***

THE SHOP

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YOUR WEBSITE & SOCIAL MEDIA ACCOUNTS ARE BROKEN PART III

Here's why & some steps to fix them. **By Barry Alt**

Note: This is the third installment in a multi-part article addressing common issues with websites and social media accounts often encountered by specialty automotive aftermarket shops. Parts I & II addressing website issues appeared in the February & March 2024 issues of THE SHOP.

Now that we've explored some common website issues that can impact your business, it's time to shift gears and focus on social media.

1 THE WRONG PLATFORMS

Choose your social media platforms wisely. Before you spend one second setting up and posting to your social media channels, you need to understand where your prospective customers spend their time online.

If you're only on Facebook and they're on Instagram or YouTube, you might be wasting your time and resources by barking up the wrong tree. Choosing the right social media platforms is critical to reaching your target audience effectively.



Choosing the right social media platforms is critical to effectively reaching your target audience.

SOLUTION: Thoroughly research your audience. Use competitor analysis, surveys and industry data to identify where your audience spends the most time online.

We've found that sometimes the best solution is to simply ask your favorite clients which platforms they prefer.

PRO TIP: There's also a ton of demographic data out there that indicates that people in different age groups may gravitate toward different social media platforms. If most of your customers are baby boomers, then they might be on Facebook, for example, and maybe LinkedIn, too. (Yes, LinkedIn counts as social media.)

2 INCONSISTENT BRANDING

Maintaining a cohesive brand identity across social media profiles is the key to a professional and memorable online presence.



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SOLUTION: Create comprehensive brand guidelines, including color schemes, fonts and tone of voice. Apply these guidelines consistently to all your social media profiles to ensure a unified and instantly recognizable brand.

This means using the same logo, profile info and messaging across all platforms.

PRO TIP: If you have a team of people supporting your social media efforts, we recommend regularly auditing your social media profiles to make sure they align with your brand guidelines.

3 INCOMPLETE PROFILES & ABOUT SECTIONS

Your social media profiles act as the online representation of your shop. Filling these out is important, because they provide vital information about your business, enhance your credibility and help potential customers easily connect with you.

SOLUTION: Make sure to fill out all the required fields in the profile section of each social media platform. Include Google Business Profile details in your posts for local visibility.

Also, always link back to your website, when possible, to drive traffic and provide additional information about your business.

PRO TIP: Craft a compelling and concise bio that succinctly communicates your brand's identity and value proposition.

Create comprehensive brand guidelines, including color schemes, fonts and tone of voice.

4 LACK OF A REGULAR POSTING SCHEDULE

Work would stop getting done if you quit showing up, right? In the same way, consistently posting on social media is crucial to staying engaged with your audience.

SOLUTION: We see a lot of accounts that haven't posted any new content in years. Are they even still in business? Without consistent posting, it can be hard to tell.

To address the issue of irregular posting, establish a content calendar. This tool lets you plan, schedule and automate posts in advance. This guarantees a steady and reliable stream of content for your followers.

PRO TIP: Use social media management tools to streamline the scheduling and automation processes. These platforms also provide insights and analytics to further optimize your posting strategy.

5 IGNORING YOUR AUDIENCE

You'd never ignore a customer standing in your brick-and-mortar store. If you want your online audience to become customers, you shouldn't ignore them, either.

Engaging with your audience is a cornerstone of successful social media management. Ignoring this can be a costly mistake for your shop.

SOLUTION: Make it a practice to regularly monitor questions and comments, and then respond promptly. Acknowledging comments, messages and feedback creates a sense of community and builds stronger connections with your followers.

PRO TIP: Consider setting aside dedicated time each day for social media engagement. (This is the "social" part of social media!)

6 LIMITED CONTENT MIX

Seeing the same old thing day after day can bore your audience and make followers quickly lose interest in your social media account. They may just ignore you or unfollow you altogether.

SOLUTION: Provide various content types, including educational posts, behind-the-scenes glimpses, engaging videos, captivating images and more. A well-rounded content strategy keeps your audience engaged and eager for what's next.

PRO TIP: Regularly assess the performance of different content types to figure out what resonates most with your audience. Tailor your strategy to emphasize this content going forward.

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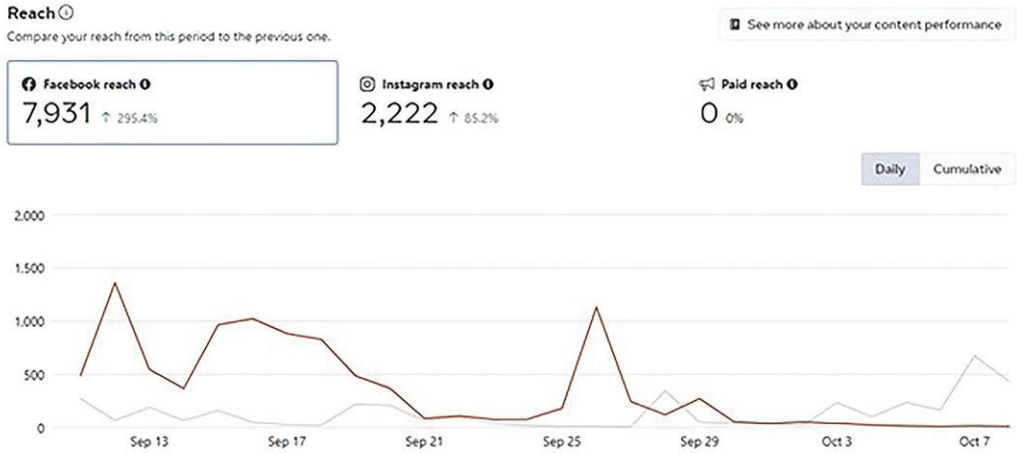
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7 NEGLECTING ANALYTICS & INSIGHT DATA

Analytics are your compass in the vast sea of social media, guiding you forward by showing you what's working well and what could use a little improvement. Neglecting it can leave you at a major disadvantage.

SOLUTION: Make it a habit to study the analytics tools provided by the platforms you use or employ third-party tools. Track engagement, reach and user behavior to gain valuable insights that can inform your content strategy and help you make data-driven decisions.

PRO TIP: Set clear goals and key performance indicators (KPIs) for your social media efforts. Regularly review your analytics data to assess your progress toward these goals.





8 LACK OF A CLEAR CTA

A call to action (CTA) motivates your audience to take the next step. Clear CTAs are essential for guiding your audience on social media to take the action you want.

SOLUTION: The goal with proper CTAs is to prompt people to engage or act. To do that, define your social media goals, whether it's brand awareness, lead generation or driving website visits.

Then, ensure that your CTAs are in harmony with these objectives.

PRO TIP: Use compelling language to create a sense of urgency and encourage immediate action from your followers.

Next time we'll take on another batch of common social media issues and their fixes. ***TS***



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THE PERFORMANCE CLUTCH MARKET

Finding success one gear at a time. ///// **By John Carollo**



From the street to the track, manual transmissions are still the top choice for many performance enthusiasts. And once they've added the power, they need the proper clutch to put it to good use.

Often benefitting from professional insights and installation experience, performance clutches are an important part of any build. Consumers can arrive with preconceived notions about what they'd prefer, but reality and practicality are the best drivers to a happy long-term customer.

Whether drivetrain enhancements are a small part of your shop's daily offerings or a main focus, there's always something new to learn when it comes to the science and technology behind performance clutches. Suppliers offer their views on the market, sales tips and hot new products to help enthusiasts make the most of their builds, one gear at a time.

When it comes to performance clutches, some customers may be experts, while others may not know much. (Photo courtesy Advanced Clutch Technology)



Focus on personalized customer service. (Photo courtesy Advanced Clutch Technology)

AN ENGAGING MARKET

As one of the higher-profile pieces in a performance drivetrain, clutches often get plenty of attention. At times, however, enthusiasts may lock in on a model that's not the best fit for their specific power goals.

"I'd say the most common misconception shops face is the customer's preconceived notions of the clutch he or she needs for their application," says Trent McGee,

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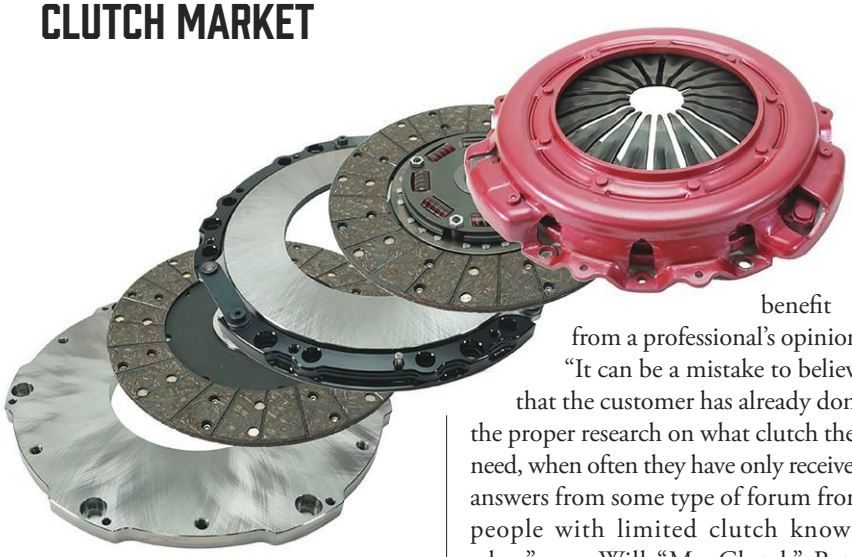
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THE PERFORMANCE CLUTCH MARKET



Specialty shops can find success installing quality performance clutch upgrades. (Photo courtesy RAM Clutches)



Brush up on your shop's clutch system knowledge by vehicle platform. (Photo courtesy RAM Clutches)

marketing manager for Centerforce Clutches, a division of Midway Industries. "Some customers will lean toward too much clutch for their application, while others will under-clutch for their needs. There are often compromises with performance clutches—the more racing-oriented the clutch is, the less street-friendly it tends to be."

The same can be said for holding capacity, he notes—as torque limits go up, overall drivability declines.

"This is why it's so important to understand what kind of power levels the customer's vehicle has and his or her intended uses for the vehicle. The ideal clutch for a street/strip application with a few bolt-on performance modifications is going to be very different from a vehicle with a highly modified engine that's a dedicated track car."

Even the most confident drivers can benefit from a professional's opinion.

"It can be a mistake to believe that the customer has already done the proper research on what clutch they need, when often they have only received answers from some type of forum from people with limited clutch knowledge," says Will "Mr. Clutch" Baty, engineering/product design, McLeod Clutches.

For instance, an overpowered clutch might be fun at first, but most customers—particularly street car owners—will prefer something a little friendlier long-term.

"(The) most common issue we run into is that customers are concerned about retaining the drivability in the clutch in addition to gaining the necessary torque capacity for the build," says Geoffrey M. Gerko, owner of Mantic Clutch USA. "We build our stuff to drive like an OE clutch, with light pedal effort, smooth engagement and quiet operation, yet increase the torque capacity up to 2,000 pound-feet."

Though not overly technical, clutch installations can still benefit from a knowledgeable technician.

"While aftermarket single- and dual-disc clutches can require extra steps to ensure a successful install, such as measuring for a hydraulic bearing installation, it is really not that difficult. It is a matter of taking your time and asking questions on the front end to avoid issues on the back end," says Mike Norcia, marketing manager for RAM Clutches. "We strive to make our products as simple as possible to install. Specialty shops can do this, where the average 'parts changer' installation shops will struggle."

In fact, performance clutches can be one of those markets where participants enter with varying levels of product understanding, from a little to a lot.

"A common mistake shops make with performance clutch customers is assuming everyone has the same level of

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Advanced Clutch Technology
Rich Barsamian
VP Sales & Marketing

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Centerforce Clutches
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Trent McGee
Marketing Manager

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■ **FEATURES & BENEFITS:** Excellent drivability with the increase in torque capacity, Kits come complete with clutch, flywheel, release bearing and all necessary hardware.

Mantic Clutch USA
Geoffrey M. Gerko
Owner

■ **HOT PRODUCT:**
McLeod RXT Twin-Disc Clutch
■ **FEATURES & BENEFITS:** Works and works great; driver-friendly clutch feel with up to 1,000-hp holding capacity; light pedal effort; low inertia disc weight to help with higher shifts; durability; strength; wide range of configurations that work with most applications.

McLeod Clutches
Will "Mr. Clutch" Baty
Engineering/Product Design

■ **HOT PRODUCTS:** Concept 10.5-Inch Dual-Disc Clutch Systems
■ **FEATURES & BENEFITS:** An affordable way to harness higher horsepower levels and maintain good drivability; popular applications include Dodge Challenger, Coyote Mustang and LS/LT; 10.5-inch diameter; higher clamp load pressure plates; spring hub top disc.

RAM Clutches
Mike Norcia
Marketing Manager

knowledge," says Rich Barsamian, VP sales & marketing for Advanced Clutch Technology. "Some customers may be experts, while others may not know much. Shops should communicate effectively, understand each customer's knowledge base and provide tailored advice. Another misconception is underestimating the importance of correct installation and maintenance, which is crucial for optimal performance."

TALK IT THROUGH

Advice from many areas of the aftermarket is often centered around asking the proper questions to really understand the customer and their individual needs.

Suppliers highlight the questions they recommend asking:

"I actually find it's best to ask two key questions," says Gerko. "First, how much power (in torque) do you plan to make? And two, how will you be using the car? A fun daily driver is much different than a dedicated drift car."

Agreeing on spec numbers, Barsamian says, "Always ask how much torque they are going to make at the crank. At the end of the day, that is all your clutch cares about. Find out if it is going to be used primarily for street, street/strip, strip only, off-road, etc."

Baty shares his list.

"The overall intended use of the vehicle, power output, future power additions, weight of the vehicle, gearing and tire size are key questions to ask when choosing the proper clutch and flywheel."

Customer desires can factor in as well, but only to a point, says Norcia.

"What does the customer expect from their new clutch system? Load factors and power levels greatly affect the clutch's ability to hold for a given application, but if the customer is not up-front about how he plans to use the vehicle, how hard he drives it and what he expects the clutch to feel like, it is very hard to get them in the proper setup and make them happy in the end," he explains.

McGee's questions begin with, "What kind of power do you anticipate putting to the ground and what will be the primary uses for the vehicle? It's critically important to understand what the customer's primary uses for the vehicle will be as well as his or her expectations."

Beyond those two questions, he also suggests asking about future plans.

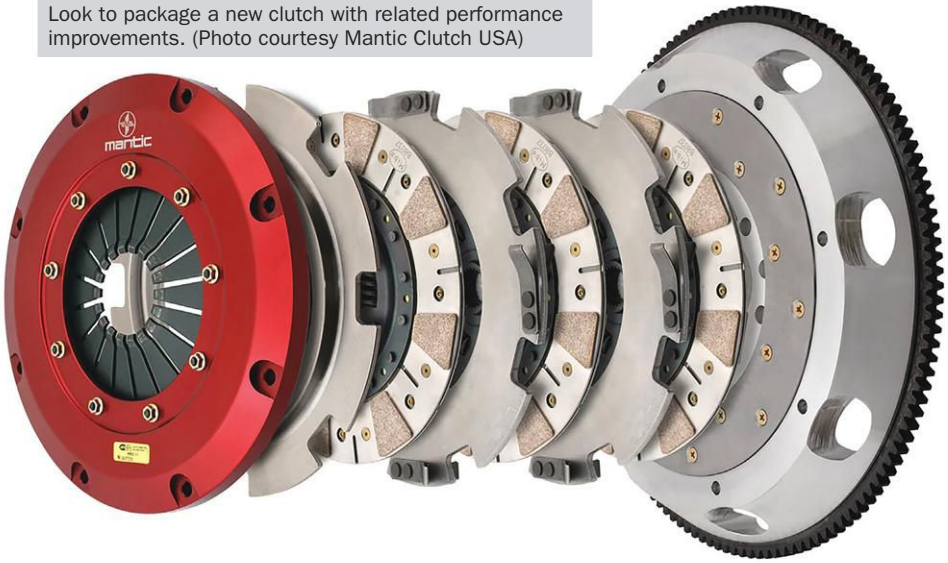
"Often vehicles are built in stages as the customer's time and budget allow. If the engine (currently) just has some minor performance bolt-ons, but the customer plans to add things like a cam, heads and forced induction, then it's a good idea to accommodate the customer's future holding capacity needs, even if there's a larger price tag," he says. "Installing a clutch is kind of a big job and most customers would prefer only having to do it once."

GRAB THAT SALE

Once all the questions have been asked and answered, it's time to look at closing the sale.

"Focus on personalized customer service," says Barsamian from Advanced Clutch. "Train your staff to understand customer needs and recommend suitable products.

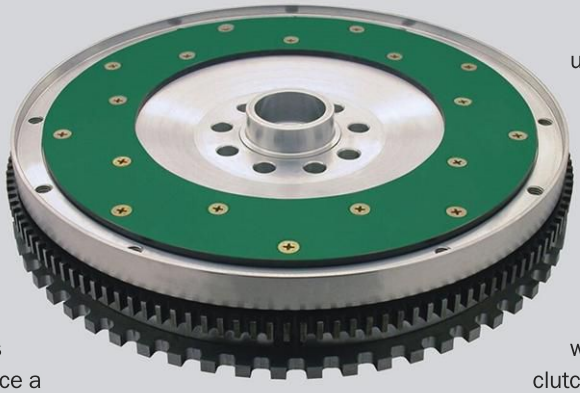
Look to package a new clutch with related performance improvements. (Photo courtesy Mantic Clutch USA)



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THE PERFORMANCE CLUTCH MARKET

A LOOK AT ALUMINUM FLYWHEELS



Jeff Jenkins, owner of Fidanza Performance in Perry, Ohio, offers his perspective on the flywheel market, and aluminum flywheels in particular:

Q WHAT ARE SOME MISCONCEPTIONS REGARDING AFTERMARKET ALUMINUM FLYWHEELS?

JJ: There are many thoughts and ideas out there regarding the added performance a lightweight flywheel will bring to a vehicle. Fidanza Performance has been marketing lightweight aluminum flywheels for 27 years. If they didn't work, we wouldn't still be around after all this time.

Our tests provide empirical evidence proving how a flywheel can impact the vehicle. Once the initial acclimation period is over, the dyno that we all have in the seat of our pants will bear evidence to the increased vehicle performance.

Q WHAT ARE THE KEY QUESTIONS SHOPS SHOULD ASK WHEN FITTING AN ALUMINUM FLYWHEEL?

JJ: Our flywheels are a true direct bolt-in replacement. As long as the year, make and model information are correct, and a flywheel is available for the application, it is a very easy upgrade. They can be used with any of the many quality performance clutches that have been manufactured to fit the vehicle. This allows shops to use their favorite clutch manufacturer. Knowing both the increased power over stock through the other upgrades that have been made to the vehicle and the customer's driving style will help match the flywheel to the proper clutch. If the aluminum flywheel selected is to replace a stock dual-mass flywheel, it is recommended going with a clutch manufacturer that uses sprung-hub clutch discs to help ensure drivability with a lighter flywheel.

Q WHAT'S AN UNEXPECTED BENEFIT OF ADDING A LIGHTWEIGHT ALUMINUM FLYWHEEL?

JJ: Our flywheels are designed to be an upgrade that has an infinite life expectancy. We have designed field serviceability with our replacement friction surface kit.

The flywheel can be rebuilt by the installer whenever a clutch is changed. This eliminates the need to have the flywheel resurfaced and takes only about 20 minutes. Since this is the only wear part of the flywheel, the service can be repeated over many years of clutches.

We have one customer with an aluminum flywheel that is over 20 years old. He has burned though six clutches and just keeps rebuilding his flywheel.

Aluminum flywheels are an option for a variety of performance clutch applications. (Photo courtesy Fidanza Performance)





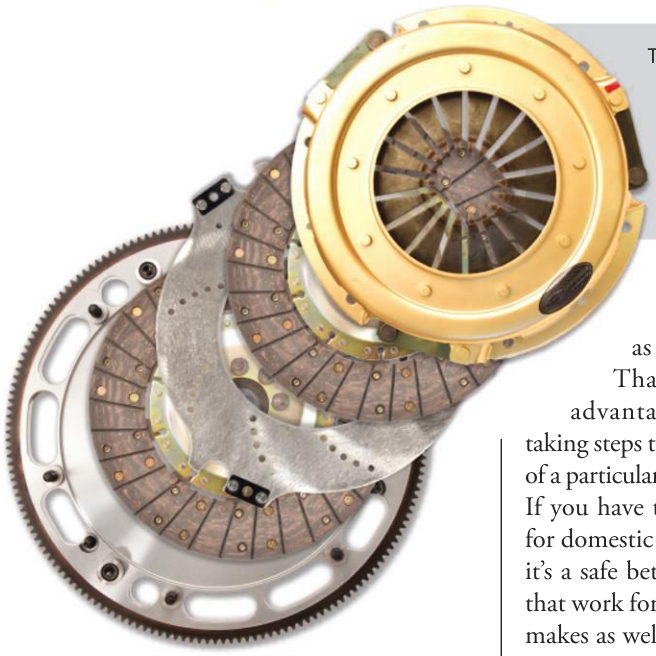
Things like vehicle gearing and tire size can affect clutch selection. (Photos courtesy McLeod Clutches)

Provide educational materials, offer professional installation and allow test drives for hands-on experiences. Highlight positive customer reviews and create bundle deals or promotions to incentivize purchases. A customer-centric approach enhances satisfaction and increases sales."

RAM's Norcia says a strong service record will build your reputation and boost business.

"We always recommend our customers seek out a reputable specialty performance shop to do their clutch installation," he notes. "Brush up on your clutch system knowledge by vehicle platform. Understand how factory release mechanisms operate and how to properly set up a new clutch system using the factory parts





There are often compromises with performance clutches—the more racing-oriented the clutch is, the less street-friendly it tends to be. (Photo courtesy Centerforce Clutches)

Most customers would prefer installing a new clutch just once. (Photo courtesy Centerforce Clutches)

in later-model vehicles, as well as aftermarket hydraulics. Once you have done the install for a particular vehicle the first time, the next jobs will go quicker and more efficiently. By specializing in performance clutch installs, word of mouth advertising will help drive future business to your shop."

McGee from Centerforce suggests keeping the big picture in mind when closing the sale.

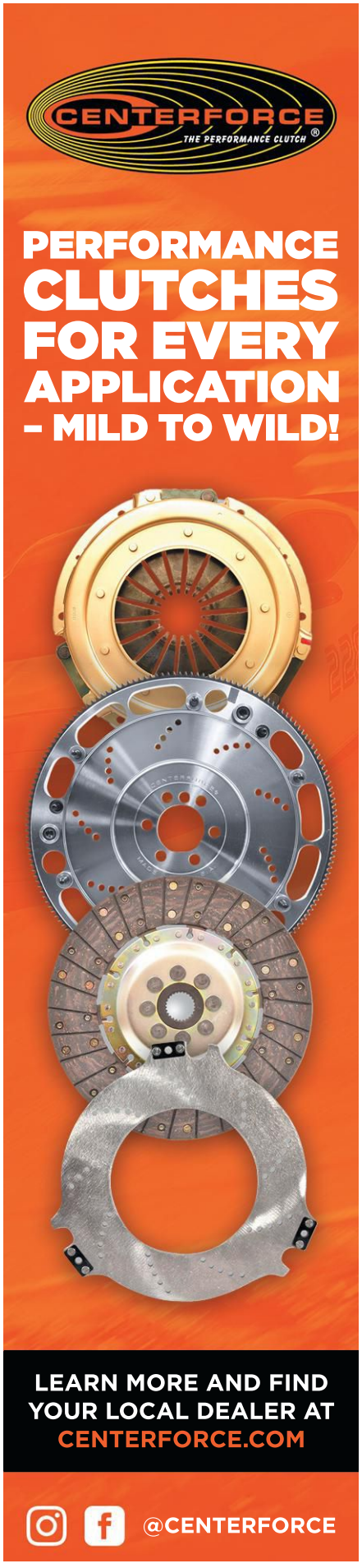
"Beyond understanding the customer's needs and expectations, try to appeal to as broad a customer base as possible. Many shops tend to specialize in a particular niche of the market, such as late-model muscle or sport compact. They might even specialize in a particular vehicle make, such as Toyota or General Motors. That's perfectly OK and even advantageous in many ways, but taking steps to appeal to customers outside of a particular specialty niche is a good idea. If you have the ability to access clutches for domestic muscle or a particular make, it's a safe bet you have access to clutches that work for a variety of other niches and makes as well. Just because you specialize in one particular niche doesn't mean you can't be the go-to in your area for parts that appeal to other outside niches."

Look to package a new clutch with related performance improvements, says Gerko from Mantic Clutch.

"Make it a combination of stressing to the customer it's a requirement for the build and noting their ability to save on some labor if the transmission or engine is already out of the vehicle."

Finally, McLeod's Baty reminds shop owners and installers that suppliers are here to help them succeed.

"Do the research on the clutch brand you offer/sell. Having accurate knowledge of the brand you offer really makes the sale easier and gains the trust of the customer," he says. "Create a good relationship with the clutch manufacturer. We don't expect the shop to know everything about our product, so don't be afraid to call us with any questions." ***TS***



KUSTOM KULTURE

The Santa Catarina Custom Show reflects the American hot rod scene.

By Tony Thacker

I didn't know Brazil had a "Kustom Kulture" until I wrote a feature for HOT ROD Magazine about a 1934 coupe being built at Troy Ladd's Hollywood Hot Rods in Burbank, California. Handling the tin work was Brazilian Marcio Luz, who moved to the U.S. from Curitiba, the hot rod capital of Brazil.

Who knew Brazil even had a hot rod capital, and who knew there was even a Brazilian Kustom Kulture?

Thanks to Luz's hook-up, Ladd, pinstriper Mike Mazooma and I were invited to the Santa Catarina Custom Show (SCCS)—the largest event on the Brazilian calendar. Founded by the husband-and-wife team of Mirella and Rodrigo Huelsmann and their friend Sonia Pimentel in 2011, SCCS celebrated its 11th edition in the new convention center in the resort town of Balneário Camboriú, known as "BC" while we were there.

Of course, Brazil has a long motorsports history and has produced 32 F1 drivers including world champions Emerson Fittipaldi, Nelson Piquet and Ayrton Senna. Likewise, BC, situated almost 400 miles south of São Paulo, has a long motorsports history dating back to the 1930s, including some Daytona-style beach racing.

Brazil's automotive history dates back to the beginning of the 20th century. In 1921, Henry Ford opened a plant in São Paulo. In '58, Ford expanded and began manufacturing the Y-block-powered F-100 there. In 1973, it launched the stylish Maverick that became Brazil's Mustang.

Not far behind, GM opened a São Paulo plant in 1930 and a second plant in '58. In '68 it launched the Opala—not to be confused with the Impala—but because the Opala had a 250-ci six and not an eight, the small-block Chevy V-8 is an expensive luxury in Brazil, whereas Ford and Chrysler V-8s appear plentiful.

Without a doubt the Brazilian market leader was Volkswagen with the Type 1 Beetle, locally known as the Fusca, and



Brazil conveys a surprisingly strong interest in American Kustom Kulture, as shown by the excitement generated at the Santa Catarina Custom Show (SCCS).

its derivatives—in particular the Type 2 Kombi. Beginning in 1953 during its quarter-century run, VW produced more than 20 million vehicles and more than 3 million Beetles/Fuscas before construction halted in 1986.

However, due to high demand, Beetle production was re-started in 1993, then stopped forever in '96. For any air-cooled fan, Brazil is the place to see numerous models and variants rarely found outside of South America.



American influences were everywhere.

STRONG DEMAND

The Custom Show reflected the domestic car industry (the fourth largest in the world) with an eclectic mix of vehicles and a mash-up of styles—there were a ton of Chevy C-10 and Ford F-100 trucks that looked similar, but not quite the same, to U.S. versions. There were obviously Mavericks by the score, Opalas and, as expected, a ton of VWs.

American influences were everywhere, from restaurants such as TGI Friday's at the airport to coveted American branded T-shirts and swag such as Rat Fink and Von Dutch.

Unfortunately, despite the enthusiasm of Brazil's 215 million people (the fifth largest population in the world), cars, parts and merchandise were expensive due to shipping costs and import duties ranging from 14%-20% in add-on taxes.

To better understand the South American opportunities for American companies, we spoke to Chris Phillips of Exim Marketing International. One of Phillips' biggest customers is Batistinha Garage/BTS Performance located in São Paulo.

BTS specializes in modifying, restoring and tuning American cars and imports

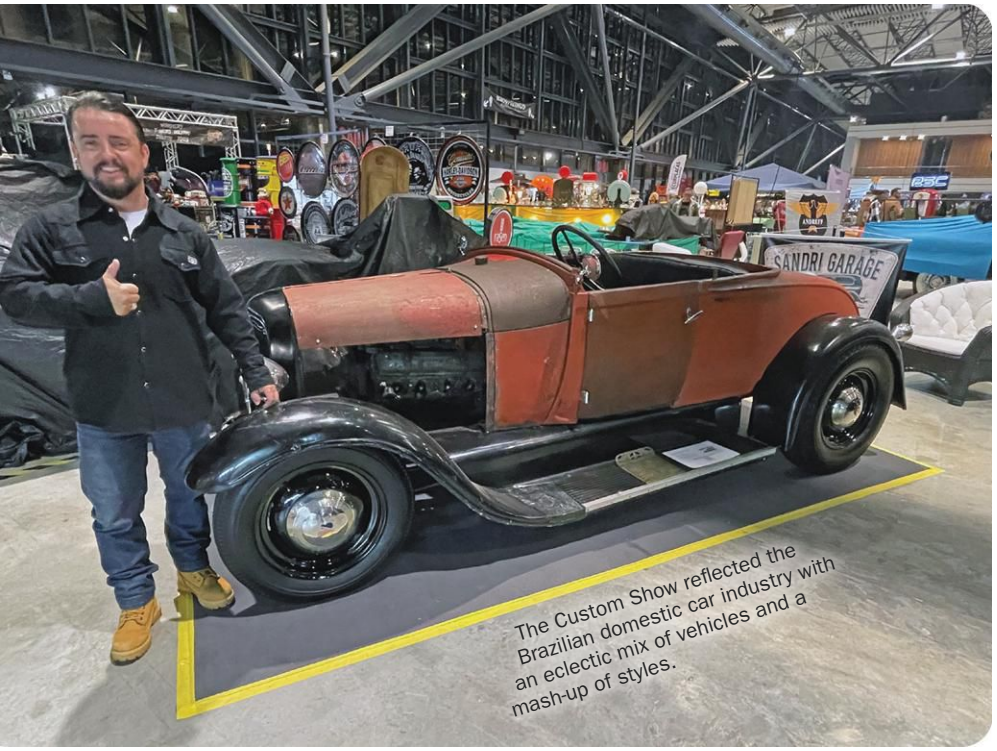


products from FiTech, SCT, Bully Dog, FuelTech and many more. Phillips says the South American market is hungry for "Ameri-carna" and the only thing holding it back is the cost of importing and restrictive laws.

"Brazil has its own equivalent of SEMA—Sindipeças (The National Association of Brazilian Auto Parts Manufacturers) and Abipeças (The Brazilian Association of the Auto Parts Industry), that appear to be lobbying for changes in Brazil's vehicle customization laws," he says. "Despite a long history of domestically produced American vehicles dating back to Ford's Model T, it remains difficult to register a hot rod in Brazil. Customized cars are less of a problem."

The upside of Brazil's distance from the U.S. is its growing do-it-yourself movement that sees gearheads such as Lucas Renan of LRV Garage building their own English wheels, and companies such as Nene Hot Rod that makes its own suspension components and Coelho Safari, which makes replacement VW windows.

It even has its own printed Garagem Old School Magazine, published by Ricardo Kruppa.



The Custom Show reflected the Brazilian domestic car industry with an eclectic mix of vehicles and a mash-up of styles.

BIRDS OF A FEATHER

We also spoke to Jaison Patrocinio, who owned Union Garage in São Paulo. Although recently closed because he immigrated to the U.S., Patrocinio said at the time, "Brazil is a big market for American parts. Around 2009, I started importing for myself and friends and it grew so big I had to open a business where we retailed and installed. We imported from a lot of American companies such as BME, COMP Cams and, of course, we were a dealer for FuelTech, which is actually a Brazilian company that has facilities in Porto Alegre, Brazil, as well as Ball Ground, Georgia. Unfortunately, the import taxes—up to 60%—make it difficult to be competitive. I



Brazilian custom trucks are very similar—yet not quite the same—to their American counterparts.





Custom VWs are extremely popular in Brazil, thanks to their longtime presence in the country.



SCCS co-founder Rodrigo Huelsmann shared details for his Roddertown mini-mall project in Brazil with Troy Ladd. Plans call for the facility to be open by the end of the year.





Born in England, ***TONY THACKER*** *is an accredited automotive journalist, author and book publisher, and served as marketing director at the famed SO-CAL Speed Shop.*

had to close the business when I was made an offer I couldn't refuse."

We also spent time with Rodrigo Huelsmann, an industrial designer, SCCS creator and one of the most prolific fabricators I have ever met.

We visited his shop where he designs and builds everything from scale trains for local theme parks to hot rods and customs for himself and wife Mirella.

Huelsmann's next big project was Roddertown, a large mini-mall located in Balneário Camboriú dedicated to American Kustom Kulture. The 40-unit Roddertown was breaking ground as we left town and is due to open at the end of 2024.

Impressed with the Roddertown concept, Ladd says, "If the numbers pencil out, I'll definitely look at the possibility of opening a Hollywood Hot Rods retail store there."

I had no expectations when I departed for Brazil, but I can't remember when I had so much fun at an indoor car show nor met such nice, friendly people dedicated to the preservation of American Kustom Kulture.

All I can say is if you ever get the chance to visit Brazil and the Santa Catarina Custom Show, do it! ***TS***

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PERFORMANCE PRODUCTS

Stock Your Shelves With These Go-Fast Components



EV Conversion Gearbox

Torque Trends, Wittmann, Arizona, presents its TorqueBox brand reduction gearbox 3.0 ratio, designed to replace the transmission in any EV conversion and multiply the motor torque by three times. Offering brute strength in a compact design, it fits tight tunnels in import and classic cars and has been tested at over 1,000 hp and behind electric traction motors spinning more than 16,000 rpm. TorqueBox 3.0 fits most popular electric traction motors and offers yoke and ParkLock options.

Mustang GT Clutches



Advanced Clutch Technology (ACT), Lancaster, California, presents a full range of 10.5-Inch Mod-Twin-Style Clutch Kits for 2018-23 Ford Mustang GT models. The Mod-Twin design delivers an ultra-durable, customer-serviceable, long-lasting clutch with high torque capacity and none of the tradeoffs often associated with a twin-disc clutch. Made to handle power-adders including superchargers, turbo and nitrous, the 10.5-Inch Mod-Twin with Mono Drive modular hub system features a very light pedal for T1 applications and slightly above stock for T2.



Mach-E Performance Sound System

BORLA Performance Industries, Johnson City, Tennessee, presents its Active Performance Sound System for 2021-23 Ford Mustang Mach-E rear-wheel/AWD 4-door models. Delivering personality with options, the system adds the sound of a powertrain, informing drivers of engine load, throttle input and more. Made from professional recordings of actual BORLA-equipped internal combustion engine (ICE) vehicles, the setup combines a proprietary algorithm with state-of-the-art audio processing and amplification technology.

Jeep Clutch Hydraulic Bearing Options



Centerforce, Prescott, Arizona, presents its new Internal Hydraulic Bearing option for 2018-24 Jeep Wrangler JL and Gladiator JT models equipped with manual transmissions. The new hydraulic throwout bearing is engineered to solve the bearing rattle that commonly affects manual transmissions in late-model Jeeps while improving pedal feel and overall durability by simplifying the clutch's release mechanism. It delivers a wider range of travel and includes steel braided lines with heat shielding and a **Jiffy-Tite** dry disconnect for easy installation.



Slidebar Custom Radio

Custom Autosound Manufacturing Inc., Fullerton, California, presents its Slidebar radio, now available for 1967-72 Chevrolet truck models. The Slidebar features a classic analog face that disappears to show a modern digital radio when needed—it functions like the bar did on the original radios to change from AM to FM, but instead controls the face displays. Features include a 300W digital tuner, USB port, CD changer controller, built-in Bluetooth, sub pre-out and multicolor display.



C8 Corvette Rear Brake Kit

Wilwood Disc Brakes, Camarillo, California, presents a Rear Big Brake Kit for Chevrolet Corvette C8 models. The system includes an electric parking brake (EPB) caliper with wiring harness for seamless integration to onboard systems. The new AERO4 rear kit with Lug-Drive dynamic-mount floating rotor complements the recently released Wilwood large front SX6R Lug-Drive C8 kits, both providing improved brake torque and increased thermal capacity.



Ferrari 296 GTB Slip-On Exhaust

Akrapovič, Horsham, Pennsylvania, presents its Ferrari 296 GTB Slip-On Race Line (Titanium) exhaust system with an available Stainless Steel Link Pipe Set to further improve the performance and sound of the track-focused exhaust system. The setup uses race-proven, high-grade titanium and greatly reduces backpressure, unlocking added performance with mandatory ECU remapping. Benefits include weight savings and a tailored sound using two valves. The included tailpipes are 3D-printed to ensure optimal fitment and aesthetic effect.

Ford Mustang Exhausts



AWE, Horsham, Pennsylvania, presents three new Exhaust Suites for Ford S650 Mustang Dark Horse and GT models. The Mustang Dark Horse Exhaust Suite is available as a valved SwitchPath exhaust or Track Edition and tailored specifically for the S650 platform. Delivering max gains of 8 hp and 8 pound-feet of torque at the wheels, it features slip-fit inlet adapters for factory header fitment while leaving an open 3-inch connection. SwitchPath retains full factory valve functionality from drive modes to programmable buttons and is made in the USA.



KIA EV6 GT Suspension Upgrade

KW automotive, Clovis, California, presents its KW V3 Coil-Over Suspension for the 585-hp electric crossover KIA EV6 GT. The established multivalve technology includes preset high-speed damping valves and adjustable low-speed damping valves for compression and rebound to create a sporty-yet-comfortable driving behavior. The parts certificate (TÜV parts approval) covers a continuously adjustable lowering of 20 to 45mm on both axles of the all-wheel drive electric SUV.



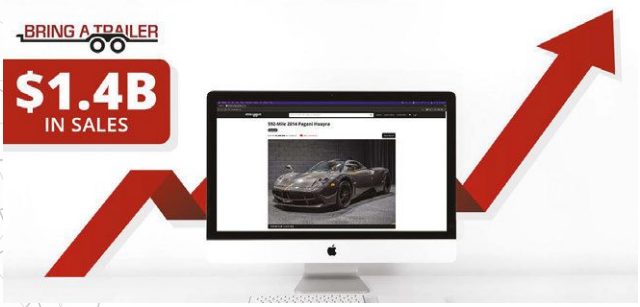
Jeep JK Overhead Switch Panel

AutoMeter, Sycamore, Illinois, presents a new Jeep JK Overhead Switch Panel with six switch cutouts that allows mounting of auxiliary switches up and out of the way. The panel comes in a black finish meant to match the stock interior and is a direct-fit replacement for the factory piece that doesn't require any cutting, drilling or modification to the vehicle. Available for all 2007-18 JK models and trim packages, each kit includes the windshield trim panel and hardware. ***TS***



CLASSICS RAP THE DIGITAL GAVEL

Online specialty auto auction company Bring a Trailer recaps a busy year.



If you've seen an increase in 20-year-old vehicles, muscle cars or even powersports projects coming through the bay doors recently, you're not alone. All were among the industry's trending classic auto transactions over the last year.

Automotive auction platform and enthusiast community Bring a Trailer (BaT) has revealed trends and highlights from the collector and enthusiast vehicle market, as observed across approximately 37,000 auctions in 2023. Among the findings was a notable surge in interest and values around early to mid-2000s vehicles, American sports cars and collectible motorcycles.

Online auctions remained strong, with BaT surpassing $1.4 billion in sales for the second straight year. The site also saw its highest volume of listings ever, with an average of between 700 and 800 auctions weekly, according to a recently released year-in-review report.

In fact, BaT celebrated its 100,000th auction in February 2023 and then took just another 10 months to surpass 132,000 auctions in December. The online sales community also continued to grow, and the site saw a 20% increase in registered members last year.

"Despite adjustments across the collector car marketplace, the Bring a Trailer community clearly demonstrated a sustained passion for collector and enthusiast vehicles in 2023," said Randy Nonnenberg, co-founder and president of Bring a Trailer. "We also saw increasing interest beyond four wheels, with motorcycles, parts and automobilia, and other categories. Perhaps most significant, though, is the continued commitment of our community to transparency and collective vetting. Those elements lead to positive outcomes for both sellers and buyers, and they remain the foundation of what we do."

BaT recapped some of the most noteworthy trends from the collector and enthusiast vehicle market in 2023:

TOP FIVE SALES BY PRICE IN 2023

Rare, well-presented and highly desirable vehicles continued to perform well on BaT. Last year saw the platform's first Pagani listing, which ultimately became the top sale by price for the year.

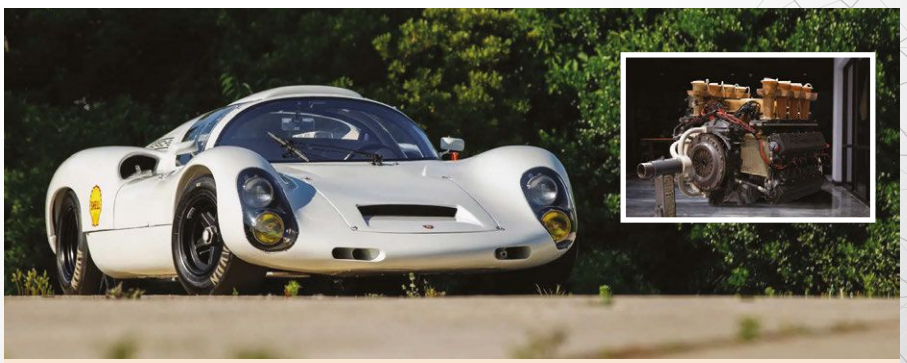
Three Porsches and a Ford GT rounded out the top five highest sales:

1. 2014 592-mile Pagani Huayra ($2.89 million)
2. 1967 Porsche 910 ($2.5 million)
3. 2020 84-mile Liquid Carbon Ford GT ($1.79 million)
4. 2005 601-mile Porsche Carrera GT ($1.78 million)
5. 2019 Porsche 935 ($1.62 million)

GERMAN & AMERICAN BRANDS LEAD ONLINE SALES

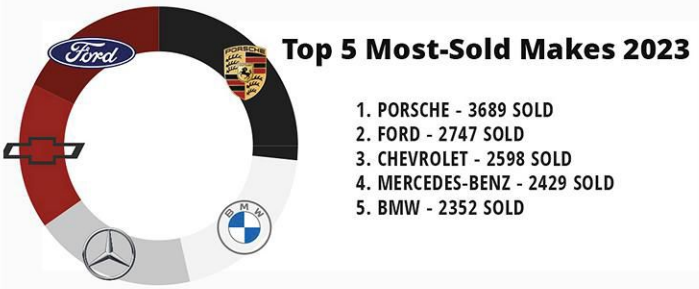
While American vehicles dominated the top five models sold, German and American marques were nearly split for the top makes sold on BaT in 2023.

Porsche (3,689 sales) led the way, followed by Ford (2,747) and Chevrolet (2,598). Mercedes-Benz (2,429) took the fourth spot, narrowly beating BMW (2,352) in fifth.



A 1967 Porsche 910 sold for $2.5 million last year.





BRING A TRAILER





Online auction community Bring a Trailer outlines trends and highlights from the collector and enthusiast vehicle market, based on approximately 37,000 auctions in 2023.

Among all vehicles listed on BaT in 2023, the Porsche 911 was the most popular model sold across all years and generations at 2,103 sales.

It was followed by other favorites including the Chevrolet Corvette (1,168 sales) and three Fords—Mustang (870), F-Series (402) and Bronco (374).

MOST POPULAR AUCTIONS OF 2023

The most popular auctions on BaT in 2023 demonstrate the broad interests of the collector/enthusiast community, the site reports. The listings—ranked by a combination of views, comments and bids–spanned supercars, recreational vehicles and automobilia.

The top five were:

- 1974 Ford C-750 Camelot Cruiser Motorhome w/Poloron Snowmobiles
- Slot Mods Porsche 917 Le Mans Slot Car Raceway
- 2002 Nissan Skyline GT-R M-Spec Nür
- 2021 Koenigsegg Regera
- 1990 Porsche 911 Carrera 2 Coupe by Singer

NEWER VEHICLES COMING OF AGE

The trend toward the modern classic continued in 2023, with vehicles from the early- and mid-2000s dominating auction listings.

In order of volume, the most listed model years on BaT in 2023 were: 2006, 2004, 2003, 2008, 2005, 2002, 2007, 1969, 1997 and 1967, the site reports.

While traditional classics, hot rods, pre-war cars and other categories remained popular among collectors, the trend shows a shift in what is considered "collectible," as more Gen X and millennial buyers enter the market to obtain cars from their youth.

TWO-WHEELED & SPECIALTY MOMENTUM CONTINUES

In addition to being the largest auction platform for collector and enthusiast cars, BaT has several growing specialty categories such as off-road vehicles, RVs and campers, and even vintage tractors, officials report.

The most popular is the motorcycle category, which features everything from rare early-1900s examples to vintage cruisers and modern superbikes. The category is one of the fastest-growing segments on BaT, jumping 45% between 2022 and 2023 alone.

COLLECTABILITY MOVES BEYOND THE VEHICLE

The BaT Parts and Automobilia category has also grown significantly over the past year, officials report. The section now houses 30 pages for engines, wheels, tires, bodywork, interior pieces and other components, as well as automobilia such as signs, tool kits, luggage, literature, artwork, timepieces and more.

Parts and Automobilia listings increased a whopping 124% in 2023 over the previous year, demonstrating strong interest in preservation and restoration in addition to an enduring passion for automotive history and culture. ***TS***



A 2014 Pagani Huayra with 592 miles was the top-selling BaT auction last year, rapping the gavel at $2.89 million.

Engine Build p. 26 / Engine Products p. 32

Building a Big-Block Chevy, Part IV

Rocker setup, water pump, crank balancer & more.

Build, text and photos by Mike Mavrigian

EDITOR'S NOTE: *This is the fourth installment of a multipart series highlighting the steps to building an old-school Chevrolet big-block performance engine. Part I appeared in the July 2023 issue of THE SHOP magazine, Part II in October 2023 and Part III in January 2024.*

PUSHROD LENGTH & ROCKER SETUP

As noted earlier, this cam provides a 4/7 swap firing order, which is 1-8-7-3-6-5-4-2 (swapping cylinders 4 and 7 from the OEM firing order of 1-8-4-3-6-5-7-2)

Our valvetrain system includes Harland-Sharp 1.7:1 Diamond Series aluminum roller rockers, Elgin Performance pushrods, Morel Black Mamba solid roller lifters, Dart rocker studs and Dart adjustable pushrod guide plates.

With the Morel solid roller Black Mamba lifters oiled and in place, we checked pushrod length. While OEM stock intake pushrod length is 8.275 inches and exhaust is 9.250 inches, Dart notes that intake pushrod length will likely require an additional 0.200-inch and exhaust will need another 0.250-inch. But, naturally, based on other potential build variables (deck height, gasket thickness, cam and lifters), lengths must be measured.



The Fluidampr balancer was smoothly drawn onto the crank snout with a 0.001-inch interference fit using our Moroso installer tool.

During measuring, an exhaust pushrod length of 9.450 inches provided a witness mark on the valve tip pretty close to center, but just a tad toward the outside (exhaust side). Adjusting to a length of 9.400 inches provided a very satisfactory center witness mark sweep of about 0.050-inch-wide on the exhaust valve tip, which made me happy.

However, the intake proved to be stubborn. Using a length of 8.450 inches, I was able to obtain a centered witness mark on the valve tip, but the sweep was wider than I would like, at about 0.096-inch. The end result: 9.400 inches for the exhaust and 8.450 inches for the intake, each with centered rocker-to-valve stem tips.

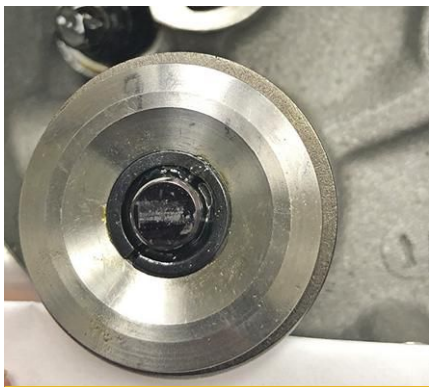
Prior to installation, I checked all pushrod oil passages for cleanliness with solvent and a pushrod oil hole brush.

During assembly, all pushrod ball-end tips were coated with Akerly-Childs Xtreme high pressure lube.

Our pushrods of choice were from Elgin's Pro Stock one-piece thick wall performance line, featuring 3/8-inch-diameter tubes, 5/16-inch ball ends and a hefty 0.137-inch wall thickness. These 4130 chromoly heavy wall pushrods feature hardened and carburized tubes with greater than 58 RC hardness.

The one-piece pushrods feature 120-degree ball ends to accommodate high lift cams, and are black oxide coated. Our intake pushrods are P/N PR-13845S and exhaust pushrods are PR-13940S.

The Harland Sharp aluminum roller rockers, its Diamond Series, feature a 1.7:1 ratio and 0.610-inch-diameter valve tip roller bearing with a bearing face width of 0.331-inch. The Diamond Series features chamfered corners, reducing weight by more than 100 grams without sacrificing strength.



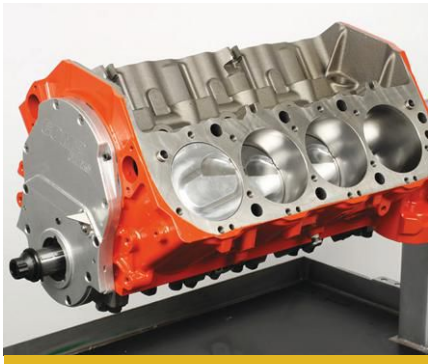
Nicely centered witness mark on an exhaust valve with 9.400-inch Elgin pushrod.

GUIDE PLATE ASSEMBLY

This setup required the use of pushrod guide plates. The Dart Pro 1 heads included



The long block is final-assembled.



Short block fitted with crank, pistons and rods.

adjustable two-piece guide plates, hinged at the center with socket head cap screws (SHCS) and severe-bite locking nuts. I'll get to that in a moment.

First, don't blindly start installing the rocker studs. The Dart kit provided two different lower thread lengths. While the upper threaded areas were all the same length, the lower 7/16-14 threads were 0.800-inch long for the intake locations and 1.300 inches long for the exhaust locations, so pay attention.

The exhaust rocker stud holes are blind, but the intake holes are open to intake port vacuum, so apply a thread sealant (Teflon pipe paste) to the stud lower threads.

Note that only one half features the Dart logo. When bolting the halves together, be aware that the side with the Dart logo always goes on top of the other half that does not have the logo. This applies to all of the two-piece guide plate assemblies.

Servicing the SHCS and nuts, you'll need a 3/8-inch combo wrench for the nut and a 5/32-inch male hex bit for the SHCS. When installing the SHCS pivot point screws and nuts, you'll quickly realize that the locking nuts begin to bite hard, perhaps giving you the impression that you're cross-threaded.

Obviously, make sure that you are not cross-threaded, but be aware that the nuts are designed to begin biting. That's normal.

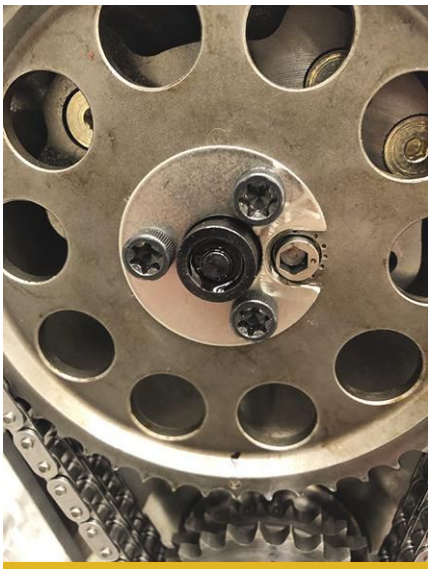
Initially tighten to a point where the plate halves are fairly snug together, but still being able to pivot the assembly with moderate hand effort. With the plates secured to the head with the rocker studs, the pushrods and rocker arms are installed. Closely examine the alignment of each rocker's roller bearing to its respective valve tip.

By using a brass drift and a hammer to gently strike the fulcrum point of the guide plates, you're able to move and fine-tune the rocker arm rollers to a proper center at the valve tips when viewed from the exhaust side of the head.

Once centered, the rocker studs are final-torqued to 55 pound-feet. This is no time to rush. After torquing, install the rockers again to verify alignment. If the rockers have moved, loosen the studs and start over.

Once you're happy with the alignment with the studs fully torqued, you can then fully snug (don't over-tighten to avoid breaking/stripping) the socket head cap screws/nuts at the fulcrum point (some builders prefer to tack weld the halves together).

After pre-soaking all rockers for 30 minutes in 30W oil (per Harlan Sharp's recommendation) and applying a dab of CMD lube to the valve tips, the rockers were installed with the supplied poly locks and cold valve lash was set at 0.020-inch.



In order to make the timing dots on the cam gear visible, I simply opened up the hole I previously drilled for the Cloyes eccentric adjuster bushing.

TIMING COVER

Our three-piece COMP timing cover features an aluminum baseplate that secures to the block with a stock-style gasket and



Using the thrust button and an assortment of shims behind the button, we finalized cam thrust at 0.007-inch.

DSR PERFORMANCE LAUNCHES NEW LINE OF SCHUMACHER CRATE ENGINES

DSR Performance, founded as the performance aftermarket division of Don Schumacher Racing, introduces the all-new Schumacher Crate Engine Series.

The DSR Performance-crafted GEN III engines offer increased horsepower, enhanced durability and ease of use for restomod and modern performance applications. The crate engine line is engineered, machined and built in-house at DSR Performance's headquarters in Brownsburg, Indiana.

The new line of Schumacher crate engines launches with the Schumacher SC, a supercharged 426-ci GEN III crate engine that produces between 1,200-1,300 hp (subject to calibration) and is 93 octane pump gas and E85 fuel friendly; and the Shumacher LB, the long block version of the SC that includes oil pan to valve cover.

"We set out to develop an engine line that was fundamentally better than any product on the market and carry the weight of the coveted Schumacher name. The team has successfully created a new standard in the industry that delivers an incredible driving experience," says Chad Osier, president, DSR Performance.

The Schumacher SC and Schumacher LB are built to the following specs:

- 426-ci GEN III | 10:1 comp. ratio
- Supercharged new-gen 3.0L Whipple
- Custom-ground Bullet cam
- Custom forged CP Carrillo pistons
- Total Seal performance rings
- Callies forged crank & H-beam rods
- Billet valve covers by DSR Performance
- Billet main caps
- Individually flowed 1,200cc injectors
- Rocker shaft stabilizers
- Manton Performance push rods



The Schumacher SC crate engine produces between 1,200-1,300 hp and is 93 octane pump gas and E85 fuel friendly.

- ARP head studs, main studs, front cover & valve cover fasteners



Our timing cover is COMP Cam's three-piece aluminum kit. This features a baseplate that attaches to the block, with a two-piece (top and bottom) cover setup.

a pair of 1/4-20 SHCS. The cover panels then mount to the baseplate, with a series of 1/4-20 flat-top screws that pass through the baseplate into the block (the bottom two screws thread into the baseplate).

The top and lower cover plates require a small bead of RTV (I chose Permatex Optimum Max Flex) for sealing against the baseplate and where the upper and lower plates mate and overlap. Be sure to lightly lube the lower plate's seal (already installed by COMP) with engine oil prior to installation of the crank balancer.

The upper cover plate features a 1/8-inch NPT hole for measuring cam thrust at the cam gear during assembly and adjustment of cam endplay. This is sealed with a 1/8-inch NPT plug.



The COMP three-piece timing cover kit includes a thrust button bearing that seats into the cam gear center hole. The round plate captures the button.

The three-piece design, with easily removable upper plate, allows for future cam advance/retard adjustment without the need to remove the entire cover assembly. All timing cover screws were snugged to 106 pound-inches.

While the COMP timing cover kit includes a somewhat adjustable sheet metal timing pointer, I opted for an Engine Pro black anodized aluminum adjustable pointer. Due to the added thickness of the timing cover, a pair of 1/4-20-by-2-3/8-inch stainless socket head cap screws were required to mount the pointer.

Also, since the pointer is designed to mount using an OEM timing cover, and to obtain an even mount, the slightly thicker lower COMP cover required machining 0.190-inch of material from the timing pointer body's lower mounting boss. The clearance between the timing pointer and balancer was close but cleared by 0.020-inch.

WATER PUMP



I tend to use Meziere electric water pumps whenever possible.

The Meziere electric water pump P/N WP-300 was mounted using four

3/8-16-by-1.125-inch stainless socket head cap screws and AN washers. Each side of the gaskets were lightly coated with Permatex Ultra Flex RTV, with all four screws snugged to Meziere's spec of 25 pound-feet, (initially at 15 pound-feet then final at 25, in a crisscross pattern).

The pump clears even the thick COMP timing cover by a more-than-healthy 0.600-inch. The pump delivers 55 gallons per minute.

FUEL PUMP BLOCK-OFF

We decided to run an electric fuel pump, so I simply installed an aluminum block-off plate, sealed with a Fel-Pro gasket and a light bead of Permatex Optimum Max Flex RTV on each side of the gasket, using a pair of 3/8-16-by-3/4-inch stainless button head screws, with a dab of medium-strength threadlocker and snugged to 18 pound-feet.

CRANK BALANCER

Our crank harmonic balancer is a viscous Fluidampr P/N 800101, designed for internal balance applications. Features include an 8-inch-diameter steel body with black zinc finish, 1.5990-inch bore diameter and a single 3/16-inch keyway.

Engraved markings are provided at 50 degrees BTDC to 10 degrees ATDC, with additional markings at 90, 180 and 270 degrees.

After lubing the snout and bore with anti-seize, the damper was carefully drawn onto the crank snout using our Moroso balancer installer. The SCAT crank snout O.D. of 1.600-inches provided an interference fit of 0.001-inch. The crank snout length from its face to the face of the crank gear was 2.100 inches.

The Fluidampr hub (front washer face to rear of hub) is 2.175 inches. When installed fully, the crank snout sits 0.075-inch behind the hub's washer face. The ARP crank bolt was then torqued to 100 pound-feet.

Note: the Fluidampr front threaded holes that accept a pulley (or crank trigger wheel) are 3/8-24 thread size (fine thread).

IGNITION

Since we're running an MSD 8620 crank trigger setup, the MSD distributor needed to have its advance locked-out. This is a simple procedure.

Remove the cap and rotor and remove the two advance weight springs and weights. Drive the roll pin out of the gear and remove the gear.

Raise the shaft up about 2 inches and remove the small lock nut and bushing from the threaded lock pin using a 9mm open-end wrench. Rotate the shaft 180 degrees and insert the lock pin into the small hole in the baseplate and reinstall the lock nut and its washer, being careful not to over-tighten the nut.

Reinstall the gear and roll pin, rotor and cap. It was an easy task that only took about 20 minutes.

Once the 8-inch Fluidampr harmonic



Each pushrod is black oxide coated and neatly laser etched for length to make them easily identifiable.



Our one-piece Pro Stock pushrods feature an oil-through passage and 3/8-inch tube diameter, with 5/16-inch machined 210-degree ball ends to accommodate extreme lift cams.



The Dart rocker studs feature different lengths for intake and exhaust.



When assembling the two-piece guide plate halves, the half with the Dart logo is placed on top of the half that does not feature the logo.



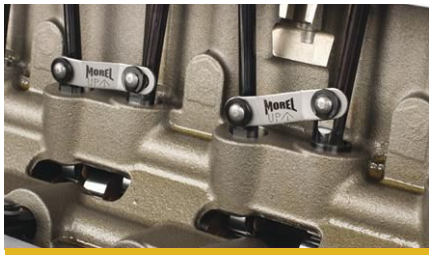
Dart's two-piece adjustable guide plates are connected by a socket head cap screw and locking nut.



With rocker studs snug but not torqued, the guide plate pivot point is nudged using a drift and hammer to gently align the rocker roller bearing to the valve.



The Morel Black Mamba 0.842-inch solid rollers are 0.300-inch taller than Gen IV lifters, to accommodate Dart's taller lifter bores.



Lightly oiled lifters drop in like butter. There was plenty of clearance between the links and the block when lifters were on the cam base circle.



A view of the lifter valley. During initial block prep I eliminated small casting flashings at the drain-back openings and smoothed out the edges to help oil drain-back.

balancer was installed, it was time for the MSD crank trigger kit. The mounting bracket secured to the right front of the block with a pair of 7/16-14 SHCS with two red aluminum spacers between the bracket and block per screw.

The 7/16-inch SHCS supplied were 2 inches long, but in our case, shorter screws were required (7/16-14-by-1-1/8-inch). Using the bracket and spacers provided, this allowed perfect alignment of the pickup to the trigger wheel, but the screws were too long for our block.

The crank trigger wheel centers onto the damper (a slight male lip on the rear of the wheel precisely centers into the damper's hub hole). With the adjustable pickup height, I placed the pickup roughly in the middle of its adjustment range.

With that location set, I placed the trigger wheel in a clock position where one of the magnets aligned with the pickup tip, with No. 1 cylinder on compression stroke and the timing pointer set at 32 degrees advanced. The pickup was then adjusted to aim directly at one of the magnets.

The kit included 3/8-16-by-1-1/4-inch wheel-to-balancer mounting bolts; however, the Fluidampr requires 3/8-24 thread so I pulled grade 8 3/8-24-by-1-1/4-inch hex bolts and flat washers from my stock to accommodate.

With the bolts treated to medium threadlocker, all were snugged to 30 pound-feet. The pickup air gap was adjusted with 0.062-inch clearance between the pickup tip and the wheel magnet.

While I'm usually an NGK guy, I opted to follow Dart's recommendation, choosing a set of Autolite 3924 plugs, gapped at 0.045-inch. With high-temp anti-seize applied to the threads, the gasketed plugs were tightened to 15 pound-feet.

COMPRESSION RATIO

Number of cylinders	8
Bore	4.500 in.
Stroke	4.250 in.
Rod length	6.385 in.
Head gasket bore	4.570 in.
Head gasket thickness	0.040 in.
Deck clearance	0.014 in.
Chamber volume	121cc
Piston dome	-10cc
Static compression	9.861:1

TORQUE SPECS

Main cap bolts (Dart spec; with anti-friction lube).	100 lb-ft
Connecting rod bolts (ARP 2000 7/16 x 1.600; w/lube)	70 lb-ft
Cylinder head stud nuts (w/lube)	70 lb-ft
Cam gear to cam bolts	25 lb-ft
Timing cover bolts	106 lb-in
Water pump bolts	25 lb-ft
Oil filter adapter bolts	25 lb-ft
Intake manifold upper to lower bolts	18 lb-ft
Intake manifold to head (35 per Dart; 25 per Weiand)	30 lb-ft
Crank snout bolt	85 lb-ft
Rocker arm studs	55 lb-ft
Valve cover bolts	110 lb-in
Oil pump to rear main cap stud nut	65 lb-ft
Oil pan stud nuts	12 lb-ft (5/16) & 106 lb-in (1/4)
Water neck to manifold	25 lb-ft
Carb to manifold	80 lb-in
Fuel pump block-off plate screws	15-18 lb-ft
MSD crank trigger wheel to balancer	25-30 lb-ft
MSD crank trigger pickup bracket to block	25-30 lb-ft
Spark plugs	15 lb-ft



Our Harland Sharp aluminum roller rockers are from the Ohio firm's Diamond Series, including locking adjustment nuts.

Due to the open-chamber head design (121cc), our calculated compression ratio was 9.86:1. While certainly not an all-out high-compression race application, this streetable ratio still allows for ample horsepower and torque for a street/strip application with the use of readily available pump gas.



Here's the left bank after all guide plates were adjusted to provide rocker to valve tip alignment.



Valve lash was set at 0.020-inch, per the COMP Cam's spec card.



Using our selected pushrod lengths, we had no clearance issues between guide plates and rocker arms at valve-closed positions.

INTAKE MANIFOLD/CARBS/LINKAGE

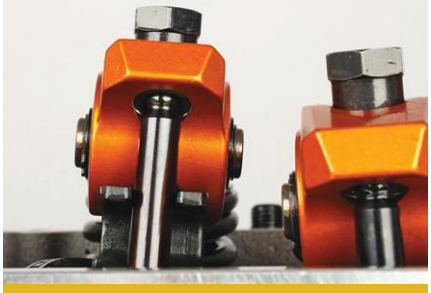
The Weiand P/N 1985 Hi-Ram dual-quad intake manifold features a separate upper/lower design. The upper secures to the lower with supplied gaskets and a total of four 5/16-18 screws, to be coated with Loctite Pro-Lock 1 271 or equivalent, at 18-20 pound-feet.

During test-fitting, the supplied SHCS featured a length of 1-1/4 inches, which only leaves about 3/8-inch of thread to engage into the female threaded holes. While this may be sufficient engagement, I found it very difficult to access the socket heads due to access.

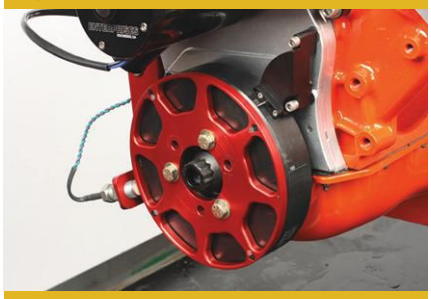
I opted to swap the bolts with a set of grade 8 5/16-18-by-1-1/2-inch hex head screws (with split lock washers), which allowed me to use a short 1/2-inch socket wrench and a 1/4-inch drive U-joint and 1/4-inch drive extension.



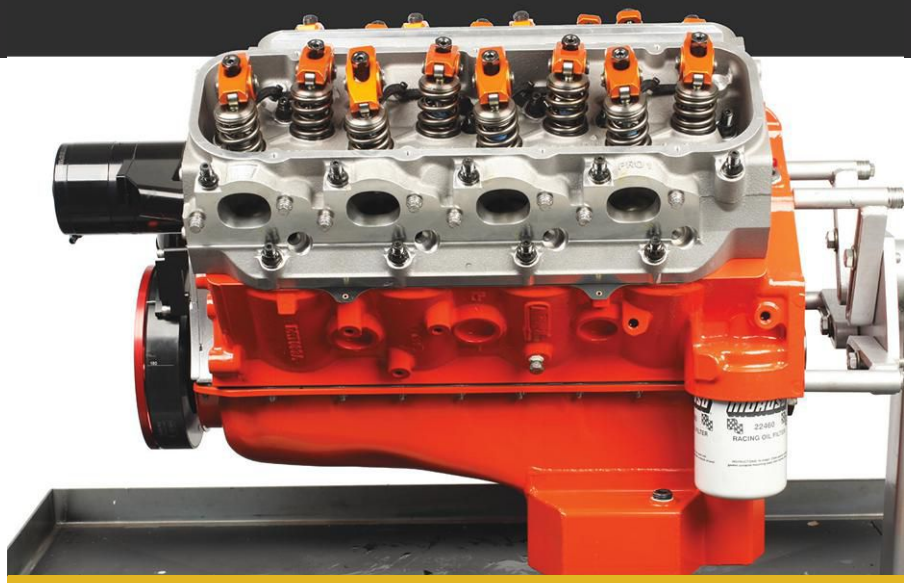
Example of a properly centered rocker to valve tip after guide plate adjustment.



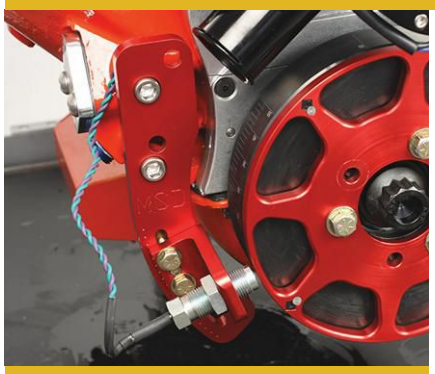
The Harland Sharp roller rocker cups are designed to accommodate 5/16-inch pushrod tips (provided by our 3/8-inch Elgin one-piece pushrods).



For accurate timing, an MSD crank trigger kit P/N 8620 was installed.



Left side view. The Dart Pro 1 heads feature 1.650-by-1.800-inch exhaust ports that are raised 0.300-inch. The exhaust bolt pattern is standard BBC.



The MSD crank trigger pickup is mounted using the kit's brackets.

The slightly longer thread length provided almost 1/2-inch of thread engagement. The final torque was set at 18 pound-feet.

The intake is secured to the heads using ARP intake bolt kit 435-2102 and sealed with Fel-Pro port gaskets. Rather than using problem-prone rubber end rail seals, the front and rear rails are sealed with a bead of Permatex The Right Stuff RTV.

A small bead of Permatex Optimum Max Flex was applied to the Fel-Pro gaskets around each water port and the intake ports. Since the manifold bolt holes in the heads are open to the lifter valley, the ARP 3/8-inch bolt threads were coated with Teflon pipe compound and initially torqued to 10 pound-feet, then 15, with a final of 30 pound-feet. (Dart calls for 30 and Weiand calls for 25, so I split the difference.)

Due to limited access of a couple of bolts, a 2-inch torque wrench extension was required. Adjusting my 14-inch-long torque wrench setting to 26 pound-feet achieved 30 pound-feet of torque value. (See previous articles for the formula for calculating torque when using extensions.)

Note that the Dart heads are not drilled and tapped for the four manifold bolt locations at the center of each pair of intake runners, so only 12 of the 16 bolts in the kit were used.

Also note that I applied masking tape at the front and rear rail areas of both the block and manifold. Any RTV that protruded out was easily wiped off. After removing the tape, no excess RTV was left on the exposed surfaces.

The Holley Ultra 950-cfm carbs were mounted with the aid of 1-inch spacers (necessary for the rear carb throttle linkage to clear the roof of the intake manifold) and 2.7-inch-long ARP stainless carb studs/washers and nuts. I love the bull-nosed ARP studs, as they make it easy to drop the nuts on and engage the fine threads.

A Weiand dual-carb linkage kit was mounted. The kit features two support brackets that stabilize the linkage and mount to the front left carb studs (viewing the sideways-mounted carbs on the engine from above, driver side studs on the side of the carbs that face forward). The bracket ears that attach to the carb studs are 0.260-inch thick, requiring 3.2-inch-long ARP carb studs (P/N 400-2412) to accommodate the two brackets.

Another fastener length changed to mount the linkage kit. The stand-off base for the linkage kit mounts to the manifold, sharing the two left-side center bolt locations. Due to the thickness of the base mount, the two original 1.250-inch intake bolts were swapped out for a pair of 2.750-inch bolts.

The Holley 950-cfm carbs were mounted using ARP stainless carb studs at an overall length of 2.7 inches (in order to accommodate the 1-inch-thick carb spacers), in addition to the aforementioned 3.2-inch studs required for the throttle linkage supports.

Next time we'll wrap things up with the stud girdles, carbs and other final touches. ***TS***



MIKE MAVRIGIAN *owns and operates Birchwood Automotive in Creston, Ohio, where he builds custom engines and street rods and performs vehicle restorations. He has written thousands of technical articles as well as nine books on automotive technology during the past 30 years.*

Mike can be reached at (330) 435-6347 or birchwdag@frontier.com. Visit Birchwood's website at birchwoodautomotive.com.



RFI Blocker Line Sleeve & Tape Products

Design Engineering Inc. (DEI), Avon Lake, Ohio, presents new Radio Frequency Interference (RFI) Shield products that reduce interference from radio and electromagnetic waves to ignition systems and high-voltage wires. The products are available as a split sleeve or tape. The RFI Shield Split Sleeve wraps around wires without having to disconnect them and includes a 17.5-inch grounding strap. Sleeves are available in 3-foot lengths in 1/2- or 1-inch diameters. RFI Shield Tape comes in a 1-inch width and 25-foot length, and also includes grounding strap.

Audi 2.5L Turbo Inlet

REVO, Murrietta California, presents a Turbo Inlet Pipe for 2017-21 Audi RS 2.5L applications that reduces restriction and heat for increased performance and drivability. Designed to eliminate airflow restrictions caused by the factory inlet, the pipe features a larger passageway with smooth transitions and tapering, and a precision-machined turbo collar that matches the stock turbo inlet. Each turbo inlet pipe is finished with a Zircotec hybrid ceramic/metal coating that provides added heat protection and resists thermal absorption.





High-Performance Chevy/GM LS Serpentine Pulley Kit

Speedmaster, introduces a high-performance Chevy/GM LS Serpentine Pulley Kit. The LS high-mount serpentine kit comes with a spring-loaded tensioner equipped with a polished cover. Designed to ensure proper tension during hard acceleration and deceleration, the kit mounts to the GM Type-II power steering pump low on the driver's side and puts a Sanden A/C compressor on the passenger side. It places the alternator on the driver's side above the power steering pump.

Conical Valve Springs for LS & Hemi

Elgin Industries, Elgin, Illinois, introduces premium PRO-STOCK Conical Valve Springs engineered for General Motors LS Series and Chrysler Hemi performance engines. The new PRO-STOCK springs feature a next-generation conical design that ensures superior performance and durability while accommodating the peak valvetrain rpm associated with high-performance camshafts. The conical springs help stabilize valvetrain dynamics and provide superior damping without wear, interference contact or other concerns.





Fuel Additive

Hot Shot's Secret, Mt. Gilead, Ohio, presents Adrenaline Racing Top Lube (RTL) Fuel Additive. Designed with input from racers, engine builders and teams, the additive blends 100% with all race fuels to greatly reduce wear on valves and valve seats and provide protection for pistons, rings and cylinders. While safe for use in all engines including those with O2 sensors and emissions systems, it is specifically formulated for dry, low-lubricity race fuel that can cause unnecessary wear and scuffing to upper cylinders or failure of fuel system components.



Exhaust Wrap

Heatshield Products, Escondido, California, presents Lava Exhaust Wrap. Designed to reduce under-hood heat from exhaust headers, tubes and turbocharger piping while improving performance, the wrap is made from specially formulated volcanic rock-based fibers and rated for 1,200 degrees continuous heat and up to 2,000 degrees intermittent heat. The wrap can be removed and reinstalled if necessary while maintaining flexibility without brittleness, and is made in the USA. It is available in 1-, 2- and 4-inch widths and 15-, 25-, 50- and 100-foot rolls.



HTC Corvette Supercharger System

ProCharger, Lenexa, Kansas, presents a Supercharger System for 2020-23 Chevrolet Corvette C8 HTC (hardtop convertible) models with LT2 engines. Delivering 45% more power over stock and capable of 900-plus-hp on modified applications, the complete turnkey system does not require engine or transmission removal and is fully reversible and removable. It offers factory drivability and durability.

Viper Dry Sump System



Aviaid Oil Systems, Chatsworth, California, presents a Compact Dry Sump System for the latest generations (3-4-5) of the Viper V-10 engine. The new Viper package is centered on a seven-stage Series 1 pump that features five oil pan scavenging sections, one pressure section and one section for scavenging a turbocharger. It can be configured with as many sections as desired, while a fuel pump can be driven off the back of the pump. A specially engineered pan is fabricated from 6061-T6 billet aluminum. The pump is driven by an HTD belt.



Break-In 30W Motor Oil

TriboDyn Lubricants, Mooresville, North Carolina, presents TriboDyn Break-In 30W Motor Oil, featuring an exclusive formula designed to provide critical protection to high-performance engines during the break-in period. The oil utilizes conventional petroleum base stocks for compatibility on engine seals to help encourage seals and gaskets to operate as designed. The proprietary blend of high-quality performance additives promotes engine cleanliness and low oil volatility.



Sandwich Adapters

Derale Performance, Santa Fe Springs, California, presents Sandwich Adapters, also known as Oil Filter Sandwich Plates or Oil Cooler Sandwich Adapters. Designed to provide a convenient and efficient way to install an oil cooler or other auxiliary oil system components in automotive applications, the adapters typically go between the engine block and the oil filter. Available in various sizes, they feature multiple ports for easy integration of additional oil lines and fittings, providing oil ports for oil coolers, oil temperature or pressure sensors, or other accessories.

SBC Top End Kit



Air Flow Research (AFR), Valencia, California, presents its new Enforcer Series Top End Kits for small-block Chevrolet engines. The bolt-on power kits include premium AFR components and are available in straight or angled spark plug styles using Enforcer Series 195cc cylinder heads paired with a low-profile Enforcer dual-plane intake manifold for increased horsepower and torque.



GM Diesel Pickup Intake Kits

Cold Air Inductions, Memphis, Michigan, offers Air Intake Kits for 2017-19 GMC Sierra and Chevrolet Silverado 6.6L Duramax diesel trucks. Engineered and manufactured in the USA, the kits reduce air restrictions and increase engine power and efficiency. They are made from metal, with an insulated airbox and thermally coated intake tube to keep the air coming into the engine cool and oxygen-rich. The systems boost wheel horsepower and torque, improve throttle response and deliver a pleasing sound. ***TS***



The annual Consumer Electronics Show (CES) in Las Vegas offers the chance for automakers to show off their latest and greatest tech. (Photo courtesy Consumer Technology Association)

2024 CES ROUNDUP

Auto technology is best experienced in person.

By Brett Solomon

Unfortunately, it seems the popularity of in-person auto shows is beginning to wane. Stellantis (Chrysler, Dodge, Jeep, Ram and Alfa Romeo) recently announced it is going to pull out of live events and spend the money elsewhere.

But new vehicle technology needs to be experienced, and sometimes the dealership is not the ideal location to make that happen.

The annual Consumer Electronics Show (CES) in Vegas offers the chance for automakers to show off their latest and greatest tech. Shop owners can take advantage of what CES 2024 had to offer by understanding what's new and what's next, and how to incorporate it into today's vehicles.

TALKING TIRES

Tires have never had the ability to talk to suspension systems—until now. Suspension system sensors have been integrated into vehicles for years, but no one had figured out how to make the tires part of the equation.

ABS and yaw sensors can dramatically improve braking and skidding out, but Goodyear and ZF (the transmission folks) teamed up to bring some next-level technology to new vehicles that can be retrofitted to older cars and trucks as well.

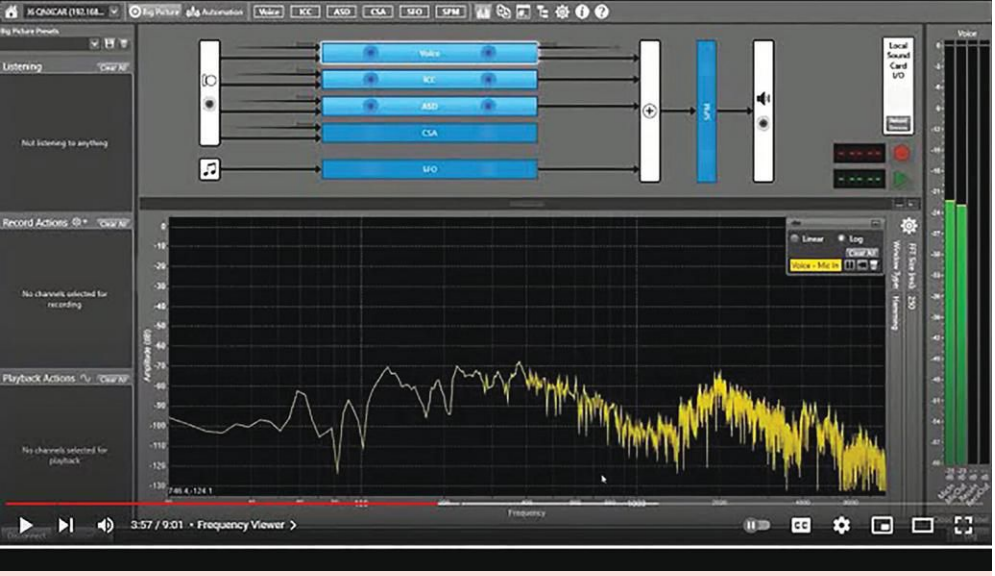
The system begins with Goodyear's SightLine that incorporates sensors into the tire. These sensors can monitor low grip, aquaplaning, tread life and, of course, tire pressure. Imagine TPMS taken to the next level.

For automakers, SightLine can offer even more robust data such as friction estimation. Knowing the grip potential of tires on a given road surface can improve the performance of automated emergency braking systems or adaptive cruise control systems.

When the Goodyear technology is brought into ZF's software suite called cubiX, it can coordinate vehicle dynamics and NVH (noise, vibration, harshness) into



Goodyear and ZF introduced technology that integrates the tires into a smart suspension system.



BlackBerry's QNX Sound technology consolidates all audio and acoustic functions within a vehicle's main software stack.

the equation. The suspension can actually help reduce tire noise when the vehicle is set to comfort mode.

"Goodyear SightLine will deepen our connection to the road and expand the scope and value of cubiX by supporting the era of software-defined vehicles," predicts Martin Fischer of ZF. "By joining our ecosystems, our customers will unlock a range of possibilities to customize and optimize their solutions in both vehicle motion and tire intelligence."

For example, on a very rainy night the SightLine sensors are on alert for deep puddles. If they find one, the system transmits the data to the ZF cubiX that, in turn, instructs the chassis actuators to apply corrective measures to stabilize the vehicle.

"Tires are the only part of the vehicle that touch the road and by digitizing this connection and equipping vehicle control actuators with critical insights, we can help optimize vehicle performance and safety," says Chris Helsel, SVP of Goodyear. "This collaboration with ZF is a great way to demonstrate what tire intelligence, actionable insights and elite software applications can do for mobility."

BLACKBERRY SOUND

When most folks think of BlackBerry, they think of the hard-keyed precursor to the iPhone. But that same company has been quietly working in the background of the automotive space, creating effective software suites.

When Ford had a problem with its first SYNC system designed by Microsoft, it was BlackBerry that created SYNC 3. It worked with much greater reliability than the original.

Now, to help keep things working correctly in new cars, the company has come up with QNX Sound. It enables automakers to consolidate all audio and acoustic functions within the main software stack of the software-defined vehicle architecture.

According to BlackBerry, this includes a complete library of automotive acoustics functional modules for smartphones, safety alerting, noise reduction, sound enhancement and media playback.

"In the software-defined vehicle age, audio becomes a new playing field for innovation and differentiation. QNX Sound is the ultimate digital audio platform for the automotive industry and the most comprehensive foundation available for innovation," says John Wall, SVP of BlackBerry. "Through it, we enable automakers to explore new business opportunities and exciting collaborations that will truly appeal to and excite the end user."

For the aftermarket, this may complicate and simplify things at the same time. Because everything is integrated, an aftermarket retailer would want to have navigation prompts and ADAS alerts broadcasted through aftermarket speakers. So, knowledge of OEM integration and tuning will be key.

High-end aftermarket DSPs (such as those from JL Audio, AudioControl or Mosconi) that can take speaker-level inputs will be able to capture all of the audio information being broadcast from the infotainment unit and then send it on to aftermarket electronics.

Of course, one of the goals of this architecture is the ability of the automaker to sell the end user an upgraded sound system as a monthly fee. The aftermarket will be able to bypass this using our knowledge of DSPs and getting signals from the speaker leads.

ALPINE'S ALL-IN-ONE TESLA SOLUTION

No doubt about it, Tesla has been on a roll, cranking out Model 3 and Model Y vehicles. Yet, some aftermarket shops are still leery about upgrading the factory sound systems.

To help change that, Alpine Electronics has come up with a solution that takes away much of the guesswork.

"Alpine is proud to be the first aftermarket car audio manufacturer to provide a complete sound system solution that's truly designed for the Tesla," says Gregg Thomas, national sales director. "As the auto industry continues to trend toward electric vehicles, Alpine will continue to invest in premium solutions catered to the EV driver."

A vehicle-specific harness makes it a snap to integrate, and the system features 1,200 watts of RMS power with Alpine amplification, matched Alpine Blue Line speakers, a sealed 10-inch subwoofer for the trunk, and a 12-channel DSP that is pre-tuned for the Tesla's interior.

The system will be available in six different applications designed to fit certain Model 3 and Model Y vehicles. Alpine



Alpine introduced a complete sound system solution designed for Tesla models.

2024 CES ROUNDUP



Newcomer EV manufacturer VinFast was at CES 2024 with two very cool vehicles—the VF Wild pickup and VF3 small SUV.

noted the efficient amplifier uses less than one mile of range per hour, even when played at full volume.

EV OPPORTUNITIES

Newcomer EV manufacturer VinFast from Vietnam was at CES 2024 with two very cool vehicles hoping to prove their worth in the real world. They included the VF3 small SUV that looks a little bit like the foreign market Suzuki Jimny, and an electric pickup called the VF Wild.

VinFast nailed the styling elements, but it's been reported the company's first U.S. vehicles had some issues that needed to be addressed with software updates. Looking at them, the models might prove to be perfect candidates for quick trips, making them ripe for aftermarket upgrades.

The VF3 features a 10-inch-screen infotainment system fitted with Android Auto and Apple CarPlay. Full folding second-row seats allow for the expansion of cargo space, making the car ready for spontaneous adventures.

"With the global launch of the VF3, we are pleased to introduce a new electric car in our range. More importantly, we are providing a new companion for a generation of young drivers who value practicality alongside personality," said Tran Mai Hoa of VinFast. "The VF3 aims to un-bound the imagination of urban mobility that is not only sustainable but also accessible for everyone."

Meanwhile, the VF Wild midsize pickup knows a pretty cool party trick. The midgate can be power-operated for longer



items. When the portal is opened, the bed length expands from 5 feet to 8 feet. The rear seats then fold down automatically providing what the manufacturer said is the largest bed in the midsize segment.

The design also integrates a panoramic glass roof and digital side mirrors to improve aerodynamics.

HONDA'S WILD EVS

Honda debuted two very out-there concept EVs at CES 2024 called the Saloon and Space Hub underneath the company's new "0" (Zero) umbrella, for zero emissions.

Currently, Honda is offering the Prologue all-electric SUV that shares the underpinnings of the Chevy Blazer EV. The two new vehicles use fewer GM shared components.

The Saloon is slated to come to America in 2026 and seems to be a good customization candidate. Sitting on a dedicated EV platform, it uses new steer-by-wire and motion control management systems. There is also a posture control assistant that comes from Honda's robotics division.

Meanwhile, the van-like Space Hub should thrive when autonomous driving becomes a reality. It features a big cabin with extended glass windows and transparent curtains.

According to Honda, the Space-Hub offers a flexible space that immediately accommodates a variety of passengers, becoming a "hub" that connects people to each other and the outside world.

BIGGER IS BETTER

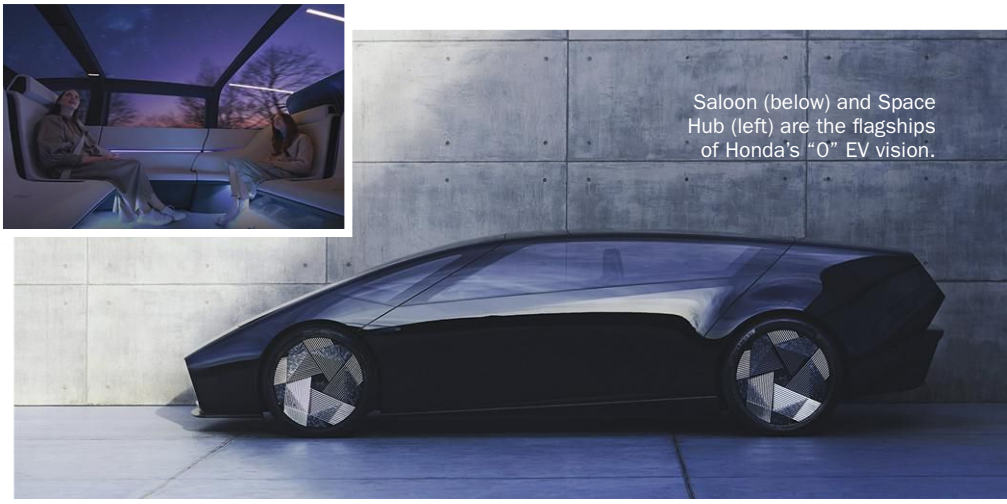


LG Electronics unveiled what it calls the largest monitor ever designed for a car.

LG Electronics was at CES 2024 with what it called the largest monitor ever designed for a car. The 57-inch pillar-to-pillar monster covers the entire dashboard from the driver's seat to the front passenger seat.

It has been tested for the harsh automotive environment and is purported to have excellent touch responsiveness. The unit has a slight curve to it that can be specified by the OEM automaker.

With all that screen real estate, LG hopes



Saloon (below) and Space Hub (left) are the flagships of Honda's "0" EV vision.

that any information the driver wants can be displayed, and then the unit can even be used for drivers to attend video conferences while the vehicle is driving autonomously. Looks like highway Zoom meetings are in our future!

AUTOMATIC VALET PARKING

Current Hyundai and Genesis vehicles can already be controlled via the key fob to back into or out of tight parking spaces and garages. Tesla vehicles have been able to do a cool party trick that can summon the vehicle from across a parking lot.

Now, BMW and partner Valeo want to take that type of tech to the next level with teleoperated valet parking that will lead to automatic valet parking.

Here's how it works—the customer leaves the vehicle at a defined drop off point. From there, a valet working remotely searches for a parking space, performs the necessary maneuvers to enter the space and can return the car to the pick-up point.

There are still questions that need to be answered on liability factors, but imagine being able to jump out at the mall and have a remote driver take over and park the car.

CES attendees were able to try out the remote control system at the show. It uses live camera images to navigate.

Possible areas of application for this technology in the future could include parking for events and airports.

Some of this information originally appeared on theshopmag.com. Visit today and sign up for the free daily eNewsletter. **TS**



A new BMW system would allow a remote valet to auto-park a vehicle left at a drop-off zone at a mall, arena, stadium or airport.



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

BEING **COLD** SUCKS!
KEEP YOUR CUSTOMER WARM.



Restyling
AFTERMARKET ACCESSORIES

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Keep inventory on hand and educate consumers about their good, better and best options. (Photo courtesy Warn Industries)

GIVE 'EM THE Hook

Connecting with the winch & recovery gear market

By Jef White

The winch and recovery gear market continues to thrive as overlanders, off-roaders and rock crawlers of all abilities head to the hills. For shops not yet taking advantage of these opportunities, now's the time to start making connections.

A need to understand pulling requirements, vehicle limitations and safe recovery procedures make this a market where consumers turn to professionals for guidance and expertise. Become the local winch expert by offering specific products and packages geared toward responsible, successful extractions.

Suppliers are here to help with info on trends, hot products and sales techniques to help you give truck, Jeep and 4x4 enthusiasts the hook.

IMPORTANT CHOICES

If your shop doesn't currently offer winches and recovery gear, now may be the time to start.

"Growth of the overland category is getting more people into vehicles that can accept a winch. Pair that with the growing UTV market and there are new customers joining every day," says Cameron Quiroz, southwestern regional sales manager for Westin Automotive/Superwinch.

The popularity of off-road vehicles has spurred growth in the winch market, meaning brand and product knowledge are essential for aftermarket shops.



FRIENDS DON'T LET FRIENDS GET STUCK

REFLEX 2.0

The reimagined Reflex 2.0 is the next generation of winches with additional features that offer the power and performance needed to overcome challenges on the trail or in the work environment. Upgraded line speeds, lower amp draw, a load indicator light, an automatic braking system, and an LED auxiliary light create a feature packed partner that you can depend on for reliable performance. Don't let the terrain limit your adventures. Whether you're pushing the limits or just exploring new territory, rely on TrailFX to get you home.

LBS Available in two weight capacities and two rope styles

Lifetime warranty on mechanical parts and a 6-year warranty on electrical parts

TRAILFX®

Exclusively distributed by Keystone Automotive Operations, Inc.

SCAN HERE to learn more!

GIVE 'EM THE Hook

WINCH PRODUCTS



Manufacturers and resellers must be aware of different customers' needs and economic situations. (Photo courtesy Warn Industries)

■ **HOT PRODUCTS:** 9,500- and 12,000-Pound Winches with Synthetic Rope
■ **FEATURES & BENEFITS:**
Can be bundled with our winch bumpers; Monster Winch designed in Australia for military, mining and recreational use; robust 5.5-hp motor; high-strength alloys and ultra-slick low-friction materials for added durability and heat reduction.

Ironman 4x4 America
Chris Miller
VP of Retail

■ **HOT PRODUCTS:**
Mission Series Winches
■ **FEATURES & BENEFITS:**
Robust drum designed for heavy-duty applications with thick side plates for durability; convenient pass-through feature for securing with ropes; drum equipped with a low-friction brake system for efficient operation with minimal power consumption.

Mile Marker Industries
Walter McMillen
Product Support Technician

■ **HOT PRODUCTS:**
SCAR Electronic Automotive Winches
■ **FEATURES & BENEFITS:**
Newly designed line offered in 10,000- and 12,000-pound pulling capacities; completely waterproof IP68 rating design that features a high-performance 6.5-hp motor, powerful 500A solenoid, out-of-drum automatic brake and wireless remote.

Overland Vehicle Systems
Darryl Sanford
New Products Manager

■ **HOT PRODUCTS:**
Res-Q Teton Performance Winch Series
■ **FEATURES & BENEFITS:**
Available in 10,000- and 12,000-pound pull ratings; 4.9-hp series wound waterproof motor; wireless remote control; removable clutch lever; amber LED winch spool light strip; diecast finned aluminum solenoid housings; fast line speed; low current draw.

Quadratec Inc.
William Gushue
Product Development Engineer

■ **HOT PRODUCT:** XV95 Winch
■ **FEATURES & BENEFITS:**
Formidable 9,500-pound line pull weight rating; 94-foot steel cable coupled with a three-stage planetary gear system and manual clutch for reliable operation; 5.7-hp motor; automatic full load braking system; four-way roller fairlead and clevis hook.

TrailFX
Sara Ford
Marketing Manager

■ **HOT PRODUCTS:**
ZEON (truck & Jeep) and AXON (ATV & UTV) Winch Lines
■ **FEATURES & BENEFITS:**
Variety of good, better, best offerings including many in the 10,000-pound range for the truck and Jeep aftermarket; synthetic ropes; trail-proven quality; wireless remote capability; ingress protection with IP68 ratings or better; customer service.

Warn Industries
Corby Phillips
VP of Aftermarket Sales

■ **HOT PRODUCTS:** SX Winch Line
■ **FEATURES & BENEFITS:**
Offered in 10,000- and 12,000-pound applications; synthetic or steel cables; IP68 rated; integrated drum light; synthetic models come pre-loaded with a wireless controller; control box can be relocated; 100% full load holding automatic mechanical brake.

Westin Automotive Products/
Superwinch
Cameron Quiroz
Southwestern Regional Sales Manager

"If we look at the history of the winch market, back in 2007 there were a handful of strong brands. Fast-forward 17 years and we find that the winch market is littered with import winches," says Corby Phillips, VP of aftermarket sales for Warn Industries. "The impact of this is consumer confusion. The consumer often asks, 'What do I need, what size, what brand?' Oftentimes consumers base their purchase decision solely on price when, in fact, quality and reliability across the different winch brands varies widely."

William Gushue, product development engineer for Quadratec, agrees the market includes many brands producing similar products.

"The electric winch is a very straightforward mechanical unit that, when called upon to rescue you in a recovery situation, needs to function as intended. The fewest number of failure points when it comes to a winch is important."

The outside factors driving many transactions are "cost and install options," says Walter McMillen, product support technician for Mile Marker Industries.

Meanwhile, technology and vehicle advancements have forced manufacturers to keep pace with innovative offerings, leading to more efficient, durable and user-friendly products, says Sara Ford, marketing manager for TrailFX.

"Integration of advanced materials such as high-strength synthetic ropes has reduced weight without compromising strength. The advent of smart technologies and connectivity has enabled features like wireless control, enhancing overall user experience and safety," she says. "These technological strides continue to shape the

winch market, meeting the demands of diverse industries and enthusiasts while promoting improved performance and reliability."

Customer demand and price sensitivity are key motivators for innovation.

"Overland Vehicle Systems is driven to adopt more efficient production processes and offer new and improved products to the market to better serve our customers," notes Darryl Sanford, OVS new products manager.

Meanwhile, good training and knowledge make for safer winch and recovery operations, says Chris Miller, VP of retail for Ironman 4x4 America.

"The lack of training and knowledge on winch usage is impacting the market. When people are confident with the use of recovery tools and techniques it's easy to explain the value of having the tool on your truck."



When the time comes, off-roaders need a winch that performs as expected. (Photo courtesy Quadratec Inc.)

SOMETHING FOR EVERYONE

The market's growing popularity also means a variety of consumers coming to the shop. Having something for everyone is vital to growing sales.

"Keep inventory and educate consumers about the good, better and best options that are available," says Phillips. "When it comes to winches, as manufacturers and resellers we must be aware of different cus-



Retailers and installers will want to make safety a priority. (Photo courtesy Quadratec Inc.)



GIVE 'EM THE Hook



Growth of the overland and off-road categories is getting more people into vehicles that can accept a winch. (Photo courtesy Westin Automotive Products/ Superwinch)

tomers' needs and economic situations."

Some customers will never pull the cable off their winch, he explains, while others will use it every weekend.

"Have at least two levels of winches to show and sell—a good winch and a better winch. These two levels will capture 85% of the winch buyers we see in the aftermarket."

In some cases, shops may inadvertently overlook crucial details when assisting customers in purchasing a winch, failing to inquire about specific requirements, says Ford.

"Understanding the customer's budget is essential, as it ensures that options presented align with their financial constraints. Equally important is discerning the intended usage and frequency of winch use, as different scenarios demand varying levels of power and durability," she notes. "Additionally, delving into the customer's preferences regarding technology and other features is crucial to matching them with the perfect winch."

McMillen suggests a "comprehensive assessment" that includes such factors as frequency of winch usage, which can impact the choice based on durability and performance, and the number and size of batteries installed in the vehicle.

"As a 4x4 shop, it's crucial to emphasize that selecting the appropriate winch goes beyond merely considering the vehicle's weight," he says. "A comprehensive assessment ensures the winch not only matches the vehicle's weight but also aligns with the user's practical needs and the vehicle's electrical capacity."

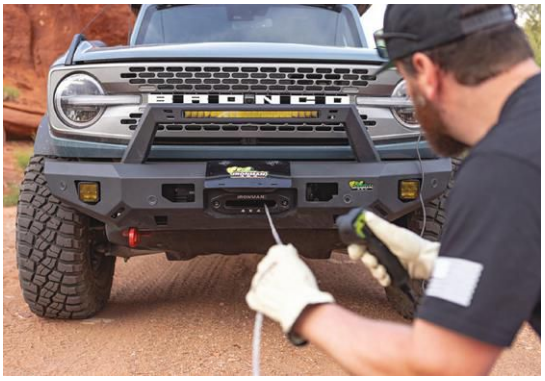
And when it comes to weight, says Quiroz, consider not only the vehicle itself, but the gear it will be carrying.

"Getting the full details of what the winch might be pulling will help get the customer the correct load capacity," he says.

Sanford suggests broadening the category, so clients have everything they need.

(Below) Shops can serve as experts by providing learning experiences for customers. (Photos courtesy ironman4x4america.com)







ROUSH, BRANTLEY GILBERT BUILD A F-350 DUALLY



Power specialist Roush Performance recently partnered with country music star Brantley Gilbert on a one-of-one F-350 build to kick off Brantley's 2024 concert tour.

Standout upgrades on the 2023 Ford F-350 farm truck include various Roush Performance components, a 5-inch BDS lift with radius arms, upgraded shocks and oversized tires wrapped around American Force 24-inch rims.

Assembled by the Wild Willies Custom Accessories team at Akins Ford, an authorized Roush Performance Dealer in Winder, Georgia, the pickup build represents an amalgamation of premium all-American brands and Roush engineering. It rides on FOX 2.5 Performance Elite shocks and includes a DPF-back exhaust system.

The truck is accented inside and out with custom appointments from Brantley himself, including black Midnight Reserve paint and a Rigid LED rock light system in the wheel wells. Official Roush Performance styling components are featured from grille to tailgate, complementing the truck's blacked-out appearance.

Inside the cabin, the Wild Willies team outfitted the truck with an LED interior lighting package. Secure storage comes courtesy of the Roush Performance console vault, and a set of premium subwoofers mounted under the seats provide a dynamic and immersive musical experience.

"This is the perfect build to kickstart the Off the Rails Tour," says Gilbert. "I've partnered with Roush Performance for some time now, and we wanted to build something special to represent our relationship. When I first contacted them about this build, we set out to bring some of the best American brands in the market to partner on this truck. I couldn't be happier with how it came out, and I can't wait to get it dirty!"

Roush Performance recently partnered with country music star Brantley Gilbert on a one-of-one F-350 build.

"Merchandising the store to include winches to complement other traditional recovery accessory options is key," he says. "Offering a full line of automotive recovery items will cater to a wider range of customers and maximizes revenue."

In many cases, customers will look upon their shops as the local experts.

"A knowledgeable sales staff that has proper vehicle recovery training using many of the modern tools and techniques can better speak to customers on why they need the tools and then hopefully inspire them to get the training to safely operate those tools," Miller says.

As such, retailers and installers will want to make safety a priority.

"One of the most common mistakes made by shops serving the winch market is putting winches on vehicles that are not correctly rated for the vehicle's weight or placing a winch on an underrated winch-mount bumper or mounting plate," says Gushue. "These winches fully have the capability to pull 10,000 to 12,000 pounds. That force being placed on mounting surfaces creates a tremendous amount of stress and potential energy. If the mounting plate or hardware is not properly rated for those types of forces, then it can end very poorly for the operator or bystanders. Proper ratings and safety factors are very important when it comes to winching."

GET OUT THERE

One way to successfully market winches is through predetermined accessory combinations, says Quiroz from Westin Automotive/Superwinch.

"Do a package sale with a bumper or winch mount. If you have a customer who comes in just looking for a bumper that is also winch-capable, it's the perfect time to tie that sale together."

Attractive offerings include a beginner

GIVE 'EM THE Hook



Offering a full line of off-road recovery items will cater to a wide range of customers. (Photo courtesy Overland Vehicle Systems)



Choose the winch that best fits the customer's unique needs. (Photos courtesy Overland Vehicle Systems)



recovery kit or a properly rated winch-ready bumper, suggests Quadratec's Gushue.

"Creating winching kits with a winch and recovery accessories that are commonly used in recovery situations is a great way to get customers the essentials they need by making sure all accessories are properly rated and therefore not putting the customer in harm's way. It's the shop's responsibility to educate customers and help them make the safest decisions when it comes to choosing the equipment for any recovery situation."

Businesses can enhance the customer's off-road recovery experience by offering additional accessories like a winch damper.

"Recommending these items not only ensures a seamless winching process, but also presents an opportunity for upselling," says Ford from TrailFX. "A comprehensive recovery kit with essentials like shackles and straps can provide customers with the necessary tools for various scenarios, while







Make a comprehensive assessment of each client's vehicle and capabilities to determine the proper winch setup. (Photos courtesy Mile Marker Industries)



Technological advancements continue to shape the winch market. (Photo courtesy TrailFX)

a winch damper enhances safety during operation. By educating customers about these supplementary products, shops not only contribute to the user's preparedness, but also maximize the overall effectiveness and safety of their winching equipment."

Bundling winches with other recovery items as well as aftermarket front or rear bumpers is a good way to increase revenue, agrees Sanford from Overland Vehicle Systems.

"Creating a kit of common winch accessories such as a tree saver, snatch block or soft shackle takes some of the guesswork out of the customer's buying decision and creates an easy solution for them to be prepared to take on any trail," he says.

Mile Marker's McMillen has a few more package suggestions:

"A comprehensive winch recovery kit typically includes heavy-duty items like a tow strap, D-ring shackles, snatch block pulley and often a shackle receiver, essential for secure and effective recovery operation," he explains, adding that integrating wireless technology into the setup offers increased convenience and safety.

He also recommends items like high-quality gloves.

"Lastly, having extra winch rope on hand ensures you're prepared for any situation, regardless of the distance or complexity of the recovery," he adds. "Investing in these accessories not only enhances your winching capabilities but also ensures you're equipped for a wide range of recovery scenarios."

Then, shops can further serve as experts by providing learning experiences for customers, adds Miller from Ironman 4x4.

"Host winch and recovery clinics, have demonstrations and provide hands-on time led by safe recovery instructors," he says. "Customers are starving for knowledge and for good experiences. Let's all rise to the opportunity to be the best resource of good, honest, accurate information, winning the trust of our customers and building a strong and safe off-road community."

After all, off-roading and overlanding are growing because they're enjoyable. So why not get in on the fun and increase sales at the same time?

"Engage with local off-road clubs and have 4x4 and coffee events on a regular basis," says Warn's Phillips. "There are also marketing companies that can scrub DMV data and directly market to specific vehicle owners. Get specific to your target consumer, educate them on winching, include yourself in their world and make them included in yours." ***TS***



STILL CHASING BRIGHT SKIES

After all these years, aftermarket sunroofs continue proving their worth. ///// **By Josh Poulson**

Back in the September and October 2022 issues of THE SHOP magazine, I wrote a two-part article on the important role sunroofs have played in the restyling industry over the past three decades and then interviewed Bill North, who had been named president of Champion Automotive Systems a year earlier, to discuss manufacturer consolidation and the future of aftermarket offerings.

At the time, Champion had purchased the tooling and manufacturing rights to the Webasto (North's former employer) 700 series sunroofs and was anticipating a strong comeback due to solid demand.

A year-and-a-half later, it seems like a good time to check in with North to see how things are going and ask if any trends are emerging that might trickle down to our local restyling shops.

WHY DID CHAMPION TAKE ON THE HUGE TASK OF GETTING THE RIGHTS TO BUILD WEBASTO 700 SERIES IN-BUILT SUNROOFS AND BRING IN THE 300 TOP-SLIDER?

BILL NORTH: After 22 years of working at Webasto, I knew the market still had demand if we could retain the original quality. With Webasto announcing the discontinuation of the 700 series, I felt there was an opportunity for our industry to keep this product going.

I partnered with John Prosser, and we added power sunroofs to Champion Automotive Systems, and we got to work on making it happen.

NOW THAT YOU ARE ACTUALLY BUILDING AND SHIPPING THE UNITS, WHAT CAN YOU TELL US ABOUT THE NEW PRODUCTS?

BN: Many of the key components stayed the same such as the glass, mechanism, sunshade and wind deflector. Some of the other parts we were able to localize for ease of procurement and also to benefit our local economy.

For instance, the trim rings and dust seals were always made in Germany by an OEM supplier called Meteor. Meteor USA is located in Ohio, so we are able to obtain the original quality while producing the parts in America.

Other examples are the drain tubes from Georgia, injection molds from Michigan, and brackets, wire harnesses and packaging from Minnesota. Minneapolis is where we complete the final assembly using the original Webasto fixtures and we are supplying domestically and exporting all over the world.

ARE ALL THE FEATURES THE SAME AS THE ORIGINAL 700?

BN: All three of our H700 models have ignition key "auto close" standard, so it is impossible for a consumer to accidentally leave their sunroof open. All models also have anti-pinch protection, which is FMVSS 118-compliant as a standard safety feature.

YOU ARE ALSO OFFERING A POWER SPOILER SUNROOF?

BN: Yes, and the acceptance has been excellent with more than 500 units installed during the first quarter of 2024. These spoiler sunroofs work for regular-cab trucks and smaller cars, and we are also installing them in tandem in front and behind roof bows to create an aftermarket double-sunroof panoramic offering.

HOW DO YOU SEE RESTYLERS CAPITALIZING ON THE SUNROOF MARKET THESE DAYS?

BN: I see two channels, the first being retail or direct to consumer. There is a great opportunity for people that have a vehicle that they want to keep instead of buying new right now.

Upgrading their existing vehicle with a power sunroof at a local restyling shop brings a whole new look and life to the vehicle.



Demand for sunroofs is high, so restylers should let retail and wholesale customers know that one can be professionally installed in almost any vehicle.



Sunroofs have been proving their popularity and aftermarket staying power for decades. (Photo by JD Weiher on Unsplash)



New models such as the Jeep Wagoneer S showcase the desirability of sunroofs. Work with your dealer clients to find trim level gaps where an aftermarket sunroof makes sense. (Photo courtesy Stellantis)

The second channel is, of course, the car dealer channel. This market is usually sold to fill gaps between trim levels or when there is a (new car) product shortage.

OEMs are very refined, so the shortages are rare and sometimes short-lived. Stay tuned-in to what your dealers are telling you and search for opportunities where the OEM shorted a run of vehicles on power sunroofs and you can retrofit the others.

Dealers are not dealer-trading the way they did pre-COVID, so making it known that it is easier to install a sunroof through a local restyler versus dealer trading is important.

Also, don't forget about the used car market, because with those cars there is no dealer trading for an identical vehicle. We have to let retail and wholesale customers know that a sunroof can be professionally installed in almost any vehicle they have found without one.

WHAT CAN MANUFACTURERS DO TO HELP RESTYLERS SELL SUNROOFS OR LOOK FOR OPPORTUNITIES?

BN: We have begun creating target sheets showing vehicle trim levels that are easily customizable with the restyler's logo. These sheets not only show how good the power sunroof looks in the vehicle, but it also helps the dealer and restyler see what the opportunities are on the different trim levels.

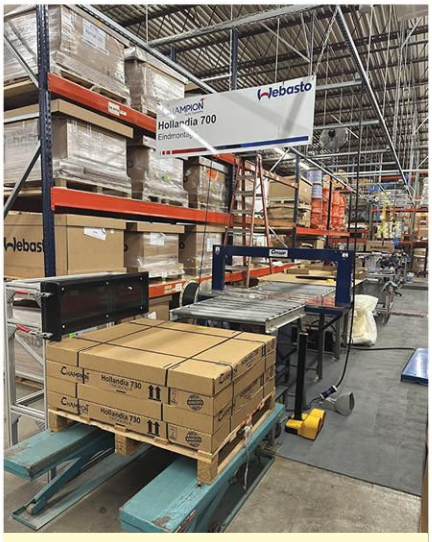
For instance, it's a $16,000 jump to get a power sunroof in a Chevrolet Silverado from a WT model and even a $5,600 jump from an LT.

There are plenty of opportunities like this with every vehicle, but the restyler has to remind the sales managers and sales teams at the dealerships so that they can use this to their advantage when selling a vehicle.

WHAT OTHER TIPS WOULD YOU GIVE TO RESTYLERS WHEN SELLING SUNROOFS?

BN: Typically, power sunroofs are harder to sell as a preload item on a dealer's inventory; however, when you put it in a package it becomes easier.

For example, if you were to offer a sunroof installation along with a leather interior and heated seats then that package has higher appeal, and the price can be substantially better than the OE options. Always strive to create the kind of package the dealer can offer to create a unique trim level.



Manufacturers are striving to keep pace by producing quality sunroofs installers and drivers can trust.

Also, having the sunroofs on some kind of menu-based system for vehicle buyers to see will finish out the offerings. I am a big believer that if a dealership will trust a restyler to install a power sunroof, they'll trust you to do all your other products as well. So, earn that trust. ***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 immediate past-chairman of the SEMA PRO council.*

LASTING *Impressions*



The company offers products and installation by well-trained techs.

Goodsell Truck Accessories has built a loyal base of satisfied customers. ◆ ◆ ◆ ◆ **By Maura Keller**

For Mark Goodsell, owner of Goodsell Truck Accessories in Jacksonville, Arkansas, keeping a close watch on the evolution of truck accessories and design has been paramount in the continued success of his company.

"We started in 1971 as a truck bumper manufacturing company," Goodsell says. "We manufactured the steel painted truck bumpers with the dealer's name on them. At that time, trucks did not come with rear bumpers on them, so there was a good market for rear bumpers."

In those days, Goodsell had a large new car dealer customer base, which allowed the company to continue to add additional products to its offering, until Goodsell Truck Accessories evolved into a warehouse distributor.

"Our truck accessories distribution become so large that we stopped manufacturing in 1991," Goodsell says.

Prior to that, he had opened a small retail store in 1989 and was cognizant of not being both a supplier and a competitor to his dealer base.

"But it turned out that many of our dealers would use us for the installation of truck accessories, since it was much cheaper and quicker," Goodsell recalls.

The retail shop has experienced growth since its inception in 1989, thanks in part to the company's well-earned reputation for exceptional customer service.

Today, Goodsell Truck Accessories is a full line accessories business that sells wholesale and retail truck and SUV accessories. The company offers



Mark Goodsell (right) purchased the company from his father in 1991 and now works alongside son Grant (left).



The shop's professional customer mix includes car dealers, jobbers, body shops, truck accessories stores, state agencies, utility companies and commercial accounts.

professional installation by well-trained techs to customers including new car dealers, jobbers, body shops, truck accessories stores, state agencies, utility companies and commercial accounts.

"We sell many brands of bed covers, camper shells, step bars, running boards and a full line of other truck and SUV accessories," Goodsell says. "We also have a professional staff of technicians to install products purchased here."

A FAMILY GATHERING

The Goodsell company was originally founded by Mark's father, Odes Goodsell, in 1971. Mark worked in the business throughout high school and college, signing on full-time in the sales department after graduating in 1985.

"I bought out my dad in 1991 and he retired," Goodsell continues. "Dad passed away in 2020 at 90 years old. My son, Grant Goodsell, now works in the company and is the third generation to be in this business. He is our social media guy and works with wholesale and commercial accounts."

The family connection is important, Goodsell believes.

"Many statistics show that second- and third-generation-run businesses do not make it, but I think we have proved that wrong, as we keep growing every year," says Goodsell. "My daughter-in-law, Ali, (Grant's wife) is our bookkeeper and is doing an awesome job. My wife, Leah, has been involved in the business for many years also."

After more than 50 years in business, the entire Goodsell family has a lot to celebrate. As for Mark, he is proud of the way his team takes care of clients.

"I tell our staff in sales meetings that if we do a good job for customers, they will tell two or three people. If we do a bad job, they will tell 10," Goodsell says. "They will also post Google reviews if they like us or not. So we have to do a good job every time. I am proud of the great team of employees we have. Many have been with us a long time. We try to take care of the team and treat them like family."



Goodsell Truck Accessories is a full line accessories business that sells wholesale and retail truck and SUV parts.

CUSTOMER- & PRODUCT-FOCUSED

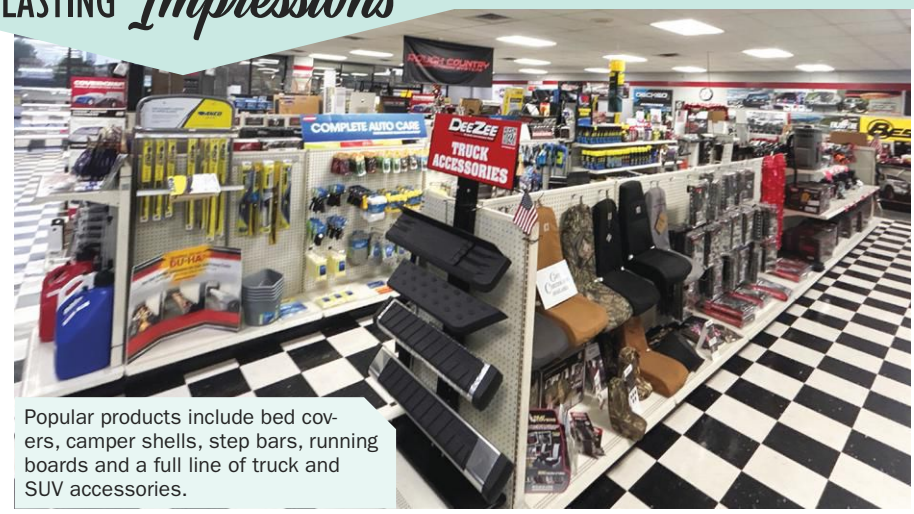
Just as the product line of Goodsell Truck Accessories has evolved, so too has its customer base.

As Goodsell explains it, back in the 1990s the typical vehicle accessories customer was male, 30 to 60 years old. But now, the company's main clients are male and female, from 16 to 90 years old.

"Many of the car drivers now drive SUVs and they gave us a whole new customer base," Goodsell says. "We have many good, loyal commercial accounts as well that bring us new trucks and vans to rig out every year as they add to their fleet."

The shop also has loyal wholesale accounts that have been turning to Good-





Popular products include bed covers, camper shells, step bars, running boards and a full line of truck and SUV accessories.

sell Truck Accessories (goodselltruck.com) for 30-plus years.

Over 25,000-square-feet of building space, including the company store, offices, shop and warehouse, more than accommodates the team of 14 employees. Goodsell built its building in 1996 and has always kept a strong inventory of in-demand parts on hand.

"We buy direct on most lines, but use other WDs for products that are not big movers for us," Goodsell says. "We sell lots of bed covers, step bars, toolboxes, bedliners and hitches, so we keep large inventories of those items."

One of the biggest challenges Goodsell faces is the long turnaround times required for stock orders. Currently, the company places orders 11 to 15 weeks out to stay well-stocked.

"We are glad to have good WDs to cover us when we run out of something until the stock order comes in," Goodsell notes.

SPECIAL EFFORTS

While word-of-mouth marketing has been essential for the growth and success of Goodsell Truck Accessories, the company also strives to create a work environment that keeps employees happy.

The business plans to add more employees and uses social media and sites like Indeed to attract new employees when a job opens—which is not very often.

"We have a good pay scale here and offer health and life (benefits), (paid) vacation, product discounts and a good work environment," Goodsell says. "Our employees know we appreciate each and every one of them."

Many of Goodsell's best customers are local HVAC pros, plumbers, electricians, hardware store owners and the like. They continue to turn to the shop for their work vehicle needs, and Goodsell uses them for their services as well.

Community outreach is also important for the business, as each year Goodsell Truck Accessories hosts a charity car and truck show. This year's event, which will be the company's 25th car show, is set for Sept. 7

"We're expecting 250-plus show cars again this year and several thousand spectators like we had last year," says Goodsell, noting the 2023 show set records for entries, attendance and money raised for its charity of choice, Jacksonville Animal Shelter.

"It's a great event for the city of Jacksonville and brings lots of people to our town," he says.

Although the Goodsell family has certainly made a name for itself within the community, the shop does use radio and social media for "call to action" ads and utilizes billboards and some Arkansas magazines for advertising.

"Word-of-mouth is our best advertisement," Goodsell says. "We also put our logo on many products we install like racks, camper shells or toolboxes."

Grant Goodsell leads the company's social media efforts and website. Using Facebook and Instagram, he showcases completed customer jobs and he also maintains the SEO efforts via Google, ensuring the company pops up when customers are searching the internet for truck accessories.

Meanwhile, it's the people he serves that's kept Mark Goodsell excited to come to work each day after all this time.

"The best part of doing my job for over 40 years is providing great customer service for our many, many repeat customers, providing jobs for our great employees and running a successful business," Goodsell says. "We have been blessed with a very good company that has experienced growth every year. I hope this growth and customer loyalty will extend into the third generation when Grant takes the reins in a few short years. We give God all the credit for all of our blessings." ***TS***



The company gives back through its annual Car & Truck Show, with its main charity being the Jacksonville (Arkansas) Animal Shelter.



Tommy Wilson, fleet sales manager, helps Goodsell deliver the goods for its many professional and commercial clients.



Ford F-150 Styling Kit

Air Design, Oceanside, California, offers a complete Styling Kit for 2021-newer Ford F-150 models. The F-150 Street Series upgrade consists of a cab spoiler, tailgate applique, tailgate spoiler, fender vents and fender flares that deliver a complete visual enhancement.

Toyota/Honda Coil Enhancer

Timbren Industries, Whitby, Ontario, presents its new SES Coil Enhancer that fits the rear coil suspension of 2019-23 Toyota RAV4 and 2023 Honda CRV models. Designed to absorb and dissipate shock from rough road conditions whether the vehicle is loaded or unloaded, the enhancer provides greater driving stability while extending the life of coil springs and the suspension system, providing a tighter, more resilient coil suspension.





Super Duty Shocks & Coil-Overs

ICON Vehicle Dynamics, Riverside, California, offers 2.5 VS Series Performance Shocks and Coil-Over Conversions, part of a complete line of suspension systems and upgrades for 2017-up Ford Super Duty F-250 and F-350 models. Systems feature Compression Damping Electronic Valve (CDEV) on-the-fly suspension adjustment, powered by the ICON Intelligent Control (IIC) module. The technology instantly optimizes shock performance for changes in speed and terrain. Users can set custom parameters or use a variety of pre-loaded performance profiles.

Off-Road Winches

Overland Vehicle Systems (OVS), Santa Fe Springs, California, introduces its SCAR Series Off-Road Winches. Built to perform under extreme conditions, the winches feature a 7-hp series wound motor that provides a fast line speed at 42 feet per minute and low DB output. The oversized engagement handle is made from 6061 aircraft-grade aluminum and operates easily with a precision-engineered ring gear and three-stage planetary gear system. The braking system has a military spec cone built into the motor with an automatic engagement system.



EST. 2023 LEATHER CRAFT by ROSEN

Leather Seating

VOXX Electronics Corp., Orlando, Florida, offers **Rosen's** new LeatherCraft line of premium vehicle leather seating for new and pre-owned vehicles. Featuring precision craftsmanship and premium leather, the line blends comfort and style in luxury seating solutions. High-volume kits are available, along with a range of customization options featuring a variety of colors, textures and styles to complement individual tastes and interior designs.



Protective Wrap Film

LLumar, St. Louis, Missouri, introduces LLumar Protective Wrap Film, a product that integrates the looks of car wraps with the resilience of paint protection film. Initially available in satin black, the film surrounds a vehicle with polyurethane construction and a self-healing topcoat for a more durable, scratch-resistant finish commonly unavailable with conventional car wraps. It delivers rock chip defense and scratch protection with a rich, satin black appearance.

Colorado Expandable Tonneau



Sawtooth, Heber City, Utah, presents its Sawtooth Expandable Tonneau Cover for 2023-current Chevrolet Colorado/GMC Canyon models. The stretch tonneau effectively covers and secures loads extending above the bed rails. It quickly secures at the cab using buckles and straps and rolls and unrolls to allow full access to the truck bed. Crafted from a heavy-duty stretch-and-hold composite textile, the tonneaus are thick and highly water-resistant and include a premium matte black finish. They seal with patented steel-reinforced J-hooks and install with no tools needed.

Hood Brow Lighting System Kit



Race Sport Lighting, Ringwood, Illinois, presents its HOODKIT1 LED Knight Rider Scanning Hood Brow DRL Flex Kit. The modern, unique hood lighting kit provides a front lighting show on the exterior of any vehicle. It includes a 5-foot-9-inch flexible all-weather strip kit that fits most full-size vehicle front ends and can be cut to size. It performs a Knight Rider-style scan on start-up and then transitions to a cool white DRL for nighttime safety. Professional installation takes one to two hours.

Drop-Down Roof Racks



DROPRACKS, Norway, introduces its line of patented Roof Racks that allow for quick, safe and easy loading and unloading of outdoor products and equipment from the top of vehicles. The patented kinematic DROPRACKS concept brings the horizontal roof loading platform easily down to waist or chest level. Built-in safety mechanisms provide complete risk-free control of the overhead weight load while preserving the integrity of the vehicle and gear. Three models and sizes are available to accommodate various vehicle applications, from cars to tall vans.

Chassis Coater



KBS Coatings, Valparaiso, Indiana, presents BlackTop Chassis Coater, a highly durable, high-performance protective coating designed for use on automotive frames, floorpans, suspension components, engine compartments, body panels and more. The easy-to-use 1K, UV-stable, single-stage, moisture-cured coating can be applied directly to prepared metal, primed surfaces, and other paints and coatings. BlackTop is available in Gloss Black, OEM Satin Black and Flat Black. ***TS***

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1932 Ford Phaeton, '59 Impala Win Top GNRS Awards



The 2024 GNRS America's Most Beautiful Roadster award went to a 1932 Ford two-door Phaeton owned by Beth Myers and built by Roy Brizio Street Rods.

The America's Most Beautiful Roadster award, considered the ultimate recognition in the world of hot rodding, was awarded to a 1932 Ford two-door Phaeton owned by Beth Myers and built by Roy Brizio Street Rods at the O'Reilly Auto Parts Grand National Roadster Show, presented by Meguiar's.

The flamed Phaeton bested eight other roadsters, taking home the title's $12,500 prize sponsored by ARP Fasteners. Myers will also be immortalized on the award's 9.5-foot-tall perpetual trophy alongside a "who's who" of hot rodding, including legendary builders like George Barris, Andy Brizio and Boyd Coddington.

The roadster started with one of 32 Brookville two-door tubs. From there, Brizio Street Rods reworked every panel to give the car its signature hot-rod profile, including a rear body section reshaped to resemble a 1932 Ford Tudor sedan.

The team built the custom 1932 Ford frame, complete with a Super Bell axle and Moal torsion bar suspension. A 500-plus-hp Roush 427 is backed by a TREMEC 5-speed and a Winters Performance V8 quick-change rearend.

With its deep black paint by Vintage Color Studio, full-length flames by Art Himsl and custom pinstriping by Eric Reyes, the car pays homage to old school hot rods with modern-day performance. Like all of Brizio's signature builds, the one-of-a-kind tub is low, fast and built to drive.

Meanwhile, David Rush's 1959 "Bespoke" Chevrolet Impala hardtop was awarded the 2024 Al Slonaker Memorial Award. Dedicated to the memory of Al and Mary Slonaker, who founded the Grand National Roadster Show in 1950, the award has been presented to the best non-roadster vehicle at the show since 1974.

Rush also received a $12,500 prize and a custom billet trophy.

Constructed by Steve Cook Creations, the Impala features a 518-ci LS3 motor built by Don Hardy mounted on a Roadster Shop chassis.

The green pearl standout was modified with raised front wheel openings, a stretched bodyline to add length to the front, custom aluminum recessed hood panels, custom-built front and rear valences, custom side- and quarter-panel trim and flush headlight and taillight bezels.

The interior by Gabe's Custom Interiors boasts 1965 Chevelle seats, a custom steering wheel and gauge lenses by EVOD and Dakota Digital gauges. Finished with Adventurine Green Pearl paint by BASF and chrome by Ogden, it beat out 10 other contenders to take home the 2024 Slonaker Award.

"Each year, we are blown away by the incredible hot rods and customs that compete for the America's Most Beautiful Roadster and Al Slonaker awards," said John Buck, owner of Rod Shows and producer of the Grand National Roadster Show. "These two cars exemplify everything these awards are designed to recognize."

This article originally appeared online at theshopmag.com. Visit today and sign up for the free daily eNewsletter. **TS**

David Rush's 1959 "Bespoke" Chevrolet Impala hardtop was awarded the 2024 Al Slonaker Memorial Award at the 74th annual Grand National Roadster Show.



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