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FROM THE EXECUTIVE EDITOR

In any business, a barometer is a critical tool that analyzes industry trends and provides a forecast to predict what is on the horizon. We are pleased to announce PRI's own barometer with the first official "2024 State of the Racing Market Report," which provides industry-specific data to guide PRI Members to stay competitive and grow their businesses.

Veteran PRI Magazine readers will recall the annual Motorsports Retail Business Survey that was produced by the PRI Editorial team and appeared annually in our pages. However, that was just a smaller snapshot of the industry compared to this new market report produced by the PRI Market Research team, led by Gavin Knapp, with help from Matt Byun, who used their tremendous resources and expansive database to reach out to thousands of PRI Members to get their take on what is going well in the industry, and what areas may need some work.

Some highlights:

- Track-use motorsports parts accounted for more than \$8 billion in US sales in 2023.
- 76% of racing businesses view the racing market as either stable or on the rise.
- 47% of racing parts resellers experienced sales growth, and 51% anticipate their sales will grow over the next year.

Next month's issue of PRI Magazine will offer additional coverage of the Report. In the meantime, PRI Business and Individual Members can download the full report by using their individual login to access their member portal at performanceracing.com. Once logged in, the report can be found by clicking "My Benefits."

Out & About: As I write this column, I just returned from the West Coast Stock Car Motorsports Hall of Fame Induction Ceremony as it honored its Class of 2024. Ken Clapp and his team produced a memorable and well-done presentation that honored Dick Cobb, Eric Holmes, Jimmie Johnson, Jimmy Vasser, Cal Wells, Joe Huffaker, Emmett Malloy, Tom Malloy, Paula



MEREDITH KAPLAN BURNS
meredithb@performanceracing.com



PRI team members joining Steve Lewis at his induction into the West Coast Stock Car Motorsports Hall of Fame.

Murphy, Bob Swanson, Ernie Triplett, Frank Lockhart, Fred Frame, Jack Dill, Jimmy Murphy, Johnny Boyd, Louis Vermeil, Rex Mays, Ted Horn, Ralph Sheheen, and PRI Founder Steve Lewis. What a wonderful celebration of these motorsports innovators.

While in Sonoma, the PRI Team attended the ARCA and NASCAR events at Sonoma Raceway. We had the pleasure to interact with numerous industry members, which only confirmed, "A bad day at the track is better than a good day in the office." How truly blessed we are to be in an industry for which we all exude such passion and commitment with the goal of bettering our sport. **PRI**

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ACCOUNTING

PAYABLES

Lily Huang

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50 States
Emissions Legal
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SHUTTER SPEED

Celebrating its 46th year in 2024, the Historic Sportscar Racing Mitty at Michelin Raceway Road Atlanta serves as one of the marquee vintage events in the US. This year's featured marque was "Cars of Japan," as seen here with Mazda leading the field to the green flag. Ten feature races filled the event schedule, confirming that vintage racing is picking up speed with record-breaking numbers of cars not only at this year's Mitty—282 entries—but at events nationwide.





ASK THE EXPERTS

WHEN TO REBUILD RACE PARTS

Reconditioning components can be a significant cost saver, but it's not always the best option.

By Bradley Iger

With the recent rise in costs both within motorsports and the world at large, competitors across virtually all racing disciplines continue to look for ways to make better use of their budgets. For some, that might mean extending the life of a chassis by an extra season or switching to a tire compound with improved longevity. But as Aaron Lambert of Penske Racing Shocks in Reading, Pennsylvania, pointed out, there's an effective tactic that is often underutilized.

"Servicing and rebuilding certain parts in regular intervals can be a significant cost-saver," Lambert explained. "If a racer can be disciplined about maintaining components like shocks, they might never need to replace them."

Lambert told us that the inherent design of components like shocks—which include both reusable "hard" components like bodies and shafts

as well as consumable elements like oil, seals, and shims—are often good candidates for rebuilds.

"All of our shocks are owner-rebuildable, though racers need to be aware of any limitations imposed by a class rule set," Lambert explained. "With Spec Miata, for example, shocks need to be sent to us at Penske to be rebuilt simply to ensure that the internals remain in line with the rules. But we can show someone how to do a rebuild in just a few minutes."

This cost-conscious approach isn't limited to shocks, either.

"Ninety percent of what we manufacture is rebuildable," said Carl Depazza of Jesel, Lakewood, New Jersey. "Rockers and lifters are particularly popular for rebuilds. Depending on the part and what a customer wants to do with one of those rebuilds, the cost savings can be anywhere from 40–60% versus replacing the part."

"SERVICING AND REBUILDING CERTAIN PARTS IN REGULAR INTERVALS CAN BE A SIGNIFICANT COST-SAVER."

Lambert said that having Penske Racing Shocks service a shock can save customers as much as 75% of the price of replacement, while racers who are willing to do the work themselves can save as much as 90%. The latter does come with some caveats, though.

"If you want to check your work, you really need to have a shock dyno. It's important to start with a baseline measurement before the rebuild, and then dyno it again after the work is done to make sure the shock is performing as it's supposed to. That can be a worthwhile investment for a lot of racers, though. If you're at the level where you're making adjustments to your shocks and tuning them, looking at tire wear and all of that, you really should have one. I've seen racers waste months of time trying to tune around an issue, but if they'd had a dyno, they would have been able to immediately realize that they actually had a shock problem. In other cases, it would have been able to confirm that they didn't have a shock problem, and that they should look at other parts of the car. At a certain point, it becomes about the value of your time."

While all of Penske's racing shocks are owner-rebuildable, "racers need to be aware of any limitations imposed by a class rule set," said Aaron Lambert. Some classes mandate that the manufacturer does the rebuild to ensure the shocks remain in spec.





Jesel prefers to limit rebuilds of aluminum rockers to 10 years "because of metal fatigue," said Carl Depazza. "But even with that recommendation, it can be a huge cost savings. You could rebuild them 10 times in that time frame if you're doing it once a season."

He noted that the service and rebuild process of a shock is often simply a matter of replacing oil, seals, and shims, but there are situations where other parts may be needed.

"All of the parts are replaceable," Lambert stated. "If a shock body is worn down, for example, we can replace that as well. Customers can just take the body off of a shock and send that in to us, or simply order a body separately. It's just a matter of knowing what to look for. Shock bodies normally don't wear out through normal use, though. If the car is involved in an incident and the shock is dented, obviously it's no good anymore."

Excessive wear can also be caused by bad habits. "The only situation where we really see bodies wear out is when they're left on the car when it's riding in the trailer," Lambert added. "Traveling across the country with the car strapped down, those small, repeated oscillations in the same area of the shock for hours on end can do some damage. On the race track, the shock is going through its full travel—you're never really riding just one area of it."

As with shocks, virtually all of a rocker's components are replaceable, Depazza

explained. "When a rocker is sent in to us for a rebuild, it's disassembled, which involves taking the adjuster assembly out and pressing the axle bearings out, along with the roller tip. A solid roller can often be reused, but a needle roller is usually replaced along with the axle."

Rocker components are then inspected for cracks and other damage before being put into an ultrasonic hot tank and then inspected again. After that, new components are sourced for the rebuild, and reused parts are put through a tumbling process to recondition them. Aluminum bodies are put through a shot peening process to remove imperfections, and afterward all of the components are once again put through a wash process before reassembly begins.

"Generally speaking, with aluminum rockers we try to limit rebuilds to 10 years because of metal fatigue," he added. "But if it's a nostalgic set, or something along those lines, we'll rebuild them. There are folks who're still running sets that were produced in the 1980s and 1990s. But even with that 10-year limit recommendation, it can be a huge cost savings. You could rebuild them 10 times in that time frame if you're doing it once a season."

There are situations with shocks where it makes more sense to go with a new part, Lambert said.

"Wrecks can create situations like that," he explained. "When a sprint car gets in an accident, they tend to flip and roll, and the violence of that can do quite a bit of damage. You can ding up a shock body, bend the shaft, and all sorts of other things all at once. Roughly 60% of the total cost of a shock is in three or four parts, so at a certain point, you lose the cost-effectiveness of rebuilding the shock rather than simply replacing it." **PRI**

SOURCES

Jesel
jesel.com

Penske Racing Shocks
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elginind.com

New hydraulic roller lifter/guide assemblies are now available from Elgin Industries in Elgin, Illinois.

These assemblies are compatible with the 2004 and above 5.7L, 6.1L, and 6.4L Hemi engines without Multiple Displacement System (MDS) cylinder deactivation. Every PRO-STOCK lifter/guide assembly is pre-assembled for quick, accurate installation. Three assembly sets are available: HLG-7013A includes four lifters assembled in one guide, HLG-7013FRA includes four assemblies for one engine, and HLG-7013A-12 has 12 assemblies for three engines.

Rick Simko of Elgin Industries stated, "We have fielded countless calls from engine builders and performance enthusiasts who are looking for an expanded range of true OE-quality parts for Hemi engines. These new performance lifter/guide assemblies join a growing range of PRO-STOCK parts—including pushrods, valve springs, timing sets, and head bolt kits—available for the most popular Hemi applications."



F 15 O LEADED OXYGENATED FUEL

FUEL FACTORY

fuelfactoryusa.com

Fuel Factory, a provider of high-performance racing fuels, based in Murrysville, Pennsylvania, introduces its new leaded oxygenated fuel, F 15 O. This new fuel was developed with engine builders Philip and Jay Oakley of Oakley Motorsports in Owensboro, Kentucky.

F 15 O is an oxygenated version of Fuel Factory's F15 fuel that was specifically designed for use in large cubic-inch, naturally aspirated drag racing and truck pulling applications. The fuel has been rigorously tested on-track and has shown a larger tuning window and increased resistance to weather changes. In fact, F 15 O has already earned victories in several NHRA Super Gas and Super Comp events this year, along with high-dollar bracket races.

"As both a builder and user of Fuel Factory products, I can confidently say they're integral to our success," said Jay Oakley. "Their flexibility and commitment to listening to racers' needs ensure we get the best performance on the track."



STEERING BUDDY

HOSTILE INDUSTRIES

steeringbuddy.com

Racers looking for a convenient way to steer their vehicle remotely when it's powered off can do so with ease thanks to the Steering Buddy from Hostile Industries in Anniston, Alabama.

Made out of 6061 aluminum and weighing less than 17 pounds, the Steering Buddy is a self-contained device that attaches directly to the steering shaft or column of almost any dirt, asphalt, or drag car. It's designed to eliminate the need for another crew member by allowing racers to easily maneuver their vehicles around the garage or race shop, on and off the trailer, and through tech inspection with the touch of a button.

"This one simple device completely changes the way racers and teams transport their cars," said Mike Pearl. "It puts out enough torque to steer your car—in all conditions—when it's not running. Jobs that were previously impossible with just one person are now totally manageable."

The Steering Buddy installs in seconds, and each unit comes with its own male coupler or clamp that affixes it to the steering column. In fact, every device consists of over 100 individual parts assembled in-house, and all laser-cutting and powder coating is done locally.

Once in place, the Steering Buddy can be controlled multiple ways: manually, through a dedicated iPhone or Android app, or via a new wireless hand controller. And, it runs off your tool battery, which means it doesn't draw power away from the vehicle.

"Years of R&D work went into the Steering Buddy to make sure it would perform flawlessly, in all applications and environments," Pearl added.

In addition to making transport of the race car easier, the Steering Buddy can be used to check caster and camber, set up Ackerman, and handle countless other tasks that would otherwise require another set of hands.



8.6 MM DIRECT FIT IGNITION WIRES

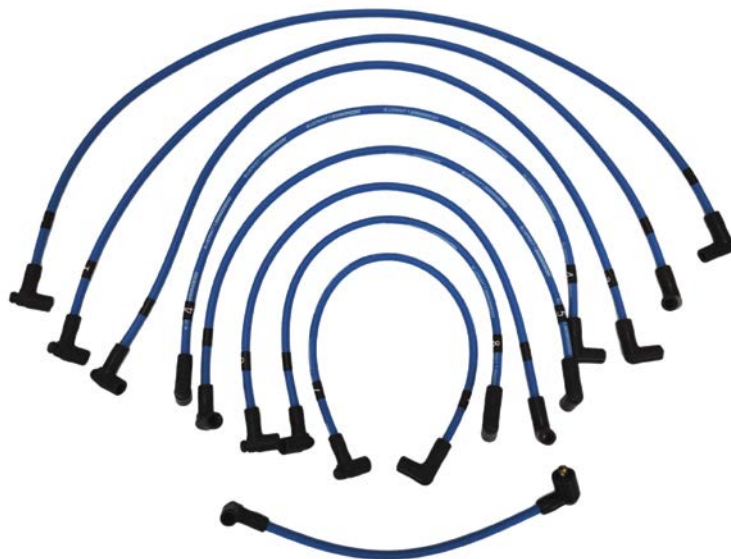
BLUEPRINT ENGINES

blueprintengines.com

BluePrint Engines in Kearney, Nebraska, which is known for its crate engines, has announced a new line of 8.6-mm Direct Fit Ignition Wires. Designed to enhance performance and simplify installation, these ignition wires are compatible with GM LS, small and big block Chevy, small block Ford, and small block Chrysler engines.

The BluePrint Engines performance spark plug wire kits come fully assembled with both the spark plug end and distributor (or coil pack on LS applications) ends pre-terminated and ready for installation. This provides a solution for those who are seeking a reliable, ready-to-use and easy-to-install set of ignition wires in equal lengths.

Several features of ignition wires include an optimized design with a large 8.6-mm size that ensures ultimate spark delivery and strength, professionally crimped spark plug and distributor boot ends that provide a hassle-free installation and maximum performance, double silicone jackets for extreme durability providing long-lasting use, maximum spark delivery with only 40 ohms resistance, and they are made in the USA.



THE TROUBLE WITH HOWARD

GROUND EFFECTS MARKETING

thetroublewithhoward.com

What could possibly go wrong if a skunk was in the pits at an auto race? "The Trouble with Howard" is a new children's book based on a real-life story about two auto racers and their pet skunk, available from Ground Effects Marketing in Auburn, Alabama.

The 48-page hardcover book is a collaboration between author and motorsports veteran Lee Anne Patterson and acclaimed racing illustrator Roger Warrick.

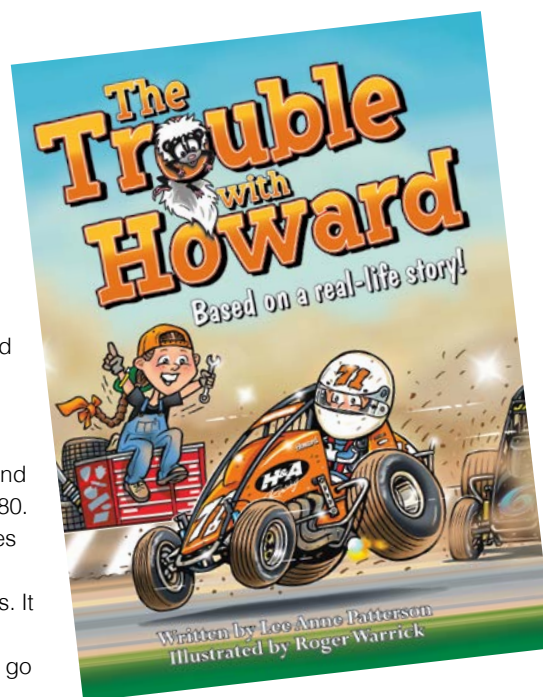
The story is based on the experiences of driver and mechanic Howard Millican and his wife, Anita. The latter became the first woman licensed IndyCar mechanic in 1980. She was also the first woman to go over the pit wall during pit stops at IndyCar races as a pit crew member. She was the jack "man."

The book promotes gender equality and encourages girls to tackle STEM careers. It also suggests how to handle bullies and ways to display good sportsmanship.

In addition, it inspires compassion toward animals. A portion of the proceeds will go to animal rescue operations.

Patterson wrote the book for children who are 5 to 8 years old. Each page carries Warrick's colorful illustrations like a picture book.

The book chronicles the story of an injured wild skunk who was treated and adopted by Howard and Anita Millican before they were married. They named him "Trouble," and he travels with the couple from race to race.



SPORTSMAN STEEL SHAFT ROCKERS

JESSEL

jesel.com

Lakewood, New Jersey-based Jesel engineers have combined the innovative features of the company's Pro Aluminum Rockers with the durability of its Pro Steel Rockers. Jesel Sportsman Steel Shaft Rockers offer engine builders a solution in high strength steel rockers at an affordable price. These rockers can be seamlessly integrated as an upgrade to existing Pro Aluminum shaft rocker systems or ordered as standalone components.

Every Sportsman Steel shaft rocker is built with the same high-quality components as Jesel's Pro Aluminum series, but enhanced for superior durability. These rockers feature a .625-inch wide body with an ultralight slot to reduce both weight and moment of inertia, making them perfect replacements for Pro Aluminum bodies.

Jesel Sportsman Steel Rockers are equipped with a .360-inch wide non-needle valve tip roller and a cup-style tool steel adjuster, designed to endure high lift and high spring pressure applications. Optional upgrades include needle bearing nose rollers and ball-style lash adjuster. The precise rocker geometry minimizes roller movement on the valve tip, while the premium alloy steel construction and thorough hardening heat-treatment, topped with a black oxide coating, ensure years of dependable service and corrosion resistance.

These rockers are specifically designed to excel in extreme conditions, making them ideal for turbocharged, supercharged, nitrous, endurance, and marine engines.



SUPER DAMPER WITH HTD DRIVE FOR CHEVY LS3 CAMARO

ATI PERFORMANCE

atiracing.com

ATI Performance Products in Baltimore, Maryland, has released its Super Damper for Chevy V8 LS-based engine applications for Z-Body Camaro and Gen 3 and 4 Vortec Trucks. Part #918657 is an OEM-sized, 7.48-inch aluminum shell damper for high-performance and Non-A/C applications. The main accessory drive is a six-groove serpentine on the outer shell, in the OEM location, and also features a bolt-on, 8-mm pitch HTD, 31-tooth drive on the hub in the OEM A/C location. This can be used for any aftermarket accessory of the customer's choice.

The damper comes with laser-etched timing marks, a single 3/16 keyway, 4140 heat-treated hub, and exceeds SFI 18.1 Certification. This damper will fit in the OEM location on LS3 2010–2015 Camaro; Gen 3 and 4 Vortec Truck 4.8L, 5.3L, 6.0L; LS1, LS2 2003–2006 SSR; and LS2 2006–2009 Trailblazer 5.3L, 6.0L.

This damper replaces the OEM GM balancer #12675620 and #19300488 in applications with the OEM main accessory locations where the use of a rear HTD drive is needed.



NEWLY APPOINTED

CHUCK SUNDSTROM

The new general manager of Radford Racing School has been a drag racer, mechanic, track director, and event producer. He got his start in motorsports watching his parents race.

By Jim Koscs

Being born into a drag racing family has its advantages. That background is sure to help Chuck Sundstrom, the new general manager of the Radford Racing School in Chandler, Arizona, as he manages the school staff and operations on the seven-track campus.

Raised on Michigan's Upper Peninsula, Sundstrom caught the racing bug early by watching his parents drag race. He began racing at age 16 and, over the last two decades, lived his racing passion as a driver, mechanic, and as race director of Spokane County Raceway in Washington and Firebird International Raceway in Arizona. (Firebird is on the Gila River Indian Community's Wild Horse Pass property adjacent to the Radford Racing School.)

Radford Racing School, founded in 1968, is the largest driver training center of its kind in the world, according to its owners. It is also the Official High Performance Driving School of Dodge SRT. Current programs include drag, road, and open wheel racing, a Formula 4 program, high-precision driving, teen driving safety, and karting. The school maintains a fleet of about 100 race-prepped cars, SUVs, and open wheel formula racers, as well as gas-powered karts.

Before accepting his new role at Radford, Sundstrom had helped the school develop its drag racing

program, which uses a fleet of Dodge SRT Challengers and Chargers, as does the road race program. He has worked behind the scenes with the NHRA and other sanctioning bodies. Most recently, he led an events business and security company that produced events at automotive venues around the country.

Sundstrom recently shared his plans for Radford Racing School with PRI.

PRI: Is there a memory from being in a drag racing family you would want to share?

Sundstrom: I grew up in Michigan in an area where drag racing was not that popular. So it was unique to see both my mom and dad drag racing. We raced in Wisconsin, going to the drag strip every weekend. It was just an amazing way to grow up, a great thing to be involved in with family and friends.

PRI: When hired by Radford, you said, "This is an exciting time to be a performance enthusiast." What does that mean to you?

Sundstrom: I've seen growth in motorsports just in the last couple of years from the younger generation with their interest in muscle cars and racing. We know within the next five to 10 years motorsports is going to be changing with the introduction of electric vehicles and all the different paths that it could lead into. Every manufacturer is coming out with



CHUCK SUNDSTROM

TITLE:
General Manager

ORGANIZATION:
Radford Racing School

HOMETOWN:
Queen Creek, Arizona

FAST FACT:
When he is not working at the track, Chuck Sundstrom enjoys getting outside for kayaking and hiking—"the total opposite of my racing life," he explained. "But my favorite thing is traveling and learning about different people and places around the world. I am very passionate about that."

an EV, and some want to have the fastest one. There are challenges, but I think it's exciting to see where it's going to go.

PRI: As a driving school, what is Radford doing to transform its students into competitors?

Sundstrom: The school has some of the world's best instructors, with solid backgrounds in all types of racing. We increased all our programs and our variety, and we continue with our high-precision driving courses, open wheel, and Formula 4. We're looking at adding some more purpose-built road race cars. It'll again be a connection with Dodge and Direct Connection. We're looking at adding a new karting program where we can start with a younger generation. [The current program starts at age 12, per the school's website.]

PRI: In addition to Dodge SRT, Radford lists numerous corporate sponsors, including Goodyear, Mecum Auctions, Hagerty Insurance, Petersen Automotive Museum, and more. Are you working through them to promote the track?

Sundstrom: We are working a lot of new avenues, getting more involved with our sponsor-partners and how those companies tie into motorsports. We're doing some displays and promotions with NASCAR, as well as displays and interactive activities with the NHRA, including some at international events. We're going to have some



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cars and displays at lower-level road race events. Also, we have a great scholarship program with Goodyear for our Formula 4 cars and open wheel program.

PRI: With your racing, track management, and entrepreneurial background, what would you say is the greatest strength you bring to this role?

Sundstrom: I think it's just the unique experience and the knowledge that I've gained that help me look at things from the viewpoint of both the racers and track managers.

"I'VE SEEN GROWTH IN MOTORSPORTS JUST IN THE LAST COUPLE OF YEARS FROM THE YOUNGER GENERATION WITH THEIR INTEREST IN MUSCLE CARS AND RACING."

PRI: Is there a mistake that you've made in your professional life that you learned from and are applying those lessons today?

Sundstrom: I've had many learning experiences, and I still learn every day, at every event. There have been things that I probably did wrong, or I could have done differently, but I learned from them, and they helped me to do a better job moving forward.

PRI: Is there a piece of advice you have received, whether personally or professionally, that has greatly impacted your work?

Sundstrom: Working for Charlie Allen, who owned Firebird Raceway, taught me a lot. I think the most important was to always be open-minded and look at both sides. Learn from your experiences every day, good and bad. **PRI**

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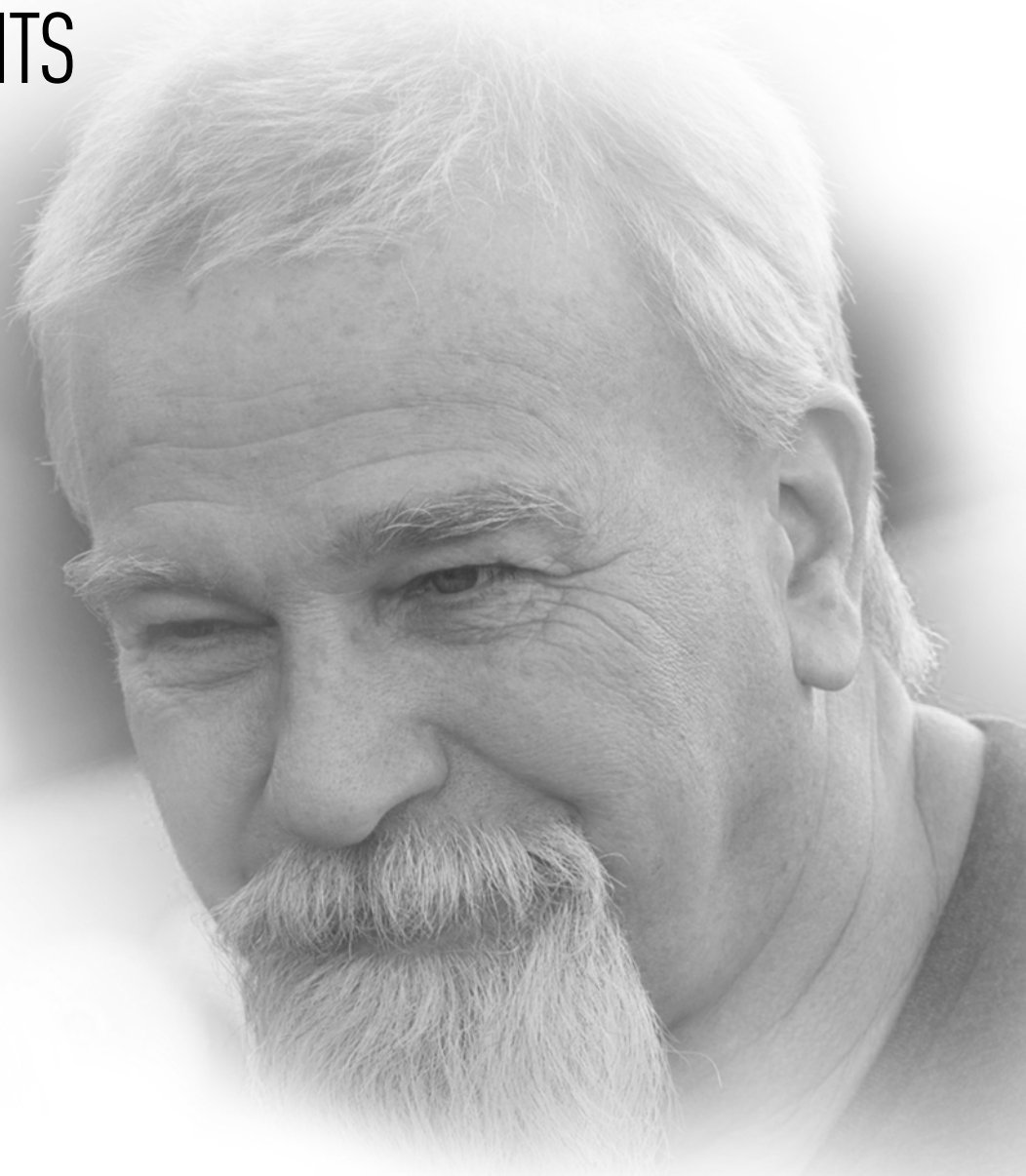
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KEITH KUNZ

Keith Kunz shares how he built Keith Kunz Motorsports into the midget racing powerhouse team it has become and why it's also the "go-to team where everybody wants to have their product."

By Jeff Zurschmeide



Keith Kunz will be the first person to tell you that most drivers of midget race cars are hobbyists, just racing for fun and a few bucks at their local dirt tracks. At the most basic level, racing is fun, and people often get into it for a few years and then move on to different activities. But among all the weekend warriors there are young drivers with the promise of greatness, and Kunz has a sharp eye for the qualities that can carry a driver to the big time.

His record so far is impressive. It was Kunz who identified an 18-year-old Kyle Larson racing midgets at Perris Auto Speedway in California. Larson, of course, went on to become not only the 2021 NASCAR Cup Series champion with Hendrick Motorsports, but also was part of the winning driver lineup to earn the 2015 24 Hours of Daytona overall victory with Chip Ganassi Racing in sports cars. After Larson moved up the ladder from midgets, he was replaced by Christopher Bell, who now drives in the NASCAR Cup Series for Joe Gibbs Racing. The list of Kunz graduates goes on, culminating with Jade Avedisian, who won the 2023 Xtreme Outlaw Midget Series championship, becoming the first female driver ever to win a national midget series title.



We spent some time with Kunz to ask him for his secrets of success and his vision of midget racing as a farm system for producing great drivers.

PRI: Tell us a bit about yourself. How did you get to where you are today?

Kunz: I grew up in Springfield, Illinois, and my family raced. My grandfather raced midgets; a couple of my uncles raced midgets. One of my uncles was Chuck Weyant, who raced Indianapolis back in the late 1950s when the road to that was through midgets and sprint cars. As my cousins and I grew older, we all started racing motorcycles and then eventually midgets. My dad was always going to the races with my uncles, and I just grew up around it.

I had a midget that I drove in 1986 and 1987 for about a year and a half. I wasn't very good at it, so I was able to get other people to drive. Then in 1990, my brother Rusty came to me and said we should put all of our stuff together and buy one good car. We did that, and we were always able to get

Jade Avedisian won the 2023 Xtreme Outlaw Midget Series championship driving for Keith Kunz Motorsports (KKM). Kunz remains on the lookout for top talent in the micro sprint series, where Avedisian came up. "The sport is craving for a great female driver to come along, and Jade has filled that role," he said.

very good drivers. We still worked normal jobs and kind of did it as a hobby, but we really got to know people in the industry. Then in 1997, Pete Willoughby started a team back here in the Midwest, and he wanted to move up to the USAC national scene and hired me to come back here. We've been together ever since.

PRI: What's the attraction of midget racing? What keeps you interested?

Kunz: I personally think it's some of the best and most competitive racing there is. It really teaches a driver how to race. With a lot of racing, you're at the mercy of the cars, but with midget racing you can showcase your

talent, especially on the dirt side where the driver really has to adapt to changing track conditions. As a race goes on, the fast line could move top to bottom, and back to the top through the middle. It could move five or six times during a 30-lap race. It's some of the most intense racing there is, and the skill set that they learn seems to apply as they move on. Midget racing teaches us some of the best car control ever, I believe.

PRI: What's the reason your team is so successful? Do you have a secret ingredient or secret sauce that you think gives you an advantage?

Kunz: I think it's knowledge. What we've built is unique because we do it for a living. This is a hobby for most midget owners. So they come and go quite a bit. But when Pete Willoughby and I started this team, we didn't have anything. We just decided we wanted to go. We were into racing, and we decided we wanted to try to do this and this only. We didn't have anything to fall back on, so we had to succeed. We've built this team over 25 years now. So I think what we



Keith Kunz (center) said it can be difficult to hire team members due to the team's demanding schedule. "Our schedule is around 80 races a year. So there are some two- and three-day weekends. Sometimes we're gone on the road for three or four weeks. It's really hard for people who have families to be gone like that."

have that other people don't have is just the knowledge. I've been everywhere in the country racing midgets, and we really keep on top of the innovation in the sport, coming up with new stuff constantly. I think 99% of the people out there who race just buy off the shelf and put it together. We are the guys who really innovate and set the tone for what's out there.

Most of the time we're one step ahead of everybody because of our partnerships with a lot of the suppliers in the racing industry. For their products to be successful, they have to be on winning teams. We're that go-to team where everybody wants to have their product. We're always out in front of that, constantly trying new things and developing new things and trying to stay ahead of the competition before it comes out on the shelf and everybody else has access to it.

Whether that's in chassis development or motor development or a little bit of everything, that gives us a little bit of an advantage. I have a hired staff of mechanics and crew chiefs, and we have lots of books and notes so we're able to get up to speed very, very quickly with drivers. A lot of dads think they can do it themselves and do it a lot cheaper, but it takes a lot longer. It takes years to get knowledge and to be competitive, where here they can step in and be competitive and winning within a few races, if their kid is really, really good. That's because we have the knowledge with the car and the setup, and it accelerates a person's learning curve and development as a driver so much faster by coming through us.

PRI: You won last year's Xtreme Outlaw National Midget Series championship with Jade Avedisian, and you have other female drivers on the team. How do you think midget racing and motorsports generally can encourage more young women to compete at the national level?

Kunz: A lot of our young kids are coming through the micro sprint series, which is from age six on up. We're big believers in watching that series and helping that series because there are more and more female drivers who are trying to race as kids. You see more and more of them in that series, and then you're able to see which ones are

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"Toyota has been interested and very helpful in anything that we need in development," said Keith Kunz. "They have really seen the value in grassroots racing helping their development of drivers to go on through NASCAR."

good. That's where Jade came through.

It's hard to say what you look for, but there's just something you see when you have been around long enough that you can tell the ones who have talent. It's usually the ones who overachieve in lesser equipment, and then just to give those girls a chance is huge. A girl actually has a financial advantage right now because of the push for diversity in the sport. The sport is craving for a great female driver to come along, and Jade has been the one who has filled that role.

I think the opportunity is there. It's just a matter of finding the female drivers. I think they're outnumbered by the boys who want to race as they go through their teenage years. But the ones who do stick to it and are determined to showcase what they

have, those are the ones who get noticed if they get results. When you get these opportunities, you have to produce. If you can produce, they'll keep moving you along because there is that need.

PRI: When you go to hire somebody to be on your team, are there any particular traits you look for? And on the other side of that coin, are there any deal breakers?

Kunz: Yeah, it's very demanding. Your time during our schedule is around 80 races a year. So there are some two- and three-day weekends. Sometimes we're gone on the road for three or four weeks. It's a very demanding schedule. To find crew guys who can do that, there's a lot of things you have to look at. Number one, their knowledge, their background, and how long they've been around it. But also, we talk to them about their private life, about how tied down they are. It's really, really hard

sometimes for people who have families to be gone like that. Sometimes they're okay with it, sometimes they're not. So you just got to get that sense of all that and their background.

At the beginning of this year, we were looking for employees. We had three of our really good people move on. One of the big benefits of our team is that not only do our

"WE HAVE SO MANY EYES ON US THAT CREW PERFORMANCE IS ALSO NOTED OUT THERE, AND THERE ARE OPPORTUNITIES FOR OUR CREW MEMBERS TO MOVE ON AND DO OTHER THINGS."

drivers move on, but our crew members move on. One of them, Jared Martin, who was one of our crew chiefs, moved on to go to work for Chip Ganassi Racing. Another kid started as a tire guy and moved up to crew chief last year. He'd been with us three years, and he went to NASCAR to a truck

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team. We have so many eyes on us that crew performance is also noted out there, and there are opportunities for our crew members to move on and do other things. We encourage that because that's another great reflection on us.

PRI: One big factor in your success is your relationship with Toyota. How did that develop?

Kunz: I believe it was in 2005 when Toyota decided to get involved in the grassroots midget racing. They were teamed up with Steve Lewis at that time. Then in 2008, we won the USAC National Midget Series championship with Cole Whitt. And during 2008, Steve Lewis decided he was going to retire and quit racing. Toyota came to us and wanted us to take over that segment and have their house car with Cole Whitt as the champion.

It started out as Toyota helping us with one or two motors in our program. They were new to it, and they were struggling, and we

struggled for two years. We never won a race. They struggled trying to find the kind of power that we needed. We were able to talk them into getting involved with Rick Long at Speedway Engines in 2010. Right at the end of the year they came out with a new motor for us at the Turkey Night Grand Prix at Irwindale Speedway. We ended up winning that night with Bryan Clauson. Right there, we knew we had something.

Then going into 2011, we needed a driver. I had spotted Kyle Larson late that [previous] year, and at the Chili Bowl he was there driving for somebody else. My partner and I went and watched him, and we knew instantly that he was our guy. We ended up hiring Kyle for the 2011 season, and things just kind of took off from there. All of a sudden, we had a great motor, we had a great driver, and we started winning races. Well, somewhere through that whole process, Chip Ganassi took a chance on him and signed him. Toyota recognized that they

had Kyle Larson right here in their hands and they let him get away. David Wilson and Tyler Gibbs of TRD came to us and said that would never happen again. At the same time, that put a lot of eyes on our team within the upper echelon of TRD. We were able to find Christopher Bell, and he won the USAC National championship.

Since then, Toyota has been interested and very helpful in anything that we need in development. They have really seen the value in grassroots racing helping their development of drivers to go on through NASCAR. They created the whole ladder

Keith Kunz believes it is knowledge and experience that keep KKM on top. "We've built this team over 25 years now. I've been everywhere in the country racing midgets. We are the guys who really innovate and set the tone for what's out there," he said.



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system around Christopher. They put him in the very best stuff. That really built our relationship, and Christopher was able to get results in everything that he did. He took up that opportunity and produced results that got him to where he is today. The beginning was with those two, and it has continued on to today. Jade is now under their banner and doing some road racing. The goal is for her to be that girl who supersedes everybody else.

We've been very, very fortunate to have Toyota support. It's not only everything that we talked about, but they offer the kids on our team a chance to come down to North Carolina, go through their training performance center, go through media school, go through their physical therapies. They have a weight training deal, they have a nutritionist, and they do concussion tests on them at the beginning of the year. All these kids get every opportunity to succeed, even if they don't stick with Toyota and they're able to move on to somebody else. But as they're coming up, they teach the kids how to be successful in the sport.

PRI: Sponsors are hard to get, harder to maintain. What do you do for sponsors that's different from other teams?

Kunz: I think our biggest asset in getting sponsors has been Toyota. We do have our affiliation with Curb Records. Mike Curb has been in the sport for a long time, and he has been one of our team sponsors. But Toyota has relationships with a lot of companies, and they use that connection and have sponsorship that they get to control.

Then again, how you keep a sponsor is you promote them. The big thing now is social media. We have our own media guy, Jay Drake, who does all the social media stuff. We keep on top of that and try to promote the sponsors with our drivers and through the media training stuff. That's one side of it. The other side of it is the racing products, Eibach Springs, all the different manufacturers of parts that want to be a part of our team because of our success. Everybody wants to be a part of it. The biggest thing with any sponsor is being able to go out and win.

PRI: Tell us about the KKM Give Back Challenge series.

Kunz: Five seasons ago I came up with this idea to give away a ride for the Chili Bowl. We had an Outlaw Kart race at Millbridge Speedway in North Carolina, and the winner of that race had the choice of a Chili Bowl ride or some money. Well, after that first year we moved it into the micro series, and we still gave away a free Chili Bowl ride.

Then last year we decided to try to expand that into a couple more races. My whole goal right now is that micro racing is kind of regional, and most people stay in their areas and there is no series. They all have a big race now and then, but there's no series that puts it all together. What I was able to do this year was put together a seven-race series called the KKM Challenge series. It ends at Port City Speedway in Oklahoma, and the Port City race is the Give Back Challenge. We got sponsors to put money in for a point fund for the series, and they're all big races. All the races paid \$10,000 to win. I was able to get some broadcast packages with FloRacing to show my KKM Give Back race at Port City, and then S2FTV.com does all the challenge series races. Now I'm trying to grow it into more and more races. But they are seven of the biggest-paying races in the country for micro racing.

PRI: Where do you see midget racing going in the next five to 10 years?

Kunz: I think it is getting stronger. The depth of it right now is probably the best depth that it has ever been. When you go to a race with the people who are following the National series, there are 15 drivers who are traveling nationally, which is huge. That's as big as any open wheel series. The World of Outlaws started their midget series up about two years ago. That really helped raise the bar. They were able to bring a lot more money into the sport. They were able to get the other series, whether it was POWRi or USAC, to raise their purses.

With social media, the broadcasting of the sport has really taken off the last few years. So it's growing. There's a lot more eyes on it because NASCAR owners and manufacturers are always looking for the next talent out there. Kyle Larson and Christopher Bell have been a big help with that. I just think midget racing is still gaining traction right now. It's probably the best it's ever been. **PRI**

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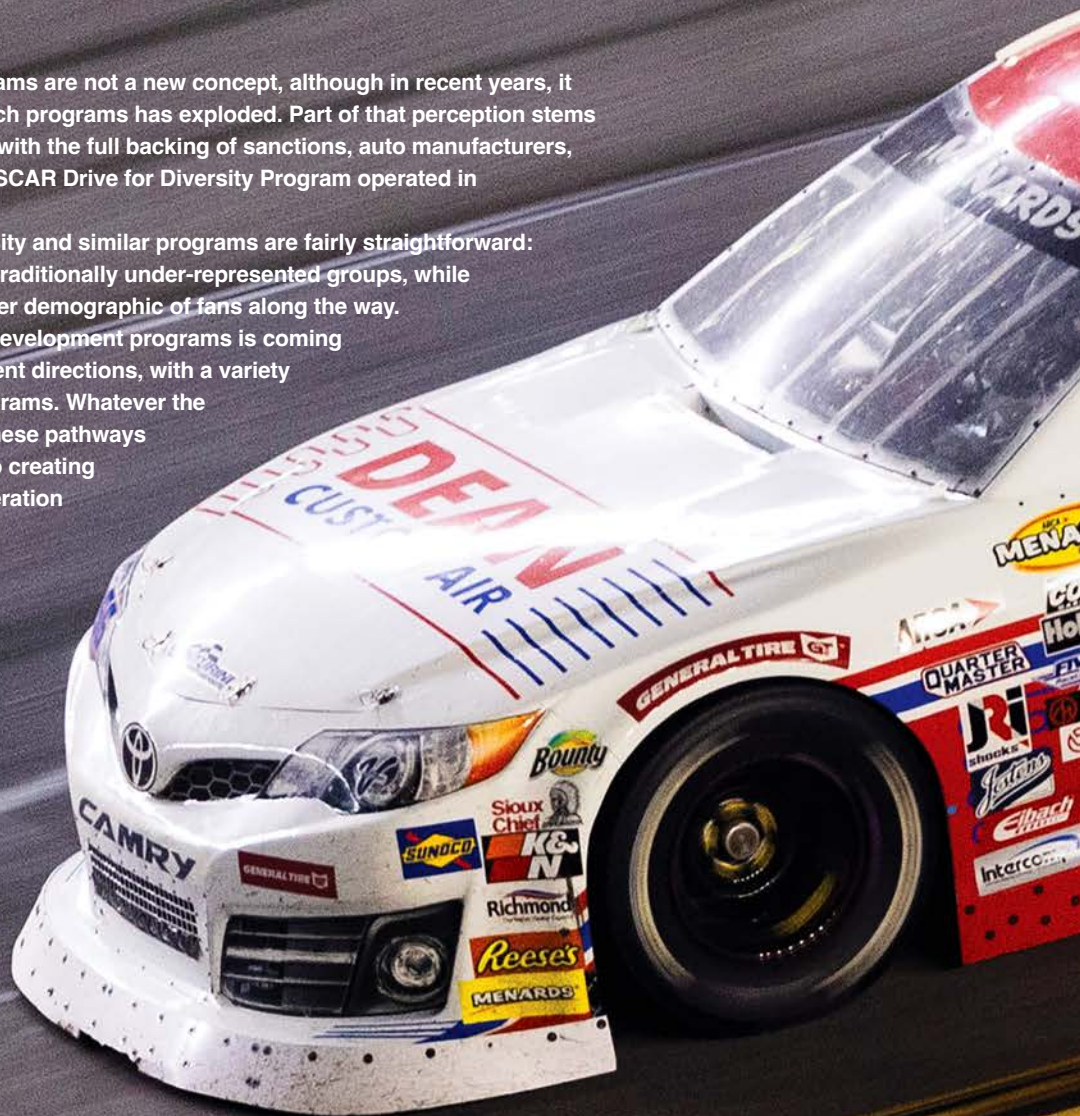
The right guidance goes a long way toward creating tomorrow's racing stars.

By Steve Statham

Driver development programs are not a new concept, although in recent years, it seems the number of such programs has exploded. Part of that perception stems from high-profile efforts with the full backing of sanctions, auto manufacturers, and sponsors, such as the NASCAR Drive for Diversity Program operated in conjunction with Rev Racing.

The goals of Drive for Diversity and similar programs are fairly straightforward: to increase participation from traditionally under-represented groups, while attracting an expanded, younger demographic of fans along the way.

But the new wave of driver development programs is coming at the issue from a lot of different directions, with a variety of motivations behind the programs. Whatever the reasons behind establishing these pathways to success, all are dedicated to creating opportunities for the next generation of drivers. Some of these programs are even dedicated to developing entire race teams or offering a leg up to experienced racers looking to jump to the next level. Our sources offered insight into what it takes to put drivers on the winning path, and their own reasons for launching their programs.





Daytona ARCA 200 winner Gus Dean driving for Venturini Motorsports. Photo courtesy of ARCA.



AB Motorsports' Accelerate program isn't just for up-and-coming drivers. Antron Brown (right) also helps experienced racers with the transition into different series. In the seat is veteran Pro Stock Motorcycle racer Angelle Sampey, who is moving into A/Fuel Dragster.

MOTIVATED DRIVERS, MOTIVATED PROGRAMS

JCM Racing in Brownsburg, Indiana, is a multi-car NHRA team that established the JCM Racing Driver Development Program in 2023. "Basically, the intent of the program is to try to develop young people into better people, for one thing, and also give those that have a little passion for racing the opportunity to race," said team owner Joe Maynard. "So what we decided was, we'd try to find one driver in each division and help them financially and give them access to our professional drivers—Tony Schumacher—crew chiefs if they need input on that kind of stuff, just the opportunity for them to talk, meet, see, pick up a phone, and call. We now have Ida Zetterström [2023 FIA Top Fuel World Champion, and current NHRA Top Fuel competitor] on our team. She works very well with some of the females. She's already had good conversations with them."

The Kulwicki Driver Development Program (KDDP) in Concord, North Carolina, was established in honor of the late Alan Kulwicki, the 1992 NASCAR Winston Cup champion and NASCAR Hall of Famer. "The whole beginning of the program could be traced back to around 2013, when Thelma Kulwicki, Alan's stepmom, was looking around trying to

figure out what she could do with the money that was left over in his estate," said Tom Roberts, executive director of KDDP and a personal friend of Alan's. "She wanted to do something that would continue his memory and legendary status by assisting in some way a grassroots racer or racers."

The KDDP program was up and running in 2014. In honoring Kulwicki, the number 7, his racing number, plays a prominent role. "The seven finalist drivers get a \$7,777 stipend. We compete for seven months, April 1 through October 31. The irony of that is that the first day of our annual competition, on April 1, is also the same day that we lost Alan. I didn't think about that at first, but it's almost like an annual, perpetual reawakening of Alan through his drivers through the years."

"Those seven drivers then compete for the grand prize, the Kulwicki Cup, which is seven times the finalist stipend—\$54,439,"

continued Roberts. "Plus, support for PR, business networking, even a priest if you need him."

Antron Brown, three-time NHRA Top Fuel champion, launched the AB Motorsports Accelerate program in 2023, although he had been advising up-and-coming racers long before that. For Brown, his own experiences in breaking into racing were still fresh on his mind. "I created it because I know how hard it was when I first started," he said. "We have driver development underneath our Accelerate program, but it's actually a program to do a lot more than just develop drivers. It actually helps to develop race teams, to help people out on the marketing side, to help people put sponsorship decks together. We work with different race teams and people on all different levels to help them develop their social media."

"We had all these different assets I'd

"THE INTENT OF THE PROGRAM IS TO TRY TO DEVELOP YOUNG PEOPLE INTO BETTER PEOPLE, FOR ONE THING, AND ALSO GIVE THOSE THAT HAVE A LITTLE PASSION FOR RACING THE OPPORTUNITY TO RACE."

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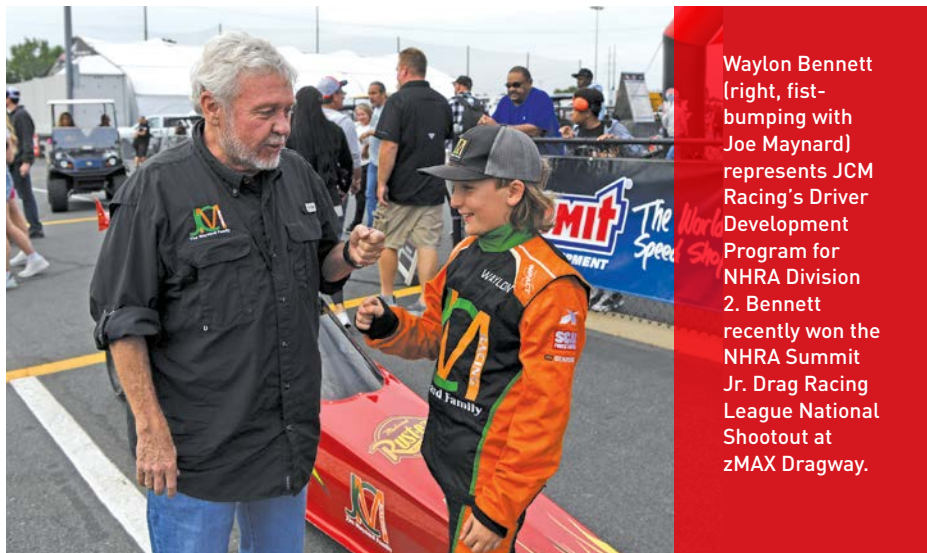
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Waylon Bennett (right, fist-bumping with Joe Maynard) represents JCM Racing's Driver Development Program for NHRA Division 2. Bennett recently won the NHRA Summit Jr. Drag Racing League National Shootout at zMAX Dragway.

invested in," continued Brown. "I thought, 'You know what? We developed all this that we can use to help other people out on multiple levels.' On the driver side, I can help drivers on their mindset, their driving. I've been doing it for years. And then I can help other race teams out on the sponsorship side. Not just to help them get sponsorship, but to help them retain and keep the sponsorship relationship healthy. A lot of people get sponsors and can't keep them because they don't know what it takes to keep them. We help on all those facets. Everybody's got driver development programs, putting people in cars. We've got that, but our program is so much more. You come here and we help people on all different levels to accelerate them in the direction they want to get accelerated in."

For Venturini Motorsports in Concord, North Carolina, the origins of its ARCA-focused driver development program began out of necessity. "We were more like a mom-and-pop type race team from pretty much when my dad [Bill Sr.] drove, when I drove, right to the end of my career," said Billy Venturini. "I kind of had to come to the realization I wasn't going to be a Cup driver. Our funds were tight, and we got to the point we were just extended too much to try to keep racing."

Fortunately, his friendship with JD Gibbs opened doors to shifting the business to driver development. Joe Gibbs Racing had one of the early diversity programs and was

looking to expand its reach into ARCA. The Venturini family's deep racing experience in ARCA proved just the right fit, and the driver development program was born. The early years weren't easy, but the program's big breakthrough occurred in 2008, when it fielded Joey Logano at Rockingham.

"That's the day, without a doubt, that put us on the map in driver development. That race was super-hyped. It was the reopening of Rockingham," Venturini recalled. "It was the highest paying race they'd ever had in ARCA. It paid something like \$34,000 to win. We were down there with Joey and honestly, we killed them. We were fastest in practice, we sat on the pole, led 260 laps, and at one point lapped the entire field but one car. So not only did we win, but we got style points. It was such an ass-kicking that you couldn't deny what you saw. We were immediately on the map."

LESSONS LEARNED

Typically, there are two major facets of driver development: on-track development, and navigating off-track relationships with sponsors, fans, and media. How each of these is weighted varies from program to program. Some programs are conducted in-house with specific training regimens, while others offer financial and equipment assistance to existing family race teams

SIGNING UP

Not surprisingly, being accepted by a driver development program is a competitive endeavor. "We have a line of people calling us. We have way more people calling us than we have availability," said Billy Venturini of Venturini Motorsports, Concord, North Carolina. "It's a great problem to have. This is not like it was in the struggling times of yesteryear. We're in high demand, but we do nothing but Toyota-affiliated drivers. Not every driver who comes in is Toyota affiliated, but if I find them, they become Toyota affiliated just by being with me."

At the Kulwicki Driver Development Program (KDDP) in Concord, North Carolina, selection of the finalists is a detailed and involved process. "We do Zoom calls with our interviewing process for applicants. We will name 15 semi-finalists and deduce seven finalists from that every year," KDDP's Tom Roberts said.

"It's all based on application and review," he continued. "Each December we open up applications. People can apply online and then the board/voting panel will take all the applications and put them in spreadsheets. All the voters get to review the applicants. Then we have Zoom calls among the voters, and each of the seven voters submits their top 15 out of all the applications we receive, and then by virtue of that vote we establish 15 semi-finalists. Each one of them has a Zoom interview with the board. After that concludes, the voting panel reconvenes and votes again. That's how we select our seven finalists." —Steve Statham



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The central section features a large background image of a racetrack at night, illuminated by bright lights. Overlaid on this is the CTECH Manufacturing logo, which includes a checkered flag graphic and the company name in bold, stylized letters. Below the logo is the tagline 'TUNE UP YOUR TOOL STORAGE' and 'BORN & BRED IN THE MOTORSPORTS INDUSTRY'. At the bottom of this section is the company website and phone number, followed by social media icons for Facebook, Twitter, Instagram, YouTube, and LinkedIn.

along with access to accomplished drivers, experienced pit crews, and marketing pros.

Venturini Motorsports serves as Toyota Racing Development's (TRD) official driver development program in the ARCA series. They sometimes funnel drivers into the Toyota Driver Development (TD2) program, and Toyota frequently sends drivers to Venturini Motorsports for stock car experience. The resources available from a major manufacturer like Toyota can make a huge difference for a driver climbing the competition ladder.

"Once they are involved with us, if they run half the season or more, they end up getting a lot of Toyota development perks," Venturini said. "With Toyota we have trainers, nutritionists, a whole training facility with heat rooms, and different analytics we run through like breathing tests, things like that. They can tell you how many calories to eat for how many your body is burning. There's all kinds of stuff they monitor. It's really high-tech stuff.

"With the simulator, we can break down their driving so well. I can talk about angles of entry, and we've got brake pressures, lifting points, and steering wheel angles. I've got an engineer who basically runs computer stuff for us all the time. And we can break everything down and really show them exactly.

"These drivers have never had tools like this until they've been here. Now we can hone their skills," Venturini continued. "It's not only a driver simulation, it's a car simulation. My race car is the race car you're running in there. All my stuff is measured by Toyota, and all my pieces that go on the car are serial numbered and measured, and then the computer literally puts the car together for us in the program. Then we can make changes to the car. They're driving our race car in the simulator, the exact race car



The driver development program started by Billy Venturini (left, receiving NASCAR's Diversity Award) is now TRD's official development program in the ARCA series. The resources available from a manufacturer like Toyota can make a huge difference for a driver climbing the competition ladder.

they're going to drive."

AB Motorsports' Accelerate program includes young drivers breaking into the sport, but Brown has cast a wider net to include experienced racers looking to move to different series or start their own teams, even athletes in other sports. Among the people Brown has advised are Pro Stock Motorcycle racer Angelle Sampey as she shifts to A/Fuel Dragster competition, and Shawn Reed as he started up his Top Fuel team.

"It's different for everybody," Brown said. "You have a lot of people out there already doing it, but then they're looking at how to go to the next level. To go to the next level, they don't know what it takes, they don't even know what kind of budget it takes to do it. They have a set price in their mind. Then when they see it, they go, 'Oh, I didn't even realize. I didn't realize this; I didn't realize that.' And there's no standard. There's no

place to go. There's no 'Racing for Dummies' out there, there's no 'CliffsNotes' for you to go do it. That's kind of what the AB Accelerate program was all about, bringing that so we could make a lot of people successful in motorsports."

Off-track guidance plays a crucial role in driver development, particularly for younger drivers in the age of social media. "We've had some things maybe that the look wasn't correct, or their social media wasn't becoming to them, or not reflective of what they want to be or what we want them to be," Maynard said. "Those have been the biggest challenges, my social media folks getting with people and saying, 'That photo is not what you want out there, or you need to change your look, your talk, your feel.' Those kinds of things. Most of these kids are great kids, and their parents are good people."

Mindset is often just as important, if not more so, than mastering the nuts and bolts of race car operation. "I feel like I'm probably as much a sports psychologist as I am a team owner, or ex-crew chief, or ex-driver," Venturini said. "Just teaching them about all the trials and tribulations that go into this, teaching them what really needs to be done for it. We talk about the fear of failing. What holds drivers back? Honestly, most drivers that fail, they stop themselves. They can't

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Levon Van Der Geest, who at age 15 was the youngest winner ever at the Milwaukee Mile driving a Midwest Truck, was a Kulwicki Driver Development Program finalist in 2023. He has made a successful transition from trucks to super late models.

get out of their own way because they get worried about not making it. So we openly talk about it. Because that's so taboo, no other place wants to even talk about it. We talk about the dream of being a race car driver and how being fearful of failing is probably going to make sure you fail.

"We try to keep them loose, try to keep them in the right mind of processing their situations, not letting the moment get too big," Venturini added. "Every now and then they need to be told to get out of their own head. They're young drivers and they want this so bad."

TOMORROW'S STARS

Although driver development programs work to create tomorrow's racing stars, it usually doesn't take long to see the results. In many cases, tomorrow is here today.

Waylon Bennett represents JCM Racing's Driver Development Program for NHRA Division 2. As this was being written, he won the NHRA Summit Jr. Drag Racing League National Shootout at zMAX Dragway on April 28.

At KDDP, school alumni grabbed all the top positions at Slinger Super Speedway for the 2024 ASA Midwest Tour season opener. "Ty Majeski, who was our inaugural 2015 Kulwicki Cup Champion, he

"THESE DRIVERS HAVE NEVER HAD TOOLS LIKE THIS UNTIL THEY'VE BEEN HERE. NOW WE CAN HONE THEIR SKILLS."

won the race, and of course, celebrated with a Polish victory lap in tribute to Alan," Roberts said. "Finishing second was Max Kahler, who is a 2024 KDDP finalist. Finishing third was Luke Fenhaus, who was the 2021 Kulwicki Cup champion. Finishing fourth was Alex Prunty, who also established a new track qualifying record there. Alex was our 2016 Kulwicki Cup champion. Positions one through four were all Kulwicki Cup alumni or current drivers."

Through the 2023 season, 41 drivers have gone through the KDDP program, competing in 1,260 races and recording 205 wins, according to KDDP.

Natural talent, of course, is a decisive factor in which racers make it to the top. But driver training can be the X-factor that levels the playing field. "At the end of the day, the

driver still has to be able to do it. You can train all you want, but there are still some people who drive cars better than others. We can close that gap a whole lot better than they used to be able to," Venturini said.

"You can tell when someone's special," he added. "We can make someone definitely really good, but to be what we would call 'Sunday good,' you can spot that the first day they walk in the door. Stalling out on Saturday isn't getting all the way there. If you're really going to be successful out of this place, you're racing on Sunday." **PRI**

SOURCES

AB Motorsports Accelerate
antronbrown.com/accelerate/

JCM Racing Driver Development Program
jcmnitro.com/driver-development

Kulwicki Driver Development Program
kulwickiddp.com

Venturini Motorsports Driver Development
venturinimotorsports.com/driver-development/

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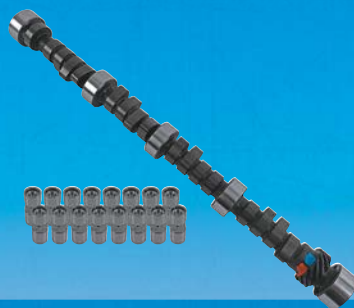
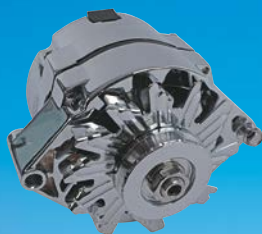
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Vintage series are enjoying record car counts as interest continues to climb at a steady rate.

By Bradley Iger

While some disciplines are still struggling to find their footing in a post-pandemic motorsports landscape, vintage racing is decidedly firing on all cylinders. Considering the inherent expense involved in sports car racing, and the additional premiums that are typically attached to anything deemed “vintage,” the strength of the segment may come as a surprise to some. And given that vintage racing isn’t an obvious path for sportsman racers looking to ascend through the ranks in pursuit of a professional career, this success story may seem even more improbable at first glance. But the numbers don’t lie.

“Globally, it’s on an upward trajectory right now,” explained Chris Ward of Historic Sportscar Racing (HSR), Daytona Beach, Florida. “Like everybody in the live event industry, there were some resets needed—some because of the business case, and some because of the customers’ needs and

RISING



wants. We are seeing a very positive trend emerging. There's a distinct resurgence in interest in vintage and historic sports car racing. Our first two events of 2024 were record breakers for HSR. Our season opener—the Sebring Spring Fling—brought in 85 cars in 2023. This year, it was 130. Last year we had 233 cars at the Mitty, and we have 282 entries this year.”

Ward cited a pronounced upswing in interest in the organization's Group 2 and Group 3 categories (1950s and 1960s vintage production cars, and mid-1960s through 1980s small-bore historic production cars, respectively), but the sentiment is consistent throughout vintage racing at large. Yet as we discovered during our discussions with organizers, there isn't one specific formula for success. Instead, these associations have

taken a tailored approach to their formats and events that reflects the expectations of their racers and the shops that support them. That, in turn, has created factions within vintage racing with distinctively unique approaches to the concept.

DEFINING VINTAGE

For many, vintage motorsports conjures up mental images of vehicles from those aforementioned categories: race-prepped Lotus 7s, MGs, Alfa Romeos, and the like. But organizations like HSR actually take a much broader approach to the term.

“Our philosophy is that a vintage car or historic car which fits into one of the groups within HSR is eligible to race once the homologation of that vehicle is more than five years old,” said Ward.

DEMAND



He explained that while some organizations look at the mid-1970s as the spiritual cutoff for vintage race cars, HSR's definition offers some key advantages.

"When Historic Sportscar Racing was acquired by IMSA two years ago, it created an alignment of the groups and classes in a number of instances between HSR and IMSA competition from years prior. For example, the wonderful DPI [Daytona Prototype international] cars that only finished IMSA competition two years ago. We have half a dozen of those running with HSR now. If we didn't have this ruleset, those cars would probably be shuttered away in collectors' warehouses because they'd have nowhere to race."

That perspective is shared by Ron Hurst of the Vintage Auto Racing Association (VARA) in Chino Hills, California. Although VARA generally serves a more grassroots portion of the market, in recent years the organization has been turning its attention to newer platforms for many of the same reasons.

"Historically, the cutoff has been 1974 for vehicle eligibility; essentially the pre-

"THERE'S A DISTINCT RESURGENCE IN INTEREST IN VINTAGE AND HISTORIC SPORTS CAR RACING."

smog era," he said. "I think that had a lot to do with the point in time when the vintage segment really got its start. But today, even a '94 Miata is 30 years old. So we've been updating our definition of what a vintage car is in order to reflect that."

Hurst also pointed to the skyrocketing values of many 1950s and 1960s sports cars, a trend that has made these vehicles a prohibitively costly proposition for a large portion of would-be racers.

"You have to ask yourself how you are going to keep participation up as many of those cars become too expensive to race," he said. "What we found is that many of the cars that were raced in the SCCA 20 years ago—Miatas, A Sedan cars like Camaros and Mustangs, and so on—are no longer competitive within the classes that they were running in. So a lot of those cars were left without a home. If you're a very strict vintage club that only accepts '50s and '60s sports

cars, I think you're quickly going to run into trouble because those cars are drying up. You've got to think farther forward."

In recent years, VARA has opened up competition to not only former Spec Miata cars, but also fourth- and fifth-generation Corvettes, '80s and '90s BMW 3-Series, and other more modern platforms that would otherwise not have a place to race today.

Meanwhile other organizations, like the Montrose, California-based Historic Motor Sports Association (HMSA), have chosen a different tack. "For production-based cars, our world stops in 1966," said Cris Vandagriff. "It's a bit of a sliding scale,

The HMSA puts an emphasis on period correctness, said Cris Vandagriff. "We don't want modern aero devices on the cars and things like that."





The traditional concept of historic racing—featuring sports and racing cars of the 1950s and 1960s—is changing, as many organizations are opening their roles to newer competition vehicles in an effort to keep historic cars on track and broaden their competitor base.

though. We're fans of Can-Am cars, which go until '74, and the same thing goes for Formula 5000. With Formula 1 cars, we go up to the end of '84."

Vandagriff noted that HMSA takes a more faithful approach to the vintage racing concept than some other organizations. "Our rules are really simple: Prepare the car as it was originally prepared. We don't want modern aero devices on the cars and things like that."

He also told us that tentpole events like Velocity Invitational—held annually at Sonoma Raceway—and the Rolex Monterey Motorsports Reunion—held annually at WeatherTech Raceway Laguna Seca—have brought greater visibility to the vintage

segment for a group of enthusiasts that essentially mirror HMSA's own clientele and champion its mission.

Vandagriff emphasized HMSA's commitment to period-correctness, but added, "It's difficult to stay true to your principles and make the bottom line work at the same time."

Much like HMSA, the New Britain, Pennsylvania-based Vintage Sports Car Club of America (VSCCA) prizes the historic importance of the cars competing as much, if not more so, than the racing itself.

"One thing I try to instill in people is that we are not a vintage racing club," said JR Mitchell. "We are a car club that is dedicated to the preservation and history of

sports cars in general. We've always sought to preserve rather than to get the latest and greatest trick thing on the cars. So our log books are stricter than most others, and the same goes for the rules."

Mitchell said that while these cars can require a significant upfront investment, VSCCA's approach significantly reduces another large expense: development costs.

"That's probably the most expensive part of running a modern car—the constant development that's required in order to keep up. But these cars are essentially frozen in time, as far as development is concerned," Mitchell explained. As a result, organizations like VSCCA and HMSA also tend to attract a different type of competitor.

"Generally speaking, these folks aren't looking for a career in racing, or a return on investment," he continued. "These people are doing it because they enjoy it and it's fulfilling to them. The only people who are really making money in vintage racing are the shops. There's no prize purse involved, and that tends to bring in a different mindset."

A fairly unique demographic comes along

"OUR RULES ARE REALLY SIMPLE: PREPARE THE CAR AS IT WAS ORIGINALLY PREPARED."

with it. "It's doctors, lawyers, and Fortune 500 people," said Vandagriff. "This is the type of thing where you could be sitting in the grandstands and think, 'Hey—I could do that.' And then actually go do it."

A DIFFERENT VIBE

Without prize money and the prospect of a career in motorsports on the line, vintage events also tend to avoid some of the pretense that's pervasive in many other racing segments.

"Without taking anything away from the level of competition that we see in HSR, because it is very competitive, it is different from what we typically see in those types of series," said Ward, who formerly served as head of motorsport operations for Lamborghini North America. "When the teams get set up on load-in day, the lights aren't on past midnight with crews doing final tweaks to the cars in preparation for a session the following morning. It's not



HSR's Chris Ward sees growth in the historic racing segment. "Our season opener—the Sebring Spring Fling—brought in 85 cars in 2023. This year, it was 130. Last year we had 233 cars at the Mitty [seen here], and we have 282 entries this year."

that. On load-in day, everyone wants to finish their setups so they can enjoy the social aspect of being in the paddock. It's a different atmosphere. It's one of the

wonderful things about vintage and historic racing, really."

Hurst said that, in the vintage segment, the racing itself is the end goal. "Generally

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speaking, these people have the means to sustain their racing programs regardless of their finishing positions. These folks tend to look at this more as a hobby. The reward is getting to race the car."

STAYING ON-THROTTLE

While social media and livestreaming have been areas of promotional focus for many vintage racing organizations over recent years, most agree that word of mouth continues to be the biggest driver of interest and participation.

"Prior to the pandemic, there used to be a Friday night paddock social at HSR events," said Ward. "Of course, during the pandemic and the years following, the paddock social disappeared, but we just re-introduced that at the annual Mitty event at Road Atlanta this year. It's a small world, and when people are having fun, word tends to spread quickly in circles like these. I think that because of this dynamic, we have to make sure that the



At HMSA, "for production-based cars, our world stops in 1966," said Cris Vandagriff, though he added that the year cut-offs are on a "sliding scale" for other types of competition cars, including Can Am and Formula 5000 (1974), and Formula 1 (1984).

off-track presentation is as good as how we conduct ourselves on-track. That extends to branding, paddock layout, and these social aspects, which are incredibly important."

For organizations like VARA, the strategy is focused on finding new ways to expand its reach and get more racers on track. "Every year in January we run a two-day

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A vintage or historic car that fits into one of HSR's run groups is eligible to race once the homologation of that vehicle is more than five years old, said Chris Ward. "If we didn't have this ruleset, those cars would probably be shuttered away in collectors' warehouses."

racing school," said Hurst. "It's very intensive—8 a.m. to 5 p.m., with classroom instruction, on-track sessions, along with skid pad, braking, and slalom exercises.

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the school counts as two race weekends toward their full competition license. We also offer several levels of high-performance driving instruction for those

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"The first step in getting somebody into a race car is getting them to a race track," Hurst said. "If you get them on the track and let them experience a little bit of what it's like to race, they're hooked."

For organizations like VARA, which is

effectively using a rolling timetable for vehicle platform eligibility, there's a sense that as long as people want to race, there will be cars and components available for them to do so. The situation seems more tenuous for outfits that have shied away from moving those goalposts forward, but when asked about concerns regarding vintage parts availability in the future, Mitchell remained optimistic about VSCCA's prospects.

"The situation isn't as dire as it used to be. At this point we can simply fabricate parts if we need to. That's something that we do on a regular basis these days. We've made wheels, uprights, bellhousing

adapters—virtually whatever there's a demand for, we can make. In a way, it's actually getting easier as time goes on. We can scan a part, 3D print it, and CNC it from there. As a result, there's a lot more stuff available today than there was just a few years ago." **PRI**

SOURCES

Historic Motor Sports Association
hmsausa.com

Historic Sportscar Racing
hsrrace.com

Vintage Auto Racing Association
vararacing.com

Vintage Sports Car Club of America
vscca.org





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RESTOCKCAR REVIVAL

TEAMS IN THE NASCAR CUP SERIES HAVE TRADITIONALLY CYCLED THROUGH CARS AT A RAPID RATE, OPENING THE DOOR FOR FEEDER AND HISTORIC SERIES TO CREATE GROUPS FOR THESE FORMERLY RETIRED MACHINES TO RUN IN. CAR COUNTS ARE BOOMING.

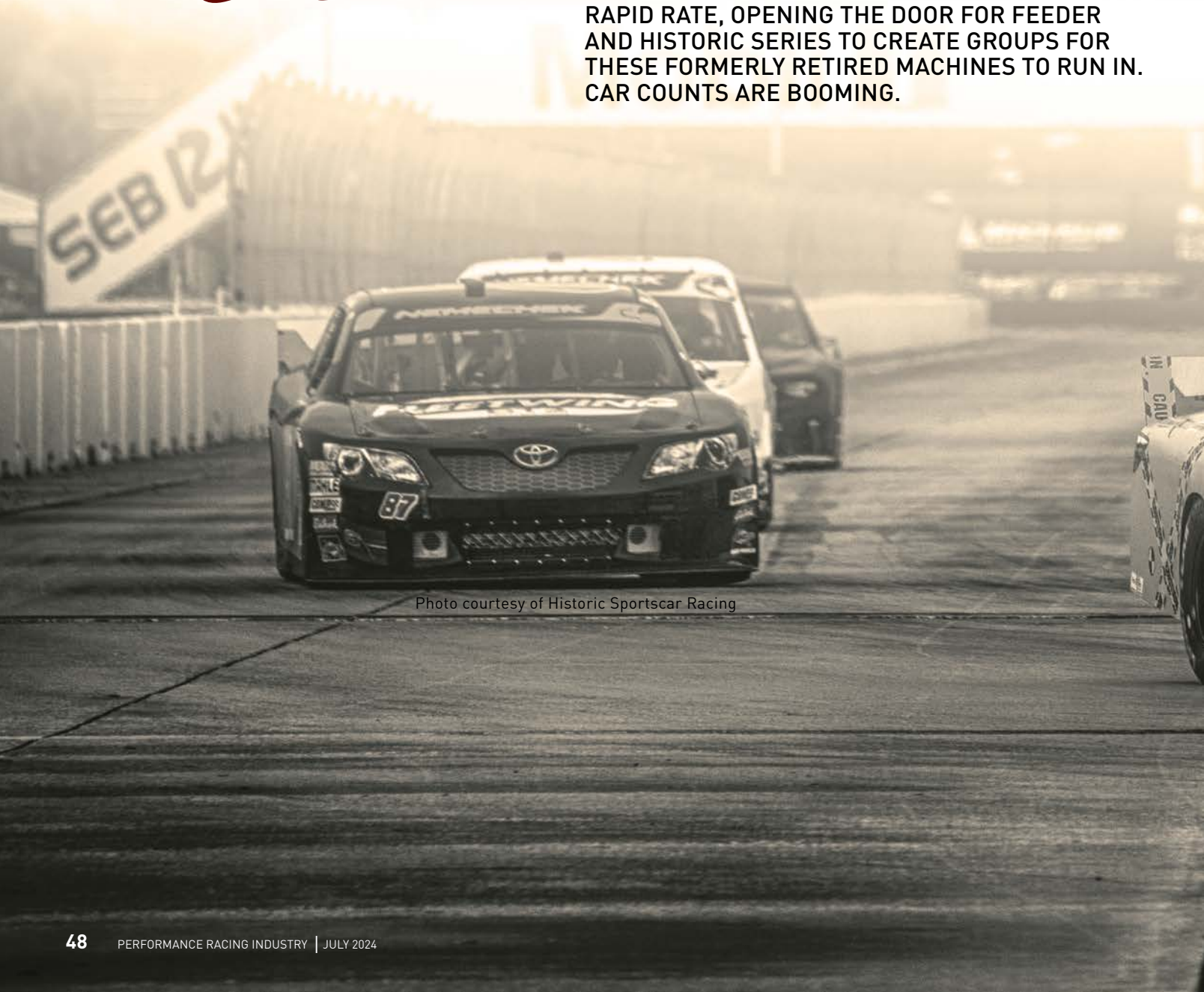


Photo courtesy of Historic Sportscar Racing

By Bradley Iger

When NASCAR unveiled the seventh-generation “Next Gen” Cup car in May 2021, it represented a sea change for the series and the teams that race in it. Outfitted with a new chassis and body design, a five-speed sequential gearbox, and an independent rear suspension, the latest Cup car is a significant technological step forward from its predecessors.

“Nothing on the Gen 7 car transfers over from the previous Cup cars,” noted Danny Puchala of Stock Car Surplus in Gaffney, South Carolina. “That car is a beast all unto itself. I’ve built four of them from the ground up, and there isn’t a nut or bolt that’s common between the old car and the new one.”

For teams competing in the series, the changeover effectively made their sixth-generation cars obsolete. But as we discovered, the end of a car’s Cup series career isn’t necessarily the end of its racing days. While some with significant race history have gone on to live pampered lives in collections, more and more of them are getting back on track to mix it up in wheel-to-wheel competition once again.





The ARCA series is one of the most popular options for those looking to get a fourth- or fifth-generation Cup car back on the track. Here, two Gen 5 chassis fight for the win at Kansas Speedway, with Connor Mosack winning the battle in the Pinnacle Racing Group No. 28 over Joe Gibbs Racing's Tanner Gray. Photo courtesy ARCA.

A BRIEF WINDOW OF CUP SERIES VIABILITY

While the introduction of the Next Gen Cup car ended its predecessor's reign in the series, the replacement of fourth-, fifth-, and sixth-generation chassis during their respective eras in the series was shockingly rapid relative to the turnover rates seen in other series and racing disciplines.

"With the sixth-generation car, teams would often run them for five or six races and then get rid of them," explained Jim Barfield of Vintage Racecar Restorations, Lafayette, Georgia. "The teams are always trying to build a better mouse trap. They were constantly building new cars with the thinking that the next car would be better

than the last one. With the Cup guys, money is no object. Some of these teams have hundreds of employees, and those folks need something to work on. So unless a particular car was just going out there and kicking everybody's butt, the thought was that whatever they were going to replace it with would be faster."

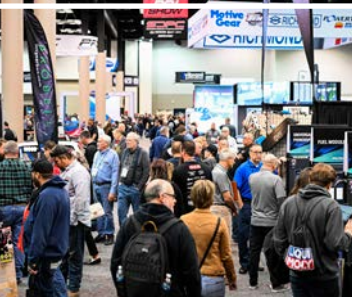
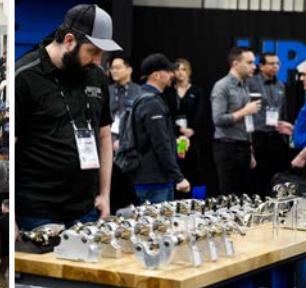
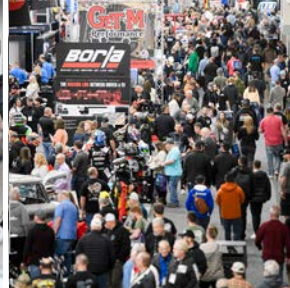
Charles Krall of the ARCA series in Temperance, Michigan, also pointed out that the specialized nature of older Cup cars meant that a particular chassis might only see a handful of races over several seasons

"WITH THE SIXTH-GENERATION CAR, TEAMS WOULD OFTEN RUN THEM FOR FIVE OR SIX RACES AND THEN GET RID OF THEM."

of racing. "With the Gen 5 car, I think most teams built their cars with the expectation that they'd run it for an entire season, if not

longer," Krall said. "But this was back in the day when some Cup operations would have 15 or 16 cars for 36 races. And some of the cars were very application specific. Some teams might've had a car that just raced at Kansas and Chicagoland. That's just a couple of races over the course of a season, and that may very well have been that car's expected life cycle."

Carlus Gann of the Historic Stock Car Racing Association (HSCRA) told us that other cars have seen much longer stints in Cup series racing. Top-tier teams would sell their cars to others in the series after moving to a newer chassis, and those teams would in turn campaign that same car for several more seasons. "That's common for the lower teams—they'd use one car regardless of whether they were racing at a road course or a super speedway." But as NASCAR's rulesets have evolved over the years, that has become a less attractive proposition. "For a period of time they kept changing the rules, requiring more steel to be put into the chassis in different areas. Eventually it's just not cost effective to do that much work to an older chassis, and teams would have new chassis built instead."



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VINTAGE STOCK CARS

Puchala also said that safety concerns affected chassis' Cup series viability in other ways. "Teams have an ideal weight that they want their cars to meet. With the Gen 6 cars, we'd have a chassis, floor pan, firewall, and fuel cell area sheet metal that could weigh as little as 725 pounds. But once you start cutting them up, it becomes a problem. For example, if a team has a crash and they repair the car, the repairs can add as much as 45 pounds to the car because of the materials that were required to get everything lined up and back together properly. So for many top-tier teams, if a car has been in an incident, they are done with it."

NOT THE END OF THE ROAD

Despite relatively brief service lives in Cup racing, many older cars have gone on to find long-term homes in other series. Today, the ARCA series is one of the most popular options for those looking to get a fourth- or fifth-generation Cup car back on the track.

"Some of these series are specifically used for driver development now," Gann said. "It gives young drivers the ability to get

up to speed and climb the ladder to get to the Cup series. Today, ARCA is the first step in that process."

Krall said that while the majority of ARCA fields are fourth-generation Cup cars, the number of fifth-generation cars is growing. He added that ARCA's approach to rules emphasizes driver skill over lofty budgets.

"Our front-line teams have at least one engineer on staff, if not more. But they're not going in there and redesigning the chassis

"THE GOAL IS TO GET THE CARS TO REPRESENT THOSE TIMEFRAMES AS CLOSELY AS POSSIBLE."

to make it go fast. We run spec bodies, so teams aren't looking for millimeters in the wind tunnel, and the LS-based 396-cubic-inch engines come sealed from Ilmor Racing. So the development focus is really on the suspension more than anything else.



The idea here was for the driver to make the biggest difference."

Puchala said that while drivers campaigning Gen 5 cars in the ARCA series are awarded a weight break to achieve parity with the Gen 4 cars in the field, other modifications that are required of the Gen 5 cars have encouraged many teams to stick with its predecessor.

"The ARCA series has a composite body that more or less mimics the Gen 6 cars," Puchala explained. "The problem is that the body doesn't just fit over the Car of Tomorrow [fifth-generation] chassis. What teams have found is that they had to cut off the front clip and raise it 2 inches because

The end of a car's (or truck's) competition career isn't necessarily the end of its racing days. More and more of them are getting back on track with various vintage racing organizations to mix it up in wheel-to-wheel competition once again. Photo courtesy Stock Car Surplus.



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Historic Sportscar Racing (HSR) has opened a number of classes to bring stock cars into its racing programs. Eligibility goes back to pre-1980 NASCAR Grand National and early Winston Cup cars up to Nextel/Sprint/Car of Tomorrow entrants with chassis and bodies through 2017. Photo courtesy of Historic Sportscar Racing.



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the cowl height and splitter height were different. Teams would typically have to go to a chassis builder to have the front clip raised and have new down bars and a new sway bar tube put on it. That's a \$7,500 to \$8,500 investment to do that, and it has encouraged a lot of the teams to put more miles on the older Gen 4 chassis."

Xfinity is another NASCAR series where older Cup cars get a new lease on life. Xfinity is considered the next rung on the ladder from ARCA toward the Cup series, allowing drivers to further develop their skill sets before making the jump to NASCAR's premiere series.

"At one point the Xfinity series was limited to 105-inch wheelbase, but because of the surplus of Cup cars, NASCAR opened it up to allow the 110-inch wheelbase of the Cup cars," Gann said. "The cars had to have the bodies removed and have a Five Star fiberglass body installed. It's also a different engine package, as Xfinity still

uses a carburetor rather than EFI, but the transmission and everything else is pretty much the same."

OTHER AVENUES

The development track offered by the ARCA and Xfinity series provides young drivers with a clear path toward their motorsports goals, but they're not the only places where older Cup cars are seeing action. Sports car racing clubs like the SCCA allow older Cup cars to run alongside Trans Am racers in the SPO class, but it's vintage racing organizations that have seen the biggest influx of these cars outside of NASCAR's own series.

"The car counts at vintage stock car races are getting way bigger," Barfield said. "On the East Coast, the numbers have tripled in the past three years at the HSCRA events. We get a lot of folks coming to stock cars for safety. There is no safer race car than a stock car. Cost is also part of it. A ready-

to-go, well-prepared stock car will cost you about a hundred grand. That's not cheap, but you could easily spend \$250,000 on a production-based Porsche. This is a lot of car for the money."

HSCRA has also been running races

"WHILE WE DO OUR BEST TO KEEP THEM MECHANICALLY IN-PERIOD, WE HAVE TO UPDATE THEM TO CURRENT SAFETY STANDARDS."

alongside several NASCAR series events, and the reaction from fans has been overwhelmingly positive. "The growth of our series eventually caught NASCAR's attention, so in 2023 they asked our Historic Stock Car group to participate in part of the

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The majority of the vintage stock cars ARCA fields are fourth-generation Cup cars, though the number of fifth-generation cars is growing. Charles Krall doesn't foresee adding seventh-generation cars anytime soon. "There are enough of those older Gen 4 and Gen 5 cars out there to handle the demand," Krall observed. Photo courtesy of Stock Car Surplus.



NASCAR weekend at Watkins Glen," said HSCRA's Chris Evans. "The fans really loved it, so NASCAR asked us to participate at two events for the 2024 season, and we're in discussions about bumping it up to four events for 2025."

While HSCRA's ruleset requires modern safety equipment, the cars are otherwise built with period correctness in mind rather than outright pace, and organizers will allow

racers to build clones of original cars that can't be found in the wild.

"The goal is to get the cars to represent those timeframes as closely as possible," said Gann. "And while it's not a contact sport, we race hard, and we race fast. So while we do our best to keep them

mechanically in-period, we have to update them to current safety standards. You don't want to be running the safety equipment they had in the 1980s—you want a full containment seat with a HANS device. It might upset some people to see an older car with a containment seat in it, but we want

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these cars to be as close to modern safety standards as possible.”

Barfield said that HSCRA encourages racers to otherwise set their cars up to be as in-period as is feasible. “We do kind of police ourselves, and we have an experimental class that racers can end up in if we see that things are getting out of hand. If your car had a C3 Ford motor in it originally, that’s what your car has to have in it. You can’t go and put an RF9 in a 2000 Taurus and expect to race with the main group. That’s not what it had back in the day.”

Puchala cited Sportscar Vintage Racing Association (SVRA) and Historic Sportscar Racing (HSR) as other organizations that have provided classes for older Cup cars to run in as well, though he said that these races tend to take on a different vibe than ARCA and Xfinity events.

“There’s a bit of a parity issue at some of these SCCA and SVRA races, but it’s because of different levels of experience,” he

said. “I’ve sold cars to doctors and lawyers, racers who have great income streams, but they’re buying more car than they’re ready for. They want some like a Hendrick Performance Track Attack car—a 900-hp stock car. And they may have never driven a Mazda Miata on a race track before.”

Organizations like the Grand National Super Series land somewhere in the middle, he said. “This series was started by Bob Schacht, who is a former ARCA driver. They race Gen 4 and older cars, and they have a whole balance-of-performance system based on the power plant that you have in the car. You can run everything from a dry-sump small block Chevy to a Toyota Phase 11 or a Dodge R5, and they’ve got weight breaks to keep things competitive regardless of budget.”

Looking at ARCA’s long-term prospects, Krall said that he expects to stay on the established course for the foreseeable future. That means the series won’t be

making the jump to the current seventh-generation Cup car anytime soon.

“I think there are enough of those older Gen 4 and Gen 5 cars out there to handle the demand, and they’re still building Gen 5-style cars for Xfinity series use. We’ll stick with this platform for as long as we possibly can.” **PRI**

SOURCES

ARCA

arcaracing.com

Historic Stock Car Racing Association

hscra.net

Vintage Racecar Restorations

vintageracecarrestorations.com

Stock Car Surplus

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FURIA CORSA

Founded in 2022 but fueled by years of experience, this vintage Ferrari specialist aims for success by finding gaps in the market, supporting cars that aren't supported, and investing strategically in in-house capabilities that can't be easily outsourced.

By John F. Katz

Furia Corsa is a relative newcomer in the vintage racing field, but it is backed by more than three decades of Ferrari racing experience. Co-founder Adam Twinley began his career in his native UK with Ferrari specialist Terry Hoyle. It was the 1990s, Twinley recalled, and “the market was really taking off. Cars were coming up for sale at ridiculous prices, and people were digging deep in their pockets to buy these rare and super-collectible Ferraris. They were starting to restore them and bring them back to race trim.”







Although Furia Corsa is a relative newcomer to the vintage racing segment, co-founder Adam Twinley has more than three decades of Ferrari racing experience, being taught under Ferrari specialist Terry Hoyle, and later Bill Binnie of Binnie Motorsports.

Hoyle's company restored, repaired, and race-prepped many of these cars for a list of prominent customers. "Vintage racing was taking off," Twinley added, "and we had the likes of British Touring Car Champion Frank Sytner and vintage car broker Gregor Fiskien driving for us at legendary tracks like Silverstone, Nürburgring, and Spa Francorchamps. And we were there at the beginning of the Goodwood Festival."

Later, Twinley worked with William "Bill" Binnie, who was the owner of Binnie Motorsports, and Intersport Racing on the Lola B2K40 that won the new LMP2 class at Le Mans in 2004, then with Binnie's New Hampshire operation on the Lola B05/40 that finished second in LMP2 in 2006. He returned to Ferrari with Risi Competizione in Houston, whose F430 topped the IMSA/ALMS GT2 Championship in 2007 and the GT2 class at Le Mans in 2008 and 2009.

In 2022, Twinley partnered with former client and close friend Randall Green in a new venture that became Furia Corsa. "We saw an opportunity to fill a void in the market," he explained. "So few reputable Ferrari specialists in the US are able to provide complete race preparation with full track support, vintage restoration at a concours level, and full maintenance and

service of Ferrari street cars across the decades. So we've tooled up here in Stuart, Florida, to restore, race-prep, and service pretty much anything with a prancing horse on it, 1947–2024 and beyond."

DEMOGRAPHIC SHIFT

Furia Corsa's capabilities cover prototype racers and single-seat open-wheelers, but Twinley sees the most promising opportunities in Ferrari's racing GTs. Partly this is driven by demographic change. "What we're seeing in vintage racing is the older demographic isn't being replaced," he explained. The drivers who campaigned 1960s-era sports racers and Formula B cars are hanging up their helmets, "and the next generation doesn't want to race those cars." Furthermore, "the vintage race shops that specialize in those cars are good at what they do. We didn't want to compete with them." Meanwhile, "the GT3 boom has inundated the vintage car market, and we couldn't find anybody, in the US at least, that offered the level of specialized parts and service that these cars require."

Twinley sees another void opened by the International GT (IGT) series, now in its 11th season. "There is now a dedicated place to race late-model GT3, GT4, and one-make-series machinery," presenting an opportunity for "older-spec Ferrari Challenge cars, and Ferrari GT3, GTE, and GT2 cars to continue to race after their



When manufacturers no longer support vintage race cars, Furia Corsa has invested in multiple CNC machines and a full fabrication shop to deliver the parts customers need. "With the help of some of our clients, we are building digital models and plan to make and stock many of the parts needed to keep these cars on-track—and to give owners a place where they can purchase parts for possibly less than they used to cost from the factory," said Adam Twinley.

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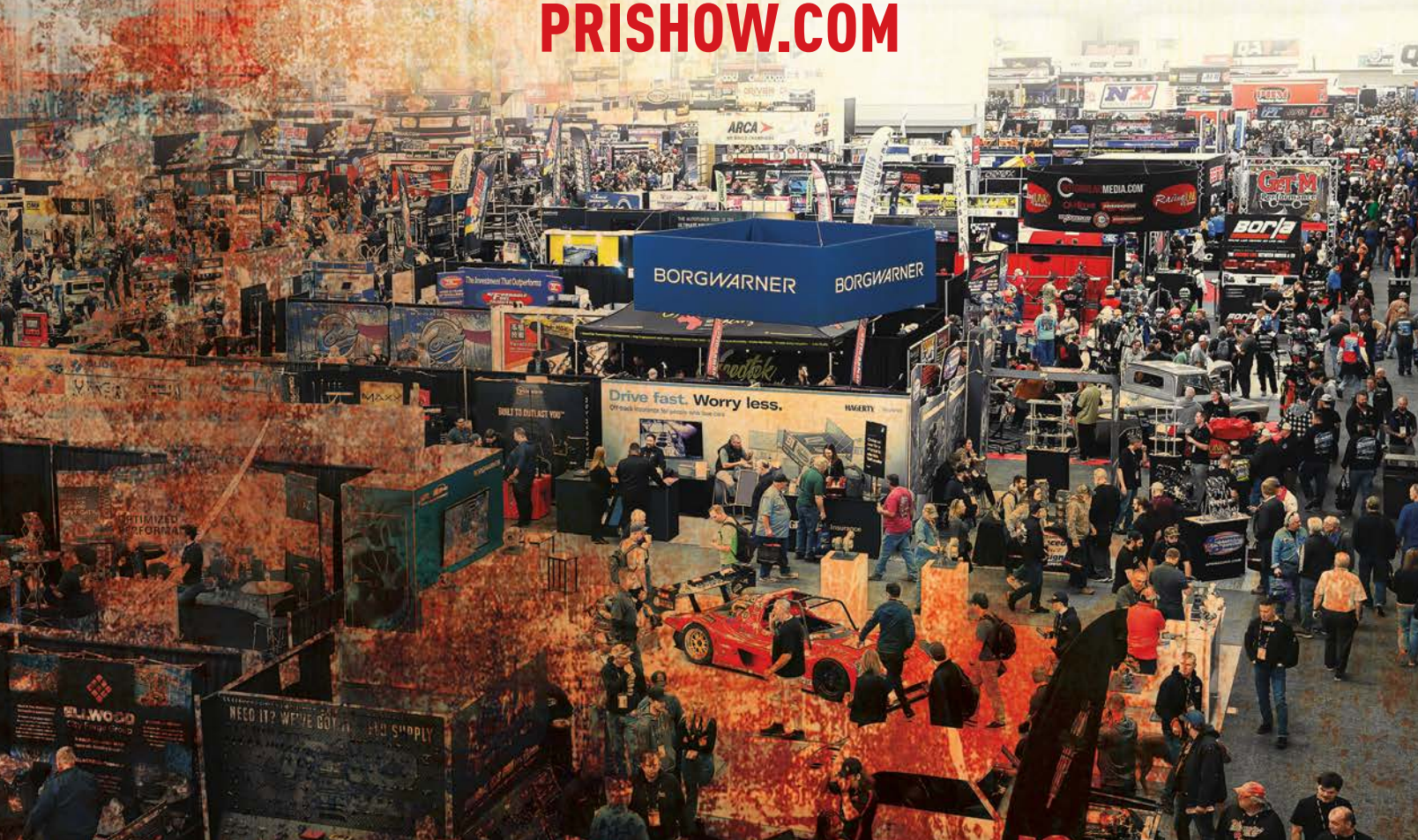
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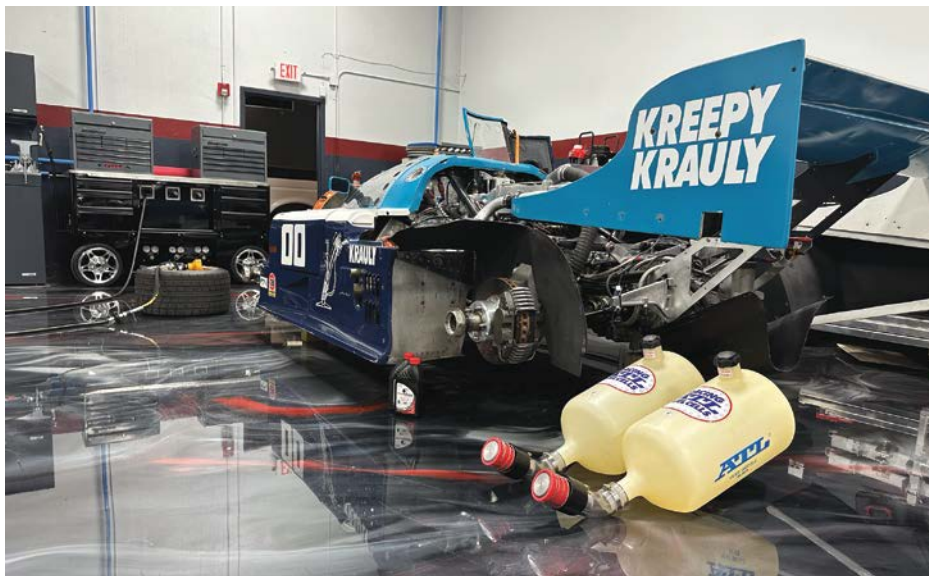


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Furia Corsa co-owners Adam Twinley and Randall Green are eager to expand beyond their Ferrari roots. In fact, the Kreepy Krauly March-Porsche, an IMSA GTP racer from the 1980s, was recently in the shop.

pro competition days are numbered. In most cases the manufacturer has stopped supporting these cars, but with the help of some of our clients, we are building digital models and plan to make and stock many of the parts needed to keep these cars on-track—and to give owners a place where they can purchase parts for possibly less than they used to cost from the factory.”

SMART OUTSOURCING

That ability to step up when the factory steps back has required an ambitious investment in tools and equipment. “We have some of the latest and greatest computers and software,” said Twinley. “We have multiple CNC machines. We can manufacture in titanium, magnesium, aluminum, steel, or stainless steel. We have a full fab shop. We have laser cutters and laser engravers. We’re in the market right now for a bigger, industrial laser metal cutter.”

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Furia Corsa can make plastic parts as well and has 3D printers for prototyping. But with its 10,000-square-foot facility located in Stuart's industrial district, the partners decided not to do in-house what they could outsource to their neighbors. "We have relationships with three great body shops capable of various levels of paint, body repair, and chassis straightening," said Twinley. "We have scanning equipment in-house to create 3D models of existing parts, but we also have a couple of injection-molding companies that work with us, so we can make a 3D model of a factory plastic bumper and send it out to someone who can either replicate the original plastic piece or make it out of fiberglass or carbon.

"We don't have any metal 3D printers. We have three big aerospace companies around us that have multi-million-dollar metal 3D printers, and they allow us to send them files."

Judicious outsourcing allows Furia Corsa

"WITH THE HELP OF SOME OF OUR CLIENTS, WE ARE BUILDING DIGITAL MODELS AND PLAN TO MAKE AND STOCK MANY OF THE PARTS NEEDED TO KEEP THESE CARS ON-TRACK."

to focus on making "the specialty stuff" that Twinley has found more difficult to obtain. "When I needed a caliper bracket, or a master cylinder mount, for somebody's more obscure car, everybody was giving me 24-week lead times, which is insane. So we looked into what machines and software we needed to do it ourselves. That made more sense given what we are trying to offer."

AT THE TRACK

Twinley described Furia Corsa's trackside support as "extensive," ranging from routine service and wheel alignment to data

analysis, engineering support, and some crash repair. "We have a welder in the truck to do MIG/TIG steel and aluminum repair; and a guy who is handy with fiberglass, so we can do crash repairs. We carry a good stock of hose fittings, so if anyone has a problem with plumbing, we can keep their car on the track. I haven't encountered anything we haven't been able to do. We pride ourselves on being able to keep cars running through the weekend—when others can't—because of the parts and equipment that we carry.

"We generally try to support 10 races

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BUSINESS PROFILE



In 2022, Adam Twinley partnered with former client and close friend Randall Green in a new venture that became Furia Corsa. "We saw an opportunity to fill a void in the market," Twinley explained. "So we've tooled up here in Stuart, Florida, to restore, race-prep, and service pretty much anything with a prancing horse on it, 1947-2024 and beyond."

a year, although it ends up being 12." Regular stops include Las Vegas, Sonoma, Thunderhill, Road America, and Watkins Glen. The awning on their semi-trailer can accommodate up to seven cars or, at most events, five cars plus a setup table and hospitality area. "We have a number of clients who run multiple races each year, and each client will take at least two cars," explained Twinley. "We transport their cars to and from the track. They show up with their driving suit and helmet, get buckled in, and by the time they are ready to race the car is warmed up."

"We have a couple of clients who like to bring their cars to the track themselves, but that's a difficult path to navigate. Often prep is limited between events, making for a less-than-favorable track experience. In the past we've had cars show up that didn't run, or hadn't had an alignment, or the tires were a year or two old. That's not our preferred method of support."

For all of Furia Corsa's trackside capabilities, "we generally try not to do a lot of work at the track," said Twinley. "We're there to help our clients extract the most from the track experience. The prep shop is where the real work is done. The business

model is break 'em at the race track, fix 'em at the shop. The billable hours at the shop is where we make our money."

"We run events with the Vintage Sports Car Club of America (VSCCA), Historic Sportscar Racing (HSR), and pretty much everybody," although Twinley prefers the Sportscar Vintage Racing Association (SVRA). "The way they organize their events is good for our clientele."

More than one Furia Corsa client has expressed a desire to race in Europe, and Twinley is still mulling "how the logistics are going to work. My father has a race team and restoration shop over there. So we're trying to figure out if they can take care of the cars for us, or if it's something we have to outsource."

"We've also been asked if we can support more cars, and we can, but it's a double-edged sword," he added. It would require an additional truck and driver, among other things. "It would be walking that fine line of expense versus income."

DOWN THE ROAD

Asked about promoting Furia Corsa, Twinley responded, "We haven't so far. It's

been word-of-mouth through our cars being up front, and Randy spreading the word by taking race cars to car shows. We set some goals early on, as to the clientele we wanted to attract and the cars we wanted to specialize in, and from there, it's networking. Randy's in wealth management, so he deals with a lot of fairly successful individuals on a daily basis."

That said, Furia Corsa is now an SVRA sponsor. "We're in their quarterly magazine, actively trying to attract more vintage race track work. And we're pretty heavily involved in a local Ferrari club. That's keeping the shop busy with Ferrari street car service."

Green and Twinley are eager to expand, beyond vintage racing if necessary. "One of our customers is talking about buying a new GT3 car to race in IMSA, so we are tooling up now to support a pro racing effort. We are also looking for more clients in vintage racing, and everything in between." And while Twinley prefers Ferrari, he isn't averse to servicing other marques, provided the client understands the necessary investment.

"A lot of customers call and say, 'Hey, I have this Audi GT3, and I can't find a fuel cell for it, or lower control arms, or whatever,' because Audi stopped supporting it five years ago. I tell them the same thing: The initial tool-up phase to keep that car running isn't an inexpensive option. But if you are willing to put the time and effort into it, we're happy to disassemble the car; find the high-traffic items; and scan, manufacture, and stock the parts needed to keep that car running. One of the cars that we have in the shop right now is the Kreepy Krauly March-Porsche," an IMSA GTP racer from the 1980s. "With that car it's the same as with GT3 machinery—nobody supports it."

Clearly, however, Twinley would prefer to remain focused on Ferrari. "Right now we are trying to get a 488 Evo Challenge car, because that's the next model that Ferrari is phasing out of their parts inventory," he explained. "They made so many of those Challenge cars, and a lot of people still have them in fairly raceable shape. If we can offer the parts to keep those cars running, we can help them [transition] out of the Challenge series and into vintage racing." **PRI**



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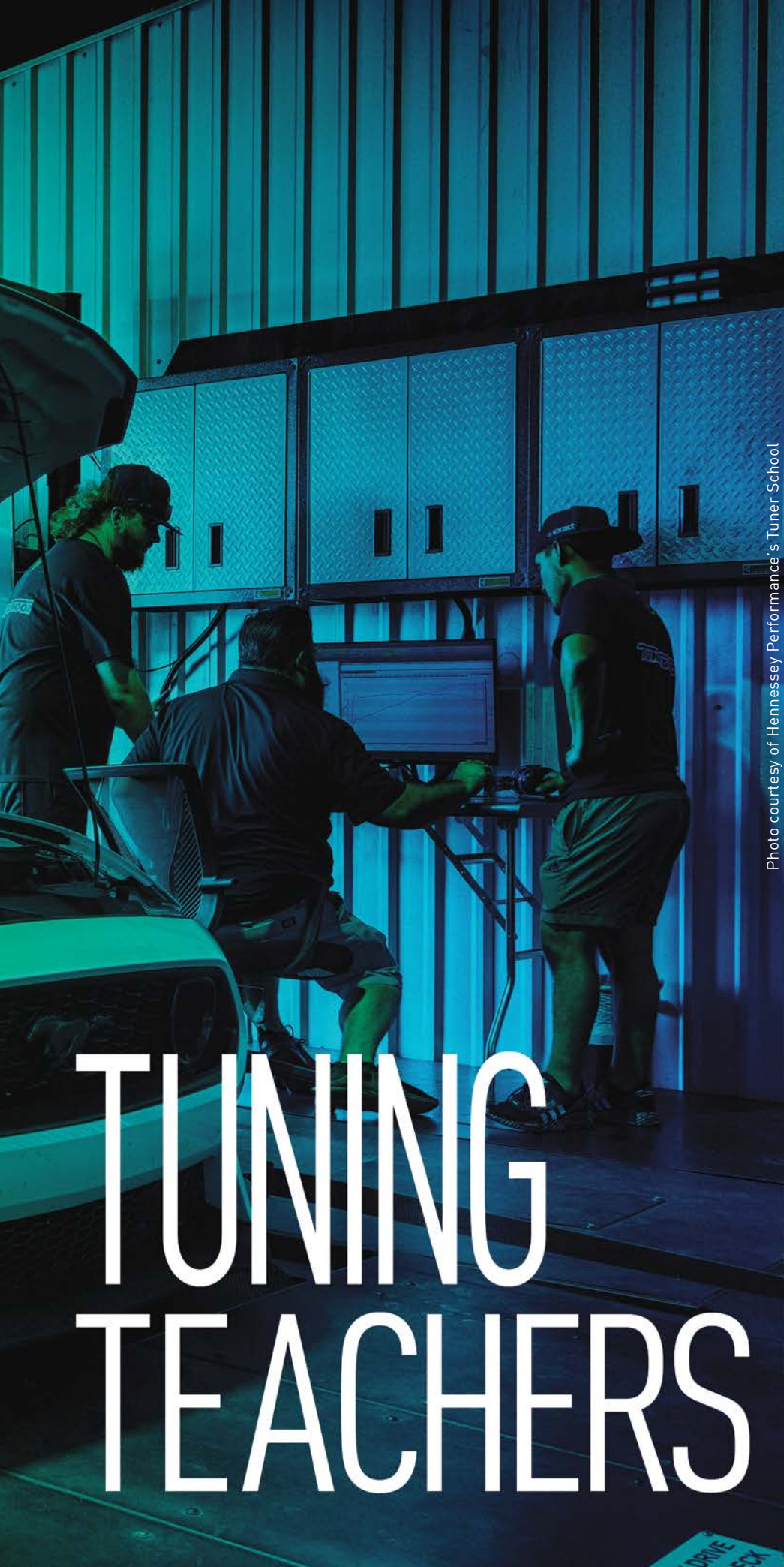


Photo courtesy of Hennessey Performance's Tuner School

HOW QUALITY TUNING EDUCATION IS OPENING DOORS FOR MOTORSPORTS HOPEFULS.

By Jack Haworth

As today's race cars continue to push the boundaries of horsepower and performance, EFI tuning has taken on increasing importance in the world of motorsports.

Great tuners bring home trophies, bad tuners detonate motors. For prospective tuners, these real-world consequences underscore the importance of getting a high-quality tuning education from a credible program.

Fortunately, there's no shortage of programs offering EFI tuning education. Online and in-person programs cover a range of budgets, teaching styles, and time commitments. But after speaking with top tuning teachers from around the country, one thing is clear: There are no shortcuts to becoming a successful tuner.

WILD WEST

It wasn't so long ago that EFI tuning was stuck in the dark ages.

"We started in the mid-1990s, and there were no good ways to learn how to tune a car," said Bob Morreale of The Tuning School, Brooksville, Florida. "Literally nobody would give us any knowledge, and the only thing you could do was buy chips through mail order. Typically, what you got was a roll of the dice. Sometimes it was better, most of the time it was worse."

Since those early days, EFI tuning has always been an awkward fit in the motorsports ecosystem. Morreale views his school as the connection between two vastly different specialties. "We like to refer to ourselves as the bridge between people who understand engines and people who understand programming."

The proliferation of information via the internet and advancements in EFI tuning software helped tuners emerge from the dark ages. However, this EFI enlightenment has given rise to a new problem.

"We call it YouTube learning," said

TUNING TEACHERS



Prospective EFI tuners can learn much at tuning schools, but they need to take what they've learned and practice, said one of our sources. If someone's persistent and willing to learn, they can definitely get into EFI tuning.

Morreale. "There's so much bad information out there about tuning. We always say you're just one key stroke away from disaster. Though more likely you'll spend a year trying to tune a car but without understanding the tuning process."

Bad decisions lead to unintended consequences. But even if a motor isn't damaged, opting for patchwork tuning education on YouTube is more likely to result in wasted time rather than a properly tuned race car.

"People usually poke around on YouTube for a year or two, and they get fed up with it," observed Morreale. "There are sufficient places to learn. However, most people just take a slow track and then eventually realize their YouTube education wasn't really the right option."

GROWING DEMAND

Skirting by on a few tutorials isn't realistic. For those who are serious about learning to tune, there are many excellent programs that cater to a range of budgets, skill levels, and locations. For those who put in the work, the

upside is significant.

"If you're an engine builder, mechanic, or technician, and you want to expand your income potential or expand the service you offer in your shop, then tuning is a great thing that people are picking up," explained Morreale.

Jeff Evans of Evans Performance Tuning, an online tuning education program based in Mt. Bethel, Pennsylvania, noticed sustained growth in the sector beginning with the COVID-19 pandemic, as people found time and opportunity to expand or start a business.

"I think there's been a bigger demand in the last five or six years in general, but

since COVID I have definitely seen a huge explosion," said Evans. "People are starting businesses and realizing there's decent money to make in calibrating and tuning, and that's where I think the need for education comes into play. Anybody can punch numbers into a keyboard, but to understand what's going on is key to calibrating and tuning."

However, new tuners should keep in mind that turning desire and potential into competence and success takes time and hard work. While many EFI tuning software programs have streamlined their interfaces to be more user-friendly, jumping into tuning on a certain platform without understanding EFI tuning fundamentals could result in a short-term gain and a long-term loss.

"A guy might choose a particular brand of software, but that's just the tool that you decided to use," said Ben Strader of EFI University, Lake Havasu City, Arizona. "You still need to know how to make the engine physically run well before you can do it with any particular brand of software. If you know what buttons to press to make the car run, but not why it worked, then you get boxed into, 'I can tune your engine if you're using

"There's something out there for everyone," said Greg Banish of Calibrated Success. "That may be a book, it may be a video, it may be a class, it may be a one-on-one. There are different levels of engagement, but there's something for everybody."



brand X software.' That shouldn't matter if you really understood the whole package."

Greg Banish of Calibrated Success in Bloomfield Hills, Michigan, and author of "Engine Management: Advanced Tuning," joined Strader in stressing the importance of EFI tuning fundamentals.

"Taking the time to understand how the system works is the real key," said Banish. "I've worked with dozens of different control systems over the years. Some guys say they are Ford specialists, GM specialists, import specialists, or whatever. But by sweating the fundamentals, that's how we get it to work right. Even if we go to European or Japanese ECUs, they're still finding a way to figure out how much stuff is in the cylinder, how much fuel goes with that, and how much spark goes with that."

A good tune enables an engine to run properly and reach its full potential. Get that wrong and nothing else matters.

"The number of vehicles out there being modified is what drives the need for tuning work," said Banish. "We used to do it with a screwdriver and a timing light. Now we do it with a laptop. But it's always going to be a necessary part of the process. Every new engine that we build, every new camshaft we install, every supercharger is going to require some ECU change to make it run as good as it should. It's always that last but critical step to getting the car to run right."

TUNING FOR THE TRACK

Tuners aren't exactly celebrities at the track. Nevertheless, they're one of the most important members of successful race teams. Just look at what's happening in drag racing, where tuners are enabling cars making eye-popping horsepower to actually hook up to the track.

"Twenty years ago, if somebody had an engine that made 1,000 horsepower, everybody's eyes got really big," said Strader. "Now street cars make that much power, and Pro Modifieds make 3,000 to 4,000 horsepower and nobody even bats an eye. I really think part of that is because EFI brought us finer control. The ability to manage the amount of power you're making has really made it a tuner's game."

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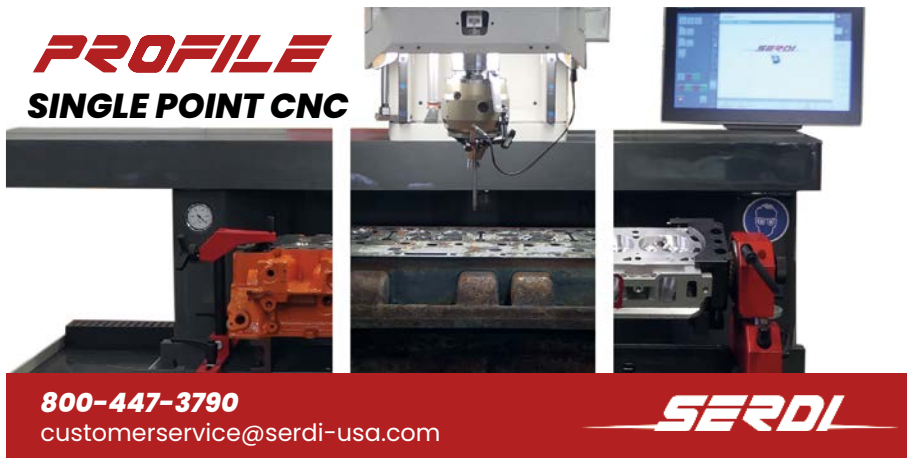
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in the drag racing sector, race teams are directing more attention and resources to tuning.

"People who drag race know everything comes down to the tune that's in the car," said Evans. "They also realize they need to look at data. That's the one large thing that's really changed in the last 10 years. People went from sending the car down the track and just trying to figure it out, to now people are heavily focused on what the data shows. The amount of data that you can process and what you can do with it is huge, which is why the cars are getting faster and faster."

Despite improving engine performance, Evans finds many racers still aren't up to speed with tuning. However, this creates opportunities for younger tuners looking to break into the motorsports industry.

"If you're a young guy trying to get into the industry, you probably don't own your own race team," said Evans. "If you look at the demographic of guys who typically do have their own race programs, they're generally older guys and maybe aren't quite as savvy on the computer side, so they're depending on someone else to do that for them. So if you show up at a race team looking for a job and you have this higher level [tuning] skill, I think it opens doors and opportunities that you otherwise wouldn't have."



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NO SUBSTITUTE FOR HANDS-ON EXPERIENCE

Whether you are a racer, a shop owner, or a young gearhead looking for a path into motorsports, becoming an EFI tuner is a wise decision. However, the first hurdle is simply figuring out which path will get you there.

The piecemeal YouTube approach isn't advisable, but a range of reputable tuning education programs is available to fit anyone's budget, knowledge base, time, and ability to travel. The most common distinction among tuning schools comes down to in-person versus online tuning education.

Hennessey Performance's Tuner School in Sealy, Texas, offers comprehensive in-person education for those hoping to make a career in the high-performance vehicle and motorsports industry. Approved and regulated by the Texas Workforce Commission, the Tuner School offers

two 14-week programs—100 Automotive Technology: Intro to High Performance, and 200 Automotive Technology: Advanced Tuning.

Jason Haynes is the director of research and development for Hennessey Performance, but also oversees the Tuner School, including writing much of the program's curriculum.

"We tell students to show up and treat it as a job," said Haynes. "This is basically you interviewing to be part of the performance racing industry."

In addition to tuning, the 100 program provides students the opportunity to cover a range of subjects ranging from fabrication to alignment.

"The expectation of that class is for you to come in, maybe not knowing anything but loving cars, and then once you graduate, you have a foundational education," said Haynes. "We try to make the class as all-encompassing as possible, so that the students really get a feel for every facet of the performance and racing industry."

Each subject is introduced in the classroom, followed by a hands-on lab component where students get an opportunity to put their newly acquired knowledge to the test on a trio of high-performance cars—a supercharged Hellcat, Mustang GT, and a Camaro SS.

"They actually get to go into the lab and perform those hands-on modifications under the safe supervision of our staff," said Haynes.

Haynes noted their 100-level graduates typically go into one of four different sectors: high-performance technicians, fabrication, engineering, or EFI tuning. For those students pursuing the latter category, the 200 class provides a comprehensive tuning education that includes running the dyno, practicing advanced traction control strategies on a test track, and getting experience on various advanced aftermarket EFI standalone systems.

"We really try to get them as much hands-on experience with all things EFI. The basic principle of the program is to graduate as a well-rounded EFI tuner."

Though just like in real life, there are no shortcuts in this program. Tuner School

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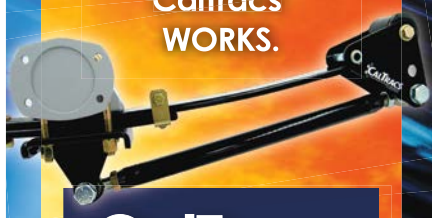
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TUNING SCHOOLS



An advantage to in-person training is real-world, hands-on experience, said an industry source. Reducing engine tuning training to memorizing a bunch of rules will not only turn students off, but they also won't remember a lot of the training fundamentals.

students must complete the 100 class to build a foundational understanding of high-performance vehicles before moving onto advanced tuning.

"To do this the right way, you need to have a very firm understanding of engine dynamics—the physics, the math of everything that goes into it," said Haynes. "It's no longer just fuel and timing. There are so many more things that go into these modern systems, and that's why education is so important."

The program isn't for everyone, and space is limited, with classes sold out for the rest of 2024. However, the success rate of its graduates is high. According to Haynes, students who complete both programs have 95% job placement, with several alumni going on to work for professional race teams in NASCAR and NHRA.

For those who already operate a shop or possess a solid understanding of high-performance engines, several programs provide a quality education without requiring

a significant investment of time and money. EFI University offers a popular five-day program dedicated to motorsports tuning education. Strader believes the key to his program is the in-person experience.

"I'm a true believer in you'll remember what you do, not what I say," said Strader. "We present a concept, explain it until you understand it, and then go out into the dyno shop and actually experience it. Because without the experience, it's just a rule. If we make engine tuning a bunch of rules that somebody has to memorize, they're not only going to be uninterested, but they're not going to remember a lot of it."

Beyond the experience of tuning a car on the dyno, Strader believes there's another intangible that can't be taught in a virtual environment—pressure.

"With today's culture, everybody wants the easy button, and it sounds good to download a video, watch it, and know how to tune," explained Strader. "But I'm telling you, it's not the same as when all that pressure is there, and you're worried about blowing up some engine or crashing some race car. It changes the experience, not so much the information."

CONVENIENCE AND ACCESSIBILITY OF ONLINE SCHOOLS

For all the positives of learning in-person,

it's not possible for everyone. Fortunately, there are several online tuning schools that provide a thorough education and extended support. The support for students is key, as it helps inexperienced tuners get up to speed once they start tuning on their own.

Evans Performance Academy started out offering in-person instruction before eventually switching gears to online only. Evans found too many students "didn't know the basics and fundamentals," which led to them not understanding the information taught in class. "It's like starting off trying to teach somebody algebra when they don't know addition or subtraction."

Evans' online-only program includes more than 2,000 hours of video content, including more than 1,700 tutorials.

"It's more like a streaming service, where you elect what you want to learn, how you want to learn, and your learning pace," said Evans. "You can watch tutorial videos over and over again."

Evans acknowledged much of tuning comes down to troubleshooting and diagnostics, which is where he saw students struggle once they left the classroom setting. For this reason, he offers email support and a private support forum for students to submit calibration files, which he then coaches them through or helps identify problems.

"You can learn the basics and the fundamentals, but as a long-term approach to tuning, you need someone to almost coach you and guide you along the way. That long-term support I think is really key to having success with tuning."

For all the benefits of the in-person experience, the online advantage is found in the ability to review past lessons for a refresher, whenever you need them most.

"Even professional calibrators and tuners can only remember so much, so they'll pop in and go through the tutorials," said Evans. "I think that's the one nice advantage of online compared to in-person, is that you have the ability to go back to the material and cycle through it. You're not going to remember something two to three years from now unless you're doing it every day."

Morreale's The Tuning School takes yet another approach, offering both in-person

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TUNING SCHOOLS



Hennessey Performance's Tuner School offers two 14-week programs for those hoping to make a career in the motorsports industry. "We tell students to show up and treat it as a job," said Jason Haynes. "This is basically you interviewing to be part of the performance racing industry."

and online education. Prospective students can choose between live classes on the dyno, virtual classes via the Master Tuning Experience, and budget-friendly learn-at-home courses. Additionally, each option includes a year of support from The Tuning School instructors. The extended support is something Morreale also touted as being a critical component of learning to tune.

"We want to make sure that if people learn from us, when they go to do their job, they aren't hung out to dry," he said. "They have a support system, and when they're struggling on the dyno and don't understand something, we're not going to tune it for them, but we're going to teach them why it's not working so they can fix it. We're educators. That's our goal."

CERTIFICATE OPTIONAL; EXPERIENCE REQUIRED

EFI tuning education requires forging one's own path. There is no official third-party certification or test to prove someone is a qualified tuner. While several tuning

schools mentioned in this article—Hennessey's Tuner School, EFI University, and The Tuning School—have instituted their own certification test, the lack of an independent third-party certification comes down to a confluence of factors.

"I've had this conversation 50 times over the last 15 or 20 years, and I would wholeheartedly support an industry-led group," said Strader. "But it's one of those things that we all wish would happen, but somebody's got to pick up the reins and do the work. I've never really seen that part because to be honest, everyone's busy running their business. And then who runs it? Who finances it? How do you get compliance and enforcement? There are a lot of tentacles to it that make it more difficult."

An additional wrinkle to forming a third-party certification comes from the very nature of tuning: It requires creativity and ingenuity to be successful. Getting all relevant stakeholders to agree on the "right way" to tune would be challenging, if not impossible.

After all, the true measure of success in tuning is determined on the track, not in the classroom or on a certificate.

"[Tuning] is a form of creativity," said Haynes. "It's a form of thinking outside of the box. The results may be the same, but how you arrive at those results may be different. That doesn't necessarily make it right or wrong, but getting a body to agree on that, it's just never going to happen."

CHOOSE YOUR PATH

"The big thing is, there's something out there for everyone," said Banish. "That may be a book, it may be a video, it may be a class, it may be a one-on-one. There are different levels of engagement, but there's something for everybody."

Tuning education is essential for understanding the concepts and basics of tuning. Without that foundation, failure could be inevitable. But once that solid foundation has been obtained, real-world experience is the next step in putting that tuning knowledge to the test.

"The big thing for someone starting out would be trying to get experience," explained Evans. "Maybe doing an apprenticeship at a tuner shop or volunteering time for a race team and being exposed to it. You can learn a lot at tuning schools, but you need to take what you've learned and practice. If someone's persistent and willing to learn, they can definitely pick it up and get into EFI tuning."

To be a successful tuner, our sources agreed the biggest investment is in time and dedication. "Just like being a race car driver, seat time is number one," said Haynes. "You can never replace seat time. You have to be on the dyno, you have to be at the track, you have to be married to the cause because that's what's going to gain you the most experience and knowledge—seat time." **PRI**

SOURCES

Calibrated Success
calibratedsuccess.com

EFI University
efi101.com

Evans Tuning
evanstuning.com

Hennessey Performance's Tuner School
tunerschool.com

The Tuning School
thetuningschool.com



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SILENT TITANS

Cylinder blocks are at the core of race-engine performance, and the newest products are expected to make a significant impact in motorsports.

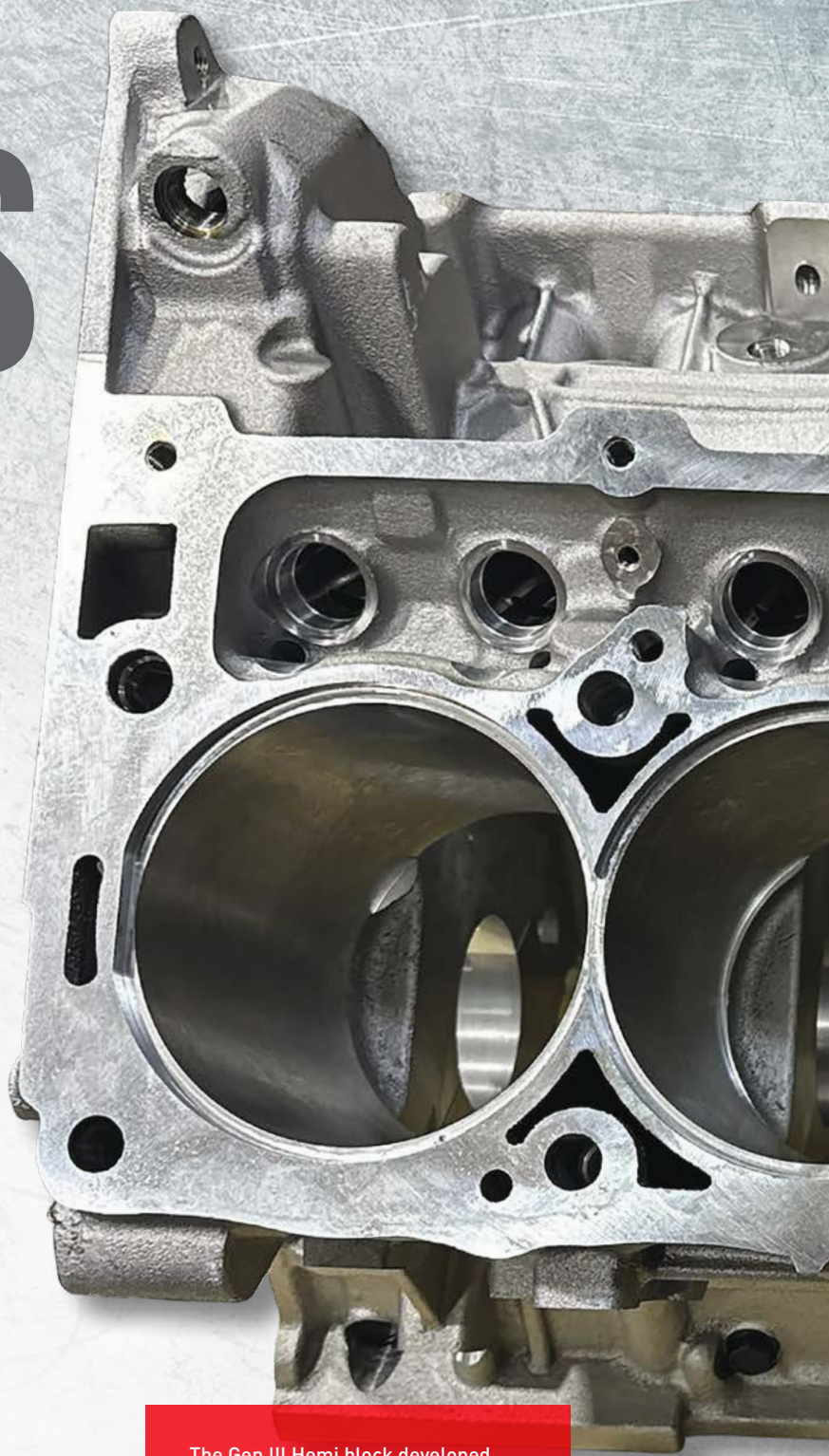
By Mike Magda

If recent cylinder-block development is any indication, then expect popularity of the Gen III Hemi engine family to continue growing in the performance aftermarket. Two new aluminum blocks and one iron configuration will be available this year for Mopar enthusiasts who have high-horsepower ambitions.

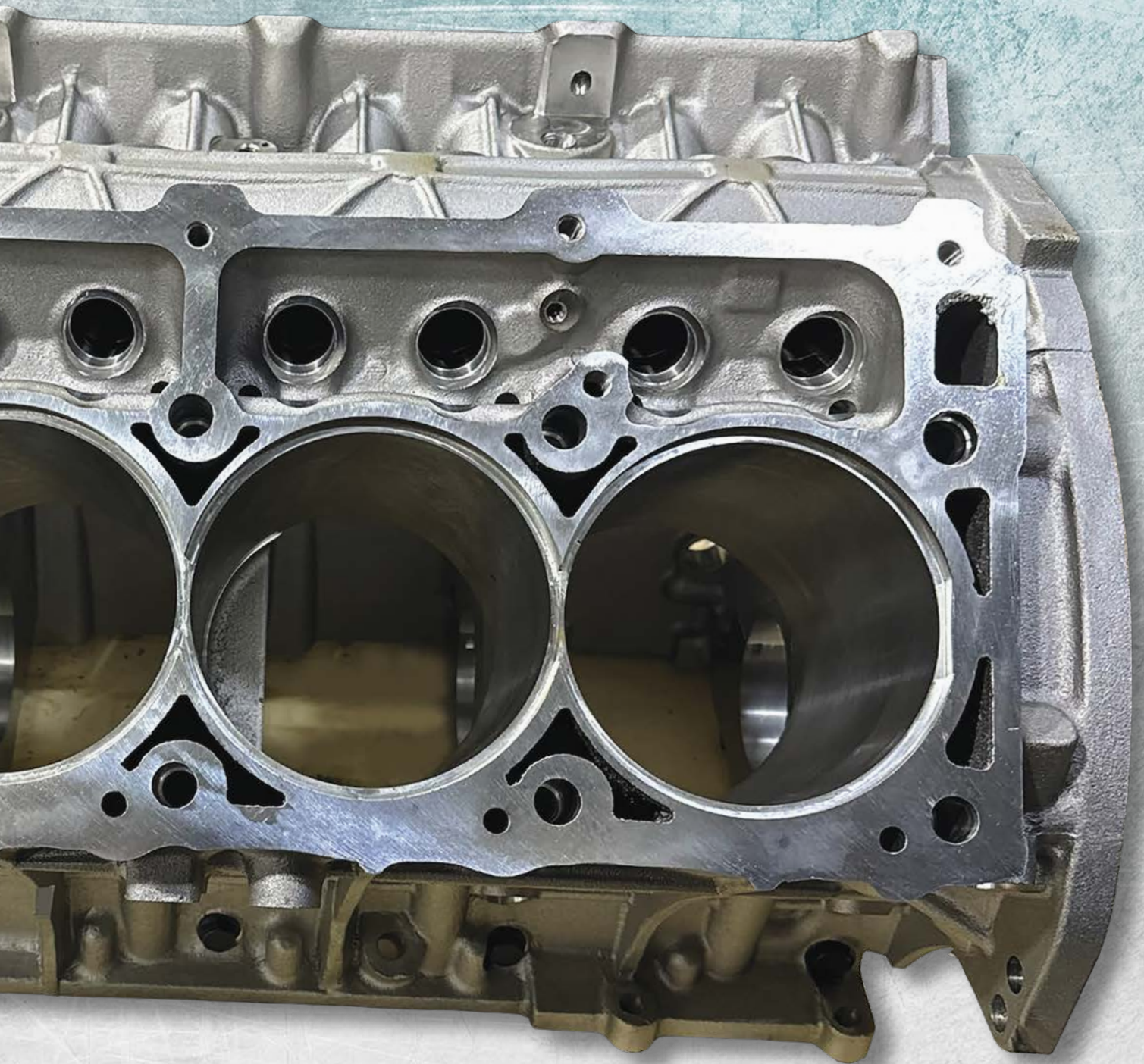
"In the past 10–15 years, the horsepower levels just got out of control so quickly," said Bill Mitchell of Bill Mitchell Products, Edgewater, Florida, which partnered with Gen3 Performance Products in Smyrna, Delaware, to develop new cast aluminum blocks (both solid and water-jacketed versions) for the Hemi platform. Mitchell has also been busy making sure the rest of his block lineup will stand up to racing demands. "That's what I've spent the last few years doing to all blocks, just upgrading and making them stronger where they needed to be stronger. Not that I had any issues, but why wait?"

Other new Gen III Hemi blocks will be available from Energy Manufacturing and from Dart Machinery. The racing community will also benefit from other notable cylinder block products, including upgrades to a venerable SBC iron block from World Products, a new Brodix sprint car block, a new 2JZ iron block from Dart, and a new short-deck SBC iron block for small-displacement racing applications from 1SPEC, which is a subsidiary of M&M Competition Engines. The market will also see more of the Honda K24 and Lamborghini billet blocks recently developed by Noonan Race Engineering.

The surge in new cylinder block products is a result of a shortage created by the pandemic. First, there was significant demand when racers and hot rodders revived projects after being sent home from work and a couple trillion dollars in stimulus money was injected into the national economy. But at



The Gen III Hemi block developed jointly by Bill Mitchell Products and Gen3 Performance Products is constructed with 356 aluminum alloy and is also available in a solid casting.



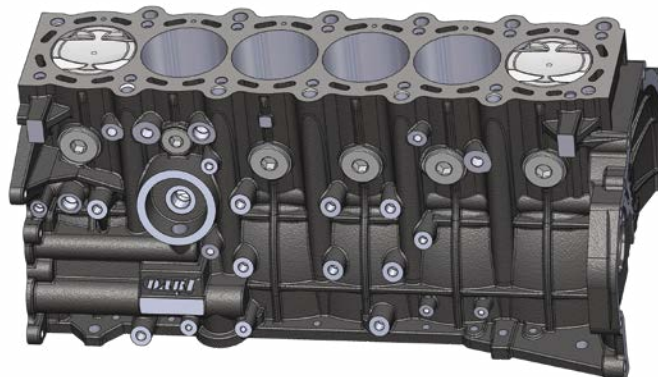
the same time there were serious foundry issues for the block manufacturers due to rampant labor and raw materials shortages along with some casting operations being shut down completely.

"Racers are mainly asking for availability these days," said Heath Norton of Energy Manufacturing, Fremont, Ohio. "They just want to be able to get blocks at a good price. It's more about consistency of product and consistency of supply."

"The whole COVID-19/supply chain issue has now pretty well sorted itself out," added Jack McInnis of World Products, Louisville, Kentucky. "We continue to have our products cast and machined in the US. They were never done offshore."

FOCUSING ON ESTABLISHED CUSTOMER BASE

One company that didn't have to worry about securing a foundry is Brodix, as it owns its own casting and machining facility in Mena, Arkansas. The company's newest block is designed for 410 sprint car engines and has additional features that are



The Dart Toyota 2JZ iron block is designed with enhanced strength and rigidity for racing but can be used as a direct replacement.

beneficial to engine builders in that highly competitive segment.

"The entire block scavenges the dry-sump system internally and doesn't require any additional internal plumbing," said Mark Fretz. "It has in and out ports on the front of the block and requires no other external tubes to scavenge the valley."

The block is available with either 400 or 350 mains and comes in a 4.125 bore diameter. The first time the block was raced in a World of Outlaws event, it won.

"We also lightened the block more, so the overall appearance of the block is different,"

added Fretz. "We've removed some of the unnecessary casting parts off of the block that didn't need to be there for sprint cars. We just tried to lighten the block up as much as possible, and then we do the ultra-light machine work to the outside of the block to make it look really nice."

The block will accept 55-mm roller bearings and either 0.904 or 0.937 lifters. There's also a valley-pressurized oil-supply hole for spring oilers, sprint-car-style bellhousing pattern, and 0.391-inch raised camshaft tunnel.

Overall, Brodix continues to focus on a core customer base that builds traditional small and big block Chevy engines, including spread-bore versions and solid castings for select classes.

"Our engine builders aren't looking to reinvent the wheel," said Fretz. "They're building bracket-race motors and they're building for heads-up drag racing. We do a ton with the radial racing, Top Sportsman, Top Dragster. They all want a block that will hold 3,000 horsepower and make 100 runs without hurting it."

HEMI BLOCKS AND MORE

The Dart Gen III Hemi Iron Eagle block arrives a little later than expected due to foundry issues, but it went through a full development action plan that included testing and validation. The main engineering challenge was unwanted porosity in the upper sections of the block. Numerous blocks were sectioned or machined as different tooling solutions were tested. The problem was solved with a unique venting design that allowed the unwanted gasses to escape.



The new Brodix aluminum sprint car engine block features a dedicated sprint car-style bellhousing pattern, improved dry-sump scavenging, and weight-reduction machining.



Some of the standard features include conventional-style main caps to help control windage, priority-main oiling, increased rigidity in critical areas, Siamese cylinder bores with extra-thick walls, available 0.500-inch head bolt upgrade, and enough clearance for a 4.050-inch stroke with steel rods. The four-bolt-main block is available with or without VVT. Among the most notable design elements are the scalloped water jackets.

"We really focused on the flow of where the water goes," explained Jon Kempf of Dart, Warren, Michigan. "Everything is smooth. Every internal radius has a smooth edge. We may have solidified an area that was not otherwise solidified to eliminate stagnation points in the water flow, and so you don't get any hot pockets."

In contrast to the Mopar block, the Toyota 2JZ block development was one of the smoothest executions by the Dart team. Since the engine is an overhead-cam design, there was no cam tunnel to worry about, and there were other components typical for a V8 that didn't need attention when working on a straight-six. Still, the goal was to produce a very strong block for high-horsepower demands.

"Through a few different manufacturing techniques, we were able to thicken the bore walls without compromising anything

Energy Manufacturing developed two styles of the Gen III Hemi iron block for sale through Callies. Both are officially licensed through Mopar. One was designed for the Hellephant engine and is VCT capable. The other is for the Dragpak package and features a large cam tunnel and larger lifter bores.

else. The water jackets are in their factory placement, and we've managed to put in well over 0.003-inch of cylinder bore wall thickness," said Kempf. "That, plus 0.750-inch decks. We also added more material in the skirting. We also opened up the oil drain-backs, anticipating more oil is needed at 8,000-plus rpm."

The block will also work as a replacement for the factory block, but it does boast a performance attitude. Extra attention was paid to the deck area to help reduce head gasket failures that are becoming notorious with the factory block, and the main caps are designed with four bolts, like other Dart blocks.

"You have seven mains lining up with a long crankshaft," explained Kempf. "We needed to make this block as rigid as possible to eliminate the jump-rope effect. So far through testing, it's been phenomenal. We've used the largest turbocharger and the largest wastegate that the company we're working with has in

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Here's the new Chevy Small Block Motown III block from World Products going through validation testing. It features increased deck thickness for those racers installing power adders or cutting the decks down to reduce weight.

stock for these types of applications. They said the block acts as if they're not even leaning on it."

Dart, as part of Race Winning Brands, will be working with sister companies to develop a crankshaft, rods, pistons, and valvetrain gear.

FILLING A VOID

Like many of the other block projects, the Bill Mitchell/Gen3 Performance Products collaboration was launched to fill a void in the market. Bruce Maichle of Gen3 Performance Products and High Horse Performance in Smyrna, Delaware, had been working with Rob Goss and his X275 Dodge Challenger.

"We had broken a few old factory blocks, and someone asked me if I'd seen the Mitchell block," recalled Maichle. "I had never heard of it, so I called him and bought three that had been sitting around for some time. They weren't making the blocks at that time, and I asked him if he'd be interested in making more."

"We actually had the block on the back burner at that time," said Mitchell. "Castings, tooling—all that was done. But I had my hands full when Gen3 called."

Maichle put the block project under the Gen3 Performance Products banner and made some improvements in select areas. He also developed a solid casting for high-

horsepower applications. "I know the power level we were going to go to. When you get much above 2,000 horsepower, it is really hard to keep a water-jacket block from not cracking due to the amount of stress that the head bolts put on it."

Finding the right foundry to work with was also a challenge. The original tooling was developed in Europe. When Maichle brought the work back to the US, the pours were different with the first foundry. Now he has found a much better working partner, and both solid and water-jacket blocks are in production.

The blocks are cast using 356 aluminum alloy with the standard deck height. Billet

main caps are included with the six-bolt style in the center three locations and four-bolt in the front and rear.

"By the time we hit the PRI Show this year, we'll have plenty of blocks out there running," promised Maichle.

The third Gen III Hemi block hitting the market was developed by Energy Manufacturing with factory Mopar engineers for the Hellephant and Drag Pak applications. The former features accommodations for the VCT solenoid and can work with the 6.2- and 6.4-liter timing set. It also has standard lifter bores and standard cam bores. The latter is not VCT capable and works only with the 6.1-liter timing set. It also upgrades to 0.937 keyway lifter bushings and 60-mm cam bore.

"Right now they're in durability testing," said Norton, noting that the blocks are officially licensed by Mopar and also available through Callies. "Mopar is running dyno cycles to validate the design. We've done some initial engine builds and dyno sessions. Now we're doing the full durability tests."

Energy Manufacturing also has a Gen II Hemi block with 4.800-inch bore spacing that is designed for Pro Mod and tractor pulling. It's been under development for about 18 months and was expected to hit the market at the end of Q2.

"It's a solid block, but we are exploring the option of a water billet block. We have enough work right now with the solid billet," said Norton, noting that the Gen II Hemi



The short/mid deck iron block from 1SPEC, which is a subsidiary of M&M Competition Engines, can be cut down to a deck height of 8.000 inches for use in small-displacement applications like Comp Eliminator or Bonneville. It also accepts Jesel cartridge lifters.

may see a unique option in the future. "We may be exploring clamshell camshafts for that platform. Part of it is, there is not a lot of support for it in other aspects of the industry. It will probably grow, but I don't see it happening too frequently yet."

Norton said other cast-aluminum and billet blocks are in development but wouldn't divulge the applications. He added that the company's small block Ford billet block remains one of the most popular products in the current lineup.

"It definitely stands out," said Norton. "What's unique, it's a small block that looks like a big block. It has a big block-style raised cam (1.237-inch), wide oil-pan rails, and Chevy bellhousing. It fights well above its weight class and does a really good job. It is a very good foundation for a pretty sweet power plant."

One of the most sought-after blocks for sportsman racers and high-performance street applications is the Motown SBC block from World Products. Now this well-respected hardware is getting a significant upgrade. Called the Motown III, the block features a 0.700-inch-thick deck to better support the head bolts and to add rigidity to the entire structure.

"We've seen a demand in the circle track world. Engine builders can cut the deck down to 8.900 or 8.800 inch," said McInnis. "Also, the front will be machined so that it can use either a standard small block camshaft or the later model step-nose type."

Other features include standard or 0.134-inch raised-cam location, cast-in hone reliefs, nodular-iron main caps (billet-steel caps are optional), and 7/16-inch main studs. Maximum cylinder bore is 4.185 inches, and the block can support a 4.000-inch crankshaft. Finally, the Motown III offers priority-main oiling with cross-feed lines between the right and left oil galleries, and it can be set up for either wet- or dry-sump operation.

CHANGES ON A WHIM

While the Motown III targets a wide range of users, another iron block is designed for a select group of racers. The 1SPEC Evolution short/mid-deck block is for

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ENGINE BLOCKS



Noonan has sold out of every production run of its billet Lamborghini blocks. The engineering team took on the project because it was a complex design and posed a challenge the Noonan team wanted to tackle.

small-displacement applications such as Comp Eliminator and land-speed attempts. Right now the company is evaluating the market before ordering the tooling and casting the first run.

"It's taken off. We've gotten a lot of deposits, a lot of interest in it," said Scott Patton of M&M Competition Engines, Franklin, Indiana, the parent company of 1SPEC, noting this new block is modeled off what was known as the GM Aurora block that is hard to find in race-worthy condition these days. "We've got the block 100% designed and engineered. We're just waiting for the order numbers to get it off the ground and running."

The shortest deck that can be machined on a standard SBC block is around 8.800-inch. The short version of the new 1SPEC block can be machined between 8.000 and 8.500 inches, while the mid-deck version works from 8.500 to 9.000 inches. Both have the cam raised 1.0535 inch and will allow up to a 70-mm roller cam bearing.

"The old Aurora block had a different bellhousing on it. If we can't drastically improve a product, we don't venture out into it," said Patton. "Ours has a standard bellhousing. Our block also accepts Jesel cartridge lifters in all 16 positions. That's

a huge improvement for guys running extremely high rpm. We can also put up to nine cam bearings in this block."

Other features include standard 4.400-inch bore spacing, a wide pan rail, two-piece rear main seal, and a choice of 283, 350, or 400 main journal sizes. Maximum cylinder bore is 4.200 inch, and engine builders can go as low as 250 cubic inches with this block.

"The primary use for the block is probably going to be Comp-style drag racing. But the Australian Pro Stock guys like to run that shorter deck as well. I also see this block being pretty heavy in some of the Bonneville classes," said Patton.

With the likelihood of short production runs, innovations like 3D printing the cores is a possibility. "That is an option. In a lot of our projects, we do kind of a hybrid as far as our tooling and cores are concerned, depending on how complex the core is," said Patton. "For some cores, that's the only way you can produce them. Also, we make our own core boxes. We can make changes quickly and on a whim."

LOOKS AS WELL AS PERFORMANCE

As far as cylinder-block aesthetics goes, Noonan is the likely winner of the under-hood bling award. Its Honda K24 and Lamborghini billet-aluminum blocks are polished gems in the aftermarket jewelry store. While conventional wisdom dictates that the Honda block has generous market potential, the Lambo V10 block place appears quite esoteric.

"We kind of thought the same thing initially. But in reality, we've actually sold out of every production run that we've made of them so far," said Barry Pettit. "It was a good product for us to sink our teeth into as a challenge for the team because it is the most complex part that we make. So it really wasn't the quantity of customer requests. It was the quality of customer requests."

The Honda block can be ordered solid or with water jackets and allows a max bore of 88 mm. Maximum stroke is 106 mm with steel rods. Other features include 0.500-inch head studs, four-bolt mains in the center three locations, and compatibility with all factory engine and accessory mounts. The 5.2-liter Lamborghini block offers improved oiling and cooling systems, increased deck thickness, and a more rigid main-cap girdle.

Noonan's most popular application remains the 4.9-inch bore-space Hemi. "It's engineered exclusively for the drag racing world. You'll see it in at least 50% of the cars at big outlaw Pro Mod type races," said Pettit.

The traditional 4.800-inch bore-center Gen II Hemi platform had numerous limitations with cylinder-head sealing, valvetrain angles, and other issues. Also, boost levels were increasing, and rpm levels were climbing fast.

"It was a perfect opportunity to re-engineer that platform and make it a more durable piece for customers at the race track. It's also more serviceable, as well," said Pettit. "We were very fortunate that once we had our prototype complete and ran our checks and balances, we got it in a customer's car and set a record with it the first weekend. From there, it was pretty much on its way."

CUSTOMER FEEDBACK

As cylinder block manufacturers continue to improve products, it's important to note that they still need honest and positive feedback from the customers.

"When we make an engine block, we don't always know the exact combination that everybody's going to run, right? It's very easy to think that every combination out there is a common combination," warned Pettit. "But we are seeing a lot of customers who want a block to arrive and be pre-rod notched and everything ready to go. From a manufacturer's standpoint, that's almost an impossible thing to chase, although we do try."

"At the end of the day, we are all in the motorsports industry, which evolves at a rapid pace," continued Pettit. "So my advice to engine builders is to not be complacent. Whether it is Noonan or any other manufacturer, inspect every part and how it fits within the engine. And always ask yourself if the combination is correct for your application." **PRI**

SOURCES

1SPEC

1spec.net

Bill Mitchell Products

billmitchellproducts.com

Brodix

brodix.com

Dart Machinery

dartheads.com

Energy Manufacturing

energymanufacturing.com

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POWER

By Jim Donnelly

GETTING TO THE TRACK IS ALMOST AS FUN AS BEING AT THE TRACK WITH THESE TOW VEHICLE PERFORMANCE ENHANCEMENTS THAT BOOST TRUCK PERFORMANCE, FUEL ECONOMY, AND DRIVABILITY.

Racers—all of them—are obsessed with power. Most will dig deep into their finances, and their personal efforts, to add a few horsepower to a race car in a competitive class. Yet another investment in power—in their tow vehicles—will pay big dividends as well. The performance aftermarket offers a host of electronic and mechanical aids that can markedly improve a tow vehicle's power, driver-friendliness, and fuel economy, which may just be the most important improvement of all given

the persistent increases in fuel prices.

TUNING TOOLS

Some of the equipment available allows teams to do a quick tune-up of their hauler, using proprietary technology, often in handheld packages that can be plugged into a hauler's data ports. At COBB Tuning in Austin, Texas, customers can find a way to better the behavior of Ford trucks equipped with the automaker's 10-speed automatic transmission. As COBB Tuning's Kirstin Backes explained, "One of the most common complaints in the Ford trucks in



PUNCH

the last few years has been the 10-speed's shift characteristics. From the factory, they're always hunting for a gear. All the up-and-down shifting is annoying as a driver, and it only gets exacerbated when you've got a load behind your truck. We can fix that with the COBB Accessport and a few minutes of your time."

The Accessport module is advertised as an easy-to-use ECU upgrade solution for a variety of performance vehicles and trucks. It essentially replaces the factory's more conservative engine-management settings with either off-the-shelf or enhanced

custom powertrain mapping for any level of customer modification. The Accessport rides in a holster and is plugged into the vehicle's OBD II port to input pre-loaded mapping, with driver-selectable tuning settings that are fine-tuned to any power modifications already on the truck by following directions on the unit's screen.

"It will help you make more power, and many drivers see improvements in their fuel economy after a good tune is loaded," Backes said. "You can't beat that combo when you're pulling another vehicle to the track. Freed-up airflow, combined with a

good ECU tune, will add substantial power, and you don't even have to leave your garage to make it all happen."

Holley in Bowling Green, Kentucky, offers a variety of towing-related horsepower products through several brands under its wide corporate umbrella. Several recent product releases are aimed directly at tow-vehicle performance. Under its DiabloSport brand of tuners and programmers, Holley produces a variety of plug-in tuning devices, most of which can be hand-carried, that are aimed at providing flash tuning upgrades to gasoline-fueled trucks. The DiabloSport



Edge Products' Insight CTS3 on-dash monitor provides drivers with real-time data that includes transmission fluid and coolant temperatures, engine oil and exhaust gas temperatures, boost pressures, and more.

loaded-in tuning maps can boost power for trucks using 87-octane fuel, with greater gains realized when the fuel is 93 octane. The DiabloSport tuners offer variable valve timing and torque management calibrations.

One such offering, which Holley sources said offers maximum control for Stellantis, Ford, or GM vehicles, is its Trinity 2 programmer. This is built around a haptic 5-inch touchscreen with multiple menus and monitoring functions and is updatable via Wi-Fi using either Windows or Mac-based computer operating systems. With 10 analog and digital function readouts, the Trinity 2 is expandable via licensing agreement to cover multiple vehicles in a customer's fleet.

In some newer trucks, especially recent General Motors trucks with 5.3-, 6.2-, and 6.6-liter engines, owners can find that the factory ECM and TCU settings may be locked. DiabloSport offers exclusive in-field tuning kits that will unlock the modules and allow uploading of a performance tune. Added horsepower, optimized transmission

calibration, and improved throttle response are the advertised benefits. DiabloSport also promises better 0–60 times, improved passing power, and more consistent transmission operation.

Superchips, another Holley holding, offers a variety of handheld flash tuners and inline tuning products for gasoline- and diesel-fueled trucks produced by a variety of automakers. Owners of Ford F-150 trucks from 2021 and up are directed to Superchips' new Pulsar XT module. This unit allows trucks that tow with the 3.5-liter or 2.7-liter EcoBoost engines to reprogram the tune without first unlocking the truck's ECM. Superchips forecasts power gains of 65% with the Pulsar XT, along with up to 90 additional pounds-feet of torque. If the truck has been re-gear-ed or fitted with taller tires, the Pulsar XT allows the user to properly calibrate the speedometer, adjust the Tire Pressure Management System (TPMS) engagement threshold, or bypass the TPMS entirely. The system also allows users to dial up the available power as needed—when climbing a hill, for example. The component is legal under the federal EPA's anti-tampering rules.

Another Pulsar XT is aimed at owners of Ram pickups with the 3.6-liter V6 or 5.7-liter Hemi V8. While not specifically a power-adding device, this Pulsar XT allows owners to disable the Ram Multi-Displacement System, which drops cylinders under moderate loading for fuel-saving purposes. There are seven preset throttle-booster settings. The Pulsar XT also disables the truck's engine auto start and stop, can be specifically calibrated for tires of 28 to 40 inches in diameter, and can compensate for gear ratios from 2.73 to 5.38. The unit can also adjust the TPMS warning threshold and can recall previous tow and haul settings on startup. It's all controlled through an Android or iOS smartphone app.

Under its Edge Products brand, which dates to 1999, Holley offers tuning and monitoring equipment aimed at the light-diesel truck owner. To make sure everything's operating properly, Edge Products recommends its Insight CTS3 on-dash monitor, which provides drivers with real-time data that includes transmission fluid

and coolant temperatures, engine oil and exhaust gas temperatures, boost pressures, diesel particulate filter (DPF) regeneration frequency, and DPF soot load. The Insight CTS3 has hundreds of configurable displays for keeping track of a broad range of powertrain functions. External temperature probes and temperature and pressure sensors can be added to reveal data not disclosed by normal OBD-II functions. The unit has self-diagnostic programming that will allow it to report functional problems on the fly.

The Insight CTS3 can be used for full tuner applications across nearly all Ford, GM, and Ram diesels produced from 1996–2024. Edge Products' Evolution CTS3 and Juice with Attitude CTS3 platforms offer added power and torque, modified transmission shift strategies, and calibrations specifically developed to improve overall drivability and towing performance.



Superchips' hand-held tuners enable the driver to perform multiple functions, not all of them related to engine performance. Some models enable the driver to adjust the Tire Pressure Management System engagement threshold or bypass it entirely.



PPE's new bar-and-plate transmission fluid cooler has a larger effective cooling area and bigger core than the OE cooler, but it still utilizes the factory mounting hardware for ease of installation.

These tuning tools from Edge Products offer improved drivability and towing performance by increasing mid-range torque and adding up to 180 horsepower over stock ratings, according to company sources, who added that most users report an improvement in mileage, throttle response, and passing power on the highway.

Among its newest offerings, Edge has released its Evolution CTS3 with Locksmith for owners of trucks equipped with the GM LP5 Duramax diesel engine. The system allows ECM and TCM unlocking and tuning, directly from the cab, using an industry-leading touchscreen with multiple digital monitors. Covering 2020–2023 models, the Evolution CTS3 is said to deliver “massive power gains” with improved throttle response. A PC and downloaded Update Agent software is required to complete the tuning process. Edge Products’ sources said the system will add up to 125 horsepower at the tires, for which the speedometer can be calibrated to match tire sizes. Four calibration maps are offered for tuning the GM 10-speed automatic transmission. Monitored functions include

soot and regeneration frequency, with adjustable speed and rev limiters, among other functions. The component is legal in all 50 states.

Another of Edge’s newest products for diesel applications is the EZX, which is an inline programming module controlled

“FREED-UP AIRFLOW, COMBINED WITH A GOOD ECU TUNE, WILL ADD SUBSTANTIAL POWER, AND YOU DON’T EVEN HAVE TO LEAVE YOUR GARAGE TO MAKE IT ALL HAPPEN.”

through an intuitive smartphone app along with the truck’s factory steering-wheel controls. According to Edge Products, the EZX is applicable to 2013–2024 Ram Cummins, 2017–2022 Ford Power Stroke,

and 2020–2022 GM 3.0L Duramax diesel engines. It adds emissions-friendly power (up to 65 horsepower) that is adjustable on the fly with the app monitoring variables such as tire size, pedal sensitivity, the truck’s speed limiter, turbo timing, and engine brake setting recall, among other variables. The system is completely plug-and-play and leaves no trace of ECM tampering, the producer reported.

The recent merger under Derive Systems in Sanford, Florida, has brought the tuning products of Bully Dog and SCT under the same corporate umbrella. Jay Payson said the firms’ products are intended to boost horsepower, improve fuel economy, and enhance the overall experience of driving a tow vehicle with added performance.

The SCT BDX Performance Programmer and X4 tuning accessories are known in

the marketplace for delivering street-tested and dyno-proven tuning files developed by expert, in-house calibrators. Both are described as adding horsepower, torque, and a more responsive towing experience. Some of the calibrations are also aimed at improving fuel efficiency. The systems have the capability to monitor variables such as coolant temperature, battery voltage, and spark timing, which helps ensure the vehicle is running optimally. As Payson explained, "This not only enhances the driving experience but can also prevent potential issues before they become serious problems."

For diesel-powered towing vehicles, Bully Dog offers the compact GT Diesel

"MANY DRIVERS SEE IMPROVEMENTS IN THEIR FUEL ECONOMY AFTER A GOOD TUNE IS LOADED."

Performance Monitor & Tuner. The unit can be mounted by suction cup and bracket inside the cab and is updatable via PC interface. The multi-function tuner is capable of performing both monitoring and diagnostic functions with a variety of pre-loaded tuning maps. Performance is relayed to the driver through a series of virtual gauges that project rpm, boost level, road speed, and operating temperatures.

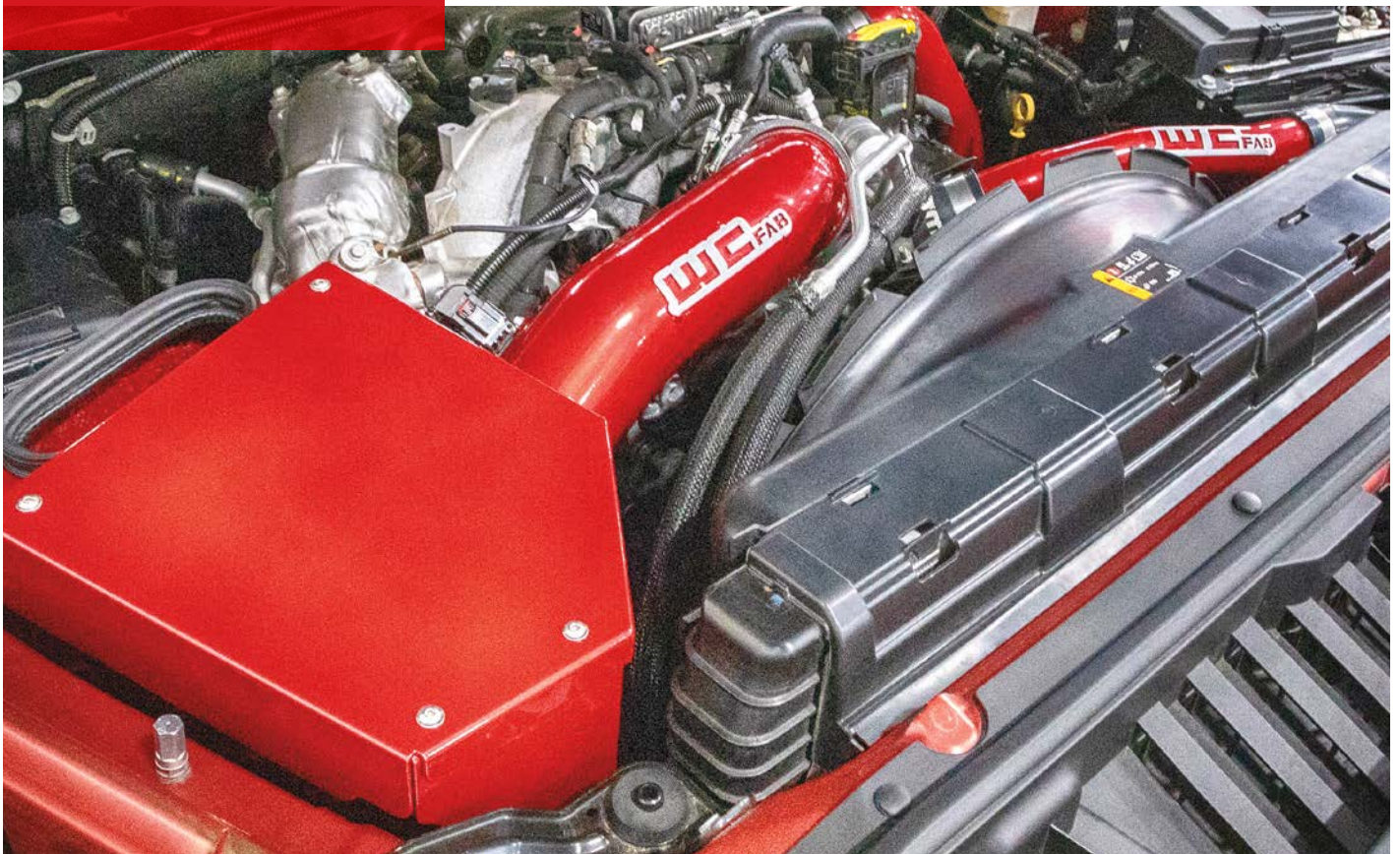
Both the SCT BDX and X4 offer user-friendly data interfaces, with the BDX featuring a full-color display along with Wi-Fi-enabled software updates and tuning downloads. This allows access to up-to-the-minute tuning data without requiring access to a personal computer, enabling custom performance tailoring. The devices can also serve as diagnostic tools, capable of reading and clearing diagnostic trouble codes. This

feature can save a trip to the mechanic by allowing drivers to address some problems themselves, according to company sources.

ENGINE TO DRIVETRAIN

Pacific Performance Engineering (PPE) in North Las Vegas, Nevada, has a full catalog of horsepower-improving accessories for trucks, including newly upgraded cast-iron cylinder heads for the General Motors Duramax diesel V8. Another such improvement can be realized from PPE's air-to-water intercooler kit for 2011–2023 Ford trucks equipped with the 6.7-liter Power Stroke. The unit advertises increased cooling efficiency and improved density of the incoming fuel charge, both of which enhance performance under heavy loads, such as towing. A simple, drop-in installation is also cited, along with a 50% larger core and

Components from Wehrli Custom Fabrication not only improve a truck's performance, but the company also offers custom powder coating that can match a tow vehicle's or race car's color scheme.



reduced inlet backpressure when compared to a stock intercooler. The flow-optimized, cast-aluminum end tanks of the PPE intercooler are reported to improve airflow, while also reducing frictional pressure drop by a calculated 63%. Sources at PPE said this ensures a constant and smooth airflow with minimized flow restrictions and maximum performance, along with significant fuel-economy benefits.

For those who tow with GM trucks, PPE also now offers its bar-and-plate transmission fluid cooler for trucks equipped with the 6.6-liter Duramax. The unit is a direct replacement for the OEM fluid cooler and uses OEM mounting hardware for speed and simplicity. The PPE unit has a larger effective cooling area and bigger core, which, according to PPE sources, allows the unit to draw 200% more thermal heat from the transmission fluid than the factory cooler can manage. That can result in a 40% drop in fluid temperature, improving transmission operation under all load conditions. The cooler is crafted from high-quality aluminum for better temperature dissipation than stock and comes with a limited lifetime warranty.

Wehrli Custom Fabrication of DeKalb, Illinois, is a one-stop source of equipment for the mechanical and cosmetic upgrading of light- to medium-duty trucks, especially diesels. Established in 2010, Wehrli produces specialized components for Duramax-powered GM pickups, Fords with the Power Stroke diesel V8, and Cummins-motivated Ram trucks. Among its offerings are drop-in enlarged turbochargers for a variety of models, dual-turbo conversions for the Cummins six-cylinder diesel, and intake kits for the three major diesel providers.

Wehrli sources explain that their selection of intakes, intake horns, intercooler pipes, and down pipes increase both air and exhaust flow for the turbocharger, resulting in improved efficiency, better throttle response, and turbo spool-up. According to the manufacturer, Wehrli turbo components eliminate weak points in the factory design that can contribute to lost power, boost leaks, and complete failures during hard-working and high-performance applications. One of them is a custom 67-mm drop-in turbocharger intended for use with the Ford

6.7-liter Power Stroke diesel from 2017–2019.

Wehrli also offers upgraded silicone boots to withstand higher boost pressures than the factory components, with an eye on increasing reliability and eliminating both blown factory boots and horsepower-robbing boost leaks. The various intake kits that Wehrli designs and produces are also advertised as improving intake air velocity and volume, while providing a more aggressive engine and turbo exhaust note during acceleration. Cosmetically, Wehrli also offers custom powder coating that can match a tow vehicle's or race car's color scheme.

In addition to offering supercharger kits for both hot street and race applications, Vortech Superchargers in Oxnard, California, also produces its Charge Cooler upgrade package for Ford F-series trucks equipped with the 3.5-liter EcoBoost engine package. The system, which reduces the temperature of the incoming air charge, can be upgraded to a complete system that incorporates the DiabloSport hand-held tuner and Vortech tuner file, plus all necessary hoses and related equipment. Andrew Schwartz said that Vortech superchargers increase power and torque, making for easier hill climbing with improved fuel economy, depending on the driver.

"If the customer is looking for a product with race-winning performance that delivers quality and durability, there's no better product on the market," Schwartz said. **PRI**

SOURCES

COBB Tuning
cobb tuning.com

Derive Systems
derivesystems.com

Holley
holley.com

Pacific Performance Engineering
ppepower.com

Vortech Engineering
vortechsuperchargers.com

Wehrli Custom Fabrication
wcfab.com

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HOLD FAST

HOW FASTENER TECHNOLOGY
TRANSLATES FROM THE HIGHEST
TIERS OF MOTORSPORTS TO AMATEUR
AND GRASSROOTS RACERS.

By Drew Hardin

Chris Brown of ARP in Ventura, California, recalled what the fastener business was like “in the glory days of Formula 1, in the early 1990s, when we got into that space. It was crazy. The budgets were about the size of a small country’s GDP. It was a free-for-all. You’d have a room of 30–40 designers just drawing whatever they needed. They would come up with some great designs, but often they were expensive to produce.

“We’re not in that world anymore,” Brown said. “It’s cost-capped, in an attempt to try to keep the cost of racing under control.”

Yet at the same time, the demands put on fasteners, particularly those that are engine-related, have exploded, pun intended.

“There’s probably nothing on earth that’s harder to seal than a Top Fuel motor,” noted Mark Campbell of P1 Manufacturing, Rogersville, Missouri. “Especially when things go wrong.”

Fastener manufacturers are challenged to find sealing and connecting solutions that strike a balance between cost and strength, while also factoring in weight and durability, always seeking less of the former and more of the latter.

DESIGN PRINCIPLES

At ARP, fastener development is based on a set of design principles, Brown said, which “really haven’t changed over the



Photo courtesy of ARP

years. When it comes to fasteners, there are certain do's and don'ts that you incorporate into design. Many of the same ideas and principles that are used in the top levels of motorsport have also been used in the grassroots, in parts in our catalog, for many, many years."

As an example, Brown pointed out that "when an engine designer is designing a joint, they want to use the lightest, highest strength thing that they can so they can

keep the weight down. That is when those principles kick in as far as, for example, where you can neck the stud down in diameter to keep the weight down, but also maintain the joint integrity with the clamp load."

Or in another example, a connecting rod bolt, the ideal basic design principle would be a bolt "that would be like a piece of steel rope—something very strong in tensile strength, but also something flexible, that

will allow the bolt to bend slightly without cracking," Brown said. The material used to execute that design principle would vary from application to application depending on the "duty cycle, the load that the fastener is going to see in service. We know there's going to be a force generated on the cap when the rod and piston get to top dead center. We can calculate what that force is with that rod, piston, stroke, and rpm combination, and then we select a material

from our palette of materials that will exceed those requirements with a very healthy safety factor.”

When developing a new fastener for a customer in motorsports’ top ranks, ARP collaborates with the team to develop fasteners for each specific use case. Teams will provide basic parameters, ARP will get back to them with recommendations, and once they agree, ARP executes the fasteners to spec. “Or, customers will send us a drawing, knowing exactly what they want,” Brown explained. Either way, the fastener design is proprietary.

“We are involved with lots of NDAs,” Brown noted, adding that ARP is “in an

“A LOT OF OUR OFF-THE-SHELF DESIGNS AND PART NUMBERS ARE BEING INCORPORATED INTO THE DESIGN OF SOME VERY CUTTING-EDGE MODERN POWER UNITS.”

unusual position of making parts for several engine manufacturers that compete head-to-head, and yet we make their parts here. It’s a position of great trust that we take very seriously.” As one would imagine, those proprietary parts don’t trickle down or wind up in the catalog.

Interestingly, Brown has noticed something of a trickle-up situation happening “with the push to reduce the cost of racing. A lot of the top-tier racing engines now are somewhat cost capped. What a lot of designers who have worked with us over the years have recognized is that the quality that we offer with an off-the-shelf catalog part is much higher than it would be for, say, a commercial grade socket head cap screw that they might have been using previously. So a lot of our off-the-shelf designs and part

numbers are being incorporated into the design of some very cutting-edge modern power units.”

A DIFFERENT APPROACH

P1 Manufacturing entered into the fastener business much differently than most would expect, Campbell said, “because one of the first products we made was a billet Top Fuel block and then the fasteners for it. We learned a lot about fasteners doing that, and we have taken a lot of that knowledge and technology and applied it to our regular, everyday stuff.”

As an example, Campbell said P1’s heat-treating process “is quite different than any other fastener manufacturer out there. We do vacuum heat-treating, which eliminates any of the particulates in the air that could

According to one of our sources, some engine builders, even after years of experience in the field, can still learn new tricks about properly torquing fasteners and the correct lube to use to get, for example, a positive and equal clamp load across a cylinder head to make sure it stays sealed.





contaminate that part while we're heat-treating it." The process and its related equipment are "very expensive," he said, "but we started doing that when we were making these extreme high-end fasteners, and we've had very good luck with it. So today, literally every single fastener that we make, whether it's an 8740 or a 625 Plus or anything in between, is vacuum heat-treated to increase their reliability."

The 8740 material Campbell referred to is a chromoly used for fasteners that is

Choosing the right fastener is "all about the application," said one source. The ultimate, highest-strength material may be ideal for one part of a vehicle but not another. "Pick which material is right for the application."

that will live in an application like that."

Developing a fastener using a material rated for 270,000-plus-psi tensile strength is

"EVERY SINGLE FASTENER THAT WE MAKE, WHETHER IT'S AN 8740 OR A 625 PLUS OR ANYTHING IN BETWEEN, IS VACUUM HEAT-TREATED TO INCREASE THEIR RELIABILITY."

often treated with black oxide to improve its durability. He described 625 Plus as "a very unique material, some of the best material you can use" with properties similar to tool steel and tensile strength in the "270,000–300,000-psi range." It's used in P1's highest-end fasteners—including those for Top Fuel engines—because "it's about the only thing

"really a matter of coming up with a fastener that obviously has a lot of strength, but also does have some pliability or is a little bit ductile," Campbell said. "Because no matter what, the stud does have to stretch to create the load you want, but it has to come back as well. Otherwise, you're getting into a torque-to-yield type fastener, a one-time use.

These guys don't want to just use this once and throw it away."

Some of the fastener knowledge P1 shares across motorsports disciplines is about how to properly torque fasteners, "and the lube that they use on the fasteners, all those things to get a very positive clamp load and an equal clamp load across the entire cylinder head to make sure that they stay sealed up," Campbell said. Many in the racing industry have been torquing fasteners for a long time and are a bit set in their ways, he acknowledged, "but we're trying to show them different ways, better ways. We have a metrology lab here, which is the science dedicated to measuring stuff, and we're trying to help them understand the properties of the materials and how they react to loads."

PANEL FASTENER EVOLUTION

To diversify our fastener discussion a bit, we spoke with two companies that manufacture and/or distribute panel fasteners. Clarendon Specialty Fasteners of Long Beach, California, distributes fasteners of all kinds "to just about every sanctioning body in motorsports, whether it's Formula

THE RIGHT STUFF?

Should racers use aerospace-quality fasteners? The term would seem to indicate a fastener of the utmost quality and strength, one good enough to keep airplanes or spacecraft in one piece in the harsh environment of extra-terrestrial travel.

"Generally speaking, people hear about a part made to aerospace or aircraft or military specification, and they automatically assume that it's better," noted Mark Campbell of P1 Manufacturing, Rogersville, Missouri. "But really, it's similar to making something to an ISO standard. Aerospace has certain standards that they want you to abide by when you're building a product. Typically, it means that it's a better product, but it doesn't necessarily mean that it's right for what we're doing in motorsports. What we do for a Top Fuel engine can be crazy compared to the fasteners we create for the aerospace industry. 'Aerospace' definitely doesn't mean that it's better."

Just because an aerospace fastener is designed to meet a particular specification "doesn't mean it's the strongest fastener," added Chris Raschke of ARP, Ventura, California. "It was designed for a certain area of the aircraft. They're all designed around a spec, and every one of them went out to meet the minimum bid at the minimum standards. In our world, we make fasteners to the highest standards at a

good quality price for good value."

"In aerospace there is quite often a degree of redundancy," said ARP's Chris Brown. "If it takes 10 bolts to hold a joint together, aerospace might use 15 or 20 to have an extra level of safety. We don't have that luxury in motorsport. The joints are really critical and a lot closer to the edge. So the materials, design, and quality of that part have to be that much higher."

"We don't want to demean the term 'aerospace quality,'" Brown continued, noting that ARP has held an AS 9100 aerospace quality credential since 2009, "and we were compliant before we became accredited. It's a very, very stringent set of rules. By the nature of what it is, aerospace has to be very tightly controlled because of safety. So it gives you a high degree of confidence as far as consistency from one part or one batch to another. Whereas in the commercial world, that can vary quite a bit because the rules are much looser."

With an aerospace fastener "you are certainly getting more strength than your run-of-the-mill product," said Caulin Anderson of Clarendon Specialty Fasteners, Long Beach, California. "But with the way cars are developing, you may need something more. Previously, automobiles didn't see the same kind of stresses as a plane. But nowadays, you're seeing more stresses on certain components." —*Drew Hardin*



The fasteners P1 Manufacturing developed for its billet Top Fuel blocks are made from 625 Plus, a unique material with tensile strength topping 270,000 psi. "It's about the only thing that will live in an application like that," said Mark Campbell.

fit. They're also offered with different styles of heads, including one that's countersunk, one that's protruding, and the one used on the Mustang GT3 cars, which has like a mushroom-shaped head for a little more clamping area around the body panel."

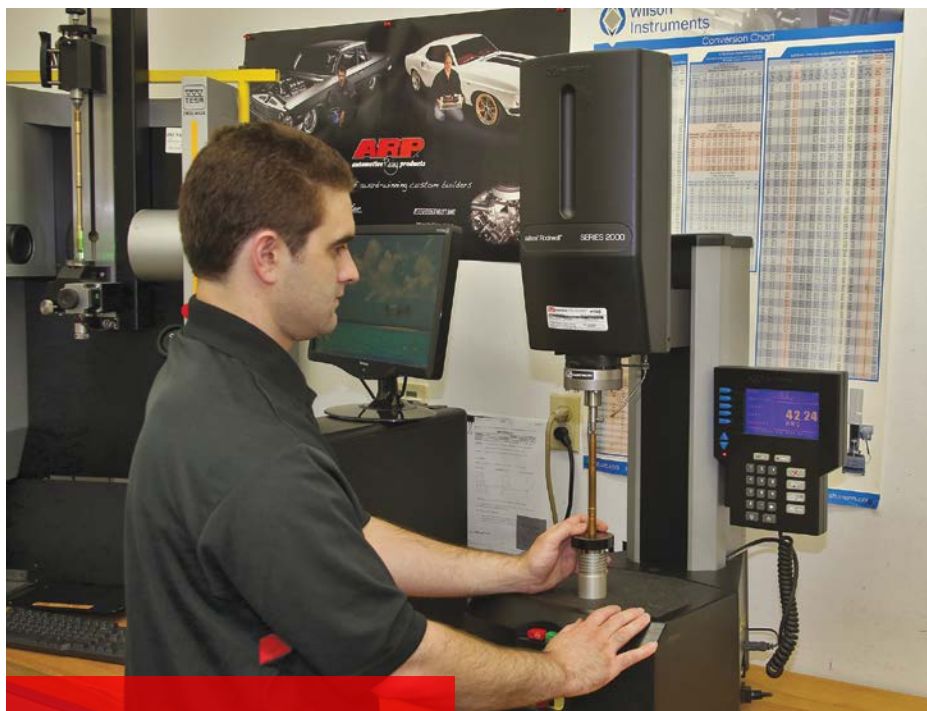
Because Live Locks are "at a higher price point," it may be a while before they reach the street car market, Anderson believes. "It's really going to come down to how much the OEMs are using it. The more they use, the more stock we're going to buy, which means a lower sales price we can give the average motorsports guy." Right now there's "something of a disconnect" between the price of the studs and the receptacles, he said, "because a lot of people need the receptacles, but they're not using the same size stud. All the studs go in the same receptacle. It's kind of like nuts and bolts. Everyone can use the same nut, but not everyone can use the same size bolt."

Behrent's Performance Warehouse in Florida, New York, has specialized in quarter-turn fasteners "for the dirt market for the last 20 years," said Jon Lynch. "Our Panelfast fasteners, which now have more than 200 variations and sizes, started with the Northeast modified market and now have pushed into national tours such as Late Models, sprint cars, IMCA, and UTV/

1, IndyCar, NASCAR, Top Fuel, even endurance racing and drifting," explained Caulin Anderson. One of the company's most popular panel fastener lines, Live Locks, "started in Formula 1, but now they've moved over to endurance racing, and you're starting to see them more, not just on DTM or GT3 cars but also filtering into GT4s." That

includes the GT3 and GT4 Mustangs Ford released earlier this year.

Several factors set Live Locks apart from other quarter-turn fasteners, Anderson said. "They're a little bit smaller and more aesthetically pleasing. And unlike the quarter-turn fasteners that give you one click, these can be ratcheted down for the perfect



A fastener undergoes hardness testing at ARP. "The space where ARP lives is in much higher grade materials and much tighter controls and specs than a commercial fastener, and in some cases much tighter controls and specs than an aerospace fastener," said Chris Brown.

off-road applications. We see new growth every year with different purposes. The expansion trickles down to karting, mini-sprints, Legends, quarter midgets, and other beginner racing classes. Most recently we have seen an influx from the drag and street market as well as niche markets like rock climbing and monster trucks."

Lynch said that newer design machinery, "such as 3D printing and scanning, has made making new items and prototypes easier and more efficient in the design stage, which enables us to make products more accessible to the end user quicker."

He noted that the fastener industry has "recently seen a bigger push toward aluminum fasteners compared to steel. Between strength of material and weight savings, it provides racers with an advantage without sacrificing durability."

What drives the decision to choose one material over another? "It really depends on the customer," Lynch said. "In crate engine classes for example, where every car has the same motor and parts, they tend to try and find the lightest option. Whereas short track racers still tend to use steel buttons, as they are more cost efficient when the possibility of damage is higher.

"Changes in head styles, color, and material options have given racers and manufacturers the ability to offer more options and tailor-make what fits each customer's needs," Lynch concluded. **PRI**

SOURCES

ARP
arp-bolts.com

Behrent's Performance Warehouse
behrents.com

Clarendon Specialty Fasteners
clarendonsf.com

P1 Manufacturing
p1mfg.com



PRI TECH

HOW TO CHOOSE A RACING HARNESS

Belt width, length, latch type, and mounting location are just some of the variables to consider when adding a safety harness to a race car.

By Mark Houlahan

Seat belts and racing harnesses are among the top-five most important safety items you can buy for your race car. With all the options that exist between size, length, closure type, and adjustability, it can be hard to decide on a specific set. This guide will give you helpful tips on what to look for in each belt and help to narrow down your choices for an informed decision.

Do I need a 3-inch or 2-inch belt?

First, let's look at size. The majority of belts come in a 3-inch width. They are common in bigger classes of cars such as sport compacts, hobby stocks, modifieds, and sprint cars. There are also a few belts that are 2 inches wide. These are common for smaller cars such as cage karts, quarter midgets, and junior sprints. Verify with local tracks or series if they require a specific size.

From there, it comes down to what you race. The only exception to this is that some 3-inch harnesses have an option for 2-inch upper shoulder belts (above right). These are referred to as "HANS" type belts. When wearing a HANS device, these narrower belts fit the HANS shoulders better. With some belts you can upgrade the shoulder belt portions for HANS use versus buying all new belts.

What belt length is right for me?

Next, let's discuss belt length



These 2-inch upper shoulder belts fit better with a head-and-neck restraint.



Speedway Motors' five-point harness latch collects all five belt segments.



Speedway Motors' Elite 5-point Seat Belt Harness.

and why you might need a longer belt. Some belts are made longer to facilitate attachment points that are not directly behind the seat. In some race cars, such as quarter midgets, the belts need to be longer to reach the bars where they attach. Harnesses can be bolt-in, wrap-around, or both.

Bolt-in harnesses have a triangular bracket at the end of the belt that bolts through a spud or tab welded onto the frame. Usually, these brackets are sewn in place and are not removable. Wrap-around harnesses are just that: The belt wraps around a frame gusset and passes through a buckle multiple times to hold itself in place. A good option for this type of harness is Speedway Motors' Racing Harness/Shoulder Pad/Sternum Protector Kit. Some belts offer a combination, which has a wrap-around end but include a bolt-in triangular bracket that the belt can be threaded through and secured into the harness using the wrap-around buckle. With the bracket, you basically turn the wrap-around belt into a bolt-in. See "How do I mount my safety harness?" section below for more details on proper mounting configurations and belt angles.

Four-point vs. Five-point Harness

A four-point harness consists of two shoulder belts and two lap belts connecting at the center of the lap belts. It is commonly used

in recreational off-roading, track days with street vehicles, and non-extreme racing events, offering better restraint than the traditional three-point harness (seat belts) used in passenger vehicles. The SFI five-point harness consists of two shoulder belts, two lap belts, and an anti-sub (AKA anti-submarine or sub-strap) belt that goes between the legs to a mounting point under the seat line. The anti-sub strap on a five-point harness prevents the driver from sliding forward in a crash. Each belt in a five-point harness assembly is a distinct belt, and all the belts are connected together at a common point via a latch or cam lock, which is covered in the next section. Nearly all competitive racing bodies (IMCA, NASCAR, NHRA, World of Outlaws, USAC, F1, IndyCar, etc.) require at least five-point harness seat belts, and it's the minimum recommendation for high-speed environments.

What is the difference between latch-and-link and cam lock belts?

The next option on harnesses is the latch type, such as the 5-point racing harness cam lock (bottom left photo). There are basically two different kinds of latches: latch-and-link and cam lock. The latch-and-link belts are the most popular and most common. They basically operate as a hook and loop. The shoulder belts and sub belt slide onto the loop, and the hook latches onto the loop,

holding it all together. The cam lock latch operates as a hub. The shoulder belts, sub belt, and other lap belt push into the cam latch, clicking into place like a street car seat belt.

To release, you simply pull or rotate a lever or knob, which activates a cam-release inside the latch, releasing all the belts simultaneously. Generally, the cam lock belts are easy to operate, allowing the belts to be locked in/secured one at a time, but are more expensive. Whereas, the latch-and-link belts are nearly infallible, but take a little effort to get used to and don't release quite as easily.

The latch-and-link style belt latch (photo on middle left) helps provide some clarity to the design. The right lap belt has the link loop end sewn into it and the sub strap end buckle, along with both shoulder strap end buckles, slip over the link loop portion. Finally, the left lap belt's end buckle is slipped over the end of the link loop and the left belt's latch lever is pushed toward the belt webbing to engage the latch into the right lap belt's link loop, retaining all five belt segments.

Similar to the latch-and-link, the cam-lock style belt starts with the main latch assembly as part of the right lap belt. However, that is pretty much where any similarity ends. The remaining belts, which include left and right shoulder, sub strap, and left lap belt, all have a latch "tongue" like a production car seatbelt that can be inserted into the cam lock latch individually. This makes belting in yourself a little easier. Then, instead of lifting the latch-and-link lever, you either twist or pull the cam lock lever to release all the belts at once.

To see the difference between latch-and-link and cam locking systems in action, we have a helpful short video at youtube.com/shorts/YKRbfv2Q-M.

What type of belt adjustment is best?

The type of adjustability each belt has is another consideration. The basic types are pull-up, pull-down, and ratcheting. When a belt is a pull-up design, it means that the lap belts tighten by pulling the belt's "tail" upward toward the latch. These belts are easier for the driver to tighten. In

comparison, a pull-down design means the belt tightens by pulling the belt's "tail" downward away from the latch. These are easier to have someone outside the vehicle tighten for the driver. Lastly, ratcheting seat belts have a mechanism on the left side lap belt that, once latched together, the ratchet can be tightened a lot tighter than simply pulling on the "tail."

They use a standard 1/4-inch ratchet and still utilize the standard latch-and-link style latch. Ratcheting belts, such as a 2-inch racing harness, are most common in sprint cars and other race cars with enough clearance around the left side of the seat to mount and access the ratcheting mechanism. These require a bolt-in spud or extra frame bracket.

What is the benefit of a six-point restraint?

The one last thing to consider in your safety belt plans is whether you want to use a more traditional five-point belt or the newer six-point belt. Initially, the thought goes to driver comfort, as the six-point's additional sub strap means the two sub straps are positioned against the inner thighs versus the single sub strap of the five-point harness, which is routed straight down the middle of the groin area. However, consider the racing seat and belt mounting locations before you decide. An improperly installed six-point belt is not better than a properly installed five-point belt. Furthermore, check with your sanctioning body and/or track rules, as some mandate the six-point belt setup. Whichever system you choose, ensure it is properly installed for it to be the most effective.

How do I mount my safety harness?

The proper way to mount a harness depends on the cage design, racing seat, and harness. Generally, avoid mounting to any area not specifically designed to hold the end of the harness (be it a bolt-in or wrap-around). It is preferred to mount the belts in double shear with a bolt-in tab on the end of the belt. This allows the belt/harness to pivot and align with the force applied in a crash. Avoid mounting a bolt-in tab where any load applied to it would bend the tab or bolt. The shoulder belts should attach to

a cage crossbar roughly 10 degrees below the horizontal plane of the driver's shoulder, while the lap belts should sit across the pelvis (the strongest bone in your body!) with the buckle about 2 inches below the driver's navel. Lastly, the sub strap should be anchored just behind your chest plane. The belts should not rub against the seat openings or any sharp interior panels, and the belts should be configured in the shortest length possible.

What is an SFI Rating?

SFI is a non-profit certification and testing organization for the motorsports industry. The certification shows a product has been tested to meet or exceed a set of data points to ensure the user's safety. Items like racing suits, helmets, and safety belts come in various SFI ratings (particularly racing suits). For safety belts the SFI rating is 16.1, and they are certified for two years. Why only two years? Many variables, such as sun fade that deteriorates the webbing material, dirt and water, etc., all contribute to loss of belt strength. Harnesses can lose between 50% and 75% of their strength over this two-year period, thus the replacement mandate. Furthermore, if the belts have been through an accident, they should be replaced immediately due to the stretching forces exerted on them in the crash.

There exists a multitude of options for harnesses. Check your rulebook, look at the racing you will be doing, and consider what neck restraint you will be using. Measure for belt length, if they don't attach right behind the seat, and think about your needs when it comes to the latch and adjustability. Remember, safety components are the most important thing in your race car, besides you. Check out the racing harnesses from Speedway Motors. Your safety comes first!

Mark Houlahan joined Speedway Motors in 2020. Houlahan has always enjoyed telling a story with words on paper (and now a screen) through numerous automotive magazines and a book on Fox body Mustangs. In 2023, Houlahan was inducted into the Mustang Owner's Hall of Fame. Column courtesy of Speedway Motors; speedwaymotors.com.

ADVOCACY CORNER

Tracking legal, legislative, and regulatory developments impacting the racing and performance industry.

Edited by Jack Haworth

PRI's Washington, DC-based legal and advocacy teams work continuously to protect and support motorsports venues, sanctioning bodies, and businesses around the nation. We are tracking several initiatives this month, including PRI's inaugural State of the Racing Market Report, a successful Washington, DC Rally to advocate for our industry, and victories to protect vehicle choice in Louisiana and Virginia.

INAUGURAL STATE OF THE RACING MARKET REPORT IS PUBLISHED

PRI released its first-ever market research report, showing that track-use motorsports parts accounted for more than \$8 billion in sales in the United States in 2023, among many other racing market data points. Produced by PRI Market Research, the 2024 State of the Racing Market Report includes key industry trends and sales metrics and is available to PRI Business and Individual Members for free as a membership benefit.

"As the industry continues to evolve, businesses need to rely on facts to understand where the market currently stands and where it's headed," said PRI President Michael Good. "This study takes the guesswork out for our members, helping them to identify new opportunities in an easy-to-read and comprehensive download."

The report finds that "businesses across the racing ecosystem are seeing positive signs that motorsports is getting back to its usual rhythm." According to the report, 76% of racing businesses view the racing market as either stable or on the rise. While companies saw strong sales growth following the reopening of tracks and resumption of races post-pandemic due to pent-up demand, the growth slowed slightly in 2023 amidst recession and inflation concerns. Still, overall sales were largely positive or remained stable for those selling racing parts.

"The racing segment continues to be a

strong piece of the specialty-equipment market and a revenue opportunity for many businesses," added Good. "Whether you are a CEO, salesperson, or race service provider, this report can help you stay ahead of the curve and navigate the dynamic motorsports landscape."

PRI Business and Individual Members can access and download the full report by using their individual login to access their member portal at: performanceracing.com. Once logged in, the report can be found by clicking "My Benefits."

PRI MEMBERS RALLY ON CAPITOL HILL, HOST 'CARS AT THE CAPITOL' EVENT

PRI members recently traveled to Washington, DC, to advocate for the interests of the motorsports parts industries as part of the 2024 SEMA & PRI Washington, DC Rally. Members and industry leaders held nearly 150 meetings with elected officials and congressional staff, advocating for their lawmakers to support legislation to protect the future of the industry. "Thanks to all of the PRI and SEMA members who participated in the 2024 Washington Rally and made sure the motorsports parts industry's voice was heard on Capitol Hill," said Eric Snyder, PRI's senior director of federal government affairs. "The relationships that were developed and reinforced during our meetings and interactions with lawmakers and their staff are critical to ensuring Congress understands and addresses our industry's



BOOSTane's Ian Lehn brought his 1969 Mustang to the 2024 SEMA & PRI Washington Rally. The car recently competed in the Big Bend Open Road Race in Texas. It has a stroker motor from Blueprint Engines, plus products from BOOSTane, SilverSport Transmissions, Moser Engineering, Bearded Stitch, Simpson Race Products, and Graphics Guys Motorsports.

policy needs."

Congressional meetings provided PRI members with an opportunity to advocate for protecting the right to repair and modify vehicles with advanced technology, stopping vehicle technology mandates that limit consumer choice, protecting motorized access to federal government lands, making permanent business tax incentives for race tracks, and extending business tax incentives that will be expiring or be reduced in 2025.

The Rally kicked off with a congressional dinner and engaging panel discussion



SEMA and PRI encourage those who weren't able to attend the 2024 SEMA & PRI Washington Rally—which included the “Cars at the Capitol” event seen here—to get involved by writing their members of Congress on issues of key importance to their business and the industry.

hosted by TV presenter and car builder Ant Anstead. The discussion featured industry champions from the U.S. Representatives, including Reps. Marie Gluesenkamp Perez (D-WA), Tim Walberg (R-MI) and Mark Amodei (R-NV). Industry members also participated in a lunch at the exclusive Capitol Hill Club with U.S. Senator Markwayne Mullin (R-OK), co-chair of the Congressional Automotive Performance and Motorsports Caucus. The Rally also featured “Cars at the Capitol”—a curated showcase of customized vehicles ranging from classic cars to late model vehicles—putting our industry on display just beyond the steps of the Capitol.

PRI members who were unable to attend this year's Rally can still get involved by writing their members of Congress on issues of key importance to their business and the industry. We also encourage you to host your members of Congress at your business. Our government affairs team makes this easy by



From left to right: Auto industry personality Ant Anstead and U.S. Representatives Marie Gluesenkamp Perez (D-WA), Tim Walberg (R-MI) and Mark Amodei (R-NV).

coordinating the logistics and participating in lawmaker visits to member companies.

VIRGINIA BECOMES FIRST STATE TO DISASSOCIATE ITSELF FROM CALIFORNIA'S EMISSIONS STANDARDS AND ICE BAN

Virginia Governor Glenn Youngkin announced that the Commonwealth would not adopt California's 2035 ban on selling new gas- and diesel-powered motor vehicles.

“Seventeen states have attached themselves to California's emissions standards over the past 20-plus years. Nine states have passed laws and/or resolutions rejecting government deciding what technology American consumers must purchase and buy,” said SEMA President and CEO Mike Spagnola. “Virginia is now the first state in the nation to untangle itself from California's emissions standards and EV mandates. We applaud Governor Youngkin for this bold action that rejects the notion that California should determine policies for nearly half of American consumers. We urge other states to follow Virginia's lead.”

SEMA and PRI have led the charge to pass laws and/or resolutions in nine states that would outlaw states and local governments from mandating a singular vehicle technology over others and protect the American consumer's right to choose the vehicle technology that best suits them and their families. SEMA and PRI's efforts also led to the successful delay in the adoption of California's ICE ban in Connecticut and Maine earlier this year.

LOUISIANA GOVERNOR SIGNS BILL TO PROTECT VEHICLE CHOICE INTO LAW

Louisiana Governor Jeff Landry signed House Bill (H.B.) 515 into law, which ensures consumers' choice of vehicle power plants and fuel technologies. This action will go into effect on August 1, 2024.

The PRI-supported law officially prohibits a state agency from restricting the sale or use of motor vehicles based on their energy source. H.B. 515 passed both chambers of the legislature with overwhelming support. The new law makes Louisiana the latest state to embrace vehicle choice.

“PRI and SEMA appreciate Governor Landry and Louisiana's lawmakers for approving H.B. 515,” said Colby Martin, PRI's director of state government affairs. “As with any automotive advancements, PRI and SEMA have continued to support an ‘all of the above’ approach to vehicle technology policy, advocating for technology-neutral policy that allows the free market to continue to innovate all technology that significantly reduces vehicle emissions.”

Louisiana is among several states seeking similar proposals. PRI believes that Louisianans, not the government, should decide what vehicles are best for them and their families. This effort promotes consumer choice, fosters innovation, and protects jobs. **PRI**

SOCIAL STATUS

New services make creating and posting testimonial videos a snap for customers.

By Joe Dysart

Business leaders who are convinced that there are few things more powerful than a customer testimonial on video are in luck.

Scores of service providers have cropped up that virtually automate the entire process of creating a video testimonial library—including invitation, collection, editing, hosting, and posting to all the social media networks that matter to your business.

Those testimonials also feed into the overall hunger for endorsement video on the web—a genre of promotion known as “social proof,” according to Isaiah Shelton, senior content strategist at Lemonlight, a video marketing services provider.

And the promotional genre is also yet another indicator of the wild popularity of video in the digital world right now.

The report, “The State of Video Marketing 2023” from Wizowl, for example, found that 91% of video marketers used video as a marketing tool in 2023. Moreover, 46% of marketers used testimonial videos as part of that mix. And 96% said video has helped customers and potential customers get a better idea of what the company was selling.

Fortunately, when it comes to video testimonial services, generally all that’s required from your customer is a smartphone and a story to tell. From there, most of these services walk your customer through the video testimonial creation process, including suggestions on what they might want to post on your behalf. Plus, the services also streamline the process for getting the video testimonial filed, approved by your company, and then published across the web in all the places your business does its digital promotion.

As most businesses realize, potential customers assign great value to testimonial videos from real shoppers that pull no punches when it comes to sharing actual experience with a product or service. Those potential customers would much rather see

a testimonial from a satisfied customer—production warts and all—than a slickly produced, professional production that in the end, is little more than clever huckstering. And those potential customers are much more likely to buy from your business once they’ve been reassured—by real customers—that your brand is one that can be trusted.

Nikola Bojkov, CEO of EmbedSocial, a social media marketing services provider, said, “Nothing is more powerful than a real customer testimonial video recorded with their own words without any pressure.

“Video testimonials provide visual proof of customer satisfaction, where prospective customers can see and hear the satisfaction and happiness in the existing customers’ expressions and tones,” added Bojkov.

Lisa Harroy, creator partnerships lead at Riverside, a customer video testimonials service provider, agreed, adding, “Video testimonials are an authentic, engaging way to show prospective customers how your satisfied customers feel about your brand.”

Moreover, given that there’s intense competition among video testimonial service providers right now, you’ll find most of these services have tried—in every conceivable way—to make the video testimonial creation and submission process for your customers as effortless as possible.

Many of the services, for example, can be integrated into your e-commerce software or platform, so that securing new testimonial videos is as easy as posting an invitation to submit on your website, sending an after-purchase email asking for a video testimonial, or providing a link for your customer to click on after check-out.

Indeed, some services even enable you to offer a QR code that your customer can scan with a smartphone, which automatically triggers activation of the video testimonial creation-and-filing service.

Most solutions also provide a release

form your customers can sign, which gives your company the freedom to use their video testimonial anywhere—including on your website, social media properties, or advertising—in perpetuity. And most services offer prompts to your customers that provide ideas on what they can talk about in their video—including a list of questions they can answer as they make their testimonial.

The good news here is if you’re stuck on how to put together suggestions for your customers for the testimonial videos you’d like, some services offer Q&A templates you can customize for your own purposes. In addition, many services are designed to auto-interface with the social media networks you promote on, including TikTok, Instagram, Facebook, and LinkedIn. That makes it a snap to publish a customer endorsement video you receive to all your social media properties in a matter of seconds.

Bottom line: It’s never been easier to get serious about soliciting—and leveraging—a library of testimonial videos for your business. And if you’re already involved in testimonial video promotion, it’s never been easier to automate much of the process that you may be engaging in manually.

WHERE TO BEGIN

Here’s a representative sampling of existing solutions:

Widewail Invite Video: Widewail is definitely from the ‘less-is-more’ camp of customer testimonial videos. Your customers need only a smartphone to record videos endorsing your company, service, or product.

Once successfully invited, the Widewail service is designed to take these influencers every step of the way. And once your customers are satisfied with their testimonial, they simply submit their video via Widewail’s app—which auto-notifies your company that you have a new video endorsement waiting.

Widewail also secures a signed release

from your customer as part of the video submission processing, guaranteeing that your company will be able to use the video anywhere for free—and in perpetuity.

Vocal Video: Testimonials handled by Vocal Video also require nothing more than a smartphone to submit a customer endorsement. It's a full-featured service that includes consumer testimonial collecting, editing, publishing, and hosting. And it also offers auto-polishing of videos customers want to submit by combining raw footage into multi-scene productions including motion graphics, soundtracks, subtitles, and branding.

You'll also have the option to feature your library on customer video endorsements via embeddable galleries that you can feature on your website and other digital properties.

Like many service providers, Vocal Video encourages you to offer questions to answer to your satisfied customers or you can customize one of Vocal Video's 46 question templates for your own needs.

VideoPeel: Besides offering basic collecting, editing, and publishing services for your testimonial videos, Video Peel also enables you to do some extra editing once customers submit their videos. For example, VideoPeel enables you to add your own video to what customers submit. Plus, you will also be able to embed your company logo, some writing—and some calls-to-action to potential customers who are viewing the endorsement.

Vidmonials: Offering a video testimonial service similar to Widewail, Vocal Video, and Video Peel, Vidmonials takes things a step further by a text-to-video option. Essentially, if your customer prefers to file a testimonial via text, Vidmonials takes things from there by auto-converting that text review into a video slideshow that features background music. Either way, the resulting video testimonials can be posted to your website or other digital properties by using a Vidmonials "embeddable widget." With these widgets, you have the option of showcasing an especially outstanding customer endorsement. Or you can use the "Playlist Widget" that plays all the testimonial videos you'd like to be displayed.

Testimonial Hero: Business leaders



looking for a more professional product-focused feel to their testimonial videos may want to opt for this service, which works with a company one-on-one to edit a customer-provided testimonial.

Testimonial Hero's initial process is similar to more basic services: Customers are invited to submit a video, follow prompts offered by Testimonial Hero about what they may want to say, and then invite them to submit their footage to the service. But once the raw footage is in hand,

Testimonial Hero works with you over the next 10 business days to create a 90-second edit of the customer video that will have more of a professional production quality feel. **PRI**

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INDUSTRY NEWS

INDIANAPOLIS 500 WINNER PARNELLI JONES, 90

Parnelli Jones, the 1963 Indianapolis 500 winner and accomplished racer across many disciplines, has passed away. He was 90.

Born Rufus Parnell Jones, he was the first driver to qualify for the Indianapolis 500 at an average speed faster than 150 mph, setting track records in 1962 and 1963. After retiring from racing, he fielded a team with longtime business partner Vel Miletich, winning the "500" in 1970 and 1971. The team also ventured into Formula 1 and SCCA.

Additionally, Jones ran in the USAC Stock Car Championship for Bill Stroppe's Mercury team, and later teamed up with Stroppe to score five major off-road wins in the famed "Big Oly" Ford Bronco.

ELDORA GENERAL MANAGER JERRY GAPPENS, 63

Jerry Gappens, a longtime motorsports executive and general manager of Eldora Speedway, passed away at the age of 63.



Jerry Gappens

Gappens came to Eldora Speedway in Rossburg, Ohio, from Gas City, Indiana's, I-69 Speedway, where he had been promoter since 2018. Prior to his time at Gas City, Gappens spent 23 years with Speedway Motorsports, serving as executive vice president and general manager of New Hampshire Motor Speedway in Loudon, New Hampshire, and senior vice president of events and marketing at Charlotte Motor Speedway in Concord, North Carolina.

FORMER TEXAS MOTOR SPEEDWAY PRESIDENT EDDIE GOSSAGE, 65

Former promoter and Texas Motor Speedway President Eddie Gossage has passed away. He was 65.

Gossage was named the first general manager of Texas Motor Speedway when it was built in 1996, leading the Fort Worth

facility for 25 years until his retirement in 2021. He spent 32 years promoting events for Speedway Motorsports, both at Charlotte Motor Speedway and Texas Motor Speedway.



Eddie Gossage

NASCAR HALL OF FAME ANNOUNCES CLASS OF 2025, LANDMARK AWARD WINNER

The NASCAR Hall of Fame in Charlotte, North Carolina, announced that Ricky Rudd, Carl Edwards, and Ralph Moody were selected as members of the NASCAR Hall of Fame Class of 2025. In addition, Dr. Dean Sicking was named the recipient of the Landmark Award for Outstanding Contributions to NASCAR.

The Class of 2025 Induction Ceremony is set for Friday, February 7, 2025, at the NASCAR Hall of Fame and Charlotte Convention Center.

HEDMAN PERFORMANCE GROUP RELOCATES HEDMAN HUSLER HEDDERS OPERATIONS TO CALIFORNIA

Hedman Performance Group, a manufacturer of off-road and performance header applications, is relocating its Alpharetta, Georgia-based Hedman Husler race header operations to the company's global headquarters and manufacturing facility in Whittier, California.

The consolidation aims to improve production efficiency for the Husler Hedderts brand, the company said in a statement.

QUALCAST ANNOUNCES MOVE TO MELLING'S SEATTLE WAREHOUSE, WILL RETAIN NASHVILLE LOCATION

QualCast, the provider of cylinder heads and valvetrain products, will move to Sumner near Seattle, Washington, to join Melling Engine Parts' warehouse. Melling acquired

QualCast at the beginning of this year.

QualCast will retain its original location in Nashville, Tennessee, and customers may still reach that facility directly to place orders.

RYAN STUTZMAN JOINS SEMA/ PRI AS CHIEF FINANCIAL OFFICER

Ryan Stutzman is joining SEMA and PRI as its new CFO.

Stutzman will be based at SEMA's headquarters in Diamond Bar, California.

Stutzman replaces former Vice President and Chief Financial Officer George Afremow, who retired in June after 12 years with the association.

Stutzman will be responsible for overseeing day-to-day finance, investment relations, and accounting activities for the association, including PRI. Stutzman will also play a pivotal role in the selection and implementation of company-wide systems, which will enhance PRI's and SEMA's business relationship with its members.



Ryan Stutzman

LAURI EBERHART APPOINTED CEO OF FRIENDS OF LAGUNA SECA

Friends of Laguna Seca, the organization set to take over management of the Laguna Seca Recreation Area and WeatherTech Raceway Laguna Seca in Monterey County, California, has named Lauri Eberhart as its new chief executive officer.

Eberhart previously served as general counsel of Speedway Motorsports and Charlotte Motor Speedway for more than 12 years. In the new role, Eberhart will lead assessments of the facility ahead of improvements.

PAT SYMONDS TO CONSULT ON ANDRETTI GLOBAL FORMULA 1 EFFORT

Pat Symonds, a British motorsports

technical expert, has joined the Andretti Cadillac Formula 1 effort as executive engineering consultant, the team announced.

Symonds most recently served as chief technical officer for Formula 1 and will officially join Andretti Cadillac at its new Silverstone, England, operations base after the completion of his gardening leave from Formula 1 Management.

GREG WALTER NAMED PRESIDENT OF CHARLOTTE MOTOR SPEEDWAY

Greg Walter, a 25-year veteran of Speedway Motorsports, has been promoted from executive vice president and general manager to president of Charlotte Motor Speedway.

Walter oversees daily operations of the facility, located in Concord, North Carolina, which includes the 1.5-mile superspeedway, the zMAX Dragway, and The Dirt Track at Charlotte.

NED WALLISER ELECTED WPI BOARD PRESIDENT

World Pulling International (WPI), the operations company of the Columbus, Ohio-based National Tractor Pullers Association (NTPA), has named Ned Walliser as president of the WPI Executive Board.

Walliser, vice president of competition for the National Hot Rod Association (NHRA), was elected to a three-year term during the company's recent annual shareholders meeting, and will replace Vaughn Bauer, who will serve as vice president.

LSI EXPANDS MARKETING, TECH SUPPORT TEAMS

Lubrication Specialties (LSI) in Mt. Gilead, Ohio, and manufacturer of Hot Shot's Secret performance lubrication products, has expanded the company's marketing staff with the addition of Justin Brown as marketing project coordinator and Mike Meyer as bypass filtration product specialist for Frantz Filter.

Brown will coordinate all marketing and

media initiatives and will assist in creating branded advertising campaigns, manage promotional campaigns, and more. Meyer will develop a vehicle application database and develop support materials for the company's Frantz filtration systems.

JUNCOS HOLLINGER RACING TAPS DAVID O'NEILL FOR TEAM PRINCIPAL ROLE

Juncos Hollinger Racing (JHR), the NTT INDYCAR SERIES team based in Speedway, Indiana, has named David O'Neill, former sporting director and team manager of Haas F1 Team, as JHR's new team principal.

In the newly created role, O'Neill will partner with current team manager David Morgan to lead the team.

STEWART-HAAS RACING TO SHUT DOWN AFTER 2024 SEASON

Stewart-Haas Racing, the Kannapolis, North Carolina-based NASCAR Cup Series and Xfinity Series team co-owned by former NASCAR driver Tony Stewart and Gene Haas, the founder of Haas Automation, will shut down at the end of the 2024 season.

"We have made the difficult decision to close Stewart-Haas Racing at the conclusion of the 2024 season. It is a decision that did not come easily, nor was it made quickly," Stewart and Haas said in a joint statement. "We have tremendous respect and appreciation for all of our employees, and we will work diligently to assist them during this transition to find new opportunities beyond the 2024 race season."

INDYCAR SETS DATE FOR HYBRID DEBUT, ANNOUNCES NEW IRACING SERIES

The NTT INDYCAR SERIES, based in Indianapolis, Indiana, has confirmed the launch of its new hybrid power unit, which will make its competitive debut at Mid-Ohio Sports Car Course during the Honda Indy 200, July 5–7.

Developed by INDYCAR, Chevrolet, and Honda, the hybrid unit will pair with the 2.2L, twin-turbocharged V6 engine used by the

series. The system is made up of the low voltage (48V) Motor Generator Unit (MGU) and Energy Storage System (ESS)—consisting of 20 ultracapacitors—both of which fit inside the bellhousing, located between the Chevrolet and Honda internal-combustion engines and gearboxes.

Additionally, iRacing, INDYCAR, and Buttkicker are partnering to launch the INDYCAR Buttkicker iRacing Pro Series, a virtual INDYCAR series set to debut September 19.

With a total prize pool of \$50,000, top open wheel sim racers will compete on the virtual circuit that includes many real-life NTT INDYCAR SERIES venues. It is the latest professional iRacing eSports series to be managed in conjunction with a racing series, including the newly announced FIA F4 eSports Global Championship, which will also make its debut in September.

NASCAR TO LAUNCH IN-SEASON TOURNAMENT, RETURN TO NORTH WILKESBORO FOR 2025 ALL-STAR RACE

NASCAR, based in Daytona Beach, Florida, has announced it will hold an in-season tournament for the NASCAR Cup Series in 2025. The seeding for the bracket-style, head-to-head event across TNT Sports' full five-race schedule will be set by results from the final three races that will air on Amazon Prime Video.

All drivers are eligible for the seeding races. The top 32 drivers based on the seeding events will become eligible for the in-season tournament competition. Bracket seeding will be established by the best finish in each race over the three races, with the tiebreakers determined by the next-best finish, followed by season points position.

The NASCAR Cup Series will also return to North Wilkesboro for the 2025 All-Star Race, marking the third consecutive year at the North Carolina speedway.

SPEED SPORT 1 LAUNCHES ON AMAZON FREEVEE

SPEED SPORT 1, the new streaming

network from Mooresville, North Carolina-based SPEED SPORT, has debuted on Freevee, Amazon's free ad-supported television platform.

The network will broadcast live domestic and international racing, including the Fanatec GT World Challenge Europe and America, DTM, and Australia's Repco Supercars Championship, as well as news and magazine-style programs.

IMS SENIOR MEDIA MANAGER WINS RACING PR AWARD

Suzi Elliott, the Indianapolis Motor Speedway's (IMS) senior manager of media relations, received the 2024 Jim Chapman Award for excellence in motorsports public relations.

Named in honor of Chapman, a legendary public relations executive in sports and racing, the award recognizes public relations professionals in motorsports. The award is determined by a vote of national media members and is authorized by the Chapman family. Public relations representatives from all forms of motorsports are eligible for consideration.

WIMNA CONTINUES SHERO AWARD

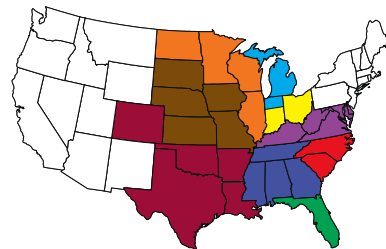
Women in Motorsports North America (WIMNA), the organization dedicated to supporting and creating resources that enable women in racing, is continuing its SHERo Award program for the second consecutive year.

The SHERo Award aims to highlight and celebrate women who have contributed to advancing motorsports and inspire the next generation of females entering the sport. All nominations received before October 31, 2024, are automatically entered to win the National WIMNA SHERo Award, which will be presented at the Women with Drive IV Summit, scheduled to be held ahead of the PRI Show in Indianapolis, December 2024.

For all the latest motorsports industry news, visit primag.com/industrynews.

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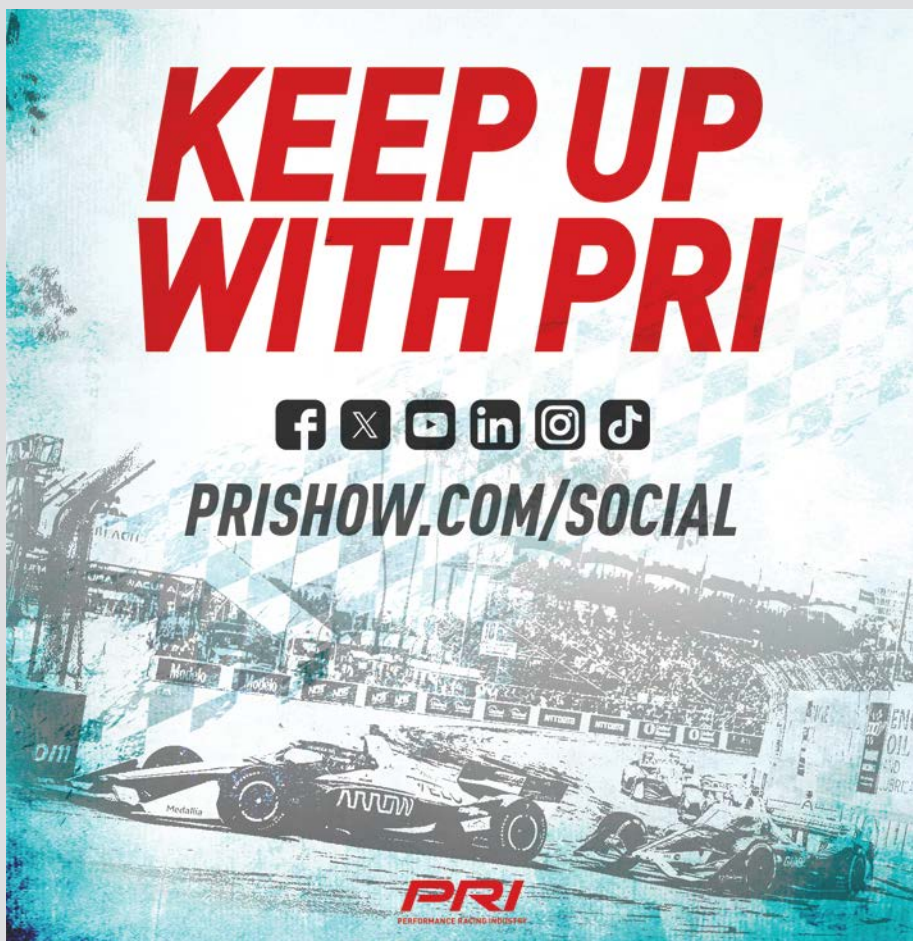
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