VOLUME 37, NUMBER 9 SEPTEMBER 2022

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SPOTLIGHT ON

# INSIDE

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WHSE22PR

# SEPTEMBER 2022 VOLUME 37, NUMBER 9







### COLUMNS

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ON THE COVER Cover Photography: Connor Moore @ActivatePhoto

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# SEPTEMBER 2022 VOLUME 37, NUMBER 9







### FEATURES

#### Special Report: Course Correct?... 40

Across the US, drag strips are closing at an alarming rate, and with far-reaching consequences. Here, industry insiders weigh in on what can be done to stem the tide and get these venues back on solid ground.

### OFF-ROAD RACING COVERAGE

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### X-SERIES DIGITAL HIGH PERFORMANCE GAUGES

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# FROM THE PRESIDENT

We have always been about helping you build your racing business, but today there's more urgency than at any other point in recent history.

This month, I want to review the three big components of the modern PRI organization and share with you how your business and your lifestyle is being protected by PRI.

#### **PRI SHOW**

We are well on our way to being fully recovered from the pandemic, and, from a trade show perspective, you are going to be standing tall in Indianapolis on December 8–10. When the doors open, you will be able to enjoy the latest technology being offered by more than 1,000 leading racing industry manufacturers, service providers, sanctioning bodies, and more. We will continue to advance our EV Performance area and our Content Creation Zone. Our PRI Education programming will keep you on the cutting edge of this fast-changing industry.

As the second largest trade show in the world in 2021 (SEMA Show was the largest), we have a new program designed to welcome first-time exhibitors to our Show. Contact us for more details on how you can display your racing products at PRI 2022 by calling 949-499-5413.

We have more surprises coming for you at the PRI Show, and I hope to start breaking that news next month. Remember, the true benefit of PRI is bringing us all together at the Trade Show, during our programs for promoters and race track officials, and after-hours while you enjoy the finest that Indianapolis has to offer.

#### **PRI MEDIA**

When the 2020 PRI Show was canceled. we literally sent the PRI Show to you. In the past two-and-a-half years, our PRI Road Tour program has made over 150 stops at our exhibitors' headquarters, race shops, and races. That dedication to you completely changed the racing industry. By the end of 2022, we will have accumulated over 300 million media impressions for the racing industry-helping you launch product, showcase your vehicle builds, and promote your racing events. The content that PRI has assembled can be found on multiple social platforms, on our website, and in the pages of PRI Magazine. Even if you have never been on TikTok, know that the PRI Media machine has been reaching people who are, for the first time ever, very interested in racing and your products specifically.

#### **PRI ADVOCACY**

Perhaps no other department is as busy as our Washington, DC-based Government Affairs team. We are encouraged by Congress planning to take up the Recognizing the Protection of Motorsports (RPM) Act this month. As we go to print, we have learned that the Senate Environment & Public Works Committee is planning to hold a hearing on the RPM Act in mid-September. PRI will play an integral role in shaping this hearing, and we are hopeful that our collective efforts to turn up the heat



From left, legendary racer Richard "The King" Petty and SEMA/PRI CEO Mike Spagnola recently met with over a dozen key lawmakers in Washington, DC, to lobby for passage of the RPM Act.



DR. JAMIE MEYER jamiem@performanceracing.com

on lawkmakers in Washington will be the X factor that gets the RPM Act passed into law in 2022. Together, we can get this done!

Most recently, we enlisted the help of Richard "The King" Petty to help us lobby Congressional leaders on the RPM Act. He was accompanied by SEMA & PRI CEO Mike Spagnola, our DC lobbyists, and our PRI media team. Petty, the greatest stock car driver of all time, delivered a strong message to over a dozen key lawmakers in DC. He explained the absurdity of fines levied recently by the Environmental Protection Agency against manufacturers of race parts for race cars. His biggest concern: The EPA's interpretation that a person can't convert a street vehicle into a race car could destroy the dreams of aspiring racers. Had this been the agency's position many decades ago, what would have been the impact on the careers of some of our most hallowed racers? Would NASCAR as an organization have struggled to exist under the most recent interpretation of the Clean Air Act?

Our efforts to protect the racing industry continue, and we often ask for your help. Together, we can continue to enjoy the greatest American pastime of them all: motorsports. If we can ever help you, or if you have feedback on any of these programs, please send me a note at president@performanceracing.com.



WE ARE GROWING - HIRING INDEPENDENT SALES REPS - contact - Jeff or Anthony

# FROM THE EDITOR

wo things I think while working out the fastest route up the coast for this month's Firestone Grand Prix of Monterey at WeatherTech Raceway Laguna Seca:

#### 1) I THINK THAT IF BRAD SWEET ATTACKS

his promotional duties with the same intensity he brings as driver of the Kasey Kahne Racing, NAPA Auto Parts No. 49 sprint car, then competitors, sponsors, and fans at Silver Dollar Speedway are in for one hell of a ride. Sweet, along with partners Kyle Larson and Colby Copeland, recently took over operations for the Northern California clay oval that's become synonymous with its signature event, the Gold Cup Race of Champions. This newish endeavor-the trio officially put pen to paper on Silver Dollar in late November-was a natural extension for Sweet, who got his feet wet promoting a few years' worth of World of Outlaws races at his backyard track in Placerville (CA). That experience, he told us, "led me to search around, trying to figure out, what is this race promotion thing all about? Is it really profitable? Is it always profitable?" The answers can be found in this month's Industry Insights column beginning on page 28, where you'll also discover what outdated mindsets about racing Sweet believes need to change, and how "The Big Cat" plans to rebuild interest in 410 sprints on the Left Coast.

#### 2) I THINK "DIVERSIFY" ISN'T JUST A

good investment strategy—it may also be one of the keys to keeping drag strips operating across the US. Sadly, track closures have hit the drag racing community like a sledgehammer in recent years. We've all watched as iconic venues like Englishtown, Fontana, Palm Beach, and others have heartbreakingly fallen off the map. And while there isn't one single factor to blame for these tracks' demise, a recurring theme is one of dollars and, well, more dollars. In short, the economics at this time just aren't in racing's corner. "Land is up so much," summarized Keith Haney, who co-owns Osage Casino Tulsa Raceway Park in Oklahoma along



DAN SCHECHNER dans@performanceracing.com

with partner Todd Martin. "You get these big corporate groups who come in and say, 'Okay, we're going to give you three or four times earnings on your land.' Or maybe it's 10 times earnings." Haney, who also owns the Summit Racing Equipment Mid-West Drag Racing Series, is in a unique position, with interest on both sides of the equation. Which is why we sought his perspective for this month's Special Report "Course Correct?" on the troubling trend of drag strip closures. But the piece by writer Steve Statham, which begins on page 40, takes a multidimensional look at the issue, which is to say it's not all doom and gloom. There are, we found, strategies for owner/operators to help stem the tide. As we alluded to earlier, a proven and replicable one involves branching out into new uses, whether it's leasing space for storage or commercial businesses, hosting events like outdoor concerts or drive-in movie screenings, or filling open days with driving/training courses. As source Steve Williams, chief business development officer at K&N, explained: "The race tracks that are going to survive are the ones that realize there's a whole list of ways to create income that then allow the race track to still put on these events, but they're not solely reliant upon the income of the actual race to keep the race track operating." Complex problems often require creative solutions. And drag racers are nothing if not resourceful. Due to necessity, there may be no better time to put that ingenuity to work. PRI



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Performance Racing Industry (ISSN 1045-3024) is published monthly in the interest of the growth and development of the racing market, consisting of manufacturers, retailers and racing participants. Performance Racing Industry can be contacted at 27081 Aliso Creek Rd. Suite 150, Aliso Viejo, California 92656, 949/499-5413, Fax 949/499-0410. Periodicals Postage paid at Laguna Niguel, CA 92677, and additional mailing offices. Postmaster: Send address change to Performance Racing Industry, 27081 Aliso Creek Rd, Suite 150, Aliso Viejo, California 92656. No part of this magazine may be reproduced without written consent of the publisher who is not responsible for the unsolicited material. Performance Racing Industry is sent to the retailers, distributors, manufacturers and racing participants within the United States. Subscriptions are complimentary to qualified members of the racing industry. "Performance Racing Industry" is a trademark owned exclusively by SEMA © 2022 Performance Racing Industry. All rights reserved. Printed in U.S.A.

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### LEAD POSITION

How significant is the custom crankshaft market? Last year alone, Callies Performance Products manufactured over 500 one-off cranks—546 to be exact—out of its Fostoria, Ohio, facility. And that was *just* for small block Chevys. What's more, "99% were mainly for a custom stroke," noted Brook Piper, who, along with fellow insiders from Crower, Scat, Manley, Molnar Technologies, and a host of other manufacturers provide an up-close look at the research and development pipeline for these sought-after components in this month's report, "Tailor Made," which begins on page 96. Maybe the need comes in response to a particular rule set. Or to withstand the pressures of forced induction. Or to accommodate a series' new engine platform, as was the case for Callies recently. The bottom line is that even as advances in tech and production continue to blur the lines between one-off and stock, and more companies offer custom add-ons within their catalogs, the demand for unique counterweight designs, extra machining, and other one-of-akind solutions is very much alive and well among today's high-performance engine builders and end users. **PRI** 

# ASK THE EXPERTS

Improper installation and setup can rob performance potential and even lead to catastrophic failures. While it's easy to assume that higher numbers are better when it comes to flow rates and system pressure, there are situations where the opposite can be true, so we're separating fact from fiction.

#### By Bradley Iger

A fuel pump might not have the sex appeal of a cylinder head or a turbocharger, but it plays a pivotal role in an engine's performance and durability. That's especially true in motorsports, where fractions of a second often determine the finishing order and reliability can be the difference between a podium and a DNF. Inefficiencies in any system tend to be amplified out on track, and when it comes to fuel pumps, the consequences can be severe.

"It can go as far as taking out an engine," said Sam Chaysavang of AEM Performance Electronics, Hawthorne, California. "These problems can be really frustrating if you've spent all this time, energy, and money getting the car ready only to end up fighting performance issues and rushing to fix failures once you get to the track."

To avoid those potential headaches and extract all of the capability from the fuel system, the pump needs to be dialed-in for the application. This is a situation where overkill can actually be counterproductive.

### WORK SMARTER, NOT HARDER

"One common mistake we see with external fuel pumps is people installing the pump too high relative to where the pickup is," Chaysavang explained. "These pumps are typically designed to be gravity fed; to push the fuel rather than pull it. If the pump has to work harder to lift



fuel to feed itself, it's not going to be able to deliver as much on the output side. That can also lead to fuel cavitation, which can lead to pump failure. As the pressure drops, the vaporization point drops as well, so it's critical to maintain good pressure."

Brandon McDaniel of DeatschWerks in Oklahoma City, Oklahoma, pointed out that problems also often arise when builders purchase a pump without planning ahead.

"We generally focus on application-specific install kits, but sometimes people will just go buy a pump off eBay or something like that and try to figure out how they're going to install it once it arrives. If that pump is a different design than what they were using previously, they might try to make room for it by deleting components that they assume are redundant or unnecessary, but are actually very crucial to the fuel system's operation. So they might remove a factory filter to make some space, but there are instances where the pressure

Voltage drop can be a problem if factory wiring is used in the installation of an aftermarket fuel pump, said Brandon McDaniel of DeatschWerks. With OE wiring, the pump could be "down on flow because the pump is not getting the voltage it needs to provide its full capability."

#### pressure increases in a performance engine, "the amperage will need to increase as well," said Sam Chaysavang of AEM Performance Electronics, "so make sure the amperage rating of the wiring and the connectors matches the expected amperage draw based on your engine combination and setup."

As the fuel

regulation is attached to that filter. So you have this pump in there now, and suddenly you have 80 or 90 psi instead of the 58 psi you're supposed to have."

DeatschWerks' Dakota Bowman said that incorrect pressure has a tendency to throw the engine tune off. "And you're going to be dumping the majority of the flow back into the tank because now you're relying on the pump to regulate the pressure. That additional pressure is also creating more heat, so the end result is actually less flow."

### BIGGER DOESN'T NECESSARILY MEAN BETTER

Bowman also told us that people have a tendency to buy fuel pumps for the setup that they want rather than the one they have, and that leads to mismatched components that can negatively affect efficiency.

"A lot of people like to go too big—they'll oversize the pump for the application because they want to size the pump for what they're eventually planning to do rather than what they're doing right now," he







Amperage requirements for a fuel pump's wiring and connectors will vary based on the engine combination, said Sam Chaysavang of AEM Performance **Electronics. In naturally** aspirated engines, the fuel pump will typically run at a fixed pressure, while fuel pressure will vary with boost pressure in a forcedinduction application.

said. "Maybe the car is making 500 hp now, but they're hoping to get it over a thousand later on, so they select a pump that's totally inappropriate for the application. In those instances, you also end up returning too much fuel, which compresses the fuel over and over, which in turn generates more heat and eventually ends up boiling the fuel."

But Chaysavang noted that additional headroom can be beneficial to fuel pump performance when it comes to filter selection. "A filter's maximum flow rate is typically based on what the filter flows when it's brand new and clean, but that's going to go down once it's put into use and starts to get dirty. If you spec out a filter that's right on the edge of what you need, it might not flow the fuel that's required for that power level once the filter has captured any debris that has been going through the fuel system. So if you're not planning to change that filter out regularly, it's a good idea to spec out a filter that can handle maybe 20% or 30% more flow than you need."

### WIRED FOR SUCCESS

McDaniel also explained that while the existing wiring can be convenient to use in order to make the necessary connections when swapping out a factory fuel pump for an aftermarket unit, it often will not stand up to the voltage demands of a larger aftermarket pump.

"Ideally you want to run brand new, largegauge wire with a relay to the pump," he said. "The big issue is voltage drop—you might be at 14 volts at the fuse box, but by the time it reaches the pump it could be down to 11 or 10 volts if you're not using the proper wiring. Now you're down on flow because the pump is not getting the voltage it needs to provide its full capability."

Chaysavang added that amperage requirements for both the wiring and the associated connectors can vary based on the engine combination. "In a naturally aspirated application, the fuel pump will typically run at roughly a fixed pressure based on what the mechanical regulator is set to. But with a boosted application, the fuel pump pressure will vary with the boost pressure if you're running a fuel pressure regulator that is referenced to manifold pressure. As the fuel pressure increases the amperage is going to increase as well, so you want to make sure the amperage rating of the wiring and the connectors matches the expected amperage draw based on your engine combination and setup." PRI

# SOURCES

AEM Performance Electronics aemelectronics.com

DeatschWerks deatschwerks.com



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# STOP DOING THAT...DO THIS INSTEAD

An improved experience can be had by all when race promoters work together to unify rulebooks and stagger events and programs.

#### By Drew Hardin

e have written plenty about the negative effects that the pandemic and its aftermath have had on racing in America. Those very effects, though, may be doing something positive when it comes to the relationships between local race tracks.

"Because of our current situation, with gas shortages, tire shortages, supply chain shortages, you name it, we're starting to see tracks working together," said Larry Boos, whose promotional efforts encompass the Montpelier Motor Speedway in Montpelier, Indiana, and the Gas City I-69 Speedway in Gas City, Indiana. "Short tracks in America are beginning to suffer, and this is probably one of most challenging years that a short-track operator is going to face. Now it's really a matter of finding the way to survive."

Boos made it clear that he had "no answers" to this situation, "but I do have suggestions" as to how tracks could be successful by cooperating, he added.

**Scheduling:** The practice of booking against another race track's major event is disappearing,

according to Boos. "More tracks are saying, 'You stay off my special event and I'll stay off yours,' so everybody can get that payday they need to remain in business."

Tracks that limit racing to a special event, or racing just once a month, "are doing much better, because they've induced a supply-anddemand thing," he added. "There's a demand for racing, but racing every week can diminish that demand." Ideally, he said, "if there are three or four tracks within a 100- to 150mile radius that all run on a Saturday night, they could agree that one takes the first Saturday of the month, another takes the second Saturday, and so on. That way race fans know if it's the third Saturday of the month, they're going to XYZ Speedway."

**Class specifications:** "Promoters want to make rules specific to themselves, so their superstars stay at their track," said Boos. Making the rules more common so racers can race at multiple tracks helps to keep car counts up, "so we're trying to do away with the 14-page spec sheet that would require cars to race only at our facilities. We've taken the

Larry Boos, who promotes races at several Indiana speedways, believes in aligning division names to make it easier for media to cover the races and support local tracks. "We have many division names—Street Stock, Bombers, Super Streets, Thunder Cars, Factory Stock—all for basically the same car."

best of the rules from tracks within a 75- to 100-mile radius and tried to come up with a common set that would allow drivers to go from track to track."

**Cross-promotion:** "The oldschool way of thinking was you ignored the track down the road because it was your enemy," Boos said. "Now it's your ally. Saturday night at Montpelier we're announcing all the Friday night races coming up at Gas City, Limaland over in Ohio, Shady Hill down the road, or Kokomo. Race fans are going to find out, so why hide it from them?"

Cross-promoting will also "amp up your game," Boos contended. "You'll notice pretty quickly if you're promoting the track down the road and you see your car count or attendance going down. You'd better see what they're doing that you're not, so you can keep race fans at both places."

Implementing these or other ideas would take a roundtable discussion, Boos said, with interested parties in one room and a "reputable moderator" there to make sure the "little track operators don't feel like it won't do them any good because all that's going to be there are the big dogs, and they won't listen to the little dogs.

"It's going to take us all working together," he added. "Some are going to have to give, some are going to have to take. But hopefully at the end of the year the bottom line is rosier for all."





### WHERE IT'S WORKING

"Two and a half years ago, off-road closed-course racing was dying," admitted Frank DeAngelo of the AMSOIL Championship Off-Road series, based in Albertville, Minnesota. The track owners in the upper Midwest came together in search of a sanctioning body and contacted the International Series of Champions (ISOC). "They do snowmobile racing," DeAngelo explained, "and about 10 years ago turned that series around when it was ready to go under as well."

In creating the AMSOIL Championship Off-Road series, ISOC built a business model that's "kind of unique," DeAngelo said. For each race on the tour, "we're responsible for everything that involves running the races and the coverage of them. The tracks are responsible for promoting their event and maintaining the track while we're there. They pay a sanctioning fee to us, and they keep all the funds from the gate, concessions, food, and the vendor area.

"We taught them how to work together and have been up front with roles and responsibilities and how we can help one another," he added.

DeAngelo pointed to two key practices that help make this work for all concerned. One is what he called the "sacred date."

"In most cases, the event they have with us is probably one of the larger, if not the largest, in their area. This year, instead of signing a one-year deal, we signed a threeyear deal with the tracks. This was good for the stability of the series, but it also enabled the tracks to say, 'On this date, every year for the next three years, this race is coming here.' That has helped them and allowed other tracks close to them to plan around their schedule."

ISOC also instituted monthly track calls, where "a representative from each track gets on the phone with us, and we talk about anything that's new with us or on their end," DeAngelo said. "I felt in order to be successful we all had to be on the same page, and the only way to be on the same page was to treat everyone the same, treat them fairly. The best way to demonstrate that was having these monthly track calls.

"We're partners with the tracks, the racers, and the sponsors," De Angelo added. "We

The AMSOIL Championship Off-Road Series fosters a partnership among its tracks in a number of ways, including monthly calls with track representatives. "To be successful we all had to be on the same page," said Frank DeAngelo. "We work very hard and very closely with those groups to make sure everybody's sharing in success."

work very hard and very closely with those groups to make sure everybody's sharing in success. That seems to have worked extremely well."

# SOURCES

AMSOIL Championship Off-Road champoffroad.com

Gas City I-69 Speedway gascityi69speedway.com

Montpelier Motor Speedway racemontpelier.com

# MAKE THE CASE

Thanks to its strength, compact dimensions, low cost and strong aftermarket support, the LS has been the engine of choice for countless high-performance builds over the past two decades. But with more and more LT-powered production vehicles rolling out of General Motors' factories every day, is the tide beginning to turn in favor of this newer and more sophisticated platform?

### By Bradley Iger



LS ENGINE ADVOCATE: Ken McCaul, Borowski Race Engines

S everal different factors have contributed to the LS platform's popularity. One of the biggest benefits is that the market for LS parts has matured. We don't have to worry about whether or not we can find a block to do what we want to do with it. At our shop we have a philosophy of using parts that are rated for the horsepower that we make. Right now, folks who're building LT engines have to deal with the fact that it's a segment of the aftermarket that is still in its infancy. To each their own, but making two or twoand-a-half times the factory horsepower using beefed-up OE parts that were never *"LS ENGINES...ARE BEING USED EVERYWHERE TO MAKE ALL KINDS OF POWER, EVERYTHING FROM RETROFITS IN OLDER CARS TO DRIFT CARS, DRAG RACING AND EVEN OFF-ROADING.* 

designed to support that much power doesn't seem like something we can build a business around. The situation is bound to change over the next few years, but the LT parts that are available right now aren't really designed for the things that people are doing with them.

LS engines, on the other hand, are being used everywhere to make all kinds of power, everything from retrofits in older cars to drift cars, drag racing and even off-roading. Lately we've been doing a lot of LS builds for sand rails, buggies and other high-speed offroad racing vehicles. Road racing is another big one, too. These engines can be very light weight, high revving and powerful without needing a power adder like a turbo or a supercharger. It's the parts that are available now that make that possible.

There's the tuning aspect to consider as well. There are a lot of people who know how to tune LS engines now, but I keep hearing horror stories about people who've tried to tune LTs who have failed at it. Ten years ago, it was about trying to get people to switch from carburetors to fuel injection, but I'd argue that the learning curve between an LS and an LT is steeper. When switching to fuel injection on a car that was carbureted previously, parameters like the air/fuel ratio, boost reference and so on are already known, but now a computer controls that. With an LT, there are totally different and very specific tuning methods to use because of the direct-injection (DI) system, and you have to learn what the goal is before even starting to understand how to dial it in.

The other big advantage the LS currently has is in the amount of reliable horsepower it can make. The bar has gone up significantly over the last few years. Grudge racers a few years ago might have been competitive at 700 or 800 horsepower, but now our pumpgas LS engines make that much naturally aspirated. We're at a point now where the parts that are available for LTs aren't rated for the kind of power it takes to win even at the amateur level.

When more parts are available and people start developing the same types of parts for the LT that are currently available for the LS, the story will start to change. Five years from now the situation will probably be very different, but at this moment LTs are still at the point where only bolt-ons and minor alterations can be reliably done. Meanwhile, our Whipple LS engines can make 3,200 horsepower to the tire with heads that have the same exterior dimensions as the factory LS7 head. It's just a different ball game.



# *"AS LS PARTS BECOME LESS READILY AVAILABLE AND THE DI ENGINES BECOME MORE PREVALENT, RACERS WILL INEVITABLY HAVE TO ADAPT.*

## LT ENGINE ADVOCATE: Howard Tanner, Redline Motorsports

R ight now, it's not so much about folks who're buying LT engines and putting them in their vintage muscle cars to go racing. It's about the guys who're racing their late model Camaros and Corvettes with LT engines in them.

It's the new small block, and a lot of people want to stay on top of what's current. If I have two 376-cubic-inch engines and one of them is 85% efficient while the other is 91% efficient, it makes a compelling case for the LT platform from a performance standpoint. There's no question that the last 6.2-liter LS engine, the LS3, gets its butt kicked by the LT1 even though they have identical displacement. The technology behind the LT1 is the reason.

Understanding the tuning strategies is important, though, and as additional layers of technology come into play, a racer has to start with strong foundational knowledge to get the most out of a platform like this. Go beyond, say, 850 horsepower to the wheels, and the fueling gets a bit more complex because it needs a supplemental port-injection system to support that power. Integrating that with a factory directinjection system is an art in and of itself. But we're at that six- to seven-year maturity point for the LT1, and things are starting to change. More and more we're seeing these engines used in drag cars and road course racing, and the LT family of engines is right on par with its LS counterparts from a reliability standpoint. They're not dramatically different platforms. It's mainly about the strategy in which they control fuel and timing, and direct injection has some clear advantages in that regard. A direct-injected engine can run a lot more compression because of the cooling effect that direct-injection system provides. That means it can make a lot more torque, and that's a benefit in just about every motorsport discipline out there.

There are still a lot of people who are scared of direct injection, though, and that is what's causing a bit of a delay in the wider adoption of the LT platform. I mean, the motor's not "new" at this point it was released at the end of 2013. There's a phobia out there, and that reluctance to embrace this platform comes from this fear that it's going to be complicated to work with. But as LS parts become less readily available and the DI engines become more prevalent, racers will inevitably have to adapt.

# EDITORS' CHOICE

Hundreds of new product announcements cross the desks of PRI editors each month. Following are our top picks for September.

## RZ-880 & RZ-88C HELMETS

ZAMP HELMETS

wo new models from Zamp Helmets in Boise, Idaho, are now certified to the advanced FIA 8860-2018 safety standards. The RZ-88O, which is designed for open wheel situations, and the RZ-88C, which is for closedcockpit applications, were just released with a retail price of \$1,799.95.

"Only two manufacturers offer this certification in the full size range up all the way to 64 cm," said Dave Zamp, noting that the larger sizes are more difficult to pass the certification standards. "Typically, competitive helmets with this certification are \$2,000 up to \$3,000."

Constructed of carbon fiber using high-pressure bag molding, available sizes include X-small (54 cm), small (56 cm), medium (58 cm), large (60 cm), X-large (62 cm), XX-large (63 cm), and XXX-large (64 cm).

The open wheel is more aerodynamic with extra venting. The closed-cockpit version is forced-air compatible and designed with more airflow throughout the helmet. Also, the front spoiler is smaller.

"The Z on the sides of the helmet is one large air channel," noted Zamp. "It allows 360 degrees circulation through the helmet."

Other features include easy installation for communication equipment, and users have options for cheek pads to ensure a comfortable fit. *—Mike Magda* 



# **SPARE TIRE' 10.5-GALLON FUEL CELL**

# **RADIUM ENGINEERING**

#### radiumauto.com

nstalling a fuel cell in select vehicles with a deep, circular spare-tire cavity can be very simple using this circular shaped unit from Radium Engineering in Clackamas, Oregon.

"Installation can be a simple, bolt-in process," noted Aaron Suchy. "The 10.5-gallon circular shape is approximately the same diameter as a common spare tire."

Part of Radium's RA series, this 40-liter fuel cell is designed and manufactured to meet safety requirements set forth by FIA and SFI. It's suitable for all types of motorsports, including road racing, time attack, drifting, rally, and off-road.

Radium Engineering RA series internal bladders are made from a special polymer that is resistant to all fuel types,



including gasoline, diesel, E85, and methanol. The bladder is housed in a lightweight, powder-coated aluminum enclosure to protect it from damage and debris. Pre-cut explosion-suppressing anti-slosh foam is included along with a threaded aluminum nut ring that helps make the installation even easier.

"We offer this new fuel cell variant with a unique mounting bracket that can be adjusted for different installation depths," added Suchy. "The tank is perfect when paired with our fuel-pump and surge-tank system that is mounted inside the cell."

Radium's other RA series fuel cells come in traditional shapes with 6-, 10- and 14-gallon capacities. --Mike Magda

### **BIG BLOCK CHEVY HEAD-STUD KITS**

# **ARP** arp-bolts.com

s new cylinder-head and cylinder-block configurations evolve from the venerable big block Chevy platform, ARP in Ventura, California, keeps up by offering more than 80 head-stud kits to cover the different combinations.

"Oddly enough, there have been several aftermarket heads sold without any stud availability. These new heads may require special length fasteners," said Chris Raschke. "Then the customer has to order special parts at a high cost and wait up to 20 weeks. With ARP making these offthe-shelf kits, we make it more economical."

Some of the recently introduced cylinder heads that are covered include Dart Pro 20-degree, Edelbrock Big Victor 12-degree and Big Victor 24-degree models. The fasteners are manufactured from premium grade 8740 steel and heat-treated to 190,000 psi tensile strength.

The threads are rolled, not cut, following heat-treatment to help give the studs up to 10 times improved fatigue life over conventional hardware. All ARP fasteners are manufactured in the company's California facility and are designed to provide additional clamping force with an extra margin of safety. Kits include assembly lubricant, nuts, washers, and instructions with torque specifications. *—Mike Magda* 



### SHP SMALL BLOCK FORD 20-DEGREE CYLINDER HEAD

# DART MACHINERY

dartheads.com

vailable with either 205cc or 175cc intake runners, these new SHP 20-degree cylinder heads for small block Fords from Dart Machinery in Warren, Michigan, are designed for street, strip, oval track, or marine use.

"Cost to performance is the greatest benefit to the racer," said Mike Panetta. "This product line provides great out-of-the-box performance at a fraction of the cost compared to our PRO1 product lines. Both the 175cc and 205cc are readily available off the shelf."

These heads are designed for optimum torque and throttle response up to 6,000 rpm and are best suited for 302-cubic-inch to 427-cubic-inch applications.

The 205cc head is available with either 62cc or 58cc combustion chambers. Valve sizes are 2.050/1.600, and peak flow numbers are 306 cfm at .700-inch lift for the intake and 207 cfm at .700-inch for the exhaust. The head can be ordered bare or assembled with 1.437-inch dual springs good for hydraulic roller or solid-flat-tappet cams



up to .650 valve lift.

The 175cc head has the same combustion chamber options but comes with 2.020-inch intake valves and 1.600-inch exhaust. Flow-bench tests reveal 267 cfm at .600-inch valve lift for the intake and 183 cfm at .600-inch valve lift for the exhaust.

Some of the features for both heads include manganese bronze valve guides and either 3/8-inch or 7/16-inch screw-in rocker studs. *—Mike Magda* 

### F-4X-140 CENTRIFUGAL SUPERCHARGER

# PROCHARGER

#### procharger.com

A nswering the call for more horsepower in Outlaw drag racing, ProCharger in Lenexa, Kansas, developed the F-4X supercharger in 2021, and now it's been mated with the 140-size compressor wheel to create the F-4X-140 model.

"The F-4X was several years in the making. The clean-slate design and exhaustive testing on the track and dynos allowed us to optimize our race product offering for these higher horsepower classes," said Cliff Hall. "Plus, our engineering team really loved collaborating with the racers and race dealers on this project."

The F-4X-140 supports the 3,500- to 4,000-horsepower engine levels. Compared to the previous 3X model, the entire gearbox was designed with new, larger helical gears, and different gear ratios were offered. Both front and rear cases are machined out of billet, and new bearings were developed.

"Racers are super happy with how the F-4X power level and durability performs," added ProCharger's Sergio Shifman.

The F-4X-140 is suitable for No Prep, NHRA Pro Mod, Radial vs. The World, and other door slammer classes. *—Mike Magda* 



## SUPER MANIFOLD FOR B58 ENGINE PLATFORM

**CSF** 

csfrace.com

acers and trackday enthusiasts running BMW's B58 engine architecture, including those driving the A90/91 Toyota Supra, can get a big boost of performance with the new Super Manifold from CSF in Rancho Cucamonga, California. "Even without modifications, the B58 suffers from heat soak in almost any type of performance driving situation," said Mark Dorman, noting that the engine management system will then start pulling timing and fuel. "In testing, the CSF manifold showed far superior resistance to heat soak, improved recovery time, and reduced stress on the turbos.

Countless amateur and professional race teams have been using our manifold for more than a year on the track and have given nothing but positive feedback about the system."

At the heart of the manifold is a F1-grade airto-water intercooler. There's also a divider in the air inlet to help even the air distribution to all six cylinders. Another feature is the modular design that allows OEM direct injection or a dualinjection system.

The manifold is already a proven winner and track record setter with victories on road courses and the drag strip. The kit includes brackets, hardware, and installation instructions. CSF also recommends additional cooling products such as a transmission cooler and auxiliary radiators for maximum performance. —Mike Magda

### **MPVI3 OBDII INTERFACE**

**HP TUNERS** hptuners.com

he new MPVI3 from HP Tuners in Buffalo Grove, Illinois, is an interface tool that can be quite helpful on any late-model vehicle with an OBDII port. With the dedicated software and apps, it will serve as a data recorder at the drag strip, a lap timer on a road course, and a diagnostic tool when there's a problem. When used with supported vehicles, it will also allow tuning adjustments for increased performance.

"MPVI3 is the communication device between your vehicle (control module) and the VCM Suite software on your laptop," said Chris Holt. "It's not only for tuningthere are features that work with data acquisition, telemetry, and diagnostics, too."

One of the features is stand-alone data logging. While making a run at the drag strip or a lap at the track, the MPVI3 will record the data without a laptop on the passenger seat.



"Most race tracks won't allow a loose laptop," added Holt. On a road course, the MPVI3 can be paired with a cell phone and GoPro to use TrackAddict for on-track data collection like real-time speed, predicted lap time, and other data, and RaceRender for post race.

Finally, the MPVI3 is also useful for tow vehicles to scan trouble codes if there's an engine problem that interrupts a trip, or the tuning features can be used to increase fuel economy. --Mike Magda

# NEWLY APPOINTED

For this industry leader, becoming SEMA's new vice president of marketing is the culmination of three decades of personal and professional commitment to the performance-car culture and automotive aftermarket.

#### By Jim Koscs

J de Vera knows that a key part of his mission at the Specialty Equipment Market Association (SEMA) is developing and implementing a digital-first, multi-channel marketing strategy to expand brand awareness and build customer affinity for SEMA and its members. He has the experience, having spent 12 years at 3M, with the last seven as global leader of digital marketing and public relations for the Meguiar's Car Care brand. Before that, de Vera helped build corporate image vehicles with OEMs including Honda, Lexus, Mitsubishi, Mazda, and Toyota.

De Vera also helped American Racing, VeilSide Japan, and Vorsteiner design and market aftermarket parts and accessories. When PepsiCo., Valvoline, Boost in the film. Now, he combines that life and professional experience for a prominent job in the automotive aftermarket. Recently, he shared his plans with PRI.

PRI: What pivotal moments in your life launched you into the car hobby? de Vera: I fell in love with customized and modified vehicles before I had my license, so much so that I stopped playing high school sports. I got a full-time summer job and then went part time during school to buy parts for a car I didn't even have yet. In senior year, I started a business selling performance parts out of my mom's condo. Then, during college, becoming a magazine editor at Petersen Publishing opened my eyes to the car culture well beyond Southern California.

*"I LOVE DRIVING DOWN A GREAT ROAD, WHETHER IT'S THE PCH OR SOMEWHERE IN THE CANYON, WITH SOME NINETIES HIP-HOP PLAYING, BECAUSE THAT'S WHAT I GREW UP WITH.* 

Mobile, Michelin/BFGoodrich, and Microsoft/XBOX needed consulting on automotive-related marketing projects, they called de Vera.

Just over two decades ago, de Vera consulted for "The Fast and The Furious," the movie that helped launch many young enthusiasts into the car hobby. He even rented his customized Honda S2000 to the production company for use **PRI:** What are you most looking forward to in this job?

**de Vera:** At Meguiar's, I contributed to a culture but that was just one brand. At SEMA and PRI, I have the opportunity to help other brands and organizations to build better versions of themselves.

**PRI:** What aspect of your career would you say best helped prepare you for this job?



## RJ De vera

TITLE: Vice President of Marketing ORGANIZATION: SEMA

HOMETOWN: Irvine, California

FAST FACT: Beyond his love of cars, RJ de Vera said, "I'm a big sneakerhead, foodie, traveler, hiker, yogi, and cardio boxer. I feel that inspiration can come from many different places." **de Vera:** I understand global marketing and strategic thinking from a Fortune-100 perspective. I've been a business owner, I've been in big corporate, and I've consulted for automotive aftermarket companies. I've seen all sides of what it means to be a member or enthusiast in the car culture. I think all of that will be beneficial in terms of perspective. It's prepared me to promote and market for the success and prosperity of our members.

**PRI:** How do you think you can make the biggest impact at SEMA? **de Vera:** My mindset and style are about stimulating progress within the association. Many people know PRI or SEMA for their shows. I want to bring some light to all the things that we do as an association and all the member services we offer. We're still protecting everyone's freedoms to be able to modify and customize their vehicles and to turn street cars into race cars. I've done that myself several times.

**PRI:** How important is it to address the youth car culture for SEMA growth?

**de Vera:** It's very important to bring new people in. Millennials and Gen Z are big populations, 80 or 90 million just in the US and close to 200 million globally. There may be a smaller percentage of young people getting involved with cars than 30 years ago when I got started, but because the population size is so big, the number is still large. We can be more welcoming and inclusive with our events and programs, especially now that we've opened membership to individuals. **PRI:** How is opening membership to individuals going?

**de Vera:** It's just starting. We're still honing in on what individual members are going to value. This is an opportunity to bring in enthusiasts as another voice in the association and as another base that we can serve.

**PRI:** What are your key near-term and long-term goals?

**de Vera:** We want to evolve some of our marketing to be digitally minded or digitalfirst. More than just digital, though, it's about blending the offline and online efforts. Whether its social media, paid digital, our websites or influencer programs, we want to take the next steps to be an even better resource to our members.

**PRI:** What is one trait you admire in others and why?

**de Vera:** First is curiosity, which opens people's minds. Probably the trait I admire even more is having a growth mindset. It's

# *"I LOVE TECHNOLOGY, BUT I ALSO LOVE THINGS THAT ARE CLASSIC.*

about being open to the idea that nothing's perfect and that you can be better each day. **PRI:** What professional or personal accomplishment are you most proud of? **de Vera:** To have had a career in the automotive aftermarket for close to 30 years. I feel proud and fortunate that I've been able to continue to work in this industry that I love. **PRI:** Is there a recent mistake that you've learned from?

**de Vera:** Lots of times, as professionals, we're go-go-go and very focused, but sometimes that focus leads us down a narrow path. There were times when I was going too fast, and I didn't pause to audit and have a "review, renew, recommit"

mentality to make sure I was still going down the right road.

**PRI:** What's one thing you can't live without, aside from your devices?

**de Vera:** It's two things, closely tied together—good music and a manual transmission. I love driving down a great road, whether it's the PCH or somewhere in the canyon, with some Nineties hip-hop playing, because that's what I grew up with. I also own a dual-clutch car. I love technology, but I also love things that are classic. **PRI:** What is a current build you're excited about?

**de Vera:** A few months ago, I came across a black S2000 with red interior, which was like my original one 20 years ago. It was serendipitous that I had an opportunity to purchase this car close to the anniversary of the first Fast and Furious movie, so it just felt right to buy it and create a tribute build. I want to build it with modern parts from member companies.



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# INDUSTRY INSIGHTS brad sweet

This Grass Valley, California, competitor's passion for dirt racing prompted him to add the title 'promoter' to a sterling resume that includes back-to-back-to-back World of Outlaws championships. His agenda now includes big plans for Silver Dollar Speedway, its signature Gold Cup event, and the high-powered 410 sprint class.

#### By Jeff Zurschmeide

B rad Sweet is among the most successful race car drivers in the World of Outlaws series. Behind the wheel of the Kasey Kahne Racing No. 49 sprint car, Sweet has won three consecutive championships in 2019, 2020, and 2021, and he is leading the points for 2022.

Born in Grass Valley, California, Sweet got his start in the USAC National Midget Series and World of Outlaws, then moved over to ARCA and the NASCAR Camping World Truck Series to learn pavement racing. He did a stint with the NASCAR Xfinity Series as well, further refining his craft before coming back to World of Outlaws as a competition home. His record in Outlaws has been stellar, with 75 wins in 751 starts at press time.

At 36 years old, Sweet is still going strong as a driver, but together with partners Kyle Larson and Colby Copeland, he has taken an interest in race promotion. The trio invested in Silver Dollar Speedway in Chico, California, taking over promotional and management duties. The track was the home course for all three drivers before they launched to the national scene, and Sweet is now responsible for regular operations at the facility in addition to his driving duties.

In July, Sweet and Larson announced a new midweek sprint car series. The High Limit Sprint Car Series will include 12 races in 2023 and will take place on Tuesday, Wednesday, and Thursday evenings to avoid conflicting with other 410 sprint car series. Both Sweet and Larson are expected to compete in the series with other 410 sprint car racers.

Making the jump from the driver's seat to the promoter's office is not easy and requires an entirely different skill set. We asked Sweet to tell us about his reasons, his vision, and his plan for success. "I STARTED LOOKING AT THE BIG PICTURE, LOOKING AT THE EVENTS LIKE THE KNOXVILLE NATIONALS AND THE KINGS ROYAL, AND JUST HOW WELL THEY RUN THEIR FACILITIES AND THE THINGS THAT THEY DO THAT MAKE IT AN EVENT, NOT JUST A RACE.





**PRI:** What made you want to decide to become the promoter at Silver Dollar? That's really crossing over to a very different job. **Sweet:** I'm very passionate about Northern California racing, just because it's where I grew up. Some of my best memories are at Silver Dollar Speedway at the Gold Cup Race of Champions. That's something I remember very vividly as a child. That event made me who I am, giving me the desire to race with the World of Outlaws. It's been pretty obvious that the Gold Cup and Chico in general haven't been the best event lately, or what the event used to be. I'm not going to blame anybody for it personally, but I felt

like I could do a better job.

**PRI:** What's behind that? Being a promoter is a very different skill set from driving.

**Sweet:** My whole life is racing and driving. But part of me started to shift in a different direction and look at business and maybe life after racing. You never know when you're going to be done racing a car. It could be at 40 years old, or some guys race much past that. But I didn't want to get done racing a car and not have anything to fall back on. So I think that's some of why I'm making these moves like I am right now.

I feel like I'm young enough, and I have a good vision of what I would like the event to grow back into. I think the West Coast deserves to have one of the crown jewels in sprint car racing. My goal is to get it back to that point. The opportunity to get these tracks are very few and far between, so I was patient. The timing was right, so here we are. We've learned a lot, and we still have a long way to go.

**PRI:** With your driving schedule, you have some help running the track, right?

Brad Sweet is in the hunt for his fourth consecutive World of Outlaws championship in Kasey Kahne's No. 49 sprint car. Meantime, he has also invested in Silver Dollar Speedway in Northern California—his home track before launching onto the national scene—with the goal of returning it to prominence.



Sweet: I couldn't do this without my wife, Rachel. She's definitely a huge part of running the office side of things. Also, Colby Copeland is our general manager, so he's really the boots on the ground. He gets my ideas and then he has to try to execute them, and they're not always easy. So between him and my wife, they're the ones who are at the track. I'm out racing, so I don't even get to be there. They report back to me, but that's how we have to do it right now.

PRI: Was there something specific that got you interested in being a promoter?Sweet: Honestly, I never really gave much thought to the business side of sprint car racing. I always just looked at it from a driver's standpoint, until I promoted a World

"The West Coast deserves to have one of the crown jewels in sprint car racing," said Brad Sweet. "I truly believe the Gold Cup needs to be that event for us at Chico." Sweet is seen here celebrating at the famed Williams Grove Speedway in Pennsylvania after earning his first win at the half-mile oval in July. Photo courtesy of World of Outlaws.

of Outlaws race at Placerville, California. I live in Placerville. It was enticing to me to get the Outlaws, but when I went to the promoter there, he said, "Hey, I'll rent you the facility, you can do it."

I thought, "This is a no-brainer. We'll make a ton of money. Everyone will come see this." That's when it hit me that there's a lot more to it all. There's a lot of risk that a promoter takes, but we did the event, and we were profitable, and it was neat to see, to be a part of entertaining so many people.

We did that event for three or four years in a row, and I enjoyed it. I learned a lot about promoting, and then I tried to do some other events. It led me to search around, trying to figure out, what is this race promotion thing all about? Is it really profitable? Is it always profitable? Then I lost money on a few races. So I started looking at the big picture, looking at the events like the Knoxville Nationals and the Kings Royal, and just how well they run their facilities and the things that they do that make it an event, not just a race.

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**PRI:** What do you think is needed for open wheel racing to thrive in the future? **Sweet:** I think you have to have the big events. Knoxville Raceway isn't on the map without the Knoxville Nationals. Eldora's not on the map without the Kings Royal. It's kind of a pyramid. It starts with the big, big events. That's what draws the most fans. It builds excitement. Racers dream of winning those big, big races. It puts your race track on the map. One event a year that the whole country's watching. I truly believe the Gold Cup needs to be that event for us at Chico. It needs to be very prestigious, World of

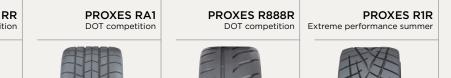
"ONE THING I WOULD SUGGEST IS EVERY DRIVER SHOULD HAVE TO PROMOTE ONE EVENT. SO THEY TAKE THE RISK ONE NIGHT AND UNDERSTAND HOW HARD IT IS AND HOW STRESSFUL IT CAN BE.

Outlaws 410 racing, where the highest level of racing comes to our track.

We want to grow the prestige of the event back to what it was. That's what draws more people in. There are plenty of kids coming up through the ranks right now in go-karts, and we want to entice them to get a sprint car and come race at our tracks here in Northern California. In return, we can put on better events that draw in the fans, and if they come to Gold Cup and they have a great time, they're going to come out to our other events. They're going to start recognizing the local stars that actually were able to battle against the Outlaws. We've been missing that.

**PRI:** What happened to it? **Sweet:** We don't have a lot of promoted star power out here. We've lost our car count for a number of reasons. California has really shifted toward 360 racing. The biggest event in Northern California is the Trophy Cup, which is a 360 race. That's what persuades



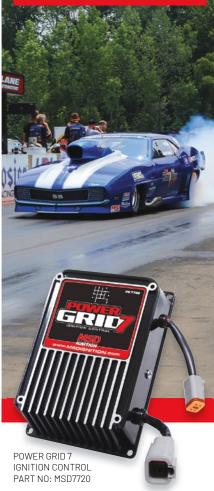




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### INDUSTRY INSIGHTS

the younger generation. They want to win Trophy Cup, and I want them to want to win the Gold Cup. I want them to want to build up through 360s and then make it to 410 racing.

If you go to healthier parts of the country, you're not going to see Lance Dewease running a 360 in Pennsylvania. You're Brad Sweet's World of Outlaws record has been stellar, with championships in 2019–2021, and 75 wins in 751 starts. As of press time in early August, he was leading all drivers in points for 2022.



not going to see Donny Schatz or myself running 360s. But out here, you're going to see Dominic Scelzi, Shane Golobic, Justin Sanders, all the main guys running 360, because they're trying to make a living doing it. They're racing 360s because they have to, and we need to change that.

PRI: What specific things are you going to do to build interest in the 410 class and the Gold Cup at Silver Dollar Speedway? **Sweet:** Having the King of the West Series run some events at our race track will help. We will also get some of the other track owners to build up some King of the West events. Then we will also make the Gold Cup a very elite event. Guys aren't going to want to miss out, and I think it's already starting to happen. You have the Dirt Cup up in Skagit, Washington, paying \$50,000 to win. We're going to pay \$25,000 to win at Gold Cup. We've aligned the rules to the rest of the country. So we're on flat top wings and the same tires, which helps teams afford to race these bigger events. You're not always having to buy different tires and different

wings and your cars are under the same rules.

We're also going to build our purses. We're going to invest back into the facility. We're going to try different market strategies that haven't been tried before. We're just going to put more of an effort into every aspect of it. We're looking at this as more of a five-to-seven-year plan, not a one-to-threeyear plan.

We need to be entertaining, and we need to be affordable. We need to make sure that we're thinking about children and how to entertain them, so we need the shows to be over by 9:30. People don't want to sit in the stands for five or six hours. We're just trying to take a different approach than some of the other promoters and some of the old school ways of thinking.

PRI: What are the old school ways of thinking that you think should change?Sweet: The alternate entertainment needs to change. I call it alternate entertainment and that can mean your support classes. I think you need to stay focused on the main





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show, which is why you're selling tickets. If you're going to spend a couple thousand bucks on something else, I think you need to be 100% in control of the time it takes. And ask yourself, does it add value to the show or does it not? It should take 10 minutes, like a halftime show, rather than adding another support class that adds more back gate money. That way of thinking is what drives the show time too long.

Also, I think when there's a bunch of classes that people didn't pay to see, there's actually a point in the night when they're wondering why they're there. But if you could do a T-shirt toss or a guy jumping some cars in the infield, that's exciting. But I think the product is your A Main race.

**PRI:** Are there specific things that we can do as the racing industry to reach out and attract more fans to this kind of open wheel racing? Sweet: I think you have to have guality entertainment, and not every track does the best job. Back gate promotion takes over in a lot of places because that's the easiest route to go once you start to lose the crowd. So they run four, five, six, seven, eight classes, just building the back gate to make it by. Once that happens, then you lose the fans. No one wants to go to watch six or eight classes of cars. So I think we have to be really focused on front gate promoting, creating alternate entertainment that's not six or seven support classes. You have to give away stuff in the grandstands.

Then there is positivity. There is so much

If fans have a good time at a premier Gold Cup race at Silver Dollar, "they're going to come out to our other events," Brad Sweet said. "They're going to start recognizing the local stars that actually were able to battle against the Outlaws. We've been missing that."

negativity from people. Everything is wrong and nothing is ever right. It is the negativity that drives people away, the negative thoughts on social media, that the track wasn't perfect, or the officiating wasn't perfect.

**PRI:** You're talking about what drivers say on social media?

Sweet: Drivers, fans, everybody. They just don't understand how damaging those comments are. There are influencers in the racing community who just don't understand how devastating a negative comment and negative comments over and over are to the people they are influencing. You just have to be careful because you can really drive people away with negative comments. If they had ever tried to promote a race, I think a lot of these racers would probably not make the comments that they make. One thing I would suggest is every driver should have to promote one event. So they take the risk one night and understand how hard it is and how stressful it can be.

**PRI:** How do you manage social media for Silver Dollar Speedway?

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racer or a promoter?

Sweet: I have a lot of people who help support me because I just don't have time to sit and think about every post, but I also keep pressure on everybody that social media is very important. We pay a company that does all our ads on social media, and they're better at zooming in on the audience that we're looking for. Those ads are aimed at a 200-mile radius of Chico for anybody who has ever typed in race car, or said race car, or looked up race car, those ads will hit those people. It's much cheaper than TV or billboards to reach the right people.

Then at the race track we have my wife and a couple of girls who are always very creative in trying to get stuff out. Our announcer, Troy Hennig, is always getting press releases out. So it's a joint effort. We have lots of conversations about what we're going to do each and every event. PRI: How's the relationship between Silver Dollar and the community of Chico? Sweet: That's a great question because that's one of the first things that I realized. There's a huge disconnect with the people, just from the lack of entertainment value for so long. The community hasn't been out there in years and used to go out there all the time. So that's why when I say organic growth, it's really "boots on the ground" promoting, because it's going to be a slow process of people coming out, having a good time with their kids, being affordable, and then telling their friends. It's a slow process of doing a great job and getting the community back to supporting us. We're doing everything we can as far as outreach, but it still comes down to performance. They still have to come out and enjoy themselves. PRI: Is there anybody that you try to emulate who you consider a role model, either as a

Sweet: There are so many great people that I love having conversations with. I admire what they've done at Eldora. I admire the Knoxville Nationals. I admire John Padjen for what he built at Silver Dollar Speedway, but I want to be innovative. I want to be the leader of the pack. I put a lot of hard work and effort into becoming a champion on the racing side. I'm not going to be any different making Silver Dollar Speedway the best race track on the West Coast. PRI

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or a sport that competes in a straight line, drag racing has certainly had to negotiate some swift curves and treacherous setbacks in recent years.

The most visible problem for drag racing today is the wave of track closings across the nation. Many of these were large, established tracks that served major metropolitan areas. Auto Club Dragway in Fontana, California-the last public quartermile drag strip in So Cal-never reopened following pandemic shutdowns. Houston Raceway Park in Baytown, Texas, closed for good after 35 years following the NHRA Spring Nationals in April. Palm Beach International Raceway in Florida likewise held its final drag race in April. Atlanta, Phoenix, and Memphis have all lost drag strips in the last year or have reported deals in place that will close them soon. The Northeast racing community is still smarting from the Englishtown drag strip in New Jersey closing in 2018.

And there is no new wave of drag strip openings to pick up the slack.

The implications of these closings are ominous. Drag racing has long been the most accessible, grassroots-oriented form of motorsports. Anyone can take their daily driver to a test-and-tune night and get their car on the track without any expensive equipment or special racing license. It's one of the few sports where someone in their 60s can compete against 20-somethings and still have an expectation to win.

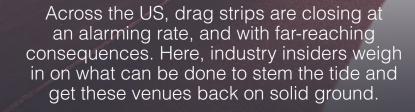
"You go to all these races and there's something for everybody. No matter what kind of car you have, they've got sportsman, they've got pro, they've got super pro, bracket racing," said Steve Williams, former chief engineering officer and current chief business development officer at K&N, Riverside, California, and a longtime NHRA competitor himself.

"If we lose this local-hero, small, grassroots track, where kids go out with

their parents and siblings, what happens is we're losing that next generation that might be interested in getting into racing. Drag racing indexes female higher than any other motorsport. Why? Because it's easily accessible," Williams said.

"Drag racing is like midget and sprint car racing—it's such the cornerstone and the foundation of all motorsports in the United States," observed Chris Bovis of Hart Marx Advisors, San Rafael, California, specialists in mergers and acquisitions in the automotive industry. "To have it under threat or have it in a declining situation is not good for any enthusiast in the US. It is a problem that needs to be addressed with creative solutions."

Losing a local track can have effects that reach far beyond the immediate community. "It's devastating," Williams said. "It would be a little bit like, for people who are into fishing, boating, and jet skiing, what if all of a sudden, they just drained the lake and you



#### By Steve Statham

had no place to go anymore? And the next lake is four hours away. Would you still just grab the kids and go out to the lake? Would you get in the car and drive four hours? No. What would you do? You'd go, 'Well, I've got to do something else.' And you'd sell your boat and be disappointed. Or you'd pack up the kids and move. I'm telling you, we have lost racers in Southern California because they have no place to race. With some of them, the car just sits in the garage, or they sell their cars."

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The loss of legitimate, legal places to race could also lead to a rise in street racing, which endangers lives and damages the reputation of the performance industry even further.

#### **BROKEN PAVEMENT**

There's no one reason why drag strips are closing around the country after decades in business. "In the cases we have looked at, each race track owner has dealt with particular issues," said Daniel Ingber, vice president, Government & Legal Affairs for SEMA, Diamond Bar, California. "In many cases, the economics of motorsports just don't work out anymore. This can be a result of dropping attendance, especially during COVID-19, combined with rising land values that create incentives to sell to developers, as often once rural or exurban race tracks are finding themselves in what is now a suburb. Suburban sprawl also can bring with it more noise complaints."

Jim Hughes owns Tucson Dragway in Tucson, Arizona, and sees the factors that challenge drag strips from the ground level. "We believe there are a few factors that could close drag strips," he said. "Lack of participation and support, for one. We have seen rising cost of goods cause push-back from racers. Race fuel, diesel, repair cost on trucks and trailers—everything seems to be on the rise in our economy. Racers seem to be struggling to get replacement parts in a reasonable amount of time as well. Another issue is that property values are just so high and in demand for other venues like malls, massive warehousing, etc. Investors and owners seeing that business opportunity must find it hard to turn down."

While each case is indeed different, according to our sources, land value is the factor with an outsize influence on tracks closing. "I think most of it is inflated real estate. I don't know the cause of it, but we're seeing just absolutely ridiculous land values," said Kurt Johnson of Total Venue Concepts, Petersburg, Indiana, a company that specializes in track prep and specialized track maintenance equipment.

"If you are a track owner and thinking of another year of possibly being at risk, and maybe not making that much money, or you could sell the land you bought for \$200,000 for \$8.5 million, that's an attractive deal," Bovis said. "As much as you love drag racing, it's hard to ignore those economics.



# *"WE VALUE OUR RACERS AND COMMUNITY EQUALLY. WE WANT TO BE A VENUE, NOT JUST A DRAG STRIP.*

It's hard to make a lot of money, hard to make a good, consistent growing business out of a drag racing venue, combined with maybe now for the first time having some other options to cash out."

In a time of high inflation, broken supply chains, and economic uncertainty, money around the world is chasing hard assets like real estate. There is more going on behind the scenes than the raw land value, however. Drag strips are an appealing target for acquisition for another reason: grandfathered infrastructure.

Keith Haney owns the Summit Racing Equipment Mid-West Drag Racing Series and, along with his business partner Todd Martin, Osage Casino Tulsa Raceway Park in Tulsa, Oklahoma. As co-owner of a track and owner of a series, he sees the challenges drag strips face from all angles.

"When you start looking at the profit margins in race tracks, the economy obviously hits the people who go to the race track first. With the rising prices of necessities that everybody needs every day, it limits their free cash to go to race tracks," Haney said.

"And land is up so much," he added. "You get these big corporate groups who come in and say, 'Okay, we're going to give you three or four times earnings on your land.' Or maybe it's 10 times earnings.

"Look at it from the perspective of a person who owns the dirt, owns the utility," Haney continued. "Say a piece of property is worth \$2 million. These corporate groups may give you \$8 million because the infrastructure that's on the race track bypasses a lot of corporate tape, or city tape, whatever you may call it. The builders won't have to have certain permits to put a building up because the infrastructure's already there and has been there. They can pay outrageous prices because they're not going to spend the money on red tape and having to go through all these guidelines, inserting sewer lines, etc., because they are grandfathered in. They just convert

Southern California—the birthplace of organized drag racing—lost its last public quarter-mile drag strip when Auto Club Dragway in Fontana didn't reopen following pandemic shutdowns. Public racing in the area is now limited to a small number of eighth-mile tracks.

the buildings that are on the property to manufacturing or whatever it is they are doing. And then they add on. Well, when they add on, they don't have the red tape that they would have when building from new."

#### **KEEP RACING**

The number of drag strips may be contracting, but the motorsports industry is nothing if not innovative and resourceful. It is entirely possible to stop the bleeding, so to speak, and part of the solution involves finding additional uses for the property that bring in steady revenue that is not reliant on the up-and-down nature of the racing calendar. A track owner with a more profitable business is less tempted by buyout offers. Our sources had plenty of ideas on how to utilize track infrastructure for additional income.

"Thinking about the property in a total sense—you have not just the assets of the drag strip, but you have a huge parking lot, you have lots of space, you have established ingress and egress plans that you can use for a lot of different things—is really smart," Bovis said.

"Track operators have been having to look at events with more of an open-mind thought process. Start taking events that are much less traditional than your normal Friday night drags or local bracket program," Hughes said. "Tucson Dragway has tried to take this approach since day one. We value our racers and community equally. We want to be a venue, not just a drag strip. By opening our doors to car shows, drive-in movies, 5K fun runs [foot races] and even a circus has helped us tremendously. Having this open and non-traditional mindset has also helped us while booking in weekday rentals



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Many race tracks have found such non-traditional uses as Christmas light shows to be good money-makers, but the key is to generate income that is not just seasonal.

"There are some race tracks that have realized that they have to create daily, weekly, monthly income independent of just whenever they put races on," Williams said. "There are a couple of race tracks that have realized that they can lease space on the property for storage spaces. There are tracks that have working shops. When you go to the race track, on some portion of the facility they lease out commercial buildings. And some small businesses work in that shop fabricating, building. So the income is



Keith Haney is in a unique position as the co-owner of Osage Casino Tulsa Raceway Park in Tulsa, Oklahoma, (seen here) and owner of the Mid-West Drag Racing Series. He sees the challenges drag strips face from all angles, but he has also leveraged his circumstances to help his and other race tracks in the region. Photo courtesy of E3xtreme. not just related to the race track and putting on a race. There are some race tracks that put on events like outdoor concerts. The race tracks that are going to survive are the ones that realize there's a whole list of ways to create income that then allow the race track to still put on these events, but they're not solely reliant upon the income of the actual race to keep the race track operating."

As a racer, Williams also has ideas for track revenue that would help him on race weekend. "Do you realize what a pain it is to get your race truck and trailer washed? It is a nightmare," Williams said with a laugh. "Do you know how much they charge? We're talking about a couple hundred dollars to do a nice job at the bare minimum. What if the race track had a commercial butler building, and washed and cleaned rigs at the race track? Would every racer use it? No. But I guarantee you a couple hundred would at







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times. Now you have this additional income. It could even be a coin-operated deal where they do it themselves in four bays."

Bovis of Hart Marx Advisors sees opportunities to expand the customer base by targeting the modern muscle car crowd that doesn't normally venture to the track. "The quality of cars and the capability of cars available today are like nothing else that has been produced," Bovis said. "Right now, people are able to go out and buy a 500-horsepower car, or a 700-horsepower car, with a factory warranty. At no time in history has that been possible. And they brake really good and they turn really good, too, and they're comfortable and have air conditioning.

"The accessibility of the cars and the speed and the enjoyment of the sport is so much better than it ever was before," he continued. "You don't need a truck and a trailer and all this infrastructure, and two guys to make sure the car doesn't fall "ANYBODY WITH A CHALLENGER OR A CHARGER WITHIN A REASONABLE DRIVING DISTANCE OF A DRAG STRIP IS A POTENTIAL CUSTOMER.

apart because it's so on the edge. All that's changed. You can drive to a drag strip, run the car all night, and drive home. That has to have an impact on traditional race entries, traditional race viability. But at the same time, it has to be giving you a bigger audience. Anybody with a Challenger or a Charger within a reasonable driving distance of a drag strip is a potential customer. That's a big difference over 20 years ago.

"I think that you're seeing an increase in accessibility, an increase in the total number of potential customers if they knew about it," Bovis added, "while you're seeing a little bit of an erosion from the traditional ways of hosting events and trying to get people to fit into a system rather than getting a system to fit around the people."

Johnson also sees potential for growth in the muscle car market. "I think that the street racer, and the guy with the quick Challenger, that market is growing. The guy with just bolt-on performance parts, could be his everyday driver, not your hardcore street racer or your hardcore racer, we'll call it the Wednesday night crowd, I think that's growing. I do think there is a movement with younger people and the performance cars that are out—the Camaro, Mustang, Challenger, and fast imports."

Road racing tracks in particular have invested in amenities that attract an upper-



PR/

income crowd, and there may be similar untapped opportunities in that approach for drag strips. "I've seen this rise of the 'country club' race track, which is a very businessmodel-changing thing," Bovis observed. "It takes it from a pure competition venue to a social organization and a status thing. It has all these other components to it that were never around when I was growing up around race tracks.

"It's become a very powerful development," he said. "People are making a lot of money at it, and people are spending a lot of money on it. It's become quite a phenomenon. I wonder whether there isn't an opportunity to do something similar in drag racing. It would have to be very uniquely tuned to the drag racing market, so I'm not sure that building condos at the side of a drag strip is necessarily the right thing. But focus more on a social environment, a membership-type situation where it is more 'run what ya brung.' It can be a lot more focused on casting a wide net for, say, everyone who has a Shelby GT500 within an hour-and-a-half drive, and trying to drive membership dues and giving a lot of accessibility to the track, rather than focused on trying to fit into an NHRA and IHRA or similar type of program."

Besides creating additional ways to monetize the track's real estate, some drag strips are already upending old business models. Not all of these actions are replicable, as many are specific to certain areas or represent unique opportunities. But viewing the success of these tracks may help generate new ways of thinking.

For example, Haney at Tulsa Raceway Park leverages his unique track ownership situation with the drag racing series he started to help other tracks in the region. "We own a track. We don't own the property, but the property owner has given us a longterm lease at Tulsa Raceway Park, and it's very inexpensive," Haney said. He and his



To help a drag strip survive, track operators have to look at nonracing events "with more of an open mind," said Jim Hughes, owner of Tucson Dragway in Arizona. Hughes has opened his facility to events like car shows, drive-in movies, 5K races, and mud runs to support his community and earn revenue not tied to the ups and downs of the racing calendar.

# Heads, Blocks, Parts





There are opportunities to bring new racers to drag strips by targeting owners of late-model muscle cars, said Chris Bovis of Hart Marx Advisors. They can "drive to a drag strip, run the car all night, and drive home. That has to have an impact on traditional race entries, traditional race viability." business partner signed the long-term lease in 2011 with the rock quarry that owns the land. The quarry bought the land in case they needed it for future expansion, Haney said, and that use is likely far off in the future.

Haney owns the racing series himself and designed it to be a win-win for everyone involved. "With the model the Mid-West Drag Racing Series is built on, we get nothing, the track gets 100%. The tracks are making money off our series because I don't need the money. I'm making it where the race tracks make the money to try to keep the sport alive. That's the only reason I did it."

The series started off focused solely on Pro Mods but added new drag race classes as it expanded. "We're constantly looking at what we can do for the race track. They get everything—back gate, front gate, tickets, merchandise, concession. We absolutely get nothing. We actually pay them to come. But they also guarantee our purses, and we bring enough cars to cover it."



Haney's business model for the series reflects his marketing experience acquired as the owner of several car dealerships. "You take a look at a lot of the sponsors, and they would love to sponsor a race track. The problem is, the race tracks don't have the staff to deliver on what they say they can do. And then they don't have the information to report back to keep the sponsors onboard. So the dealerships leave because they didn't feel like they got anything for their dollar.

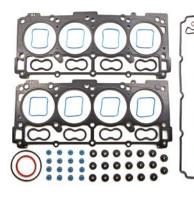
"With the Mid-West Drag Racing Series, we are basically a marketing company for marketing partners," Haney continued. "We make sure their commercials are on live feed, their banners are all over the track, all our websites have all of them on it, we have links back and forth, we do all our social posts, we tag all of our marketing partners when we go to a race track, we do it all. We've become a marketing company for, let's just say, Summit Racing Equipment, which has the naming rights of the series. *"YOU'RE SEEING AN INCREASE IN ACCESSIBILITY, AN INCREASE IN THE TOTAL NUMBER OF POTENTIAL CUSTOMERS IF THEY KNEW ABOUT IT.* 

We basically are promoting for them, and we become their face to the racers. Now, those people go track to track to track with us. At the end, they see the reports. They see what they're getting for their dollar."

The Mid-West Drag Racing Series has a show on MAVTV, further extending the series' marketing reach. "It's a difference in model concept," Haney added. "Most people who do this, live out of it. They own the series and they're getting paid out of the series. Me, I don't take a paycheck."

When it comes to making drag strips more economically viable, there may also be ways to attract support from local or state governments, although that is usually a lengthy and tricky minefield to negotiate. But governments are also motivated to eliminate street racing, which could give track owners a foot in the door. "Government assistance, state and county funding, public partnerships are all very realistic options," Hughes said. "Why not take a drag strip on state or county land and operate it more like a municipal park? Open more often during the week to avoid long lines during testing or run-what-you-brung events. Give kids these days a safe place to race and off the streets. Implement a plan instead of giving out speeding and exhibition-of-speed tickets. Have them take a driving school at your local race track."

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The Mid-West Drag Racing Series started with Pro Mods but has added new classes as the series expanded. "We're constantly looking at what we can do for the race track," said series owner Keith Haney. Photo courtesy of E3xtreme.

The racing industry may have to prepare itself for things to get worse before they get better, given the realities of the current economy. "You can't blame the race tracks for doing what they do," Haney said. "They're only protecting their families and looking out for the future of their families. Some race tracks have been in business for 50 years. They finally sell because nobody wants to pay them to buy the race track and start a



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new chapter. The other part is, people can't afford to buy them when you have these equity groups that come in and buy the property. You have a piece of property that's worth \$2 million, and you're getting \$8 million for it. If you had a business that was making a half-million dollars a year, that business might bring three-and-a-half times earnings. Now you're getting \$6 million for the property. I don't think there's a way out of that math. As long as these equity groups and corporate companies have the money they have, it's just a smart decision for the people who own the track."

Even so, the motorsports industry is known for its resourcefulness and adaptability. Many of these issues will be examined at this year's PRI Trade Show in December. "This is one area where I think we as an industry could do a better job," Williams said. "How do we create access to some think tanks and some brainstorming and some things that are actually working? For instance, here's something that happens between racers: Racers are this community that has this unbelievable ability to do whatever it takes to still get to the race track and go racing. But along the way you discover all these clever things, whether it's how to make more power, how the car works better, or how to save money on towing, trailer setups, you name it. And they like to share there's always these phone calls going back and forth. So there's this 'group tank' to share info. Race cars today are so much more sophisticated than they were even 10 years ago, and so much better because of that sharing of information. Where's that for the race track owners?"

As long as there are cars there will be drag racing, but the time for thoughtful, coordinated effort to keep the sport viable has definitely arrived.

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GROUND GAINS

Interest in off-road motorsports was already on the rise prior to the COVID-19 lockdowns, but it boomed after folks around the country who were stuck at home began looking for ways to get outside and compete. While the industry is currently facing headwinds on several fronts, series organizers have been hard at work ensuring that the growth created during the pandemic is lasting.

#### By Bradley Iger

By the time warmer weather started to arrive in the spring of 2020, enthusiasts and competitors across the country were ready to get out of the house. Months of federally mandated isolation had created a collective cabin fever of sorts, and many were in search of safe ways to enjoy the great outdoors with their families. Those circumstances led to a boom in sales across the off-road industry, and off-road racing saw a significant increase in interest in turn.

"Things were already on the upswing prior to COVID-19," said Greg Adler of Off Road Warehouse, San Diego, California. "After a brief initial dip during lockdown, that interest not only came back, it increased. People wanted to get out, whether that required outfitting their vehicles for overlanding adventures, or going out to the desert to race, or going out just to play. The enthusiasm just skyrocketed."

Jim Ryan of SCORE International in Reno, Nevada, noted that the timing also coincided with major announcements from OEMs that brought more visibility to the segment as well. "First, we saw dirt bike sales spike after being on the decline for many years, and UTV sales also continued to impact all aspects of off-roading, from weekend recreational usage to the



From a participant standpoint, offroad competition benefited from the aftereffects of the COVID-19 lockdowns of 2020. Support at the **OEM** level also has helped boost the category and attract "another potential motorsports enthusiast base," noted one of our sources.

full-factory support team now competing in the SCORE World Desert Championship series. But at the OEM level, we also had the introduction of new Ford F-150 Raptor models as well as the new Bronco, which provided a great increase in the visibility of off-road and its motorsports heritage. That brought with it another potential motorsports enthusiast base."

Two years later we're still dealing with residual fallout from the pandemic, but some sense of normalcy has returned to everyday life. Shuttered manufacturing businesses have re-opened, travel bans have been lifted, and spectators can fill the stands at events once again. While the removal of these restrictions has certainly made it easier for racing businesses to operate, like other segments throughout motorsports, the offroad industry now faces new challenges that threaten to walk back those gains.

"I think one of the big concerns right now is the price of fuel," said Pete DeLorey of PDank Performance & Off Road Parts, New Franken, Wisconsin. "Turnout is still strong at these events, but it feels like it may be starting to have an effect in some areas."

As the industry continues to navigate the tumult, sustaining the growth that the sport has enjoyed over recent years is a top priority for series organizers. That's led many to employ new strategies involving class structures, race calendars, and marketing tactics to not only keep fans engaged, but also ensure that racer feedback is being heard loud and clear.

#### LEADING THE CHARGE

Thanks to their impressive out-of-thebox capability and accessibility, UTVs have received a lot of attention in short course and desert off-road racing events. That trend continues today, but other off-road platforms are also seeing rising numbers. "UTVs probably benefited the most from the elevated interest in off-road during the pandemic, and that market is still just growing and growing," said Lee Perfect of Great American Shortcourse (GAS), Temecula, California. "We do especially well with a lot of the youth classes in general. We start racing them at six years old in a Polaris RZR 170, and we have three classes of trophy kart that are also doing very well. I think it really comes back to people wanting to get out of the house. We got new entries



Enthusiasm for off-road motorsports should remain high, particularly in the UTV segment, said Pete DeLorey of PDank Performance & Off Road Parts. "As long as the factory and aftermarket support stays in the UTV side of things, that segment will continue to grow. I don't think it has plateaued just yet."





Interest in off-road racing of all kinds has surged in the wake of the pandemic, as racers—and their families—look for safe, fun ways to enjoy the outdoors.

in each one of our classes from folks who were either new to short course or switching classes, but the UTV and youth classes are definitely leading the way for us."

Affordability was already a strong driver of interest in the UTV segment, but the youth-focused options have taken that to another level. "The RZR 170 has made it easy for families who might not have been previously involved in motorsports to make that leap," said DeLorey. "Before COVID pricing hit, used models could be had for as little as \$1,500 before you added in the cost of safety equipment. That level of cost made it accessible for a much wider range of people."

Adler said that short-course formats tend to be particularly appealing for families. "Parents seem to prefer it. Since it's a smaller track, it's easier for them to keep an eye on what's going on, and it's generally a good way to introduce kids to off-road racing. Series like WORCS [World Off Road Championship Series] also have courses that can be as long as five miles, and we tend to see the older kids and teenagers racing on those types of courses. It allows them to grow into the idea of doing those bigger desert races later on."

Adler also pointed out that once newcomers are introduced to off-road motorsports, they tend to stick around. In the case of short-course racing, that's led many who may have been new to the sport a few years ago to now consider stepping up to a

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Trophy Truck entries continue to grow with the addition of new classes, including an LS-powered Spec class and the Legends class for drivers over 50. Here, Off Road Warehouse's Greg Adler pilots his Trophy Truck at the King of the Hammers.

more sophisticated machine.

"Some of it comes down to age," said Perfect. "You have a bunch of young racers who're ready to move up to the next age group or make the switch to a different vehicle—we've definitely seen a few move into our UTV ranks. There are also some who have moved out of our Mod Karts into either the Pro Lite or Pro Buggy classes as well."

In that same spirit, DeLorey pointed to the Championship Off Road Series' new Pro Am class, which offers a middle ground between the sportsman and Pro Stock sideby-side classes. "They've had very high counts in both of those classes, so Pro Am was created as a way to put the sportsman racers who have a little more experience into a class that wouldn't require as much money to run in as Pro Stock does," he said. "The series doesn't have limits on how many entries they can have in a race, and it can get a little chaotic when you have 40 or more vehicles on track simultaneously. That tends to lead to a lot of yellow flags, so creating this new class helped reduce that."

Meanwhile, new platforms have also brought more excitement to top-tier classes. "The next generation all-wheel drive Trophy Trucks have now arrived and are dominating the premier SCORE Trophy Truck class with consistent overall race wins at the 2021 SCORE San Felipe 250, SCORE Baja 400,

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SCORE Baja 1000, along with this year's 2022 season opener, SCORE San Felipe 250," said Ryan. But beyond the introduction of these new AWD machines, SCORE has also expanded the Trophy Truck class structure to include more options for racers who're looking to keep costs in check.

"The Trophy Truck Spec class is a good example of that," said Adler. "The trucks are similar to those in the main Trophy Truck class, but they use a spec LS engine, so you don't have to dig as deep into your

"PRO AM WAS CREATED AS A WAY TO PUT THE SPORTSMAN RACERS WHO HAVE A LITTLE MORE EXPERIENCE INTO A CLASS THAT WOULDN'T REQUIRE AS MUCH MONEY TO RUN IN AS PRO STOCK DOES.

pocketbook to compete at a very high level. That class continues to grow, and now we're seeing more entries in that class than in the top Trophy Truck class. Some series have introduced a Trophy Truck Legends class that's seen strong numbers, too."

The Legends class is offered to drivers who are 50 years old or older, but the rules remain virtually identical to the main Trophy Truck class. That means that drivers who are eligible to compete in the Legends class could race in both classes without making any significant changes to their trucks. "At the most recent Baja 500, there were about 10 of the new all-wheel-drive Mason Motorsports trucks competing, which are generally considered to be the latest-and-greatest of the segment, and a couple of them were running in the Legends class," said Adler. "The vehicle platforms are evolving, and the series are evolving alongside them."





Short-course racing, as seen here in Crandon, Wisconsin, is popular for families, said Greg Adler of Off Road Warehouse, as it's easier for parents to keep track of their kids on the course. It's also a steppingstone to longer races and more sophisticated machinery.

#### MEETING THE CHALLENGE

With most of the biggest pandemicrelated obstacles in the rearview mirror, series organizers are now focused on sustaining the growth seen over the past two years, but external factors still threaten to stall that progress.

"We have 17 different classes now, and we're still seeing solid entries across the board," said Perfect. "People are getting back into their normal lives. A lot of them looked at 2022 and said to themselves, 'OK, let's run all the races and go for points.' A few will naturally drop off as the season progresses, and now there are concerns about fuel prices and the health of the economy that we have to contend with. People are feeling the crunch. So I've been looking to perhaps offset some of that with an extra ticket or two per entry. These are the types of incentives that we can provide without it costing us a lot of money, and hopefully they will help bridge some of those gaps."

DeLorey said that Championship Off Road has also implemented new methods of getting the word out and connecting with fans. "They're now doing podcasts with sportsman and pro-level drivers as well as 'meet the driver' interviews. This season they also partnered with FloRacing to provide live streams of the races, but social media still seems to be the primary driver for series awareness."

Adler said that social media content not only keeps fans engaged, it also provides value to sponsors. "The posts on Instagram, Facebook, and YouTube really help with visibility, and that's what the sponsors want to see. In some ways, the views have become more important than the race wins. People are seeing off-road

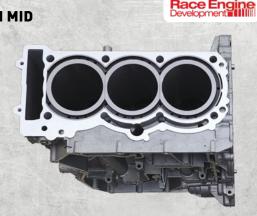
racing in a whole new way. Now anyone with a smartphone is able to capture highguality video and share it instantly. In the past, desert racing was about coming back from the event and telling some stories. Now if a Trophy Truck goes flying by a fan at 100 mph, it can be accessible to the world in a matter of seconds. Series' live-stream broadcasts have improved significantly, too. Events like King of the Hammers and the Mint 400 are setting the bar for live off-road racing coverage right now. They're using helicopters and drones to stay right on top of the action, and they're also capturing really high-quality video at the ground level. It's the next best thing to being there."

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Adler also noted it tends to be more difficult to create and share content like this at events held in Mexico due to the differences in the country's cell phone and Internet infrastructure versus the United States', but Rvan told us that SCORE has been actively working to address that issue at its events. "Operating in remote areas in another country has always been a development process for us as we continue to zero in on what the technology and terrain will allow for." With that in mind, SCORE introduced new Starlink satellite systems in 2022 that were designed to provide uninterrupted communication and video feed from the course.

#### AN EVOLVING LANDSCAPE

Perfect said that GAS added an extra weekend of competition to the 2022 race calendar above and beyond the four weekends and eight rounds of racing that the series offered last year, but he plans to take a measured approach to any changes in the roster of events going forward and decide how the series will expand based on feedback from his racers.

"We wanted to take small steps coming out of the pandemic and get a really solid sense of things from our racers in terms of how much they wanted to do. Some want to go to a track in Utah, others are fine with sticking to our Southern California courses. We're also trying to co-exist with the

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Championship Off Road Series back east and not step on their race dates, and that can be tough to do in the summer. It's kind of a balancing act, but ultimately, I want the racers to have a say in it."

Perfect added that a larger regional reach is a long-term goal for Great American Shortcourse, and collaboration with Championship Off Road is on the table as well. "There's long been talk of doing a combined race with them. There are a lot of hurdles involved in it, but I'm down to do it, and I think they are, too. I think it just comes down to the costs involved for the racers and how we'd go about making it all work. But that's still a possibility down the road."

DeLorey said that he expects interest in off-road motorsports to remain high over the coming years, especially within the UTV segment. "As long as the factory and aftermarket support stays in the UTV side of things, that segment will continue to grow. I don't think it has plateaued just yet."

SCORE is already taking the necessary steps to bring the next generation of vehicle technology on board. "We're seeing continued interest from many new vehicle manufacturers—along with the traditional big OEM manufacturers—in our electric class," said Ryan. "And there's interest coming from technology companies that are developing electric battery systems as well. They want to learn more about how to make them survive in the most grueling endurance conditions, so just completing the course would be a landmark occasion."

## SOURCES

Great American Shortcourse greatamericanshortcourse.com

Off Road Warehouse offroadwarehouse.com

PDank Performance & Off Road Parts pdankoffroad.com

**SCORE International** score-international.com

Thanks to their impressive capability and surprising affordability, UTVs have taken the off-road world by storm in recent years. Still, racers are discovering weak points in factory setups that must be addressed.

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By Bradley Iger

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O nee dismissed as a novelty by seasoned competitors, UTVs have seen unprecedented growth in off-road racing over the past decade. That trend shows no signs of slowing down. "The entire segment has just exploded," explained Matt Martelli of UTV World Championship, Vista, California. "At this point it's the biggest segment in off-road racing, and for us the entry-level classes are the biggest area of growth right now. What we tend to see is that people come in, race in that class, and they start finding the areas of the platform that could be improved. And they want to move up."

The out-of-the-box capability of UTVs has played a major role in the vehicles' ongoing popularity, but there's another factor that has also played a crucial role in this segment's rise to prominence. "Prior to UTVs coming onto the scene, you would have needed to go to a race car builder, or buy an existing race car, in order to get involved," Martelli noted. "Those would all have been up-front hard costs. But UTVs can be financed, and now we're also seeing participants financing upgrades and modifications as well. So you could literally go racing without being a dime out of pocket before you get on the track."

With strong aftermarket support, the segment is changing the landscape of off-road racing at all levels. "It's become an incredibly competitive platform," said Ricky Berry of RCV Performance Products, Rockford, Illinois. "We're seeing UTVs with finishing times in desert races that are on par with Trophy Trucks. It's ridiculous, especially when you consider the cost differences. There was an event earlier this year where a racer in a Polaris Pro R finished in the top three overall in a field that included Class 1 cars."





Whether a competitor is just getting started in UTV racing or is looking to climb the ranks to the upper levels of the sport, these vehicles require preparation and modification in order to be eligible to compete, run competitively, and last for the duration of an event. Here we'll take a closer look at what's being done to get these machines race-ready. While out-of-the-box capability is a big reason for the growth in UTV racing, so is its affordability, said Matt Martelli of UTV World Championship. "UTVs can be financed, and we're seeing participants financing upgrades and modifications as well." Photo courtesy of Mad Media.

#### **UP AND RUNNING**

"It's interesting, we often sell the same products to the guy who's going out to race for his first time ever as we do to the guys who have factory sponsorship," said Berry. "But safety is always going to be the first step regardless of what level someone is competing."

That typically includes the usual

suspects—roll cage, racing harnesses, and driver safety gear like fire suits and helmets—but the requirements are largely dependent on the sanctioning body and the class that the vehicle is campaigned in.

"Some classes don't even require changing out the factory cage," he pointed out. "But you're still going to need harnesses, maybe different seats, and you'll likely need a HANS device for your helmet. Head-and-neck restraints are required pretty much everywhere."

#### **DIALING IN DURABILITY**

Larry Heidler, SXS/UTV technical inspector for WORCS UTV in Lake Havasu City, Arizona, pointed out that while factory UTVs are more capable than ever, they are typically outfitted for enthusiasts who hit the trails on the weekends rather than those who're looking to go racing. "A bonestock UTV typically isn't ready for the racing environment," he said. "You might have

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ACCEPTS BOOST/NITROUS something that's factory-equipped with Fox shocks and stuff like that, but it's not going to be designed to handle this level of abuse."

With that in mind, wheels and tires are generally the first things to go. "Beadlock wheels are a common upgrade here," said Martelli. "There's some debate about whether that's necessary on such a light vehicle, but we like that technology because of the forces that the wheels are being subjected to in offroad racing while cornering. UTVs typically weigh between 2,500 and 3,000 pounds, but when you're throwing one of these vehicles into a corner at speed, all of the weight is going to one wheel, and you want to be sure that you're not going to peel the tire off."

Martelli also pointed to strength as another important attribute of a race-ready wheel. "Most of the stock UTV wheels you come across are cast aluminum," he said. "I wouldn't say they're fragile, but they're not something that you'd want to rely on for a race, so forged wheels are a popular



upgrade. And one-piece designs are generally preferable."

Berry told us that tire choice often comes down to personal preference, but the general consensus is to go big. "Some classes limit tire size to around 32 or 33 inches, but in situations where size isn't restricted, UTV tire sizes are getting pretty wild. Thirty-five-inch tires are the new normal, and we're seeing 37-inch tires on UTVs becoming more and

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courtesy of Jason Ashton/ Mad Moose Media.

"A bone-stock UTV typically

isn't ready for the racing

environment," said Larry

inspector for WORCS UTV. Wheels and tires are often

among the first upgrades

made, as are changes to

the chassis and suspension

Heidler, a technical

components. Photo

more commonplace."

Chassis and suspension components are usually the next area of focus when it comes to modification. "Factory suspension tunes are usually general purpose," said Martelli. "But that's normally going to be a bit soft for racing use. While they might have progressive spring rates, they aren't using rates that are set up for this kind of application. And the shock tune is hugely

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important as well. Just like in pavement racing, car setup is key. But here we have a lot more variables to deal with."

Heidler said that an increasing number of entry-level racers are swapping out the factory A-arms and trailing arms for stronger aftermarket pieces as well. "Those have been found to be weak points, so that's becoming a more popular upgrade even in the youth classes. A lot of it comes down to the material—the factory component might be made of some sort of mild steel, while the aftermarket options are usually chromoly."

Berry quipped that you can almost bend some of these factory components over your knee. "It's designed to be 'good enough.' Fortunately, there are now loads of options out there for racers who're looking for increased strength, whether it be different materials, thicker materials, or just a completely different design versus the stock part. HCR Racing, for instance, offers an arm design that doesn't use tubes. Instead, it's a plate design with internal structure, they use chromoly steel, and it's all TIG-welded. Then you have options like what Lone Star Racing offers, which looks aesthetically like the factory piece but offers far greater strength."

He told us that axles have also been identified as another common failure point, and that's largely by design. "Axles are one of the biggest weak links in UTVs. There's a sense that the factory would prefer these to fail rather than the transmission or differential because the latter are much more expensive warranty items. That failure point is so low that these racers are reaching it pretty quickly."

Competitors are responding by moving to more robust axle designs that can handle the abuse, along with associated parts that can further bolster longevity. "For us, it's both the material quality and the engineering behind it," continued Berry. "There are design limitations because you're working within the constraints of the factory packaging, but we're using chromoly housings and 300M steel for the shaft and internals. 300M is just about the best material you can find in terms of memory and fatigue resistance."

Berry also cited CV boots as another common problem area. "A torn boot is the Achilles heel of a UTV," he said. "Once you tear that rubber boot, it has the potential to take out the CV and eventually the axle, and now you're down a corner. So we've learned



PR/

that the grease used is really important. We had guys finish 500-mile races without CV boots because of the grease we developed. As it gets hot, low-end grease will liquefy and follow the path of least resistance, and that means your lubrication is going away from where you need it. A high-end grease is going to be more resistant to liquefaction, and that helps keep it where it needs to be to prevent those failures."

Turning to the powertrain, Steve Demirjian of Race Engine Development in Oceanside, California, said that there are some very simple upgrades that can have a substantial impact on engine durability. "More power means more heat, so the cooling system needs to run as efficiently as possible. If you're running a lot of boost on a wet liner the water can cavitate, and you can actually end up eroding the outer surface of the sleeve. So running something like Evans Coolant, which is cavitation resistant, is a good idea."

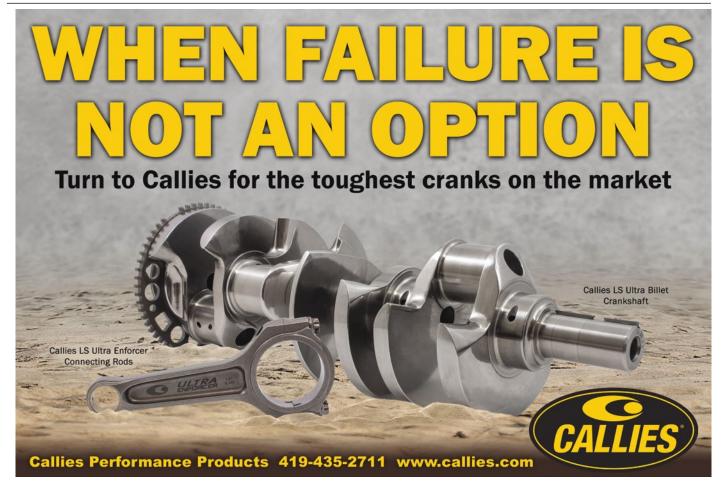


The general-purpose nature of factory UTV suspension tuning is "a bit soft for racing use," said Matt Martelli of UTV World Championship. "Just like in pavement racing, car setup is key. But here we have a lot more variables to deal with." Photo courtesy of Mad Media.

The belts on UTV continuously variable transmissions are also a notorious failure point, but solutions have been developed to address that as well. "Clutching is really important here because you're trying to squeeze as much as you can out of the top end without sacrificing belt life," said Berry. "But it's also about airflow to that belt, so bigger air intakes and ducting are important, too. And a belt box fan can also make a big difference. You need to keep the belt as cool as possible in order to extend its life, so that system is pulling in cool air and pushing out hot air to help manage the heat."

#### PROPER PERFORMANCE

While durability tends to be the top priority for endurance-style UTV racing formats,



short-course and hill-climb events allow racers to prioritize things differently. "In desert racing, most racers leave the motors pretty close to stock," Heidler said. "But on the short course, those engines are being rung out. Those racers are trying to get every last ounce of horsepower that they can from them because everyone else in the field is doing the same."

That kind of approach probably isn't going to last in a 300- or 400-mile race, but the short-course racing tends to be less abusive just by virtue of the format. "A track car is going to be lighter because you don't need to bring spares with you, and you're on a groomed track rather than the really varied terrain that you see in desert racing," said Martelli. "So you can push the setup a bit harder here because durability is less of a concern. If the engine only needs to last half an hour, you can build a high-strung time bomb if you want to."

Demirjian said that many racers opt to



Steve Demirjian of Race Engine Development noted the engine block in the popular Polaris RZR "was originally of open-deck design. The later blocks went to a closed-deck design for added strength, but neither will hold up for long with the power these engines are making. The Darton MID sleeves solve the problem of the cylinder walls breaking." go that route. "People are getting ridiculous power out of these motors. They're not longdistance combinations. We're seeing people get 500 or 600 horsepower out of twocylinder engines. It's crazy."

Turbocharging has become an integral part of these high-horsepower engine combinations, and that typically necessitates upgraded rotating assembly components. "So a set of pistons, and the crankshafts that are used in these engines, tend to be a weak point as well," he added. "Some people are running upwards of 90 pounds of boost on these engines. It's incredible."

In order to make a UTV engine live at those boost levels, Demirjian offered a few recommendations. "The cheapest upgrade for these blocks is a dry liner. That will beef them up substantially," he explained. "If you're going to run a lot of boost, the Darton MID sleeve is the way to go. It's far stronger than the factory cylinder wall, so you're not going to break it. And ARP head

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studs are basically a requirement in order to get the clamping force needed to keep the head down."

Heidler also said that tuning plays a critical role in these turbocharged setups. "We spent a lot of time just dyno testing the car and making sure that we can get every last bit of power out of it while still making sure that it's not detonating, and the fuel mixture is right where it needs to be all the time. In the class I compete in, the races are 55 minutes long, and we're basically running the engine flat out the entire time. Back in the day you could sit back a little and wait for other competitors' cars to fail, but now we're going nonstop from green flag to checkered because the field is getting much more reliable in general."

On the suspension side, Martelli noted that electronically controlled shocks are becoming an increasingly common sight in UTV racing. "Fox Live Valve shocks have been a game-changer here because they allow for so much greater control over the vehicle's dynamic behavior. This technology is only a few years old in this market, so we've just scratched the surface of what it's capable of in this type of application."

Looking ahead, all seem to agree that UTV racing is headed for increasingly sophisticated setups. "We're at a point now where 600 horsepower is the ceiling," Demirjian said. "Two hundred horsepower per cylinder on a 900cc engine is a lot. Eventually we're going to need billet engine blocks, and I think it's just a matter of time before someone steps up to offer that."

As the performance bar continues to rise, Berry expects UTVs to push further into the forefront of off-road racing in coming years. "The future of UTV racing is going to be at 100 mph and beyond. I think that's going to be the norm sooner rather than later."

With bigger players getting involved in aftermarket development, that prediction seems likely. "Over the past eight years or

so, this has become a fairly robust industry," Martelli said. "The popularity of the segment has started to attract the attention of larger manufacturers. This is just the tip of the iceberg, though. The biggest challenge for everyone right now is just keeping up with the demand."

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WORCS worcsracing.com



**BUSINESS PROFILE** 

# ODDBALL MOTORSPORTS

A pioneer in turbo technology, Garrett Stanley rerouted his business from the drag strip to the desert, where he's emerged as one of the Southwest region's premier off-road racing and fabrication service providers.

#### By Dana Ford

Garrett Stanley and his company, Oddball Motorsports, were not always major players in the off-road racing scene. Stanley started out more than 20 years ago building trucks for drag racing from his home garage shop in the Houston, Texas, metropolitan area. The business was called Oddball Turbo and Fabrication.

As a pioneer in turbo technology in the Houston area, he built a large number of drag trucks for customers, some holding world records. He achieved local fame for having the fastest street-driven truck in Houston. That fame, however, came with a cost. Being at the top, he found some people didn't want to race him anymore, and some tracks even changed the rules to "level the playing field," allowing competitors to catch up to him. This eventually led him to believe it was time for a change and shift his energy into another of his passions: off-road racing.

Just as he did in drag racing, Stanley threw all his energy into off-road racing and began to learn all he could about building and racing the trucks. His passion for the sport was soon shared by his wife, Monica. She learned to co-drive and navigate in their race truck, which was built in their shop on evenings and weekends. The duo raced



all over Texas in the Texas Desert Racing Association (TDRA) circuit as well as the Southwest Texas Off Road Racing (STORR) circuit in El Paso, allowing them to learn what desert racing was all about. As their experience grew, Stanley stopped working on his own truck to build a Jeep for Monica, starting with a \$400 auction vehicle and ending up with a competitive desert racer with the only I-beam front suspension out there they know of.

Stanley explained that when he switched to off-road racing, most of the market was based along the West Coast. However, he admitted, "the thing's getting bigger and bigger in Texas. We've raced in Texas for a long time, and there was nobody in the middle of the US who was dealing with any of the parts or doing any of the service. There wasn't anybody who was making a statement or who was trying to supply people everywhere else with parts and knowledge. We chose to kind of shut down the business as it was—we were doing turbo stuff and fabrication and all that for the race car industry—and switched over to the offroad industry and started manufacturing our own parts and doing our own stuff. When we switched businesses, it was like you closed a business and opened another one. It was that drastic. We survived it, made things happen, and did what we needed to do."

The demand for his skills and parts meant growth in the business, which required

a purpose-built racing/fabrication shop. "My shop's about 3,500 square feet, in two different sections," he described. "We have a build side and a manufacturing side, and we have a CNC table and all that stuff. That is basically how it's laid out. I have a 4- x 8-foot Arclight Dynamics CNC Plasma table and Miller and Lincoln welders."

Monica offered additional details about the CNC table. "We made the decision, even though we were in the hard times, to purchase the CNC table, and that was the best thing that could have ever happened," she said. "He taught himself CAD and how to use the machine and never looked back. He can look at something, eyeball it, take a guess, and get it right in CAD on the first or second try. And he is still using the free software that came with the table."

This equipment allows Oddball Motorsports to design, build, and supply the off-road racing community with plenty of competitive parts. Some of the components built by Stanley and his team include rear trailing arm upper shock mounts, universal equal-length beam frame brackets, universal radius arms with tabs, double-shear axle tabs with box plate, headers, plus various DIY kits as well as components specifically for Ford Ranger LS swaps.

"The good thing about what we do is, we sell a lot of weld-it-yourself stuff and parts that customers can assemble and build," Stanley said. "When COVID-19 first hit, we were covered up with shipping parts everywhere just because somebody wanted something to do. It worked out to our benefit. I sell a lot of the LS block mounts for the Ford Rangers and the header kits for it. The LS block Ford Ranger has become my



When they switched Oddball Motorsports' focus from drag racing to off-road racing, Garrett and Monica Stanley learned all they could about the sport by building trucks themselves and racing them all over Texas.

specialty. It was something I thought was cool. Since we were racing a Ranger with an LS in it, I saw a market that nobody was a part of, really, and I put it out there. It's been a really good thing."

Building the volume of well-engineered and well-made parts along with the diverse services the company offers requires more



than just Stanley's efforts. Part of the success of Oddball Motorsports comes from having a dedicated staff of four employees, including Monica, "who does the office stuff. We don't just manufacture parts, we do a lot of Holley EFI tuning, a lot of wiring of cars, we do a little bit of everything. If I'm not selling parts, I'm building cars, and if I'm not building cars, I'm selling parts. I really need to hire two more guys just to work off some of these big builds. That's what the struggle is right now. The economy's just not at a point where I'm able to afford a couple other guys to be able to take it to the next step to allow me to move products and more stuff."

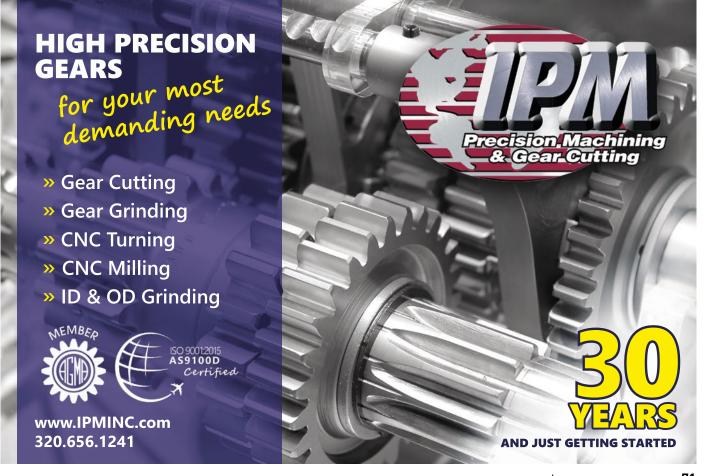
Manufacturing and fabricating custom parts and working on custom cars is not a common skill that can be found just anywhere. When Stanley hires an employee, he makes sure to train that person to be the quality worker he expects and then follows that up to keep the employee happy and with the company. "The guys who are with "THE GOOD THING ABOUT WHAT WE DO IS WE SELL A LOT OF WELD-IT-YOURSELF STUFF AND PARTS THAT THE CUSTOMERS CAN ASSEMBLE AND BUILD.

me have been with me for a little while," he said. "I really prefer younger guys so I can train and mold them and show them the quality of work we try to produce. I like to get them in young and teach them the way it needs to be done. It's worked out pretty good. The track days, the test days, I put them in there, kind of put them through the experience, teach them the ins and outs of what we do and how we do it. A big thing at the shop is just a respect deal. Give me the respect, and I'll go the extra mile for you. We have cookouts at the shop and different things like that."

"We try to foster a family environment here," Monica added. "We like to have BBQ and crawfish boils and take trips out on the boat to celebrate working hard and accomplishments."

#### ADDRESSING CHALLENGES

Many businesses find there are challenges to keeping a steady flow of work going in the current economic climate. Oddball Motorsports is no different. "We've had struggles here and there just being able to keep material," Stanley admitted. "If I don't have the steel and I don't have the material, I can't sell parts. That's been a little bit of a chore itself, keeping supplies to be able to do that. We've had to invest in different things at different points to make sure we still



were able to keep our products out there and make money at it."

To stay aware of industry trends and potential customer needs, Stanley routinely has conversations with customers throughout the country and closely watches social media. "My wife's really good at social media," he said. "Facebook has been good for us as far as marketing goes and being able to post pictures and interact with the customers. If you look up the analytics for all of our sales and all our products, Facebook has been better than Instagram as far as marketing. We are number one on Google for our LS Swap Ranger mounts, headers, and those things."

Perhaps the most impressive component of Oddball Motorsports is Stanley's commitment to maintaining a relationship with the customer before, during, and after the sale. Where some other companies will only sell parts without providing instructions on what to do with them,



Refitting Ford Rangers with LS engines "has become my specialty," said Garrett Stanley, after racing an LS-swapped Ranger and recognizing no one was serving that market. Among the products he offers for the swap are engine block mounts and header kits.

Stanley makes sure his customers know how to install and properly use the parts as they were intended. He explained, "I deal with people all over the world—Canada, Norway, and all kinds of different places and we are able to supply people with the parts, and have, I think, customer service that is a million times better than what you can get elsewhere."

His focus on customer service begins with being personable and following up as a knowledgeable resource with customers and potential customers. "Half of this stuff we do is for the garage-built guy, and the guys do have questions," he said.

"My whole goal is to be able to help educate these people and say, 'Hey, my parts will work if you do it this way.' Most of the time the other guys aren't going to tell them any of those tips or tricks. I don't mind spending 10 minutes or 20 minutes or whatever it is with the customers to educate them and tell them they can make this work





Garrett Stanley puts a premium on customer service at Oddball Motorsports. His commitment to his customers goes above and beyond just selling parts and fosters a loyalty among his clientele that is more like a friendship than a typical customer/ vendor relationship.

if they do this and that. It's really paid off to be a good thing," Stanley added.

#### BEYOND THE CUSTOMER RELATIONSHIP

Building this kind of bridge of trust between a company and the customer is not the norm for many businesses, but Oddball Motorsports is not your average business. Its commitment to the customer definitely goes above and beyond just selling parts and more often than not creates loyal customers who view the relationship more as a friendship than a vendor/customer situation.

Evan Graham, a longtime customer, is

quick to testify to this. "He's given me a lot of very good insight," Graham explained. "He knows a lot more than I can imagine. He basically can build anything he can possibly imagine; you ask him to do something, he's going to find a way to do it. He always wants to work with you.

"I trust him with everything," Graham continued. "If I'm set on a certain way I want to build it, and he says, 'Dude, I know another way to do it,' I trust him completely with everything. I don't question it at all. We'll talk and he'll tell me why it's a better way.

"There was a time I went with him to EI Paso for an off-road race to do some testing for him. He let me drive the truck. We had only met five months beforehand, and he let me get into his race truck that he had just finished building. He trusted me to hop in there so he could video it. I wasn't taking it easy on it. I ended up bending one of the I-beams on the truck before the race.



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"He'd always been humble and super-cool to me, and to do something like that to him really got to me," Graham admitted. "To get respect you've got to earn it. He had earned every bit of my respect, 100%. So when I did that, I had to find every sort of way to fix it so that I could get him back in the seat to race. And I did. We got him back in the seat and raced the entire race, and he was humble enough to let me get into the last lap of the race. After I had already broken his truck, he's letting me finish the race in his race truck," Graham concluded.

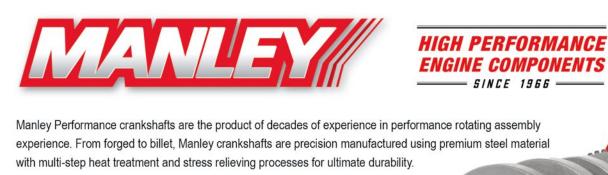
Longtime customer Brian Pajor agreed, and he shared how Stanley's personalized service was why he became a loyal customer. "I'd been looking into building a Ford Ranger and was looking into a longtravel suspension with an LS block," Pajor said. "I was looking over the Internet for the engine swap and motor mounts and Oddball Motorsports popped up. It was between him and another company. I called



When Garrett Stanley hires an employee, he trains that person to execute the high quality of work he expects; he also strives to keep his employees happy so they'll stay at the company. "The guys who a<u>re with</u> me have been with me for a little while," Stanley told us.

the other company, and they didn't give me the time of day.

"I was starting from scratch, square-one for long-travel, four-link suspension and all that stuff not really knowing a whole lot," Pajor continued. "So I thought, 'Okay, let me try this company,' and off the bat I was on the phone with him for about two hours just going in-depth. He just talked me through everything, and from that first interaction



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"We do a little bit of everything," Garrett Stanley said. "If I'm not selling parts, I'm building cars, and if I'm not building cars, I'm selling parts. I really need to hire two more guys just to work off some of these big builds."

on the phone, I knew this was someone I wanted to do business with. I could tell he wasn't BS'ing me, he wasn't trying to sell me stuff just to sell me stuff. He was selling me the stuff that I would actually need. "Any question I had, I could call him any time and he would give me answers. When I bought the kit, he flew down from Texas to Florida to custom fit everything to my truck. He came down and made sure it all fit, just to make sure it was done right. The customer service, to me, goes a long way. He'll go above and beyond, finding me the best deal and not selling me something I don't need. Just slowly, piece by piece, building my project and him taking the time to talk to me. He explains the purpose of it and why I need to do it this way and not that way. Making sure whatever product he sells me is the right product for what I need.

"I can't say enough about how much I appreciate him taking the time and not taking advantage of anybody," continued Pajor. "His work speaks volumes, too. The welds, the fabrication parts, are just amazing. I never got the vibe from him that he was just trying to make a buck. It's a dream come true doing what I'm doing, and without his help I'd be completely lost. There's no way I'd be where I'm at without Garrett. He's awesome! I can't do more than a five-star review."



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The market for motorsports trailers is not only blistering hot, it's a microcosm of the political, industrial, and competitive landscapes in racing today.

By Mike Magda

PERFORMANCE RACING INDU

djacent to I-44 and a half-mile from the original Route 66 road that runs through the colorful town of Cuba, Missouri, is a large grassy lot set aside for trailers and motorhomes. It's the property of Flying A Motorsports, a dealer for numerous national trailer manufacturers. At any given time this past summer, there was an average of 20 to 25 car-hauling trailers on display.

"We're used to having 200, and eight to 10 motorhomes," said Alan Cape, sighing.

Insight into the motorsports trailer industry today is pretty much a reflection of the entire country's industrial woes as well as its joyous times. Trailers dedicated to racers' needs are backordered for up to two years at some manufacturers. The strong demand is hindered by shortages of raw materials, supply-line issues for critical electronic- and chassis-related equipment, and a lack of returning skilled labor caused by the pandemic.

"We're starting to get inventory back, but it's the cheaper style of trailer," said Cape. "We don't make much money on them, and they're not as popular or desirable right now. What's desirable are the more equipped and more expensive race car trailers, and we can't get those in stock. We do have a bunch of orders, which, when we get them in are delivered right away to the customer. But as far as inventory, we really can't get any."

There's a similar concern at Eldorado Trailer Sales in Eldorado, Wisconsin. "Pre-COVID-19 we kept about 250 trailers and 15 coaches on the lot," explained Abby Kopf. "Currently we have about 150 trailers, and we're averaging between two and four motorhomes."

Kopf said coach orders are a year out, and a large number of trailer orders are up to six months out. "We're starting to catch up, but we're still having a hard time keeping inventory in stock," she explained. "What we're getting in now is product that has been on order for a long time and comes in with a customer's name on it."

One lot owner was so concerned about having enough inventory he purchased his own trailer manufacturing company. "I own two lots, and that was my biggest reason for purchasing United, so I can control my inventory better on my lots and improve the product for every other dealer," said Jason Dietsch of United Trailers, Bristol, Indiana. "We can pretty much supply somebody and they can get something within 12 to 16 weeks."

#### **INDUSTRY UPDATE**

Driving the demand the past year has been a busy motorsports schedule with full fields at many tracks and a growing number of racers in certain disciplines, such as Outlaw drag racing. A strong economy, although tempered with high inflation, continues pushing race teams to travel farther and more often. In doing so, they're all looking for extra features that provide comfort and utility.

"It really is the best it's ever been," said Mike Nichols

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What buyers are looking for are the "more equipped and more expensive race car trailers," said Alan Cape of Flying A Motorsports. Unfortunately, "we can't get those in stock," he noted. Those that do arrive on his lot are pre-sold and "delivered right away."

of Haulmark, which is part of the American Cargo Group and is based in Elkhart, Indiana. "We see so many new racers coming in and moving up through the ranks. It's obviously new racers and the expanding race industry that have been good to us. We've had two back-to-back record years. We've delivered more than 600 highly customized race units this year."

Nichols said the motorsports trailer industry is coping with the same supplychain issues as housing, RVs, and just about all manufacturing, yet his company is looking ahead offering new innovations for the 2023 line—which will be on display at the PRI Trade Show in December.

"We have a lot of great racer-friendly changes coming up," said Nichols. "We are going to more rigid and sturdy sidewalls. We're trying to eliminate the oil-can effect and as much wood in the trailer as possible, so we can make the trailer lighter and sturdier. We're upgrading our LED light and stereo features. We'll be leading the way again with new features this year."

Perhaps the biggest challenge currently for the industry is labor. While the actual numbers may vary from company to company, most are feeling the pinch of either not enough labor or the loss of experienced, skilled workers.

"Some of our manufacturers are down

as much as 40% from max capacity of employees," noted Kopf.

"It's finding good people who want to consistently work and stay in a position and grow with a company," said Terry O'Neill at Bravo Trailers, Bristol, Indiana. "We are growing as a business. We are expanding our facility here to meet the demand head-on while coming up with new innovative ideas to be one of the industry leaders. But you have to have good people employed. You have to have good skilled craftsmen and individuals who want to come in and do the best job they can every day."

At Victory Custom Trailers & Motorcoaches in Metamora, Michigan, it's a similar story of



Haulmark is implementing "great racer-friendly changes" for 2022, said Mike Nichols, including making trailers lighter and sturdier, and upgrading features.

strong sales that are sometimes hampered by supply or labor challenges.

"I think everybody's about maxed out on their production," said Chris Heffinger. "Several of our manufacturers are building new facilities, trying to increase production. I'm sure suppliers are also doing the same trying to get production up—the axle companies, the light companies.

"The bottleneck has been supplies, both raw materials and manufactured components, but then there's labor," continued Heffinger. "It's just hard getting employees, and everybody's facing that in every industry. I feel the manufacturers have done a really good job of trying to increase production as much as they can but not sacrifice the quality of the product."

"It's the same as the world in general," agreed Cape. "Motorhomes can't get furniture, sometimes generators are slow for a while, and air conditioners are hard to get for a while. So it's just a combination of things that have been hard to get. Our higherpriced race car trailers have sliding-glass doors. Well, you think you'll get your doors in one place, but all of a sudden they're hard to find and they've quadrupled in price."

Brad Bell of Formula Trailers in Bristol, Indiana, acknowledged that there's been limited inventory since the COVID-19 crisis began, but his employee count is back to normal, and he's upbeat about the racing industry overall.

"Motorsports remain strong, and the custom end of the trailer business is still out there. Some of the industry is slowed down a bit due to fuel prices and inflation. But the accounts that I work with, for the racers, I would say it's still going strong."

Turnaround times have been a "struggle," Bell added, due to difficulties in securing raw materials, electrical goods, and air conditioners. Current turnaround time for a "mid-range" car hauler at Formula Trailers is nine to 12 weeks.

"Turnaround time is getting better," observed Bell. "We are at full labor force. Most manufacturers do have a good core group of people, but they're always trying to add a little bit here and there just to finalize their equation. Still, we have a full crew at present."



#### **ESSENTIAL OPTIONS**

Besides labor issues and an erratic supply chain, the key factor in driving the lead time is the demand for high-end product and features. The days of racers settling for a basic trailer to load up and go to the track is over.

"Everything we do is very, very high-end and large," noted Todd Datweiler of T&E Enterprises Auto Haulers, Herscher, Illinois. "Almost everything we do is multiple-car trailers, like big stackers and semi-trailers. That's our niche."

"Most of our trailers are high-end and fully equipped," said Dietsch. "We build stackers, goosenecks, bathroom trailers."

"Most of the teams want a turnkey unit when it is finished, so that they're basically loading up their equipment and going to the track," added Mike Galvin of Featherlite Trailers, Cresco, Iowa. "We're doing more with installing all of their IT equipment and making sure it networks properly prior to it being delivered.

"The teams are a lot more focused on the little items that make their job easier," continued Galvin. "So putting an order together probably is a little bit more specific now than it was in the past. A lot of the teams that I work with, they used to order a trailer and tell us to build it like the last one but add this to give it a little different look. Now, the teams are really focusing on what area somebody's going to be working in and the items they need to make that happen."

Galvin referenced one example where a customer who normally had his trailers



"Most of the teams want a turnkey unit when it's finished," said Mike Galvin of Featherlite Trailers. "Putting an order together is more specific now than it was in the



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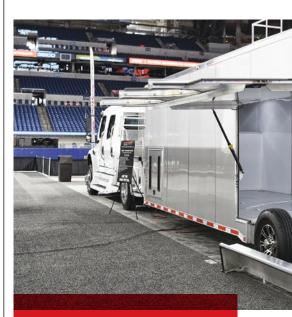
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TRAILERS



"The trailer industry has evolved significantly in just the last five years," said Chris Heffinger of Victory Custom Trailers & Motorcoaches, with more emphasis on amenities that are beneficial to racers and their families.

built with a stainless-steel exterior has now requested that the sheathing come from just one location in the world.

"We can only order it in that one place, and it's a very specific product that has unbelievable clarity in the stainless," explained Galvin. "We're building two of those units right now. We're also providing more electronics and the ability for the customers to clearly talk from the track back to their home facility."

Connectivity is a growing feature that teams need in highly competitive racing. Data can be relayed to a tuning specialist or the engine builder in a remote location. Also, teams need to be hooked up to their social media outlets to provide up-to-the-minute reports.

"You almost have to have an AV specialist on your staff to take care of the needs some customers want," said Galvin. "There's just a lot more detail in today's trailer."

"Take a simple battery indicator," said O'Neill. "All of these trailers have batteries in them, especially the high-end race trailers. However, you never know the level of your battery with regards to the charge. Now I can





just look on the wall to see if I need to charge it or not. Just little things like that."

"It's everything technical these days," agreed Dietsch. "I work with guys programming cars, and you have to be Internet-capable."

#### **CAUTIOUS OPTIMISM**

Looking ahead, the industry shares a cautious optimism—given the inflation numbers and upcoming national election— mostly due to strong orders and decreasing lead time.

"We're extremely busy," said Datweiler. "Typically, when we've seen high fuel prices things have slowed down a little bit. But I really don't know, I'm just hopeful things straighten out. I don't think it will ever get all the way back to what I refer to as normal, but it is heading that direction, anyway. It is getting better."

Finally, there are some new racing essentials evolving in the industry these days that are also driving motorsports designs. Not just the extra space, advanced electronic features, and cool color schemes that are important to racing consumers, but family considerations are playing into the custom orders.

"Now, travel is more of a luxury. Also, they want to save time by having the trailer organized and have certain options and features in the trailer in case there's a problem at the track," said Heffinger. "It SERVES UNIVERSAL TRANSMISSION OIL COOLERS ENGINES ARE COOL. OVERHEATED TRANSMISSIONS ARE NOT!

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### WORDS OF ADVICE

here's a lot of push-pull in the motorsports trailer industry these days. Demand is at an all-time high, yet at the same time delivery of product is being checked by supply chain difficulties and uncertain labor conditions. To help guide potential consumers through this market, manufacturers and dealers are advising them to study and compare the market, be honest and realistic about their needs and expectations, and perhaps most importantly, buy now! Following is a sample of their recommendations:

"Well, racers, there hasn't been much inventory around. So, yes, you need to order. I've always been one to [recommend]—when I talk to the racers, especially at PRI—to order. That way you get exactly what you want, right down to the color scheme of how the interior is built. I would say the used market is very slim, and the pricing on used trailers is right up there. If you could find one, buy it. But good luck on finding one that will fit your needs. —Brad Bell, Formula Trailers

"Do your homework. Everybody is strategically trying to get in front of the racers, the consumer. Most of the time, you will see a manufacturer strategize using price or discounts or rebates to move product. The most important advice I can give customers is to understand what you are buying. At today's price, everybody seems to be in the same boat. But it's very important for that consumer to understand and know exactly what they want. And among all of us competitors, who is going to fit the mold perfectly for that customer. Just do your homework. —*Terry O'Neill, Bravo Trailers* 

"I would buy now and get yourself in the slots. Because I don't see our production slowing down at all by any means. But the biggest thing I tell people who are starting to get into the sport or have had a trailer for a long time, it's a substantial investment. My advice to any team is find somebody that you're comfortable with. Find somebody who is knowledgeable about the product in the series that they're racing in, and work with that person. So many fly-by-nights out there are going to tell you all kinds of stories. We're going on our 50th year here at Featherlite. —*Mike Galvin, Featherlite Trailers* 

> "Buy now," said Featherlite's Mike Galvin, "and get yourself in the slots. I don't see our production slowing down at all."



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has become so important that trailer design is way above what it was five years ago. People used to buy a \$20,000 trailer and that was loaded up because they had cabinets and lights in it, and maybe had a tire rack because they thought that's all they needed.

"Well, now we're getting into bathrooms, air conditioning, built-in generators, and just a lot of custom options that really make race day much more beneficial for them," continued Heffinger. "Now, you're seeing a lot more families go to the track, not just the dad and his buddies. Wives are now having more input in the design of the trailer. Obviously, the prices of the trailers are way up, but we've been able to finance them to make it more feasible for everybody. However, the trailer industry has definitely evolved significantly just in the last five years."

#### SOURCES

Bravo Trailers bravotrailers.com

Eldorado Trailer Sales eldoradotrailersales.com

Featherlite Trailers fthr.com

Flying A Motorsports flyingamotorsports.com

Formula Trailers formulatrailers.com

Haulmark haulmark.com

inTech Trailers intechtrailers.com

Jason Dietsch Trailer Sales jasondietschtrailersales.com

T&E Ent. Auto Haulers tande-racetrailers.com

United Trailers united-trailers.com

Victory Custom Trailers & Motorcoaches victorycustomtrailers.com



#### UNLOCK YOUR VEHICLE'S MAXIMUM POTENTIAL!!!

EFILive V3

Put the right tools in your toolbox! FlashScan V3 from EFILive allows you to scan, data log and reprogram your vehicle for maximum performance and outstanding drivability. For full specifications and compatibility, visit our website.



EFILive, V3

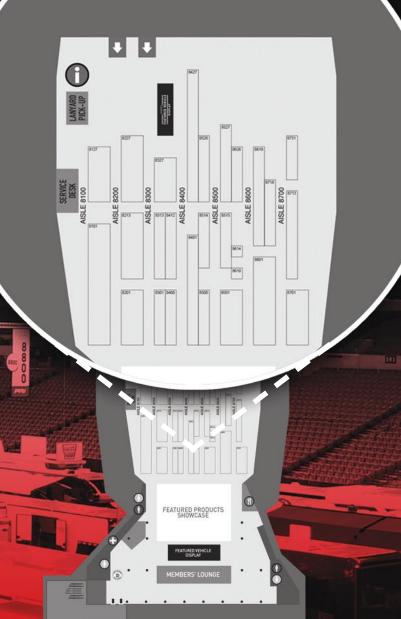
ARRADORO DE LA CONTRACTA DE LA

Need to fit more parts and equipment in your hauler? If it's time for an upgrade, then a visit to Lucas Oil Stadium should be at the top of your agenda during the PRI Trade Show, December 8–10, to see the latest models of trailers, motorhomes and toter homes featuring state-of-the-art designs and accessories to keep your gear organized and optimized. Visit *pri2022.com/floorplan* for updated exhibitor listings.

\* List current as of August 9

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### LUCAS OIL STADIUM



#### **BRAVO TRAILERS**

bravotrailers.com Booths 8514 & 8515 Enclosed Race Trailers

#### **CAPITOL CUSTOM TRAILERS AND COACHES**

capitolrenegade.com Booth 8101 Coaches and Trailers

#### **DYLANS RV CENTER**

**dylansrv.com** Booth 8601 Motor Coaches

#### **ELDORADO TRAILER SALES**

eldoradotrailersales.com Booth 8227 Bolt Custom Coaches, Renegade, Showhauler

#### **FEATHERLITE TRAILERS**

**fthr.com** Booth 8401 Car Trailers

#### **FLYING A MOTORSPORTS**

**flyingamotorsports.com** Booth 8501 Trailers

#### **FORMULA TRAILERS**

formulatrailers.com Booth 8500 Enclosed Race Car Trailer

#### HAULMARK RACING TRAILERS

haulmark.com Booths 8201 & 8301 Enclosed Racing Trailers

#### INTECH

**intechtrailers.com** Booth 8701 Enclosed Car Hauler

#### **JASON DIETSCH TRAILER SALES**

jasondietschtrailersales.com Booth 8327 Custom Aluminum Race Trailer and Toterhome

#### **KB TRAILER SALES**

**kbtrailersales.com** Booth 8412 Trailers

Continued on page 88

#### **ARROW COMPONENTS**

#### ARROW FLIP BENCH

- Mounts on 48-inch centers.
- All clear anodized aluminum construction.
- Many machined parts.
- Over 200 lbs. capacity.
- Two sets of mount pins included.
- Special hardware for FRP trailers available.
- Custom widths available.

#### For more info: arrowawnings.com



#### **FLYING A MOTORSPORTS**



ARROW @

#### **RACE TRAILERS**

- Flying A Motorsports has been in business since 1988 and has seen many changes during this time, but that hasn't changed how the company does business.
- Honest, fair, responsibly.
- Offers great prices, financing trades, consignments, and knowledgeable people to help customers.

#### For more info: flyingamotorsports.com



#### **EQ SYSTEMS**

#### CUSTOM HYDRAULIC LIFTING & LEVELING SOLUTIONS

- Universal three-hole bolt pattern for easy installation in A-frame trailers.
- 6,000-pound lifting capacity and 16 inches of stroke.
- Commercial single function pump with manual override, rocker-style switch control with keyed lockout.

#### For more info: eqsystems.us



#### INTECH TRAILERS

# inTech

#### ALL-ALUMINUM TRAILERS

- All aluminum, all tube construction.
- Exclusive customer portal for access to prints, construction photos, and much more.
- Meticulous attention to detail and quality.

#### For more info: intech.com





#### **MAC'S TIE-DOWNS**

#### **VERSATIE TRACK AND FITTINGS**

- Four profiles (surface mount and recessed).
- Custom lengths up to 16 degrees.
- Attach point every inch.
- 3,000-pound minimum breaking strength (vertical pull).
- Full line of VersaTie fittings for light- and heavy-duty hauling.

#### For more info: macstiedowns.com



#### **SHOCKER HITCH**



🔭 mac

#### **AIR RIDE TOWING HITCHES**

- On a mission to make towing smoother and safer.
- Offers a hitch for all towing needs: Air Receiver Hitches, Trailer Tongue Mounts, The Gooseneck Surge, Quick Air Fifth Wheel, an array of ball mounts, and more.
- Manufactured with precision in Arthur, North Dakota.

#### For more info: shockerhitch.com



#### MAXX-D TRAILERS



- Super low loading angle.
- No ramps needed.
- Easy tie-down with E-trac system.
- Push-button controls.
- Ultra smooth ride.
- Head-turning, unique look.

#### For more info: maxxdtrailers.com



#### **T&E ENTERPRISES**



#### CUSTOM-BUILT ALUMINUM RACE TRAILERS

- Custom built by racers for racers with unmatched quality and trendsetting designs.
- The company designs and builds trailers for sportsman-class racers as well as for the pro-class racers.
- The lineup consists of Pull-a-Long Bumper Pull trailers, gooseneck/ fifth-wheel trailers, stacker trailers, sprint car trailers, semi trailers, vending trailers, and coach trailers.
- Offers personalized support and excellent customer service.
- For more info: tande-racetrailers.com



#### TECHNOCRAFT

#### WHEEL WELL CABINET

• Three full length shelves.

- Custom sizes available upon request.
- Wheel Well Cabinets provide ultimate storage using very little space.

#### For more info: trailercabinets.com



#### TURN 2 RACING COMMUNICATIONS



#### **TRAILER CURTAINS**

- Economical solution to keep the A/C in the trailer during the hot months, and the heat when it's cold.
- Keeps trailer interior private and helps keep dust out.
- Custom made to order and come standard with the 1/4 Turn Twist Locking Mounting Solution, two clear PVC vinyl windows as zipper center closure.
- Team logo, sponsor, etc. can be printed on the curtains.
- Options include tinted windows, magnet center closure, full zipper rail mounting system, and just about anything you want to add to the curtain.

#### For more info: turn2rc.com



#### **TRAILER ALARMS, LLC**



#### PTS-2W BY TRAILER ALARMS, LLC

- Video recording when alarm is triggered.
- Easy access through app.
- Remotely arm/disarm.
- Notification and video emailed when alarm is triggered.
- No monthly fees (Wi-Fi required).
- Flashes trailer lights.
- Sounds 120-db siren.
- Locks electric brakes.
- Customized solutions like this are available.

#### For more info: trailer-alarms.com



#### Continued from page 85

#### LB TRAILERS

Ibtrailers.com Booth 8526 2023 48' Vintage Trailer

#### MAXX-D TRAILERS

maxxdtrailers.com Booth 8626 TTX 36, N6X 24', A6X 24'

#### MOTORVAULT

**motorvault.com** Booth 8719 Futura Trailers

#### OVER KILL MOTORSPORTS

okmotorsports.com Booth 8527 Stacker Trailer

#### **PACE TRAILERS**

**looktrailers.com** Booth 8400 Race Trailer

#### **R&M RACE TRAILERS**

rmtrailer.com Booth 8313 Enclosed Race Trailers

**RPM TRAILER SALES** 

rpmtrailersales.com Booth 8213 Custom Aluminum Trailers

#### **TRAILER CAPITAL USA**

trailercapitalusa.com Booth 8618 Enclosed Race Trailers

#### **UNITED TRAILERS**

**united-trailers.com** Booth 8427 Race Trailers

#### WINTERS TRAILER SALES

winterstrailersales.com Booth 8700 Continental Cargo Trailers

# COUNTING DOWN TO A CONVENTION CENTER, INDIANAPOLIS, IN

PERFORMANCE RACING INDUSTRY

# 2022 PRI TRADE



**NEW FOR 2022** YOU MUST BE A QUALIFIED INDUSTRY PROFESSIONAL AND BE A PRI MEMBER TO ATTEND THE SHOW. FIND OUT MORE AT **PERFORMANCERACING.COM/MEMBERSHIP** 

**#IAMPRI** 

# HERE'S WHAT YOU GET WITH YOUR MEMBERSHIP...

#### PRO MEMBER: \$40/YEAR

- Admission to the PRI Show for Qualified Attendees
- Save our Racecars Advocacy
- Inclusion in the Performance Racing PAC
- 12 Issues of PRI Magazine Digital Edition

#### **CHAMPION MEMBER: \$250/YEAR**

- Admission to the PRI Show for Qualified Attendees
- Save our Racecars Advocacy
- Inclusion in the Performance Racing PAC
- 12 Issues of PRI Magazine Print Edition
- Subscription to the PRI eNewsletter
- Posting Access on the PRI Jobs Board

- Subscription to the PRI eNewsletter
- Posting Access on the PRI Jobs Board
- PRI Membership Card & Welcome Packet
- PRI Decals
- Enhanced PRI Membership Card & Welcome Packet
- PRI Decals
- Exclusive Entertainment Discounts and Events
- PRI Swag Pack
- More Exclusive Benefits and Discounts

#### **BUSINESS MEMBER: STARTING AT \$295/YEAR**

- SAVE OUR RACECARS: Contribute to the fight to protect the racing community, and ensure racing continues and grows in the United States and internationally
- LEGISLATIVE ADVOCACY: Support the PRI Washington, D.C. office as well as local and state representation for the industry
- LEGAL COUNSEL: Get updates, reports, best practices, and more information on legal issues affecting the motorsports industry. PRI does not offer specific legal advice
- LEGAL SUPPORT HOTLINE: Access to assistance from PRI staff for insight and information on issues affecting racing businesses
- PRI EDUCATION: Educational programming and training for racing professionals and enthusiasts
- MARKET RESEARCH REPORTS: PRI Business Members will get Exclusive industry reports from PRI covering important topics in the business of racing
- PRI JOBS BOARD: Coming soon, a central location to post industry jobs
- 10% DISCOUNT ON PRI TRADE SHOW BOOTH SPACE: PRI Trade Show exhibitors enjoy a significant discount on booth space
- PLUS MORE: PRI is actively developing additional member benefits that will be rolled out in the coming months

#### JOIN TODAY! LEARN MORE AT PERFORMANCERACING.COM/MEMBERSHIP

# **SHO VI DECEMBER 8-10** INDIANA CONVENTION CENTER, INDIANAPOLIS, IN

# SHOW EVENTS



**GRAND OPENING BREAKFAST** Live talk show-style program with host and special quests



**RACE TRACK BUSINESS** CONFERENCE Cutting-edge sessions on opportunities and developments in racing

**PRI HAPPY HOUR** Wrapping up day one with appetizers, beverages, and live music

**INTERNATIONAL COUNCIL OF** 

**MOTORSPORT SCIENCES** 

**ANNUAL CONGRESS** 





**PRI HEADOUARTERS** The hub for all things PRI: Membership, Magazine, PAC and more

CONTENT **CREATION ZONE** 

Meet and learn from the industry's leading social media influencers

**EV PERFORMANCE ZONE** Discover the latest in electric vehicle technology and capabilities

**HOT RODDERS OF** TOMORROW Timed engine competition featuring the nation's top high school teams

Scientific and medical experts present advances in motorsports safety FEATURED PRODUCTS SHOWCASE

The newest and hottest parts and gear from PRI Trade Show exhibitors











# 2022 PRI TRADE

# S E M I N A R S







EV

#### THURSDAY, DEC. 8 | 1:00 PM - 2:00 PM EV PERFORMANCE: PUSHING LIMITS & BREAKING RECORDS

THURSDAY, DEC. 8 | 3:00 PM - 4:00 PM EVs: The computer Modeling connection

#### FRIDAY, DEC. 9 | 10:00 AM - 11:00 AM BUSINESS OPPORTUNITIES IN THE EV CONVERSION & MOTORSPORTS MARKETS

FRIDAY, DEC. 9 | 3:00 PM - 4:00 PM How to get your ev Wheels turning

#### SATURDAY, DEC. 10 | 10:00 AM- 11:00 AM RACING AND PERFORMANCE ELECTRIFICATION: TESTING/ SAFETY/TECHNOLOGY

SATURDAY, DEC. 10 | 11:00 AM - 2:00 PM EV RACING & GENERATIONS NEXT

#### TECH

THURSDAY, DEC. 8 | 10:30 AM - 11:30 AM How to choose the Right turbocharger

THURSDAY, DEC. 8 | 1:00 PM - 2:00 PM FAILURE ANALYSIS: BROKEN PARTS AND THE TALES THEY TELL

FRIDAY, DEC. 9 | 10:00 AM - 11:00 AM THE SHAKE, RATTLE & ROLL OF CRANKS & BEARINGS

#### FRIDAY, DEC. 9 | 1:00 PM - 2:00 PM UNLOCKING HORSEPOWER THROUGH A SYSTEMS APPROACH

#### FRIDAY, DEC. 9 | 3:00 PM - 4:30 PM ALL-STAR PANEL: PROFESSIONAL CYLINDER HEAD/INDUCTION SYSTEM DESIGNERS

#### SATURDAY, DEC. 10 | 10:00 AM - 11:00 AM THE ULTIMATE DIRT LATE MODEL SETUP SESSION

SATURDAY, DEC. 10 | 11:00 AM - 2:30 PM CLEAN PERFORMANCE TUNING FOR THE FUTURE (ALTHOUGH YOU SHOULD BE DOING IT NOW!)

#### BUSINESS

THURSDAY, DEC. 8 | 10:30 AM - 11:30 AM Strategies to win in A Tough Economy

THURSDAY, DEC. 8 | 3:00 PM - 4:00 PM Social Media Marketing TIPS & TRICKS

FRIDAY, DEC. 9 | 10:00 AM - 11:00 AM WOMEN IN MOTORSPORTS PANEL

FRIDAY, DEC. 9 | 1:00 PM - 2:30 PM FACEBOOK & IG: BETTER RESULTS & LESS WORK (!)

#### SATURDAY, DEC. 10 | 10:00 AM - 11:00 AM

MOTORSPORTS SPONSORSHIP SALES IN THE DIGITAL ERA

# **SHOW DECEMBER 8-10** INDIANA CONVENTION CENTER, INDIANAPOLIS, IN

# MACHINERY ROW

# TOPS WORKROOM AND LOUNGE

0



The TOPS Workroom and Lounge area is the headquarters, meeting spot, or take a break room, with tables, chairs, and comfortable couches exclusively for track and sanction officials, management, and staff. Admission is included with your PRI Membership. Small (up to 12) meeting room space is available.

#### **TOPS MEETING SCHEDULE ROOM 132**

#### **THURSDAY:** 9:15 AM - 12:00 PM **ROAD COURSE ROUNDTABLE HOSTED BY TIM FROST / RTBC**

1:00 PM TO 5:00 PM **OVAL TRACK ROUNDTABLE HOSTED BY JOE SKOTNICKI / RPM WORKSHOPS** 

#### FRIDAY:

9:00 AM - 4:00 PM DRAG RACING ROUNDTABLE HOSTED BY KURT JOHNSON / **TOTAL VENUE CONCEPTS** 

4:00 PM TO 6:30 PM TRACK OPERATOR/SANCTION **BREWS AND BS HAPPY HOUR** 

SATURDAY: 9:30 AM - NOON **COME ONE AND COME ALL** - TRACK OPERATION IDEA **EXCHANGE FOR ALL TYPES OF RACING** 



MACHINERY ROW: From CNC machines to welding equipment, parts cleaners, tooling and more, this area is a true destination point for PRI Show attendees.

# TRAILER EXHIBITS



**INDOOR TRAILER EXHIBITS:** Lucas Oil Stadium plays host to dozens of the newest trailers, haulers, RVs and toter homes from the industry's top manufacturers.

# 2022 PRI TRADE

# 2022 PRI TRADE SHOW EXHIBITORS \*As of 8/9/22



#GRIDI IFF



CCA Racing Products

Centrnid Performance Racing





Farris Equipment Sales





1 Way Technolog 3030 Autosport Forged Performance Wheels 3pConnect 4 Piston Racing A&A Manufacturi ABRO Balancing Inc Abruzzi Racing Transmission ABS Products Accelerated Surface Finishing Accelo Racewea Accu-Force Dynos & Testers ACL Performance Bearing ACME Trading Acumatica Cloud ERP Advanced Clutch Technology Advanced Composite Products Inc - ACP Stahl Headers Advanced Product Design Advanced Racing Suspensio Advanced Sleeve Advantage Lifts AED Motorsport AED Performance AERA Engine Builders Association Aero Exhaust AERO Race Wheels Aeromotive Inc Affordable Fuel Injection Inc. AFR-Air Flow Research - Scat Enterprises Procar by Scat AHDRA AiM Sports LLC AJE Susper Alcon Brakes - Pro-System Alitrax International P/L All Pro Cylinder Heads Inc All Out Porformance Allstar Performance Allstate Carburetor Alpinestars Alto Products Corp Altronics Inc. American Electronics American Flat Track American Race Cars American Racer Amick Associates Inc. AMSOIL Inc Anderson Composite: Andrews Products Inc Antioravity Ratteries AP Racing ApexTurbo LLC ARE Dry Sump Systems - Spintric Arno Manufacturing Co Arias Pistons Arizona Sport Shirts - Gotta Race ARP Inc Arrow Components Corp Arrow Precision Engineering ASCS Ashcroft Ini ASNII Atech Motorsports ATI Performance Products Inc ATL Racing Fuel Cells ATM Innovation Atturo Tire Corp Aurora Bearing Company

AUS Injection Inc Auto Verdi Automatic Transmission Design Automotive Centre of Excellence AutoRod Corporation Autotech Driveline Autotuner AVIAID Oil Systems AVIORACI AVI AWA Forned Composites AXE Equipment Bad Dog Tools Baker Engineerin Bassett Racing Wheel **BBK** Performance BBS of America - KW Automotive BD Diesel Be Cool Inc Rehrent's Performance Warehouse Bell Racing - Racing Force USA Rend-Tech Rort Tranem Reta Tools **Revea Headers** Bill Mitchell Hardcore Racing Products Billet Connection - Clear View Filtration Billet Specialties Inc Rishko Automobile Literature Black Belt Racing Blaser Swisslube In Blower Drive Service **Blue Demon Welding Products BluePrint Engines** BMR Suspension Boker's In RoltsandNuts con **Boninfante** Roostline BoroWarner Borla Performance Industries Ind Borowski Race Engines Inc Bosch Motorsport BOSS HOG Torque Converters Ross Tables Roundary Pumps Braille Battery Inc BrakeOMeter LLC Bravo Trailers LLC Brian Tooley Racing Inc Briggs & Stratton Racing Engines **Brinn Transmissions** Browell Bell Housing Brown & Miller Racing Solutions Bullet Racing Cams Bullet Racing Engines Burr King Manufacturing Co Ini Burmman Butlerbuilt Motorsports Equipment Buzze Racing - Buzze Axles C & S Specialties Calico Coatings Callies Performance Products - Energy Manufacturing Cam Motion Inc Canton Racing Products Canitol Custom Trailers and Coaches Carr Lane Manufacturing

Carter Americas LLC

Chamn Pans Champion Oil ChassisSim CHE Precision Inc Chevrolet Performance Chillout Systems ClampTite LLC Clarendon Specialty Fasteners Inc Clark Conner Head Gaskets Inc. Classic Dash Classic Instruments Clay Smith Cams Click Bond **Clinton Aluminur** Cloyes Coan Engineering Cobra - Detroit Torch Coker Tire Coleman Machine Inc Cometic Gasket Inc. COMP Come Comp Turbo Competition Suspe Composite Fabrics of America Concept Performance Corghi USA CorteX Racing CP-Carrillo Ini Creative Racing Crower Cams & Equipment Co Inc CSF Cooling **CTECH Manufacturing** CTEK Inc CTW Automation Cunningham Precision Group Curto-Linonier Foundries Co. **Custom Performance Engineering** CVF Racing CWT Industrias LLC **Cylinder Head Abrasives D&J** Precision Machine Daido Metal USA Dailev Engineerir Dakota Illtrasonics Dan Olson Racing Products Dart Machinerv Darton Sleeve Data Here-to-There Davis Technologies LLC DAYCO Products Inc. Dayton Lamina - DAYlube DeatschWerks Fuel System Decal Shon - Racer Walsh Defiant Metal Delta Custom Tools Delta PAG Derale Performance Design Engineering Inc - DEI **Diamond Racing Products** Dice Performance Converter **DIESEL Motorsports** Diode Dynamics Dirt Car Lift Dirt Empire Magazine DMI Racing Components - Bulldog Quick Change Rears DMP Awnings LLC

DMPF Inc

Dodson Motorsport Dominator Race Products Dontyne Gears Ltd Draco Racino Drag Illustrated Media LLC Drain Daddie DRC Race Products Drexler Motorsport USA Driven Racino Oil DRP Performance Products DSS Racing Pistons DTS Drivetrain Specialists Duco Performance Dura-Bond Dyer's Top Rods LI C Dylans RV Center Dynabrade Inc Dynamic Drivelines Dynapack Dynamometer Dynacom Industries Inc Dynoiet Research Inc Dynotech Driveshafts E3 Ignition Eagle Specialty Products EarEverything logies Group Earnhardt Techr FAT SLEEP RACE LLC Eaton Perfo e Ray Motors EBC Brakes EC Carburetors Eclipse Surface Technologies Forroll Cornoration Tool Technology ECORSA Motorsport Non-Petroleum Racino Motor Oil EcuFast FCIIMaste Ed Tillmock Art Eddie Motorsports Edelbrock Edelbrock Group o Flov Fuel Eibach Springs Eide Industries Inc - RaceCanopies.com Eldorado Trailer Sales Electric Drag Racing Association Elgin Industries Eliminator Products Elliotts Custom Trailers and Carts Elring - Das Original EMI Emmforce Inc Emtron Australia Ptv Ltd Energy Suspe Engine Builder Engine Ice - Kost USA Engine Pro EngineQuest Engler Machine & Tool Inc FPARTRADE Eppico Rodman EPT Group - Auto Meter Equalizer System: FTL Performance Products Inc. Exedy Globalparts Corp Exergy Performance Exhaust Gas Techno Extreme Racing Oil & Fuel **F7Sine** Factory Kahne

FASS Diesel Fuel System FAST Fastway Trailer Products Featherlite Trailers Ferrea Racino Components Fidanza Performance Fifth Third Bank Motorsports Group Firebottle FIRMAN Power Equipmen First Brands Groun **FiTech Fuel Injection** Five Star Race Car Bodies Flagtronics by Ballenger Motorsports Flaming River Industries Inc Flatout Group LLC Fleece Performance Engineering Flis Performance LLC Flitz International Ltd Fluid Film Fluidampr - Buffalo Turbine FLUIDYNE High Performance Flying A Motorsports In **FMB Machine** Foqqit Forgeline Motorsports Formula Trailers Fortin Racing Inc Francia Performance Systems - FK Rod Ends Frankenstein Engine Dynamics Fresh Air Systems - FAST Cooling FTI Performance - McLeod - Silver Spor Fuel Factory Fuel Injector Clinic FUELAB FuelTech FCII Full Race Motorsports Full Spectrum Power FURICK CUPS Fytron - Automotive Machine Shop Softwar Gale Force Suspension & Tool Gamma Electronics Gandrud Performance Parts Garmin Internationa Garrett Advancing Motion GB Remanufacturing Inc Gear Vendors Overdrives GET'M Performance GFB Go Fast Bits **GEH** Insulation **GForce Performance Engineering** G-Force Racing Gear G-Force Transi Giant Finishing Inc. GinnerMan Raceway Gladiator Parts Washers Goodridge USA Goodson Tools & Supplies **GRAF** Gearboxes Grannas Racing Grassroots Motorsports Magazir Graymills Corporation Green Bay Anodizing Inc Green Filter - GROUND FORCE Grex Airbrush GripLockTies GRP Connecting Rods-Winberg Crank-shafts-Gibtec Pistons-Western Motorsports **GST Racing Seals** Gusher Pumps - A Ruthman Company

H&W Machine Repair & Rebuilding Inc H B Fuller Haas Automation Inc Hagerty Haltech Hammer Concepts and Designs Hammond Motorsports Hangsterfer's Metalworking Lubricants Harland Sharp Harrop Engineering USA Harts Turho Hastings Air-Energy Control Inc. Hastings Manufacturing Haulmark Racing Trailers Hawk Performanc HC Pacific Headershield Heatshield Products Hedman Performance Grou **HEIDENHAIN** Corn HEM Inc - HE&M SAW Inc Heritage-Crystal Clean HMS Moto Holinger America Holley Hondata Inc Hooker Custom Harness In Hoosier Pattern Ind Hoosier Racino Tire Corp Hot Shot's Secret HotRods by Havliks - Steelhorse Design Howards Cams Howe Racing Enterprises HP Tuners HPL Superior Lubricants HRP - Hepfner Racing Products - Streeter Super Stands Hughes Performance Hunter Engineering Compan Hussey Performance Huth Ben Pearson International HYLIFT- JOHNSON by Topline Hypercraft ICT Billet IDIDIT Ionite Industrial Technologies Ignite Racing Fuel IMCA Impact RaceGear Impact Racing Ind Indiana Oxygen Company Industrial Hard Carbon LLC Indy Cylinder Head InEarz Spor Inferno USA Evewea Inline Tube Inc Innovators West Inc inTech Intercom International Lubricants Inc - Stellar Automotive Group IPM Inc Irontite Products ISC Racers Tape ISKY Racing Cams **ISP** Seats ISSPRO Inc Italian Trade Comm ItalianRP - Rods Pistons Jamison Equipment Inc. Jamo Performance Exhaust

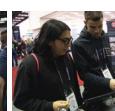
Jason Dietsch Trailer Sales ID Squared Inc IF Pistons Jesel Inc JET Performance Products let-Hot Coatinos IGS Precision Turbo Control Products JMR Manufacturing JMS Chip & Performan Jobbers Warehouse Supply Inc - JPW lones Cam Designs Jones Racing Products Jones Transmission Cooling Systems Jongbloed Racing Wheels IPW Industrie JR1 Racing Oil JRi Shocks JRP Johnston Research & Performance Inc JRZ Suspension Engineering K&K Insurance Group Inc K1 RaceGear K1 Technologies Kaeser Compressors Inc Kaiser Manufacturing Katech Engineering KB Cores KB Trailer Sales **KBS** Coatings Keith Fuln Motorsports Keizer Aluminum Wheels Kelford Cams Kennys Comp Kenny's Pulling Parts & Machine King Engine Bearings King Racing Products - BR Kinsler Fuel Injection Ini Kirkey Racing Fabrication Inc Klotz Synthetic Lubricants LLC KNKUT Kooks Headers & Exhaust KORE Software KPXA KRJ Race Products **KSE Racing Products** Kustom Komponents LLC LA SLEEVE Label Co. The Lafrance Perform Laris Motorsports Insurance Larry Jeffers Race Cars Laser Marking Technologies LAT Racing Oils Late Model Engines Lazer Chassis - Remheisel **I B Trailers** Lear Chemical Research Corp Legacy EV Liberty Engine Parts Inc Liberty's Gears Lifeline Fire & Safety Systems Ltd Lincoln Electric Line2Line Coatings Link Engine Manage LIQUI MOLY Litens High Performance Livernois Motorsports and Engineering LOCK-N-STITCH Inc Longhorn Fah Shon LSM Racing Products Lucas Oil Products Inc

# **SHOVE DECEMBER 8 - 10** INDIANA CONVENTION CENTER, INDIANAPOLIS, IN

#### **EXHIBIT AT THE 2022 PRI TRADE SHOW** CONTACT PRI TODAY: 949.499.5413 PRI2022.COM/EXHIBIT











NASCAR National Auto Sport Association National Donk Racing Association National Performance Warehouse - NPW National Sprint Car Hall of Fame & Museum Neal Chance Racing Neanco Drivelines - Performance Series Neat Gearboxes NecksGen NEO Synthetic Oil New England Gear Polishing LLC Neway Manufacturing NGK Spark Plugs U.S.A. Inc NHRA Nickels Performance Nitro Manufacturing Nitron Racing Shocks Nitrous Express & Snow Performance Nitrous Outlet NMRA Ford Nationals & NMCA Muscle Car Nati Noonan Inc Northern Radiat Nostrum High Performance Inc Nu-Ice Dry Ice Blasting **Oasis Scientific Inc** Oetiker - Jiffy-tite Offroad Motorsports Youth Foundation Ohin Brush Works Ohio Crankshaft OmniWall by Noble Industries Online Resources Inc Optic Armor Windows **OPTIMA Batteries** OptiMate High Performance Battery Chargers OptiTorque Technologies LLC Orthene OTR Filters Outerwears Inc. Outlaw Diesel Super Series Over Kill Motorsports P1 Manufacturing PAC Pace Trailers PAGID Racing Pakelo Lubricants - Risi Performance Oils Palmgren PBM Performance Products PDRA LLC PE Racing neel 3d **PEM Racing** PennGrade PENNZOIL Penske Racino Shock Performance CBN Performance Electronics Performance Plus Global Logistics Performance Plus The Leading Edge Performance Trends Inc. Permatex Personal Positioning Technologies PerTronix Inc PEC Brakes Philadelphia Racing Products Pit Pal Products Pit Weld U Pithoxes com Pit-Pro Custom Carts

Plymouth Tube Co PMAS Technologies PMC Engineering PMD Automotive PML Inc PolyDyn Performance Coatings Ponne-Potthoff POR-15 - American Icon Power Automedia Powerhouse Racing Powermaster Performance PowerMist Racing LLC PRC - Precision Racing Components LLC Precision Turbo & Engine - Turbonetics Pro Sont International Pro Illtrasonics ProCharger Supercharger Systems ProEFI Professional MotorSports Solutions LLC Prn-Filer Performance Products Inc. Promaxx Performance Products Prosub USA ProThings.Com Pro-Tint Inc. ProTorque PRW Performance Pure Drivetrain Solution PWR Advanced Cooling Technology Pyrntect 0A1 **OMP** Racing QualCast LLC Quantum Machinery Group Quarter Master Quick Performance QuickCar Quicksilver **R&M Race Trailers Race Engine Technology** Race Face Brand Developmen Race Monitor **Race Parts Liquidators** Race Ramps Race Star Wheels RACE TECH Manazine Race Tools Direct Race Winning Brands Race Winning Brands - Transmissio Racecar Engineering RACEceiver - Flagge Racechick RaceQuip Racer's Choice Ini Racers For Christ RaceTec Pistons Racetech USA RaceTrack Connection Racetronics Racing Electronics **Racing For Heroes** Racing Optics RacingJunk.com Racingrivets.com Radical Race Gear Radium Engineering RainMaker Inc Randy's Racing Filters Ravbestos Powertrain

Rayfast

RC Components

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MANUFACTURERS CONTINUE TO REPORT STRONG DEMAND FOR ONE-OFF CRANKSHAFTS ACROSS VARIOUS APPLICATIONS, EVEN AS THE LINES BETWEEN CUSTOM AND OFF-THE-SHELF GROW BLURRIER BY THE DAY.

By Mike Magda

rankshaft manufacturers offer a wide variety of counterweight designs, strokes, weight options and journal sizes for popular racing platforms. So many, in fact, that it begs the question: What is a custom crankshaft these days?

"Generally speaking, it's because a racer is trying to build something special or something different," said Tom Molnar of Molnar Technologies, Kentwood, Michigan.

"A custom crankshaft, technically, could be any crankshaft that's different from stock," added Kirk Peters of Howards Cams, Oshkosh, Wisconsin. "More and more crankshaft companies have made the custom add-ons part of their product line."

"If you're looking for something that isn't in the catalog, then it automatically becomes a custom crankshaft," noted Tom Lieb of Scat Crankshafts, Redondo Beach, California.

"Our crank offerings haven't changed much over the last three to five years with the exception of adding a couple of LS billet offerings," said Michael Tokarchik of Manley Performance Products, Lakewood, New Jersey. "Throughout our crank program, our designs don't typically evolve beyond what we launch."

But an off-the-shelf billet crankshaft?

Who would have predicted that for the shopping scenario entering the 21st century when 'billet' was synonymous with 'exotic custom,' and high-quality forgings were still hard to come by outside of factory performance vehicles.

"In the 'old days' when nothing aftermarket was common, the only option was billet," explained Alan Davis of Eagle Specialty Products, Southaven, Mississippi. "Nobody could justify the initial cost of a forging. You saw it first with pistons and cams. Everything high-performance was billet, hence the reputation."

Led by a racing community that quickly accepted new OEM engine platforms, and then overcame its aversion to EFI and boost, the aftermarket industry grew as fast as horsepower levels at the track. Companies selling rotating assembly parts started investing in forge tooling and offering extra crankshaft features such as unique counterweight designs and extra machining to reduce weight.



Despite having a wide variety of off-the-shelf crankshafts available in inventory, most manufacturers also do a robust business in custom cranks. Callies Performance Products made this custom crankshaft for a Nissan RB30 engine developed in Australia by Bullet Racing Engines.

#### STRONG DEMAND

Even though racers have so many options off the shelf or out of the catalog today, there continues to be a strong demand for custom crankshafts. Callies Performance Products has no fewer than six different lines of forged and billet crankshafts in its catalog, and yet the custom orders come in at the rate of two per business day—and that's just for an aging 67-year-old engine platform.

"You'll probably fall over, but last year alone for the old-school small block Chevy, we produced 546 different custom cranks," said Brook Piper of the Fostoria, Ohio-based company. "And I would say 99% were mainly for a custom stroke."

Rules drive much of the demand for a custom-stroke crankshaft. There may be a cubic-inch limit, and the engine builder finds a way to expand the bore on a cylinder block—thereby requiring a unique stroke to fit within the displacement rules.

Sometimes the need arises from a completely new engine. Callies recently worked with a major racing outfit that was building a new engine platform to compete in a high-profile series.

"They had a general architecture in mind, and then we put our scent on it," said Piper. "The race shop did an FEA analysis on the model that we proposed. When it came back to us, we did some more tweaking. It went back and forth at least twice.

"You can tweak the pin arms, the width of the counterweights, elements like that," continued Piper. "Cranks fail in the pin arms from torsional loads. I'm sure they had the cylinder pressures and loads it will see at rpm, and they can simulate the entire crankshaft operation."

#### **TRULY STAGGERING**

The research behind some of today's custom crankshafts can be truly staggering. Austriabased Pankl manufactures racing and OEM performance-engine components and is a sister company to CP-Carrillo in the US. Pankl has worked with NASCAR, Pro Stock, and Formula 1 teams in designing and manufacturing crankshafts, and the development process always starts on a desktop.

"We first provide basic data sheets that need to be filled out," explained Christoph Wachmann, adding physical space constraints are needed along with cylinder pressure, operating rpm, maximum torque, piston and rod weights and, most important,

### THE STRAIGHT AND NARROW

It's an oil strategy that's been around for decades, and it still works.

"When Chevy designed the original 265-cubic-inch engine, they used the straight-shot oil system," said Tom Lieb of Scat Crankshafts, Redondo Beach, California. "All of us crank guys over the years have tried to improve on that. Guess what? We haven't been able to in the last, what, 70 years?"

Straight-shot oiling means there is a straight passage for the oil to flow without interruption from the crankshaft mains to the rod bearings. Over the years, refinements have been made to the angles and positions of the feed holes to better serve high-rpm applications.

"With some engine builders, placement of the oiling holes is highly important, and with others it's no big deal," said Kirk Peters of Howards Cams, Oshkosh, Wisconsin.

For a time in the 1980s, though, racers had a love affair with cross-drilled

crankshafts. It was a high-tech-sounding term that stirred fantasies of muchimproved lubrication. The original concept added supplementary oil passages through the mains in the belief that oil flow would be equalized to the bearings. Basically, users thought the bearings would get two shots of oil with each crank rotation. At high rpm, however, centrifugal forces come into play and would actually draw oil away from the rod journal oil holes.

"There isn't enough oil pressure in the world to push that oil in at high rpm," said Tom Molnar of Molnar Technologies, Kentwood, Michigan. "You can't get oil to the rod bearing and then you fry them."

"You could do an entire article on crankshaft oiling," added Alan Davis of Eagle Specialty Products, Southaven, Mississippi. "The highly debated topic of standard vs. cross-drilled oiling is ripe with speculation, and inaccurate information is floating around. Much of which is the opinion of 'old school' racers and has very little, if any, engineering analysis behind it."

Any discussion of crankshafts will almost always touch on weight. As engine builders demand lighter and lighter cranks, they also don't want to give up strength. Crossdrilled cranks were out of the question when manufacturers offered to gun-drill the mains. But there's also a way to lighten the crankshaft using the oil system.

"Almost all dirt late models have gone to a wide-bore or 4.500-inch bore-space cylinder block," explained Peter Harris of Crower Cams & Equipment Co., San Diego, California. "Some are running into durability issues with how light a crankshaft they want. We combat this by putting in smaller oil holes. We used to have quarter-inch oil passages. Then 7/32nds. Now it's eighth-inch. It doesn't seem to be an issue for oiling, but it definitely makes the crankshaft stronger." —*Mike Magda* 

PR/

the type of racing.

"The next step is to define the development targets. Is the focus on friction or being as light as possible?" continued Wachmann. "If you make it very light, it could flex more and end up being a higher friction crankshaft."

A basic computational model analysis with FEA and balancing schemes is performed followed by a 3D model. From there, the customer could order a crank, or the computer could start working overtime.

"There are a lot of budget-dependent options on simulation. This could include choice of materials, dynamic calculations where we would need a model of the crankcase. We can take into account the full interaction between the rotating crank with rods and pistons," added Wachmann.

The basic development calculation runs around \$10,000, and just the simulation and modeling can easily top \$100,000 when oil-film analysis and other computations are required.

"An important point for crankshafts is oil flow and lubrication," said Wachmann (see sidebar on page 98). "You have all kinds of possibilities in passage angles, bore



diameter, chamfers. Combine this with inertia analysis, oil pressures and rotation of the system. We're trying to design the oil system to avoid things like cavitation."

#### **EXOTIC ALLOYS**

Most custom crankshafts are machined from billet bar stock because the cost of producing forging dies for a single application is prohibitive. For one customer, however, Pankl was able to use the

From left to right, these before-andafter photos illustrate the types of repairs done at Mile High Crankshafts. In this case, journals that had seen better days were made like-new again.



automaker's forging dies from a similar engine to manufacture a custom crank that was part of that factory's supercar production program.

"We forged the cranks with our own material, then applied our process for induction hardening and filet rolling," said Wachmann.

An advantage noted by some competitors is that Pankl has access to exotic steel alloys made in Europe. Wachmann said it's a steel that will accept extremely deep nitride hardening.



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Molnar Technologies offers custom forged and billet crankshafts, like this eightcounterweight LS crank. For some engine platforms, like vintage AMC V8 blocks, it's actually cheaper to make a limited run of billet crankshafts than to design and produce dies that would require over 200 forgings before getting a return on the initial investment of the dies and design work, said Tom Molnar.

"Deep nitride for us is up to a millimeter or 1,000 micrometers," said Wachmann. "Usual nitride depths can be 100 to 300 micrometers. A NASCAR crankshaft may go up to 500 micrometers. These steels have a different chemical composition that allows a deeper nitride. To get a one-millimeter depth, the crank stays in the nitriding furnace for 200 hours."

Steel quality is one of the most confusing, if not mysterious, metal properties that

weigh on engine builders' minds. Most performance forgings are made from 4340 steel. To some, that alloy can mean different formulas are in play.

"I don't believe all 4340 steels are the same," said Dave Olsen of Mile High Crankshafts, Denver, Colorado.

Olsen doesn't manufacture crankshafts, but he sees a wide range of models that are in for repair or customizing.

"You can call it 4340 because it has whatever window of ingredients in it, but that window might be pretty big," he said. "I'm not a metallurgist, but it just seems that the domestic cranks are a better grade of steel."

#### **POPULAR REQUEST**

Echoing what Piper mentioned earlier about stroke length being the driving force in custom cranks, Olsen said modifying the stroke on a crankshaft is one of his most popular requests. For example, NHRA Stock and Super Stock classes allow a plus or minus .015-inch variation on the published stroke for a particular engine.

"So, we'll add around .013-inch to be safe.



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It's not really for bigger displacement. It gives the guys a little more compression because they're limited on combustion chamber size and the pistons they can run," said Olsen. "And then there are the Pro Stock guys. They're always changing their combination. A little less stroke because their bore is getting big enough and they can't make the 500-cubic-inch limit."

Mile High Crankshafts can also change the journal size. "We do that because basically the crank manufacturers are so buried with orders that they don't have time to do some of these jobs," added Olsen.

Fluctuating workforce numbers have prompted some crank companies to limit custom orders because of the extra manhours, and experienced specialists who grind crankshafts are retiring with no replacements in sight.

"It's a labor issue," said Peter Harris of Crower Cams & Equipment Co., San Diego, California. "To tell you the truth, we do still make custom stuff, but I'm shying away from it. The amount of time that's involved and what I can get for them kind of make it cost prohibitive." Lunati, which is based in Olive Branch, Mississippi, does not accept custom orders but has a mild customizing program for highperformance cranks in its catalog.

"Our forgings and heat-treat process ensure we have a crank that will handle about all you want to throw at it," said Will Vance. "As far as custom work, we do offer undercutting the throws for rod length accommodation, as well as offer a 'blower series' where we enlarge the flexplate holes as well as the crank-snout bolt. We also add an additional keyway."

"The only secondary service we offer is balancing, which is surprisingly popular with our engine builder customers as of late," said Manley's Tokarchik, echoing that recurring theme of tight labor, especially for skilled machinists. "This is likely due to staffing issues on their end. They can still enjoy a nice profit while their employees can focus on other things."

"We offer some additional machining on finished products, like undercutting the counterweights," added Davis. "Also, a round sprint-car rear flange and a second keyway for blower applications."

#### **BILLET MORE COMMON**

As demonstrated, off-the-shelf billet crankshafts are becoming more common because it's still cheaper than making forging dies to produce just a dozen or so for a rare application. Molnar recently designed a billet eight-counterweight crankshaft for a vintage AMC block because the forging dies are no longer available. Just tooling up a typical forging die would cost upwards of \$100,000 to \$120,000. A crank manufacturer would need to sell 200-plus crankshafts just to recover the initial investment.

Molnar designs his billet crankshafts in the US but has them machined offshore, however, that factory requires a minimum order. "I got enough guys together to make a run of it," said Molnar, adding that once there were commitments for the minimum order, word spread and he was able to double the number. He also added a couple extra to the order in case there was a quality issue with one to have an example in stock. "I wouldn't necessarily call these custom cranks, they're more of a limited run."







The average turnaround time for a custom crank when raw materials and labor conditions are favorable is 10 to 12 weeks. That's after all the data review and consultations, which don't always end in a custom order. Some engine builders have radical ideas that prompt the manufacturer to shy away when there's conflict over the

predicted structural integrity.

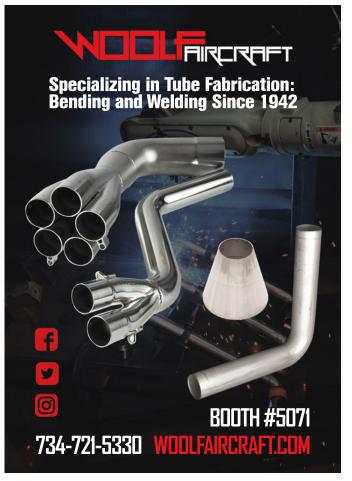
"The strength of the crankshaft is between the top of the radius on the main to the bottom of the radius on the throw," explained Lieb. "That cross-section is what holds the crank together. As you increase stroke and/ or decrease the rod journal or main journal diameter, that cross-section changes. If the How to define a "custom" crank? For Tom Lieb of Scat Enterprises, it's simple: "If you're looking for something that isn't in the catalog, then it automatically becomes a custom crankshaft."

guy has a 4-inch-stroke crank for a small block Chevy and wants to run a Honda rod journal and an early 283 main size, I mean, there's less than my pinky finger worth of material holding it together.

"We'd talk and say, 'Hey, I'm flattered that you want to keep our employees working by making a crankshaft for you, but you're going to be really pissed when it breaks. So we'd rather not," added Lieb.

#### WHEN TO CHOOSE

Now that the lines between custom and off-the-shelf are blurrier than ever, just when should an engine builder choose to order a custom crankshaft?







"Most stock crankshafts have enough safety margin built into them to handle a mild increase in power and torque. The time to upgrade to a performance or custom crankshaft will vary depending on your application. However, if you're building an engine that will be boosted, blown, or use nitrous, you should always upgrade to a billet," said Matt Polena of K1 Technologies, Mentor, Ohio.

"Horsepower really isn't a factor in custom ordering a crankshaft," noted Peters. "For example, a hobby stock dirt track racer with an unlimited budget wants to build a killer engine and custom-orders a super light crankshaft with Honda journals for his twobarrel 450-horsepower engine."

"Horsepower doesn't break cranks," agreed Molnar. "Look at a Top Fuel car. They make 11,000 horsepower first time down the track on a new crank. But they also know they can get only so many passes before that crank does break due to the fatigue of bending and twisting from the high loads."

The best advice, as always, is to talk to the manufacturer's tech reps. They can provide

critical advice along with useful do's and don'ts when it comes to ordering crankshafts.

"We've had requests for crankshafts before that we could not fulfill, so we recommended the customer to a billet manufacturer," said Davis. "Such things as unique stroke, unique application, something that had a design aspect that was necessary, and we couldn't accommodate. It rarely has anything to do with powerhandling capabilities. It is most often due to unique design aspects that were required. "Finally," he added, "race what you can

afford to replace."

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# NEW TO MARKE

#### RISING POWER LEVELS AND A GROWING DIVERSITY IN ENGINE COMPONENTS MAKE GASKET DEVELOPMENT MORE IMPORTANT THAN EVER. HERE'S HOW TOP SUPPLIERS ARE KEEPING PACE WITH RACER DEMANDS.

#### **By Drew Hardin**

hile they have always been a key component in making an engine work properly, never before have gaskets especially those tasked with sealing the business end of a high-powered, boosted powerplant—been asked to do so much.

Today's four-cylinder engines, like the Ford EcoBoost, can make 250 or more horsepower from the factory, "which is pretty good for a fourcylinder," said Ryan Hunter of SCE Gaskets, Mount Pleasant, Tennessee. "Then our customers in the aftermarket ask, 'How can I make it produce 1,200 horsepower?' At 1,200 horsepower we're moving that block, deck, crankshaft, and cylinder head all over the place under load, and problems begin to occur with an OEM head gasket."

"We run into problems with applications that have been power added," noted Tim Golema of MAHLE Aftermarket, Farmington Hills, Michigan. "Now that the intake charge is at such a high volume, we have to be concerned with maintaining the seal. It's no longer the motor alone sucking it down the cylinder head. Now you're blowing it down the hole with 30, 40, 50, 60 pounds of boost. Now the act has become more complicated."

How do gasket makers keep up with this ever-moving horsepower target? We spoke with several leading manufacturers in the performance automotive space to find out.

#### SEEING A NEED

The first step in staying abreast of racers and their engine development is recognizing that a need for new gaskets exists.

Flatout Gaskets of Mundelein, Illinois, recognizes those opportunities "partly through industry need and partly through customer calls," said Tony Gillig. "Often when a company produces something new like a cylinder head, it doesn't make the gasket. We hear through the industry that, say, Brodix or Dart is making a new head, and we get with them to find out what the head looks like so we can create a gasket for it. Or we'll get a customer calling and asking, 'Do you have a gasket for this?' If we don't, we do some

digging and go to the manufacturers for a way to generate a gasket for that product."

Cometic Gasket of Concord, Ohio, takes a similar approach. "We may get requests for a certain part, or we'll see what's being developed in the market," said Micky Hale. "When we see more of something being developed, we'll talk to the engine builders and the piston manufacturers. That's usually where it starts, when they start modifying something." "The ideation process can come from anywhere," said Nick DiBlasi, Race Winning Brands' director of product management in regard to Pro Seal of Cypress, California, a brand born from the performance experience of JE Pistons. "Our staff is just like our customers and engine builders. Every one of our sales guys is a racer. So we'll often hear about opportunities internally first. And we talk on a regular basis with our customers and engine builders.



"For what we do, in most cases it's an OEM engine that someone built that is now exceeding the factory gasket capabilities," DiBlasi added. "We need to understand the application to understand what is failing. We'll speak with the people blowing out the factory gaskets and ask what they're doing. We'll look at the gasket, drill out the rivets to find out what is it about this factory gasket

that's failing. Is it the design, is it an OEM flaw, or are they actually pushing it way past its limits?" A relative newcomer to the gasket

market, at least in the US, is ElringKlinger in Plymouth, Michigan. Over more than 140 years of business in Europe it has become a major OEM supplier, but it launched its US aftermarket efforts just within the last five years, offering performance gaskets through a select distribution network that includes Engine Parts Group (EPG) and Brian Tooley Racing. "Our vision is to bring this brand awareness in the US with the right

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"Every gasket is designed for a specific application," said Tim Golema of MAHLE Aftermarket. Just because a gasket is considered a performance gasket, he noted, doesn't mean it will work in every application. There's a "litany of materials" MAHLE chooses from to form a gasket, he said, and those materials can vary in thickness and density as well.





#### GASKETS & SEALANTS



distribution partners, best-in-class products, and supported with effective marketing," Jeff Guenther said.

While ElringKlinger manufactures gaskets for Formula 1 through its OEM channels, here in the US "we like to operate through our distribution team," said Harald Reinhardt. "They know better their customer range and what they want to serve." EPG, for example, gets its LS gaskets through Elring.

"We have a full-range engineering department," said Reinhardt. "Whenever we put a gasket out, we collect the requirements from the customer, so we make sure we know about what kind of sizes they need, what kind of horsepower they're running. Then we do our full R&D with all the OE knowledge in the background." When the gaskets get to the customers, "either they do some dyno tests or test runs or they use it immediately. Whatever feedback we get, we use to improve and get better."

At MAHLE, "we need to determine if there truly is a need" before developing product, Golema said. "There are many applications that are very, very limited. It would be difficult to justify putting all the effort into making a new gasket if only six guys in the country would be using it."

He said the PRI Trade Show is among the "first places we look" to gauge the need for new gaskets. "We get to see new blocks, new cylinder heads, new intake manifolds. If someone has created hardware, chances are someone will want a gasket to fill that gap."









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**DUMHAN** 



The situation is different at Clark Copper Head Gaskets of Blaine, Minnesota. "Right now, most of the stuff we're doing is custom," said JR Clark. "Most new motors are using MLS gaskets. They've become so good they don't need a copper gasket." Most of the gaskets he makes, then, are for older engines, including race motors based on "small and big block Chevys, 351 Fords, 440 Chryslers, some 429/460 Fords, motors that haven't been updated to where people use enough of them to keep gaskets on the shelf." He's also doing a brisk business with tractor pulling engines. "We're making

a lot of gaskets for Internationals, Farmalls, Olivers. They're making so much horsepower now, they can't use the old gaskets, and a lot of the tractor pulling motors are so old, nobody's made anything for them in years."

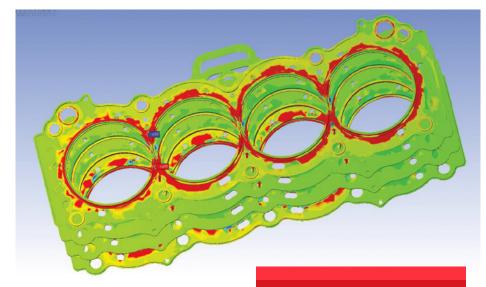
#### **CUSTOM GASKETS**

While it may not be their mainstay, several of these companies offer custom gaskets for low-volume engines or specialized projects. Custom gaskets "are a big part of our

> The laser that Flatout Gaskets uses to cut copper gasket material can also etch or engrave the surface as needed, said Tony Gillig. "It starts with one piece of flat material, cuts it all out and laser etches it, start-to-finish."

#### PRI

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program," said Cometic's Hale. "Almost every major engine builder across the country comes to us and says, 'We're doing this to this cylinder head or we're CNC'ing this cylinder head and we need intake gaskets to match.' We get their DXF [drawing exchange format] file in here, then we have a gasket to match what they need. We can change the gasket thickness or the port sizes, or anything that they're doing. And we're good at keeping secrets. If it's their spec part, it won't be going out the door to a million people."

Elring, too, has a prototype shop that can produce custom gaskets "for any kind of car, any kind of specs," Reinhardt said. "As long as we can get the old gasket or some specs, we are able to rebuild those gaskets." Prototype shop requests can be submitted via Elring's website (elring.com).

"We offer all the basics, but we can make a custom gasket for any application," said Flatout's Gillig. "We cater to our customer's needs, whether it's an individual racer or an engine builder. One guy might want to order a hundred, one guy might want 20 sets, or a guy calls and needs one for his motor. No problem, we'll get them out today. We can fill that empty hole and get it to somebody in a hurry. You can make or break some guy's season that way."

#### MANUFACTURING

Few of the companies we spoke to were willing to provide details of their manufacturing processes due to their Pro Seal shared with us Finite Element Method (FEM) photos of its gaskets "to show the high sealing pressure areas that we focus all of the embossment on," said Nick DiBlasi. "That way we know that the higher load areas are where we want the most sealing and clamping forces to be applied."

proprietary nature. Those who did share had some interesting details to discuss.

"Back in the day—and this is a terrible thing to hear—but gaskets were literally made out of centers laying around because the material was cheap," said MAHLE's Golema. "That's not how we operate. We use a virgin sheet of material per application, and every gasket is designed per application. That makes it sound like there's one choice of material to use, but there's a litany of materials we may use depending on that specific application."

He cited a case where a potential customer at last year's SEMA Show "saw a gasket made for a big block Chevy. But this particular engine was made for a Brodix head, which has a machined surface and a machined valve cover, so the gasket was relatively thin and dense. That gasket would not work on a stamped cover with an as-cast head. It was designed for perfectly flat surfaces with the best bolt load you could get. Just because it's performance doesn't mean it fits." MANDREL BENDING - STAINLESS STEEL - ALUMINUM - MILD STEEL FROM 1/4" OD TO 6" OD WE BEND IT ALL

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When Clark is manufacturing a custom copper head gasket, "we request that they send us the old gasket if they have one in decent shape," he said. "That makes it easier to make a print from, and we can go right to copper and send it to them. If the gasket is bent up or not in great shape, we'll make them an aluminum template and send it to them to make sure it fits the motor the way they want. When they verify it's what they want, then we'll make a copper one. Especially nowadays with the price of copper, we don't want to be ruining it. If we can even get it."

At Pro Seal, "one consistent design aspect we follow with our MLS gaskets is that you want all the layers of the material to be the same," said DiBlasi. "All the layers in the gasket are of the same exact grade of stainless steel. Then instead of a one-hit process that embosses it, we form it over multiple hits and presses. What that does is build a nice, smooth radius for all the bends and embossment. You don't want to stamp it too hard, because that makes a lot of ridges and stress risers. You want to slowly stretch the metal, and then stress-relieve and heattreat it after that process, which normalizes it in an embossed state.

"That's really critical," he added. "Probably the most important thing in creating any sealing type of gasket is the process by which you emboss it and then treat it after that. It creates the memory in the metal by processing it after. A lot of companies take a gasket that's pre-coated, then emboss it or laser cut or water cut it. The problem is, because it has a coating on it, you can't heat-treat it. That will melt the coating. But when you heat the gasket back up, and it's not heat-treated, it wants to normalize back into its original state. Any time you can heattreat it, that's the new normal, its new living state for the rest of its life."

Hunter said SCE has "engineering capabilities here, drafting and drawing, fitting up to the component whatever it may be. We'll plot it, make sure that it's properly dimensioned, and then we produce a tool. There are various types of tools—some are as simple as a steel rule die, which is very much like a glorified cookie cutter. There are limitations to those tools, so they're used in





While Cometic Gasket leverages its engine-builder partners to help with development and testing of new gasket products, it also has a "full-service engine shop and dyno," said Micky Hale. "It's a great controlled environment" to help the company learn "what will work and what's not going to work."

certain areas and not in others. They can't cut steel core material very well, for example, as they tend to leave kind of a pucker. There are tools that are well suited for an intake gasket that wouldn't be well suited for a head gasket, for example.

"Then it comes down to, if we have the fitment right, how does it perform in the field?" Hunter continued. "We can get very close to knowing how the gasket will perform based on the gasket design and our knowledge of the raw materials selected for it, and then we put it out to the customer base. Because we cannot, even on a dyno, duplicate what takes place in motorsports."

#### RESEARCH, DEVELOPMENT & TESTING

While many of these companies get new product ideas from their engine builder customers, it's also common for them to work with their customers to get real-world research, development work and testing on those new products.

"We have what we call select

development partners all over the country," said Hunter. "There's Dale Meers Racing Engines in Kentucky, David Butler at Butler Performance near us in Tennessee, and Kenny Duttweiler out in California. We'll go to them and say, 'Here's a new product. Try it, flog the thing, tell me what breaks.' They're happy to do that because they know that we're pushing the envelope trying to get them a product that seals more than what's available now.

"I don't want it to sound like we're just taking our best guess and letting the customers do our testing," he added, "but in some respects that's actually true. Customer input has often helped us with the final degrees of refinement."

"We have customers who will let us use their engines for some testing," said Kristen Damberger of Cometic Gasket. "They'll come in and want to see what power they can get out of their engine. We'll ask if we can use some of this data for ourselves, or can we run this test a little bit differently so we can get what we need out of it?"



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At the same time, Cometic Gasket also has "a full-service engine shop and dyno in our facility," Hale added, with LS and small block Chevy mule engines in-house. "It is a great supervised, controlled environment, where we know the consistency and how things are put together. We'll know what will work and what's not going to work."

Pro Seal, DiBlasi said, has "multiple companies, with decades of experience, that specifically manufacture to our requirements. Utilizing their OEM experience, we lean heavily on their in-house development and testing. We work in collaboration with our suppliers on requirements for the engine and operating conditions to mutually understand the specifications needed for success. They also do a lot of physical testing, including follow up with FEA [finite element analysis] and validate with real-world engine dyno testing. We perform surgical inspection post dyno testing, or work with a customer we've partnered with to ensure sealing is optimized and performance targets are achieved."

#### **CHEMICAL GASKETS**

Beyond the world of MLS, cork, rubber, and copper gaskets are the silicones and other chemical gasket makers. Eric Seibold of Permatex in Solon, Ohio, said these gasket types are becoming more prevalent due to evolution in engine manufacturing.

"The biggest change we've seen over the years has been in the quality of the machined surfaces in domestic automobiles. With computers and laser cutting, the surfaces are so fine that they need less gasketing material to form a seal. That has led to an increase in the use of chemical gaskets like ours, and the ability for us to use thinner formulas. You don't need to cake in a bunch of silicone to create a physical barrier; you're looking to glue or adhere two surfaces together."

Permatex is a fixture at chain auto-parts stores and DIY centers, but Seibold said racing is "our testing and proving ground. We have relationships with a lot of different race teams. We will send them product that is either new to market or in development, ask them to use it on test-and-tune days, and if they have a lot of success, then use it on race tracks. If it functions for them, in

#### PR/

### *"CUSTOMER INPUT HAS OFTEN HELPED US WITH THE FINAL DEGREES OF REFINEMENT.*

extreme conditions that they're under as far as pressures and temperatures go, we know it's going to work on a street vehicle."

Though he couldn't share specifics about products in development, Seibold said a Southern California professional drift team is currently testing "a new experimental gasket maker." That same product will "replace all the gaskets" in a Mini Cooper that is entered in a 24 Hours of LeMons race in October.

"We can do all the lab testing in the world to get our quantitative numbers and confirm a product is within spec for a silicone, meets a certain ASTM test, or meets a certain OEM specification. But the realworld, qualitative use by mechanics or race teams is arguably more important," Seibold said. "We can be fairly confident in the lab, but that doesn't necessarily mean it's going to perform in the harsh conditions that race teams put them through."

#### **CARBURETOR GASKETS**

The carburetor gasket niche is wholly different than gaskets in the rest of the engine, noted Dave Braswell of Braswell Carburetion in Tucson, Arizona. "It's not an application like a head gasket where motors are making significantly more power every year, and the loads on the gaskets are quite a bit more severe." That doesn't mean, though, that the carb gasket landscape isn't changing.

"Carburetors originally were an OE application, and the lowest bidder was the one who sold the carburetor," he explained. "That meant the quality of the product and castings weren't normally the best because there wasn't the profit margin to keep the tooling fresh, so gaskets were really important. Now, with CNC machining, the overall quality of products is much better, so the sealing of the products is much less of an issue than it used to be."

The precision of today's engine manufacturing techniques has allowed Permatex to use thinner formulas in its chemical gaskets, said Eric Seibold. "You don't need to cake in a bunch of silicone to create a physical barrier; you're just looking to adhere two surfaces together."









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#### GASKETS & SEALANTS

Braswell uses "premium materials in our gaskets," with applications available for all race cars that use carburetors.

Braswell has gone beyond traditional gaskets for sealing applications. "Whenever we can put an O-ring in a product, we do. Probably 10 years ago we put an O-ring where the power valve goes into the metering block instead of using a gasket. That's been really successful. The power valve seats on aluminum on the metering block instead of on a gasket, so you don't have to worry about the gasket drying out and the power valve coming loose."

Braswell also machines sealing beads "in all our castings. If there's not a sealing bead in the casting on a machined surface, like on float bowl screw washers, we'll machine a sealing bead into it to ensure that they seal. A lot of the sealing issues can be eliminated with proper design work of the component part that you're trying to seal."

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**Permatex** permatex.com

Pro Seal auto.jepistons.com/proseal

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# MEMBER CHECK-IN

#### **CD RACING**

Despite challenges on the supply side, Chris Dyson sees "huge opportunity in this industry right now" as he continues winning races and championships.

#### By Jim Donnelly

Confronting shortages of both components and talented people are daily challenges for teams competing at all levels of motorsports. Creative planning has come to be essential in the current process of race-team prep. Chris Dyson is facing these same kinds of challenges, only he's doing it in two wildly different racing disciplines, with marked success in both. His status as a scion of an American racing dynasty leaves him positioned to turn potential obstacles into wins and, more recently, championships.

"Like anyone else, we've been affected by supply chain issues with all of our programs over the years," Dyson explained. "So it's important to work very carefully with vendors, and to be realistic with planning, because



lead times have changed considerably. There's a lot of interdependence as you put together a program, and if you have a couple of vendors who are short or behind, that can hold up an entire project.

"I think that just carefully managing the supply chain landscape right now is one of the biggest pieces on the operational side," Dyson continued. "It's also about attracting and cultivating talent. It's a challenge, not just for us but for everybody. This is a sport that's had a lot of interest and longevity for a long time, but we have to make sure we're recruiting and building up the next generation of talent and leadership."

In Dyson's case, that occurs in two seemingly non-intersecting orbits. The first is his own brand, CD Racing, which was created from patriarchal Dyson Racing in 2018. Winning rookie of the year in the SCCA Trans-Am's TA division from the outset, Dyson captured the series championship in 2021 and is on a roll for a repeat, having won half the 2022 TA rounds at the time of this writing. Beyond that, CD Racing has partnered with erstwhile Dyson Racing rival

Citing new investment, new teams, and strong car counts, Chris Dyson is bullish on the current state of racing. That said, "we can't take for granted that the sport will thrive, and survive, in the long term without continuous efforts to engage not only those involved in the industry, but also potentially looking at the industry from a business standpoint or as participants," he added. "PRI has really taken center stage in these efforts." Doran Racing to field open wheel cars, primarily in the USAC Silver Crown series.

Despite the headaches currently faced by most motorsports executives, CD Racing's successes leave its chief with obvious and vocal optimism. A big part of the reason why is CD Racing's status as a PRI Founding Member, which he said allows the team to stand on the foundation of policymaking for the sport's continuing health.

"PRI membership benefits me by being more engaged with the industry as a whole, and by creating advocacy for the sport itself, and also for the players who depend on the sport's success," he said. "You have central leadership coming out of PRI, really working hard on getting the awareness out on the need to save our race cars, to protect the sport long term. As someone who's been in racing and has had racing-associated businesses, we can't take for granted that the sport will thrive, and survive, in the long term without continuous efforts to engage not only those involved in the industry, but also potentially looking at the industry from a business standpoint or as participants. PRI has really taken center stage in these efforts."

For the Trans-Am effort, CD Racing prepares Ford Mustangs out of the Dyson Racing shop in Poughkeepsie, New York, which run the TA division with sponsorship from Altwell CBD and Gym Weed, a hempinfused energy drink. On the oval side, Dyson is partnered with Kevin Doran to field a USAC Silver Crown effort for Kody Swanson, the series' winningest driver with six championships, including the recent one. Doran Racing preps Silver Crown cars for pavement competition at its facility in Lebanon, Ohio. The dirt cars are prepped



for CD Racing in the Dillsburg, Pennsylvania, shop of longtime Keystone 410 sprint car standout Sean Michael.

"We're racers to the core, and in an era of specialists, it's important to underscore your commitment to the sport by not being specialized," Dyson explained. "Kevin and I started in WKA karts. I raced Silver Crown in 2018 and 2019 and absolutely loved racing on the big miles, so during a period of time when I wasn't road racing, we pursued running ovals with a lot of enthusiasm. Then my road racing career has been resurrected in recent years, so I've been less able to compete, but Sean maintains the program. It's been a good fit all around."

Winning races and titles means getting the cars to the track in fighting trim, which also means flexibility and a redoubled commitment to planning, he said. "From a supply chain standpoint, it's maintaining virtually constant contact with vendors and supplier partners. You try to have as much Through CD Racing, Chris Dyson is involved in very different forms of motorsports. While defending his 2021 SCCA Trans-Am TA division championship, Dyson also is fielding open wheel cars in the USAC Silver Crown series. "We're racers to the core, and in an era of specialists, it's important to underscore your commitment to the sport by not being specialized," he explained.

transparency as possible. We've found that our planning has had to become more refined, with more flexibility to our timetables. We try to give ourselves alternative paths that in past times, we might not have done. It's also pushed us to seek out new vendors who can perhaps fill needs."

It's immediately obvious from a conversation with Dyson that his belief in everything about racing that's good has never dimmed.

"There's definitely huge opportunity in



this industry right now. The sport is at a very strong moment with new investment, new teams, and really good car counts in any realm of the sport, and we touch a lot of them with our programs," Dyson said. "Enthusiasm and passion aren't the problem. It's about making sure you have all the parts and components in place. The team has been fortunate to have some tremendous successes over the past few years, but you just can't take that for granted."





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# PRI MOTORSPORTS RETAIL BUSINESS SURVEY: SOCIAL MEDIA

Planning for business success through digital marketing and content creation requires the use of various platforms that offer different solutions to deliver an effective message.

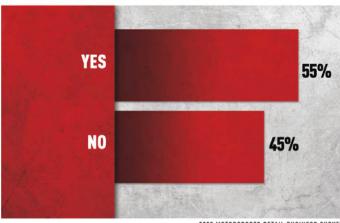
#### By Jim Donnelly

n the beginning, and for a long time thereafter, the marketing of performance equipment was pretty straightforward. Manufacturers either relied on word of mouth in pit areas to make people aware of their advances, or else they took out an ad in one of the numerous performance-car magazines that then existed, or perhaps put up a jazzy display in a brick-and-mortar speed shop. The practice of marketing goods, whether aimed at motorsports or not, has been walloped by seismic upheaval since then. For instance, many of those car

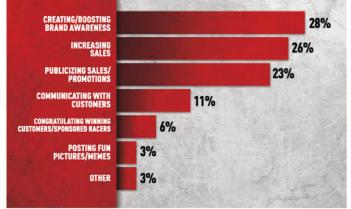
magazines and local speed retailers no longer exist. We live in an age when producers make contact directly with their prospective customers on a highly individualized basis through the use of social media. The new frontier of specialty automotive marketing winds its way today among various platforms that can be used effectively to get a manufacturer's or marketer's message out. Facebook, TikTok, Instagram, and YouTube are all being used to put the word about new products or services in the lap of a prospective customer with precision-guided accuracy. The challenge lies in picking the platform that's the best fit for the message, the product, or the customer.

One excellent case study on how to do it exists in the form of DFW Speed Shop in Dallas, Texas, a full-service retail and conversion firm that specializes in building and outfitting both street rods and off-road vehicles. DFW is one of several clients of Let's Glow Media, which develops social media strategies aimed at the motorsports industry. Let's Glow founder Katherine

#### DOES YOUR COMPANY USE SOCIAL MEDIA TO PROMOTE THE BUSINESS?



#### WHAT IS YOUR PRIMARY GOAL WITH SOCIAL MEDIA?



2022 MOTORSPORTS RETAIL BUSINESS SURVEY





Brunner is a contractor who developed DFW's social media presence.

"The speed shop is on Instagram, TikTok, and Facebook," she explained. "The biggest message that we're trying to get across is not so much trying to get people to buy into the service, but instead the lifestyle. People want to think they know the guys in the speed shop, even though they don't live in Dallas. That's the community we're trying to create with this. Personally, I think TikTok is the biggest platform out there that's up and coming for these businesses. It's all about creating an informal, ad hoc demand for that content."

"THE BIGGEST MESSAGE THAT WE'RE TRYING TO GET ACROSS IS NOT SO MUCH TRYING TO GET PEOPLE TO BUY INTO THE SERVICE, BUT INSTEAD THE LIFESTYLE.

Brunner said that DFW Speed Shop repurposes its content message across all three platforms. "For the most part, it's the same kind of content since we already know that we have different communities for each platform, so it's important that those messages be showcased across all three."

Empirically, using social media has clearly boosted DFW Speed Shop's visibility in the wider world. Brunner has compiled statistics demonstrating that DFW has had about 409,000 video views in the last 90 days on TikTok, all organic growth, which means the speed shop didn't pay for any of those additional views. DFW has also reached about 40,000 Instagram accounts over the same time period. Brunner said that DFW started using TikTok less than a year ago and has already built a community of followers. Each one of DFW's Instagram posts yields thousands of views, she said.

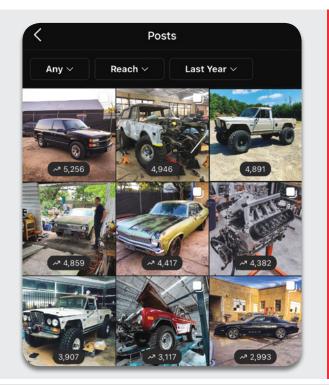


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The social media strategy for DFW Speed Shop is to post content across TikTok, Instagram, and Facebook, said Katherine Brunner, who developed the company's plan. Because each platform appeals to a different community, the same content message can be repurposed across all three.

"Facebook is more oriented toward our older customer," Brunner said. "It's hard to tell exactly what TikTok is right now because it's so new, and it seems to be mostly younger or Gen-Z people, but there are some older people on there."

Regardless of platform, Brunner recommended some basic procedures for companies new to social media. First, she said, advertisers should make the time to post consistently across any platforms they use, to keep the message fresh and viewers engaged. Devote time each working week toward planning what to say on social media that particular week. If you're too busy, hire a consultant to do it for you. Brunner strongly advised engaging on TikTok, because of its newness and largely informal content. And realize that if the advertiser's content lacks visual appeal, it's probably going to be a bust.

Another firm that has a favorite platform is DRT Racing—it stands for Drag Racing Technologies—of South Amboy, New Jersey,

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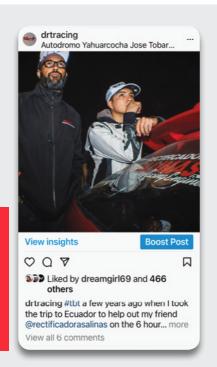
*"I TRY TO HELP PEOPLE KEEP UP WITH THE PROJECTS THAT I'M WORKING ON, AND NOW PEOPLE CAN FOLLOW ALONG AND MAY GIVE ME A CALL.* 

which besides catering to import racers in quarter-mile combat also provides fabrication and dyno-tuning services to competitors in road racing, autocross, and drifting. Company co-founder Ralphy Estevez said DRT Racing has achieved its best socialmedia results since arriving on Instagram.

"It's the easiest to use. I started with Facebook, but I'm an old guy and now you need a degree to work on it," Estevez explained. "You go into the Instagram platform right from your smartphone and go from there."

DRT Racing started out on Twitter, but Estevez shied away because of its politicsheavy content. "I find Facebook and Instagram to be the best for advertising," he said. "Another thing with Instagram is that once I post, I can link my Facebook, and it pulls from both at the same time. It's much more user-friendly. I have a YouTube, but

> Ralphy Estevez of DRT Racing said Instagram has delivered the best results for his social media investment. Plus he finds it easy to use. "Once I post, I can link my Facebook, and it pulls from both at the same time. It's much more userfriendly," he explained.







I'm working now on a separate one that will show people how to do things, how to unbox the product and such. I've already spoken to some of the companies, and they're willing



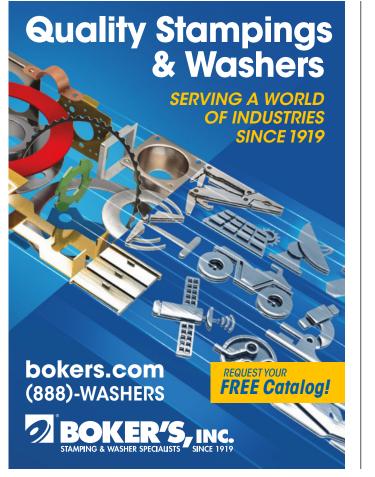
to do it. I think YouTube will end up being the bigger platform than all the rest because people like videos."

Estevez said using social media allows DRT Racing to avoid the "out of sight, out of mind" reality, building buyer interest. "I try to help people keep up with the projects that I'm working on, and now people can follow along and may give me a call. It's easier than the magazines I used to use, which used to be the way. Magazines were our

Vengeance Racing owner Ron Mowen doesn't believe one social media platform outperforms the others. "Each one attracts different viewers, so all of them are important to me," he said. "We do focus the majority of our attention on Facebook and Instagram, but also utilize YouTube, TikTok, LinkedIn, and others." social media."

Balancing multiple social media platforms has also been a winning strategy for Vengeance Racing of Cumming, Georgia, a leading firm in performance parts, installations, and tuning across multiple generations of late-model American muscle cars, including the Chevy Corvette and Dodge Viper. Company owner Ron Mowen believes a wide-angle approach is intelligent. "I do not feel there is a platform that works best," he said. "Each one attracts different viewers, so all of them are important to me. We do focus the majority of our attention on Facebook and Instagram, but also utilize YouTube, TikTok, LinkedIn, and others."

Getting the news out about what actually goes on inside Vengeance Racing's shop is critical, Mowen explained. "Our focus is on promoting the results from our in-house performance builds, whether it be dyno results or track results," he said. "We do this by sharing all relevant build information



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## *"EACH PLATFORM SEEMS TO ATTRACT ITS OWN UNIQUE AUDIENCE AND USERS, SO HAVING MULTIPLE PLATFORMS ALLOWS US TO ENGAGE A BROADER RANGE OF POTENTIAL CLIENTS WITH MINIMAL CHANGES TO THE CONTENT ITSELF.*

and modifications including before and after dyno comparisons, as well as pictures of the vehicle highlighting the build quality and attention to detail."

Like Brunner and her clients at DFW Speed Shop, Mowen strives for message consistency, regardless of platform. "The content may change based on the platform being used," he explained. "As an example, posting an Instagram story would be much different than posting a featured build on Facebook with text, pictures, and so forth. The message would be similar, but the content used to deliver the message would have to change."

The methodology of getting customers'

eyes on your business is also fairly consistent regardless of which platform is being used, in Mowen's estimation. "Each platform seems to attract its own unique audience and users, so having multiple platforms allows us to engage a broader range of potential clients with minimal changes to the content itself," Mowen continued. "As an example, we use Meta Business Suite, which will post our content to Facebook and Instagram simultaneously, and also allow us to manage the content from one location." **PRI** 

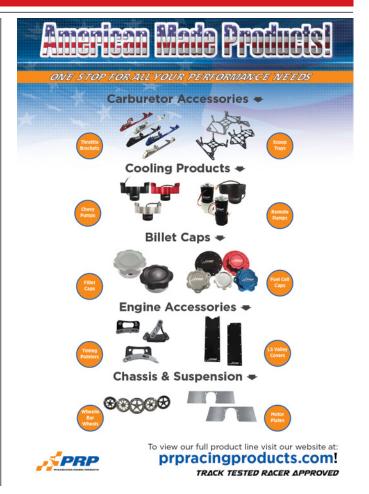
## SOURCES

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DRT Racing drtracing.com Let's Glow Media letsglowmedia.com

Vengeance Racing vengeanceracing.net





# PRI EDUCATION

#### HOW TO STAY ON TRACK WITH AN OIL ANALYSIS

Keep that race engine pumping at full power by incorporating this process into your regular maintenance schedule.

#### By Josh Steinmetz

n oil analysis is similar to visiting your doctor for an annual blood test. The doctor can determine your overall health from a very small sample of your blood. It shouldn't come as a surprise that the same can be done with lubricants in engines, gearboxes, transmissions, and more. An oil analysis can help determine if you are using the correct lubricant to protect your investment, and also helps monitor wear rates, viscosity, and lubricant breakdown, which can help ensure you stay on track on race weekend.

It is important to note unless you are part of an IndyCar or NASCAR series, the average racer will not have access to the equipment and technical professionals to have an oil analysis done at the track. Still, valuable data can be mined from samples sent out for analysis. The focus of this article will be on engine oil, though the same methodology could also be applied to other parts of a race vehicle.

The most important information an

oil analysis can provide is in the overall comments made by the oil analysis technician. The technician will take past results and the existing results and formulate a course of action and recommendations. When sending off your sample, provide as much information as you can, including equipment type, mileage or hours used, and if any oil has been added to the base oil since the last sample. You also want to collect the sample the same way each time for repetitive results. It is recommended to use a pump method and clean tube or allow some oil to drain before retrieving the specimen.

Most motorsports involve extreme conditions that challenge the ability of lubricants to perform for long periods of time without failure. As a result, racers change their fluids often—sometimes more than needed. But with an analysis, racers can actually decrease maintenance costs by determining the proper drain interval. Plus, they can monitor and replace failing parts before a more complex and expensive repair is required.

It's important to collect a clean oil sample in order to accurately perform an oil analysis. A source at Hot Shot's Secret recommends first making sure the oil is warm, then letting the initial oil drain while avoiding any sediment from the oil pan.



Results from an oil analysis are broken into three parts: elemental analysis, contamination analysis, and oil condition analysis. Lubricants need to stay in balance to perform at their maximum efficiency, so if any one part is too far out of specification, the lubricant has failed.

#### **ELEMENTAL ANALYSIS**

The elemental analysis detects the amount and type of elements in the oil from component wear, contamination, and typical ingredients found in oil. When an oillubricated component begins to wear, small amounts of metal become suspended in the oil. These trace amounts of metal, if left unattended, can lead to part failure.

Since components in a race car are made of several different metals, an oil analysis technician can usually determine which component is showing signs of wear by analyzing the type of metal and the concentration found in the test sample. For example, if the technician finds iron, the source would likely be the engine block, cylinder liners, or piston rings, depending on the engine construction.

A wear metal analysis is performed by emission spectroscopy, which provides the concentration of metals for wear. additive concentration, and contamination. Often, components have different levels of acceptable concentrations of wear metals. For example, a transmission or gearbox can withstand higher levels of wear metals compared to an engine, so be sure to find a trained oil analysis technician who can determine critical levels and provide the appropriate recommendations. Keep in mind, all systems are different. Some systems by their design will produce high levels of wear metals. It is essential that periodic test results are compared in order to establish if any trends are emerging.



The following is a "rule-of-thumb" for metal concentration limits in parts per million (ppm) for an engine:

	DIESEL Engine	GASOLINE Engine
Iron	80	300
Chromium	25	40
Lead	50	n/a
Copper	50	75
Tin	25	40
Aluminum	30	40
Nickel	10	15
Silver	5	5
Silicon	5	20

#### **CONTAMINATION ANALYSIS**

Contamination analysis detects the physical presence of unwanted fluids or contaminants including water, fuel, and antifreeze; particles such as dirt and metal; and oil byproducts such as soot, nitration, and sulfur. These contaminants can be internal or external. Many oils use various additives to obtain certain levels of performance, however, so provide a reference sample to your oil technician to determine the expected life available for the lubricant.

When lubricants oxidize, they form reactive materials that can re-constitute into different deposits. Oil analysis can help to identify the degree of oxidation that has occurred. More sophisticated analysis may have to be performed to identify the exact contaminant. Oxidation, sulfur, soot, fuel, antifreeze, and nitration are measured by an instrument called a Fourier Transform Infrared Spectrometer (FTIR). Values are compared to a baseline reference of the oil.

#### **OIL CONDITION ANALYSIS**

Finally, an oil condition analysis tests viscosity and the oil's ability to neutralize acids (Total Base Number for engines or Total Acid Number for non-engines). Oil viscosity breaks down due to the extreme heat and pressure during the combustion process.



An oil analysis can be performed using different methods and equipment, according to our source at Hot Shot's Secret, who pointed to the machine pictured here as one the company uses to lab test during the formulation stage of product development and research.

Once the oil is broken, excessive wear and part failure is shortly behind. When this happens, changing the fluid sooner or finding a better lubricant should be considered.

As an oil begins to break down, various types of acids form, which can lead to further oil degradation, metal wear, and additive depletion. The Total Base Number (TBN) measures the amount of basic (alkaline) materials in engine oil that will neutralize acids. The TBN decreases as oil approaches the end of its useful life, so the lower the value, the less effective the oil will be at neutralizing acids.

Work with your lubricant supplier to review your current program and determine what can be improved. If everything is running smoothly, use the opportunity to dial in your drain intervals to keep maintenance costs in check. Using the proper lubricants and changing at the correct intervals will not only save you money, it can also maximize the performance of your vehicle and help lead to more victories. **PRI** 

Hot Shot's Secret Digital Marketing Manager Josh Steinmetz is a true gearhead and motorsports enthusiast. He grew up on a farm before earning a degree in Agricultural Engineering from Ohio State University. He is responsible for managing the company's ecommerce sales and digital strategy. He also assists with the National Tractor Pullers Association involvement and the Steve Sommers Overnight Drive radio show.





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# ADVOCACY CORNER

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

#### **Edited by Laura Pitts**

RI's Washington, DC-based advocacy team, along with race track ambassador Tom Deery, work continuously to protect and assist tracks, sanctioning bodies, and motorsports businesses around the nation. This month, we are tracking several initiatives, including racing legend Richard Petty's support for important motorsports legislation, PRI/SEMA leadership meeting with lawmakers in DC, and HP Tuners teaming up with PRI staff to help facilitate a tour with a congressman, whose subsequent backing of the RPM Act marks a big win for the industry.

#### RICHARD PETTY JOINS PRI/ SEMA CEO ON CAPITOL HILL

In July, "The King" Richard Petty joined PRI/SEMA CEO Mike Spagnola in the nation's capital to advocate for Congress to pass the Recognizing the Protection of Motorsports Act (RPM Act). The bipartisan bill (H.R.3281/ S.2736) protects Americans' right to convert street vehicles into dedicated race cars and the motorsports-parts industry's ability to sell products that enable racers to compete.

Like most NASCAR drivers who competed in the 1960s, 1970s, and 1980s, Petty raced cars that started as street-legal vehicles. However, the EPA maintains that such modified race vehicles are not legal under the Clean Air Act, threatening many classes of racing along with an industry that employs tens of thousands of Americans and contributes more



From left to right, SEMA Board Member Ted Wentz, Richard Petty, Rep. Richard Hudson (R-NC), and PRI/SEMA CEO Mike Spagnola.

than \$2 billion to the US economy each year.

Petty and Spagnola sat down with key members of the US Senate and House of Representatives to advocate for the interests of racers, enthusiasts, builders, tracks, sanctioning organizations, and businesses, while also looking to gain stronger congressional support to protect one of America's oldest pastimes and hobbies. In an effort to curtail the EPA's overreaching and extreme enforcement of the Clean Air Act, Petty and Spagnola appeared in Washington, DC, to push for passage of the RPM Act, which awaits committee action in the House of Representatives and Senate.

"The EPA is overstepping its jurisdiction and penalizing small motorsports parts businesses," Petty said. "The RPM Act is essential to the racing industry and protecting the careers of young racers all over the country. During most of my racing career, my fellow NASCAR drivers and I competed in race cars that started out as street-legal vehicles."

"There's no bigger name in motorsports than 'The King,'" said Eric Snyder, PRI's Director of Congressional Affairs. "Richard Petty won 200 NASCAR races. Most of his wins came while he was competing in race cars that were converted from streetlegal vehicles. Some of the most important lawmakers in DC were excited to meet The King and learn why he is so passionate about protecting racing and the ability to modify street vehicles for the track."

Petty's visit "produced immediate results,"

Snyder added. "It led to House Republican Whip Steve Scalise (R-LA) co-sponsoring the RPM Act. Meetings with Mr. Petty were integral to firing up key lawmakers, motivating them to lobby their colleagues in support of the RPM Act."

Petty and SEMA met with several key congressional members to discuss the importance of the bipartisan RPM Act. They included Sen. Richard Burr (R-NC), RPM Act lead sponsor: Sen. Thom Tillis (R-NC), RPM Act original co-sponsor; Sen. John Barrasso (R-WY), Senate Republican Conference Chairman and RPM Act co-sponsor; Indiana Sens. Todd Young (R-IN) and Mike Braun (R-IN), RPM Act co-sponsors; Sen. Joe Manchin (D-WV), RPM Act original co-sponsor; House Minority Leader Kevin McCarthy (R-CA); House Minority Whip Scalise (R-LA); Rep. Patrick McHenry (R-NC), RPM Act lead sponsor: Rep. Richard Hudson (R-NC), RPM Act lead Republican co-sponsor; and RPM Act original co-sponsors Rep. Markwayne Mullin (R-OK), Rep. Ted Budd (R-NC), Rep. Doug LaMalfa (R-CA), and Rep. Bill Posey (R-FL).

The RPM Act reverses the EPA's interpretation that the Clean Air Act does not allow a motor vehicle designed for street use—including a car, truck, or motorcycle—to be converted into a dedicated race vehicle. This American tradition was unquestioned until 2015, when the EPA took the position that converted vehicles must remain emissionscompliant, even though they are no longer driven on public streets or highways.

"Now is the time for other racers and racing personalities to get your network engaged in the fight to pass the RPM Act," said Snyder. "Tell them to go to saveourracecars. com, which makes it easy to sign a letter to lawmakers in support of the bill, call members of Congress with the click of a button, and



access talking points to prepare for a call with congressional staff. And, if you want to go further, invite your lawmakers to the track or to visit your business. Email me at erics@sema. org. I'm ready to help."

#### LAWMAKERS BACK RPM ACT FOLLOWING PRI/SEMA LEADERSHIP VISITS

Prior to his visit with Richard Petty, PRI/SEMA CEO Mike Spagnola visited Washington, DC, in June to lobby for the passage of the RPM Act. There, he met with key members of Congress who are integral to the legislative process on the bill and urged them to act.

With strong legislative support from more than 160 members of Congress, thanks in part to unprecedented grassroots advocacy from industry members and enthusiasts, the RPM Act is well-positioned to be passed. Still, it must be voted on to become law this year.

In an effort to help get the bill over the finish line, Spagnola met with key elected officials, including strong bill supporters and members who are best positioned to shape automotive policy. Specifically, Spagnola met with the following lawmakers about the RPM Act: Sen. Shelley Moore Capito (R-WV), an RPM Act co-sponsor and Ranking Member on the Senate Environment and Public Works Committee; Sen. Mark Kelly (D-AZ), RPM Act co-sponsor and member of the Senate Environment and Public Works Committee; Sen. Maggie Hassan (D-NH), an RPM Act co-sponsor; Rep. Cathy McMorris Rogers (R-WA), the senior Republican on the Energy & Commerce Committee; Rep. Debbie Dingell (D-MI), a strong voice on automotive issues on the E&C Committee (Rep. Dingell's new district will include Plymouth, Michigan, which is home to SEMA's Detroit Garage); and Rep. Mike Thompson (D-CA), an RPM Act co-sponsor and the Chairman of the Congressional Motorsports Caucus.

"We had very productive meetings with some of the most important lawmakers in the automotive policy space," said Spagnola. "The momentum for passing the RPM Act is building, and the progress we are making is in no small part thanks to the phone calls and letters members, the racing community, and automotive enthusiasts have made to Congress. Now is the time to keep our foot on the gas and continue to remind lawmakers that they must pass the RPM Act before the November election. It is time that Congress delivers for the men and women in our community and protects the right to convert and sell parts for race vehicles."

The RPM Act (H.R.3281/S.2736) is a bill that would protect the future of racing by clarifying in federal law that it is not illegal to modify and convert a street vehicle into a dedicated race vehicle. The House and Senate must pass the RPM Act by Jan. 3, 2023, for it to become law during the 117th session of Congress. Businesses and enthusiasts are urged to continue to reach out and contact their legislators at saveourracecars.com and push for passage of the RPM Act this year.

"The motorsports industry positively impacts the lives of millions of Americans. From the racers, race crews and teams, to the businesses that manufacture and market parts, and even the fans who support the sport, the industry is far-reaching," said Eric Snyder, PRI's Director of Congressional Affairs. "The best way to educate lawmakers and congressional staff on why they need to support the RPM Act is to provide them with information about the role of motorsports parts businesses and the race tracks in the state or district they represent."

#### REP. SCHNEIDER VOICES SUPPORT FOR RPM ACT DURING HP TUNERS VISIT

PRI thanks Congressman Brad Schneider (D-IL), who announced his support for the RPM Act during a recent visit to diagnostic, logging, calibration, and data acquisition solutions provider HP Tuners.

Rep. Schneider toured the Buffalo Grove, Illinois-based facility and met with company employees to learn more about how software and hardware tools are designed and manufactured. These components are used in racing applications as well as to help bring vehicles into and maintain emissions compliance. He also saw firsthand how important the RPM Act is to the specialty automotive aftermarket and to HP Tuners in particular, including its leadership and workforce.

"We were happy to welcome Congressman Brad Schneider to come take a tour of HP Tuners and share some insights with our employees," said co-owner and CEO Keith Prociuk, who founded HP Tuners more than 20 years ago to help offset the costs associated with his passion for racing. "Thank you to the Congressman for visiting and engaging in a thoughtful dialogue about some of the most important issues facing the industry, including the RPM Act, the right to repair and modify vehicles, tax policy, and data protection/cyber security. We appreciate Rep. Schneider voicing his support for the RPM Act, which is so critically important to our company and racers like myself."

This recent visit was coordinated by PRI's team based in Washington, DC, as part of an effort to pass bills that protect motorsports and enable the racing parts industry to thrive. Whether in Washington, DC, or state capitals around the country, public policy battles are won by organized interests that have relationships with lawmakers. In short, the organizations that shape public policy are the businesses and individuals who know their lawmakers and, more importantly, their lawmakers know them.

Hosting members of the US House of Representatives and Senators at your businesses is integral to developing meaningful relationships with lawmakers and helping them to understand the industry so they can advocate for policies that defend and expand it.

"Rep. Schneider was impressed by HP Tuners, as his tour of the company helped him to understand the importance of the RPM Act," said Eric Snyder, PRI's Director of Congressional Affairs. "HP Tuners' Founder and CEO Keith Prociuk and HP Tuners Chief Operating Officer Andrew Mernone are passionate about racing. Their advocacy for the RPM Act and the importance of the legislation to the company is very compelling. Hosting a member of Congress at your business or taking them to the race track is the best way to develop a relationship and get your lawmakers to join our campaign to pass the RPM Act."

The first step in developing these relationships is to introduce yourself and invite them to your business. PRI's government affairs staff will draft an invitation, send it to your lawmakers, coordinate the visit by providing a briefing prior to the event, and manage day-of logistics in coordination with you and your company. To host a lawmaker at your motorsports business, contact Eric Snyder at erics@sema.org. **PRI** 

# INDUSTRY NEWS

#### PRI TRADE SHOW TO BE HONORED AS TOP 100 TRADE SHOW OF 2021

Trade Show Executive Media Group, the Chicago, Illinois-based media firm covering the trade show industry, has announced the PRI Trade Show has ranked as one of the top 100 shows in the United States.

The PRI Show is widely known as the most influential business event in racing and features the newest parts and technology, access to countless manufacturers and service providers, and virtually unlimited opportunities to network face-to-face with industry leaders.

The 2021 installment of the PRI Show featured several new events and activations, including the EV Performance Zone showcasing key players in the electric vehicle racing and performance space, including OEMs, builders, and suppliers. Meanwhile, the new TOPS (Track Operators, Promoters, and Sanctioning Bodies) Workroom & Lounge featured an exclusive space dedicated to track operators, promoters, and sanctioning bodies. In addition, special events included the Save Our Racecars Rally to raise awareness and support for motorsports legislation.

This year's PRI Trade Show is set for December 8–10, at the Indiana Convention Center and Lucas Oil Stadium in Indianapolis, Indiana.

PRI will be honored at the Trade Show Executive's Gold 100 Awards & Summit, set for September 21–23, at the Ritz-Carlton Bacara in Santa Barbara, California.

For more information, including how to register for the 2022 PRI Trade Show, visit performanceracing.com/tradeshow.

#### LARSON, SWEET ANNOUNCE NEW MIDWEEK SPRINT CAR SERIES

Kyle Larson and Brad Sweet have announced the creation of a new dirt series for 410 sprint cars in 2023. The High Limit Sprint Car Series—based in Mooresville, North Carolina—will include 12 races, with all scheduled for midweek so as not to compete with other series.

Events will take place on Tuesday, Wednesday, and Thursday nights, and races will be streamed live by FloRacing. Two of the 12 High Limit races will pay \$50,000 to win, while the rest will pay out \$23,000 to the winner. An end-of-the-year championship fund totaling \$120,000 also is included.

#### INDYCAR, IMS ANNOUNCE NEW DIRECTOR OF MEDICAL SERVICES

Dr. Julia Vaizer will succeed Dr. Geoffrey Billows as the director of medical services for IndyCar and Indianapolis Motor Speedway (IMS) in Indianapolis, Indiana. Vaizer becomes the first female medical chief in the history of the sanctioning body and track.



Dr. Julia Vaizer, left, and Dr. Geoffrey Billows

Vaizer, who has served as the assistant medical director for IndyCar and IMS since 2021, also served as acting medical director when Billows was on a short medical leave of absence earlier this spring. Billows will continue contributing to medical services part time starting in 2023.

#### NHRA ANNOUNCES A/FUEL ENGINE PROGRAM FOR TOP ALCOHOL FUNNY CAR

National Hot Rod Association (NHRA) officials have announced the addition of an A/Fuel engine program for the Top Alcohol Funny Car class beginning in the 2023 NHRA Lucas Oil Drag Racing Series. With the addition of the A/Fuel (injected nitromethane) engine program, NHRA aims to increase participation and give drivers and race teams another option to run.

"As an added benefit...the injected nitro combination can also serve as a viable path for drivers, teams, and crew members to ultimately advance to the nitro Funny Car class in the Camping World NHRA Drag Racing Series," an NHRA rep stated.

#### ADRL BUYS IHRA AUSTRALIA, IHRA NEW ZEALAND

The Australian Drag Racing League (ADRL) has completed the purchase of the International Hot Rod Association (IHRA) Australia and IHRA New Zealand from IRG Sports + Entertainment (IRGSE) based in West Palm Beach, Florida.

ADRL is headed up by veteran motorsports professional Maurice Allen, the former managing director at IHRA Australia and the founder of the Australian Dragbike School. He also previously served as CEO of the Aeroflow 400 Thunder Professional and Sportsman Championship Series, a drag racing series sanctioned by IHRA Australia.

IHRA Australia operates at seven different facilities and sanctions events and series, including the 400 Thunder and the Australian Top Fuel Championship.

IHRA New Zealand features the 10-race New Zealand National Series at four facilities.

#### MAYNARDS NAMED MAJORITY OWNER OF DSR TOP FUEL TEAM

Don Schumacher Racing (DSR) and Joe and Cathi Maynard have announced an expanded partnership that sees the Maynards as majority owners of the Top Fuel operation piloted by Tony Schumacher.

The new Maynard Family Racing/Don Schumacher Racing team (JCM/DSR) launched at the NHRA Northwest Nationals, when the Maynards took over day-to-day operations of the Tony Schumacher-driven/ Todd Okuhara-tuned machine.

DSR will continue to operate its hospitality program, graphic design and vinyl installation, nitromethane, parts, and chassis sales, and a 75,000-square-foot precision machining and fabrication facility in Brownsburg, Indiana. Additionally, DSR's trio of Factory Stock Showdown Series entries will continue to compete under the DSR banner.

Don Schumacher, DSR Performance President Chad Osier, and DSR Vice President Megan Schumacher will continue to develop DSR Performance, DSR's performance aftermarket, aerospace, and defense manufacturing division.



#### **NEW OWNERS FOR BUNKER** HILL DRAGSTRIP (IN)

NHRA Top Fuel veteran Terry McMillen and his family have purchased Bunker Hill Dragstrip, known as Indiana's first drag strip.

Terry, Cori, and Cameron McMillen will be the new owners/operators of the facility in Bunker Hill, Indiana. The IHRA-sanctioned track was previously owned and run by Mark Cregier.

The track celebrated its 65th anniversary last vear.

#### TORQUED DISTRIBUTION **OPENS DETROIT WAREHOUSE**

Torqued Distribution—the motorsports and automotive performance warehouse distributor-has opened an all-new warehouse and national sales office in Detroit, Michigan.

Headquartered in San Francisco, California, Torqued began by importing racing and performance brands from England and Europe and today is the sole US distributor for Tillett Racing, Nuke Performance, obp Motorsport, and more. Additional brands include Holley, Bell Helmets, CSF, Detroit Muscle, MOMO Italy, and XClutch.

#### CUMMINS ANNOUNCES JENNIFER RUMSEY AS CEO

Columbus. Indiana-based Cummins has announced Jennifer Rumsey, president and chief operating officer (COO), will assume the role of president and chief executive officer (CEO). She replaces CEO Tom Linebarger.

Rumsey will be the seventh CEO and first woman to lead the diesel and alternative fuel engine and component manufacturer since it was founded in 1919. Linebarger will continue to serve as chairman and executive chairman of the board of directors, working directly with Rumsey on specific initiatives, including the pending acquisition of commercial vehicle aftermarket manufacturer Meritor.



Jennifer Rumsey, left, and Tom Linebarger



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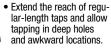
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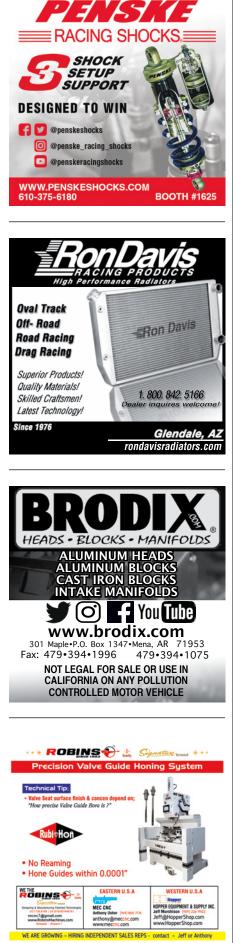


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#### INDUSTRY NEWS

## K&K INSURANCE NAMES NEW PRESIDENT, CEO

K&K Insurance, the Fort Wayne, Indianabased motorsports insurance company, has announced Ron Norton as its new president and CEO. He replaces Todd Bixler, who retired after 12 years with the company.

With 36 years at K&K, Norton began as an associate underwriter in 1986, before managing programs including leisure camps, campgrounds, and more. He was later promoted to vice president of the leisure division in 2007. In 2019, he was promoted to chief underwriting officer.

#### BENDPAK ANNOUNCES SENIOR LEADERSHIP CHANGES

BendPak—the manufacturer of car lifts, wheel components, and shop equipment based in Santa Paula, California—has announced Jeff Kritzer as president and CEO. He replaces Don Henthorn, who has served as president and company founder since 1965. Henthorn moves into an advisory capacity as chairman emeritus.



#### From left to right: Jim Fornear, Jeff Kritzer, Don Henthorn, Javier Arias, and Rudy Diaz

Additionally, Rudy Diaz was promoted from vice president of information technology to executive vice president and chief operating officer (COO). Jim Fornear, meantime, moves from financial controller to chief financial officer (CFO), while Javier Arias continues as vice president of operations.

## MICHELIN APPOINTS NEW MOTORSPORTS DIRECTOR

Michelin North America in Greenville, South Carolina, has named Jason Anzalone director of motorsports, succeeding Tony Ménard, who is returning to Michelin headquarters in France after three years in North America.

Anzalone has served in several positions



during his 11-year Michelin career, most recently as a strategic account director for Discount Tire and Tire Rack.

#### HOOSIER RACING TIRE APPOINTS NEW HEAD OF MARKETING

Nic Moncher has been tapped to head up the newly established marketing department at Hoosier Racing Tire in Lakeville, Indiana.



Scott "Woody"

Woodruff

He will be responsible for developing business plans, supporting sales concepts,

and expanding promotional marketing strategies to help drive growth. In addition, he will help with overall brand development and strengthening of the brand in the global marketplace.

#### ELITE MOTORSPORTS NAMES WOODRUFF NEW BRANDING & MOTORSPORTS DIRECTOR

Scott "Woody" Woodruff has been named the new director for Branding and Motorsports at Elite Motorsports, the Wynnewood, Oklahoma-based dealer of motorsports transportation and related components.

In his new role, Woodruff

will work closely with the organization's various brands, including Elite Motorsports, Elite Performance, Elite HP, Patterson-Elite, and Elite Cultivation.



Lubrication Specialties Inc. (LSI)—the Mt. Gilead, Ohio-based provider of specialized oil and fuel additives and parent company of Hot Shot's Secret lubrications—has promoted Julie Blankenship to chemical business development manager.

Blankenship will coordinate sales and marketing for LSI Chemical's current 12

distributors in nine countries in Central America and Europe. She will also manage LSI Chemical's trade show and conference event schedule and coordinate all educational and promotional materials.

## DAN ROBINSON JOINS FIVE STAR RACE CAR BODIES

Five Star Race Car Bodies—the manufacturer of race car bodies and components based in Twin Lakes, Wisconsin has appointed Dan Robinson to the newly created role of MD3 key accounts manager. MD3 is the provider of dirt late model, dirt modified, and street stock body panels.

"I look forward to representing the MD3 brand and Five Star with a stronger presence in the field of dirt racing...[and] communicate with teams, chassis builders, and sanctioning bodies to fine-tune existing products and to seek out new product opportunities that fit the needs of the industry," Robinson said.

"Dan will be a key piece to elevating our MD3 brand to a whole new level," said Five Star Race Car Bodies Vice President Corey Schultz.

#### TYLER EPP NAMED PRESIDENT OF FORMULA 1 CRYPTO.COM MIAMI GRAND PRIX

Tyler Epp has been named president of the Formula 1 Crypto.com Miami Grand Prix event in Miami, Florida. Epp previously served as the event's senior vice president and chief operating officer (COO) and has more than 20 years of senior management experience spanning multiple sports.

Richard Cregan moves into a consultancy role, where he will continue to provide his knowledge and experience to support Epp and the management team.

#### IMSA VP RACING SPORTSCAR CHALLENGE TO DEBUT IN 2023

A new, multiple-class, sprint-race series will make its debut in 2023 as Daytona, Floridabased International Motor Sports Association (IMSA) officials have unveiled the IMSA VP Racing SportsCar Challenge, with entitlement sponsorship from VP Racing Fuels.

The series will replace the IMSA Prototype

Challenge and will feature currently homologated Le Mans Prototype 3 (LMP3) and Grand Touring 4 (GT4) race cars in 45-minute sprint races with one driver per car. The new series class names will be LMP3 and GSX, respectively.

#### LEGACY EV ANNOUNCES ACCREDITED COLLEGE EV EDUCATION PROGRAM

Tempe, Arizona-based Legacy EV—the provider of electric vehicle (EV) aftermarket applications and education—has announced a new EV certification program for Northeast Texas Community College in Mount Pleasant, Texas.

The Carroll Shelby Automotive Program is a first-of-its-kind accredited college program designed to prepare students to work on EV systems and conversions, a source from Legacy EV stated.

#### BOROWSKI TO TAKE ON BBC MARKET

Having recently completed major capital investments and added staff, Borowski Race Engines in Rockdale, Illinois, is broadening its scope to include big block Chevrolet engines. The company had focused on LS engines in recent years.

Borowski's new BBC product line will build on its long-standing relationship with Dart Machinery, as Borowski will be using Dart's Big M (billet steel main caps) and Sportsman blocks (ductile iron main caps) in a 4.560inch bore diameter. Borowski's Sportsman blocks will have a BBC standard deck height of 9.800 inches, while the Big Ms will be tall decks at 10.200 inches.

The rotating assemblies will feature Callies Performance Products crank and rods with Diamond Pistons. The Sportsman block builds will use Callies Compstar cranks and rods. Diamond Pistons will provide a range of products with various compression ratios and design features for specific naturally aspirated and boosted engines, a company source said.

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

# RACE SHOP



#### DEATSCHWERKS deatschwerks.com

This 2.0L Fuel Cell Surge Tank is designed to fit one, two, or three pressure pumps. It fits standard 6- by 10-inch 24-bolt fuel cells and is made for 39-mm or 46-mm pumps. Optional straight or angled filler necks are available and support up to 2,500 bhp. Optional accessories are available, too. **Contact: 405-217-0701** 



## FFP CUSTOMS ffpcustoms.com

These seat mounts are fitted for 1 1/4, 1 1/2, 1 5/8, and 1 3/4 OD tube. They are made of 6061 aluminum with grade 8 hardware and provide a strong bolt-in adjustable solution when needing to support the upper half of a seat. Two 5/16-24 bolts clamp the mount onto the roll bar, and there's a 3/8 bolt hole in the center (bolt included) to fasten the mount directly to the roll bar. Parts and installation hardware included. **Contact: 813-928-1449** 



#### FINISHMASTER finishmaster.com/smart

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Contact: 866-711-5235



## HOLLEY PERFORMANCE PRODUCTS holley.com

Holley EFI fuel filters with built-in regulator are designed to provide a simple and clean way to fuel an LS swap. Available with either OEM-style or -6AN connections, they feature an internal regulator set at 58 psi, along with an integrated 5 nominal micron-rated filter. These are ideal when performing an LS engine swap or any other fuel injection swap that is designed to run at 58 psi of static pressure.

Contact: 866-464-6553



JRi SHOCKS jrishocks.com

JRi Shocks' Ride Height System raises and lowers the vehicle with the push of a button. This system uses a hydraulic pump with no air, which means no noisy compressor or leaky seals, and no variances with temperature or elevation changes. The system includes four shocks, the pump assembly, and oil. **Contact: 704-660-8346** 



LINCOLN ELECTRIC lincolnelectric.com

The POWER MIG 215 MPi multi-process welder is a lightweight dual-input voltage machine with a new ergonomic design. Features include increased duty cycle for longer weld time, a built-in TIG solenoid that requires no installation by the user, an improved wire drive that ensures consistent wire feeding, and the new Magnum PRO 175L Gun, and much more.

Contact: 888-935-3877



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RACE SHOP



#### MAHLE MOTORSPORT mahlemotorsports.com

The Small Block Chevy 23-degree USRA Factory Stock PowerPak Piston Kit is designed to meet all USRA Factory Stock rules. The kit is available for 357-, 359-, 361-, and 362-cubic-inch engines. Each kit includes a 1.5-, 1.5-, 3.0-mm file fit performance ring set and heavy-duty steel wrist pins. **Contact: 888-255-1942** 



#### MUSTANG DYNAMOMETER mustangdyne.com

Mustang Dynamometer offers a new version of PowerDyne Controls Software and Vehicle Look-up Tables. PowerDyne features the company's exclusive Virtual Inertia Technology and enables advanced high-performance shops to stimulate the scientific laws of mass and motion without leaving the shop environment. The latest Vehicle Look-up Tables contain pertinent vehicle information, including the 2022 model year.

Contact: 330-963-5400



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## PROCHARGER SUPERCHARGERS procharger.com

Add 180-plus horsepower to a LT2powered C8 Corvette. With an intercooled P-15C-1 Tuner Kit Plus, the C8 can get a boost in performance with 6 psi on 91-plus octane. The kit comes complete with all of the necessary hardware for installation, including engine management components. **Contact: 913-338-2886** 



#### TORQUED DISTRIBUTION torqueddistribution.com

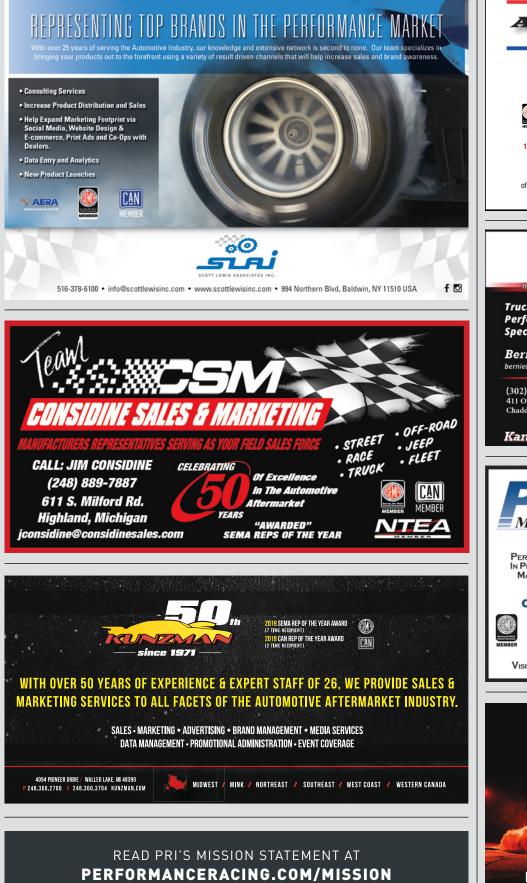
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## PERFORMANCE INDUSTRY REPS



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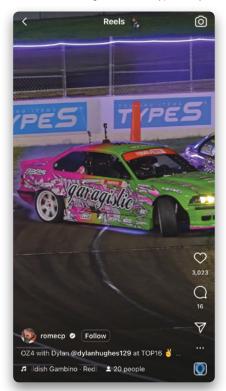
# SOCIAL STATUS

A closer look at racing and performance industry members' engagement strategies on TikTok, Instagram, Facebook, and more.

his month we're taking a look at the benefits of social media from a professional racer/business owner's perspective.

Formula Drift driver Rome Charpentier mainly focuses on Instagram, Facebook, and TikTok, but has spent some time on YouTube as well. "YouTube is normally used more for information and longer videos," he told us. "TikTok is used for funny short clips to catch attention, and Instagram is more of a daily update, along with Facebook, that allows people to know what we're doing. But I mainly just look for trends and see what platforms have the most action going on in the demographic we are targeting."

In addition to driving in a premier drifting series, Charpentier builds race cars out of his shop, IMAGINE GARAGE. "At the end of the day, it's all about ROI for us," he said. "So, getting eyes on what we're doing and creating an excitement along with some hype really



allows us to hold our audience on mentally and continue to bring more fans into the sport and connect more people with our sponsors."

A larger following on social media can absolutely help drivers gain sponsors; however, oftentimes it's the engagement that's much more important. "We all know people who have paid for followers, [only] to get themselves nowhere in the end. So, it's all about the interaction on the platforms and communication," Charpentier noted.

Creating content is one of the more involved aspects of social media-coming up with ideas, determining what your audience likes, following the trends and algorithm changes, etc. And even when you think you have that figured out, engagement can still be fairly unpredictable at times. "Popular content is very random for us. We never know what people will like and what they won't like," Charpentier noted. "Sometimes we make something that we just throw on social, and people love it. And when we try to re-create it, no one even watches it. It's a very hit-or-miss situation right now, so we just play the numbers. The more stuff we post online and the more consistent we are, the better our chances are of going viral."

If you're able to, hiring outside contractors or utilizing staff to help with social media can be beneficial. "We have an in-house media team that takes care of all of our social media so that I can focus on the main stuff, which is driving and building race cars," Charpentier said. "Here's the easiest way to look at it: Social media is basically marketing, so just like with any business or race team, marketing is very important. But if you don't keep things floating and moving forward and progressing, then all the marketing in the world doesn't help. So basically, find people to do what they're good at so you can focus on what you're good at. It's very easy to get caught up in social media."

Charpentier's advice for drivers or businesses trying to build their social media



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presence: "Just start posting. It doesn't really matter what you're posting as long as people are seeing you all the time and becoming more familiar with you and see progression in your business and/or your race program. You may not always have a ton of driver content to post, but you still have an everyday life as well, so keep that in mind." **PRI** 



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