

PRI

PERFORMANCE RACING INDUSTRY MAGAZINE

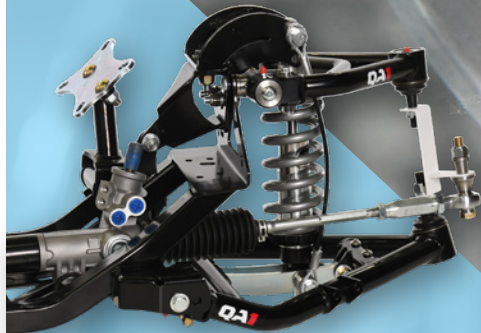
POWER *Hungry*

HOW MODERN TURBOCHARGERS
ARE GENERATING MAXIMUM OUTPUT

PRI SHOW REPORT
A TREASURE TROVE OF
NEW PRODUCTS FOR 2023

INSIDE

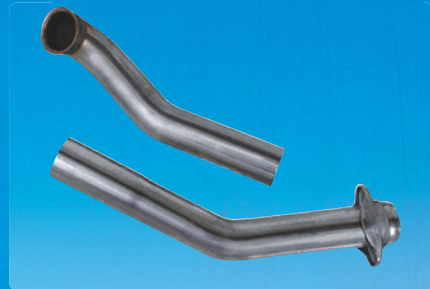
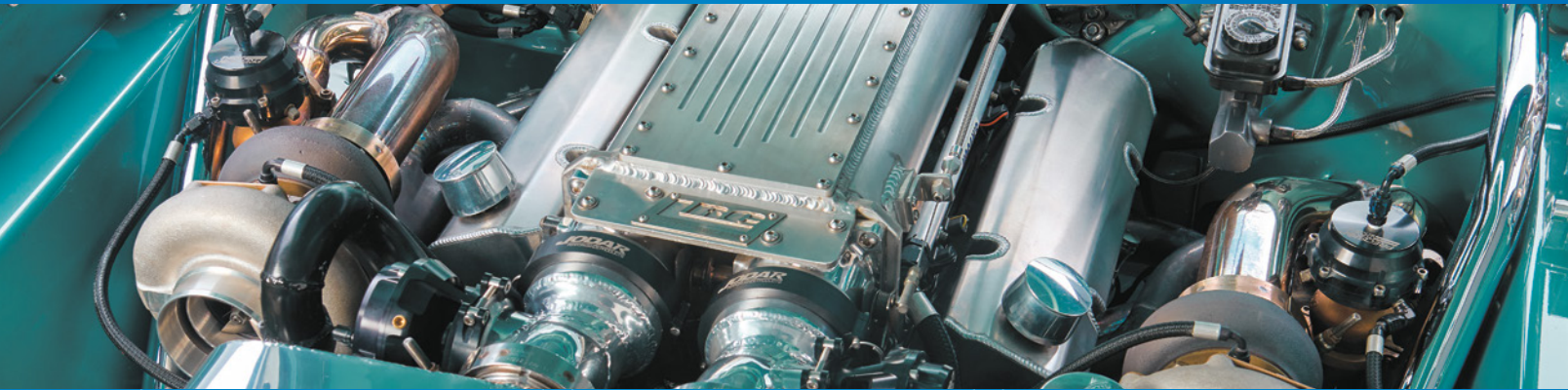
STOCK CARS | TEST & TUNE | DRIVER SAFETY
DATA ACQUISITION & SENSORS | VALVE SPRINGS
BRANDING | FIRE SUPPRESSION | & MORE



SERIOUS PERFORMANCE.

SERIOUS WHOLESALE POWER BY ATECH MOTORSPORTS.

- Access to Over 1,500 Brands
- Unbeatable Service and Satisfaction
- Huge Inventory—We Stock it so You Don't Have to
- FAST, FREE Shipping—Reliable 1-2 Day Delivery
- Drop Ship Service at No Additional Fee
- We Export at Competitive Rates



FEATURED BRANDS



ATECHMOTORSPORTS.COM
FOUR LOCATIONS—MILLIONS OF PARTS!



Global Wholesale
DISTRIBUTOR

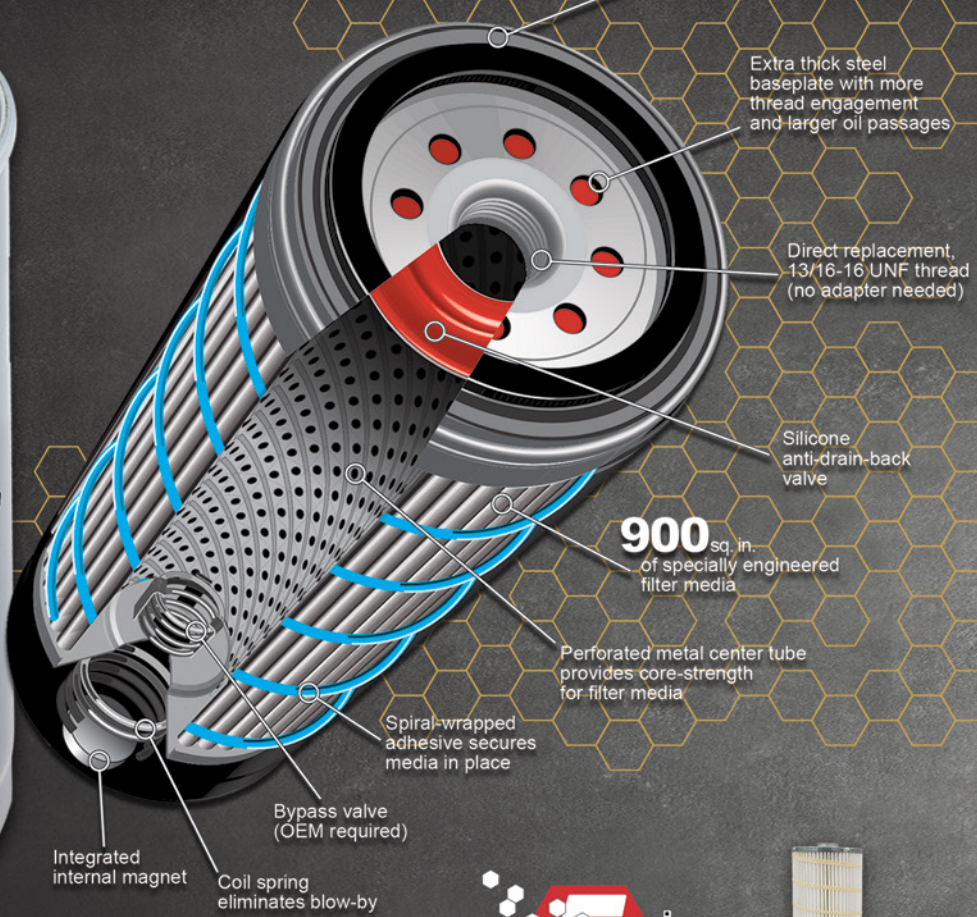
TALLMADGE, OH • MCDONOUGH, GA • SPARKS, NV • ARLINGTON, TX
800.517.1040 • 1.330.630.0888 • FAX: 1.330.630.5365

Some parts are not legal for sale or use in California or other states with similar laws/regulations. Please check your state and/or local laws/regulations. Typographical errors and errors in description or photography are subject to correction. ©2023 AUTOSALES, INC.



MicroPureXR[®]

Extreme-Performance Engine Oil Filter



GET A FIRM GRIP! ▶

GM 6.6L Duramax PPE Engine Oil Filter Socket

Easy filter install and removal with this specialty socket. (114000559)



5 micron filtration
down to five microns



PPE
(900 sq in)



Standard
(357 sq in)

MicroPure XR Engine Oil Filter TorqSTOP Technology

Applications: 2001-2019 GM 6.6L Duramax
(114000555)

PPE
PACIFIC PERFORMANCE ENGINEERING

PPEpower.com

725.238.2002

SCAN NOW TO
LEARN MORE!



CONTENTS

FEBRUARY 2023 VOLUME 38, NUMBER 2

performanceracing.com | mail@performanceracing.com



18

From the Editor 8

How race teams, businesses, and others apply what they gathered at the PRI Trade Show will help define their success in the season ahead.

Featured Vehicles 12

Showcasing the old-yet-outfitted-with-the-new by way of a 950-horsepower land speed racer and a supercharged 1932 Bantam Altered.

COLUMNS

Ask the Experts 16

Successful motorsports industry professionals reveal the keys to building brand loyalty and keeping customers coming back for more.

Stop Doing That...Do This Instead ...18

Using incorrect valve spring pressure can reduce horsepower and component longevity, so getting this element dialed in is well worth the effort.

Editors' Choice 20

Introducing our top product picks for the month, including a new rod bolt stretch gauge, synthetic ATV/UTV motor oil, and a quick-release steering system, among others.



28

Fast Movers..... 24

A look at some of the country's in-demand products and services by region and racing segment, direct from the PRI Trade Show floor.

Newly Appointed 26

Jason Reed's life has centered around Knoxville Raceway, from showing livestock at the county fair as a youth to his current role as general manager.

Industry Insights..... 28

Bringing people together over a love of racing is the secret sauce for Tom Bailey, publisher of Sick the Magazine and architect of the relatively new yet wildly popular drag-and-drive event Sick Week. Oh, and he also finds time to pilot the nation's fastest street-legal car.



20

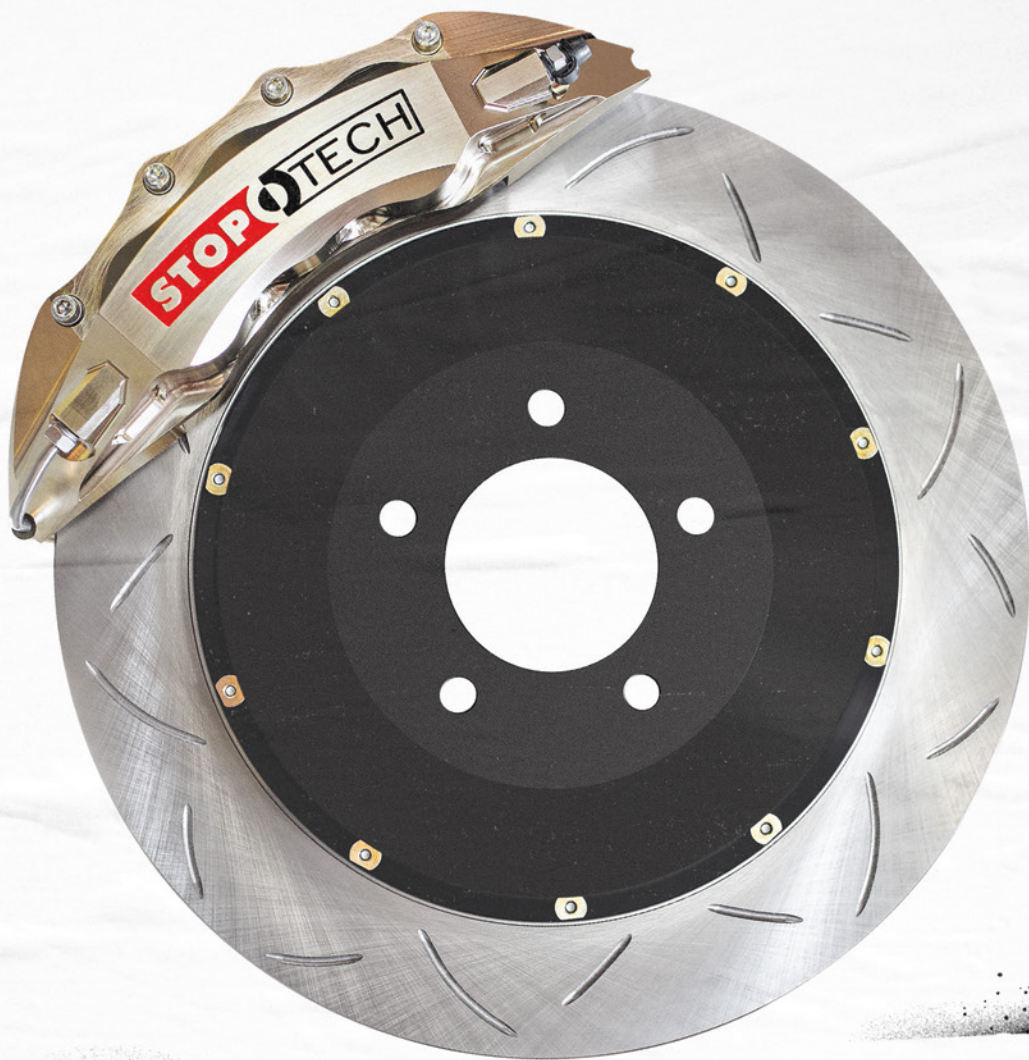


24



ON THE COVER

Cover Photography: PRI



YOUR COMPETITIVE ADVANTAGE

TURN14
DISTRIBUTION

x

STOPTECH
HIGH PERFORMANCE BRAKE SYSTEMS®

FIFTH-GENERATION TROPHY BIG BRAKE KIT

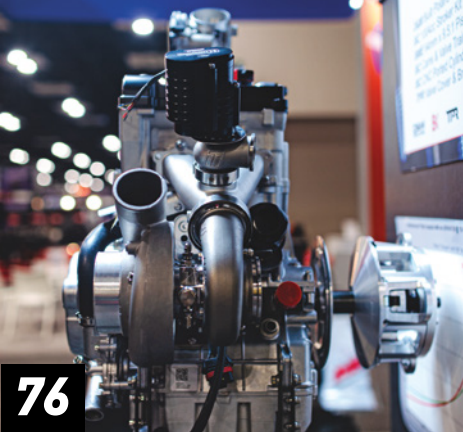
Turn 14 Distribution is the premier B2B source for StopTech's high performance brake systems. As a valued dealer, we provide you with access to industry-leading customer support, real-time inventory, flat rate shipping from our strategically located distribution centers, and 100% hassle-free returns.

100% WHOLESALE | TURN14.COM

CONTENTS

FEBRUARY 2023 VOLUME 38, NUMBER 2

performanceracing.com | mail@performanceracing.com



76

FEATURES

PRI SHOW REPORT

Show-Stopping Innovations 34

Speed merchants will be busy this year making sure high-horsepower engines don't get thirsty, and that the growing Godzilla family will have plenty of trick parts to keep it company.

Prize Packages 42

From adaptive gearboxes to battery relocation kits, engine control systems, and pocket tire gauges, PRI's Featured Product Award winners are "following the trends of where this industry is going."

Attention Spanning 50

Industry buyers can bank on a prodigious supply of new performance parts and solutions designed to drive sales—and podium finishes—in 2023 and beyond.

First-Class Education..... 58

Information-sharing and training across business and management, tech, and EV performance provide PRI members with actionable takeaways for 2023 and beyond.

Staged for Success 66

A photographic look at memorable vehicles, equipment, features, and VIPs as captured by PRI's team of award-winning photographers and content creators.

Power Structures 76

Whether naturally aspirated or propelled by nitrous, turbos, or superchargers, race engine technology was front and center at the industry's annual salute to speed.



82

STOCK CAR COVERAGE

United Front.....82

Super Late Model teams across the US now have more competition options as rules parity comes into focus.

Balancing Act.....88

As tracks, series, and sanctions continue to tighten the playing field, chassis setup is becoming a core focus in the hunt for a competitive edge in stock car racing.

Business Profile: VanDoorn Racing Development.....94

This Michigan-based late-model specialist has run the short track to success with race-winning engineering, quick turnaround times, and outstanding customer service.

Open Gates.....100

Test-and-tune events at the drag strip offer a ground-level snapshot of the state of straight-line competition.

Data Driven.....106

System manufacturers are upping their game to provide more information that's easier to access and interpret.

Safety First114

Industry experts reveal when helmets, fire suits, and other pieces of critical protective gear should be replaced.

Tailor-Made Boost120

To meet requirements while remaining competitive, more racers are turning to custom turbochargers for purpose-built solutions.

Member Check-in126

Pushing the performance envelope into EV territory is the focus of T Sportline and CEO Brian Reese.

PRI Tech128

Determine which suppression system to install now before each second of a fire event becomes more and more crucial.

Advocacy Corner.....130

Developments include an update on legislation designed to protect racing businesses, a new law aimed at impeding sales of counterfeit goods, how connections from the PRI Show will fuel the industry in 2023, and more.

DEPARTMENTS

Industry News	132
Manufacturers Reps	135
Advertisers Index	137
Social Status.....	138



STORAGE FOR CHAMPIONS

Designed Online. Built To Order.

Now you can **customize** toolboxes, pit carts, and garage/trailer cabinets completely online. All in stunning 3D. Just in time for the racing season.

- Choose from a variety of cart and cabinet types
- Customize size, options, and more
- Delivered to your door with the click of a button



WWW.CTECHMANUFACTURING.COM



(715)-355-8842

7501 Commerce Dr. Weston, WI 54476

FROM THE EDITOR

Two quick thoughts on the recent PRI Trade Show and its implications for the 2023 season, and an icon passes on:

1) PRI EXHIBITORS ARE DIRECTLY— and sometimes indirectly—on-trend. It isn't exactly news that the 1,000-plus manufacturers and service providers whose displays line the aisles and display rooms of the Indiana Convention Center and Lucas Oil Stadium represent the pinnacle of innovation in motorsports. But it's refreshing to hear firsthand from buyers enthusiastically exploring the possibilities of all those new trick parts unveiled on the Show floor. Among them was local racer Nick Taylor, who told us that even though he doesn't race big-wheel cars (i.e., Donks), QA1's full-handling kits for 1971–1976 Impalas/Caprices nonetheless grabbed his attention. "I do no-prep racing and we like long-travel suspensions," he said. "So I'm trying to gauge how this [product] could work out for what we do, not just the application they've produced it for." Similarly, Fort Wayne, Indiana-based fabricator Ryne Moonshower summarized, in general terms, "There's crossover between a lot of different sports here. New products for circle track may also be useful in another area like drag racing, and you would never know that unless you came to PRI." This month's multi-part Special Report, which begins on page 34, provides countless takeaways from December's big event, including award-winning products, inspiring education, spectacular race vehicles, dazzling engines, and much, much more.

2) KNOWLEDGE IS POWER, AND PRI

Education delivers the goods. (We also found out what happens when you throw a party and EVERYONE shows up!) In short, it was beyond gratifying to see attendees streaming into seminar rooms to listen and learn from some of the industry's leading minds in Business & Management, Tech, and EV Performance—the three tracks offered as part of our complimentary



DAN SCHECHNER
dans@performanceracing.com

on-site education and training program. Whether it was social media tips and tricks, sponsor engagement strategies, clean performance tuning, EV conversion opportunities, or more than a dozen other hot-button topics, the information delivered over three days of the Show should have a lasting impact on those in attendance. Indeed, the cheat code is in how audience members take what they learned and apply those lessons in their own offices, shops, garages, etc. And, based on our exit interviews that's precisely what many have in mind. "I'm going to try to use some of his suggestions," said Zack Remsen, owner of Florida-based Remtune, following a presentation by Bob Morreale of The Tuning School on how to show compliance with EPA emissions requirements. "I'm a small-business man," Remsen added, "and I can't afford a \$60,000 piece of testing equipment, but I will look into the suggestion to package different components together that have been tested, and also the SEMA Garage program."

3) JUST AS THIS ISSUE WAS GOING TO

print we received word that Dan Jesel, founder of Jesel Valvetrain Innovation, had passed away at the age of 81. Jesel's contributions to the performance aftermarket are nothing short of legendary. From the revolutionary Jesel Keyway Roller Lifter to his company's universally recognized shaft rockers, camshaft belt drives, and roller lifters, Jesel never stopped pressing forward. His legacy, immeasurable. He will be missed by all. **PRI**

GENERAL MANAGER
Jim Liaw

EDITORIAL
EDITOR

Dan Schechner

MANAGING EDITOR

Meredith Kaplan Burns

SENIOR EDITOR / SOCIAL MEDIA

MANAGER-EDITORIAL

Christen D'Alessandro

ASSOCIATE EDITOR

Laura Pitts

COORDINATING / PROJECTS EDITOR

Daud Gonzalez

CONTRIBUTORS

David Bellm, Jim Clay, Jim Donnelly, Drew Hardin, Bradley Iger, Mike Imlay, Jim Koscs, Mike Magda, Linda Mansfield, Steve Statham, Jeff Zurschmeide

SALES

VICE PRESIDENT OF SALES

Warren Kosikov

SENIOR SALES DIRECTORS

Alan Josse Brian Paik

INDUSTRY SALES DIRECTORS

Andrea Brake Celina Kluba

Becca Butler Monica Terlouf

Jeff Dahlin Willie Yee

Scott Hartwick

SALES ASSISTANTS

Madison Danna Lisa Schafer

Marel Del Rio

PRODUCTION

ADVERTISING COORDINATOR

Brandon Benson

ART

SENIOR ART DIRECTOR

Paul Graff

GRAPHIC DESIGNERS

John Cabral

Jeffrey Chhan

PHOTOGRAPHERS

David Allio, Michael Allio, Richard Barnes, James Black, Scott Crawford, Bob D'Alessandro, Kevin DiOssi, Driveline Studios, TJ Harron Photography, Ainsley Jacobs, Mike Magda, Holly Martin/Metal and Speed, Connor Moore, Alex Owens/Alkey Alex Photos, Ally Ross, Dan Schechner,

ACCOUNTING

PAYABLES

Lily Huang

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 © 2023 Performance Racing Industry. All rights reserved. **Printed in U.S.A.**

PM # 40702022, Return Undeliverable: Canadian Addresses to: Station A, PO Box 54, Windsor, ON N9A 6J5. Email: cpcreturns@wdsmail.com



pureTM
drivetrain solutions



SCAN ME



SG 5
Seat and Guide



SG 8 XL
Seat and Guide



VR10P
Valve Refacing



SG 7
Seat and Guide



SG 8 XL Smart
Seat and Guide



VR 5
Valve Refacing



SG 8
Seat and Guide



Rubi Surf 1.7
Smart



GH 8 & GH 8 XYZ
Valve Guide Honing / Automated Hole to Hole



SG 8 Smart
Seat and Guide



Rubi Surf 1.9
Smart



GH 100 & GH 100 XYZ
Valve Guide Honing / Automated Hole to Hole

ROBINS offer Fixed / Serdi / Newen BB Style live pilots in 0.0001" (2 microns) increments

CVS
Constantly-Varying Speed

Rubi-Hon
Valve Guide Honing Systems

ROBINS
SINCE 1983
-0+ Exactly
www.RobinsMachines.com

RUBI SURF
Manual & Smart Surfacing

RUBI-hard
Premium Multi-angle cutting inserts:

RUBI SURF

SURFACING MACHINES



Caterpillar C15 Cylinder Head

RUBI SURF 1.7 SPECIFICATIONS

- X-axis workhead travel: 42 inches (1065 mm)
- Cylinder head length: 34 inches (865 mm)
- Cutter head diameter: 14.0 inches (356 mm)

RUBI SURF 1.9 SPECIFICATIONS

- X-axis workhead travel: 56 inches (1400 mm)
- Cylinder head length: 47 inches (1200 mm)
- Cutter head diameter: 16.5 inches (420 mm)

COMMON SPECIFICATIONS

- Spindle speed: 200-1200 RPM variable (CNC AC SERVO)
- Surface finish: As low as 0.2 Ra μmm
- X-axis slideways: Low friction turcite slideways
- Operator panel: Rubisurf Smart Series
- Waviness: Below 70 Wt

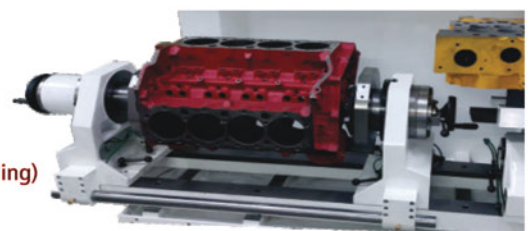
Unique revolutionary concept for V6 and V8 cylinder blocks machining

****No Precision Locators Needed****



Reference from either main bearing bores/cam shaft bores or pan rail surfaces!

ROBINS...World's First (Patent Pending)



ROBINS offer Fixed / Serdi / Newen BB Style live pilots in 0.0001" (2 microns) increments



FEATURED VEHICLES

Celebrating the “old-yet-outfitted-with-the-new” is the focus of this month’s inside look at some of the motorsports industry’s most notable race cars.





1934 FORD ROADSTER

AARON BROWN | DENVER, NORTH CAROLINA

RACE SERIES/CLASS:
Bonneville C/Street Roadster

ENGINE:
Roush Yates FR9 built by Nick Ramey of Roush Yates Engines

CAR:
Built by The Garage Shop

FEATURES:
Earnhardt Technologies Group, Schultz Fuel Cells, Steel-It Coatings, The Joie of Seating, LabWare, Goodyear Racing tires, Penske Racing Shocks

FACTS:
The car makes about 950 horsepower at the crank, turning 9,400 rpm.



1932 BANTAM ALTERED

TIM KISH | KALAMAZOO, MICHIGAN

RACE SERIES/CLASS:
Bracket dragster that runs in the Jegs Super Quick Series in NHRA Division 3

ENGINE:
6.6L LS built by Lingenfelter Performance Engineering

CAR:
Chassis built by Spitzer Race Cars

FEATURES:
Magnuson Superchargers, Holley EFI, Coan Engineering, Scott Performance Wire, Fuel Injector Clinic, Eaton Performance Products

FACTS:
Inaugural Holley LS Fest East Quick 16 Champion (2022). Power boost comes from Magnuson TVS2650 supercharger running 24 psi boost on methanol.

WORLD'S FIRST



GH 8

GH 8_{XYZ}

AUTOMATIC **GUIDE HONING** MACHINES

Accurate to 0.0001" (0.002 mm) AUTOMATICALLY!

ROBINS offer Fixed / Serdi / Newen BB Style live pilots in 0.0001" (2 microns) increments

ROBINS
SINCE 1983



[f](#) [@](#) [t](#) [v](#) [d](#) [i](#) /robinsmachines

rc@RobinsMachines.com
www.RobinsMachines.com

Eastern U.S.A and Canada



MEC CNC

Anthony Usher (949) 800-7176

anthony@meccnc.com | www.meccnc.com

Western U.S.A



HOPPER EQUIPMENT

Jeff Murchison (909) 226-9922

Jeff@HopperShop.com | www.HopperShop.com

Enquiries from outside USA and Canada Contact Factory Directly



Constantly-Varying Speed
US Patent - for Chatter - Free Seats !

2 in 1
Manual  RubiSmart

SG8XL SMART

SEAT and GUIDE MACHINE



Cummins ISX Cylinder head



Machine two V8 cylinder heads in one set-up

SG 8XL SMART Specifications

- Max cylinder head size: 47" L x 15" W x 10" H (1200mm x 380mm x 254mm)
- Spindle stroke: 8.500" (216mm)
- Spindle speed: 35 - 500 rpm
- Spindle tilt: 15 Degrees
- Roundness: <0.0002" (5 microns)
- Concentricity: 0.0002" (5 microns) with Honed Guides
- Surface finish: <0.6 Ra μm
- Micro Fine Feed
- Spring Free Adaptors
- Constant Varying Speed

ROBINS offer Fixed / Serdi / Newen BB Style live pilots in 0.0001" (2 microns) increments

ROBINS  **- 0 +**
SINCE 1983 **Exactly**

[f](#) [@](#) [v](#) [t](#) [y](#) [d](#) [i](#) [n](#) /robinsmachines | rc@RobinsMachines.com
www.RobinsMachines.com

Eastern U.S.A and Canada
 **MEC CNC**
Anthony Usher (949) 800-7176
anthony@meccnc.com | www.meccnc.com

Western U.S.A
 **HOPPER EQUIPMENT**
Jeff Murchison (909) 226-9922
Jeff@HopperShop.com | www.HopperShop.com

Enquiries from outside USA and Canada Contact Factory Directly

ASK THE EXPERTS

HOW TO BUILD BRAND LOYALTY

Tips from successful racing industry professionals on ways to keep customers coming back for more.

By Drew Hardin

Getting a customer to try your product and having that customer return for more are two distinct buying decisions. Product awareness and consideration influence that first step, while product quality is the cornerstone of the second. Other factors, though, play a role in a customer's buying behavior beyond that first purchase. Here, three industry experts offer distinct takes on what those factors are.

PERFORMANCE IS KING

"Consistency and consistent quality" are key to brand loyalty at VP Racing Fuels, San Antonio, Texas, "but for our customers it is more than that. Performance is also king for all our products," said Ben Dolan. "We keep innovating and iterating, and that's a big part of what leads to a really high perceived value for our customer. They've gotten something that is a premium product with a high perceived value because of all of the investment we make into making sure that it is the best product available. That then creates another pillar of brand loyalty, which is brand trust. They come to trust us because of that consistency and because of that performance."

Dolan said he can't walk through an airport "without someone stopping me to tell me, 'I race, and I just love your fuel. It smells so good and makes so much power.' That experience they have, and then the



brand trust and perceived value, all come together."

Working closely with engine builders and other experts is another way VP builds credibility and brand loyalty, Dolan said. "When they see that the products work well, they build their engines around using VP fuels or VP lubricants. They'll get to where they require our products, because they know they can eliminate lubricant- or fuel-related issues by using them and building their engine to use VP products."

It helps, too, that the people at VP Racing "have shared values with our customers," Dolan added. "We love motorsports, and we love our customers, so it's become a lifestyle brand over the last 47 years because we live it, we're at the events, we engage across all different types of motorsports."

That lifestyle aspect is the reason VP brought its apparel in-house, Dolan said. "Our apparel is made for people in motorsports who are living the lifestyle and want to wear the brand. That's another example of brand loyalty: when people want to

A visible example of brand loyalty is "when people want to be associated with the brand," said VP Racing Fuels' Ben Dolan. "Our apparel is made for people in motorsports who are living the lifestyle and want to wear the brand."

A concerted effort to illustrate a complete MAHLE Power Pack—rather than just a single piston—in advertising and promotions made a big difference in buyer behavior, said Joe Maylish. "In 2018, people were asking us what a Power Pack was. In 2022, people called and said, 'I want to buy a Power Pack.' It was as simple as presenting to the customer everything they were going to get."

be associated with the brand. That's the reason why at the SEMA and PRI shows we'll go through thousands of stickers. People want it on their car, on their motorsport container, on other products they use. It's the perception of the brand."

AVAILABILITY

To promote brand loyalty, the "biggest thing you have to have in the current market is availability," said Joe Maylish of MAHLE Motorsport, Fletcher, North Carolina. "Sometimes your availability is your best ability. Post COVID-19 2020, there has been huge demand for aftermarket and high-performance parts. Before the pandemic, we were more in line with production times. Now, a customer that used to enjoy another brand, if they don't have it, they may come across our brand."

MAHLE also has "a large number of customers who are willing to wait for our pistons if they have to, or will use nothing but our product," Maylish said. "A lot of that has to do





“If we can be an information provider, rather than a salesperson, we become a resource and a valuable friend to that person, and then we turn that person into a customer,” said Hot Shot’s Secret’s Kyle Fischer. “It becomes a great long-term relationship, and that’s when you get into high levels of customer retention.”

with the fact that on the motorsports side, our staff are the same engineers that work with numerous professional race teams. A lot of professional engine builders like our product because it’s very exact. When they get it, it’s within such close tolerances that they don’t want to use anything else.”

The “easiest sale when it comes to pistons,” said Maylish, is the customer “who has had our piston in their engine four, five, eight years down the road, and they call us and say, ‘I’ve got this piston in my

engine, and I want to punch it out another tenth.’ They love how the pistons look, how everything looks in their engine. They have proof right in front of them that this has worked great. They don’t want to change anything, just punch it out a little more and get another piston in there from MAHLE.”

Good customer service also builds brand loyalty, Maylish said. “You can do all the advertising you want, have all the pro drivers out there that endorse your product that you want, but if you don’t have knowledgeable people picking up the phone and able to dissect a tech question or help them figure out something they’re trying to do, all the efforts you’re doing everywhere else will not retain a customer.”

EDUCATIONAL LEADER

“We’ve focused on being an educational leader of the industry,” said Kyle Fischer of Hot Shot’s Secret (HSS), Mt. Gilead, Ohio. Lubricants and additives “is a difficult product category to explain through any type of traditional marketing or advertising, so we’ve learned how important it is to educate our consumer. That in turn has had us look at the bigger picture and make a conscious effort to talk to consumers directly and educate them about the diesel platform itself. When they have a question, whether it has to do with our product or is just a general diesel question, we want to be the top source for all that knowledge. We create the

environment where, if the consumer trusts you as an industry expert, they become loyal customers to your product.”

Fischer said the education process is similar “with top level racers. We take the time to educate them, to do the oil analysis on their race engines and walk through the analysis, show them what ppm is, for example, how antimony is protecting their bearings, those kinds of things.

“The relationship we have with the driver or sponsored team, and with the consumer, is very similar,” Fischer explained. “It is literally fueled by education and trust. That builds the long-term relationship, which builds the loyalty.”

HSS also benefits from a nimbleness that larger companies don’t have. Fischer talked about a competing company’s transmission fluid that had become very popular with drag racers. One of Fischer’s sponsored racers was being pressured by his transmission builder to switch to the new fluid. The racer called Fischer, who in turn explained the situation to his R&D department.

“They made him a custom transmission fluid, and it was out the door in 48 hours,” Fischer said. Not only did the fluid meet the racer’s expectations, but during post-race teardown, the transmission builder was so impressed by the condition of the transmission that he wanted some of the fluid for himself.

“That all happened in four phone calls and a couple weeks of work,” Fischer said, adding that the fluid “will probably be a new racing transmission fluid for us. That’s the type of stuff that creates the most extreme loyalty with my brand, especially from the sponsored racer side of things.” **PRI**



SOURCES

Hot Shot’s Secret
hotshotsecret.com

MAHLE Motorsport
mahlemotorsports.com

VP Racing Fuels
vpracingfuels.com

STOP DOING THAT...DO THIS INSTEAD

USING INCORRECT VALVE SPRING PRESSURE

Missing the mark in either direction can reduce horsepower and component longevity, so getting this element dialed in is well worth the effort.

By Bradley Iger

Motorsports applications demand much from valve springs, and spring pressure plays a crucial role in the overall performance of the valvetrain because it provides the force needed to control valve motion. While the camshaft profile dictates when the valves open and how much, proper spring pressure ensures that the system stays under control at the intended rpm ranges without causing undo stress to the system.

"One of the oldest misconceptions in the valvetrain realm is that it's fine to just use too much spring, and if you run into a problem, putting more spring on it will help. That's just not the case," said Joe Hornick of Joe Hornick Enterprises, Mooresville, North Carolina. "Stress is something that we do not want, and as you increase spring pressure, you increase stress. You're trying to open the valvetrain against this big spring, so you're winding up all the parts. You're making the pushrod bend more, and you're making the rocker arm bend more. When those parts are bent like that, the valve is going to hit the seat too fast when it comes back. So not only are you fighting the inefficiency of excess weight, because the spring and retainer are heavier than they need to be, you're also potentially losing some performance due to the additional bending load on the parts."

Inadequate spring pressure, meanwhile, can cause serious issues of its own. "Generally, you'll



lose limit speed," Hornick explained. "If you need to run at 9,000 rpm, but you don't have enough valve spring, maybe at 8,400 rpm things start going out of control. It has become harder to identify than it used to be because of improvements over the last decade or so in spring materials and how they're processed. Today's springs can handle a lot more instability. Regardless, that instability is causing horsepower loss at the very least."

That means an accurate assessment of valve spring pressures is necessary to extract all of the potential out of a given engine combination. "There are a number of good gauges out there, both manual and automated, that will allow you to check valve spring loads versus spring height," noted Chris Potter of Edelbrock Group,

Proper valve spring pressure ensures that the valvetrain stays under control at the intended rpm ranges without causing undo stress to the system. Too much spring pressure can be harmful to parts, said a source, while too little pressure creates other kinds of problems.

Valve spring considerations often extend beyond horsepower targets and rpm ranges. As one source said, an endurance race engine won't use the same type of spring as a drag race engine would, for example, due to differing durability requirements.

Olive Branch, Mississippi. "The manual ones will have some sort of load measuring device and a dial indicator to measure the actual spring height. The automated ones from Performance Trends and Larson will take all the data for you. However, these only show static load. The best way to measure load is with a load cell under the valve spring on something like a Spintron, or another type of motoring dyno. A load cell allows you to measure the running load between the bottom coil and the cylinder head."

Potter also told us that because both static load requirement and frequency play important roles in valve spring performance, teams need to work with both the camshaft company and the valve spring supplier in order to properly match both components for a given application.

"In this situation frequency, mass, and load are all working together," Potter explained. "The camshaft profile is going to input specific frequencies that the spring must be able to withstand, then that profile is going to 'write a check' for a certain dynamic load that's required from the spring to keep everything under control. The pushrod and rocker





Valve spring choice can't happen in a vacuum, our source said. Race teams need to work with both the camshaft company and the valve spring supplier in order to properly match both components for a given application.

stiffness are going to alter that check through deflection and stored energy from those components. So a good valvetrain must be built as a system."

As Hornick pointed out, the considerations often extend beyond horsepower targets and rpm ranges. "You're not going to use the same type of spring for endurance racing and drag racing, for example. The static numbers that are generated by our design software will tell us we have this much stress at wide open, this much stress at the seat, and this much of a variation in stress as it's opening and closing. When you're looking at a spring that's going to be used for drag racing, and we compare it to the number that we believe the wire can take, we're going to use maybe 90% of that stress number and the spring is not going to break."

While that can provide enough headroom for a situation where the engine is on boil for a few seconds at a time, Hornick said that racing formats that subject the engine to extended periods of time at or near wide open throttle generally require a more conservative approach in order to ensure durability. "That means that the number we would use in an endurance application would be a lot lower relative to what the max stress would be." **PRI**

SOURCES

Edelbrock Group
edelbrockgroup.com

Joe Hornick Enterprises
jheinc.com

CALICO
COATINGS

The Performance Advantage.



TOUGH COATINGS PERFORM

Coating Solutions:

Calico D
Calico D-2
Chromium Nitride (CrN)
Diamond Like Carbon (DLC)
Teflon®
Titanium Nitride (TiN)

A company built by racers, for racers.

Calico's range of thin film coatings increase the performance of your parts, reducing the friction that causes wear and increasing your speed on the track.

CalicoCoatings.com | 704.483.2202 | Connect with us online.  



Diamond Like Carbon (DLC)

- Ultra low coefficient of friction
- Uniform in thickness
- High chemical resistance
- Corrosion protection

Chromium Nitride (CrN)

- Extreme hardness
- High heat resistance
- High chemical resistance
- Oxidation resistance

Get Calico coated parts from these partner brands:



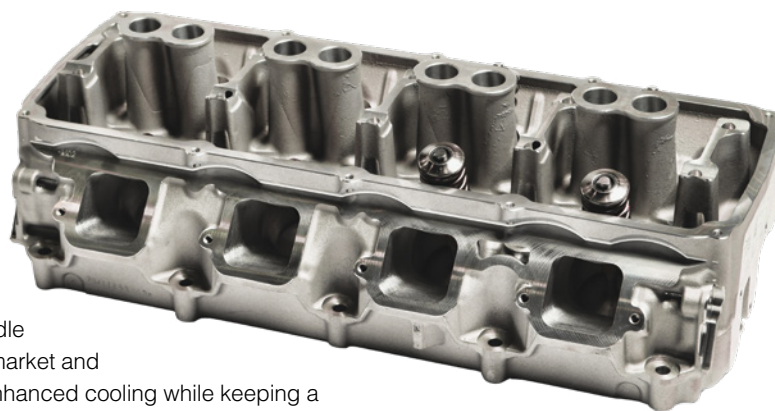
EDITORS' CHOICE

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

BLACK HAWK GEN III 5.7L, 6.1L & 6.4L MOPAR HEMI CYLINDER HEAD

AIR FLOW RESEARCH

airflowresearch.com



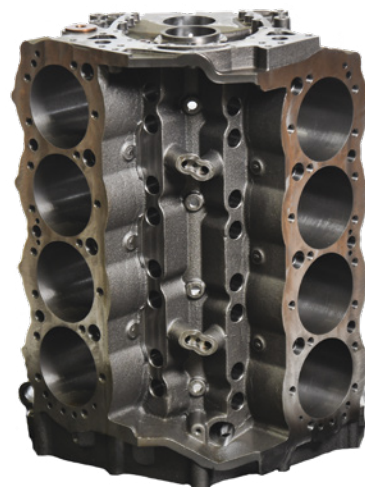
Air Flow Research (AFR) of Chatsworth, California, introduces its Black Hawk Mopar Gen III Hemi cylinder heads that are manufactured from A356 aluminum using permanent-mold technology, and with the company's trademarked .750-inch thick head deck to handle the increasing boost and power demands of today's aftermarket and race engines. AFR has improved the water jacketing for enhanced cooling while keeping a minimum of .200-inch port-to-water jacket thickness. Machine option available to add bolt hole and dowel provisioning for Hellcat superchargers. These heads were designed for use with hydraulic roller camshafts up to .650 inches of lift. —*PRI Staff*

EVOLUTION SMALL BLOCK CHEVROLET CAST IRON BLOCK

1SPEC

1spec.net

This Evolution small block Chevy cast iron block from 1SPEC (for 1 Stop Performance Engine Castings) in Franklin, Indiana, offers standard features such as deck heights of 9.025–9.325 inches, a 350 or 400 main journal, bore spacing of 4.400 or 4.500 inches, a rear main seal, offered in one piece or two, standard or reverse cooling, wide oil pan rail with oil filter provision, and extended main and head stud bosses. Core plugs are machined to accept -16 AN O-ring style plugs, while oil galley plugs are machined to accept -6 O-ring style plugs, and the lifter valley was designed to accommodate most lifter locations. —*PRI Staff*



5W-40 SYNTHETIC ATV/UTV MOTOR OIL

AMSOIL

amsoil.com

Amsoil's new line of synthetic motor oils for ATV and UTV powersports is formulated for racers as well as recreational users.

"There's no need for a separate line of racing oil," said Len Groom of the Superior, Wisconsin-based company. "This is the same product we send to all our race teams."

The new line currently offers 5W-40 and 10W-30 viscosities. They are wet-clutch compatible and designed for all-weather performance.

"The way these machines are operating now, people are using them in every season," added Groom. "So, for the 5W-40, a five will flow nicely in cold weather if you're using the machine to plow or run on a lake for ice fishing. Then the 40 gives you protection in the summer for desert racing or such."

Groom said premium base oils are used in the formula to build up the shear stability required for powersports.

"These machines tend to chop up the oil. They'll turn a 40 into a 30 into a 20 fairly quickly, due to the action of the engines," said Groom. "You want to make sure you build a shear-stable product, and you do that with high-end base oils. We can use less additives and still end up with a higher performing product." —*Mike Magda*



ROD BOLT STRETCH GAUGE

CCA RACING PRODUCTS

ccaracing.com

The debate over the proper way to install connecting-rod bolts is pretty much leaning toward measuring the stretch of the tightened bolt. Given the very narrow margin of error, it's important to have an accurate gauge and robust support tool.

"My dial indicators are custom made in the USA for this application," said Mike Gallo of CCA Racing Products, Cedarburg, Wisconsin. "They're very easy to read."

The base tool is machined from billet aluminum and anodized in purple or black. The design features a "finger hole" that allows for stable use in tight-fitting areas.

"You can get the tool in place without having to hold the actual beam itself," said Gallo. "It's impossible to gain access into some of the small blocks."

The full kit includes the body, dial indicator, reversible tool-steel anvil (1-mm and 3-mm ball ends), slotted thumbscrews and 1-mm and 3-mm ball tips for the indicator.

"Basically, you can switch the anvil end-over-end and switch the tips out to fit pretty much any combination out there," added Gallo, noting that some diesel applications may not fit within the range of the tool. "Yeah, there are some pretty big diesel applications, and I don't know if the throat of my gauge will fit those." —*Mike Magda*



PUSH-TO-CONNECT QUICK-RELEASE STEERING SYSTEM

IDIDIT

ididit.com

A new push-to-connect system from Ididit in Tecumseh, Michigan, will convert an OEM steering column to quick-release, which is quite handy for some factory racing classes and a new trend hitting the drag strips.

"There are racers in drag-and-drive events that like to use it," noted Trever Cornwell. "We see a lot of people installing lightweight factory style steering with the turn-signals in place. We also sell a steering column with the push-to-connect in place."

The design employs a new style center and spline pattern that offers smooth engagement without pulling on the pull ring, and there are close tolerances for a tight fit.

"It's spring-loaded, and once it connects there's an audible click," said Cornwell. "Then, it's a solid engagement, it doesn't move. We came up with a proprietary spline pattern that is very smooth to engage, but then there's no lash. SFI allows two degrees of movement. Ours is way less than that."

The system is available for 3/4-inch shafts to mount two-, five- and six-bolt steering wheels. There are also kits to mount on GM columns that come with or without a horn button.

The product is constructed from aircraft-grade aluminum, and the pull ring is black anodized. It is SFI certified and made in the USA. —Mike Magda



MICRO/MINI SPRINT SHOCK ABSORBER

SLADE SHOCK TECHNOLOGY

sladeshocktechnology.com

Designed and built in-house, a new shock absorber for the growing micro- and mini-sprint car market is available from Slade Shock Technology in Fostoria, Ohio.

"My experience as a sprint car driver and winning shock specialist in NASCAR gives me a unique perspective from all sides of the equation when working with teams," said Eric Slade. "I find this is a distinct advantage."

Slade utilizes sophisticated software to design and evaluate the parts before prototypes are machined, assembled, and tested. Ninety percent of the finished product is constructed from different grades of aircraft-quality aluminum in addition to a few parts that are constructed from stainless steel and hard chrome-plated steel. All parts are CNC machined to precise tolerances.

"I design products that I would want if I was still racing—high quality shocks that perform as well as they look—then I back them with unmatched customer support," added Slade. "These are the most accurately valved shocks available at any price and combined with our modular design. This design allows for cost-effective repairs."

The shocks are available in lengths of 6, 7, 8, and 9 inches. They're offered in non-adjustable, single-adjustable, or double-adjustable versions. —Mike Magda



PAOLI TYPHOON 1 INCH ELECTRIC IMPACT GUN

UNITED RACE PARTS

unitedraceparts.com

A peek into the future of pit stops in the US is being offered by United Race Parts in Troutman, North Carolina, which is the US distributor for Paoli wheel guns. Currently in use by Formula 2 and Formula 3 teams in the pits, the Typhoon electric impact with LED indicator lights is the first electric wheel gun to be officially used in sanctioned motorsports.

“The main reason behind that is they worked with the FIA to develop a sensing system so that the tire changers can determine when the wheel nut was safely tightened and it was safe to release the car,” explained Thomas Decker. “There are proprietary sensors and software that determine the torque applied to the wheel nut.”

Available in both left- and right-hand models, the cordless Typhoon 1 is powered by a 20-volt lithium battery and carries a max torque rating of 1,180 ft.-lb. Free speed rpm is 1,650, and it weighs just under 10 pounds.

“Right now, we have the standard version in the US and that’s on our website,” said Decker. “We’ve got those with teams in a garage setting. But in the near future as the world goes electric, so will pit stops.” —*Mike Magda*



HPR SERIES ALTERNATOR

POWERMASTER

powermasterperformance.com

Designed to meet the demands of a race car’s specific battery and electric components, the new Hairpin Replacement (HPR) Series alternators from Powermaster in West Chicago, Illinois, have a preset voltage output to precisely charge 12-, 14-, and 16-volt conventional batteries along with 16-volt lithium batteries.

“We can build them for drag-and-drive cars that have high-amperage needs,” explained Ed Law. “They’re for anybody looking for more amperage in a compact unit.”

Powermaster offers a small-frame unit rated at 145 amps at idle and 175 amps at the top end. The large-frame model offers 190 amps at idle and 245 on the top end.

“We can fit these alternators into street rods, late-model Hemis, and Coyotes,” added Law. “The market is all over the place.”

The alternators are a direct bolt-on to factory brackets with either a one-wire or factory connection. They’re supplied with an OEM-style pulley, decoupler or clutch-style, for a factory fit that doesn’t require a change in belts.

Each HPR unit is assembled and tested in West Chicago and is shipped with a proof-of-performance tag that details the output. It’s available in natural, polished, or black finishes.

—*Mike Magda*



FAST MOVERS

A look at some of the country's in-demand products and services by region and racing segment, as reported from the PRI Trade Show floor.

Edited by Laura Pitts

For a snapshot of the latest industry sales trends, we asked retailers and service providers—straight from December's PRI Trade Show floor—to identify some of their most popular parts and services. Following are highlights from their respective markets.

BAD COMPANY INC.

Retailer Bad Company Inc., based in Toano, Virginia, services customers that compete in road racing, autocross, and drifting. When asked which products were its fast movers, Eric Hayhurst told us a long list of brands that included Holley EFI, which consists of a range of EFI systems that provide “ease of tuning, reliability, and easy interface interaction.”



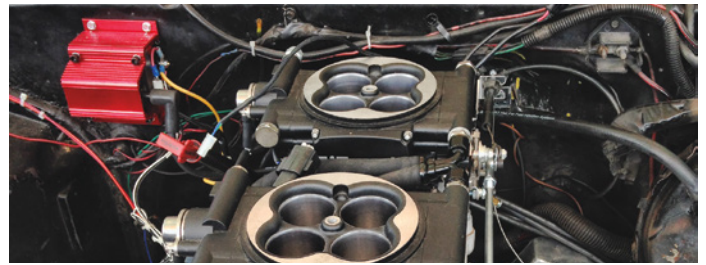
In addition, the shop's Mustang Dynamometer has been “bringing in a lot of business. People come to the shop to use the dyno for tuning, so much that we're a couple of months out for the bigger projects,” Hayhurst said. “If someone needs a quick dyno job, we can expedite them, but a complete and full tune is a few months out [at press time].”

Additional popular products for Bad Company include tools from LSM Racing Products, camshafts from Brian Tooley Racing, and Borla exhaust components. “These are our fast-moving products because of their high quality. And, if there ever is an issue, these manufacturers are always happy to work with us on a solution.”

MOTORSPORTS SOLUTIONS

Thurman Exum of Motorsports Solutions told us that drag racing is on the rise for the Greensboro, North Carolina-based shop, which also services a wide range of circle track racers. Although identifying as an engine builder, Exum emphasized he's working on more than just engines these days.

“Racers are having me focus on the entire powertrain, which would include the engine, transmission, rearends, all the way up to the wheels and tires. Most customers today want a system; you can't just build an engine,” Exum said.



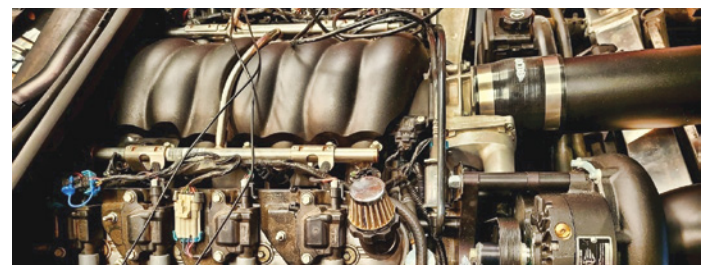
Exum's customers are also trending toward more computer-related components. “The computers and ECUs have gotten more important. Before, I used to only need to install an MSD box. Today, I need an entire MSD ignition system or an entire FuelTech engine management system. It's like, we used to buy a TV that came with one remote. Now we have four different remotes for four different systems,” he said.

“Our industry is data-driven, and we use that system of data to go faster. This gets complex when the customer wants to learn the entire process of how to go fast and quick—they don't just want the parts anymore,” Exum added.

TOP END FABRICATION

Top End Fabrication is a performance and fabrication shop based in Rossville, Georgia. When we connected with Jason Harvey, he told us the company had seen an increase in Chevrolet Corvettes, specifically models like the C5 and C6 and similar stick-shift drag vehicles.

“We've been working on more Corvettes and H-Pattern stick shift racing vehicles, like the SFI 25.3 chassis certified cars. We've been cutting up more of those over the last few years,” Harvey said. “These are the cars that are racing on the eighth-mile. We service the entire Southeast, but our home track is Brainerd Motorsports Park [in Ringgold, Georgia].”



One of the shop's most recent C6 Grand Sport Corvette customers came in for some power upgrades, including a new Texas Speed & Performance camshaft, an ECS supercharger, plus new headers and an X pipe for the exhaust system. **PRI**



2023 PRI SHOW CALL FOR SPEAKERS

EDUCATION FOR THE INDUSTRY, BY THE INDUSTRY

PRI is now accepting submissions for our seminar program at the 2023 Trade Show in Indianapolis that reflect current trends, ideas, best practices and processes, new techniques and discoveries within the racing and performance industry.

To Submit Your 2023 PRI Show Education Proposal online, visit
pri2023.com/speakers

SUBMISSION DEADLINE: April 30, 2023

For more information, contact Daud Gonzalez at
Daudg@performanceracing.com or 949-373-9231

TOPICS OF INTEREST

(but not limited to):

- Sponsorships
- Hiring & Employee Management
- Branding
- Content Creation
- Youth Engagement
- Small Business Operations
- Advertising/Promotions
- Traditional & Digital Marketing
- Sales Strategies
- Technical Content
- EV Performance

PRI TRADE SHOW | DECEMBER 7-9, 2023 | INDIANA CONVENTION CENTER, INDIANAPOLIS, IN

NEWLY APPOINTED

JASON REED

One could say this Iowa native's life has centered around Knoxville Raceway, first as a child showing livestock at the county fair, then working at the races, and now as the recently named general manager of the "Sprint Car Capital of the World."

By Jim Koscs

Jason Reed literally grew up around and into his new position as general manager of Knoxville Raceway in Knoxville, Iowa, on the Marion County Fairgrounds.

"I would say that I have been preparing for this position my entire life," he told PRI Magazine when discussing his new role. "I spent my childhood here showing livestock at the county fair, working during the races, and also being a race fan."

"HAVING A STRONG WEEKLY PROGRAM DRIVES HAVING GREAT CAR COUNTS FOR OUR NATIONAL EVENTS."

After graduating high school, Reed continued to volunteer both at the fair and the track. The 48-year-old father of three has been a fair board member for the last 14 years, including four years as president and four as secretary.

For most of that time, he worked full time for 3M, with the last 12 years as a manufacturing supervisor. That experience, he said, helped prepare him for this role. Reed also feels a familial bond to the fairgrounds and track. His grandfather, Jim Goff, was

a fair board member and the facility's well-known manager of concessions.

PRI: What are you most looking forward to in this new role?

Reed: I am excited to be a part of making sure the Knoxville Nationals continues to be the best sprint car race in the world. I want to continue the traditions that we have and add more to offer the best experience possible for fans, drivers, and our partners.

PRI: Can you share your plans for the next season, and for the long-term future of the track?

Reed: We are always trying to create ways to get more fans to come experience Knoxville Raceway. We've added a two-day World of Outlaws show in April, and we're also adding a two-day non-wing USAC race in June to go along with the June Outlaw date. Long-term goals would be to continue growing the 360 Nationals and the Late Model Nationals.

PRI: What do you see as the most pressing concerns for short tracks today?

Reed: The biggest concern that I see is the weekly racing program. We think that having a strong weekly program drives having great car counts for our national events. We will focus on improving the track experience to attract new fans and to get some old fans to come back.

Another concern that I have for all tracks is the ability to find help.



JASON REED

TITLE:
General Manager

ORGANIZATION:
Knoxville Raceway

HOMETOWN:
Melcher-Dallas, Iowa

FAST FACT:
For Jason Reed, family is No. 1. He said he and his wife, Jaime, prioritize time spent with their three daughters—Kynser, 20; Kasyn, 17; and Kesley, 14—who are all active in 4H, athletics, and working at Knoxville Raceway. "It keeps us very active. We want to make sure that we support them in all they do, so we spend lots of time traveling to their sporting events."

It takes a lot of people to run these shows every week, and finding people who are willing to give up their weekends to work here is becoming harder. We have had and still have some great employees who have been here for a long time, but when they leave, who replaces them?

PRI: Is there anything in your 3M background that you will draw on in this new role?

Reed: In my supervisory role at 3M, I dealt not only with operators but also upper management. I learned to handle issues that were affecting the employees and still be able to deliver results for the company. I think this has prepared me to be able to interact with fans, drivers, owners, and our partners to ensure all are getting treated fairly. Also, working through the pandemic has prepared me to be able to make changes quickly, sometimes daily.

PRI: What is one professional or personal accomplishment that you're most proud of?

Reed: Being offered the general manager position here in Knoxville. I am glad that I was able to make such an impact while serving on the fair board that they had the confidence in me to offer this position to me.

PRI: What is one recent mistake you've learned from (could be yours or someone else's)?

Reed: I have seen many times problems caused by a lack of

Rotating Assemblies Complete Engine Kits

Race Engines & Street Performance

HIGHEST QUALITY COMPONENTS
INDUSTRY LEADING BRANDS
EXPERT CUSTOMER SERVICE
FAST SHIPPING



“WE WILL FOCUS ON IMPROVING THE TRACK EXPERIENCE TO ATTRACT NEW FANS AND TO GET SOME OLD FANS TO COME BACK.”

communication. I plan to make sure that everyone is getting updates on what we are working on and any issues that might be holding us back. I also believe in getting employees together routinely to discuss issues and what I can do to help them accomplish their goals.

PRI: Who do you look up to and why? (This could be professionally and/or personally.)

Reed: The person that made the biggest impact on me when I joined the board was Ralph Capitani. In the few years that I was able to spend with him, ‘Cappy’ was always willing to share his wisdom for what made him successful. He had a way with people, and it started first by just listening to them and then working on a solution.

PRI: What lasting impact would you like to leave on Knoxville Raceway and the Marion County Fair Board?

Reed: I want to make sure that Knoxville Raceway continues to grow in all aspects of racing and see the fairgrounds continue to succeed. I would also like to see what other events we could host at the fairgrounds, including some that are not racing-related. We have an awesome facility. **PRI**



www.pbm-erson.com

800-588-9608

Louisville, KY
800-879-1325

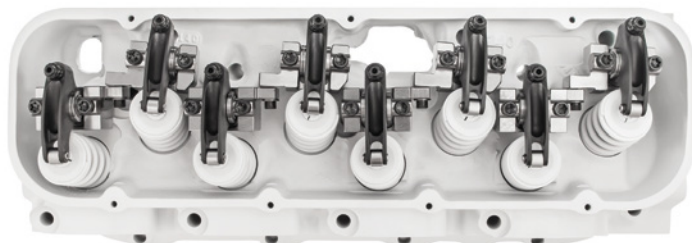
St. Peters, MO
800-625-5900

Urbandale, IA
800-400-0850

Laurel, MD
800-578-4182

Barboursville, WV
800-879-6233

Greensboro, NC
800-879-0230



SPORTSMAN STEEL SHAFT ROCKERS

We've combined all of the features of our Pro Aluminum Rockers with the durability of our Pro Steel Rockers. Order these extremely affordable high strength steel rockers separately or as an upgrade to certain Pro Aluminum rocker systems.



For additional product details, visit us online at Jesel.com or contact us by phone at 732.901.1800

INDUSTRY INSIGHTS

TOM BAILEY

Bringing people together over a love of racing is the secret sauce for the publisher of Sick the Magazine and his relatively new yet wildly popular drag-and-drive event Sick Week. And somehow, he also finds time to pilot the nation's fastest street-legal car.

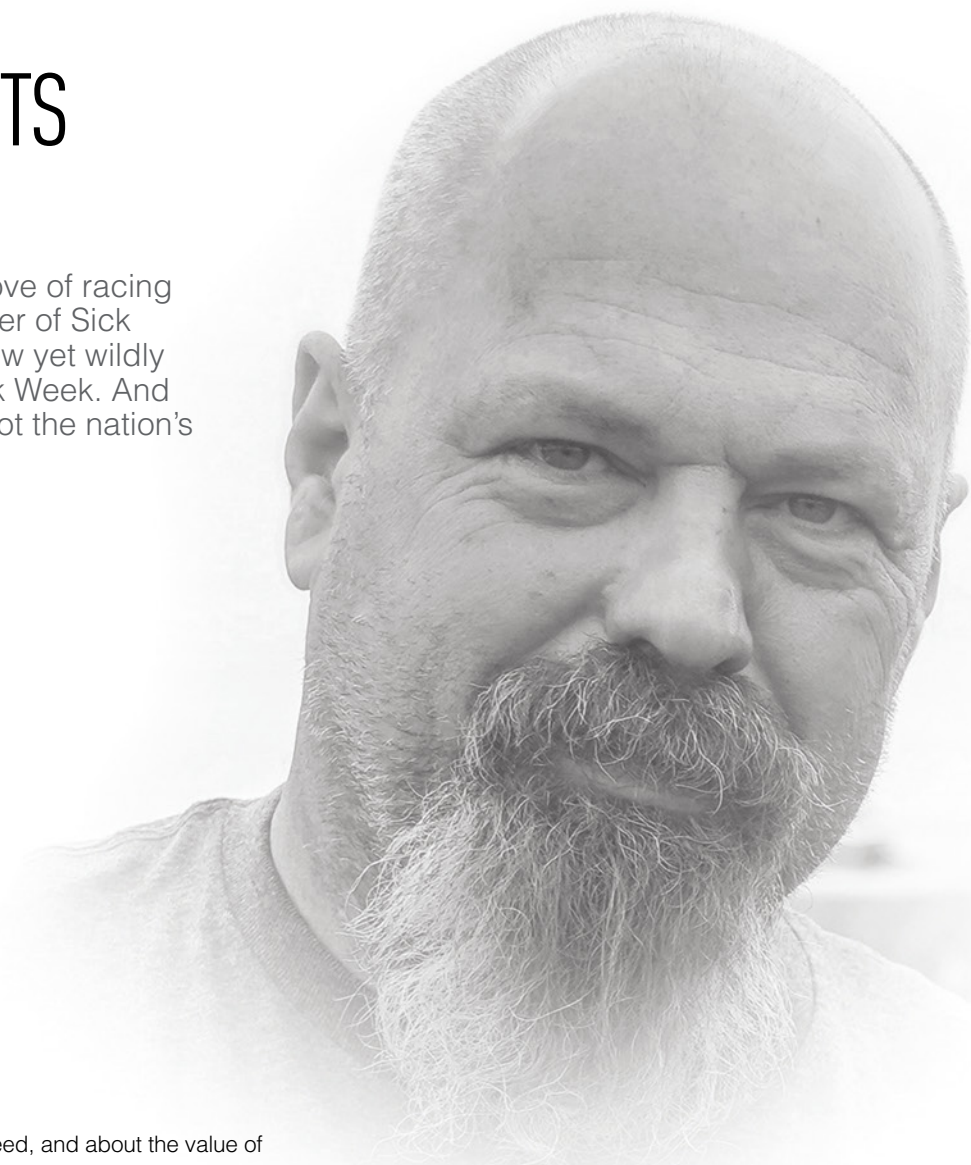
By Jeff Zurschmeide

Tom Bailey knows a thing or two about speed, and about the value of promotion. Not only does he own and drive the fastest street-legal car in America, he also manages Sick Week, a drag-and-drive event with a long waiting list, and publishes Sick the Magazine and a series of successful videos on YouTube.

Each part of Bailey's program promotes and reinforces the others. His credibility starts with his car, grows through the integrity and popularity of his event, and his business grows with the magazine and videos. As his website says, "When the ambers drop, the BS stops. You can run your mouth about how quick your car is, but until you put it up in lights, it doesn't count. Street legal speed is what we are all about."

It goes on, stating, "Running a time is the easy part. Will your horsepower hero end up a road trip zero? Drag-and-drive events test the endurance of competitors and their equipment to the ultimate level."

Like Hot Rod Magazine's Drag Week, Bailey's events involve driving a street-legal race car from place to place over the course of a week, surviving on the road and then racing with everything you've got. If your build can survive the road and then win on track, you can claim glory. We found some time to chat with him and find out how it's going.



Photos courtesy of Sick The Mag

“HERE’S A WAY THAT YOU DON’T HAVE THAT SINGLE-USE VEHICLE SITTING IN YOUR GARAGE COLLECTING DUST. YOU GET A LOT MORE PURPOSE OUT OF IT.”

PRI: You organized your first Sick Week in February of 2022. How did it go?

Bailey: It went great. It sold out in less than three minutes. Then everybody had a good time. I mean, the routes were cool. The checkpoints were cool. It had the fastest racing that’s occurred on any drag-and-drive.

PRI: You didn’t just gin up Sick Week from nothing and sell it out in three minutes. What is it that makes Sick Week and what you do so popular? What is the appeal?

Bailey: I think the appeal to our racers is the same appeal it had for me. It’s that we don’t have time to go racing every weekend or do the bracket stuff, but we can take one week a year and we can go race. But we also want to use our car for other stuff. With the drag-and-drive events, you use your car to go out to dinner, or to take your wife out. You can

do any of those things, and then you also take your car out and you go race it for a week or two weeks a year in the summertime when you have time. But when you get kids in sports and kids in extracurricular activities and school, you don’t have a lot of that racing time. So here’s a way that you don’t have that single-use vehicle sitting in your garage collecting dust. You get a lot more purpose out of it.

PRI: Conventional wisdom says you can have a street car or you can have a race car, but if you try to make a car that’s going to do both things, it won’t be good for either purpose. How do you create that notion that you can have one car that does both things?

Bailey: You’re going to have to make a few sacrifices. You might sacrifice air conditioning or different things like that, creature comforts. You have to think about a

lot more with a drag-and-drive-style car than you do just a race car. I mean a race car, you go down the track, bring it back to the pits, even if it’s getting hot, no problem. It’ll be cooled off by the next round. With our event, you have to be able to make it survive hours and hours and hundreds of miles of driving.

PRI: What’s next? Do you think you can replicate Sick Week around the country or make Sick Week bigger? What do you think the next couple of years will look like?

Bailey: Well, we can only accommodate 350 cars going down the track. But we incorporated Sick Ward, which has all the benefits of Sick Week, so you get VIP parking and some other things. We had food trucks available for them, different stuff for them, but they don’t go down the track. I call it the Power Tour because basically they have a car show every day. They hang out, follow the routes with us, and stay in the hotels. They enjoy all the camaraderie; they just don’t go down the track.

Last year we only let 125 cars in the Sick Ward just to feel it out and see how it would work. We sold that out, so this year we’re expanding to 250 cars. The good thing is

Tom Bailey, a veteran competitor (and champion) of several drag-and-drive events, launched his own, Sick Week, in early 2022. “With our event, you have to be able to make [the race car] survive hours and hours and hundreds of miles of driving,” in addition to racing all week long.





The demand for drag-and-drive events is so strong that Tom Bailey's first Sick Week sold out "in less than three minutes. The routes were cool. The checkpoints were cool. It had the fastest racing that's occurred on any drag-and-drive."

we're bringing fans with us from track to track. So now we have 350 race cars that are going track to track, and we also have 250 show cars that are going with us and more people hanging out in the stands. We're just trying to make it a big fun fest.

PRI: What are you doing to make that more attractive?

Bailey: We're expanding the food vendors this year. We'll see if I can pull it off, but my goal is to have a tattoo artist who will give Sick Week tattoos. Just trying to make it a real fun deal so everybody has a good experience. There's a ton of like-minded people that are into cars, into the racing side of things.

That's probably the biggest thing I see, is that spectator counts are down. Racer counts are up, but spectator counts are down. So how do we get more spectators there? What do we do to help people bring their family out and enjoy it? That's what we're trying to do with the VIP experience of Sick Week.

PRI: Where do you see drag-and-drive racing in five to 10 years?

Bailey: Drag Week is the OG, but then you got Rocky Mountain Race Week, you got us, you got the North Carolina Drags. It's worldwide now because there's events in Australia, there's events in Sweden, there's events in Canada that are all similar. I really think that this is the Radial Racing of five years ago, where it's just on the cusp and everybody really wants to do it and everybody's excited about it. I think we're going to have a big influx of cars because if I look at Radial Racing and Ultra-Street, all the big money stuff has gone to Radial Racing.

Those guys keep going down to smaller and smaller tires, so we're doing a Rowdy Radial blast, which is for 235 tires. The idea is to get some of those guys whose cars had to weigh 3,000 pounds in Radial Racing. A lot of those cars are street legal, so we're hoping to get a lot of those people over to Sick Week. We're doing track prep before our races. We've got Total Venue Concepts at every track doing prep the day before. So we're doing a lot to bring top level prep so that everybody can go out and enjoy it. That's how we can get the small tire guys involved in the drag-and-drive, because they've kind of been alienated until now.

PRI: Let's look at the larger world. California and 18 other states have said that no new internal combustion engines are going to be sold after 2035. Do you think that's going to be a problem for the racing industry?

Bailey: I think that there's always going to be room for technology. I think that EV cars will develop into race cars. They've already started to a little bit. And there'll be a mix, just add it to whether you're a nitrous or turbo or supercharger guy. Well, an EV guy is just

Tom Bailey added the Sick Ward to Sick Week to accommodate show cars that wanted to travel with the racers. "We're just trying to make it a big fun fest," he said.



another one of those, call it classes, that are going to be intermixed in there. I think internal combustion's going to be around for a long time as just one of the technologies.

PRI: What do you think is the most divisive issue going on in motorsports right now?

Bailey: The EPA. That's the biggest thing going on right now. The EPA doesn't want people to be able to modify cars from whatever the factory spec was. I think everybody should be free to choose what they want to do and do it how they want to do it. Obviously, there should be rules in anything, but you shouldn't be told, "No, you can't do that." We're probably talking less than 1% of the cars in the country that are used as race cars. Let us have our hobby, and you have your hobby.

PRI: What's the best piece of advice you've received about how to approach the business of motorsports, and how has that proved out in your business?

Bailey: Be a leader, don't be a follower.

"I THINK INTERNAL COMBUSTION'S GOING TO BE AROUND FOR A LONG TIME AS JUST ONE OF THE TECHNOLOGIES."

Figure out what you want to do and go after it. Just prove the naysayers wrong. You'd have to be a complete idiot to start a print magazine in this day and age, and here we did it and we're successful at it.

We came up with the magazine because the people that are doing this type of stuff deserve recognition. They're out there working hard and they're doing it. We thought it'd be just a small following, like maybe we'd get 500 or 1,000 people to buy

this. Well, we were vastly wrong. Before the first issue ever went to print, we had more than 3,000 subscribers, and that's at \$33 an issue for 200 pages.

Now we have more than 5,000 subscribers, and it just keeps growing. That just proves that if you provide a quality product, people are going to buy it. Another thing is, we don't offer it online. People ask if there's a digital version. Nope, there won't be a digital. Literally you get the magazine. That's it.

PRI: Well, that brings us to young people, who tend to look at all this stuff very differently. Many young people don't want to have a race car, a tow rig, a trailer, and a street car. They don't live in the kind of places where they can have all those things, so they want to compete in their street cars. Do you see a younger crowd showing up, or is it more older people?

Bailey: We've got both, but we have a lot more young people than any other kind of

CNC MACHINED FLANGES



MANDREL BENDS



HEADERS



CUSTOM FAB



Merge Collectors




VIEW OUR CATALOG ONLINE

- Merge
- Double Slip Merge
- Weld-On Merge
- Bent Merge
- Tri-Y
- Flat Merge



SPECIALTY PRODUCTS DESIGN INC.

888.778.3312

www.spdexhaust.com

Exhaust Engineering Excellence Since 1969

racing. They're taking their street-legal car, their daily driver, and they're running next to my street-legal Pro Mod. They're not isolated to the back, or anywhere else. They're in it the same as all the rest of us. With what we're doing, it doesn't matter whether you got a 16-second car or you got a 5-second car, we're all following the same routes. We're all going to the same hotels, we're all hanging out at the same places. So it gives the younger crowd the motivation to keep going faster or to be comfortable where

Tom Bailey, shown here working on his Camaro, admitted that "you're going to have to make a few sacrifices" to build a car that hits the sweet spot between drag strip performance and over-the-road durability. Don't expect to have air conditioning or other creature comforts.

"WITH WHAT WE'RE DOING, IT DOESN'T MATTER WHETHER YOU GOT A 16-SECOND CAR OR YOU GOT A 5-SECOND CAR, WE'RE ALL FOLLOWING THE SAME ROUTES."

they're at. But they're around people who are just like them. Whether your budget's different or not different, doesn't matter. You're still on the same page as far as doing cool stuff with your friends.

PRI: Let's flip that around and ask if over the next 10 to 15 years, as older folks age out of the hobby, will those people be replaced by

new people coming in?

Bailey: We do have a big crowd of people who are older, which unfortunately I'm getting to be one of them! I'm over 50, but there's a lot of young kids who are coming in, and they are very interested in taking up the reins. That's where we push a lot, with radial cars, front-wheel-drive cars, and imports. A lot of race people say, "Oh, it's the imports, keep them away." I say, "No, the import guys are racing just like us." Seeing a rotary engine that's got a turbo bigger than the engine putting out a thousand horsepower, that's pretty cool to me. I don't know what gearhead isn't into something like that. Literally the turbo's bigger than the engine, and the guy's out there running eights. I mean, that's cool. Then a lot of younger guys are just getting into old school V8s and small block Chevys. That's just what's cool about the community—everybody is in it together.



“SEEING A ROTARY ENGINE THAT’S GOT A TURBO BIGGER THAN THE ENGINE PUTTING OUT A THOUSAND HORSEPOWER, THAT’S PRETTY COOL TO ME.”



PRI: What would you say to other people who are trying to promote racing, whether that’s circle track, drag racing, road racing, or off-road?

Bailey: I think that the biggest thing is to be inclusive. Bring everybody in! An event can be successful with just the racers and promoter, but you want fans there. The racers want people watching them, and whatever you can do to bring fans and bring young kids into it, that’s the future. Everybody’s going to age out at some point in time. Unless you keep young blood coming into it and watching it and being part of it, then you’re going to have a hard time.


Then, so many people who did Sick Ward last year are signing up for Sick Week because that was their first toe in the water. They follow along in the car and then the natural progression is, “Okay, next year I want to race.” **PRI**

The appeal of Sick Week to racers “is the same appeal it had for me,” Tom Bailey said. “We don’t have time to go racing every weekend or do the bracket stuff, but we can take one week a year and we can go race.”

DURALOY DIESEL PISTONS

New expanded Duramax line, all 3 generations including the LML.



 UEM has a selection of 010” reduced compression height pistons for most applications.

 ASK about **ULTRATHERM CM** in-house thermal barrier crown coating as an “add-on” option.

NEW UEM EXCLUSIVE - Duramax Rings PVD coated with Chrome Boron Nitrite (CrBN) THE BEST ring coating for long service life and HI OUTPUT applications. **IN STOCK!**

LML PISTONS NOW IN STOCK!



UNITED ENGINE & MACHINE
1040 Corbett Street • Carson City, NV 89706 | 1.800.648.7970 | www.UEMpistons.com



SHOW-STOPPING INNOVATIONS

Speed merchants will be busy this year making sure high-horsepower engines don't get thirsty, and that the growing Godzilla family will have plenty of trick parts to keep it company.

By Mike Magda

As if there wasn't already enough interest in Ford's Godzilla engine platform, son of Godzilla will ensure the fire-breathing monster is in the forefront of aftermarket product development heading into the 2023 season.

Other priorities for performance and racing companies include improved fuel-delivery products to keep up with the ever-increasing demands of new power-adder engine combinations, as well as more use of sophisticated simulators to expedite driver development and preparation before races.

"With the horsepower level that we're seeing these days, the racers need a real fuel system in the car," said Phillip VanBuskirk of Aeromotive, Lenexa, Kansas, which is developing high-performance fuel components for race cars and late-model production cars like the Ford Mustang. "We're really stepping up the game for stock fuel tanks. They want a high-horsepower pump that can go into a stock tank, and they want brushless with a speed controller that can be tied to the ECU."

"Driving simulators will be the wave of the future to help drive down costs," promised David Smith of Shockwave Motorsports, Sidney, British Columbia, Canada, which manufactures race car simulators suitable for NASCAR, ARCA, Trans-Am, Late Models, and sprint car training. A typical setup includes body, roll cage, window net, dash, steering, and seating similar to the desired race car. On-track realism is achieved through three 75-inch high-def TVs, fully programmable travel vibrations, adjustable torque steering and even in-helmet sound. "It's one more tool for developing drivers," added Smith.

Sharp-eyed observers at the recent PRI Trade Show also picked up on other trends that race-equipment manufacturers are indicating will be key to a successful year. Addressing high-horsepower demands is certainly a priority. Transmissions will have to be more robust to handle the power that bigger turbos and superchargers will deliver. Hub dynos that measure that horsepower will be essential to some teams. Innovations that save time in the garage or pits will also be embraced, and even companies that simply help racers get the race cars from the shop to the track are promising more comfort and utility.

"What's going to drive the market will be high-end features," said Terry O'Neill of Bravo Trailers, Bristol, Indiana. "Everybody wants good quality and on-time delivery. They don't want a base trailer that they have to add features on their own to the trailer to the level that meets their needs. Everything is driven toward custom."







Driving simulators will become more sophisticated, said Shockwave Motorsports' David Smith, making them an even more important tool for developing drivers. Increased realism is delivered via multiple high-def screens, programmable travel vibrations, adjustable torque through the steering, and in-helmet sound.

Such an example would be double doors on the back of a trailer that can be closed with the ramp down. This provides privacy in the trailer and allows the climate controls to work more efficiently. Other features important to racers will be charging stations and reliable Internet connectivity.

"Trailers being ordered will have a high

level of high-end features to start with, and then the customer will add a few extras to personalize it," added O'Neill.

A MONSTER PLATFORM

If new-product releases are an indication of the most popular engine in the country right now, then many of those race trailers

will haul cars powered by the Ford Godzilla engine. And very soon a more powerful relative will be on many wish lists.

Dubbed the Megazilla, the new 7.3-liter crate engine will offer 615 horsepower and 640 lbs.-ft. of peak torque, with 500 lbs.-ft. or more reportedly available from 2,500 to 6,000 rpm, Ford said. The original headliner, Ford's Godzilla crate engine, is also 7.3 liters and is rated at 430 horsepower with 475 lbs.-ft. of peak torque.

"We wanted to take Godzilla to the next level," said Mike Goodwin of Campbell Marketing and Communications, which works with Ford Performance. "So we kicked off a program to make more power and still keep it naturally aspirated."

One of the first moves was a new intake manifold that repositioned the throttle body to avoid hood interference in popular swaps. Ford also swapped out the truck 80-mm throttle body for a GT500 92-mm model.

"We upgraded to MAHLE pistons and Callies H-beam connecting rods," added



High-end features will drive the trailer market, said Bravo Trailers' Terry O'Neill. Among Bravo's new features are double doors that can be closed with the ramp down to provide privacy and allow the climate controls to work more efficiently.

The popularity of Ford's Godzilla crate engine has spawned a sequel, Megazilla, which will deliver 615 hp and 640 lbs.-ft. of peak torque. "We wanted to take Godzilla to the next level," said Mike Goodwin, "so we kicked off a program to make more power and still keep it naturally aspirated."

Goodwin. "The heads are CNC ported, and we changed the camshaft."

Goodwin said Megazilla will be available in Q2 2023, and that many of the individual power parts that go in the engine will also be available separately.

By coincidence, Mast Motorsports of Nacogdoches, Texas, can offer a sneak peek at the camshaft and cylinder heads because it is the supplier. If you need confirmation that the Godzilla platform is red hot in the market, just ask the engine builders at Mast.

"Right now, the ratio between LS, LT, and Godzilla engines that we're selling is equal," said Jason Youd.



Italian design. European quality.

BETATOOLSUSA.COM

+1 717.449.5044



FOLDS DOWN FOR EASY STORAGE

EFFORTLESS TRANSPORT. EASY STORAGE.

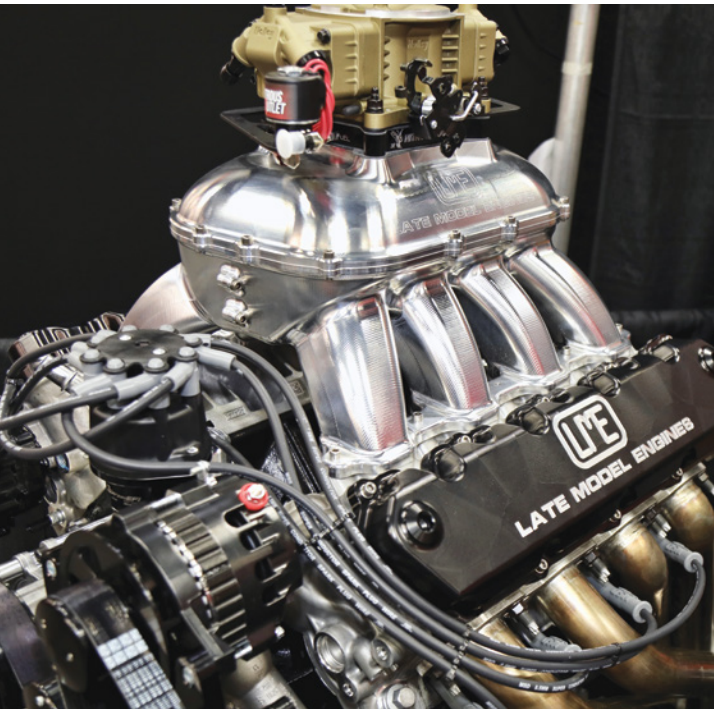
The Beta C27S folding tool cart is the perfect companion for indoor and outdoor jobs. It's unique patented design guarantees an effortless transport. The C27S folds easily allowing you to take it on mobile jobs when needed. The Thermoplastic worktop has six built-in tool trays for max organization while working on your various projects.

- TWO DRAWERS WITH BALL BEARING SIDES FOR TWO-WAY OPENING
- TWO FIXED CASTORS AND TWO STEERING CASTORS WITH BRAKE
- THERMOPLASTIC WORKTOP WITH SIX BUILT-IN TOOL TRAYS



AVAILABLE COLORS: C27S-O C27S-G C27S-R C27S-N C27S-B

Beta Tools USA is a subsidiary of BETA UTENSILI S.P.A. Sovico (MB) Italy



Late Model Engines is “excited about the Godzilla platform,” said Bryan Neelen. Among the products it has developed for the Ford crate engine is a new front timing cover that incorporates an MSD distributor, allowing for carburetor options. LME has also engineered a billet intake with interchangeable tops for further engine customization.

One of the neatest tricks from Mast for the Godzilla engine—which Ford originally developed as the base engine in the Super Duty pickup—is a two-piece, long runner intake manifold. The unique design actually has the runner lengths continuing inside the plenum.

“It was designed with a little CFD help and a lot of knowledge leveraged from our other projects,” said Youd.

A sampling of other leading aftermarket companies reveals significant Godzilla development programs. A billet dry-sump pan and oil pump are available from Dailey Engineering in Temecula, California. “Right now, all we have is a race version, but we’ll do a more production style kit soon. A dry sump will be more effective for swaps because it can tighten up the pan

clearance,” said Bill Dailey.

Late Model Engines of Houston, Texas, has introduced a front timing cover with distributor provision. “We’re excited for the Godzilla platform,” said Bryan Neelen. “Our cover features an integrated, high-volume gerotor pump with billet gears, single-roller billet timing set and it can support a MSD distributor so the user can run a carburetor. The cover also has integrated motor plate mounts for racing applications.” Future Godzilla ideas include a retro-style oval air cleaner and valve covers that are reminiscent of 1960s Ford engines.

Fox body headers and stainless-steel header flanges for Godzilla swaps are available from Ultimate Headers in Berea, Ohio. “These header flanges are investment cast to allow very tight radius and large header tubes. The 321 stainless steel is stronger and resists thermal fatigue,” said Jim Browning.

MEETING POWER DEMANDS

As noted earlier, competitors obsessed with both horsepower and boost will need a constant reminder to pay more attention to their fuel system.

“They better be,” said Aaron Suchy of Radium Engineering, Clackamas, Oregon. “Neglecting the fuel system is a terrible idea, although fuel sometimes gets left behind.”

Aftermarket companies are developing improved versions of every component in a fuel system, including fuel tanks, pumps, hoses, fittings, regulators, injectors, and carburetors. It’s all part of keeping up with the power demands of the engine.

“One thousand horsepower is the norm on the street these days,” noted Suchy. “We’re adding ‘smarts’ to their fuel systems. These new parts are useful and good looking. They’re not an afterthought.”

DeatschWerks in Oklahoma City, Oklahoma, has new fuel rails for popular



ProCharger offers innovation at both ends of the forced induction market, from a larger, 144-mm impeller for its F4X supercharger to a modular accessory front-drive system for LS engines that accommodates the addition of power steering, air conditioning, and a supercharger. “It’s a great kit for swaps,” said Grant Jones.

import vehicles and a new voltage booster to get more fuel in the system.

"We have two models, one for brushless or brushed fuel pumps," said Krista Lamb, adding that a new 2-liter competition surge tank is designed for up to three pressure fuel pumps and fits in a standard 6x10 fuel-cell opening. "It will support up to 2,200 horsepower."

Where's all this power coming from, and what does the coming year look like for new power products? Adapting nitrous to late-model performance engines is one way.

Dodge Hellcat engines with a 3.0-liter supercharger already make more than 800 horsepower, but if you want to "squeeze" a little more out of the 6.2-liter powerplant, then Nitrous Outlet of Waco, Texas, has CNC-machined nitrous plates that are sandwiched between each cylinder head and the blower. Jetting for up to an additional 130 to 400 horsepower is available.

"We feed both ends of the plates because you can't run a single passage line through each side," said Clifton Winkleman. "The big challenge was getting the correct discharge angle for even distribution."

Superchargers and turbochargers are getting bigger and more efficient, and even a little more affordable. Precision Turbo & Engine in Crown Point, Indiana, introduced a next-generation 122-mm turbocharger that features an innovative one-piece center housing and compressor backplate design. The company is also releasing a pair of mirror-image turbos for those racers who like a symmetrical appearance in the installation.

"Previously these were available only with ball bearings," said Reggie Wynn. "Now they're available with hydrodynamic journal bearing center sections that are more budget friendly."

Wynn also noted that more class-specific turbos will be developed over the years. These turbos will have wheel sizes that fit the rules but are designed for maximum efficiency within those rules. He also said safety items like Kevlar turbo blankets will become more popular and possibly required by rules.

Last year ProCharger of Lenexa, Kansas, introduced the F4X supercharger with a 140-mm impeller. Now that top-level blower can be ordered with an even larger 144-mm impeller to help engines exceed 4,000

horsepower. On a different level, ProCharger has a modular accessory front-drive system for LS engines that allows the user to add power steering, air conditioning, and a supercharger at any time.

"It's a great kit for swaps," noted Grant Jones.

Support for all the higher-horsepower applications will come from many sources. ATI Performance Products in Gwynn Oak, Maryland, is introducing a lockup input drum conversion kit for the Turbo 400 transmission and 1.250-inch input shaft. It features a lightweight billet-steel drum and hardware.

"It's designed for very high-horsepower applications like Pro Mod," said JC Beattie Jr.

Many high-end drag cars will be clutchless in the future, using a torque converter in front of an air-shifted manual transmission.

"Super high-horsepower engines are hard on a clutch. The torque converter is a more forgiving setup," explained Craig Liberty of Liberty's Gears in Harrison Township, Michigan, adding that transmissions will be designed with more robust components like stronger cases, wider gears, and improved support bearings.

TOTAL CONTROL - FULL FLEXIBILITY

NEXUS R3

So much functionality squeezed into one compact, rugged unit:

- New Generation ECU
- 4 Channel PDM
- Wi-Fi Module
- Wideband Controller
- Data Logger

All controlled through one powerful software.

Haltech

www.HALTECH.com 888.298.8116





New products from Dynocom include robust hub dynamometers that can measure up to 6,000 hp and a fuel-injector tester to help ensure engine builders use evenly matched injectors for a more consistent tune.

Classic engine platforms will not be excluded in the current power surge. The 1 Spec small block Chevy cast-iron block from M&M Competition Engines in Franklin, Indiana, has forward-thinking features like core plugs machined to accept -16 AN O-ring plugs and oil galley plugs machined to accept -6 O-ring plugs. To support massive power combinations, the grey-iron block has thick cylinder walls, extended main- and head-stud bosses, and four-bolt mains in all five locations.

“BY ASSEMBLING ALL THE PIECES IN BULK, WE’RE PASSING THE COST SAVINGS ONTO THE CUSTOMER.”

“We’ll also have Gen II LT1 versions with reverse cooling available,” said Tim Linder. “Some class rules call for reverse cooling.”

Brodix in Mena, Arkansas, will also promote its new big block Chevy cast-iron cylinder block as the venerable Rat motor remains very popular. It comes with splayed four-bolt main caps, two-piece rear main seal,

4.250/4.500/4.600-inch bore, 9.800- or 10.200-inch deck height, and standard cam location.

“This is our customer base,” said Mark Fretz. “Right now, there is a void in the market for cast-iron blocks.”

Aluminum blocks for late-model projects will not be left in the dust of their cast-iron counterparts. Bear Block Motors in Chatsworth, California, is offering a heavy-duty production replacement for 5.0- and 5.2-liter Ford Coyote engines.

“We use 356T aluminum, so it’s stronger than a factory block,” said Jim Ronzello.

Not all new products will be getting larger in the future. Holley Performance Products in Bowling Green, Kentucky, just released the MSD Ultra 6A capacitive discharge ignition control that is 60% smaller and 50% lighter than the Digital 6A box. Despite the compact footprint, the Ultra 6A works up to 15,000 rpm and delivers 135 to 150 mj spark output.

“Everybody wants smaller and faster,” said Mark Gearhart. “It’s smaller, lighter, and uses less energy.”

With more emphasis on building power, precise testing will become even more crucial for race teams. Many high-powered cars are simply outgunning traditional roller-based chassis dynos, so advanced hub

dynos are drawing more attention.

“These systems are portable, they’re not built into a shop floor,” said Peter Owen of Dynocom Industries, Fort Worth, Texas. “You can set it up in a parking lot. We can equip you to measure from 1,800 to 6,000 horsepower.”

Dynocom also offers a fuel injector tester to help ensure that engine builders use evenly matched injectors for a more consistent tune.

EXTRA HELP

Saving time in the shop or at the race is another priority for some teams. Also, as it becomes harder to find experienced help, any product that can take the place of a crew member for some chores will free up the team to address more critical jobs.

The Niflate 99 from Autopro Distributing in Kentwood, Michigan, is a tire purging and inflation device that can inflate four tires with nitrogen at a time and run up to five purge cycles with no crew member having to watch over it. The tires are inflated to the predetermined pressure. Since the product is automated, teams will use up to 60% less nitrogen than with manual inflation.

“You’re not allowed to use vacuum to pull air out of the tires,” said Jeff Vandehoof. “This unit allows pressure to escape naturally, so the tire won’t be distorted. And it has an integrated dryer to ensure there’s no moisture in the nitrogen.”

Another product offering an extra hand is the Steering Buddy from Hostile Industries in Anniston, Alabama. When connected to the steering shaft in the race car, it allows remote control for all steering operations. This action is helpful when moving a car into a trailer, around a garage, or through tech inspection.

“You can even operate it with a smartphone app,” said Mike Pearl, adding that his son Mike first approached him about developing such a device while working on a dirt-track race crew. “They were fighting to load it on a trailer. Sometimes the cars are hard to turn with some of the front-end settings.”

QA1 in Lakeville, Minnesota, just introduced another time saver in the shop, a ‘six pack’ of dry shocks that includes all the necessary parts to build custom shocks as well as backups in an easy-to-access box.

“We developed it for shock rebuilders. It has all the parts and pieces to build shocks that are custom valved to your specs,” said Dave Knauff. “A lot of work went into



The Mango II FR Ratcheting Countersink Set is “great for cleaning holes,” said our source from Shaviv USA. “It gets the work done quick instead of having to dig out different files to smooth out the edges.”

the packaging so that the users will have a productive open-box experience. By assembling all the pieces in bulk, we’re passing the cost savings onto the customer.”

Racers building their own cars may be more appealing in the future as fabrication equipment gets better and more affordable. Hammer Concepts & Designs in Adams, Tennessee, will set up a shop with a custom table and accessories so that just about any kind of chassis can be built from the ground up.

“Builders are looking for repeatability and faster builds,” said Reno King. “We offer fully adjustable, multi-purpose jigs that handle

different axle housings, suspension designs, steering columns, and more.”

Meantime, Monit Motorsport in Mount Maunganui, New Zealand, has developed a very useful product that adjusts the front-rear brake bias and provides a built-in digital display so that the driver doesn’t get the settings mixed up.

“Drivers always want to know where the bias is. Sometimes they were afraid to change it because they weren’t sure they could return to the previous setting,” said Reuben Caldwell. “It’s waterproof, has its own internal battery, and always keeps the

driver informed.”

Finally, Bolingbrook, Illinois-based Shaviv USA is touting its Mango II FR Ratcheting Countersink Set for cleaning in the inside diameter of holes. The kit includes an ergonomically designed Mango II handle, the FR ratchet holder, and F20 20-mm countersink blades.

Unlike a standard deburring tool, this piece “usually cleans out a hole in one turn,” Nicholas Prohl told us. “There’s a lot less fatigue on the hand, and the user can do multiple holes very fast.”

Even with all the new shop gear, chassis components, and other car-related products that will be available in the coming season, engine performance will likely remain in the headlines as competition heats up. There are still enough race classes where engine builders have freedom to build some serious horsepower combinations, but there will be cautionary stipulations.

“Everyone wants to make more power,” observed John Partridge of Bullet Racing Cams, Olive Branch, Mississippi. “But they also want keep those engines happy.” **PRI**

The latest technology combined with advanced materials...

... MAHLE performance gaskets provide unrivaled quality across the board.

The MAHLE Performance gasket line was built from the ground up. MAHLE uses the latest technology and most advanced materials – to seal and protect engines which are designed to run harder, faster, and push beyond the limits of conventional gaskets.

mahle-aftermarket.com



PRIZE PACKAGES

From adaptive gearboxes to battery relocation kits, engine control systems, and pocket tire gauges, PRI's Featured Product Award winners are "following the trends of where this industry is going."

By Laura Pitts

Innovation was the overriding theme for PRI's Featured Products Showcase, which highlighted hundreds of new race parts, equipment, technology, gear, and more straight from the Trade Show floor.

"There were so many new innovative products in last year's Showcase—since we had two years off [due to COVID]—so I was not expecting to see as many cool new products this year. That's not the case; I'm impressed," said BangShift's Chad Reynolds, who was selected as a Featured Product Awards judge in the traditional media category. "Some of the lesser-known brands are clearly stepping up their game and making better components."

Like Reynolds, Skye Romanoff of Blanco Racing was impressed with the variety of cutting-edge options in the Showcase. "It was a little overwhelming at first, just because there are so many products to see," said Romanoff, who judged in the social influencer category. A rally racer, she is also the president of California Rallycross and an event host for the Northern California SCCA National Rallycross. "It was difficult to choose my Judge's Pick. I had three contenders, but I went with Radium Engineering's spare tire fuel cell. I like that it's a simple plug-and-play option where you don't have to weld or do extra fab work. It's all pretty much one system that you don't need extra switch tanks or anything else—everything is ready to go in one little box. You take out your spare tire, and you're good to go. It's great for not only full-on race cars, but also for people

like me who have production cars."

The theme of innovation carried over for JA Ackley of Grassroots Motorsports, who had his sights on inventive parts in the oval track and sports cars categories.

"My Judge's Pick is a fire suppression system from Lifeline for electric vehicles (EVs). It's nice to see a product that is following the trends of where this industry is going. They're clearly ahead of the curve right now, so kudos to them for taking advantage of the latest technology," Ackley said. "I know for us at Grassroots Motorsports, we're seeing more EVs in our \$2,000 Challenge [event]. Safety standards haven't [necessarily] caught up with these cars yet, so seeing a product from Lifeline address that is a good step toward meeting those needs."

For Kevin Wells of Formula DRIFT, the SST Transmission by Pure Drivetrain Solutions (PDS) caught his eye. "It is a manual transmission, so you can have a clutch pedal, and you can have it as sequential or H-pattern, and you can convert it to an automatic. It can work in damn near anything. [Someone] could go road racing, use it as a manual with the paddle shift option, then go sit in LA traffic, switch it to automatic, and you're good to go. It's a really cool setup that bridges both worlds of race cars and street cars," Wells said.

Two dozen PRI exhibitors received either a Judge's Pick or a Category Award through the Featured Product Awards program. Following is the complete list of winners.



BEST ACCESSORY PRODUCT

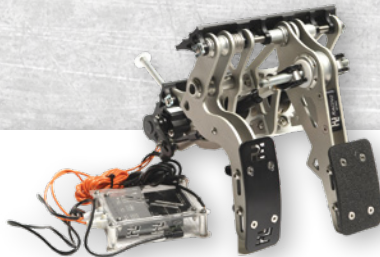


SMART HITCH/WS 180 HITCH WITH BUILT-IN GAUGE TO MEASURE TONGUE WEIGHT

WEIGH SAFE

The Weigh Safe 180 is a patent-pending design of an adjustable turn-over ball mount that will now also measure tongue weight on both tow balls. The Weigh Safe 180 gives the convenience of two tow balls readily available with no need to guess your tongue weight.

weigh-safe.com



SIM RACING PEDAL BOX

PE RACING

The Pedal Box is a turnkey solution using a patented pedal assembly featuring load cell cylinder technology for training and competition. The Pedal Box is engineered for a realistic feel, reliability, and strength with an adjustable feel for a range of disciplines. Available in two- and three-pedal versions.

peracing.com.au



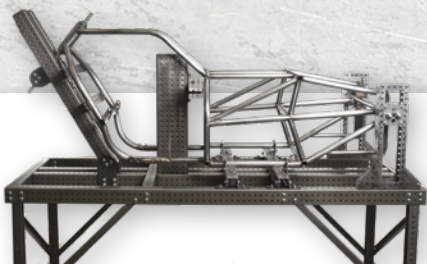
ZERO EV FIA 8865 SYSTEM

LIFELINE FIRE & SAFETY SYSTEMS

With the goal of surpassing the requirements set out by the FIA, the Zero EV was designed to be one of the most technologically advanced suppression systems available today. Zero EV can be used for, but not limited to, hybrid and EV vehicles utilizing 100% Novec 1230 and has also been successfully tested against the latest generation of biofuels.

lifeline-fire.com

BEST CHASSIS PRODUCT



MULTI-JIG

ME RACING SERVICE AB

The Multi-Jig system offers versatility and adjustability as the first chassis jig made to accompany individual building needs. Its modular design enables users to assemble a rigid and accurate jig to fit any type of building project, be it Top Fuel dragsters, doorslammers, motorcycles, or even sulkies for horse racing.

meracing.com



SIAG - SUPER INTELLIGENT ADAPTIVE GEARBOX

PURE DRIVETRAIN SOLUTIONS (PDS)

SIAG (pronounced /seej/) is designed to be the most advanced and versatile gearbox in the world. A first-of-its-kind, this gearbox checks every box for multiple applications, including drag, road course, autocross, drifting, sand drag, resto mods, drag and drive, street cars, and roll racing. SIAG is available in RWD and AWD configurations, is rated for 2,000 lbs./ft. and 2,700 Nm, provides lightning-quick shift times, and is capable of 10,000+ rpm, CAN integration and 16 GB of data logging memory.

puredrivetrainsolutions.com



COMPLETE BATTERY RELOCATION KIT - PRO SERIES

WIRING SPECIALTIES

The battery relocation kit is designed to wire the power system with a battery located in the trunk and optimize power delivery for total confidence. Featuring properly AWG-sized power wires and heavy-duty ring terminals crimped on securely, the kit also includes a 200-amp circuit breaker protection and firewall bulkhead for easy firewall pass-through.

wiringspecialties.com

BEST DRIVETRAIN PRODUCT



BRUSHLESS VARIABLE SPEED WATER PUMP

DELTA PAG

This made-in-the-USA water pump is designed with a huge 65 GPM and features a brushless motor drive, long life, and constant duty of up to 50,000 hours. Additional features include a dual 1-inch volute output and 1.75-inch inlet, a stainless steel impeller, and variable flow rates dependent on temperature. Users can ramp flow up or down as needed to maintain temperature. deltapag.com



BRAKE BIAS DIAL MONIT MOTORSPORT

This remote brake bias adjuster has a built-in display showing the set brake bias position. It is compatible with all pedal boxes and balance bars and connects via a flexible shaft. Drivers can also reset the dial to zero at their preferred bias position. The product is also water resistant, and battery powered with an 18-month battery life on a user-replaceable CR2032 coin cell. The screen also stays on constantly for ease of use. monitmotorsport.com



SPARE TIRE FUEL CELL

RADIUM ENGINEERING

This 10.5-gallon FIA- and SFI-approved competition fuel cell features a circular shape that allows installation into common spare tire wells found in the trunks of some vehicles. In addition, the polymer bladder is resistant to all types of fuels, and this cell can be paired with a Radium fuel cell surge tank system for the ultimate motorsports fuel delivery solution. radiumauto.com

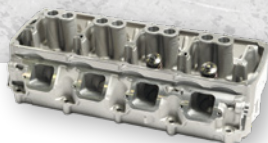


FLOOR MOUNT TRU-BAR BRAKE/CLUTCH AND THROTTLE PEDAL WITH THROTTLE LINK

WILWOOD DISC BRAKES

This adjustable ratio Tru-Bar brake pedal features a floor mount throttle, brake, and clutch pedal assembly with throttle linkage for front engine cars. The pedal head adjusts vertically to provide a 4.75, 5.25, or 5.75:1 ratio. Triple master cylinders are able to mount to the assembly, with a trunion-based adjustable Tru-Bar balance bar providing front-to-rear brake bias. wilwood.com

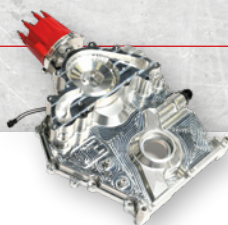
BEST ENGINE PRODUCT



BLACKHAWK GEN III 5.7L, 6.1L & 6.4L MOPAR HEMI CYLINDER HEAD

AFR-AIR FLOW RESEARCH

AFR's Black Hawk Mopar Gen III Hemi cylinder heads are manufactured with a trademarked .750-thick head deck. Now with an improved water jacketing for enhanced cooling while retaining a minimum of .200 port-to-water jacket thickness. A machine option is available to add bolt holes and dowel provisioning for Hellcat superchargers. Peak flow is 390 at .700 inches. airflowresearch.com



BILLET GODZILLA FRONT COVER LATE MODEL ENGINES (LME)

This front cover is integrated with a high-volume oil pump with billet gears. The cover comes with a single roller billet timing set with distributor drive, while the oil pump does not use electronic control like the factory. The product accepts an MSD distributor to allow the use of carburetors or any aftermarket fuel injection while an integrated motor plate mounts for racing applications. latemodelengines.com



CHEVY LS MOCK-UP ENGINE SWAP DUMMY BLOCK KITS

SPEEDWAY MOTORS

This kit is compatible with all LS engine bolt-ons, such as intake manifolds, headers, oil pans, timing covers, water pumps, and accessory brackets. The short block weighs 18 lbs. and the long block weighs 35 lbs. This LS mock-up engine can be lifted in and out of the vehicle without needing an engine hoist. It also features heavy duty 12-gauge steel construction. speedwaymotors.com

BEST IN-VEHICLE/ELECTRONIC/TELEMETRY PRODUCT



FT600 EFI SYSTEM
FUELTECH ECU

The FT600 is FuelTech's most advanced engine control and monitoring system, and is an all-in-one ECU, dashboard, data acquisition, and power management system.
fueltech.net



NEXUS R3 VCU
HALTECH

The Nexus series just got a whole lot more interesting. This data logger is designed for total control and full flexibility, and features a power distribution module, a wideband controller, a high-speed Wi-Fi communications module, and a new-generation engine management system all natively interconnected and programmable with a single software.
haltech.com



G5 VOODOO PRO ECU
LINK ENGINE MANAGEMENT

As a successor to the G4X range, this ECU features 14 injection, eight ignition, and four multipurpose (inj, ign, aux) channels. It can control up to 12 cylinders with sequential injection and direct spark, while the multipurpose channels allow up to two-stage injection on a V8 (16 injection and eight ignition) or three stage-injection on a six cylinder (18 injection and six ignition). It also features gasoline direct injection control, dual onboard E-throttle and Lambda, built-in GPS, and more.
linkecu.com

BEST RACE FLUID



107R RACE OCTANE CONCENTRATE
DEATSWERKS FUEL SYSTEMS

This concentrate by DeatschWerks is race, dyno, and lab-proven to boost pump gas up to 107 octane and clean your fuel system. Designed for off-road use only.
deatschwerks.com



FS36 FUEL SYSTEM STABILIZER
DEATSWERKS FUEL SYSTEMS

This fuel system stabilizer inhibits evaporation, bumming, varnish, and corrosion. It contains powerful detergents and lubricants and stabilizes fuel for long-term storage. The formula is effective for 36 months of storage and is compatible with e85.
deatschwerks.com



ROYAL PURPLE XPR
ROYAL PURPLE SYNTHETIC OIL

Royal Purple XPR (Extreme Performance Racing) oils are recommended for use in various racing applications and are popular in a variety of motorsports, including NASCAR, NHRA, World of Outlaws, and Bonneville Salt Flats. The oils also contain Royal Purple's proprietary Synerlec additive technology.
royalpurple.com



SPEED SAUCE PLUS WATER-ETHANOL INJECTION FLUID
VP RACING FUELS

Speed Sauce Plus is a 20/80 water-ethanol injection fluid ready to use straight from the bottle, delivers more power per gallon, and provides up to 4% more power compared to methanol-based injection fluids. Speed Sauce Plus water-ethanol injection fluid is 99% renewable and less toxic and corrosive than methanol-based injection fluids.
vpracingfuels.com

BEST SHOP EQUIPMENT



RACESENSE POCKET TYRE GAUGE

HMS MOTORSPORT

Designed for the rigors of track life, the Pocket offers precision pressure and temperature measuring. Users will never forget their tire pressures again with automatic logging and smartphone connectivity. There is even an optional tire pyrometer for temperature readings. As the name suggests, it fits neatly into your pocket, too.

hmsmotorsport.com



MOUNTING CLAMPS

PE RACING

These clamps provide a non-permanent, faster, easier, and stronger solution for mounting a variety of objects and accessories to tubes or panels. They are made to fit common roll cage tubes and eliminate the need for welding panels and brackets to your frames. Products include a tube clamp mount; panel to tube clamp adaptors; steering wheel and helmet hooks; and pump and filter insulated mounts.

peracing.com.au



STEERING BUDDY

STEERING BUDDY

The Steering Buddy is like having an extra crew member with you. It is a self-contained steering device that allows users to maneuver their race car in and out of the trailer and through tech inspection. The device can be controlled via Bluetooth or a hand controller.

steeringbuddy.com

BEST SUSPENSION PRODUCT



1963-1987 C10 FRONT TUBULAR CROSSMEMBER SUSPENSION SYSTEM

QA1

Upgrade a classic truck to a modern driving feel and performance with this kit, which has everything to convert a front end to coil-overs and a tubular cross member with rack-and-pinion steering. Users can overhaul their suspension in one go, giving an adjustable ride height for the perfect stance with up to 8 inches of drop and saving 140 pounds of weight.

qa1.net



CIRCLE TRACK DRY Q SERIES SHOCK SIX PACK

QA1

The Q Series circle track shocks are now offered in six packs of "dry" shocks. They include the components for six shocks and offer a cost-effective way to build custom valving. The packs include gas bags, seal packs, pistons, piston rods, and more.

qa1.net



GM BIG WHEEL FULL-VEHICLE SUSPENSION

QA1

This product fits up to 28-inch wheels on Caprice or Impala vehicles and comes with a complete bolt-in suspension system, including control arms and sway bars. It has everything you need to get a Donk, Box, or Bubble sitting right while giving users a better ride and improved handling. This kit will raise a car 2 inches above stock ride height or up to 2 inches lower than stock.

qa1.net

JUDGE'S PICKS



ABCS FOR FUTURE DRAG RACERS NHRA EDITION

EAT SLEEP RACE LLC

* Awarded by David Kennedy, National Hot Rod Association (NHRA) and Mike Carpenter, Drag Illustrated



FT600 EFI SYSTEM

FUELTECH ECU

* Awarded by Mike Galimi, Hot Rod



ZERO EV FIA 8865 SYSTEM

LIFELINE FIRE & SAFETY SYSTEMS

* Awarded by JA Ackley, Grassroots Motorsports



BRAKE BIAS DIAL

MONIT MOTORSPORT

* Awarded by Garrett Reed, American Muscle HD and Joe Skotnicki, Race of Champions



SIAG - SUPER INTELLIGENT ADAPTIVE GEARBOX

PURE DRIVETRAIN SOLUTIONS (PDS)

* Awarded by Kevin Wells, Formula DRIFT



SPARE TIRE FUEL CELL

RADIUM ENGINEERING

* Awarded by Skye Romanoff, Blanco Racing



TH400 SMART-TECH DRUM MODULE

SONNAX

* Awarded by Alex Taylor, Alex Taylor Racing



CHEVY LS MOCK-UP ENGINE SWAP DUMMY BLOCK KITS

SPEEDWAY MOTORS

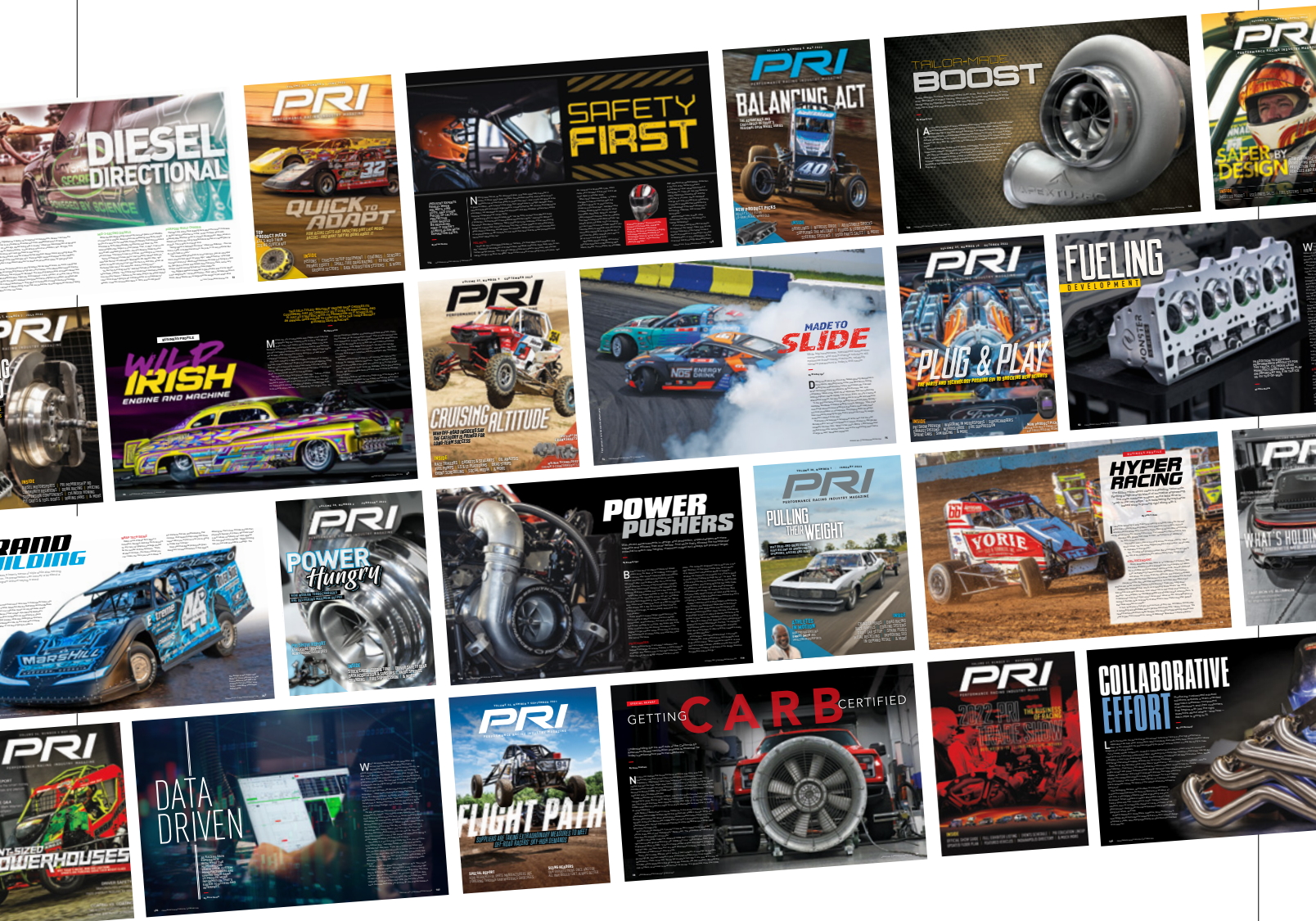
* Awarded by Chad Reynolds, BangShift

PRI MAGAZINE COVERS THE BUSINESS OF RACING

27,000 PRINT • 95,000+ DIGITAL DISTRIBUTION

ADVERTISE TODAY!

VISIT PERFORMANCERACING.COM



THE BUSINESS OF RACING STARTS HERE!

PRI
PERFORMANCE RACING INDUSTRY

ATTENTION SPANNING

Buyers can bank on a prodigious supply of new parts and solutions designed to drive sales—and podium finishes—in 2023 and beyond.

By Mike Imlay

Demand for “late-model stuff,” including newer Ford and LS platform products, as well as lighter-weight billet parts, and even kits for big-wheel drag cars is expected to intensify in the coming year.

Motorsports parts resellers and service providers, as well as race teams and racers themselves, leveraged the recent PRI Trade Show in Indianapolis to uncover solutions that could provide a competitive edge in 2023, whether through added strength and durability, increased performance, weight savings, or a clever new approach to a common obstacle.

MANUFACTURERS' ASSESSMENTS

Exhibitors like The Edelbrock Group noted new market forces shaping today's buying tendencies, but cited one in particular: “The big trend we've started to see as we exit the pandemic is that there's still a lot of demand for Ford FE and early Chrysler product—the C's and D's,” said Bryan Barlow, Canadian sales manager for the Olive Branch, Mississippi-based manufacturer. “During the height of it all, everyone focused on getting their orders out on A and B movers. Along the way a lot of C and D movers got depleted or discontinued. So we're starting to see a big push right now as everyone's getting caught up.”

Somewhat surprisingly, Edelbrock's new VRS carb continues to resonate with racers following its introduction last year, Barlow added. “About June we started to ship it, and we're already overwhelmed with orders,” he said. “With the market shifting so greatly toward EFI, we were a little nervous on the introduction of a new carburetor, but carburetor sales have been through the roof.”





Carburetor sales have been “through the roof,” despite the market shift to EFI, said a carburetor manufacturer’s rep. His company has been “overwhelmed with orders.”

For the team at Valencia, California-based Air Flow Research and Scat Enterprises, flat-plane crankshafts that deliver “the sound and performance of the Ferraris and Lamborghinis” are expected to remain atop racers’ wish lists in 2023, according to Danny Cerny. However, “for strength and a lot of the drag racing and performance sports, it’s the billet crankshafts,” he noted. “While manufacturing and producing the billets, we are also expanding a lot of our lightweight forgings that hold up to the industry’s punishing demands.”

Cerny also predicted that, somewhat ironically, the push for vehicle electrification could bode well for his segment. “People are going to want to rebuild a lot of the modern vehicles because the mileage is going to be coming around,” he explained, “and they’re not going to want to upgrade or go into an electric vehicle. So for us, it creates a whole new avenue in providing crankshafts, pistons, cylinder heads, and connecting rods.”

From the viewpoint of Lakeville, Minnesota-based manufacturer QA1, buyers are eyeing rear suspensions for such classic trucks as the 1973–1979 Ford F-150, as well as full-handling kits for 1971–1976 Impalas/Caprices that are popular among Donk

racers and other big-wheel enthusiasts.

Along with products designed for older vehicles, QA1 also is utilizing advanced technologies and materials to meet customer demand. “They’re looking at new things like our carbon fiber driveshafts,” said Steve

Smith. “There are still some folks out there who just can’t believe that a carbon fiber driveshaft can actually be stronger, lighter, and safer than any other driveshaft there is. They’re intrigued by things with innovation in the parts.”

Based in Glendale, Arizona, Pro EFI noted its wiring harnesses for the Ford Coyote engine as a top attention-getter; at King Engine Bearings, meantime, much of the focus was on the company’s first-to-market Can-Am race bearings, which were displayed at PRI in a Brian Crower specially crafted Can-Am engine block.

New and often unexpected business opportunities were found everywhere, in fact, as Edward Cooper, president of Nu-Ice Age, a dry-ice blasting operation in Jackson, Michigan, discovered via Miles Ahead. Based in Carmel, Indiana, Miles Ahead brings turnkey open wheel electric kart racing competitions to fundraising and company team-building events. And that presented Cooper with a potentially new application for his product.

“When [blasted] dry ice hits, there’s no water in it,” Cooper explained. “Tiny explosions take place that lift dirt off walls or off a vehicle. They’re perfectly cleaned off,



Machinery Row remains among the PRI Trade Show’s top attractions for many buyers who are seeking to enhance productivity as well as build quality. “Every time I turn around, I’m finding something that I need and want,” said one fabricator.



Hands-on demonstrations of machinery and tools is an important part of the PRI Show experience, said a source. "It's more impressive to see it live than on paper. Seeing it in working mode tells us if it's something we really need."

without hurting the finish."

This waterless technology could be an ideal solution for cleaning e-karts and their specialized components, he surmised. "It's cold and takes the dirt down to the ground. You just sweep it up and you're done," he said. "We've been doing this, but we also race cars, so this is kind of what we're looking to as a next step."

BREAKTHROUGHS FOR BUYERS

So, how are buyers themselves approaching the 2023 season?

Indianapolis-based racer Nick Taylor was among those eyeing the aforementioned QA1 setup for big-wheel vehicles. Although he doesn't race Donks or big-wheel cars, "I do no-prep racing and we like long-travel suspensions," he said. "So I'm trying to

"THE BIG TREND WE'VE STARTED TO SEE AS WE EXIT THE PANDEMIC IS THAT THERE'S STILL A LOT OF DEMAND FOR FORD FE AND EARLY CHRYSLER PRODUCT."

Complete Line of Engine Building Equipment

**Comec
CNC Boring Mill
ACF 200 CNC**



301-C Cayuga Drive
Mooresville, NC 28117
www.comecus.com
info@comecus.com

800-887-6076

ULTRA-HIGH PERFORMANCE PISTONS



MADE IN THE U.S.A. SINCE 1979!

Custom and off the shelf offerings for most import & domestic applications.



PHONE: 310.536.0100
EMAIL: SALES@ROSSPISTONS.COM
WEB: WWW.ROSSPISTONS.COM



NEO SYNTHETIC GEAR OILS

Neo Synthetic Oil
2871 Gundry Ave.
Signal Hill CA 90755

Ph: 1-562-595-7208
Email: Neooilusa@gmail.com

NeoSyntheticoil.com



Experts say the market for racing apparel, helmets, and safety gear is expected to continue expanding through at least 2026, due in part to the broadening appeal of motorsports, especially among younger demographics.

gauge how this [product] could work out for what we do, not just the application they've produced it for."

Fellow attendee Ryne Moonshower, with Moon's Fabrication in Fort Wayne, Indiana, agreed. "There's crossover between a lot of different sports here," he added. "New products for circle track may also be useful in another area like drag racing, and you would never know that unless you came to PRI. There were some circle track twin-tube shocks that really piqued our interest, even though we do drag racing and a lot of backtrack stuff."

For numerous buyers, Machinery Row ranks among the Show's top attractions—Daniel Adams, with CT Race Worx in Monroe, North Carolina, was on a mission there. A welder and fabricator specializing in side-by-sides and powersports vehicles, he was looking for new and upcoming welders, CNC tube benders, and air-driven and cordless power tools.

"Those are big things in our industry now, and every time I turn around [here], I'm

finding something that I need and want," he said. A seven-year veteran of the PRI Trade Show, Adams noted that Machinery Row consistently proves valuable to his business. "We're able to increase production times and also the quality of our end products because we're able to find the tools and equipment that help us produce better product in the end," he said.

Tony Hatfield, owner of Modco Racing Engines in Joplin, Missouri, was in the market for CNC machines, and he found several by Howard, Pennsylvania-based Centroid that merited closer examination. Hatfield, who's considering updating his equipment for cylinder heads and other engine-building tasks, noted improved efficiencies of the industry's latest tooling; he was able to visualize the possibilities thanks to "hands-on" demonstrations provided by Centroid and others on Machinery Row.

"It's more impressive to see it live than on paper," he noted. "Seeing it in working mode tells us if it's something we really need for where we want to be at. We get an idea of

"WE BUILD A LOT OF RACE AND TRACK CARS, AND WE'RE FOCUSED ON MEETING ALL THESE VENDORS HERE."

“I’M TRYING TO GAUGE HOW THIS [PRODUCT] COULD WORK OUT FOR WHAT WE DO, NOT JUST THE APPLICATION THEY’VE PRODUCED IT FOR.”

what’s new out there [and] make sure we’re not missing anything. The whole drive is to move forward.”

First-time PRI attendee Robert Bierman, a fabricator with AJ Performance Machine in Sycamore, Illinois, pondered how several of the “cool tools” he discovered could improve his workflow. “We build all kinds of street cars, race cars, turbo kits and performance items—we do blowers, installs, tuning, and dyno,” he told us. “There’s a lot of good stuff here, especially the grinders and a couple of the welders.”

With motorsports broadening its appeal, especially among younger demographics, experts say the market for racing apparel, helmets, and safety gear is expected to continue expanding through at least 2026. Of course, comfort, lighter weight, and fire protection remain key factors for buyers, with manufacturers jockeying to differentiate themselves in the areas of quality, regulatory compliance, aesthetics, and innovation.

Pete Hunsinger of Chase Hunsinger Racing in Mansfield, Ohio, was among the many smaller buyers seeking new apparel and safety gear. A racer who started in go-karts nearly three decades ago, he and his 14-year-old son are planning a move into 410 sprint cars this year. “We’re going from a traditional go-kart jacket to a full-sized driving suit for him, obviously, for safety reasons,” said Hunsinger. “We’re hitting some of the safety equipment booths around here, see what we like, what feels comfortable for him, and what they can do for us with our sponsors.”

Not far away, Will Wattanwongkiri, owner of Chino, California-based WRTechnica, was examining helmets and other safety

TESTED & PROVEN
Around. Above. Below.

ARP
automotive *Racing* products

ARP fasteners are used in racing all around the globe and applications from space to below the earth’s surface.

ARP Fasteners are tested and proven in the most demanding environments on Earth... and beyond.

Made In USA

1.800.826.3045
arp-bolts.com
request a free catalog

Finally - Affordable Racing Communications!

Quality Customer Service along with Professional Communication Products have made SRC the Industry Leader in Racing communications.

From intro Start Systems through ALMS/Grand Am completely scrambled and digital racing radio communications... Here at Sampson Racing Communications, *We've Got You Covered!*

“We look forward to working with you and your racing team” - Shawn Sampson

SAME DAY SHIPPING...
With thousands of dollars of products on our shelves, it's never a problem.

Dealer Inquires Wanted

Vertex Standard
Authorized Distributor

sparco

SRC Sampson
Racing Communications
Order Toll Free (866) 396 7231 • www.SampsonRacing.com

HOOKED ON MOTORSPORTS?



Become a member of Performance Racing Industry and join the first-ever community of its kind.

Now available to racers and motorsports enthusiasts, PRI Membership is designed to bring the industry together, and protect racing by advocating on our collective behalf.



WINNING TOGETHER

*YOUR MEMBERSHIP INCLUDES AMAZING BENEFITS GO TO:
performanceracing.com/membership
 TO LEARN MORE*



equipment by Scala Gear. Wattanwongkiri's performance motorsports-oriented shop also fields TeamWWR, which has raced in NASA Super Touring, SRO GT4 World Challenge, and various other series.

"We resell, distribute, car build, support, transport—we're a one-stop shop for customers with high-performance cars," he said. "They can just drop the car off and forget about it. And, if there's something they need that we don't do, we refer it to our partners. We're here to work with everybody."

Wattanwongkiri touted the materials, fit, and quality of the helmets and gear he saw from Scala and others. "We're here to buy helmets," he said. "We're also here to buy suspension parts and brake parts, wheels—just all kinds of things. Our business is

"NEW PRODUCTS FOR CIRCLE TRACK MAY ALSO BE USEFUL IN ANOTHER AREA LIKE DRAG RACING, AND YOU WOULD NEVER KNOW THAT UNLESS YOU CAME TO PRI."



Attending the PRI Show “is about connecting with all the motorsports industry people, a lot of whom I’ve been talking to on the phone and now am putting a face to the name,” said an attendee. “It’s great to connect with all the other companies in this industry.”

focused on vehicle dynamics. So, anything that makes the car handle better, that’s what we do. We build a lot of race and track cars, and we’re focused on meeting all these vendors here.”

Like scores of other buyers flooding the aisles, Wattanwongkiri found it difficult to single out any one aspect of the Show—or product trend—that especially caught his eye. The floor was simply filled with so many innovations across so many categories, making them impossible to list. However, he did agree with other attendees we spoke with that the relationships forged at the Show stood out.

“Coming to PRI, for me, is about connecting with all the motorsports industry people, a lot of whom I’ve been talking to on the phone and now am putting a face to the name,” he explained. “Motorsports is such a focused, niche market, and it’s great to connect with all the other companies in this industry.

“There are also a lot of old industry friends who we just don’t get to see often,” he added. “I go racing around the country and I see them here and there, but this is the kind of place that just brings everyone together. I’m meeting other people through my current connections and then also introducing new connections to them—it’s a really good networking opportunity.” **PRI**

3" Tube Aluminum Driveshafts
3-1/2" Tube Aluminum Driveshafts
3" Tube Steel Driveshafts
2-1/2" Tube Steel Driveshafts

pro-life **Lightweight Harmonic Balancers**
 * All Steel
 * All Aluminum
 * Aluminum With Steel Sleeve

pro-life **Lightweight Quick Change Gears**
 .875 Wide
 Only 2.9 Lbs.

COLEMAN
 colemanracing.com
 N1597 US41
 Menominee, MI 49858
 Phone: (800) 221-1851
 Email: sales@colemanracing.com

facebook

colemanracing.com

PROFORM
 PROFORMPARTS.COM

Scan to see more.

SUPER-STREET ALUMINUM ROLLER ROCKERS FOR LS GEN III & GEN IV ENGINES

Unleash Your Horsepower, on the Strip the Street!

- Open Spring Rating: 750 lbs. (Gen III) | 500 lbs. (Gen IV)
- Body Style: Standard
- Max Spring Dia.: 1.4-in.

Includes 16 roller rockers, 16 pedestals, & 16 M8 Allen-head mounting bolts.

FIRST-CLASS EDUCATION

Quality learning opportunities at the annual PRI Trade Show cover critical subjects across business, tech, and EV performance—many of which can be put into practice straight away.

By Linda Mansfield

Racers should never rest on their laurels. No matter how fast, quick, or reliable the race car is right now, it can always be faster, quicker, more robust. The same holds true with racing and performance businesses, engine builders, and race teams.

Racing has enjoyed a resurgence of late, thanks in large part to post-pandemic, pent-up demand; but the marketplace is constantly shifting, and strategies that worked today may not be enough to ensure success tomorrow.

To keep racing and performance businesses moving forward in 2023, we've collected tips, advice, insight, strategies, and other key takeaways from select PRI Education seminars presented at the recent PRI Trade Show in Indianapolis.

Subject-matter experts covered a number of disciplines, from

how to make better use of social media to maximizing engine (and EV) performance. We're sure there's information here you can use to sharpen your program for the new race season.

SOCIAL MEDIA MARKETING TIPS & TRICKS

Social media marketing is one area where many small-business people struggle to keep up. Not only is it hard to create good content and find the time to post it, many people are unsure how to gauge the effectiveness of their efforts.

Sasha Dierker of SRI Performance in Mooresville, North Carolina, offers some tips and tricks for performance and racing businesses, starting with the basics. She defines digital marketing as all the opportunities brands have to interact with consumers online, via



email, social media, websites and blogs, display ads, and search engines.

An advantage to posting on social media—Facebook, Twitter, Pinterest, Instagram, LinkedIn, Snapchat, TikTok, and YouTube among the most popular—is that companies can do so for free, whereas display advertising is a pay-to-play environment.

Tools for a digital marketer include conversion funnels, key performance indicators (KPIs), search engine optimization (SEO), Google ads, campaign tracking, retargeting strategies, display ads, social media, newsletters, user experience (UX) and user interface (UI), spreadsheets, WordPress, customer relationship management (CRMs), Google analytics, A/B testing, customer journey mapping, and website optimization.

According to Dierker, a digital marketing plan has seven key parts: an executive summary, KPIs, marketing strategies, objectives, the target audience, competitive analysis, and market analysis.

How can one measure the success of a social media program? First, goals should be very specific, she said, and it's paramount to know your audience.

KPIs are crucial. Some examples include sales growth, sales per client, profit margins, customer retention, and customer satisfaction. "KPIs should be simple to understand and measure," Dierker noted. "They should be aligned with your company's overall strategic goals and objectives. They should be actionable. They should focus on internal factors that are in a business's goals."

There are various ways to measure a social media program.

Since Dierker uses Facebook extensively, she pays attention to the analytics it offers.

It also helps to schedule posts in advance, and there are several options for software to help. Most of them include analytics that can be valuable. Dierker uses Sprout Social. Other options to consider include Hootsuite, Buffer, and Zoho.

Also of note is Canva, a free-to-use online graphic design tool. Not only will it help to create artwork for posts, but its templates can stimulate creativity. Adobe Photoshop is another option.

Deanna Baldwin of Baldwin Racing Engines in Friedheim, Missouri, and Abby Hohlbein, a USAC D2 midget driver from Cloverdale, Ohio, found the information on Canva helpful.

"Appealing to what people want and watching your analytics were interesting to me," Hohlbein said. "I use social media mostly to promote my sponsors and to provide videos of our races, because they're not televised. We use Facebook and Instagram mostly. For the races we use Facebook Live a lot."





Tom Shay of Profits Plus Solutions assured small business owners that they can outperform larger companies by providing better and more personal customer service. Nearly two-thirds of customers leave for a competitor, he said, because they think the business doesn't care.

GIVING SMALL BUSINESS AN EDGE

Small businesses have the opportunity to outshine bigger ones if they provide better and more personal customer service, noted retail expert Tom Shay of Profits Plus Solutions, based in Dardanelle, Arkansas. This approach gives them an edge over big businesses that simply track customers' spending habits but don't offer a personal touch.

"Today's customer focuses on availability, convenience, and customer service," observed Shay.

He advises not spending money to search for new customers if you're ignoring customers who have done business with you in the past; he notes that 65% of people leave and go somewhere else because they think a business doesn't care.

In tough economic times it may be tempting to "save" money by not advertising, but Shay advises against it. Instead, he said small business owners should determine their advertising goals and change their messages—and the media they use—frequently.

It's important to test new ideas, he emphasized. "You have to try new approaches, because challenging times require radical thinking and actions. Listen to your gut feelings," he said.

Small-business people should calculate what they may lose if a new tactic fails, but also what they'll gain if it succeeds. If their

gut feelings say it could work, try it.

Two of those new tactics could be discontinuing a product, or even firing an employee, which can be hard but necessary. It's easy to put both off in the day-to-day routine of doing business, but it's important to take stock of a situation realistically and make necessary changes as soon as possible.

Another change Shay recommends is a shift in focus from a business's products onto its customers. "Focus on who your customer is and what you can do for them instead of on your products," he said. "There may be other things you can add to your product line or provide as a service."

He also advises looking for every possible expense to eliminate, and to understand your financial statements.

"Remember Vivian Greene's quote: 'It's not about waiting for the storm to pass; it's about learning to dance in the rain,'" he said.

Shay's advice registered with Saban Bibent, an 18-year-old sprint car driver from Cincinnati, Ohio, who wears most of the hats on his team.

"We're all so different, and you have to make the best choices for yourself," he said. "Having good relationships with your

customers will differentiate you from the competition that is only doing things online.

"In my case, as a driver, fans don't just show up," Bibent added. "You have to give them something, whether it be your time, or something that you support or stand for, before they're going to want to buy one of your T-shirts, for example."

SPONSORSHIPS IN THE DIGITAL AGE

If social media has changed the small-business person's daily routine, the digital age has also generated big changes for the people who buy and sell motorsports sponsorships. Stephen D'Hondt of Spire Sports + Entertainment in Cornelius, North Carolina, said the digital age has shifted the balance of power between companies' marketing decision makers and the sponsorship salesperson.

Today, the entire discussion is different, and the sponsorship salesperson needs to adapt.

Marketing decision makers don't want to be sold because they've already conducted their own research and have a good idea of what they want to sponsor, D'Hondt said. Therefore, the sponsorship salesperson needs to come across as a problem solver instead of a salesperson, and the questions he or she asks often determine his or her success.

Tactics that work include introducing who you are, but asking questions to understand what the company is looking for in a marketing partnership; admitting that you

"YOU HAVE TO TRY NEW APPROACHES, BECAUSE CHALLENGING TIMES REQUIRE RADICAL THINKING AND ACTIONS."

may not be able to help; asking discovery questions in a conversational format, using neutral language; and asking consequence questions to get the prospect to start selling themselves on why they need what you have to offer.

D'Hondt suggests people become fanatical about media and creating content, because the lines between sales and marketing are blurring. "Your digital presence is your presence," he said. "Actively seek out audiences and meet them where they are spending their time."

How can sponsorship salespeople best move forward? "Stay close to your points of contact," he said. "Ask how you can help them through economic cycles. Find efficient ways to deliver incremental value."

"The future of motorsports sponsorship is one of transition, where business models will have to adapt in order to survive," D'Hondt continued. "Multiple points of value will have to be provided."

Salespeople should be on the same social media platforms as the brands, he added.

It's often hard to even determine who a company's decision makers are. He suggested LinkedIn, SponsorUnited, Winmo, company press releases, and Google searches as ways to find the right contact person.

At-track hospitality is still a key component to sponsorship, D'Hondt said, and the driver is now more important than ever.

"Ask questions about what matters to the company; that's key," he stressed.

Christian and Adam Mulloy of Mulloy Motorsports in Lockport, Illinois, a drag racing and motocross team, took it to heart. "We will be more personal and get to know our sponsors and potential sponsors better," they said.

WOMEN IN MOTORSPORTS

Being in sponsorship sales is challenging, and so is being a woman in what has traditionally been a man's sport.

Natalie Decker of Natalie Decker Racing; Michelle Lackey Maynor of Alaska Raceway Park; Kaylynn Simmons of the Parts Plus Top Fuel dragster team; and Dr. Rebecca Starkey of VMP Tuning offered their thoughts and advice under the direction of Jeanette DesJardins of Car Chix.

HOWARDS
cams
& RACING COMPONENTS

MORE than Camshafts

75 Years of Race Winning Innovation!

920.233.5228 • FAX: 920.233.0938
howardscams.com • info@howardscams.com

WARNING: Cancer and Reproductive Harm
www.P65Warnings.ca.gov

CHECK OUT WHAT'S NEW FROM PYROTECT FOR 2023!

PYROTECT
www.pyroprotect.com

<p>NEW PYROCELL ELITE Standard Fuel Cells and Bladders from 5 to 60 Gallon. FIA-FT3 Approved.</p>	<p>NEW CUSTOM FUEL CELLS Specializing in Custom Fuel Cells any size or shape. FIA-FT3 & FT3.5 Approved.</p>	<p>NEW SINGLE & DUAL MOUNT PLATES Available for Aeromotive or Weldon High Performance Pumps.</p>
<p>NEW PRO AIR FLOW SA2020 SFA HELMET Available in White, Flat Black, Gloss Black, & Carbon</p>	<p>NEW PRO SPORT SA2020 TFA HELMET Available in White, Flat Black, Gloss Black, & Carbon</p>	<p>THE PYRO CELL FUELING TOWER from PYROTECT Available in 35, 50, 75, 100 Gallon.</p>
<p>NEW FIA CAMLOCK HARNESS with Lt. Weight Adjusters. Available in 6 Point, Black, Red, Blue and Silver.</p>	<p>FIA ANKLE TOP RACING SHOES Available in Red, Black and White.</p>	

Now Order Online at www.pyroprotect.com or call us toll free at 800-669-2355.

FUEL CELLS • HELMETS • FIRESUITS • SEATBELTS • GLOVES • SHOES



In PRI's Women in Motorsports seminar, Alaska Raceway Park's Michelle Lackey Maynor, second from left, advised women who feel too shy to make connections in the industry to "do your research so you can go talk to them and make it happen."

Work-life balance is a challenge for all of them. "I'm a big proponent of more hours in a day!" said Starkey, who has six children. On a more serious note, she added that she has to prioritize tasks.

On the subject of how to handle negative comments on social media, the advice was to ignore it. "I can't control it, so I'm not going to put my energy into it," Decker said.

Maynor said one racer at her track uses social media to complain about track prep, but her policy is not to engage in it, and to try not to even read it.

Simmons shares behind-the-scenes information on YouTube, and she'll respond to educational comments, but tries not to respond to negative ones.

Starkey has separate personal and business social media accounts.

What is one thing women in racing do that hurts their careers?

"They don't dream big enough," said Starkey.

"Some constantly try to be tough, and sometimes that blocks people from coming into your life," noted Simmons.

"Not aligning themselves with good, genuine people who have your best interests

at heart," offered Decker.

One attendee asked for advice on making connections despite being shy.

"Follow people on social media," suggested Simmons. "It will give you a common ground to talk about when you

meet them."

"Do your research so you can go talk to them and make it happen," offered Maynor.

"Show up!" added Decker. "You never know who you might meet!"

Among those inspired by these women was Sonya Lortie of K & K Insurance in Fort Wayne, Indiana. "Their perception of being a minority in this industry and their advice about how to handle it was interesting, and I'm sure it will help me."

"A lot of it was helpful," agreed Sara Thorpe of Disorganized Grime in Littleton, Colorado. "I'm a drag racer myself, and it was very encouraging. It helps to know you're not alone. Other women are dealing with some of what I've experienced, too."

THE ENGINE AS A SYSTEM

Engine builders should think about every component in an engine as being part of a system and concentrate on how the components interact with each other, since oftentimes changing one thing will adversely affect other components.

According to Billy Godbold of Godbold Engineering Solutions in Lakeland, Tennessee, "If your valvetrain is out of control, [then] you increase your springs. Then, all of a sudden, you're doing horrible things to your valvetrain. It becomes a

"At the end of the day, we want you to think of the whole [engine] system when you change one component," said Billy Godbold of Godbold Engineering Solutions, at right, in discussing a holistic approach to tuning and engine components.



“AN ENGINE IS A SERIES OF INDEPENDENT PARTS. WHEN YOU CONSIDER MAKING A CHANGE, YOU NEED TO THINK ABOUT THE TRADE-OFF, AND DETERMINE IF THAT CHANGE IS WORTH IT.”

vicious cycle.”

Oil analyses and combustion analyses are important tools, added Ben Strader of EFI University in Lake Havasu City, Arizona. “Measure the power in each cylinder and try to get each cylinder to do the best job it can do, instead of doing it exactly like the other cylinders,” he advised.

“You can’t make each cylinder the same; it’s not possible,” Godbold offered. “But you want to make each cylinder do the best job it can do. All the NASCAR guys know this.

“You only have four things you can change,” he continued. “There’s displacement; you can make the engine bigger. You can go to a higher rpm. There’s volumetric efficiency, and BSFC [brake-specific fuel consumption]. Rarely is there one trick part that will make more power. An engine is a series of independent parts. When you consider making a change, you need to think about the trade-off, and determine if that change is worth it.

“Remember that you have eight unequal cylinders,” Godbold said. “At the end of the day, we want you to think of the whole system when you change one component.”

Godbold and Strader’s tips landed with Evan Overturf of Greeley Automotive Machine of Greeley, Colorado. “It’s about balancing all the components, and the valvetrain in particular,” he said.

PERFORMANCE AND THE LAW

Making horsepower is always important, and so is following the law. Shop owners, tuners, and parts manufacturers know all too well that Environmental Protection Agency (EPA) enforcement of emission levels is on the rise, and fines can be hefty.

FORD 5.0 MUSTANG GT SUPERCHARGER SYSTEMS

-  COMPLETE 2018-2020 SYSTEMS RATED 692 HP* AND 586 LB/FT* TQ @ 7.5-8.5 PSI FROM V-3 JT-TRIM SUPERCHARGER - CARB EO # D-213-40
-  COMPLETE 2015-2017 SYSTEMS RATED 630 HP* AND 483 LB/FT* TQ @ 7.5-8.5 PSI FROM V-3 SI-TRIM SUPERCHARGER - CARB EO # D-213-36
-  INDUSTRY’S MOST EFFICIENT COMPRESSOR STAGE, LESS PARASITIC LOSS, MORE HP PER LB OF BOOST
-  EASY INSTALL WITH OEM FIT AND FINISH
-  MOST EFFECTIVE FACTORY SUPPLIED CHARGE AIR COOLER, 1,000 HP TESTED

*HP and TQ numbers estimated based on data using 91 Octane CA Fuel.







30 YEARS
OF LEGENDARY EFFICIENCY,
PERFORMANCE & POWER

BOOST YOUR PERFORMANCE TODAY
805.247.0226 | vortechsuperchargers.com
#POWEREDBYVORTECH



All sets precisely matched using Fuel Injector Clinic’s proprietary **DATA MATCH TECHNOLOGY**, the most complete flow matching and latency value information available in the industry.



1440cc Injector

with USCAR Plug

- Compatible with ALL Fuels
- Competitively Priced
- Drop In Fitment
- Great Tuning Data
- Lifetime Warranty
- Bosch Injector
- All Makes. All Models.



The leader in high flow rate performance fuel injectors with the latest injector technology for performance engines. Sizes from 365cc to 2150cc—32lb to 200lb. Dealer programs available.

fuelinjectorclinic.com/warranty • 561.427.0082



Performance Shops / Tuners – DEFINE THE customers...

1. **Race Only** – it came in on a trailer AND proof. It's obviously a race car.
2. **Emissions Exempt (Pre-Emissions car)**
3. **Street cars/trucks – YOU KNOW what you want**

What Can you do?

1. **Whatever you want (Race only)**
2. **Whatever you want (Pre-Emissions car)**
3. **Time to be careful – How? (Street cars/trucks)**

Bob Morreale of The Tuning School had several recommendations for engine builders and tuners on how to minimize problems with EPA emissions enforcement. "You need to be able to show them documentation that you are making a vehicle more compliant, not less."

Clean performance tuning happens when a shop or tuner can show reasonable basis that they have not grossly increased a vehicle's emissions through working on that vehicle by installing parts and/or tuning.

It applies to any modern street vehicle that is modified or tuned. It does not apply to race cars.

Bob Morreale of The Tuning School in Odessa, Florida, said that if EPA representatives come knocking on your door tomorrow, you need to be able to show them

documentation that you are making a vehicle more compliant, not less.

Morreale offers a few key suggestions for performance shops:

1. Develop consistent packages of already tested and approved parts, and pursue testing using Tuning Labs and/or the SEMA Garage, a testing program that SEMA has developed.
2. Buy parts with EOs—executive orders saying the part complies with emissions requirements—which have already been tested

and approved. "Supercharger kits with EOs avoid 100% of your possible issues," he said.

3. Standardize packages so everything you do isn't 100% custom. "Bundles will help you be compliant, and you can make more money because you're minimizing your time," he said.

Tuners can minimize their exposure to fines by never disabling or deleting oxygen sensors on street cars, or disabling test routines.

"Consider joining Tuning Labs; do your own tuning and testing, or test for others in the area who also need parts or tunes tested for their own protection," he said.

Morreale suggests parts manufacturers get their products certified through the SEMA Garage, a program located in both Plymouth, Michigan, and in Diamond Bar, California. For large volumes of product, consider getting an EO test procedure at the SEMA Garage as well.

"The future is going to be that everything is going to be EO tested," he said. "It's already to the point that the big parts houses don't want to carry parts that aren't EO tested because of the liability. EOs are expensive, but SEMA's certification program costs about \$10,000 to \$12,000 and takes a lot less time than going the EO route."

"I'm going to try to use some of his suggestions," said Zack Remsen, who owns Remtune in Gainesville, Florida. "I'm a small-business man, and I can't afford a \$60,000 piece of testing equipment, but I will look into the suggestion to package different components together that have been tested, and also the SEMA Garage program."

EV PERFORMANCE

The EV movement has come a long way in a short time. People like AZN of Street Outlaws; Steve Huff of Huff Motorsports;

Steve Huff of Huff Motorsports proposed several ideas for track promoters to improve their services for the growing number of EV racers, including more power outlets in the pits and having chemical fire extinguishers available. "Promoters who fulfill these needs will have an advantage over those who don't."



John Metric of Lonestar EV Performance; and Allen Thomas of the National Electric Drag Racing Association expect this to continue because a certain number of people are always into new technology, and the younger generation cares about sustainability. They all told moderator Alan Reinhart of the NHRA that the number of EVs on the road will drive the EV aftermarket.

This generates immediate opportunities for suppliers.

“We have a steep learning curve with all the sensors, but other companies will get involved in the future,” Huff said. “One thing we need right now is domestic manufacturers of batteries, but we’ll get them. The chemistry dictates batteries built to specific needs.”

Huff said the fear level has come down concerning safety, but noted some things track operators could improve in the new year. He said teams often have to bring their own fire extinguishers for chemical fires, and many pit areas need more power outlets. Standardization is also a problem, so most teams have to invest in a lot of adapters and bring generators to the track. Promoters who fulfill these needs will have an advantage over others who don’t.

Getting into EVs requires a big expense up front, but after that the discipline can be done cheaply. And, as far as records go, they predict every one will eventually be broken by an EV.

“We can see the difference in EVs just in the last five years,” said Christopher Cysewski, a student at the University of Northwestern Ohio in Lima, Ohio. “It’s nice to know there is going to be a high-performance sector.”

“Everything that comes out is new,” noted fellow Northwestern Ohio student Collin Peterson. “You have to just dive in and figure it out yourself. We’re all going to have more voltage as things go on.”

“For me, it was great to hear EV and racing together,” said Jake Hawksworth of Hypercraft in Provo, Utah, which manufactures EV powertrains. “It was neat to hear all the positives. It gave us a sense of where the racing industry sees itself in relation to EV. It’s going to be a part of our future.” **PRI**

For Any Mopar Crate Motor Swap, You Need an Aftermarket Oil Pan



A, B and E Body Stock K-Member

Pro Touring with Tubular K-Member

Dakota 2 and 4 wheel drive

Hellcat A, B and E Body Stock K-Member

**For 5.7, 6.1, 6.4 and 6.2 Hellcat
Milodon Has Dozens of Applications and the Precise Fit
To Make Your Build Easy**



Visit Milodon on the web for additional information:

www.milodon.com

Simi Valley, CA • (805) 577-5950

CONNECT WITH PRI



PRIHOW.COM/SOCIAL



NEW RACING BOOTS

- Integrated soles
- Option of Adjustable Strap
- Fire/chemical/electric shock resistant
- SFI 20
- Made in the USA



(405) 632-2022 stroudsafety.com

STAGED FOR SUCCESS

A photographic look at the “excitement, energy, and passion” on display at the annual PRI Trade Show in downtown Indianapolis.



In addition to packed halls and aisles bursting with the latest products, the Indiana Convention Center and Lucas Oil Stadium in downtown Indianapolis hosted a number of educational seminars, networking events, advocacy activities, VIP appearances and autograph signings, awards ceremonies, and more throughout all three days of December's PRI Trade Show.

"This latest Show was filled with excitement, energy, and passion," said PRI General Manager and interim President Jim Liaw. "The state of the industry is one of great strength!"

Indeed, exhibitor participation was up some 10%, with more than 1,000 hardcore racing and performance companies connecting with tens of thousands of dedicated professionals in attendance. Industry icon Tony Stewart joined Speed Sport's Ralph Sheheen on stage at the Grand Opening Breakfast, PRI's annual kickoff event. Additional key Show features included the Content Creation Zone; EV Performance Zone; the Track Operators, Promoters, and Sanctioning Bodies (TOPS) Lounge; and the Street Outlaws stage, among others.

"The PRI Show is about helping businesses and professionals in the motorsports industry grow and succeed," said Liaw. "In addition to new products and technology, the Show addresses timely topics and issues. Through the many features, attractions, and activities at the Show, attendees were able to access resources that are most important and valuable to them."

Here, we present some of the most memorable Show vehicles, equipment, features, and VIPs as captured by PRI's team of award-winning photographers and content creators.



VEHICLES

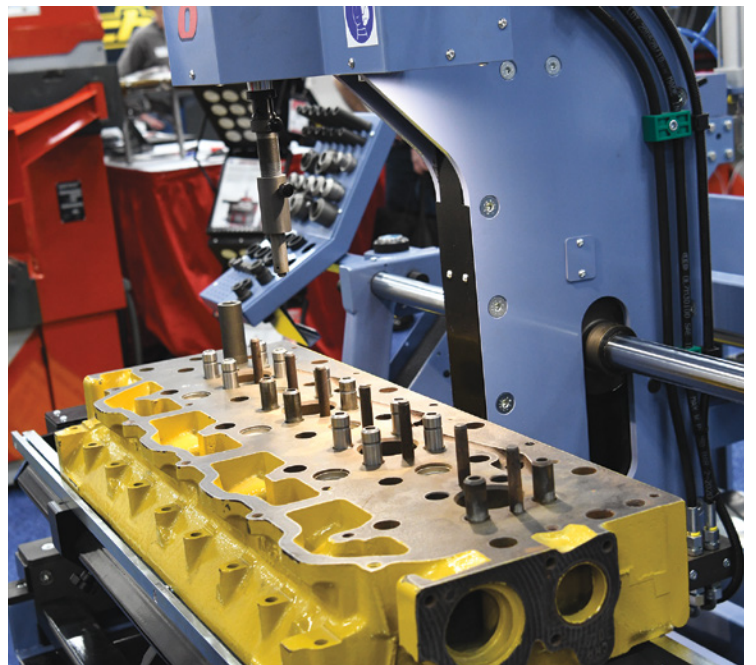
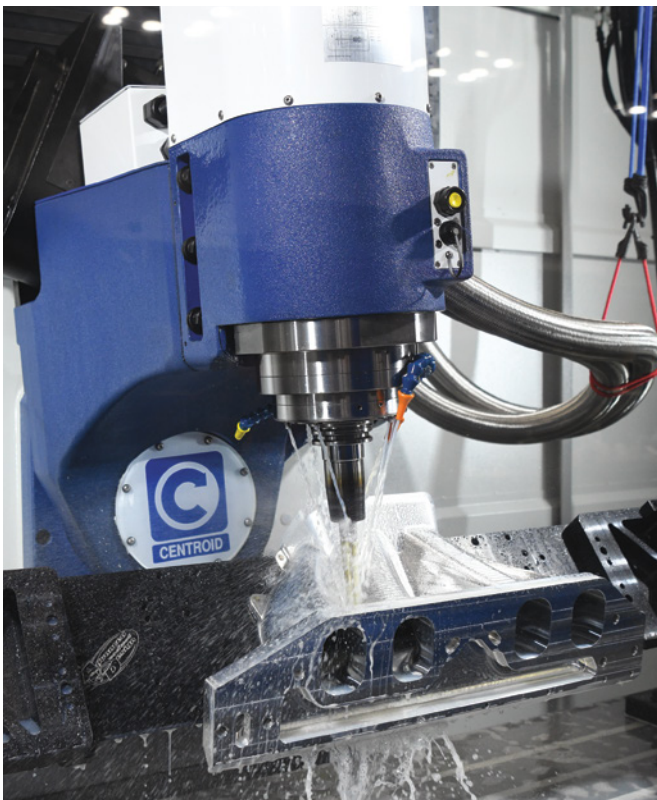
From dragsters to road racers, tractors, vintage, and more, PRI highlights an array of show-stopping competition vehicles that come in all colors, shapes, and sizes. In fact, these track-ready cars and trucks catch the eye even amongst a Show floor packed with dazzling parts and equipment. Representing all forms of motorsports, our Featured Vehicle and in-booth displays showcase some of the quickest and most unique builds to hit the quarter-mile, road course, or autocross course.

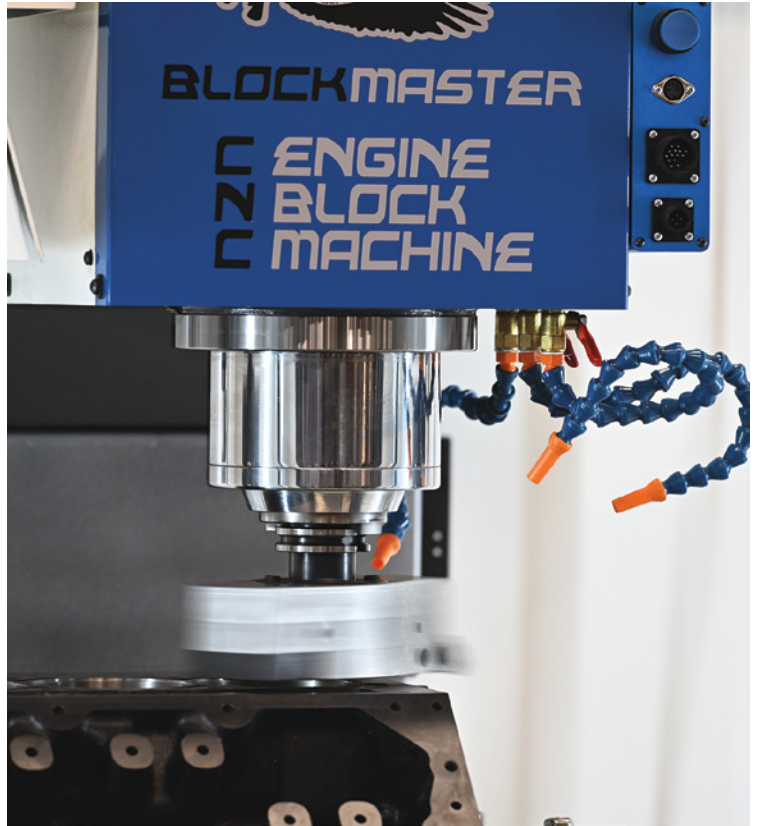
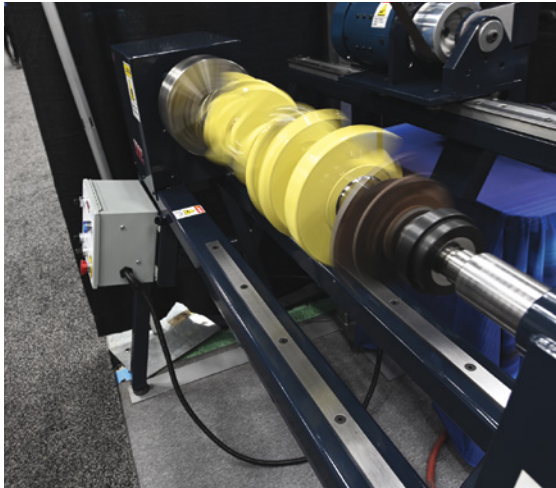




MACHINERY

Aisles upon aisles of the latest shop machining equipment—alongside precision-engineered tools, workstations, parts cleaners, and more—are a hallmark of PRI's world-famous Machinery Row. For countless high-performance engine builders, fabricators, and machinists, this exclusive portion of the Show floor represents a treasure trove of cutting-edge technology designed to enhance their operations and add new capabilities and services to help drive business for the coming race season.





FEATURES

Traditional favorites like PRI's Grand Opening Breakfast were joined by returning activations including the EV Performance Zone, spotlighting electric race and performance vehicles, specialty EV builders, and EV component suppliers; the Content Creation Zone, where industry leaders and influencers discussed all things digital content; the Hot Rodders of Tomorrow engine competition, where high schoolers compete for the national championship; a host of live interviews and broadcasts; and much more.





VIPs

What better place to visit with drag racing legend John Force, or NHRA legends-in-the-making Antron Brown, Erica Enders, and Leah Pruett, not to mention Street Outlaws stars Murder Nova, Farmtruck, and AZN, Arrow McLaren SP IndyCar drivers Felix Rosenqvist and Alexander Rossi, and even the icon herself, Linda Vaughn? As always, the PRI Show proved once again to be the ideal gathering place for motorsports' top personalities and performers.





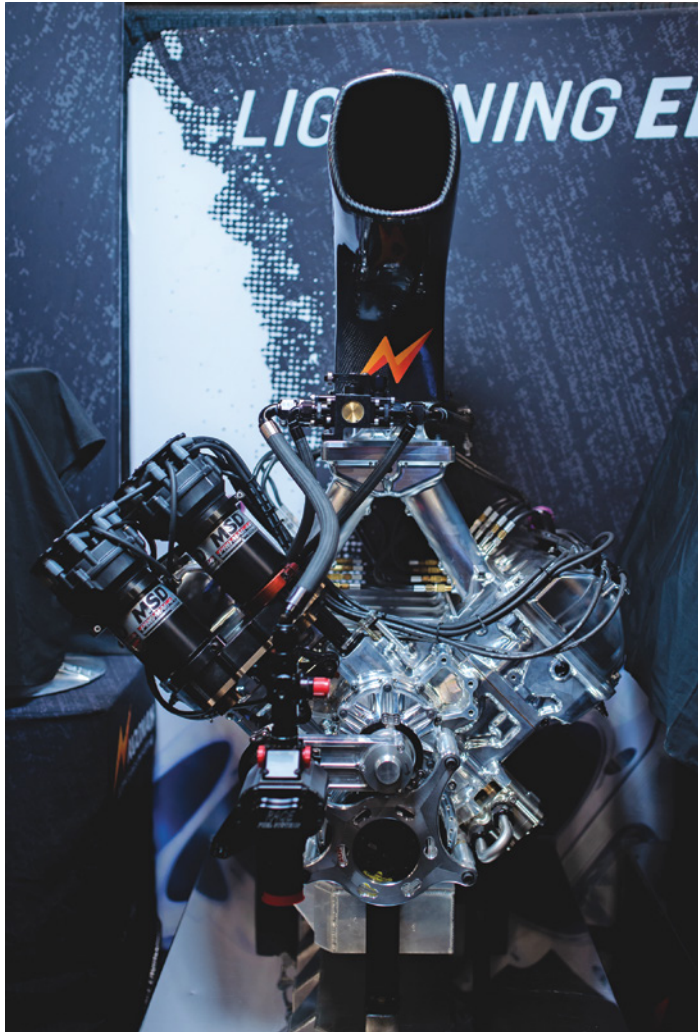
POWER STRUCTURES

Whether naturally aspirated or propelled by nitrous, turbos, or superchargers, race engine technology was front and center at the industry's annual salute to speed in downtown Indianapolis.

Each December, top suppliers show off their muscle in the form of high-performance engines on display at the annual PRI Trade Show.

Various motorsports disciplines are represented, including truck and tractor pulling, sprint and midget racing, UTV performance, drag racing, marine performance, the import market, and much more.

While it's nearly impossible to single out a favorite from the Show floor, we did manage to hone in on 10 impressive powerplants showcasing a bevy of hardcore race parts across diverse applications—which can only be found at PRI.



NOONAN

439CI NITRO-INJECTED –
BASED ON 4.8-INCH BILLET HEMI BLOCK

ENGINE BUILDER:

Noonan Race Engineering

APPLICATION:

NHRA Top Alcohol Dragster

HORSEPOWER:

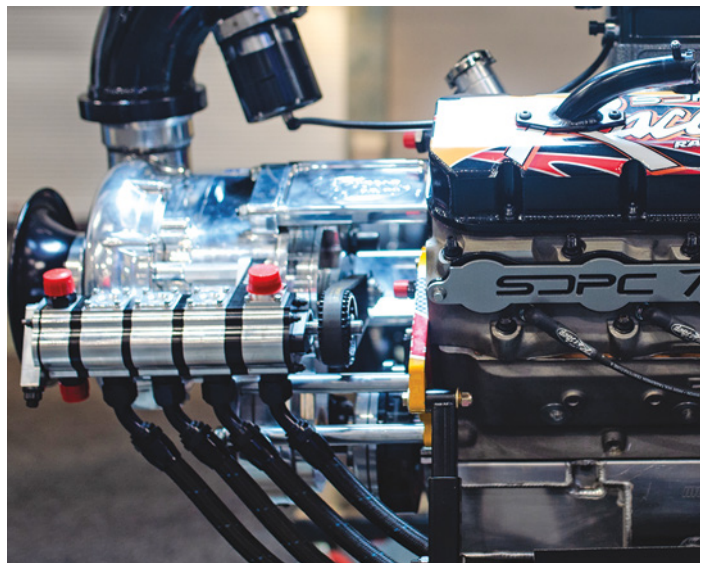
4,000 hp

FEATURES:

- 6,500 rpm redline
- 30 gallons per minute of fuel – 92% Nitro
- Three injectors and two spark plugs per cylinder
- Complete billet construction, all new components
- Developed in six months, all designed in conjunction
- Set to race for the first time during the 2023 season with their own car

"Our machine work really stands out [when compared] to any other company.... All our other engine combinations won five championships this year in every category." — Jamie Noonan, founder of Noonan Race Engineering

"The whole combo hasn't been done before.... This is the first 100% billet unit from oil pan to manifold in its class."



PROCHARGER

540 BIG BLOCK CHEVY

ENGINE BUILDER:

SDPC Raceshop

APPLICATION:

NHRA Top Dragster – 6.10 and under class

HORSEPOWER:

2,275+ hp

FEATURES:

- Multi-time NHRA Division championship-winning package
- This exact engine won the last race of the NHRA Top Dragster 2022 season in Texas
- Features ProCharger F-3R-112 with RaceDrive
- The engine alone is 1,000 hp. The ProCharger blower adds more than 1,200 hp, more than the base engine alone
- Blow-through APD carb setup
- Custom forged Raceshop pistons by Diamond
- Engine is refreshed every season, supercharger lasts multiple seasons

"Very consistent and durable powerplant...the guys like it because they can make 2,000+ horsepower and run a whole season and not have to worry about maintenance. Just change the oil in it and that's pretty much it." —Walt Sipp, motorsports manager at ProCharger



ARP

850CI+ CHRYSLER HEMI CONFIGURATION

ENGINE BUILDER:

Moran Racing Engines

APPLICATION:

NHRA Pro Mod/Custom Crate Engine

HORSEPOWER:

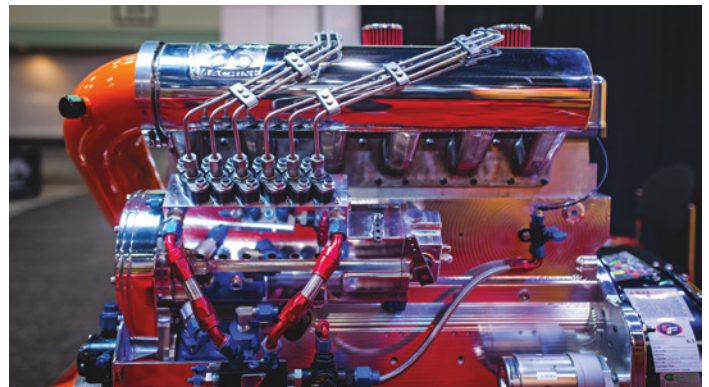
5,300 hp

FEATURES:

- Only four examples ever made
- Complete billet construction from manifold to oil pan
- 7,200 rpm peak power
- 5.3-inch bore spacing
- Square engine design – 4 3/4-inch bore and stroke
- Twin 104-mm turbos (small turbo setup)
- Newly designed 550 and 850 pound/hour fuel injectors and fuel rail
- Methanol-powered
- Rear-mounted throttle bodies
- Dailey Engineering dry sump system

"The technology in the intake manifold is completely different than anybody else is running. I can't dig too deep into that, but it's very cool from an engineering perspective." —Anthony Donnarumma, design engineer at Moran Motorsports

"Watching this thing do a power pull on the dyno and seeing the numbers that come off it is probably the coolest part of the whole engine."



SCHAEFFER'S SPECIALIZED LUBRICANTS

12-VALVE SUPER STOCK SUPER B CUMMINS

ENGINE BUILDER:

Haisley Machine

APPLICATION:

Truck/Tractor Pulling

HORSEPOWER:

3,000+ hp

FEATURES:

- 391 CID
- Triple turbocharger setup for 160 PSI of boost
- Complete billet block
- Custom dry-sump lubrication system
- Billet 18-mm injection pump
- SMT roller rocker system
- Water injection
- Sandridge four-core air-to-water intercooler
- ARP fasteners
- Haisley builds a new engine for display at every PRI Show

"Almost like a work of art...he's [Haisley] been doing this a long time, so he has these visions of, 'I can improve this by doing this, rather than following the old process.'" —Steve Brewer, vice president of Schaeffer's Specialized Lubricants

"We can't determine the torque on it because there is no engine dyno that can handle this. It might suck all the air out of the room with those turbos."



FLEECE PERFORMANCE ENGINEERING

6.7-LITER CUMMINS

ENGINE BUILDER:
Fleece Performance Engineering

APPLICATION:
Custom crate engine

HORSEPOWER:
Up to 700 hp

FEATURES:

- Freedom Series HD cylinder head
- Freedom Street HD engine block
- In-house Cheetah 63-mm turbocharger
- PowerFlo 750 CP3 fuel pump
- Upgraded Stage 2 valvetrain package
- Billet front cover and pulleys

"We sell more 6.7 Cummins turbos than anything else.... We designed the whole package to be a good drop-in replacement engine." —Paul Richardson, product development manager at Fleece Performance Engineering



INDY CYLINDER HEAD

572CI RACE WEDGE

ENGINE BUILDER:
Indy Cylinder Head

APPLICATION:
Pro Mod/Pro Stock

HORSEPOWER:
1,250 hp

FEATURES:

- 450 pounds dry weight including supercharger
- Indy Maxx aluminum block
- Blower Shop 250 Blower – 7-psi pulley
- GPR aluminum rods
- In-house wet sump oiling system, oil pan, valve covers
- Single alcohol-powered carburetor

"We are proud of the fact that it is a lightweight and reliable package...for the power and the price point, it's amazing. It's meant to race the whole year without anything but changing the oil. Reliability is what we targeted." —Charli Wheatcraft, president of Indy Cylinder Head



ARP

STAGE 5 POLARIS 1,004CC TURBO STROKER

ENGINE BUILDER:
D&M

APPLICATION:
Custom Crate Engine/Sand Dune Drag

HORSEPOWER:
500 hp

FEATURES:

- Designed for Polaris RZR XPTurbo
- 8,000–9,000 rpm redline
- Brian Crower 1,004cc stroker kit
- Custom King Bearings
- “Shuffle pinned” - each main fastener gets its own unique dowel pin
- BME 94-mm bore x 9.5:1 stroker pistons
- Brian Crower cams, valvetrain
- Brian Crower ported cylinder heads
- TPR valve cover and breather
- 70-mm XONA turbo
- Clutch rated for 1,000 hp

“The power-to-weight ratio is unheard of, it’s insane. It’s like the old sport compact days, and a lot of those guys are getting into the side-by-side (desert drag) market now.”

—Jared Raschke of ARP

“Racers can get a full season out of one engine. With the stock Polaris powerplant, you are changing the motor every race.”



TURN 14 DISTRIBUTION

2.8-LITER STROKER RB26 INLINE-SIX

ENGINE BUILDER:
GReddy Performance

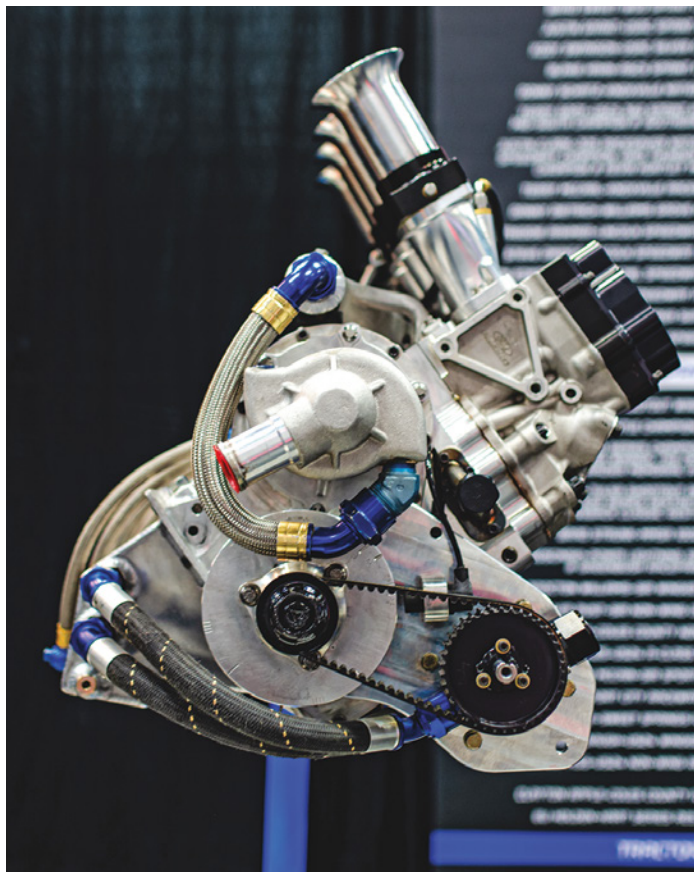
APPLICATION:
Custom Crate Engine

HORSEPOWER:
800 hp

FEATURES:

- Fully built stroker engine, capable of 2,000 hp
- GReddy billet valve cover
- GReddy prototype twin GP54R turbo kit (available in 2023)
- GReddy Type 29F intercooler
- GReddy 90-mm single throttle surge tank
- GReddy fuel rail for 10.5-mm injectors
- GReddy BNR34 aluminum pulley kit
- GReddy x Taarks Oil block adapter
- GReddy R35 ignition coil conversion kit for RB26
- GReddy aluminum oil pan

“We built this so that if you have an R32 [GT-R] imported from Japan and you are looking to upgrade your tired engine, new technologies allow this to be an amazing street engine or a crazy 2,000-horsepower racing powerplant.” —Kenji Sumino, president of GReddy



ENGLER MACHINE AND TOOL

166CI FORD FOUR-CYLINDER

ENGINE BUILDER:

Engler Machine and Tool

APPLICATION:

USAC National Midgets

HORSEPOWER:

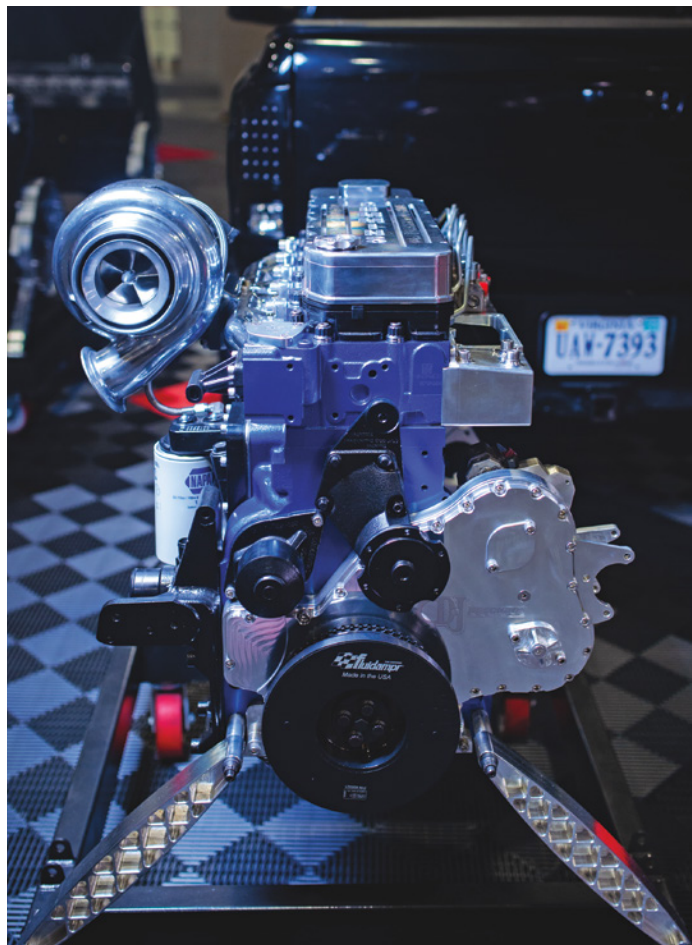
370 hp

FEATURES:

- First ever all-billet and fully forged Ford powerplant within USAC National Midget Series
- 8,700 rpm redline
- Seven-year development process, three years collaborative project just for the camshaft
- Engler Machine complete injection system (individual throttle bodies, runners, injectors, nozzles, lines)
- Dailey Engineering dry-sump lubrication system

"The best part about the billet block is versatility. Let's say you want to put a Mopar or Toyota head on it, you can just change the bolt pattern and use that head instead." —Tim Engler, founder of Engler Machine and Tool

"Out of 36 competitors at the [2022] Turkey Night race, 28 of them are running Toyota engines. I want to give the guys another option. This is the most modern and up-to-date package to be competitive with the Mopars and the Toyotas."



D&J PRECISION MACHINE

6.7-LITER CUMMINS

ENGINE BUILDER:

D&J Precision Machine

APPLICATION:

Custom Crate Engine

HORSEPOWER:

3,000 hp

FEATURES:

- Fully built and assembled by D&J
- ENFORCER Series deck plate block (adds a 1-inch-tall deck plate)
- Stage 3 billet cylinder head (two times the flow of a stock head) with upgraded valvetrain
- D&J billet LED valve cover, front cover, oil pan, crank seals, and oil cooler housing
- D&J billet gear-driven dual CP3 fuel pump housing
- D&J HD girdle
- FSR billet pistons and Total Seal piston rings
- D&J X-BEAM 1-inch longer rods
- Billet flat tappet camshaft

"We run these engines on the street and in dirt drags. We have setups from budget-friendly reman packages starting at 700 horsepower all the way to a 3,000 horsepower capable ENFORCER block." —Josh Hills, sales manager of D&J Precision Machine



UNIFIED FRONT

WITH THE NEWLY FORMED STARS NATIONAL SERIES KICKING OFF ITS INAUGURAL SEASON, AND THE EXPANSION OF A SOUTHWESTERN TOUR ACROSS THE COUNTRY INTO FLORIDA, SUPER LATE MODEL COMPETITORS NOW HAVE MORE OPTIONS ABOUT WHERE TO COMPETE AS RULES PARITY COMES INTO FOCUS.

By Jim Donnelly



Photo courtesy of Track Enterprises

Fans of short-track racing in North America have a smorgasbord of regionally popular genres of their sport to watch, with one of the premier classes being the snarling, full-bodied Super Late Model. It's one of the quickest cars on any paved oval in North America. It's also about to undergo a very significant boost in exposure and competitive intensity. A national tour for these lightning-quick stock cars, the STARS National Series, was revealed at December's PRI Trade Show in Indianapolis.

With highly aerodynamic bodywork, slightly asymmetrical chassis and big-displacement small-block horsepower in most cases, Super Late Models essentially now exist in widely scattered pockets of prominence ranging from New England and eastern Canada to the southeastern United States, the upper Midwest, and the desert Southwest. In some areas, the Super Lates, as they're commonly called, compete in regional touring series, and in Wisconsin on a hugely vibrant weekly circuit that spawned more than one future NASCAR star. The central part of Florida is another heady hotbed for Super Late Models.

NATIONAL TOUR

The STARS Series' organizers say it will hearken back to the glory days of Super Late Model racing as it was presented by the American Speed Association, a tour that ended in the early 2000s. STARS has announced a broadly diverse 10-race national schedule with a

planned point fund of \$100,000. The first race is set for March 11, 2023, at historic Five Flags Speedway in Pensacola, Florida, famed as the home of the annual Snowball Derby for Super Lates. A Winner's Circle program for teams with perfect attendance is also planned.

"The meeting, which turned into a series of announcements, had an unbelievable reception by competitors, teams, and fans," said

Bob Sargent, president of Track Enterprises in Macon, Illinois, which owns and operates the STARS National Series. "We still have a lot of work ahead of us, but we are facing all of it with a lot of enthusiasm, especially after PRI."

Sargent already presents one of the Super Late world's premier events, the All American 400, held each fall at Nashville Fairgrounds Raceway in Tennessee. Sargent announced his intentions following months of speculation that the Super Lates would become the next class of short-track car, like 410 sprint cars, to benefit from a true coast-to-coast presence, potential major sponsorship, and enhanced media exposure. The national tour will be made up of three races from each of the regional Super Late Model series now under the Track Enterprises banner: the ASA CRA Super Series, the ASA Midwest Tour, and the ASA Southern Super Series. Track Enterprises acquired both the CRA sanctioning body and the Midwest Tour before announcing a partnership with the operators of the Southern Super Series.

"We listened to the fans and the teams and the promoters, and we had our own promoter hat on, and we listened to a desire for a national series," Sargent said. "So we began a long research and learning curve, and in the process acquired the CRA series, the ARCA Midwest Tour, and the Southern Super Series, so we have three regional series to give us a good foundation and beginning for a national series. We listened to the drivers and the teams, and they were asking for this. Our goal is to present them with opportunities to race in a larger footprint as far as television, exposure for their sponsors, and their winnings."

Track Enterprises started in 1985 as a dirt-centric promotion, operating two dirt tracks in Illinois and also promoting races on the historic mile dirt tracks in Springfield and DuQuoin, Illinois, and on pavement at the Milwaukee Mile. Earlier this year, Champion Racing Association co-owner Glenn Lockett announced the sale of CRA to Track Enterprises, giving it a marquee event in the Winchester 400. With Track Enterprises already running the All American 400 at Nashville, the acquisition was a benchmark on the way to creating a national tour.

Next, Track Enterprises announced its intention to buy the ARCA Midwest Tour for Super Late Models from longtime



Announced at the 2022 PRI Trade Show, the 2023 STARS National Series will bring a nationwide boost in exposure to the highly competitive—and very regional—Super Late Model racing scene.

promoter Gregg McKarns, with the acquisition effective January 1. More recently, Sargent disclosed a partnership with the Southern Super Series, owned by Tim Bryant, who also operates Five Flags Speedway in Pensacola. As Sargent explained, “The opportunity to partner with the three most prominent regional tours this year has put us in a great place to launch a national tour.

“WE WANT FAIRNESS AND PARITY AMONG CARS, ALSO WITH AN EYE ON COST CONTAINMENT.”

“For the 2023 season, we’re going with established premier events with high purses, raising the purses in a few instances. What we’re offering teams is consistency in touring, STARS money to show up at our events, discounts for parts, a major point fund at the end of the year, plus we’re looking at attracting the kind of quality drivers that fans are looking to see at these events,” Sargent said. “The schedule for 2023 goes from ARCA to CRA to the Southern Super Series, to Wisconsin, possibly to Minnesota,

all the way to the Carolinas and the Florida area. We anticipate that the majority of our schedule will be at major facilities, including a majority of established, high-profile events. Sponsorship talk is ongoing. We have several broadcast partners interested.”

Bringing racers together from different parts of the country inevitably leads to discussions, at the least, about rules commonality. Bryant, of Five Flags Speedway and the Southern Super Series, said one significant goal of STARS is minimizing the hassle that touring racers will face in making their cars legal for the national series.

“We’re cognizant of the fact that racers are not real keen on rule changes,” Bryant said. “They’ll accept a rule change if it’s fair and cost-effective. We battle that here to some degree because there’s always a new gadget coming out and it costs a lot. With the series, we’re looking at some tweaks for internal engine components, taking a look at a new body by Five Star and trying to tweak its specifications, but that’s kind of a work in progress for 2023. As far as major overhauls of the rules, we just don’t see it. Most of the stuff is not going to be of interest to casual readers. There’s been talk about rearend rules, brake blowers, and so forth. We try to reach out to the teams to find out what their ideas are. We want fairness and parity among cars, also with an eye on cost containment.”

Sargent concurred, adding, “There’s no significant major rules changes coming down the pike. We are aggressively addressing some cost-containment and

safety issues. Nothing else is even on the table at this point. In some tweaking of the rules for 2023, we’ll be taking a harder look at cost containment from engines to tires to rearends to bodies for the 2024 season. A spec engine has not been discussed. Cost containment is a big issue, but I think it’s more a case of fine-tuning the rules we have now. Nobody is lobbying for major changes.”

JOINING FORCES

Bryant contrasted the environment for Super Late Models in Wisconsin, where they race weekly on a variety of name tracks, to central Florida, where the Super Late is a fan favorite but where conventional weekly racing really doesn’t exist. One very prominent Florida locale is New Smyrna Speedway near Daytona Beach, which is a frequent Super Late host and also presents the class during its annual World Series during Speedweeks in February. New Smyrna has aligned itself with the rules package used by the SPEARS Southwest Tour for Super Late Models, creating a new SRL National tour independent of the STARS group.

“New Smyrna will stay New Smyrna. We started leasing the track to Tim Bryant to run the Southern Super Series,” New Smyrna official Rusty Marcus said. “He wants to race at this facility, and we look forward to him coming back. We will be marching in the direction of CRA.

“My hope would be that [any change to rules] doesn’t affect a lot of stuff,” Marcus



continued. "One of the big problems in racing, which we're trying to get straightened out in the Super Late Model division, is that tracks tend to become like an island. And when you're on an island, you can only pull from so many cars. Some tracks do this with their rules so that cars can't go to other race tracks. You're stuck at that race track. And that's the absolute wrong thing to do.

"I worked with US Legends cars for many years, and I'm a big proponent of that type of racing where it's a level playing field. If all the rules are the same, and you've got to put new tires on anyway, you can pull from hundreds of cars, not just dozens, without having to rebuild your car to be a New Smyrna car or a Pensacola car or a Mobile car," Marcus said. "If Tim [Bryant] had some kind of wacky rule at Pensacola, the Snowball Derby wouldn't get the kind of cars that it does now. He's got the right idea in being able to pull cars from everywhere,



Berlin Raceway General Manager Jeff Striegler supports the ongoing effort to win national exposure, and more money, for Super Late Model racers. He also believes any rules differences between STARS and other groups will be minor enough to not create obstacles for racers. Photo courtesy of Ally Ross/Berlin Raceway.

already strong counts of Super Late Models at today's big-dollar, prestige events. Bryant counted 43 Super Late Models in the pits

"ONE OF THE BIG PROBLEMS IN RACING, WHICH WE'RE TRYING TO GET STRAIGHTENED OUT IN THE SUPER LATE MODEL DIVISION, IS THAT TRACKS TEND TO BECOME LIKE AN ISLAND."

where everyone can come and play. That's the future of Super Late Model racing."

Rules parity and simplicity are viewed as keys to unlocking big fields at the national STARS races, piggybacking off what are



at Nashville's most recent All American 400. The corresponding number for the December Snowball Derby tends to be in the upper 40s at Pensacola, he said.

As Bryant noted, "Central Florida today is almost a fair comparison to what's going on in Wisconsin. They give those guys enough racing without them having to travel around a lot."

Another track that has been aligned with the SRL tour is Berlin Raceway near Grand

"I would obviously like to see a rules package that supports one another," said Berlin Raceway's Jeff Striegler of the new national series. "I am a strong believer in looking after the race teams and making sure the rules align and are cost effective, that the rules make sense." Photo courtesy of Ally Ross/Berlin Raceway.

RaceQuip



PRO20
FULL FACE

The RaceQuip PRO20 is a Snell SA2020 rated full-face auto racing helmet that incorporates contemporary styling with modern production techniques.

Distributed by



www.motorstate.com
800.772.2678



**THE HIGHEST QUALITY,
PRECISION PISTONS**
PROUDLY MANUFACTURED IN
HUNTINGTON BEACH, CALIFORNIA



15681 COMPUTER LANE, HUNTINGTON BEACH, CA 92644
RACETECPISTONS.COM | PHONE 714.903.4362 | FAX 714.903.4318

“IF WE WORK HARD TOGETHER, WE WILL SUPPORT SUPER LATE MODEL RACING ACROSS THE COUNTRY, AND THAT SHOULD BE EVERYBODY’S GOAL.”

Rapids, Michigan, which runs Super Lates on a bimonthly basis. General Manager Jeff Striegle said that while Berlin is allied with SRL, the speedway supports the ongoing effort to win national exposure, and more money, for Super Late Model racers. Striegle predicted that any rules differences between STARS and other groups, including SRL, will be minor enough that they don’t constitute an obstacle or cost headache for racers.

“We are happy to work with Hoosier to come up with the best tire, whether for Berlin Raceway or one of the national tours. From an engine standpoint, I’m very positive with what the SRL tour is doing, and I’m very positive with what Bob Sargent is doing,” he said. “I do strongly support what Bob Sargent is doing. I also support what [SRL organizers] are doing with their tour. I would obviously like to see a rules package that



“For the 2023 season, we’re going with established premier events with high purses, raising the purses in a few instances,” said Bob Sargent of his new STARS National Series. “We’re looking at attracting the kind of quality drivers that fans are looking to see at these events.” Photo courtesy of Track Enterprises.




**All New!!
Serdi Profile CNC**

1-800-447-3790
www.serdi-usa.com
customerservice@serdi-usa.com




We offer over 1,000 high performance products used in Racing, Street, Off-Road and Marine for Chevrolet, Chrysler and Ford applications.

715-834-7748 Visit Our Website www.champpans.com Email Us: jrmfg@champpans.com



Matt Panure of the TUNDRA Super Late Model series said he likes the idea of the STARS national tour but is concerned about rules parity with his upper Midwest series. "We've entrenched ourselves very heavily with working with local race tracks, to make sure we're all within very close proximity on rules." Photo courtesy of TUNDRA Super Late Models.

supports one another. I am a strong believer in looking after the race teams and making sure the rules align and are cost effective, that the rules make sense. I support them both, because if we work hard together, we will support Super Late Model racing across the country, and that should be everybody's goal."

Another consideration affects the TUNDRA series for Super Lates, which runs a regional series of six to eight races annually at tracks in Wisconsin and neighboring Michigan. Now in its 13th season, TUNDRA originally branched out from Dells Raceway Park in Wisconsin, and series official Matt Panure said there are differences between the STARS' rules and TUNDRA's because "they're aligned more with the rules in the South. I think the biggest thing is going to be their engine-setback rule and the four-barrel carburetor."

TUNDRA mandates a two-barrel Holley 4412 carburetor, with a four-barrel allowable on the Wegner sealed engine that TUNDRA also permits. "We're a very locally based series for Super Lates, maybe for guys who ordinarily don't have the pocketbooks to compete at different tracks, can't do a ton of traveling, or maybe don't have a ton of sponsorship," Panure said. "I like the [STARS] idea, but I think it's going to take quite a bit of work in order to hold people like myself because we've entrenched ourselves very heavily with working with local race tracks, to make sure we're all within

very close proximity on rules. A TUNDRA car can also race at Dells or Golden Sands or Norway. We try to align with those rules packages as closely as we can."

A similar localized circuit for Super Lates exists in the Upper Midwest with the Reveal The Hammer Outlaw Super Late Model Tour, based in Elkhart, Indiana. This regional tour has expanded to eight dates in 2023, visiting Michigan's Birch Run Speedway, Owosso Speedway, and Corrigan Oil Speedway. Racers will now compete for \$280,000 in guaranteed prize money. **PRI**

SOURCES

Berlin Raceway
berlinraceway.com

Five Flags Speedway
5flagsspeedway.com

New Smyrna Speedway
newsmyrnaspeedway.org

Outlaw Super Late Models
facebook.com/SMOLMS/

Southern Super Series
southern superseries.com

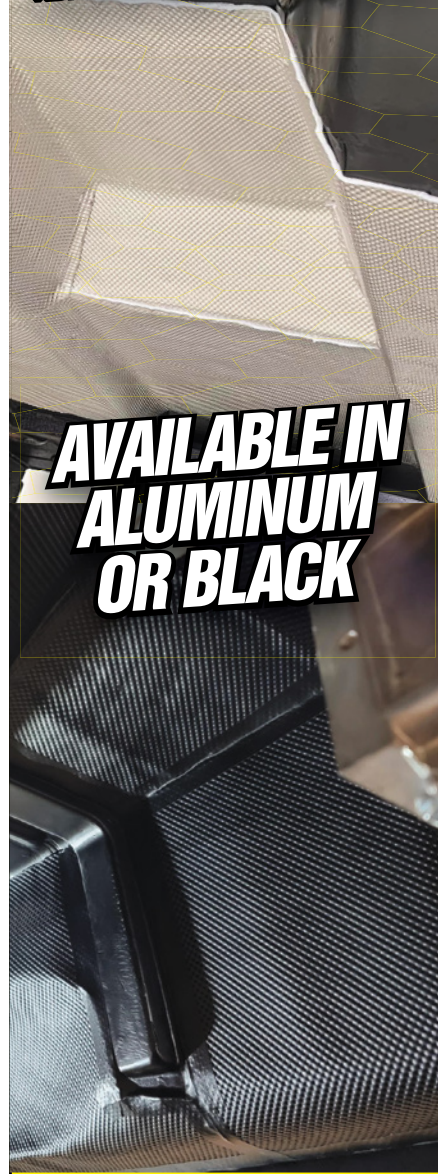
STARS National Series
starsnationalseries.com

TUNDRA Super Late Models
tundrasuperlates.com



EXTREME HEAT BARRIER FLOOR & TUNNEL SHIELD

- DIMPLED ALUMINUM SKIN WITH GLASS FIBER INSULATION
- BLOCKS HEAT FROM FIREWALLS & TRANS TUNNELS
- ADHESIVE BACK FOR EASY INSTALL



AVAILABLE IN ALUMINUM OR BLACK

800.264.9472

DesignEngineering.com



Dealers & Distributor Inquiries Welcome

AS RULE SETS CONTINUE TO TIGHTEN THE PLAYING FIELD, CHASSIS SETUP IS BECOMING A CORE FOCUS IN THE HUNT FOR A COMPETITIVE EDGE IN STOCK CAR RACING.

By Bradley Iger

Circle track sanctioning bodies across the country have put much effort into containing costs in recent years. In the interest of preventing teams from simply out-spending one another to snag a podium, organizers are playing a game of whack-a-mole in order to manage the exploits that are being found in the gray areas. But innovation has always been an intrinsic part of motorsports, and if those advantages can't be had in new designs or unconventional components, racers will inevitably look for other ways to outsmart the rest of the field.

"Setup is incredibly important, especially out here in IMCA country," said Ryan Rosenow of Jerovetz Motorsports Shock Service, Suamico, Wisconsin. "Everybody's on a crate motor and everybody's on the same tire, so you need every little bit that you can get because the racing is so close. In today's world, setup is everything."

That's driving teams toward increasingly sophisticated equipment and setup techniques, much of which is making its way down from NASCAR. "Not too long ago, all you really needed was four scales and a caster/camber gauge. That's what you did for setup," said Dave Schneider of Right Foot Performance Products, Appleton, Wisconsin. "Now the guys running up front are testing in wind tunnels. That's a drastic change."

It's a trend that has ushered in more data with greater accuracy, but that alone doesn't guarantee success.

LAYING THE GROUNDWORK

While advanced equipment has become a part of many race programs, Carter Gerlach of Elite Shock Services in Ramsey, Minnesota, pointed out that effective stock car setup still starts with the fundamentals. "First and foremost, I think a team needs to have proper scaling equipment. A good, accurate set of scales goes a long way."

Although there's been a bigger emphasis on the ability to capture dynamic data in recent years, the majority of teams are still setting their cars up off of static settings, or they're using static data as the starting point before venturing into dynamic elements of car setup. "It still starts with things like caster/camber gauges, scales, and toe plates," said Bob Harris of Bob Harris Enterprises, Ames, Iowa.

"Some of the equipment that's out there now has gotten to the point where it's overly technical for a significant portion of the end users, and very expensive as well," he continued. "While it might be neat to have some piece of equipment in your garage, you have to ask yourself how much you're actually going to use it versus the cost involved. Racers need to be smart about purchasing things that they're confident they will be able to use throughout the year, rather than something that might end up being a one- or





BALANCING ACT



Advanced setup equipment has become a part of many race programs, but Carter Gerlach of Elite Shock Services said effective stock car setup still starts with the fundamentals. "First and foremost, I think a team needs to have proper scaling equipment. A good, accurate set of scales goes a long way."

two-use type of deal."

That means equipment and techniques that some might consider antiquated are still very relevant in contemporary stock car setups. "When we roll out a brand-new race car, I still scale it out the old school way before we move on to dynamic numbers," Rosenow said. "That way our customer—who may or may not be up-to-date on technology—has both sets of information to make adjustments accordingly. The static data is the foundation that you need to have before you can move on to the more advanced elements."

Yet even though static data is an essential piece of the setup equation, it ultimately can only take you so far. In order to really dial the car in for a track and driving technique, the setup also has to account for how the car will behave at speed out on the course. That's where equipment that can simulate the chassis' dynamic behavior comes in.

"That has been the biggest game-changer across the board in stock car racing," said Gerlach. "Being able to find out what the car

is actually doing out there has revolutionized car setup—it has really forced these teams to create a new notebook. The trick is understanding what to do with that data. Being able to capture this dynamic data doesn't invalidate the static data that they've collected over the years. A lot of the time we're tying the two together."

Load sticks are a particularly popular piece of equipment on the dynamic end of stock car setup, a tool that allows the user to check the load on a corner of the car as the suspension is subjected to the forces it would experience during a race, rather than those observed at a standstill.

"Before this we couldn't know things like what the actual spring rate was on the right-front spring at three inches of compression," said Harris. "We used to do all of the adjustments with the car sitting on the ground motionless. The problem is that it never races in that situation, so you're

ultimately guessing what the loads will be out on track to some degree. For example, if we've determined that 1,200 pounds of load on the right-front corner of the car at three inches of compression is ideal, but we need to change springs, we still want the right-front to be at 1,200 pounds of load at three inches of compression when the car is rocked over on the right-front. We want to change the spring rate, not the load of the car, and a load stick allows you to do that."

Understanding dynamic load is a particularly critical aspect of a stock car setup, according to Schneider. "Anyone

Static data is essential in car setup, but to really dial the car in, the setup also has to account for how the car will behave at speed out on the course. That's where the new breed of equipment that can simulate the chassis' dynamic behavior becomes more important.





running bump stops or bump springs needs to be able to understand how that's affecting the load on that corner of the car," he said. "We make bump stops now that are a 32nd of an inch thick, and that 32nd of an inch can be the difference between winning and running mid-pack. That's how precise things have become."

Spring smashers serve a similar purpose with coilover setups, but since many race cars have different suspension configurations in the front versus the rear, both pieces of equipment are often needed in order to gather load data from every corner of the car.

HONING IN

Gerlach said good setups generally start with reliable contact patch data. "The tires are one of the most important aspects of the car. It's a big thing that's often overlooked. It's important to have accurate, repeatable data in terms of temperatures and pressures, and that has become an even bigger concern over the past few years."

The tire availability challenges that have cropped up over the past few seasons have caused some series to change their spec tire, so this is something that should definitely be on teams' radars. Switching the tire that the car is running on will have an effect on its setup, so it's important to start with baseline data that accurately represents the car's current combination.

The key to a good setup is achieving balance, said a source. While front-end settings are critical, the rear suspension is just as important to get the power to the ground.

As is the case in most motorsports disciplines, the key to a good setup is achieving balance. For Rosenow, that means not neglecting one aspect of the car to focus on another.

"Front-end settings are huge, but the rear suspension is just as important if you want to put the power to the ground. Ultimately you have to remember that you only have four points on the car that should be making contact with the race track, so you need to make sure that those points are attaching to the race track properly and tracking around it the way you want them to. There are no magic numbers—the numbers are just a

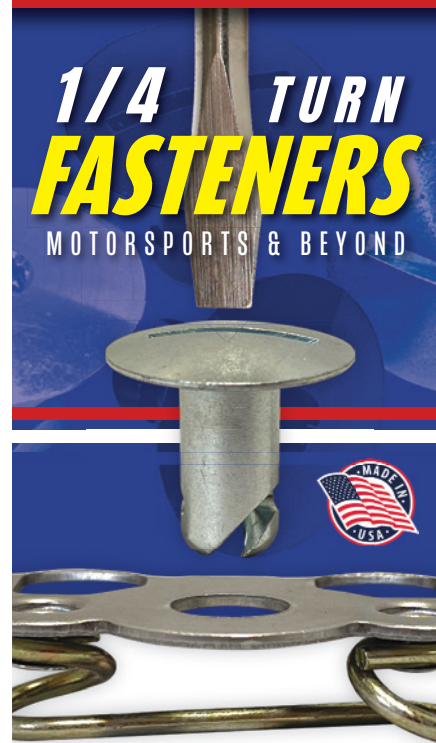
"THE STATIC DATA IS THE FOUNDATION THAT YOU NEED TO HAVE BEFORE YOU CAN MOVE ON TO THE MORE ADVANCED ELEMENTS."

PANELfast

Exclusively By Behrent's 

1/4 TURN FASTENERS

MOTORSPORTS & BEYOND



AVAILABLE IN:

STEEL OR ALUMINUM
7075 ALUMINUM OR GRADE 8 STEEL

MULTIPLE FINISHES
RAW, ANODIZED BLACK OR GOLD

100+ VARIATIONS
HEADS/GRIP LENGTHS FOR ANY JOB

BUY ONE OR IN BULK
QUANTITY DISCOUNTS AVAILABLE



VIEW OUR ENTIRE LINE OF FASTENERS @ **PANELFAST.COM**

TOLL FREE: **877-372-2348**

PANELfast

baseline for you to know where you're at so you can repeat it and make adjustments based on the performance. Once you have that balance figured out, repeatability becomes the priority."

AVOIDING PITFALLS

Setup is a tricky and somewhat subjective business, but enterprising racers can potentially make meaningful improvements if they have the data they need and they know what to do with it. The latter, Harris said, comes from doing the research.

"Educating yourself on what changes you need to do, and how to do them, is very important," he explained. "There's a lot of stuff that you can actually learn by just running the suspension through its travel and things like that. We'll clamp the right-front down and simulate it as if it's all loaded up, then we'll jack up underneath the seat, and on a dirt car we have a left-rear chain that limits how much the suspension can hike up. That can simulate where our bars are, where our angles are, and that sort of thing. This is something you can do at home in your garage over the winter. You can find out so much about your car doing things like that—it all just depends on how much effort you want to put into it."

At the same time, he also offered a word of warning about how changes made to one aspect of the setup can affect other areas. "You have to keep in mind that there's always an equal and opposite effect when you make

a change. A single change will often do what you need it to do, but a lot of times if you make a change in one area, you'll also have to make a change in another area in order to account for that original adjustment. If you don't do the consecutive changes, you may not see the full effect of that first adjustment."

There's a pervasive issue that frequently causes frustration when racers are in the midst of chasing down that ideal setup combination.

"We see a lot of teams who start trying to make changes on cars that have existing mechanical issues," said Gerlach. "It's not uncommon for racers to make a ton of changes to their setup without realizing that they're trying to work around a mechanical problem. Something's bent or broken and it gets overlooked, or there's an assumption that it's just not important. If a car isn't responding to any of the changes you're making, it's a big sign that there's a mechanical issue somewhere."

"ANYONE RUNNING BUMP STOPS OR BUMP SPRINGS NEEDS TO BE ABLE TO UNDERSTAND HOW THAT'S AFFECTING THE LOAD ON THAT CORNER OF THE CAR."

Some of those mechanical challenges can be tough to pinpoint at first, but Rosenow said that good habits can preemptively address many of them. "Effective setup starts with a good maintenance program," he explained. "You can have that car sit on scales seven days a week and make all sorts of changes, but it's not going to matter if the A-frame is bound up. Any bent part will change your numbers, both static and dynamic, so it all starts with having a well-maintained race car."

Meanwhile, Schneider cautioned would-be tuners to consider how accurate they can be with the equipment they have before they start turning wrenches. "Today's setups



are a lot more precise than most people realize. The guy who can only read down to a quarter-inch on his tape measure is going to be left behind by the person who can read a 32nd of an inch."

Schneider also advised to be wary of how changes can cascade into one another. "If you make a change in one area, that's going to cause something else to change in the car that you need to compensate for, and sometimes people aren't aware that they may need to take a third or fourth step in order to compensate for what they did initially," he said.

As teams continue to devote more of their budgets toward setup, it appears that the strategies are only going to get more advanced from here. "I think you're going to see more teams doing wind tunnel testing," predicted Rosenow. "Air is so important these days, especially with motor combinations being so close now, and the body rules we're seeing in a lot of series. Air is everything now."

Aero isn't the only aspect of the car that's getting increased scrutiny in the latest stock car setups. "Now we're starting to see tire smashers coming to market," said Schneider. "That's a piece of equipment that allows you to load the tires and determine the spring rate at the tire itself."

Since tires absorb and deflect forces in much the same way that components like springs and shocks do, it makes sense to consider them a part of the suspension



A race car only has four points of contact with the race track, so racers need to make sure those points are attaching to the track properly and tracking around it the way they want them to, said a source. Once that balance is figured out, repeatability becomes the priority.



New and more sophisticated setup equipment is going to add another layer of strategy and complexity as racers continue to hunt for a competitive advantage.

system. In the realm of car setup, new equipment like this could add another layer of strategy and complexity down the road in the ongoing hunt for a competitive advantage.

"It seems likely that teams will have to reevaluate their setups at that point, or at least incorporate that number into how they approach it, because that number has an effect on everything," Schneider added. "I don't know if tire smashers are going to be the next big thing, but it's an interesting development." **PRI**

SOURCES

Bob Harris Enterprises
racetechno.com

Elite Shock Services
essuspension.com

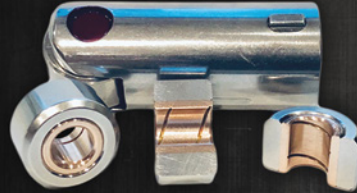
Jerovetz Motorsports Shock Service
jmshocks.com

Right Foot Performance Products
rightfootperformance.com



**DO IT RIGHT...
RACE WITH THE LEGEND**

INTRODUCING THE EZ-ROLL HELIX™
**EZ-ROLL HELIX: THE GREATEST
ADVANCE IN THE HISTORY OF
ROLLER LIFTER DEVELOPMENT!**



**THE NEXT GENERATION OF ADVANCED
"NEEDLE-FREE BUSHING" ROLLER LIFTERS ARE HERE!**
**NOW AVAILABLE IN KEYWAY & TIE-BAR VERSIONS
FOR SMX, 481X AND HEMI BOOSTED APPLICATIONS
WITH UP TO 1700 LBS OPEN SPRING PRESSURE!**

**The Revolutionary Double-Helix DNA
Oil Delivery System:**

Where scientifically formed "acoustic-wave" channels in the bushed-bearing continuously direct oil from the primary source to "bathe" the bearing with 24/7-360° cooling lubrication, guarding against friction and wear at "nano" levels, even under the most grueling Extreme-Zone™ operating conditions!

This trifecta of advanced features work in concert to deliver the smoothest, longest running High-Performance Roller Lifter Bearings we've ever created and the new standard of excellence in auto racing today!

SHOP ONLINE 24/7 - TRY OUR EASY MAKE AND MODEL SEARCH

WWW.ISKYCAMS.COM

310.217.9232

@ISKYRACINGCAMS /ISKYRACINGCAMS

GM 602 CRATE ENGINE
KIT# 1441-AR-CE

WHAT DRIVES YOU®

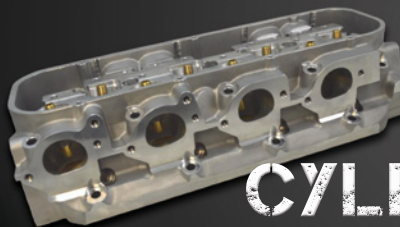


#JonesRacingProducts
#AdvancedBeltDriveSystems
#WhatDrivesYou®

610.847.2028

www.JonesRacingProducts.com

(562) 926-5858 | WWW.TOPSTREETPERFORMANCE.COM



CYLINDER HEADS

TSP's high-performance cylinder heads are cast from high-quality aluminum and designed for optimal air flow. The combustion chambers, intake ports, and exhaust ports are all fully CNC-ported for maximum horsepower and torque. With several variations for multiple engine types, TSP's aluminum cylinder heads are the perfect way to cap your performance powerplant.



JM4100
Chevy SB Aluminum Cylinder Heads,
198cc Intake Ports,
64cc Combustion Chamber



JM4300
Ford SB Aluminum Cylinder Heads,
185cc Intake Runners,
60cc Combustion Chamber



JM4100S
Chevy SB Aluminum Cylinder Heads,
Straight Spark Plugs, 198cc Intake Ports,
64cc Combustion Chamber



JM4500
Chevy LS1/LS6 Aluminum Cylinder
Heads, 210cc Intake Runners,
64cc Combustion Chamber

QUALITY. PERFORMANCE. PERIOD.™



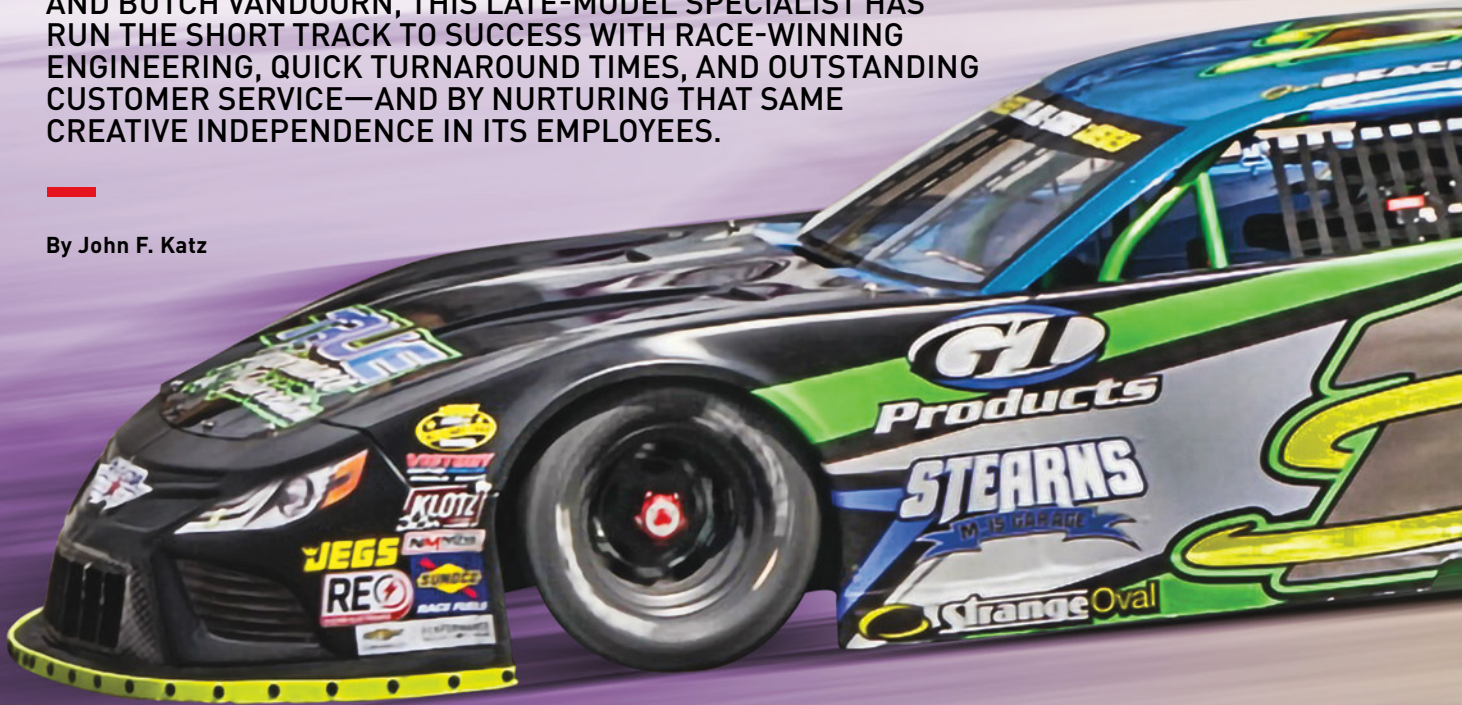
BUSINESS PROFILE

VANDOORN

RACING DEVELOPMENT

FOUNDED ON THE INDEPENDENT SPIRIT OF BROTHERS JOHN AND BUTCH VANDOORN, THIS LATE-MODEL SPECIALIST HAS RUN THE SHORT TRACK TO SUCCESS WITH RACE-WINNING ENGINEERING, QUICK TURNAROUND TIMES, AND OUTSTANDING CUSTOMER SERVICE—AND BY NURTURING THAT SAME CREATIVE INDEPENDENCE IN ITS EMPLOYEES.

By John F. Katz





In just nine years since John and Butch VanDoorn opened their chassis fabrication business in Muskegon, Michigan, the brothers have built nearly 200 race cars, expanded into setup and consulting, and established themselves as national players in the asphalt Late Model field. In the past year alone, VanDoorn Late Models have scored victories at nearly a dozen tracks in Michigan, Illinois, Indiana, Ohio, and Pennsylvania; plus farther-flung first-place finishes at Tucson Speedway in Arizona; Kern County Raceway Park, Irwindale Speedway, and Madera Speedway in California; South Sound Speedway in Washington; and Petty International Raceway in New Brunswick, Canada. October was a particularly good month: On the 8th, Cody Dempster nailed down the Super Late Model track championship at Colorado National Speedway; a week later Eddie Van Meter claimed the CRA Super Series Championship. And on the 29th, VanDoorn's new Diamond chassis debuted with a third-place finish at Nashville Fairgrounds Speedway in Tennessee.

No one seems more surprised at the success of VanDoorn Racing Development than John VanDoorn.

"We're building chassis number 185," he noted when we spoke in November.

"So we're almost 200 race cars into this thing.

If you'd asked me

in 2013 if we'd ever reach this point,

I'd have said, 'not in a million years.' We never imagined it would take off the way it has."

While asphalt Late Models remain VanDoorn's signature product—from rollers to race-ready vehicles—they actually account for about 40% of the company's total business. The remaining 60% comprises body repair; building, rebuilding, and dyno-testing shock absorbers; a parts department

stocked with components from more than 30 top-name performance brands; consulting services, including driver development; and fabrication jobs outside of the racing industry. (TIG-welding damaged fuel tanks for 18-wheel trucks has become a minor specialty.)

"You always want to stay diversified," VanDoorn explained, "to set yourself up for a rainy day. But chassis building is still the face of our business. It's the foundation, and everything else is built on it." Furthermore, VanDoorn sees a synergy in the company's various activities. "One feeds the other, absolutely. If they are running our chassis, then they are buying our parts. We're rebuilding shocks that we sold them. And they are hiring us to come out and work on their cars."

"WHEN YOU SHIP A CUSTOMER A NEW PRODUCT, YOU ALSO FOLLOW UP WITH THEM, AND DO WHATEVER IT TAKES TO MAKE SURE THEY GET THE PART BOLTED ON THEIR CAR CORRECTLY AND WORKING IN THE PROPER FASHION."

APPOINTMENT WITH ASPHALT

VanDoorn referred to race-car building as his "destiny.... My Dad owned a towing business, so I grew up around trucks and cars. The tow shop had welders and torches, and I started welding when I was about five years old.

"Building things," and particularly fabrication, has interested him for as long as he can remember. "I guess it was my calling in life," he continued. "We were NASCAR fans, and we always cheered for Earnhardt. So when I was eight years old, I started go-kart racing. It was fun for about a week, and then it turned into serious business as

we got competitive. In sixth grade, when all my friends were into video games and sports, I started drawing late-model chassis. It was like the Earth was trying to tell me what my life was going to be.”

Around the same time—in the year 2000—VanDoorn graduated from go-karts to dirt-track street stocks and sportsman. At 16 he began running Late Models on pavement and went to work for Port City Racecars in Muskegon. “I would go there after school to sweep the floors and clean the shop, and I worked my way up from the bottom. By 2010 I was driving the house car while also building cars and setting them up. That’s how I began my career as a race-car manufacturer.”

By then John’s younger brother Butch worked at Port City as well. According to John, Butch “didn’t do the driving, but he always went racing with me. He would hang out and work on the cars. Then when he was about 14—about the time my driving career was taking off—he really took an interest in shock building. He was 16 when he built his first-ever Penske shocks, and I won the very first race I ran with them. That’s how we got to where we are. I was inside the race



“We’re almost 200 race cars into this thing,” said John VanDoorn of the magnitude of VanDoorn Racing Development. “We never imagined it would take off the way it has.”

car looking out; he was outside the race car looking in. We have been fortunate to have both perspectives.”

Butch and John both “had a really good career going at Port City.” Yet that wasn’t enough. John drew a familiar metaphor from popular music: “If you’re a musician in a band, and it may even be a successful band at that, but it’s somebody else’s band. You still want to express your own art, to make your own impact. We wanted to do our own thing, start our own journey, have our own brand.”

The Brothers VanDoorn left Port City in November 2013 to launch VanDoorn Racing Development. “We rented a 6,000-square-foot shop, but in just three-and-a-half years we outgrew it,” John said. “Then the building we are in now came up for sale. It was already a fabrication shop, so it was set up perfectly for what we do.” Today the main facility covers 9,600 square feet. A second building adds another 5,000, and the company employs nine people full time.

SPEEDY DELIVERY

As much as he values his experience as a driver, John rates his 2020 retirement

from racing as one of the best decisions of his career. “That really expanded our business—it really opened things up for us—because it allowed me to be at the race track helping our customers.” Another key decision was the move to larger quarters, “which allowed us to bring in more machinery and equipment, to do more manufacturing in-house.”

In fact, when asked what sets VanDoorn Racing Development apart from its competitors, “two big things,” John answered.

“Our customer service, and our speed turning out products—how fast we can build new things, and how fast we can repair things. Those are our biggest strengths.”

Such prompt manufacturing and repair is enabled not only by “being set up in the shop with the right tools and equipment,” but also by experience—“knowing what to do”—and by “the work ethic of doing whatever it takes to keep the customer happy. If someone needs a part right away, we designate people to build that part and ship it out the same day. If it has to go to the West Coast, it may take a couple of days to get out there, so you have to be flexible enough to make sure that every customer gets to the race track on the weekend.”

Additionally, VanDoorn emphasized “follow-through with every customer. When you ship a customer a new product, you also follow up with them, and do whatever it takes to make sure they get the part bolted on their car correctly and working in the proper fashion.”

CREW CHIEF FOR HIRE

Asked how his role in the company differs from his brother’s, John told us that he manages “more of what goes on in the shop, while my brother handles consulting and sales. He’s the one who’s on the phone with customers 24/7.” That said, both brothers consult with customers and even crew chief for a few select teams. “Because I drove for



Though the company has diversified into body repair, consulting, and other services, “chassis building is still the face of our business,” said John VanDoorn, seen here. “It’s the foundation, and everything else is built on it.”

25 years,” John added, “when a team hires me to crew chief, I can offer not only chassis tuning but also driver coaching—all the little things that help a driver gain an edge and do well.

“That’s a big part of what we do. I’m gone 20–25 weekends out of the year as a crew

“WHEN I DO BUSINESS WITH VANDOORN, I DON’T FEEL LIKE A NUMBER.”

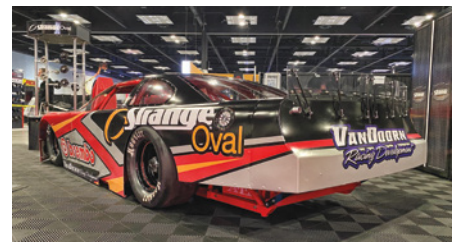
chief, and there are probably half a dozen teams that I help. My brother does the same thing, for a half-dozen to maybe 10 teams.”

John lamented that “there are so many races out there, and we can’t be at them all.” But having a brother as a business partner sure helps. “Butch can fly off to an SRL race in California, while I go to Indiana or

Pennsylvania the same weekend.”

“Butch comes to the track, sets up the chassis, and crew chiefs,” confirmed Buddy Shepherd, who drives a family-owned Super Late Model in the Spears SRL Southwest Tour. “It’s a big help.”

Now 23, Shepherd started racing karts when he was four, moved up to dirt-track stockers at six, and graduated to Super Late Models on asphalt as soon as he turned 16. He’d been driving an SLM for about a year when the late Nick Sivesind asked him to sub for his regular driver at Madera. “It was my first time in a VanDoorn car,” Shepherd recalled, “and I won the race.” Shepherd continued to drive for Sivesind, and in early 2018 finished second to Kyle Busch in the 4th Annual Winter Showdown at Kern County Raceway. The team purchased a new VanDoorn car in 2020, and Shepherd acquired another after Sivesind’s untimely passing in late 2021. We spoke just a few weeks after he’d won the Southwest Tour



There’s synergy in VanDoorn Racing Development’s various activities, John VanDoorn said. “One feeds the other. If they are running our chassis, then they are buying our parts. We’re rebuilding shocks that we sold them. And they are hiring us to come out and work on their cars.”

race at Irwindale in September 2022.

“Any time I have a question, I call Butch,” Shepherd continued. “Or I send him a picture, or whatever we have to do to resolve it. If I have any questions or concerns, he

5-Axis ENGINE SHOP CNC

A560 Five Axis
CENTROID Performance Racing

Videos online at:
centroidperformanceracing.com

Call for a personalized “anytime” demo
(814) 353-9256 ext. 101

Header Components

Merge Collectors

Complete Header Build Kits

Mandrel Bends

High Performance Oval Exhaust

Header Flanges

Race Mufflers

We are your #1 source for high performance USA made header components in mild, 304, 321 and aluminum materials.

Stainless Headers MFG. INC.
PERFORMANCE ENGINEERED COMPONENTS

1-800-290-3920 1-651-448-8661

www.stainlessheaders.com

always answers them.”

“When I do business with VanDoorn,” added Bob Wheeler, a team owner from Kalamazoo, Michigan, “I don’t feel like a number. They are easy to deal with, and they make you feel really comfortable. They are not there to sell you something. They care about what we are doing, and they have helped tremendously, pointing us in the right direction and keeping us rolling.”

Wheeler grew up in a racing family; his grandfather and uncle are in the Michigan Motorsports Hall of Fame. “I traveled to races with them for years,” Wheeler recalled. “Then about six years ago, we decided to go out on our own and do our own thing with an Outlaw Late Model. I met Butch and Johnny when they were working at Port City. Butch helped us with our shocks and setup; he saved us time and money, and improved our performance right off the bat. So when they started building their own chassis, we bought a new car from them—it was chassis



John VanDoorn, above, and his brother, Butch, are available as crew chiefs for hire. “Because I drove for 25 years, I can offer not only chassis tuning but also driver coaching—all the little things that help a driver gain an edge and do well,” said John VanDoorn.

number 13. In our first year with that car, we set a couple of fast times and won a couple of races.”

Wheeler later traded number 13 for the improved model VanDoorn released in 2016. When he switched to CRA last summer, he bought two new cars from VanDoorn and was “in the process of building two more” when we spoke in November. “They help us keep up with the times,” Wheeler concluded, “and with the big teams that travel all over the country.”

STEERING THE SHIP

“We have some really good customers,” John VanDoorn noted, “who have been with us through the years, and who have won a lot of races. If you win on Saturday, you sell on Monday. Being competitive and providing customer support are the two things that keep you relevant in this industry.”

The company maintains a Facebook page, featuring its products, services, and

BELL RACING SAFETY APPAREL

Available early 2023

Call 1 (800) 237-2700 to learn more.

BELL

BELLRACING.COM

the winning exploits of VanDoorn drivers. But John readily admitted the limitations of the medium. "Social media is certainly prevalent in our industry, but it isn't everything like it is in some other industries." Racing still relies on "a lot of word-of-mouth"—and on satisfied customers who win races.

The VanDoorns refer to their vendors as "partners" and, accordingly, they choose them carefully. "First and foremost," said John, "you want to align yourself with a company that produces a great part, has a great reputation, and whose service is A1. In racing, everything has to be done yesterday, so you have to line up with manufacturers who can get parts out to you right away."

Still, for everything that has contributed to VanDoorn's success, John said that he was "most proud of our employees. In any business, right now especially, probably the biggest challenge is finding qualified help. Our society and our culture have gone down the wrong road and aren't grooming people



For all of his shop's success, John VanDoorn cited his employees as the ultimate source of pride, including Isaiah Prins, seen here. "They are all extremely talented go-getters," he said. "And each one has a strength that they contribute to our product."

very well for the industrial trades. We've gone through some employees, but the ones who are working for us right now are all doing a great job. They are all extremely talented go-getters. And each one has a strength that they contribute to our product."

Leadership matters, too. "The big thing is that you set the standard; you set the example of what a good employee should be," VanDoorn said. "Set the ground rules but give them enough freedom to put their passion into their work. We've all got to arrive at the same destination, but let them steer their own ship, in a way that suits them. That keeps them coming back, wanting to make the mouse trap better—just as my brother and I did."

He switches metaphors again to muse about the future of the VanDoorn enterprise. "At this point the train is really humming along. I don't know where the train is headed, but it's really humming along." **PRI**

sūsa
SetrabUSA.com

oiling system components
for racing cars



Setrab
Oil Coolers

the choice of top teams and builders
across all venues of motorsport



NOW THERE IS SOMETHING
TO HOWL ABOUT!

Introducing the 5.0L Modular Coyote Direct
Injected PowerPak Piston Set for Gen 3 Fords



- High strength, 2618 Aluminum alloy
- Slipper skirt forging
- Dual coated with Phosphate & GRAFAL® skirt coating
- 1.0mm, 1.0mm, 2.0mm file fit ring set included
- 10.4:1 Compression Ratio

1-888-255-1942
follow us on social media
@MAHLEMotorsport_NA

Scan the QR
Code for more
information
mahlemotorsport.com

MAHLE
Motorsport

OPEN GATES

Test-and-tune events at the drag strip offer a ground-level snapshot of the state of the sport.

By Steve Statham

Healthy numbers of competitors for test-and-tune nights at the drag strip and packed grandstands for 'run whatcha brung' events are positive signs for the motorsports industry. The opposite is true as well. If nobody is coming through the gate for practice passes, it's a bad omen.

Test-and-tune events are an important part of any drag strip's economic model, but they are also a barometer for the health of motorsports in general. Test and tunes are racing at its most grassroots and are critical for reaching the next generation of young racers. It is the easiest point of entry in all of motorsports, the first place that legions of future racers will experience a car on a race track. Anyone can pull up to the starting line if they have a car capable of passing tech inspection, and practice skills, master techniques, and experience the thrill of driving a car flat-out. Being able to line up against a buddy for an impromptu best two-out-of-three challenge only adds to the fun.

We reached out to tracks with healthy test-and-tune events for insights into what works, who is showing up, and how to reach new drivers. One thing the tracks all had in common was an incredible variety of vehicles that come through the gates for test and tune.

"We get everything from Corvettes, Camaros, and Mustangs to Teslas. I've seen Plymouth minivans with turbochargers on them, they come out here," said Ben Faucette of GALOT Motorsports Park, Dunn, North Carolina. "Some of the stuff you see you might wish had stayed at the house, as far as leaking and that stuff goes. But for the most part it's okay."

Irwindale Speedway, in Irwindale, California, is a motorsports complex that includes an eighth-mile drag strip. It too sees a broad spectrum of participants. "We've got a Smart Car, an ice cream truck, to full-blown pro street dragsters. It's literally completely across the board," said Irwindale's Tim Huddleston.

Cedar Creek Dragway, an eighth-mile track in Kemp, Texas, southeast of Dallas, bills itself as "The #1 Test-N-Tune track" where racers can test anytime the track is open. "We allow anything to go down the track as long as they have a helmet and that kind of stuff. There are some kids that come out with go-karts with their families. That's something that is low budget, but they can have a good time and be with their family," said Daniel Hux.





Test and tunes at Carolina Dragway are drawing “a lot more late-model Camaros, Mustangs, Challengers, and Chargers, and a younger crowd coming in with that,” said Jimmy Owen. With the influx of late-model cars, he sees “less of the heads-up, all-out race car stuff.”

“Some people come out in golf carts,” he continued. They don’t run fast, but they don’t have to run fast. They’re just going down learning how to push the brake, push the gas pedal, all those fundamentals.”

MODERN MUSCLE

Variety is a given, but there are still some trends at test and tunes that are hard to miss. The late-model muscle car boom has transformed this scene at many tracks and lured a generation eager to find out just how fast their Mustangs, Challengers, and Camaros are. With many of these cars capable of ETs that were A/FX territory in the 1960s, a hassle-free night gathering timeslips is tailor-made for mastering these powerful cars.

Carolina Dragway in Aiken, South Carolina, an NHRA sanctioned quarter-mile track, is one facility that has witnessed the modern muscle wave. “What we’re seeing now is a lot more of your late-model Camaros, Mustangs, Challengers, and Chargers, and a younger crowd coming in with that,” said Jimmy Owen. “That’s where we’re starting to aim our focus, to that crowd. Not that we don’t want the other guys—we do, and we do things for them, too—but we’re starting to see that newer generation come in. That’s the future, and that’s what you’ve got to focus on.

“I’ve seen that the last couple of years. It’s like any other form of racing—bracket racing,

heads-up racing, grudge racing, whatever you’re into—it goes through periods of change. The last year or so, we saw some of that changing a little bit with a slowing down of what I would call the traditional grudge crowd. There are a lot more options for those guys to go to this time of year, but even prior to that, this summer we started seeing more of an influx of the later-model cars and less of the heads-up, all-out race car stuff.”

“We’re definitely booming with Fox-body Mustangs, Camaros, street cars,” said Irwindale’s Huddleston. “You can literally go buy a drag race car right off the shelf, straight from the showroom.”

Some tracks attract the late-model muscle car crowd with impromptu events that skirt the line between test and tune and structured classes. “We decided, ‘Okay, we’re going to do a little shootout tonight for late-model, 2008-and-newer street-driven cars. Must drive it through the gate,’” Owen explained. “That seems to attract some of those guys, and we just build on that. You get them in there one time, and they like it, you treat them nice, and they come back

with a friend next time.

“It’s like marketing with any other form of racing,” Owen continued. “You’ve got to respect your customer. You have to attract that customer to come in, and you have to treat them nice when they get there so they come back.”

INNOVATION SITUATION

Besides running traditional test-and-tune formats, the track representatives we spoke with were also implementing events that, in essence, run parallel to test and tune and bring in different types of newcomers.

“We run probably 100 events a year on our drag strip. We do a run-what-you-brung every single Thursday night, 5–10 p.m.,” Huddleston said. “We have an eighth-mile drag strip and then we have a one-of-a-kind burnout stadium. It’s a 2,000-seat stadium, 140 x 100, and we call it the Burnout Box. You can just go in there and shred tires. That rocks every Thursday night. And then, whether on Saturday or Sunday of the weekend, we do a drag race and a car show. We call them Sunday Fun Days where

“WE GET EVERYTHING FROM CORVETTES, CAMAROS, AND MUSTANGS TO TESLAS. I’VE SEEN PLYMOUTH MINIVANS WITH TURBOCHARGERS ON THEM.”

“ON A BIG TEST-AND-TUNE NIGHT, WE MIGHT HAVE 120 CARS AND MOTORCYCLES RUNNING.”

you just come out and test and tune. We do grudge racing, heads-up match racing, best two-out-of-three. Crazy stuff like that.”

The burnout stadium attracts its own audience and delivers a different run-whatcha-brung experience. “It’s a different crowd. The Burnout Box guys come with two or three sets of tires in the back of their truck, and they change out their good tires and put junk tires on the back, and they pretty much hang out on that side of the property. Every now and again you’ll have them cross over, but it’s usually two events going on at the same time,” Huddleston



Today, tracks from coast to coast are reporting an incredible variety of cars coming through the gates for test-and-tune sessions. “We allow anything to go down the track as long as they have a helmet and that kind of stuff,” said a source.

continued. “There’s a lot more spectators than competitors. A lot of music, it’s real music- and atmosphere-driven over at the Burnout Box.”

Besides their regular Thursday night Test n’ Tune and Grudge Race, Carolina

Dragway has been hosting a monthly Coffee and Cars meet at the track for several years that expanded into a second Test n’ Tune. “It works out really well. They would go to a parking lot at a shopping center or something like that, and as it got larger, they

Gear Up for Racing with

SCS GEARBOX **PROBELL RACING**
An SCS GEARBOX Company

SCS/PB 419-483-7278
SCSGEARBOX.COM • PROBELLRACING.COM
739 W. Main Street, Bellevue OH, 44811

4x4, Mega Trucks, & Monster Trucks
Tractor Pulling
Ultra4 Rock Bouncers Mud Racing
10-Spline Quick Change Gears
SFI Bellhousings Steel and Aluminum
Dyno Parts
6-Spline Quick Change Gears

Like us! **MADE IN THE USA**

SCS Gearbox Probell

GANDRUD
PERFORMANCE PARTS
CHEVROLET PERFORMANCE VEHICLES / PARTS / RACING

www.gmperformancemotor.com



Cedar Creek Dragway maintains a “family-friendly environment where they can come out and have a good time with their vehicle, whether it be a street vehicle or a race car on a trailer,” said Daniel Hux. Opportunities to make several passes “is the biggest draw.”

were taking up more of a footprint in the parking lot, and the stores would run them off,” Owen said. “So they like coming to the race track. The first few we did years ago, they just wanted to do the car show. Well, with a race track, why can’t we go down the race track? Well, you can. So we started opening that up to a Saturday Test n’ Tune and Coffee and Cars car show.”

As with Irwindale’s Burnout Box, the Coffee and Cars event at Carolina Dragway tends to attract a different crowd, more show car oriented than hardcore racer. “We don’t prep the track like you would for the Thursday test and tune,” Owen said.

“Another thing we’ve done with our street car guys, since Thursday is an odd night for some of these guys, some asked if we could do a Saturday test and tune,” Owen continued. “Normally for Saturdays, we’re either bracket racing or we’ve got some structured event we’re doing. So the off Saturdays that we’ve had, we would just once a month do a Saturday street car test and tune. That’s how we bill it, and that’s what it is. If you want to bring your pro mod in and test it, just know that it’s street car Saturday, and the track is going to be prepped for those guys. On those days we

cater to our street car guys and make them feel a little special.”

BUSINESS TUNING

For many tracks, test and tune is just one element of a crowded calendar, but for Cedar Creek Dragway it’s the central plank of the business model. “We have our events here and there, but mostly just test and tune,” Hux said. “You can have a big event,

but everybody still wants a test and tune. You can put \$5,000 or \$10,000 out there, and you may bring in people, but you’re still going to have the majority of people watch test and tune or grudge races. We’ve always been known as a test-and-tune track. You can come out there, get going, and figure out how cars work, get familiar with it.”

Hux believes that Cedar Creek Dragway may be the second oldest continuously operating track in Texas, and it has seen plenty of tracks come and go. “They try to do these big money things and guarantee this and that, and they lose a lot of money. It’s a business. People are supposed to have fun, and I’m not saying they don’t at the big-money events, but I think a lot of fun is really missed on that. We have test and tune and people come and cook out. We allow people to cook and grill. Not a lot of tracks do, but we do. It’s a family-friendly environment where they can come out and have a good time with their vehicle, whether it be a street vehicle or a race car on a trailer.”

Hux said that a good test-and-tune night will attract 100 to 120 cars, with opportunities for several passes. “That would be the biggest draw, that they are able to get on the track way more than most other places,” he said.

GALOT Motorsports Park draws from



Properly promoting test-and-tune events “is like marketing with any other form of racing,” said a source. “You’ve got to respect your customer. You have to attract that customer to come in, and you have to treat them nice when they get there so they come back.”

“WE’RE STARTING TO SEE THAT NEWER GENERATION COME IN. THAT’S THE FUTURE, AND THAT’S WHAT YOU’VE GOT TO FOCUS ON.”

Raleigh and smaller towns along the I-95 corridor, and for it as well, a triple-digit number of competitors for test and tune is common. “On a big test-and-tune night, we might have 120 cars and motorcycles running,” Faucette said. “A lot of guys are repeat customers. There are a lot of guys with Hellcats or Mustangs that come out in groups of three or four and run against each other as many times as they can as time permits.”

Although some tracks like Cedar Creek Dragway are content to stay focused on maintaining a healthy test-and-tune crowd, others, like Irwindale, seek to transition

them to structured classes. “We push them hard to get into our Summit ET class. That’s huge,” Huddleston said. “We’ve had a lot of our ‘just show up’ test-and-tune people that convert into bracket racers.”

Test and tune has long been an entry point for the beginner and a practice session for the more experienced racer, both of which are vital functions for the health of the sport. “I always press fundamentals,” Hux said. “Learn the car, don’t try to go fast. Understand the car. That’s what we’re there for. And once they do, they’re a much better driver and way safer.”

Another strength of run-whatcha-brung-

type events is the lack of pressure on the racer. There aren’t any high stakes involved, no payout to sweat over. Drivers can just practice and have fun. “We’re just laid back, with a laid-back atmosphere. They’re not uptight about anything. They’re just laid back and having a good time,” Hux said. **PRI**

SOURCES

Carolina Dragway

carolinadragway.com

Cedar Creek Dragway

cedarcreekdragway.com

GALOT Motorsports Park

galotmotorsportspark.com

Irwindale Speedway

irwindalespeedway.com

PRI
PERFORMANCE RACING INDUSTRY

CONNECT WITH PRI

f t i n i g s

PRISHOW.COM/SOCIAL

OilVue

SEMA Booth # 20038
PRI Booth # 2949

Kelsey Rowlings
2022 Formula Drift Prospector Driver

Detect Problems Early & Avoid Major Failures!

OilVue’s oil analysis gives you information about:

- Oil Condition
- Wear Metals
- Contaminants

Get the most from your oil & safely extend time between oil changes.

Results sent to your mobile device!

Interested in protecting your engine?

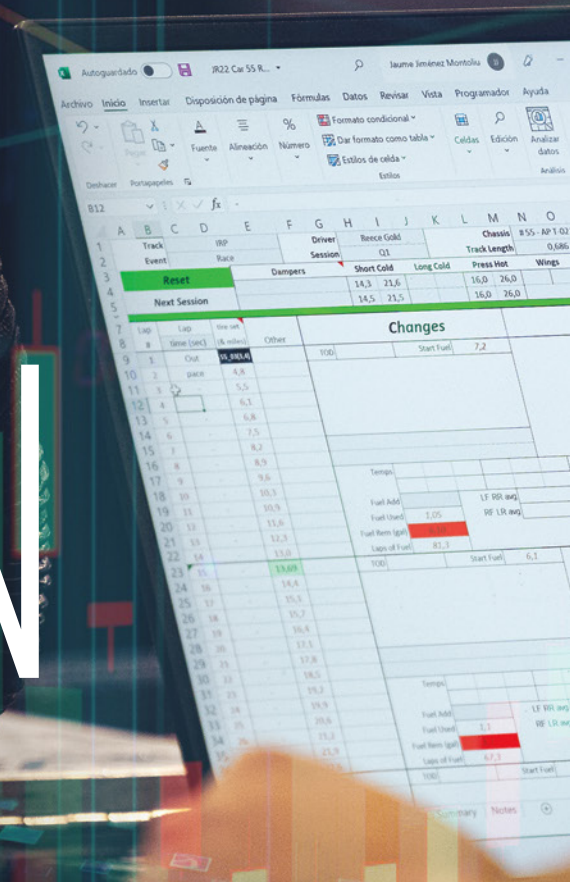
Learn more about oil analysis:

OilVue.com

DATA DRIVEN

AS RACERS GAIN EXPERIENCE WITH WHAT THE NUMBERS CAN TEACH THEM, SYSTEM MANUFACTURERS ARE UPping THEIR GAME TO PROVIDE MORE INFORMATION THAT'S EASIER TO ACCESS AND INTERPRET.

By Drew Hardin





When we spoke recently with data acquisition and sensor manufacturers about what they had in development for the performance racing industry, we heard several variations of, “I’m not allowed to say anything,” and “I can’t give you any details yet.” It was clear, though, that all of these companies were hard at work on new products they planned to launch within the next year or so. All were responding to what they saw as significant growth potential in the use of these diagnostic tools.

“A lot of cars out there still don’t have any sort of data acquisition,” observed Donny Cummins of Holley Performance Products in Bowling Green, Kentucky, which includes Racepak Data Systems among its brands. “They don’t know how they can benefit from it. Some of them know but are scared of it. Some think it’s out of their budget. I try to find the balance for these guys.”

He also pointed out that some racers are getting data acquisition by default. “The majority of EFI systems out there have data acquisition built into them, so racers switching from carburetors are automatically getting a data logger with their ECUs and being introduced to it. Which is great. I always say to my customers, at the end of the day, no matter what company you end up with, having data in your race car is the most cost-effective and time-effective thing you can ever do. You can diagnose a problem in one or two passes as opposed to taking a whole weekend before you finally find an issue.”

“The reality is, if you’re trying to really fine-tune, you can’t fine-tune without data,” said Matt Parlett of Computech Systems, Charlotte Hall, Maryland. “If you are a weekend bracket racer who just goes out there every once in a while, you’re not going to be worried about data. Once you start taking it seriously and want that extra edge, you can’t go any further without data. It is absolutely flying blind with no clue of what’s happening inside the car.”

When a racer recognizes the importance of data, “they never turn back,” Parlett added. “At that point, every chance they get they’re getting data. It becomes an ever-feeding circle. The more data you get the more you learn, so you want to get more data to learn more. And the more you learn, the more data you want. Ultimately, once you unlock that cycle, you become a better tuner, because each time you go through one of those iterations,



and you fine-tune something and get that aspect perfect, your combination gets tighter and tighter.”

ON THE HORIZON

Some of the company reps hesitant to talk in detail about what's on their drawing boards did give us general outlines of what they are planning.

Computech, which specializes in drag racing data acquisition, is working on a data logger update that will “implement graphing features directly onto the gauge panel,” Parlett said. “When you get done with a pass, all you have to do is swipe up and it will instantly show your last two graphs overlaid on top of each other so you can recognize what was different between this pass and the pass before it.”

As part of this update (which will be available as a download from the company's website, computech.com), the logger will display an after-action report, according to Parlett. “We'll have a list of what your launch rpm was, what the max EGT was, the average fuel pressure during the run, stuff like that. All of these will have instant overlays with each other so it will instantly compare this run to the last. We're trying to do it automatically, to get them to see that, right after a run is over, we've changed the screen. Once the car's turned off it will go right to the graphs while they're still sitting in the car. The graphs will be smack dab in

their face showing what's different. Doing that automatically will help the guy who has a data logger but doesn't pay attention to the data. It's hard to ignore it when it's staring you right in the face on the screen.”

“We're going to get more modernized,” said Cummins of Racepak's future offerings. “We're going to use a lot more technology that's been around for a while, dealing with storage and mobile devices.” Does that

“HAVING DATA IN YOUR RACE CAR IS THE MOST COST-EFFECTIVE AND TIME-EFFECTIVE THING YOU CAN EVER DO.”

mean better accessibility? “Bingo. Things will be a lot more accessible. We're looking at different platforms. We're not going to stray from your standard laptop windows that are in everyone's trailer. That will always be supported. But we don't have blinders on. We recognize the need for more wireless technologies, different platforms, and we'll be going down that path.”

One advantage Racepak has when developing new product is the ability to share resources with fellow Holley brands, Cummins reported. “That opens up a door

Donny Cummins of Holley Performance Products reports a “tremendous amount” of growth potential in the drag racing market, as “I still see a lot of cars at the drag strip that don't have data acquisition. They don't know how to benefit from it, and some think it's out of their budget.”

to get outside the box a little bit. If we don't know something, maybe that guy from the other company will know. We have something in the works for next year utilizing cool stuff from Holley and bringing it to the Racepak side.”

OEM sensor manufacturer Tensior of Irvine, California, introduced its 3FP brand in the first quarter of 2022 “specifically targeting performance racing,” said Scott Gilman. In terms of future products, the company is looking at segments “that are not highly commoditized or where there's truly a gap in the market, whether that's a quality gap, a reliability gap, a price gap, whatever that might be.”

Gilman said he can't “speak specifically to the technology we're working on in R&D,” but “as a company, something we're doing at the OE level is consolidating sensor technologies into multi-parameter sensors.” These sensors will address circumstances where “our customers are using multiple different sensors to capture the data they need. By consolidating sensor technologies into one, racers can capture pressure and temperature together at the same time in one sensor location, getting two or three constant data streams.”

Gilman said Tensior has the ability “to do everything from pressure and temperature sensors to speed sensors, O2 sensors, you name it. So we're looking to our customers and our partners for feedback—what's important to them, where do they need help, and what can benefit from having us take this grassroots approach of looking at the market, finding those gaps, and figuring out how can we fill them and do better.”

WHAT'S NEW NOW

When we spoke to Parlett, Computech was about to release a new data logger specifically designed for Junior Dragsters that's based on its existing drag racing data logger. "With NHRA there are a lot of rules and regulations—because they're kids and not adults—specifically regarding the data logger and what the driver has access to. We found a way to fit within the rules and give the driver a true gauge panel." That panel is "almost identical to the same screen I'd have in my big race car," he explained, "but is limited in terms of sensor capability. According to the rules, we're only allowed to have four sensors: engine rpm, jackshaft rpm, exhaust temperature, and head temperature."

Parlett's son races a Junior Dragster, and he has learned from experience that "one of the most important things is to get the idle temperature correct and get the idle rpm correct before the driver launches. Slight changes in that will make a big difference." The panel is designed so that the desired launch rpm can be dialed in to display at 12 o'clock and in a green section of the gauge. "If the needle is bouncing around in the green, you know you're good to go."

The new data logger "teaches the kids when they're young how to read data and use this software, so when they get to a big car, they can buy one for their big car and



The 3FP pressure sensors from Trensor are engineered to be robust because dependability is "extremely important to racers," said Scott Gilman. "It's critical when they make that pass or run that race that they have reliable data they can look at."

THE BEST IN HEAT & SOUND CONTROL

SINCE 1987

MADE IN USA

COOL IT. Thermo Tec

Enter code **PRI20** to receive 20% off your order at ThermoTec.com
 (800) 274-8437 www.ThermoTec.com Available at: **NAPA** **Summit** **JEGS**

LESS WEIGHT = PERFORMANCE

Bill Mitchell Products creates nothing but the best blocks from 357-T6 Aluminum as our standard.

LS
SBC
BBC
409
SBF
HEMI
WEDGE

Check Out Our Huge Selection Of High Performance Parts at BillMitchellProducts.com
 Or Call 386.957.3009

BMP HARD CORE RACING
 BILL MITCHELL PRODUCTS

VAC MOTORSPORTS

www.VACmotorsports.com
 @VACMOTORSPORTS
 +1 (215) 462-4666 sales@vacmotorsports.com

VAC RIT SUPER DAMPER
Crank Dampers

- Isolate Damaging Harmonic Vibrations
- Allow Engines to Produce More Horsepower
- B58 | S14 | M50 | M52 | M54 | N52 | N54 | S50 | S50B30 | S50B32 | S52 | S54 | S55 Applications

VAC
Billet Differential Covers

- Available for E36, E46 M3, E9x, Z4 / Supra
- Increased Oil Capacity and Cooling
- Improved Strength over Factory Cast Cover

VAC CALICO MAHLE
Main & Rod Bearings

- Friction Resistant Calico Coatings
- Eliminate OEM Bearing Failure
- B48 | B58 | S14 | S38 | M50 | M52 | M54 | N52 | N54 | N63 | S50 | S52 | S54 | S55 | S63 | S85 + More Applications

VAC
Billet Engine Blocks

- High Strength 6061-T6 Aluminium Block
- Extreme Weight Savings over Factory Iron Block
- Can Stand 1500+ Horse Power
- S14 | S38 | M50 | M52 | S50 | S52 | S54 Applications

See More: **Mastercam** **tilton** **SCHRICK** **COMETIC** **DAY CHMS I** **Dynalene** **Quality Engineering** **ARROW** **PERFORMANCE PRODUCTS** **QUAIFE**

WOOLF AIRCRAFT

Specializing in Tube Fabrication:
Bending and Welding Since 1942

f
t
i

734-721-5330 WOOLF AIRCRAFT.COM



Computech's latest data logger, the DataMaxx Jr., is designed specifically for Junior Dragsters. It "teaches kids when they're young how to read data and use this software," explained Matt Parlett, so they'll be comfortable with the system when they move up the racing ranks.

sensor inputs to your recording software—different chassis sensors and G meter and suspension travel, different power distribution channels—to see what the power is doing in the car."

He attributed the shift in thinking to "having the ability with the Nexus R5 and R3 to log at 1,000 hertz. You have a much more granular view of everything. But at the same time, that's also given you a lot more room to log more data. With the progression of not just ECUs and data logging, but the progression of turbo technology, tire technology, and everything, there's definitely kind of a resurgence of looking at all of the data, not just engine data. Lap times are included in that. It's more of a mind shift on the part of the drivers, especially when it comes to drag racing, looking at the whole package and being comfortable with looking at a data system to make sense of it. The more robust your data acquisition is, the better the logging that you keep, the more details you have, the better your program is."

Redden has seen this holistic approach in action at the drag strip. "I know guys who will make suspension adjustments in the staging lanes because something changed," he explained. "Something that they saw on the track looked different, or something about the way the engine was running at the time was slightly different from the last pass. They're saying, 'Hey, I just saw this, it's in the data, go make a change,' and they'll do it right there in the staging lanes before they

they'll have the exact same software that they're already comfortable with. This can take them throughout their entire racing career."

Joshua Redden of Haltech in Lexington, Kentucky, said the company recently released two new products. He described the Nexus R3 vehicle control unit as "a next generation of the Elite 2500. It's an engine management unit plus a PDM plus a Wi-Fi module and an integrated wideband controller all in the box." Haltech also added the PD16 power distribution module to work with Haltech ECUs. "Being a power distribution module, the PD16 gives you a lot of data and diagnostic capabilities on the power usage via your Elite or Nexus ECU."

Redden said both of these products speak to a broader trend he sees in data acquisition. "What they give you access to is more of what you're looking for. One of the biggest things we're starting to notice when it comes to data acquisition is that more people are looking at a vehicle more holistically. They're not just looking at engine operation, they're looking at the vehicle as a whole. So you're seeing a lot more

Split Mono Leaf
SPRINGS

Gary Enrud
1967 Plymouth Satellite "The Lemon Wedge"
Calvert's, Calvert Split Mono Leafsprings
CF Front Racing Shocks, CR Rear Shocks

Calvert's performance Split Mono Leafsprings provide increased spring rate over stock springs. This slows down rate of separation for faster and more consistent 60' times. Helps plant the rear without unloading. Assembled and ready to install, the unique parabolic design distributes stress along the length of the spring and can withstand over 2,500 HP.

Work Hard. Play Harder.
CALVERT RACING

ASK A TECH:
661-728-9600
Hours: M-F 8am-4:30pm PST
CalvertRacing.com

*“THE MORE DATA YOU GET
THE MORE YOU LEARN, SO
YOU WANT TO GET MORE
DATA TO LEARN MORE.
AND THE MORE YOU
LEARN, THE MORE DATA
YOU WANT.”*

roll into the water box.”

Redden also pointed out that adding new sensors to the Haltech line, including “suspension geometry sensors and laser ride-height sensors, those kinds of advancements and offerings, have opened the door for a lot of data we didn’t have in the past. Now we’re able to live look at suspension height, how much the car has lifted in a turn, or off the line in a drag race, and be able to react to that and program accordingly to that. That’s a major feat.”

“The need for improved technology in sensing products in the past two to three years, as well as drastically increasing reliability for use in today’s engines, has been increasing exponentially,” observed Will Smith of Smith Systems, Brevard, North Carolina. “Customers want products specifically designed for their application—which we specialize in—rather than modifying an existing product to work. Race teams and other end users are wising up



Joshua Redden of Haltech has seen a shift in the use of data acquisition. Racers aren’t just looking at engine operation, “they’re looking at the vehicle as a whole.” They are monitoring shock travel sensors (seen here) plus “different chassis sensors and G meters, and different power distribution channels, to see what the power is doing in the car.”

www.radialbearing.com
sales@radialbearing.com

RADIAL BEARING CORPORATION

PROVEN IN THE AIR...

- Aircraft Quality ROD END and SPHERICAL BEARINGS
- Self Lubricating (PTFE) and Metal-to-Metal
- Alloy and Stainless Steels
- Specials for Specific Engineering Needs

PROVEN ON THE TRACK...

1-800-377-1937 for a free catalog
Fax: (203) 744-1691

AS9100 / ISO 9001

1WAY

1WAY-TECH.COM
812-254-6456
C.N.C. Ported Heads & Manifolds
Race Engine Development

VR IOP

VALVE REFACING MACHINE

- Large coolant and filtration
Cool and Clean Grinding
- Foot pedal for ball chuck locking and unlocking

ROBINS
SINCE 1983

Anthony Usher (949) 460-7176
Eastern USA & Canada

RobinsMachines.com

Jeff Marchbanks (909) 236-9922
Western USA

IDIDIT[®]

PERFORMANCE

Lightweight Steering Columns and Accessories

Quick Release Steering Hubs

Quick Release Steering Hubs

- American Made
- SFI Certified
- Available in 3, 5, or 6 bolt designs
- Quick and easy install using factory dash mounts
- Machined with extremely tight tolerances that eliminate backlash for tight steering and feel
- Center pin design ensures a perfect wheel centering every time

Pro-Lite Steering Column
Pro-Fab Steering Column

Lightweight Steering Columns

- American Made
- Engineered for superior fit, finish, and performance
- Save up to 20 pounds of weight
- Quick and easy install using factory dash mounts
- Pro-Lite Series can go from street to strip featuring turn signals, 4-way flashers, and wiring plug
- Pro-Fab Series includes components to retain original column shroud keeping the stock appearance

IDIDIT LLC., 610 S. Maumee Street, Tecumseh, MI | 517-424-0577 | ididit.com

to the fact that race engines are very high-stress environments, and experts on these individual products need to weigh in on material selection in order to meet those requirements.”

Accordingly, Smith Systems “is replacing a lot of the standard-built sensors that users have been using for years, and those users are having great experiences with these improved products,” Smith said. “We’re seeing usage on these sensors increasing drastically enough for us to shift some more attention to our racing line of sensors. There seems to be a large need for companies like us to enter the market, as other traditional suppliers have lagged with the use of improved technology and given less attention to the end users for improvements to the products. The minute details in design make a huge difference. Coming from rail, aerospace, and heavy equipment has put us in a good position for leading the drive for these improvements.”

When it launched its 3FP brand, Trensor came into the racing market with seven new sensor SKUs, “the result of a two-year

journey of research and development, talking to different race teams, different engineers,” Gilman said. “We took our patented Trensor technology, which is a pressure sensor technology, and deployed that in sensors that have several features and benefits that are first to market.”

Among those features is a high level of accuracy, Gilman said, “what we call real-life accuracy. We hold across the entire working temperature range, -40 to 150° Celsius, between 1 and 1.5% accuracy even in the harshest ends of that range. So when

“IT’S HARD TO IGNORE IT WHEN IT’S STARING YOU RIGHT IN THE FACE ON THE SCREEN.”

racers are looking for that insight, they know within a 1% margin of error that they have their system dialed. Typically, that is better accuracy than most engine control modules hold themselves.”

Another feature the Trensor sensors offer is “truly atmospherically vented reference,” Gilman said. “When we came to the market, we saw racers were modifying sensors. At Pikes Peak, for example, where racers would gain thousands of feet of elevation within 15 minutes, with a competitor’s

product they would need to run a separate barometric pressure sensor that would take that elevation change into account and allow for that tune to be adaptive to that changing elevation.” The Trensor sensors “automatically calibrate themselves to changing elevation. That atmospheric reference is protected with a very high technology membrane that allows for atmosphere to pass through it—but not water or dust, so it totally protects the circuitry and the sensor cell itself.”

The Trensor sensors are also robust enough to withstand the vibration that occurs “in any violent race application,” Gilman said. Where some engine sensors have to be ported off to the firewall or a cage tube to protect them from vibration, “our technology is validated to more than 40 Gs of force on all axial planes. They are designed to be put on your engine. We partnered this year with a Top Fuel drag racing team that had been going through sensors either every race or every other race. The sensors we put on that car at the beginning of the season are the same sensors they ran their last pass with.”

Dependability is “extremely important to racers,” Gilman said. “A lot of these guys are spending anywhere from a few thousand dollars a race to one million dollars a race. It’s critical when they make that pass or run that race that they have reliable data they can look at, see what’s going on with that system or that vehicle after the race to gain insight.” **PRI**

“Minute details in design make a huge difference” in sensor technology, said Will Smith of Smith Systems. “Coming from rail, aerospace, and heavy equipment has put us in a good position for leading the drive for these improvements.” Photo courtesy of Smith Systems Inc.



SOURCES

Computech Systems
computech.com

Haltech
haltech.com

**Holley Performance Products
(Racepak Data Systems)**
holley.com/brands/Racepak

Smith Systems
smith-systems-inc.com

Trensor
trensor.com



PRI

CAREER CENTER

APPLY FOR JOBS

POST YOUR RESUME

GET JOB ALERTS

THE BUSINESS
OF RACING
STARTS HERE



[JOBS.PERFORMANCERACING.COM](https://www.jobs.performanceracing.com)



INDUSTRY EXPERTS REVEAL WHEN HELMETS, FIRE SUITS, AND OTHER PIECES OF CRITICAL PROTECTIVE GEAR SHOULD BE REPLACED. HINT: IT DOESN'T ALWAYS ALIGN WITH EXPIRATION DATES.

By Drew Hardin

Nothing lasts forever, as the old saying goes, and that's especially true when it comes to driver safety gear. Helmets, fire-retardant clothing, and head-and-neck restraints can all lose their ability to protect the racer—even if they still appear to be in good condition—due to factors that range from simple wear to outright damage. Race sanctioning bodies and safety organizations, including the FIA, SFI, and the Snell Memorial Foundation, set standards for protective equipment and also establish replacement and/or inspection timeframes for certain items.

Determining when to replace safety gear “can be tricky, as they have different levels of protection, and some don’t have required replacement dates,” said Carrie Willhoff of Racechick, Woodland, California. “Many people go to the rulebooks of their sanctioning bodies as a good start, but just because they may not have guidance with replacement dates doesn’t mean they are still good. For example, NHRA doesn’t require recertification on anything below an SFI 3.2A/15 fire suit. Does that mean that the lesser protections will last forever? Absolutely not.”

HELMETS

“There are two homologating bodies on helmets—the Snell Memorial Foundation and FIA,” explained Jacob Brown of K1 RaceGear, Carlsbad, California. Each body sets its own helmet ratings periods. “FIA changes ratings whenever it deems necessary, with the last rating change in 2018 on the 8860.” Snell comes out with a new rating every five years. “We

SAFETY FIRST

are currently in a Snell 2020 cycle, which came out in October of that year, and it will cycle again in October 2025.”

When Snell makes an update, “it makes changes to make the helmet safer, but a helmet is good for 10 years from the issuance of the Snell date,” said Brian Prior of Holley, Bowling Green, Kentucky, which has HANS, RaceQuip, Simpson, and Stilo safety equipment brands under its umbrella. That means today’s Snell 2020 helmets “are actually good until 2030. That’s not saying you won’t want to look at a 2025 helmet if you have the liberty to upgrade and see what the new safety standards and protocols are. If you have the ability, naturally you’ll want to go up to the next Snell cycle.”

“Standards always change and evolve,” observed Kyle Kietzmann of Bell Racing USA, Miami, Florida. “For example, the FIA



A helmet is good for 10 years from the issuance of its Snell date, said Brian Prior with Simpson Performance Products. Because of constantly changing technology and safety standards, he encouraged racers to “go up to the next Snell cycle” sooner “if you have the liberty to upgrade.”

8860-ABP standard has added ballistic protection in the front of the helmet to prevent penetration for open wheel-type forms of racing like F1. There are new standards for safety equipment issued by SFI and FIA every five to 10 years. These standards change over time, providing an opportunity for people to upgrade their equipment to take advantage of the latest advances in technology, materials, and construction techniques.”

Beyond these rules, though, other circumstances play into the timing of a helmet replacement.

“If you have a racing accident and take an impact on the helmet, make sure you do a visual inspection of the helmet to see if there’s any evidence of cracking in the shell or delamination, or any compression of the inner liner and the energy absorbing foam,”



Off-road racing can be “a very hostile environment in some cases, and the need to replace equipment could be much sooner” than for racers on pavement, said Ben O’Connor of Impact Racing. Manufacturers will inspect helmets to ascertain if the impact from debris was severe enough to have damaged the integrity of the outer shell.

Kietzmann said. “If the helmet is damaged, replace it. If you lose consciousness in an accident, we recommend that you replace the helmet even if it appears that there’s no visual issues with the product. That’s one circumstance where the helmet could still be within the proper Snell or FIA date range, but you would want to replace it.”

“After any type of impact on a helmet, you would want to get it inspected,” said Prior, which most helmet companies will do free of charge. “We understand that sometimes financially-wise you may have that helmet inspected in hopes that you can reuse it, but ideally after especially a firm impact—a crash, a rollover, something of that nature—you would want to replace it. Once the EPS [expanded polystyrene] liner takes an impact, it’s going to compress to a certain extent.” That liner, he said, is “a large portion of the construction of the helmet—what lies between the driver’s head and the exterior shell of the helmet. That’s where the protection factor lies.”

It may not take what these companies euphemistically call “an event” to prompt a new helmet purchase. “If you have a good quality helmet, and it’s worn 20 times in a year, you look at that helmet and it doesn’t look good anymore,” explained Danilo Oliveira of G-Force Racing Gear, Acworth, Georgia. “The cushions are not good and it’s not even comfortable anymore. After some time, the cushions give up a little bit. So it’s not as tight as it was before. Why are you still

wearing it?”

“We recommend replacing a helmet every three to five years,” Kietzmann said, “just because of normal wear and tear. Materials and components can break down over time.”

According to Brown, “the rule of thumb is you usually replace your helmet every two to three years if racing extensively, three to five if not racing on a full-time basis. It’s based on how often the helmet is used, and that’s not taking into account any crashes or drops.”

Environmental factors come into play as well. “In drag racing and in road racing there’s not a lot of wear and tear on a helmet since you’re dealing with a cleaner environment versus off-road,” said Ben O’Connor of Impact Racing, Indianapolis, Indiana. Off-road and dirt oval racing can be “a very hostile environment in some cases, and the need to replace equipment could be much sooner, particularly if there’s damage to the helmet due to rocks, mud, debris, things of that nature. If a rock hit was big enough to take a chip out of the base material of the helmet, you should replace it, or at least send it back to the manufacturer to have it inspected.”

HEAD-AND-NECK RESTRAINTS

Head-and-neck restraints are “up for inspection every five years,” O’Connor said. “That’s the SFI recommendation, and most sanctioning bodies have adopted that.” He pointed out that “most devices are carbon-

impregnated poly or something of that nature. They’re pretty darn strong and will last for quite a while.” The inspections, then, are to “make sure the tethers, soft goods, and fasteners are in good shape. If you see a tether that’s fraying, get that replaced. That is the lifeblood of the device. You don’t want your tether breaking in an event. Make sure the hardware is in good shape as well.”



The SFI-mandated five-year inspection cycle for head-and-neck restraints is meant to ensure that the tethers, fasteners, and other soft goods are in good shape, our experts said. They are the lifeblood of the device, and racers don’t want them to break in an incident.

“The only things that can be recertified with us are the HANS and hybrid devices,” Prior said. “Those are good for five years, and those can be sent back to Simpson to be recertified.”

FIRE-RETARDANT CLOTHING

The replacement rules for fire suits aren’t as cut-and-dried as they are for helmets. They vary based on the suit’s level of protection.

SFI-15 and SFI-20 fire suits have to be inspected and retagged after five years.

"Some of the things we would look for in those suits are rips, tears, and issues with the stitching," said O'Connor. "Contamination would be cause for us to not recertify a suit or need to do repairs on the suit before it can be retagged. There's no limitation on how many times a suit can be retagged by SFI, but we tend to limit that to one recertification. We feel that after 10 years, you really should replace the suit."

There are no time limitations on the commonly used SFI-1 or SFI-5 suits. The same holds true for fire-retardant shoes and gloves. The decision to replace, then, is based on a number of factors.

"If you are in a fire, the suit needs to be replaced. It's a one-time-use thing," emphasized John Gentry of Stroud Safety, Oklahoma City, Oklahoma.

For Willhoff, the number-one deciding factor is fit. "The safest fire suit is one that fits the body well. Any time people gain or lose weight would be a time to determine if your suit still fits well. If you have gained weight, are you still comfortable in the seat with it on, or are you stressing the seams? If you've lost weight, a suit that is too bulky or has excess material is a liability, as it can get caught on pedals, roll cages, or any other edge when trying to exit the car in a hurry.

"Any opening on the suit can provide the risk of an air entry between the body and outside, which is a pathway for fire, so pay special attention to the neck opening as well as the cuffs on arms and legs," she added. "Women shouldn't wear men's suits, as oftentimes the neck is too large and the shoulder seams lay lower across the bicep, which limits mobility and range of motion."

On the subject of openings, "do you see any seams that are unravelling?" Willhoff asked. "If there are any punctures, rips, or tears, the suit should be replaced, as it could provide a pathway of fire to the body."

"If you do tear a suit, you certainly should get it fixed in a timely manner," advised Brown. "Send it back to us. That way we're using the proper fire-retardant thread to put it together."

Chemical exposure, especially to flammable materials, can impact a suit's flame retardancy. "You see guys who wear them like mechanic's overalls working on



At the 2022 PRI Trade Show, longtime helmet maker Bell Racing introduced a line of soft goods, including fire suits, underwear, shoes, and gloves. "For 2023, we are targeting grassroots motorsports with SFI-5 suits," said Kyle Kietzmann., "For 2024, we'll be adding the drag racing categories of SFI-15 and 20."

things," Prior said. "I can understand that when you're in a time crunch, working between heats. But ideally you want to keep that suit as pristine as possible. They're going to get dirty. They're going to get beat up. That's fine, but when you get into chemicals—oil, fuel, anything like that—you just turned your most important piece of protective equipment into a wick, basically."

To keep it clean, "we recommend a suit is dry cleaned with non-petroleum-based solvents," explained Prior. "It's very important when a racer takes a suit to a dry cleaner to request that it truly be dry cleaned and not laundered."

The Proban material used in some SFI-1 suits is a "cotton-treated-type layup, and it's possible under certain circumstances to wash some of that treatment out if you're not careful about how you clean the garment," O'Connor said. "Nomex or Aramid-based fabrics are going to have a natural inherent fire resistance to them, so there's not as much of a concern of washing that treatment out because there's no treatment on the fabric. However, over time the fabric itself can still break down, and that changes the

WHEN COMMUNICATIONS IS KEY...TURN TO... TURN 2

- Communication Systems
- Helmets • Tents • Trailer Curtains
- Tool Box Covers



Official Radio Provider for the NMCA Muscle Car Nationals and NMRA Nationals Series



302-362-2441
www.Turn2RC.com

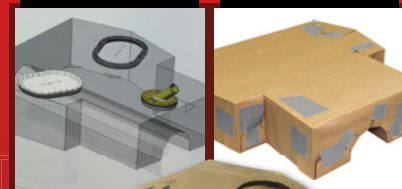


THE MOST RESPECTED NAME IN FUEL CELLS FOR 50+ YEARS

LET US TRANSFORM YOUR FUEL SYSTEM DREAMS INTO REALITY

DETAILED CAD MODEL

TO PAPER TEMPLATE



ATLRACING.COM @atracingfuelcells

800-526-5330 MADE IN THE USA - Ramsey, New Jersey USA

STEERING CLEAR OF COUNTERFEIT GEAR

Top quality safety gear is not inexpensive, so it makes sense that a racer on a budget would look for deals when it's time to add or replace a piece of equipment. A deal that's too good, though, usually means the gear isn't what the racer thinks it is.

"Pop-up suit companies selling suits for pennies on the dollar compared to your more reputable brands is a very appealing thing," admitted Jacob Brown of K1 RaceGear, Carlsbad, California. "People don't want to spend a lot of money on safety gear, but usually the old adage 'you get what you pay for' typically rings true." A suit selling far below regular market value "usually means the material is not what they say it is. It's not going to keep you safe in case of an accident."

"The SFI Foundation and FIA do rigorous testing for the racing safety companies to make sure that the materials hold up to the standards required to have their certification," noted Carrie Willhoff of Racechick, Woodland, California. Looking for an SFI label or FIA hologram on the gear will usually ensure the racer is getting authentic equipment. But there was a recent spate of SFI labels being counterfeited, and "the embroidered fake SFI labels look pretty darn close to the real thing," Willhoff said.

To avoid being scammed, racers should do their homework before buying. "Research the company on the SFI Foundation list of approved manufacturers, which can be found on its website (sfi-foundation.com), and always buy through the approved manufacturer directly or one of its distributors," Willhoff said. "I know it's tempting to get 'the deal' on eBay or buying from other channels, but it's imperative that people know exactly what they are getting by going straight to the approved manufacturer."

When buying a helmet, "the Snell website (smf.org) has a listing of all helmets that meet its certification," said Ben O'Connor of Impact Racing, Indianapolis, Indiana. "Look at the Snell decal and make sure it matches the packaging, because it's labeled inside the helmet as well as on the packaging itself." If a racer is still in doubt, contact the manufacturer. "There are ways they can identify their helmet, either through the Snell labels or just looking at the product. We would know instantly if we turned the helmet over and looked at the interior, because there are certain pieces of the hardware that are very specific to us."

The safest thing, O'Connor said, is to "buy direct from the manufacturer or through a well-known dealer. The places to avoid are large e-commerce sites that are open platforms anybody can sell through. If somebody's counterfeiting something, that's where you're going to find it."

That doesn't mean Internet retailers like eBay and Amazon aren't legitimate sources of safety gear, said Danilo Oliveira of G-Force Racing Gear, Acworth, Georgia. "We are on eBay; we are on Amazon. If you want to buy from eBay, buy from official stores that are on eBay, not from any one seller on eBay."

Determining whether a safety equipment retailer is legitimate "isn't that hard," Oliveira said. "Do they have social media? Google can tell you how many reviews they have, how long they've been in business. If you look at G-Force, it's 25-plus years. Look for one of our dealers, like Summit, you'll see that they sell billions of part numbers."

"The ones who can stop fake products are not the police or the manufacturers, not SFI or FIA," he added. "We can't. It's impossible. The ones who can stop it are the consumers." —*Drew Hardin*



characteristics of the fabric."

Fire suit material "will get thin over time," said Stroud Safety's Tommy Cunningham. "Areas that you use in a race car—your bendable joints, elbows, knees, waist area where your belts come across, everywhere there's a constant wear—every time you suit up and strap in, it's getting a little abrasion. Friction will cause wear faster than normal. If you wear the material thin, or make a hole in spots, there's less protection in those areas."

"Replacement should be based on how much the suit is used," Oliveira said. "The guy who cleans his suit once a month because he's racing every other week should be looking for a suit sooner than the guy who raced three times a year."

The Proban or treated FR cotton commonly found in SFI-1 suits "will lose its fire retardancy over time as you continue to wash it, wear it, and move around," Brown said. Nomex, by comparison, "will break down, the actual fire retardancy will decrease, but it will never go away." For that reason, Brown recommends Proban or FR cotton suits be replaced "yearly, or at the absolute most every two years if they haven't been worn that much."

Annual replacement was the shortest timeframe we heard from any of the representatives. Most recommended suit



There are no time limits set per SFI for driving shoe replacement, said Impact Racing's Ben O'Connor, "but if the soles are coming undone or splitting, you should replace the shoes."

faster, to get that extra tenth, but common sense needs to kick in. You need to spend money on proper safety gear. You need to replace it every so often. You're getting motors rebuilt every 12 to 15 races, let's get the suits redone every 40 to 50 races. That's extreme, but look at the money you're spending on the car versus what you're spending to be safe to race. Safety is usually an afterthought, and it shouldn't be." **PRI**

replacement after anywhere from two to five years, depending on its condition, how often it was worn, and all the other factors mentioned above.

Similar recommendations came up when discussing accessories. "Shoes and gloves should be replaced every two years, unless you wear a hole in them," Prior said. "Driving shoes are designed for driving, but we wear those things everywhere. That just wears the soles out quicker."

"I saw a guy, a pro or semi-pro driver, walking on the track with a shoe that was almost falling apart," Oliveira explained. "I asked him, 'Why do you still have that shoe?' He said, 'I just don't feel like putting money into shoes. I only have two more races this season.' I said, 'Man, you shouldn't have been wearing this a month ago. You still have two more races? Come on, buy the shoes and wear them next year. You still have next year to race.' There has to be a balance of common sense and what you're allowed to wear."

"Safety comes down to common sense," Brown added. "You have to take care of yourself more than anything. You can buy the fastest motor, the best tires, the best chassis, but if you get hurt racing, you can't replace yourself. You're given one head, one body. We're always going to do what it takes to go

SOURCES

Bell Racing USA
bellracing.com

G-Force Racing Gear
gforce.com

HANS Performance Products
hansdevice.com

Impact Racing
impactraceproducts.com

K1 RaceGear
k1racegear.com

Racechick
racechick.com

RaceQuip
holley.com/brands/racequip/

Simpson Performance Products
simpsonraceproducts.com

Stilo
simpsonraceproducts.com/stilo-racing-helmets

Stroud Safety
stroudsafety.com

PF Performance Forge, Inc.

FORGED PISTONS

MADE WITH PRIDE IN THE USA

PERFORMANCE-FORGE.COM
323.722.3460

BR Motorsports IGNITIONING

MSD MAG REPAIR

- Full Service MSD Mag & Box Repairs
- From Top Fuel to Sprint Cars & Everything In-Between
- We specialize in Amperage Output Blueprinting
- Home of the Black Magic Series of Pro Mags
- State-Of-The-Art Testing Facility
- Largest Inventory of 12, 20, & 44 Amp Units on the Planet
- 28 Years Experience, See brpromag.com

1-800-328-3333
2216 EAST MINERAL KING • VISALIA, CA 93292
brpromag.com

ROBINS SINCE 1983

Rubi-hard
Premium 3-Angle Inserts

Carbide Pilots (Live + Fixed)

Get min 50% more life compared to any other 3-angle inserts

ATTENTION

ROBINS offer fixed, Serdi, Newen BB style live pilots in 0.0001" (2 microns) increments

ROBINS SINCE 1983

Anthony Usher (949) 450-7176 Eastern USA & Canada | RobinsMachines.com | Jeff Marchison (909) 226-9922 Western USA

TAILOR-MADE BOOST

Turbo design is more sophisticated than ever, but so are the rule sets and demands in many racing disciplines. To meet requirements while remaining competitive, racers are turning to custom turbochargers for solutions that are purpose-built for the application.

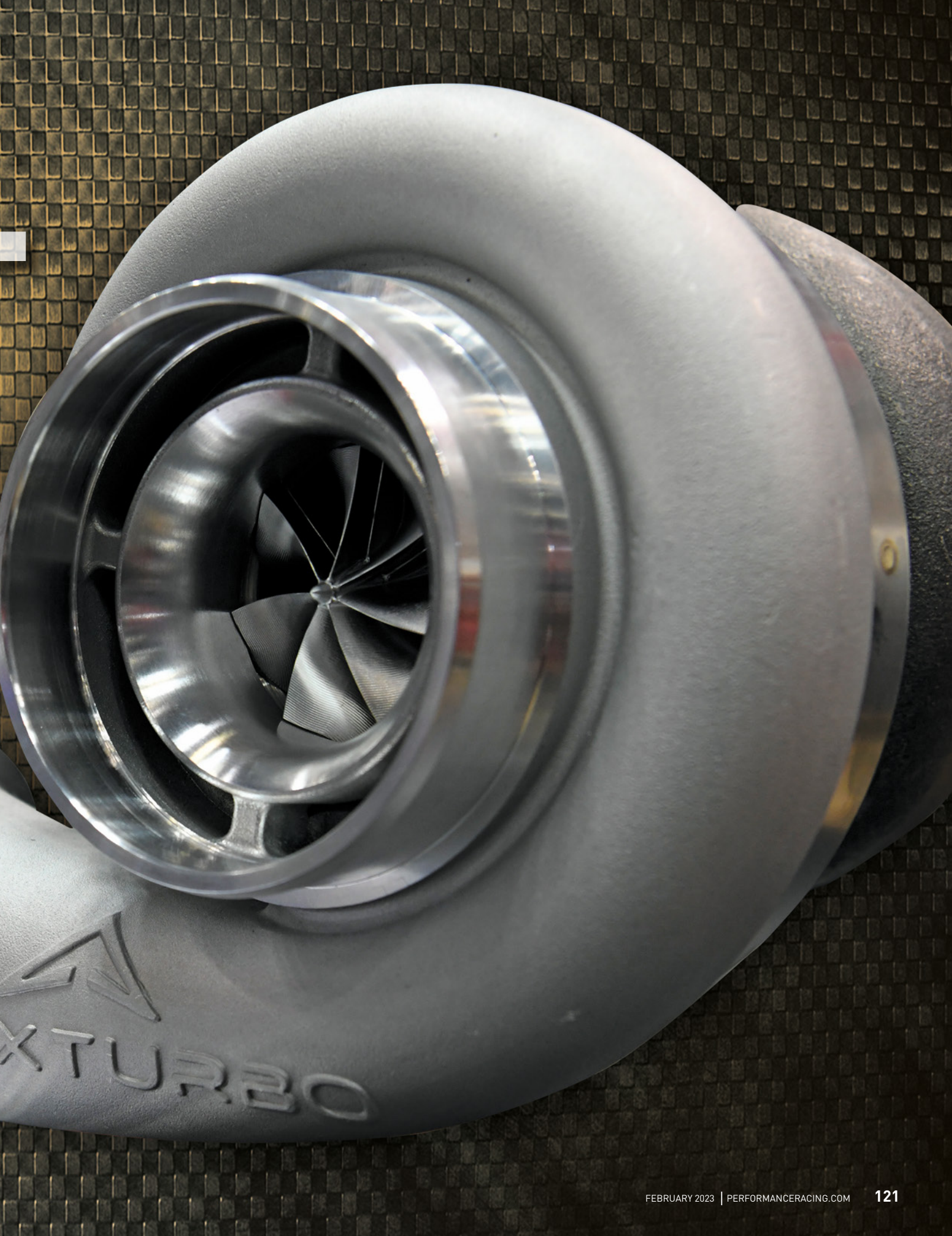
By Bradley Iger

As increasing numbers of racers embrace turbocharging as their preferred route to big power, turbo manufacturers have been putting in long hours creating bigger, better, and more robust offerings to meet the demand. Advances in compressor housing and wheel designs, material improvements, and expanded product lineups have come not only as a result of larger demand, but also due to the number of companies that are now fighting for a piece of the forced induction pie. As is often the case in the automotive realm, increased competition improves the breed.

"It's forcing everyone to step up their game," said Reggie Wynn of Precision Turbo & Engine, Crown Point, Indiana. "The products just keep getting better and better all the time."

Still, there are situations where an off-the-shelf turbo solution just won't cut it. As a result, serious competitors across a range of motorsports disciplines are now turning to custom turbochargers as a means of dialing in their setups not only for the demands of their application, but also the specifics of the rule sets in the classes they run in.





XTURBO



A bigger emphasis on aerodynamics has increased flow rates for both the compressor and the turbine, said a source. Those aerodynamic improvements have necessitated evolution in other aspects of turbo design.

STRATEGIC DEVELOPMENT

"At this point it's about really making these designs state of the art," said Ryan Salenbien of ApexTurbo, Maybee, Michigan. "Right now the bearing packs are improving because the wheel designs are getting so much better, and we're seeing more high-quality ceramic ball bearing options for CHRAs [center housing rotating assemblies], which is dramatically increasing the longevity of those turbos. And, of course, the geometries of the wheels keep improving. It's about optimizing all of the surface area that you have to work with in a given bore size for greater output."

Geoff Raicer of Full-Race Motorsports in Phoenix, Arizona, told us that, when it comes to motorsports-caliber products, recent increases in flow rates for both the compressor and the turbine have come from a bigger engineering emphasis on aerodynamics. "They'll use a gas stand to run a very hot, high-velocity stream of exhaust gas through the turbine and a butterfly valve on the exhaust outlet to monitor how much air is actually moving through the system at a given restriction."

Those aerodynamic improvements have necessitated evolution in other aspects of turbo design in turn. "If you're gunning to be a top performer, there is nothing that's going to beat today's high-end ceramic ball bearing with an aluminum cage that's plated with silver to prevent galling," he added. "Little tricks like that have changed not only response, but also longevity. The abuse that today's turbos can take is pretty wild."

GOING BESPOKE

These advances in turbo design are pushing up horsepower numbers at all levels of motorsports, but Wynn noted that racers who are competing at the upper levels of a given discipline are still faced with potential compromises if they opt to stick with off-the-shelf solutions.

"If you're serious about being competitive, it should be a consideration," he explained. "Unless you're just going to get some track time and hang out with friends, a custom turbocharger is going to make more sense in almost any situation."

While custom turbos typically command a 20–30% premium over their standardized

counterparts, the ability to tailor various aspects of a turbo's specifications for a particular application comes with undeniable benefits. In a growing number of popular racing disciplines, going custom is becoming a necessity.

"When someone comes to us for a custom turbo, they usually need to follow some kind of rule or regulation for the class they're competing in," said Salenbien. "So it's not only being customized for the vehicle and use-case, but also the rule set, and an off-the-shelf option isn't going to give you the best result in a situation like that."

Raicer pointed out that trying to make an off-the-shelf turbo perform like a custom solution can lead to its own set of challenges, particularly in drag racing applications. "Drag racers tend to over-speed their turbos because most don't monitor turbo speed. When you over-speed your turbocharger, you're exceeding the material's ability to hold itself together. The blades can actually explode off of the wheel, and beyond the negative impact that would have on a racer's competitiveness, it's also incredibly dangerous. Fortunately, companies like Garrett and BorgWarner are starting to integrate speed sensors into their designs, and the data can help a racer make these types of decisions."

Many of the benefits of a custom-spec turbo are fairly obvious. Configuring a turbo to a specific engine combination and priorities is going to deliver performance that's better suited to the requirements than a more general-purpose product can. In a growing number of race classes, going custom is more or less mandatory if you have your sights on the podium.

"Typically, you'll see rule sets that limit inducer and exducer diameters," Salenbien said. "Sometimes it'll be related to the surge grooves in the compressor covers. If they're too large, you might end up being disqualified based on a rule set's requirements. It's especially prevalent in drag racing. Most organizations have turbo specifications that can be used for a given vehicle weight. In a sport compact class you might be allowed to run a 57-mm compressor wheel for a weight deduction, or maybe you can run a 73.9-mm inducer



Increased competition in the turbocharger market has led to improvements in turbo technology. "It's forcing everyone to step up their game," said Reggie Wynn of Precision Turbo & Engine.

at different minimum weight. If the rule said 73.9, anyone who is serious about being competitive is going to look for a turbo with a wheel that's 73.9 mm. You wouldn't get an off-the-shelf turbo with, say, a 73.6-mm inducer because you're potentially leaving performance on the table. So unless you find a turbo that's made specifically for a certain class and happens to be well-suited to your engine combination, you're going to have to go custom to comply with that rule set while maximizing performance potential."

With so many drag racing classes having their own specific requirements, finding an eligible off-the-shelf turbo that's also ideal for a given application is becoming more difficult by the day. "Inducer, exducer, and the turbine wheel size are typically all going to be factors in a rule set where that's regulated," said Wynn. "That's why it's really hard to find an off-the-shelf turbo that ideally fits an application. It might be the right inducer size, but you could be giving up some performance by not having a larger exducer, for example."

Custom turbos are also popular in diesel tractor pulling for similar reasons. "All of the classes in pulling have very specific dimensional characteristics for turbochargers," said Roger Conley of Harts Turbo, Fayette, Missouri. "So for us, work in that segment is constant. Our dyno is running 120 to 150 days a year just doing development work, and most of that is for truck and tractor pulling. We'll try two different wheels to see how it responds, then one of our engineers will go back to

the office, modify the design based on the results, and plug that into the CNC machine. The next morning the wheel is ready to go, so we bolt it up to the turbo and make another rip."

In other motorsports like rally, road racing, time attack, and drifting—where the rule sets often don't regulate turbo specifications—the need to go custom tends to come from priorities that are specific to the format of the discipline. "Those racers tend to focus more on 'time to torque,'" said Raicer. "If you need world-class response and spool, you usually aren't going to be able to achieve that with an off-the-shelf turbo. These are situations where you're on and off of the throttle many times over the course of a run, rather than going wide open throttle for a few seconds at a time like you would be in a drag race. Drag racers don't really need to worry about response and inertia as much because they're going to be on boost for the entire pass, but when you're on and off of the throttle and driving for extended amounts of time, response tends to become a higher priority. That response is typically achieved with things like electronic waste gates and smaller turbos that are made out of more exotic materials."

GETTING DIALED IN

Those who are considering a step up to a custom turbo will need to have some information at the ready in order to get something that's really synced to their needs. "Everyone ultimately wants the most power in the shortest amount of time, but the

COMETIC
GASKET

ph: (440) 354-0777 · 1 (800) 752-9850

www.cometic.com

f t i in

BRODIX COY

HEADS • BLOCKS • MANIFOLDS

ALUMINUM HEADS
ALUMINUM BLOCKS
CAST IRON BLOCKS
INTAKE MANIFOLDS

t i f YouTube

www.brodix.com

301 Maple • P.O. Box 1347 • Mena, AR 71953
Fax: 479-394-1996 479-394-1075

NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE

TUNE UP YOUR TURBO

SELF-FITTING GRAPHITE COATINGS:
ZERO CLEARANCE - ZERO FRICTION
BOOST PERFORMANCE
INCREASE EFFICIENCY
REDUCE TURBO LAG
IMPROVE FUEL ECONOMY

LINE2LINE
COATINGS

ABRADABLE POWDER COATINGS™

248-625-3052

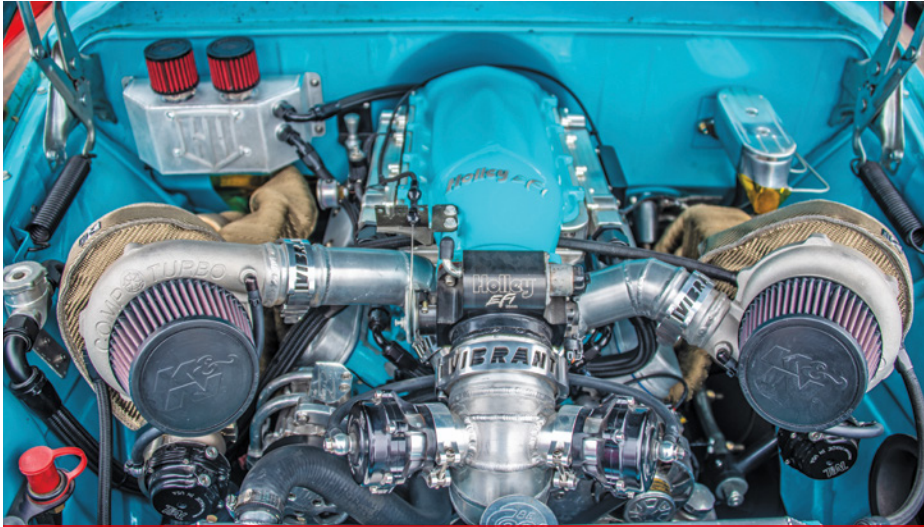
WWW.LINE2LINECOATINGS.COM

JAZ
Products

SEATS
FUEL CELLS
PIT ACCESSORIES

800-525-8133

www.JAZProducts.com



Competitors across motorsports disciplines are turning to custom turbochargers to dial in their setups not only for the demands of their application, but also the specifics of the rule sets in the classes they run in.

specs really come down to the needs of a particular application,” said Wynn. “The main difference is that the turbocharger is going to be running at longer amounts of time in a drift car than it is in a drag car, so that driver is probably going to need something that’s a little more durable to ensure that it can handle the demands of that type of racing, and they’re probably going to prioritize response over maximum horsepower.”

Salenbien suggests that a racer’s engine builder or tuner should be part of the custom turbo conversation, and that it’s important to keep in mind that with a custom turbo, tweaks can be made after the fact when needed. “You have to have a clear understanding of what you’re after, and you need to speak to the right turbo techs in order to get there. But if something doesn’t work the first time out, you can make it work. One of the big benefits that you get with a custom turbo is that it’s upgradable. So if one aspect of the spec doesn’t work, you can make changes to it to get it where you want it to be.”

Custom turbo options tend to cover everything from inducer and exducer sizing and turbine housing design to blade count on the turbine wheel, but it’s important to be aware of how these different options interact with one another. “We can get in the

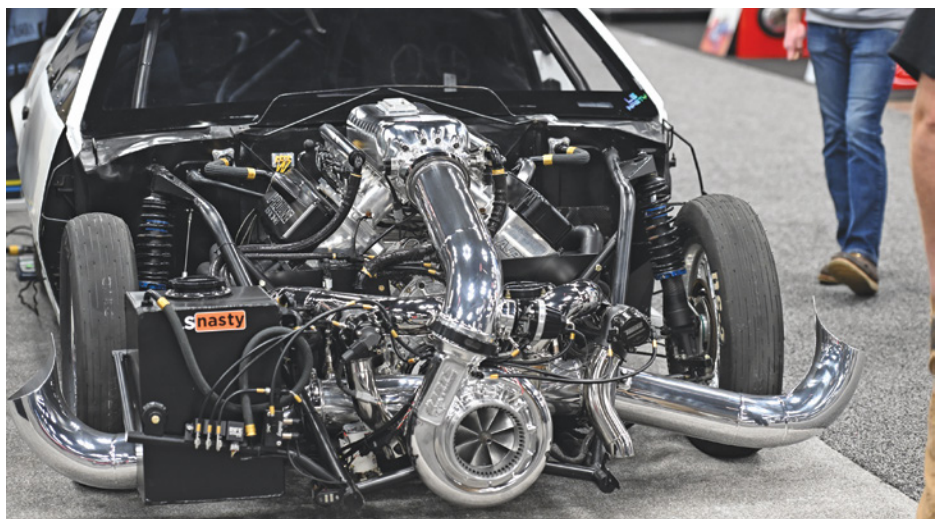
ballpark with the wheel size of it, and then we fine-tune it with the turbine housing,” said Conley. “Changing the sizing of the turbine housing basically changes the rate at which it pinches down the air. So it becomes more restrictive, but it drives the turbocharger harder. If you have a smaller displacement engine, you might use a smaller turbine housing to improve that response and get it

to spool up quicker, whereas you might not want to do that with a larger displacement engine that really wants to breathe.”

Along with a thorough understanding of their class rule set, racers who are looking to move to a custom turbo generally just need information about their application and their goals. Details like the engine’s displacement and typical rpm operating range, the fuel being used, power goals, and whether the setup will utilize additional power adders like nitrous or a water/methanol injection system can help zero in on the turbo specifications that will deliver the right result. “Ultimately there’s no free lunch,” Raicer said. “Everything in turbocharging requires some level of compromise, and it’s up to the person spec’ing the system to create the best balance based on the needs of the application.”

GOING BEYOND PLUG AND PLAY

Although custom turbos can provide racers with a number of benefits over off-the-shelf units, would-be adopters must keep in mind that custom turbos often need custom supporting components. “Most custom turbos are not a direct bolt-on replacement, so there’s going to be some plumbing requirements,” said Salenbien. “And it’s



Custom turbo options tend to cover everything from inducer and exducer sizing to turbine wheel blade count. But, manufacturers should be aware of how these different options interact with one another. “We can get in the ballpark with the wheel size of it, and then we fine-tune it with the turbine housing,” said Roger Conley of Harts Turbo.



A custom turbo should be a consideration for any racer “serious about being competitive,” said Reggie Wynn of Precision Turbo & Engine. “Unless you’re just going to get some track time and hang out with friends, a custom turbocharger is going to make more sense in almost any situation.”

important to make sure you have proper fittings, drains, and so on. You don’t want to cause any premature wear, so you need to make sure you have an adequate oil feed and the correct amount of pressure.”

Proper mounting is also crucial to turbo performance, and that can be trickier when you’re working with turbos of this caliber. “One issue that we see a lot in classes like Pro Mod is that people will tilt the turbo further than 15 degrees,” said Wynn. “When you do that, it causes the oil to want to stay inside the bearing housing because it’s gravity-drained out of the turbocharger, so it just keeps building up more and more, and that can cause oil to leak out of the bearing housing. We tend to see this issue more often at this level because these are physically large turbos—whether it’s a custom unit or something off the shelf—so it’s easier to start running out of real estate in the engine bay.”

Despite any additional cost and complexity that comes with the move to a custom turbo, Salenbien expects to see continued demand for these offerings over the coming years, particularly at the upper levels of motorsports. “I don’t know if we’ll ever have a situation where there are enough options available on an off-the-shelf product that it will make custom turbos irrelevant. Serious competitors don’t want to compromise on performance or reliability, and you’re always going to need to do something to the turbo in order to really set it up for requirements of a given application.”

As bigger advances are made in turbo design, Conley expects to see those innovations arriving in high-end custom offerings well before they make their way into more mainstream products. “We’re pushing more into boreless technology, where the hub has gone all the way down to the point where you don’t see a shaft coming through with a nut on it, and we’ve seen that there are other manufacturers that are headed in that direction as well. That boreless design creates more surface area for the blade to compress the air, so you’re improving flow on the hot side just by taking that bulky hub and nut out of the equation. Competition in turbo development is really pushing the technology forward. We make something better, then someone else comes back with their own improvements, and we respond in turn. It’s the American way.” **PRI**

SOURCES

ApexTurbo
apexturbo.com

Full-Race Motorsports
full-race.com

Harts Turbo
hartsturbo.com

Precision Turbo & Engine
precisionturbo.net

CARRILLO
FOR ALL YOUR PISTON & CONNECTING ROD NEEDS... WE'VE GOT YOU COVERED.

949.567.9000
WWW.CP-CARRILLO.COM

PENSKE
RACING SHOCKS

3 SHOCK SETUP SUPPORT

DESIGNED TO WIN

Facebook: @penskeshocks
Instagram: @penske_racing_shocks
YouTube: @penskeracingshocks

WWW.PENSKESHOCKS.COM
610-375-6180

Ron Davis
RACING PRODUCTS
High Performance Radiators

**Oval Track
Off-Road
Road Racing
Drag Racing**

Superior Products!
Quality Materials!
Skilled Craftsmen!
Latest Technology!

1. 800. 842. 5166
Dealer inquires welcome!

Since 1976
Glendale, AZ
rondavisradiators.com

DARTON SLEEVES

WWW.DARTONSLEEVES.COM

TOLL FREE ☎ **(800) 713-2786**
FAX 📠 **(760) 603-9629**

MEMBER CHECK-IN

T SPORTLINE

Pushing the performance envelope into EV territory is the focus of this PRI Founding Member.

By Jim Donnelly

The North American performance industry started out in the 1940s with components like cast cylinder heads for the flathead Ford V8. It has been evolving continuously ever since. Scores of manufacturers develop speed products for engines that rely on carbon fuels. A few others are pushing performance boundaries into a new dimension by anticipating aftermarket needs for the new generation of electrified vehicles.

Among the leaders of this new wave of aftermarket performance is T Sportline, which advertises itself as the world's first, and leading, source of tuner components for Tesla vehicles.

Operating from bases in Atlanta, Georgia, and Van Nuys, California, this PRI Founding Member offers a variety of products for these luxury performance EVs, centered on wheel-and-tire packages that address the physical realities of a Tesla's overall layout and capabilities. Beyond that, T Sportline markets Tesla model-specific exterior dress-up items, interior enhancements, and tools, all aimed at making Teslas tougher.

"We're primarily Tesla but moving into all types of EVs at this point," T Sportline CEO Brian Reese explained. "Our company started 13 years ago with a focus on Tesla; we got started before it was even cool to think about electric cars. We have almost 10 years of experience in that space.

"Really, our mission has been similar to the traditional automotive aftermarket for ICE cars," he added, "in that we wanted to improve the performance and appearance of the vehicles. We have a respectful relationship with Tesla, but they're mostly focused on delivering cars. We've known them since it was just Elon and some guys."

Like traditional muscle cars, EVs benefit from the lower unsprung weight that a specialty wheel-and-tire combo can deliver,

only the engineering parameters are considerably different between the vehicle types. "You have to specify products for use in EVs because the cars are heavier," Reese explained. "Our load rating for wheels is typically higher than what you'd find in a similarly sized wheel for ICE. We tend to have to make a higher-spec wheel that can survive on a Tesla because of the torque and the weight. You can't just take your ICE part and say it's good."

As such, T Sportline's business centers on modifying vehicles, with the potential regulatory roadblocks that the notion implies. For that reason, Reese made clear that T Sportline benefits just as strongly from PRI advocacy, particularly at the federal level, as any supplier specializing in internal-combustion power.

"We share, just like people with ICE engines, in preserving the right to modify a car," he said. "We're a little different than ICE is. We maybe don't have the same EPA consideration as an ICE engine, but like anything else, I'm sure there are things waiting down the road for us, such as disposing of batteries, or modifying batteries on these cars, so I think we're comparing our interests to the ICE world in terms of preserving our rights to race."

T Sportline, in Reese's assessment, currently faces operational headwinds that are analogous to those faced by firms developing internal-combustion components.

"We have the same challenges as everyone else," he said. "It's difficult to dance around COVID-19 delays and factory slowdowns. We've paid a lot on inbound and outbound freight, and for us, the OEMs making new cars for us to modify has been a challenge. There just aren't as many new cars as there should be."

Looking ahead, Reese cited the economy



As the performance aftermarket expands from its traditional focus on internal combustion engines to now including vehicles with electric motors, Brian Reese of T Sportline is leading the charge to add performance enhancement options to Tesla owners.

as yet another ongoing challenge. "We're coming off some really good years, but now have interest rates really going up. Hiring people is also difficult, especially to work in the office, not from home. We're a hands-on business here."

The long-term outlook is nonetheless exceedingly positive for T Sportline as the acceptability of EVs continues to expand and performance opportunities grow. "We allow customers to personalize, to improve performance, and to support whatever means of activity they want to do," Reese said. "We do street cars to full-race performance, whatever suits somebody, and it's good to know that in the land of Tesla, everything is up for performance upgrades in just the same way that we've known in the traditional market. Most of it is street, only because it's relatively new, but NHRA has also created an EV bracket. Tesla has been routinely involved in autocross and road race and has really done quite well. Even in off-roading or overlanding, we're growing in that category as well.

"What's different is that the motorsports world needs to evolve around EVs like it did around ICE," he continued. "You think about drag racing: There's no such thing as a cubic-inch limit in the land of the EV. There will be some evolution there that I think will come along just fine. The cars perform extremely well. They have a very low center of gravity, you're never in the wrong gear, and they're typically all-wheel drive, with great stability management. They make you a better driver." **PRI**



THANK YOU

PRI FOUNDING MEMBERS FOR YOUR CONTINUED SUPPORT!

Your commitment to build, promote, and protect the racing community is an honored category within PRI membership and the motorsports industry at large. PRI Founding Members' unparalleled support and dedication to racing is a critical factor in the fight for our community at all levels of motorsports.

The membership team is grateful for the continued support of our Founding Members and encourage all PRI members to offer support by visiting Founding Members' websites to learn more about the companies, missions, products, and services they provide to the industry.

PRI exists because we—together—are strongest when we are united. By stepping up to Founding Member status, these companies send a clear message that they support our industry's yesterday, today, and tomorrow. And they're showing they stand with you, our members.



WINNING TOGETHER

CHECK OUT YOUR EXCLUSIVE
PRI MEMBERSHIP BENEFITS TODAY AT
WWW.PERFORMANCERACING.COM



PRI TECH

CONSIDERATIONS FOR RACING FIRE SUPPRESSION SYSTEMS

Determine which type of system to install now before each second of a fire event becomes more and more crucial.

By James Clay

Over the last decade, fire suppression has moved to the forefront of discussion in the racing world. We continue to evolve driver safety in our sport, yet the proximity of a safety response team has too often been the dictating factor in determining our standards.

Rally car teams in more remote environments were the first to develop and require system efficacy. This trend followed with sports cars on 2- to 3-mile road courses. Yet, some notable fires resulting in injury still occurred in half-mile ovals with faster response times. The initial 20 seconds of a fire event, where the fire suppression system is the only responder, is critical.

When we discuss fire protection, we focus on plumbed-in systems. There are two primary deployment methods available: automatic or driver-activated. Driver-activated systems are deployed as a first step in a fire event while the driver is still belted in. Both systems allow drivers to focus on getting out of the vehicle while the fire system fights the fire.

Handheld systems are intended to be supplemental because they require an active user. In rally or off-road, their primary use is to help other competitors. In a significant fire event, the driver needs to be able to focus on extraction.

There are several factors that define the effectiveness and suitability of a fire suppression system. This includes the suppressant type, amount, delivery method, and system design.

For a series with existing fire



suppression rules, many of these factors will already be defined. This leaves you with fewer choices to make—so always start by reading the rules, as these factors are all interrelated. Yet, with a proper system design, suppressant type is more often the defining factor.

TYPES OF FIRE SUPPRESSANTS

There are three major classes of fire suppressants: gas, foam, and powder. For most applications, gas agents are the gold standard. They react with the fire three-dimensionally. This means they expand in a volume of space to fight fire. 3M Novec 1230 is the leading modern gas agent, as Halon suppressant has been illegal to manufacture for well over a decade.

Novec is non-conductive and non-corrosive. This is critical

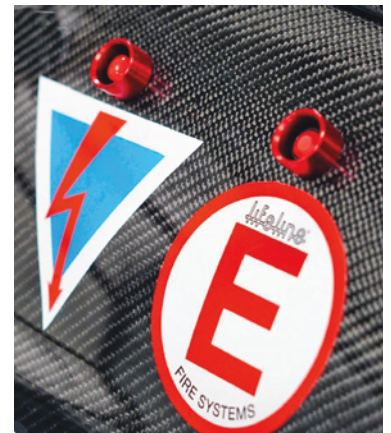
SFI has recently mandated fire suppression systems for sprint cars. Here, Lifeline USA's automatically activated 5-pound SFI 17.3 system is mounted under the seat in a sprint car.

in vehicles with expensive and advanced electronic systems. It also evaporates with no residue for easy clean-up. Finally, Novec is a super-coolant, which puts it at the forefront of the newest technology for EV and hybrid vehicles. Preventing thermal runaway is critical to fire containment in electric platforms.

Foam is another effective suppressant. It has the benefit of drawing heat out and preventing reignition due to the high volume of water in the foam solution. Yet, it is a two-dimensional agent that must cover and smother the fire with a foam film. Thus, there are efficacy limitations, especially in racing vehicles with larger volume cockpits with more complex contours that are harder to smother with a foam barrier, typically but not limited to production-based cars and trucks.

Finally, powder can be effective for many types of fuels as a suppressant. When mounted in a racing vehicle, however, powder packs down with vibration, making it dense, hard, and difficult to deploy.

Pictured here is an electronically active fire marshal button on the exterior of a race car. A fire suppression system's activation method is one of several key criteria used in choosing the proper system for a race application.





Shown here is an example of an electrically activated FIA system typically seen in sports cars and road racing. System installation should follow both the sanctioning body's rulebook as well as the system's instruction manual to achieve the intended performance.

- Engine bay and cockpit airflow: As more air flows through these areas from a combination of higher speeds and more open design as found in a sprint car cockpit or Ultra4 engine area, suppressant will be diluted when the fire system is deployed while moving, so more is required. Conversely, a closed-cockpit prototype requires much less suppressant to maintain safer levels for the driver inside.

- System size.
- Activation method (mechanical, automatic, electrical, and auto electrical).
- Weight constraints: Weight is often less of a concern for a vehicle adding ballast than those at or over the weight limit, but many still focus on an effective lightweight system to allow more freedom in ballast placement.
- Rulebook requirements.
- Budget.

Once a fire suppression system has been installed, just like any other part on the vehicle it must be properly maintained to remain effective and compliant. Both the SFI and FIA require that fire systems be serviced every two years by an authorized dealer. If you have installed a water-based foam system, ensure that your vehicle isn't stored in freezing conditions. If so, make sure your manufacturer has incorporated an antifreeze in their suppressant.

Fire protection is a critical component in continuing to make our sport safer and more sustainable. Choosing the correct system for your vehicle and type of racing shouldn't be daunting, but there are several factors—more than we can even touch on in this article—to consider. If you don't have a clear answer of what is correct for you, engage with your supplier or manufacturer to ensure you are getting the protection you're paying for. A fire system spends 99.44% of its life riding around as ballast. When you need it, you'll be thankful you invested the time to choose the correct one. **PRI**

James Clay is a professional sports car racer and has been involved in the racing industry since 1997 as the president of BimmerWorld and BimmerWorld Racing. In 2015, James and team expanded their racing industry footprint with the start of Lifeline USA, the American arm of the UK fire suppression manufacturer Lifeline.

It takes a very advanced deployment system to both prevent this and deploy in rollover situations. For this reason, powder is often confined to crew or safety team use.

SUPPRESSANT DELIVERY METHODS

Suppressant delivery method is no less important than the suppressant itself. It is a factor that differentiates many manufacturers. It isn't uncommon to have different nozzle designs for gas and foam suppressants, and even specific designs for engine versus cockpit, or SFI versus FIA homologated systems.

For example, nozzle count isn't defined in FIA homologated systems as it is in their SFI

counterparts. They are more of a factor of system design; not "more is better." Tubing length and diameter, as well as operating pressure, also play a critical role in system design and performance. Installation should follow both your sanctioning body's rulebook as well as your system instruction manual. This is critical to achieve the intended performance.

Some final factors may also influence your decision on a fire suppression system. They include:

- Vehicle size and interior volume: Larger vehicles with larger cockpit and engine bay volumes such as Trophy Trucks, stock cars, and production sedans typically require more suppressant than small single-seater formula cars.

ADVOCACY CORNER

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

PRI's Washington, DC-based legal and advocacy teams work continuously to protect and support motorsports venues, sanctioning bodies, and businesses around the nation. We are tracking several initiatives this month, including an update on key legislation designed to protect racing businesses, a new law aimed at impeding sales of counterfeit goods, how connections from December's PRI Show will fuel the industry in 2023, and more.

UPDATE ON STATUS OF RPM ACT

The 2021–2022 Congressional session has ended without the passage of the Recognizing the Protection of Motorsports (RPM) Act despite strong Congressional backing and extraordinary support from the racing community.

"We wouldn't have made it this far without this incredible effort by so many of our members," said SEMA President and CEO Mike Spagnola. "The RPM Act was one of the most bipartisan bills in the 117th Congress, with over 165 lawmakers co-sponsoring the legislation. SEMA and PRI are leveraging the momentum we built during the 2021–2022 congressional session, assessing the current challenges the industry faces, and will be charting a path forward for the industry's advocacy efforts at both the federal and state levels."

SEMA/PRI will continue its advocacy work to bring needed certainty to the racing community and protect a great American pastime and hundreds of thousands of jobs in communities throughout the country. For updates, visit saveourracecars.com.

NEW LAW TAKES AIM AT COUNTERFEIT GOODS

A new law has been passed that will help protect consumers from bad actors peddling counterfeit and stolen goods. The PRI-supported INFORM Consumers Act is critical in helping law enforcement,

manufacturers, retailers, and online marketplaces of all sizes shield buyers from unscrupulous merchants selling knock-off and potentially unsafe products.

"PRI celebrates passage of the INFORM Consumers Act, which protects the intellectual property of motorsports parts manufacturers and helps to prevent the sale of stolen and counterfeit products," said Eric Snyder, PRI's Senior Director of Federal Government Affairs.

For more information, including key provisions of this new law, contact Snyder at erics@sema.org.

TRACKS, SANCTIONS STRATEGIZE AT PRI

Motorsports facility owners, event organizers, promoters, and professionals from across the nation gathered at the most recent PRI Trade Show to create dialogue, share information, and make new connections.

"These conversations between tracks and sanctions give racers more consistent and quality racing. We're moving toward race teams being able to tune to what they ran at the last track or race they attended," said Kurt Johnson of Petersburg, Indiana-based Total Venue Concepts. "Safety is also paramount. It's not just a competitive advantage—we're also providing safer tracks countrywide thanks to the conversations [here]."

During the three-day Show, more than a dozen breakout sessions took place in the



From left, Mike Gritter of Autobahn Country Club, Tim McGrane of M1 Concourse, Kathy Stout of Pittsburgh International Race Complex, and David Vodden of Thunderhill Raceway Park lead a road course roundtable at PRI.

TOPS (Track Operators, Promoters, and Sanctions) Workroom & Lounge presented by MyRacePass.com, including a special drag racing day that covered topics on track prep and maintenance and getting the most out of track equipment, plus an all-star panel of promoters discussing what makes an event successful.

"We all have to remember that no matter what type of motorsports you're into—drag, oval track, road racing, you name it—the track owners and promoters are the baselines for our entire industry," said Josh Holt, co-owner and co-founder of MyRacePass. "Having a

[space] where promoters can ask questions, hang out with their peers, and learn some of the new tricks of the trade is a fantastic addition to the PRI Show.”

The meetings also allowed tracks and promoters to align their goals—and racing schedules—to benefit race teams, fans, and the entire industry.

“Being able to meet in person strengthened our relationships,” said National Speedway Directory’s Timothy Frost, who oversaw roundtables on road course and off-road racing. “Promoters coordinated schedules with other facilities and sanctioning bodies,” which will lead to more opportunities for track time for racers, fuller car counts, and better racing.

“Anytime you have the opportunity to communicate with others, be it your next-door neighbor [track] or somewhere across the country, it can help; it opens the dialogue that helps foster relations,” agreed Joe Skotnicki of Racing Promotion Monthly (RPM).

PRI RALLY RAISES \$40K FOR ADVOCACY

Some \$40,000 was raised to help elect lawmakers that support motorsports during a fundraising event at the recent PRI Trade Show in Indianapolis. Thousands of industry members took part in the “Save Our Race Cars” rally at Lucas Oil Stadium presented in conjunction with PRI’s Performance Racing Political Action Committee (PAC).

Emceed by Johnny D, “the Motivational Cowboy,” the event featured appearances by members of Discovery Channel’s *Street Outlaws*, as well as Sage “Donkmaster” Thomas, Brent Leivestad from PFI Speed, and others.

For more information or to help support the Performance Racing PAC, visit performanceracing.com/pac. **PRI**

SPINTRIC
EVERYTHING DRY SUMP!
 CNC Machined Dry Sump Tanks | Atmospheric Vent Cans Patented!
WWW.SPINTRIC.COM | 916-652-5282

COMPUTECH
RACEAIR CLOUD
RACING WEATHER STATION
 • Temperature • Wind Speed & Direction
 • Humidity • Sunlight Intensity
 • Pressure • Text Messaging
 • Performance Altitude • Improved Paging
 • Humidity Grains • New Software
 • Air Density Ratio • Easy Installation
 • Correction Factor • 24/7 Tech Support
Computech.com | 301.884.5712

PRI
 PERFORMANCE RACING INDUSTRY
CONNECT WITH PRI
 f t i n i g
PRISHOW.COM/SOCIAL

BRASWELL
 AMERICA'S FINEST COMPETITION CARBURETION
CARBURETORS FOR CHAMPIONS
 Dirt Track | Oval Track
 Drag Race | Road Course
 Off Road | Marine
 - More Top End Power
 - Broader Power-Band
 - Smoother Acceleration
MORE THAN COMPLETE CARBURETORS
 Premium Parts - Engine Building Programs - Rebuild Kits
 (520) 579-9177
SALES@BRASWELL.COM
WWW.BRASWELL.COM

C.H.E. PRECISION INC.
 (805) 499-8885
WWW.CHEPRECISION.COM

ICRP
 864.580.1858
 OWNER OF THE CV PRODUCTS BRAND
CV RACING
 sales@cvracingproducts.com

World Leader In Temperature Sensors!
EGT TECHNOLOGIES, INC.
 EXHAUST GAS
 Motorsports
 Engine Dyno
 Industrial
 Aerospace
 MADE IN THE U.S.
 1-800-348-4678
Sales@exhaustgas.com

INDUSTRY NEWS

RALLY RACER & ACTION SPORTS STAR KEN BLOCK, 55

Prominent rally racer and action sports star Ken Block has passed away after a snowmobile accident in Utah in January. He was 55.

Block competed in the American Rally Association (ARA) along with his wife Lucy and 16-year-old daughter Lia, one of the couple's three children. Block, a co-founder of the skateboarding brand DC Shoes, was also known for the Gymkhana action videos on YouTube.

Block was a featured speaker at the 2022 SEMA Show Kickoff Breakfast, too, where he discussed the making of "Electrikhana," a tire-shredding trip on the Las Vegas Strip through the lens of a bespoke, 800-volt, bi-motor, AWD Audi S1, developed and built by Audi.



Ken Block

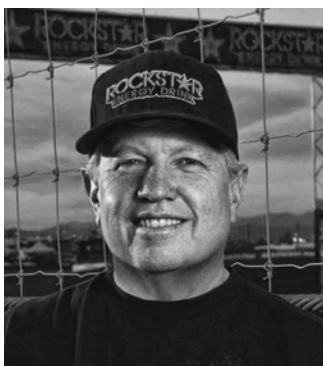
OFF-ROAD RACING PIONEER ROBBIE PIERCE, 63

Off-road racing pioneer Robbie Pierce has passed away following a scuba diving accident in January. He was 63.

Pierce was inducted into the Off-Road Motorsports Hall of Fame in 2018. He owned Santee, California-based Jimco Racing, the provider of off-road racing Trophy Trucks, parts, equipment, and fabrication.

Pierce, who began racing in his 40s, was named CEO of MasterCraft Safety in 1999, and expanded the business with the purchase of Impact from safety pioneer Bill Simpson in 2010. Pierce sold Impact by MasterCraft Safety to the Italian firm Sparco in 2017, and less than a year later, he announced his acquisition of Jimco Racing.

Pierce competed in several off-road racing events, most recently finishing fourth in the SCORE TT Legends class in the 2022 BFGoodrich SCORE Baja 1000 presented by 4 Wheel Parts. He raced a Jimco AWD Trophy Truck with a Dougans engine and an Xtrac transmission.



Robbie Pierce

NEW OWNERSHIP GROUP FOR CARS TOUR

Former and current NASCAR drivers Dale Earnhardt Jr., Jeff Burton, Kevin Harvick and Justin Marks have announced their acquisition of the Solid Rock Carriers CARS Tour.

Founded in 2014 as a continuation of the former Pro Cup Series, the CARS Tour enters its ninth season in 2023. The North Carolina-based asphalt late model series features both Pro Late Models and Late Model Stock Cars competing at the same track on the same night.

"These regional series are vital to the quality of racing you see at the top level," said Earnhardt. "Jack (McNelly, CARS Tour founder) has done a tremendous job establishing the CARS Tour as a preeminent series, and I'm thrilled to be part of its future."

Aside from the ownership transition from McNelly, the CARS Tour will remain unchanged. The 2023 schedule includes 19 race weekends, and McNelly and his staff will continue to oversee operations and track events. The current owners' respective business units—DEJ Management, Jeff Burton Autosports, Inc., Kevin Harvick, Inc., and Trackhouse Racing—will be charged with providing proficiencies in brand management, business strategy and partnership acquisition and retention, among other responsibilities, according to a company release.

MAGNAFLOW GROUP ACQUIRES CAMBURG ENGINEERING

MagnaFlow Group—the Southern California-based company specializing in performance and other automotive products—has acquired Camburg Engineering, the off-road racing and aftermarket suspension brand based in Huntington Beach, California.

Camburg founders Jerry Zaiden and Jason Campbell will continue their roles within the business, focusing on "shaping the future of suspension and off-road racing," according to a company release.

MIKE SHANK APPOINTED TO ROAD AMERICA BOARD

Elkhart Lake, Wisconsin-based Road America has announced the addition of Meyer Shank Racing (MSR) team owner Mike Shank to its Board of Directors.

Shank comes into the position with over two decades of motorsports experience as a professional IMSA and the NTT IndyCar Series team owner.

MSR, which welcomed Jim Meyer as a co-owner in 2018, will contest the 2023 IndyCar season with Helio Castroneves and Simon Pagenaud.



Mike Shank

JESSE WEAVER NAMED NEW CFO AT HOLLEY

Holley—the platform for performance automotive enthusiasts based in Bowling Green, Kentucky—has announced the appointment of Jesse Weaver as the chief financial officer (CFO). He will succeed Stephen Trussell, who has served as the company's interim CFO since September 30. Trussell will continue as the company's vice president of Finance, a role he has held since 2009.

Weaver reports to President and CEO Tom Tomlinson.

LSI NAMES BRAND MANAGER FOR HOT SHOT'S SECRET

Lubrication Specialties (LSI)—the manufacturer of Hot Shot's Secret brand of additives, oils, and fluids—has announced the promotion of Josh Steinmetz to Hot Shot's Secret brand manager.

In his new position, Steinmetz will help develop and define the brand vision and strategy. He will also oversee all brand messaging, packaging, and media buys, and provide input on new product development for diverse markets.

Steinmetz first joined LSI in 2019 as a digital marketing manager before being promoted to e-commerce and digital marketing manager.

POWER AUTOMEDIA ANNOUNCES NEW LEADER, PLANS FOR 2023

Power Automedia—the media and automotive digital publishing company based in Temecula, California—has announced new leadership following the sale of the company to a five-person ownership group in November.

Nashona Haldane has been added as the marketing director and will work to help drive revenue. She holds 20 years of experience in brand development and management, most recently at JMS Performance Group and Derive (SCT and Bully Dog).

In addition, ProMedia has announced the new Electrified magazine, which will cover EV swaps and aftermarket modifications, e-motorcycles, e-bikes, scooters, and the electrification of things as a means of alternative energy for transportation.

HEMMINGS NAMES KATHRYN REINHARDT SR. VP OF MARKETING, EVENTS

Hemmings—the Bennington, Vermont-based monthly publication for antique classic, vintage, muscle, street rod, and special interest vehicles—has announced Kathryn Reinhardt as senior vice president of Marketing and Events.

An automotive industry veteran, Reinhardt has held leadership roles at 4 Wheel Parts, Pilot, and MagnaFlow. She is also a member

of the SEMA Board of Directors, is the immediate past chair for SEMA Cares, and holds several accolades from SEMA.

KAWASAKI APPOINTED EXECUTIVE CHAIRMAN OF THE WHEEL GROUP

The Wheel Group (TWG), a portfolio company of Wynnchurch Capital, has announced that current board member Wade Kawasaki has agreed to expand his role to executive chairman.

Kawasaki, who currently is the executive director of SEMA and PRI Political Action Committees, has also served as SEMA's Chairman of the Board, was selected as SEMA's Person of the Year, and in 2014 was inducted into SEMA's Hall of Fame.

RWB ADDS ROSS CLARK TO TECHNICAL SALES

Race Winning Brands (RWB)—a Mentor, Ohio-based portfolio company of MiddleGround Capital in Lexington, Kentucky—has announced the addition of Ross Clark in a technical sales role.

In his new role, Clark will focus on the MGP Connecting Rod brand while providing support to Diamond Racing Pistons. He will report to RWB Michigan Sales Manager Steve Rhodey.

SSI NAMES NEW SALES DIRECTOR

SuperSprings International (SSI)—the manufacturer of suspension solutions and products based in Carpinteria, California—has announced Justin Coulter as the director of Sales. He will help lead company growth with a focus on entering new markets.

Coulter is based south of Louisville, Kentucky, and has over 10 years of experience in the industrial sector.

NGK SPARK PLUGS ADDS GM OF PURCHASING

NGK Spark Plugs (U.S.A.)—the Wixom, Michigan-based manufacturer of ignition parts and sensors—has announced that

Jeffrey Schlenker has joined the company as general manager of Purchasing. In this role, he will be responsible for the efficacy of all sourcing activities across the organization.

ATTURO TIRE NAMES NEW REGIONAL SALES DIRECTOR

Atturo Tire—the private tire brand based in Philadelphia, Pennsylvania—has announced the addition of Jeremy Wurst as its new Northeast sales director. Wurst, who holds over 15 years



Jeremy Wurst

of sales experience, will service customers in Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

MICKY HALE JOINS SPA PERFORMANCE

SPA Performance—the high-performance automotive component manufacturer based in São Paulo, Brazil, and represented by Barbosa Enterprises—has appointed Micky Hale as its new national sales manager. SPA Performance has a US-based facility in Mooresville, North Carolina.

LUCAS OIL NAMES NEW CHIEF ADMINISTRATIVE OFFICER

Lucas Oil Products has announced the appointment of Katie Lucas, the company's vice president of Strategy and Philanthropy, to the position of chief administrative officer (CAO). In this role, she will be responsible for blending day-to-day operations with long-term goals, as well as providing oversight of company policies, procedures, campaigns, and growth initiatives.

Lucas was recently named one of Indiana Business Journal's Forty under 40, recognized for her professional success and civic involvement in central Indiana.

MAHLE AFTERMARKET OPENS NEW AUTOMATED WAREHOUSE

MAHLE Aftermarket has opened a highly automated warehouse in Olive Branch, Mississippi. The facility is designed to speed up deliveries to workshops and distributors, reduce the frequency of returns, and enable an order to be commissioned within 30 minutes.

MAHLE has invested approximately \$6.4 million in the fully automated facility and has plans to outfit its additional warehouse locations in Europe with similar technology in 2023, starting with Décines in France.

SPEEDWAY MOTORS ANNOUNCES PROMOTIONS

Speedway Motors—the manufacturer, retailer, and distributor of automotive parts and racing products—has announced three promotions within the Lincoln, Nebraska-based company.

Betsy Grindlay has been promoted to vice president of People, Purchasing & Marketing. Melissa Ward has been promoted to director of Marketing. And, Erin Bond has been promoted to director of People Operations.

SHELBY AMERICAN ADDS KASH SINGH TO MANAGEMENT TEAM

Shelby American, a wholly owned subsidiary of Las Vegas, Nevada-based Carroll Shelby International, has announced industry veteran Kash Singh has joined as the sales and marketing manager. Singh was most recently with Detroit-based Ford Motor Company, where he last served as Global Ford Performance Enthusiast Marketing Manager and in other key roles since 2004.

MICKEY THOMPSON NAMES NEW SR. DIRECTOR OF MARKETING

Mickey Thompson Tires & Wheels—the Stow, Ohio-based manufacturer of truck, street, and drag tires and wheels—has promoted former director of Product Management Heather Tausch to senior director of Marketing. She will lead the company's product and marketing teams and oversee the strategy and execution of all product development and marketing activities.

NEW OWNER FOR MACON SPEEDWAY (IL)

Macon Speedway has new owners for the 2023 season. Chris Kearns, longtime race official and promoter, has assumed ownership of the 1/5-mile dirt oval in Macon, Illinois.

The track has been under the leadership of Track Enterprises' Bob Sargent, the owner and promoter since 1985. In 2007, Ken Schrader, Tony Stewart, and Kenny Wallace joined Sargent as speedway co-owners.

NICK BOHANON TAKES OVER SALEM SPEEDWAY (IN)

Former USAC Midget racer Nick Bohanon has taken over ownership of Salem Speedway fueled by the Hoosier Lottery, the 0.555-mile oval track located in Salem, Indiana.

Announced plans also include upgrades to the pavement, pit area, lighting, scoreboard, and infield concessions and restrooms.

PHOENIX RACEWAY (AZ) NAMES NEW TRACK PRESIDENT

Phoenix native Latasha Causey has been named the new track president at Phoenix Raceway in Avondale, Arizona.

The longtime community development executive will become the first female Black track president in NASCAR history, and the second woman to hold the position at Phoenix Raceway. She replaces Julie Giese, who accepted the position as track president of the new Chicago Street Course last year.

TONY SPITERI NAMED GM OF NASCAR CANADA

NASCAR has announced that longtime Canadian motorsports executive Tony Spiteri has been named general manager of NASCAR Canada. He will be responsible for growing all facets of NASCAR in Canada, including the NASCAR Pinty's Series, the largest national motorsports series in the country.

Spiteri will be based out of Burlington, Ontario.

FASTRAK RACING ADDS BILL LUPINOS AS VP

FASTRAK Companies International has announced the hiring of Bill Lupinos as the company vice president. His appointment will allow FASTRAK founder, owner, and

President Stan Lester to concentrate on his health. Lester will continue to be involved on a limited basis, consulting for the company and working on additional marketing to increase purses and point funds.

FASTRAK is the governing body that oversees the Ultimate Super Late Model Series and the Heart of America Ultimate Super Late Model Series.

STARS NATIONAL SERIES ANNOUNCES DIRECTOR OF RACE OPERATIONS

Track Enterprises President Bob Sargent has announced veteran racing official Joe Balash as the director of Race Operations for the new STARS National Series in 2023. He will be responsible for all aspects of competition and operations for the pavement Super Late Model series. He will oversee rules packages, inspection processes, and race procedures for other Track Enterprises organizations, like the ARCA/CRA Super Series, ARCA Midwest Tour, and Southern Super Series.

USAC ANNOUNCES CIRCLE TRACK COMPETITION DIRECTOR

The United States Auto Club (USAC) has announced Tommie Estes as the new competition director for USAC Racing's circle track division.

Estes will lead the USAC Silver Crown National Championship and serve as an advisor to USAC National Series Director Kirk Spridgeon, who will continue to oversee USAC's AMSOIL National Sprint Car and NOS Energy Drink National Midget divisions.

MATT GRECI NAMED SR. VP, GM AT NASHVILLE SUPERSPEEDWAY

Speedway Motorsports has announced that motorsports industry executive Matt Greci has been promoted to senior vice president and general manager at Nashville Superspeedway in Lebanon, Tennessee. He replaces Erik Moses, who leaves to become executive director of the Fiesta Bowl.

PERFORMANCE INDUSTRY REPS

SLINGER SUPER SPEEDWAY JOINS HSRA IN 2023

Slinger, Wisconsin-based Slinger Super Speedway—known as the “World’s Fastest Quarter Mile Oval”—has added the High School Racing Association (HSRA) series to its schedule in 2023. The facility joins Beaver Dam Raceway, Dells Raceway Park, Tomah-Sparta Speedway, La Crosse Fairgrounds Speedway, and Madison International Speedway as HSRA-sanctioned race tracks in Wisconsin.

NATIONAL SPRINT CAR HALL OF FAME NAMES 2023 INDUCTEES

The National Sprint Car Hall of Fame has announced its 2023 inductees, who will be honored on June 3 in Knoxville, Iowa.

Ken Hamilton, Chad Kemenah, Cory Kruseman, Bobby Marshall, and Joey Saldana have been selected in the Drivers category.

Johnny Capels, Paul Hazen, and Tommy Sanders will be inducted in the Owners-Mechanics-Builders-Manufacturers-Car Builders category.

Ralph Sheheen, Max Dolder, Alan Kreitzer, and Johnny Vance will be inducted into the Promoters-Officials-Media Members-Event/Series Sponsors category.

Joie Ray, a decorated 17-year career driver, will be honored in the Pre-1970 category.

MENLEN NAMED SERIES DIRECTOR FOR CRA

Track Enterprises and Champion Racing Association Powered by JEGS (CRA) have announced that Scott Menlen will take over as series director for CRA and its four series including the ASA/CRA Super Series Powered by JEGS, JEGS/CRA All-Stars Tour Presented by Chevrolet Performance, Vore’s Welding CRA Late Model Sportsman Powered by JEGS, and the CRA Street Stocks Powered by JEGS.

Menlen, who has been an official with CRA for 13 years, both in a full-time and most recently a part-time capacity, has been the general manager at Nashville Fairgrounds Speedway in Nashville, Tennessee, for the past three years for Track Enterprises. Menlen will continue to work with Nashville Fairgrounds Speedway during the 2023 season, helping develop staff members into a larger management role.

Former CRA managing partner and most recently series director Glenn Luckett will remain with CRA in a consulting position and help with the transition of Menlen to series director throughout the 2023 season. Luckett was recently hired as the GM at Salem Speedway in Salem, Indiana, for new owner Nick Bohanon. Joe Balash, director of race operations for Track Enterprises, and Greg Wood, operations director for CRA, also will work with Menlen on his transition during the season.

ACT ANNOUNCES NEW MIGHTY MINI SERIES

The American-Canadian Tour (ACT) has announced a new stock car touring division called the Mighty Mini Series, which will launch at Hickory Motor Speedway in Newton, North Carolina, on March 17–18.

The points-counting season will officially begin on Saturday, April 1, during the 49th Icebreaker Weekend at Thompson Speedway in Thompson, Connecticut. The series will later visit the track for its inaugural championship event as part of the 61st Sunoco World Series of Speedway Racing on Sunday, October 8.

For more information and a current schedule, visit acttour.com.

YOKOHAMA TIRE ANNOUNCES PROMOTIONS

Yokohama Tire Corporation (YTC) recently announced a trio of organizational changes. The following executives have been promoted to new positions:

Fardad Niknam has been promoted from senior director of consumer product planning and product marketing to vice president of OE Sales. Niknam joined YTC in 2014 and has had responsibility for product marketing, including product planning and motorsports for the past five years.

Ray Polentz has been promoted from senior director of supply chain and logistics to vice president of supply chain and logistics.

And Pavan Desaneni has been promoted from vice president of information technology (IT) to chief information officer (CIO).

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



BOB COOK SALES
SALES & BRAND CONSULTANTS

901-854-4632

www.bobcooksales.com

lesrudd@bobcooksales.com

NEXT LEVEL BRANDING



Ballard Allen
MARKETING, INC.

Performance....
We build our business on it

WWW.BALLARDALLEN.COM

Corporate Office:
711 W. 17th Street Suite F7
Costa Mesa, CA 92627
P: 949.722.7716 F: 949.722.7957

ADDITIONAL REGIONAL OFFICES SERVICING YOU
LINCOLN, CA - DENVER, CO - PORTLAND, OR - PHOENIX, AZ

We are here to service your business
in the Western 11 States and Western Canada



AIRHEART SALES
"the Performance Reps"

Jim Link Ph. 425.888.2540

Branch Offices
Ladera Ranch, CA • North Bend, WA • Portland OR,
Newport Beach, CA • El Paso, TX • Edmonton, Canada

Territory: AZ, CA, CO, ID, MT, NM, NV,
OR, TX, UT, WA, West Canada
www.airheartsales.com



Thomas Sales and Marketing
Specialists in the Performance, Automotive, Heavy Duty,
Diesel, Agricultural and Industrial Markets.

Central Office:
317-846-7024
Ron.thomasco@sbcglobal.net
www.thomasalesco.com

Indiana, Illinois,
Kentucky, Michigan, Ohio,
West Virginia,
Pennsylvania, Wisconsin.

PERFORMANCE INDUSTRY REPS

REPRESENTING TOP BRANDS IN THE PERFORMANCE MARKET

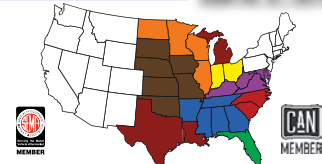
With over 25 years of serving the Automotive Industry, our knowledge and extensive network is second to none. Our team specializes in bringing your products out to the forefront using a variety of result driven channels that will help increase sales and brand awareness.

- Consulting Services
- Increase Product Distribution and Sales
- Help Expand Marketing Footprint via Social Media, Website Design & E-commerce, Print Ads and Co-Ops with Dealers.
- Data Entry and Analytics
- New Product Launches



516-378-6100 • info@scottlewisinc.com • www.scottlewisinc.com • 994 Northern Blvd, Baldwin, NY 11510 USA

ALL-MIDWEST SALES



ADMINISTRATIVE OFFICE

16700 Hampton Chase • Strongsville, OH 44136
Office: 440-238-7390 • Cell: 216-225-4564
j.morehouse@att.net

Over 50 Years of professional representation of premier companies to all levels of distribution in the Specialty Automotive Aftermarket
www.allmidwestsales.com

KAM MARKETING

MANUFACTURERS REPRESENTATIVE

There's No Substitute for Experience & Integrity

Truck & Performance Specialists



Bernie Meyer
bernie@kammarketing.com

Our Service Area



(302) 658-7778
411 Old Baltimore Pike
Chadds Ford, PA 19317

KamMarketing.com

Team CSMS CONSIDINE SALES & MARKETING

MANUFACTURERS REPRESENTATIVES SERVING AS YOUR FIELD SALES FORCE

- STREET
- RACE
- TRUCK
- OFF-ROAD
- JEEP
- FLEET

CALL: JIM CONSIDINE
(248) 889-7887

611 S. Milford Rd.
Highland, Michigan

jconsidine@considinesales.com

CELEBRATING
50 Years
Of Excellence
In The Automotive
Aftermarket

"AWARDED"
SEMA REPS OF THE YEAR



ProRep MARKETING

SERVICING THE
PERFORMANCE TRUCK & DIESEL MARKETS
IN PENNSYLVANIA • NEW YORK • NEW JERSEY
MARYLAND • DELAWARE • NEW ENGLAND
EASTERN CANADA

CONTACT: ADAM OLSON

14 MEADE LANE
ENFIELD, CT 06082
PHONE: 860.698.6022
AOLSON@PROREPMARKETING.COM



Visit Us At: WWW.PROREPMARKETING.COM



2019 SEMA REP OF THE YEAR AWARD
(2 TIME RECIPIENT)

2019 CAN REP OF THE YEAR AWARD
(2 TIME RECIPIENT)



WITH OVER 50 YEARS OF EXPERIENCE & EXPERT STAFF OF 26, WE PROVIDE SALES & MARKETING SERVICES TO ALL FACETS OF THE AUTOMOTIVE AFTERMARKET INDUSTRY.

SALES • MARKETING • ADVERTISING • BRAND MANAGEMENT • MEDIA SERVICES
DATA MANAGEMENT • PROMOTIONAL ADMINISTRATION • EVENT COVERAGE

4094 PIONEER DRIVE / WALLED LAKE, MI 48390
P 248.360.2700 F 248.360.3704 KUNZMAN.COM



MIDWEST / MINK / NORTHEAST / SOUTHEAST / WEST COAST / WESTERN CANADA

READ PRI'S MISSION STATEMENT AT
PERFORMANCERACING.COM/MISSION
AND SEND US YOUR FEEDBACK.

THE BUSINESS OF
RACING
STARTS HERE



PRI Magazine's Content Online

PRIMAG.COM

AD INDEX

1 WAY TECHNOLOGIES	111	CTECH MANUFACTURING	7	PURE DRIVETRAIN SOLUTIONS	9
AIRHEART SALES	135	DAIDO ENGINE BEARINGS	19	PYROTECT	61
ALL-MIDWEST SALES, LLC	136	DARTON INTERNATIONAL INC.	125	RACETEC PISTONS	86
ALS SERVICES USA CORP.	105	DESIGN ENGINEERING INC.	87	RACING FORCE BELL	98
ARE DRY SUMP SYSTEMS INC.	131	EXHAUST GAS TECHNOLOGIES INC.	131	RADIAL BEARING CORP.	111
ARP INC.	55	FUEL INJECTOR CLINIC	63	RON DAVIS RACING PRODUCTS INC.	125
ATECH MOTORSPORTS	2	GANDRUD PARTS CENTER	103	ROSS RACING PISTONS	53
ATL RACING FUEL CELLS	117	HALTECH	39	ROTTLER MANUFACTURING	140
B.R. MOTORSPORTS	119	HOWARDS CAMS/HRC	61	SAMPSON	55
BALLARD & ALLEN MARKETING INC.	135	IDIDIT LLC	111	SCOTT LEWIS ASSOCIATES INC.	136
BEHRENT'S PERFORMANCE WAREHOUSE	91	ISKY RACING CAMS	93	SCS GEARBOX INC.	103
BETA TOOLS	37	JAZ PRODUCTS INC.	123	SERDI CORP.	86
BILL MITCHELL HARDCORE RACING PRODUCTS	109	JESEL INC.	27	SETRAB USA	99
BOB COOK SALES	135	JONES RACING PRODUCTS	93	SPECIALTY PRODUCTS DESIGN	31
BRASWELL CARBURETION	131	KAM MARKETING INC.	136	STAINLESS HEADERS MANUFACTURING	97
BRODIX INC.	123	KUNZMAN & ASSOCIATES	136	STROUD SAFETY	65
CALICO TECHNOLOGIES INC.	19	LINE2LINE COATINGS	123	THERMO-TEC	109
CALVERT RACING SUSPENSIONS	110	MAHLE AFTERMARKET INC.	41	THOMAS SALES CO. INC.	135
CENTROID CORP.	97	MAHLE MOTORSPORTS INC.	99	TOP STREET PERFORMANCE	93
CHAMP PANS	86	MILODON INC.	65	TOPLINE AUTOMOTIVE ENGINEERING	139
CHE PRECISION	131	MOTOR STATE DISTRIBUTING	85	TURN 2 RACING COMMUNICATIONS	117
COLEMAN MACHINE INC.	57	NEO SYNTHETIC OIL CO INC.	54	TURN 14 DISTRIBUTION INC.	5
COMEC INC.	53	PACIFIC PERFORMANCE ENGINEERING	3	UNITED ENGINE & MACHINE CO.	33
COMETIC GASKET INC.	123	PBM PERFORMANCE PRODUCTS	27	VAC MOTORSPORTS	109
COMPUTECH SYSTEMS INC.	131	PENSKER RACING SHOCKS	125	VAN NORMAN MACHINE INDIA PVT LT.	10,11,14,15,111,119
CONSIDINE SALES & MARKETING	136	PERFORMANCE FORGE INC.	119	VORTECH ENGINEERING INC.	63
CP-CARRILLO INC.	125	PROFORM	57	WOOLF AIRCRAFT PRODUCTS INC.	110
CRP CANTRELL RACING PRODUCTS LLC	131	PROREP MARKETING LLC	136		

SOCIAL STATUS

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

Trade shows, like the PRI Show, offer exhibiting companies a means to highlight their products and services, attain new customers, conduct business, network, and more, all in person. But in addition to having a display, it's essential for exhibitors to promote their presence on social media.

"We want to guarantee ROI so we can get our money's worth out of these expensive trade shows," noted Richard Andresen from Turbosmart, Ontario, California. "Reminding our customers that we will be there on full display gives them the opportunity to map out their schedule or add our booth as a 'must visit' location for the show. Driving traffic to our booth allows the people to see these products for themselves in person and even see it work firsthand, while also having the ability to ask an employee of Turbosmart questions on the spot."

Prior to the PRI Trade Show, Turbosmart used Instagram and Facebook to promote its booth location and what products would be displayed. During and after the PRI Show, the company utilized Facebook, Instagram, and TikTok to promote various builds at the Show that featured its products.

Similarly, Forgeline Motorsports in Dayton, Ohio, used its entire network of digital channels, which includes Instagram, Facebook, Twitter, LinkedIn, Tumblr, and CarBuff, to promote its new product releases leading up to PRI. "Once the Show started, we primarily posted through Instagram, which has generally proven to be the channel at which we get the most active interaction with serious existing and prospective customers," noted John Comeskey.

The type of content presented on social media also plays an important role in the company's success on the platforms. "We used both images and videos," noted Ehab Barakat of Stainless Works, Streetsboro, Ohio. "Sometimes an image with stickers is good enough, and sometimes a video/Reel shows more details with a full walk through or live stream to let our followers who couldn't visit us experience a small part of the Show, or to encourage them to visit us if they are at the Show."

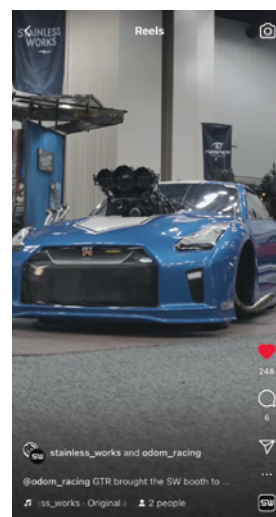
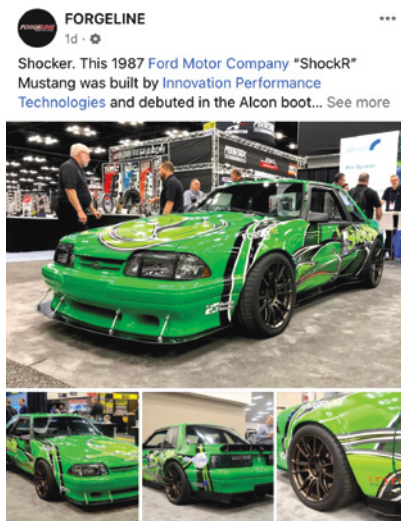
Not only does social media reach your current following, it can also reach many more people who don't follow you, allowing your products and brand to be seen by a larger number of potential customers.

Images are a little easier for Forgeline to manage within the busy and hectic environment of the PRI Show. "However, video is an extremely powerful format that absolutely should become a more significant part of our online content strategy. Advancements in technology are making it easier to produce quality digital content on the fly because mobile phone cameras are so good, and a variety of mobile editing apps is now available, including Instagram's native Reel editor," Comeskey explained.

Forgeline, Stainless Works, and Turbosmart all used relevant hashtags with their postings, "although hashtags aren't as prevalent in the algorithm as they used to be, but they can still be used as a search tool," Andresen said.

Comeskey added, "At the very least, hashtags allow me to search through user-generated content (UGC) that I can reshare."

Social media remains hugely beneficial for businesses, providing opportunities to build brand awareness, acquire new leads in a low-cost way, boost website traffic, and more. Think in terms of a two-pronged approach: While you're at the PRI Show doing business in person, social allows you to expand your business digitally at the same time. **PRI**



TopLine

Automotive Engineering, Inc.

Chicago, USA

TRUSTED QUALITY
AND PRECISION
SINCE 1973!

For decades, TopLine has been manufacturing and supplying O.E. spec engine parts for import cars. *It's our niche.* Along with Hylift Johnson, manufacturer of the Highest Quality Valve Lifters on the market, these brands have consistently proven that —
WE ARE COMMITTED TO YOUR SUCCESS.



**HYLIFT
JOHNSON
LIFTERS**

A Division of Topline Automotive

AMERICAN MADE FOR 70+ YEARS AND GOING STRONG!



CALL OR VISIT US ONLINE
TO SEE HOW TOPLINE CAN HELP
WITH YOUR NEXT BUILD.

800-441-1400 | TOPLINEAUTO.COM

ROTTLER EM69HP

**AUTOMATICALLY
DIGITIZE PORTS
AND CYLINDERS
WITH THE MOST
ADVANCED
MACHINING
CENTER ON THE
PLANET**



100

**YEARS OF COMMITMENT
AND DEDICATION TO THE
GREATEST INDUSTRY
ON EARTH**

ROTTLER

ROTTLERMFG.COM 1-800-452-0534