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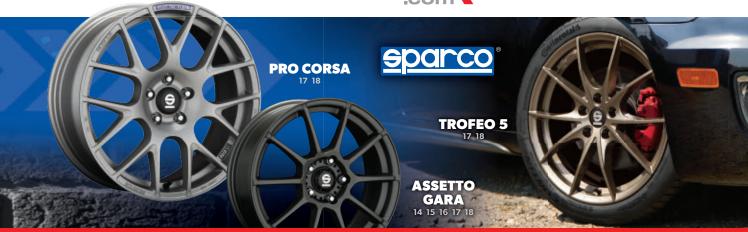
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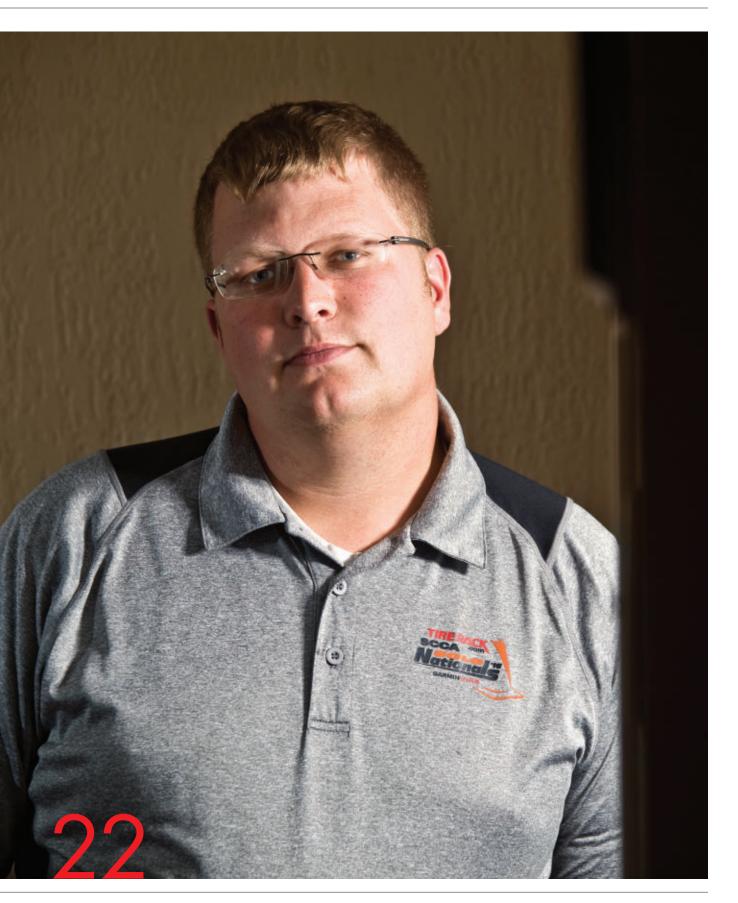
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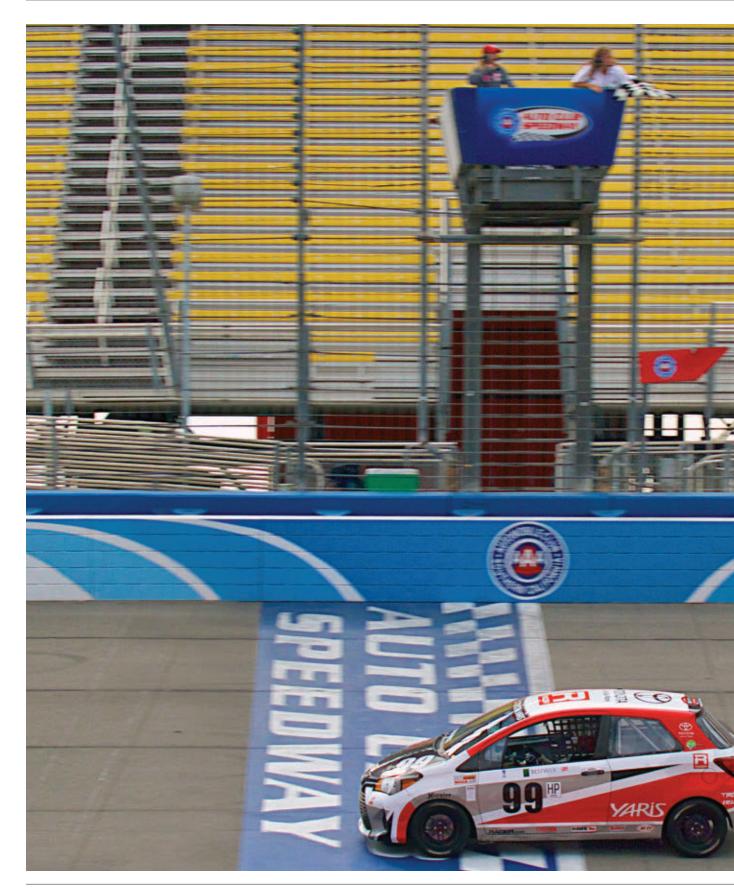
Trying to make the editor's column great again

COVER PHOTOGRAPHY Philip Royle













2017 U.S. MAJORS TOURS SET

By now, most (if not all) of the 2017 SCCA U.S. Majors Tour competition calendar has been announced. A total of six weekends (12 races per Conference), make up each Conference's schedule, with some of the weekends counting toward two Conference points races. For a complete schedule, head to www.scca.com/majors.



PROSOLO NATIONAL SERIES SCHEDULE UNVEILED

he 2017 Tire Rack SCCA ProSolo calendar has been announced, and it contains a mix of new and old sites that comprise the 10-event season, running March to August, leading to the Tire Rack ProSolo Finale in early September. Included in the schedule is a currently tentative kickoff at Donaldson Airport in Greenville, S.C., while series favorites like the Spring Nationals and Finale both take place in Lincoln, Neb.

During ProSolo events, drivers face off, side by side, at a "Christmas Tree" start before launching down a straightaway and into mirror image autocross courses. Three heats of competition give drivers 12 total runs, six on each course. Like other Solo competitions, runs are timed to 1/1000th of a second and knocking a cone down means a two-second penalty added to a time.

HEADS UP

Combining Solo with elements from drag racing, ProSolo is a unique and challenging competition.

Opening runs determine class rankings and set the qualifying order for the second part of the event, which determines the overall winner. The top qualifiers enter single-elimination brackets and conduct runoffs until only one driver remains: The Top Eliminator. Additionally, the Ladies Challenge pits top female qualifiers against one another, while the Super Challenge features the top 28 Open class competitors in a winner-take-all battle. There's even a Bonus Challenge where randomly selected, non-qualifying drivers can compete for prizes and bragging rights.

Competitors earn class and Challenge points throughout the season that count toward the Overall Ladies and Open ProSolo Championships. Class National Championships and Overall ProSolo Championships are determined by combining regular season points with points earned at the ProSolo Finale in Lincoln, Neb. 0

2017 TIRE RACK PROSOLO NATIONAL SERIES SITE/CITY

DATE

March 10-12*	Donaldson Airport / Greenville, S.C.
April 7-9	Orange County Great Park (formerly El Toro Air Station) / Irvine, Calif.
April 28-30	NASA Crows Landing Airport / Crows Landing, Calif.
May 5-7	Arkansas Aeroplex / Blytheville, Ark.
May 12-14	MetLife Stadium / East Rutherford, N.J.
May 26-27	Lincoln Airpark (Spring Nat'ls) / Lincoln, Neb.
June 2-4	Mineral Wells Airport / Mineral Wells, Texas
1 011	T

Toledo Express Airport / Swanton, Ohio June 9-11 Former Hampton July 14-16 Lumber Mills Packwood /

Packwood, Wash. Oscoda-Wurtsmith Airport / Aug. 4-6 Oscoda Township, Mich.

Lincoln Airpark (ProSolo Finale) / Sept. 1-3 Lincoln, Neb.

^{*} tentative





AREA 4 DIRECTOR STEPHEN HARRIS PASSES

We're sad to report that Western Ohio Region member and Area 4 Director on SCCA's Board of Directors Stephen Harris passed away mid November. A 31-year member, Harris was passionately involved in the Club, holding multiple licenses, including those of a National Steward and Chief Steward.

MATCH TOUR SETS DATES

he 2017 Tire Rack SCCA Match Tour schedule has been released and is comprised of four events, spanning March to July. Sunny Southern California is where the Tire Rack Match Tour season begins with an event hosted by San Diego Region. The second event of the year is hosted by Steel Cities Region and takes place on the smooth asphalt at Pittsburgh International Race Complex. Indy Region hosts the third event of the season on a great concrete site with lots of grip. The calendar then concludes in Bristol with a weekend hosted by Eastern Tennessee Region.

Match Tour Showdowns are three events in one package. The event is broken into four sessions. Session 1 and Session 2 are on Saturday and consist of a traditional three-run autocross. The best run from each session is added together to determine class rankings. Class trophies are then distributed Saturday during the evening's social event.

Session 3 on Sunday is another three runs to determine the qualifiers for the Top Dog and Under Dog Challenges. Then the Challenges take place in Session 4 of the event. •



2017 TIRE RACK MATCH TOUR		
DATE	SITE/CITY	
March 3-5	Qualcomm Stadium/ San Diego, Calif.	
April 28-30	Pittsburgh Int'l Race C'plex/Wampum, Pa.	
June 2-4	Grissom Aeroplex/ Peru, Ind.	
July 2-4	Bristol Motor Spdwy/ Bristol, Tenn.	



HOOSIER SUPER TOUR SCHEDULE AND SERIES REGISTRATION

CCA has unveiled the 10-event calendar for the 2017 Hoosier Racing Tire SCCA Super Tour, which are featured dates within the U.S. Majors Tour schedule. Each venue will host two Hoosier Super Tour races over the course of a weekend.

Also, available now is series registration at MotorsportReg.com for the 2017 Hoosier Super Tour and U.S. Majors Tour. Those paying the \$50 series registration fee can reserve a single or two-digit number in a Conference of their choosing with payment deferred until Jan. 1, 2017. The same number can also be reserved in other Conferences for an additional \$25 per Conference. A series registration fee of \$100 allows drivers to register a three-digit number, with the leading digit required to be "1," for all Conferences.

Only SCCA Full Competition and SCCA Pro Racing license holders may register for the Hoosier Super Tour and U.S. Majors Tour series. Series registration allows drivers to prepare number graphics for their cars that will be good for the season. Registered participants also receive a special Hoosier SCCA Super Tour hard card and series decals

for car placement prior to events. Where available, series registration also provides access to express registration and tech.

For more information on the Hoosier Super Tour, U.S. Majors Tour, or series registration, head to www.scca.com and click the Majors or Super Tour links under the road racing "Programs" tab.

SUPER STARS (ABOVE) The Hoosier Super Tour incorporates various professional racing aspects into the Club Racing weekend.

2017 HOOSIER SUPER TOUR		
DATE	RACETRACK / CONFERENCE	
Jan. 13-15	Sebring International Raceway, Fla./ Southeast Conference	
March 4-5	NOLA Motorsports Park, La./ Southeast Conference, Southern Conference	
March 11-12	Willow Springs International Raceway, Calif./ Western Conference	
April 8-9	Hallett Motor Racing Circuit, Okla./ Mid-States Conference, Southern Conference	
April 14-16	VIRginia International Raceway, Va./ Northeast Conference, Southeast Conference	
April 28-30	Buttonwillow Raceway Park, Calif./ Western Conference	
May 19-21	Portland International Raceway, Ore./ Western Conference	
June 2-4	Mid-Ohio Sports Car Course, Ohio/ Northern Conference	
June 16-18	Road America/ Northern Conference	
June 23-25	Watkins Glen International, N.Y./ Northeast Conference	



SOUND DECISION

The latest edition of Fastrack has revisions for the popular Spec Racer, now requiring the standard muffler kit p/n G1190523 (including standard muffler p/n 390523). For tracks with strict sound requirements, the quiet muffler kit (p/n G1190524) is available as a replacement for that event. Muffler packing of any kind is not permitted.





NEW PATH TO THE RUNOFFS

he SCCA Board of Directors has decided to simplify the qualification path for the 2017 SCCA National Championship Runoffs taking place in September at Indianapolis Motor Speedway. After receiving feedback from the membership, the BoD has opted to remove the points criteria for Runoffs qualification as pertaining to the U.S. Majors Tour. Instead, racers must simply compete in three U.S. Majors Tour weekends, but also now have the option of substituting two Regional race weekends for one U.S. Majors Tour event. John Walsh, Chairman of the SCCA BoD, also says that each Hoosier Racing Tire Super Tour weekend still count as one U.S. Majors Tour weekend.

"The Board felt it necessary to make it easier to understand what is required to receive an invitation to the Runoffs," Walsh explains. "By making expectations simple and clear, competitors will know from the very beginning of the racing season what it takes to get to Club Racing's premier championship event, the SCCA Runoffs, starting in 2017 at Indianapolis Motor Speedway."

The Divisional Championship path to the Runoffs remains unchanged, as well as the policy welcoming defending Runoffs winners. It should be noted that while the road to the Runoffs has been simplified, firm qualifying rules will be in effect stipulating drivers be within a certain percentage of a class pole time at Indianapolis Motor Speedway in 2017.

O

2017 SCCA Board of Directors

S CCA Board of Directors elections were held in four of the SCCA's geographic Areas in 2016, with three new Board members being elected and one incumbent rejoining the Board for another three-year term in office.

Jack Burrows, of Harrisonburg, Va., will now be the Area 2 Director, garnering more votes than incumbent Terry Hanushek. In Area 6, Chris Albin, of Maryland Heights, Mo., takes over the Director seat left by Peter Zekert. In Area 10, Earl Hurlbut, of Batavia, N.Y., will take over the Director's position vacated by John Walsh. And in Area 12, Director Tere Pulliam, of Oxford, Ga., ran unopposed.

The Area 4 position is currently open pending a Board decision following the unfortunate passing of Stephen Harris, that Area's Director. ⊙

THE 2017 SCCA BOARD OF DIRECTORS

Area 1: Bob Dowie

Area 2: Jack Burrows

Area 3: Lee Hill

Area 4: ---

Area 5: Bruce Lindstrand

Area 6: Chris Albin

Area 7: Dan Helman

Area 8: Arnie Coleman

Area 9: Charlie Davis

Area 10: Earl Hurlbut

Area 11: K.J. Christopher

Area 12: Tere Pulliam

Area 13: Jim Weidenbaum

RUMAN REPEATS AS TRANS AM CHAMP

A my Ruman, the first female professional road-racing champion in North America, made history again in November at Daytona International Speedway as she captured the 2016 Trans Am Championship, once more etching her name into the Trans Am record book in this, the 50th anniversary season. Ruman's championship-clinching victory was her third in a row at Daytona and saw an up-and-down season for the defending champ end on a high note.

Entering the weekend, and even through the first third of the race, victory seemed anything but assured for Ruman - very much the opposite of her first championship when she only needed to take the green flag to secure her title. Paul Fix, with a nine-point lead, had begun the Daytona race on the pole, with Ruman alongside. He kept Ruman at bay early on, but 10 laps into the 29-lap race, disaster struck for Fix when he suffered a flat left front tire. Fix entered the pits, his crew quickly changed the tire, and Fix reentered the race in eighth position - should Ruman win, Fix simply needed a fourth-place finish to secure the title. But lightning struck twice for Fix, with tire debris damaging his motor on the 13th lap.

"I woke up thinking, 'You know, anything can happen, it's racing," Ruman said after the race. "Mechanicals happen. Traffic can play a role. Paul [Fix] could win; I could win. When it boils down to one race, anything can happen.

"My hat is off to Paul Fix and the Ave team; they've worked hard all year, too, and we've both had up and down seasons," she continued. "It's unfortunate what happened to them, but we persevered and won."





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OOPS...ERRATA

In the November 2016 issue of SportsCar, we inadvertently gave credit to Dan Tonneson for a 22nd place finish in C Street at the Tire Rack Solo National Championships. That 22nd place finish actually went to Drew Tonnesen. We apologize for the error.





TRANS AM PICKS UP PIRELLI TIRES IN 2017

Pirelli Tire North America and The Trans Am Race Company LLC have announced a three-year agreement that will see Pirelli named the official tire supplier and presenting sponsor of the Trans Am series. Starting in 2017, Pirelli will supply tires for all classes within the Trans Am series, presented by Pirelli, including purpose-built P Zero tires for the TA and TA2 classes.

"From the very beginning, Pirelli has gone above and beyond our expectations," says John Clagett, President of The Trans Am Race Company. "They took on the challenge of engineering, from the ground up, a tire that fits the needs of TA2, which presents its own unique set of challenges. The work they have done is simply remarkable, and I can say with full confidence that Pirelli has delivered a product that we can proudly present to our competitors."

FAST FOOTWORK

Starting in 2017, the entire Trans Am field will sport new Pirelli rubber The extensive tire development process undertaken by Pirelli to develop a product for the TA2 class spanned six months and the result is a product many TA2 drivers will find familiar. The tires will be offered at the same price as their predecessor but are superior in many ways, as testified to by 2013 and 2014 TA2 Champion Cameron Lawrence who, alongside Mike Skeen, served as test drivers during the process.

Also involved in the development process was Stevens-Miller Racing, who supplied the TA2 racecars utilized throughout testing. "Pirelli needs to be given credit for the level of discipline and hard work put into the new TA2 tire," says Joe Stevens, owner of Stevens-Miller. "With no setup changes, our cars were turning lap times ranging from 1- to 2.5-seconds faster, all while maintaining that characteristic TA2 look and feel.

Pirelli will also debut new TA class tires built to withstand the sheer power of the 875hp grand touring machines that make up Trans Am's iconic class. 2010 and 2011 TA Champion Tony Ave had the opportunity to test both the slicks and rain tires at Homestead-Miami Speedway. "It's a very driver friendly tire that is essentially a bolt-on for the current setups on TA class cars exactly what Trans Am and Pirelli wanted to create from the onset."

Trans Am's production classes, TA3 and TA4, will sport Pirelli's iconic P Zero Racing Slick and P Zero Racing Rain tires. ⊙

MEMBERSHIP DRIVE CONTEST

While membership always gets a spring boost, many of our regions are currently experiencing solid growth! Congratulations to the leaders and keep up the momentum. For complete details on the SCCA Membership Drive Contest, log in to ams.scca.com and look under "Forms."

MEMBERSHIP DRIVE REFERRAL

LEADERS FOR OCTOBER 2010				
Brian Ghidinelli	73	San Francisco		
Gal Mesika	68	Washington DC		
Gayle Jerdine	47	Cal Club		
Warren Leach	45	San Diego		
Yunfan Wu	27	San Francisco		
J. Burchardt	26	SW Louisiana		
Cheryl Babbe	19	Arctic Alaska		
Darren Gunn	19	Central Florida		
Derrick Taylor	19	Buccaneer		
Todd Higgins	15	South Jersey		

There are 2,220 additional members with at least one referral.

REGION LEADERS

(Category based on 2015 year end membership)

Region	Growth
Jumbo Regio	ns (800+):
Texas	8.3%
Central Carolina	s 5.4%
Chicago	5.1%
Large Region	s (401-799):
South Jersey	6.5%
Northwest	4.5%
Ohio Valley	4.0%
Medium Regi	ons (200-400):
Mohawk Hudsor	n 36.7%
Des Moine Valle	/ 19.9%
Northwestern O	hio 12.8%
Small Region	s (<200):
Puerto Rico	58.3%
Montana	53.2%
Arctic Alaska	53.0%

Cunningham throttles back, NSX throttles forward

As RealTime Racing runs full speed ahead into the 2017 season, outfitted with its new Acura NSX GT3 Pirelli World Challenge GT program, stalwart of the series and team principal Peter Cunningham is poised to step out of the cockpit.

Cunningham is part of World Challenge and SCCA history, sitting at the top of the charts as the all-time leader in World Challenge starts, wins, and poles, as well as having tasted success in both the Club Racing and the Solo ranks.

"I'm not retiring, but it was my decision to not compete with the NSX program to focus on the behind-the-scenes portion of the team," Cunningham explains. "I've always done both all along, but I'm liking these opportunities more and the heat of battle less"

As the team embarks on the 2017 World Challenge season, it will call upon veteran racer and NSX development driver Peter Kox, who will team with RealTime regular Ryan Eversley.

"I'll be plenty busy without driving," says Cunningham. "This is an important program with the NSX and we are fully committed to its success. The change of job descriptions for me makes a lot of sense right now."



PASSING THE TORCH
From cars to drivers, a lot is changing for RealTime in 2017.







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ADJUSTABLE DECISION

The Club Racing Board is seeking member input regarding dampers for the Touring 4 class. The latest edition of Fastrack offers two potential options, ranging from non-adjustable OE-style replacement dampers, to adjustable dampers similar to those used in other Touring classes. Members should offer feedback via www.crbscca.com.





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THE CLUB **BOARD**

IOHN WALSH

CHAIRMAN, SCCA BOARD OF DIRECTORS

LAST DANCE

ow, that went by fast. Six years on the Board of Directors, more than three years as Chairman, and now out the door as 2017 hits and back to where I started a few decades ago - a member. This has definitely been the most difficult "job" I've ever held - I learned from each of the successes and failures, and I hope the things our Board has generated and fostered will take solid root, making the Club even stronger.

I want thank the 25 Directors I've served with on the SCCA Board in the past six years. I've learned from each and every one of them, and made some great life-long friendships. That said, right now you should be thinking, "On a Board of 13 members, there have been 26 directors in six years?" I'll suggest that this points to a structural problem with continuity and institutional memory. Keep this in mind if future Boards or members ask for changes to the SCCA bylaws.

That aside, with my last column I'd like to give an update on some pressing issues. The Board's search for our Club's new president has begun. We've redefined the job

description, based on good inside and outside guidance. We've also started a two-pronged search strategy, one using our known contacts and the other casting a wider net via executive recruiters. The interviews won't include Rorschach tests, but real deep investigations into management skills and leadership qualities. Next year's Board will be making that hiring decision, and I'm confident the work we've done these last few months will yield success.

So, what should you expect from the Club going forward? Happy members and healthy Regions are critical to the Club's future. The SCCA revolves around two things members and Regions. Member retention and recruitment are critical to its success, financially and as a force in motorsport. Regions, the fundamental social element of the SCCA, need ongoing support and new tools to compete with all those other attractive recreations - motorsports or not. Push on the National organization, through your Directors, to continue to focus on that.

What does the future hold for me? Well, the SRF gets its GEN3 motor plugged in the back after sitting in the crate on my shop floor for almost two years! I'll probably spruce up the Spec Miata, too, and deal with the blown-up motor in the 240Z racecar. And, now that I seem to have a 46-year-old CAM car for Solo, I'll set to fixing the suspension bits that broke on that last run in August, right before the Tire Rack Solo National Championships presented by Garmin VIRB.

Ultimately, I'm thrilled to be "just" a member again, and I'll see you at an SCCA event! •

Charlie Davis named Area 9 Director

Charlie Davis, a 38-year SCCA member, has been appointed by the Board of Directors to fill the vacant Area 9 seat immediately. Davis will hold that position through 2017 when the next Area 9 election is scheduled to occur.

Davis, who is a member of San Francisco Region, started his SCCA involvement in St. Louis, Mo. He has more than 40 years of autocross experience and competed in 36 National Championship events. He has served on numerous subcommittees and the SEB over the last 30 years, and chaired several autocross clubs, as well as co-chairing

numerous Divisional, National Tour, and ProSolo events in Northern California. He also worked as a road race scrutineer, communicator, and Club ambassador.

The Area 9 seat was previously held by Brian McCarthy, who passed away in September.

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Out-racing your competition starts with out-thinking them.







TODD HARRIS

OREGON REGION MEMBER SINCE 1995

y first taste of victory came in an SCCA RoadRally in West Texas in 1968. My mom and dad drove while I 'navigated' from my car seat in the back of our 1966 Ford Mustang. I was about 6 months old. By 1970, I was going to sports car races at Portland International Raceway and Seattle International Raceway to watch my dad race his Triumph Spitfire.

A year later, my dad lost a rear wheel at [Mazda Raceway] Laguna Seca and spun at the fastest portion of the track. When I saw the racecar after the race I declared, 'I don't wanna be a racecar driver.' Only 4 years old and already retired from racing - but my retirement didn't last.

I continued going to races with my family until my dad quit racing after the 1977 season. During these years, my dad won many races and championships. My favorite racecar drivers were Jackie Stewart, Monte Shelton, and my dad. I wanted to be like them. At home in my basement, I raced my slot cars and dreamed of the day I would race the real thing.

In high school, I started volunteering with Oregon Region in Timing and Scoring and absolutely loved it! I even worked the 1984 G.I. Joe's 200 inaugural race weekend when AI Unser Jr. won his first IndyCar race. (Side note: AI has been my co-driver in a Wolf Racing Prototype the past couple of years at endurance races - how crazy is that?)

When I went to college in 1985, my trips to the racetrack became few and far between, but I still watched racing on TV and read *SportsCar* magazine. Upon graduation, I purchased my first full-fledge racing go-kart. My future wife Jenny even supported me and helped crew most race weekends, although she thought I was going through a 'stage' in my life.

The Spec Racer Ford was my first step into SCCA racing. My dad was my crew chief and we won races up and down the West Coast. Fast-forward 20 years. I've been blessed to make a living in the racing world. I own Pro Drive Racing School with Kristen Moore, my sister-in-law, and I get the opportunity to teach people about driving every day.

I've raced too many cars to list, but my greatest achievement in the SCCA came this year when I fulfilled my childhood dream of winning the National Championship Runoffs. A moment I'll cherish forever. Now my 17-year-old son Calvin is racing an SRF3 and his little brother Taylor is excited to start racing when he turns 15. My dad has even returned to racing with SCCA.

Racing gives me great joy on and off-track. Bench racing with buddies has always been a highlight when we get together and talk about the 'good old days,' even when that means the race last month. Simply put, racing is in my blood, and if you're reading this, I'm sure it's in yours, too."

IMAGE Rick Corwine



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ave you spun lately? Lost it? Backwards? Both feet in and hope you stop before the wall? It probably was oversteer. Tricky, diabolical, counter-steering oversteer. Here are the top 10 ways you are making your racing life harder for yourself with too much tail-happy.

Rear springs too stiff. When your car rolls over from cornering forces, the end that is more stiff resists it more, taking more of the load, reaching its limit of tire grip first, and overloading into a slide first. Further, if too hard, the load will happen too fast, shocking the tire, causing a sudden loss of rear grip. My least favorite handing characteristic: snap oversteer.

Rear anti-sway bar too stiff. Similar to having too much rear spring, too much rear bar adds another factor. It's attached to both wheels, twisting. When the car leans that wheel pushes up on the car, which tries to lift the inside tire. Too much, and the inside comes right off the ground - as is the case with many front-wheeldrive rears, and some rear-wheeldrive fronts. Looks very cool in pics, but not always a great idea.

Tire over-pressure. Does your grip feel greasy later in a session? Check your hot tire pressures. If the pressures get too high, it's a slippery slope. Most DOT tires hate to be over 40psi, race tires lower. Try onboard pressure monitors, like many current street cars. They give valuable information.

Tired tires.
Experienced racers know about heat cycles. Every time you go out on track, you cook your tires and can reduce the oils that make 'em stick. The hotter they get, the greater this effect. Could the rears be getting old faster than the fronts? Sure. And if you allow them to slide, you accelerate the aging process.

Tire and wheel size. Manufacturers often use this trick to create stability. A bigger tire and/or wider wheel increases rear grip to reduce your slide-for-life. BMW does this a lot, and racers call it running square when they go to the same bigger size up front. Makes sense on a balanced car front to rear. We tried something similar on our Porsches, and while it helps braking, it destabilizes the rear-heavy chassis. The 911 is the prime example of using a larger rear tire to match the load. What I wonder, is why we almost never see the reverse on front drivers. Why not, manufacturers? If I were king (crew chief), and the rules allowed it, I'd run a big, wide front and a narrow rear to balance, sizing to the load. Guess what? In that land-of-handling called Solo, the fastest Street Modifieds like Andy Hollis and Jinx and Ginette Jordan's Hondas are doing just that. Makes sense!



Rear wheel alignment. This is a biggie, and yet it can sneak up on you and be hidden. Loose on power? Add rear toe-in, this is a secret tweak for putting power down better. Rear toe-in adds stability. Many stock rear suspensions add toe-in when cornering for stability and safety. Rear toe-out adds instability, and a tiny bit makes a huge difference. Perfect for front-wheel-drive drifts! Mid-Ohio insider thought from out-of-the-box: Toe-in the right rear for the fast lefts, Turns 1 and 11; toe-out the left rear for the long, tight rights, the Carousel, Keyhole and Turn 6. We've done it and won there.

Often, add camber. Most radials just love negative camber. If you have a new Corvette, here's an insider tip: rear caster! Have you ever checked that in your life? I bet your alignment guy hasn't. On the C7 'Vette, it affects toe steer. If it's wrong, it will cause roll toe-out, the perfect recipe for evil handling and the last thing those brawny Americans need.

Check your roll steer, especially the rear. When

suspensions move and bushings flex, alignment changes. Factory engineers figure this out for us, but when we modify, we enter a brave new world. Take the spring out, and then move the suspension through its travel, measuring toe every inch or two. If it ever goes out, there's your diabolical gremlin.

Rake - and I don't mean leaves. Engineers may be chuckling at my shade-tree descriptions, but we live in the real world, right 99 percenters? Rake is established by front-to-rear ride height. The roll axis. This is geometry. Mysterious and alluring, like Mary-Lynn Desjarlais in college calculus class. Rake is what jacked-up drag cars have. It has almost no effect on weight distribution. Don't fall into that trap - until you turn. Then it has a strong effect. That nose-down angle causes the front to load more and the rear less as it leans over; a good way to turn-in better, or get too twitchy. Lower rear, more stable; higher, more pointy.

GETTING AIR

(LEFT) Stiff rear swaybars on frontdrive cars lead to three-wheeling. To a point this is unavoidable, but too much could hinder corner speed.

Bottoming and binding. This is a biggie when we start lowering our cars, which is something I, for one, love to do. Go too far and you'll start hitting things, starting with your stock bumper rubbers. These simple-appearing rubber or foam donuts are actually quite sophisticated now on street cars and are the reason you don't see tail-draggers when loaded, unlike the old days. The truly slammed can hit all kinds of things when the tires are all the way up into the wheel well. When the suspension stops, the instant shock to that tire causes it to break away like a flat or an oil slick. It's devilishly dangerous. If your car is evil, check clearances.

Rear brake bias. If your rear brakes are working harder than your front, this extra sliding force will send the tail out at turn-in, and is one reason why you want a little front lockup first - important even with ABS.

Look in the mirror it could easily be you. Your driving can cause a good handling car to go bad. That's why "Be Smooth." Snappy throttle or brake, on and off, send surprises to your tire contact patches. You are throwing your weight around, and causing tire drama. Yanking the wheel into the turn throws loads to the outside, like a wave crashing on the beach. All that inertia will create slides and headaches that never would have happened with better smoothness. Your bad driving will cause you to chase your tail if you blame your poor helpless car. •





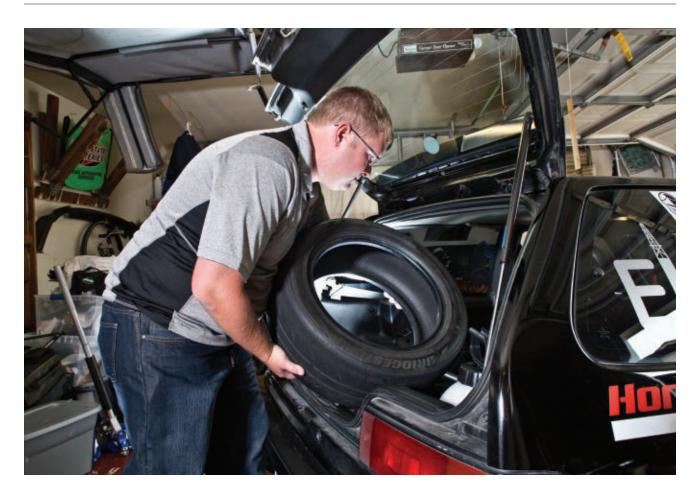
THE ROOKIE

Tire Rack Solo National Championships first-timer Peter Lindberg learns lessons and lives dreams on the road to Lincoln, Neb.

WORDS Peter Lindberg
IMAGES Philip Royle

If you Google poor financial decisions, my face should be the first image you see. I have student loans up to my eyeballs and no degree to show for them. I was sold my 1991 Honda Civic Si on credit; seriously, the guy who sold it took pity on me and told me, "Take the car and we'll figure out the money later. You're the owner this car needs, I've driven it less than six times in eight months and it needs to be driven and raced." He and I have since settled the money, but this helps you understand the world I'm in.

With that humble beginning, I got my hands on a beautiful Civic. The car had been owned by four other autocrossers over 13 years and had Tire Rack Solo National Championships trophies to its name. It was turnkey, nationally competitive in STS, and had non-adjustable Whitener Racing Bilsteins - perfect for a novice like me with no business messing with shock settings. It was simple, low horsepower, front-wheel drive, and competitive - a good combination for me to learn with. However, in the process of paying for the car over several months, I dried up the bank account I was planning to use for my trip to the Solo National Championships.



LOADED

(ABOVE) To make the journey to the Solo National Championships affordable, Peter Lindberg realized he would have to drive his Civic to Lincoln. It also meant that everything he wanted to take must fit in the tiny hatchback.

It was four weeks before the Solo Nationals and I had yet to figure out how I was getting both myself and the car to Lincoln, let alone where to stay while I was there. My Civic has a stock catalytic converter and straight-through muffler with a turndown tip under my butt - in other words, it's loud. Lock yourself in the dryer with a go-kart engine mounted to it at wide-open throttle, and you're pretty much on point.

My first choice was towing the car to the Solo Nationals, but after running the numbers for renting a trailer and borrowing my roommate's truck, I realized the gravity of the situation. Towing the car would increase the cost of the trip by \$600, or roughly four times what it would cost in gas to drive the car the 1,800 miles round trip between Houston, Texas, to Lincoln, Neb. I abandoned the towing idea and ordered a set of

noise canceling earmuffs and a new set of ear buds for \$50.

Lodging at the Solo Nationals ended up being fairly simple, as you can camp onsite at Lincoln Airpark, but when (not if, but when) it rains, the airstrip will flood with standing water and your tent will become worthless for anything more than keeping your soaking wet stuff from floating away. I was advised of this, and elected to find a roommate to

TRAVEL LOG

(LEFT to RIGHT) The
Civic shortly after
arriving at Lincoln
Airpark. Getting a
set of competition
tires to the Solo
Nationals meant
packing efficiently. A
large part of the Solo
Nationals is what goes
on in the paddock
after the day's
competition ends.



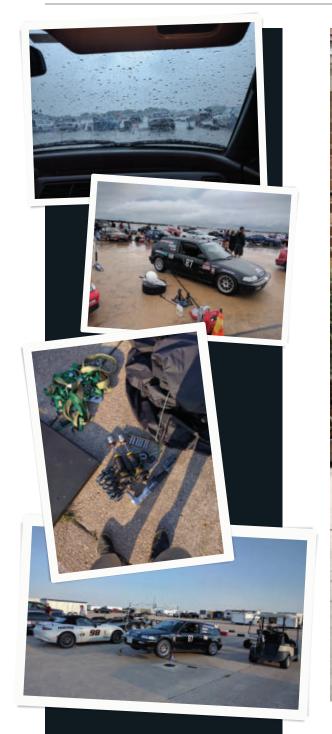


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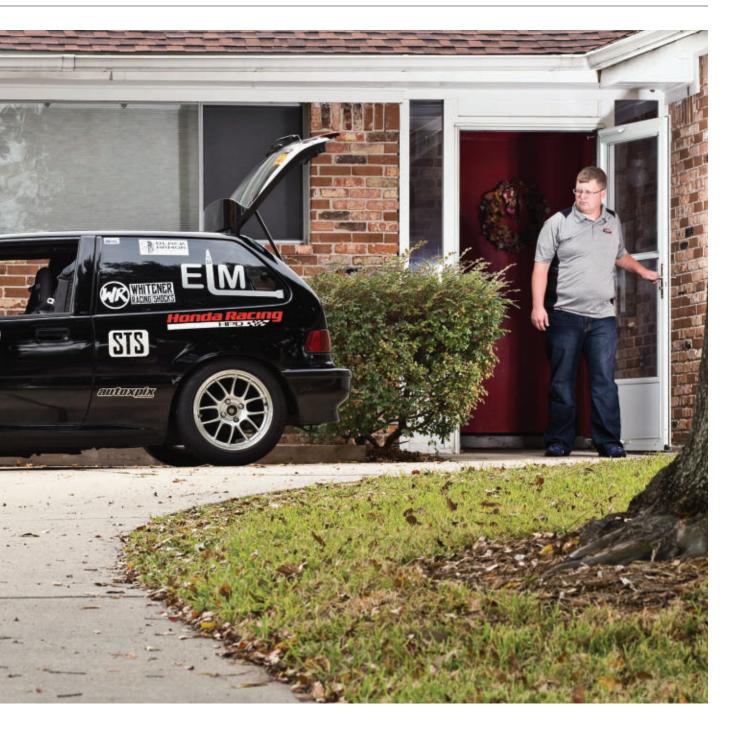


RAVEL LOG

(TOP to BOTTOM) When the rain started falling during competition, Peter took to his car for shelter. You know things are about to get real when you finally pull into the grid at the Solo National Championships. Thinking there may be a problem with the front dampers, Peter removed them in the paddock and had them checked at the event – something that's possible when the smartest people in the Solo community all converge at the same location. Suspension surgery was easily done in the paddock.

split the costs of a cheap hotel room. You can spend as little or as much as you want on a hotel; I opted for a Motel 6. Lincoln has *lots* of options as it is a college town, and SCCA also negotiates better rates at some places for you.

I lucked out on packing clothes. 2016 was a very mild temperature year and it rained when I was able to take shelter. That said, it should be noted that a temporary rain poncho from a gift shop isn't going to cut it. It will rain during the Solo Nationals, so come prepared. If you bring rain gear like you're going to go catch king crab off the coast of Alaska, you're on the right path. Also, bring a good rain jacket and rain paints, as well as waterproof shoes or boots. It can be sunny and 80-degrees F one heat and pouring and mid 60s the next. I did my



weather research ahead of time, but historically the temperatures range between 40 and 90 degrees in Lincoln, so pack accordingly.

I packed all my stuff the week before into the little noisemaker and headed for Dallas in the later part of Saturday after work. I broke the drive up because I was by myself, but I got the screaming Civic 900 miles to Lincoln with my sanity intact for \$70 in premium fuel after crashing for four hours on my buddy's couch in Dallas.

I arrived on Sunday evening and took off my 14-inch transit wheels and tires and put on my race combo. I took a tour around the site in my car to get a feel for how big the place was, and had Bridgestone mount and balance some new RE71s I'd brought along. They mounted and balanced for free on site. Awesome service.

I race my Civic in the STS class, which is an *extremely* competitive class. I'm stealing this quote, but it's essentially a spec class, or the closest thing to it you'll find in Solo. It's a lot of fun, but also incredibly close competition. My class was running in the final heat on Thursday and Friday.

The first day was on the East Course, which was the longer of the two courses. It had lots of places to

HEADING OUTPeter Lindberg's

journey to the Solo National Championships in Lincoln, Neb., started with a hope and a dream some 900 miles away in a Houston suburb.



lose time and few places to make it back up. I'm still learning the grip limits of my Civic, and Lincoln didn't help this by being the best autocross surface I have ever run on. Consequently, I wasn't carrying nearly enough speed around corners until my third run when I went for broke (or so I thought), and still left tons of time on the table. I came out of day one in 48th place out of 56 entries, which was ahead of my goal of not being dead last.

ON THE ROAD

(ABOVE) Getting to the Solo National Championships affordably required Peter Lindberg drive his 1991 Civic there – loud exhaust, stiff springs, race seat, and all. (BELOW) You never know what to expect at the Solo Nationals. In 2016, Peter found a deluge. Friday arrived, and the competitors of STS knew our fate; rain was supposed to rear its ugly head in a big cell in the early afternoon.

The last heat arrived and we could see the weather bearing down on us - and right as we're preparing to get started, it came down in epic proportions. Lightning strikes not far away and we entered a one-, then two-hour delay.

Once the event got going again, there were two races going on - one race on course and another against Mother Nature, as a smaller cell was also on its way. First runs were wet but not crazy, and I turned in a clean time and prepared to dial it up a notch for run number two. Unfortunately, the new cell was now upon us and it was dumping tons of water.

My second go-round was awful, running wide everywhere until I floored it out of the last corner, which was a huge mistake as I missed the rivers of water running across the course before the finish and ended up spinning just outside the finish chute

and narrowly missing the timing lights.

The rain let up soon after, and third runs were a game of finding the dry spots. At the front of the pack, Jason Frank was unable to beat the gauntlet thrown down by Jeff Wong early in the heat; at the other end of the field, I was able to put down a very solid final run and improve my position by five places for a 43rd-place finish. Not dead last - a win for me.

I was soaked and a bunch of my stuff in my paddock spot was soaked, but I'd achieved my goal and had a tremendous amount of fun in the process. So, yes, after my first time attending, my take on SCCA's Solo National Championships is this: go. Seriously, it's a blast and you will have lots of fun memories to recount at your local autocrosses, and you'll also get to see just how crazy the level of competition is at the National level. •

This story originally appeared on www.tracktuned.com. A special thank you goes to Adam Jabaay and his crew.







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THINGS

While your competition car is neatly packed away in the garage for the winter, now's the perfect time to check those key components

WORDS SportsCar staff

TO DO

ored? You shouldn't be.
Since there are limited
SCCA events taking place
right now, this is the perfect time
to check a number of items on
your competition car you've
either forgotten about or been
too lazy to do. With a little
preventative maintenance, you'll
be able to start the 2017
competition season with
confidence, concentrating on
going faster rather than chasing
last year's problems.

So, what have you been remiss to inspect? Undoubtedly, there are a ton of items. Sure, you put the car on jack stands and bought new fluids to put in as the race season nears, but when's the last time you checked your hubs for slack? You intended to do that midseason. remember? But then your transmission broke right before that big work trip, and the next thing you knew the Tire Rack Solo National Championships or National Championship Runoffs was upon you. You got through that event, and now what are you doing? You're reading SportsCar and continuing to not do exactly what you didn't do back then.

We're not saying to stop reading *SportsCar* - far from it. Rather, read on, as we've compiled a list of things for you to check on your competition car as soon as you're done paging through this issue.





UP TO DATE

Even if you're sure your helmet and harnesses don't expire this year, you should still check - you don't want to find out during your first event of 2017 that you were wrong. Some harnesses, like the Oreca Tech H Light (ABOVE), are both FIA and SFI approved, as the labels clearly state (TOP RIGHT). The Snell SA2015 sticker on this Oreca Full RS helmet (ABOVE) was located inside the helmet on the back, underneath the lining (BOTTOM RIGHT). Some helmet manufacturers might place the sticker toward the

side; dig around

and you'll find it.





CHECK EXPIRATION DATES

Let's start with something quick and easy. Few items in your competition vehicle expire, but there are two you need to keep an eye on; for Club racers, those are harnesses and helmets. For harnesses, the GCR mandates the use of belts that meet the SFI 16.1 or 16.5 specification, or FIA's 8853/98, 8853-2016, or 8854/98 specifications. In the case of SFI harnesses, the GCR

states that the belts expire on Dec. 31 of the fifth year after the date of manufacture as indicated on the label. So, in this case, belts manufactured in 2011 will expire on New Year's Day of 2017. FIA harnesses, meanwhile, expire on the last day of the year marked on the labels – if there is a hole punched in the "2016" line, your harness needs replacing.

Racing helmets also expire, but it should be noted that helmets used in Club Racing have a different lifespan than helmets used for Solo and RallyCross. In Club Racing, helmets holding Snell SA2005 certification will age out on Jan. 1, 2017, meaning all Snell-approved helmets must have SA2010 or SAH2015 certification. Also legal are helmets with an SFI 31.1 sticker, or helmets holding an FIA 8860-2004 or later certification, or meeting British Standards Institute BS6658-85 type A/FR approval.

Solo and RallyCross do not mandate harness replacement, but they do have rules dictating helmet replacement. In this case, helmets with Snell Foundation SA2000 and M2000 certifications will expire on Jan. 1, 2017.

While modern race suits, shoes,

gloves, and fire resistant underwear don't carry expiration dates, now is a great time to inspect those, too. Check seams for fraying, and double check all stretch points for thinning, like the elbow and knee areas. This may also be a good time to replace your fire-resistant socks, as those tend to wear thin long before other items.

If you do find yourself in the market for new equipment, there are several options. One method enjoyed by many a thrifty racer is to purchase last generation equipment. For example, you might be able to pick up a helmet with an SA2010 certification for a song this holiday season as manufacturers and suppliers blow out their old stock. That said, Snell updates its standards every five years, and the SA2015 standard brought with it a number of updates you might be willing to pay for, like more stringent impact testing. At the same time, recent years have brought about a number of boutique safety companies with competitive and unique products, so you might be surprised what your money can buy now versus when you bought your last harness or helmet.

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PREVENTIVE MAINTENANCE

Fuel cells are not a "set it and forget it" item and should be serviced between seasons for maximum life. Access to the cell's innards is usually possible through bolts at the top (ABOVE). Once inside, you might find fuel pumps, foam, and more (RIGHT). Clean the fuel cell as instructed by the manufacturer.

TEST IT

A leak down test

can be performed at home with a

quality gauge set,

like this one from

Longacre, and an

air compressor.

INSPECT YOUR FUEL CELL

For many of us, we won't give our fuel cell a second thought until there's a problem, but taking the time to give it some attention during the off-season will undoubtedly prevent a problem down the road.

Not all fuel cells are created equal; you might have a plastic drag race style cell in a Solo car that carries just enough fuel to finish three runs, or a full tilt FIA-certified, Kevlar bladder unit tucked away in your GT Club Racing car. Each type serves its intended purpose, but both deserve attention.

The best thing you can do for your

fuel cell is to drain it of any fuel when your car is going to be inactive for a lengthy period of time. If you have a basic cell without a bladder, little more than draining the tank, removing the filler plate, and wiping the inside clean is required. However, if your tank is plastic then you should protect it from the elements, as ultraviolet light and extreme temperature can make the plastic brittle over time.

If your cell has a bladder and foam inserts, the process is a little more complex. According to ATL Racing Fuel Cells, "Fuel cells are best treated by draining all fuel, and then filling with water for five minutes and emptying. The internal foam baffling should be removed immediately thereafter and dried outdoors. After wiping the bladder dry, the foam may be cleaned and reinstalled or replaced with new [foam]."

Like a plastic tank, a fuel cell bladder is sensitive to light and temperature, so it's recommend you store it in a dry, dark place if you don't plan to reinstall it immediately after cleaning.

Jack Lawson of Fuel Safe Racing Cells tells us well-treated fuel cell bladders should last for up to 10 years, so as long as you are treating it right, and you don't see any signs of wear and tear or damage, you should be able to continue to use it for years to come.

Unlike the bladder, the foam used to control fuel slosh is going to need much more attention, and very likely replacing more than once in your fuel cell's lifespan. ATL recommends checking the foam every six months, and replacing it if there are any changes in the material's composition.

Make sure to follow your fuel cell manufacturer's recommendations and instructions when dissembling and reassembling the cell, and replace any consumable items like gaskets as directed. If you have any doubts about the condition of your fuel cell bladder, inquire with your manufacturer about an inspection.



/ Sam Bloxham

PERFORM A LEAK DOWN TEST

Whether it's the hot new bolt-on power adder, a little tweak to the ECU tune, or lubricants that can free up untapped power, racers will do it. But the power you're looking for may get lost inside your aging engine if there's a problem at the heart of your motor. Luckily, a leak-down test is a great way to see where everything stands.

"We do leak-down tests whenever we see an over rev, or if we feel a loss of power on track or see it on the dyno," says Jim Drago of East Street Racing.

A compression test has been the go-to standard for years, as it offers a quick and easy look at the engine's

ability to generate cylinder pressure. However, a compression test does little in the way of telling where the engine might be losing that cylinder pressure. A leak-down test, on the other hand, can help tell the story of an engine's ability to hold cylinder pressure, and should there be an excessive leak, it can help you determine which area might need attention.

A leak-down test can be performed at most local repair or performance tuning shops, typically for as little as a few hundred dollars. You can also buy a leak-down tester and perform the test yourself, keeping in mind that a quality leak-down assembly and a large compressed air supply are essential to accurate results.

Performing a leak-down test is no more difficult than a compression test; the leak-down gauge assembly is fitted to a spark plug hole, the engine is set to top dead center, and a compressed air line is connected to the tester. The percentage of leak down is simply a matter of doing the math, calculating the percentage of loss between what is being fed into the engine, and what is escaping.

No engine will read zero loss - after all, you have metal rings trying to seal on metal calendar walls, and metal valves attempting to seal against metal seats, much of which is coated in a film of oil. For a road-going car, a 5- to 10-percent loss represents a strong engine, while an engine measuring a 10- to 20-percent loss will still often run OK, but will certainly be down on power.

In many cases, you may be able to track down where the pressure is escaping during the leak-down test. For instance, if you hear air escaping from the throttle body, you may have an issue with your intake valves, while air coming from the exhaust would indicate exhaust valve troubles. Meanwhile, air coming from the PCV, oil filler cap, or dipstick can be a sign of worn piston rings, and bubbles in the coolant may indicate a more serious problem, such as a faulty head gasket or damaged cylinder head.

Your budget (and how competitive you want to be during the racing season) will likely determine the threshold of pressure loss you'll put up with before servicing the engine.

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CHECK IT OUT

(ABOVE) under your car's body is everything from swaybars to dampers to springs, suspension arms, and bushings and you should check them all between competition seasons. (BELOW) While many suspension components can be visually inspected, it's a good idea to have your shocks tested on a dyno to find out

what's going on inside.

EVALUATE SUSPENSION COMPONENTS

Unless you had an off-track excursion or nailed a pothole on the way to a Solo event, why would you give your suspension components a second thought? After all, it was OK the last time you rolled off the grid. But the reality is if you don't check those suspension components now, you'll probably regret it later.

Items like shocks and suspension bushings are wear items, and they should be given a solid visual inspection regularly. Road grime has a nasty habit of being attracted to the

The House I have a second of the House I have

lubricant used to keep bushings moving freely, and even just a thin film of oil on a shock shaft can lead to dust and dirt building up around the outer seal. "Do a visual inspection," advises Lee Grimes, KONI America Automotive Product Manager. "Clean everything up and look for leaks, or physical damage to your shocks and struts. Make sure all of the adjusters function smoothly, and that they have the correct range of adjustment. Leaks or adjuster irregularities can be indicators of internal problems."

The type of dampers you are utilizing will determine in large part the service interval required. "If it's a street-based shock that adjusts right and has no leaks, you can go five years between services," Grimes estimates. "A real race shock is not made to cover 50,000 or more miles - a real race shock needs to be tested and serviced more frequently. [Testing] once a season is awesome, but testing it on the shock dyno and rebuilding every two to three years is pretty standard. I took a rough ride at Mid-Ohio during the 2016 Runoffs, so you can bet I'm going to dyno and inspect all of mine."

Like with any maintenance, don't put shock service off until the 11th hour as the process can be lengthy. "Typically, it takes about three weeks to turn around a set of shocks," says Thomas Haugg, of Performance Shock Inc., a KONI authorized service center. "We try to work with the customer, and we offer an expedited service for an additional fee."

Surprisingly, the time of year seems to have little impact on the speediness of shock service ("We stay pretty busy year-round," says Haugg), so you'll want to do it when it makes the least amount of impact to your race schedule.

Bushing service typically won't involve an outside vendor, unless you find yourself in need of a replacement. Simply removing any built-up dirt and grime and giving them a good onceover will tell you a lot. If you've removed your shocks for service, now's a good time to cycle the various parts of your suspension by hand - if you detect any binding, further attention may be warranted. Applying the appropriate bushing lube as directed by the parts manufacturer should be all you need to get back on track.

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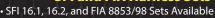
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CYCLING OUT

When tire shops replace their aging equipment, that's a great opportunity to buy a perfectly good tire changer for pennies on the dollar.

CHANGE YOUR OWN TIRES

You need a tire changer. Like, now. If you're serious about SCCA competition and you have a garage at your house or condo, buy a tire changer. We're not talking about a manual tire changer, either. Nope, we're talking about a pneumatic tire changer like the ones used in tire stores. What's that? "But those things cost \$2,000," you say. We say you're wrong. In fact, we say they cost as little as \$600, or maybe less.

OK, you got us, the overall price isn't \$600; it's actually a few hundred

"A year of private use by an SCCA member could be equal to one week's worth of use in a dedicated tire shop"

bucks more if you don't already own a decent air compressor. For what most SCCA members will be doing with a tire changer, a 30-gallon, 90psi compressor will get the job done - it might tax the compressor a little if you're blasting through multiple sets of tires, but for the most part, it'll do.

Back to the \$600 tire changer - in the SportsCar office, two staff members have purchased tire changers for their home garages. The reason was both the inconvenience of taking tires to a shop, and the bill the shop hands you at the end; you can spend anywhere from \$50 to \$100 having a shop dismount and mount a set of tires, and they'll get them done sometime today, guaranteed. Doing it vourself means you can change the tires on your own schedule, and the cost is the electricity used to power the tire changer and air compressor. So, where are these magical \$600 tire changers? Well, they're used, and you'll find them everywhere from the tire shop you currently use, to an ad on craigslist.

One of the two tire changers owned by our staff is a high-quality Corghi purchased directly from the tire shop he used to use - they mentioned it was for sale while he was having tires changed, and about \$600 later, he owned it. The other tire changer a staffer owns is a Talyn, which is a cheaper brand. Originally found on craigslist for a little less than the price of the Corghi, the Talyn was being sold by an aftermarket tuner shop that discovered less expensive tire machines can't mount 22-inch tires.

While both tire changers were used, the reality is that a year of private use by an SCCA member could be equal to one week's worth of use in a dedicated tire shop; in other words, a unit that is "worn out" for one use might still have years of life left for another. Case in point, both the used Corghi and Talyn tire changers have delivered years of services in our personal garages with no significant maintenance.

As for actually changing tires, it's not difficult. For the job, you'll need a couple of tire irons (Harbor Freight sells inexpensive ones) and tire paste (buckets can be ordered via Amazon). You'll also need to know how to use the tire changer, and for that we recommend asking the tire shop you're buying the changer from to give you a demo. When you forget what they said, search YouTube.

The next topic is balancing tires. Interestingly, the same staffers who own tire changers have also discovered that for most production-based cars traveling less than 120mph in competition, balancing is not completely necessary. But if you disagree, those same tire shops also sell their old tire balancing equipment, too.

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LEARN TO WELD

Yes, you should learn to weld. No, we're not crazy. And, no, we're not talking about using your newly discovered skill to build a rollcage. Rather, use the ability of sticking two pieces of metal together wisely, moving up to bigger projects – and even then, don't build a rollcage.

Welding is a great skill, even if you're not good at it. We discovered long ago that with a 110-volt MIG welder and a little patience, tools and brackets can be fabricated with ease, and you can even get more ambitious and build something like an exhaust - but as we said, be smart about it.

Recently, we removed a stainless steel exhaust from a pickup truck we were testing, and rather than tossing the near-new piping, we repurposed it onto one of our racecars. We ordered a new header, a couple Burns Stainless race mufflers, some V-band exhaust clamps, a couple feet of spare exhaust piping, and then set to chopping the truck's exhaust into usable bends and straight pipes with a chop saw. With an HTP MIG 140 welder, we tacked the exhaust in place and then took the tacked pieces to a shop for finish welding - like we said, we're not crazy, so we rarely rely on our welding to hold things together for long.

Let's pause for a moment. The HTP MIG 140 welder costs about \$1,000, which is a lot of money to spend on a something we're not going to use to finish the job. But at the same time, by tacking the exhaust and taking the pieces to the shop for finish welding, we saved both time and money.

Taking a competition car to a shop is a headache. In many cases, it requires loading the car onto a trailer, towing to the location, finding somewhere to unload the car, and then doing everything in reverse when the work is complete. Then there's the money. By only bringing the exhaust pieces, the shop said we saved at least \$300 versus them putting the car on the rack and building the exhaust themselves. Granted, \$300 is not \$1,000, but project after project, savings add up.

Cost aside, there's also a sense of accomplishment. In this case, not only did we build an exhaust exactly the way we wanted, but we can also say we built a custom exhaust. So, yes, you should learn to weld. No, we're not crazy. And, no, we're not talking about

building a rollcage. What we are talking about is developing your skills beyond driving – and you get to wear a cool welding mask.

COMPLETE YOUR OWN ALIGNMENTS

Production-based competition cars are susceptible to alignment miscues, due to the slipping of things like cam-style adjusters in A-arm cars or crash bolts in strut suspension. It takes little more than a small pothole on an autocross course or dipping a tire off the racing surface at the track to put your alignment out of spec, not to mention the fact that you might want to actually test a new alignment setup. A trip to the alignment shop in the middle of a competition weekend is usually out of the question; so having the ability to make changes on the fly can be an invaluable tool.

If you're handy with math you can perform an alignment with little more than a level, a tape measure, jack stands, and string, but investing a few hundred dollars into proper alignment gear will save you a lot of time, and easily pays for itself over time.

A basic set of toe plates and a camber gauge is a great starting point for the weekend warrior. If you don't know how to use the tools, it's best to start off with a known good setup - this gives you something to compare your numbers to the first time you lay your hand-held camber gauge up to your wheels, or whip out the tape measures and toe plates. Be sure to keep notes when you make a change so you can go back to your baseline.

While it won't always be easy to find trackside, a piece of level ground is essential to help ensure accuracy when aligning your car. A large level is useful for finding such a spot, and any number of items can be used under your tires to help level things if you can't locate a desirable location. Also, it's great practice to have your tires set to your competition pressure when performing an alignment.

At the alignment shop, your car will be sitting on a set of slip plates to help eliminate any suspension bind that might give inaccurate readings, but those are costly and not exactly convenient to tote to events. A low-buck alternative is to spread grease between a couple of sheets of stainless steel, Delrin, or nylon – some people have even

done the same trick with plastic trash bags. The idea is to allow you to turn the front wheels from side to side without a lot of resistance.

Adjusting a car's alignment is typically straightforward; a quick glance at your factory service manual (or the instructions for aftermarket items like crash bolts) should show you what items to manipulate and how tight to torque those fasteners when you are done. Once you get comfortable making alignment changes, you will wonder why you ever spent all that money, and time, waiting for someone else to do the work.

"You can perform an alignment with little more than a level, a tape measure, jack stands, and string"

CUT VINYL GRAPHICS

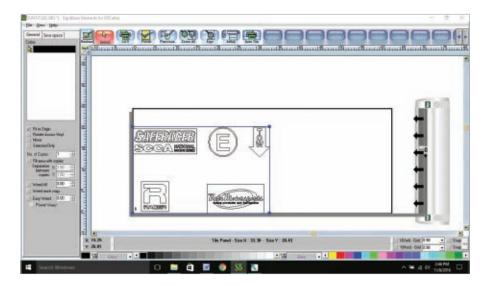
From Solo to Club Racing to RallyCross and RoadRally, every car that competes in SCCA events is required to have some kind of visible class or number designation. Blue tape on the doors works in a pinch, but there's nothing better than having visually pleasing numbers and class designations cut to the rules-legal size on your competition



THAT WAS EASY

Aligning your own car might seem overwhelming at first, but with tools as simple as a camber gauge (ABOVE) and tow plates (BELOW), you can dial your car in at home or even during an event. We recommend, however, starting with a good baseline alignment you can measure to ensure accuracy.





CUT IT OUT

Vinyl cutting software (ABOVE) isn't always intuitive, but once you figure it out, it's easy to cut vinyl at home on your very own vinyl cutter (RIGHT).



vehicle. But having vinyl cut is often inconvenient, so why not do it yourself?

Tired of having to find sign shops willing to cut stickers to fit our needs, some of *SportsCar*'s staffers invested in a vinyl cutter to make racecar projects easier. There are a variety of size options available, but we chose a 28-inch cutter with a stand from USCutter.com for about \$270. Vinyl of various colors can then be

purchased for \$20 for a 24-inch by 10-yard roll. Over the years, we've discovered we primarily use black, white, and silver vinyl, so we make sure to always keep those colors in our cupboards; at the same time, we also stock pink and gold, as those get used more than you'd think.

Cutting numbers and letters from a sheet of vinyl is a breeze, but logos aren't as straightforward. Vinyl cutting software isn't always the most intuitive when it comes to importing files, and unless you're familiar with manipulating EPS image files in a separate program like Adobe Illustrator, you may find cutting sponsor logos is not in the cards. But even if you're limited to cutting numbers and letters, you'll find a vinyl cutter a great investment.

Before you jump in, you'll need the tools of the trade. Companies that sell

vinyl and cutters also sell starter kits; that said, all you need from those kits are a couple good X-Acto razor knives and a roll of transfer paper.

Once you've set up your vinyl cutter and cut some numbers and letters, you'll need to "weed" the vinyl. Weeding is a process of removing unwanted vinyl from the vinyl sheet, leaving just the part you want to apply to the car. Next, stick the vinyl on to the transfer paper and

"Cutting numbers and letters from a sheet of vinyl is a breeze, but logos aren't as straightforward"

trim around what you printed - this will leave you with a sticker that's familiar to anyone who's ever seen vinyl stickers prior to application. Once you're ready to apply the vinyl on the car, peel off the backing paper (the vinyl will now be on the transfer paper), and apply the vinyl to the car. Depending on the size of the vinyl numbers or letters, you may want to apply the vinyl wet, which allows you to move the vinyl a little once on the car. For this process, application fluid and a small squeegee are useful.

Does everyone need a vinyl cutter? No. There are sign shops all across America specializing in this service, and they do a great job. That said, owning your own cutter offers a freedom you never knew existed when it comes to how your competition car looks – and it has become one of SportsCar's "must have" items. •

VIRTUALLY FREE Stickering our EP project car used less then \$10 in vinyl, and allowed us to resize stickers to fit.



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Congratulations to Scott Speed on two straight Red Bull Global Rallycross Championships.

In the 560-horsepower Beetle GRC Supercar, Speed brought home another Red Bull Global Rallycross Championship trophy in 2016. He and Volkswagen Andretti Rallycross teammate Tanner Foust combined for eight victories this season, earning Volkswagen its first Red Bull GRC Manufacturer's Championship title. Along with the team's six other podium finishes this year, that's a lot of trophies. We're running out of space on the mantelpiece.



n the world of Solo, swaybar modifications are things almost any class enjoys. Effectively, if your car came with a swaybar, chances are the rules allow for it to be changed; and if it didn't come with one, you can probably add it. This works out well because a correctly adjusted swaybar can be a highly effective tuning tool for making any car faster. "Swavbars." reveals Guv Ankeny, who works in the Damper Works division of FR Sport, "are one of the most important things on your car." Ankeny should know. Beyond being one of the go-to suspension authorities in the Solo community, he's also a multi-time Solo National Champion who has turned wrenches on everything from Solo cars to professional race sedans to formula cars. "Stable doesn't mean fast," he explains. "Stable means easy to drive, and is generally more confidence inspiring."

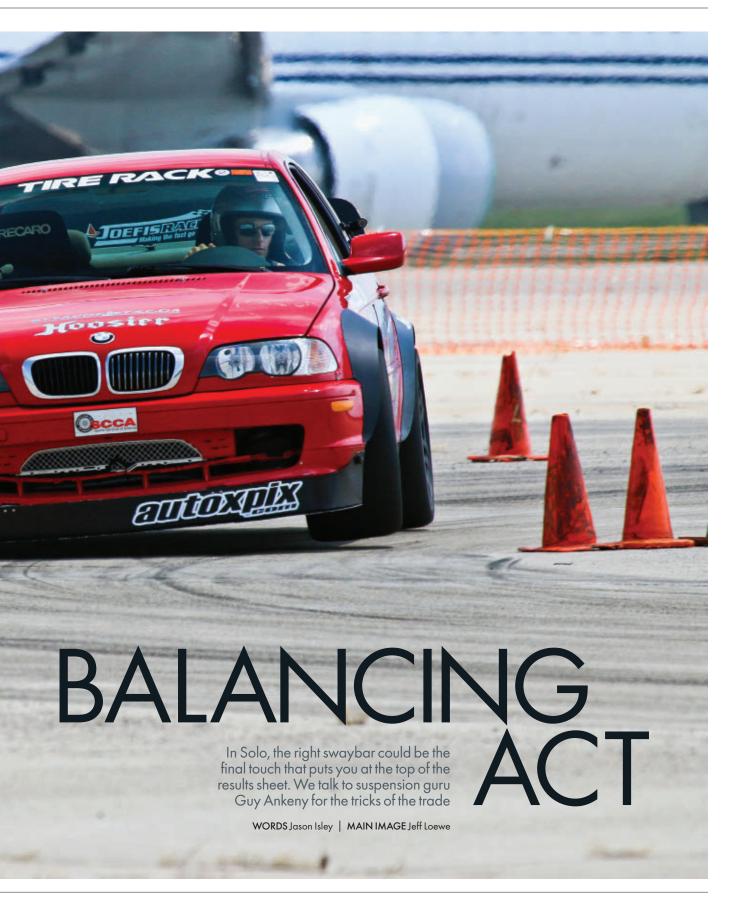
For softly sprung Street category machines, taking advantage of the allowance to change the swaybar of your choice can make a big difference in not only corner grip, but also transitional speed, and how your car accelerates off a turn. "For a rear-wheel-drive car, a front bar is for sure the best way to go," says Ankeny. "The thing the front bar does is not only keep the front of the car from leaning so it will transition quicker and keep the car flatter pretty much everywhere - which is a great thing - it also gets more rear grip." A rear swaybar, Ankeny explains, generally takes away rear grip, basically lifting the inside tire. "So, if you are having power-down issues, you surely wouldn't want to put a bigger bar on the rear of a rear-wheel-drive car."

If you happen to pilot a front-wheel-drive, or all-wheel-drive car, your choices, unfortunately, are slightly less clear. One school of thought is to run a bigger front swaybar to help limit body roll and minimize camber loss, but that typically comes at the cost of acceleration, as the swaybar transfers load from the outside to the inside tire causing it to try and lift. "A front-wheel-drive car is

CORNER EXIT

Front swaybar rate can have a big impact on a rear-drive car, particularly when it comes to getting off a corner quickly.





obviously slightly different because you are limited by inside wheel spin and other things, so you let that dictate what size swaybar [you run] - more wheel spin on a stiffer [front] bar and less wheel spin on a softer bar if you don't have a limited slip," says Ankeny.

Because of the tendency for the larger front swaybar to increase wheel spin on a front-drive car, the better choice is typically a larger rear swaybar. A larger rear bar helps free up the rear of the car while transferring load to the front drive tires. You may give up some transitional speed with the relatively softer front setup, but this is typically more than made up for by the ability to rotate the car in long-radius turns, and the added corner exit grip the front tires gain. The same is often true for all-wheel-drive cars.

"Most of the all-wheel-drive

guys will run a bigger rear swaybar because they can't make the car rotate," says Ankeny. "You don't want the car lifting the inside rear tire but, at the same point, steady state the cars generally understeer so badly that you have to mask it with something else."

For Solo cars not limited to original equipment springs, a swaybar is still a very effective tuning tool - but used slightly differently. "You are trying to use the swaybar more as balance for steady state cornering in a car where you can do more modifications, where in a stock-based car it may be the only thing you can do," says Ankeny. "You are trying to get power down, or keep the platform more level so you can maximize the grip you have on the tires."

Before you open up the Winnebago catalog and order the largest swaybar in the world, remember there are always some tradeoffs. By its nature, a swaybar takes some of the "independent" out of independent suspension. "If one tire hits something, it really affects the other one," says Ankeny. "Sometimes you have to run a big bar, but there are drawbacks to it – you don't get something for nothing."

Most popular vehicles will have plenty of off-the-shelf swaybars available, but others are not so lucky. The good news is that with a little engineering you can often come up with the perfect match via a custom-built swaybar. This is not nearly as frightening or costly as it may sound.

"I look at a little bit of everything, the spring rates that the car has, what the motion ratio would be, and what the car is being used for," Ankeny explains when designing a one-off swaybar setup. "If you are using Hoosiers versus a 200 tread wear tire, you're going to experience more body lean, so you are trying to counteract that."

Seat time at a Solo event is a highly prized commodity, and typically no one ever gets enough of it. When it comes time to dialing in your swaybar, it's good practice to make a change that will actually make a difference. In other words, don't just creep up -going too far can get you just as much useful data.

"If I had to pick something, I would generally go bigger, and then come back down to earth," says Ankey about trying out a new swaybar. "In other words, make a big enough change where you feel it; the more you use them, the more you will understand them.

"A lot of times we say, 'lt's just oversteering or pushing this much, so I'm just going to make a little change'," he continues. "Well, you can make a tiny change and sometimes you can hardly tell







PICK YOUR POISON

Vehicle platform, and the desired behavior, will influence your swaybar tuning choice. (ABOVE) An all-wheel-drive car may have a tendency to drive like a frontwheel-drive car, but still needs to put power down via the rear tires. (LEFT) Too much front bar on a rear-drive car can result in understeer. (FAR LEFT) Contrary to popular belief, it is possible to make a frontwheel-drive car oversteer, but you can find the right balance by playing with swaybars.

that there is a difference - you have to make enough of a change that you can tell you are going in the correct direction."

Along those lines, Ankeny emphasizes how important it is that any adjustable swaybar be easy to adjust. "Having a bar that is adjustable is important, and the easier it is to adjust is even more important," he explains. "Having a bar that takes half an hour to adjust is almost a waste of time, because you can't test it back to back."

The most common adjustable swaybars feature predrilled holes that allow you to independently adjust each side, altering its

stiffness by a few percent - but there are other options as well. "The blade bar is the easiest," says Ankeny. "It has a great range of adjustment, and is so quick to adjust. Some of the ones I've built can be adjusted in less than 15 seconds, and that is key when trying to adjust cars in a quick period of time."

The speedway style, Ankeny says, is nice, but he has a preference on how those are adjusted. "You can get arms that are predrilled or even drill your own, but I like slotting it the best. Slotting it makes it easy to adjust."

No matter what you decide for a swaybar, don't overlook the

rest of the system. Items like adjustable end links can help even original equipment swaybars perform better, as they allow you to tune out preload. "It's basic common sense on those," says Ankeny. "Making sure the bar does not have preload in it - it makes the car more consistent, easy to drive, and offers repeatable results."

While this may be a lot to digest, the take-home tip is that if you have an adjustable swaybar on your competition car - use it. And, if you don't have an adjustable swaybar and the rules of your class allow it, what are you waiting for?

BOUND UP

One of the most detrimental things to your car's handling can be suspension that doesn't move when it's supposed to. A bound-up sway bar can mask itself as many different handling issues, and keep you scratching your head for days. "Probably one of the most important things on the sway bar is to make sure the brackets that hold the sway bar do not pinch it and keep it from rotating," says Guy Ankeny. "I would say that 90-percent of any sway bar systems I've looked at where a person is saying the car is pushing, we disconnect two of the links on the sway bar and none of us can physically move the bar. It's very common on Corvettes; from the factory, the bushing is almost bonded to the bar. It shouldn't be - it should move freely in there."

In some cases, it's simply a matter of remembering to service the bushings with the appropriate lubricant on a regular basis; in other cases you may need to relieve the bushings to allow the bar to move freely. Either way, it's time well spent.



A half season of use later, we look at the SCCA Solo department's new tow rigs to see how they've fared | WORDS Philip Royle

ROAD TRIP

(ABOVE) SCCA's Solo department now tows its big trailers with a pair of 3500HD Chevy Silverados. (RIGHT) Logging major mileage requires a comfy interior. (FAR RIGHT) SCCA's tow rigs often act as recovery vehicles on site.

n June 2016, SCCA announced a partnership with Chevrolet, where Chevy would become the official truck of the SCCA. On its face, this might not seem to affect the membership; the reality, it turns out, is quite different. You see, this venture brought with it new Chevy trucks for SCCA's Solo department, meaning the Tire Rack National Solo Series equipment trailers would traverse the country behind

Chevy Silverados. If those trailers didn't make it to their destination, thousands of SCCA's most diehard autocrossers would be left in the lurch.

There's one person who knows this reality more than anyone, and that's SCCA Project Manager Clancy Schmidt, since his driving accounts for half of the miles logged by SCCA's Solo department. "I tow about 35,000 miles a year for the National Solo

Series," says Schmidt, who also drove a semi for SCCA Pro Racing's Formula 4 series this year. "As a racer myself, I tow to three or four road races a year in my own truck pulling my own 20-foot enclosed trailer."

The trailers the Solo department pulls to more than 20 events nationwide are not small. "For Solo, we now have three trailers," Schmidt explains. "The Timing and Scoring



trailer is 28-feet long and weighs about 16,000lbs. It's a nice dual-axle trailer with electric brakes and spread axles. The trailer we take for tech is also 28-feet long, but depending on how it's loaded, it's around 14,000lbs. We pull these two trailers with 2016 Chevy Silverado 3500HD Crew Cab duallys with the 6.6L turbo-diesel. The Match Tour/RallyCross trailer is 20-feet long and weighs about 10,000lbs loaded. We pull this with a Chevy Silverado 2500HD four-wheel-drive Crew Cab diesel."

When it comes to truck selection for towing, Schmidt says the priority is, quite simply, choosing a rig that will get you where you're going.
"Reliability is foremost," says Schmidt.
"Think about it - were the Solo timing trailer to show up a day late, or not at all, it would really mess up a major Solo weekend."

Having the right equipment, Schmidt says, is vital. "I've towed with equipment that was way too inadequate," he admits. Too little truck for the job at hand is something Schmidt, who used to own a company that produced high-end trailers, staunchly advises against.

"I'd say for towing anything over

10,000lbs you should seriously consider a dually," he says. "There is less stress on the truck and less stress on the driver. You don't have to chase it all over the road, and you have decent brakes. It's way safer."

For many enclosed trailer loads Schmidt sees SCCA members pulling, he advises against a half-ton truck for the same reason: safety. Once you've stepped up to the three-quarter-ton or one-ton truck, then you can start looking at other options. "Heated seats are nice," Schmidt laughs, "but a/c seats are the sweetest thing."

SCCA's Chevy Silverado trucks, Schmidt notes, have all the bells and whistles. "I love the SiriusXM radio and really love the navigation system. The seats are comfortable for an 11-hour day - twice a year we work 12 hours a day for a three-day weekend and then put together four 11-hour driving days to get to the next event."

But in talking to Schmidt, what was possibly the most telling was an offhand comment that meant the world. "The seats are comfortable, the mirrors are good, the trucks are quiet, they ride great, and the brakes are fantastic," Schmidt sums up. "I'm a Ford guy and, frankly, I love these Chevys."





HEAVY LIFTERS

Ultimately, picking a new heavy-duty truck to tow your racecar comes down to the numbers. Here's what you need to know about the latest Chevy Silverado 2500 and 3500 truck lineup:

MODEL	ENGINE	НР	LB-FT	TOW CAPACITY (TONGUE)	TOW CAPACITY (5TH WHEEL/ GOOSENECK)	PAYLOAD
2500HD	6.0L V8	360	380	14,500lbs	14,800lbs	3,534lbs
2500HD	6.6L V8 diesel	397	765	14,500lbs	18,000lbs	3,275lbs
3500HD	6.0L V8	360	380	14,500lbs	14,600lbs	4,390lbs
3500HD	6.6L V8 diesel	397	765	14,500lbs	17,500lbs	4,335lbs
3500DRW	6.0L V8	360	380	14,300lbs	14,300lbs	7,153lbs
3500DRW	6.6L V8 diesel	397	765	20,000lbs	23,200lbs	5,587lbs



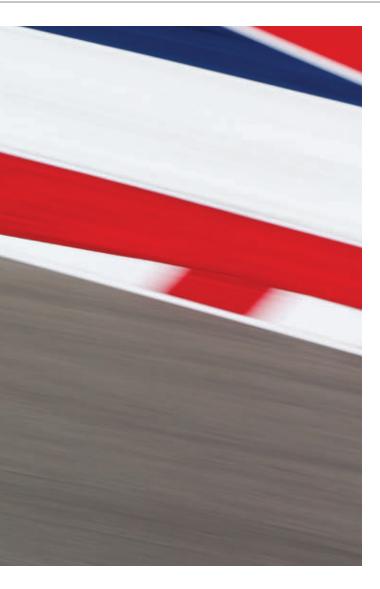
s the series headed toward its final showdown of the season at Daytona International Speedway, the Trans Am series hosted two very intense weekends of racing, one coming the weekend of Oct. 15 at NOLA Motorsports Park and the other during the Nov. 5 weekend at Circuit of the Americas.

At NOLA Motorsports Park, Paul Fix captured his fourth win of the 2016 Trans Am Championship with a flag-to-flag victory. The win put Fix just one point off the points leader at the time, and defending TA class champion Amy Ruman, who finished second in that weekend's race. In TA3, Randy Mueller secured the TA3 championship despite finishing sixth in class, while Steve Streimer captured his second victory of the year in the class and Dave Ricci secured his first career win in TA3.

For Fix, the victory saw the culmination of a second half surge through the points, with a single point separating him from Amy Ruman; combined with Cliff Ebben just nine points behind Fix, the TA class was poised for one of its most dramatic finishes in recent memory.

"I've just been keeping my head down," says Fix. "The guys have been putting together a great car. We had some setbacks early on in the year, some mechanicals and stuff like that, [but] the guys have been spot-on the last few races. They've given me the opportunity to really concentrate on putting down consistent laps and focusing on wins, and that's been the key."

In TA3, Streimer, who began the race on pole, fended off early challenges from Mueller as well as plenty of multi-class traffic and a hectic restart to capture



STAR DRIVERS

Paul Fix pushed hard and claimed TA wins at both NOLA and COTA (LEFT). Meanwhile, Dillon Machavern (BELOW) finally had his weekend come together for a TA2 win at COTA.

his second victory of the year - but post-race celebrations were also taking place in Mueller's paddock space as his sixth-place finish secured him the TA3 championship.

"Everyone at Epic Motorsports has put a lot of effort into this Championship," says Mueller. "I get to do the driving, I get to look like the hero, but our team is what makes it happen.

In TA4, Dave Ricci emerged victorious after a race-long battle with Spencer Caudle after pole-sitter Ernie Francis Jr. was forced to pit with a failing half-shaft.

In a separate race, that day, Tony Buffomante led every lap of the TA2 race, maintaining the lead on every lap despite strong challenges from Justin Haley and Shane Lewis throughout the race, eventually securing his fifth TA2 win of the year.

"We needed this," says Buffomante. "We've been manufacturing ways to win these last few races, but needed to find the speed - and we found it.

Three weekends later, the Trans Am series headed a little to the west to Circuit of the Americas in Austin, Texas, where Paul Fix began the day on the TA pole and finished the day on the top, also capturing the Trans Am championship points lead with one race remaining. In Trans Am's production classes, Tim Kezman capitalized on the late mechanical misfortune of Ernie Francis Jr. to secure his second TA3 win of the year, while Todd Napieralski captured his first TA4 win of the year and fourth podium appearance.

In the standalone TA2 race, Dillon Machavern emerged victorious atop the 22-car TA2 field, outlasting a 102.81-mile race that saw four official lead changes and an hour-long battle with defending TA2 champion Gar Robinson. Machavern would take the lead on the 25th lap of the 30-lap race, eventually growing the lead to four seconds before the checkered flag flew.

"About halfway through the season we really ran into some bad luck," Machavern admits. "We were struggling with mechanical issues but finally have made our way back on top. We were strong all weekend and knew we'd have a good shot come the race. TA2 is super competitive, and you're always going to be run hard up front. You have to be able to keep it relatively clean, keep the car relatively straight and keep the tires underneath it.

The final race of the weekend will have already occurred by the time you read this, with results appearing in the next issue of *SportsCar* and on Trans Am's website, www.gotransam.com. •



RACING ROOM CLUB RACING



KNOWING IS HALF THE BATTLE (LEFT) At the 2016 Runoffs, the CRB placed data boxes in every P1 car in the field. (BELOW) Let the CRB know your thoughts on various topics, like the 2018 Runoffs proposal, at crbscca.com.

GATHERING DATA

Just because National Club Racing is over for the year doesn't mean the CRB isn't hard at work | WORDS Jim Wheeler, Chairman, Club Racing Board | MAIN IMAGE Mark Weber

After a lull in the action following the 2016 National Championship Runoffs presented by Garmin VIRB, the Club Racing Board handled slightly more than 200 letters at our Nov. 1 meeting. While it sounds like a lot, this is a pretty typical number of letters as everyone takes their last shot at rules changes and competition adjustments for the new season. But going through the letters and making adjustments isn't straightforward this time of year, as we had data gathered at the Runoffs to also weigh into the equation.

At the Mid-Ohio Runoffs, we had data boxes on a very large cross section of the cars. Although we don't go strictly by data from the Runoffs for any adjustment, Mid-Ohio happens to be a very good track to use for data gathering. Unlike when the Runoffs was at Daytona in 2015, which is an atypical track compared to the rest of the tracks

in the country, Mid-Ohio offers a little bit of everything. Glen Thielke Jr., one of our Race Data Technicians from the Milwaukee Region, worked all Runoffs week installing and retrieving data boxes from cars in many classes.

Thielke, who is semi-retired, spent 30 years in quality, engineering, and manufacturing management before becoming a teacher and consultant at a technical college, put AiM data boxes in all P1 cars as well as data boxes in AS, T1, T2, and F5 cars, logging close to 1,000 laps of data. "The process of getting the boxes in and, especially, out of the cars is a work in progress," Theilke says. "It definitely needs some tuning as I couldn't keep up - lots of miles in the paddock. I had minimal issues with the drivers. Most were extremely cooperative."

Putting the boxes in cars is one thing - going over the data afterward is another. "Data analysis took more time than anticipated," Theilke admits, "about 20 hours a week from the conclusion of the Runoffs until the first week of November."

It should be noted that the Advisory Committees cannot view the raw data; rather, SCCA staff and CRB members not involved in the subject classes view the raw data and provide Advisory Committees with screen shots from which to figure possible competition adjustments. We are very careful to prevent anyone from gaining an unfair advantage by having access to data from cars in their classes.

The next face-to-face CRB meeting will take place on Thursday, Jan. 19, at the SCCA National Convention in Las Vegas. We will be spending time on future plans for Club Racing and, although this is a closed meeting, we can take some time to meet with fellow racers. If you will drop me an e-mail before the event, I will try to set aside some time

for you with the CRB (contact information for all CRB members can be found by logging into www.scca.com). By convention time, we should have a handle on the data that was gathered during the season and at the Runoffs.

And, finally, by now you may have noticed in the December Fastrack some recommended changes for the 2018 GCR that would allow for new U.S. Majors Tour classes. This is part of our proposal to separate Majors classes from the Runoffs - a new class could race in the Majors but would not necessarily be invited to the Runoffs. There will also be a method (a return of the 2.5 rule) that would let undersubscribed classes be dropped from the Runoffs but still be able to run in the Majors. Majors races and the Runoffs would be used to figure the average participation as it applies to the 2.5 rule. Read the rule carefully and submit any comments to the crbscca.com letter system. •

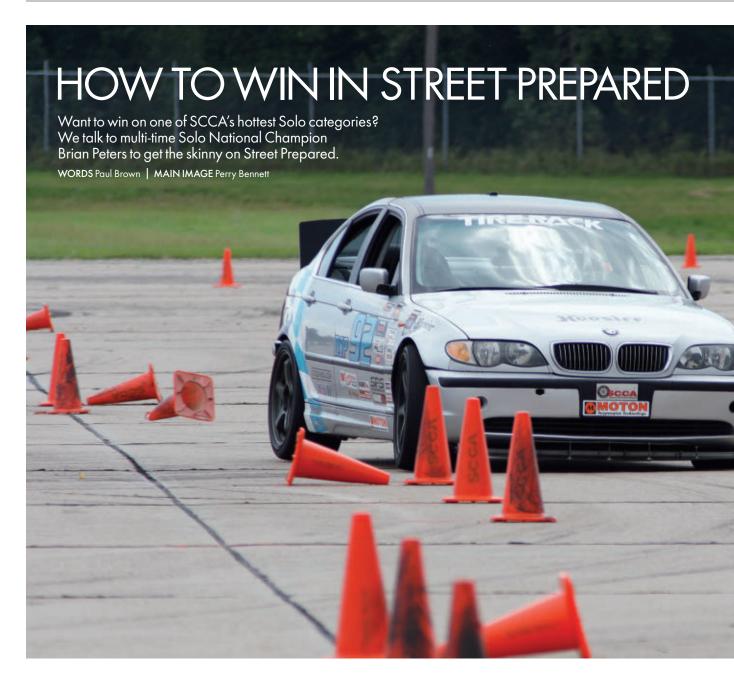


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Prian Peters is a name many autocrossers know. The 2015 recipient of the Solo Driver of Eminence award, his claim to Solo fame came in part due to time spent competing in rear-wheel-drive Street Prepared cars. In addition to titles in FS, STU, and SSR, Brian also has National Championships in CSP (Mazda Miata), DSP (BMW 3-Series), and ESP (Ford Mustang), and it's with these cars that our questions lay.

When it comes to Street Prepared, Peters does not think it takes a 100-percent car to win a National Championship. That said, Peters thinks CSP may be the class at the sharpest end of the spear these days. The NC Miata that delivered his first championship was selected as much for its on-course potential as it was for being a tolerable daily driver. That said, Peters is also aware that the car was a better tool for the slippery asphalt surface at Heartland Park Topeka than it might be for Lincoln's concrete.

Peters is convinced that there is a lot more variety of competitive

WINNING EDGE
Brian Peters has
become very adept
at setting up reardrive Street Prepared
cars, like the DSP
BMW (ABOVE)
and ESP Mustang
(RIGHT) he collected
Solo National
Championships with.

vehicles now than we usually see competing at the National level. Just because the car you have isn't the choice of all the lemmings, it could be capable of winning - and not just locally. But, in his mind, there are some universal truths. For example, you need as much tire under the car as possible, he says. For most Street Prepared cars, that means the 275/30-15, 285/30-18, or 335/30-18 Hoosiers, depending on gearing needs, vehicle size, and clearance issues. Some car builders get obsessive



about keeping a car as narrow as possible, but Peters says the big tire is more important. Beyond re-gearing via tire size, Peters also advises to look at update or backdate choices for both transmissions and final drives; the ratio found in the automatic-transmission cars may be different from what came with the manuals.

Next comes maximizing power, minimizing weight, and dialing in aero and suspension. An intake, exhaust, and tuning are a must, Peters explains. For some cars, there are off-the-shelf options, while for others

"Higher spring rates allowed us to keep the center of gravity low"

BRIAN PETERS



RACING RESUME
Brian Peters (RIGHT)
has seen success
in a variety of
cars, picking up
Solo National
Championship
titles in everything
from Stock to
Street Touring to
Street Prepared.



you'll be heading to a fabricator. Then you need to do what you can to minimize weight. Think about aero (yes, Peters says, it matters at autocross speeds), a good limited slip differential, and consider damping options, with mono-tube design being Peters' preference. With everything else in the ballpark, suspension tuning will bring all the components together. "I put an emphasis on transitional speed when tuning all my cars," says Peters. "If the driver can keep up, there is almost always more time to be had in the transitional features on an autocross course. The car absolutely needs to dance."

Peters says if you don't notice the differential when driving, it's probably pretty good - but getting to that point may be an iterative process. For some cars, a basic Torsen may be all that's needed; otherwise, OS Gikens are a great choice, and some other options can be just as good. In any case, a tunable differential is a big plus, as being able to get on the power early is huge.

Peters does not have a massive database of spring rate information. He starts out talking to people in similar cars (not category dependent) to get his baseline, but his eventual choice is going to be determined by testing - lots of testing. Pay attention to ride heights and suspension travel, he says. "One of the benefits of tuning the ESP Mustang with higher spring rates allowed us to keep the center of gravity low yet still avoid bump stop complications," he says, noting that spring rate changes will come from what you find during testing. He also suggests you put another good driver in the car to get their feedback.

"Make it easy for the driver," Peters says - and by that he means to use a supportive seat that doesn't flex, and install a small steering wheel, all in a configuration that's in a good driving position. He also says modern a/c systems are quite light and are probably not worth removing.

So, how do you build a winning Street Prepared car? According to Peters, start with something reasonable, do your homework on every aspect, test everything, and then do more testing. Spring Nationals at the Lincoln Airpark site, Peters says, is a great opportunity for testing that counts. And, if you happen to be a Driver-of-Eminence-caliber driver, that doesn't hurt.

SHIFTIN' GEARS SCCA FOUNDATION



THE GOAL

The SCCA Archives are currently being sorted. When the process is finished, our Club's archive will resemble housed by the International Motor Racing Research Center (LEFT).

The SCCA Foundation is facilitating these activities with annual funding of at least \$30,000 for the next four years. This makes SCCA member participation in Foundation fundraising particularly important, not only to meet the annual funding requirement but in the hopes of exceeding it since the more funding we provide, the more archivists can be hired to work on the collection and the faster it will be available to everyone.

Research Center Executive Director Tom Weidemann was enthusiastic about the plans for incorporating the SCCA Archives into the materials already available at the IMRRC. "Space is our number one issue at this point, so we have a plan to expand the current building with a three-story new structure on the lot next door," he explains. "Ideally, we'd like the new building to include a room dedicated to the SCCA Archives as well as the John Fitch Archives we just received." The family of SCCA Hall of Fame member Fitch donated a significant collection of trophies, photographs, clippings, entry lists, and race

programs from 1949-'66.

It should be noted that even while inventorying and organizing the current SCCA Archives, SCCA members may still add to the collection by donating memorabilia through the IMRRC. Prior to sending anything, however, members should contact Weidemann or Ambrose to verify

the materials are appropriate for the SCCA Archives collection and that there is physical space available to receive it. Any item of memorabilia that members want added to the SCCA Archives must be designated to that specific collection in writing when the donation is made, or it becomes part of the general collection belonging to the IMRRC.

More information about the IMRRC is available at www.racingarchives.org. Donations in support of the SCCA Foundation's funding of the work on the SCCA Archives can be made through the Foundation web page at www.sccafoundation.org. •

ARCHIVES UPDATE

With the SCCA Archives now in its new home in Watkins Glen, the SCCA Foundation checks in with an update.

WORDS & IMAGES Jeff Jacobs

he SCCA Archives, a massive collection of SCCA's history and other Club collectibles, has a welcome home at the International Motor Racing Research Center (IMRRC) in Watkins Glen, N.Y., along with a professional staff eager to explore, preserve, and enhance the richness of the collection. Earlier this year, the Research Center hired head archivist Jenny Ambrose who will be leading a team of assistants in their work on the SCCA Archives. The task ahead of them is formidable, but it's also a labor of love.

The first order of business will be creating a full written inventory of the contents of every box in the collection, with materials transferred to archival-quality containers as needed for preservation. The written inventory will include "finding aids" to allow digital searches for materials in response to inquiries from SCCA members and the public. In time, the digital inventory will be available online and searchable by anyone - but there are things to do before we reach that point.

The next phase of activity will include digitizing the archive contents to facilitate member access and give us the ability to research our Club's past. Materials may be reorganized into sub-collections, and opportunities to expand the collection will be explored.





HIDDEN GEMS (ABOVE) Initial sorting of the Club's archives has already uncovered memorable motorsports posters

and event programs.







DIFFICULT DECISIONS

Tom Brown discusses his path to becoming a race steward, and lessons learned along the way | WORDS James Kearney | MAIN IMAGE Courtesy Tom Brown

Some people are uncomfortable making judgment calls, but not Tom Brown - he's been doing it all his life. Now retired, he was in the appraisal business for 40 years. While working the job that brought him to Texas from his hometown of Milwaukee he had to establish the going value of the franchises at U.S. National Parks like Yosemite, Yellowstone, and the Grand Canyon. Making a judgment on a racing incident is not going to cause him to lose sleep.

He has three goals. He wants to reach the correct decision; he wants the racers involved to know that he listened to every shred of available evidence; and, perhaps most importantly, he wants the process to be respectful of all. "I raced myself and I've helped my son, Darren, race at a high level. I understand the commitment of time, money, and energy that goes into the racing effort. Difficult decisions need to be made, but I don't want to disrespect anyone."

Tom started back in the mid-1960s doing time and distance rallying. He began with a TR3, moved up to a big Healy, and later drove a Corvette. He got to know all the F&C folks, as they were often the same folks involved in

the rally program. He went road racing with a GP MG Midget, running Road America, Blackhawk Farms, Grattan, IRP, Mid-Ohio, and the Milwaukee State Fairgrounds. He took a break from the Club from the mid-1970s through the '80s to raise his kids, but he says they brought him back to it later on.

After moving to Texas in the '90s, he raced an ITB Mustang and was a steward at the same time. "We didn't get a lot of protests down our way," he says. Of all the different steward roles, he leans toward the Black Flag Steward, sometimes known as the Steward of the Course. "You are close to the action and available to both drivers and crew. When you talk with a driver in pit lane you get a real sense of him."

If a report has come in, Tom will stop a driver and ask: "Were you passed under the yellow?" The driver under suspicion will also be questioned before exiting the pits. Tom notes that if the drivers are not unhappy with what has occurred they are likely to let it be. He recalls a National Championship Runoffs race at Heartland Park Topeka that was decided by a very close margin and resulted in a steward's inquiry into rough driving.

"I came out of a room to find the top two finishers chatting amiably about their race. I asked them if either of them was upset and they said, 'Quite the opposite.' If they are not aggrieved, why should we get into it?"

Obviously, that is not always the case, and Tom acknowledges that driver-to-driver protests are the hardest ones to call. Feelings can run high. "But it's part of the job," he says. "If you go to work in a foundry you know it is going to be loud and hot. If we have to penalize someone, we do it. But just because you are a steward doesn't mean that you have to go about it in an arrogant manner. I've been thanked by drivers that I've penalized."

In-car camera footage and other videos have been a great source of help in determining if someone has misbehaved. At the Runoffs, they may access the SpeedcastTV video, although that may slow things up a bit. Due to the size and significance of this event, they will have up to four courts with three stewards each ready to go at all times. "We may not see a lot of daylight, but that's what we're there for. At Mid-Ohio, it was not too bad and I actually saw six or seven races." When he can, he likes to take in the small-bore production races, as that's where he got his start.

Tom believes that keeping things civilized and communicating that he is willing to listen to each side as long as they have something to say is key to how the process should work. "In the '60s and '70s, some of the stewards were almost abusive," he says. "We don't want it to be that way."

While stewards may be called to make tough decisions, Tom doesn't feel any need to restrict their social interaction. "We don't want any elitism in the stewards program. We want all drivers to be able to talk to us about anything that's on their mind. Being friendly and approachable is a very good thing."

STEWARDS AS COUNSELORS

"We're here to ensure that the competition is fair, even, and safe," says Tom Brown. "People don't always understand the degree to which we try to guide competitors, to get them to see how their approach is too wild or too rough. For example, we spent a tremendous amount of time talking with a rookie named Tom Thrash who seemed to always end up in the spotlight for the wrong reasons. We'd ask him if he could see if he could have made any better choices, etc. Finally, the light came on. Tom went on to become a National Champion in EP. Tragically, he passed away too young and he is no longer with us, but I think about how unfortunate it would have been for us to be dismissive of him. We would have prevented this champion from reaching his peak. It's much better for us to guide them rather than bludgeon them."





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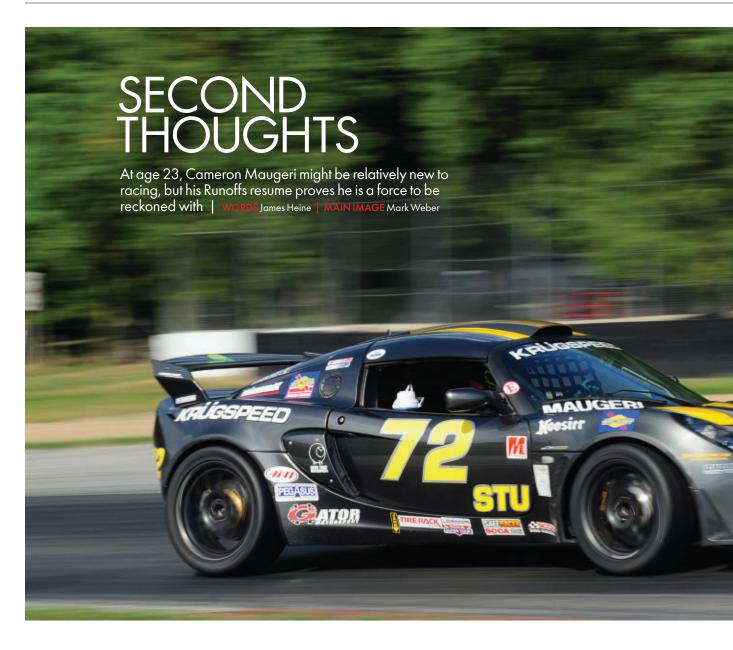


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xcept for a quirky, intermittent misfire in his STU Lotus Exige and a lap four restart that didn't go as well as it might have, Central Florida Region's Cameron Maugeri might be relishing a National Championship Runoffs victory right about now. Instead, the 23-year-old Daytona resident, while pleased with his second consecutive Runoffs runner-up finish, views the 2016 finish with "kind of mixed feelings," and is looking forward to the forthcoming season and perhaps another shot at a Runoffs title.

"I was excited to get back on the podium at the Runoffs, but it didn't exactly go as planned," he said about his Mid-Ohio experience. "The Lotus ran well even though we had a little misfire, which didn't really hurt us much. It's just the way the race went that hurt us a little bit - dropping back a few spots and then getting held up for four or five laps."

At Daytona in 2015, Cameron finished second in Touring 1 to First Gear alum, fellow Southeast Division driver, and multiple Runoffs Champion Andrew Aquilante. That race had its hardships, too, Cameron recalls, because he finished the last lap in his Boss 302 Mustang with a tire going flat. Still, he finished ahead of three former National Champions, which -

all things considered - was a great result for a Runoffs rookie.

"Throughout the race, I was just trying to concentrate on my own race by keeping my head down and running fast laps," he said at the time.

His two Runoffs experiences were totally different, because Mid-Ohio was a new facility for him, Cameron says. "I had never been to Mid-Ohio. It was a new track for me. We had to absolutely be on our 'A' game the whole week. Fortunately, our setup was not that far off, and we did well."

We caught up with Cameron a few weeks after the 2016 Runoffs and not long after Hurricane Matthew had



winner at the Rolex 24 Hours of Daytona, where he, John Finger, Doug Mills, and Andy McNeil piloted a Chevrolet Camaro to an AGT victory.

"When I was little, my dad used to do a lot of track days," Cameron says. "Then he moved up and actually did the 24, I think, five times. He got a first, second, and third."

Needless to say, the senior Cameron was a big influence on the aspirations of his son. "He's the reason I want to be a racecar driver," says Cameron.

Cameron describes his family - dad, mother Dina, brothers Brett and Spencer, and twin sister Jordan - as "pretty close-knit. We do a lot together. Every time I'm at the racetrack, they're there to support me," he says. "And, anything they need, I'm obviously there to support them."

In addition to his family, Cameron credits Alex Krugman of Krügspeed Racing and Dave Janse of BTI Motorsports with offering him a "tremendous amount of support" and advice. "It wouldn't be possible without them," he says.

Like his dad, Cameron has now dabbled in professional motorsports as well, having run a couple pro series including a Trans Am race at Daytona.

Away from the track, Cameron focuses on school - he's a senior majoring in business management at the University of Northern Florida - and on working on and building cars for himself. As for this year and the coming season, "I hope to continue driving the Lotus for Alex Krugman and Krügspeed Racing,"

Cameron says. •

made its October landfall along Florida's Atlantic coast. Fortunately, Cameron says, he and his family live inland a bit from the Daytona coastline, and while they - like almost everyone else in Hurricane Matthew's path - had "prepared for the worst and hoped for the best," they and their immediate neighbors essentially "dodged a bullet" because of the last-minute track of the storm.

"We definitely got lucky," he says.
As with many First Gear candidates who have appeared in this section,
Cameron's introduction to motorsports came through his family. Dad, Rick, is himself a racer and a 2000 class



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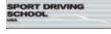
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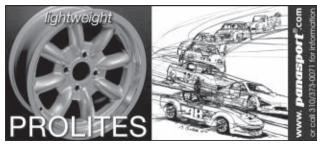
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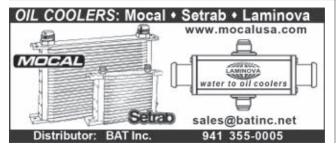
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STOHR WFI SPORTS RACER > Buy now to go to race the Indianapolis Motor Speedway in Sept. 2017. Full carbon fiber body with full tunnels and includes tunnel blocks for P2 or simply remove for P1. Strong stock GSXR engine, flat shifter, 2 sets of wheels, jacks, poured seat, side fuel fill, AiM dash and full data system. Fully sorted and ready to race. \$39,750. Call Dr. D. at (937) 609-3726 for full details or email cld74gt@aol.com

22 OPEN WHEEL | SPORTS RACERS V



95 VAN DIEMEN FC > Excellent condition! Only best gear, three races on fresh engine and gear box. Spare engine with dyno time only, have receipts. New suspension, NHBB rod ends, 24 gear sets. Extensive list of spares. 2007 Pace 24' Silver Arrow trailer with cabinets. Everything for \$35,000. Contact: Bob at ram-f2000@live.com or (207) 380-5483 / (207) 633-9908.



2006 FORMULA ENTERPRISE > Chassis #69, new MXL2 dash, new belts, fresh gearbox, new transponder, 4 sets of wheels and tires. One set of brand new American Racer Tires not mounted. Have a few spare parts. 16ft enclosed trailer included. \$25,500. Contact: Tim at treinke46@gmail.com or call (832) 724-1632.

23 PRODUCTION BASED | GT ▼



LOTUS SUPER SEVENS DOMINATE **FP RUNOFFS >** Offering an outstanding example with a new chassis, strong all steel 1,500cc Cortina, re-engineered Leeson, Quaife, Penske triples, CDS data aq with suspension analysis (\$10K system), spares. Price: \$40K. Details: Austin (386) 767-6396.



2014 RUNOFFS PODIUM FINISHING GT-3 NISSAN 240SX > Square tube chassis, Lotus link, new Rebello KA24 3-valve motor, 32mm SIR. Completely sorted, ready to win. Spares, 2 motors, 12 wheels, assorted carbon fiber body parts, 24' Haulmark enclosed trailer. Price reduced - inquire! Specs and photos at gt-racecar.com. Contact: Chuck McKinney at (510) 812-1140 or chuck@amtmetals.com.

23 PRODUCTION BASED | GTV



SCCA GTL MINI > Tube frame RWD. 1,275cc bored 40 over, dry sump, Elite 5-speed, mini QC, Alco suspension, Electromotive ignition, fiberglass body, 17 Revolution wheels/tires, fresh spare engine and nose, boxes of parts, LRP 1:02, Glen 2:14. \$25,000. Contact: Chris, (203) 858-3115



1992 ACURA NSX > Driving Ambition/Comptech Race Car. 2012-'13 SCCA champion and multiple Track Attack winner. 3.5L turbocharged with 500-800rwhp. Car is in perfect condition and ready to race. Current SCCA log Book 2016. Over \$250,000 invested. For sale at \$75,000. Contact: Igor Lyustin at (415) 515-1395



2006 AUDI A4/B7 > Ex-Stasis World Challenge Touring Car, Audi Sport UK chassis, one of only two built from body in white. Competed in SCCA WCTC during 2006-'07. SCCA STU Class National Champion in 2011. New transmission. AiM dash. Fall-Line Motorsports prep. \$49,000. Contact: Joel Weinberger, (630) 388-5400 or joelweinberger33@gmail.com



2010 PORSCHE GT3 CUP CAR >

Championship winning car. Race ready. 34 hours on engine, 12 hours on gearbox, sold with new set of brakes front and rear, 3x wheel sets, 2 misc tire sets, 2 new tire sets, 2x splitters, lug nut socket, MoTeC system, full camera system. Located at Motorsport Ranch Cresson, TX. Asking \$110,000 Contact: Nick B at Nick@deBoulle.com or (214) 773-7487

26 TOW VEHICLES | TRAILERS V



2001 PACE CARGO SPORT 7X18 > Excellent condition. \$3,500 Louisville, KY. Finished interior. 10x18 attached canopy. Pit Pal. Diamond plate. New brakes and bearings. Custom ramp extensions. Used for SRF. Great for small production cars, sports racers, and formula cars. Contact: raytdalton@gmail.com or (502) 773-6204. Photos on request.

28 SERVICES V



CUSTOM GARAGES > Custom architectural design for garages, race structures, and distinctive outbuildings throughout New England. Contact: Dan Ferguson at rackandruinracing.com

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MEMBER BENEFITS

The number and variety of special offers available under the SCCA Benefits Program continue to grow. These partners offer the following advantages to members:



SCCA members get 15-percent off and free shipping when ordering from **Speedhut** at www.speedhut.com.



Solo Performance Specialties (**SPS**) offers a 10-percent discount all online purchases of graphics items.



Prize Possessions

Prize Possessions is offering members a free custom logo setup and 10-percent off on the initial order.



Budget Rent A Car is offering SCCA members a promotional rate of up to 25 percent off a rental.



Fairfield Inn & Suites Millville/Vineland is

offering a 30-percent discount off regular rates to SCCA members.

For a full description of all the special offers included in the Member Benefits program, plus links to participating companies, go to www.scca.com and check out the Member Benefits link under the "About SCCA" tab.



Trans Am

TRANS-AM gotransam.com (2016 schedule and results)

Mar 4-6 Sebring Int'l Raceway, Fla.
Bupp (TA); Robinson (TA2); Saunders
(TA3); Kent Jr. (TA4); Boden (TA5)

Apr 8-10 Road Atlanta, Ga. Ruman (TA); Buffomante (TA2); Mueller (TA3); Francis Jr. (TA4); Flynn (TA5)

May 13-15 Watkins Glen International, N.Y. Ruman (TA); Machavern (TA2); Boden (TA3); Francis Jr. (TA4); Kezman (TA5) Jun 3-5 Belle Isle Grand Prix, Mich. Lopez (TA); Marcelli (TA2); Martin (TA4) Baucom (TA); Andretti (TA2); Francis (TA4) Jun 10-12 New Jersey Motorsports Park, N.J.

Fix (TA); Buffomante (TA2); Aquilante (TA3); Francis Jr. (TA4); Kezman (TA5) July 1-3 Brainerd Int'l Raceway, Minn. Fix (TA); Robinson (TA2); Streimer (TA3); Francis Jr. (TA4)

Aug 11-13 Mid-Ohio Sports Car Course, Ohio Gregg (TA); Marcelli (TA2); Mueller (TA3); Francis Jr. (TA4)

Aug 25-27 Road America, Ga. Ebben (TA); Buffomante (TA2); Boden (TA3); Francis Jr. (TA4)

Sep 23-24 VIRginia Int'l Raceway, W. Va. Fix (TA); Buffomante (TA2); Mueller (TA3); Francis Jr. (TA4)

Oct 7-9 Homestead-Miami Speedway, Fla. Ebben (TA); Lewis (TA2); Camus (TA3); Francis Jr. (TA4)

Oct 14-15 NOLA Motorsport Park, La. Fix (TA); Buffomante (TA2); Streimer (TA3); Ricci (TA4)

Nov 3-5 Circuit of the Americas, Texas *Fix (TA); Machavern (TA2); Kezman (TA3); Napieralski (TA4)*

Nov 10-12 Daytona Int'l Speedway, Fla. Ruman (TA); Lewis (TA2); Saunders (TA3); Maugeri (TA4)

Champions: Ruman (TA); Buffomante (TA2); Mueller (TA3); Francis Jr. (TA4)

All dates/events subject to change

* = Double Event # = Enduro

Ro= Runoffs qualifier r = Restricted

HC = Hill Climb v = Vintage
CT = Club Trial TT = Track Trial

PDX = Performance Driving Experience GTA = Game, Tour, Adventure Rally

GRC = Great Race Class NT = National Tour

NC = National Course RT = Regional Tour
CR = Course Rally SR = Social Rally

E-mail addresses for registrars and event organizers are available at www.scca.com

FOR CHANGES

Club Racing: (785) 232-7229 Solo, RoadRally: (785) 232-7656 RallyCross: (785) 357-7259



WORLD CHALLENGI

world-challenge.com (2016 schedule and results)

Mar 3-6 Circuit of the Americas, Texas GT:Long, O'Connell; GTA: Fuentes, Fuentes; GTC: Udell, Urry; GTS: Aschenbach, Sandberg; TC: Kozarov, Grahovec; TCA:

Goulart, Wolfe; TCB: Hough, Rodgers Mar 11-13 Grand Prix of St. Petersburg, Fla. GT: Lewis, Lewis; GTA: Fuentes, Fuentes; CTP, Urry, GTS: Roush Jr., Rousch Jr. Apr 15-17 Grand Prix of Long Beach, Calif.

GT: Parente; GTA: Fuentes April 22-24 Barber Motorsports Park, Ala. GT: Parente, Cooper, GTA: Fuentes, Fuentes;

GTC: Udell, Udell, GTS: Buford, Buford

May 19-22 Canadian Tire Motorsports
Park, Canada

GT: Long, Long; GTA: Schein, Schein; GTC: Udell, Green; GTS: Aschenbach, Riddle; TC: Wittmer, Grahovec; TCA: Goulart, Goulart, TCB: Morse, Rodgers; SprintX: Mills Mills (GT), Riddle (GTS), Riddle (GTS)

May 27-28 Lime Rock Park, Conn. GT: Parente, Parente; GTA: Schein, Fuentes; GTC: Urry, Udell; GTS: Aschenbach, Burford; TC: Wittmer, Geraci; TCA: Goulart, Goulart; TCB: Rodgers. Washay

Jun 23-26 Road America, Wis. GT: Eversley, Eversley; GTA: Schein, Montecalvo; GTC: Udell, Udell; GTS: DeBoer, Sandberg; TC: Rivera, Rivera; TCA: Bickers, Bickers; TCB: O'Gorman, O'Gorman

Jul 29-30 Mid-Ohio, Ohio GT: Parente, Cooper; GTA: Scheun, Schein; GTC: Udell, Udell; GTS: Aschenbach

Aug 12-14 Utah Motorsport Campus, Utah GT: Heitkotter, Heitkotter; GTA: Montecalvo, Fuentes; GTC: Urry, Udell; GTS: Mantella, Heckert; TC: Poland, Weisberg; TCA: Wolfe, Wolfe; TCB: O'Gorman, O'Gorman, SprintX: Calvert/Lewis (GT); Lewis/Calvert (GT); Allexandridis/DeBoer (GTS); Wilson/Piddle (GTS)

Sep 16-18 Sonoma Raceway, Calif. GT: O'Connell, O'Connell; GTA: Schein, Schein; GTC: Udell, Udell; GTS: Stacy,

Oct 7-9 Mazda Raceway Laguna Seca, Calif.

GT: Parente; GTA: MacNeil; GTC: Fergus; GTS: Barkey, Heckert; TC: Gallagher, Gallagher; TCA: Powell, Bickers; TCB: Rodgers, Rodgers

Champions: Parente (GT); Fuentes (GTA); Udell (GTC); Sandberg (GTS); Grahovec (TC); Goulart (TCA); O'Gorman (TCB)



F1600 CHAMPIONSHIP

11600championshipseries.com (2016 schedule and results) Feb 11-13 Palm Beach International Raceway, Fla. (exhibition) Ming Feb 19-21 Sebring, Fla. (exhibition) Ming Apr 7-10 Road Atlanta, Ga. Portante; Verhagen; Mallinen

May 13-15 Watkins Glen, N.Y. Denes; Ming; Denes Jun 3-5 VIRginia Int'l Raceway, Va.

Verhagen; Estep; Auriemma

Jul 1-3 Mid-Ohio Sports Car Course, Ohio
Portante; Ming; Verhagen

Aug 5-7 Pittsburgh International Race Complex, Pa.

Verhagen; Verhagen; Frederick Aug 26-28 New Jersey Motorsports Park, N.J.

Ming; Verhagen; Verhagen Sep 30-Oct 2 VIRginia Int'l Raceway, Va. Verhagen; Portante; Verhagen Champion: Verhagen



F2000 CHAMPIONSHIP

f2000championshipseries.com (2016 schedule and results)

Feb 11-13 Palm Beach International Raceway, Fla. (exhibition)

Norman

Feb 19-21 Sebring, Fla. (exhibition) *Norman*

Apr 7-10 Road Atlanta, Ga.
Bamford; Bamford

May 13-15 Watkins Glen, N.Y. McDonough; Bamford

Jun 3-5 VIRginia Int'l Raceway, Va.
Bamford: Bamford

Jul 1-3 Mid-Ohio Sports Car Course, Ohio
Bamford: Larue

Aug 5-7 Pittsburgh International Race Complex, Pa.

Bamford; Bamford

Aug 26-28 New Jersey Motorsports Park, N.J.

Dixon; Walko

Sep 30-Oct 2 VIRginia Int'l Raceway, Va. Norman; Grant Champion: Bamford

ATL ANTIC championship

ATLANTIC CHAMPIONSHIP

atlanticchampionshipseries.com (2016 schedule and results) Feb 11-13 Palm Beach International Raceway, Fla. (exhibition) Norman

Feb 19-21 Sebring, Fla. (exhibition)

Norman Apr 7-10 Road Atlanta, Ga. Norman; K. Grant May 13-15 Watkins Glen, N.Y.

Norman; Norman Jun 3-5 VIRginia Int'l Raceway, Va. Norman; Norman

Jul 1-3 Mid-Ohio Sports Car Course, Ohio D. Grant; Norman

Aug 5-7 Pittsburgh International Race Complex, Pa. *D. Grant; D. Grant*

Aug 26-28 New Jersey Motorsports Park, N.J.

Norman; D. Grant
Sep 30-Oct 2 VIRginia Int'l Raceway, Va.
Norman; D. Grant

Norman; D. Grant Champion: Norman



FORMULA 4

f4uschampionship.com (2016 schedule and results)

Jul 1-3 Mid-Ohio Sports Car Course, Ohio Czaczyk; Czaczyk; Czaczyk

Aug 11-13 Mid-Ohio Sports Car Course, Ohio

Kirkwood; Robinson; Das **Aug 26-28** New Jersey Motorsports

Park, N.J. Goughary Jr.; Das; Das

Sep 17-18 Road Atlanta, Ga. Das; Das; Das Oct 7-9 Homestead-Miami Speedway, Fla.

Das; Das; Das Champion: Das





FORMULA LITES formulalites.com See the series website for updates.





Date Track/Region Phone *numbers* are for region registrars

2017 U.S. MAJORS TOUR sccamajors.com

NORTHEAST CONFERENCE

2017 schedule not announced at press time

NORTHERN CONFERENCE

May 6-7 Blackhawk Farms Raceway, III. Jun 2-4 Mid-Ohio Sports Car Course, Ohio (Hoosier Super Tour) Jun 16-18 Road America, Wis. (Hoosier Super Tour) Jul 8-9 GingerMan Raceway, Mich. Jul 29-30 Road America, Wis. Aug 12-13 Grattan Raceway, Mich.

SOUTHEAST CONFERENCE

Jan 6-8 Homestead-Miami Speedway, Fla. Jan 13-15 Sebring Int'l Raceway, Fla. (Hoosier Super Tour) Mar 4-5 NOLA Motorsports Park, La. (Hoosier Super Tour) Mar 17-19 Road Atlanta, Ga.

Apr 14-16 VIRginia Int'l Raceway, Va. (Hoosier Super Tour)

Jul 1-3 Roebling Road Raceway, Ga. MID-STATES CONFERENCE

Apr 8-9 Hallett Motor Racing Circuit. Okla. (Hoosier Super Tour) Apr 22-23 Circuit of St. Louis. III. May 13-14 Heartland Park Topeka, Kan. May 27-28 Pueblo Motorsports Park,

Colo. Jul 1-2 High Plains Raceway, Colo. Jul 22-23 Motorsport Park Jastings,

SOUTHERN CONFERENCE

2017 schedule not announced at press time

WESTERN CONFERENCE

Jan 13-15 Auto Club Speedway, Calif. Mar 11-12 Willow Springs, Calif. (Hoosier Super Tour)

Apr 1-2 Thunderhill Raceway Park, Calif. Apr 28-30 Buttonwillow Raceway Park, Calif. (Hoosier Super Tour)

May 19-21 Porland Int'l Raceway, Ore. (Hoosier Super Tour) Jun 17-18 The Ridge Motorsports Park, Wash.

SCCA NATIONAL CHAMPIONSHIP RUNOFFS

Sep 25-Oct 1, 2017 Indianapolis Motor Speedway, Indiana

DIVISIONAL/REGIONAL

SOUTHWEST sowdivscca.org Dec 3-4*Ro MSR Houston/Houston SCCA ACCREDITED SCHOOLS

FULL COMPETITION LEVEL

AMG Driving Academy (888) 604-1766 amgacademy.com Bertil Roos Racing School (800) 511-7606 racenow.com **BIR Performance Driving School**

(866) 511-7606 birperformance.com



U.S. MAJORS TOUR

WHAT Club Racing WHEN Jan. 13-15, 2017 WHERE Fontana, Calif. The Western Conference clicks into high gear with its Majors opening event at Auto Club Speedway in mid January.

Bob Bondurant School (800) 842-7223 bondurant.com

MSR Houston

(281) 369-0677 msrhouston.com

Pettiford's Go 4 It Racing Schools (303) 666-4113 go4itservices.com

Porsche Sport Driving School (888) 204-7474 porschedriving.com

Simraceway Performance Driving Center (800) 733-0345 jimrussellusa.com

Skip Barber Racing School (800) 221-1131 skipbarber.com

Spring Mountain Advanced Driving School (800) 391-6891 springmountainmotorsports.com

NOVICE PERMIT / SCHOOL AND **EVENT CREDIT**

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Bob Bondurant School (800) 842-7223 bondurant.com

Bridgestone Racing Academy (905) 983-1114 race2000.com

Lucas Oil School of Racing (561) 200-7223 lucasoilraceschool.com

Pettiford's Go 4 It Racing Schools (303) 666-4113 go4itservices.com

Pro Drive Racing School (503) 285-4449 prodrive.net

ProFormance Racing School (253) 630-5130

proformanceracingschool.com

Simraceway Performance Driving Center (800) 733-0345 jimrussellusa.com

Skip Barber Racing School (800) 221-1131 skipbarber.com

NOVICE PERMIT / SCHOOL CREDIT

Allen Berg Racing School (888) 722-3220

allenbergracingschools.com Bobby Cee's Racer's Edge High

Performance Driving School (562) 714-1799 bobbyceesracersedge.com



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www.scca.com

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President & CEO ROBEY CLARK

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(813) 684-4741; Ihill@scca.com

Area 4: Temporarily vacant following the passing of Stephen Harris

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Area 12: TERE PULLIAM

(678) 697-9755; tpulliam@scca.com Area 13: JIM WEIDENBAUM

(503) 327-8990; jweidenbaum@scca.com

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SCCA MEMBERS CELEBRATING 25-60 YEARS

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60-YEAR MEMBERS	12/1/1951	Life Members
Edwin K. Kitow Jr.	12/1/1956	Texas
55-YEAR MEMBERS Jerry Pacheco Tom White	12/1/1961 12/1/1961	San Francisco Northeast Oklahoma
50-YEAR MEMBERS Linda Dent Albert E. Horn	12/1/1966 12/1/1966	Fort Wayne Tennessee Valley
45-YEAR MEMBERS Richard L. Allen Jerry Bergman Eddie Cadena Ron Glaub John B. Lennes Tom C. Mankin Ann M. McHugh	12/1/1971 12/1/1971 12/1/1971 12/1/1971 12/1/1971 12/1/1971 12/1/1971	Oklahoma Western New York Houston Chicago Land O'Lakes Lone Star Neohio
35-YEAR MEMBERS Joe Camilleri Gloria J. Carr Kathy Daniels Edward J. Magner Susan Spragg	12/1/1981 12/1/1981 12/1/1981 12/1/1981 12/1/1981	Western New York Ohio Valley Central Florida Western Michigan Des Moines Valley
30-YEAR MEMBERS Brad L. Baer Patricia A. Baer Brian Blain Richard Alan Butler	12/2/1986 12/2/1986 12/11/1986 12/2/1986	St Louis

12/8/1986 Arizona

12/8/1986 Atlanta

12/16/1986 New England

12/29/1986 New England

Robert Warren DeLoatch 12/16/1986 Buccaneer

D. Warren Dickinson Jr 12/19/1986 San Francisco

Susan W. Green Andrea Griffith Gregory D. Grucella Stanley E. Hinds Paul W. LeCain Robert Eugene Lentz Jim Linn James R. Marinangel Ann Marie Massa John D. Massa Bruce A. Miller Richard Murphy Gary Musciano Lisa B. Noble Debbie Schmidt F. Bernice Schnoerr Erik Skirmants Jay D. Smith Douglas Snyder Lans Stout David A. Trzeciak David Scott Zeckhausen Susan Zerlin	12/23/1986 12/29/1986 12/29/1986 12/30/1986 12/30/1986 12/30/1986 12/19/1986 12/19/1986 12/11/1986 12/11/1986 12/11/1986 12/17/1986 12/24/1986 12/24/1986 12/24/1986 12/24/1986 12/24/1986	Mahoning Valley Eastern Tennessee New England Washington DC Cal Club Chicago San Francisco San Francisco Central Florida Northern New Jersey Kansas Northwestern Ohio Florida Colorado Philadelphia San Francisco Oregon Lone Star Northern New Jersey
25-YEAR MEMBERS John G. Anderson	12/17/1991	Philadelphia
Linda Fullerton Boyer	12/17/1991	New England

25-YEAR MEMBERS		
John G. Anderson	12/17/1991	Philadelphia
Linda Fullerton Boyer	12/9/1991	New England
Barry D. Brown	12/18/1991	Washington DC
Mark Gustafson	12/6/1991	Central Florida
J. Michael Johnson	12/18/1991	St Louis
Shawn Keith Mclaughlin	12/18/1991	Atlanta
Daniel W. Mullin	12/17/1991	Oregon
Nyle Polis	12/18/1991	Houston
Vanessa Prado	12/6/1991	Central Florida
Pedro Prado	12/6/1991	Central Florida
John Sherck	12/11/1991	San Francisco
Arthur J. Sonen	12/5/1991	Hawaii
Craig Spaulding	12/17/1991	Texas
Steve Thein	12/12/1991	San Diego



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(800) 453-5506 corvetteracingschool.com Spring Mountain Advanced Driving School (800) 391-6891 springmountainmotorsports.com

Waterford Hills Road Racing Inc. (248) 623-0070 waterfordhills.com

TIME TRIALS

SOUTHWEST sowdivscca.org Dec 3-4 PDX MSR Houston/Houston **Houston** TBD

SOLO TIRE RACK SCCA SOLO CHAMPIONSHIP TOUR 2017 season to be announced

TIRE RACK' SCCA SOLO NATIONAL CHAMPIONSHIPS

Sep 5-8 Lincoln, Neb.

TIRE RACK SCCA PROSOLO

Mar 10-12 Greenville, S.C. (tentative) Apr 7-9 Irvine, Calif Apr 28-30 Crows Landing, Calif. May 5-7 Blythville, Ark. May 12-14 East Rutherford, N.J. May 26-27 Lincoln, Neb. (Spring Nationals) Jun 2-4 Mineral Wells, Texas Jun 9-11 Swanton, Ohio Jul 14-16 Packwood, Wash. Aug 4-6 Oscoda Township, Mich. Sep 1-3 Lincoln, Neb. (Finale)

TIRE RACK MATCH TOUR.

Mar 305 San Diego, Calif. Apr 28-29 Wampum, Penn. Jun 2-4 Peru, Ind. Jul 2-4 Bristol, Tenn.

CAM CHALLENGE

2017 season to be announced

REGIONAL

SOUTHEAST sedivracing.org Dec 4 Spence Field/Dixie Dixie bbatch@nettally.com

SOUTHWEST sowdivscca.org

Dec 3-4 NOLF Waldron Field/South Texas Border

South Texas (361) 980-8000

SOUTHERN PACIFIC scca-sopac.org Dec 11 Marana Regional Airport/Arizona Border

Arizona Border arizonasanders@msn.com

ROADRALLY

A complete RoadRally planning calendar can be found at www.scca.com/rally

NATIONAL

2017 season to be announced

REGIONAL

2017 season to be announced



WHAT Regional RallyCross WHEN Now WHERE Over there RallyCross is kind of the Wild West of SCCA competition, with its "run what you brung" attitude and fun-loving crowd.

RALLYCROSS

NATIONAL CHAMPIONSHIP

2017 event to be announced

REGIONAL

NORTHEAST nediv.org

Dec 11 Walczyks Farm/Central New York **Central New York** (315) 575-3623

SOUTHEAST sedivracing.org

Dec 4 Durhamtown Plantation/Atlanta Dec 10 Byron Racway/Middle Georgia Dec 10 Hollytree Offroad LLC/Tennessee

Atlanta quattros@gmail.com Middle Georgia topher170@yahoo.com

Tennessee Valley

leon@dynatorch.com

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NEW PRODUCTS



ORECA V-PRO FORMULA RACE SUIT

New to safety wear, Oreca is bringing quality equipment at affordable prices to a complete lineup of driver gear from helmets to gloves to race suits. Its new two-layer V-Pro Formula race suit is available in grey/black/neon orange in sizes from 48 to 64 and features an elastic fabric, floating-arm construction, elastic lower back panel, and holds FIA 8856-2000 certification.



QA1 CARBON FIBER DRIVE SHAFTS

QA1 now offers its award-winning REV Series custom carbon-fiber drive shafts in a 2.25-inch diameter for vehicles with up to 750 horsepower with a maximum torque of 500lb-ft. Because every vehicle is different based on driveline, power level, and other upgrades, QA1 uses an in-house filament winding system to custom wind these drive shafts www.qa1.net



DeWitts is now offering a new air-to-oil type engine oil cooler kit for all C7 Corvettes. This kit includes a custom two-pass oil cooler that is designed to mount directly behind the grill opening. This kit replaces the factory water-to-oil cooler with a custom adapter and stainless steel braided oil lines. Detailed installation instructions are included.



EDELBROCK MAZDA MX-5 E-FORCE SUPERCHARGER KIT

Edelbrock's E-Force supercharger system for the new Mazda MX-5 gives your Miata the power it needs. A side-mounted TVS 900 supercharger allows for a clean installation on Mazda's new 2.0L I-4 engine and fits neatly under the stock hood with no modifications. The supercharger system is 50-state emissions legal (pending) and includes a three-year, 36,000-mile powertrain warranty. www.edelbrock.com



The Eastwood three-piece brake bleeding wrench set includes the three most popular size wrenches to allow use on virtually any car, SUV, light truck, or motorcycle brake caliper or wheel cylinder. This set is constructed of rugged steel with high-quality silicone hoses and a precision-machined check valve for long life and brake fluid resistance. www.eastwood.com



The RS-20 Lithium Car Battery has a built-in battery management system to balance the lithium cells for the safest, longest service life possible. Additionally, this system has an automatic low-voltage cutoff that limits over-discharge and protects the battery from damage. The RS-20 is rated at 2,000 cycles – nearly twice that of a typical battery, and weighs only 10lbs. www.antigravitybatteries.com



SportsCar welcomes submissions of relevant motorsports products. Please send a description of the product, including price, and a color image to SportsCar Toy Box, 17030 Red Hill Avenue, Irvine, CA 92614, or e-mail sportscar@racer.com. Products appearing in SportsCar are not necessarily endorsed by SportsCar or the SCCA.



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CONTACT PATCH

PHILIP ROYLE

EDITOR, SPORTSCAR MAGAZINE

ROOKIE YEAR REDO

h, rookie year at the Tire Rack Solo A National Championships, I remember you well. For me, it was 2010, and I entered STS co-driving with perennial frontrunner Michael Heinitz in an STS-classed Miata. The car was capable, as Heinitz proved that year with his fourth-place finish; I was not, as I proved with my 16th-place finish.

At the time, I was happy with my finish, just four spots out of the trophies - but looking back now, I'm shocked I did as well as I did. In the STS field that year were Andrew Canak (who not only won that year but backed it up in 2011), Tom O'Gorman (who just added the 2016 Pirelli World Challenge TCB championship trophy to his shelf of multiple National Solo titles). and David Whitener (now a multi-time National Champion) - and that's in addition to a number of other competitors who, like Michael Heinitz, always found their way to the pointy end of the field.

In talking with Peter Lindberg - who you'll find on the cover of this month's issue - I enjoyed hearing about his rookie year at the Solo National Championships in 2016, which he writes about starting on pg. 22. His Solo Nationals week, however, was completely different from mine.

For my rookie year at Nationals, I rented a ride, flew into Lincoln, Neb., the day before the event, made my runs, then headed back to the airport. All in all, about three days out of the office, and I even managed to do some work on the airplane. Peter, meanwhile, drove his competition car to the event, on his own, meeting up with fellow Houston Region friends in the paddock at Lincoln Airpark. He also arrived on Sunday for his Thursday-Friday runs, giving him ample time to familiarize himself with the paddock, the courses, and the general flow of things. It gave him time to absorb the event in its entirety, rather then the whirlwind trip I made of it, where I barely had time to walk the courses. I was flustered and rushed. Did it affect my finishing position? Probably not, but after talking with Peter, I'm now sure I missed out on much of the Solo Nationals experience.

In our conversation over lunch. Peter talked more about his adventures in the paddock than he did his actual competition runs. The "big wheel" autocross, the evening gatherings, and the new friends



FIRST-TIMER

My rookie year at the Solo National Championships came in 2010, where I received a thorough beatdown in STS.

made an impact that has Peter itching to return to the Solo Nationals in 2017.

Yes, I remember my rookie year at the Solo Nationals, but now I wish I could do it over. I wish I'd put more effort into the sideshows, meeting people, and generally taking in the event before getting caught up in the thrill of competition. So, when you read Peter's story in this issue and get inspired to go to the Solo National Championships for the first time yourself, follow his lead and not mine - you'll definitely have more fun.

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FROM THE ARCHIVES

10 YEARS AGO **JANUARY 2007**



 Following a 12-year stint at Mid-Ohio, the Runoffs moved to Heartland Park Topeka, where it stayed for three years. Roughly a month after the Runoffs, the USRRC took to the

streets of Topeka, Kan.

25 YEARS AGO **JANUARY 1992**



 A news item discussed a new technology at the SCCA office: a voice messaging system.

· Pro Racing newcomer Scott Sharp won the Trans Am championship.

50 YEARS AGO. **JANUARY 1967**



 Arizona Region member Tracy Bird wrote a letter against reducing the number of championship road racing classes - a topic that was under discussion by the Competition Board at the time.





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