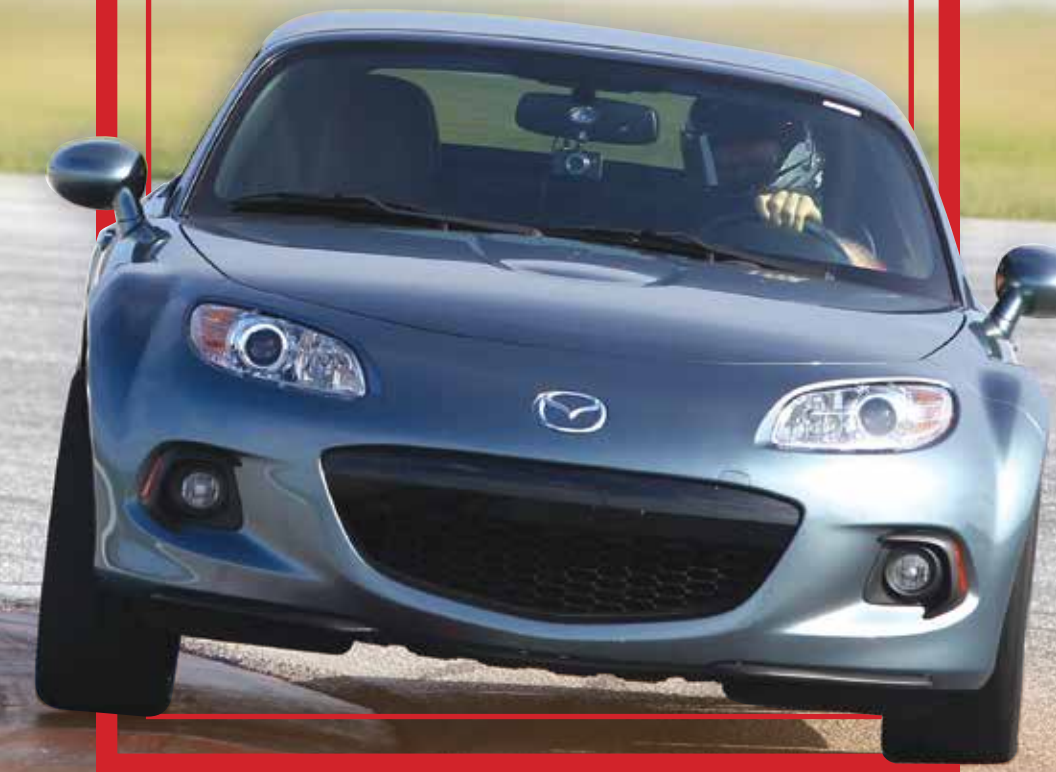
Grassroots Motorsports

THE HARDCORE SPORTS CAR MAGAZINE

trackside companion:

the comprehensive guide to tracking your car



presented by:

SCCA Sports Car Club of America

BFGoodrich Tires

KONI PERFORMANCE SHOCK ABSORBERS

Welcome to the *Grassroots Motorsports* Trackside companion

Learn more at grassrootsmotorsports.com.

Yes, you're finally one of the cool kids–someone who enjoys the thrill of an apex and the challenge of nailing that perfect lap.

To help you maximize that experience–and to continue our mission of being your personal guide to the sports car world–we present this Trackside Companion. Use it to prepare for that next event, whether it's your first one or your hundredth. And if you ever need another copy for yourself or a friend, just let us know.

This Trackside Companion contains decades' worth of knowledge from some of the sharpest minds on the scene. In addition to the *Grassroots Motorsports* magazine staff's own insights and experience, we've gathered wisdom from our friends at the Sports Car Club of America, BFGoodrich Tires and Koni. Thanks, guys.

We also need to thank you, our loyal readers, who constantly push us to deliver the finest product possible.

SCCA: Getting on Track

Learn more at scca.com.

Since 1944 this club has been turning fans into participants. Today it offers more options than ever for those looking to get involved.

Starting Line: The Sports Car Club of America and Tire Rack have teamed up to create a program that offers newcomers professional, personalized instruction in three different venues: autocross, track and RallyCross.

Autocross: It's all about precision driving: How fast can you navigate a maze of cones on an expanse of asphalt? It sounds easy until you realize that the tiniest bobble can cost you a trophy–or a national championship.

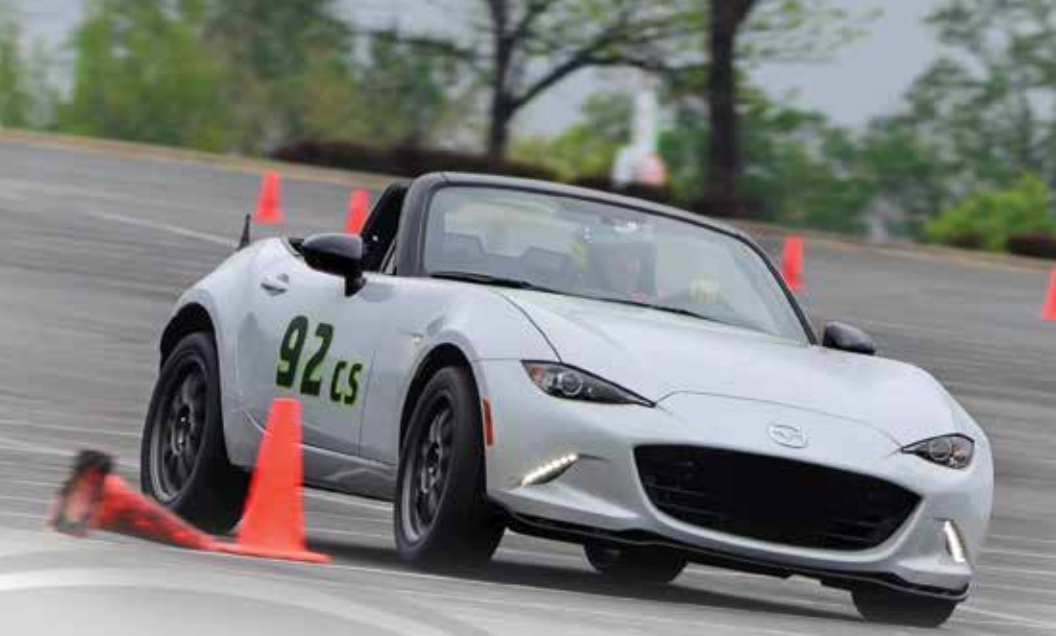
RallyCross: Take the concept of autocross and apply it to dirt, gravel, snow or any other low-traction surface and you have RallyCross.

Track Events: The SCCA offers several ways to get you and your car on track, from their novice-friendly Track Night in America program to Track Days and their Timed Track Trials events.

Road Racing: For decades SCCA road racing has attracted some of the biggest names in our sport, and today they offer a car class and venue for every possible preference.

RoadRally: Even though RoadRally events take place on public roads that aren't closed to regular traffic, they require a lot of skill. The objective? Follow the rally-master's instructions to arrive exactly on time.

Workers and Officials: Someone has to keep all of this action safe and organized, and that's where workers and officials come into play. Events need to be planned, cars need to be inspected, and flags need to be waved.



MORE THAN 2,000 EVENTS A YEAR.

SCCA
Sports Car Club of America
#FUNWITHCARS

FIND YOUR FUN AT SCCA.COM

Preflight Inspection

Before going on track, your car must pass an inspection performed by an official, a shop or, in some cases, you. The specifics will be explained when you register, but no matter the exact drill, there are some basics to inspect:

• Brake fluid should be clean, fresh and recently bled. Ideally it's of a high-temp variety.

• Track time puts way more stress on the brakes than autocross, so we'd recommend running circuit-friendly pads. All-out race pads are probably a bit much–and can be very dusty–but most companies offer a street-friendly compound that's suited to the temperatures reached on track.

• We're fans of braided-steel brake lines. They provide a solid feel and also fend off rocks and debris.

• You don't need the latest track tires, but yours should be safe and free of defects. The factory-recommended pressures are a fine starting point.

• Wheels can experience some punishing forces. Do yours have any cracks or defects? Are there any missing lug nuts?

• The throttle return spring works, right?

• Anything leaking? And we'll assume you have a secure battery tie-down.

• Check the fluids. Oil fresh? Coolant topped off? You're not low on differential fluid, are you?

• If your car is older, how close is the timing belt to its expiration date? What about the clutch?

• Get all of the loose junk–yes, all of it–out of the car. This includes cell phones, change, burger wrappers and anything else not securely mounted to the car.

• Check the security of your front seats. Are all of the bolts tight?

• If anything is clunking or not fastened down, fix it now.

• Make sure you can get comfortable in the car while wearing a helmet.

• Notice that we haven't recommended or suggested any speed parts? Focus on technique and safety. Speed can come later.

Stuff to bring to a track day:

- Car
- Helmet
- Membership card
- Driver's license
- Cooler with water and ice
- Snacks
- Torque wrench
- Tire pressure gauge
- Extra quart of motor oil
- Bug repellant and/or sunblock
- Rain gear

Stuff to not worry about at a track day:

- Lap times
- Upgraded speed equipment
- Formula 1 scouts
- Catching other drivers

Flags and Flaggers

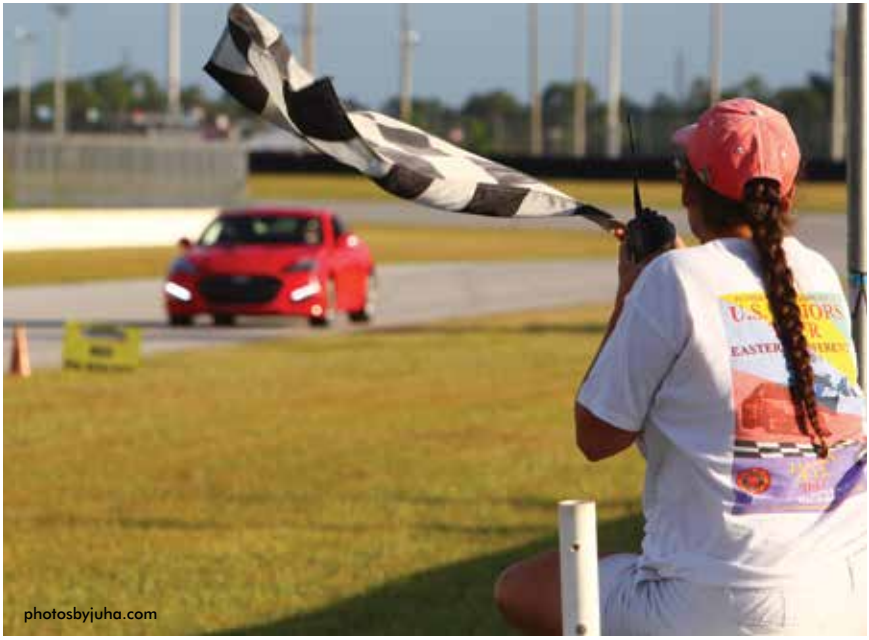
Keep your eyes on the track, yes, but don't forget about the flaggers. They're there to relay information–both commands and advisories–to ensure your safety. As you pass each worker station, make a habit of glancing their way. And on the cool-down lap, don't forget to give them a thank-you wave.

Communication is a two-way street. A worker throw a flag your way? Acknowledge him or her with a head nod, finger wave or some other (polite) gesture.

Faster car come up behind you when you're not quite at a passing zone? Again, a nod of the head or wave of the finger in the driver's general direction can quickly confirm that you're aware of the situation.

HOW TO SPEAK FLAG

Each sanctioning group is free to have its own flag rules, but most tend to follow the SCCA's lead.



COMMAND FLAGS:

Solid green: The course is clear, and the session is underway.

Solid yellow standing: There's danger in the area, so slow down. No passing until past the incident.

Solid yellow waving: There's imminent, scary danger ahead, so really slow down. Again, no passing until past the incident.

Double-yellow standing: The entire course is under a yellow-flag situation, so slow down and don't pass.

Solid white flag waving at the starter stand: This is the last lap of the session.

Solid black flag pointed at a car: That driver is doing something unsafe, so officials are watching.

Solid black flag displayed with a car number: That driver shall not take another lap; proceed to the pits to talk with officials.

Solid black displayed at all stations: The session has been ended early. Proceed with caution to the pits. No passing.

Black flag with orange ball displayed with car number: That driver shall proceed to the pit lane because there's something wrong with the car. Do not take another lap.

Checkered flag: The session is over, so take a cool-down lap and then proceed to the pits.

Solid red flag: There is extreme, imminent danger, so come to a safe, controlled stop at the side of the track–ideally within sight of corner workers.

ADVISORY FLAGS:

Blue flag with diagonal yellow stripe: Heads up, traffic is approaching from behind.

Yellow flag with vertical red stripes: The racing surface is slippery, possibly due to debris.

Solid white flag standing: There's a slow-moving vehicle ahead–possibly an emergency vehicle–so proceed with caution.

Track Day Etiquette

Don't worry about scorching lap times or landing a ride with Red Bull Racing. Your main focus needs be clicking off safe, smooth laps. The speed will come with the smoothness.

• During your warmup lap, take stock of the emergency crew positions. Should something go wrong–hey, stuff can happen–you'll want to know where to stop, drop and roll.

• Your car isn't not the only one on track, so situational awareness must become very important. Keep tabs on traffic, including those faster cars coming up behind you. Remember that four-wheeled monster gridded a few spots back? Where's it going to end up half a lap later?

• Technically the overtaking car is responsible for safely completing the pass, but you still don't want to get caught off guard–or serve as the session's jam car as faster drivers line up waiting to be pointed by. Regularly check your mirrors; you don't want to be the head of the conga line.

• Not comfortable with the car or cars around you? Maybe they're new and still coming up to speed, or perhaps they're rocketing down the straights and parking it in the turns? Either way, try taking a trip down pit lane to create some distance from them on track. And remember, stay slow and safe through the pits.

• Over the years we've seen plenty of incidents occur at pit-in and pit-out. Don't be that driver. Take it easy when entering and leaving the track, especially when you're faced with narrow, winding pit lanes. Remember, the Formula 1 teams probably aren't scouting that day.

• Show up with a full load of fuel, as running a partially filled tank in order to save a few pounds isn't going to really affect performance. There's not much worse than running out of fuel on track.

• This is supposed to be social, too. Make new friends. And why not bring some of your own to the track?

Track Tips

That first track day can be intimidating: high speeds, looming walls and the new variable of traffic. Fear not. Millions before you have successfully tackled their first track day, and you can do this.

• You're physically comfortable behind the wheel, aren't you? And your seat posture allows you to reach the entire steering wheel? Oh, and you have a good dead pedal, right?

• Remember to feed the driver. Don't skip breakfast that morning.

• Once per lap–usually on the longest straight, when you can relax a bit–take a look at your gauges and warning lights. Anything running warmer than ideal? If so, hit the pits and figure out what's up. Remember, this isn't a race, so there's no need to push a car to–or past–its breaking point.

• That situational awareness extends to your own car, too. Be aware of noises, smells and vibrations that could signal an impending problem. Trust us, you'd rather deal with those issues on pit lane than out on track.

• As the session goes on, tires can get greasy and brakes can go soft. Learn how to sense these changes. You may have to alter your driving, too, by being easier on the car and braking earlier. Or you may need to call the session a few laps early.

• Here's a common rookie mistake: forgetting to breathe. Periodically remind yourself to take a few deep breaths. While you're at it, wiggle those fingers, too, and take another glance at the gauges and mirrors.

• You paid to use the entire track, so use it. The classic line through a turn has you start at the outside curbing, cross the track to the apex, and then track all the way out to the edge of the track. Know why? It's usually the fastest way through a turn. Don't kill your momentum by limiting how far you track out of the turns.

• When it's time to brake for a turn, brake like you mean it. If you're jumping on and off the brakes, the suspension will become loaded and then unloaded. This is a great way to spin out.

• Between sessions, stay hydrated, clean the windshield, check fluids, monitor tire pressures, and torque the lug nuts. And remember what Mom said: Before you get in the car, visit the bathroom.

Fantastic Traction and Where to Find It

IN THE DRY

The track isn't a ribbon of perfectly smooth, perfectly consistent asphalt. Bumps, ridges, rises, crests, pavement changes and oil spots can all limit traction. Learn how to read the pavement:

- Off-camber turns will offer less grip than banked ones.
- Bumps can bounce tires from the pavement; in a braking zone, for example, this can extend braking distances.
- Ridges, crests, humps and road crown can cause a car to become light on its feet, again limiting traction.
- Marbles–bits of balled-up rubber mixed with gravel–often collect outside of the racing line. Get off-line, and you may be in for a ride.
- Curbs can upset the chassis.
- Fluids and dirt on track can, obviously, limit traction.
- Concrete usually offers more grip than asphalt, but of course the opposite can be true.
- Painted curbs and markings may be slippery, especially when wet.
- The patches found at the turn-in and apex points may offer more or less traction than the rest of the track. The locals will know.
- As the sun sets, the quickly cooling track can become slippery with dew.

WHAT IF IT RAINS?

Track events and autocrosses take place rain or shine. Should the heavens open up, you may want to adjust your strategy:

- Hit the pavement gingerly.
- Keep your shoes dry. Wet feet can slip off the pedals.
- Most track asphalt has been polished over the years, but the rougher pavement found off-line can offer more grip. In other words, you may have to adjust your driving line. The locals should be able to help.
- Painted markings, including curbs, will likely be slippery.
- Pavement changes can have a bigger impact on traction than before.
- Wet grass is the slipperiest thing out there.
- Sure, it may cost you a few horsepower, but kicking on the air conditioning can guarantee a fog-free windshield.
- Some tracks puddle badly, especially at the apexes.
- If in doubt, come in–this is a track day, not Le Mans.

Stuff Happens. Here's How to Handle It

WHAT TO DO WHEN THINGS SEEM OUT OF CONTROL

Car-on-car violence rarely happens during track days, but every now and then someone will run out of talent and spin. Don't panic.

- Your hands will follow the path dictated by your eyes. Look at where you want to go, not at what you think you're going to hit.
- In a spin, both feet in: If you're past the point of no return, locking up the brakes will send the spinning car along a straight, predictable route.
- If you leave the pavement, admit defeat and don't try to save it. Trying to save a spin usually escalates the situation, because now the rest of the field has to deal with you as you rejoin the track under less-than-ideal conditions.
- If it seems like your spin is going to get really bad, do not stick your arm out the window to try to stop the car. Trust us, it won't cancel your date with the tire wall.
- After the spin, make visual contact with the corner workers. They will tell you when it's safe to reenter the track.
- As you approach pit lane, pull in for a chat with an official. This also gives you an opportunity to cool down and look over your car for damage.

Tuning With Tire Pressures

Your tires are your only link with the pavement, and those four relatively small contact patches are tasked with managing every bit of power, handling and braking force thrown their way. Properly manage your tires, and they'll return the favor.

TOO MUCH TIRE PRESSURE	TOO LITTLE TIRE PRESSURE
• Harsh ride, excessive wheel patter. • Sliding and wheelspin. • High tire temps at center of tire. • Very quick warm-up then drop in grip level as pressures overbuild. • Better high-speed wet grip.	• Soft and mushy response. • High tire temperatures with dip in center of tread. • Very slow to come in. • Hydroplaning in wet conditions, especially at high-speeds and/or in deep water.

INCREASE PRESSURE	• Reduce contact patch • Increase grip at cold temps • Decrease heat generation • Reduce grip if tire does not reach operating temp • Decrease rolling resistance • Tires will initially be more responsive at colder temps but may not reach optimal temp with time on track • May decrease wear rate
DECREASE PRESSURE	• Increase contact patch • Reduce grip at cold temps • Increase heat generation • Increase grip as tire reaches approximately 65% of operating temp (range between 80° F and peak tire performance temp) • Increase rolling resistance • Tires will initially be less responsive at colder temps but will generate heat more quickly • May increase wear rate
INCREASE WIDTH	• Increase contact patch • Increase grip • Reduce heat generation • Takes longer to reach optimal temperature • May require lower tire pressure
REDUCE ASPECT RATIO	• Reduce contact patch • Improve response at the expense of reducing driver reaction time for corrections • Decrease heat generation • Will require higher pressure • Decrease rolling resistance • May increase wear rate

Managing Understeer and Oversteer

Is one end of your car gripping better than the other?

If the front wheels are sliding before the rears, then you're experiencing understeer. The circle track crowd will call this a push.

If the rear wheels are losing traction first, then it's called oversteer. This is known as being loose in circle track parlance.

UNDERSTEER

CORNER-ENTRY UNDERSTEER: CAR WON'T POINT IN AND-GETS PROGRESSIVELY WORSE

Possible causes:

- Front roll stiffness is too high.
- Insufficient front spring rate.
- Insufficient rear rebound (increase rear rebound force).
- Insufficient front aerodynamic downforce.
- Braking too hard, too late, and carrying too much corner entry speed. (Read this one again because it's so common, especially with beginners.)

CORNER-ENTRY UNDERSTEER: CAR INITIALLY POINTS IN AND THEN WASHES OUT

Possible causes:

- Too much front toe-in.
- Insufficient front aerodynamic downforce.
- Too much front or insufficient rear anti-roll bar. Adjust if possible.
- Too little rear rebound force.

CORNER-ENTRY UNDERSTEER: CAR POINTS IN AND THEN DARTS

Possible causes:

- Insufficient front wheel travel in either bump or rebound.
- Too much front bump stop.

OVERSTEER

CORNER-ENTRY OVERSTEER

Possible causes:

- Excessive rear shock rebound force (softer rear rebound adjustment).
- Driver-induced lift/trailing throttle oversteer (smoother driver inputs).
- Limited rear suspension travel caused by interference.

CORNER-ENTRY OVERSTEER THAT GETS PROGRESSIVELY WORSE FROM THE TIME POWER IS APPLIED

Possible causes:

- Worn-out limited-slip differential.
- Too much rear roll stiffness (adjust rear anti-roll bar and/or reduce shock rebound force).
- Too much rear camber.
- Too little rear downforce.
- Too little rear toe-in.

CORNER-ENTRY OVERSTEER WHERE THE CAR TAKES SET AND THEN SUDDENLY BREAKS LOOSE

Possible causes:

- Insufficient rear suspension travel (look for binding).
- Too much rear bump rubber.
- Too much throttle applied too soon after driver's confidence increased following initial set.
- Sudden change in outside rear tire camber.

CHASSIS TUNING CHEAT SHEET

ADJUSTMENT	TO DECREASE UNDERSTEER	TO DECREASE OVERSTEER
FRONT TIRE PRESSURE	Lower	Higher
REAR TIRE PRESSURE	Higher	Lower
FRONT TIRE SECTION WIDTH	Wider	Narrower
REAR TIRE SECTION WIDTH	Narrower	Wider
FRONT CAMBER	More negative	More positive
FRONT SHOCK	Soften rebound	Stiffen rebound
REAR SHOCK	Stiffen rebound	Soften rebound
REAR CAMBER	More positive	More negative
FRONT TOE	More toe-out	More toe-in
REAR TOE	More toe-in	More toe-out
FRONT CASTER	More positive	More negative
FRONT SPRING RATE	Soften	Stiffen
REAR SPRING RATE	Stiffen	Soften
FRONT ANTI-ROLL BAR	Soften	Stiffen
REAR ANTI-ROLL BAR	Stiffen	Soften
WEIGHT DISTRIBUTION	More rearward	More forward

Koni: World Leader in Shock Technology

Learn more at koni-na.com.

KONI is the world leader in adjustable shock absorber technology. In business for over 150 years, KONI has made automobile dampers since 1932 and adjustable telescopic dampers since 1945. Although best known for cars, KONI also builds industry-leading shocks for trucks, buses, RVs, military, and railway rolling stock as well. What this adds up to is world class design and manufacturing experience.

As a niche maker of high-performance shocks, KONI is small enough to interact with its customers on a regular basis. They even have a Tech Line staffed every working day with KONI technicians, many of whom are car enthusiasts just like you. This means you'll receive the personal attention missing from most product businesses today.

KONI'S MAIN AUTOMOTIVE PRODUCT LINES:

Sport

Performance street ride quality and handling upgrade.

Great for everything from daily driven street use to autocross to track events.

Rebound damping adjustable with 100% adjustment range for broad tuning capabilities.

Best KONIs for all stock or performance lowering springs.

STR.T

Budget-friendly, entry-level performance shocks and struts.

Complements stock or performance lowering springs.

Perfect for OE replacement or vehicle upgrades.

FSD (Frequency Selective Damping)

Patented FSD parallel-valve design smooths road impact harshness.

Improved performance handling and ride comfort working together.

Eliminates traditional ride quality and handling compromises.

Special D and Classic

Broad applications for older cars and traditional suspensions.

Rebound damping adjustable.

The products that KONI built its brand reputation on.

Race

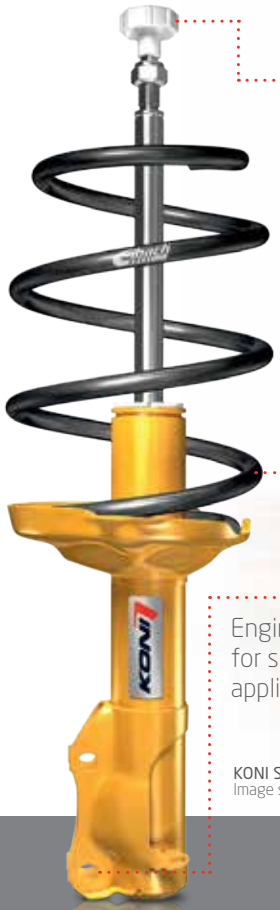
Most-winning damper brand in the history of motorsports.

Single- and double-adjustable racing struts and shocks.

Short-body, race-valved dampers in stock for key applications.

EXPERIENCE THE DIFFERENCE

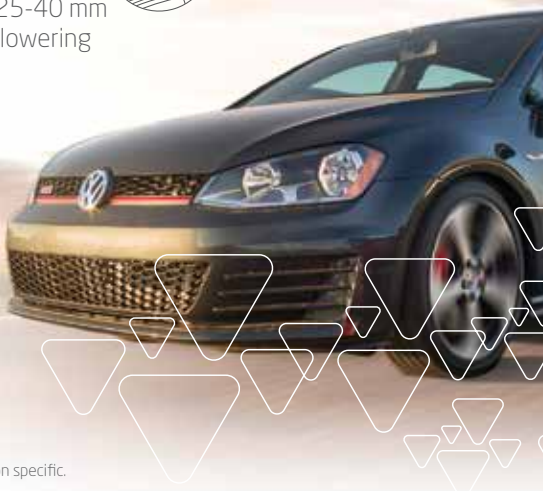
KONI Sport struts and shocks are the industry leader in externally adjustable damping, establishing the ultimate driver control. By adjusting the soft, comfortable ride to a more firm, aggressive ride, KONI Sport transforms the "daily driver" into the weekend track machine. With its very broad range of adjustability, KONI Sport is a great choice to upgrade stock, to tune for better handling, or when matched with lowering springs and other performance upgrades. Most applications sold as individual dampers or complete kits with springs. As with most KONI products, the KONI Sport carries a limited lifetime warranty.



External rebound damping adjustment

Approx 25-40 mm of body lowering

Engineered Kits for specific vehicle applications



KONI SPORT KIT
Image shown is not application specific.

Suspension 101:

Why Does Your Car Need a Good Suspension?

It's easy to credit a powerful engine for how fast a car can go. Ultimately, though, every car is connected to the ground by the small contact patches of their tires, and how well they grip has a dramatic impact on speed. When the car accelerates, brakes and turns, the tires do battle with the many forces of physics working against the driver.

Meanwhile, the car's suspension is the interface between the tires and the car body in motion. If the suspension can control and optimize body motion and tire grip while smoothing the road impacts and driver inputs, then the car goes faster, is safer, and has better ride quality.

Shock absorbers play a key role in a suspension's function. A better term for them is dampers, as their job is to damp or control the car body and suspension motion as it goes over undulations and bumps in the road. In a nutshell, the suspension's springs carry the weight of the car and for a given road input will establish how much motion the car will likely have. The shock absorber or damper serves as a timing device to regulate how long it takes for this suspension motion to occur.

A good-performing shock absorber is firm enough to slow or eliminate excessive body and suspension motion yet allows enough motion to provide a good ride quality and tire grip. If a suspension is too soft or too firm, the car, passengers and performance will suffer. Finding the right suspension balance lets the driver put the engine's power to the ground, optimizes tire grip and braking, and improves speed and safety.

Are Your Shock Absorbers Good or Not?

BAD

A car with bad (failed, worn-out or low-quality) shock absorbers will bob and bounce around, often disconnected from immediate road and driver inputs. Tires are unevenly loaded, cornering and braking is compromised, and engine power is less effective.

GOOD

A good, basic-performance shock absorber will limit excessive motion (body roll and oscillations) under subtle steering and handling movements, but won't be so firm as to have a negative effect on ride quality and tire grip when hitting bigger bumps on the road.

BETTER

A better option, especially for mixed-use cars (street and motorsports), would be adjustable-rebound valving. This allows the driver to tune for their preferred ride and handling qualities and also help optimize other suspension upgrades, like performance springs, better tires, etc. Adjust a bit softer for rougher public road imperfections and adjust firmer on smoother surfaces. Plus, drivers can fine-tune the car's balance (understeer, neutral, oversteer).

BEST

Although generally overkill for a street car, a double-adjustable (rebound and compression) damper can allow competition drivers to shave fractions of a second from their lap times. They allow fine-tuning for smooth or rough pavement, maximum grip from performance tires, and the ultimate confidence and consistency needed to extract every bit of performance from the complete package.

Suspension Alignment

How your car's wheels are pointed also greatly affects handling.

TOE: THE RELATIONSHIP OF TWO WHEELS ON THE SAME AXLE WHEN VIEWED FROM ABOVE

TOO MUCH FRONT TOE-IN:	TOO MUCH FRONT TOE-OUT:
• Car darts over bumps, under braking, and during corner exit. • Car won't point into corners, or may point-in very quickly and then wash out.	• Car wanders under braking and may be unstable in a straight line, especially in response to one wheel having too much toe-out or running over diagonal bumps. • May point into corners and then refuse to take a set.
TOO MUCH REAR TOE-IN:	**TOO MUCH REAR TOE-OUT:**
• Rear feels light and unstable on corner entry.	• Power-on oversteer during corner exit (or while straight). • Straight line instability.

CASTER : THE STEERING PIVOT AXIS'S TILT FROM VERTICAL AS VIEWED FROM THE SIDE

TOO MUCH FRONT CASTER:	TOO LITTLE FRONT CASTER:	UNEVEN FRONT CASTER
• Excessive physical steering effort accompanied by too much self-return action and transmittal of road shocks to driver's hands.	• Car too sensitive to steering inputs. • Too little steering feel, self-return and/or feedback.	• Steering effort more difficult in one direction than the other. • Car pulls in one direction (toward side with greater caster) in a straight line.

CAMBER : THE LEAN IN OR OUT OF A CAR'S WHEELS WHEN VIEWED FROM THE FRONT OR REAR

TOO MUCH NEGATIVE CAMBER:	TOO MUCH POSITIVE CAMBER:	TOO MUCH FRONT POSITIVE CAMBER:
• Inside of tire is excessively hot and/or wearing too rapidly. (The inside of the tire tread should be 10-20 degrees warmer than the outside of the tire tread; tire temperatures should be measured at three points across tread surface with a needle pyrometer.) • Reduced braking capability and/or acceleration (FWD car). • Reduced acceleration (RWD car).	• Outside of tire will be hot and/or wearing too rapidly. • May cause corner entry instability and corner exit oversteer.	Excessive chassis roll or insufficient roll camber compensation, which will cause understeer after the car has pointed into a corner.

Instability and Response

Car feel nervous and twitchy? Or is it sluggish? You might be looking at some equipment changes.

GENERAL STRAIGHT-LINE INSTABILITY

Possible causes:

- Rear wheel toe-out, either static due to incorrect setting or dynamic due to bump steer.
- Excessive front toe-in or toe-out.
- Vast lack of rear downforce or overwhelming amount of front downforce.
- Broken chassis, suspension member and/or mounting point.

SPECIFIC SITUATIONAL INSTABILITY

STRAIGHT LINE INSTABILITY UNDER HARD ACCELERATION

Possible causes:

- Limited-slip differential worn-out or malfunctioning.
- Insufficient rear wheel toe-in.

STRAIGHT LINE INSTABILITY WHERE THE CAR DARTS OVER BUMPS

Possible causes:

- Too much front toe-in or toe-out.
- Uneven front caster.
- Uneven front shock forces or bump stops.
- Front anti-roll bar too stiff.

INSTABILITY UNDER BRAKING AS THE FRONT END DARTS OR WANDERS

Possible causes:

- Too much front brake bias.
- Front brake pads too aggressive.

INSTABILITY UNDER BRAKING AS THE CAR WANTS TO SPIN

Possible causes:

- Too much rear brake bias.
- Rear brake pads too aggressive.
- Too much positive camber on rear tires.

CAR FEELS SLOPPY AS IT'S SLOW TO TAKE A SET IN CORNERS AND ROLLS A LOT

Possible Causes:

- Too little shock damping.
- Insufficient roll resistance or ride rate.

CAR RESPONDS TOO QUICKLY AS IT HAS LITTLE FEEL AND SLIDES AT SLIGHTEST PROVOCATION

Possible causes:

- Too little downforce.
- Too stiff in either ride or roll resistance.
- Too much shock damping.
- Too much tire pressure.

EVENT LOG SHEET

EVENT ______________________________

DATE ____________ LOCATION ______________________

MAKE ____________ MODEL ____________ CAR# ________

SURFACE ____________ WEATHER ______________________

EVENT TYPE ____________ REGION ______________________

SCCA OFFICIAL SIGNATURE ______________________

EVENT TAKEAWAY ______________________________

VEHICLE SPECS	LF	RF	LR	RR
CASTER (DEG.)				
CAMBER (DEG.)				
TOE				
TREAD DEPTH (BEG. EVENT)				
TREAD DEPTH (END EVENT)				
SHOCK SETTING				
ANTI-ROLL BAR SETTING				
TIRE PRESSURE				

TIRE TEMPS

LEFT FRONT			RIGHT FRONT		

LEFT REAR			RIGHT REAR		

notes: ______________________________

LEFT FRONT			RIGHT FRONT		

LEFT REAR			RIGHT REAR		

notes: ______________________________

LEFT FRONT			RIGHT FRONT		

LEFT REAR			RIGHT REAR		

notes: ______________________________

LEFT FRONT			RIGHT FRONT		

LEFT REAR			RIGHT REAR		

notes: ______________________________

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SURFACE ____________ WEATHER ____________________

EVENT TYPE ____________ REGION ____________________

SCCA OFFICIAL SIGNATURE ____________________

EVENT TAKEAWAY ______________________________

VEHICLE SPECS	LF	RF	LR	RR
CASTER (DEG.)				
CAMBER (DEG.)				
TOE				
TREAD DEPTH (BEG. EVENT)				
TREAD DEPTH (END EVENT)				
SHOCK SETTING				
ANTI-ROLL BAR SETTING				
TIRE PRESSURE				

TIRE TEMPS

LEFT FRONT			RIGHT FRONT		
LEFT REAR			RIGHT REAR		

notes: ______________________________

LEFT FRONT			RIGHT FRONT		
LEFT REAR			RIGHT REAR		

notes: ______________________________

LEFT FRONT			RIGHT FRONT		
LEFT REAR			RIGHT REAR		

notes: ______________________________

LEFT FRONT			RIGHT FRONT		
LEFT REAR			RIGHT REAR		

notes: ______________________________

EVENT LOG SHEET

EVENT ______________________________

DATE ____________ LOCATION ______________________

MAKE ____________ MODEL ____________ CAR# ________

SURFACE ____________ WEATHER ______________________

EVENT TYPE ____________ REGION ______________________

SCCA OFFICIAL SIGNATURE ______________________

EVENT TAKEAWAY ______________________________

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TIRE TEMPS

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LEFT REAR			RIGHT REAR		

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LEFT FRONT			RIGHT FRONT		

LEFT REAR			RIGHT REAR		

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LEFT REAR			RIGHT REAR		

notes: ______________________________

LEFT FRONT			RIGHT FRONT		

LEFT REAR			RIGHT REAR		

notes: ______________________________

EVENT LOG SHEET

EVENT ______________________

DATE ______________ LOCATION ______________

MAKE ______________ MODEL ______________ CAR# ________

SURFACE ______________ WEATHER ______________

EVENT TYPE ______________ REGION ______________

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LEFT FRONT			RIGHT FRONT		

LEFT REAR			RIGHT REAR		

notes: ______________________

LEFT FRONT			RIGHT FRONT		

LEFT REAR			RIGHT REAR		

notes: ______________________

LEFT FRONT			RIGHT FRONT		

LEFT REAR			RIGHT REAR		

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notes: ______________________________

LEFT FRONT			RIGHT FRONT		

LEFT REAR			RIGHT REAR		

notes: ______________________________

LEFT FRONT			RIGHT FRONT		

LEFT REAR			RIGHT REAR		

notes: ______________________________

LEFT FRONT			RIGHT FRONT		

LEFT REAR			RIGHT REAR		

notes: ______________________________

Five events! SCCA members, it's time to celebrate with some swag! Go to scca.com/eventlog to get your SCCA T-shirt today!

EVENT LOG SHEET

EVENT ____________________

DATE ____________ LOCATION ____________________

MAKE ____________ MODEL ____________ CAR# ________

SURFACE ____________ WEATHER ____________________

EVENT TYPE ____________ REGION ____________________

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LEFT REAR			RIGHT REAR		

notes: ____________________

LEFT FRONT			RIGHT FRONT		

LEFT REAR			RIGHT REAR		

notes: ____________________

LEFT FRONT			RIGHT FRONT		

LEFT REAR			RIGHT REAR		

notes: ____________________

LEFT FRONT			RIGHT FRONT		

LEFT REAR			RIGHT REAR		

notes: ____________________

BFGoodrich: The Right Tires

Learn more at bfgoodrichtires.com and bfgoodrichracing.com.

The BFGoodrich brand is all about performance–performance in the dry, performance in the wet, performance in the winter, and performance in the mud. As part of the Michelin family, BFGoodrich has the technology and resources to deliver the right tires for those conditions.

For high performance in dry weather, they currently offer two model lines: the g-Force Rival and the g-Force R1. Both product families are the result of decades of development and refinement.

BFGoodrich g-Force Rival: The g-Force Rival family features street-legal tires designed to deliver extreme summertime performance. Their 200-treadwear rating makes them legal–and thus a popular choice–for many of today's SCCA autocross classes. The g-Force Rival tires have also become very popular for track events.

BFGoodrich g-Force R1: While technically DOT-approved for road use, these are dedicated track and autocross tires. Armed with minimal tread and sticky compounds, they deliver amazing performance right out of the box.

THE GARAGE

BFGoodrich is more than just a manufacturer of those black, round things. It's a community, too, and The Garage is where that community comes together. The Garage is an online resource, a place to share stories, and a series of meet-ups. Next time you're at a big event, look for the BFGoodrich Garage to learn about tire tech, meet some cool people, or just take a breather from the day's action.

Learn more at garage.bfgoodrichtires.com.