



Event Day Insurance for Drivers

This topic seems to come up quite often with varying results. As you know, there is a possibility of your insurance company denying any claim that is the result of track day damage.

First of all, you've got to define track day. You have no hope of being covered by your car insurance if you're racing. That means wheel-to-wheel, "rubbin is racing" racing. That DOES NOT mean any driving that occurs on a race track. Your auto insurance policy almost certainly contains a clause that says you are not covered under competition of any kind. This means competition for position on a track, and often also means competition against a clock. Any question you have about the latter merits a call to your insurance agent to ask about whether you'll be covered, but it's very unlikely you'd ever be covered if you're being timed. Another important consideration is that you will not be covered if you were "practicing for racing". From the point of view of your insurance company, "practicing for racing" is the same as actually racing, and it's a sure way to lose coverage.



Oh-Oh

Some questions to think about:

- 1) **Does your insurance policy explicitly refuse coverage for anything occurring on a race track?** It may sound obvious, but you've got to check. There's a new trend among some insurance companies where they're explicitly refusing to cover anything that happens on a "course designed for competition", which they typically inform you of in the paperwork you get when it's time to renew. You've got to read this stuff to make sure it's not there.
- 2) **Were you being timed?** If the event involves timing you on the track, this will most likely be considered "Racing". If you have your own "in car timing system" such as a G2X etc. that is not provided by the track and should not even be discussed with your insurance company.
- 3) **Did you have an instructor in the car?** This is not required in order for you to be covered but this certainly adds to your argument if you say you were at a "drivers education" event.
- 4) **Does the event organizer describe the event as a "RACE", or use the term in their name?** Use of the word "RACE" can make things very difficult. The insurance company is NOT going to buy it if it is described as a race.
- 5) **And as unfortunate as this question is, how modified is your car?** It may not be fair, but the more "race-car like" your car is, the more trouble you're likely to have. If you have a full roll-cage in your car, you've got a serious problem. If you've got full-slicks on the car (meaning non DOT tires), you've got a problem. If you've just got the typical stuff, say DOT-R tires and a roll bar (not a full cage), and perhaps suspension changes, you're probably ok. A harness and race seats will also raise eyebrows, but won't get you excluded on their own.

Ultimately, if you want to know if you'll be covered, you must read your policy. If your capacity for boredom isn't great enough to read the whole thing, your other choice is to call your agent. This is really a distant second, though, as agents often find this stuff just as boring as you do, and they haven't even read them. It's not uncommon for people to get incorrect answers about coverage from their agent, so we STRONGLY recommend you both talk to the agent and read it yourself.

While the information above is true and accurate to the best of our knowledge, it can not be construed to cover every possible situation, and we can not guarantee your agency's policies will necessarily be reflected in the above.



The —Black —Crack —Report



The addiction you don't want to fight

10/10ths "Tech Corner"

As a result of some great feedback from our drivers, we will be adding a monthly "Tech Corner" discussion to our newsletter. Feel free to submit articles of your own and/or suggestions for topics you would like to see discussed.



As some of you know, when I am working on the 10/10ths car, I only use a hammer. You may want to invest in a few other tools yourself, or as in my case, make sure you have some very good friends that know how to work on cars.

POLY BUSHINGS:*

Polyurethane, delrin and other plastic compound bushings are a common replacement for rubber suspension bushings. They reduce suspension deformation under load, providing more precise cornering. They also transmit road vibration and create ride harshness.

Ride harshness is often blamed on the hard-compound of polyurethane bushings. Though partly true, that is not the primary cause of harshness.

In fact, there is another process in play - friction. Friction is the primary cause of ride harshness with polyurethane bushings.

Rubber bushings - how they work

For all their faults, rubber bushings allow suspension movement with very little friction. Rubber bushings do not slide in their mounts, they accommodate movement by deforming in a twisting motion. There is no friction surface hence the friction is very, very low. Rubber bushings resist movement due to the spring rate of the rubber, not friction. Their behavior is similar to a torsion spring though the spring rate is small.

Polyurethane bushings - how they work

Aftermarket polyurethane bushings are completely different than the rubber bushings they replace. Instead of deforming, the polyurethane forms a friction-surface that slides around the steel suspension member or mounting point.

Unfortunately the polyurethane-on-steel friction coefficient is significant causing them to "grab" the steel liners. With the weight of a vehicle resting on the polyurethane the friction becomes substantial. The problem is compounded under high speed cornering loads or heavy braking. The problem is further compounded if the polyurethane bushing fitment is not precise or bushing alignment is poor. Grease will help reduce the friction but doesn't last long, as demonstrated by the many cars with squeaky polyurethane bushings.



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The addiction you don't want to fight

Friction and damping

Early automobiles actually used friction-type dampers. Their performance is horrible and use was quickly eliminated in favor of hydraulic dampers.

The key problem with friction dampers is static friction and the resulting large force to start the suspension moving. Once moving, the dampers begin absorbing energy with relatively low kinetic friction. Essentially the suspension is locked in position until a large bump creates enough force to overcome the static friction of the suspension. The result is a very harsh ride that is insensitive to small bumps.

Contrast this with a modern hydraulic damper that begins motion with very low force. The damping action increases with the speed of the damper. The suspension responds well to both small and large bumps yielding improved ride quality, superior tire-to-road contact, and road-holding.

Though friction-type dampers are an extreme case, any friction in the suspension causes similar ride harshness.

Stiction

Static friction in suspensions is often called "stiction". The word invokes an appropriate image of a sticking, jerky, binding suspension that does not operate smoothly and only responds to large inputs (bumps).

Unfortunately, some level of stiction is present in all automotive suspensions. Ball joints, shock seals, and bushings all introduce some stiction. Stiction is the enemy of road-holding performance and ride quality. Though it can't be eliminated, all good handling cars take pains to minimize stiction. True race cars use metal heim joints and suspension bearings to minimize friction.

The high-stiction characteristics of polyurethane bushings have created their reputation for harshness.

Stiction and performance

The purpose of a performance suspension is to keep the tire contact patch optimal at all times to maximize grip. For a suspension to work it must move in response to bumps, road contours and driver input. Stiction interferes with movement attempting to lock the suspension in place. Unfortunately, stiction is greatest under high corner and braking loads - just when grip is most critical.

Stiction also makes accurate corner balancing of the vehicle nearly impossible. Stiction creates corner weights that lack repeatability.

Measuring stiction

With the car parked on a level surface, lift one bumper corner by hand extending the suspension as high as possible. Don't simply release, but SLOWLY let the car return to normal height under its own weight. Do not push down. Measure and record the bumper height.

Next press down on same corner compressing the suspension. SLOWLY allow the car to return to normal height. Measure and record the bumper height.

The difference between the two heights is a measure of the cumulative stiction.

Several factors influence the acceptable range of good values including spring rate and vehicle type. But in general a difference of 1/4 inch would indicate low stiction, a difference of 1 inch or greater would indicate high stiction.



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Reducing stiction

Identify and understand the operation of all friction points in your suspension. This includes "A" arm bushings, ball joints, steering tie rods, shock seals, shock mounts, sway bars, linkages and anything that moves with the suspension.

Ensure that all these friction components are in top shape, replace anything that is worn. Ensure that all items requiring lubrication are properly lubricated.

Ensure that all bushing mounts are properly aligned. Misaligned mounts result in pinching, binding and excessive stiction.

* Information obtained through various searches on the internet.

WHEELS:

For anyone who tracks their car and especially for those who have dedicated cars and/or a set of wheels, when was the last time you took them off, cleaned them and gave them a very good inspection for cracks?

Cracks are of particular importance, because they are the single most common type of damage that can leave a wheel beyond repair. When a wheel bends near the base of a spoke, haze marks in the finish can sometimes be seen and indicate cracks. Because repairing a wheel is not always best in a particular situation, it is important that the wheel is thoroughly examined. You should also look for damage caused by going "off". It is not uncommon to have sand or even small rocks imbedded between the tire and wheel.



Just a bit beyond cracks !!

I actually had small rocks INSIDE of my tire as a result of going off through a runoff area and sustained enough damage to the wheels on the right side that I threw them away.

Prior to your next event, I would challenge you to do this:

Remove your wheels and give them a very good cleaning and inspection. If you find any suspect areas on the wheel, take it to a wheel shop etc. to have a good, expert inspection done on it. If there is any doubt, better safe than sorry. Compare the price of the wheel against that of your car, or even better against the value of your life.

OUR NEXT EVENT:

Saturday 6-6-09 At Putnam Park. You can find registration details at www.1010thsmotorsports.com