

I'm delighted to announce Rachel Durling has agreed to become the MSTR Newsletter Editor. I think you'll agree she absolutely nailed her first newsletter.

Michigan Renegade Mountain Ride Mystery

By Kent Niederhofer

Despite a weather forecast that anticipated thundershowers for the second half of the week I took a chance and headed to Waynesville, NC for the MSTR's Michigan Renegade Mountain Ride as originally planned. Fortunately, an early departure provided for an additional day of excellent weather on some of the most entertaining roads we get to ride. And while the full, weeklong excursion was not to be, we did get three solid days of riding the "twisties" (minus about one hour of riding through a downpour as we puttered home along the Blue Ridge Parkway on the last hour of Tuesday's ride). In total, I was able to put about 900 miles on my BMW K1300S that had a nearly fresh set of Continental SportAttack 3's on it.

Naturally, along the way there were periodic stops at roughly two-hour intervals for snacks, fuel and nature breaks. It was during one of those stops that I happened to stare down and inadvertently noticed an unusual wear pattern on the rear tire. On the full circumference of the tire's outer edges, there appeared to be signs of "cupping" (which, I subsequently learned, is more correctly referred to as scalloping). In addition, the tire showed signs of some tearing of rubber near

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Editor – Rachel Durling

its outer edges and, along each of the tire sipes' leading edge, there were ridges of increasingly greater accumulated rubber while the trailing edges were nicely rounded. I had never seen tire wear like this before so it motivated me to do some research on the "inter-web", which we all know is the source of all knowledge and truth!



Needless to say, I did the best I could to find articles or documentation from qualified sources that included motorcycle suspension tuning firms and tire suppliers. Greater reassurance was provided when I saw two such qualified sources attribute the unique wear patterns to the same root cause or causes. I found one such website particularly insightful and have included the article (as well as a video link at the end), both which have been shared on multiple other sites. See if you come to the same conclusions that I did, which I will share at the end of the article that follows.

The Race Track Tire Wear Guide: Common Types and their causes

By Dan Netting

In this guide I have gone over some of the different types of tire wear that you can expect to find on track day tires around the circuit paddock. My intention here is to help you learn more about bike tire wear so you are better equipped to deal with a nasty tear if/when it rears its ugly head.

However, like most tire based guides, the nature of the subject is quite complex, so it's not as easy as saying this causes that, or that causes this (especially when talking about suspension adjustment) so please take this as being a somewhat simplified guide to motorcycle tire wear, not the definitive resource. I'll leave that to Mr. Dave Moss. So let's get on to the first type of tear.

Cold Tear

Cause – Cold tear is caused by the tire being overinflated. When the tire is overinflated the contact patch on the ground is too small so it cannot generate heat that is widespread enough to bring the carcass of the tire up to operating temperature. Instead what happens is the surface of the tire super heats very quickly while the carcass stays below operating temperature, so the surface of the tire is ripped straight off.



Symptoms – The tears are in fact quite deep into the carcass and are somewhat

fingernail shaped. If you can get a fingernail under them and almost peel a sizable chunk of the rubber back off the surface of the tire then this is a sure fire sign of cold tear.

Hot Tear

Cause – Hot tear is caused by the tire being underinflated. An underinflated tire causes the contact patch to be too large on the ground which in turn means the tire overheats. When the whole of a tire over heats, the surface gets hot and is melted off very quickly and is pitched away due to the centrifugal force created when the tire spins.



At first glance it's quite similar to cold tear but because the whole tire is overheating instead of just the surface, the rubber comes off with less effort as opposed to being ripped off a cold carcass like you see with cold tear, this then means hot tearing isn't as deep.

Symptoms – As said above, it doesn't take as much for the surface rubber to come off of an underinflated tire because the whole tire is overheating, so the tears on a tire experiencing hot tear are fairly shallow and more spread out and you shouldn't be able to get a fingernail deep under them like you can with a cold tear.

Also you will notice when looking at the tire that the tears come down and into the centre

of the tire in an arc shape because of the centrifugal force of the tire.

Suspension Related Tire Wear

When we start talking about suspension and how incorrect settings can affect tire wear, it's difficult to explain what symptoms mean what because not every form of wear is unique to one particular component of the suspension. However, below I have outlined some points that should help you better determine if your tire problems could possibly be suspension related.

If your rear suspension settings (rebound, compression, sag or spring rate) are incorrectly set to the point where they are then asking the tire to act as a part of the suspension, you are immediately going to see some unusual wear or tearing because the tire simply wasn't designed to be used in that way.



To the untrained eye, tire wear brought on from incorrect suspension settings could quite easily be palmed off as a pressure related problem (hot or cold tear), but there are some differences and some questions you can ask yourself to get you started on the right path to fixing it.

Do you know you have the right spring? – If your spring is either too hard or too soft for your weight, the carcass of the tire will be put under a lot of strain because it's being asked to act as a significant part of the suspension what with the spring not doing its job properly. This means the tire ends up quickly shredding itself to pieces with incorrect loads.

Is the affected area uniform in width? – Have a look at the thickness of the tear. If you notice that the width of the tear is not uniform and changes considerably as you follow it around the tire, then this is a good indicator that something is wrong with the suspension, usually rebound being out of adjustment. The picture to right demonstrates this.

Does the tear go all the way around? – If it does, that may be poor tire pressure or geometry.

However if it doesn't and you follow the tear around the tire and notice that it is not a continuous tear i.e. there is an affected area, then there's a sizable area where it's clean, then there's some more damage, then it goes clean again, this is another indication that a suspension setting is out, most probably rebound or compression, or even a combination of them both.

Are the edges of the tread raised? – If you have a raised area on either the leading or back edge of the tread, this is a strong sign that rebound damping on the forks or shock is set either too fast or too slow. Usually if



it's on the leading edge rebound is too slow, and if it's on the back edge it's too fast.

By answering the above questions, you should be able to determine whether or not you have a suspension related issue.

Geometry Tears: Not enough weight on the front

Cause – This type of motorcycle tire wear is not quite as common as things like hot or cold tear as it comes from an incorrect geometry set up which usually affects the front tire. What you see in the picture is a result of there not being enough weight on the tire so it cannot get to operating temperature.

This means it cannot get proper grip or traction and as a result the front tire pushes and drags across the ground when the rider gets on the throttle, rather than rolling over it as it should. The surface is then super heated and subsequently torn up.

Symptoms – With not enough weight on the front, what you'll see is a much smaller band of tearing that looks very similar to hot tear on a rear tire, only the band will be about 5 – 10 mm thick, usually about half way between the centre of the tire and the edge. Also, it will typically be uniform all the way around the tire.

Too much weight on the front

Cause – As the above heading would suggest, the other type of geometry tear is too much weight on the front. What happens in this instance is that when you start to turn the bike into a corner, because of the excessive weight on the front it will actually plough across the ground (rather than rolling), and it's only when you have finished turning the bike and you get back on the gas that you take the weight away from the front end and the tire is relieved.

As well as having too much weight on the front, this type of tear can often be caused by the front end being too soft in conjunction with too much weight.

Symptoms – With a geometry tear where there's too much weight on the front it will be the edge third of the tire that is showing signs of incorrect wear, so the affected area is quite large.



If your tire is showing bad wear patterns on the edge third, where the start of the wear pattern (the bit closest to the middle of the tire) follows the circumference of the tire uniformly, you can be pretty sure you're suffering from geometry tear and have too much weight on the front.

Tire Discoloration - Blue Tires

You often see the question come up 'why are my tires blue' or 'what's this blue stuff on my tires' with people suggesting that when you see it the tires are done. This isn't completely true.

What makes it blue? - Motorcycle tires

actually contain oils that keep the tire soft and the blue/green tint you can see on your tires is just the oils coming to the surface.

Why are they on the surface? – After the tires have been used to the point



where they gain significant heat, when they cool down again (this is one heat cycle) the oils in the tire will often come to the surface. When you go back out and ride the bike these surface oils are scrubbed off and it's only when you come back in and let the tires cool down again that you'll see more oils coming to the surface.

Each time you take a tire through a heat cycle you are losing the oils that keep the tire soft, so the more heat cycles a tire has been through the less effective the rubber is going to be for you.

As a side note, heat cycles will affect track tires a lot worse than road-biased tires, as road tires are expected to go through these cycles.

What we want to see from our tires: Good Tire Wear

So we know what we don't want to see in terms of tire wear, but what DO we want to see?

Have a look at the picture to the right... this is what you're looking for. If you have a pattern like the one in the picture which looks like a beach where the tide has gone out, you've nailed it.



This doesn't mean to say it will give you optimum performance (racers often sacrifice tire life for better performance) but it does

mean you are highly likely to see great longevity from your tire with enough grip for any track day rider.

Summary

Motorcycle tires are very expensive and probably the biggest expense for any track day rider or racer (apart from track time maybe), so making sure we are best equipped to deal with a tire wear problem if it crops up is extremely important for keeping your tires, and your wallet in good condition.

Taking the above advice into account I would like to think you will now be able to spot some of the clues and tell tale signs that show up when we experience unsavory tire wear, and as a result get on top of it as soon as possible before it ruins your tires.

It's also worth noting however that this is a fairly simplified guide to tire wear and tearing as there are a multitude of factors that come into play such as pressures, suspension make up, how the rider rides the bike, and even the nature of the track where the problems occur, so all I have intended to do for you here is give you some baseline knowledge so you can head in the right direction to getting your tire problems fixed. Something I hope I've achieved.

Other than that, keep one eye on those hoops ladies and gents.

Video: <u>www.onthethrottle.com/howto/dave-</u> moss-unsprung-tire-wear/

My Rear Tire Wear Conclusions

By Kent Niederhofer

First let me be clear that I'm no tire expert even though I did read the article – and view the video – multiple times. As a reminder, my tire had (1) scalloping along the tire's outer circumference, (2) light rubber tearing and (3) an accumulation of rubber along the sipes' leading edges.

The first issue is related to improper lowspeed damping which causes the tire to bounce and wear unevenly. As background, the BMW K1300S is equipped with three electronically adjustable levels of preload and damping. The former can be set for one rider, one rider with luggage or two riders with luggage while the latter can be set for comfort, normal or sport mode. I had the suspension set for one rider and normal despite the fact that I had both panniers fully loaded (probably about 30 lbs.) and was riding rather aggressively. So it's quite possible that the extra weight (BMW assumes the average rider to weigh 185 lbs. and I wish I was the average rider) coupled with inadequate damping for the riding style was causing the rear tire to bounce and wear unevenly.

Also, from the article it appears that the third issue – an accumulation of rubber along the leading edge of the sipes – is attributed to too much damping (though that surprises me as I would have thought that carrying too much weight and more aggressive riding would have required more damping, not less)!

Lastly, the second issue (i.e., the tearing of the rubber) – which reflected relatively shallow separation – is what the article refers to as a cold tear. This implies that the tire did not reach full operating temperature, which is possible as we were riding very aggressively in the twisties but at a much more moderate pace on the straights in between.

The only thing I can say for certain is that I'm not certain but based on what I read and observed, that's my analysis and I'm sticking with it – unless one of you, with a bit more experience and knowledge, sees it differently. If so, feel free to buy me a drink at our next event and share your thoughts on the topic.

A special thanks to **Kent Niederhoffer** for their article and pictures featured this month.

Remember... All published articles earn a free breakfast, entry into the year-end newsletter drawing AND your articles will be appreciated by your fellow members and the newsletter editor, and you will also earn points toward the 2018 MOTY Award!



MSTR Heads Up

Here's a listing of some of the upcoming local events and meetings within the next few weeks. If you know of a local motorcycle event in Michigan or Ontario the MSTR would

be interested in attending send Ian Orr an email at <u>Communications@mstriders.com</u> with the details.

MSTR EAST Breakfast Meeting

Saturday, June 23, 2018, @ 9:00 AM Doc's Sports Retreat, 19265 Victor Parkway Livonia, MI

Gregg Mitchell will be moderating this meeting

MSTR WEST Breakfast Meeting

Saturday, July 14, 2018, @ 9:00 AM Alibi Bar & Grill, 1394 E. Riverside Drive, Ionia, MI <u>www.alibionia.com</u>

Please send an email to Gala (gschip@me.com) so she can plan on providing breakfast for everyone who attends. Breakfast will be available for \$11 plus tax & tip.

Keith Danielson will be moderating this meeting.



MSTR 2018 Rides

In 2018 we'll have a similar number of events for MSTRiders to attend.

The dates for many events have already been set and are listed on the Events page of the MSTR Website (www.mstriders.com)

2018 MISTR Sistoric Courthouse Grand Tour

April 23 – November 17, 2018 Michigan

This year's Grand Tour has been finalized. Keith is calling it the 2018 Michigan Historic Courthouse Grand Tour this year.

Event details can be found here (2018 Grand Tour) and you can always contact Keith to sign up and for more information.

Ride Organizer: Keith Danielson

keith.danielson@att.net

7 Ranges RideJune 28–July1, 2018
St. Clairsville, OH

If you are like me, you are counting the days until riding season. You might even be thinking about which club rides to go on this summer. And I'm here to give you a new choice and make the decision more difficult. The routes are north of the Marietta routes, sharing a few roads along the way, and run in Ohio, W. Virginia, and Pennsylvania.

Ride HQ: All week Fairfield Inn 67731 Mall Road, St. Clairsville, OH 43950 Phone: 740-699-4980

The event hotel is sold out. There is a Super 8, Red Roof, America's Best, and Knights Inn within 1 mile. Overall, there are 13 hotels within 2 miles.

At the moment, there are 5 routes between 240 and 300 miles long. The roads are very good with lots of variety. They range from narrow backroads with no centerline to a 30 miles stretch of smooth highway sweepers. The countryside varies from quaint farmland to hollars down by the creek to forest on good size mountains.

Event information including Rider Information Packages and GPS routes will only be sent to those who have signed up. To join us for 7R2 add your name to the sign-up list at upcoming monthly meetings or send an email to Jac.

Jac has added this challenge photo of a road on the 7R2 ride and will buy the beverage of choice, during the ride, to the first person who successfully identifies this road by state number, route number or by name.



Ride Organizer: Jac Brown jac.brown@2020comm.net

BGB Blue Grass Boogie

July 19–22, 2018 Morehead, KY

Join us in Morehead, KY to ride some great roads in Eastern Kentucky on Friday the 20th and Saturday the 21st. We'll be staying at the following hotel:

Hampton Inn 500 Hampton Way I-64 Exit State Route 32 Phone: 1-606-780-0601

Should they fill up, or if you want a little less expensive room, there are plenty of other motels nearby.

There will be a **Mandatory "Rider's Meeting"** held at the hotel every evening, beginning on Thursday 19th at **9:00 PM**, where we'll set up the riding groups, review the routes and prepare for the next day's ride. If you want to participate - here's what you do:

1. Make your hotel reservations at the hotel without delay. There is **NOT** a block of rooms being "Held".

The sign-up sheet will be available at upcoming monthly meetings or contact Kelly.

Ride Organizer: Kelly McCrystal kmcc927@comcast.net

ROUGH RIDER 1000 NASHVILLE STRINGS

August 4th & 5th

Calling all MSTR Roughriders: past, present or future, and anyone else who even thought of a beautiful couple of days in the saddle on a Southern ride. This year, the MSTR Roughrider 1000 is a little modified and I think will prove

very interesting for those who wish to participate.

We will depart at approximately 6:00 am on Saturday, August 4, 2018 and ride the first 500 mile, on the route to Nashville, TN. On arrival in Nashville, approximately 10 hours later, we will all stay at a Hotel to be selected and start the evening with a Southern Dinner and entertainment at the Historic Wild Horse Saloon. After an evening in Nashville, in accordance with your own schedule, we will return to the Hotel for the customary riders meeting and get a well-deserved rest for the return trip. On Sunday, August 5, 2018, at approximately 6:00 am we will start the return trip home on a different route.

To join us for the 2018 Roughrider 1000 Nashville Strings add your name to the sign-up sheet at an upcoming monthly meeting or send an email to Terry.

Ride Organizer: Terry Odom

tjopc1@gmail.com

BBR 3 Pre-Event

August 15, 2018 Fayetteville, WV

Dave Ostaszewski is organizing a day-long white water raft trip on the New River prior to the start of BBR 3. This will be the same trip enjoyed by eight MSTRiders last year.

We'll travel and stay at the following hotel in Fayetteville, WV on Tuesday, August 14th. Ask for the MSTR room rate.

Quality Inn New River Gorge 103 Elliott's Way, Fayetteville, WV 25840 (304) 574-3443

The raft trip starts mid-morning on August 15th and finishes around 4pm. After changing back into dry clothes we'll travel back to Marietta, OH and get an early start on BBR 3 on August 16th.

The sign-up sheet for the raft trip will be available at upcoming monthly meetings or contact Dave.

Event Organizer: Dave Ostaszewski

1daveo@comcast.net



Barn Burn Raid 3

August 17–19, 2018 Marietta, OH

This is an early ride-hotel announcement. The ride hotel has agreed to hold a block of rooms at a reduced rate and recommended booking these rooms **now** to ensure availability due to other (non-motorcycle) group bookings.

Ride HQ: All week Best Western Plus Marietta Hotel 701 Pike St, Marietta, OH 45750 Phone: (740) 374-9660

A block of 25 rooms are being held as follows:

 Check-in: On or after Wednesday, August 15, check-out: Sunday, August 19. Request the MSTRiders rooms and rate

The routes will be similar to last year's BBR event. The event proper runs from August 17th to the 19th but many MSTRiders arrive early to enjoy the area roads.

The sign-up sheet for BBR 3 will be available at upcoming monthly meetings or contact Keith.

Ride Organizer: Keith Danielson

keith.danielson@att.net

MSTR Newsletter & Website

The MSTR Website (MSTR website) and Newsletter belong to you, the MSTRiders. They both can only be as good and as

interesting as you make them. If you've got something to say about a ride, your bike, perhaps a trip you're planning, whatever, send it in for the newsletter and/or website to:

Rachel Durling: rachelshott@gmail.com

MSTR Photo Gallery

The MSTR maintains a SmugMug photo gallery (MSTR Smugmug) to allow riders to upload and download pictures of various club events. Upload and download passwords are sent out to participants for each event. Click on the above link or visit the MSTR website and select the MSTR Photo Gallery link to check out all the event pictures.



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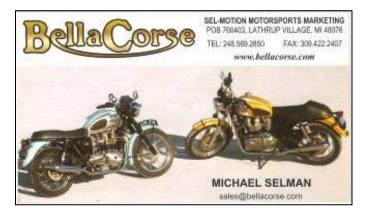
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WILLIAM W. WEBB, PRIVATE ATTORNEY 248-647-9000 Author of the <u>The Traffic Ticket Maze</u> http://statebar.net/trafficticket.pdf



