

NORD STERN



New In This Issue:

11th Annual German CarFest
2005 Nord Stern Annual Concours
Non-Competitive Driver Training Opportunity!
Business Meeting April 5, 2005

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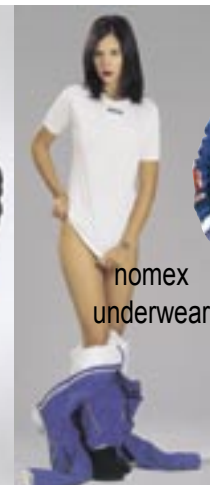
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Call Christie Boeder 952 593-5544.

*Our grass is green,
the hostas are
popping out all over,
the rhododendron are
abuzz with bumble
bees and bouquets of
pedals (that was fun
to write!). Obviously
the track season
for Porsche is right
around the corner.*

Oh my, Springtime is more than just in the air. Our grass is green, the hostas are popping out all over, the rhododendron are abuzz with bumble bees and bouquets of pedals (that was fun to write!). Obviously the track season for Porsche is right around the corner. What more can we ask for! In fact one autocross has already happened and from what I hear on Clubtalk it was a HUGE success. How exciting. We have a fabulous turnout for First Fling. I really do look forward to a fun summer of driving events. With the variety of activities the club sponsors, I do truly believe there is 'something for everyone' so no excuses for not joining in on something. Driver Ed stuff is scheduled at BIR, there is one more Autocross (August 14), the annual Concours is back in Afton in late July (see calendar), there will be a Lon/Lori Tusler Rally later in the year. Bill Berard promises us some fun 'just driving' excursions. The annual HeritageFest down in New Ulm is July 9th plus the German CarFest is again a full weekend of events (see their ad) over in St. Paul. An evening cruise, Concours and car get-together, a serious Ball are a few of the festivities planned. So if you aren't up at Brainerd for Fast Fling, sounds as if one should plan on checking out the action over by the Capitol!

I included in 'Letters to the Editor' the recent thread about oxygenated gasoline. I have read articles and included stuff before but it's always of interest to revisit something like this. It's truly something I don't know anything about (lots of those areas for me!) and am sure there are a fair number of us out there. Additionally there is a older document posted on the web site listing gas stations that sell it. It's probably not accurate, but might be useful. It's in the 'What's New' area, near the bottom: <http://www.nordstern.org/WhatsNew.html>.

See you at the 'next event!'

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1/2 pg.	\$77	\$69	\$50
1/4 pg.	\$46	\$39	\$30
1/8 pg.	N/A	\$30	\$20
Inside Covers	N/A	N/A	\$85
Back cover	N/A	N/A	\$95

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Full page:	7.5" wide by 10" high
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Welcome . . . New Members

(and returning members!)
We hope to see you
at upcoming events!



So, Just What Do We Do In Nord Stern??!

Stan Passananti
Ely, MN
911 and 993

Scott Carson
Cottage Grove, MN
Boxster

Andy VanderWoude
Eden Prairie, MN
Boxster

A **brief** synopsis of activities and events offered by your club, Nord Stern, and/or PCA or, just enough info to pique your interest??!

Autocross: A driving event, teaching one how to maneuver one's car around a set course of pylons on a closed circuit. Instruction is available, drivers compete against the clock. No modifications to one's car are necessary. Some safety equipment needed (helmet).

Concours: A setting where Porsches are displayed for general viewing and/or inspection competition. Experienced judges evaluate the various models based upon cleanliness, overall condition and authenticity.

Driver Training: A driving course designed to teach and enhance high speed driving skill and technique on an actual racecourse. Training includes classroom sessions, on-track 'exercises' plus supervised lapping sessions.

Driver Education: High speed driving event on a closed-course racetrack (Brainerd, Blackhawk Farms) where drivers are grouped according to prior lap times. Instruction is available. Performance enhancements are frequently made (but not required!).

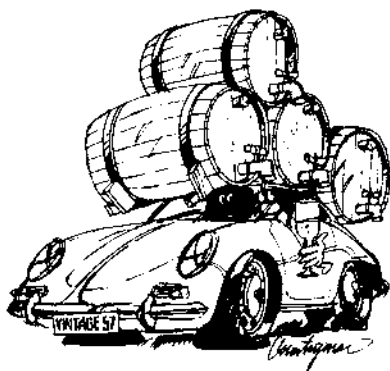
Time Trials: On course timed lap with controlled starts and exiting.

PCA Club Racing: Wheel-to-wheel competition between drivers who hold PCA club racing licenses. There is a race class for every model Porsche. Safety modifications to your vehicle required.

Rally: An event wherein a driver and co-driver complete a predetermined route along open roads following a specific set of navigational instructions. Can be a TDS (time-distance-speed) or a 'fun' rally.

Social: Organized gatherings of club members, affiliates and family member to meet, eat and drink beverages! See our motto on page 1!

Tech Session: Casual educational session that span a wide range of topics, from general maintenance, through Concours prep, performance enhancements and general car/mechanical knowledge!



"A good majority of our new members are driving Boxsters yet we see very few at our driving events. This is a bit ironic given the number of them on the streets. On June 19th we are holding our Car Handling Training event at Dakota County Drivers Training Center. This is the perfect event for those of you who'd like to explore the handling capabilities of your car in a safe environment. You'll also learn valuable driving techniques that can help you in every day driving."

I haven't been to one of our new member orientation meetings in awhile but we sure had a great one on March 23. **Steve Sherf** and **Ed Vazques** put together a great agenda for the many new members who turned out. Great food (who can argue with pizza) and great conversation. Many new members to meet.

A good majority of our new members are driving Boxsters yet we see very few at our driving events. This is a bit ironic given the number of them on the streets. On June 19th we are holding our Car Handling Training event at Dakota County Drivers Training Center. This is the perfect event for those of you who'd like to explore the handling capabilities of your car in a safe environment. You'll also learn valuable driving techniques that can help you in every day driving. Any Nord Stern member is welcome and you don't need a Boxster to attend. Look for details in our Nord Stern newsletter or on our website.

Thanks to the many people who have responded to our call for volunteers. If you'd like to meet more people in the club, there is no better way to do so than getting involved on a committee. Club Race chairman, **Roger Johnson**, advises that we still need pit and grid workers for our race weekend in August. If you'd like to help on any of our committees, drop the committee chair a line and let them know.

Speaking of our club race weekend, it's coming together well and it promises to be the best yet. If you've never seen a race in person, this one is well worth the trip to Brainerd. Even if you're not driving that weekend, it's a fun event as an observer. Book your room soon as the area hotels fill up fast. You can, of course camp at the track.

Our concours event returns to Afton this year. From all the conversation I've heard, we should have quite a selection of gorgeous cars to view. A few of the businesses in Afton have undergone face lifts giving you plenty to see after the car judging is over. This should be a great event.

On a sad note, our past president, **Ed Hazelwood**, is moving to Chicago. Over the past 15 months I've gotten to know Ed as we tackled Nord Stern issues together. Ed put a lot of sweat and energy into making this club great for all our members and we should all appreciate his effort. His wife evidently got a great job opportunity in Chicago and Ed is opening a new office for his company there. My only concern is all the seat time he'll be getting at Road America. I'll never catch him.

The last Nord Stern business meeting for the spring was April 5. Thanks to the many committee chairs and members at large who attended these meetings over the winter to plan our upcoming year. Look for our next meeting in September.

The weather is great outside. I've pulled out the 911 for spring prep and clean up. It's officially driving season. Let the revs begin.



Pictures by Jim Anderson

Looking for pictures to remember your weekend? I work Fire and Rescue at BIR for all the Nord Stern events, and can be found in the red Dodge Dakota on corners during the days, and at the social in the evenings. New for this year, I'll have printing capabilities at the track for up to 13x44 prints.

Let me know in advance that you want pictures of your car, along with enough description that I can recognize the car in traffic and I'll get as many as I can for you to choose from.

<http://www.jimsracing.com> or email jima@copper.net

Letters to the Editor . . .

Gasoline 'guessing'

This question should go to Techtalk, but I am not signed up for that. So if anyone can clue me in on this question, I would appreciate it.

On the Nord Stern web site there is a list of gas stations that sell special gas, non-oxygenated I think it is called. Why do I need to know that? I assume I should be using that in my Boxster, but why? It seems to run fine on the premium from any station I go to.

And finally, what makes it different from other gas? I am planning to drive out to the Parade in June and do some touring of New England while I am out there. How will I know where to find it in other states or what should I look for on the pumps that will tell me?

It should now be obvious why I didn't sign up for the Techie group.

—Dale Tripp

"Oxygenated" is another way of saying "with alcohol."

The reasons people go for this include facts and beliefs. One fact is that gasoline with 10% alcohol, which is typical, has 5% less power than pure gasoline. The tracksters in the club want that extra 5%.

Another fact is that older cars, like the late Seventies and before, can have fuel system parts that don't deal with the alcohol well. Older plastic and rubber parts were susceptible to this. Some people will pick it for other reasons. Like thinking that "pure" must be better. Or that the alcohol itself carries impurities.

Personally I put in whatever is cheapest until one or two tankfuls before DE weekends. Then I get some non-oxy gas and keep filling with that through the weekend.

You don't need to worry about it. Get the correct octane as specified in the owners manual and you'll be fine.

"Pure" gas has its place but do get the "extra virgin" if you find it. ;)

—Glen Larson

I'm no gasoline expert but I always have an opinion.

Oxygenated gas is done by adding MTBE to the normal mix. It is intended to lessen pollution, especially in the colder months and in metro areas. I think there is a Fed mandate about what cities must have it and Mpls qualifies. Funny thing is, you can get non oxygenated fuel by just driving to a small town outside the metro area, or so I'm told.

Down side is that older cars had some difficulty digesting the new fuel mix as it tended to soften older seals and gaskets, causing leaks and other failures. Now we're talking really old here, not just 10 years or so. I had to have my now 24 year old snowblower carb rebuilt when we made the switch as the gaskets in it failed. Another thing is that this gas will tend to allow more moisture to dissolve in the gas, which could cause more problems with gas line freeze and clogged fuel filters. I've never had a problem with this so I'm dubious if

this is really a significant point. Lastly, it is not supposed to perform as well as the non oxygenated gas. Never noticed an issue with my cars.

Now, to your Boxster. Since it is new enough, it should have no issue with any of the above items save the possibility of less performance. I'm pretty sure the Boxster has a knock detection system as Porsche has used them since the late 80's and that would automatically adjust your engine to the quality of the fuel you are burning.

My 2c and I'm sure I'll get corrected if wrong. YMMV - pun intended ;-)

—Jon Beatty

Jon and all,

In Minnesota and other states with lots and lots of corn, the gas gets mixed with alcohol. In fact, our State government mandates it. There might be MTBE as well. (My chemistry set is out-of-date.)

In other parts of the country they use MTBE which oxygenates and raises octane. (Alcohol raises octane, too.)

Thinking the correction is shared equally.

—Glen Larson

Yes, I guess I knew that as I have a friend who is producing ethanol for the local gas companies. Lots of ways to increase oxygen. Fewer ways to increase performance without a similar increase in pollution.

Thanks for the correction.

—Jon Beatty

Guys,

I love these posts about gasoline and mixture effects. I agree with all of your comments and want to add one of my own too.

The reason oxygenated gas drops power from your engine (if it had been designed to run on straight gas), is because it actually leans the mixture out. When you add 10% ethanol to gasoline you are taking fuel (ethanol) that should be burnt with 4.5 or 5 parts air for complete combustion, and adding it to fuel (gas) that should be burnt with 14.7 parts air for complete combustion, but in total you are still using 14.7 parts air to one part of the fuel mixture. The result is that some of the air will not be combined with fuel and is not used. For environmental reasons, this is a great thing, because that also means that the chances of creating carbon monoxide because of a lack of oxygen in the combustion process is decreased. Also, since the extra air is not burnt, it also absorbs heat from the combustion process, this in turn keeps combustion temps down, which also decreases the ability to create NOx. Well, what happens is that the heat that was absorbed by the extra air is taking away that heat that can go into producing power. The significance may be small, but to some it is noticeable. Besides that, the net effect is that you are putting less fuel into the engine as well, and that is also what is pulling power from the engine.

Continued on page 16

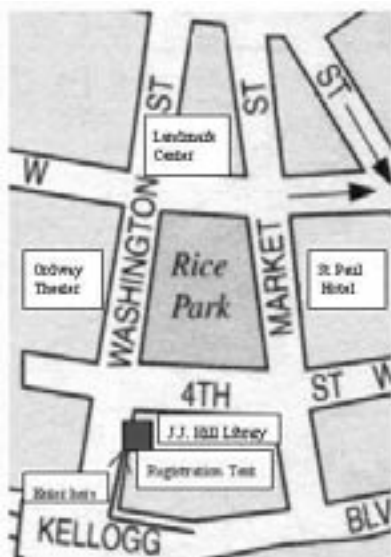
NORD STERN MAY 2005

11TH ANNUAL GERMAN CARFEST

Saturday June 11, 2005

9:00AM - 3:00 PM

RICE PARK, ST PAUL



The great annual get-together of German car fans!

Our friends from the Audi, BMW, Mercedes-Benz, Porsche & VW Clubs
will all be there to celebrate!

The German Carfest is open to all German makes & models

Beautiful Rice Park is right in the heart of Downtown St Paul!

Vendor exhibits, including the Dentman, Jürgen Holzer
50% off on site, 10AM-Noon

German food provided by the St Paul Hotel

Enjoy the Musikmeister's 30-man German Brass Band!

Car Show: 9:00AM - 12:30PM

Awards at 1:00PM!

People's Choice Awards: 1st, 2nd & 3rd overall!

Get ready for the best Carfest yet! Be there!

AUDI - BMW - MERCEDES-BENZ - PORSCHE - VOLKSWAGEN

THE ULTIMATE COMBINATION

11th ANNUAL GERMAN CARFEST - SATURDAY JUNE 11, 2005 - RICE PARK - ST PAUL, MN

Registration Form

NAME: _____ PHONE NUMBER: _____

ADDRESS: _____

E-MAIL ADDRESS: _____ CAR MODEL: _____ YEAR: _____

In order to speed up registration at the gates, we are asking Club members to pre-register by May 20th. The cost is \$10/car. Your advance registration packet will be ready for you when you arrive at the park. For non-preregistered participants the cost will be \$15 at the gate.

Please make check payable to MBCA TWIN CITIES SECTION and send it before May 20, 2005 to:

Paul Bergquist - 6747 Canterbury Lane - Eden Prairie, MN 55346

For additional information, please call 952-937-1822 or contact PBASSOCINC@AOL.COM



Ed Vazquez works at welcoming new members to the club and its activities



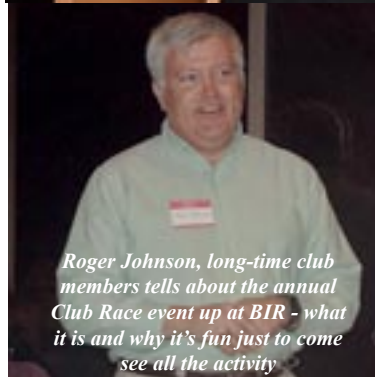
Nord Stern Prez Chip Smith gets the evening rolling ...



Driver Training Chair Lee Jacobsohn presents information on the Nord Stern driving schools



Membership Chair Steve Sherf listens intently!



Roger Johnson, long-time club members tells about the annual Club Race event up at BIR - what it is and why it's fun just to come see all the activity



Rally Chair Lon Tusler discusses the 2005 plans



Keith and Kim Fritze and Shawn Tripet pay rapt attention!



A number of new members enjoy pizza while listening to various Nord Sterners try to explain just 'what do we do in this club!'



Bruce Boeder, Roger Johnson and new members Loran and xxx Hall exchanging info about 'how MANY Porsche do you own?!!!'



NOT new members, Scott Kuhne, Lon Tusler, Pam Viau and Steve Sherf to right were all very helpful as we welcomed a number of numbers



New members chatting



*Mike Lancial, Lon Tusler and
Chip Smith*



*Right, Steve Sherf welcoming new
members*

New Member Social Draws an Enthusiastic Crowd . . . of Both 'New' and 'Old' Members!

by Christie Boeder, all photos by Jim Anderson

*"Thanks to our
dealerships, Maplewood
Imports and Carousel
Automobiles for the door
prizes and gift certificates
given to the lucky ones
who had their names
drawn."*

It was a warm, pleasant evening (a taste of things to come!) that brought out a number of Porsches to the annual gathering of 'old' and 'new' members of Nord Stern to Davanni's in Edina, right off Hwy 100. This year's New Member Social was a great success with both 'sides' well represented. Thanks to both **Steve Sherf** and **Ed Vazquez** for organizing an evening devoted to introducing new members to our club with presentations by various officers and members who spoke to all the various events and activities our club plans throughout the year. The pizza was good, the beer readily available and the conversations lively. A good time was had by all.

Thanks to our dealerships, Maplewood Imports and Carousel Automobiles for the door prizes and gift certificates given to the lucky ones who had their names drawn. Ed V. made the presentations on behalf of the dealerships. A slide show depicting pictures from various events held last year helped give visual impact to answering the questions of 'just what we do!' And Roger Johnson shared the newly produced DVD from PCA commemorating the club's 50th Anniversary.

SLOWPOKES

Open Track Event

Brainerd International Raceway

Cost: \$250 per car per event

(number of drivers per car unlimited)

Open track May 27 & July 5, 2005

Get as much seat time as you can handle!

Participants: 40 cars (maximum registration)

Requirements: Prior High Speed School
Snell 90 or newer helmet
Tech: Nord Stern certification or equivalent (inquire if in doubt)

Contacts: Fred Jacobberger at: 952.948.0600
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Linda Olson at: 952.888.0613 or 952.221.6720
www.slowpokes.org

Each driver must have completed a training event at BIR or have prior drivers education events at BIR. Please call if you are a new to Slowpokes to get any additional information.

Fill out this form and mail with a check payable (or enter online with Paypal) to
Slowpokes Inc. to:

Linda Olson
8835 Penn Lake Circle
Bloomington, MN 55431

Driver _____ Co-driver _____
Phone(work) _____ Home _____
E-mail _____ May 27, 2005 _____ July 5, 2005 _____
Address _____ Make _____
Model _____ Year _____ Color _____ Number _____
BIR or equivalent experience: _____
Emergency Contact _____ Emergency Contact # _____
Each driver will sign a waiver at the day of the event.

Signed: _____ Co-driver: _____

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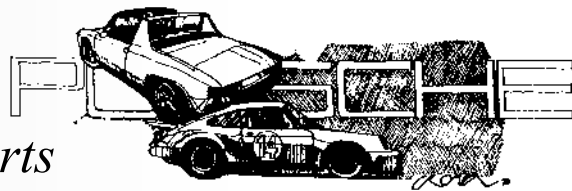
5th Annual Maplewood Imports AutoFair

Sunday, May 15, 2005

Location: Maplewood Imports

2780 N. Hwy 61, Maplewood 651.483.2681

Time: 10 a.m. to 2 p.m.



Dust off your favorite car and celebrate the start of the summer driving season. On Sunday, May 15th Maplewood Imports is once again hosting their grand get-together. From 10 to 1 their entire lot will be cleared to make room for your beautiful Porsches, Audis, Mercedes Benz; all years and models are welcome!

Eventmaster: George Andeweg 651.483.2681

Rick Moe's

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Run For The Hills, Part Trios

*Mark Your Calendars Now and Get
Your Registration in!*

August 25-28 2005

Multi Regional event

RUN FOR THE HILLS, PART III

See Mount Rushmore and tour the scenic Black Hills and
Badlands of Western South Dakota
with the Dakota Region PCA.

Eventmaster: Tim Powell 605.721.6194
rushmorepcatrip@hotmail.com

2005 Nord Stern Annual Concours d'elegance

Mark Your Calendars Now

Sunday, July 24, 2005

Afton City Park
in lovely downtown Afton, MN
Selma' Ice Cream Parlour (right across the street)
Re-opening with expanded outdoor dining facilities and
refreshments!

Eventmaster: Chris Harbron 651 882-0475

Porsche Enthusiast!



By the smile on Jon Beatty's face you can tell that he truly enjoys his beautiful raced-prepared Porsche 911 RS America. As President of Minnetonka Software and VP of Minnetonka Audio Software, Jon knows being prepared on and off track is important. That's why he financed his home through Mortgage Marketing where we're always prepared to handle all your

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Letters to the Editor . . .

. . . continued from page 8

Your knock sensor won't account for this. It will keep your engine safe from the after effect of running a lower octane gas than what the engine required, but the two issues are different. Ethanol will actually increase octane rating (most pure alcohol is 140 octane or something like that).

If you store your car over the winter, ethanol can have a negative effect on the fuel system. I think it is very similar to brake fluid, as it is hydroscopic (is that the right word?) and absorbs water readily, but I also believe that given a cold temperature, that water can dissociate and cause problems.

For what it's worth,

—Curtis Beaumont

I have to add my own 2 cents on this, too -- having read many discussions of the issue as a substitute for bench racing.

I had not heard the "lean mixture" reasoning before. It might well be true; it certainly sounds plausible. One thing I wonder about though -- I certainly can believe that adding ethanol to fuel could lower combustion temperature, but leaning the mixture of most any internal combustion engine usually raises the temperature. (Ask me how I know.)

However, the primary reason ethanol lowers your power

-- and gas mileage too, by the way -- is because it has less net energy or power per pound than gasoline. There's enough difference that the argument that the reduced air pollution resulting from oxygenating with ethanol is actually offset completely by the larger amount of fuel burned because of the poorer mileage.

Clearly that kind of argument would be tough to prove either way without a huge, well-controlled study.

It's also true that ethanol raises the octane, since octane is a measure of knock resistance and ethanol just doesn't go "boom" as easily as gasoline, to put it in overly simple terms.

And lastly, yup, alcohols are hygroscopic (absorb water from the air) by nature. So when I store my Porsche for the winter, I fill it up with a tank of non-oxygenated fuel at my favorite non-oxy station, the BP at Penn and 66th in Richfield.

--

—Chris Johnson

Non-Competitive Driver Training Opportunity! Right Here in Metro Area

This event is oriented to Drivers who are interested in learning the acceleration, braking and cornering capabilities of their vehicles in a low key setting. The event will be tailored to people who have NOT taken a high speed driving school before and have NOT driven on a race track. The event is a combination of classroom sessions with driving exercises allowing you to test and experience what is discussed in the classroom. The driving exercises are designed to NOT exceed 60 mph, yet allow you to test the capabilities of yourself and your vehicle. At the end of the event you will receive a certificate of completion.

Dakota County Technical College & Drivers Training Facility

1300 145th Street E.(Co.Rd.42), Rosemount

Sunday, June 19

Time: Registration 9:00 am, lunch break 12:00 to 12:30, Graduation 2:30pm

Arrive by 8:30 for a quick vehicle inspection.

Bring a lunch or a snack, pop will be provided.

Must be 18 years of age, with valid drivers lic.

Vehicles must be street legal and licensed and in good operating condition, eventmaster reserves the right to designate any vehicle as unsafe to participate in the event.

One participant per registered vehicle.

Remove all loose items (old pop cans, cellphones, windshield scrapers, golf clubs, gym bags, etc) from the vehicles interior and trunk before arriving at the event.

Helmet required, (any motorcycle, snowmobile or auto racing helmet is acceptable).

Fee \$40 advanced registration

\$10 surcharge for registration at the event, \$10 charge for non PCA members.

Maximum of 40 participants.

Name: _____

Address: _____

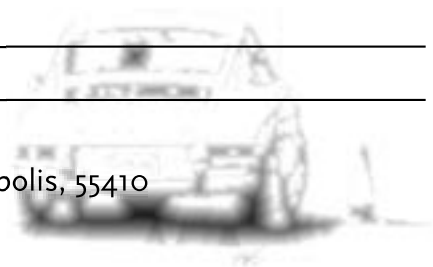
Phone #: _____

e-mail address: _____

Vehicle make and model, Why are you taking part in this event? What would you like to get out of it? _____

Mail to Lee Jacobsohn, 4849 Russell, Minneapolis, 55410

E-mail: speed@tela.com



Nord Stern 2005 Driver Ed Event Registration



- **Eventmaster/s:** TBA for each event
- **Cost:** BIR April/June/Sept events: \$195 driver; \$150 2nd driver, same car
Early Bird Discount (30 days prior to event) \$170 driver; \$150 2nd person, same car: and Limited non-PCA registration available: \$245 per person
Road America: \$245/\$225 PCA members, \$295/\$250 non-PCA drivers
- **Requirements:** Snell 95 or newer helmet, 96 db noise limit, PCA Membership Card & valid driver's license
- **Experience:** To participate, you must have Nord Stern or other approved driver's training experience.
- **Tech Inspection:** Mail in form with registration, form available in Nord Stern or downloadable from Nord Stern website (PDF format) www.nordstern.org
- **Refund Policy:** **FULL refund if you cancel by calling at least one day before scheduled event.**

- ☐ Fast Fling June 11/12
- ☐ Club Race (Cost TBA) Aug 6/8
- ☐ Road America July 11/12
- ☐ Last Fling Oct. 1/2



Rush this form along with your check payable to Nord Stern to:
Cal Townsend, Registrar 15391 Flower Way Apple Valley, MN 55124

Driver _____ Car #: _____

Co-Driver _____ Car #: _____

Do both drivers have previous high speed experience with Nord Stern? _____ Yes _____ No

If no, will driver attend Nord Stern DT school prior to this event? _____ Yes _____ No

If no, do you have approval from head driving instructor to attend this event? _____ Yes _____ No

Phone(Wk/Hm) _____ Cell: _____

Street _____

PCA Card # and expiration date: _____

City _____ State _____ Zip _____ email: _____

Car _____ Model _____ Year _____

Best Time BIR _____ Best time co-driver BIR _____

"In consideration of being permitted to use the BIR facility under the track rental lease of Nord Stern, I agree to be solely responsible for any and all property damage to the BIR facility caused, in whatsoever manner, by myself, or a registered co-driver either in the vehicle which I have registered, or in another vehicle, within seven (7) working days of invoice by it for all reasonable property damage which it has been billed, or which it paid to the operators of BIR for property damage to the BIR facility in which I, or my vehicle was involved. Nord Stern Region reserves the right to exclude any individual."

Driver: _____

Co:Driver _____

Zone 10



April 2005

Around the Zone

On March 5th, I attended the Carousel Porsche Swap Meet in Minneapolis hosted by the Nord Stern Region. There were tables with lots of Porsche stuff to pick through. In addition, one table supported the local charity and one table had Porsche boutique items. It was great to meet Chip Smith, Nord Stern President as well as many Nord Stern members. Local artist, Michael Jekot, was there to display some of his work and it is magnificent. He will attend Parade and I would encourage everyone to check out his work. My thanks to Nord Stern for their hospitality and very fun event.



This event offered good exposure for the local Porsche dealer and a perfect location for members to swap parts and stories. An event other Regions might consider adding to their calendar in the future.

Charity Subsidy

As you continue to plan your Region activities, please don't forget that PCA offers a \$350 subsidy to assist with your charity event. You can find more information on page 79 and 140 in the RPM manual or on the PCA webpage under Admin Services.

Observer's Report

I have sent out the Observer's Report forms to those Regions having driving events in April. The Observer's Report is an excellent pre-planning tool as well as the tool PCA uses to keep insurance costs down and assure safe events.

Treffen

You'll want to remind your members about "The Total Porsche Factory & Driving Experience in Germany." The Porsche factory opens its doors to PCA twice per year for the Summer (June 15-20) or Fall (September 28 - October 3) Treffen. Visit Germany, drive a Porsche on the Autobahn, visit the Porsche Museum, and experience "Hot Laps" at Weissach. This is a trip of a lifetime and you can find details in the latest issue of *Panorama*.

Membership Information

Please remind your membership chairperson that whenever they receive changes to member's address, telephone or email, they should send that information to PCA at admin@pcanational.org. Many times our members update their information with the local Region but forget to send it to the PCA national office. Thanks for your help!

PCA Merchandise

PCA has entered into an agreement with Mid America Motorworks to produce and distribute PCA merchandise. Once initiated, this will allow members to buy PCA merchandise through ads in *Panorama* or the Mid America Motorworks catalog. Watch for more information in *Panorama*.

Be Safe

April marks the beginning of our driving season. Remember to buckle-up and drive safely. I hope to see you soon.

John Phillips
PCA Zone 10 Rep
402-333-7245
pcazone10rep@cox.net

Nord Stern's Fast Fling

June 11 & 12

Brainerd International Raceway



*The first 96 entries get the second
in our "Fling" series mugs.*

Enter today!

See entry form elsewhere in this issue.

Eventmasters:

Teresa Vickery

952-474-7126

twv@mktgbydesign.com

Roger Johnson

763-557-9578

rsamerica93@comcast.net

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2005 Kalender

May

- 7-8 Mid-America DE**
Host: Great Plains Region
- 13** Drivers Training for Women! See Page 21**
Brainerd International Raceway
Cost: \$125 Eventmaster: Susan Anderson,
susan@andersonmotorsport.com
3-Club school, no membership required, any
woman 18+ can register at <http://www.northstarbmw.org/drivingschools.aspx?ns=Register>
- 15 Annual AutoFair, See Page 11**
Maplewood Imports
Eventmaster: George Andeweg 651.483.2681
- 21/22 Kansas City Region**
Ozark Lake Weekend Festivities,
further details TBA

June

- 3-5 Mid-America Club Race & DE**
Host: Great Plains Region
- 10 PCA Instructor Training @ BIR (tentative)**
Eventmaster: Lee Jacobsohn 612.922.8458
speed@tela.com
- 11,12 Fast Fling Driver Education**
Brainerd International Raceway
Eventmasters Teresa Vickery 952 474-7126
email: TWV@mktgbydesign.com
and Roger Johnson 763 557-9578
email: rogerdjohnson@comcast.net
- 10-12 German CarFest - Weekend Festivities**
Location: Rice Park, downtown St. Paul
Contact: Paul Bergquist, 952.937.1822 of the
Mercedes-Benz Club
- Saturday** will feature the traditional CarFest.
Sunday will be the Concours featuring cars
vintage 1967 and older - Porsches are invited to
participate! This past year's Concours featured
200+ cars and a huge crowd. See page 9
- 19 Car Handling School @ Dakota Country
Driver Training Facility**
Eventmaster: Lee Jacobsohn See Pg. 16

July

- 9 New Ulm Heritage Fest**
Caravan leaving Lion's Tap at 9:00 a.m. for a day of
German heritage celebration fun.
Information: Paul Bergquist, 952.937.1822 or email
at: PBASSOCINC@aol.com

2005

- 11-12 Nord Stern at Road America!
Two Full Days of Driver Education
Monday/Tuesday**
Location: Elkhart Lake, WI
Eventmaster: Dave Anderson 763 479-8231
david@anderson.com
- 24 Nord Stern Annual Concour d'elegance**
Location: Afton City Park
Eventmaster: Christine Harbron, 651 882-0475 tel,
612 968-0629 cell. See page 10
- 8-10 Heartland Park Club Race**
Host: Kansas City Region

August

2005

- 5,6,7 Nord Stern Annual Club Race & DE**
Brainerd International Raceway
Club Race Eventmaster: Roger Johnson
- 13-14 Mid-America DE (note date change!)**
Host: Great Plains Region
- 14 Autocross @ Dakota County Driver
Training Facility w/Corvette Club**
Eventmaster: Harvey Robideau
p911sc@earthlink.net
home 952 361 4872 or cell 952 221 0443
- 26-28 Run for the Hills, Pt. Trois!**
Host: Dakotas Region; See page 10

September

2005

- 5 2nd Annual Rochester Porsche Picnic!**
Eventmaster: Roger & Mikey Forland email:
roger@westwoodhomes.biz and Jeff and BJ
Boehm email: jbandbj@chartermi.net
Time: 1:00 to 6:00 pm
BYOB & B (Beer & Brats!)
Location: TBA
- 15,16 Blackhawk Farms DE
Thursday and Friday**
Eventmaster: Ron Lewis 952 932-0505 or
lewis_re@earthlink.net
- 16-18 DE / Heartland Park**
Host: Kansas City Region
- 23-25 13th Annual North Shore Fall Color Tour**
Headquarters: BlueFin Bay (1-800-BlueFin)
Eventmaster: John Dixon 612 939-9071
Email: eyerack@tcq.net

2005

30 **Last Fling Driver Training**
Brainerd International Raceway
Eventmaster: Lee Jacobsohn 612.922.8458
speed@tela.com

October

2005

1,2 **Last Fling Driver Education**
Brainerd International Raceway

14-16 **Annual Flaming Fall Weekend**
Host: Ozark Lakes Region, further details TBA

Friday, May 13, 7:30 AM

Driver Training for Women

Location: BIR

Cost: \$125

Eventmaster: Susan Anderson,
susan@andersonmotorsport.com

3-Club school, no membership required, any woman 18+ can register at
<http://www.northstarbmw.org/drivingschools.aspx?ns=Register>

Complimentary tech inspections available (no convertibles) – Orr Autosport on April 14th 6-8pm, or contact Susan

Loaner helmets will be available c/o Audi Club

Option to stay for BMW's Co-ed Driving School w/Ross Bentley

Ramada: BMW rate \$63, reserve by April 20th [any nights 5/12-15]

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Dues Are Past Due!

Your monthly newsletter for Nord Stern Porsche Club, the Nord Stern does require a subscription. Our dues are yearly (January through December).

\$20 per year
\$55 for 3 years
\$90 for 5 years



Nord Stern will not be mailed to those who have not renewed for 2005 starting with the March issue. Call Steve Sherf, Membership Chair with your questions: 952 471-1054.



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Wed. June 15th – Mon. June 20th**

- **Tour the PORSCHE Factory, Museum, Special Order Department, and PORSCHE Zentrum**
- **Experience Weissach ("Hot Laps" if available)**
- **Enjoy driving a brand-new Factory PORSCHE 997 or Boxster S for 2 days**
- **Autobahn to quaint Lindau on Lake Constance**
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All taxes, gratuities, insurance & gasoline included – \$2,485 per person, double occupancy

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For additional information, contact Fast Lane Travel, Inc. – the official PCA endorsed Treffen tour company at 877-959-FAST (3278) or visit our website at www.FastLaneTravel.com

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9a Sunday Qualifying

1p Sunday Race

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- Track tickets for both Saturday and Sunday
- Reserved seats in preferred track location #33
- Overnight accommodations at Manoir St-Saveur Spa and Resort

- Meals at the track and three course meal on Saturday night
- Travel wallet with itinerary, activities guide, map and more
- Applicable taxes and service charges included.

Cost Per Person

\$1195 per person Coach

\$1395 per person First Class

Contact Dan or Don 952.471.8518

The above cost is predicted upon a payment of 100 participants. This program is subject to confirmation, payment schedule, and conditions of operation.

Don't forget our Performance Driving School/Lapping Days

May 16, 2005 Brainerd, MN

June 13, 2005 Brainerd, MN

July 5, 2005 (Sold Out) Brainerd, MN

July 11, 2005 Brainerd, MN

July 14, 2005 (Sold Out) Brainerd, MN

August 29, 2005 Brainerd, MN

September 19, 2005 Brainerd, MN

4444 Shoreline Drive, Spring Park, MN 55384
952.471.8515 fax 952.471.8491





Out and About at Novice Driver Tech Session

photos by Jim Anderson

It was an enthusiastic group that gathered at Apex SPG on April 2nd to learn about the upcoming Driver Training event being held at BIR later in the month. Jim Bryant, owner of Apex SPG and long-time Nord Stern member, DE participant and Club Racer hosted the informative and fun event.

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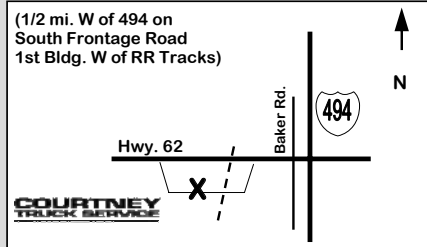
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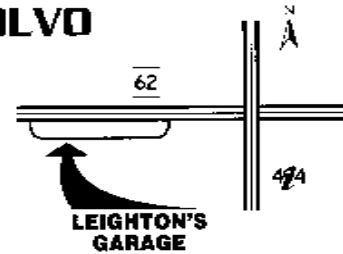
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Above: Submitted by Jeff Bloehm of Rochester, MN! No explanations needed! He says the wait was worth it . . .

Nord Stern Business Meeting April 5, 2005

Eleanor Renwick, Secretary

The meeting was opened with brief remarks by President, Chip Smith. He announced that Board Member and Past President, Ed Hazelwood is relocating out of the area. Ed's leadership and enthusiasm will be missed greatly. The next business meeting will be in September, location to be announced. Observers reports must be completed after each DE event.

Treasurer Report: pre payments have been made to reserve all venues. Ad notices have been mailed for '05. All ads not paid from '04, which have received courtesy display in the newsletter, will be discontinued after this month.

Concours: will take place at Afton City Park, on July 24. Times will be announced. New and interesting ideas to make this an event to remember will be forthcoming as details are finalized.

Drivers Ed: Club race Registration – 60 cars limit; Porsche registrants have priority. There will be no onsite tech for the event. All arrangements for First Fling are in place including track contact, ambulance, and rescue service. Lapping will be offered on Friday afternoon, April 22, for \$60/person. No reduced rates for 1 day attendance at BIR events. First Fling event masters are **Bruce Boeder** and **Jim Holton**. Instructors and novices will be introduced at First Fling.

Social: look ahead for details about a cruise night. Also planning a trip to a vineyard in Wisconsin.

Membership: the new member social was a huge success. 30 people attended and many of the novices were at the tech session as well. Thanks to area dealers for notifying new owners about Nord Stern. The June event at Dakota County will make an excellent low speed venue for Boxsters and young drivers 16 and older. Region clubs can help support each other by attending outside events. Please update member profiles.

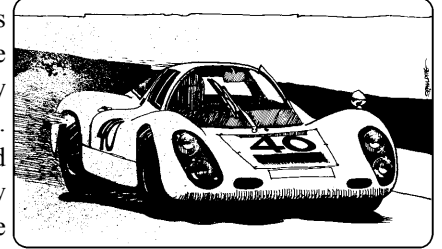
Autocross: DE timed event at First Fling will take place at 3:00 p.m., with lapping sessions afterwards until track closes. Many people are registered for the 4/17 event. As a low speed venue, 16 year olds are eligible.

It was requested that fees for corner workers at Road America be raised to be competitive with other events taking place there. The board will determine the amount. At least \$10 per person was recommended. Safety chair is responsible for paying corner workers.

Insurance: new incident reports are out. And new rules

apply to minors on the premises for events. This will be monitored at the gate entry point.

Club Race: A banner advertising the Club race will be displayed at Sebring and Mid Ohio to invite participants from other regions. The banner can be used at any event to promote the event. New art work was unveiled for this year as well as a new logo which is interchangeable for other events. Other promotional ideas were announced including web elements, mugs, and takeaways. Thanks to all sponsors for making the creative ideas a reality. Need a pace car for races. Photographer is arranged-same as last year. Andy Busche will be registrar.



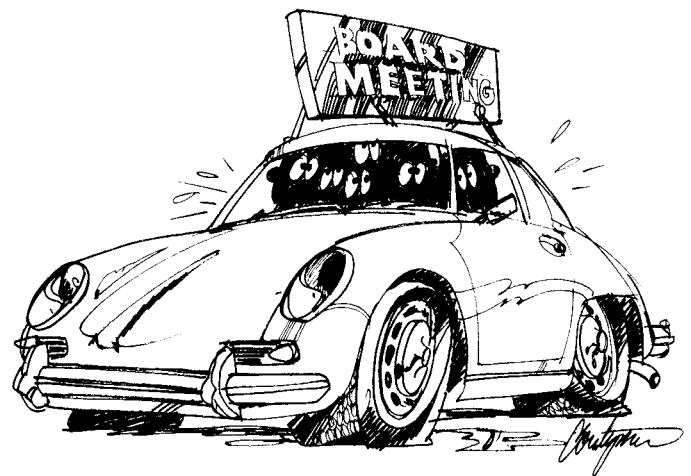
Newsletter: contributions are always welcome. Send photos and articles from events to the editor.

Other business: There is a May event at Gingerman. Contact Ron Johnson for caravan details if interested.

Ron and Michele Johnson will host an informal open house on July 2nd at their lake place. Please contact Ron for details and to sign up.

Don't forget the Instructor School in June.

—Respectfully Submitted,
Eleanor Renwick, Secretary



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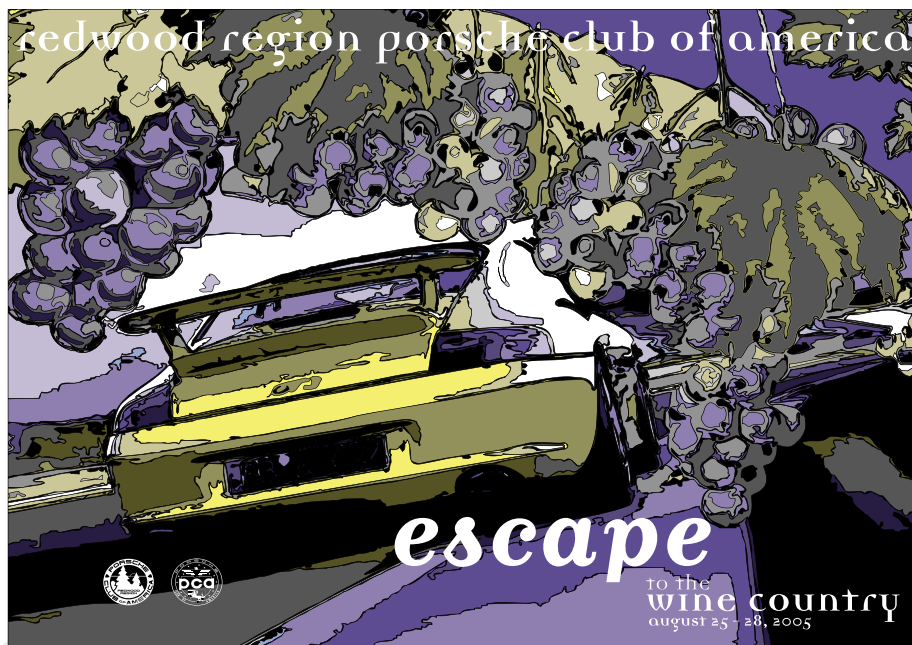
Maplewood: 651 748 1300 Hopkins: 952 935 5200 Eagan: 651 687 0516
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Our friends in Zone 7 from the Redwood Region are hosting the Escape this year. This event is non competitive and designed for fun. They have many offerings to interest you; Bus Tours, Driving Tours, Shopping, Car display, Dinners and more. You can also check out their website at <http://red.pca.org/escape.html>

Registration opens April 15th, the ad will appear in Panorama this in April.

This is a new National non-competitive event that will be held on the opposite coast of the Parade. Next year the PCA Escape to . . . will move back East as the 2006 Parade is in Portland



What more could a Porsche lover ask for?
Great roads, Porsche friends, and the beautiful
scenery of Wine Country!
We invite you to join us for four days of fun.

The schedule is as follows:

Thursday Evening

Welcoming Party and Registration
Sign in, pick up your goodie bag,
then relax with plenty of food and wine.

Friday Tours

Redwood Region boasts that we have
the best roads in PCA.
We have six different tours that will allow
you to find out that we're right!

Because this is "Escape to Wine Country"
We've arranged for six different bus tours,
so you can sample the wines without the
driving risks. We're supplying PCA
member/docents to help you enjoy
the experience.

Saturday Car Show

We've arranged for historic cars, rare cars,
and we have a place reserved for your car
as well. Because this is not a concours,
we hope to have everyone's car on display.
Additionally, we'll have vendor displays,
wine tasting, and lunch available.

Saturday Night Banquet

Because there are no competitive events,
this is not an awards banquet.
As a keynote speaker, we have, none other
than Alois Ruf. It promises
to be an evening you won't want to miss!

Sunday IRL at Infineon Raceway

We will have a special Porsche Corral at the
IRL race at Infineon Raceway.
This will be the first road race for IRL.
Anyone else interested in whether these
guys can turn right?

Registration starts at \$25!
All event fees can be added a la carte.
Registration opens April 15, 2005.
For details and registration form
go to red.pca.org/escape.html

escape
to the
wine country
august 25 - 28, 2005



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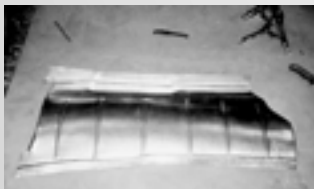
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Tech Tidbits . . .

. . . continued from page 37

rules, let's expand on some of those points.

In The Eye Of The TEMpest

To say that a pyrometer is worthless is incorrect. However, their proper usage is severely compromised by circumstance. The main problem is that tire surface temperatures drop so quickly that if you don't measure them almost immediately, you've missed your window. If you've run any straight-away distance before the measurements are taken, you've already significantly altered the temperature profile. These factors make it awfully hard to get real usable data unless you have a crew and a paved surface all to yourself.

Secondly, full bodied cars tend to alter the surface temp profile because the inner area of the tire naturally receives less cooling air than the outer portion. Once again, surface temp differential measuring came from bias ply usage, primarily on open-wheeled cars.

Use your pyrometer to judge the overall effectiveness of pressure adjustments as they pertain to how hard the tire is working internally, not its surface temp differential. Since a majority of tire heat comes from the machinations of the various belts and bands in the casing, higher temps generally call for an increase in pressure to keep the tire supported structurally.

Somewhere out there exists a pressure setting that will not only allow the tire to work extremely hard, but allow it to do so in relative comfort temperature-wise.

Still Under Pressure

Pressure is not the baseline tuning method for DOT racing radials. However, once you've discovered a camber setting that agrees with your car and gives good tire wear characteristics, pressure and a stop watch become the final building blocks in the foundation of speed. It should be noted here that any camber changes will likely require pressure adjustments for ultimate optimization. However, in the end, pressure adjustments have more to do with "what the driver likes" than anything else, as comfort generally brings a driver's fastest times initially.

Many drivers today are running low pressures because they equate the feeling of safety and confidence with speed or tire adhesion. As mentioned last month, radials tend to be a little twitchy, particularly in the first laps. Lowering the pressure eases the "hard edge" feeling of these tires, giving a wider comfort threshold. But, as we've learned, they may be damaging their tires -- both the mechanical and chemical makeup -- and preventing them from working in a range that will give the best performance and longevity.

Let's say you started with 30 psi cold and measured 40 psi hot. You then lowered the pressure to 26 psi cold and still measured 40 psi hot; what would that tell us? It would likely suggest that while the car "felt better" at 26 psi cold, it was actually stressing the tires more because of under-inflation. The missing key is temperature.

Your now-trusty pyrometer (now that you know its true

purpose) would have shown that the second run produced higher temperatures because the tire was working harder. While the softer pressure provided more driver comfort, it was not providing optimal internal support for the tire, thus creating more stress and heat. The car may "feel" better at low pressures, but more performance and tire wear are to be found at a higher pressure.

Obviously, confidence is a very important component of speed. As mentioned previously, the fastest drivers usually run in the upper end of the pressure scale; a range where the radial tire can feel loose or twitchy. However, the higher pressures likely allow -- and even demand -- the car to be driven harder so as to utilize this maximized cornering power and grip. This raises the bar -- the commitment level as well as the rewards to be had -- higher. True, it takes a more skilled and daring driver to run in this range, but the benefits are there, both in speed and -- ironically -- tire life. Speed equals fun. Tire life equals MONEY!

So now you've got a god foundation under your tires. Anything else to do? YOU BET!!

But That Rubber Costs Money!..

"Removing about half the tread from your R tire's surface by having them shaved will help them last longer." Sound ludicrous? Well, let's discuss why it is an absolute fact.

The main enemy of a tire is excessive heat, particularly if it is localized. Most excessive heat situations are caused by improper inflation or suspension set-up. Surface friction is not a major producer of heat; remember, the tire's surface cools quickly!

As we've learned, the surface of the tire is not where the danger lies; it's under the tread at the cap ply. This is where the tire separates or "chunks." By removing rubber from the surface, you are effectively removing insulation, or "heat sink" from the tire, thereby allowing the heat to dissipate more easily. A smaller, thinner object will hold less heat than one bearing more mass. A thinner tread surface holds less heat!

In addition, shaving a tire will improve the transient response and feedback it gives because of reduced tread squirm. A 2-foot steel bar is much easier to bend than a like 1-foot example because of the increased mechanical advantage working against it. The same applies to the individual tread blocks of a tire. A shorter tread block will deflect or squirm less than a taller one. Incidentally, this mechanical squirming of the tread produces more heat than surface friction, and it is transferred under the tread, not to the surface.

Tires On—Tires Off!

Here is something that is most beneficial, but is impractical for most of us to achieve: Heat Cycling!

Like many other items, race tires function best when broken-in properly. Although they feel incredible in the first laps, this is not the time to abuse them. Tires are made up of many mechanical and chemical components. These components need to be "familiarized" with each other and the task at hand to achieve maximum performance. If a tire is abused early, its performance will degrade rapidly. If it is

brought along slowly, its performance will be more consistent for a longer duration.

Here's the scoop: The tires should be inflated 4-6 lbs over normal cold settings (this provides added safety against mechanical damage). You then proceed to gradually bring the tires up to full operating temperature by driving increasingly swiftly, but smoothly and conservatively; no skidding, sliding, or other laying-down of rubber.

At approximately the 10-minute mark, the tires should be up to full temperature. You then proceed to the pits, remove the tires, decrease their pressure, and allow them to cool for as long as you possibly can (at least 24 hours, the longer the better!).

What you are attempting to achieve is analogous to the heat treating of metal. Many metals must be heated to just the right temperature, and then cooled slowly to form the proper molecular links. If you over-heat or cool them too fast, you ruin the metallurgical structure and they become very hard, but brittle.

Here's another analogy; did you know that ice that freezes slowly is much less brittle, or "chippy", than ice that freezes rapidly? If you were making hockey rink ice, this would be important. Following some of that reasoning, you should never artificially cool tires with water. As with steel or ice, if you artificially cool them (quenching), or cool them too rapidly, you "shock" the rubber and it becomes hard. You are trying to make the molecular bonds of the rubber tough, not hard.

Black Magic

We've covered lots of ground here. This tire thing really runs a lot like life; Trial and Error! The best you can hope for is some good solid information to help you make the right choices. It also helps that if, having good information, you are applying it to the proper area in the proper way. As a recent Pirelli ad campaign suggests, "The Wrong Equipment Can Ruin A Performance!" To that, we can add that the wrong information, incorrectly applied, can ruin the equipment!

In order to optimize the longevity and performance of your DOT R-compound tires, you will likely have to increase the amount of negative camber you run. If you drive your car on the street as well, this will cause accelerated wear in your street tires and make the car wander more, particularly on crowned or well-worn road surfaces. Once again, we are left to deal with another trial and error situation where we will be looking for the best compromise between track and street tire utilization.

The answers will be there in front of you. By looking at your tires, you will see the efficacy of your settings. By interpreting the evidence presented correctly, you will know what adjustments to make to get you where you want to be. Hopefully, these articles will help clue you in to what you are looking at, how to interpret it correctly, and what to do to improve the situation. It may be only money, but seriously; Who's got money—or rubber—to burn?

PCA 50th Anniversary and Membership Station at the Mid Ohio Porscheplatz (Porsche Corral) for the ALMS Race Weekend, May 20-22, 2005:

courtesy PCA

There will be a PCA 50th Anniversary and Membership Station within the Porscheplatz at Mid Ohio from Friday, May 20th through Sunday, May 22nd. The Porscheplatz is hosted by Porsche Cars North America, Porsche Motorsport North America, the International Motor Sports Association (IMSA) and the American Le Mans Series (ALMS). There will be scheduled appearances by Porsche race drivers for informal talks and autographs. In addition, IMSA will offer supervised Parade laps of the track on Friday afternoon from 6:45 - 7:15 pm with a two lap maximum open to the first 100 registered Porsches on a first come, first served basis. Registration for the Parade Laps starts at 9:00 am on Friday, May 20th to credentialed Porscheplatz participants only (available at entrance to Platz, no cost to Porsche cars, owners and companions - track ticket required). Special features for the weekend will include a "Long Distance Award," raffle drawings for an "Honorary Pit Crew Member" with an ALMS Porsche race team, a "Hot Pit" escorted tour and two passes to the "Victory Circle" celebrations. Round two of the IMSA Porsche GT3 Cup Challenge Series will take place on Sunday, May 22nd. For information contact Roy Wilkinson, 330-733-4813, rwilk5@juno.com and also visit the IMSA website, www.imsaracing.net <<http://www.imsaracing.net>> for the latest event schedule. Parking in the Porscheplatz will be for Porsches only.

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Members of the region are welcome to place ads of a non-commercial nature at no charge for two months. \$10 for non-members. Submissions must be received by the 7th of the month prior to publication date: Send ads to:

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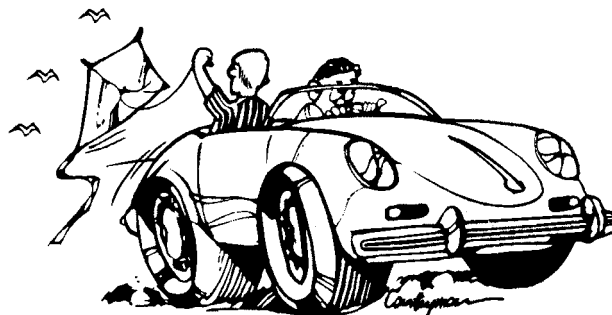
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Tires – How Old? By Ken Smoot, Chicago Region?

There is a definite way to tell when a tire was made. This came about as a compromise between tire manufacturers who didn't want people to know (surprise!) and consumer groups who demanded that information.

Look at the last three (3) numbers of the serial number of the tire. The 1st and 2nd of these numbers refers to the week (01 to 52) and the last number refers to the year it was made. For example, if the last three numbers are xxx123 that means the 12th week of 1993 (or, unfortunately it could also mean 1983, as only one digit is used).

Within limits, age is not as detrimental a factor as exposure to sunlight (ozone). I'd much prefer a four year old tire that was properly stored inside, over a one year old tire stored outside and exposed to sunlight. Ozone "dries" a tire and will deteriorate it to the point of becoming brittle.

A Tiring Dilemma, Part 1: Real Answers For R-Compound Tire Users, By John Hajny, Central NY Region

Like a lot of track-enthused PCAers, I have begun the pursuit of higher performance, fun (hopefully), and challenge in my track driving. Anyone who reads this newsletter will likely recall my chagrin at "burning up" a set of R-compound tires in less time than I deemed reasonable. From what I have seen since, I am not alone. And from what I have subsequently learned, it is not all that surprising!

There is no doubt; the quickest way to faster cornering is to buy a set of R's, or race compound DOT (Department of Transportation) approved radial tires. They simply stick much better than regular street rubber -- period! However, as with most things in life, they have their idiosyncrasies and their own set of special parameters for efficient operation. At the same time, one must be careful to apply the right ministrations to the right patient.

I have done a lot of research on this subject since then. Unfortunately, I've found that most of the information floating around out there -- the word-of-mouth stuff discussed in the pits that most of us end up relying on-- is incorrect, or at best, misinterpreted or misapplied.

Tire Temperatures

This is the hot topic in racing and is filtering down to driver ed. Many people have invested in a pyrometer to take their tire temperatures. It seems that the standard goal of most people has been to try and achieve the best relative equality in temperatures across the face of the tire as a means of discerning the correct pressure to be used. This is done by measuring the outside, middle, and inside of the tread surface and noting the difference. If the differential were too great, they adjusted the

pressure in hopes of equalizing it.

Unfortunately, this information—like much of it out there—was derived from bias ply tire experience and has little if any correlation to DOT radials.

Like any other, bias ply tires are designed to run with their tread flat on the road. In practice, the sidewall deflects and deforms considerably to absorb cornering loads and keep the tread surface relatively perpendicular with the wheel. Therefore, tire temperature differentials are a good measure of correct tire pressures. If you had a close temperature spread across the tread surface, it meant that you had a pressure that was conducive to the proper amount of sidewall flex, thereby keeping the tread surface more completely in contact with the road. This was achieved somewhat apart from suspension set-up.

DOT radials, however, do not rely on sidewall flex to maintain the contact patch. They are designed with a stiff sidewall and steel tread belts that flex very little. These tires are predominantly dependent on camber settings to maintain optimal surface engagement. For these reasons, pressure has virtually no effect in changing temperature differentials.

Proper radial tire set-up involves varying degrees of negative camber, and generally, the inside of the tread surface will run hotter than the rest (15-30 degrees) simply because it is in greater contact with the road when driving in a straight line. Within limits, the higher temperature is of no real concern as it is derived from simple road contact, not from potentially damaging cornering overload.

On a properly set-up car with radials, the body/suspension of the car will lean and effectively tip the wheel up into a more perpendicular attitude when cornering, thereby utilizing the entire tread surface. Tire pressure has little effect on the contact patch.

Put This Under Your Tongue

The tire thermometer, better known as a pyrometer, is becoming a common sight, even at \$100-\$300 per. However, their proper usage seems to be as big a mine field as their purpose. If you're shopping pyrometers, you'd best know what type to purchase and how to use it correctly.

The ONLY type of pyrometer to buy for testing your tire's health is the probe type! Then, only a probe length of 3/8-inch or longer will do the trick. Here's why.

The surface of the tire is not where the heat damage occurs. The danger zone where the tire will start disintegrating is under the tread at the cap ply (the layer of chord you see when you wear through the tread). Because this area is under the tread surface, you need a probe type pyrometer of sufficient length, and inserted to the hilt, to access it. Otherwise, you are not getting your measurement from the area where the damage is occurring.

Incidentally, for this very reason, the hand-held infrared

pyrometers are worthless for gauging your tire's needs. They may seem ultra-trick and real easy, but they only read the surface temp of the tire (which cools almost immediately), not under the tread where the tire will start separating. Buy the infrared style pyrometer to check your pot roast. Buy the probe-type for tire testing.

Under Pressure

We now know that radial tire surface temperature differentials are not truly indicative of the need for pressure adjustments. But they will tell if a suspension adjustment is called for.

If, for example, you measure a surface temperature drop of over 50 degrees from inside to outside, chances are you're running too much negative camber. This means that the tire never leans over -- or de-cambers -enough in a turn to employ the full tread surface; it is only riding on the inside half.

This over-cambered situation will be much more easily and accurately evidenced by excessive inner tire wear, as tire surface temperatures usually drop so fast that it is virtually impossible to get measurements that you can rely on to prove the point.

Where air pressure does effect radial tires is in handling feel. Radial tires have produced incredible advances in cornering power, but are much less forgiving at the limit than bias ply tires. A properly inflated radial tire can seem "twitchy" at the limit, where a bias ply tire has a controlled and gradual breakaway. This could lead you to the conclusion that bias ply tires may be a wiser choice until you notice you are going much faster to reach the breakaway point with a radial. Everyone wants to go faster, after all. What other justification do you need?

This twitchy feeling in radials can be tweaked by raising or lowering the pressure of the tire. If the change does not exceed a reasonable margin (4-5 lbs either way from the recommendation), this will not adversely effect the tire's health.

However, keep in mind that the fastest drivers usually run at the high-end of the tire's pressure range, as this gives maximum cornering power. They also, ironically, seem to get better tire mileage, which suggests that the tires are actually much healthier at the high-end of the pressure scale. This is probably due to the inner structure of the tire being optimized by the higher pressures and working more effectively at handling the cornering forces.

So?

What all this tells us is that, given a proper inflation range, a radial R-type tire will be effected much more by suspension set-up than pressure. This is not to say that over or under-inflation is not of concern. Either of these is a no-no (particularly under-inflation), as the tire will not be operating in a mechanically efficient manner and will suffer internally, with premature wear or failure the result. It is much better to start at a higher pressure and work down, as this will not harm the tire's inner structure.

It also tells us not to look to tire surface temperature differentials as the ultimate sign of suspension or pressure

optimization for radial tire use. Because of camber settings, the inside temperature will naturally be higher. As long as this variance doesn't become excessive, things are looking good.

The ultimate guide to assessing the efficacy of your suspension settings is good old tire wear! Again, assuming specified inflation levels, if you see excessive wear on the inside, you've got too much negative camber. Conversely, if you see chunking or blistering on the outside of the tread surface, you likely don't have enough negative camber.

Having said all that, if your camber settings are close but you notice that you are not quite using the full tread surface, you can make minor last minute adjustments in pressure to compensate. A little more air to stay off that outer sidewall, a little less to roll over more. Just don't be looking to this as a way of altering the tire's surface temperature.

So. Run your tires at or near the factory recommendation for pressure, crank in the right amount of negative camber, and watch the wear patterns for the real signs of your success. Save that money you were going to spend on a pyrometer to buy more tires. You'll be going so much faster, you'll probably need them soon!

A Tiring Dilemma, Part 2: More Answers For R-Compound Tire Users: By John Hajny, Central NY Region

Let's chase the DOT racing radial situation some more. In Part 1, we set many basic rules for their proper utilization. We learned that:

1) Since DOT radials are much different in construction than bias ply or even radial slick tires, the set-up requirements are very different. There is little, if any, overlap in data between these different tire types.

2) Since they have little sidewall flex, they are optimized by camber settings, not pressure. They should be run at or very near the recommended pressure to protect their inner structure and maximize their performance and longevity.

3) Within the recommended inflation range, pressure has little to do with surface temperature.

4) Because of higher negative camber settings, the middle to inside of the tire will naturally run hotter.

5) Pressure tuning primarily effects the tire's feel rather than its actual performance. However, the highest cornering potential is obtained at the high end of the pressure range because the tire is better able to handle the job mechanically.

6) Don't buy a pyrometer solely to measure surface temperature differentials. Within the proper range, pressure has little effect here. They can be useful as a general guide to overall tire performance. Buy a minimum 3/8-inch probe type, not an infrared.

7) Tire wear patterns are the most accurate and dependable guide to proper set-up. Optimum settings will show very little wear on the outside shoulder.

Furthermore, now that we've established some general

continued on page 30

For Fun: Nord Stern BIR Track Records

Ed Tripet, Timing

Class	Driver	Car	Time	8W	Susan Lee	911SC	2:03.994
1M	Vaughn Johnson	914	2:07.722	9M	Mike Courtney	911	1:55.692
1W	Lyn Erickson	924	2:18.823	9W	Becky Bailey	911	2:04.493
2M	Joe Rothman	944	1:58.590	10M	Ron Lewis	993	1:52.872
2W	Margo Anderst	944	1:59.396	10W	Jan Watson	965C4	1:58.019
3M	Jim Benson	944S	2:00.669	11M	Jim Breaky	996	1:54.606
3W	Polly Benson	944S	2:12.975	12M	Pat Kelly	996 GT3	1:49.690
4M	Jim Bryant	944S2	1:53.218	12W	Suruchi Kelly	996 GT3	2:02.455
4W	Pam Viau	944S2	1:59.118	P1	Steve Watson	911Turbo	1:40.679
5M	Kim Crumb	928GT	1:53.744	P2	Mike Hoke	911	1:43.416
5W	Nancy Smith	944TS	2:03.163	P3	Ed Hazelwood	944Turbo	1:50.964
6M	Bob Fleming	911	2:06.045	P4	Bob Viau, Jr.	944S2	1:52.449
7M	Dave Weisel	911T	2:06.443	P5	Dave Weisel	911T	2:01.763
8M	Rew Johnson	911SC	1:56.171				

MAC Schedule of Events

DATE	EVENT	SPONSOR	LOCATION
MAY 1	Autocross (MOWOG 1)	Minnesota Autosports Club	Valleyfair, Shakopee, MN
MAY 14-15	NCCC Super Weekend	Corvettes of MN/ Suburban Corvettes MN	MN Highway Safety Center, St. Cloud, MN
MAY 21	Test & Tune Day (MAC Only)	Minnesota Autosports Club	Central Parking, St. Paul, MN
MAY 22	Autocross (MOWOG 2)	Minnesota Autosports Club	Central Parking, St. Paul, MN
MAY 20-22	Corvettes do Brainerd	Suburban Corvettes MN	Brainerd Int'l Raceway, Brainerd
JUN 5	Autocross (MOWOG 3)	Minnesota Autosports Club	MN Highway Safety Center, St. Cloud, MN
JUN 19	Driving School (PCA Only)	Nord Stern Region - PCA	Dakota County Tech College, Rosemount, MN
JUN 19	Autocross (MOWOG 4)	Minnesota Autosports Club	Midway Stadium, St. Paul, MN
JUL 10	Autocross (MOWOG 5)	Minnesota Autosports Club	Dakota County Tech College, Rosemount, MN
JUL 22-29	NCCC National Convention	Corvettes of MN/ Suburban Corvettes MN	MN Highway Safety Center, St. Cloud, MN
JUL 24	Autocross (MOWOG 6)	Minnesota Autosports Club	Central Parking, St. Paul, MN
JUL 30	Autocross	Corvettes of MN	Treasure Island Casino, Red Wing, MN
AUG 6	Autocross (MOWOG 7)	Minnesota Autosports Club	MN Hwy Safety Center, St. Cloud, MN
AUG 14	Autocross	Nord Stern Region - PCA and Corvettes of MN	Dakota County Tech College, Rosemount
AUG 27-28	NCCC Super Weekend	Corvettes of MN and Suburban Corvettes MN	MN Highway Safety Center, St. Cloud, MN
SEPT 24	Evolution Driving School - Phase 1	Minnesota Autosports Club	Midway Stadium, St. Paul, MN
SEPT 25	Evolution Driving School - Phase 2	Minnesota Autosports Club	Midway Stadium, St. Paul, MN
OCT 1	Autocross	Land 'O Lakes Region - SCCA	Valleyfair, Shakopee, MN
OCT 2	Autocross (MOWOG 8)	Minnesota Autosports Club	Valleyfair, Shakopee, MN

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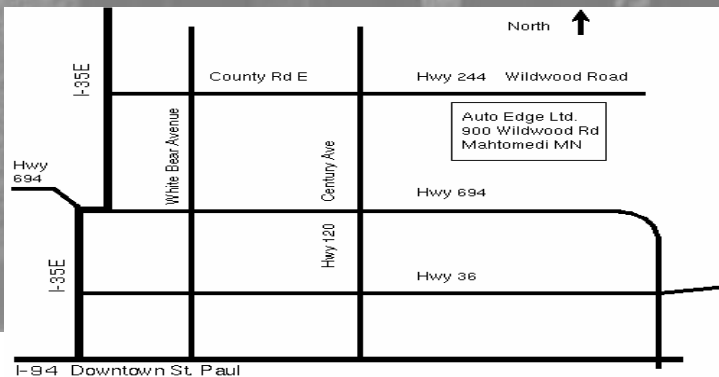
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