

NEWSLETTER OF THE NATIONAL CAPITAL CHAPTER
OF THE BMW CAR CLUB OF AMERICA



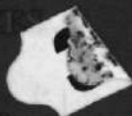
NOV/DEC 1989
VOL XXIV, ISSUE 6

der bayerische



IN THIS ISSUE:

REMINISCENCES,
FIRST EXPERIENCES,
FAREWELLS
AND WHAT'S IN STORE



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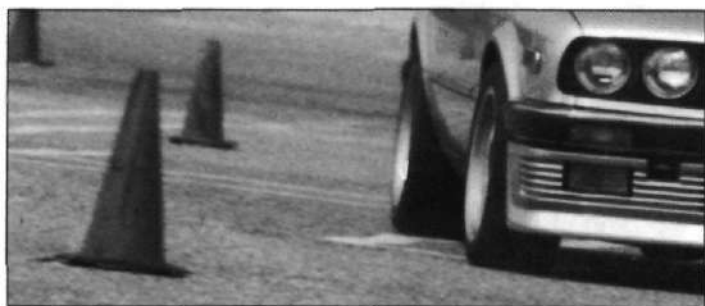
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Please Note: Changes of address are to be sent directly to National headquarters. Change of address form (and application form) at the back of this issue.



Orange Seas, Aborigines and The Sticky Goo

A First-Timer's Impressions of Autocross

by Chris Leeper

- ▲ At my second Summit Point BMW CCA Drivers School a few years ago, Cory Laws spotted me getting out of my 535i after an afternoon session on the track wearing a wall-to-wall grin. Seizing what he obviously considered to be a window of opportunity, he sauntered up to me and said, "Hey, Leeper; your name has come up quite a few times during the bull sessions that us Chapter muckety-mucks have had in recent months."

continued on page 18

Front Cover: *Baltimore Autocross Number Two. See Story and results on Page 9.*

Cover Photo by Dwight Derr

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'89 CALENDAR

NOVEMBER

Wed 8	Board Meeting
Sat 11	Ferrari & BMW Drivers School
Sun 12	Hot Shoe Drivers School
Sat 18	Annual Dinner
Thurs 30	Stereo Tech

DECEMBER

Fri 1	<i>der Bayerische</i> deadline
Sat 16	Holiday Social

1990 DRIVERS SCHOOLS

(Tentative Dates)

March 17 - 18
June 16 -17
September 8
October 8

Refrigerator Bowl Returns to Summit Point

A new organization out of Roanoke, Virginia known as Car Guys has planned an ambitious schedule of drivers schools at several southeastern tracks. Their next three events, all at Summit Point Raceway, will be known as the Refrigerator Bowl Series. Several years ago Summit Point put on its own such schools that featured high speed driving instruction and some fun activities such as tag team "races". Dates of the new Refrigerator Bowl Series are **November 25 -26, January 6-7, and January 20-21.**

The cost is \$95 per event or \$250 for all three.

Other 1990 Car Guys schools at Summit Point will be **March 3-4, and July 1-2.**

Other tracks to be used include Charlotte and Rockingham Motor Speedways in North Carolina and Roebing Road in South Carolina.

For entry forms or information contact Car Guys, Inc., 4721 Starkey Road, Suite 212, Roanoke, VA 24018. (703) 772-1517.

COMING EVENTS

DRIVING SCHOOL

Joint BMW & Ferrari Clubs School

Sat/Sun, November 11& 12

Summit Point Raceway

Our Club has an opportunity in November to participate with the Ferrari Club in a driving school. I (*Gordon Kimpel*) attended the Ferrari School in July and had a wonderful time driving with three Testarossas, a Daytona, a 275 GTB, and lots of 308's and 328's.

The Ferrari Club is the host on Saturday. They have two run groups: Touring, for speeds under 85mph, with passengers welcome, and High Speed which resembles our schools.

The BMW Club School on Sunday is the proverbial "Hot Shoe" school for drivers with three or more driving school experiences. More advanced driving techniques are emphasized. A lot of fun quality track time is the goal. There will be several touring sessions for the Hot Shoe on Sunday to keep friends, track groupies, etc. happy.

Please note that if you do both schools, you must send two separate checks and applications as the two days are two separate club events. For costs and other information see the application form, in the previous issue. Lunch will be available at the track through the Summit Point Concession Gourmet Restaurant.

ANNUAL DINNER

Saturday, November 18

Time: 7:30pm

The Annual Elections Dinner is fast approaching. To all of you silent members who do not partake in other Club events, this is a great time to come out and enjoy some good food, good spitts and good people.

This year's Elections Dinner will be held at the Old Town Holiday Inn, 480 King Street, Alexandria, Virginia. Nominations will remain open until the night of the event. This is our first year at the Holiday Inn and it promises to live up to the caliber of past Annual Dinners, so come out and enjoy.

The evening consists of a buffet dinner, cash bar, door prizes, elections and possibly a guest speaker representing BMW NA. The cost is \$15.00 per person with an advance reservation and \$20.00 per person at the door.

COMING EVENTS

For reservations, contact Sharon Miller (703) 739-0656 (evenings). Reservations can be made up to two days before the event.

Directions to the Old Town Holiday Inn: Take Beltway 495 to Route 1 North exit. Follow Route 1 North approx. 1 mile and turn right onto King Street. Follow King Street (Route 7) East approx. 6 blocks and the Holiday Inn is on the right. Parking is available in the hotel underground lot.

STEREO TECH SESSION

East Coast Auto Sound

Gaithersburg Auto Service Mall

Thursday, November 30

Time: 7pm - 9pm

Jeff Flemming and Tracy Lowe of East Coast Auto Sound will discuss a number of topics of interest to BMW owners, including:

- Getting the most musical performance out of your factory stereo by adding a subwoofer;
- Upgrading your factory radio by upgrading to a CD player;
- Power versus Volume and Music versus Noise;
- Any other topic of general interest.

Come on up to G'burg and see stereo systems and installations that will blow your mind. If I try to describe them here, you'll say that I've been inhaling too much of BMMRR's exhaust. For more about East Coast Auto Sound, see the article elsewhere in this magazine.

The directions are simple, East Coast Auto Sound is located in the Gaithersburg Auto Service Mall near the intersection of MD routes 115 and 124. If you live in Gaithersburg, you probably know where it is already. If you come up I-270 North, get off at the Shady Grove exit; pay attention, they've been playing around with the exits. Follow Shady Grove Road to the east, cross MD 355 and continue on until you reach the T-intersection at MD 115, Muncaster Mill Road. Turn LEFT onto Muncaster Mill Road and go about a mile at which point you'll cross MD 124 (a traffic light). The Gaithersburg Auto Service Mall is on the right, pull in and look for the big sign that says 'East Coast Auto Sound'.

Light refreshments will be served. If you plan to come, please give Mark Yaworski a call at (301) 972-8237 so that enough cases of refreshments will be available.

HOLIDAY SOCIAL

Cory & Angela Laws'

Saturday, December 16

Time: 7:30pm

I'm putting my money where my mouth is. I've been talking about making this Chapter more personal, and am doing something very personal to make my point. Other chapters have had great success holding events at a member's house, and we can too! When the National Meeting was held here in march, there was a very nice brunch at my house afterwards. This provided the idea for this year's holiday party. So...you are cordially invited by my wife Angela and I to join us in celebration of the holidays (or whatever you choose to celebrate). This promises to be a great party. I'm busily at work on a basement entertainment suite, and should be well prepared for this. Besides superb audio and video entertainment, the pool table might be delivered by then (so keep your fingers crossed or pray that I make a big sale!). Angela has been planning for weeks with Sharon Miller to make this a very memorable occasion. The way we figure it, we have room for the 75-100 people who have attended the last few holiday parties, and the surroundings will be very homey, which is just right for that time of year.

The menu is still being planned, but will likely include a smoked turkey, a honey baked ham, a mousse or two, a variety of sweets and other nibbles, as well as a good selection of wines and champagne. And of course there will be a good non-alcoholic punch for the designated drivers among us. As space will be limited, I would appreciate reservations not later than December 8th. We're trying to make this a first class affair, and need time to arrange the proper catering etc. For reservations or more information, please call Cory or Angela at (703) 450-2310, evenings until 9:59 (no later).

Directions: From the Beltway, take the Dulles Toll Road (Route 267) — *Ed. remember to take four quarters with you!* — west to Reston Parkway exit. Turn right at the light onto Reston Parkway. At the fourth light, turn left onto Baron Cameron. Turn right onto Stuart at the next light, follow 1.8 miles to Rowland Drive. Turn left onto Rowland to 1252. There should be a BMW flag outside.

See you there!

President's Message

This, the last issue of the year marks some traditional events, and provides the transition to the next year's activities. Please take note of the Annual Dinner and the Holiday Social, which will culminate another highly successful year for the Chapter. The Annual Dinner will be the best yet. We've picked a new site, and it promises to be a special affair. Also, the Holiday Social will be a very special event. Please see the coming events section for complete details.

It's been three years since I started writing this column as president. I can't believe how fast the time has passed. I must say that I've truly enjoyed my term, but am eagerly anticipating passing the gauntlet to my successor. In the time I've been responsible for Chapter operations, I've been keenly aware of the legacy I inherited, and equally conscious of that I'll leave behind. There were some big shoes for me to fill, and I hope that I've done well at it.

Looking back, there were two key things I tried to accomplish. First, I wanted to bring more of a family orientation to our activities. We've expanded our list of social functions, and have actively encouraged family participation wherever possible. Second, I wanted to bring a more businesslike approach to the decision-making process. We have a large budget, and have had some problems with it. Hopefully we've instituted a more rational and responsible approach to our fiscal matters.

The one thing I didn't manage to accomplish, was the holding of regular meetings. We had a couple of particularly successful meetings, but they were not nearly as regular as I had planned. This may be something that has to happen more slowly over time, but is very important to the well-being of the Chapter. If there's one problem I see, it's the lack of open communication channels between the board of directors and the general membership. We can easily communicate to you via *der Bayerische*, but there's no easy method of reaching us for the kind of give and take that encourages active participation. Hopefully, the new leadership will strive to tackle some of these issues, if they see fit.

Remember, we're here for all of you. Hope to see you soon...

Cory Laws

From the Editor

What's an autocross like?

If you haven't been to one, read on.

If you've been to so many that you can't remember what it was like to have never done one before, read on.

Chris Leeper takes you through the paces of his own initiation, starting on page one. Another autocross first timer, Vo Tran, reports on the August 27 autocross, also at Baltimore's Memorial Stadium.

What's a driving school like?

Bonnie Butler takes you to the Back to School Drivers School, starting on page 10. If you missed her autocross experience in verse, you'll find it again on page 27. Like another lap at a nice track.

Interested in racing?

...but can't tell the players without a program? Then you need to be reading Woody's Competition Corner on a regular basis. Page 24. Plus in this issue, learn more about the racing efforts of Bob Gammache on page 25, and Max Rodriguez on page 31.

Meanwhile, there's a local guy planning to attack the world land speed record with a BMW engine! See page 23.

How about technical stuff?

You just might find yourself at one of these Holiday Parties, when someone tells you that their engine is bored? How should you react? You might ask if it's stroked. That will keep the conversation going, but you'd better read up if you want what follows to make any sense. No more clues, just a few page numbers: seven and seventeen. Page twenty-one will talk about putting on the brakes.

Gossip?

We've got that too. How about, "Max sells his Mistress. Tells all." Read for yourself about the twin sister. Begins on page 14.

And if enough's not enough...

We've got good news. More track time! Read about the Refrigerator Bowl which starts right after Thanksgiving. See Coming Events.

And if you'd STILL rather go shopping...

We've got classifieds. We've got a Club Store. We've got a "50% Off Half the Town Coupon Book", or something like that. And we've got Advertisers, Indexed!

David Sossamon

The Last Words From the Drivers School Coordinator

The Back To School Drivers School went off very well, it was the first time in two years that a school was filled to capacity and applications were still coming in the mail. A couple people grumbled that they had BMWs and could not get in while non BMWs were out zooming on the track. The drivers schools used to have a registration policy that admitted club members with BMWs first, members without BMWs second and anyone else last; registration would open to non BMWs two weeks before the school. Because the response to the drivers schools was so poor last year, the board decided to admit non-members as their applications were received. With the unprecedented number of applications for the September school, a few members, who were slow in mailing their applications, did not get into the school and I am truly sorry because I believe that our schools should be for our members.

Reprinted here is a Maifest '89 T-shirt design that was done by Mike McConnell, a professional advertising artist and a member of NCC who donated his time and skills. I had intended to have Maifest '89 shirts made but only three people told me that they would like a shirt. Without sufficient interest, I could not justify the expense of having shirts printed. Thanks for the effort Mike.



*Ed. I think it could make a great '90 Maifest shirt—
Let's hear it from the T-shirt lobby.*

"Now it's time to say good-bye to all our company..." (© Walt Disney Productions, Inc.)

Most of you know that the Back to School Drivers School was my last as Drivers School Coordinator. No, a volunteer has not yet come forward to fill the vacancy, I have had a few nibbles but no bites. It has been a pretty good two years. I have gotten to know

hundreds of Club members from our chapters and across the country. I had fun at the track although I was not able to take advantage of the free track time that is the perk of the Drivers School Coordinator because running an efficient school and having fun on the track are mutually exclusive. One of my few complaints about the job is that some people insisted on calling me at 11:30 at night or 5:30 in the morning.

I must thank a number of people for their help over the past two years.

First and foremost is my wife, Lynn, who has been not just understanding and supportive but also an irreplaceable asset. Lynn served as Worker Coordinator and OD at Pit Out, keeping the schools running smoothly while I attended to the administrative details of the school.

Terry Luxford has done a exemplary job as biermeister, tow truck operator, wit, and sage. Terry has been coming to the NCC's Drivers Schools for more years than he cares to admit, he is there in the rain, snow, or sunshine to do grid tech, offer advice and help people fix their cars so they can get home at night. Thanks Terry, your invaluable help has been truly appreciated.

Bob Gammache, for coordinating the instruction and providing an awesome ride in his tii.

Kay Heatherly, for unceasing efforts in instructor recruiting, serving as registrar, and an unforgettable door prize giveaway at Maifest '89.

Skip Menzies who, with his nephews, has been handling the lunch set up; serving; and, the job everyone hates, cleanup.

Last but not least, the corner workers who are the eyes and ears out on the track. Especially those who show up at every school, rain or shine (we can now laugh about those November days in the freezing rain, can't we?) You all know who you are, I won't name names because I may omit someone, so just pat yourselves on the back. You people are what make this organization a club.

Let's be careful out there.

Mark Yaworski

Ed. I know I am joined by all those who have participated in or attended a Drivers School during Mark's "reign", in extending our heartfelt thanks to him for all his hard work and dedication.

Club Store

For those of you who do read the dB, I haven't forgotten about you or the Club, we've been sorta hectic around our end of the world lately!

Let me explain the Club Store to the new-comers and let me remind the old-timers. What the Club Store is and how it operates: the Store is more intangible than your local dealer or shop. In actuality the Store is one end of my garage and a corner in my basement where various lifters, plugs, Techron, brake pads etc. occupy space. If we don't have it we can get it.

New Business — The Club Store is going to operate an on-going (am I crazy? probably!) swap meet. If you've got a part call me; if you need a part, likewise. Hopefully I can put the two of you together and I can help clean out 2 garages, one which needs to sell and one with wants to buy. Read the ads this month and you will see several projects that Club members either lost interest, desire or money in, or in one case went in an entirely different direction. Help the Club Store help you, and help me clean my garage.

Recently I have found that BMW has a problem with the electronic circuit board on the 325e and (I am guessing here) the 528e that cause erratic readings on the temp gauge and speedo. A new part is in the works and may be out by now. Just be careful; speeding tickets are not cheap even if you are in the right, and cracked heads (something 'e' cars just love to do to their owners) are far worse.

Fire Hazard — Another problem that all BMWs (and all other cars) have and especially fuel injected models is the cracking and drying out of fuel line. On every car that come to pick up parts, I check for cracked fuel lines and almost every one of them is in need of fuel line. I suggest you go and check your fuel line today for tiny cracks running lengthwise, it could save your car or your life! If you need that hose replaced, be sure and get fuel injection hose or call the Club Store, but only from 11am till 9:59pm.

Keep it running.

Steve Haygood

Please note: The Club Store is run not for profit, but as a service to Club members. It is staffed by volunteers who give their time and energy "for the love of the marque". 'Keeper of the Store' Steve Haygood can be reached at:

• (703) 450-9175 •

Stereo Tech

Guess what folks? We're going to have a Stereo Tech Session once again. This one will be at East Coast Auto Sound in the Gaithersburg Auto Service Mall. See 'Coming Events' for details.

This year BMMRR decided that he needed a new stereo. Argh! and other cries of anguish. My MasterCard screamed and was only slightly outdone by me. A new technology to explore and master; I like techno-toys but I hate trying to glean useful information from salesmen who only want to give out information pertaining to what they have in stock. Plus I hate having to pay big bucks for my toys.

I made the rounds of most of the high, medium and low end car audio stores in the Rockville and Gaithersburg area and had found neither a system nor a salesman who impressed me. About the time that I had reached maximum technical desperation and confusion, I discovered East Coast Auto Sound. Wow! What a breath of fresh air.

Jeff Flemming and Tracy Lowe, the President and Vice President, respectively, of East Coast, are not so much salesmen as they are stereo educators. They listen to you: your ideas and your desires. They ask you questions: budget, musical tastes, type of car, type of driving and thousands more. Drawing on their 30 years of experience in the car audio field, they fill in the gaps in your knowledge and smooth out the rough spots in your original concept.

I am not an audiophile and I get quite aggravated by pushy salesmen who try to make you feel like scum because you either do not want or cannot afford the latest Blastosonic 1000 Watt Mondo System. This doesn't happen at East Coast Auto Sound. Jeff and Tracy understand the meaning of the word 'budget' and they have high quality systems that will fit into almost any price range (if you want something for \$69.95, go to 'Billy-Bob's Discount Emporium'). Complete replacement of your existing stereo is not always the recommendation, quite often they suggest keeping some part of the current system and adding a new component. Yes, definitely a new experience. Jeff's sales philosophy was expressed very simply, "you are going to have a lot of cars for a lot of years and if I treat you right, you'll keep coming back for a long time."

If Jeff and Tracy are familiar names, there is a good reason: until about a year ago, they were with Meyer-Emco in Rockville. A friendly parting of ways occurred and East Coast Auto Sound was born, a car audio center unlike any other.

Come to the tech session and stay tuned for 'The BMMRR Saga: Stereo Installation'.

Mark Yaworski

Letters to the Editor



Send your letters and comments to: *The Editor, der Bayerische, 6939 33rd Street, NW, Washington, DC 20015*

Response, Metric Mechanics

Dear Ed

The letter in the last issue from one of the Metric Mechanics about bore and stroke was fairly informative but lacking in only one area. The relationship of rod length to stroke has been an element of longevity and power for nearly 20 years (read Grumpy Jenkins on the small-block Chevrolet and Smokey Yunick on any engine). The simple fact is that the stock street BMW rod length is at a practical minimum for the stroke of the engine. This is one of the few horsepower-hour limitations of this marvelous engine series.

In our experience, increasing the stroke improves the response in the lower rpm range and (we must predict) hurts the longevity. Using the stock 3.150 inch stroke and *increasing* the rod length (improving the rod length/stroke relationship) helped power and longevity. These were race engines and while racing improves the breed, the data are somewhat limited (even for race engines).

Make the bore as big as you can (sleeving the block helps for a couple of reasons) because this helps compression ratio and squish area, and, well, you know the rest of the litany. The corollary is that bore is (nearly) free but stroke costs lost of \$. Even sleeving the block (and buying racing pistons) is cheaper than stroking your motor.

Ten or so years ago, we tried to get some short stroke cranks from BMWNA. We were referred to Motorsport (in Germany). Motorsport said that such cranks were not available. When asked if such cranks could be made available, the answer was no, that no special cranks were made by Motorsport, that they only re-marketed cranks made by (or for) BMWAG. When asked about cranks from BMWAG, the answer was that only the stock strokes would be available (remember this was the period of the 1.4 litre and 2.0 litre turbo 320i that ran in IMSA). When asked if the raw castings or forgings were available, the answer was "no, Motorsport *could* not sell an unfinished product (cranks) and BMWAG *would* not sell an unfinished product (crank).

The distillate is that you must live within the limits imposed by the stroke (crank) and the rods (rod length) available to you. You could use a huge bore, and the ultra-short stroke crank from the old 1500-1600

engines (or the 1969 1800 TISA [fully counter-weighted]) and the 1980-85 1.8 litre motors, special pistons, and special *long* rods (Crower, Mechart, or Carrillo, for example). We noticed that the M-6 rods were about 0.5 inches longer than stock but were reluctant to look up the price. The pistons aren't much more \$ than stock, but the rods, befitting their quantity and quality of manufacture are lots of \$.

The point is that if you want all the horsepower hours built into your original engine by BMW, pay attention to the basic design limitations and specify your modification(s) with an eye on the limitations as well as the goals.

T.M. Luxford

Quality Car Services, Ltd

Ed. Thanks for the lesson, professor. Thanks too for the following expansion on material from last issue's Max Tech.

Mixing oil and water and getting a slick ride...

Dear Ed

Oil Analysis: The individual using oil analysis to evaluate his tune and mixture is missing more immediate and accurate tools e.g., the ubiquitous exhaust gas analyzer.

Oil & Water: The above individual needs more help with interpreting the presence of water in his oil. There is no direct connection between the water pump being bad and water in the oil. Better look a bit farther if it was coolant or think a bit farther if it was water.

Wheels & Tires: for 2002s and 320is with *stock* rims a 205/60 X 13 tire is too big. The 205/60 X 13 is OK for a 6 inch rim but *may* require slight surgery on the rear wheel openings. Remember, the early 2002s had 4.5 *inch* rims and 5.5 inch 320i rims have the wrong offset for comfortable use on 2002s.

Hydroplaning: The size of the footprint of your tires doesn't have much to do with hydroplaning. The nature of the rubber compound and the tread pattern are the main determining factors.

T.M. Luxford

Vienna, VA

M-tech

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August 27 Autocross

Thanks to Gary Toyama and many other volunteers from the NCC, I finally could experience the thrills of maneuvering my GTI through a winding autocross course set in a parking lot in front of Baltimore Memorial Stadium. The number of drivers was about right (21) and the weather, threatening in the morning, somehow cooperated throughout the event.

Even though I've been to Summit Point a few times for NCC driving schools, this is my first time autocrossing and I frankly didn't know what to expect besides the fact that a different set of skills is involved here.

The course was my most immediate concern. At first, it looked almost hopelessly confusing. The two untimed runs went by without a hitch — I was basically driving at a snail's pace. My first timed run was much slower than I had hoped. My buddy, Steve Adelman, recorded a much better time with his CRX Si. Unfortunately, I didn't have a clue as to how to improve the time. Being more aggressive in the second timed run didn't seem to help either.

For my last timed run, I decided to slow down more just before the turns by braking a little harder. Somehow, I felt like my front-wheel-drive car was just

wasting too much time scrubbing the cement around the turns and not going anywhere. This theory seems to work since I improved my time a bit in the last run with more "stop-and-go's" around the turns.

Woody Hair, not unexpectedly, turned out the best time in his 325is during the second run. His last run seemed even faster, but unfortunately, turned out to be a DNF (Did Not Finish) at the very end. The second fastest time belonged to Dwight Derr in his modified 535i. Dwight's aggressive style is always fun to watch and typically seems faster than the actual time indicated.

One more fun run afterwards and I was on my way back to Washington, with a big grin on my face. I am definitely sold on the fun of autocrossing and strongly recommend it to those Club members out there who haven't tried it. You'll be surprised how hard it actually is and how humble it'll make you.

And one more thing, I don't think I've learned a thing about the slalom besides the fact that it is much harder than it looks!! Anybody out there with clues I can use?

If only I can find an incredible deal on a used M3! And then maybe I'll shave another second...

See you all at the next autocross!

Vo Tran

August 27 Autocross Results

MODIFIED	Car	1st Run	2nd Run	3rd Run
Dwight Derr	535i	62.90	66.71 (2)	62.30
Harry Warren	325e	65.84	67.80	66.08
Leah Epting	2002	OC	66.93	67.60
Mario Yuri	320i	69.16	OC	68.49
Mike Early	2002tii	70.62	68.61	69.19 (1)
STOCK				
Woody Hair	325is	OC	60.18	DNF
Rafael Garces	325i	62.87	62.95	62.67
Don Whitaker	325es	65.98	64.14	64.45
Tim Tate	M5	OC	65.33	69.02
John Kentworthy	528i	67.67	65.51	67.62
Mike Mills	M6	65.55	66.34 (1)	66.87
Brian Hair	325is	65.80	68.04	68.40
Rich Schmelz	M3	71.11 (1)	70.14	68.73 (1)
Bonnie Butler	325e	OC	71.05	70.51 (2)
Charles Johnson	533i	72.10	OC	DNF
Greg Morgan	318i	77.26	DNS	(broken distributor)
X CARS				
David Vetter	Datsun 310	65.23	65.64	85.98 (2)
Steve Adelman	Honda CRX Si	65.83	65.61 (1)	65.26
Vo Tran	VW GTI 16V	68.35	68.02	66.10
Mike Bodner	VW Jetta GLI	OC	OC	74.22
Fred Ramsey	Saab 900	OC	OC	DNS



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Back to School

"But why are you going to a Driving School? I thought you already had your license?"

My neighbor Lisbeth is a nice lady. So are the people at work who had subjected me to two weeks of queries and teasing. As are my aunt and uncle, visiting from Illinois, who understood that I would be busy on Saturday, September 9, . . .but doing what?

Frankly, the phrase "what am I doing here?" did cross my mind several times that Saturday. But not nearly as often as the query, "when can I come back?"

Schools are for learning. NCC Drivers Schools seem designed for a special kind of learning: the transfer of "head" learning to feet and hands. Putting theory into practice, physics into instinctual response.

I have a car with a heritage of performance. The Driving School was my chance to develop my own performance driving skills, to begin to live up to this magical machine. So, what did I learn?

After several rounds on the skidpad, and analysis by Bob Gammache, Terry Luxford and Terry's pyrometer, I learned how to balance tire pressures for optimum handling of my car. Physics.

Hurling 'round on the skidpad, I tried to put into practice Kay Heatherley's instructions on "ocular driving". "Keep your eyes on where you want to go, not on where you are. Keep looking ahead. Watch the line. Watch the line. No, don't take your eyes off the line. Look as far ahead as you can see." I concentrated on the line, peering deep into the corner of the windshield. It felt wierd, but it worked. Instinct.

Kay's injunctions were not the end of my education in ocular driving. Later in the morning Pete Cage told us more in a classroom session. "If you watch the tree, you'll hit the tree." Focus on where you want to go, far ahead of your current position on the track.

Pete spoke to us of smoothness. Of the importance of dealing with the track, with the line, in sweeping continuity. He taught us to drive, not from turn to turn, apex to apex, but rather from the perspective of linking each turn smoothly into our set-up for the next. Smoothness. Equilibrium. How sudden input from steering, brakes or throttle can serve to disturb the equilibrium of the car, demanding further aggressive handling. What happens when the throttle is eased, or the brakes applied, in a turn. Loss of equilibrium, loss of smoothness. Loss of speed.

Anna Johnson beautifully illustrated for me the application of Pete's comments to the reality of driving the track. First she drove, providing a running commentary that belied her seemingly effortless smoothness and speed. It was obvious that she was truly thinking far beyond the upcoming turn as she clipped an apex and commented on what she was doing to set-up for challenges further down the track.

Then I drove and Anna coached. I began to learn the line, began to learn to think far ahead of the car's

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position as she forced me to focus on my set-up for turn 4 even before I was hitting the apex of turn 3.

Lunch was a welcome respite from the intensity of the morning's driving. We munched on mammoth sandwiches, but I barely finished mine. The best part of lunch at a driving school is hitching a ride with the instructors during their track time.

I rode with Glen Stewart, marvelling at techniques I haven't learned and despair of mastering. "Simple" coordinations such as double-clutching and heel-and-toe. Then he drove my car a few laps, commenting on details of its responsiveness and handling.

More time on the track. Ed Lindsey coached me on aggressiveness. And smoothness. And aggressiveness. "Use all the track to keep your line smooth and flowing." I finally felt comfortable through turn 5. The esses became an exhilarating challenge. And I really did begin to think myself on into turn 10 even as I was exiting from turn 8. The line began to make sense as a smooth sweep of continuity. I won my "solo dot".

Another advantage of driving schools is the opportunity to learn from several instructors. We had a lot of track time in the afternoon, and at various times I was able to nab Pat Skeeahan and Woody Hair to coach me for a few laps. By this time I was comfortable enough to enjoy the difference in perspective which each instructor brought. Following one instructor's line brought "don't go so far out on your set-up" from the next. Sean Gallagher's foray into the woods brought a bit of soberness to my enthusiasm. I focussed on smoothness and control until Woody coached me into more aggressiveness, speed and fourth gear. There was a lot of track time for both the "A" and "B" groups, but the breaks gave us a

chance to escape "brain fade", raid the soda cooler and admire other folks' cars. In addition to a respectable field of 2002's and 3-series such as my own, there were three M6's, an M5 and a couple of M3's. Joining the BMW's were a Panterra, a couple of RX-7's, a turbo Peugeot, AlfaRomeo, a Corvette . . . a nice and varied group. Women shouldn't be a minority at club events, but we often are. It was nice to note six other women drivers, as well as several women instructors.

There was beer - courtesy of Quality Car Services - to facilitate the winding-down from the intensity of track, speed and focus. I hitched a few more rides with instructors - just to keep my adrenelin up - then headed back to Frederick.

Special thanks go to Mark Yaworski for organizing the School, and Bob Gammache who not only orchestrated the instruction but shared with each of us his own insights and expertise. Due to their commitment we not only had fun, we learned.

Returning to the real world has been culture shock. I had to keep reminding myself that I was only on the wide stretches of highway 340 and not still on the back straight at the track. All that open space seemed a lure almost impossible to deny! I still find myself focussing impossibly far ahead and setting up for turns as I go to work each morning on the Old Frederick Road. But then I remember that I can't "use all the track" - there's a Maryland State trooper whom I meet every morning coming south as I'm driving north. Not sure he'd appreciate a discussion on apexes or ocular driving!

My neighbors and colleagues? Now they're sure I'm crazy. Frankly, I agree.

Bonnie Butler

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Open Meeting:



Ray Korman Night

Boy did we have a treat! Approximately 70 members attended the meeting in September where Ray Korman was guest of honor. As it turns out, we were very fortunate in capturing him for our event.

Seems when he accepted our invitation, he hadn't bothered to check his calendar, and assumed that we were meeting on the weekend. When I called to confirm, Ray was somewhat concerned about the mid-week date, and how his wife would take it. (He didn't even take off for her birthday, but here he was travelling 5 hours up the road to speak to a bunch of car crazies in DC.)

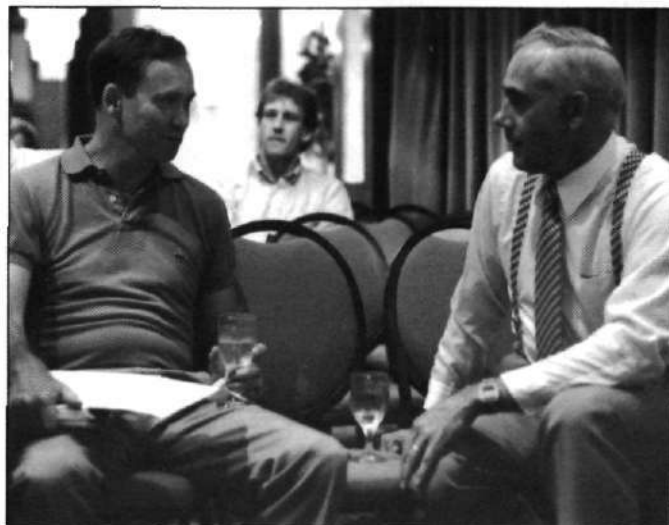
I felt a little guilty, but hey, we didn't hide the date or anything. Anyway, we bought him a nice dinner, and had made reservations for him to spend the night. However, he wanted to get down the road away, and declined our offer of complimentary lodging. As it turned out, he ended up staying in Manassas that evening, so didn't get far at all.

The meeting was a roaring success! In deference to his schedule, I dispensed with all but the briefest of Chapter

issues and announcements, and turned things over to Ray. He spoke on a variety of topics, including his personal racing activities, BMW AG and BMW NA involvement, car preparation, etc. Following about 45 minutes of presentation, there were numerous questions that led to further discussions of the above and other topics. Then, for the truly hard core, there was the video tape of Ray Korman's 325e winning the Firehawk at Watkins Glen.

With such a good turnout, we'll definitely have to do this a bit more frequently!

Cory Laws



Woody Hair and Ray Korman swap stories.

Photo by David Sossamon

Bavarian Inn Oktoberfest

Sunday, September 17th began crisp, but clear. By 9am as I was drying off the car, I was getting an itch to drive. Ahead was 100 miles of prime Northern Virginia and West Virginia country lanes, mapped out as only Bill Via could. Over the years, I've driven a number of Bill's routes, each one as scenic and entertaining as the last.

An office friend was my navigator on this date, Angela having decided to absorb herself in some much deserved pampering at the local beauty establishment. Last minute scrambling caused me to leave later than I had planned, and after picking up my navigator and filling the tank, I arrived at the starting point some 15 minutes late. But, as I was the one with the instructions, all were patiently waiting. Approximately 20 cars and twice that number of people had already arrived.

After sharing greetings and good wishes (and collecting for food tickets), cars pulled out to see what the day's route

would have in store. As always there were miles and miles of tree-lined lanes, green pastures, picket fences and small towns. In mid-drive, there was a town festival in process complete with Revolutionary soldiers marching in full regalia. Bill's routes are known for their surprises (usually involving a sharp crest taken at speed). At least one car managed to get a pair of wheels off the ground.

The grounds of the Inn were quite nice, as usual. Also, we were again treated to reserved parking on the lawn (it's great to have friends in high places!). After some initial confusion concerning our reserved tables, we all settled in for an afternoon of Bavarian style food, drink, and entertainment.

In all, the day was a smashing success; good food, good company, and a great day for cruising. One couple suggested that we do an overnigher there next year. Good suggestion. I have a scouting team spending a weekend there to provide a full report. New officers, are you listening?

Cory Laws

Remembering Tundra

It has been a long time since I have written about Tundra. For those that are new to the Club, Tundra is (was) my mistress (a 1972 3.0CS).

1982 Tundra's life started as an Automatic 3.0 CS. Upon setting my eyes on her back in August 1982, I fell in love (lust). I had to have her.

As naive as I was back then (I am still somewhat), I thought that this was a 'rust free' coupe.. Boy was I surprised. Needless to say, when I discovered the cancer, I had the car restored by Tom Baruch, owner of London Auto Services.

For the next year I drove the car and even entered a Cross Country Rally (Boston To San Diego). After the Rally, I wanted to convert the car to a 4-speed.

During all this time, my car was being serviced by both Quality Cars and Lothar Schuetler (with VOB at the time). It was through Lothar that I became afflicted by the bug known as Webers and BMW performance cams. Needless to say, Lothar installed a modified 3.0 engine with triple sidedraft Webers. This engine was a

screamer and very reliable. Driveability of this car with the performance cam was like there was nothing there until you put your foot down. People who had driven my car at Summit Point were very impressed.

Next on the agenda (The Mistress kept asking for more) was to install a Racing limited slip differential and a 5-speed overdrive. The initial work was started in Vermont, but it was so badly performed that Quality Cars had to re-do the installation. Also brand new 16" wheels with Yokohamas' A008's were installed.

1984 Well, it was now 1984 and we were ready for the second coast-to-coast rally. This time we finished in 6th place out of 26 cars. On the way back, we observed a top speed of 155mph in the Arizona desert. Not bad.

Next was of course more power. This time Quality Cars under the direction of the Big Guy (Terry Luxford) built another engine to the same specs as before. But this time, the head was ported and polished for additional *gusto*. The Suspension was also reworked for added stability, and the carburetors jetted to handle the additional fuel supply required. To say the least, the car was a BLAST, but it was not enough.

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1986

By now it was 1986. With the advent of many members ordering and installing 3.5 ltr engines, the Mistress said, *me too please*. Back to Quality Cars for more surgery. They ordered a high compression Euro spec engine and modified it further. Special headers were made by Stahl (thanks to Cory Laws) but this time we wanted to run the new engine on the dyno.

To everyone's surprise, the engine had so much torque and hp at the lower end that the dyno could not handle it thus depriving all of us from really knowing what the real output was. After some calculations, it was estimated to have between 270 and 300hp.

The only way to test this beast was to go to the Race Track and test it. During the test run, I noticed immediately that I was approaching a speed of 135mph about 200 ft earlier than with the other engine (125-130mph before applying brakes) and close to 140mph before brakes were applied. This was an increase of 10-15 mph faster than before. Another WOW. But there was a fuel delivery problem. The 3.5 ltr engine needed additional fuel for the top end to increase. Because of the amount of time it would involve, we left the car as it was. Anyway, how often do you go 140mph or more. What is fun is being able to get there very quickly.

After this last heart transplant, Tundra quietly went into retirement from attending schools. Not because it was not fun (I still would drive her around) and attended autocrosses, but because of time. At around this time I was beginning to get into racing and with a newborn Mini Max, Tundra began to little by little gather dust in the garage.

1989

I began to contemplate selling her, but I could not bear to part company. It came to a point that every time I thought of selling, I would take her for a short ride (couple of hours) just to reaffirm my decision to keep her. It was until finally one day, I received a call from a Club member asking if I knew of anyone selling a CSI coupe. The rest is history.



Tundra now belongs to someone else. The new owner, Anthony Muller is giving her as much pampering as I used to, which means occasional trips to Summit Point. Many of my friends including my wife, could not believe I did it.

1990

Well friends, so that I don't disappoint you, there is another project in the wings. This one may take 2-3 years to complete, but when it's finished you will meet Tundra's almost identical twin, but sexier sister.

Max Rodriguez

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Bimmer Meets Bimmer

Something nice happened the other day and I thought that I would pass it along. No, I didn't win a car at O'fest and Ed McMahon didn't call to tell me that I had won billions of dollars. What happened is someone left a note on my windshield.

Lynn and I were at Lake Forest mall to see "When Harry Met Sally..." (good movie, I laughed until I stopped) and when we came out of the theater there was a note under my windshield wiper. My first thought was someone had left an ad on BMMRR but I realized that the paper was too small. Perhaps someone had hit BMMRR... I plucked the message from under the wiper and a smile broke across my face as I read:

Nice car but my 2002's better. I am member #32XXX. Keep on trucking.

Mitch

Thanks for taking the time to say "Hello" to another Club member, Mitch. By the way, you were being very charitable in describing BMMRR as 'nice', 'battle worn' would be a better description. Did you happen to notice the blue Prelude Si parked next to my 320i? It belongs to my wife, Lynn, and also has a BMW CCA sticker in the window. Next time you are at a social or driving function, look me up and say 'Hello'.

Mark Yaworski

'02 Register Forming

Mike O'Connell, BMW CCA member in Dallas, is putting together a registry grouping the following older models:

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1800 (1963-72)
2000 (1966-72)
2000 TI/tilux (1966-70)
2000 tii (1969-72)
1600-2 (1966-71)
1602 (1971-75)
1600 touring (1971-74)
2002 (1968-76)
2002 USA (1974-76)
2002 Cabrio (1971-75)
2002 ti (1968-71)
2002 Touring (1971-74)
2002 tii (1971-75)
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2002F
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Max Tech

ENGINES (Again). It seems that one of the questions most asked is about engines. People are just intrigued on ways to squeeze more power inexpensively. When we deal with the older cars, it is much simpler to add power cheaply than it is with the newer(1977 on) fuel injected models.

On 2002's, you can up your power in four stages:

Stage 1: Replace carburetor with a Weber 38/38 - \$ 200

Stage 2: Install headers or Tii exhaust manifold - \$ 100-250

Stage 3: Install 300 drg Cam & top end rebuild - \$ 500

Stage 4: Perform bottom end rebuild - \$ 800

Note the prices indicated are approximate cost of parts and any machine shop labor. It is assumed this is a Do-It-Yourself project. Cost for 6 cyl models are about 30% higher.

Now the other option for 4 cyl engines is to have a 2002 tii engine installed, retaining or even upgrading the carburetor. Factory rebuild installed price will run you about \$ 3,000. The big advantage on a factory rebuild is that you get a new cylinder head with the engine. While rebuilding your own, you use the old head. Many repair facilities no longer do their own rebuild, they opt for the factory units. Now getting to the fuel injected systems. Whatever you do, *do not discard nor replace the fuel injection with carburetors*. Here the process is basically the same, except that Stage 1 is a Header (if available) and Stage 2 is the cam. The fuel injection will have to be adjusted to compensate for the changes in the cam. Higher compression is not really required but it is desirable. A maximum of 9:1 is what I recommend unless stock compression is higher.

On cars with the 1.8 ltr engine, you can install a 2.0 ltr with no problems. The only things needed are a 2002/320 crank and pistons. Again 9:1 E12 pistons fit perfectly on the original cylinder head which you must retain.

As I have said before, the more power you want the more the dollars are. When trying to decide, ask your mechanic to give you a menu for you to choose from. Ask him to show you the pros and cons and of course the bottom line. Also remember that the additional power will require additional suspension work.

All of this brings me to what I wrote about two issues back regarding the Stroker Engines. The folks from Metric Mechanic wrote up a segment in reply to my column about a fictitious engine using the M3

crank. Well it is not that fictitious if they used to build them. Anyway, I am glad they wrote because they verified that in order to use this crank there was extensive machining involved thus making it very expensive which was my point. At the same time, Terry Luxford in his column is correct in saying that cranks which have been stroked are great for low revs but can not sustain high rpm's for very long. When it comes to the cylinder head, there is an area where you can gain a lot of power. Not everyone knows how to do it. Those that do are far away from us. The only local group that has the right equipment is QuickSilver Racing Engines in Frederick, Maryland. The ticket here is expensive. Again, the M&M folks must know what they are doing, because otherwise they would have been out of business long ago. If anyone out there has any of their products, please let me and the membership know. Share your experiences with the rest of us.

WINTER TO-DO's. Alright, so it is getting cold out there. What is there to do? Well for one, this time of year is great to get things done on your car. First, I would suggest follow my recommendations from the last issue and add the following items:

- 1) WASH & WAX - Give your car surface a good WASH followed by a good WAX job. This will help you protect the outside during the harsh winter elements.
- 2) KLEAN INTERIOR (With a K) - Other than the carpets you should not have a problem doing this. Treat the leather with some 'Hide Food'. Keep the inside of windows clean, specially if you smoke.
- 3) Run your A/C for 5 minutes every couple of weeks. This will help keep the whole system lubricated and functional.
- 4) Once a month, go into a Do-It-Yourself car wash and pressure spray the undercarriage to remove all sand, salt etc..
- 5) Organize your garage. Look at your inventory and buy what you need.
- 6) Lastly, you may want to tackle one of the Do-It-Yourself projects.(new engine, transmission etc..)

TECH SESSIONS. The first tech session of 1990, will be about Cylinder Head Refurbishing. It will be held at M-Tech on January 13th, 1990. For more details, see write up. If at any time you want to chat with me about any particular subject or just trade stories, call me. You can reach me daytime on 240-6072 or at nights up until 11pm at 301-831-9328. See you at the Annual Dinner. Until next time...

Max Rodriguez

Cory sells rice-burning ultra high tech computer stuff, I think, and he's apparently pretty good at it because he can afford a BMW, a wife, a kid and a new house in one of the growing *nouveau riche* sections of greater Herndon, Virginia. Being a successful salesman, Cory knows all about hooks. With his offhand but calculatedly genuine opening remark, he'd tossed out his line into what he figured was a well-stocked eddy and waited.

"Is that right? My name has come up?" I replied, duly impressed that Cory and the Chapter muckety-mucks even knew who I was.

"Sure has," he said, observing that I'd taken the hook. "The way we figure it, if you were to write an article for the *dB*, the National Capital Chapter would be a shoo-in to win the annual Club Newsletter Contest."

It occurred to me that the Chapter muckety-mucks had never seen so much as a postcard that I'd written, and I knew that Cory was aware that I was thinking that. I also knew that if they *had* read even *one* of my postcards, they wouldn't want me to write an article for the men's room wall at the bus station. Furthermore, like 99% of the members of this Chapter, I was more inclined to fill out a Form 1040 Long Form with Schedules than to embarrass myself by attempting to write an article for publication in the *dB*. I suspected that he knew I was thinking that, too. But he patiently waited to set his hook.

"I wouldn't know what to write an article *about*, man." I meant it too.

He gave his line a little flick, "How 'bout writing about one of our Drivers Schools?"

"Huh?" I replied, lamely.

Another flick. "Sure. Why not? he

continued, "Jackie Stewart and Skip Barber couldn't write a better Drivers School article than you, Leeper. And we really *would* like to win the Chapter Newsletter Contest."

That was it. He'd set his hook and reeled me in. I expect I even flopped around on the ground at his feet for awhile. I completely forgot that this had been only my second Drivers School and that my "performance" had been singularly unimpressive. I even forgot about the postcard, the men's room wall and the Form 1040.

The day before the deadline for the next *dB*, I proudly hand delivered my article to Cory at this home (he was living in D.C. at the time and only had a BMW, a wife and a dog, but I'm convinced that he had generic pictures of a kid and a house in Herndon taped to his refrigerator and bathroom mirror). My article was published, too. But it didn't say much about what goes on at Drivers Schools. It turned out to be an article concerning my fears and trepidations about doing my first Drivers School (I knew I wasn't alone, and that was the whole point of the article) and about how glad I was that I'd finally tried it, because they're so much fun.

As I recall, the Chapter muckety-mucks didn't even submit that issue for the Chapter Newsletter Contest. I can't say that I blame them, either. Consequently, I was a bit surprised when Woody Hair sauntered up to me a few days ago and said, "Hey, Leeper..."

I really do think that I'd still prefer filling out that Form 1040. But before I knew it, I'd agreed to write an article about the Autocross that the Chapter had held in Baltimore on a Sunday in July. Woody knew that I was by then a "regular" at the Chapter's Drivers Schools at Summit Point and that I'd become fairly well addicted to them

(they're better than sex), and yet he wanted me to write about the Autocross. He knew that it had been my very first Autocross and that I'd had the same fears and trepidations about doing Autocrosses as I'd had about doing Drivers Schools.

The fact is that I had been terrified of a) bending some expensive sheet metal or breaking some expensive parts on my new M5, or b) embarrassing myself in front of a bunch of Autocross experts, or c) both. But Woody and Dwight Derr had somehow succeeded in persuading me to give Autocrossing a try. So off to Baltimore I went.

Anyway, this is supposed to be a piece about that July 9th Autocross in Baltimore.

So...here goes.

It was held in the Memorial Stadium parking lot on 33rd Street. The Orioles were in the midst of a series in Milwawki (not a good one, either, but they didn't lose their grip on first place in the American League East!).

The event was supposed to begin at 10:00 a.m. I didn't get there until 10:40 (I overslept). Not a good start, being late for my first Autocross. Even worse, I drove right past the entrance to the parking lot, and, as I did so, I could see the BMWs in the lot and everyone in the Whole World watched me miss the entrance. Late. "How can I possibly do a respectable job at a damn Autocross when I can't even get there on time or find the damn entrance to the parking lot? Jeez." I considered driving on to Philadelphia for the day and claiming that I had a sick relative there. "Yeh, that's it, that's the ticket! I just happened to take 33rd Street through Downtown Baltimore on my way to Philadelphia to see my fourth cousin twice removed. Poor thing was suffering from a bad case of



beri beri." As I waited for the light to change at the next intersection, my palms felt like the bottom of The Great Dismal Swamp. "What the hell am I doing here? Why did I tell Woody and Dwight I'd do this? Why have I driven all the way to Baltimore to do a damn Autocross? I didn't have the foggiest idea how to do one of the damn things! I can't possibly fake my way through it without screwing up something on my car or embarrassing the hell out of myself in front of all those Autocross muckety-mucks! Or both! Jeez. What the hell's wrong with the stupid air conditioning system in this car, anyway? Which way is Philadelphia?"

But it soon occurred to me that the air conditioning was working just fine and that I'd surely get lost for weeks if I tried to drive to Philadelphia from Downtown Baltimore. Without the help from those guys back there in that parking lot, I wouldn't even be able to figure out how to get home again from this stupid intersection.

So, when the light changed, I turned around and slinked into the parking lot.

My first impression was orange. The parking lot was a featureless sea of orange traffic cones undulating in the July sun. I'd expected orange traffic cones. I'd understood that they were used on large empty parking lots to define a somewhat squiggly course that is the essence of Autocrossing. But this was some kind of cruel joke! No one had told me that I was supposed to bring a compass and sextant and know how to use them!

I pulled up and parked alongside Woody's unoccupied "87 2002" (his red 1987 325is). I opened my door and extricated myself from the sweaty goo that had formed on my seat as I sat at that stupid intersection waiting for the light to change. I opened my trunk lid

hoping that maybe somebody at the factory had absentmindedly left a bottle of Valium there.

"Unloading yer trunk, eh?" It was Dwight. I turned to face him, with visions of Frank Robinson tearing out of a dugout to give an ump a nose-to-nose piece of his mind. But before I could figure out what my beef was he was leaning into my open trunk.

"Good!" he continued. "Here, let me give you a hand with it. D'you remember to inflate yer tires? I'll help you set yer pressures. D'you remember yer helmet? You can borrow mine if you forgot yours. Or Woody or somebody'll let you use theirs if you wind up in the same heat as me."

There was no way out. They had everything covered. The bastards would probably have loaned me a car if I'd forgotten mine.

Disarmed, I crawled back into my dugout. "I brought my helmet. But thanks, anyway. And, yeh, I remembered to inflate my tires," I said, hoping that he hadn't noticed the terror in my face.

"Great," he said. "I'll help you double-check yer pressures anyway. I you need to add air, some of the guys've brought portable air tanks 'n stuff. And there's a gas station just a couple blocks away. They've got both air and fuel if you'd rather do it that way. Missed the entrance first time by, eh?"

I smiled and actually began to relax.

"C'mon," he said, "I'll show you where to register and then you'll want to study the course lay-out on the board at the registration table and walk it a few times."

I looked at my watch. It was nearly 11:00 o'clock. I asked Dwight about the scheduled 10:00 a.m. start. He explained that things were running

late and nothing had happened yet. That was a small relief. At least I wasn't really late.

He guided me over to the registration table and then wandered off to shoot the bull with some folks who I assumed were Autocross muckety-mucks.

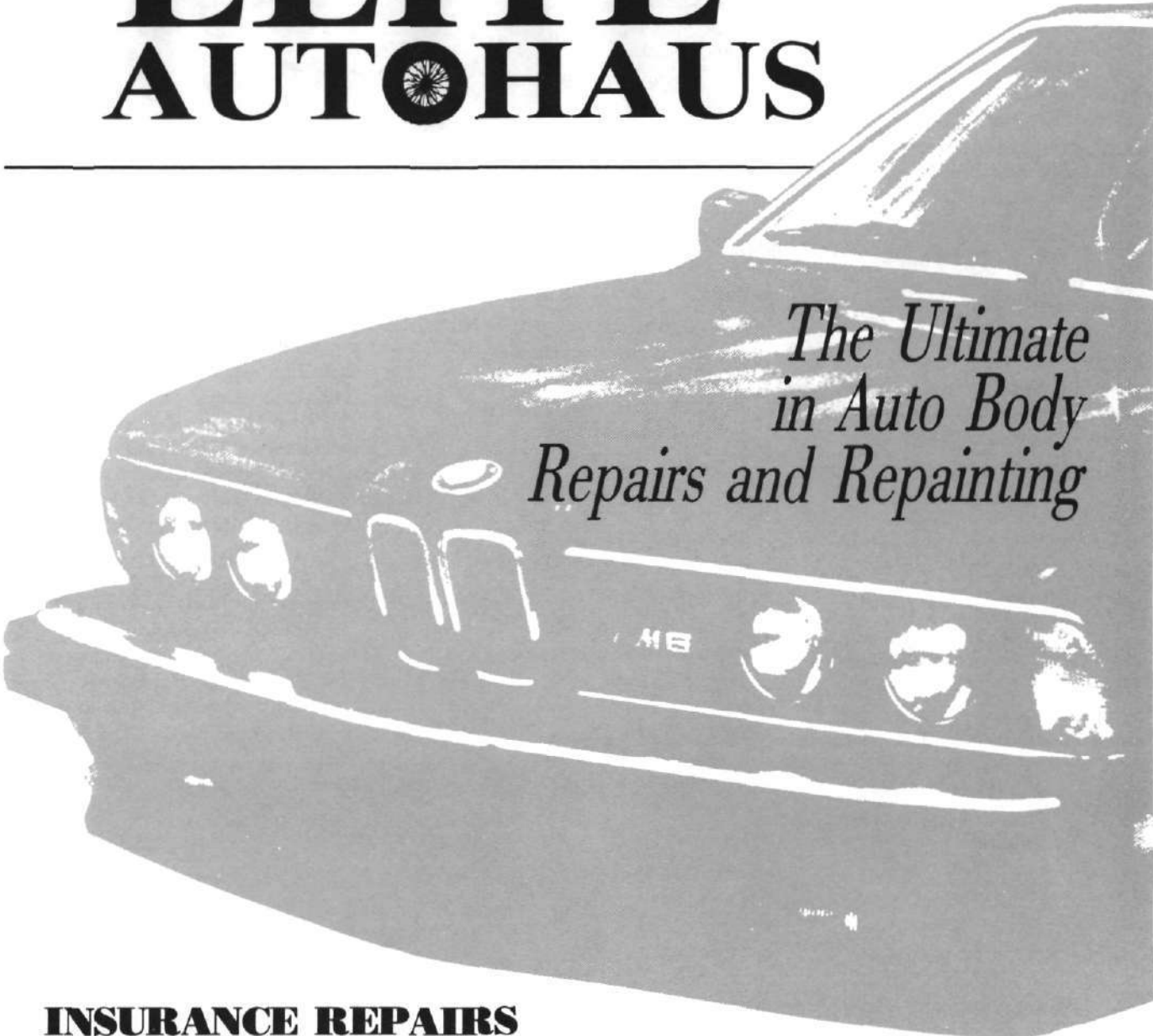
I was all alone again among strangers. I paid my nine dollars, registered, picked my heat (without having the foggiest idea what a "heat" was since there were no dogs around) and studied the drawing of the course lay-out. To my infinite surprise, it actually made sense to me. The drawing was a "picture" of the course viewed from above. X's represented orange traffic cones and directional arrows indicated the way through them from the starting line to the finish. Designed by Gary Toyama, it was a squiggly course, alright, and included one slalom section that had to be done twice in the same direction. I was able to figure it out just on the drawing board. Looking out at the orange sea on the parking lot was, however, quite a different matter. With some effort, I was able to identify what appeared to be the starting gate and the finish line, but the seemingly random array of orange cones inbetween bore no resemblance to the drawing on the board in front of me. The problem, of course, was the difference in viewpoints. The drawing depicted the course from a bird's eye view, but looking at the real thing was like watching whitecaps from the water's edge. I hadn't a clue where the course was out there. A sinking feeling came over me as I imagined myself driving around in that orange chop feverishly trying to find the stupid course. Then I noticed Woody walking in the midst of the vast orange sea, and I recalled Dwight's remarks a few minutes earlier: "You'll want to walk

continued on page 26



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As the Wrench Turns

In As the Wrench Turns, each issue, 'The Big Guy' Terry Luxford, with 30 years of street, track and full dyno experience, tells us what he knows...

Refocussing

When we started this column, there were lots of skills to re-learn. Writing skills, that is. Couple rusty writing with a bi-monthly publication schedule and there is time or space for very much exposition. Yet exposition is the "why" of this column.

Where you have some understanding of what your BMW requires then you will have a longer and happier relationship with it. While we gave tech tips within this column, that function will go into the separate Tech Tips column. This column will retain the background, observations, and trends that will clarify the Tips. Both are intended for *your* service and safety so don't be bashful about writing the eds with questions, curses and/or kudos.

This column will also clarify items of earlier issues where we reduced some complex subjects to an equation or table. This was done to get these "systems views" out as quickly as possible. These tools were current and will be refined when we get new information, etc. As we have often observed, there are many compromises built into any car and modifications to any of these systems merely represent a different set of compromises rather than a re-design. We present the conclusions to give you insight to what you have, and what you can get, and how to ask for it. Enjoy!

Brakes

Brakes are the final element that affect the contact patch. To put them in perspective, brakes are capable of slowing your BMW faster than your engine can accelerate it. Unfortunately, you only have the one brake pedal for control - this means that you have to be very, very careful about your brake system in general and doubly so when making modifications.

BMW and its OEM brake component suppliers have worked hard to produce a high performance brake system with minimum weight. The down side of this is a sacrifice in longevity. The good news is that handling characteristics have been maintained by keeping the brake component (un sprung) weight to a practical minimum.

Changes to the brake system should be undertaken very carefully. The safest approach is to use an up-grade material *intended* for street use on both ends of

the car. REPCO metal master of Ferodo M or H compounds work just fine. We are currently evaluating some Kevlar material that looks pretty good. Be wary of claims and don't try racing materials. Using that simple brake pedal you must modulate deceleration forces at the contact patch across ice and hot sticky asphalt.

Besides, the more familiar you become with your car, the better your control, and the less you will use your brakes. The trick is to have the whole brake capability available and under your control for emergency situations. A panic stop situation is not time to be dragging your brakes to make enough heat to start your (*very*) hard racing pads working.

For the late-model ABS-equipped cars it's a bit easier, the anti-lock system is really great. Just make sure the pads employed are matched front and rear. Only in the 02-series BMW's should you make any change in the front and rear braking force or brake balance. The brakes in the 02-series have always been pretty marginal for the speed capabilities. Once you have improved your suspension, you can re-balance your brakes to reflect the re-balancing of your suspension. The simplest method is to change the size of the rear wheel cylinders. Stock wheel cylinders are 15mm on 1970 and later 2002s but my 1969 2002 came with 20mm wheel cylinders and early 1602s came with 22mm cylinders. With some minor fitting, you can choose between 15mm, 17mm, 19mm, 20mm and 22mm wheel cylinders. The bad news is that for cylinders longer than 17mm you will need a larger master cylinder, e.g., the 23mm master cylinder from the Tii and 2800cs. Remember, this change will adversely affect the braking in slippery conditions. The change to 17mm cylinders won't hurt you when it's slippery and will shorten braking distances appreciable.

Although we generally subscribe to the racers dictum:

If some is good and more is better, then way too much should be just about right

—this does not apply to modifications to the brake system.

Lots more to come, but the late-season protest and appeal procedures took too much of our time.

Terry Luxford

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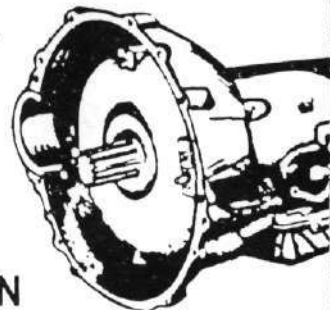
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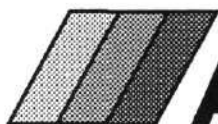
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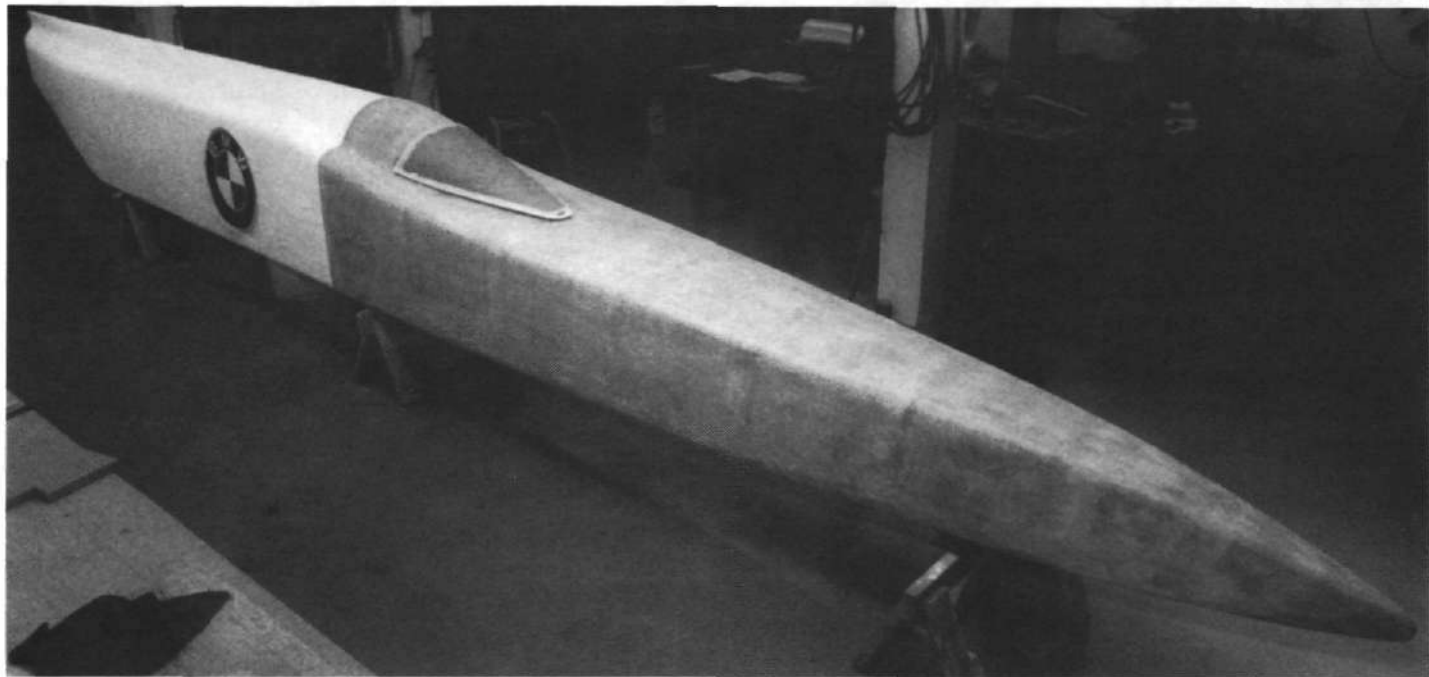
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World Speed Record Project

In West Germany, BMW is limiting the top speed of its newest cars to 155-miles-per-hour. But in Virginia, Steve Pieper is working to roughly double that top speed. BMW's goal is to appease opponents of the unlimited speed autobahns. Pieper, on the other hand, wants to set a world speed record.

Steve Pieper, President of Heishman BMW, says his first idea was to use one of BMW's new V-12 engines to power his dream racer to a world speed record on the Bonneville salt flats. BMW, however, said it is not interested in a racing image for the V-12. Pieper then suggested an M-Power engine might be a more appropriate choice for a speed record. BMW agreed and the importer has provided an engine for Pieper's Bonneville project.

Late every summer, speeders gather on the Bonneville salt flats in Utah to.....speed. Vehicles of all shapes and horsepower drive flat out seeking the highest speed in their particular racing class. Steve and his father, Wilfred Pieper, are in the process of developing a sleek M-Powered car to set a new FIA 5-liter Special Vehicle speed record. That means going faster than 297-miles-per-hour. This project has moved slowly and carefully from idea to research to paper to model to full-size mock-up and (soon) to actual car.

This "car" looks like a giant ballpoint pen lying on its side sitting on motorcycle tires. It's simply an aerodynamic package to carry an engine and driver.

For the speed project the 3.5 liter 24-valve Motorsport engine is being turbo-charged and generally beefed up to handle the power Pieper and Pieper intend to produce. Even though the rules allow up to 5 liters in this class, they expect the 3.5 BMW to produce all the power needed, about 800 horsepower. The transmission is the stock M-car unit. By the way, the first engine for the Bonneville project is familiar with competition. It powered an M5 half-way around the 1988 One Lap until the "Car and Driver" team rolled. (Incidentally, the other M5 entry kept its shiny side up and won the 1988 One Lap.)

On paper, Steve says the engine and car break the speed record. But he won't know about the real engine and car until he zooms across the salt in Bonneville next summer. Stay tuned for more on this local effort to set an international record.

John Hartge

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In the SCCA's Mid-Atlantic Road Racing Series (MARRS), the competition on the race track has been somewhat overshadowed by official protests concerning what constitutes legal (i.e. original) BMW engine components. As of this writing at least one of the protests is under appeal, so it might be best to wait for a more informed explanation from the parties involved once everything is settled.

MARRS RESULTS

Briefly, here are the Improved Touring Class results from the last few MARRS events at Summit Point. On Sunday, September 2 Eric Bucher's 2002 beat out John Weaver's similar car for first place in ITB. Monday, the 3rd saw Eric's blue car finish first ahead of Mike Morella's white Bimmer. Jim Epting suffered through a miserable weekend with his 2002. Broken rocker arms were among his ills. Bob Gammache traded the lead in the ITA races both days but was able to come away with two well earned wins with his beautiful cinnabar red 2002tii.

On October 1 Bob turned the no-longer-for-sale tii over to Round Man Racing's original number one driver Jim Harrison. Jim proceeded to set an ITA lap record (1:33+) while winning the class. After qualifying on Saturday, Jim Epting towed his race car home so daughter Leah could drive it in the Porsche club's championship autocross first thing Sunday morning. Leah won her class but Jim finished second to Eric Bucher during the rainy last race of the day back at the Point. Gary Green opted to drive his mechanic's street 2002 in the autocross, but finished back in the ITB field.

Club member Larry Matsen has just finished his second year of racing a Peugeot 505 Turbo in the SCCA Nationals. Larry has several wins in the Showroom Stock B class including the August National at Summit Point. He is preparing to go to the Valvoline Runoffs at Road Atlanta as this is being written. This is a very competitive class and most of the favorites are driving the 505 Turbo. Larry decided to race the Peugeot instead of a BMW because of the vastly better financial support program.

CHAMPIONSHIP AUTOCROSS RESULTS

Of the last three championship autocrosses, official results are only available for the August 20 event (round 6). Jim Epting (2002), Cory Laws (535i), and Gary Green (2002) took 1st, 2nd and 3rd respectfully in

E Street Prepared. Tom Baruch (3.0 CS) was first in F SP, Woody Hair (325is) first in C Stock, and Don Whitaker took the Novice class with his M5. Four of the MWCSCC classes might have season champions using BMWs.

SPEED SHIFTS

I have seen the video tape of last March's La Carrera race from Baja. As mentioned in the *Roundel*, the view from inside the 2nd place M6 is quite exciting. No mention is made in the tape of the two deaths that marred this event. On September 24 the similar Silver State Challenge was run in Nevada. According to *AutoWeek* magazine a husband and wife team in a Ferrari Testarossa suffered a blowout at speed and were thrown from the car when it left the road (no mention of safety belts). The woman died at the scene and the man, a surgeon from California is hospitalized with multiple injuries. Apparently the 91 mile highway race was won by a 750 hp Camaro at an average speed of 190 mph! No word on how the BMW entries fared. . . . This past summer the Golden Gate chapter held a 2002 fest. The event was planned as a celebration of the chapter reaching 2002 members. Well that didn't happen (yet) but it was quite an event nevertheless. Eighty four 2002s and 275 people attended. Former National Capital member Mike Vincenty won the award for most miles (285,000) on his red tii. . . The British magazine *Fast Lane* has a road test of a new Hartge H5-V12. That is a 5 series fitted with a tuned (336 hp) V12 and the sport five-speed manual gearbox. *Fast Lane* concluded that it really isn't as fast or smooth as the new M5. When asked why they bother to build them, Hartge replied "That's what our customers are asking for". . . Since the only competitive event in this area for the next couple of months is a championship autocross on November 19 there will be no Competition Corner Calendar this issue. Don't forget the Washington Rally Club's beginner series starting in late January. . . Mark your 1990 calendars: tentative dates for our drivers schools at Summit Point next year are March 17-18, June 16-17, Sept. 8, and October 8.

CRUNCH

Woody Hair

Congratulations, Bob Gammache

(1989 MARRS ITA Champion*)

You will be happy to know that your Driving School Chief Instructor is not only a SCCA Driving School Instructor but a SCCA regional racing champion!*

Bob Gammache won all but one MARRS and one Mini-MARRS race that he ran this year. Those of you who saw the Labor Day weekend Monday ITA race saw Bob get a bad start and drive the 8th overall and 3rd in class to 3rd overall and 1st in class in 15 laps. Since the championship had been clinched on Sunday, his Monday drive showed the toughness and class that mark a champion.

Bob's family is his foremost sponsor and the source of all the noise when he passed Marty Jeter for the win on the 15th and final lap on Labor Day Monday. The extraordinary exterior is sponsored by Master Crafters and the responsibility of Tom (metalwork) and Charlie (paintwork). The marvelous mechanicals are sponsored by Quality Car Services and are the responsibility of Sandy. The great graphics are sponsored by Capitol Signatures and are done by Mark. The premier promotions are by KZ Creations — yea, Kay Heatherly, that is.

(* Actually, the championship is pending the decision of the SCCA Court of Appeals findings. Bob's engine was protested on Labor Day Monday and torn down the following Thursday. The engine was found to be "squeaky, squeaky clean" by the SCCA Chief Scrutineer and the two neutral BMW mechanical observers from VOB. There was a ruling subtlety introduced from another racing series involving a different car type (Formula Ford) that awaits clarification by the SCCA on Bob's appeal. Regardless of the decision, Bob Gammache is a champion this year and Roger and Max are starting to move through the field.)

Next year will be great; be there.

Terry Luxford—Quality Car Services, Ltd



Photo by John Harge

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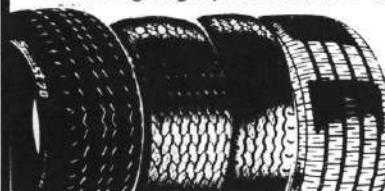
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the course a few times."

I walked over to what I'd determined was the starting gate, hoping that no one was watching, just in case. As I took my place on the starting line, I saw two cones ahead of me that could be nothing else but the first "gate." I walked toward them. As I got closer to them, two more cones came prominently into view ahead and to the left, and it became clear that they were the second "gate." Just beyond the second gate and again slightly to the left was another pair of cones. It was obviously the third gate. I approached it and as I did a straight file of cones appeared immediately ahead. So that's the slalom. I zig-zagged my way through the slalom toward another pair of cones just beyond. Gate four, the "exit" from the slalom. Proceeding through the slalom exit gate, I easily found gate five ahead and to the left. Through gate five and just ahead I saw gate six ahead and again just off to the left. Then gate six beyond, abruptly to the right this time. And so on. As I approached each gate, the next subsequent gate appeared conclusively ahead of me, albeit to the left or to the right. The course unfolded in sweeping turns and tight cuts, back and forth and around through the slalom again. As I approached the slalom the second time, I realized that it mattered whether I kept the first cone to my left or to my right, because it not only affected one's approach to and through the slalom entry gate but also the angle of exit from the slalom and consequently the angle of entry to the next gate and, for that matter, the one after that. And so on.

As I walked, the featureless sea of orange cones became a purposeful course as distinct as the drawing on the board at the registration table. I was amazed, but I knew exactly where I needed to go at every step.

Reaching the end of the course, I intercepted Woody. He suggested that I walk the entire course a second time, and he offered to walk with me. Walking alongside him, I was able to lock into my memory the undulation

of the course, to left and to right, and I began to imagine myself working my way through them in my car at speed. Woody gave me all sorts of insights into angles of approach, entry and exit at the gates. I knew I couldn't possibly remember a whole lot of what he told me, but that didn't really matter.

I became fairly confident that I could drive through the course without getting lost and without embarrassing myself unbearably. I may not be as fast as Woody or Dwight or Gary Toyama or the other muckety-mucks, but that was okay, too.

"Okay, everybody, are we ready to go?" blared a bullhorn. "Has everyone walked the course at least once?" Pause. "Would anyone like to walk it one last time? We're about to get underway here," cried the bullhorn. Several people wanted one last walking tour before getting in their cars and cinching up their helmets. I took advantage of the extra time to finish unloading my car, check my tire pressures and go through tech inspection.

"Okay, let's go with the first heat." It was the bullhorn again. "Those cars that have been assigned odd numbers will run in heat one. Even numbers, heat two. Each heat gets one timed practice run and three timed runs that count."

I was car #6. That made me second heat. Good. I could watch the first heat and observe how they managed the course. I watched from the timing and scoring stand. Mark Yaworski operated the timing equipment and the bullhorn. Lynn, his wife, held the registration sheets and noted the times of each participant. Watching the first heat work their way, one at a time, through the traffic cones, my walking tour understanding of the course was brought into perspective. Those guys were tearing through the course faster than I'd thought possible. Mark announced each driver, car number and vehicle model on his bullhorn at the start of each run and the times at the end of each. The times were generally falling in the one minute five to one minute seven second range, rounded to the nearest

thousand on a second. They meant nothing to me. I had no idea whether they were good or bad. I knew only that I couldn't possibly find my way through those damn pylons at the speeds those guys were going. At one point, between runs, Mark asked me several rapid fire questions, one after another without interruption, questions designed to elicit my considered expert opinion of the course and of individual performances.

"I don't think we're in Kansas anymore, Toto," I replied with the soft voiced sincerity of a terrified child.

"Huh?" he queried.

"How the hell should I know? I've never Autocrossed before!" The words hurled themselves from somewhere down around my groin. I figured they would come back to haunt me in bullhorn technicolor, but it was too late to do anything about it. You can't unhonk a horn. My palms began to get clammy again.

"This is your first Autocross?"

"Uh huh," I said sheepishly.

Luckily, at that moment I noticed Klaus Hirtes in car #8 ripping through the course in his 3.0CS working on his third and final official run. That left only Dwight to do his last official run, finishing up the first heat. I glanced quickly over to the staging area and saw Mike Early in his white tii and Woody, the first two of the second heat cars, already lined up. I jumped on the excuse to bolt over to my own car, cutting short any opportunity for Mark to uncover any further embarrassing secrets for possible P.A. publication.

Helmetted and belted securely in my car, I waited in terror behind Woody. A fresh batch of sweaty goo was already coagulating under my exposed thighs (I wore shorts), glueing me uncomfortably to the leather seat. My heart raced. My breathing was tight. There was an orange golf ball in my throat. The same hideous fluorescent orange as those damn traffic cones undulating again on the parking lot in the steamy July sun. I was just about to embarrass the hell out of myself and break my

car in the process. Mark announced Mike Early's car number, and off he went. Woody eased forward to fill the vacated spot at the starting line. I managed to move up to where Woody'd been. Only slightly more than a minute later, Mike crossed the finish line, and Woody's car number was announced. Already in the starting gate, he quickly revved his engine up into the power band and

yer run?"

"My run? Oh. My run. Sure. Sure, I'm ready." I replied vaguely.

"Well, you need to pull up into the starting gate."

"Yeh. That's probably a good idea, I probably oughta do that," I said, shaking off the comet and the bare breasted aborigines. I eased forward and stopped at his signal. Looking off

clutch. The car lunged forward and died. I stumbled for the ignition key, located it, engaged the clutch, restarted the car, found reverse and backed up again until the guy working the starting gate signalled me to stop. I jammed the stick into first and revved the engine again and released the clutch. The car shot forward toward the first gate. Off the accelerator and tap the brakes, ease the steering wheel

by Bonnie Butler

**In the style of
James Joyce**

Cloud-dazzled sun. Pinball wizard, tense-coiled spring....

The course curves the cones course orange gates beckon challenge chide the slide of control lost to motion vector's impetus.

Turbo mantra.

Movement moment force of torque move move weaving plait of motion through around, retrace the cones, the gates, knotted within itself the net of time in passing space to be the bond of wheels to engine tires call out to hands response responds the moment is.

then released the clutch, launching himself off the starting line, through the first gate and into the wild orange yonder.

The guy working the starting gate motioned me to pull forward, up to the starting line to await my run. I couldn't move. He motioned again. I stared dumbly at him. His figure dissipated in the humid air, replaced by a hot blue light that grew to obliterate everything in my sight. I thought I felt a comet entering the gravitational field of Neptune. I wondered what the aborigines of New Guinea were up to on a fine day like this. A half dozen bare breasted milk chocolate girls giggled as they dug into the loamy earth for roots or tubers.

"Something wrong?" The guy working the starting gate was kneeling beside my car.

"Huh?" I said, looking at him with furled brow, wondering what the hell he was doing in New Guinea.

"Everything okay? Ready to make

to my left, I could see Woody working his way smoothly and quickly through the cones, and I realized that he was nearing the end of his practice run. I surveyed the undulating orange sea and tried to recall my walking tours, picking out the landmarks and re-identifying the patterns. A tense calmness settled upon me.

"Next up for his practice run, it's Leeper in car #6! That's a brand new M5 Leeper's driving! Hey Leeper, you got a car phone in that thing?"

It was Mark on his bullhorn.

Why'd he have to point out the M5? It's possible - just barely possible - that everyone would've concluded from my inevitably slow times and sloppy style that I'm driving a 518i weighted down with a useless air damn and rear spoiler and stuff. But now they know it's an M5, they'll just figure I'm a dweeb. And thanks for the car phone crack! Jeez.

I engaged the clutch, found first gear after several awkward attempts, revved the engine and released the

to the left and then back on the accelerator. Into the second gate, increase the steering input to the left and then back a bit to take the slalom entry gate. Tap the brakes. Keep the first slalom entry cone to my right. Squeeze on the power gently, around the first slalom cone and on toward the right side of the second cone. Steering input left to right and back again, feathering the throttle. Round the second slalom cone and heading toward the third, looking for the turn-in point, I run out of room for continued throttle and released the accelerator. Turn hard to the right. The weight shifts, unloading the right front tire. Squeeze the throttle to settle her down and turn in, steering left past the third cone and back to the right. Too much throttle. Release accelerator. Transition. Left front tire unloads with hard steering input right to left at the turn-in point for the fourth cone. Late. Scrub off speed, too much lateral slide rounding the fourth cone. Not smooth. Ease back onto the throttle to get the tires hooked up again. The car squirts toward the fifth

continued on page 28

cone. Get off the gas. Very hard steering input left to right to round the fifth cone, again unloading the right front tire. Hard transition. Clean run so far. Not smooth, but no cones knocked over. Squeeze the throttle down hard coming off the turn round the fifth cone. Release steering. The car settles down as the steering wheel goes to neutral and it's time to set up for the exit from the slalom, just beyond the sixth cone. Squeeze the throttle harder and turn in smoothly, right to left, making the sixth cone a long sweeper round through the slalom exit gate and on to the braking point to set up for the right-hander through the next gate. Stay hard on the throttle to blast through that gate and keep the throttle down through the left-handed toward the next gate. Anticipate the braking and turn-in points. Exiting the next gate, it's off the binders and turn hard left to head to the gate after that.

And so on.

I'm amazed that even at speed I know exactly where I am and where I need to go next. I'm going as fast as I can in second gear and through the squiggles it feels very fast indeed, but not threateningly so. This is a blast! The transitions - the shifting of the car's weight fore and aft with braking and throttle input and side to side with steering input, in complex combinations - are all wonderfully controllable and exciting. Because the course is a closely spaced series of turns, absolute speed is actually quite modest as evidenced by the fact that I never have to use a higher gear than second, but the sensation of speed is there in copious and invigorating quantities. What a gas!

I work my way through the entire course and stop sharply as I cross the finish line. Suddenly there is silence. I did it, by jimminee, I actually did it! Every cell in my body is tingling. I'm overcome by a sweet, warm glow.

"One minute, twelve point five three six. Clean." It was Mark on his trusty bullhorn. Compared to the times I'd heard him announce after virtually all of the earlier runs, I knew mine was slow but that didn't dull the glow.

"That was Leeper's first-ever Autocross run! A pretty darned good time for a first-timer!" It was a genuine compliment and it turned up the warmth of my glow a couple of notches.

I had a pretty darned good time alright, but I'm not talking about the time on the clock!

I happily lined up for each of my official runs. On my first, I did a 1:09.938, clean (without knocking down any cones or missing any gates). I got a little faster with each of the other two runs, down to a 1:07 and some change on the last one, but I took out a couple of cones each time. I think everyone took out a cone or two on at least one run, so I figured I was in good company. A one-second penalty was added to one's time for every cone knocked down, so my first official run stood as my best for the day.

After all of the cars in each of the two heats had completed their three official timed runs, we were permitted to do as many untimed "fun runs" of the course as we wanted in the next hour or so. I lined up for a bunch. It was all over by 2:30 in the afternoon.

Throughout the day, people were helpful and supportive. Al Zavalla offered his assistance in adjusting my tire pressures to optimize grip and to minimize understeer.

Tom Baruch let me use his portable air compressor, but I couldn't get it to work, even with Al's help, so I drove to the service station two blocks away and paid 25c for 5 minutes of air time. Woody gave me pointers on technique. Mike Early tried to sell me his tii. Dwight peppered me with his good-natured barbs to ease the tension. And so on.

When it was all over, a gaggle of us caravanned down to the Puddrucker's Restaurant at the Inner Harbor for refreshments and war stories.

Hey this Autocross stuff is fun. My anticipatory fears and trepidations were unfounded: I neither embarrassed myself nor damaged my car in any way. I'm convinced that there are a slew of folks out there, members of

this Chapter, who have had at least a passing thought of trying an Autocross but haven't done it because they too secretly harbor the same fears and trepidations. The same goes for Highway Safety Schools, Drivers Schools and Rallies. Well, now you know.

I've got a sneaking suspicion that Woody spotted me getting out of my car after one of my runs at that Autocross wearing a wall-to-wall grin. And I can't help wondering if Cory'd had a little chat with Woody about Leeper and hooks. ▲



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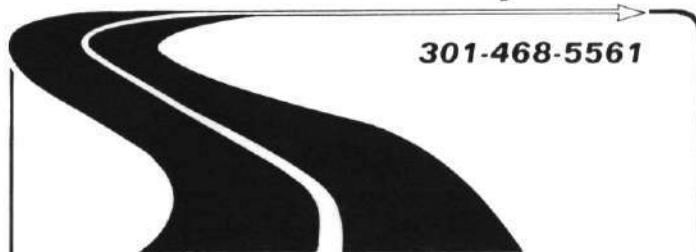
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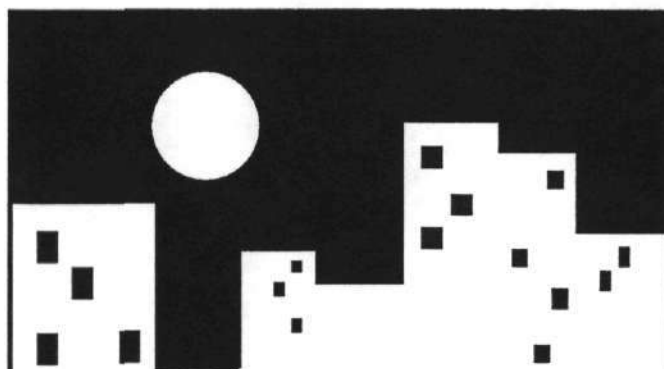
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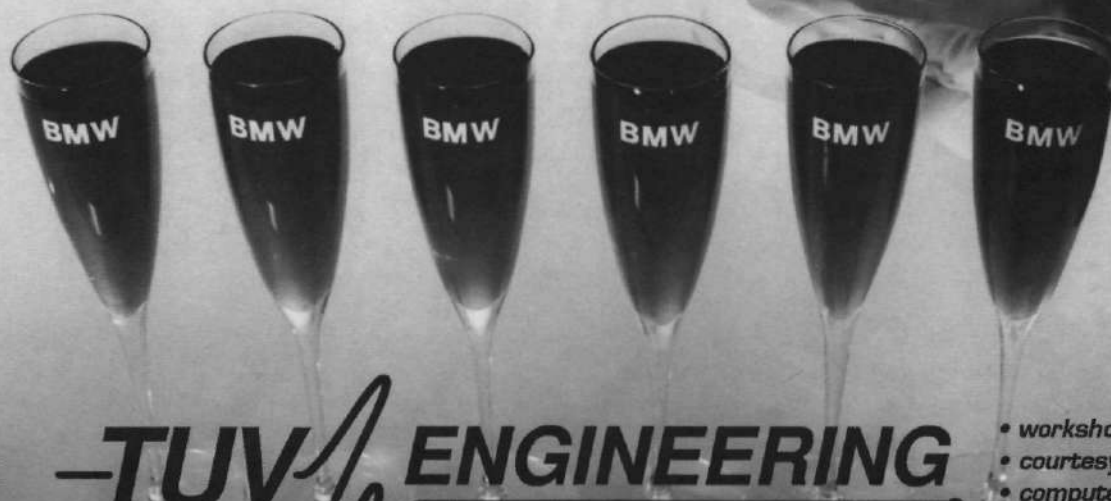
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Another Fun Year of BMW Racing

Here we are at the end of the season, and many BMW race car drivers are already making plans for the 1990 season. This year as last year, I had a very exciting year. Here is a quick synopsis of 1989 racing; The season started early April. This year unlike last, I was not alone out there. There was another TUV sponsored racing machine piloted by no other than crazy "El Pedorro" Roger Baker. This made the third BMW Tii in Improved Touring A. This was in addition to Bob Gammache who was piloting a fresh almost Showroom new gorgeous *arrest me red* BMW Tii. We were all pumped up for our first race. The folks at TUV had just recently developed two new *puerhouses* of engines and we were all eager to show the competition.

Our first day was not a great one. First, Roger's transmission failed due to additional extra shifting by the new rookie. Second, during practice I noticed that I was having a fuel delivery problem. With no time to fix it before qualifying, we all headed back to the shop for an all nighter. Roger's car got a new tranny, and I received a new electric fuel pump. We arrived at the track on Sunday, 45 minutes before race time, with no sleep and a lot of NO-DOZ. We were able to finish the race that day. Bob Gammache finished first. What a race weekend!

Our next race took us back to Summit Point. My partner in crime, had gotten his priorities mixed up and ended it up vacationing in Florida rather than racing. But here I felt that it was my turn to show the competition some real racing. Qualifying was in the rain. In my many years at the track, I have never been exposed to driving in this kind of soup. I was so scared that it really made me concentrate. So careful I was, that I felt real good in the rain. So much that I qualified FIRST overall. My crew and I were ecstatic.

For the first race (5 laps), we took off on a still wet track with Bob Gammache following. After a couple of laps, Bob made an excellent pass after I fish-tailed coming out of turn one. We finished the race 1-2. This was the first time in two years that BMW's have finished in this order.

Sunday was the big event. I was hoping for the same 1-2 results, but in reverse order. One hour prior to the race, both Bob Gammache and I were informed that a protest had been filed against both cars. The reason for the protest was the specifications used in building the car. We were accused of building cars to Euro Specs rather than US. We won the protest at the track, but later lost under appeal. Anyway, back to racing. We were all out there on the pace lap. At the drop of the green flag I accelerated and made it to turn one ahead of everyone. We had the whole BMW fan



Photo by John Hargre

Max racing 9/3/89

club at turn one cheering. This was a first. As soon as I got past turn one, I allowed the faster cars to go by. By the third lap, I had an eight second lead over the closest contender, this being Bob Gammache. It was no sooner that half a lap later, my engine overheated. Rather than take any chances, I pulled in to call it a day.

Back at the shop on Monday, the cause of our problem was two fuel injectors going bad, thus making the fuel delivery lean. It got so hot, that the top of the piston on two cylinders melted. Nevertheless, it was a super great weekend of great achievements.

Next on the schedule was Watkins Glen. This for us was the first time up there. It is by far the best track that I have been to and driven. It is a super fast and very challenging track. During qualifying, Roger had the misfortune of a engine breakdown. So that left me as the only member of the team out there. We qualified first in class. This was great. Bob in the meantime was having fuel injection problems. During a short qualifying race on Saturday, the throttle linkage broke and forced me to finish almost last which meant starting in 37th position for the big race on Sunday.

After a short practice session on Sunday, we were ready. The green flag was dropped and the race began. In front of me, were a bunch of ITC cars (Datsuns 510s, Fiats etc) needless to say it was not very hard to power thru all of these guys with great ease. It then became a matter of racing against the cars in my group. One by one, I began to pass. I passed them in the turns, going up hill, down hill in the straits and specially in front of the BMW Fan Club by the start/finish line. By lap 5, I had passed all ITA cars except one. This was a Mazda, who was the favorite to win. I calmly waited for the right time and passed him in front of the BMW gang.

I completed one more lap and a half until suddenly there was a BOOM... No power, Nothing. After the race was over, we discovered that there was a one big hole where the starter used to be. One of the rods decided to go sideways thanks to a crankshaft failure. After the race, we learned that we had set a new track record for the class. I can tell you that was an expensive record to set. The one reward is that we got one hell of a good video from inside the car. If you are interested in an unedited copy, will cost you \$10. (VHS only).

continued on next page

BMW Racing

continued from previous page

Back at the shop, we wanted to try and make Charlotte. Rather than rush to try and get an engine put together, I decided since I was so far back in the points race for the championship, I would stay at home and concentrate on the next race at Summit Point during Labor day. This race turned out to be fun; I qualified seventh in class and finished 5,7,5. Not bad and good enough for a trophy. That weekend for me was perhaps the most exiting. The reason being that the racing was close. I myself had a very good race fighting between 4th & 5th place with a Mazda. Finally settled for 5th.

The weekend was not without controversy, however. Up to this point Bob was ahead in the points lead for the championship. At the last day of racing, a protest was filed against his car and a subsequent teardown of his engine found it illegal. At this writing, Bob is appealing the decision. If the original decision is upheld, the championship will be taken by a Toyota Supra.

The last race, for us was mostly for fun. Bob had decided not to run the last race, so his car was piloted by no other than Jim Harrison. For those of you who do not know him, Jim is perhaps one of the best drivers out there. He was also our Chief Instructor for many years. For this race, Jim Harrison qualified third and I fifth in class. Roger had some electrical problems which placed him 10th in class.

The outcome of the race was BMW's first, fifth and tenth. Jimmy Harrison took the honors of first place and set a new track record for the class of 1:33.18. This record however was beaten by the Toyota Supra with a time of 1:33.12. OUCH! So close...

For me, although I failed to bring in a checkered flag home this season, I am pleased with the accomplishments, which were; Track Record at Watkins Glen, qualifying first overall at Summit Point, getting to turn one ahead of everyone else and bringing home a trophy (beer mug no less).

Plans for next year have not been set in concrete. I have been contemplating moving to the Spec Racer Class and go national, or continue in ITA for one more year. Either way, you'll read about it. My many thanks to all involved: TUV Engineering, Edmund Huang, the spouses or girl friends, Marc Givits the BG Man and of course my wife and loan officer Lori without whom nothing would have been possible.

PS... If you want to go racing and want a great Race car with all kinds of spares at a reasonable price, call me. Until next year...

Max Rodriguez

New Members

Name	Model	Referred by
Dany Abi-Najm	M3 1988	
Celeste Adams	325i 1988	Scott Greenberg
Nicholas Alley		
Rebecca Amos	325e 1985	Fred Antenberg
John L. Anderson	2002 1973	Gabrielle Gannon
T. Davis Ashby	2002 '75 528 '87	
Joan Athen	735i 1988	Jimmy E. Howe
David Baker	M3 1989	
Ray A. Ball	318i 1984	
Bob Bailey	528e 1984	
Rod Barshook	3.0Si 1976	Auto-Therapy
Andrew J. Bean, Jr.	318i 1984	
J. Dan Beckett	2002 1976	Tom Buck
Susan Bennett	325 1987	Mike Mills
Dallas Blair	2002 1973	Jeff Faitelson
Barry G. Blum	735i 1985	Ron Perdall
William Boldyga	325 1987	Dan English
Glenn Borrelli	535i 1988	BMW of Fairfax
Mark J. Brice	533i 1984	
Marc A. Brunon	318i 1984	Maggie Kamalian
Joseph C. Bunnell, Jr.	535is 1987	Mike Mills
Steve Bussmann	325i 1987	
Lance Cantor	325es 1985	Serino
William Cheng	528e 1988	
Joe Chrest	2002tii 1974	Bill Adler
Tony Celeste	325is '87 528e '87	
Jason Cohen	318i 1985	
William Cooper	320i 1983	Edwin Dugas
Robert C. Crain	535i 1985	Glenn Sims
Larry Cruse	325e 1984	Mike Muth
Rene Cuesico	2002 1976	Rob Moskalski
Bruce Cunningham	535i 1989	
J. Dahill	325e 1984	
Ashok Daswani	325i 1989	Heishman BMW
Michael Datko	2002A 1976	Steve Hiltabidle
Albert Davis Sr.	535i 1988	Mark Yaworski
John Davis	528e 1984	Martens BMW
Raymond Davis	2002 1974	J + F Motors LTD.
Suzanne G. Demko	2002A 1974	J + F Motors
Serge DeBustros	535IS 1988	
Ken Dere	2002tii 1973	BMW of Fairfax
Gary M. Deutsch	325i Conv. '89	Dwight Derr
Randall Dickson	318i 1985	Denny Barth
Shannon J. Donovan	2002 1972	BMW of Fairfax
Robert Dotson	733i 1984	Mike Mills
Robert Downe	735i 1985	Mark Yaworski
Raymond Dunton	533i 1984	Micheal Guimond
Michelle Durant		
Ed Early	535ia 1988	Mike Early
Doug Elliott	633csi 1984	Foreign Service
William English	325e 1984	VOB
Daniel G. Eramian	318i 1984	
Thomas H. Ezell Jr.	M3 1988	Tim Davern
Fredrick Fischer	2002 1976	Road + Track
David Fitzgerald	325 1986	Glenn A. Walters
Alvin L. Flowers	325e 1985	Frank Conway
Mitza S. Fox	320i 1981	Radial Tire
Scott Frix	325is 1987	Karl Hoffman

Name	Model	Referred by
Stan Fulton	325 1986	Excluservice
Natale Franco		
Giovanni Franco		
Mark E. Goins	320i 1983	Phil Marx
Dave Gurtner	2800 cs 1971	Kim Langley
Stephen Green	2002A 1975	Mike Whitley
John P. Grills	530i '78 320i '77	S. Tenney
Robert Grossman	318i 1984	Heishman BMW
John Hammer	2002 1973	Russ Parise
Tom Hanley	2002 1974	
Leslie Hansen	325i Conv. '89	John Marshall
Greg Harris	2002 1976	Richard Sperry
Andrew L. Hartman	2002 1976	
Charles William Hauck	2002 1974	
Jack M. Heinmann	635csi 1985	Foreign Service
Karl Hendrickson	530i 1976	
Dean Henry	2002 1976	Tom Baruch
Ronald Hermes	750 IL 1989	
Brian Hollen	535i 1985	
Dale R. Holt	525i 1989	William Steward
Curtis Hom	630 1977	
David Hooker	325e 1985	Tom Pack
Maxwell Howell	325i Conv. '87	
William S. Hydro	2002 1973	John Hydro
Ikejiri		Bill Shook
Ken Jacobs	325 ix	Mike Solinker
Herbert W. Johnson	633 1977	
Kevin Johnson	316 1982	J + F Motors
Davidson Jones	528e 1985	Dwight Derr
Luther Casey Jones	2002 '72 325ic '87	
Andrew Justice	732i 1981/2	
Steve Kaminer	535i 1989	
Lawrence Kaufman	325e 1985	Katrina Van Dopp
Taehyun E. Kim	735i 1986	
John P. Kosciusko	325i 1987	Stephen Dull
Nancy Kramp	325e '1986	Mike Mills
Mike Kurl	533i 1984	Excluservice
Matthew Leech		Ray Leech
Robert Lesche	535i 1989	
David Lipe	2002 1972	
Robert Lighthizer	325 1984	
Eugenia Lopacinski	533i 1984	
William Lorenz	2002tii	E +E Autobody
Dana Lutz	530i 1975	Philip Lutz
Phillip Lynah	528e 1984	
K. Majd	3.0csi '72 2002 '73	
Jeffrey S. Markowitz	325es	Frank Russell
William Martin	524td	Woody Hair
Chad McCarthy	2002 1972	W.E. Cather
James D> McInroe	325i 1984	BMW of Houston
Blane F. Meadows	M3 1988	
William C. Melvin	325i 1987	Tom Pack
Richard P. Meid	320i 1982	
Jim Morison	320i	Tom Pack
Regina Musgaves	735i 1985	Ivan Miller
Sam Nikoomanesh	325es 1986	Dwight Derr
John A. Noble	318i 1984	
Fredrick T. Osborne	325i 1989	
Lydia Owens	318i 1984	Autobahn Motors
Steve Palmedo	533i 1984	J + F Motors
Alan S. Pedersen	320i 1980	

Name	Model	Referred by
Chuck Peppler		
Alan Peters	3.0s 1973	Tim Dougan
Lisa A. Piraneo	320i 1977	Woody Hair
Keith Pitts	325is 1988	Mark Yaworski
Janice Rauch	530i 1978	
Bradley Rees	318i 1985	
Ryan Rice	318i 1985	L. Phillips
Larry Ringer	L6 1987	
David Roberts	535 86,325is 87,318 85	
Bennie Rodgers	528e 1988	BMW of Fairfax
Keith W. Rouleau		James Horchner
Brenda Rowe		Jack Chandler
Warren Savoy	325is 1987	Timothy Hall
Billy Schaefer	2002 1974	Mark Thompson
Richard J. Schena	325e '85 528e '88	
Kevin S. Schwapp	2002tii '72 2002a '75	Russ Parise
Stephen C. Schwartz		
Christopher Schwindt	325 1986	Ron Perdall
Robert Scott	320i 1981	Major Strong
Mike Shaw	2002 1976	
Tom Shook	325es 1986	BMW of Fairfax
Richard Shinnick	2002 1971	Philip Wiethorn
Harold Shores	735i 1987	
Kurt Shovestul	320i 1979	Chris Harrington
Harvey Shugerman	325i 1985	Mitchell Warren
Scott Silverman	325is 1987	Joshua Gatoff
Tom Smith	318i 1984	
Michael Specter	318i 1984	J + F Motors
Les Stahl	735IL '89 528e '87	James Eating
Maria Stanton		
Matthew Stanton	Porsche 914-6	Bill Shook
Robin Steel	320i 1979	Rex Pippin
Eric Stewart	528i 1979	
Frank Stokes	Bavaria 1974	BMW of Fairfax
Junichi Takagi	M3 1988	Bill Shook
Jonathon Taylor		Jack Chandler
Todd VanHouten	525i 1989	Mike Mills
E. Vaughn Jr.	318i 1985	
Richard Wallach	733i 1984	M. Leeper
Mullen C. Walton	535i 1985	Tim Tate
DeShan I. Waring	1800ti	Jack Lewis
Darry Washington	325is 1987	Mike Mills
Sterling Watts Jr.	325 Conv. '87	Russ Parise
Eugene Williams	325e 1987	Curtis Glover
Michael Wright	325i 1988	A.C. Roda
Edward T. York	2002 1975	

The Officers of the National Capital Chapter and the staff of der Bayerische wish all our members and readers a very happy and safe holiday season.

Drinking/Driving, No Excuses

*from the Washington Traffic Safety Commission
via Auspuffanlage, Inland Empire Chapter*

If you have any doubts about a guest's ability to drive, offer an alternative. Their excuses don't hold water. Here are some ways to respond:

They've got to have their car in the morning...

Great! So let them curl up and stay overnight.

They've got to get home tonight or they'll be in big trouble...

Trouble is being caught and jailed for drunk driving.

They're not that drunk...

Let them know you're just not comfortable letting them drive right now. If they stick around a little longer they may be sober before they go home.

A little coffee and they'll be in great shape...

Wrong. Despite popular belief, coffee, cold showers and fresh air have no effect on alleviating intoxication.

They don't live far. They can make it...

All the more convenient to drive them home.

They can't afford a cab...

They can't afford a DWI either. Taxi fare is a bargain compared to fines, legal fees, law suits or even injury or death.

They've never been caught before. They won't get caught this time.

Sure. And why don't we pull the trigger to see if this gun is really loaded?

Alignment Tip

*by Harmon Fischer
of the Bayou Chapter*

Many BMW owners have been ripped off because they thought that BMW front suspensions were like those of American cars, and needed expensive alignment on a frequent basis.

There are three measurements of front suspension geometry — caster, camber, and toe-in. Caster involves the degree of rake of the front struts, camber measures the vertical positioning of the wheels (if the top of the wheel leans out, it is positive, if the bottom is out, it is negative), and toe-in (or toe-out) indicates whether the front wheels are running parallel. The normal settings are not necessarily horizontal/vertical/parallel, but rather what was designed into the car.

On a BMW, the only normal adjustment is that of toe-in. If the caster or camber is out, it is usually an indication that a very solid obstruction has been encountered, and quite possibly will require replacement of one or more suspension components or even cold bending of the strut assembly.

Rough streets, over a period of time, have a very bad effect on BMW tie-rods and center track rods. If your car "clunks" as it encounters pavement separations or chuck-holes, and the tie-rods and/or track rod has not been recently replaced, you might be ready for a bit of maintenance.

Ed. The last point here we can say is particularly important in the District! Keep it smooth...

Number Game

courtesy of the San Antonio Chapter

A tire loses about one-half of its resilience within three years of its manufacture. If you find someone selling you a 3-year old tire, you may wish to inquire elsewhere or talk a special deal.

Before you buy a tire, look carefully along the outside wall. There is a 3 digit number required by the Department of Transportation to be molded there (not everyone molds it on the outside). It takes a bit of looking and some practice to easily recognize what you are looking for, but it is well worth the effort. The number

you are seeking indicates the week and year of manufacture. For example, 421 means 42nd week of 1981. Here are a few examples of the number sequence found on two tires:

Pirelli P6 185/60R14 82H: DOT XB 99X JNW 252 E3.

Michelin XWX 165SR13: DOT FN E9 A 4M X 499.

Did you find the date? The Pirelli was manufactured on 252, or the 25th week of 1982. The Michelin on the 49th week of 1979.

MARKETPLACE

CARS FOR SALE

'64 1800 ti parts car, very rusty. Can be trailered to your spread if necessary. Call Tom at 854-3420 eves.

2002 Tii Race Car: Two engines, differentials(1 LSD), lots of other spares. Car built by TUV Engineering. Adjustable Racing Shocks, Fuel Cell, the works. Ready to Race. Will Paint to your favorite color. \$ 7,000. Reason for selling: moving to another Race Class. Call Max Rodriguez at 240-6072(days) or 831-9328(eves.)

1989 535i VIN WBAHD1315K2174071—5-speed, ltd slip, bronzit, 7000 mi. Garage kept. Like new. NADA Blue Book or \$35,000. Includes new custom fit car cover. Call Dick Bergen, 202-267-0972(day), 703-938-4680(eve).

PARTS FOR SALE

From 1980 733i: Leather rear seat (bottom & back) carmel color, rear window w/seal, hood & trunk lid, 4spd trans, complete fuel injection w/harness and air flow meter, trunk carpet set (complete), jack lug wrench wheel chock, starter, pr rear seat belts, 2 distributors-one electronic, one for points, fuse box w/ engine wiring harness, water neck w/thermostat housing, turn signal & wiper switches, 2 driver side mirrors, 1 passenger side mirror (chrome), front calipers & rotors-10K miles on rotors, rear diff, rr calipers, dirver side door glass fr&rr, call Paul at 829-1330 til 10pm.

Parts: 2002tii throttle body, Blaupunkt Bavaria am/fm cassette, pr bumper mount fog light gaurds, 54 lug nuts, Weber 45Dcoe carb, call Paul at 829-1330 anytime til 10pm.

Parts: New right front fender for 320i, \$75. Used flywheel, \$75. New flywheel, \$100. ALL NEW: Guibos 4 speed and 5 speed, pilot bearing, right grill, transmission mount, right side view mirror, McGard wheel locks for BBS 15X7 wheels. Mark (301)972-8237, 8-10pm.

Parting out '71 2002. New brake shoes, tie rods, center track rod, motor mounts. Send SASE for list of available parts and prices or call Mark Yaworski, 17567 Kohlhoss Rd., Poolesville, MD 20837. (301)972-8237, 8-10pm.

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6 Cylinder big blocks, standard or performance. Rex (301)828-8111.

6 Cylinder parts. Euro 3.5 ltr block, needs pistons \$600; Schrick 290' cam for big 6 with Korman dual valve springs \$400; on board computer display module \$275; '77 3 ltr engine \$700, hear it run; 2 '80-'83 320i heads complete \$200 each; late 320 block \$200; new passenger side quarter panel for 2002 \$150; 2002 trunk lid \$40. All prices are best offer. Doug (703)941-9002.

WANTED

More photos! Of Club events or fun Bimmer shots, for publication in *der Bayerische*. Write your name and the event (with date) on the back and send them to *der Bayerische*, c/o Bumper Crop Studios, 6939 33rd Street, NW, Washington, DC 20015.

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