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The Crash of My 320S BMW M1 Testdrive Box 685 Arlington, VA 22216

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All copy submitted must be typed and received by the editor by the 20th of the month preceding the coming issue.

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COMING EVENTS

SPRING TOUR April 16, 1983

On Saturday, April 16, 1983 at 10:00 a.m. meet at Precision BMW, Frederick, Maryland (301) 694-7400, 428-0400 D.C. After the arrival of all the participants we will drive with enthusiasm through some of Western Maryland's most scenic roads. Then later at approximately 1:30 p.m. we will arrive at Warner's German Restaurant in Cresaptown, 7 miles South of Cumberland, Maryland, There The Club will provide lunch and refreshments.

Directions: From Baltimore take 70 West to Route 355/85. Right on 85 to Precision BMW on your left.

From Washington take 270 North to Route 85 North. Go approximately 11/2 miles to Precision BMW on your right.

DRIVING SCHOOL INSPECTION April 23,1983

The mandatory inspection for driving school participants will be held on Saturday, April 23, 1983, 9:00 a.m. thru 12:00 p.m. at Heishman BMW, Arlington, Virginia (684-8500). Summit Point drivers and volunteers who would like to have their cars inspected at that time are welcome. This is a good learning experience.

Directions: From Washington cross 14th Street Bridge to Route 1 towards Alexandria. Heishman BMW is just past Glebe Road on your right.

DRIVING SCHOOL May 7-8, 1983

The Summit Point driving school will be held on Saturday and Sunday, May 7th and 8th, 1983 at The Summit Point Raceway in West Virginia (304) 725-8444. Times 7:30 a.m. both days for the drivers and 8:30 a.m. both days for the helpers. Use the application at this issue to enroll in fun. We still have a few places available for drivers. This is a safe, instructional and low pressure event. Come drive one day and help at the flag station the next day. If you do not wish to drive at this time, just come on up and observe, help and enjoy the sumptuous steak dinner, complete with beer, wine and soft drinks for only \$8. For the past two years over 100 members and guests have taken advantage of the driving school, the great steak dinner and marvelous door prizes.

MARRS RACE May 15, 1983

On Sunday May 15, 1983 at MARRS Race at Summit Point The Club will provide a corral, parade laps, beer and soft drinks. Bring your family for an eventful day of socializing and racing on a beautiful spring day.

To enroll in the May 7-8 Summit Point Driving School call Ira Winthrop (202) 275-6766.

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PRESIDENT'S MESSAGE

On February 18, 1983, the Club held its Annual Election and Dinner Meeting at the China Coral. The membership elected me President, Gordon Kimpel Vice President, Daniel Lim Secretary, and David Bowers Treasurer. On behalf of your new officers, I wish to thank you for the vote of confidence. This promises to be a most exciting year for me. We are planning many new and different activities for 1983/1984.

We will be joined this next year by Don Kellam, Membership Chairman: Raine Mantysalo, Editor of Der Bayerische, and Bill Riblett, Chairman of the Club Store. The Club's new activity chairman and future officers, known as Members-At-Large, are Dave Dunmire, Terry Forrest, John Hartge, Mike Kensler, John Nitzke and Dan Sherron. We have also established an Executive Committee to advise the Board of Directors (elected officers). The Executive Committee will aid in reviewing of policies, rewriting the By Laws and planning the Club's direction. Chuck Garrish, Klaus Hirtes, Cory Laws, Bill Loftin, Bill Riblett, Lothar Schuettler, Bernice Winthrop and Ira Winthrop have each made substantial contributions to the NCC as active members or former officers. I am certain that they will continue to contribute in the new capacity. My personal thanks to each advisor, member at large, chairman and officer who has agreed to serve.

Gordon Kimpel will continue to ensure that the NCC offers top flight (Did I write that?) driving events. The May 7-8, Driving School is the prima event. I have already signed up; there are only a few slots left, so if you would like to enroll, call Ira Winthrop (202) 275-6766. I started as a helper and found that it's a great way to see how the School is operated and to become familiar with the track. More helpers are needed for both days — contact Gordon to sign up. For all others, why not come up for the afternoon and enjoy the steak dinner? The price is right (\$8.00) and attendance and door prizes have been great.

For those who can't wait until May, how about the Spring Tour to Cumberland, Maryland. For more details see Coming Events on page 2.

You may be asking by now, what I plan to offer as the new president. Well, hopefully a few new ideas and more of what has worked in the past. We are planning two things that are especially unique - a membership drive and a charity fun rally. Don Kellam and his membership committee have some fine ideas for a membership drive. Both members and business establishments (dealers and independents) will compete in separate categories for prizes based on the number of referrals of new members to the Club. Watch for details in future issues. On July 17 we will hold a Charity Fun Rally to benefit Children's Hospital. The rally will feature outpatients and former patients as navigators in a low speed, distance rally. Prizes will be awarded for the greatest amount of money raised and the best distance turned in. Members who volunteered for the drive-a thon planned for last year will be contacted first. Watch for details in the May/June Der Bayerische.

The other thing I hope to bring to the Club is more of a sense of belonging. I am getting to know more and more of you and hope that this will result in your wanting to be more involved with your Club. Have you noticed a cashmiere (gold) 733i with Maryland plates WOR flashing and waving at you as you drive around town. Well, if you haven't, I just haven't seen you yet. Aside from those difficult maneuvers necessary to get through traffic in less than the predicted time, I look out for BMWs on the road. I hope that I see you and that you will return the greeting. Until next time.

Bill Ross

FROM THE EDITOR

You have probably spent some time wondering what ever happened to your March/April issue. Believe me, there were times when / didn't think there was going to be a March/April issue. The production of the newsletter was held up by a series of very unfortunate and very unforeseen circumstances, nevertheless it's in your hands. To help out some of the problems I have established some very basic requirements, that I hope will not get in your way of helping me and the newsletter out. (They are on page 2, under the master head.)

I want to thank you for all the support you have given me since I took over this job as an editor. It is just great to get letters like the one from Bill Adler, Parker Spooner (you haven't seen nothing yet) and all the other guys, thanks for the great shots, Jim Christensen, keep them coming! My special thanks to Bill Via, who does such an incredible job for our newsletter, keep it up.

The article on the "Crash of My 320S" did not get ready prior to going to print on this issue, the car will be featured in the next issue, (some cars take longer to be perfect).



Personally, the hunt is over! My some three month old search for a 2002 resulted in the purches of a '73 2002. I have to tell you that trying to find the car that would fulfill your requirement can be very timetaking. I must have checked out every 2002 for sale between D.C. and Richmond and took at least a look (stare) at a good three dozen or so; what can I say. A lot of them were "immaculate" and "mint", you know, but you couldn't press the metal because your thumb would go through.

I hope you have your spring car cleaning all planned out, don't forget to take some time off to participate in some of the upcoming Club events. I'll see you there!

Raine Mantysalo



UNDERWORLD UPDATE

We all know that BMWs are desirable automobiles, and some data I found recently in USA Today confirms this in a rather disturbing way. According to the Highway Loss Data Institute's survey of ten major insurance companies, the following cars were the most and least frequently stolen in 1981. The results were reported in relative terms, 100 representing the average rate for all 1981 model automobiles. The BMW 320i experienced the highest frequency of theft - 8.95 times higher than the average for all cars. One can interpret these statistics as a compliment in a backhanded sort of way. Especially when one looks at the cars least likely to be stolen. I'm frankly quite surprised that anyone would want to steal any of those cars. Perhaps they were stolen, only to be returned later by disgusted thieves.

BMW owners have lately been more inclined to install alarm systems in their automobiles, and no wonder. At least that beats driving around in a Ford Escort. WL

Frequency of theft claims	
Car Model	Highest
BMW 320i	895
Chevrolet Corvette	686
Ford Thunderbird	590
Ford LTD	392
Mercury Marquis	391
Car Model	Lowest
Ford Escort	23
Plymouth Horizon-2 dr.	26
Plymouth Horizon-4 dr.	27
Chevrolet Citation	29
Chevrolet Chevette	30

Reprinted from the Zundfolge, BMWACA Puget Sound Chapter.



CALENDAR OF EVENTS

April 2	Working Tech Session at Tischer BMW in Laurel, Maryland. 9:30 a.m. to 12:30 p.m. "Do-it-yourself".
*April 16	Spring Tour. Warner's German Restaurant Cumberland, Maryland.
*April 23	Mandatory pre-inspection for Summit Point driving school at Heishman BMW, Arlington, Virginia. 9:00 a.m. to 12:00 p.m., free inspection! \$20 at the gate otherwise!
*May 7-8	National Capital Chapter driving school at Summit Point Raceway.
May 15	MARRS Races at Summit Point, corral laps.
June 12	SCCA National Races at Summit Point, corral laps.
June 18	Tech Session at VOB Body Shop, in Rockville, Maryland. Subject: Bodywork

OTHER EVENTS OF INTEREST

The New York Chapter of the BMWCCA will host a Concours d'elegance at BMWNA headquarters in Montvale, NJ. In conjunction with this event, BMWNA will hold an Open House. The date will be May 15, 1983 from 12:00 noon till 4:00 pm. For more info call Raine at (301)953-7293.

A National Technical Meeting for BMWCCA members. "Gateway Tech '83", April 22-24, 1983 at the Holiday Inn Westport, St. Louis. For more info call Raine at (301)953-7293.

July 17	Charity Event
July 31	Crab Feast, Bayridge Yachtclub
August 14	SCCA Summer National Races at Summit Point, corral laps
August 24-27	BMWCCA National Octoberfest in Colorado Springs.
September 10	Tech Session at VOB Auto Sales, in Rockville, Maryland. Subject: Electronic Diagnosis. Members' cars wil be put to test.
September 18	Fall Tour: To Bavarian Inn
October 1	Octoberfest at Autoy.
October 23	Winery Tour
October 14	El Cheapo driving school.
November -	Augustfest.
December -	Wine and Cheese Party.

*See Coming Events for details.

1983 Blue Ridge Rendezvous sponsored by the Tidewater Chapter of BMWCCA. Memoral Day Weekend, May 28-30, 1983. For further info call Charles (804)562-2161 or (804)488-0030.

Bill Scott Racing School schedule: June 5, July 23-24, and October 15. For your "hands-on" training call (304) 725-6512.



To enroll in the May 7-8 Summit Point Driving School call Ira Winthrop (202) 275-6766.

RAMBLING RUMINATIONS

Acceleration misinformation: Road & Track muffs another one—The thirty-fifth anniversary issue (June 1982) of *Road & Track* contains what purports to be a compilation of the 0-60 mph times, as well as the quarter-mile elapsed times and terminal speeds, for all the cars ever tested by that magazine. Unfortunately, there are two egregious flaws in the presentation of the compilation that seriously circumscribe the usefulness of the data.

First, the compilation does not always indicate that a particular car tested was equipped with an automatic transmission (making it, typically, significantly slower) when that was in fact the case, as a check of the Road & Track issue containing the road test for certain cars will confirm. The 1981 Honda Civic 4-door sedan is an example of an automatic transmission-equipped car that was tested and that fact omitted in the compilation; another is the 1981 Saab Turbo; still another is the 1973 BMW Bavaria - and, no doubt, there are many more. The, seemingly random, omission of such a vital fact makes much of the data suspect, and is hardly conducive to valid comparisons. The compilation is not rendered worthless on this account, however, since, as many enthusiasts know, some cars are available in the U.S. with an automatic transmission only, while others are available here with a manual transmission only - but some cars in the latter group are available with the choice of either a four-speed or a five-speed gear box, and performance may well differ as a result of the type fitted. If you have the pertinent back issue of Road & Track, you can check a doubtful case, but to the extent that you must do that, the purpose of the compilation is unrealized.

Second, and more significantly for the purposes of this discussion, *Road & Track* does not explain in the compilation that, beginning with the road tests reported in its May 1977 issue, it used (a different, more efficient starting method for acceleration runs, but more importantly) lighter, more accurate, computerized testing equipment, which (most significantly) also made it unnecessary to have an observer on board, all resulting in lighter test weights (by an average of 250 lbs.) and better acceleration performance flowing from such a change is greater for the smaller cars since, as a result of the loss of a given amount of weight (here, about 250 lbs.), the smaller cars necessarily enjoy a greater improvement in (astested) weight to horsepower ratio, than do the larger cars.

To its credit, Road & Track did, in the May 1977 issue (see pp. 60-64), endeavor to explain this change and went so far as to provide a couple of graphs and straight-line equations for data conversion, so that it is possible to gauge (but only crudely) how a car tested under the old conditions might fare under today's conditions - provided you know its original test weight. For our purposes, it may be helpful to note that, in evaluating the effect of the change in testing conditions, Road & Track ran check tests on ten cars (said to range from a VW bus to a Ferrari 308 GTB) and reported that the new testing conditions resulted in 0-60 mph times that were quicker by 1 second to 2.5 seconds, and in guarter-mile times that were from .4 to .9 of a second guicker (but terminal speed improvements were not revealed). To reiterate, the greatest improvements were realized by the cars

experiencing the most improvement in (as-tested) weight to horsepower ratio, *i.e.*, the lighter, more moderately powered cars.

Roundel joins in (2002/320i)—It is doubly regrettable that *Road & Track* did not take greater care in presenting its anniversary issue road test data compilation for, had it done so, it could have provided its readers with more meaningful (or, at least, less confusing) information and, at the same time, spared us, perhaps, the dissemination, by our very own *Roundel*, among others, of erroneous conclusions based on misinformation in the compilation. For a case in point, see the first item under "Briefs" on page 6 of the July 1982 *Roundel*. This item, citing the *Road & Track* compilation says, in part: "More fuel for the 2002/320i debate: the 1980 320i tested slightly faster than the vaunted '68 2002."

The compilation does in fact show that the 1980 320i reached 60 mph from rest .2 of a second more quickly than did the 1968 2002; the compilation does not show that, due to the intervening significant changes in test conditions, the time for the 2002 must be reduced (by some factor that we can very roughly reckon to lie in the range of 1 to 2.5 seconds) before it can be validly compared with the time recorded for the 320i. Moreover, contrary to the implication of the Roundel statement, the compilation shows that the 2002 reached the guarter-mile from rest .1 of a second quicker than did the 320i (but with a terminal speed of 2 mph less than the 320i). But, again, to make a valid comparison with the time recorded for the 320i, the May 1977 issue of Road & Track teaches us that the time for the 2002 must be reduced (by some factor that we can very roughly reckon to lie in the range of .4 to .9 of a second) making its margin of quickness over the 320i in this test even greater. And, of course, removing about 250 pounds from the test weight of the 2002 would result in the attainment for it of a higher guarter-mile terminal speed, as well as a guicker time.

We may wonder why our comrades at the Roundel (apparently) did not notice, and become at least moderately perplexed by the fact, that the Road & Track compilation shows the 1977 320i (a real 2-litre car) as being slower in the 0-60 mph test, as well as in both facets of the guarter-mile test, than both the 1968 2002 and the 1980 320i (in fact, a 1.8-litre car). More particularly, the compilation shows the 1977 320i as being .9 of a second slower in the 0-60 mph test than the 1980 320i, and as being .7 of a second slower in the quarter-mile, while also achieving a 3.5 mph lower terminal speed. Could they have noticed but accepted without question the notion that notwithstanding the slightly more favorable (curb) weight to horsepower ratio of the 1977 320i, the lower (numerically higher) gearing of the 1980 model compensated for its lower horsepower and torque sufficiently to make it actually out-perform the 1977 model in these tests? (Such a result would, indeed, be a laudable, if not in fact a "legendary", engineering achievement.) This seeming anomally, explainable by the change in test conditions, may have been overlooked by the Roundel staff, but the reason remains a mystery, especially since note was taken of the acceleration times for a number of other BMWs.

Roundel again (tii)—In fact, the same *Roundel* paragraph quoted above contains this statement: "Tii purists have always been certain the '72s were the fastest. Not so, says R&T; the '74 (that's right, the one with the big bumpers) beat the '72 by 2/10 sec." Well, in truth, my copy of *Road & Track* shows the 1974 model to be .3 — not .2 — of a second quicker than the 1972 model in the 0-60 mph test. But, the *Roundel* did not report that the 1972 model, according to the compilation, reached the quarter-mile mark from rest .4 of a second quicker than did the 1974 model tested, although the latter model had a 2.5 mph higher terminal speed — a, *prima facie*, somewhat incongruous phenomenon, perhaps. Both cars were tested under the same (*i.e.*, old) conditions, so no adjustment of the data on the account is necessary.

It may be helpful to note that (to the best of my recollection) the early 1972 til models brought into the U.S. somewhat higher (numerically lower) gearing than did later (including 1974) editions, which, ceteris paribus, would have enabled the early models so equipped to attain a higher top speed at the cost of some loss in acceleration prowess. But other relevant factors (beyond the heavier bumpers, adopted in 1974) did not remain the same. For one thing, in 1973, the four-cylinder BMWs received revised combustion chambers, similar to those on the six-cylinder cars at the time, in an effort to enhance power while meeting U.S. exhaust emission requirements. It is true, as many people are wont to point out, that the 1972 til U.S. engine was rated at 140 bhp (SAE), but that was a gross horsepower rating (as many of the same people seem to forget), whereas the 1974 til U.S. engine was rated at 125 bhp (SAE), net.

Now, I'm not sure just what a til "purists" is although I owned a superb 1974 edition - but I distinctly recall that the conventional wisdom of yore, at least in these parts and among my peers, held that the 1973 models (with somewhat lower gearing than the '72s, with lighter bumpers, and lower ride height, than the '74s, and with the revised combustion chambers adopted in '73) probably enjoyed a slight performance edge over the others. I do not, however, have the definitive resolution for this conundrum, and Road & Track published no test on the '73. I might also point out that it was widely accepted in this area that any til was a formidable competitor for its six-cylinder sedan sibling contemporaries in a run up to 80 mph, or so. I have it on reliable authority that this acceptance was solidly bottomed on a fair amount of ad hoc "research" on the issue in the form of corroborative "road tests" that were, however, never formally reported.

The til and the 3231-A more intriguing question for til buffs, perhaps, is how would the til stack up against its three-series successor, the 323i? This is difficult to assess fairly and precisely, since we have no factory "Federalized" 323i models to use in the comparison. Some considerable light may be thrown on this question, and much of our curiosity allayed, however, if we compare performance data for the European versions of these cars. Would that we had, for this purpose, access to past issues of Auto Motor and Sport. There is available, however, Richard L. Busenkell's little volume, BMW Since 1945 (1981), among the appendices of which is one captioned, "BMW Performance Figures", obtained, I infer, from the manufacturer. Now, we know that factory performance claims, especially by Europeans, may be a trifle on the conservative side - that is, they may slightly understate actual performance. But, that factor does not preclude meaningful comparisons (intra-family) of the data, if the

figures are derived on a consistent basis (that is, skewed uniformally, in whatever direction), which it seems fair to assume is true of the BMW figures at hand. Let us, then, have a look.

According to the figures reported by Busenkell, the European 2002tii had quicker acceleration times than the European 323i: from 0-60 mph (by .3 sec.); from 0-80 mph (by .3 sec.); from 0-100 mph (by .7 sec.); and in the quarter-mile from rest (by .1 sec.), although the same quarter-mile terminal speed (80 mph) was attributed to both cars. The factory claimed top speed of the 323i is listed at 2 mph higher than that of the tii (*i.e.*, 118 vs. 116 mph).

It may also be somewhat instructive to look at Road & Track test results (September 1981) for a 323i, "Federalized" under the aegis of Hardy & Beck. One problem with this test, however, is that the car is claimed to have 162 bhp (SAE) net, which translates to more than the factory rating of 143 bhp (DIN). And, it isn't clear from the text whether the engine was modified (seems unlikely) or an erroneous rating reported (not improbable). Be that as it may, Road & Track reports, for this 323i, a 0-60 mph time of 9.3 seconds and a guarter-mile time of 16.9 seconds, with a terminal speed of 81 mph. Kindly remember that this 323i test was run under the new (starting May 1977) test conditions, while also noting that the 1974 til (the one with the big bumpers) ran 0-60 mph in 9.5 seconds and did the quarter-mile in a reported 17.7 seconds, with a terminal speed of 81 mph, all under the old test conditions - that is, while toting a 250 lb. testweight penalty. Now, Road & Track says the Hardy & Beck 323i reached a top speed of 125 mph in fifth gear, and 116 mph in fourth. I don't have at hand the top speed reported by Road & Track for the 1974 til, which had no close ratio five-speed transmission, but I believe that it was not appreciably different from the top speed in fourth gear reported for this 323i, which the til attained, of course, with the test-weight penalty, aforesaid. I should add that claims of indicated top speeds in the range of 115 to 120 mph were not uncommon among til drivers in my time, and such claims seem not unreasonable, given the 115 mph top speed claimed for the U.S. '74 til in the official BMW brochure.

A disgression for perspective—The 323i is a highly respected little sports sedan in Europe, and rightfully so. The forthcoming revised 323i will probably be a better performer than the present edition of that car and some might claim, "Isn't it about time?" But this discussion is hardly meant to be a put down of the 323i or a claim of flawlessness for the tii; rather, it is intended as a gentle clue for the uninitiated as to why the til was so widely perceived to be - and, in fact, was - such a magnificent little tiger, from the moment it was whelped, well over a decade ago. This discussion might also provide some insight into why many til owners, and aspiring til owners, were sorely disappointed, and even felt betrayed, when BMW refused to offer in the U.S. that car's successor, the 323i, and why this disappointment turned to disillusionment with the marque when BMW subsequently reduced the engine size of the three-series car it did decide to import here from 2 litres to 1.8, further hobbling that model's performance.

While the 1.8 litre three-series car presently sold in the U.S. may be an excellent little machine in certain respects, to think that it is in the same acceleration (and speed) performance league as the 2002 or, especially, the til variant is to engage in reckless fantasy. Yet, there apparently are those who are capable of thus distancing themselves from reality.

A strange letter—A letter in the December 1982 Roundel (pp. 60-61), under the "Back Talk" column, offers data on the 1972 2002tii and on the 1980 320i, purportedly taken from the Road & Track issues of May 1972 and February 1980, respectively, which points up again how easy it is to draw erroneous conclusions from Road & Track test data if one is not familiar with the significant change in test conditions that became effective beginning with the tests reported in the May 1977 issue. However, there are flagrant errors in the letter, the responsibility for which cannot fairly be laid at the feet of Road & Track.

While I seem to have lost, or misplaced, my copy of the May 1972 issue of *Road & Track*, I am confident that the horsepower of the 1972 tii was 140 bhp (SAE), gross, and not (an unqualified) 120 as claimed in the letter, but this, standing alone, is a minor point. The 0-60 mph time of 9.8 seconds, as well as the quarter-mile time of 17.3 seconds and terminal speed of 78.5 mph, given in the letter for the '72 tii are at least consistent with the figures in the June 1982 compilation by *Road & Track*. We might wonder, however, why the '72 tii was used for comparison instead of the later, somewhat better performing, 1974 model. Be that as it may, I do have the February 1980 issue of *Road & Track* and the acceleration data for the 1980 320i reported in my copy are quite different from that claimed in the letter. More particularly, the letter claims that the 1980 320i ran 0-60 mph in 9.8 seconds, whereas my copy of *Road & Track* says it took 11.1 seconds; the letter claims that the 1980 320i ran the quarter-mile in 17.1 seconds, whereas my copy of *Road & Track* says it took 18.0 seconds; the letter claims that the quarter-mile terminal speed of the 320i was 79.0 mph, whereas my copy of *Road & Track* says it was 77.0 mph. If you consider the proper *Road & Track* figures for the 1980 320i in juxtaposition with those for the 1972 or 1974 tii, even before taking into account the 250 lb. test weight penalty that hampered these two cars, the relative inferiority of the 320i in these tests is manifest.

There are in the letter other remarkable and. I think. unaccountable errors, all of which are, again, seemingly directed toward making the 320i look better than it is. For example, the letter gives \$12,000 for the as-tested price of the 320i, whereas my copy of Road & Track says the figure is \$13,025; the letter says the curb weight of the 320i is 2420 pounds, where as my copy of Road & Track puts it at 2435 pounds (but I believe it is, in fact, closer to 2500); the letter puts the trunk spack at 16.0 cubic feet, whereas my copy of Road & Track says it is 12.6. And, curiously, the letter says the 1980 320i has a ground clearance of 5.7 inches, whereas the data panel in my copy of Road & Track gives no ground clearance figure at all. The letter also claims that the 320i has larger brakes than the '72 tii, which I believe to be untrue, but even if it were true, it is braking surface relative to weight that is significant, not brake size alone. It is also noteworthy that the letter omits top speed figures for the two cars that it "compares". There are other flaws in the letter, but those already noted will suffice for these purposes.



Roundel's role-We might agree that, as a general rule, the editors of the Roundel should not be expected to monitor for substantive accuracy all the letters and other materials that are submitted and selected for publication, recognizing all the while that authors who submit letters and other materials have an obligation to us all to make every reasonable effort to be accurate. At the same time, we might ask why the Roundel staff should not, indeed, be extraordinarily knowledgeable and vigilant in the case of submissions of engineering and performance data concerning the very cars that are, after all, the magazine's (and club's) raison d'etre. At the very least, perhaps, the editor of the "Back Talk" column ought to be more prudent about appending an "Amen" imprimatur to letters, as he did in the case of the incredible letter under discussion. That action by the editor can hardly be construed as reflecting a neutral stance. Given the dubious decision to publish the letter, some word or phrase certainly ought to have been offered in response, but several other, more appropriate, interjections than "Amen" spring readily to mind.

Bill Via

THE PROBLEM OF NOISE

Reprinted with permission, California Sounds, San Diego, CA -

Since car stereo has become true high fidelity, noise has become somewhat of a problem. Noise that would have gone undetected in the systems of five years ago are plaguing the highly sensitive car stereos of today. Fortunately, many different kinds of noise suppressions are available to use and 95% of noise problems are easily correctable.

There are various types of noise problems in a car that can be fixed. The most common types of noise are antenna noise, alternator whine, ground loops, and radiator noise. Before you check for those problems, make sure that all the wiring in your installation are good.

With antenna noise, the chances are that the antenna cable is bad. Have all the cable connections checked, and check the cable itself for cracks and splits in the plastic shielding. If the antenna cable is fine and the noise persists, that probably means that the antenna is picking up ignition noise from either your car or a different car. If that is the case, an antenna noise supression is in order.

One major problem in cars is alternator whine. Alternator whine is evidenced by a high pitched whine that fluctuates with the RPM's. This is usually cured by a noise filter placed in the hot lead between the battery and the power unit.

The problem that is most difficult to identify is ground loops. Ground loops can occur when you have more than one piece of equipment to ground. An example would be having to ground a source unit, equalizer and amplifier. If all these units are grounded in different places, then all three places must have equal value. Some ground spots are better than others. If the grounding is inconsistent, then a whine much like an alternator whine will be heard. The solution to the problem is to ground everything to the same spot or find spots that are equally effective. If your spark plugs or spark plug wires are bad, then a static-type noise called radiated noise can develop. Most likely just changing plugs and wires will solve your problem.

Unfortunately, noise like wind, road noise and engine noise can't be suppressed. This type of noise is called ambient noise. Some cars simply have more ambient noise than others.

If you are having noise problems and can't quite figure them out, please give us a call and we'll be happy to figure them out with you.

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200,000 MILESTONE!

Just after Thanksgiving, the til covered its 200,000th mile since I purchased the car new in March 1973. I can happily report that the driving was essentially trouble free with the normal (or not so normal) complement of repairs such as 3 sets of brakes, 4 sets of XAS's, a few guibo's etc., etc. At 175,000 I had the engine examined (the car burned a guart of oil every 500 miles, so it seemed time for a look) and found all bottom end parts to be within production tolerances. I replaced the valve guides. rockers, pistons, etc. for good measure and am now enjoying hopefully another 100,000 or so. In order to keep anything for 10 years, you have to like it. The 2002 til has been an enjoyable and even exciting car to own and drive every day since purchased. The secret is a combination of a great engine design, frequent oil changes, and quality materials inherent in the older BMW's, which makes it possible to get such good service from the product. I only wish, I could find a car which offers the same qualities in today's market. In the meanwhile, I'll shoot for a quarter million.

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CAN A FIGHTERPILOT FIND HAPPINESS IN A BMW 528e?

All of us in BMW land have been exposed to a fairly consistent series of published opinions about the 528e. Ranging from damning with faint praise (C&D, R&T) to outright hostility (Auto Week), we have been told how the engineer/managers at BMW Werke have betrayed their heritage and our trust by producing a car for status wimps who would otherwise buy Diesel Eldorado's or 300D's. The boys from Bavaria have pandered to American "tastes" and betrayed enthusiasts by derating the 5 series engine, and most especially, lowering the rpm limit. Whoever heard of such a thing?

Since I consider myself an auto enthusiast who did a fair amount of research before buying my e, and after living with it for 9,000 miles, I don't understand what the fuss is all about. While I will admit right off the bat that the car cost too damn much, I must also admit feeling that the e is the state of the art for production sedans at any price, so BMW has a logical right to ask whatever they think the market will bear. The car is designed for the performance envelope applicable for driving in the US of A deplorable as these conditions might be, a beautifully packaged balance of performance, handling and fuel economy.

Perhaps because of my background as a fighter pilot I tend to seek out cars with responsive handling over other factors, along with the need to occasionally carry kids or customers. When my accountant mentioned that I needed something to depreciate, it opened up the window of auto-availability and I pitched into the selection process with gusto.

Over the years I have had some interesting cars and have shamelessly enjoyed demonstrating their superiority to less descerning motorists. I once had a four-barrel V-8 which could beat the jet I was flying to 80. But I couldn't help noticing that the only people dragging at the light had more pimples than I did. Even more to the point, you can be out on the four-lane doing 10 over legal limit, crosschecking three mirrors and the radar when some kid in a Duster or a matron in a Buick whizzes past. What does it mean except that they're feeling luckier than you today, or value their license less. And the car I've won most dices with was an early 504. Sure they could out drag me, but one catches up in a few seconds, and the car's performance allowed me to take it into regions that the other guy was unable or unwilling to enter. All of which leads me to the same opinion I started with: balance is all. Responsive, predictable handling, adequate power, well modulated brakes, reasonable economy. Let's drive a 528e.

First of all, just look at it sitting there. An artist friend of mine calls it understated elegance. Not too big, not too small, but just right. The lines are aesthetically perfect except for the sealed beams. It appeals to good taste and love of machinery.

Climb into the cockpit. Better visibility than most cars or airplanes, more enunciator lights too, for that matter. Most of the gadgets are really unnecessary, but since they come with the car, you may as well enjoy them. A case to point is the console mounted window buttons. Getting into your car on a hot day, just gangload the down buttons and let the stale air out (the circuit breaker, by the way is down by the steering column, one of several not found in the book). You couldn't do that with manual winders, or door mounted buttons.

The blinking master caution light is right out of a fighter cockpit, put there to warn the busy pilot that something had come unglued down in the bowels of the beast. You can't ignore the one in the e, since it has to be set with a touch of the brake everytime you start. It might save an engine some day for somebody, but whether the average e driver cares to deal with it daily is a question I can't answer.

The steering wheel is just right. I found the wheel of the Mercedes, for example, too bus-like, and the Audi Coupe too like a kiddiecar. The angled console really reinforces the cockpit feeling; all it lacks is a radar. Well, to be honest, amps, oil pressure and temperature would be welcome and reasonable additions.

What you do have, though, is the mpg computer. It's a sophisticated device that gives you a graphic picture of what effect your accelerator and gearshift positions have on performance efficiency. After a few months experience you pretty much know what it's going to indicate, but along the way you learn to set the car up to suit your driving habits. More about this later.

The heat and vent is first class; set it and forget it. It's handled all four seasons admirably. The stereo is current state of the art electronic glitz with a good but not great sound. The seats, well, I can't help feeling that they're designed for someone more teutonic than I. There are plenty of adjustments for the driver's side, however, so one can get the driving position one prefers. The shoulder belts are just fine, but then us pilots are used to buckling up.

Turn the key. It starts every time. On a cold day there is no racing engine, just the usual measured beat. Back it up; you can see all quadrants. Cut it sharp: what a turning radius; nothing like it since the Triumph Herald.

Let's drop it into first. When its cold it will make polite diesel-like clicks as you move out; that's normal. Don't run down to your dealers complaining the first chilly day. If it's warmed up, well rnaybe you'd like to tromp on it. Expect a little wheel spin, just enough to impress. If it's wet, you'll be the one impressed, because you're still standing still. My tire man recommends 36 psi in the rear, 35 front, rather than BMW's 29. This does help, though I recommend judicious use of the accelerator in the wet.

Back to first on dry pavement, it's a split second to redline, then down to second gear, grunch. Let's admit that getting to second can be a humbling experience. The secret is, clutch to the floor, move the lever smartly back. Score one of the critics; I'd gladly accept a retrofit on the gate.

But once there, we're in afterburner! Head back on the headrest: here comes that redline again. On a standard day, I come out of second gear at 55mph; isn't that convenient enough? Skip third and fourth and go direct to fifth. Engage cruise conrol and open the roof. Who's got a better ride?

For really serious acceleration, like merging into six lanes of assorted teamsters and commuters, I use third. It has a nice range, from 30 to 85, and I frequently use it all, 'cause I like to show off as much as the next guy. But I have just never been in a situation where I have not had enough acceleration. More to the point, what the e has is phenomenal torque where you need it, and the fuel control to get it on and off on demand. A good fighter plane appears to respond without conscious control movement; so does my e. Think about a lane change: you're there. Curl your toes: ten more knots. Think about slowing: you've got the drag chute. The tracking and steering are flawless. No car I tested came close. It wants to turn: no scrubbing off, no rear end out, no squeal. There is a little body lean, but that's part of the system. The car responds to finesse and makes it look effortless. No lag in throttle response up or down, quick steering with plenty of feedback, and brakes with linear response.

In my opinion, the whole question of open throttle-low RMP for this car is immaterial to driving it. While it is true that it will pull nicely in fourth at 1200 RPM, the computer dial shows the same 10 mpg as it does in second gear at 2,000. Drive it the way you like. In point of fact, I use third more in the e than I have wih any other car. Let me explain.

One of the nicer features of the electronic fuel injection is that fuel flow is cut off under conditions of closed throttle deceleration. Then as the car slows down or you depress the clutch, fuel flow is resumed so that the engine can idle. In a typical driving situation in my neighborhood, I'm on a rolling two lane road behind a large station wagon whose brake lights are on most of the time. I leave the e in third. There is plenty of torque for up hill, and good control downhill; saves the brakes and the fuel flows 0 on the downhill side. If I shift to fourth on each downhill side I use more brake and no less fuel.

Finally, stopping at the gas pump has its rewards too. In suburbia I average 27 mpg. And since I don't feel I've given up any performance to get the mileage. I get satisfaction everytime I fill it up. And service (knock on wood) has been excellent. I've had a low RPM miss which was fixed with a dab of silicon, and a recall for a throttle body heater which was installed while I waited. If you don't mind changing your own oil, the first scheduled expense is service at 15,000 miles. Since it has maintained its delivery tune, and comes with a 36,000 mile warranty, I'm not anticipating any immediate problems.

Of course the car has its sore points. Part of the bad press might he because it isn't an easy car to get used to. Shifting is a chore, and missing a shift deflates the reviewer's ego and lowers the acceleration time. And it is designed for American conditions; it's optomized for the 30 — 70 mph merge and cruise, so the driveability may not be as obvious as the lower RPM limit and horsepower from the 528i. And for the price the e should come with limited slip, a more civilized clutch, better fit and finish on the transmission, less wind noise, and custom seats.

As it stands now, however, the 528e is the most enjoyable, responsive and reliable car this enthusiast has ever owned. Taking note in the December BRIEFS that the 533i will list at \$5600 more than the e, that will be a considerable premium to pay to reach 60 in second gear. Now if someone would just come out wih a little heavier valve springs . . .

George B. Berke

LIFE WITH A FEDERALIZED CAR:

A "Weiss Mit Blau" 323i Cabriolet

I took delivery on a "federalized" 323i cabriolet in August 1982, after a series of negotiations unusual for a BMW purchase. The car is a 323i converted to cabriolet specifications by Baur of Stuttgart - a longtime BMW subcontractor which produces limited quantities of various models in top-down configuration. After the Baur treatment, the car was then shipped to the U.S. and "federalized" to meet the stringent DOT and EPA emissions control and crashworthiness standards by Sunbelt Imports of Houston. Properly speaking, then, the car was manufactured by BMW/Baur/Sunbelt - with labor, hardware, and extra cost from each stop along the way. It is one of about 3000 cars imported to the U.S. each year for federalization, and is one of about 5-6000 3 series cabriolets which Baur has produced. What is this type of car like? Bill Ross and Gordon Kimpel have already reported on a 323i cabriolet test drive in an earlier issue of Der Bayerische, but there are a few other important things which should be said based on my ownership.

Let me begin at the beginning . . . negotiations for purchase. I found that my particular car was available through Lothar Schuettler of VOB Auto Sales, which has delivered a small number of such "federalized" cars to local customers. My cabriolet was still in Houston when I first spoke to Lothar. The importer promised the car to me ... then changed his mind. Lothar had to intervene to close the deal. The Sunbelt owner had decided that HE wanted the car for his own personal use! After this minor skirmish was won, Lothar's son, Fred, flew to Houston and drove the car back. The car was truly custom built -following German practice. Literally everything on it is optional, down to a separate price for the right side mirror, the tinted glass, a transmission choice including a four speed or two different five speeds, etc. (This fact doesn't necessarily allow you to "tailor" a car easily, however, because you may have to wait 8 or so months for such a special order car to arrive from Germany. Instead, a faster delivery can be had if you do as I did and take a car with certain equipment on it which is already in the U.S.) Regardless of how you do it, there are plenty of 3 series options available on these special imports: power steering (about \$450), the cabriolet conversion (a mere \$3800). Recaros, sports suspension, expensive air conditioning (at about \$1600), large or small tool kit, "pop out" or "fixed" rear side windows on the coupe, high dollar sound systems, a locking glove compartment (\$40), foglights (\$125) - even the last two items are optional in Europe!

This all adds up to a very expensive fully loaded car — with a top-of-the-line price probably at about \$33K. While you may see these cars advertised for about \$21-22K these days in *AutoWeek*, check the optional equipment closely — for example, air conditioning and power steering adds \$2K alone, and the cabriolet option would drive it up another \$4K, much less adding a radio, foglights, etc. However, if you're considering the purchase of a federalized car, shop around a bit, because there are wild variations in prices for a similarly equipped

unit. In my case I purchased the car from VOB because another local area dealer wanted an additional \$5K for the same thing! Obviously, then, there are those who would like to make a healthy profit on these special cars. In some cases, however, you really can't blame the dealer for the price because of the peculiarities of the federalization process. The loophole in the law which allows these cars to be imported in the first place makes the federalization of each car a unique case - the importer converts the car to U.S. specs., hands a nonrefundable \$700-800 to the EPA test facility, and hopes his conversion will pass the two day long federal tests. If it doesn't, he gets the car back with a list of items to correct and hopes he can figure out how to get the car through the test the next time. Since each two day test costs the same price, each time a car fails it adds another \$700-800 to your price and stories are told of cars which have failed as many as four or five times before finally passing. Obviously, then, once an importer has found a "correct" way to get a particular model of car through the test, he should be able to duplicate it on each of his subsequent cars to keep the cost down. This is generally true, although I've also heard stories of cars set up with emission control systems using hardware identical to that on a car which passed, and still having them fail. This means that there is a natural variation in what the price of two identical cars could be.

Another variation is caused by the type of emission control hardware the "federalizer" actually uses. My car uses a real Heinz Variety mixture — a General Motors air pump and evaporative emission control system, Porche double pulleys to carry the extra pump, a Ford catalytic converter cut in three places and hand welded to fit the dual exhaust pipes, and plenty of hand fabricated brackets - shaped with a cutting torch. On the other hand, high priced federalizers use more sophisticated emission control gear; since BMW itself sells cars in emission regulated countries like Sweden and Japan, some of this gear is available for use in U.S. federalization of the same models (albeit at higher cost than the GM/Ford gear used on my car). You may want to ask questions about the type of emission control gear the federalizer used when considering a purchase . . . a higher price might mean higher quality.

Speaking of quality, what is the quality of the Baur/ Sunbelt 323i conversion? Baur does an excellent job on the cabriolet arrangement; the fit, quality and hardware of the top are superb. The top even came with a rectangular vinyl cover which snaps on over (just) the rear window . . . great to keep the dew and dust off the window at the racetrack or at night. I had some minor repainting to do on the drip rails above the doors, however, because the Baur rubberized paint was unevenly applied. The only other problem area which I watch is the Baur trunk lid seal, installed below the rear window line, which tends to collect water rather than sealing it out.

On the other hand, the Sunbelt federalization is ... only pretty good. The good news is that there are absolutely no driveability problems associated with federalization. The car starts easily hot or cold, runs smoothly on premium unleaded, and delivers a solid 27 mpg on the open road. The emission gear itself is another matter. As Woody Hair pointed out in an earlier Der Bayerische article, the catalytic converter on my car is close to the ground and can scrape easily ... it was situated as close



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to the manifold as possible to meet the nitrogen oxide limits, which meant putting it very far forward. The air pump was tucked in too close to the inner fender, so some minor repositioning was necessary after purchase. The same repositioning was required for the power steering pump, which had been moved to accommodate the air pump and had subsequently worn a pinhole in a radiator hose. Another problem was replacing a piece of heater hose which had been installed by Sunbelt on the supply side of the power steering pump. They needed some extra length, and apparently heater hose was the only thing they had laving around the shop! In other areas, however, the Sunbelt federalization is quite good. This particular car was fitted with U.S. 5 MPH bumpers (no longer necessary under the relaxed standards) and the quality of the conversion is high. And, the door beams that were added for crash protection were bolted rather than welded in, which makes for a neat installation when viewed from the end of the door. The seatbelts work quite well, the steering column conversion is excellent, and the gas tank filler neck conversion (the unleaded syndrome) came with a locking gas cap.

Regarding any minor problems, VOB has been absolutely great about the car. Lothar Schuettler stocks basic parts for the car, and there are other stateside suppliers as well. (The warranty with the cars, by the way, is a standard European one year arrangement with a VOB five year/50,000 mile drive train warranty.) It should be said, however, that even such minor things as the dashboard knobs are peculiarly German — the unique air conditioner knob started to strip out and we found it necessary to repair it since a special order replacement from Germany never came through.

Well, that's enough on the intimate technical details of the car. What's it like in daily use? Spectacular is probably the best word for it. People ring the front door bell during the dinner hour to ask about it. Passersby stop to reminisce about their long lost 320 or 2002 or 530 (no Isetta owners yet). A fellow BMW owner stopped her car in the middle of a busy street to stare when I passed her. White haired men in four door Chevrolets smile and wave. We've gotten accustomed to having 60 MPH door handle-to door handle window-down conversations with fellow motorists on freeways about the car. The "thumbs up" sign is common, and we collect thumb prints on the hood from the curious even when the car is protected at the back corner of a parking lot. Kids in souped up Camaros stop to check out the top, although when I tell them it's a SIX cylinder they think it's the economy model (No V-8??). I still get shut down by 5 liter Mustangs and Z-28's in the stoplight grand prix, but everything else has trouble getting away. For some reason, the car makes middle aged people who drive (or is it aim?) Chrysler products mash down their accelerators when we're side by side. Freeway driving becomes hazardous to one's health when eight high school kids in a '66 Chevy park a few inches off the bumper to stare. The mere act of passing in the fast lane makes other people match the speed to check the car out, and even eighteen wheelers honk and wave. The uniformed say the car is like "... that Toyota convertible" conversion, and hardly anyone quesses the high price. Owners of early 320's suggest that it probably costs \$18K (!), with most people saying \$20K. (Let's see . . . with a new Ford Mustang convertible at \$16K, that would be some deal!)

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Is a federalized 323 cabriolet worth the money? It's hard to say; by paying the money, I guess I've made my choice. The car IS about as unique as you can get, and obviously "unique" has a price . . . high. The uniqueness of having a U.S. certified factory six cylinder 3 series will pass if the so-called 326 e is actually imported, but on the other hand a Baur BMW cabriolet will always be rare. If the federalization loophole disappears as some predict it will, the car will become even more unusual. On the other hand, if the loophole stays open, federalizers may get more competent in doing easy conversions, and competition could drive prices down considerably. Parts availability could be a problem in any case; only time will tell on that issue, but fortunately most parts are common to various models.

What IS safe to say is this: that with the top down in good weather, hung out sideways on a 495 entrance ramp, starting to enter the stream of traffic by shifting from second to third gear at 60 MPH . . . the car is pretty hard to beat. It's a pricey BMW that may or may not appreciate in value, but all-in-all its a HAPPY car, and that's worth a lot!

Skip Marsh

SELECTED 323i SPECIFICATIONS

- 143 bhp 2316 cc 6 cylinder engine
- 140 ft/lb of torque @ 4500 RPM, 9.5:1 compression
- · Vented front disc brakes
- · Rear disc brakes, handbrake via drum brake
- Tilt angle limiters on the front suspension struts
- Sports suspension
- Dual exhaust
- · No front wheel shimmy, no brake dust
- Cabriolet: no rear stereo speakers; fiberglass top panel stows in a trunk rack
- · Fast and smooth, vibration-free motoring.

TECH SESSION ON RUST AND RUST PREVENTION

It was a beautiful Saturday morning, one which had been blessed with the most delightful weather of the season, and bimmers from all around the area had decided to make use of this magnificent day not only to show off their machines but also to learn about rust and rust prevention.

If you were part of the thirty or so members attending this particular Session, you shared the same interest of preserving your ULTIMATE DRIVING MACHINE from the evils of corrosion.

The session started with what else, coffee and doughnuts, soon there after our newly elected President (Bill Ross) welcomed all members to the event and proceeded to introduce Tom Baruch of London Auto Services.⁴

Tom began pointing out the differences of surface rust and integral rust, as well as to the WHY'S and WHERE'S. The causes of rust come from improperly sealed welds at the factory which attracts road grime and salt spray and tend to accumulate and retain moisture in between body panels. Drain holes which are either clogged by this grime or have been blocked shut by the improper use of hydraulic lift. Are also responsible.

Rust is like a cancer and should be taken seriously. Once it begins, it will require immediate treatment or else it will spread, therefore early detection is critical.

Once the first signs of rust appear (bubbles on the paint or actual rust showing on metal parts) if must be treated before it gets any further. I HATE THE SIGHT OF A RUSTY BIMMER.

In order to show us the evils of corrosions and what can happen if it i not treated at the early stages, Tom had on display a beautifully rusted 1971 2800 CS to experience first hand this type of cancer. Being the owner of a gorgeous 1972 3.0 CS I know the feeling of what it can do.



Now that we have an understanding of rust, its evils and its symptons, lets start talking about treatment.

As stated before early detection is the key. Once you have determined the extent of the damage, the following products and techniques will work for the DQ-IT-YOURSELF buffs.



RUST TREATMENT PRODUCTS

- 1. Expose the rusted areas by removing the paint and sanding the surface to bare metal.
- Apply a rust removal product. Tom recommends OXI-SOLV with RUST-BIOX as the alternative. These products are sprayed over the rusted areas where it then forms a phosphate coating which can then be repaired and primed.



3. Body Fillers:

- Aluminum base
- Fiberglass base

These fillers are waterproof and can be used to seal cracks and areas where road grime can get into. NOTE: Do not use PLASTIC base body fillers since these are not waterproof. Careful reading of the instructions on the use of these products, will eliminate surprises due to their misuse.

PAINTS

Among the different types of paints in the market ie. Urethane, Polyurethane, Laquers, Enamels etc., the ones recommended are: Imron (Polyurethane), Deltron (Urethane) of which Imron is about 5% tougher.

RUST PROOFING

DURO Rust-proofing kit.

It is always recommended that 'when in doubt, ask someone' for assistance, even if it means paying someone to give you an estimate of the damage.

For those of you were unable to attendthis session, I hope the above information can assist you in treating your bimmer.

Although there were no door prices given this time, we did receive a wealth of information about rust and its treatments. (The beer drinking out of Gordon's 530i was great, too.)

We thank London Auto Services for making this event a very gratifying experience.

Max Rodriguez

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POLO, PICNIC AND CAR SHOW

The Potomac Polo Club (PPC) has invited us to join them, antique car owners and members of selected car clubs for an afternoon of high-goal polo, a car show and your own tailgate picnic lunch. The date is August 14, 1983 — so plan ahead.

Each year, the PPC designates one Sunday as "Tailgate Sunday". The tailgate picnic prize will be awarded and we are welcome to join with their members in what promises to be a most enjoyable occasion. The game will start at 4:00 p.m., but we are advised to come earlier to avoid the pre-game rush.

We must advise PPC of the approximate number of members who will be attending by July 15th and a firm number by August 10th with the names of the drivers to ensure that the cars and passengers are given free admission and have a parking space reserved.

The grounds are located just off River Road, 12 miles West of Potomac — more details will appear in the May/ June issue.

Bill Ross

TECH SESSION ON ENGINE REBUILDING

January 29 saw not only a fine sunny day, but a turnout of well over 50 club members for the Tech Session on engine rebuilding held at J&F Motors Ltd. in Arlington, Virginia. Joe Anderson, one of the principals at J&F, was on hand to make the presentation and he had a mountain of BMW engines in various stages of disassembly with which to illustrate his discussion. Audience enthusiasm was high and knowledge levels varied from those who had rebuilt a few engines themselves to others who had always been' curious about what lies under the big aluminum thing supporting the oil cap.

Joe concentrated on the 6-cylinder engines, with special attention to strong and weak ponts. It was very informative to learn the symptoms of a cracked cylinder head, why cracks develop, and what BMW did to correct the problem. Not to mention getting a close-up look at a cracked head complete with the telltale pitting that occurs when combustion takes place with antifreeze as an auxiliary fuel supply! Similarly, loose oil gallery plugs and loose rocker arm pads were indicated (not all on the same engine!) and the cures were described in detail. Those in attendance now know exactly how to check for such problems whenever the cam cover is off.



In contrast to the head problems, Joe indicated that it's extraordinarily rare to find a BMW engine with any sort of crank, rod, piston, or other "lower-end" problem. It was quite fascinating to have the benefit of Joe's 10 + years of BMW rebuilding experience; he can easily correlate a particular engine's problems (or lack thereof) to specific characteristics of the car's use and upkeep. On his own BMW's (three, currently), his experience has ranged from "budget" rebuilds to all-out reconstruction. Each type works fine, he says, one just lasts longer than another.



Numerous questions were fielded, ranging from the advantages of highway versus driveway warmups to the choice of factory or aftermarket piston rings at the first rebuild. It was great to be able to peer right into a BMW crankcase, study valve operating mechanisms first hand, and compare worn parts to their new replacements. The high quality of both design and construction was quite apparent in the engines, certain weaknesses aside, and it is remarkable how much power can be developed from such compact pieces of aluminum, steel, and iron.

The shop area at J&F was, in contrast to many automotive shops, very hospitable. It was clean, uncluttered, and well-lighted. They rebuild roughly 5-6 BMW engines per week, in addition to doing more routine tuneup and repair work. The various costs quoted sounded reasonable, particularly in comparison to dealer charges. Club President Gordon Kimpel says the staff is patient and willing to discuss your situation thoroughly. They'll even let you watch as the work progresses if you're careful. If your Bimmer has over 100,000 miles on the clock and is starting to trail blue smoke or sound like the Hammers of Hell, J&F Motors Ltd. would be a good place to investigate.

In the back corner of the shop, Denny Sorber of National Transmission Service explained the intracacies of automatic transmissions to a subset of the group. Judging by the sounds of air wrenches and occasional loud banging, plus the many favorable comments, it was highly informative.

All in all, it was a first-rate Tech Session — one that the club would be well advised to repeat in the future. The buffet lunch, arts discount, and ensuing conversations were icing on the cake.

Rick Foster

TECH SESSION ON MOTOR OILS AND SYNTHETIC LUBRICANTS

On Thursday, February 24, 1983 Terry and Neil of Quality Car Service, Ltd. hosted a very informative Tech Session on motor oils and synthetic lubricants. In addition to a tour of their new service facility (including a demonstration on their dyno), refreshments, product displays, and individual consultations, Terry Luxford shared some of what he has learned about lubrication in over twentyfive years of experience as a BMW mechanic and more recently as a race car crew chief. Some of the points from his discussion which would be of general interest included:

- Use 20W-50 oil year round
- Avoid lubricants with graphites
- . In general, when level starts to go down, it's time to change oil (consumption of oil indicates that it is breaking down)
- Repeated hard right turns (Summit Point, exit ramps) can cause consumption of oil since the breather is on the left side of BMW engines
- The gasoline guality today isn't very good. Amoco 93 octane is the best of the lot
- As far as engine oil QCS recommends Valvoline 20W-50 Racing oil (which they sell by the case at a very good price)

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- · Short trips in which the engine does not reach operating temperature, can cause heavy wear especially in the winter
- QCS recommends that after starting your car, drive away immediately and let the engine warm up on the road rather than in the driveway
- The dip stick marks on your BMW are more than a quart apart
- · Never add oil until the level gets down to the second mark - don't top off
- The oil in your BMW should be changed every 90 days or after 2,000 miles for Castrol, 3,000 miles for Valvoline, or 6,000 miles for synthetics.

Thanks to Quality Car Service for hosting this session and for all of the support they've given the Club. QCS is located at 210 N. Stonestreet Avenue, Rockville, Maryland (340-8BMW), near Rockville Mall.

David Dunmire

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MEMBERSHIP APPLICATION



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	1979	528i
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Duane Schmidt	1970	1600
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Bruce L. Dunn	1976	2002
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Mike Arnold	1971	2002
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	1982	320i
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FOR SALE

1969 2002. Red, A/C, 4 speed, 5,000 miles on professionally rebuilt engine. Good battery, tires, shocks, new exhaust. Solid, straight car, needs only minor cosmetics. \$1,900. Roland Williams (703) 250-5493.

1973 Bavaria 3.0. Sahara with tan interior; auto. trans.; A/C/; 30K on rebuilt engine; dbl. core radiator; new Eagle GT tires; OEM tool kit; car cover; spare parts kit; Alpine AM/FM Cassette; Halogens; new front Bilstein shocks; Bilstein Waxoyl undercoat; new battery, distributor, underhood insulation; regularly serviced - all records; \$4,800 or reasonable offer; call 270-6655 and leave message.

WHEELS: 2 original 51/2" x13" wheels from 1973 2002 with good condition Michelin XAS tires. Also two hubcaps in fair condition. Make offer Craig Sablosky (202) 265-6368 evenings.

PARTS: From a 1969 1600; 4 speed transmission, cylinder head, starter, alternator, carburetor and other engine parts. (703) 786-2994.

1972 2002 til. 4 speed, sunroof, Blaupunkt stereo, new radials and wheels, new BOGE shocks, new metallic silver paint, 11 years of service records, foglights, new exhaust, excellent condition. 127,000 miles, \$6,995. Steve Heger W 445-4300, H 262-7469.

FOR SALE

Phoenix 3011 Racer tires, 195/60VR14. Brand new, still in original package. Sells for \$132.35 + tax at NTW, will sell for \$99 each, price incl. valve stems. Max Rodriguez W (202) 775-3308, H (301) 530-4697.

Spring Garage Sale. From 1978 530i: Exhaust downpipe \$30, rear bumper - scratches on top, but not bent \$75. air pump 2 thermal reactors and hoses, make offer, 4 Alpine speakers and equalizer, excellent shape \$200, 2 6x14 steel wheels \$30 (not perfect, but excellent for spare), 1 four speed trans, still in car \$700/offer, buying a five speed. Gordon M. Kimpel 524-8712 days, 527-3234 evenings.

WANTED

4 51/2x13 factory alloys. Ted Ibach W (703) 527-9200

THE SNUFFERS ARE IN!

The Club's order of SNUFFER fire extinguishers has arrived. These are the halon extinguishers described in the October Roundel. By purchasing in case lots The Club is able to offer these extinguishers at about half the suggested retail price. For further information or to make arrangements for picking up your extinguisher, call 565-2970 days, or 933-3257 evenings. David Dunmire





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