

**BMW ACA
Puget Sound Region**

Zündfolge

July 1992



**South Carolina
Announces BMW Plant**

**Photos of the
New V8 Engine**

**Nast Picks on
Spiro T. Quayle**



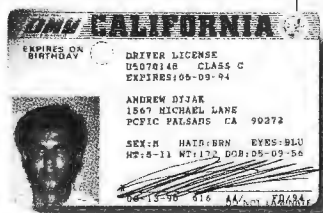
THE LAW VIEWS DRIVING AS A PRIVILEGE. BMW PREFERS TO VIEW IT AS A SKILL.

In Germany, before you could get behind the wheel of a car like the new BMW 325i sedan, you'd first have to do a bit of homework. Up to 30 driving lessons at a cost of 1,000 dollars, in fact. Just to obtain a license.

Needless to say, in a country where there are highways that have no speed limits, they take the skill of driving seriously.

Perhaps that's why at BMW, we

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▲ At BMW, we believe that driving requires more than just a license, it requires skill. Something a BMW, any BMW, can make the most of.

engineer our cars not simply to make the most horsepower or the most luxury, but to make the most of the driver's skill.

Take the 325i's rear suspension system, for example.

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sensitive power steering, a high-performance/low-maintenance engine, and an interior designed around the driver's needs, what you arrive at is an automobile that acts not as a separate entity, but as a natural extension of the driver's will.

So if you agreed driving is not simply a necessity, but instead a skill that should be taken seriously, perhaps you should test drive the car that takes the driver seriously. The BMW 325i. For the location of the BMW dealer nearest you, call 800-334-4BMW.



◆ The new 325i features BMW's latest generation antilock brakes, providing for improved control even in emergency braking situations.

◆ With over-steer (A), rear tires can slide out of control taking a turn. BMW's possess slight under-steer (B), for a turning characteristic that is easier to control.

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Cover: BMW V-8's past and future: The 502 from 1954 and the 740i for 1993.

Inhalt

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BMW ACA events are partially supported by a generous grant from BMW of North America, Inc.

Activities

Magazine Help Needed

The staff that puts out *Zündfolge* ten times a year, would like some help. We're looking for someone to make a long term commitment to the staff. Tasks include proofreading, paste up, writing and editing. Eventually, we want to produce the magazine on desktop publishing software. That will require someone with computer expertise and someone to do typesetting.

The payoff? Satisfaction and the fun of working with a good group. Call David Lightfoot at 282-2641 if you're interested.

'You Asked For It'

Of all the requests we receive from the membership, the majority are asking for more time on the track. Well, you asked for it and here it is. Monday August 17th will be open track day at SIR. Here's a great opportunity to extend your weekend and spend a summer's day at the track driving to your heart's content. This event is for those who have attended at least one club school. For those who have not yet attained Level 1, we'll have a few instructors available to ride with you. The amount of time you'll get on the track presents the opportunity to upgrade your skill level. From Novice to Level 1 or Level 1 to Level 2. Take advantage of the occasion and drive your BMW the way it was meant to be driven in an environment that is safe and free of radar. We'll have the gates open at 8:00 a.m., hit the track at 9:00 and run until 5:00 p.m. Tech inspection will be done at the track so make sure your car is in good condition. Also don't forget to bring your log-book. So send your registration in today and benefit from the pre-registration savings. Mail entry form and check to:

Gary Parr
3537 E. "L" St.
Tacoma, WA 98404

We're looking forward to a good turn-out so come join us and we'll see you at the track.

Calendar

- July 18** **Track Day at PIR** hosted by our friends in Portland. Contact Gary Parr for information.
- July 25** **Tech Session** at Strictly BMW Independent Service in Bellevue. The topic is emergency preparedness. See article in this issue.
- July 26** **Port Gardner Bay Classic Car Show.** Held in Everett to benefit Deaconess Children's Services. Come to Legion Memorial Park between 10:00 and 4:00.
- August 6** **Board Meeting** at the the Muse residence, 12437 N.E. 146th Place, Kirkland. Call 488-6873 for driving directions.
- August 16** **Autocross** at Boeing Space Center in Kent
- August 17** **Track Day at SIR.** All day, Monday, at SIR. See Gary Parr's article for more information.
- October 18** **High Performance Driving School.** Full instruction and designed for the novice. The *only* way to drive the ultimate driving machine.

Track Day at SIR August 17, 1992

#1 Drivers Name _____

#2 Drivers Name _____

#1 Drivers Experience: ☐ Attended School ☐ Level one ☐ Level two

#2 Drivers Experience: ☐ Attended School ☐ Level one ☐ Level two

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Registration received by August 8:

☐ \$100 car/driver ☐ \$20 co-driver

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☐ \$120 car/driver ☐ \$20 co-driver

Total Amount enclosed \$ _____

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Emergency Preparedness

Strictly BMW will host a tech session on July 25th. The subject of the session will be Emergency Preparedness, including pretrip inspection, on-the-road failure and fault diagnosis, and quick fix repairs.

Pretrip inspections will emphasize how to check your car over prior to a major trip.

The fault diagnosis portion will include testing of fuses, drivability and troubleshooting.

Strictly BMW is located at 2111 140th Avenue N.E. in Bellevue.

The session will run from 10 a.m. to about noon. Phone 747-6044 if you have any questions. Then join strictly BMW owner Ron Newell for this informative event.

A Wet, But Fun, Wine Tour

Despite the tour director's uncanny ability to pick the only wet Saturday in June, several hardy souls ventured forth to take part in the Club's Western Washington wine tour. Despite the inclement weather, everyone seemed to have a good time.

Vehicles on the tour included an M5, M6, two convertibles (yes!), and an ix. The trek began at the Cascade Estates Winery near the University of Washington. The wines were good value, but varied widely in quality. If anyone is interested in getting more wines here, better act soon, as the winery is going out of business.

From Cascade Estates it was on to an abortive stop at Paul Thomas in Bellevue (tasting room closed). After

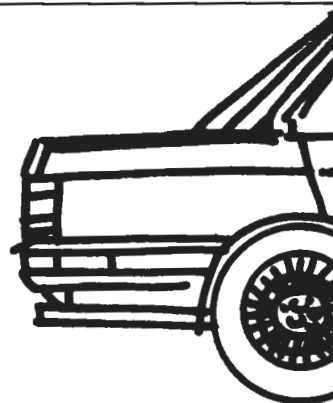
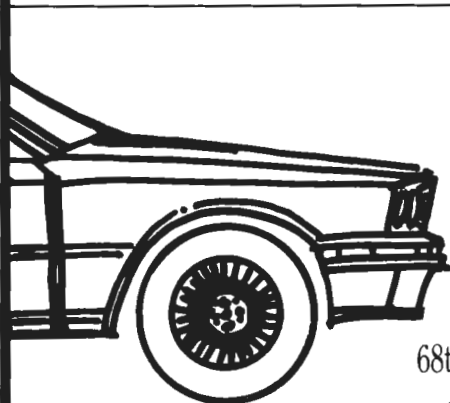
lunch, we gathered again at the newly opened Hedges Cellars in Issaquah, which featured excellent wines that were an exceptional value as well.

From Hedges we took a trip up to the Snoqualmie winery, with a detour to Boehm's candy factory thrown in. After that it was an enjoyable hour or so north to the Quilceda Creek winery outside Snohomish. Alex and Jeannette Golitzen have recently released their 1988 Cabernet Sauvignon to the expected rave reviews. Alex gave us a thorough tour of the winery, discussed some of the secrets of the trade, and answered questions. This is obviously a labor of love for the Golitzens, and the care lavished on the wine is evident in the tasting. A wonderful way to end the day.

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Stalls

by Thomas B. Nast

Electing the Elite

It was hard to overlook Spiro T. Quayle's dribblings concerning the "Cultured Elite" the other day. At first I thought this was some type of yogurt he found at an espresso stand. Then I thought it was a misprint, and he meant "Curried Elite," a wonderful dish served with fried bread in Indian restaurants. But it was no misprint — he was talking about what is most near and dear to fellow Americans: Cars. He raised two important questions: What is the Cultured Elite, and why shouldn't we like it?

Now, I never considered the Elite to be a particularly Cultured car. I mean, how can a car with Lucas electrics be considered Cultured? Why Lotus thinks it can get away with charging \$60 to \$80K for over-stressed four-cylinder cars has mystified me for over two decades. (It should have mystified GM, too, but it went ahead and bought Lotus anyway.) But then I recalled that there are such things as Cultured Pearls, which are relatively cheap things grown around pieces of dirt inserted into oysters, and it all began to make more sense. The Lucas electrical system is that piece of dirt, and a Cultured Elite is grown around it by Lotus, which is the oyster. Some of them even come with Pearlescent paint.

It gave me a great sense of relief to finally realize that Spiro T. Quayle is a car guy, and a sophisticated one at that, one who understands British cars and symbolism, even if he doesn't like the cars very much. He always struck me as more of a Caddy kind of guy, and I mean Seville and not Allante; to find out that he has a special understanding of Lotus really takes him out of the Mr. Potatoe Head class. Does he turn over surplus campaign contribution to the remnants of Harrah's Auto Museum? Is he railing against New York because the only cars built there are Chevys so lousy that the plant is being closed?



The antithesis of us car guys appears to be one Richard M. ("I have a secret plan to end the deficit") Perot, who, according to press accounts, drives around in an early '80's Buick, and who probably never gave one thin dime to any auto museum of any sort. Now, if I was the kind of guy to buy a car and hang onto it a really long time, not because I had to but because it's the economical thing to do (and I am that kind of guy), I think a Buick would have been pretty close to the bottom of the list in the early '80's (let's face it, Renault and AMC are down there counting the worms). The early '80's were not a time of great distinction in the car industry in general, it must be admitted, but if I had three or four billion burning a hole in the bank, I could at least swing a sedan with a decent power steering pump and that goes around corners. Sign me up for a Mercedes or, well, make it a Mercedes. The M-Series hadn't been hatched yet.

So maybe Quayle could get along with Perot, since both seem to want nothing to do with Cultured Elites. But there is a difference between them. Quayle knows that the Elite is grown in England around a piece of dirt, or perhaps soot, but Perot doesn't have the slightest idea what an Elite is. Perot, however, would like to sell you one, or perhaps two if you could afford them

(terms are available). Quayle, on the other hand, only wants to sell you on not having one. Given a choice, he would sell you a Buick, probably a used four-cylinder job built in the early eighties.

This state of affairs has really confused the car-loving electorate. Several centuries ago, it would have responded by throwing Cultured Elites into Boston Harbor. But Quayle's boss made an issue four years ago about too many things already having been thrown into Boston Harbor, so we don't get to throw things there any more. Chesapeake Bay is still available, but the denizens of Baltimore have never had the irresistible impulse to backfill the shipping lanes that Bostonians have. There just doesn't seem to be an outlet any more for the national tradition of delading vessels of overpriced commodities into a convenient channel of water. In fact, we must now conserve even the basest of existing cars. The party which pledges "No New Taxis" is the one which wins, even if it celebrates victories by buying new Cadillacs.

There is a way through this public perception of overblown English cars being politically incorrect. Just hire on Malcolm Forbes as our national leader/spokesman. Now this is a man with a collection of antique and current Harley and BMW bikes, who likes to travel by hot air balloon (perfect in Foggy Bottom, where the fuel is plentiful); a man who knows a Cultured Elite when he sees one, but has too much class to own one. My CompuServe correspondents suggest that his four-wheeled stable includes a Quattroporte and a Countach. It only adds to his attraction that he died several years ago. He will have less of a tendency to make the mistakes in office his survivors and successors make, such as sticking with early '80's Buicks and getting indicted for withholding memoranda from Congress. And maybe we'll get to drive some of his machines — he doesn't need them anymore, after all.

BMW to Build Plant in South Carolina

It's official. BMW will build a manufacturing plant in Spartanburg, South Carolina. The investment could reach \$400 million. The plant will employ about 1000 initially and about 2000 by 2000. Spartanburg County has already attracted other German firms including Bosch. The South Carolina legislature gave BMW tax incentives worth \$150 million. The local Chamber of Commerce negotiated with property owners in order to provide 900 acres to BMW.

The new plant will begin operation in 1995. To be built at the plant is an all new small BMW to be sold in the U.S. and shipped abroad. The car is most likely the long rumored 214i. Production capacity for the plant will be only 75,000 cars annually. BMW sells slightly more than half a million cars a year worldwide; about ten percent of those in North America.

Initially, drive train components will be brought in from Germany. Over time, U.S. content will be increased. U.S. labor costs were a big attraction; they are 30% less than in Germany. Restrictive work rules and environmental laws in the father land also make a U.S. plant attractive. North America is BMW's largest market after Germany.

Also rumored for possible U.S. manufacture are a couple of convertibles. First, the 3-series cabriolet. Second, the Z-10 roadster based on the 3-series platform. The convertibles' largest market is the U.S., especially California.

BMW will hire from a workforce with no automotive experience, probably an advantage. The area has a strong work ethic and a good technical school program that trains workers in the Edwards Deming methods for quality control. Meanwhile, Daimler-Benz intends to build Mercedes in Mexico. We'll see how that works out. Audi is also considering U.S. assembly.



Details of the financial incentives offered to BMW point out how badly South Carolina wanted the plant. The 900 acres of land next to Interstate 85 were purchased for \$36 million but will be leased to BMW for \$1 per year for 30 years. After 30 years, BMW has the option to buy the land at the original purchase price. Infrastructure improvements of \$22.5 million will be made. These include site utilities, highway expansion and lengthening the runway at the Greenville-Spartanburg Airport to accommodate 747 freighters. Over \$70 million in state and local tax incentives over 20 years were also part of the package. South Carolina's studies show that the state will realize \$1 billion in economic benefits from the plant.

— David Lightfoot



New M3 Announced

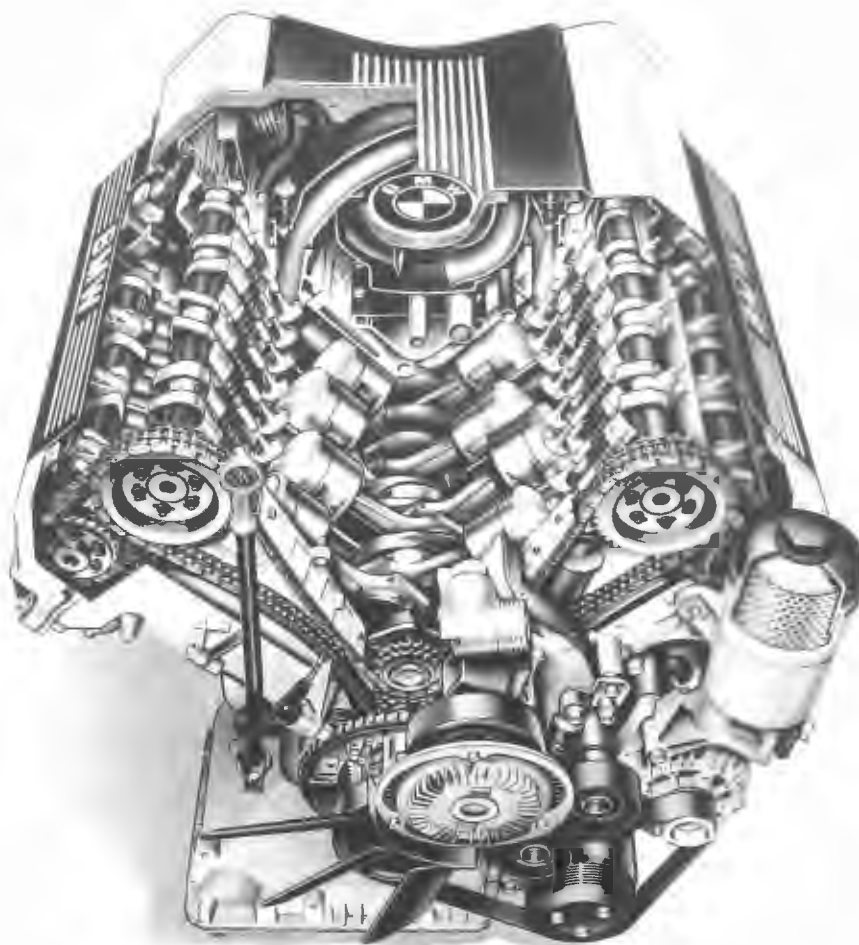
BMW AG has announced the new version of the M3, based on the recently introduced 3-series two door coupe. The M3 will be launched in the German market this fall. The M3 is being evaluated for the U.S. market but no decision has been made.

The new M3 does not have the distinctive appearance of the old M3. The new car has a front air dam and side skirts but no fender flairs or rear wings. A little boring in my opinion; I'd like something to distinguish the car from the 3 coupe.

But what this car lacks in boy racer looks, it should make up for in performance. No figures are quoted, but just speculate on what 286 horsepower will do for a 3-series. That's the German market motor and ours, if we get the M3, will probably have reduced power. Still, 286hp is what the original M5 had using the M1 motor. And my U.S. spec M5 has only 256hp. And this is in a 3-series! This thing is gonna fly.

The motor is a 3.0 liter six cylinder. Torque is 236 lbs-feet at 3600 rpm. Horsepower and torque both must set some sort of record for a 3.0 liter, normally aspirated engine. Price is pegged at 80,000 marks. Let's hope we get the car in 1993.

—David Lightfoot



The New

The new BMW V8s of 3.0 and 4.0 liters have a 90° V-angle. Both the crankcase and the heads are made of aluminum for light weight. The heads have dual overhead camshafts and four valves per cylinder. The camshafts are driven by a double chain as their primary drive and two connection chains as the secondary drive.

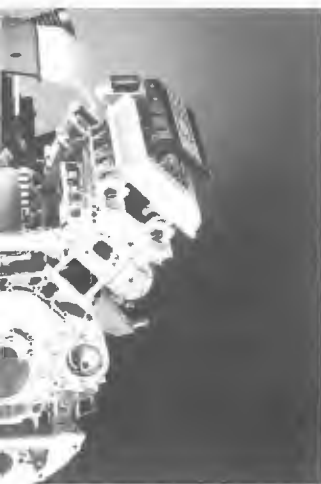
The new V8s were designed with several objectives in mind. These include extreme stiffness, compact external dimensions and very light weight. High output and torque were important but good fuel economy was also required. Emissions were a concern, as with all modern engines. Ease of maintenance was designed in, just like the new small six. And a new challenge for the engineer: easy recyclability. Finally, low vibration and noise were needed. BMW's engineers have succeeded on all counts.

The cylinders on these new V8s (M60) are 98mm apart. This contrasts with the 91mm spacing on the M70, M40, M42 and M50 engines. Cylinder liners are coated with a special nickel dispersion layer for long engine life.

The crankshaft runs in five bearings with six counterweights. Camshaft throws are displaced by 90°. The firing order is 1-5-4-8-6-3-7-2 to keep bearing forces to a minimum.

A feature never used on a large-scale production car is the use of sintered connecting rods. These weigh only 538 grams each, 17% lighter than conventional conrods. Balancing of the engine is achieved because weight tolerance is +/- 3 grams. Smoothness will





BMW V8s

be retained even in the event of repair and part replacement.

The compression ratios are 10.5 to 1 for the 3.0 liter and 10.0 to 1 for the 4.0 liter. The knock control system allows various grades of fuel to be used.

The cylinder head covers are magnesium to save weight. The covers also accommodate the separate solid-state coils.

Valve stem length is 6mm, shorter than other BMW engines. This reduces valve weight and spring forces. This, in turn, means a reduction of friction forces which enhances fuel economy and reduces valve noise. The valve springs are egg-shaped in cross-section.

The ignition system is the latest Digital Motor Electronics 3.3. Features include 8 separate coils, individual cylinder fuel injection monitoring, adaptive knock control and self diagnosis. Any defects are stored to be retrieved at the dealer. Advantages claimed for the latest electronics include improved fuel economy, fuel availability, performance and engine response improved, better electromagnetic compatibility, easier service, robust design (no fuel related damage), easier service and many failsafe functions.

The ancillaries are driven by poly-V-finned belts, as used on the small six. These are maintenance free, self adjusting and will last the life of the engine.

Compared to the old inline six, the V8s weigh only 14 more pounds but have 16% greater output. All in all, this is the state-of-the-art in engine design.

— David Lightfoot



Clockwise, starting opposite, lower left: BMW V8 kit, some assembly required; BMW 4.0 liter V8 cutaway drawing; trick exploded engine; that's eight pistons, folks; new connecting rods apply sintered forging technology. The connecting rod and rod cap are centered by the specific surface pattern created by a deliberate fracture.



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An Interview With Wolfgang Reitzle

(The following interview with the Director of BMW's Research and Development Division is reprinted from Car Magazine.)

Wolfgang Reitzle, 53, is a Bavarian who joined BMW in 1976 after attending Munich Technical University. He first worked in production technology, before heading the development division of BMW in 1985. He became a full board member in 1987, and was recently approached to become chairman of Porsche. He declined.

Let's talk about the rumored co-operation between BMW and Mercedes.

There still doesn't exist a concrete plan. You must not forget that BMW and Mercedes are direct competitors. Before you analyze a joint venture's economies of scale, it is vitally important to determine the consequences the co-operation could have for both partners. That's a very sensitive area. Poorly handled, such a co-operation would do harm, not good.

Under what circumstances would a joint venture with Mercedes be feasible for BMW?

In my opinion, it would have to be restricted to a market segment in which neither BMW nor Mercedes currently competes. That's the only way we can maintain our credibility vis-à-vis the customer who has over the years become used to the polarization of the two marques. To quote a fictitious example, it would be a mistake jointly to develop the successor to the 3-series and the Mercedes 190. But I could imagine us tackling a completely new product together.

What kind of vehicle do you have in mind?

A niche model. A jointly conceived electric car would for instance, fit this framework, although I find it hard to visualize an E1 with a star on the bonnet. More suitable for a joint venture are perhaps a minivan or a compact roadster. As I have pointed out before, there exists no concrete project, but I won't preclude the possibility that such a partnership may make sense one day.

How long do we have to wait for the legitimate successor to the classic BMW 2002? Or will you clear out and leave this segment to the Golf VR6?

Certainly not. We are working on such a car which will receive a modified body and specialized mechanicals, although it is a derivative of the 3-series. I can't as yet be specific about the timing for this model, but I promise you that it will be keenly priced. While the Japanese continue to move upmarket, BMW is going back to basics.



Like Porsche, BMW is facing a number of crucial tasks. One of them is to cut exhaust emissions to meet the forthcoming stringent US exhaust standards. Are you prepared?

We have invested approximately £350m in the development of new engines which will step by step comply with California emissions regulations. In fact, I believe these regulations are problematic because they apply only to newly registered vehicles. The legislation for used cars is comparatively lax.

Tomorrow's emissions and fuel consumption regulations require new technology. What innovations does BMW have up its sleeve, and when do you plan to implement them?

First of all, we shall improve the efficiency of our engines. By 1996, this should reduce consumption by between eight and 10 percent. But to do this, we need low-sulphur fuels. Weight saving is another key measure, which should help us to cut consumption by up to five percent. An additional two to five percent can be saved by reducing the rolling resistance of the vehicle and the inner friction of the driveline.

Will BMW continue to use conventional manual and automatic transmissions?

In principle, yes. But we are going to introduce in the near future an intelligent engine-gearbox management sys-



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tem, with adaptive shift patterns that allow us to operate the engine almost constantly in a low-noise, low-consumption and low-emissions mode. As far as smaller cars are concerned, I expect further breakthroughs with continuously variable transmission. Bigger models may get autoboxes with more than five gears.

By how much do you think you will have reduced fuel consumption by the year 2000?

It depends which particular model you base your calculation upon, but on average I believe that between 15 and 20 percent is feasible. In some cases, this dramatic improvement will come effect with the next model generation, which may be out well before the year 2000.

If this is a reference to the next 3-series range, can you tell us whether it will be an evolutionary design or a radical departure from existing recipes?

Part of the engineering concept is revolutionary. But the shape, size and equipment cannot change dramatically because the customer is not prepared to accept cutbacks in performance and comfort.

Are we going to see even lower drag coefficients?

In the mid-term, I expect figures of around 0.28, perhaps 0.26. Further cuts will be extremely difficult as long as customers insist on ultra-wide tires and powerful engines which in turn require relatively large air intakes.

Will BMW in the long run continue to offer four-, six-, eight- and 12-cylinder engines?

I think so. But we may see a certain substitution within our model range. The new V8 will probably make life more difficult for the V12, and the six is likely to lose some ground to the more economical four-cylinder.

At the Geneva Show, BMW introduced its BMW Individual concept. Can you explain?

In the future, we shall build tailor-made cars for people who are prepared to dip deeper into their pockets for an exclusive, one-of-a-kind BMW. In Geneva, we demonstrated the options that will be available during phase one - fancy paint jobs, matching leather upholstery and special trim work using materials such as maple wood, kevlar or lacquer. The conversions will be carried out by BMW Motorsport, which also assembles the M5. In a second step we plan to offer a wider range of optional equipment. From 1993 on, you can have fully integrated telephone and fax units, as well as made-to-measure seats for driver and passenger.

Phase three will satisfy even more individual requests. It deals with the technical side of our cars, and entails modifications to the coachwork.

Could you give us some examples?

I can, for instance, imagine hybrids such as a 325tds turbodiesel convertible, a 725tds, or a four-wheel-drive version of the 730i. Even a four-door 7-series droptop is a possibility, as long as the customer is prepared to pay for the substantial conversion costs. But there are also a few cars we would definitely not do. Among them are a V12-engined 3-series (it's too nose-heavy), a 4wd edition of the M5 (our existing 4wd parts aren't compatible with the extra torque), or a 7-series hearse (it wouldn't go with our image).

Does BMW Motorsport have the space and manpower to satisfy such a wide scope of requirements?

We could free some capacity by having the parent company assemble the M5, and if that's not enough, we can always move to Wackersdorf which currently houses the recycling plant and the special vehicles division. Wackersdorf provides ample space for expansion; after all, the site in lower Bavaria is as big as our Munich plant.

What is going to happen to BMW Motorsport?

It will not be affected by these expansion plans. The Motorsport division continues to develop high-performance models, and it handles our motor-racing activities.

You're apparently very much in demand. What were your reasons for staying at BMW and refusing the offer to become a chairman of Porsche, a very challenging job?

I can't comment on these matters. I'm sure you can understand why.



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High Performance Driving School at SIR

The time for our annual October high performance driving school is fast approaching so I thought it was time I share some information with you about the school. The school is held at Seattle International Raceway. SIR is a beautiful, challenging 2¾ mile, nine-turn road course with lots of elevation change. It features long sweeping turns, downhill hairpins, esses, and a long straight-away. In the past, SIR has hosted Can-Am and Trans-Am races and more recently Formula Atlantic pro races. Currently, the Skip Barber Formula Ford Series races twice a year at SIR. Our school offers you the chance to experience driving a true road racing course. The objective of the school is not to produce race car drivers but to make one a safer and more attentive driver. The emphasis is placed on car control. Teaching you how to control your BMW in a skid, brake at the absolute limit, and the proper way to drive through a corner. You may think this sounds like advanced drivers ed., it's not. Again, this is not a racing school but many of the techniques we teach are the same ones taught at many of the professional racing schools. Our instructors are highly qualified, some are racers themselves.

If you're like most you probably think of yourself as a pretty good driver. I certainly did before taking my first club school. Let me tell you that was a humbling experience. There is a lot more to it than most people think. I found it challenging, exciting, rewarding and addicting. I think you will too, not to mention the increased confidence and enjoyment you'll get driving your BMW. Well that's briefly what our high performance driving school is about. Watch for more information about the school in next month's *Zündfolge*. Pass with care.

-Gary Parr

Please limit phone calls to these volunteers between the hours of 9 a.m. and 9 p.m.

Classified Marketplace

For Sale: Parts from a 1980 320i. Seats, side panels, steering column & wheel, rear bumper and more. (206) 821-0809 after 5 or on weekends.

For Sale: 1985 M6, Black, black leather interior, fully equipped. Excellent condition. 59K, \$21,900. (509) 448-0124.

For Sale: Four Rigen 16" wheels (off a 528e) almost mint, with Goodyear Eagle VR55, 205-55R16 tires with 85-90% tread. \$725 OBO. (206) 454-8054.

For Sale: 1982 528e engine. Complete, 120K, good runner. \$450. (206) 244-1223, ask for Bob before 2:00 weekdays.

For Sale: 1976 2002, gray, sunroof, good tires (3 spares), mechanically sound, body in good shape, little rust. Owned car for 10 years. \$1,700 (206) 780-5411 Tim.

For Sale: Parts cars, two 1969 2002, one 1969 1602, cars are in running condition, prefer to sell the cars as whole units. \$500 each. Also many other parts for sale, including drive lines, transmissions, radiator, wheels, tires, windows. (206) 780-5411 Tim.

For Sale: 1971 2002 Ti parts, race header & Ansa exhaust \$125; 4 speed \$150; Bilsteins \$125; Suspension Techniques springs \$100; 17mm rear sway bar \$25; Schnitzer front fenders \$75 pair; Kamei front spoiler \$45; 13x6 alloy rims \$150; front seats reupholstered in leather \$50; various body parts \$5-75. (206) 752-7549 Paul.

Wanted: Limited slip differential and right side mirror for a 635. (206) 752-7549 Paul.

Wanted: 4-speed transmission for 1978 320i. Mike, home: 745-6943, work: 881-7544 extension 2450. Leave a message if necessary.

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For Sale: Two for the price of one! 1979 528i, VIN 5333730, Reseda green/tan, 4SPD, AC, 127K, looks right with Euro bumpers, 15" 750iL wheels, XGTV's, Kamei front spoiler, Foha rear spoiler, '80 528i outside mirrors. Extra set of gold mesh BBS, Hella headlights, K&D air filter, Boge Turbo Gas struts and shocks, Spanish head etc at 90K, Blaupunkt with Equalizer, Factory manual, PLUS a 1979 528i parts car with complete drivetrain (4SPD) and FI system (body has good doors, but the rest is a goner). \$5,900 Steve Hewett days: 206-648-2201, ext. 220, eves: 206-533-0913.

For Sale: 1962 356B Coupe Chassis #210342 Car is 100% race ready. Totally rebuilt performance engine. Engine assembly and building was accomplished by Reinhard Reidel, a Porsche mechanic all of his life, and racer of 356's since the '60's. Engine has break-in miles only. Price is \$19,500. Car is not streetable, but arrangements can be made for test driving at SIR. Contact Ted Rodgers at 206-432-2336.

For Sale: 1968 1600-2 with 1981 320i engine. Will consider parting it out. Mike, home: 745-6943, work: 881-7544 extension 2450. Leave a message if necessary.

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Rock singer Prince's 850i made a promotional appearance in Seattle in late June. This low profile machine is "factory painted chiquita yellow," has purple dyed sheepskin seat covers, the wheel covers feature Prince's initial signature "P", super sound system, radar detector, voice activated phone, etc. The car is featured in Prince's new video, "Sexy MF." The car attracted enough attention at Beehive Records on 45th that it caused a three car accident.

Alpina has introduced its new B12 5.7, which is an 850i with the V-12's capacity increased to 5.7 liters. Power is increased to 416 hp which provides a top speed of 186 mph and a 0-62 mph elapsed time of 5.8 seconds.

The B12 runs an Alpina-revised suspension and 18 inch alloy wheels fitted with massive Michelin tires. *(Road & Track)*

Dinan Engineering is now offering the Dinan 850 Twin Turbo. Forced induction and other mods to the V12 help it yield 511 hp and 570 lb. ft. of torque. With the six speed manual, the Twin Turbo is capable of 4.6 second 0 to 60 mph times and a 190 mph top speed. Suspension modifications are typical of Dinan: lowered, stiffer springs and bigger antiroll bars. Conversion price is \$30,000. *(Autoweek)*

formation

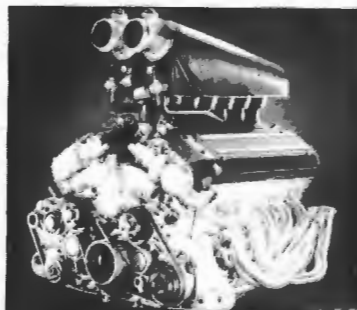
...from the editors

McLaren introduced their roadgoing F1 in late May, as expected. The BMW Motorsport built engine is a twin cam, 48 valve V12 of 6.1 liters. Power output is said to be 550 hp, which should be adequate in a car weighing only 2244 pounds.

The monocoque and body are made from advanced carbon composites. Seating is three abreast with the driver in the middle and the passengers on either side and slightly to the rear.

McLaren's goal was to create the ultimate sports car without consideration to top speed or acceleration. But, the F1 will be capable of well over 200 mph and can accelerate from 0 to 60 in under four seconds.

Only 300 will be made over a six year span. Price is about \$1 million. *(Autoweek)*



Motorsports V12 for McLaren

BMW will soon be launching a new four wheel drive system based on the proven technology of the 325ix, but updated to a more advanced standard. One of the most important improvements will be electronically controlled limited slip differentials, insuring optimum power distribution at all times. This system will be fully compatible with ABS brakes. The new system will also feature improved front wheel geometry for better directional stability, and 16-inch wheels.

The newly developed electronically controlled limited slip differentials are used both on the power divider and on the final drive. The limited slip affect varies automatically and infinitely between 0% and 100%. Thus the flow of power from the engine to the wheels adjust at all times to road conditions.

Under normal driving conditions the limited slip differentials are open, with one third of the power going to the front and two thirds to the rear. The limited slip differentials cut in only when needed. The sensors used for the ABS brake systems are also used to determine the limited slip needed in a given case. The power divider is locked electromagnetically. Due to the greater forces acting on the rear wheels, the rear axle pile drive is locked electrohydraulically. Pressure is fed into the hydraulic unit by a tandem pump connected to the steering pump, serving at the same time for self levelling of the vehicle. As soon as the locks cut in, the driver is informed by a light in the cockpit, thus realizing that road conditions have deteriorated. *(BMW NA)*

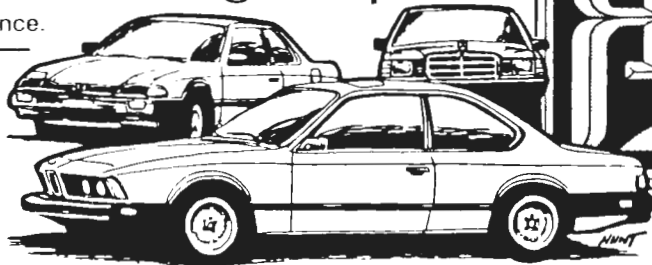
Eberhard von Kuenheim, BMW AG chairman, will resign at the end of the year. Volker Doppelfeld, currently responsible for financial affairs at BMW, has the inside track to replace Von Kuenhiem. *(Autoweek)*

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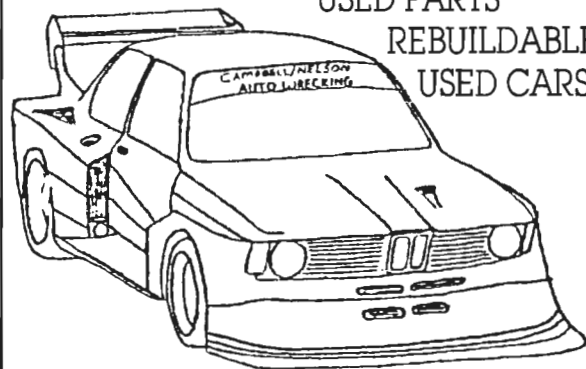
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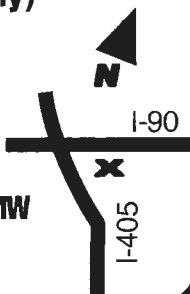
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