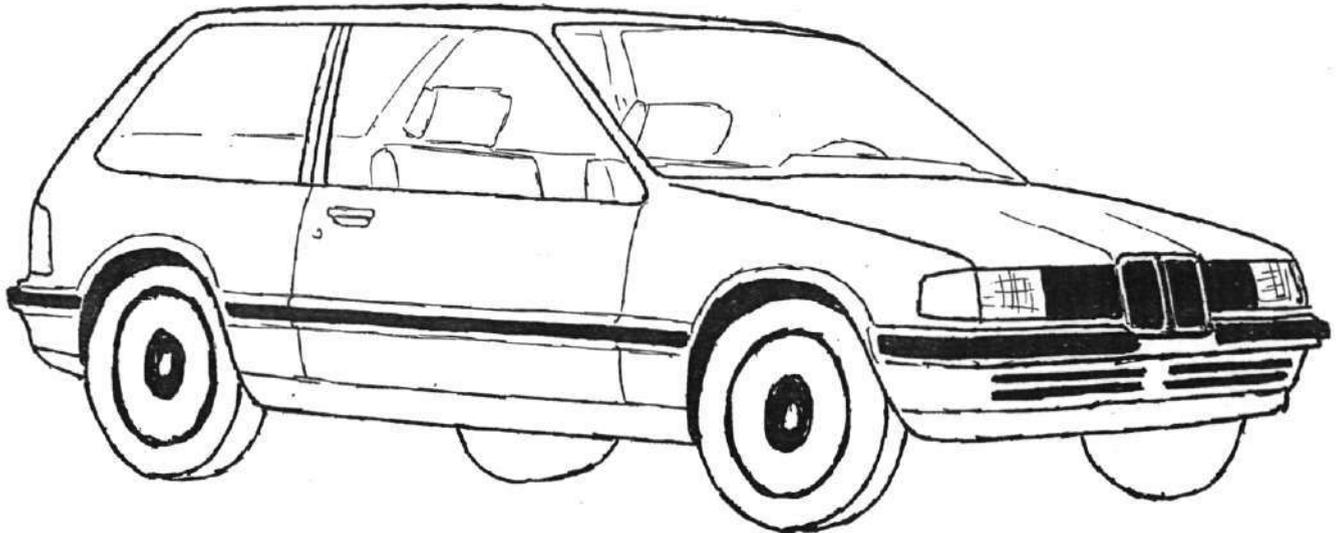


der bayerische

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

feb

'81



the next bmw?

ATTENTION MEMBERS

FEBRUARY MEETING - WEDNESDAY FEB. 25 - 7:30 p.m.

Our February meeting will be held and hosted by BMW of Fairfax (formerly Manhattan Auto) 847 Lee Highway, Fairfax, Virginia. Beer and refreshments will be provided! A fun and informative evening is planned, with one of many guest speakers detailing dealership mechanical pre-delivery procedures, among the topics. It is also planned that BMW Factory personnel be present for questions, if time schedules do not conflict.

Plan to attend! Ample parking on paved storage lot across Lee Highway from the dealership.

DIRECTIONS: From 495 Exit 8W (Rt. 50 West toward Fairfax) 3rd traffic light make a right onto Prosperity Avenue. Left onto Lee Highway to BMW of Fairfax.

> Advertising a car related product or service in Der Bayerische may be the best, most selective ad-bargain anywhere. You can reach almost 600 BMW owners. Contact Dave Bowers for charges and details.

> YOU are the staff of Der Bayerische. Please write for it. Anything to do with the car, from wax to transmissions, service problems or solutions. Articles sent to the editors by the 15th of the month will be printed in the next issue.

> Sell, Swap and Trade, the classified ad section is open and free to all members. Send legible copy to the editors by the 15th of the month. Include name and membership number. Non-members are encouraged to advertise. Contact Dave Bowers for rates.

TECH TIPS REP/ATLANTIC ZONE

Bill Machrone 121 North Avenue
Fanwood, NJ 07023
201-322-8654
(7 - 10 p.m.)
Hugh Wells 120 Wicklow Road
Winston-Salem, NC 27106
27106
919-748-1601

COVER

The next BMW? The January 1981 issue of Road & Track reports that BMW will enter the front wheel drive market in 1984. The car is code named the 313.

der bayerische

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from the president

The election of national officers is at hand again. I get just a bit depressed when I receive a ballot with no choice other than a confirmation vote. Why aren't there more people interested in running for officers? The local election's of this chapter were held in November and we did not even have enough names to cover all of the offices. The job of secretary is still open and we desperately need a volunteer for this position. A number of current officers of our chapter will not be running for reelection next year so start thinking about which position you can fill.

But back to the national election. On the ballot there will also be a referendum to separate the Atlantic zone into two independent zones (most likely North Atlantic and South Atlantic). National Capital chapter would be in the South Atlantic zone if the vote is in favor of the split. There is a close relation between National Capital and two of the other three chapters serving Virginia. We could even find ourselves involved in events with the Tar Heel Chapter. We are hosting the Atlantic Zone Congress here the last week of July. This is not the South Atlantic nor North Atlantic Congress regardless of a split. I would think that if the split does come, that this congress will be the largest in a long time.

I will take a moment to describe what happens at this type event. Usually two or more delegates from each chapter start arriving Friday night. There is usually a hospitality suite sponsored by the hosting chapter. Friday night is devoted to getting acquainted and socializing. The business begins Saturday morning with financial and activity reports by each chapter and other business posed to the zone and national officers in attendance. Saturday night is the zone banquet with a lot more socializing. The final business of the congress is concluded on Sunday morning so everyone can be on their way home by noon. The Friday night and Saturday night social functions are open to all. As we near July, there will be urgent pleas for help to put on the hospitality suite on Friday night. The Saturday night banquet will afford members of the National Capital chapter to come out and meet some of the national officers and alot of members from other chapters in a very pleasant and informal social gathering. The cost of the evening should be no more than \$12 - \$15 per person. Give this function some thought and try to attend. We will probably have applications in the May or June newsletter.

A few notes about membership. Last years renewals were about 7.3% by the end of December. This year 56.5% had renewed by December 12th. New members are coming into the club quiet a bitfster than last year also. Things seem to be going well both nationally and locally in this department. Don't forget the contest for new members being conducted by the national office.

We have a busy schedule in the coming months with tech sessions at Precision BMW, Fairfax BMW and Marlow BMW. We have a wine and cheese party and monthly meeting in Bethesda on March 20th. And of course there is the driving school at Summit Point on May second and third. (The driving school was advertised in the October, November and January newsletters). If there is any activity that you dearly love and we have missed, let me know.

calendar of events

CALENDAR

- Saturday, Feb. 7 - Tech Session at Precision BMW, Frederick, MD. 10 a.m.
TOPIC - simple repair (detailed in January newsletter p. 2)
- Wednesday, Feb. 25 - Monthly Meeting at BMW of Fairfax, Fairfax, VA 7:30 p.m.
TOPIC - pre-delivery procedures.
- Friday, March 20 - Monthly meeting - Wine and Cheese Party at Grosvenor Park,
Bethesda, MD 7.30 p.m. TOPIC - fun and comradery
- Thursday, April 9 - Monthly Meeting - Tech Session at Marlow BMW, Marlow
Heights, MD 6-9 p.m. TOPIC - Brake Problems
- Saturday, April 4 - Autocross School - Annapolis Junction Sports Car Club
invites BMW Club to participate at Fort Meade, Operations
Bldg. North Parking Lot, 12 Noon
- Saturday & Sunday, May 2 & 3 - Driver's School. Also Party on Saturday night at
Summit Point, W.Wa. Get your application to Bill now.
- Saturday & Sunday, July 25 & 26 - Atlantic Zone Congress, National Capital
Chapter hosting

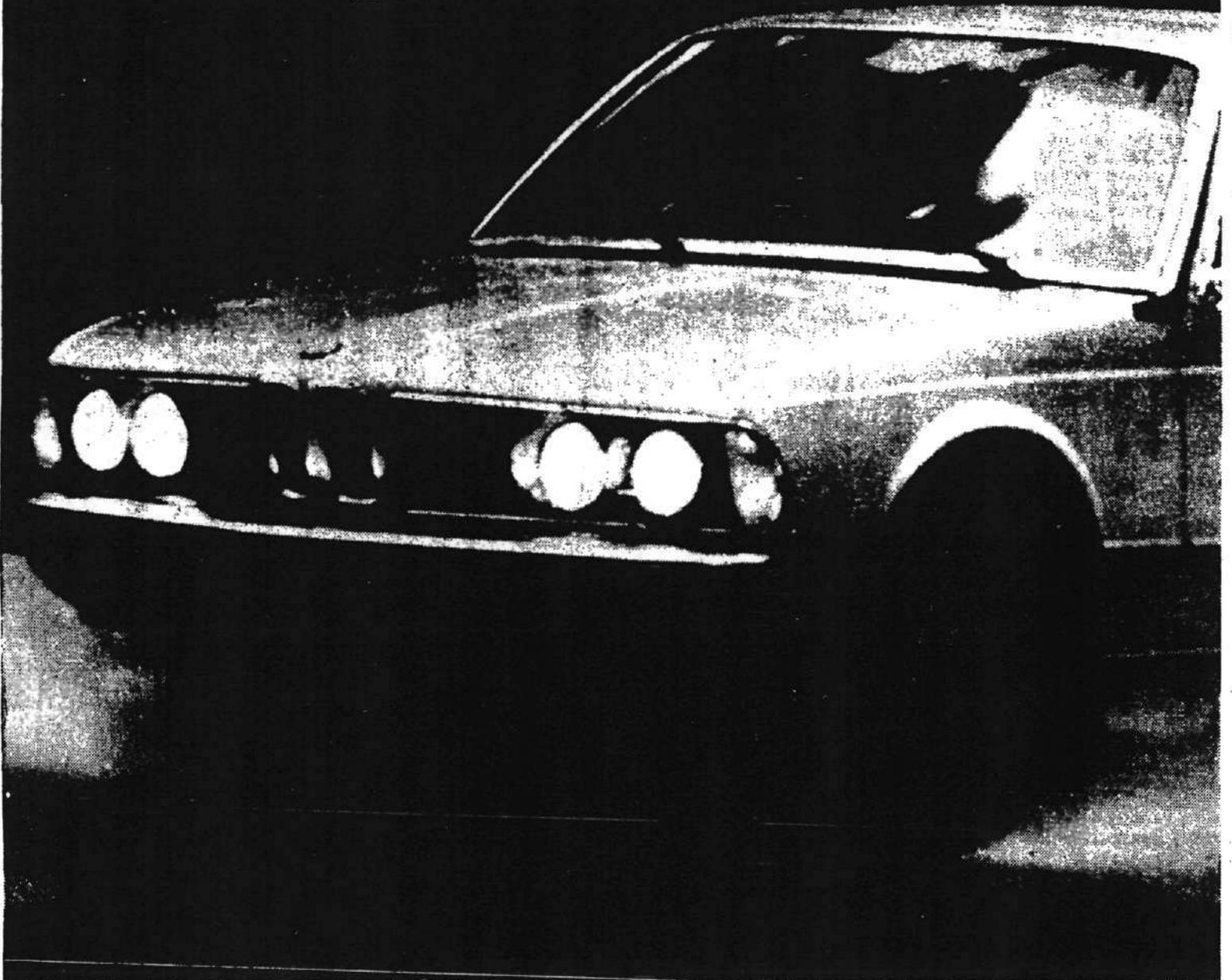
For more information on these activities see Bill Loftin's column "From the
President" on page 3 . Gordon Kimpel has detailed the February Monthly
Meeting on page 2 .

A Wine and Cheese Party will be held at Grosvenor Park, 10500 Rockville
Pike, Bethesda, Maryland at 7.30 p.m. on Friday, March 20th. This apartment
complex is only a few hundred yards north of the intersection of the
Beltway-Rt. 495 and Rockville Pike. The party will be held in the party room on
the top floor of the building closest to Rockville Pike. Strictly informal.

A tech session will be held at Marlow BMW, off Auth Road, Marlow Heights,
Maryland from 6-9 p.m. on Thursday, April 9th. This tech session will
concentrate on brake problems. Two mechanics will be available for questions
(and to help if you screw up). Three to four bays in the service dept. will
open. Club members can do brake maintenance on their own cars. Bring your own
parts, or you can buy parts at Marlow BMW if you get there early enough.



by heishman



from the editors

Hello, Hello out there. We've been so positively underwhelmed with mail this month from our readership. Maybe pages 6 & 7 last month got stuck together.

Seriously, we were disappointed with the lack of response from our request for material from you. We suppose many people are reluctant to write an article because they do not think that they can do it well, or don't think that they have something interesting to say. Don't let that bother you. We are not literary critics, we are only interested in your experiences. If you have come across a problem, and found a solution to it, most likely someone else now has that same problem, and could use your advice.

Off the soap box. We hope you'all liked our first issue last month. This was the first time that either of us had tried to put something like this together. If anyone has any ideas or suggestions, we would like to hear from you.

In this issue, John Hartge has an interesting article about The Car Book, published by the National Highway Traffic Safety Administration (NHTSA). NHTSA has taken a lot of flak over the years from car enthusiasts because of some of their questionable programs, such as air bags. They do deserve a lot of credit for their consumer activities, and for improving the performance and safety of car design, especially American cars. Whether you like NHTSA's work or not, The Car Book is an interested publication, and its free.

If you would like a copy write to:

NHTSA
General Services Division
NAD-42
400 7th Street, S.W.
Washington, DC 20590

We have available articles about desmogging engines - for racing purposes only. We hesitate to print too much on the subject because we doubt that the increases in performance are worth the decrease in environmental quality and the potential hassles of future state emissions testing. We've included one article this month on the subject, if you want to see more on the subject, let us know.

IRA

Hi! We're still looking for members of the 100,000 mile club and entries for our newsletter cover.

Please take note of the diversified activities coming up in the next few months. If you haven't been to a meeting it might be good to try one ... You might like it.

For our readers who live outside of the Washington area, we're going to run short summaries of the meetings. You won't not have to miss our informative meetings, if you live hours from the meeting place - and for those of you who are local, maybe we can whet your appetite. We're looking forward to meeting some new people.

Bill Loftin is still looking for reservations for the Summit Point Driver's School. There are a few spots, we understand, so hurry with your applications. For those of you who don't want to drive, come to the party Saturday night. See the January newsletter for details and application. You have to make party reservations if you're coming and not driving.

*See ya on
Feb. 25
Bernie*

AIR CONDITIONING RECHARGING

All BMWs use the York compressor. The first thing to check, especially if the system squawks when first turned on or at idle, is the belt. This should be tighter than those belts which turn the alternator, fan and power steering. To adjust, simply loosen the two 17mm nuts which hold the compressor and adjust so there is virtually no slack.

One of the other really important parts of the system is the sight glass which is situated just forward of the moisture trap on the right fender well on the six cylinders. The sight glass on the fours is located at the top of the receiver/driver which is located just to the right of the right headlamp behind the grille.

To check this unit, start the car and turn on the air conditioning, allowing it to operate for $1\frac{1}{2}$ to 3 minutes, then rev up the engine to 1500 or 2000 rpm and check what you see passing beneath the glass. If everything is in A-1 working order, you will see only clear liquid. If the liquid appears foamy or turgid, the system is low on refrigerant.

The Behr system uses what is known as Freon-12 for recharging. The "12" is important, as there are numerous other Freons. You can mix brands but not numbers. Any BMW dealer or refrigeration specialist should be able to recharge the system in about 30 minutes if everything is functioning properly.

You can do it yourself if you prefer. Bear in mind, though, that Freon in the lines is under pressure, so take necessary precautions. Freon is also heavier than air which can lead to suffocation of human beings if used in small, unventilated areas. So take the necessary precautions in these regards.

The most economical way involves going down and getting a "home charging kit" for auto air conditioning. Usually, one gets a can of Freon, a valve to open the can, a hose and a valve to fit the compressor. Very basic but adequate to just do the job. Start by reading the directions about three times, then do the following: Locate the suction line on the compressor. This is one of the two. The other is discharge. These names are embossed on the top surface of the compressor. Next, attach the can top valve to a can of Freon-12. You can use a "leak detection" type of Freon-12 with a special dye added to it if you suspect a leak in the system. With this type, the area around the leak turns red. Anyway, put the valve on the top of the can. Then turn the valve down to puncture the top of the can, but don't open the valve to let the Freon out yet.

Remove the cap from the Schrader valve on the suction line on the compressor. The Schrader valve is sort of like a tire valve and it is located just opposite the fitting for the line on a little block on the top of the compressor. Therefore, by removing the cap, you don't let all the Freon out that's already in the system. Attach the hose to the valve on the can first and open the valve again. Now attach the line to the Schrader valve on the compressor.

OK, you're ready to start the car. Set the engine rpm to 2000-2500 and turn the air conditioner on full blast (both fan and temp on

full). Now open the valve on the Freon can and watch the sight glass carefully. As the system fills, agitate the Freon can. When the sight glass fills so that only liquid is visible and no bubbles, close the valve on the Freon can and disconnect the hose to the Schrader valve. Note that all the engine stuff is now hot in that area.

Replace the Schrader valve cover on the compressor and shut the engine off. You're done! The less expensive plastic Freon can valves don't seal well enough to store the unused Freon for any length of time, so it is best to bleed off the unused Freon outside slowly, disconnect the can from the valve and throw the can away.

Ron Slusser, Los Angeles BMWACA

TWO STATEMENTS ON GASAHOL

Following is a direct quote from the Transactions of the Society of Automotive Engineers:

"In the development of our internal combustion engine, the minutest details have been gone into microscopically, so to speak, and with the greatest amount of criticism, that we might make an engine as nearly perfect as possible, yet we have considered the fuel supply only indifferently, or only as it has been forced upon us. We have scarcely concerned ourselves about the source of supply or permanency of the supply. When some far-seeing mind attempted to bring up legislation whereby a substitute could be manufactured, a strong lobby immediately set to work to defeat the measure. The time is opportune and ripe for the Society of Automotive Engineers to turn its attentions to alcohol legislation. There is scarcely a house in the land that does not throw away enough raw material to heat, light and cook with, if proper legislation were enacted."

When you consider that the above was written in 1918, don't you get the feeling that history repeats itself - but nobody notices?

Paul Hoecke
Tarheel Chapter BMWCCA

BMWNA has issued the following technical bulletin on the subject of Gasahol:

"In the interest of insuring compatibility with the BMW fuel system, EXTENSIVE tests by BMW utilizing Gasahol are currently being performed. In the interim, please advise your customers, service and sales persons, that Gasahol should not be used in BMW vehicles until the results can be evaluated."

Please inform your members that testing is still being carried out. This is a revision of our former policy.

Tom McGurn
BMWNA

Remember when gas was 19¢ a gallon and they had gas wars to get it down lower? I made a dollar an hour then. Gas is now \$1.28 a gallon, and I make five dollars an hour. Big deal.



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BOOK REVIEW: THE CAR BOOK

The National Highway Traffic Safety Administration has compiled a colorful Consumer's Guide to Car Buying. The government authors say the book is designed to help you comparison shop for a car. It's something you would expect from Consumer Reports, but because tax dollars pay for it, this book is FREE.

BMW is mentioned, so, blind loyalty to BMW aside, I have "objectively" analyzed The Car Book's analysis. The government's purpose is noble, but in many cases the methodology is questionable.

Here's how the BMW 320i is rated. Seat belt comfort and convenience are FAIR. Mercedes, Volvo, Buick, and Cadillac were the only rated cars to do better with GOOD ratings. Granted, it does take quite a twist to reach the belt buckle, but anyone can see a two-door belt will be located further aft than a 4-door belt, requiring a longer reach to grab the retracted belt. Fuel Economy ratings for city driving are listed, for automatics only, even though most BMWs are standard. Actually BMW lucks out here because the automatic rates higher in the city than the 5-speed, probably because a higher geared rear end is used. Preventive maintenance is HIGH. The government calculates you will spend \$522 to do all the required maintenance for 45,000 miles. The only other cars in that price range are Mercedes, Olds Diesel, Peugeot Diesel, and Cadillac Diesel. We all know BMWs are expensive and since many of us do our own work, we can dismiss that figure. The 320i also gets a HIGH for repair costs. Prices for things like water pump, alternator, brakes, and catalytic converter are listed. Actually Mazda's RX7 gets the award in this category--\$1667 for a catalytic converter? Don't laugh. The 320i carries a \$410 price tag for that anti-pollution device, according to The Car Book. The authors admit although the items listed are typically repaired, there is no way of knowing exactly what will go wrong with your car or how often.

So far, BMW has been spared the 35-mile-an-hour crash test. Most cars have failed it, including such European gems as the Mercedes 240D and Volvo DL. We might expect the BMW to test similarly. The front seat passenger dummies were said to be fatally hurt because seat belts gave a little too much in the Mercedes. Since these cars were rammed squarely into a flat wall at 35 miles per hour, presumably the only way to duplicate these results in the real world is to crash squarely into a stationary flat surface at that speed, something I do not intend to do. Also, on the crash tests, the government authors seem to contradict themselves. The book contains a graph showing a direct relation to death rates and car weights. The heavier the car, the lower the death rates. BUT, The Car Book says, "Some European cars, such as the Volvo and Mercedes-Benz, have relatively low fatality rates. This is probably due to the characteristics of the driver, the design of the car and higher safety belt usage." The graph shows European compacts to be nearly as safe, statistically, as 2 ton GM and Ford products. The European compacts rate 1.6 occupant fatalities per 10,000 cars. The large cars 1.5. The average rate for all sizes is 2.3 occupant deaths per 10,000 cars. The book seems to me to be saying European compacts are safe in the real world, but kill dummies in laboratory tests.

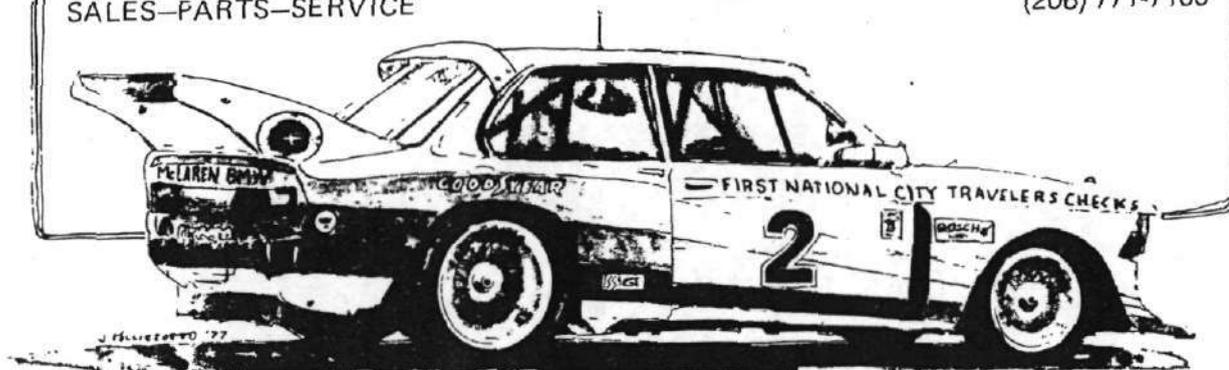
All things considered, I'd rather collect my own data to pick a new car.

John Hartge

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SUPER 320i

A 320i runs fairly well in the stock state of tune. However, there are several tricks that, if applied correctly, can make for a marked increase in power, economy, and overall driveability. By selective massaging of certain engine components, I've got the car to the point where it can run with, if not out-pull, at track days, most early 2002's with dual Webers. This is in addition to being able to get 20-22 mpg around town and 28-30 mpg at 60-65 mph.

It should be pointed out that several of the modifications involve removal or disablement of various emissions controls. In areas where emissions testing is mandatory, changes will have to return to normal to pass inspection.

As for the various steps to follow, no one single change is going to bring about an earth-shattering improvement. Rather, the composite of the parts will produce what I consider a superbly running automobile. The steps below should be tried on a sequential basis. It can be rather difficult to track down a problem if you have made five changes at one time. Each modification should be made and tried out before moving to the next. Not all suggestions will work on all cars, so you'll want to see if it works in your particular case.

Probably the easiest thing that can be done to enhance performance and mileage is to retune the distributor to European specification (they also have smog control, though not nearly as stringent), setting the distributor for 25 degrees BTDC advance at 1750 rpm; 50 will make a noticeable improvement in throttle response.

Prior to doing this, it wouldn't be a bad idea to reset or change your points. Also, should you encounter detonation or pinging under load (most often around 4000 rpm going up a hill), using a 100 rpm higher engine speed for 25 degrees BTDC will usually cure it.

Specific details can be found in your owner's manual, or better yet the Haynes manual for the 320i.

1978's and 79's come with a solenoid valve in the vacuum advance circuit, allowing vacuum advance in 4th gear only (77's have only vacuum retard and I'm not sure what automatics have).

Around town mileage can be improved by re-routing the black vacuum hoses around the solenoid valve using several of the plastic fittings already provided. The emission control diagram on the fenderwell shows the circuit fairly well. The solenoid is the cylindrical device next to the distributor with two wires out of the top and a black hose out of each end (its also the device that causes the click you hear in your radio each time you shift out of 4th gear).

77's can benefit in mileage by substituting a later vacuum advance/retard diaphragm for the present retard only.

I've mixed feelings about disconnecting the vacuum retard line to the distributor. On one hand it can give you up to 2 mpg better mileage and improved low end throttle response, though overall power isn't improved due to the fact that vacuum retard drops out under wide open throttle. On the other hand the car seems to run a bit rougher, a sign of over-advanced timing. All I can recommend here is to try it yourself and make up your own mind. Should you decide to disconnect and plug the line (its important that there are no vacuum leaks), you will have to reset the idle speed as it jumps up several hundred rpm. See page 72 of the owner's manual for instructions here.

Hot weather (80°F plus) performance can be improved by ducting cooler air from outside the engine compartment into the injection air intake. This is easily accomplished with about four feet of 3" diameter plastic dryer ducting. Merely unscrew the mounting clamp and remove the black plastic air hose on the fuel injection body and insert the dryer hose, securing it with duct tape. The other end of the hose should be led over the front fire-wall directly to the right of the radiator where there is a hole used originally for the carburetted 316's air intake. Secure the hose with duct tape or similar means.

Perhaps the most dastardly piece of emission control hardware ever devised is the exhaust gas recirculation valve (EGR). This little turkey only runs contrary to every known concept for volumetric and thermodynamic efficiency.

The remedy here is to remove and plug off both the red and blue vacuum lines leading to the valve. It can be recognized as the blue-capped diaphragm directly ahead of the intake manifold towards the front of the car.

On my car I've removed the mechanical engine fan, relying now upon the auxiliary electric fan ahead of the radiator. Alpina claims five horsepower improvement here, which I have no reason to doubt. Additional advantages are a quicker engine response, smoother running, and a much quieter engine.

Only on hot days in traffic will the electric fan kick in, though it takes a while to get used to the temperature needle getting all the way up to the last white mark before the red. This can be remedied by adding a manual override to the existing thermal switch.

Most of the above have worked out favorably for me on my car and those of a few friends. Just remember to try only one thing at a time to make sure it does indeed work for your Bimmer. Good Luck!

- Larry Foster
Portland Chapter, in the Buckeye
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Brighten Your Bimmer

At a monthly meeting not too long ago, a club member asked me if BMW headlights were dimmer than those of other cars. Without thinking about it, I looked at him and said no, not to my knowledge. O ill-remembered questioner, my sincerest apologies, because BMW headlights are indeed dimmer than other cars.

As with virtually everything else, there is no one answer to why this is so. The first contributing factor is corrosion, primarily of the battery terminals, the ground strap, the battery box-to-frame connection, and fuses. The voltage to the lights must traverse all these obstacles in order to light the headlights.

If you have looked under the hood of any GM car made since 1964, you might have noticed that there is an extra wire on each battery terminal which carries current to the headlights only. The headlights themselves are controlled by a relay, so that voltage is not reduced by coursing all over the car before it gets to the lights.

BMW is really behind the times here, and the problem seems especially bad on 2002s. You can check this yourself if you have a volt-meter. Turn the headlights on. Set the meter to a low voltage range and put the positive meter terminal on the positive side of the battery. Connect the negative side to the center terminal (low beam) and you will probably see a reading of between one and two volts. You are measuring the voltage drop across the resistances mentioned above. This is how much of the battery's voltage is not getting to the headlight. Repeat the measurement on the ground side by connecting the meter's ground terminal to the battery's ground and the meter's positive terminal to the headlight ground (brown wire on the left of headlight socket). The total voltage you measure is the total that the headlight never gets.

Steve D'Geralomo made this discovery independently and put in a headlight relay and some heavier wire. The difference, says he, is incredible, almost like the difference between regular lights and quartz-iodine lights.

The wire size really does have a lot to do with it, and the stuff that BMW uses is just too thin not to incur a voltage drop. So you can brighten up your night by cleaning all of the contact and connection points mentioned above and you can improve on that by installing the headlight relay and some heavier gauge wire.

The difference will be illuminating! Reprinted from New Jersey chapter.

Servicing Six Cylinder Oil Filters - Mike OHara, Portland Chapter

If you have ever had trouble changing your oil filter, try this method:

Instead of removing the bottom bolt and attempting to jockey the red filter canister out of the bottom or over the top, while hot oil dribbles everywhere, try removing the four 8mm bolts (with a 13mm socket wrench) that attach the alloy housing to the engine block and lift the complete assembly up and out. Be sure to have a new gasket available in case the gasket is hard or torn. This method allows better cleaning of all parts and positive sealing of the O-ring.

BMW HISTORY: A Trivia Quiz

by Marc Cohen

Reading Halwart Schrader's *BMW: A History* and Ron Wakefield's *New BMW Guide* has provided me with heaps of fascinating, but utterly useless, facts and figures about BMW's history. Naturally, I'd like to pass some of this knowledge on to my readers. Do you think you know a lot about the history of our marque and its various products? Then sharpen your pencils and try your hand at this month's trivia quiz. (Answers are provided at the end - no peeking.)

1. The -02 series has been the most popular in BMW's history. How many of those cars (1502, 1600-2 and 1602, 1802, 2002) were turned out during the entire 1966-77 production run?

2. The bore x stroke of the 2000 engine is 89 x 80mm, while that of the 1600 is 84 x 71mm. What about the 1800? Is it a stroked 1600? A de-stroked 2000? Both? Neither?

3. How many colors was the 1800 TI/SA available in?

4. What is the final drive ratio of the 1800 TI/SA?

5. When was the 2002 turbo produced, and how many were made?

6. The crowning glory of the BMW V8's, the 2-seater model 507, is a real rarity. How many of these classic sports cars were produced in all (1956-59)?

7. Every BMW owner turns his head when he hears a bimmer going by - that characteristic engine whine is unmistakable. What causes it? Was it really designed in?

8. All modern BMW engines have chain-driven overhead camshafts - true or false?

9. Did BMW ever make an all-aluminum engine?

10. Beginning with the 2000CS in 1965 and going through the 3.0CS of the mid-seventies, how many "old-series" coupes were produced in all?

11. What's the difference between the early 2000 TI and the 2000 TI-lux (later tilux) which went into production a few months later (in 1966)?

12. 320's and 528's are manufactured in the same plant - true or false?

13. What connection is there between BMW and the Austin Seven?

14. What is a Goggomobil?

15. What is a BMW Farmobil?

16. What does "Dreikugelwirbelwannen-brennraum" mean?

ANSWERS

1. Including specialty models (ti, tii, cabriolet, turbo) but not including the 3-door hatchback (touring), just over 830,000 of the -02 cars were manufactured.

2. There have been two engines in the 1800 series. The first (1963-68) was a stroked 1600, with a bore x stroke of 84 x 80mm, for a displacement of 1773 cc. In August 1968, the 1800 was given a new wide-bore short-stroking engine when the 2000's block was mated to the 1600's crank. The resulting bore x stroke of 89 x 71mm, for a displacement of 1766 cc, produced a freer revving engine without altering torque and power.

3. There is some dispute on this one. Ron Wakefield claims that the TI/SA was available only in silver metallic, but local TI/SA owner Chuck Christensen swears that his was originally white, and that the car could also be had in the well-known "1800 grey". We are awaiting the results of further research into this burning question.

4. The TI/SA came with four rear-ends: 4.11, 4.22, 4.75, or 5.86. Why more diffs than colors? The TI/SA was a very limited edition (200 copies), for sale only to licensed professional race drivers. (So how did Chuck Christensen ever get one?)

5. The 2002 turbo had a production run of only ten months (1973-74), during which 1670 units were built.

6. Only 253 of the 507s were made.

7. That special "BMW whine" comes from the chain that drives the camshaft. BMW engineer Paul Rosche says: "Yes, we worked on it; it wasn't accidental. It is related to the camshaft-drive design, of course, but once we discovered it we made the most of it."

8. False. The new (Europe only) "small six" is a departure from recent tradition, featuring a toothed-belt camshaft drive.

9. Yes. The V8's of the 1950's (models 502, 3.2 Super, 2600, 3200L, 3200S, 503, 507, and 3200CS) had overhead valve engines with aluminum blocks and heads. When the engine for the "new class" was developed (the direct ancestor of virtually all subsequent BMW engines) it was originally intended to be all-aluminum, too, but a last-minute decision before its debut at the 1961 Frankfurt Automobile Show changed the block to the more economical cast iron that has survived in the BMW engines of today.

10. About 44,000 of the "old" coupes were turned out, over a period of about 12 years.

11. The 2000 TI was a dual-carbureted version of the 2000 sedan, but had the outward appearance (round headlights, vertical tail-lights) of the older 1800 rather than the 2000. The 2000 TI-lux packed the sporty 2-liter engine into the newer exterior (rectangular headlights, horizontal tail-lights, etc.) of the 2000.

12. False. The 3-series cars are built in the Milbertshofen factory in Munich; all other BMWs (except the M1) come from Dingolfing.

13. If you answered that the Austin Seven were a group of Texans who staged a sit-in at the Munich factory you are not taking this quiz seriously enough. Here are the facts: in 1927, the Fahrzeugfabrik Eisenach took up license production of a British automobile, the Austin Seven; the German version was called the Dixi 3/15 hp DA 1. In 1928, BMW got into the automobile business by taking over Eisenach and continuing the production of the Dixi 3/15.

In July 1929, an improved version, called the BMW 3/15, went into production. Thus, the first BMW automobile, properly so-called, was a not-very-remote descendent of an Austin!

14. The Goggomobil, produced by Hans Glas GmbH between 1955 and 1969, was a tiny 2-stroke *kleinwagen* – a direct competitor of the Isetta – which evolved from the Goggo motorscooter. BMW continued to produce the Goggomobil for nearly three years after its takeover of Glas in 1966.

15. The Farnobil, which looks like a sort of motorized sled (cf. Schrader, p. 319), was a multi-purpose offroad vehicle, built in Greece by the Fahr organization (Germany) and powered by the BMW 700 engine. It could carry 10 kg more than its own weight of 610 kg.

16. "Triple-spherical turbulence-bowl combustion chamber." (Isn't it handy that German has a single word that means that?) This refinement of the "new range" combustion chamber was introduced in the 6-cylinder engines of the 2500 and 2800.

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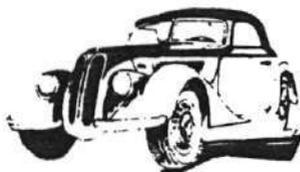
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NEXT MEETING

Wed. February 25
7:30 p.m.
BMW of Fairfax

