



Das Kummer

JUNE 1980



AT THE APEX

CHARLES DICKENS

I have recently inherited the parts store from Rusty Barton, who had to give it up for personal reasons. So, if you are in need of any tune up or maintenance supplies for your Bimmer, give me a call at 488-0030. Be a sport and try to call at a decent hour. If any disagreement arises about the decency of the hour when you call, Linda's decision will be final.

If I do not have any response to my requests for volunteers to man some of our upcoming vacancies, I will be forced to take the bull by the horns as it were and I may be knocking on your door. The smart thing for you to do in that situation is to call and offer your services and get some choice in what job you wind up with. The openings which are definite at this time are for an editor, or better yet, coeditors, for Das Kummer, since Rob and Joyce Tumbelston will be leaving us in August.

The office of vice president is still precariously occupied by Brian Missig, but as soon as their house is sold, they will be gone.

We could use a good storekeeper, but that job will require the right combination of willingness to participate and do some work, plus quite a bit of time. A good central location would be nice, as would a solid background in BMW mechanicals. Come to think of it, I don't think I'm up to it myself.

Other than that, the club is running along just fine with good prospects of getting better. For instance, we are entered into negotiations with Langley

(continued on next page)

Der Tafel: ACTIVITIES COLUMN

SUNDAY JUNE 15. 8 p.m.

BOARD MEETING at my house, 1344 Armistead Bridge Rd. in Norfolk. If you need directions to my place, call 623-4404. All members are invited to attend. FREE!

SUNDAY JUNE 22. 12 noon.

TECH SESSION at the home of Amar Dwarakanath, 500 Scarborough Dr. in Chesapeake. Take I-64 to S. Battlefield Blvd. exit (S-168). Go five miles on S. Battlefield. (You'll pass the canal and Great Bridge Shopping Center). Turn left at the fourth light, onto Mt. Pleasant Rd. (There's a Safeway to the right.) Go approximately 3/4 mile to the third street and take a right. Even though it says Carawan Ln., it is really Scarborough Dr. Amar's phone number is 482-4220.

SATURDAY JULY 12. 12 noon.

TECH SESSION at NTW. This will be very interesting; they will fill us in on the newest tire technologies and new products and we will also raffle off a set of air horns. Be there. It will be very informative and fun, too. Refreshments will be served and as usual, there will be a \$2 charge.

SUNDAY JULY 20. 8 p.m.

BOARD MEETING at the home of Jack Hornbeck, 1143 Bedford Ave. in Norfolk. If you need directions, give Jack a call at 423-2267.

(continued on next page)

AT THE APEX (continued from page 1)

Speedway for the use of that track for a real honest-to-gosh drivers' school of our very own. If you are interested, pick up your phone and let me hear your ideas -- or, better yet, come to the board meeting and help plan the whole thing.

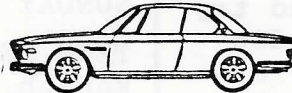
We do not usually run a "Welcome to New Members" column, but in this case I feel a double urge, so here goes:

From out of the past, welcome back to Ann Williams, who has rejoined in a way through her one-and-only, Mac Callison. Glad to have you both.

Another new member who I believe will contribute quite a bit to our club is Mr. W. L. Curles, who has just bought a very nice Bavaria from Ken Todd. If his name sounds familiar, it's because his son Wyndham Curles III is the service manager at Atlantic BMW -- and a darn good club member too, I might add.

To the new club in the state, we send a hearty "Welcome aboard!" The name of this as-yet-unaffiliated fledgling club is The Blue Ridge BMW Club, and it is closely connected with Berlin BMW of Charlottesville, Va. The spark plug for this great development seems to be Mr. Phil Marx. Glad to have you guys! Let us know if we can be of any help, and feel free to attend any of our events at any time. We will immediately add you to our mailing list.

In closing, let me remind you to keep blinking those lights when meeting another Bimmer!

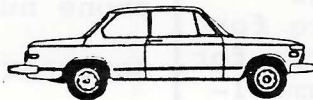


ACTIVITIES COLUMN (continued from page 1)

WEDNESDAY JULY 23.

DINNER MEETING. See next issue for details.

Your Activities Chairman,
Clyde Hill



DIAGNOSTIC TECH QUIZ

Try your hand at the answers to these common problems with BMWs. Each problem described has multiple choices of solutions to the problem and a full discussion of the problem will be found at the end. See if you can pick the best answer. As with many other things, these answers are not absolute; there may be different causes of problems and alternative solutions. The purpose of this quiz is to stimulate your thinking about your BMW.

1. You're driving down the road on a cool day and you realize that even though the heat is on, you feel cold air on your feet. The temperature gauge reads normal. You notice a gradual decrease in power which rapidly deteriorates into missing and stalling. You pull over to the side of the road and the engine stalls. The most likely cause is:
 - A. A clogged fuel filter
 - B. The cooling system is plugged
 - C. A blown radiator hose
 - D. Faulty water pump

2. You've just recently had your car tuned and it's running great. You're driving down the road and suddenly the car stops dead. You crank the engine and nothing happens. The tach doesn't budge while you crank. The first thing you should check is:
 - A. Faulty carburetion or injection
 - B. The points
 - C. A blown fuse
 - D. Out of gas

3. Each time you start the car you hear a loud squealing. It only lasts a moment. You would ignore it but your neighbor with the new Fairmont looks askance at you whenever you start up your Bimmer. The most likely suspect is:
 - A. The fan belt
 - B. A bad water pump
 - C. A faulty water pump
 - D. A vacuum leak

4. The car pulls to the right. The phenomenon becomes more pronounced when you step on the brakes. You clip out a coupon from the local tire shop and have the alignment checked. It is perfect. The next thing to check for is:
 - A. Strong side winds
 - B. A bad wheel bearing
 - C. Loose nut behind the wheel
 - D. High pressure in right tires

5. As you drive along you hear a steady squealing sound. It doesn't vary in pitch, but just becomes apparent as you gather speed and fades away as you slow down. There are no symptoms or side effects. The cause is:
 - A. A bad wheel bearing
 - B. Dragging disc brake pads
 - C. The driveshaft center bearing

6. Sometimes when you start your 530i you suddenly find the car enveloped in a cloud of white smoke. It is occasionally hard to start the car. There does not seem to be much correlation between whether the car is hot or cold. You bring the car to the dealer, where it naturally behaves perfectly. Aware that the guy down the street works for the EPA, you endeavor to locate the problem. A likely suspect is:
 - A. A stuck fuel injector
 - B. A cracked cylinder head
 - C. A defective brake booster

7. Your fuel gauge behaves erratically. Sometimes it is accurate, sometimes it fluctuates wildly. You've taken to setting the trip odometer each time you fill up because you no longer trust it. The problem is caused by:
 - A. Poor contact on the gauge plug
 - B. Bad ground, instrument panel
 - C. A faulty tank sender
 - D. Poor battery to chassis ground
 - E. All of the above

ANSWERS

1. The cold air on your feet and erratic engine operation indicate that you have lost your coolant and that the engine is overheating seriously. So, you say, what about the temperature gauge? How come it reads normal?
No cop-out here by saying the gauge is defective. In a sudden, catastrophic loss of coolant, the sender for the temperature gauge may well be reading the air temperature inside the cooling system. The sender is designed to be immersed in water; block temperature and the temperature of the steam in the block leave it relatively unaffected. Stop quickly. Your engine is on the line. You have probably blown the lower radiator hose. Virtually any other hose would cause a more gradual loss of coolant, which would be noticeable on the temperature gauge as a rise as cooling efficiency drops.

2. What sort of gremlin stops your car dead in its tracks right after a tune up? There can be many causes, but the key here is that the tach is inactive. This means that there is no signal coming from the points. You (or the mechanic) probably didn't

tighten the points screw sufficiently, they slipped and are comfortably closed. When the difference is between getting home and getting towed, you can set the points "quick and dirty" by setting the gap with a matchbook cover. Remember, the gap is set while the rubbing block is highest on the cam lobe.

3. Some cars just seem to object to starting and make as many horrendous noises as possible to try and convince you to leave them alone. Don't be dismayed. The most common culprit is the lowly fan belt. Your battery usually needs replenishment after starting the car and the extra load on the alternator can cause the belt to slip, causing the squealing sound. The extra heat of friction generated by the slippage often softens the belt surface sufficiently so that it grabs. The slippage, however, will hasten the deterioration of the fan belt and ultimately cause its demise, usually late at night, far from civilization. Carry a spare and the tools to install it.
4. Umm...this one is a giveaway because I just wanted to point out that a failed or failing wheel bearing can make itself known in many strange and wondrous ways. Usually you can hear and feel the bearing going, as it often makes grinding, crunchy sounds. The increase in friction is what accounts for the pulling. The braking is uneven because the dying wheel bearing is probably not in adjustment and probably hasn't been for many thousands of miles. Check those bearings as often as you change your oil and repack them every couple of years and you may never have to replace them.
5. The steady, whistling squeal is the classic symptom of a failed driveshaft center bearing. This, of course, means that the bearing itself has failed and what you're hearing is metal-to-metal friction.
The center bearing is a steel hoop that bolts to the underside of the car. Within the hoop is a rubber surrounding ring which holds a bearing in its center. The drive-shaft runs through this bearing. The purpose of the bearing assembly is to keep the driveshaft centered and to absorb vibrations that would otherwise cause the drive-shaft to whip.
The other common failure mode of the center bearing is for the rubber ring to crack, sag, or tear. This allows the driveshaft to whip, which can be felt as a low frequency vibration when it first starts; as the situation gets worse, it deteriorates into a dramatic thumping as you engage the clutch. This is the sound of the driveshaft trying its best to dash itself to pieces against the underside of the car. This action is understandably hard on the universal joints and rubber couplings, not to mention your nerves. The only cure is to replace the center bearing assembly. This requires an extra big socket wrench and a moderate amount of cussing. Since the bearing is essentially the same on all cars, the six cylinder cars tend to be harder on the center bearing, due to the increased torque.
6. White smoke upon starting is not limited to 530is, but the suggested reasons are all fairly common to 530s. The three items are all potential causes of white smoke on starting.
The fuel injector on the 530/528 is an electrically controlled valve that regulates the amount of fuel delivered to the engine by varying the amount of time it stays open. Contrary to popular belief, the timing of the injection relative to opening of the intake valve is relatively unimportant, which is evidenced by the injection on the 320i, which sprays continually in varying amounts. Dirt can cause an injector to stick.
When a fuel injector hangs open, a steady stream of fuel is sprayed into the cylinder. There is far too much fuel to be burned properly, so lots of unburned and partially burned gas comes out the tailpipe. This is readily distinguished from other types of white smoke by its tendency to sting your eyes and choke you half to death when you breathe it. Although it is possible in theory to clean an injector and restore it to proper operation, the more probable satisfactory solution is to replace it.
The next possible cause of white smoke is a cracked head. You may ask why big dollar luxury cars are cracking cylinder heads, but the fact is that it can and does happen, primarily as a result of overheating. The cooling system of the 530i is heavily loaded by the thermal reactor, which causes much higher underhood temperatures and causes the head in particular to absorb much of the extra heat.

You can never afford to allow the cooling system to be anything but perfect. Owners who have had their thermal reactors "stolen" (for the titanium content, no doubt) and who have replaced them with Bavaria manifolds or a Stahl header report noticeably lower operating temperatures, not to mention increased performance and mileage. The smoke you see when the head is cracked is usually steam from the coolant which has leaked into the cylinders. Michel Potheau published the following technique for detecting excessive water vapor or steam in the exhaust. Simply hold a piece of tissue paper in the exhaust stream. If steam is present, it will rapidly dissolve the tissue. While water vapor is a normal product of combustion, there is a big difference in how long the tissue lasts when steam is present.

The last possibility is one of those fluke things that can drive you crazy if you don't stumble on the problem. A leaky master cylinder coupled with a pinhole in the vacuum diaphragm can cause brake fluid to be drawn into the engine through the vacuum line. The result is impressive white clouds and a relatively minor brake fluid loss. It isn't a common problem, but it would be a shame to replace the head if the vacuum booster were the real culprit.

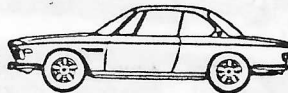
7. You guessed it! Any of the things listed can cause erratic fuel level indications. The plug on the back of the instrument panel sometimes becomes loose, especially on older 2002s. The fix is to pull the plug and reach in with a jeweler's screwdriver and flex the brass contacts so that they grab the pins on the back of the instrument panel more tightly.

The instrument panel circuit board has been a problem on 2002s for years. The board makes its ground contact with the car through two grommets on the circuit board which are not soldered to the printed circuit. This is remedied with a small soldering iron. A drop of solder on the grommet will ensure a good electrical connection with the board.

The battery ground strap is forked; it goes two places -- to the engine and to the body. Often the connection to the body becomes corroded or the cable breaks completely. The result is a variable ground connection for all the electrical systems in the car, which can be seen in the fuel gauge, the temperature gauge, the lights, etc.

The fuel level sender has a definite lifespan and breaks as it gets older. It works on the principle of an arm sliding on a pair of wires. The resistance of these wires determines the reading on the gauge. The normal course is to replace the unit, but it is possible to repair it by replacing the wires with new ones of exactly the same diameter. This must be determined with a micrometer.

Bill Machrone
NJ Bulletin



RUSTING GAS TANK?

Sooner or later every owner of an older 1600/2002 must come to grips with the nagging problem of a rusting gas tank. The problem has been well documented in recent Roundel correspondence and the solutions are many, but unless you can stop the rust on the inside of the tank seam, the problem is still with you. And with new tanks costing over \$100, you may feel like you're caught between a rock and a hard place, right? Wrong, good old American ingenuity can fix this Bavarian blunder.

The 3M Company make a product called SCOTCHCLAD #776 Fuel Resistant Coating specifically made to coat the inside of fuel tanks, sealing minor leaks and stopping rust cold. The tank has to be rinsed with acetic acid (vinegar) and then the honey-like stuff is poured in, allowed to set for

three days, after which time your tank is better than new.

You need a quart to do a BMW tank. 3M classifies this as an industrial coating and sells it through local industrial supply houses.

George Friedhoff
Buckeye Chapter



WATER PUMP LUBRICANT

A crew member of Miller and Norburn Racing recommended Soderseal Water Pump Lubricant and Rust Inhibitor as the superior product on the market. It is found in discount and auto parts stores for about 90¢ a can. One can every six months will keep your seals in your water pump from drying out, and keep your water passages free from rust. Anti-freeze does NOT have that much lubricant in it. Change your anti-freeze at least every two years.

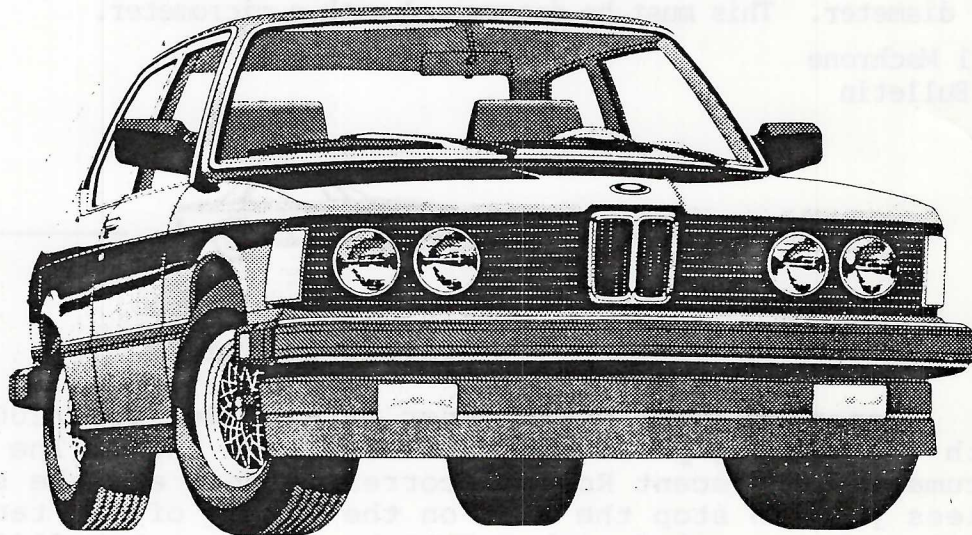
Connecticut Valley Chapter

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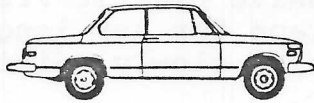
1839 LASKIN RD. AT HILLTOP IN VA. BEACH

Phone 422-3201

FOULED-UP PLUG FOULS UP ENGINE

A talk with a friendly mechanic recently turned up an interesting fact. Several cars he had worked on had serious engine damage caused by a fouled plug or a broken ignition wire. When the plug didn't fire, the gas supplied to that cylinder washed down the cylinder walls, removing the oil lubrication. This lack of lubrication resulted in a scored cylinder wall. Moral of the story: If you've got misfiring, correct it immediately!

Ed Vosek
Connecticut Valley Chapter



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 sixes. 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 1½ 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.

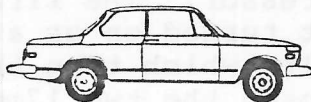
The most economical way involves going down and getting a "home charging kit" for auto air conditioning. Usually, one gets a can of Freon, a valve to open the can, a hose and a valve to fit the compressor. Very basic but adequate to just do the job. Start by reading the directions about three times, 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 temperature 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 such 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.

Larson & Slusser
St. Louis Gesundheit

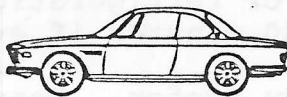


FOR SALE: Four 185 SR70 13 Uniroyal 180 Rallye. About 4,000 to 5,000 miles left or they're perfect for autocross tires. Real good handlers. \$35.

Also: many small parts and leftovers from projects. I need the space and am going to heartlessly throw this stuff out if someone doesn't rescue it... things like stock wheels, consoles, instruments and all manner of neat little odds and ends I wouldn't part with if I didn't have to. All this stuff could be traded for, if what you got is:

- 1) smaller than what I got;
- 2) something I haven't had yet to play with.

Charles Dickens, 488-0030.



WANTED: Red-blooded Bimmer Enthusiast(s)

You can:

- * Have first crack at all articles for sale in Das Kummet every month.
- * Read through the other BMWCCA chapter newsletters at your leisure (Discover a gold mine of tech tips to win friends and influence people!).
- * Be among the first to know every activity of your own Bey Em Vey chapter so you can plan your social calendar accordingly.
- * Provide an essential service to your fellow Bey Em Vey members.

How can you do all this? By becoming the new editor(s) of Das Kummet! This is a most interesting activity with many rewards, especially suited to a husband-wife team. To offer your services, or for more details (and benefits), call Rob or Joyce Tumbelston, 625-1236.

The Tidewater Chapter (Bey Em Vey Corporation) of the BMW Car Club of America Inc. is an independent group of BMW owners and is not associated with the manufacturer, importer, or dealers of BMW automobiles. Meetings are held as announced in this publication.

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MEMBERSHIP APPLICATION
NAME _____
ADDRESS _____
CITY _____
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ZIP _____
MODEL OF BMW _____
SERIAL # _____
YEAR _____
SERIAL # _____
SEND YOUR CHECK FOR \$10.00
AVAILABLE TO CHECK IN THE ABOVE
ADDRESS OR BY AIR MAIL TO THE
LOCAL AND NATIONAL CLUBS.

Rusty & Janis Barton
2 Farington Circle
Chesapeake, Va. 23320

VA. BEACH, VA. 23462

P.O. BOX 62145

BEY EM VEY CORP.



MEMBERSHIP APPLICATION

BEY EM VEY CORP.
BOX 62145
VA. BEACH, VA. 23462

NAME _____

ADDRESS _____

CITY _____ STATE _____

ZIP _____ PHONE _____

MODEL OF BMW _____ YEAR _____

SERIAL # _____

BMW #2 _____ YEAR _____

SERIAL # _____

SIGNATURE _____

SEND YOUR CHECK FOR \$25 MADE
PAYABLE TO BMWCCA TO THE ABOVE
ADDRESS OF BEY EM VEY CORP. THIS
COVERS A YEAR'S MEMBERSHIP IN THE
LOCAL AND NATIONAL CLUBS.

