



Das Kummet



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 they are announced in this publication generally in the third week of the month.

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SEPTEMBER 1978

ACTIVITIES

September 19

DINNER MEETING-Nick's Steak House Pavilion 1125 So. Military Highway, just south of and on the opposite side of the road from College Park Shopping Center. 15% gratuity will be included in the bill.

September 24

TECH SESSION- Rusty Barton's home at 102 Charles Ave. in Portsmouth. For the incredibly few of you who don't know where our illustrious leader lives, go through the tunnel, on to the interstate, get off at Fredrick Blvd., go left on Fredrick till you get to Deep Creek Blvd where you turn right, then continue on to Charles Ave. which pulls off to the right. The traditional \$2 per car will be collected.

PRESIDENTS COLUMN

July and August have been fun months. In July we had the wettest Tech Session on record at Stuart Nelson's but all was not lost as his wife put out a nice assortment of eats and drinks and those in attendance shot bulls most of the afternoon. We did finally caravan to Charles Dickens' house to use his carport but by that time the rain had ended. It was an interesting if not very eventful afternoon! Charles and I journeyed to Atlanta for this years Chapter Congress July 21st, Driving until 3:30 am to get there. Charles took us through some interesting country roads in North Carolina and somehow always managed to be driving when on them. Me- I got the interstate!

The trip back was interesting and leisurly as we took two days to do it. We stopperd at Richard Pettys' home and shop in Level Cross, N.C. The setup there is fantastic with, I believe, three huge metal buildings which dwarf the

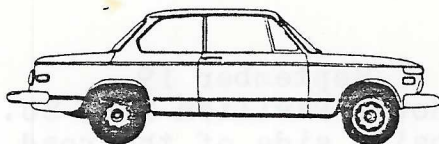
Petty home. It gives the appearance of a small industrial park. We toured the trophy room which, of course, was chocked full and had Petts' old "Superbird" Plymouth Hemi 426 racer right smack in the middle of the room. This is the one with the rear wing and front pointed nose piece that Chrysler produced in limited quantities at the height of the muscle car era. Quite a beast! Unfortunately we couldn't go into the shop area as they were preparing Richards new Chevy race car and didn't want any interruptions.

Next we went to Karzundpartz in Greensboro and managed to get a ride in the Stage IV 2002. Wow! This car has a 2300cc four with dual webers, hot cam, high compression, and buckets of horse power. It makes going back to my weak little Tii a real shock!

Finally we stopped off at Miller and Norburn in Durham for a few hours of talk and cooing and aahing over a brand new 320i they had just finished hooking up to a turbo charger. Unfortunately the owner had not taken delivery yet so rides were out of the question but a neater and more sanitary installation does not exist. All in all it was a very enjoyable trip. Details of the meeting follow.

We had our second event at the Hermitage foundation museum in the form of a lawn party. The evening weather was perfect- A full moon even. The catered dinner was delicious and more than ample. Quite a few members attended the relaxing affair and all had a great time. Thanks to Dave Pritchard for organizing this superb event. Hope to see you all at the dinner meeting on the 19th.

Rusty



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CHAPTER CONGRESS REPORT

Charles Dickens and I were lucky enough to attend this year's Atlantic Zone Chapter Congress in Atlanta last July. For those of you who don't know, each July BMWCCA holds a gathering of all Chapters in each zone. The purpose of the Congress is to assess Chapter strengths and weaknesses, pass helpful information among Chapters, receive input from National, and express the chapter viewpoint directly to National Officers in attendance. What follows is a brief outline of what happened at this year's Congress.

- Finances at the National level are in the black now and should stay that way
- The National office has been moved and is now functioning smoothly.

-Next year's raffle may be for vouchers in an amount equal to the base price of a 320i. The vouchers could then be used to purchase a 320i, 530i or any other BMW with the member making any additional monies needed.

-National is now investigating going to a minicomputer system for membership renewals, mailing lists, etc. An offshoot of this could be a change to Anniversary month renewals instead of January renewals.

-The ROUNDEL is considering going to an 8½"X 11" format at some future date.

-Finally a very interesting discussion took place, the purpose of which was to come up with some minimum performnace standards for a Chapter to remain a viable Chapter:

COMUNICATION

- a. Written communication to members at least once per quater.
- b. Prompt submittal of Zone Chapter Congress reports.
- c. Have a P.O. Box that is checked frequently.
- d. Must submit officers list to National.
- e. Prompt response to communications from the National Office or National officers.

PARTICIPATION

- a. Hold at least one event per quater.

ORGANIZATION

- a. Follow Chapter by-laws.
- b. Have full slate of Officers.
- c. Exercise fiscal responsibility.
- d. If membership falls below 15, National will scrutinize the health of the Chapter

ENTHUSIASM

- a. A Chapter should have this, subjective as it may be.

GROWTH

- a. Taking into consideration the local of the Chapter, growth is important.

Since these guidlines were developed by those present at the Congress and not by edict from National, we believe them to be fair and realistic. Its encouraging to me that our Chapter not only meets but exceeds by far every stand-ard that was listed. One point that came home to me was just how strong our Chapter really is. On a percentage basis, we have as good or better participation Than many other Chapters in the zone. So while we may be small, we're strong and we have reason to be proud of our Chapter.

All in all the 1978 Chapter Congress was a most beneficial event. It was enjoyable to mingle with people from other Chapters from as far away as Boston and Miami, and the trip down and back, while long, were fun with lots of bear dodging. I hope I get to more Congresses in the future.

Rusty

PARTS STORE UPDATE

Yes, Virginia, your club still has a parts store; as a matter of fact, the club parts store is brimming with tune-up parts in stock and is ready to special order other items. You don't have to wait for a tech session to obtain parts, simply come on over to my house anytime-just give me a call first to be sure I will be home.

OIL FILTER, ALL 4 cyl	\$2.25	POINTS 4cyl thru '72 &	
" " " 6 "	2.25	6cyl thru '74	\$1.40
AIR FILTER, EARLY 4 & 6 cyl carb	3.40	" '74 Tii, '73 2002	2.25
" 4 cyl 2 bbl carb	5.25	" 2002 '75 on	2.75
" Tii	3.25	" 6 cyl '75 on	2.50
" 530i	7.00	" 1602 to '69, 1800, 2000	1.25
" 320i	9.00		

(continued last page)

EXHAUST TIP by Jim Craig

Owners of '72 & '73 3.0 Bavarias can save some money when replacing the entire exhaust system by converting from the three section system (two resonators and a final muffler) to the '74 two section system (a single resonator plus a final muffler). Note that the entire system must be replaced since the pipe diameters and configurations preclude intermixing of the two systems. BMW part numbers are:

18 12 1 245 342	resonator
18 11 1 245 356	muffler
18 11 1 102 632	chrome tip

Depending on where the system is purchased, expect to save \$25-\$30 by converting.

LEAN OR RICH by Micheal Deal from the COONASS COURIER

This tip is especially applicable to those of us with the 32/32 DIDTA carb. If you can't decide, after fiddling with your carburetor, if you are rich or lean, here's a fool proof way. Cut a piece of cardboard big enough to cover the entire carburetor horn. This is, of course, with the air cleaner off. Starting with the cardboard covering the secondary half of the carb (driver's side) slide it toward the primary side. As it gets about $\frac{1}{2}$ " from covering the total area of the carb throat, the engine will do one of three things: (1) it will run faster, indicating that your carb is too lean, (2) it will run slower, indicating that you are too rich, (3) it will not change and simply quits, indicating you have a near proper adjustment.

TII ALTERNATOR BOLT by Yale Rachlin from BOSTON BIMMER

All you Tii people should be aware of yet another item that requires periodic inspection: the rear bolt connecting the alternator to the block. This month no less than three of us (two '74s and a '73), had this bolt break off. That's right: break off. Seems that in order to make room for the fuel injection pump, BMW moved the position of the alternator. The rear bolt is under much stress due to the pull of the belt, and subject to engine vibration as well. Apparently, the vibration shakes the bolt loose and the stress finally breaks it. At this point, the alternator assumes a different angle to the belt (although none of us lost it completely). Worst of all, the bolt tends to break inside the block. When this happens, removing it can be a harrowing experience at best, and if it's really stuck in there, you may have to lift the engine out to get to it. Best advice: check it regularly and keep it tight.

HIGH BEAM RELAYS by Speed Hill from DIE ZUGSPITZE

Question: When does a \$5.00 Hella relay cost \$13.37?

Answer: When it is sold by a BMW dealer.

Coming back from Baltimore recently, my headlights refused to turn off: the relay was stuck and closed. As the primary light circuit is not separately fused, the only way to turn them off was to remove the canister housing the relay inside the left fender. (Had I needed to carry on, I could have substituted the horn relay adjacent to it.) Upon pricing a replacement at my local surly parts outlet, I was staggered at the price he was writing up for a Hella (not a BMW) part. Calling Norm at Time Machines, I got a \$5.00 Hella relay (part no. 4RA 003 205-112 12V) with the identical pin position (and numbering) as the 91/6-20-12V relay it was replacing by UPS in less than 24 hours.

I plugged it in and it works; it is rated for 30 amps, which should be ample, and it is encased in plastic, which suggests that it may last longer. At \$5, it's worth carrying a spare.

DISC BREAK SQUEAL by Steve McGhee SMOKEY MOUNTAIN CHAPTER

If the front brakes on your 2002 are like mine, they may be squealing for help. This noise is often caused by the pads vibrating against the calipers. After removing the front brake pads, I sprayed the backs of them with Permatex's "Disc-Brake-Quiet". This spray acts as a vibration damper between the backs of the pads and the calipers. The cost is less than \$4.00 And seems to be ten times the amount needed, although I do not know how long an application will last. In my case this eliminated the squeal and was simple to do. Be sure to allow enough time. It took the spray 4 hours to dry before reinstalling the pads.

BE COOL by Bill Machrone NJ BULLETIN

It's summer again- and as you roll back your sunroof, blast down the road and feel your spirits soar, your temperature guage soars, too.

Overheating is a common problem for BMW's and it has been dealt with before, here and in the ROUNDEL. What follows is an overview of the problems that occur and how to fix them.

The most common villain is the thermostat, especially the hose thermostat in 4-cylinder models. The hose 'stat, although unusual, is actually a pretty good idea. since it's out in the airstream instead of buried in the block it's sensitive to out side temperature. When everything is working right your engine should run slightly warmer in the winter than in the summer because the cold air around the 'stat delays opening. Also, the hose 'stat is a bypass system- when it's closed the water pump circulates the water in the block, intake manifold and heater core. This insures a quick warmup and no hotspots in the cylinder head. When the 'stat opens it includes the radiator in the circuit, dumping hot water in the top and extracting it from the bottom. When the 'stat starts to fail it tends not to close completely, which leaves the radiator in the circuit all the time. This results in slow warmups and possibly excessive fuel consumption as the choke remains open longer.

At the same time that the thermostat is failing to close, it usually fails to open fully. I've talked to a surprising number of owners who where stumped by an overheating problem who said, "It can't be the the thermostat, because I put it in hot water and it opened at 180F." The shop manual gives the specification for the amount that a thermostat must open: 5/16" at 175 to 180F. The most common symptom of a non fully opening thermostat is the faster you go the hotter it gets. I once had to gut a thermostat with a screwdriver and a longnose pliers just to get home. Also a new thermostat is not a guaranteed cure. I once went through three new ones before I got one that opened to spec. Tod Silverman once had the head redone on his 2002 and subsequent over heating problems were traced to a brand new subfunctional thermostat.

An alternative to the Behr thermostat is the Thompson #140, available from NAPA distributors.

It is important that the cooling system be bled subsequent to the installation of the new thermostat. The six cylinder cars have a srew for this purpose; four cylinder cars are as follows (from the shop manual):

"Before refilling the coolant system set heater lever to warm. Fill in water and screw on cap until the second stop is reached. Run engine so that coolant is heated to 80C (176F). After thermostat has opened, bleed system by turning radiator cap to first to first stop. Press the upper and loser hoses together by hand a few times, as this generates a pumping effect and insures that any air still in the system can escape through the radiator. Check radiator level and turn cap to second stop."

Some people drill a small hole in the thermostat plate to allow a path for air. This works, but isn't necessary. It's probably worth mentioning at this point that the system is meant to run on an antifreeze/water mix. Water alone doesn't conduct heat well enough to do the job. Another critical factor is the pressure. Pressure is necessary to prevent the coolant from boiling. You'd be amazed at how many cooling systems don't hold pressure. Any radiator shop can test your cap and pressure test your system, but when was the last time you tightened every single hose clamp? Not just the easy and obvious ones like the radiator and the thermostat, but how about the heater line into the rear of the head? Or the intake manifold heater lines or the little tubes going to your automatic choke?

The radiator itself can be the cause of overheating- as a car gets older, sedimentary deposits form on the inside of the radiator, engine and even hoses. The prevention for this is an annual or semiannual flush of coolant. Use of a lubricant additive such as Solder Seal water pump and bearing lubricant is a good idea. Don't use any kind of stop leak product. It will only gum up the works. If it has already happened to you, chances are you can flush the sediment and corrosion out with one of the commercial products intended for this purpose.

A good way to determine if your radiator is at fault is to compare the temperatures at the top and the bottom hoses. If the bottom is just as hot as the top it means the deposits in the radiator are insulating the coolant so that it can't give off its heat to the air. If the flush doesn't do the trick there are two alternatives, rodding or recoring.

In rodding, one of the tanks is unsoldered from the core and a metal rod is pushed through each tube in the core, scraping off crud and opening the passages so that more water can flow and more heat can be exchanged. In recoring, the entire core (finned area of the radiator) is replaced. Recoring has gone up in price until it costs nearly as much as a new radiator. The advantage is that you can find shops that will install a core that is denser than stock.

You can get more radiator into your 2002 by using a Pinto radiator (yes it really does work). Mounting requires two new holes on one side, and the other side will align with the holes already in the body. Early six cylinder cars have a radiator that is too small to get the job done. The factory switched to a denser core and added some shrouding around the fan and things got better.

There are other miscellaneous fixes for cooling problems, some effective, some not. One that has always bothered me is "locking" the fan on six cylinder cars. The fan is clutched so that at low temperatures or at high engine speeds, it free-wheels, cutting noise and saving power. The factory has been recommending locking these fans, so that they run all the time, when no fan is needed at all at speeds over 40 mph. Meanwhile, the new cars continue to be produced with clutch fans.

Some owners are found of removing the mechanical fan and replacing it with an electric one that blows through the radiator, such as the Wood Jeffries and the Bosch "pancake." These fans cut in thermostatically or on demand from the driver. Most air conditioned BMW's have such an auxiliary fan, but this is necessary due to the extra cooling load that a/c puts on the engine. One of these units is entirely satisfactory on a non a/c four cylinder car. The benefit is quieter operation and slightly better economy and power.

You can also improve cooling on a 2002 by adding the fan shrouding found in the '76 models. An air dam will also improve cooling by creating more of a pressure differential between the nose and the undercarriage. Air is forced through the radiator in order to fill the void.

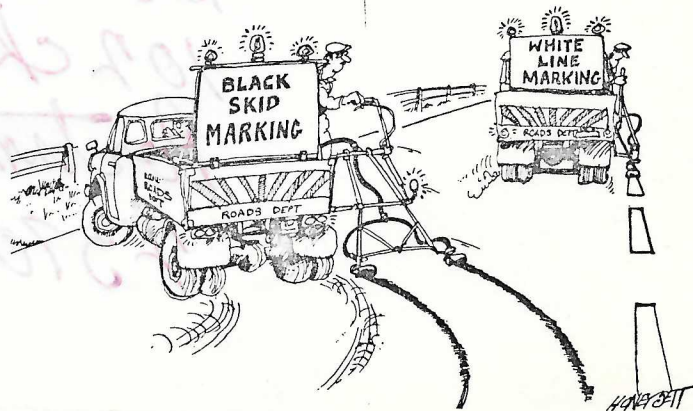
Finally, there are several aspects of engine tune that effect operating temperature. Lean jetted emission controlled engines run hotter for several reasons. First, each given quantity of gasoline is mixed with more air than is necessary for maximum power. This produces fewer unburned hydrocarbons and less CO (carbon monoxide). But like any fire that you feed more air to, it burns

hotter. Next, spark timing is retarded (late) which promotes a continuance of combustion after the spent mixture leaves the cylinder. This is often amplified by an air pump forcing air into the into the exhaust manifold, or into a thermal reactor. Unfortunately, all this stuff gets hot, much of which must be cooled by the engines cooling system. The exhaust valves take more than their fair share of abuse in all this. Finally, the engine is forced to breathe some of it's own wastes via the ERG system. These gases are naturally hotter than the air that the engine would prefer to breathe, adding more heat to be dissipated.

So whats being harmed by all this heat? How about rubber seals that get brittle as a potato chip, oil that turns to jello, heads that warp, valve guides that wear, valves that burn, etc. So don't buy that baloney that anything between the blue and the red on the guage is fine. Get those temperatures down and be cool!

PARTS STORE continued

CONDENSER, 4 cyl thru '72, '74, &		BELT 4 cyl alternator	1.50
" 6 cyl thru '74	\$2.50	" Tii "	2.50
" '73 2002, '73, '74 Tii	2.50	" 2500/2800 alternator	3.25
" 2002 '75 on, 320i	4.00	" 3.0 Bavaria "	3.25
" 6 cyl '75 on	3.50	" 530i	3.25
" 1602 to '69, 1800, 2002	1.00	" power steering 2500/2800	2.25
DIST. CAP 4 cyl thru '74	2.50	" " " 3.0 Bavaria	2.25
" 4 cyl '75 on	2.75	" " " 3.0Si, 530i	2.25
" 6 cyl thru '74	5.00	" AIR CONDITIONING 2500, 2800,	
" 6 cyl '75 on	5.50	" " " 3.0 Bavaria	2.25
TOR CAP 4cyl thru '74 &		" " " 3.0Si, 530i	2.25
" 6 cyl thru '74	1.25		
" 2002 '75 on, 320i	2.25	SPECIAL ORDERS	
" 1602 to '69, 1800, 2000	2.25	Special orders must be prepaid. If our	
SPARK PLUGS, NGK BP6ES, ALL BMW'S	1.10	supplier has the part in stock, I can	
SPARK PLUG CONNECTORS ALL CARB	1.10	usually have it in four business days.	
BMW'S		I have available such items as brake parts,	
HOSE, UPPER RADIATOR 4 cyl	3.50	clutch parts, exhaust parts, CoCo Mats,	
" lower " " "	2.25	piston rings, engine bearings, piston,	
" bypass, 4 cyl	2.25	cylinder head parts, gaskets and more.	
" short thermostat to	1.00	before you go to the dealer-call me for a	
" water pump		price!	
" Water pump to manifold		RUSTY BARTON 393-0235	
" early 4 cyl	2.50		
" upper radiator 6 cyl	3.25		
" lower " " "	4.00		
" bypass 6 cyl	2.50		
WATER PUMP 2002	21.00		
" " Tii	26.00		
" " all 6 cyl	21.00		
THERMOSTAT, 4 cyl	8.75		
" 6 "	7.50		
VALVE COVER GASKET 4 cyl	2.25		
" " " 6 cyl	2.75		
FRONT WHEEL BEARING GREASE SEAL			
" 1600/2002	1.25		
FRONT WHEEL BEARING GREASE SEAL			
" Tii/6cyl	2.00		





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