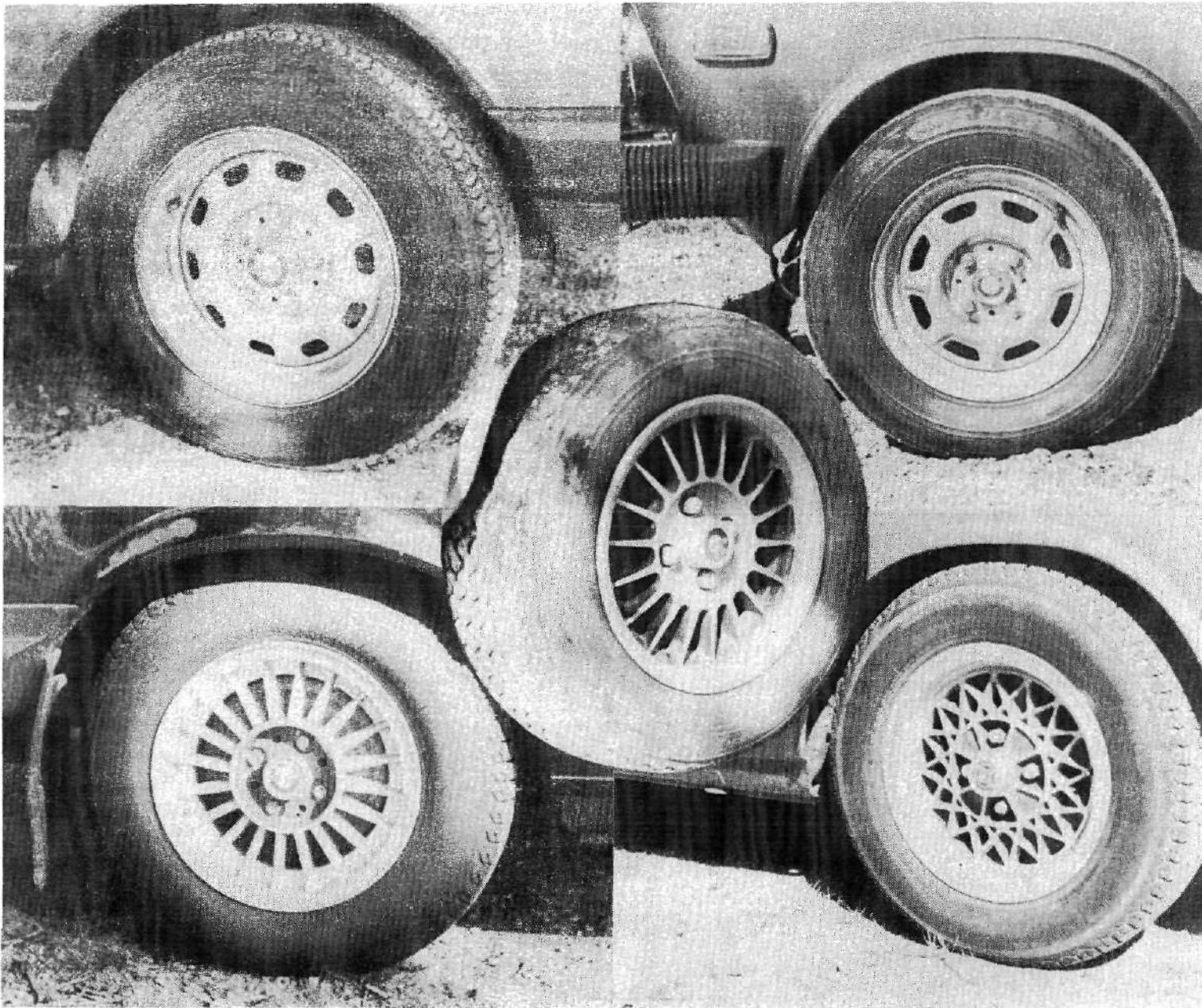


der bayerische

VOL.9 NO.9

OCTOBER 1979



WHEELS OF FORTUNE

Editor's Notes

1980 OFFICERS SOUGHT

Just a reminder about October's meeting--election of officers. The National Capital Chapter is one of the oldest in the BMW Car Club of America, also one of the largest. Without your help, the chapter could fold. Nominations will be open for President, Vice-President, Secretary, and Treasurer. This is a call for all who have benefited from the club in the past to give something in the future--a little time and energy to lead the club through 1980.

To let you know what you would be in for, the National officers have set minimum standards for local chapters to meet: There must be a business meeting and/or activity each quarter. There must be a newsletter each quarter. Certain reports must be filed with the national office each year.

Consider what you expect from the club in 1980 and attend the October meeting. If you can not make the meeting, the club officers will gladly take your phone calls.

Speaking of 1980, the newsletter editor also will retire at the end of this year. If you're interested in writing and/or compiling material written by others, perusing every other chapters' newsletters for hot items, getting an early peak at the classifieds, and seeing your name in print, call the editor for info.

more tech tips

INERTIA REEL SEAT BELTS

The automatic seat belt must only be subjected to an energy absorbing strain once. After, any head-on, rear-end, or side-swipe or side-on collision more serious than just a bump when parking the car, in other words if any deformation is detected at the front radiator bulkhead or any wavy surfaces noted on the rear side panels, the automatic reel seat belt (diagonal and fixed lower section) must be renewed.

Always scrap the old belt (removed from the car after impact or collision or rendered useless in some other way) immediately so that it cannot accidentally be re-used. The automatic reel assembly needs no maintenance at all, and must not be opened.

Service Bulletin from
BMW NA

CALENDAR

- OCT 16.....BMW Monthly Meeting 8PM
Election of 1980 Officers
Diamond Head Restaurant
6900 Wisconsin Ave
Chevy Chase
- OCT 26.....DEADLINE DER BAYERISCHE
- OCT 27.....Oktoberfest
Autoy & AutoWerke (see p.8)



der bayerische

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TECH TIPS REP/ATLANTIC ZONE

William Machrone 201-322-8654
(7pm-10pm)

racing report

BMW Wins Road Am

BMW took 2 of the top 4 positions at the Road America IMSA race in Wisconsin on September 1. David Hobbs and co-driver Derek Bell won the 500 mile race in their turbo-charged 320i. Then came two Porsches and in 4th, the Jim Busby BMW M-1. It was the second 1st place finish of the year for the 4-cylinder 320i against the more powerful 6-cylinder Porsches. It was the 3rd U.S. appearance for the M-1, and the second time it finished in the top 4 positions.

At Road Atlanta September 23, the Hobbs 320i made another strong showing, finishing 3rd. That finish, combined with the win in Wisconsin, helped push David Hobbs up to 4th place in the 1979 IMSA GT standings, after some bad luck in July and August. Jim Busby entered the 320i in the Georgia race, but his BMW was retired when the brake line broke after being hit from behind.

BMW/NA-sponsored cars next appear at Daytona November 25.

CONDO FOR BIMMERS

Those who attended the Oktoberfest undoubtedly noticed how many BMWs live in the Boston area. Wonder how they keep those 633CSi's so clean and shiny in crowded downtown Boston? They buy condominiums for their cars.

A Unique condominium for cars has been established on Beacon Hill. For \$8,500 you can buy a parking space (plus \$66/month condo fee for garage maintenance). It's called the Brimmer Street Garage, (could be known as Bimmer Street). Rumor has it the most popular resident is Mercedes... but following closely is BMW.

By the way, for all that money, you do get valet parking and the corners and poles are wrapped in orange carpet to cut down on scratches. The 171-square-foot units are reportedly selling fast...1 couple buying 5 spaces to store 3 Maseratis and 2 Ferraris.

Genderson Mall



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Washington Area

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GENDERSON BMW Gives Special Consideration to BMWCCA Members



by heishman



WHY YOUR TRANSMISSION FEELS SHIFTLESS

by Thomas B. Nast
Puget Sound BMWCA

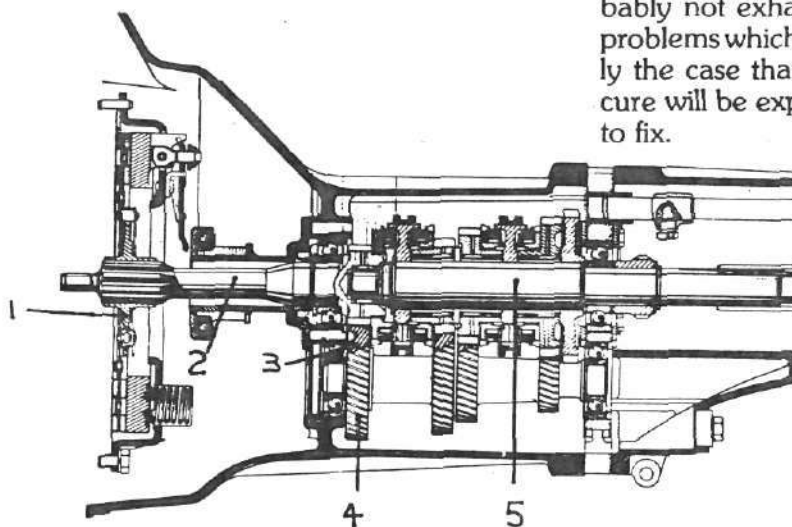
A complaint I hear frequently about BMWs which have accumulated a few miles is that the shifting has grown balky. The synchronizers are said not to be synchronizing, or new noises are perceived, or it just doesn't "feel" like when it was new. The synchromesh rings are almost always blamed, but they don't always deserve it. This article will endeavor to explain what is going on down there, and identify the potential trouble areas.

A gearbox is a device about which an intimidating mystique has developed, but it is basically very simple. The input shaft (2) receives power (rotation) from the clutch (1). Thus, whenever the clutch is fully disengaged there is not power being fed into the front of the gearbox. The input shaft has a gear on the end of it (3), inside the gearbox. This gear is in permanent mesh with the gear on the end of the layshaft (4). Whenever the clutch is engaged

the synchromesh (squeezing it) and into some teeth. This couples the spinning gear through the sliding assembly to the output shaft itself, because the sliding assembly is affixed to the shaft. In this manner, power reaches the drive-shaft.

It is the job of the synchromesh ring to equalize the speed of the output shaft (sliding assembly) with the input shaft, which is turning that free-spinning gear. By so doing, gear clash is prevented. This job is made difficult by the fact that while the input shaft is not turning much (clutch disengaged) the output shaft is turning at a speed directly proportional to speed of the rear wheels. Remember, the rear wheels are mechanically coupled directly to the output shaft. The synchros have a rather brutal job to perform, and it is worth reminding readers that all-synchro transmissions are a relatively current development.

The following is a list of problems. It is probably not exhaustive, but covers 99% of the problems which arise. Unfortunately, it is usually the case that whatever the problem is, the cure will be expensive and/or a hard, dirty job to fix.



the layshaft is in motion. The layshaft permanently turns gears on the output shaft (5), which looks like it is attached to the input shaft but in fact is not — it is separated by a bearing, and is coupled to the input shaft only when fourth gear is selected. So, in neutral position clutch engaged, the input shaft, layshaft and output shaft gears are all spinning. How does one select a gear? Moving the gearshift lever causes a shaft to move a fork, which pushes a ring over

SYNCH RINGS — these abused souls wear out periodically in the Porsche-type gearboxes, which were used until about 1972. The more abuse they receive, the shorter they last, the range being roughly 40,000 to 100,000 miles. There is no cure but replacement. Datsun rings are *not* recommended, as they are quite stiff at first due to slightly different dimension, and have been known to quit early in their BMW careers. The later, notchier-shifting Borg-Warner type synchros rarely break or wear out.

Transmission Blues

Complaints about them indicate investigation into other potential problem areas before tearing down the gearbox.

TRANS OIL — this author does not represent himself to be a transmission oil expert, so no discussion will be undertaken of the merits or different brands or slightly different weights. Suffice it to say that reports have been made that by changing to a different brand or weight, shifting problems have been solved however, more frequently the problem is not solved. One thing which can be guaranteed is that running without a sufficient quantity of oil *will* result in problems. Sounds dumb, but I have torn down at least three boxes run with a few tablespoons of oil, and the damage is massive. Burned gears and bearings are the rule, and usually all that can be saved is the case and shift forks.

BAD TRANS BEARINGS — These are rather rare. They sometimes give warning (rumbling or growling) and sometimes do not. Running on a defective bearing is quite dangerous, as the transmission will self-destruct when the bearing goes. This has happened, but it is so infrequent it is not worth worrying about until you hear a strange noise. Without the noise, it is not a suspect in your shifting problem.

BAD OUTPUT SHAFT — this problem is well documented, and anybody with a 2002 vintage 1968 to 1975 who hasn't experienced it is fair game. The splines on the output flange wear against the splines on the shaft, causing the flange to loosen. Eventually, it will spin independently of the shaft, immobilizing the car. But the torque which is supposed to be holding the flange also helps keep the shaft steady in the case, and when the flange works loose the shaft gets loose. This causes shifting problems, particularly in the lower gears. Furthermore, the flange is what the output seal seals against, so a bad seal results when the flange shifts around. This results in a lot of oil loss through the back, with all the problems oil loss causes.

BAD CLUTCH LINKAGE — If the clutch is not disengaging sufficiently, the synchros are being asked to equalize power being sent into both ends of the gearbox instead of just one end. This is a most difficult demand, and one which will cause audible complaint. Those with mechanical or early hydraulic linkage should be sensitive to clutch adjustment. Those with later, self-adjusting systems should watch for water or air in the lines and leaking cylinders. A surprising number of shifting problems are a result of leaky cylinders. A surprising number of

leaky cylinders are a result of failure to change the clutch fluid with the brake fluid, which you change every year, don't you?

BAD CRANKSHAFT BEARING — I won't claim credit for discovering this problem, but I can't find the article I first read about it in. I have observed the problem, and it is critical. If you remove the clutch assembly from the flywheel, you will see in the center of the flywheel a metal cap (pre '75 or so) or felt pad (later models). Behind this is a bearing. Metal capped crankshafts (that is what you see in the middle of the flywheel) have a small ball bearing, which seldom goes bad. Replace it if the crankshaft is out, and check it if suspicious by removing the metal cap (do not destroy—dealer won't have any). During a rebuild, repack the bearing and carefully replace the dirt barrier. Later cars are not so happy — a roller bearing was used, dirt tends to get in and failures are being reported at 40,000 miles and up. The solution is to either replace or, preferably, backdate to the older ball bearing. The input shaft sits in this bearing. The bearing supports the shaft, yet permits it to turn independently of the crankshaft. When this bearing fails, it is much like losing your clutch, as the synchros are again asked to equalize two sources of power. Letting the problem go could also cause damage to the tip of the input shaft, making a cure difficult when a stuck bearing finally is replaced.

BAD LEVER BEARING — The shift lever itself sits in a bearing which is made of two half-spheres of plastic. Every few years they need regreasing, which is simply a matter of pulling up the lever boot and prying out the circlip. Don't lose those shims, or you'll have a sloppy shifter.

MISCELLANEOUS — some thing actually having nothing to do with shifting are misinterpreted as transmission troubles. Included are noisy throw-out bearings, which sound like a noisy transmission bearing but do so when engaged, rather than disengaged. Also included are shot engine and transmission mounts, which can cause clunks and grabby feelings. The driveline may lash up if a guibo (doughnut) or center-bearing support is shot, causing thumps or vibration under high-load conditions. And the differential will suffer lash (as a unit) if its rubber mounting block or the rear subframe rubber blocks are tired. Any BMW of eight years or more should scrutinize those subframe mounts closely, as they may well be at the end of their useful lives.

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GENERAL REPAIRS

MAINTENANCE

1. 1929 3/20. 2. A radial 23 cylinder aircraft engine. 3. 2. 4. 1953. 5. 3.5 liters in a 335. 6. A custom built, Bullet-proof limousine and there are two. 7. The 1500.8. Four. 9. 1958. 10. No, they were strictly export models. 11. Yes, in 1929 and won. 12. Yes, but only available in Europe. 13. Turismo Internationale/Sonders Aufuhrung. 14. Yes. 15. No, it was the first model designed solely by BMW. 16. Baur of Stuttgart. 17. Yes, Bertone styled the 3200CS. 18. Yes. 19. No, the unusual arrangement of rockers and pushrods made it appear as an overhead cam. 20. Yes, the remaining car is on display at the factory museum.

ANSWERS:

TRIVIA QUIZ

(From the Puget Sound Chapter)

17. Did Bertone ever do bodywork for BMW?
18. BMW built the first jet engine, yes or no?
19. Does a 328 engine have overhead cams?
20. Was there ever a DOHC 700 engine?

1. What model BMW first carried twin oval gilles?
2. What is the greatest number of cylinders in a BMW engine?
3. How many doors on a BMW 600?
4. What was the last successful racing year of the 328?
5. What is the largest displacement of a BMW street engine?
6. What is a BMW 505 and how many are there?
7. What model first carried the current design four cylinder engine?
8. How many wheels does an Isetta have?
9. What was the first year that disc brakes were available on a BMW?
10. Can you buy a Bavaria in Germany?
11. Did the DIXI ever race in the Monte Carlo Rallye?
12. Is there a 2500 CS?
13. What does TI/SA stand for in BMW 1800 TI/SA?
14. Did BMW ever design a motor scooter?
15. Yes or no, an AM4 is a licensed copy of an Austin?
16. What company built 1600 convertibles?

TRIVIA QUIZ

The pleasure of your company is
requested at the Second Annual
Oktoberfest

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at two o'clock p.m.

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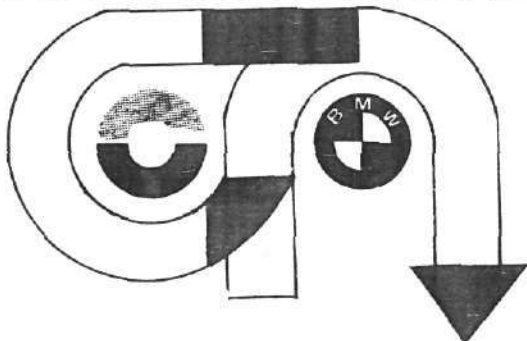
4954 Wyaconda Road, Rockville, MD 20852—Telephone 468-0323

(Next to Autoy's New Location—See Above Directions)



BMW's assembled at the Bay Ridge Community Boat Club on the 1st day of fall for the National Capital Chapter's annual Picnic. As usual, 2002s dominated the crowd, but 1 "3" and 1 "5" series BMW filled out the field. Those who attended thank Genderson BMW for the fine beverages they provided. See you and your bimmer at the next chapter event!

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Spark Ignition Wires. Radio-suppressed, silicone-jacketed, low-loss, solid wires by MSW. Long life and no resistor losses to diminish intensity of sparks to plugs.

Spectrometric Oil Analysis

Even if you change your oil frequently (at 2,000-3,000 mile intervals) you will find the old oil is dark. All the gook that turns the oil dark can tell you lots about the condition of your engine, if you put it through a spectrometric oil analysis. Gulf Oil offers such a program--Motorcheck. Send a check (or Gulf credit card number) for \$7.95 to Motorcheck, PO BOX 4033, Atlanta, GA. 30302. They'll send you a 2 oz. bottle and mailing container, along with an information sheet. Next time you change your oil, pour some in the bottle and return it to Gulf.

In a couple days, you'll receive a report. It will tell you the oil's condition--viscosity, carbon content, water content, antifreeze content, dirt and abrasives content--and the engine's condition--cylinder wear rates, piston wear rates, ring wear rates, crankshaft and bearing wear rates. It's all determined by the amount of those particles found in the used oil.

I tried this analysis at 83,025 miles. Everything checked out normal. Obviously, this test will only reveal what your engine has been doing since the last oil change. It will not turn up previous problems.

J.H.

UPDATE: Fifty-Five MPH

In March, DER BAYERISCHE reported that states' efforts to increase the maximum speed limit from 55 would fail because of the renewed energy crisis. Not only have all states given up higher speed limit ideas, but the federal government is considering a new crackdown to enforce 55.

Preliminary studies have singled out 5 states that could lose federal highway funds if they do not get tough on speeders. NHTSA head Joan Claybrook says Texas, Missouri, New Mexico, Wyoming, and Indiana could be in trouble.

Under the law, states are supposed to assure that 30% of all motorists obey the speed limit. States that do not comply would lose 5% of their federal aid, or millions of \$\$\$\$.

CLASSIFIED ADS

FOR SALE:

1970 2500, for restoration, very reasonable, call for info: Greg Melcher 301-464-8955

1973 2002, very good cond, new brakes, wheel bearings repacked, all maintenance receipts, malaga paint, 4 speed, AM/FM, sunroof, excellent interior. \$3200, 703-591-4976

1976 3.0Si, 28,000 miles, 4 speed, mint condition, must sell, make offer 703-938-5864 after 6:30pm

19 mm front and rear sway bar w/bushing for 2002 \$40, Ansa rear section new for '74 2002 \$30, '74 stock distributor \$15, stock fuel pump \$20. Jim (H) 703-768-4090 (O) 703-836-0505.

1 Conti TS 771 tubeless radial 185/70-13, new tire. \$35. Chuck Garrish after 6p.m. 301-268-5643

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Date: _____

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City: _____

State: _____ Zip _____

Model of BMW: _____

Year: _____ Ser. No. _____

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Year: _____ Ser. No. _____

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NEXT MEETING:

DATE: October 16, 1979 (3rd Tuesday)

TIME: 8:00 P.M./Election of Officers

PLACE: Diamond Head Restaurant
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Chevy Chase, MD

