



bimmer immer

August 2011

- Important Events
- Battery Care
- e30 Tech: Ball Joint Boots



bimmer immer

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Cover Photo: 1991 e30 318iS• owned by j r schabowski

Photo: MHT image • J R Schabowski



2011 Calendar

- August 8-9** Audi Driving School - Road America
- August 11** Board Meeting - 7pm Brew City Grill - Mequon, WI
- August 18-20** Car Corral at the ALMS Race (outside turn 14) - Road America
- August 27** Masterpiece Car Club Day, downtown Milwaukee, at the Lakefront
- September 8** Board meeting - 7pm Brew City Grill - Mequon, WI
- Sept 15-18** Grand Tour around Lake Michigan - All Central Regions Participating
- September 30** Advanced & Instructor Day at Road America
- October 1-2** OktoberFAST Driving School at Road America
- October 22** Board Meeting - 11am Enterprise BMW - Appleton, WI
- October TDB** Fall Car Clean-Up - Port Washington, WI
- November 10** Board meeting - 7pm Brew City Grill - Mequon, WI
- November TDB** Winter Tire Talk with Peter Cunningham or Real Time Racing - Saukville, WI
- December 8** Board meeting - 7pm Brew City Grill - Mequon, WI
- January 14** Holiday Party
- February 2012** Chicago Auto Show

Board meetings are held on the second Thursday of each month. They start promptly at 7:00. Board meetings are open to all members. The Board encourages member attendance.
Monthly Board meetings convene at: Brew City Grill • 10250 N. Cedarburg Rd. • Mequon, WI 53092
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From the President

Mike Loos

M

My first BMW was a 2002. It sparked my love of cars and cemented BMW's as my favorite. If a stock 2002 can do that, then a modified one should send me to another world. Some place foreign and wonderful. It would feel like new territory like Hawaii or Mars. Just like with other passions in life, taking the next step up captivates my imagination and fills my mind for weeks. That's the fun part. Receiving a box from the UPS man with a label from a parts house is the pinnacle of that thrill. The fun is over, time to install the part (or get it installed) and make it work with the other systems of the car.

I've been through this. My 1974 BMW 2002 has: a custom built engine with a 2002 block, flat topped low compression pistons, a 1982 BMW 320i cylinder head, and a Garrett turbo charger kit. The fuel system got converted from carburetion to CIS fuel injection. This was achieved by using late model BMW 320i injectors and fuel distributor, an air flow meter from an early BMW 320i, a boost sensitive differential fuel pressure regulator from a Volvo 240 turbo and the fuel pump installed inside the fuel tank using Audi 5000 parts. The throttle linkage was fabricated. An intercooler from a Mitsubishi was modified and buried inside the nose.

The 4 speed manual transmission was replaced by a 5speed overdrive transmission from a 1982 BMW 320is. The limited slip differential came from the same car and the shortened drive was fabricated by Portland Drive Shaft Company.

The shocks are Bilstein HD's all around supported by a big sway bar conversion. The front brake calipers are from 1980 BMW 528i, mounted on modified (by John Morgan) BMW 2002tii front struts. The front brake rotors are vented and fit early 1976 BMW 320i's only.

The brake master and booster are from a 2002tii. The rear drum brakes were replaced by slightly larger 320i rear drum brakes. This required a fabrication on the emergency brake cables.

You know the funny part? I haven't driven this car for 2 years. Maybe it was too much of a good thing.....

I'm going back to work on my Lemons Racer.

bj



Battery Clinic+ -

by Dave Thuerk



W

What affects a car's battery life????

I have been designing, field testing and disassembling worn out lead acid batteries for over thirty years with twenty of those years involving automotive lead acid batteries. The causes for automotive battery failure have not changed substantially in the last few decades. What has changed is the rate of failure and operating life. When I started designing and developing automotive batteries, the primary causes for battery failure was corrosion of the internal lead component and/or dry out from excessive gassing (water loss through electrolysis). This is still the primary causes of failure, but the time to failure has been extended when the batteries are used in the same operation conditions. The gains are the result of continuous development of materials and processing. Improved lead alloys and lead purity has reduced the corrosion rates and reduced content of elements that force gas generation and water loss. As a result of the improvements, water loss in a battery has been reduced to the point where no water addition is necessary for the life of the automotive battery. This is coupled with a reduction of the internal corrosion rates of the lead components by a factor of two to three times.

So why don't batteries last for ten years now?

HEAT!!!!

The enemy of the battery is high temperature exposure. The higher the operating temperature the battery experiences, the faster the lead components corrode and the greater the water loss is. Over the last few decades, as under hood temperature continue to increase, the gain in battery life has been suppressed by the increase in under hood temperatures.

Looking at the location of the battery, engine compartment and next to the radiator, high operating temperature is the norm. Many car manufacturers do take some effort to protect the battery by placing shield on the hot side or completely surround the battery. Even if the shield is metal, it reduces the heat transfer into the battery and reduces the average operating temperature. The only worse place for a battery is next to the exhaust manifold but that is not used because the plastic case

will melt. BMW'S trunk location is the best location to maximize life. So enjoy, you probably have the best battery longevity. Actually, any place isolated from the engine compartment heat is an improvement.

So why does my battery usually fail in cold weather in the north? Batteries are sensitive to temperature in other ways. As the battery temperature drops, the power you can remove from the battery decreases continuously.

At minus twenty degrees F, the battery can only provide fifty percent of the power it provides at eighty degrees. Added to this is the increasing current needed to start an engine as the temperature drops. An engine at minus twenty degrees F wants a lot more power to crank. The combination of degradation in power from age, lower operating temperatures and increased power requirements for cold start creates the starting problems. The engine wants more and the battery says NOPE I don't have it to give.

What can you expect for battery life? The typical life in the northern climates is about five to seven years. In the southern states the average life is about three years because of the higher under hood operating temperatures. There are designs that were developed specifically for the hot southern states that extend life up to 5 years in high temperature climates but they do not have much effect here in winter country. In the 70's, battery life was three to five years with much lower under hood temperatures.

How not to destroy your car battery

Here are a few guidelines to help extend battery life beside





months for a twenty four hours. When a battery is discharge, recharge it as soon as possible. If you ever needed a jump to start because you left the lights on or something similar, put a charger on battery and charge it for twenty four hours. If you use the car, resume charging when it is not in use until you have a total of twenty four hours of charging. Your daily driving will not fully recharge a battery in a reasonable time unless you are driving across country.

Check your belt tension before winter or summer. A loose belt will not maintain the charge on a battery and the battery will slowly discharge. A loose belt does not always make noise.

In the fall I will provide direction on storing batteries over the winter, why this is necessary and what signs provide a hint that the battery is near failing.

bj

the major issue of keeping the battery out of a high temperature environment which is not always possible. Before sever weather conditions occur check your battery terminals for corrosion, before winter in the north and before summer in the south. If corrosion is found (white or green deposits on the terminal or connector) disconnect the terminal from the battery post, dip the terminal in baking soda & water solution and then clean with a wire brush. Clean the lead post with baking soda solution and then brush with a wire brush, terminal cleaning brush or sandpaper. Corroded terminals can prevent charging resulting in no start condition and battery failure.

Long extended discharges are detrimental to batteries. If you are storing the car for extended periods, over 1 month, disconnect the battery or connect a float charger to the battery, a Battery Tender (or equivalent). With a float charger connected the battery can remain connected in the car. Repeated deep discharge or storing a battery in a discharged state will destroy an automotive battery in short order. Since all newer cars have parasitic draws, a substantial amount of the battery's capacity is lost in a month.

If you are not using a battery tender to float the battery in storage, recharge before storing and charge every three



e30 Tech



text and photos by J R Schabowski

It is my firm belief that BMW will never again build a car as good as the e30 series 3. I know I'll get flack for that from you '02 devotees, but it's true.

Why?

... Because they were nice simple cars. Incredibly fun to dive at any horsepower rating. Responded well to simple mods. They were made before governments decided to interfere with the design process with all manner of oppressive regulations. Free from "connectivity", nav systems, ASC, Park Assist, and iDrive, they remain cheap and easy to fix as well, my second personal favorite e30-factor (the fun to drive factor superseding the fix factor - of course).

There were a few buggers. Foot well rust from sunroof drains ... and the lack of part numbers for ball joint gaiters being two. Sunroof drains aside, the parts to replace the ball joint boots in the front lower control arms and tie rod ends always came with the required rubbers snap-ringed into place. But what about those of us who love making their e30s even better by endless tuning of suspensions? Every time we separate those ball joints, those delicate boots risk getting trashed, cut and bruised rendering them useless protection. I have used copper anti-seize on the tapered shafts to make the next disassembly process less frustrating, and it works well, but having replacement gaiters on hand is like having two and a half a million in your 401k.

I searched a long time to find the pieces in this article

and I can assure you that after using these on my most precious e30 318is for thousands of miles, and three suspension systems, they work great! These urethane gaiters also make it easy to repack the joint with fresh grease, will not crack with time passage, and survive weather and temp extremes better than the original buna rubber boots.

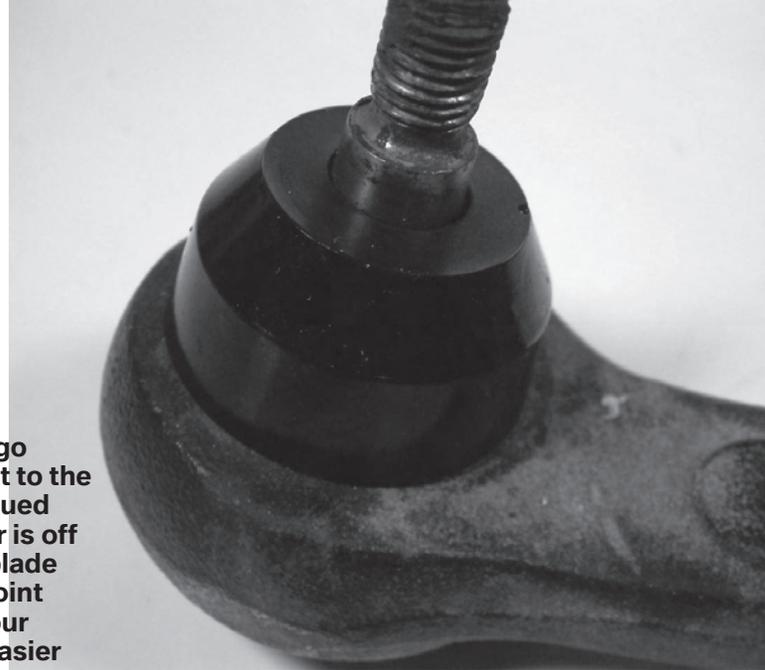
So if you are like myself and take great joy in testing out different suspension setups, try a set of these. They make the assembly job way easier.

bj

Here are the pieces, part number and all. They come two to a package for about ten dollars direct from Energy Suspension. Also available in red. Part number 9.13119G. Urethane makes them strong and timeless.



Here is one bad ball joint ... Right? Nope! The joint was still in good, safe condition, but the boot was gone well off. I saved this assembly and it is at present working well on an 84 318i ... thanks to through cleaning, inspection, good grease and an ES boot. I wouldn't recommend this for anybody, but I did it to prove the boot.



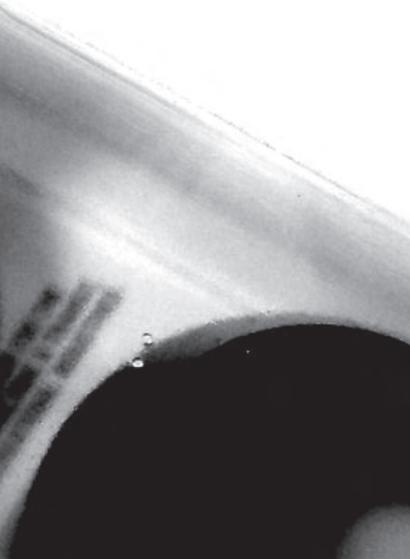
The gaiter is shown here in place, with the whole arm ready to go back into the car. Yes, there are NO visible means of attachment to the shafts and base. The assembly crushes down as the nut is torqued and the gaiter bulges and squeezes down securely after the car is off the jack. Once loaded for driving, you can't get a screwdriver blade between the gaiter and the metal. Jack up the car, tap out the joint and you can again regrease and clean the joint or switch out your shocks. Use copper anti-seize on the shafts to make removal easier next time.



Here is the same part number gaiter placed on the inner ball joint, the one with the longer shaft. You can see the gap around the shaft. That gap sinches up on the tapered shaft when the assembly is fitted and the nut tightened.



All loaded up and ready to go. You can see how that straight sided cylinder of the unloaded gaiter gets that nice ball joint bulge when loaded. Extra grease oozes out and is simply wiped away. These also survive the R&R process time and again.

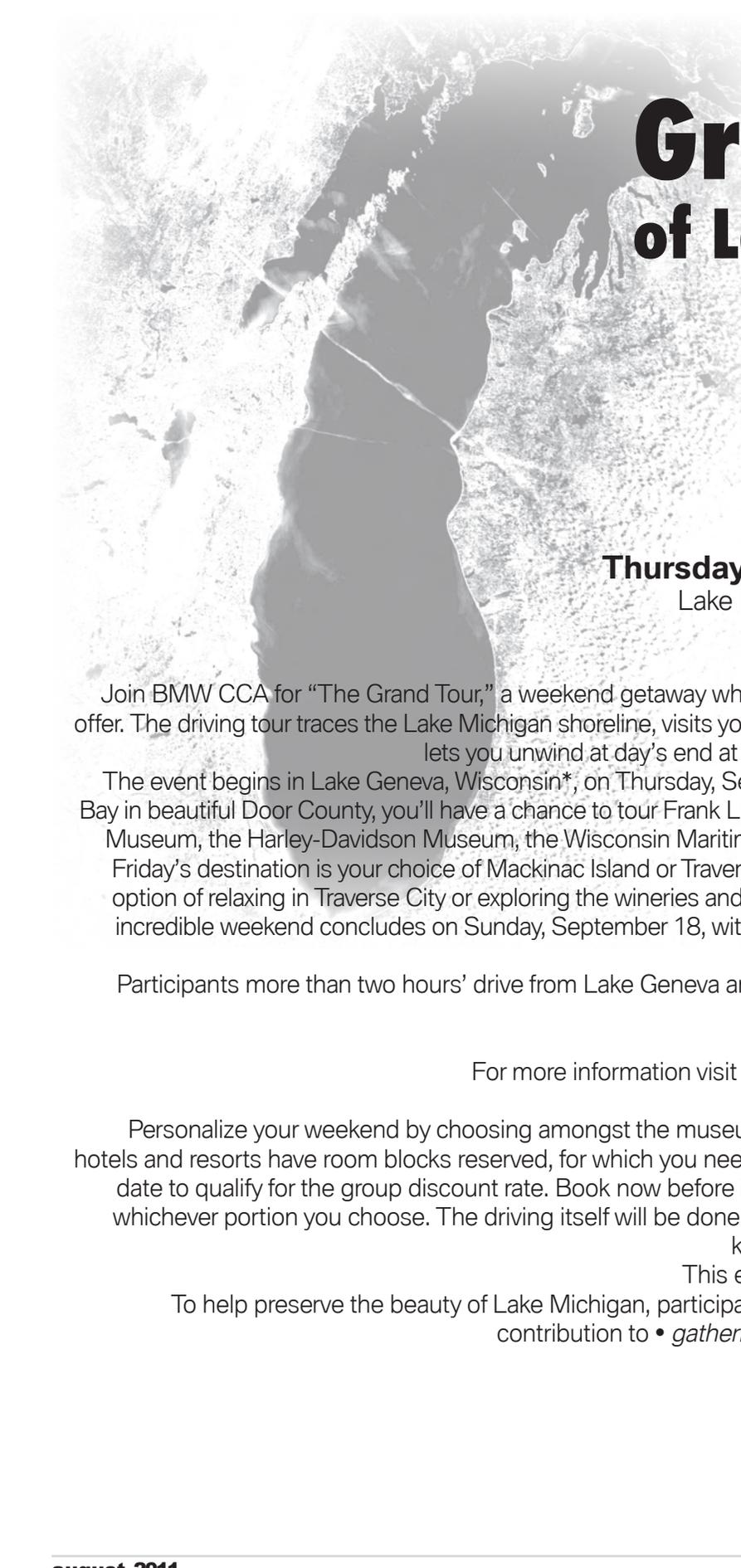


BMW's

at the 2011 Kohler International Challenge

photos by J R Schabowski





Grand Tour of Lake Michigan

Thursday Sept. 15 - Sunday Sept. 18

Lake Michigan Shoreline, Lake Geneva, WI

Join BMW CCA for “The Grand Tour,” a weekend getaway which samples the best the Midwest has to offer. The driving tour traces the Lake Michigan shoreline, visits your choice of (5) Wisconsin museums, and lets you unwind at day’s end at premium resort and culinary destinations.

The event begins in Lake Geneva, Wisconsin*, on Thursday, September 15, 2011. En route to Sturgeon Bay in beautiful Door County, you’ll have a chance to tour Frank Lloyd Wright’s Taliesin, the EAA AirVenture Museum, the Harley-Davidson Museum, the Wisconsin Maritime Museum, or the Kohler Design Center. Friday’s destination is your choice of Mackinac Island or Traverse City, Michigan. Saturday offers you the option of relaxing in Traverse City or exploring the wineries and winding roads of nearby peninsulas. This incredible weekend concludes on Sunday, September 18, with the incomparable Gilmore Car Museum outside Kalamazoo.

Participants more than two hours’ drive from Lake Geneva are encouraged to stay in Lake Geneva on Wednesday night, September 14

For more information visit • <http://www.bmwcca.org/TheGrandTour>

Personalize your weekend by choosing amongst the museum, lodging and dining options. Selected hotels and resorts have room blocks reserved, for which you need to mention “BMW CCA” by the cut-off date to qualify for the group discount rate. Book now before it’s too late! Partake in the entire event or whichever portion you choose. The driving itself will be done in small groups, with no set schedule, to keep the experience relaxed and intimate.

This event is open to all BMW CCA members.

To help preserve the beauty of Lake Michigan, participants are encouraged to make a charitable contribution to • gatheringwaters.org/land or michigannature.org

**Last day to register online:
Wed Sep 14, 2011**

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2011 Driving Events

Road America

Registration is open for OktoberFAST at Road America in Elkhart Lake. Check www.badgerbimmers.org for a link to a detailed article about the event and the on-line registration form.

OktoberFAST

This year OktoberFAST will be Friday, September 30th to Sunday, October 2nd. Friday is for instructors and advanced students and Saturday/Sunday is the drivers' school with run groups for novice students, intermediate students, advanced students and instructors.

Helmets must Snell M or SA 2000 or later. 2011 will be the last year that 2000 specification helmets will be allowed. Starting in 2012 only 2005 and 2010 specification helmets will be allowed.

bj



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New Members

Badger Bimmers Welcome New Members

David Lanser
Paul Hultgren
William Kumrow
Richard Zedoun
Austin Schmidt

Brookfield, WI
07 M5 - Whitefishbay, WI
79 320i - Kewaskum, WI
11 Z4 - Johnson Creek, WI
05 M3 Comp - Menomonee Falls, WI



BB Notable Events



BMW Car Corral at Road America for 2011

The Badger Bimmer BMW Car Corral will be open and we invite everyone to park your BMW's in the fenced area outside Corner 14 for the following events. The club's grills will be fired up and available for use, so BYOM, bring your own meat to cook out if you like and picnic with us at the races. Further details to follow, keep informed on the website.

- **August 18-20 American Le Mans Series** - The car corral will be available for members to park in. The grills will be out for use and a schedule TBD for paddock tours on Saturday only.
- **August 27, 2011 - Masterpiece Car Club Day** - downtown Milwaukee at the Lakefront Advanced registration is required. \$15 per vehicle gives you 2 exhibitor passes good for the weekend and a continental breakfast for two on Saturday. Space is limited to the first 500 vehicles. The first 200 will receive a commemorative dash plaque. Questions call Lindsay Schoettlin at 414-225-1344 or Ischoettlin@jfsmilw.org See more information at the website: www.milwaukee.masterpiece.com Let's fill the Lakefront with BMW's

Classified

CARS

1973 BMW Bavaria - Malaga with Tan Vinyl Interior, Oklahoma Car with little rust, Unknown Miles, 4 speed, runs and drives, many new parts, includes numerous parts from parts car (less engine, transmission, and interior), needs full restoration. (Parts for a 5 speed fuel injection conversion are available as well for an additional \$1200) \$2500 OBO Contact Kirt @ kam1271@hotmail.com for more information. Car is located in the Madison Area.

1973 BMW 2002 - Malaga, tan interior, mileage unknown. Runs and drives, Weber carb, crane ignition, e21 sport seats. Floors solid, needs paint and body. Car came from Colorado. Extra parts available. \$1,500.00 - contact Bill 262 268-1006 wnicoud@wi.rr.com

2001 BMW 330xi - AWD Orient Blue, Gray Leather. Sport package, dual power seats, 5 speed manual, CD premium sound, 17" wheels. Excellent condition, 72,000 miles - \$10,900. Car is located in Green Bay - 920-662-1500 or 920-655-7225, ask for Brian.

2006 BMW Z4 M Coupe - Black, black extended leather. 25,000 miles, never been in the snow. Car is located in Mequon - 262-242-4173 or 414-698-8801 or mclemens@execpc.com.

1987 16Valve 190 2.3 Cosworth 5-speed Benz. Smoke Silver Met. A hoot to drive, these cars were quite different inside & out. One-of in South Central WI and only a few hundred left across country. 106K



miles but these can easily do twice that. All service records. Good local service is available. No dings or rust. A fairly good example. More pics & info at DrivingFanatic.com. \$7800. For info or questions, GreggT@DrivingFanatic.com.

1987 M6 - low mileage beauty. It is blue with a light gray interior. Originally a California car, the second owner moved it to San Antonio, Texas until I purchased the car a few years ago. I am the third owner. The car has hardly seen rain and has never been driven in winter conditions. The car is kept in my heated and air conditioned garage. It has 80k miles and only a few minor paint chips. The leather interior is fabulous, showing almost no wear. There is some shrinkage in the leather around the defroster outlets, but the dash and rest of the leather is like new. The car has had BBS chrome/gold wheels since new and currently wears Michelin Pilot Sport tires with at least 50% tread life remaining. All options and accessories work as intended. New berber floor mats with the M6 logo from Bavarian. Never on the track nor abused in any way. \$17,500. Offers will be considered. Dave: 1.920.450.3017 or buettnerdav@fvtc.edu

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STORAGE - Heated secure well lit indoor storage for your street car, race car or collectable. In Delafield near I-94 and Hwy 83 Contact Mike Jeffords @ 414-640-6476.

1999 e36 M3 Fender - Drivers side, coupe, Cosmos Black, great condition. Make offer - Text to 414.803.3385 or email: mhtjef@gmail.com

e36 Coupe Interior - manual front seats, black, and rear folders, black leather, great condition. Make offer - Text to 414.803.3385 or email: mhtjef@gmail.com

Running out of space to store all your cars? Three locations have 10' x 20' units available: Cudahy, Menomonee Falls or Random Lake. Call 414-352-3261 and mention this ad for your club discount.

BMW Magazines - .50 each. Huge list of issues. Contact: Jerry Szefflinski - jerrysze@sbcglobal.net

BMW CAR CLUB OF AMERICA FOUNDATION SEEKS EARLY bimmer immers

The BMW CCA Foundation is trying to build a complete archive of newsletters from all chapters in the country. Does anyone out there have any issues from 1999 and before? If you do and are willing to allow the Club to photocopy some, please contact Darcy Yench at pres@badgerbimmers.com.

Non-commercial ads are free to Club members, and are subject to space and editing. Ads run for a minimum of three insertions and then are discontinued unless the editor is notified to continue running the ad. Please notify us as soon as the item is sold. - ED.

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