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Cover: How well does the 2016 BMW 328i stack against the Mercedes-Benz C 300? Read the comparison article on page 28. Photo: James Chew

Magazine of the National Capital Chapter BMW Car Club of America

der Bayerische

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**BMW Car Club
of America**
National Capital Chapter



President's Message

This snow is really irritating! Luckily it's starting to melt away and I can finally wash my car which is tattered with salt, grime, and dirt. I guess finding that empty parking lot with fresh snow has a few minor consequences. But, this too shall pass, and spring will be here before you know it. And that means car stuff!

We've just released the schedules for both Autocross and our High Performance Driving Events (HPDE) so mark your calendars. If you've never done either, these are great ways to see how you can get the most out of your BMW and to increase your performance driving skills. Be sure to sign up early, as these are very popular with our membership.

This is also a very important year for BMW, its 100th birthday! BMW North America has planned many events throughout the upcoming months to celebrate both its centennial, and also its next 100 years. Just visit www.celebratebmw.com to see what's in store and you'll want to be there. Not only will BMW CCA's Oktoberfest be centered around the world famous Laguna Seca race track, but BMW will be the featured marque in several events during Monterey Car Week including the Pebble Beach Concours d'Elegance and Legends of the Autobahn. This will be truly a once-in-a-lifetime celebration and many members have started planning their trips cross country. Hopefully you can join us for this remarkable adventure.

Finally, I'd like to announce our 2015 Program and Volunteer of the Year. David Miller has led the HPDE program for the past few seasons and last year was truly exceptional with all HPDEs filled to capacity. We also graduated several students through our Instructor Academy adding more firepower to our incredible base of top-notch instructors. A very successful year with great leadership from both David and the rest of the Drivers' School Steering Committee (DSSC).

Our Volunteer of the Year had her hands in a lot of things. Attending a ton of events, snapping pictures, and writing for this newsletter, Anna Maripuu did it all! Her passion for cars and racing make these assignments fun and it all comes through in her articles. Her dedication to the club is second to none. Congratulations Anna!

Attention! Attention! Attention!

To Members of the National Capital Chapter

It takes a great deal of planning and coordination to execute the many club related activities that are put on for the benefit of the membership. It also takes a lot of equipment; the chapter has tents, tables, chairs, banners, and more. Storing and moving these items has become more complex and time consuming as the amount of equipment grows with the increasing number of events.

To address this situation, the chapter is looking to secure a "Chapter Utility Vehicle" to store and move our equipment and supplies. Since we are a BMW club we prefer a BMW Touring model to support our needs. Specifically we are seeking an E39 (1995 to 2003) chassis vehicle. An E34 chassis (1988 to 1995) is also acceptable. Obviously we would like the vehicle to be in the best possible condition, but the need for some degree of minor mechanical repair is acceptable.

If any chapter member owns such a vehicle and is interested in donating it to the chapter we would be interested in hearing from you. Also, if you know of a vehicle meeting our needs that is available outside of the chapter, we would be interested in hearing about it as well.

Please contact one of the following members with any referrals or information:

James Laws, euro6er@gmail.com, 301-717-5950

Marlon Spencer, renntaxi@verizon.net, 240-605-6182

FromThe Editors

It has been a heck of a couple of months.

We have had some terrific driving weather in December and January. Think Pie Runs. From my perspective, though, most of winter happened the last week of January. I suspect we are not done with it.

Driving after a snowstorm is not an issue of how many lanes are available. It is lanes appearing and disappearing which causes problems. And

I find the comments from far flung parts of the country (Chicago comes to mind) that they have weather like this all the time, and it doesn't stop them. But that is the issue. We have different weather and different needs for our roads. For the same reason we encourage club members to attend a driving school, dealing with unusual circumstances needs practice. This area does not get much experience with snow.

There is a very interesting and uplifting article about the ecosystem of which we are a part. James Chew has an article in this issue on how the CCA and BMW support us with our automobiles and our driving, both sedate and on twisty little roads.

Finally, it would appear that only VW is suffering the consequences of their cheating scandal, which is good news for BMW.

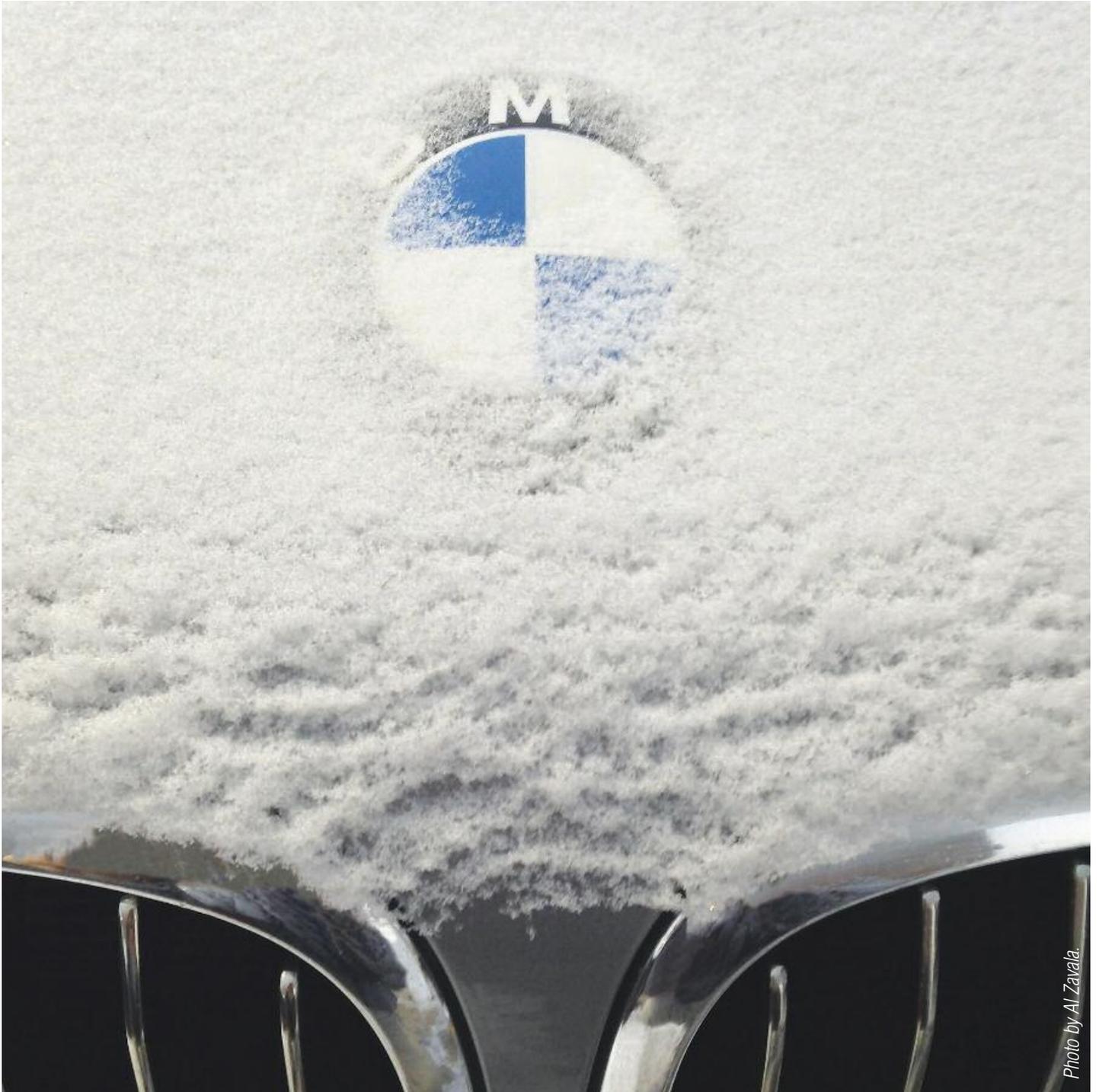


Photo by Al Zavala.

CALENDAR OF EVENTS

January

- 7 NoVa Social - TBD
- 13 Board Meeting/Social @ Brio Tuscan Grille, Rockville, MD
- 14 Columbia Social @ Glory Days Grill, Ellicott City, MD
- 21 MoCo Social @ Pizza CS, Rockville, MD
- 30 2016 NCC Annual Meeting, Embassy Suites Springfield, VA

February

- 4 NoVa Social – Tupelo Honey Café, Arlington, VA
- 10 Board Meeting/Social @ Brio Tuscan Grille, Rockville, MD
- 11 Columbia Social @ Glory Days Grill, Ellicott City, MD
- 18 MoCo Social @ Pizza CS, Rockville, MD

March

- 3 NoVa Social – Tupelo Honey Café, Arlington, VA
- 9 Board Meeting/Social @ Brio Tuscan Grille, Rockville, MD
- 10 Columbia Social @ Glory Days Grill, Ellicott City, MD
- 17 MoCo Social @ Pizza CS, Rockville, MD
- 19 NCC Autocross Novice School (Bowie)

April

- 2 NCC Autocross Test & Tune #1 (Regency)
- 7 NoVa Social - Tupelo Honey Cafe, Arlington, VA
- 8-10 HPDE @ Summit Point Jefferson Circuit
- 13 Board Meeting/Social - Brio Tuscan Grille, Rockville, MD
- 14 Columbia Social- Glory Days Grill, Ellicott City, MD
- 16 NCC Autocross Event #1 (FedEx Field)
- 21 MoCo Social- Pizza CS, Rockville, MD
- 30-01 Spring 2016 M Club Day @ BMW Performance Center

May

- 7 NCC Autocross Event #2 (FedEx Field)
- 11 Board Meeting/Social - Brio Tuscan Grille, Rockville, MD
- 20-22 HPDE @ Summit Point, Main Circuit

June

- 5 NCC Autocross Test & Tune #2 (Regency)
- 8 Board Meeting/Social - Brio Tuscan Grille, Rockville, MD
- 12 NCC Autocross Event #3 (FedEx Field)

COMING EVENTS

NoVa Social - Tupelo Honey Café, Arlington, VA

1616 N Troy St, Arlington, VA 22201
Thursday, March 3, 2016

Come join us at our new NoVa location, Tupelo Honey Cafe, in Arlington, VA as we gather amongst fellow club members for a night of BMWs and great food/drink. Why spend time sitting in DC/VA traffic trying to get home, just come on over and hang out with us!

Board Meeting/Social @ Brio Tuscan Grille in Rockville, MD

Wednesday, March 9, 2016

Columbia Social @ Glory Days Grill in Ellicott City, MD

Thursday, March 10, 2016

MoCo Social at Pizza CS in Rockville, MD

Thursday, March 17, 2016

Autocross Novice School (Bowie)

Saturday, March 19, 2016

NCC Autocross Test & Tune #1 (Regency)

Saturday, April 2, 2016

End of Winter Detailing Workshop

Odds and Ends Detailing,
201 Davis Drive Suite LL, Sterling, VA 20164
Saturday, April 2, 2016

Darryl Nichols, owner of Odds and Ends Detailing, will present a clinic at his shop in Sterling, VA. The session will run from 9 a.m. to 3 p.m. and there is a \$5 fee for the workshop (payable at the event).

Attendees will gain knowledge that they can take home to prepare their Deutsche Marque entry. Learning some tricks of the trade will help you over the next few weekends preparing your car for the Concours. This will be more than a brief explanation of the detailing process; it will be a chance to bring your problems to the expert for advice on what you can do to make your car stand out from the rest.

9 a.m. – 12 p.m. - A quick review of some basics, such

as proper detailing materials and processes; paint maintenance strategies and techniques with demonstrations (washing, waxing, and claying)

12 p.m. – 12:30 p.m. - Break for lunch

12:30 p.m. – 3 p.m. - Paint polishing and scratch removal strategies and techniques with demonstrations

For more information about the event, or questions or topics you'd like to have covered please contact John McWilliams – john.mcwilliams@gmail.com

NoVa Social @ Tupelo Honey Café in Arlington, VA

Thursday, April 7, 2016

HPDE at Summit Point Jefferson Circuit

Friday, April 8, 2016 through Sunday, April 10, 2016

Board Meeting/Social @ Brio Tuscan Grille in Rockville, MD

Wednesday, April 13, 2016

Columbia Social @ Glory Days Grill in Ellicott City, MD

Thursday, April 14, 2016

NCC Autocross Event #1 (FedEx Field)

Saturday, April 16, 2016

Spring 2016 M Club Day @ the BMW Performance Center

Saturday, April 30, 2016 through Sunday, May 1, 2016

33rd Annual Deutsche Marque Concours d'Elegance

Nottoway Park, 9601 Courthouse Rd, Vienna, VA 22181
Sunday, May 1, 2016 (Rain Date: Sunday, May 15, 2016)

One of the highlights of our event schedule is the Deutsche Marque Concours d'Elegance. This year marks the 33rd time that we have gathered with our friends from the Greater Washington Section of the Mercedes-Benz Club of America (MBCA) and the Potomac Region of the Porsche Club of America (PCA) for this terrific show. Once again, we have reserved Nottoway Park in Vienna, easily reached via Route 66. The park entrance will be marked with large car club banners.

In the Deutsche Marque Concours, vehicles are judged by their condition, appearance, and cleanliness. There will be three classes at this event - *Street class* (judged), *Meister class* (judged - consisting of first-place category winners from the 2015 Concours), and *Display class* (not judged - winner selected by people's choice balloting). Judges scoring cars in the Street and Meister classes will only judge the tops of the cars, including the exterior, interior, engine bay, storage compartments and chrome, but not the chassis. Street class cars are generally divided into several groups based upon BMW CCA national concours rules.

Please note: Cars produced after 2011 will not be judged, but are welcome to be entered in the Display class, and are eligible for the People's Choice and Judges' Choice awards.

Vehicles will be classified into the following categories:

Classics, 2002s, Modern 1980s - E30 3 Series, E28 5 Series, E24 6 Series, E23 7 Series, M1 and Z1

Modern 1990s - E36 3 Series, E34 5 Series, E32 7 Series, E31 8 Series and Z3

Modern 2000s - E46 3 Series, E39 5 Series, E38 7 Series, 6, Z4 and Z8

Current - E87 1 Series, E90/91/92/93 3 Series, E60/61 F10 5 Series, E63/64 6 Series, E65/66 F01/02 7 Series, E83 F25 X3, E53/70/71 X5 and E71 X6

The entry fee for the Concours is \$30 per car (\$40 after April 24th or on-site).

There is no charge to attend the Concours as a spectator. In order to allow us to plan appropriately for the number of guests, please register in advance using the registration form that at MotorsportReg.com.

Contact John McWilliams at john.mcwilliams@gmail.com if you have any questions or call me at 540-687-0166. I will be at Nottoway Park at approx. 8 a.m.

This is an all-day event.

Rolex Monterey Motorsports Reunion celebrating 100 years of BMW at Mazda Raceway, Laguna Seca

Saturday, August 20, 2016 – Sunday, August 21, 2016

47th Annual Oktoberfest (Monterey, CA)

Tuesday, August 23, 2016 – Sunday 28, 2016

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The BMW CCA Ecosystem

By James Chew

During an interview for a business publication, the former Apple CEO, John Scully, was asked if the then all-new feature-laden Samsung Galaxy phone would overtake the iPhone in terms of sales. Scully replied that even with all the impressive features on the Galaxy, Apple was not worried because iPhone users appreciate and take full advantage of the Apple “ecosystem.” The most visible part of that ecosystem can be seen at any Apple Store. When one sees Apple’s benchmark service after the sale (free advice, assistance and repairs, no matter the age of the Apple product, at their famous “Genius Bar”) one can see why the loyal “Apple Corps” grows and gets stronger with every sale. And that ecosystem was something that neither Samsung, nor any of the other smartphone manufacturers could match.

In fact, BMW contributed to Apple’s ecosystem. How many of you remember BMW being the pioneers for integrating the iPod into the vehicle entertainment systems?

Much the same could be said about BMW. While the BMW products have proven to have timeless designs and be reliable (when was the last time you saw a twenty-year-old, or even ten-year-old Lexus, Mercedes, or Audi used as a daily driver?), the BMW Car Club of America helps provide a wonderful ecosystem for the BMW owner.



(Above) Purchased new from Passport BMW in 2007, our X5 dutifully served us in the DelMarVa region and in California for close to 73,000 miles. (Below) Being transported to the closest BMW dealer courtesy of BMW Assist.

What many BMW owners may not realize, or appreciate, is that BMW North America and the BMW dealership network contribute significantly to this ecosystem. Here’s a recent personal example of my using this ecosystem to address a significant product issue.

After less than 73,000 miles, the rear differential on my wife’s 2007 X5 3.0 failed. Purchased new in 2007, we had dutifully followed the recommended BMW service intervals, which included NOT servicing transmission and differentials because they had “lifetime fluids.” All services and repairs were performed by my preferred BMW Center. When the extended free maintenance period and extended warranty period for this vehicle expired, I used my preferred BMW Center and a trusted independent BMW service center for these services.

My local independent BMW service center, which diagnosed this problem, informed me that the rear differential failing after so few miles was quite unusual. He also suggested that I contact BMW North America to see if they could help with the repairs.

From past experience, I knew that I could approach BMW North America to discuss this issue and then provide some “goodwill” to help cover the costs of this repair. Before I approached them, I decided to exercise the BMW “ecosystem.”



I first emailed Mike Miller (editor, BMW "Roundel" magazine "Tech Talk") to discuss this issue. Within an hour, he replied to my email. He relayed a few interesting bit of information, including (1) a BMW rear differential catastrophically failing before 73,000 miles is quite unusual, (2) he is becoming aware of an increased number of premature drivetrain failures because of BMW's use of "lifetime fluids," and (3) work with my preferred BMW Center and with BMW North America to request a "goodwill" repair. He also advised reminding both the dealer and BMW North America that BMW IS considered to be a premium brand. In my mind, BMW is on par with Nordstrom. And that is my expectations for service after the sale.



Even though we purchased the 2007 X5 new and had followed the recommended service, this vehicle was well out of its warranty period. So I emailed the BMW CCA Ombudsman to discuss this issue and ask for advice on increasing my chances of BMW NA and my preferred BMW Center providing "goodwill" to cover most, if not all, of the repair costs. John Gamel, one of the ombudsmen, quickly responded to my email. He asked for more information and included his phone number.

I decided to give him a call. Not

only was it a pleasure to chat with a fellow BMW enthusiasts, he provided some great advice on approaching both my preferred BMW service center and BMW North America to ask for "goodwill." The best piece of advice was to be the typical BMW owner (e.g., be anal) and show all the service and maintenance records for the vehicle.

Armed with this information, I contacted the service manager at my preferred BMW center (Alan Bettley at Richmond BMW). He asked me to bring my vehicle in as quickly as possible and he would work with BMW North America to see what could be done in terms of "goodwill." When I informed him that I planned to contact BMW North America independently, he heartily encouraged me to do so.

Because the X5 is my wife's car, I have diligently kept the BMW Assist service up to date. Contacting them very early on a Saturday morning, BMW Assist provided free towing to my current preferred BMW Center, Richmond BMW, which is close to 50 miles away from my house. Speaking with the kind and courteous professionals at BMW Assist and BMW Roadside Assistance at such an early hour was quite comforting. The BMW Assist staff member connected me to a BMW Roadside assistance staff member, and stayed on the phone during that call. The BMW Roadside assistance staff member texted me with the tow company information and their estimated time of arrival. And the tow company service was outstanding.

When we arrived at Richmond BMW, the service manager was there to greet us. After unloading the X5 and some discussion (reiterating that the X5 is my "wife's baby" and it was our 10th BMW), I was provided a car for use while my wife's car was in their shop.

That Monday, both the service manager and I independently contacted BMW North America to discuss the issue and ask for some help toward that repair. And while he



(Below left and above) BMW and the BMW Car Club of America – more than just Ultimate Driving Machines, great magazines, and dealer discounts!

had a response from the regional BMW North America rep. late Monday, he advised that we wait until BMW North America responded to my request before moving forward.

And thanks to Alan Bettley and BMW North America, the provided "goodwill" covered over one-third of the cost of this repair.

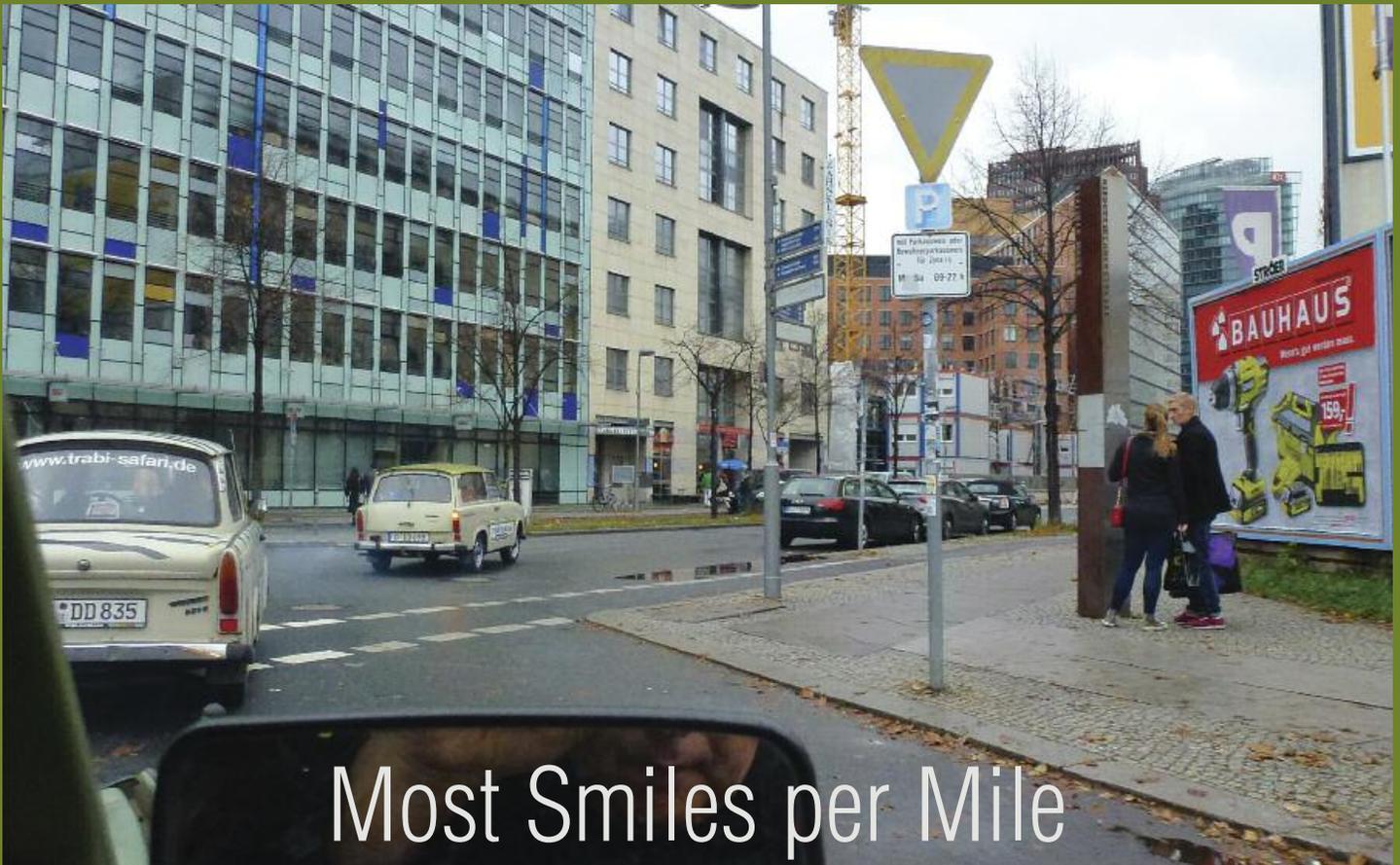
Here are some of my lessons learned from this experience:

1. If you are a BMW owner AND a BMW CCA member you are part of the strongest ownership ecosystems in the industry. If you have an issue with your BMW, you're not alone. Not only is your preferred BMW service center backing you, you also have BMW Assist (that little "SoS" button near your rear view mirror) – just remember to keep it current, the considerable BMW CCA resources (Mike Miller and the Ombudsmen), and Customer Relations at BMW North America.
2. Be the typical BMW owner, follow the maintenance schedule, and keep great service records. If you have your BMW serviced at a BMW dealership, the dealer can access these records electronically. It's still good to keep a paper copy.
3. Be reasonable and courteous. It is up to the discretion of BMW

North America and your preferred BMW center to provide any "goodwill" toward an out-of-warranty repair. I would have been reluctant to utilize the BMW ecosystem if the differential had failed after 200,000 miles. Use the BMW CCA resources to assess if your out of warranty goodwill repair is reasonable.

While it would have been nice if BMW North America had agreed to cover the entire costs of this repair, I would just as happy if they provide this data to the decisions makers in Munich to reverse their use of "lifetime fluids." As Mike Miller wrote, "The measuring life of lifetime fill is the lifetime of the component it lubricates." When the component fails because the fluid has never been changed, then the lifetime of the lifetime fill has ended, and it is time to buy a remanufactured component from BMW – in this case, a differential. This does not make sense from an ownership perspective, because instead, you can just change the darn oil at reasonable intervals.

This experience demonstrated to me the value of the BMW "ecosystems." It's most likely the major reason why most BMW owners are not just enthusiasts, they're evangelists.



Most Smiles per Mile

Driving a Trabant Through the Streets of Berlin

By James Chew

There's a wall of international photographers lining the streets as I enter the turn. Thinking I have found the perfect line, I aim for the apex. I then curse because I'm having problems with the shifter. It's not the first time I've had that problem – but never with so much at stake. At the last minute, I find the right gear, lifting the clutch pedal and applying some gas while executing a “Satch Carlson Alaskan rally” turn. I then tap the less-than-responsive brakes and let the momentum of our vehicle pass a multitude of vehicles to catch the lead car, as my co-driver sighs in relief. We've caught up with our tour and won't have to cluelessly navigate the streets of Berlin.

As with other adventuresome driving venues, I paid for the privilege of testing my driving skills on a challenging course. This time, I'm driving a relic of the Cold War through the streets of a unified post Cold War city. I'm with the “Trabi-World” tours in Berlin (www.trabi-world.com).

After reading about the number of BMW CCA members enjoying their BMW European delivery experience, I thought driving a Trabant throughout the streets of Berlin would provide an

interesting contrast. However, rather than driving what I thought would be the East German equivalent of an AMC Gremlin (which, incidentally, was my first car) I was driving a car that had the spirit of German engineering constrained by Soviet Union/Warsaw Pact regulations.



(Top) A parade of Trabants driving through the streets of a new, unified Berlin. (Above) Near Potsdam Station – a sign and the gas fumes remind you that there's no smoking!

Derided by the Western world and abandoned by their former East German owners following the fall of the Berlin Wall, Trabants have experienced a resurgence in popularity that would make any marque jealous. The clever straightforward design and ease of customization has turned a vehicle that was destined for the scrap heap into a timeless classic.

I discovered this Trabi-World while in Berlin walking to Checkpoint Charlie. I noticed Trabants driving in a line throughout the same streets that I walked. After photographing these strangely cute cars driving among a sea of late model BMWs, Mercedes, and Audis, I just knew that I HAD to drive one.

In 2000, Trabi-World started their business in Berlin with three Trabants. Offering the Trabant driving tours of Berlin in 2000, the locals scoffed at the 50 deutschmark price. During that time, one could PURCHASE a Trabant for a few deutschmarks. Following the



2004 release of the movie, *Good Bye Lenin* (starring Daniel Bruhl – one of the stars of the *GREAT* Formula 1 movie, *Rush*), there was resurgence of interest in the Trabant. Today, Trabi-World has 120 Trabants and can accommodate driving tours of up to 500 people at a time. Surprisingly, over 85% of participants book in advance.

Introduced in 1957, the Trabant has the same front-wheel-drive, front-transaxle architecture as the Morris Mini-Minor (yes folks, THAT Mini). While it had the same innovative space saving design, the Trabants use of a 600 cc, two-stroke, two-cylinder engine and “four on the tree” manual shifter gave the Trabant the acceleration of a typical riding lawnmower. But the advanced suspension – fully independent two-spring design – makes you wonder about the driving potential of this chassis with a more capable powertrain.

The two-stroke, two-cylinder

engine is rather unique. Running on a mixture of 20 percent oil and gasoline, the car uses a dipstick to measure the fuel level.

The “four on the tree” shifter does need some practice. Push the shift lever too far down and you’re in reverse. Shifting at the normal shifter position, you’re in third or fourth gear. Finding the “middle” position for first and second gears takes practice. While you get some “pre training” before the driving tour begins, it’s an “on the road training” experience. And please be careful NOT to stall. While most BMW CCA members are comfortable with manual shifting, using a manual choke is a lost art.

(Top) Hauling a trailer filled with beer kegs prove the Trabant's utility! One can rent a Mustang to drive the former American Sector streets. (Right) The Trabant speed record holder – 122 mph!

Not withstanding the “lawn mower” engine and the weird shifter, the Trabant was a blast to drive. The exhaust fumes were quite intensive (I recommend keeping ALL windows rolled down) and

the interior cabin noise rivals that of a World War 2 bomber. Fortunately the radio system used by the lead car was turned up high so we could hear the driving instructions. And even though we were continually





(Above left) Innovative use for a word Trabant engine. (Right) Doesn't the Trabant's front transsexual drivetrain look familiar? (Below) The fuel gauge is a dipstick!



out-accelerated by bicycle riders, seeing the sights of Berlin while driving this strange little car was quite enjoyable.

Making it more enjoyable were all the people taking pictures and videos of us driving on the streets of Berlin. If you're on this tour, be prepared to smile and wave.

At the end of the tour we were

all presented, with some pomp and circumstance, our official "DDR" drivers license.

Over three million Trabants were produced, with NO recalls! That's a record that every auto manufacturer would enjoy!

If you prefer to drive a "green" Trabant, Trabi-World has 30 "e-Trabants", where the two cylinder,

two-stroke engine has been replaced with electric motors that were once used for forklifts.

The Trabant experience does not need to end with the drive. Across the street from Trabi-World is a Trabant Museum. There is a 50% admission discount with the driving experience. That being said, the museum is well worth the regular 4-euro admission price.

The exhibits are rather interesting. Trabant claims Auto Union (e.g. Audi) ancestral roots. From my research, that seems to be a bit of a stretch. Trabants were assembled in an Auto Union factory, which was seized by the Soviet Union following World War 2. By the time the first Trabants came off the assembly line in 1957, any relation to Audi was quite distant, to say the least.

While there are a number of other product displays that are quite interesting, such as the "Ferrari Trabant", the "Camping Trabant", and the East German

police/military Trabants, a 4-stroke engine Trabant that may have never seen production, and the "record-setting" heavily modified road racing Trabant (196 km/hr – that's 122 mph), the most interesting exhibit is the Trabant video. In that video, retired Trabant engineers proudly discuss the engineering behind the Trabant. They discuss the unique "Douplast" body panels claiming a much better crash test survivability than by any other European assembled car of the time.

One of the more interesting stories relayed in that video is of the "Trabant 603". Designed in 1969, this two door hatchback model was continually denied permission for production by the Soviet Union controlling hierarchy, fearing that this vehicle would propel East Germany in the auto production lead within the Soviet Bloc (it may be hard to believe, but the Trabant was a much better vehicle than the Lada). As told by these retired Trabant engineers, the designed,





(Left) No iDrive, no cupholder, no navigation, no satellite radio, and a “four on the tree” shifter. (Below) Trabants DO rival Bugs for cuteness!

annual festivals and the Trabant Fest is that a majority of the Trabant Fest participants purchased their vehicle and paid five deutschmarks or less for their vehicles!

The Trabant and BMW share a kinship. Both have the same German spirit of perseverance. One wonders where Trabant would be today if they had had access to state-of-the-art engineering and assembly practices or if Moscow had “green lit” the Trabant 603.

Observing the growing popularity of the 24 hours of lemons, which is where I think all the Gremlins and Pacers have gone, “car guys” are linked globally through their love of cars and motoring. It’s great to realize that classic cars never die – they just get re-invented and re-invigorated by a new generation of enthusiasts.

So if you’re one who wishes to take BMW European car delivery, or if you’re planning a future trip to Germany, it’s worth the time to take a detour to Berlin and drive a Trabant. Think of it as driving a spiritual ancestor to the 2002!

documentation, and prototypes of the Trabant 603 disappeared in the early 1970’s. But when the VW Golf (e.g., Rabbit) was introduced in 1974, these same Trabant engineers swore that it was the Trabant 603 design!

The Trabant enthusiasts have their equivalent to our BMW CCA “Oktoberfest”. Held annually in Zwickau, Germany, participants and their cars would match the spirit and enthusiasm of our annual “Legends of the Autobahn” AND annual BMW CCA Oktoberfest combined. Of course, a major difference between our



One More Thing

Our rental car in Germany (from SIXT) was a 2015 Mercedes GLA. Yes, this was truly a front-wheel-drive Mercedes SUV. While there were a few things that took a little time to become familiar with – such as the gear selector location for the 7-speed DCT (it’s similar to the one used in the 2000 BMW 7 Series), the navigation system speaking German, and the speedometer in kilometers per hour, we found this vehicle ideal for three businessmen and their luggage.

Driving over 1000 kilometers, mostly at Autobahn speeds, we found the vehicle to be extremely stable at those speeds (our vehicle was rev limited to 210 km/hr) and achieved outstanding fuel economy. And within the locations we visited, the GLA’s handling, ride quality, and maneuverability on the narrow cobblestone village roads was outstanding.

Even with a center tunnel (for the all-wheel-drive models) the interior was roomy. The sunroof provided an airy feel, all the seats were quite supportive, and the cabin noise was impressively low. Even while driving the GLA at its top speed, we never had to raise our voices to be heard.

Most surprising was that our rental vehicle was equipped with the 2.0 liter turbo-charged four-cylinder GASOLINE engine. And diesel is much less expensive than gasoline – by at least 0.20 euro per liter.

So, as I said in my review of the Mercedes CLA AMG 45, if BMW decides to switch to a front-wheel-drive architecture for the future 1 and 2 Series, the BMW faithful will be relieved that unless told, most of us will not notice the difference.

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A DIY at **Aktiv Automotive**

By Anna Maripuu

You know it's going to be a good day when you pull out onto I-270 and find yourself behind a 3.0 CSI clipping along at a good speed and making that oh so distinctive throaty BMW engine sound. I thought, well this guy must be going to the Cars and Coffee and DIY held at Aktiv Automotive on 22 West Diamond Avenue in Gaithersburg, Maryland. I followed him and sure enough, he pulled into Barron's parking lot across from Aktiv Automotive, where the Cars and Coffee was being held.

At this joint DIY and Cars and Coffee, there was a healthy turn out of great cars. There were some VERY new cars that turned up, including the new 7 Series and the new X5 M package brought courtesy of Mo Abassi at BMW of Fairfax. Everyone gathered around Mo as he demonstrated the high tech capabilities of the Almandine Brown Metallic 2016 750i xDrive Sedan with Tartufo Full Merino Leather interior. At a retail price just shy of \$126 K, this car had all sorts of bells and whistles and packages the likes of which one has never even heard of, including Autobahn Package, Driver Assistance Package Plus, Driver Assistance Package Plus II, Executive Package 2, Luxury Seating Package with Cold Weather, Interior Design Package, and Ambient Air Package. Whew! It also had a Panoramic Sky Lounge LED Roof and a Bowers and Wilkins sound system. As if that wasn't enough it featured things like Gesture Control, Dynamic Digital Cluster and a Wi-Fi Hotspot. I flunked Gesture Control, failing



to open the trunk with a wave of my leg, instead kicking the car!

With a 4.4 liter twin turbo V-8, 32-valve engine, the 8-speed Sport Automatic transmission with Sport and Manual shift modes is capable of five driving modes: ECO PRO, ADAPTIVE, COMFORT, SPORT, and SPORT+. The car is equipped with steering wheel-mounted paddle shifters and something called Launch Control. I expected it to be capable of lifting off into outer space, it had so many mind boggling features. I've never seen an engine quite like this one before. When one lifted the hood, the engine was completely covered over and enclosed. It made me wonder just how difficult it might be to service this car.

Among the great vintage cars on the scene was Kourosh Farshadfar's 1973 Inka Orange 2002. Several other 2002s showed up, all in great shape and in a variety of colors. There was a 1976 Polaris 2002 driven by Ellen Beck. It was completely original and had been purchased by her dad, who was the original owner. She has recently started driving the car to NCC events so hopefully we'll see this beauty out and about more. I wasted no time introducing myself to the driver of the car I had tailed on the way here and it was Doug Dolan, proud owner of a Boston Green 1972 3.0 CSI with an M5 engine, an absolutely stunning vehicle.

Tim McNeish drove his recently purchased Imola Red Z4 M roadster, and Bill and Caroline

(Top) Doug Dolan's Tundra green 3.0 CSI drew a crowd of admirers at the cars and coffee. (Above) Kourosh Farshadfar with his beautiful Inka orange 1973 2002. (Below left) Mo Abassi from BMW of Fairfax gives Doug Dolan a tour of the brand new 7 Series, including a demonstration of how certain pre-defined hand gestures can control the infotainment system. (Below right) The comfort seats in the rear come with a massage function that includes twelve massage and six rotation balls. Marc and Andrew Caden enjoyed trying out several of the different massage settings.



Mansfield showed up in their Calypso Red E30 325i convertible.

While the Cars and Coffee was going full force, club members were busy working on their cars across the street at the Aktiv Automotive DIY, coordinated beautifully by Phil Cummings. In its current incarnation, Aktiv Automotive opened its doors on January 15, 2015. It had existed since 1982 as Mathias Service Center, until Kevin Lucas, Chad Mustard, and Craig Maul bought it last year with the intention of turning it into a German speed shop, specializing in tuning, performance modifications, and general maintenance.

The owners, of which Kevin Lucas is the majority stakeholder, are passionate about BMW. Kevin owns several BMWs. He has an Imola Red 2004 ZHP E46 330i, with black interior and an active autowerk twin screw supercharger. He's had it for two years and is still working on the car. It was custom tuned by Frank Smith in Crofton, Maryland and though it runs on gasoline it has methanol injection which helps cool the supercharger and increases horsepower. Kevin's first car was a rare 2001 330i ZSP. In addition to the 2004 330i, Kevin also owns a 2008 X5, a 2004 X5, and a 2000 325i.

We couldn't have felt more welcome at Aktiv Automotive. For the Saturday DIY, we had access to all seven of the shop's lifts. All three owners were on hand to help club members and give them advice. In addition to the owners, Stuart Page is



the detailer/mechanic and service writer, Bill White is the lead technician, and John Holdsworth is the technology manager in charge of customization, coding and electronics. Aktiv Automotive partners with Bavsound, ECS Tuning and VMR Wheels. This is not your shop full of average mechanics. They are one of the few shops around that will do any kind of customization, both interior and exterior. And somehow, there is a very happy vibe in this shop.

Some twenty-seven club members tinkered with their cars. Doug Verner and his son Austin, brought their 2005 M3 ZCP Dinan S2 and 2003 330ci, respectively, to do oil changes and brake flush. Club president Paul Seto swapped summer tires to winter tires on his 2011 M3 coupe. Many club members did oil changes or coolant or brake fluid flushes and filter changes. Myron Sadowyj installed a front door window regulator on his 2001 325i. I decided my car needed a face lift, so in addition to an oil change, I installed new (black) kidney grilles which turned out to be a delicate but successful procedure.

After the DIY, I have been back to Aktiv Automotive several times, once for a full detail including claybar and compound and wax to renew and refresh my car's paint job, and for miscellaneous mechanical issues, such as installing a new battery. I have been super impressed by the work done at Aktiv Automotive and what is so refreshing is that you can have a great conversation with anyone there about your

(Above) Ellen Beck's father was the original owner of this Polaris 1976 2002. (Below middle) Bill and Caroline Mansfield brought their beautiful Calypso Red E30 325i convertible. They owned a similar E30 convertible when they were first courting many years ago and just recently purchased this car from a Northern Virginia seller.



A DIY AT AKTIV AUTOMOTIVE



car. I highly recommend giving Aktiv Automotive a try. You will find them to be highly competent, friendly and ever so willing to listen and include you every step of the way. It's a far cry from the impersonal service one often receives. The passion for BMW shines through clearly, and you just know Kevin and the rest of the crew are going to care for your car just as thoroughly as if they were working on their own cars. Lucky for us we get to return to Aktiv Automotive in the coming months. Two DIYs are scheduled there for the upcoming year. Whether you have a newer BMW or a vintage car, Aktiv Automotive is there to help. Happy motoring!



(Top left) DIY coordinator Phillip Cummings poses with a DIY regular. (Top right) NCC Club members Steve Tenney and Doug Verner take a break from working on a car at the DIY. (Above) The owners of Aktiv Automotive, a new German speed shop in Gaithersburg MD, pose in front of their new sign.



AUTOCROSS, NCC STYLE.

What to Expect in 2016.

Photo by Eric Hall

By Abheek Sen

Autocross season is coming up in a few months. Although the 2016 schedule is not fully set yet, it's important to be prepared for the season's fun. Depending on if you are a novice, seasoned veteran, or an observer, autocross has something for everyone.

Let's start with what autocross is. Autocross is a timed competition where a driver has to safely navigate a short course laid out using cones in the shortest amount of time, usually around the 40-60 second range. The standard mantra at the course is "Drive at your capability, not what you think your capability is" and "You break it, you buy it!". Unlike HPDE events, autocross events are relatively slow speed. In general, HPDE takes the concepts of autocross (precision cornering and braking) and applies them to longer tracks and higher speeds. In neither case is racing the goal, but rather proper and precise handling of the automobile. I've seen everything from modified jeeps, stock econoboxes, Italian exotics, stock sedans, to race-ready M3s take the field. Due to the technical nature of the course, autocross trains the driver to be quick instead of relying on the car's 0-60 capability.

There... basics out of the way. Let's talk about the season. NCC BMW CCA's autocross team has a series of events throughout the season. They can be broken down into Novice Schools, Test and Tunes, and Points Events.

Novice School is open to anyone who wants to learn how to autocross, usually for those who have had less than two autocross sessions in the past. Instructors sit with you in your car and help you learn how to read the course, help you understand your ability as well as your car's ability.

Test and Tunes are mainly for more experienced drivers. Drivers are given as many runs as wanted to fine tune the car's set up as well as have more experience behind the wheel. Slots for Test and Tunes are limited so sign up early if you want to get involved in this.

Finally, there are the points events. During points events, drivers are usually given three chances to complete the course as quickly as they can. Prior to the course going "hot" (i.e. when actual cars are racing on the course), drivers usually walk the course to identify the turns and burn the course into memory. If you are new or having trouble with the course, don't be afraid to ask for an instructor. Most instructors are seasoned drivers who have help you navigate and manage every turn better, in turn making you

faster. There are two sessions a day, Morning and Afternoon. Within each session, drivers are split up into two groups: those who drive and those who work the course. If you want your points from racing to count, you have to work the course.

This year's schedule is as follows:

- Novice School: March 19 @ Bowie Baysox Stadium, Bowie, MD
- Test & Tune #1: April 2 @ Regency Furniture Stadium, Waldorf, MD
- Autox Points Event #1: April 16 @ FedEx, Landover, MD
- Autox Points Event #2: May 7 @ FedEx, Landover, MD
- Test & Tune #2: June 5 @ Regency Furniture Stadium, Waldorf, MD
- Autox Points Event #3: June 12 @ FedEx, Landover, MD
- Autox Points Event #4: July 16 @ FedEx, Landover, MD
- Autox Points Event #5: August 14 @ Bowie Baysox Stadium, Bowie, MD
- Autox Points Event #6: September 4 @ Regency Furniture Stadium, Waldorf, MD
- Autox Points Event #7: October 8 @ Regency Furniture Stadium, Waldorf, MD

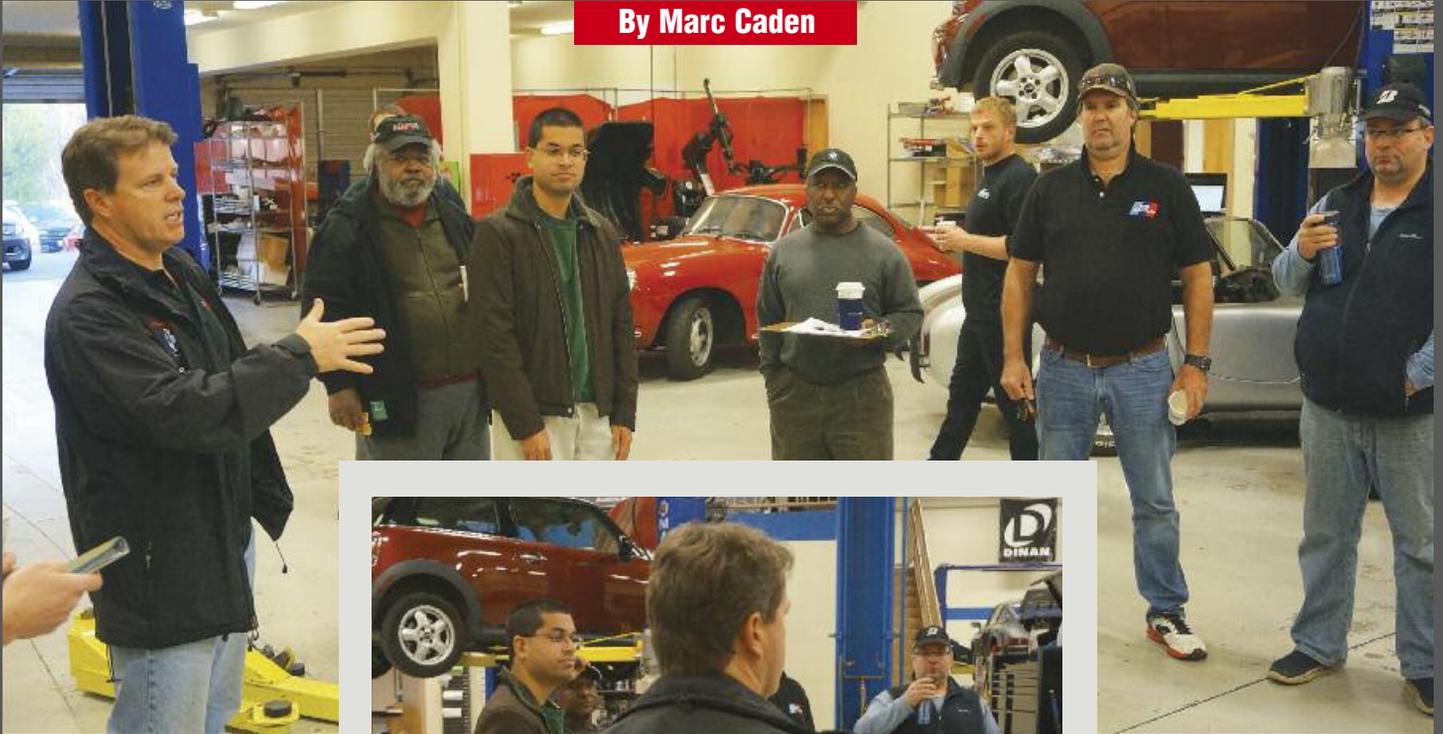
With that being said, meet the board that works tirelessly to put these events together.

Phil Yates – Committee Chairman
Collin Smith – Co-Chairman and Timing Coordinator
Sarah Abernethy – Co-Chairman and Sponsorship Coordinator
Mike McKee – Social Media/Advertising
Fraser Dachille – Novice Coordinator
AJ Aviles – Course Design Coordinator
Jeff Noyes – Course Design/Safety
Kamran Bakhtian – Course Design/Safety
Bob Esser – Classing Coordinator
Okas Elam – School/Novice Coordinator
Adam Chelikowsky – School Coordinator
John Lattanzio – Registration Assistant
Jeremiah Anderson – Timing Coordinator
Jack Raymond – Timing Coordinator
Seth Koch – Tech Coordinator / School Assistant
Marina Martin – New Member Liaison
Zach Pullins – NCC Board Liaison

To find out more about NCC Autocross, visit our website, www.nccautocross.com. We look forward to seeing you out there this season.

December DIY at ASM Performance

By Marc Caden



During the pre-purchase inspection of my 2005 E46 M3 at ASM Performance last year, the technician mentioned that my constant pressure valve or CPV was weeping a little oil. The telltale sign was a slight trail of oil appearing on the passenger side of the engine block near where it meets the transmission. The technician, Matt, said this was not an immediate worry because any actual oil loss would be beyond measure. He also said that this was very common for S54 engines. So if you're currently driving a BMW with an S54 engine – e.g., an E46 M3, Z4 M Roadster/Coupe or Z3 M Roadster/Coupe (2001-02) – that hasn't already had the issue corrected, this applies to you.

The CPV itself isn't a very expensive part and it retails for around \$40 from the dealer. However, it isn't the metal valve itself that is causing the leak or needs to be replaced. Instead, there is a sealing o-ring around the valve that hardens over time from the high heat produced by the engine. Once the o-ring loses its



Above) Although the back of owner Morgan Adams' jacket still says AtSpeed Motorsports, going forward they will be known as ASM Performance.

sealing capabilities, a leak appears. Several aftermarket manufacturers sell a replacement o-ring that is more heat resistant than the original for about \$5.00. However, some dealers and independent repair shops quote between \$400 - \$600 to address this malady. Why spend so much money when the parts are so little? Read on.

I decided to tackle this project at our December DIY at ASM Performance. Turns out this thing is kind of hard to reach with your engine still in the car. It is nearly invisible and located high up on the right side of the engine by the exhaust manifold. You can approach

it by either going over your control arm with a series of extensions or through a narrow, vertical passage between the exhaust manifold and engine block. If you were gifted with long slim arms, this process will be made a little easier, but helpful genetics were not on my side. Once you finally reach the CPV, you realize traditional metric sockets won't work and that it must be removed using a tool resembling a flat head screwdriver.

Matt from ASM helped me break loose the CPV and I was able to remove it using an extra long 3/8 inch ratchet with a floppy head and a special drag link socket. After

removing the CPV, it was apparent that the o-ring was toast. It was hardened like brittle plastic. I cleaned up the engine block with some brake cleaner and then replaced the o-ring on the CPV. The whole process took less than two hours and any semblance of a leak is now gone. DIY success was achieved and at a savings of several hundred dollars!

There are some new notables to mention at ASM Performance located in Hanover, Maryland. First, is the new name. Previously, they were known as AtSpeed, but going forward they will be known as ASM Performance. Although their name has changed, what has not is their commitment to quality and care in servicing your BMW. Their technicians are among the very best, they have added more lifts, they are a DINAN authorized facility, and they have the very latest machines and software. ASM Performance is a family run operation with owner Morgan Adams and his father Bill always on the premises to provide a warm greeting.

The most important new fea-



ture at ASM Performance since our last visit is the installation of a Dynapak Dynamometer (or dyno) machine in July. The main feature of the Dynapak machine is the way it connects to the car. Instead of the wheels spinning on rollers, the drive wheels are removed from the car and the hubs are connected directly to the machine. This mechanical connection allows for no tire slippage and permits the technicians to do more advanced load testing.

We got to see the machine in action and it was truly impressive. An owner had towed his Porsche 944 racecar all the way from Georgia solely for the opportunity to have ASM's experienced tuners analyze the car on the dyno machine. It didn't take long to diagnose a flat spot in the engine's

performance that would have gone unrealized without the machine's advanced ability to load test the car. The owner was flabbergasted to have finally diagnosed the problem, which he felt was holding back the car's performance on the track.

A lot of interesting tasks were performed by our DIY participants. DIY Coordinator Phillip Cummings and ASM Owner Morgan Adams gave some brief preliminary safety instructions before everyone went to work. John Walker replaced the running boards on his 2012 X5. James O'Gara replaced the fuel filter on his 2011 335d. Mother and son duo, Tyrik Dedrick and Imogene Newsome replaced the front brake pads and rotors on her E46 3 Series. This was their first time attempting a brake job and

there were plenty of helpers on hand to provide assistance. The husband and wife duo of Andy and Caroline Miller are regulars and needed no help with draining and refilling the differential oil on their E36 318ti. Another DIY regular, Chris Wootten, replaced the oil and filter on his 2013 328i with M sport package.

There were doughnuts and coffee served in the morning and a nice pizza lunch provided for all participants. Much thanks goes out to owner Morgan Adams and everyone at ASM Performance for hosting us! We hope you make a New Year's resolution to join us at an upcoming DIY event.



(Bottom left) The owner of this Porsche 944 racer towed it by trailer almost 12 hours so it could be analyzed and tuned on ASM Performance's Dynapak dynameter. Note how the rear wheels have been removed and the machine attaches directly to the hubs rather than the wheels spinning on rollers. (Bottom right) Tyrik Dedrick helped his Mom out by replacing the front brake pads and rotors on her E46 3 Series. (Middle right) John Walker replaced the side running boards on his X5.

Traditions

BY Tom Kapikian

PHOTOS Tom Kapikian

Rebuilding the E28 HVAC System

Removing the evaporator box from the E28 wasn't something I was looking forward to. As someone who usually enjoys a good project, the HVAC system had never been a priority. It's just not exciting work. That was about to change after I found a puddle of oil beneath the A/C compressor of my beloved 1988 BMW 535is.



Photo by Raine Mantysalo

could approach this two ways. Replace only the compressor and continue to live with mediocre air conditioning, or do a complete teardown and rebuild of the HVAC system using modern A/C components. As an avid DIY'er, I chose the latter.

I began with the interior.

Without question, this was the most daunting task. To gain access to the evaporator box and heater box I removed the center console, shifter console, center stack, radio, HVAC control panel, glove box, dashboard, driver side lower trim and firewall heater trim panel (accessed via the engine compartment), which pretty much meant the entire front cabin. It's possible to leave the dashboard in place, but having just replaced mine, the second time around went quickly and provided much (and I mean much) easier access. A word of caution. If you leave the dashboard in place, it's very easy to snap off the drain from the bottom of the evaporator box during removal.



Center console cover hardware



The evaporator box is accessed first. This is a totally enclosed unit where the evaporator, expansion valve, temperature regulator and blower motor reside. I removed it as one piece and saved all disassembly work for the workbench.

Behind the evaporator box lies the heater box – the last layer of demolition. Also an enclosed unit, the heater box houses the heater core, another blower motor, more electronics, and a bunch of flapper doors that direct air where



Wiring harness view 1 (this is important for reassembly)

needed. Since this is the deepest part of the interior, I preemptively replaced the heater core because believe me when I say, you only want to do this once. Take lots of photos during disassembly, they'll become your best friends later.

The blower motors that live inside the



Wiring harness view 2 (this is important for reassembly)



Wiring harness view 3 (helps in reassembling the dashboard)

evaporator and heater boxes had become noisy, especially when subjected to any G-loads such as moderate braking. These motors are still available from the dealer but only as a complete assembly with the attached squirrel cage fans. As a less expensive option, I carefully pressed off the plastic fans (they were surprisingly robust) and replaced just the electric motors. They're available from other vendors for about a quarter of the price. Take careful measurements



Squirrel cage fans for circulating air



Where there should be foam insulation

before removing the fans because if they're not positioned on the shaft exactly as before, they will rub against the plastic housing.

The foam insulation surrounding the vents, heater core and evaporator had deteriorated to the point of turning to sand on contact. Some of this foam is used to dampen vibration and some is used to seal joints between air ducts. After trying what seemed like an endless amount of insulation choices, I settled on 3/16" X 1 1/4" closed cell foam weatherstripping from my local Ace Hardware. It's wide enough to cut down to size, and the closed cell design keeps out any moisture. 3M Adhesive Remover made quick work of the old glue. As an added bonus (I would discover later) the airflow from both the floor and dashboard vents significantly improved. The new



Foam insulation from Ace Hardware

blower motors, cleaned fans and a repaired flapper door likely all contributed.

The next order of business was finding a suitable compressor. Many from the E28 forum community (MyE28.com) have used the Sanden model # 6664 with success and have even crowd sourced custom brackets that bolt to the M30 engine compressor mount. These custom brackets were produced in very limited quantities so you will probably have to make your own



Compressor mount



Compressor in mount



Top of compressor as attached to engine block

(although, as of this writing, a few are still available). Some flat bar steel with holes spaced for the new compressor shouldn't be too difficult to make. The only modification to the stock mount involves enlarging the top hole to accept an M10 bolt that secures the top of the new compressor. After making some custom spacers

to fill gaps between the mount and new compressor, I was able to reuse the stock 800mm drive belt. The Sanden compressor is inexpensive, similar in size and more efficient than stock. In fact, the entire cost of parts for this upgrade is less than a replacement OEM compressor.

Easily the best upgrade to the A/C system is changing the condenser to a parallel flow design. They allow for more efficient heat transfer than the OEM tube and fin design and generally have 25% more capacity for the same size condenser. The goal here is to convert the gaseous refrigerant entering the top of the condenser back into a liquid. Liquids evaporate and create the cooling effect you feel in the cabin. Although bigger is better when it comes to condensers, to avoid any fitment issues, I found one roughly the same size as stock (14"X18") and fabricated four new mounts.

Riveted to the front of the old condenser is a two speed electric fan. It was still in good shape so I drilled out the rivets, did some slight modification to the three rubber mounts and re-riveted the fan onto the new condenser. Also, the large resistor attached to the fan housing should test at 0.6 ohms otherwise, the fan will operate only at high speed.

Oily residue living on the original rubber



New condenser/evaporator coil



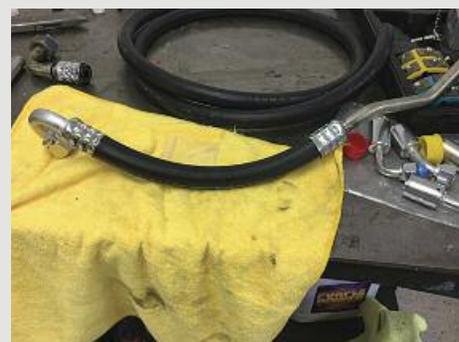
Condenser in front of the radiator

hoses was a constant reminder of the need for barrier hose when using R134a. R134a is a

smaller molecule than R12 and it will eventually leach out through the old hose. Most hydraulic shops will crimp new lines for a small fee, but I decided it would be more fun to make my own. The crimping tool (every big project gets a new tool as motivation), barrier hose, o-rings, and all the necessary fittings are readily available online. The barrier hose comes in four different sizes, #6, #8, #10 and #12. Most runs for the E28 use #8 hose with also a short run of #6 and #10. These are for the liquid line leaving the receiver/dryer and the suction line going to the compressor. To keep the stock appearance, I reused the original metal lines where they clamp to the inner fender. The low pressure charging valve is integral to one of these metal lines and is often a source of leakage. Changing out the valve core is both easy and inexpensive.



Crimping a fluid transfer hose



Hose with fittings after being crimped

The fittings for the hose ends are sized by the same numbering system and are available in all kinds of shapes and sizes. For example, the suction line entering the Sanden compressor uses a #10, 135 degree, o-ring fitting to clear the side of the engine block.

Hiding near the anti-skid hydraulic unit is the receiver/dryer whose purpose is to filter, store and dry the refrigerant before sending it to the expansion valve. Anytime the system is opened for service it should be replaced. I saved this part of the reassembly for last because once the



Hose fittings

seal of the new receiver/dryer is broken, the desiccant inside will start absorbing atmospheric moisture. Also, using a refrigerant safe thread sealant, I transferred the high pressure cutout switch from the old receiver/dryer to the new one.



Expansion valve

The last two components to address are the expansion valve and the evaporator. The expansion valve is a metering device that regulates the rate at which liquid refrigerant flows into the evaporator. Since I had no way of testing it and being a relatively inexpensive part, it was an easy decision to replace it. The evaporator on the other hand is fairly expensive. After it was successfully pressure tested overnight, thoroughly cleaned, and flushed multiple times, I convinced myself that I could avoid the expense of buying a new one. (I may



Evaporator/cooling coil

come to regret this down the road). To prevent moisture from dripping into the cabin and engine bay, I wrapped the cold line leaving the evaporator with new cork insulation tape. Incidentally, the old insulation tape was saturated with leak detector dye at the joint where this cold line joins with the one that exists the firewall. Being so well hidden explains why I never found the source of my slow leak.



Evaporator with circulating fans

This brings us to the rewarding part of the project – reassembly and recharging. Fortunately, I was able to piece everything together with no leftover parts or fasteners thanks to the numerous photos I took during disassembly. I replaced all o-rings with lightly lubricated HNBR (hydrogenated nitrile) o-rings and then boiled away any moisture in the system with a deep vacuum before recharging. This can be done at home if you have access to a vacuum pump and manifold gauge set or at a shop if you don't. If recharging with R134a, the system will use less refrigerant than that used for R12 and the high side pressure will generally be 2.2 - 2.5 times outside air temperature. Specific procedures for recharging are widely available, but I used approximately 24 oz. of R134a and was able to get 39F out of the center vent with an ambient air temperature of 84F at 1500 RPM.



Console after being reassembled

Finally, a few general notes about E28 air conditioning. There is no low pressure cut out switch for the compressor, only the high pressure one located on the receiver dryer. Pushing the A/C button does several things. It removes power from the heater blower motor and turns on the evaporator blower motor even if the fan speed is set to off, closes the fresh air flaps located on the heater box, activates the electric fan in front of the condenser and allows the evaporator temperature regulator to control the compressor clutch. Unlike most cars, the A/C operates only on recirculated air. There is no provision for outside air.

And remember, it's illegal to vent refrigerant to the atmosphere. If converting to R134a, use R134a charging ports or use adapters over the original ports so the next owner doesn't accidentally recharge with the wrong stuff.

So, was I happy with the results? I fired up my new, 2015 daily driver under similar conditions (low 80's) to see what kind of vent temperatures a modern air conditioner produced. I got exactly the same result. That's good enough for me. This upgrade won't improve your lap times and may not be exciting work, but it rates very high on the satisfaction index.



E28 with much more efficient cooling

Breakdown of prices. (dollars)

Heater Core (Behr)	56.00
Receiver/Dryer (Behr)	21.00
Expansion Valve (Egelhof)	33.00
Blower Motors (Bosch)	62.00 each
Compressor (Sanden)	164.00
Condenser (14X18)	66.00
Fittings and hoses	80.00
R134a 24oz.	25.00
Cork insulation & foam	30.00
Crimping Tool	175.00
Cold air	Priceless



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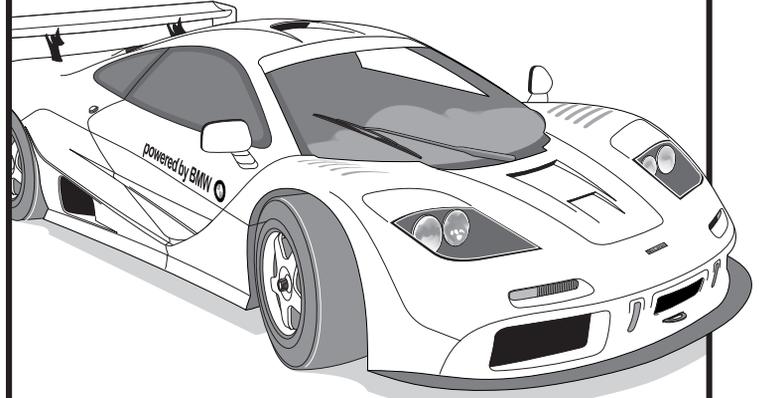
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NEW MEMBERS



New Members through December, 2015

National Capital Chapter now has 5,692 members. We continue to be the largest chapter in the U.S. and add memberships every month.

Do you know someone who owns a BMW, but is missing out on the rewards of belonging to the BMW CCA? They probably don't even realize what great benefits they are missing, including parts

discounts at local BMW dealerships and select independent service centers, the *Roundel*, the club's award-winning national, monthly publication, the Membership Rewards Program sponsored by BMW NA, and all of our local chapter activities. Please do them a favor and share this with them – after all, the more the merrier!

To our newest members listed below, you joined the

club, now join the fun! Check out our Web site at www.nccbmwcca.org for the latest event details.

Note: If your name is spelled incorrectly, please use the address change form found under the "Join and Renew" menu item at www.bmwcca.org to correct it. And, for those whose memberships are about to expire, it's easy to renew online at this Web site as well.

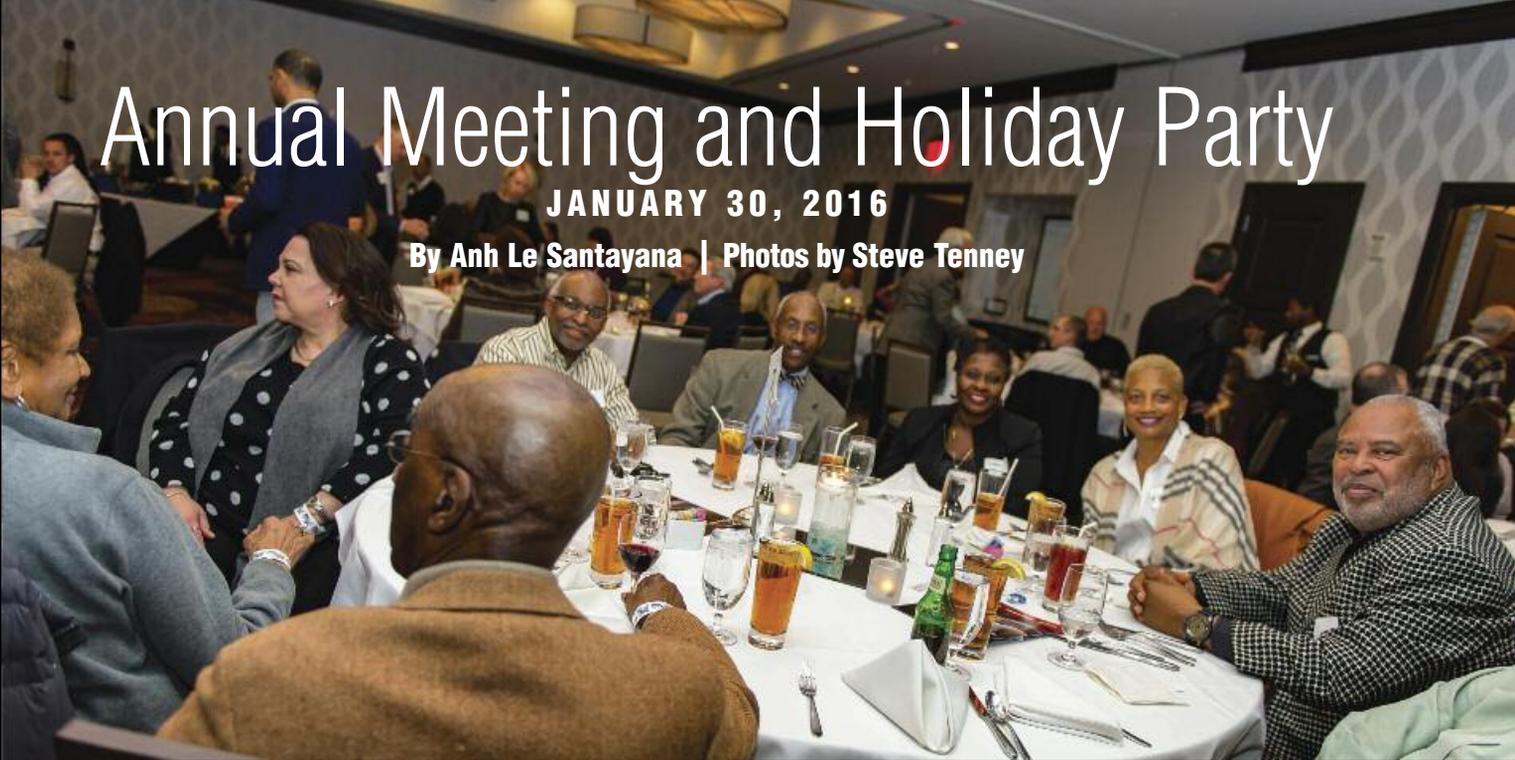
Enrico Abalos	Sundeep Damani	Amanda Herr	Oscar Matos	Bruce Schreiber
Drew Abernethy	Ryan Daughtridge	Chris Hillar	Ian McCallum	Alex Scott
Leslie Acosta	Paul DeCourt	Joaquin Hinojosa	Alexander Mcglothlin	Sherise Scott
Peter Auchincloss	Leslie DeCrispino	Michael Hinojosa	Don Menner	Mohammad Shah
Melony Austin	David Denbow	Stella Hoffman	Nicholas Mezzullo	Cicely Sharp
Robert Awalt	Greg Dennison	Scott Hoke	Bill Michel	Virginia Shell
Samar Aziz	Rebecca DePrez	Deonna Hope	Zack Miller	Odie Silva
Claude E. Bailey	Lisa Dignazio	Ronald Hougham	Brian Miller	Darius Smith
Stan Bailey	Katharine Drossos	Isaac Hunter	Michael Moncavage	Kathryn Snyder
John Barber	Matt Duran	Crystal Jackson	Ethan Mott	Susy Solis
Ian Barnhart	Patrick Dynes	Lauren Jackson	Bryan Mun	Jesssica Stampfer
Max Barnhart	Patrick Ennis	Ben Janczak	Will Murphy	Brian Stutz
Peter Battaglia	Maria Escalante	Desmond Johnson	Michaela Murphy	Mary Stwodah
Marko Becker	Carol Evans	Carter Jones	Beverly Nelson	James Tabb
Mitchel Bell	Branden Evans	George Jones	Kazvin Olmeda	Michael Talley
Reginald Berry	Daniel Famiglietti	M Richard Kalter	Andrew Oltorik	Joe Thompson
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Natalia Ceron Parra	Steve Gunsior	Don Longano	Janet Proctor	Charles Wiedemer
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Annual Meeting and Holiday Party

JANUARY 30, 2016

By Anh Le Santayana | Photos by Steve Tenney



What better way to start the New Year than with your fellow BMW enthusiasts on a Saturday evening. The National Capital Chapter (NCC) held its Annual Meeting on January 30, 2016 at the Embassy Suites in Springfield. Hundreds of NCC members gathered that night to visit with old friends and meet new members.

James Laws, Membership Committee Chair, started the night by welcoming the attendees. James also took the time to thank the many volunteers who contribute their time and effort to the Chapter. President Paul Seto followed up with the point that the Chapter is always in need of additional volunteers. It would be difficult to run the Chapter without our volunteers to help plan over 120 events held throughout the year. The Chapter awarded a plaque to Anna Maripuu as Volunteer of the Year for all her assistance in the many events and for her writing contributions to the *der Bayerische*. David Miller was also recognized with the Program of the Year with his efforts for HPDE's phenomenal year. David was awarded with a special guest pass to Dominion Raceway (donated by Jim Lorimer from Dominion Raceway).

Rob Siegel, column writer for *of a Hack Mechanic*, spoke about his love for BMWs. Rob noticed cars from a young age and loved to buy cars that he "craved." He has owned 59 BMWs since 1982! Rob also took questions from the audience after his presentation and stayed on to autograph books. Rob also revealed that he will have a new book coming out in April, 2016. As his current book is not a manual – a more apt description would be – "my life viewed through the lens of cars" – he disclosed that his forthcoming book, *A Guide to European Automobile Electrical Systems*, will be a repair manual.

The raffle table was filled with many wonderful prizes graciously donated by our sponsors. Below are the big winners of the night:

M School Class
Radial Tires (Buy 2, Get 2)
Nemacolin Woodlands Resort (1 night)
Hilton Asheville Biltmore Park (2 nights)
BMW Men's Watch

Cindy LaRoche
Jerry Skeim
Marie Morris
David Dugan
David Ford

The Chapter would also like to recognize all the sponsors who donated the amazing prizes for the raffle that night. Their generosity is greatly appreciated.

- BMW Performance Driving School
- BMW of Alexandria
- BMW of Silver Spring
- Capitol Shine
- Drivers Club at Dominion Raceway
- Hilton Asheville Biltmore Park
- Leatherique Professional Leather Restoration Products
- MedTEC Engenuity Corporation
- Nemacolin Woodlands Resort
- Passport BMW
- Radial Tire

An immense thank you to Kendra Seto and Angela Livingston for organizing a remarkable event, and to all of the volunteers, without whom the success of the Annual Meeting would not have been possible.



(Above) Rob Siegel, column writer for the *Roundel* and author of *Memoirs of a Hack Mechanic*.

Doug Verner, our M Club Day coordinator, swore in the following volunteers as our current club officers. Congratulations to our new Board members!

President- Paul Seto
VP- James Laws (sworn in post-event due to runoff)
Treasurer- Rick Kempf
Secretary- Gina Hector

Perhaps the main highlight of the night was the returning guest speaker. Rob Siegel, column writer for the *Roundel* and author of *Memoirs*



The 2016 BMW 328i and 2016 Mercedes-Benz C 300

The Horse and The Monk

By James Chew

It's a book.

All this time, I thought the Monk in Munich's city symbol was holding a beer. I must remember NOT to ask the friendly waitresses at Munich's Hofbrauhaus about such things.

current "entry level" sports sedan market 40 years ago when they launched their North American "Ultimate Driving Machine" brand campaign with the E21 3 Series. Seven years later, Mercedes-Benz

North American products, we thought it would be interesting to evaluate both products in terms of their different company cultures.

Both the 2016 BMW 328i and the 2016 Mercedes-Benz C 300

As the Capital of Bavaria, Munich has historically been an art and cultural center. It's most famous residents include Mozart, Wagner, and Ludwig II (the fairytale king). So while BMWs share the same



(Above) THE "Ultimate Driving Machine" for 40 years, the 2016 BMW 3 Series.

And the Prancing Horse on Stuttgart's city symbol looks familiar. A friendly barmaid told me that the name Stuttgart is derived from a German word that means "stud farm." And it IS the same Prancing Horse that's used for the Ferrari logo. Now I really need a beer.

I was pondering such things during our two continent, three location evaluations of the 2016 BMW 328i and the 2016 Mercedes-Benz E300.

BMW planted the seeds for the

launched their 190 series, known as the "Baby Benz." That same year, BMW launched the iconic E30, which included a four-door "saloon" model. And while both were outstanding driving vehicles, both manufacturers ignored the features demanded by their growing American market. But, 26 years ago, when both Lexus and Acura entered the entry-level sports sedan market, both BMW and Mercedes started to pay attention to their American customer base. As their best selling

reflect the cultures of their respective headquarter cities.

Since the 1880's, Stuttgart has been an industrial pioneer. It was during those years Gottlieb Daimler invented the automobile, followed by Robert Bosch opening his first "Workshop for Precision Mechanics and Electrical Engineering." It's no wonder that Mercedes-Benz have always been distinguished by their precision design, engineering, and manufacturing, proudly living up to their The Best or Nothing" slogan.

precision engineering and manufacturing characteristics of a Mercedes-Benz, the BMW design and system engineering have a distinctive artful soul. And it's that artful soul that makes BMWs the "Ultimate Driving Machine."

When examining both exterior designs, the Mercedes seems stoic while the BMW seems to be just as business like, but giving us a subtle wink.

"Precision" comes to mind when approaching the C 300. The

THE 2016 BMW 328i AND 2016 MERCEDES C 300

crisp lines, the rear-boat tail, the aerodynamic trunk lid, and bright trim give the Mercedes an upscale business look. One would expect the C300 driver to be dressed in a business suit with a perfectly knotted tie and laced dress shoes.

With the 328i, “fluid” seems to be the best word to describe the exterior design. While exuding the same upscale feel as the Mercedes, the

seemed to be an afterthought. Perhaps both are working with Apple and Samsung eventually to incorporate an in-dash iPad or Tablet docking station.

And both interior designs now acknowledge American ownership habits. The front and rear cupholders can easily accommodate the Starbucks Venti-size cups (oddly enough, we didn’t notice the

ately tighten. It’s as if the car is saying, “We’re going to drive, so you need to be safe.” The 2.0-liter turbocharged four-cylinder engine produces 241 horsepower and 271 foot pounds of torque and is coupled with the electronic seven-speed automatic transmission with paddle shifters. While a very nice experience, one feels like a ship Captain when driving the C 300. The vehicle

this car, you’ll want to take the long way to every destination, especially if that route includes interesting driving roads.

Both vehicles are quite comfortable driving in excess of 200 km/hr. The quiet cabin and smooth ride make watching the rural German countryside quite a pleasant experience. Likewise, both are comfortable and quite competent in the



(Above) The 2016 Mercedes C Class, a fine BMW 3 Series competitor.

BMW design has “fun” undertones. Perhaps it’s the Hofmeister kink that gives the BMW that “fun” spirit. If the BMW driver had reason to wear a business suit, Salvatore Ferragamo driving shoes would complete the ensemble.

Both vehicles have attractive interior designs. It should be no surprise that Mercedes interior looks like an upscale executive office while the BMW looks like an upscale driver’s lounge. However, the infotainment screens in both vehicles

cupholders in either vehicle during our recent European trip). And both vehicles have dual folding rear seats to increase the vehicle’s cargo capacity.

When driving both vehicles, the major difference between the design philosophies and corporate cultures are most apparent.

The C 300 exhibits a business-like driving demeanor. After shifting the automatic transmission from Park to any drive gear, the driver and front passenger seat belts immedi-

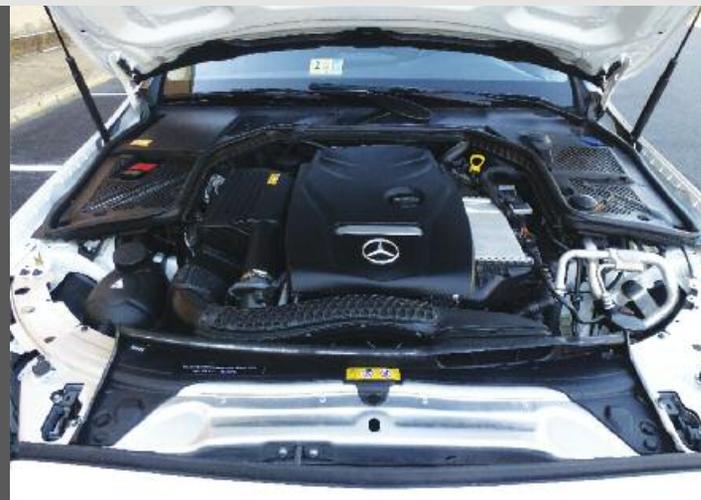
seems to quickly repeat every driver command before executing that maneuver.

Driving the 328i makes one immediately understand why BMW is the “Ultimate Driving Machine.” With the now familiar “TwinPower Turbo” in-line four, that produces 240 horsepower and 255 foot pounds of torque, coupled either with the eight-speed automatic transmission with paddle shifters or a six-speed manual shifter, the 3 Series just wants to be driven. With

Washington, D.C. Metro area and Southern California driving environments.

To have an idea of the contrast in driving experiences, think of the 328i as the “Barden Bellas” and the C300 as “Das Sound Machine.” If you haven’t seen “Pitch Perfect 2” (it was shown on the plane ride back to the U.S.), think of the BMW as a Mac and the Mercedes as a high-end PC.

With the four-cylinder engines and now nearly imperceptible “Auto



(Above) The now familiar and proven TwinPower Turbo four-cylinder engine.

(Above) There's a four-cylinder engine under all that plastic, note the dipstick!

stop/start" feature, in both continents the vehicles achieved an average fuel consumption in the high 20's.

Comparably equipped, the C 300 is slightly more expensive than the 328i. The price difference between the Mercedes and the BMW is much more if one selects the Mercedes pre-paid maintenance package. And while the BMW does give the buyer the option between a six-speed manual and an eight-speed automatic transmission, the

C 300 simply has a seven-speed automatic transmission.

BMW and Mercedes have taken different approaches to the "entry level" sport sedan. They are not direct competitors, rather they appeal to the different tastes within that market segment. A BMW driver will feel isolated driving a Mercedes while the Mercedes buyer will feel the BMW is a little unrefined. The biggest accomplishment of these two vehicles is that they have expanded

the "entry level" sports sedan market. In addition to these two segment leaders, today one can select from a number of products, including an exclusively American interpretation (the Cadillac ATS), a Japanese interpretation (the "Novocain" like Lexus), a Korean alternative (Hyundai – yes Hyundai), and a "Quattro" alternative (the Audi A4).

We thank Levant Inal, sales manager at BMW of Alexandria, for the use of one of their in-stock 2016

BMW 328is for the photos. We couldn't test the BMW at the same time as the E300 and appreciate the support of our local area BMW dealers.

(Below) Large cube-like truck and folding rear seats – the 3 Series car area makes one wonder why they "need" an SUV.

(Below) The Mercedes C class cargo area is just as useful – so why does one "need" an SUV?



THE 2016 BMW 328i AND 2016 MERCEDES C 300



(Above) The 3 Series driver's position has a familiar fun and friendly vibe.

(Above) The C Class driver's position has an "all-business" demeanor.

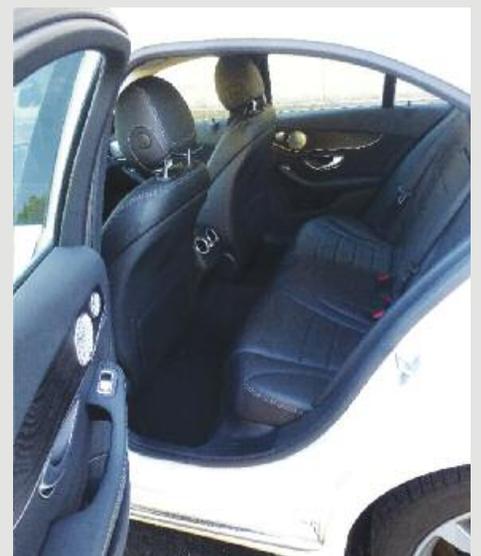


(Above) The 3 Series dash and center console show a direct lineage to the original 3 Series.

(Above) There is no allowance for a manual shifter in the C Class center console.



(Left to right) Both the 3 Series and C Class rear seating areas are easy to enter and exit and can accommodate two six-foot adults.



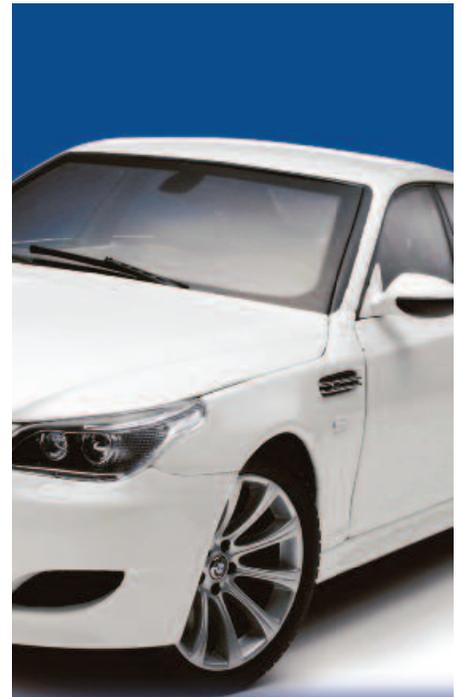
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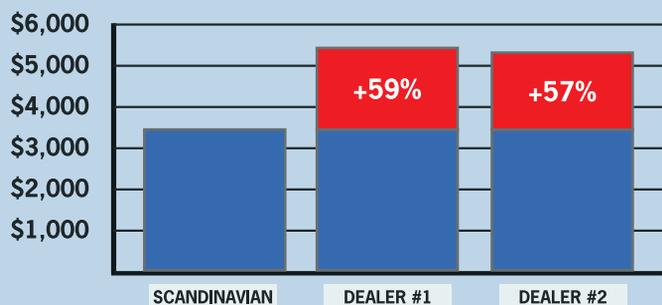
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\$198.95 Replace Brake Pads / Sensors Front

This offer is valid only for BMW X5 Series (E53) (built from 2000-2006). Prices include parts & labor.

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