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FALL 2014

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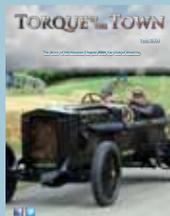


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Brutus

The ultimate driving machine for Houston Traffic



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Dennis Nowak
President - Houston Chapter



school are spreading throughout the communities. We are always looking for volunteers, both instructors and staff to help out, so if you can help, please do.

Just like Christmas in July gets you thinking about the holidays later in the year, I need you to start thinking about Elections in January. We will have the Secretary and Treasurer Positions open to any member in good standing. If you have ever thought about serving on the Board, this is your opportunity. To find out more, read the article about the 2015 elections in this issue

The monthly club coffee meets are something I look forward to. They give me a chance to chat with other members, welcome new members and introduce myself to those who do not know me. Plus I get to see the nice cars in parking lot. I am always amazed at the turnout too. I've seen large groups when I expected small and small groups when I expected large, but ironically, it's been equally fun no matter how many people are there. Whenever I meet a member who tells me they are a "long time member, first timer here" I always ask "what brought you here today?" I am thrilled when at the end of the meet those same people tell me they are glad they came and even more thrilled when they keep coming to the next meets. These coffee meets are a true testament of the phrase, "it's the cars that bring us together, but it's the people that make us stay." I hope to find you at the next event;

**you can find me...
in the driver's seat!**

the cone chasers, are all volunteers doing their part to make this a better car club. I believe you get what you give, so if you can give a little time to help out with events you will most likely find it very rewarding and beneficial to all members.

Speaking of events, now that we've make it through the "hot" months, our AX team will be starting up again September 21st. Keep an eye on the calendar and eblast's for a special AX event Chris and his team are planning. I mentioned in an earlier issue, that several members are in the planning stages to bring track events to the Chapter. They are close to releasing details soon, so keep your eyes on the eblast for that too. Our **Fredericksburg Weekend Drive** is coming up October 31st thru November 2nd. This is a fun weekend with a Halloween party scheduled again along with the drives. I've been a cop and a pirate in years past so maybe an action figure this year? *Maybe not.* Anyway, make sure you make hotel reservations before October 1st to get the discounted room rate.

On October 18th we will again host a **Teen Street Survival school**. This will be our 2nd one this year as the 1st one was a huge success. We will no doubt reach our limit of 30 students again this time as the benefits of attending this

the general accounting; pay bills, make deposits and invoicing. All of which is posted in QuickBooks. There are quarterly reports made during Board Meetings, annual reports to National and our yearly tax return. The treasurer is also responsible for keeping track of the new points systems which gives credit to members for their participation in club events. All of this is very simple because the format is already in place.

If this sounds like something you would be interested in, please submit your name to be placed on the ballot to:

nominationcommittee@houston-bmwca.com

Stay Informed!! - eBlast Signup

Once a month the Chapter emails an eBlast to all members who have indicated that they want to be kept informed about Chapter activities and events, as well as news and information involving the Chapter.

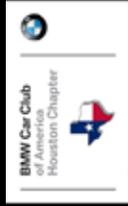
If you wish to receive this information and are not already signed up you may do so on the website at www.houston-bmwca.com.

The eBlast request is located at the lower left on the front page.

Houston Chapter Treasurer Position Open

By Sarah Nowak

I have enjoyed serving as Treasurer for two terms but now it's time to turn the reigns over to someone else. So, I am writing this article to explain the club treasurer's responsibilities. Of course there is



Fredericksburg Weekend 2014

Halloween Edition

IT IS TIME AGAIN FOR ONE OF OUR MOST POPULAR SOCIAL EVENTS OF THE YEAR!

REGISTRATION 101:

1. Contact the hotel (info below) by **OCT/01** at the latest and make your reservation requesting the HOUSTON BMW CLUB rate. **The club rate is not guaranteed after Oct/01**
2. **RSVP to Neil Baer** at socialevents@houston-bmwcca.com **no later than OCT/25** with the following info:
 - a. First and last name of participant(s)
 - b. Car specs (year, model, color)
 - c. A contact number
 - d. Whether or not you will join the Friday caravan from Houston so we know how many cars to expect

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BMW Event Group Rate (incl. breakfast)
 Traditional Suites: \$149/night + tax
 King Suites: \$179/night + tax

48-hour cancellation policy for reservations.
 All rooms are no smoking and no pets.



2014 AGENDA

FRIDAY, OCT-31

9:30am: meet in parking lot of Bass Pro Shop Outdoor World Katy Mills
 5000 Katy Mills Circle, Katy, TX-77494 **Departure 10:30am sharp! Bring your radios!**
 7pm: Halloween Party: we gather at the hotel's conference facilities for our own Halloween Party with fun games and contests! Costumes are encouraged! Bring the soft drink of your choice. **We are asking each party guest for a \$10 donation to help cover room rental + food**

SATURDAY, NOV-01

9:00am – 5:00pm: Hill Country drive and picnic at LOST MAPLES STATE PARK
 Evening: TBD

SUNDAY, NOV-02

9am: hotel check out. Drive to Austin for brunch at THE OASIS

www.oasis-austin.com

Brutus



Jim Robinson



The following images and text were gleaned from the internet. Check out the links below for this amazing machine which was way ahead of its time.

After WW I many aircraft engines were available since Germany was not allowed to own aircraft. These engines were installed on old undercarriages and used to perform races similar to the special Maybach racing cars and following the traditional Blitzen-Benz.

Auto & Technik MUSEUM SINSHEIM's in Germany created "Brutus" in their workshop. A 12-cylinder aircraft engine with 46 liters displacement and a constant performance of 500 hp at 1500 rpm, that was located in Spain by museum club member Hans Dittes was mounted on an undercarriage with a chain-drive circa 1908 was used as a basis for the "Brutus" project.



The attraction of this vehicle is not least due to the fact that it is going to reach a speed of far beyond 100 km/h at about 800 rpm only. After several years of hard work the vehicle was completed. It has been presented in action at many events.

Editor's Note: This text was taken from the website which was translated from German. I corrected sentence structure and arrangement.

Check out the videos. They're really amazing.

<http://sinsheim.technik-museum.de/en/en/project-car-brutus>

Auto & Technik MUSEUM SINSHEIM | Museumsplatz | D-74889 Sinsheim (Germany)

There's also a video via the British program "Top Gear". Search for Brutus V12 Top Gear video.





By Blake LaGrone

What is Auto Appraisal Network and why should I know about it? AAN was started in 1999 by two car buffs who found that most insurance companies undervalue custom or classic cars. I know that my own insurance company has no real interest in knowing what kind of modifications I have done to my cars, or what value they truly add. The two friends decided to put together a company that would fill that space and AAN was born in California.

Today, AAN is a Nationwide company and is used exclusively by the producers of the TV shows “Overhaulin” and “Rides”. AAN also works closely with Hagerty’s classic car



insurance co.

Our club was contacted by Micheal “Woody” Wooding. Woody came to our coffee meet up and gave us a brief talk about what AAN does and what they can do for us Bimmerheads. Woody was searching for a “retirement” job and in 2007 met Phil Restivo, a reserve Marine Colonel on active duty. Phil holds an MBA and Master’s degree in Aviation Systems and worked as a NASA contractor during the space shuttle years. He works for Oceaneering International, a subsea oilfield service and product provider, and had his



own company, AAN Houston.

When Woody met Phil he was just getting ready to deploy overseas and Phil needed someone to help his fledgling company continue to survive while he was away. Woody stepped up and today they cover the region of South Texas.

There are many purposes for getting an appraisal:
(The following is reprinted from AAN’s website with their approval)

“The most common reason is for insurance purposes. If the published value guides say that a perfect ’40 Ford Coupe is worth \$36,000.00, but you have around \$160,000.00 invested in your fully customized Street Rod, then you better have every facet of that conversion work verified, photographed, and documented in a professional appraisal. You can’t blame your insurance company for undervaluing your vehicle if the insurance company doesn’t know what you have!

We have never been involved in an insurance claim yet where the adjuster looked at one of our appraisals and said, “That’s just way too much information.” We have, however, tried to help many unfortunate owners after they have already filed a claim without a professional appraisal and been told, “We have no idea what your car is worth.” Lack of a professional appraisal not only costs them thousands of dollars but months of stress and aggravation as well. Our advice? Be prepared.

The second most common reason to have a vehicle professionally appraised is probably financing. Banks and credit unions will often finance classic cars and even customized vehicles, but they need to know exactly how much that special vehicle is worth in order to lend money on it.

Other common situations that require professional appraisals include: legal disputes, insurance disputes, diminished values, divorces, estates, probate cases, and charitable donations.

Of course, some of our clients just want to know the right sale price to set for their vehicles! We have an appraisal format to suit each customer’s needs.

Our appraisers come to you and fully document your custom or stock; car, motorcycle, truck or watercraft. Each report is supported by market research, specialized experts, an extensive database of comparable classic cars the latest collector car sales data and historical valuation data. Our electronic reports are sent directly to our clients within hours of completion, days before traditional agents can even produce a report. The printed

and bound report we mail is even more impressive. No other appraisal report contains the extensive photo documentation of your auto ranging from 40 to 100+ photos and thoroughly documenting vehicle options, customizations, identification and vehicle provenance.

Auto Appraisal Network is dedicated to helping custom and collector car owners protect their investment by providing state of the art, professional documents not available anywhere else in this industry. We provide certified appraisal reports for your antique car, restorable project car, tricked out car, muscle car, antique car, classic car, custom car, custom truck, show car, show truck, prostreet, street rod, hot rod, race car, SEMA car, custom bike, we have appraised more of these types of vehicles than any other appraisal company in the United States. We are the most qualified company to appraise your custom or collectable car” End quote...

AAN carefully selects its appraisers and sends them to a two week training class at headquarters in California to make sure they know how to properly document any vehicle and judge its value.

Woody spoke about diminished value on cars that we drive on the street. When your car is damaged by another insured driver, insurance companies in Texas must not only repair the car, but compensate you for the loss in market value of your vehicle. My biggest question for Woody was, Ok so I get the appraisal, what happens then? His answer was, “If your car is hit by another insured driver, the insurance company has very little recourse. AAN uses current market data to validate our claim and insurance companies use formulas to calculate diminished value. In the rare case where the insurance company won’t settle, AAN has found that Judges prefer current data over formulas most every time”

For insurance appraisals a discount will be applied if doing multiple cars in the same location. So if we have 5 people interested with 5 cars, all 5 cars need to be appraised at a common location. All types of appraisals cost \$325 per car. A discount of \$30 on each appraisal will be applied for 3 or more cars.

To read more about AAN go to:

autoappraisalnetwork.com

Or email:

Woody@autoappraisalnetwork.com

2015



2015 is just around the corner and along with ringing in the New Year comes voting in new Officers to the Chapter Board. Our Annual Dinner is scheduled for January 10th, 2015 when we will elect two of the four Officers. Our bylaws are set up to stagger election years so we don't have four new officers come into office all at once trying to hit the ground running. Since we elected the President and Vice-President in 2014, we will elect the Secretary and Treasurer in 2015. The current Officers in these two positions do not intend to run again, so both positions will be open to any member in good standing. It goes without saying, that a person interested in the Treasurer position should have some background in book keeping. Both positions are two year terms. More information about the Secretary and Treasurer positions

can be found on our chapter website. Click the ABOUT US tab, then open the Operations Manual. Another great opportunity to find out about these positions is to contact the Officers presently in those positions. Their email addresses are:

secretary@houston-bmwcca.com

treasurer@houston-bmwcca.com

If you have the desire to give back to the club or just want the ability to help steer it in a positive direction, please give it some thought to run for these positions. Do not assume that others will do it so you won't have to, or that you are not qualified in some way. Now is the time to step up and be a part of your club.

A Nomination Committee is set up to receive nominations for candidates. If you want to submit yourself, please send an email with your name, member number and position requested to:

nominationcommittee@houston-bmwcca.com

We will post candidate names on a ballot in the next edition of the newsletter before the elections.

WELCOME! NEW MEMBERS:

Adarsh Pakanati/Spring
Akram Sirafi/Houston
Alan Herrera/Houston
Andrea Martin/Houston
Andrei Lapin/Houston
Ankush Wattal/Houston
Anthony Taitt/Richmond
Anthony Travalent/Conroe
Arkadios Kofidis/Houston
Asbjorn Johansen/Katy
Autumn Grounds/Seabrook
Avrim Fishkind/Houston
Bailey Brewer/Tomball
Benjamin Craig/Spring
Blake Frazier/Pasadena
Brendan Mizler/Kingwood
Brian Thao-Houane/Houston
Britt Antley/Houston
Chad Bass/The Woodlands
Charles Shem/Houston
Chloe Forbes/Missouri City
Christian Gordon/Katy
Cihan Varol/Willis
Coral Morozoff/Conroe
Craig Vollmers/Houston
Darian Jones/Friendswood
David Kaczynski/The Woodlands
Delaney McFarland/Spring
Dhrupad Bezboruah/Houston
Dominic Laven/Houston
Don Sweitzer/Houston
Dragos Dorobantu/Houston
Dwight Turner/Houston
Emily Carter/Houston
Felipe Garnier/Houston

Frazier Newlin/Austin
Gary Hyfield/Porter
Geoffrey Burns/Houston
Jacob Hile/Spring
Jaevin Knott/Houston
Jairo Peralta/Houston
James Fowler/Houston
James Andritsos/The Woodlands
James Kolb/Porter
Jan Johansson/Spring
Jared Engelbrecht/Spring
Jeff Seidel/Richmond
Jeffrey Klima/League City
Jenna Marotta/Katy
Jenny Russell/Houston
Jeremy Swancoat/Houston
Jeremy Wessels/Katy
Jim Wimberley/Cypress
John Jakum/Conroe
John Laird/Houston
Jorge Padilla/Houston
Joseph Coleman/Spring
Joseph Kelley/Baytown
Justin Pham/Houston
Karan Parmar/Missouri City
Kendall Thurston/Cypress
Louis Gauthier/Houston
Madelyn Ortiz/League City
Maher Mneimneh/Houston
Maria Mozey/Spring
Mario Cuervo/Houston
Mark Inman/Spring
Mason Thilman/Houston
Matthew Harrison/Missouri City
Mi Hyun Ji/Houston

Michael Fernandes/Katy
Michael Klaybor/Houston
Michael Mazzella/Houston
Mike Newnam/Katy
Mike Williams/Houston
Nicola Sirito/Pearland
Paul Galvani/Sugar Land
Richard Mawdsley/The Woodlands
Rick Mercado/Missouri City
Russell Stalters/Houston
Same Decker/Houston
Scott Eynard/Houston
Sean Warden/Conroe
Sean Cash/Cypress
Seth Eaton/Houston
Shane Sampels/Katy
Sherman Watters/Cypress
Sisir Mallela/Bellaire
Spencer Parsons/Houston
Stephen Orihel/Cypress
Susan Whiting/College Station
Suzanne Gordon-Martin/Houston
Theresa Le/Houston
Thomas O'Neill/Houston
Tim Doshier/Kingwood
Timothy Gebauer/Humble
Todd Payton/Seabrook
Tuan Vo/Houston
Tyler Wright/Port Neches
Valentin Ivanov/Katy
Virtus Ifeanyichukwu/Spring
William Wallace/Spring
Zachary Lewis/Friendswood

Addressing Addresses

Neil Baer - Social Events Chairperson socialevents@houston-bmwcca.com

The Chapter sends an e-Blast at least monthly to help keep current information as handy as your e-mail and to alert you to coming events. The e-Blasts are sent to the e-mail address entered in your BMW CCA National membership profile. If you find your name in the list below, please log in at BMWCCA.org, click on [Manage Account](#), then [My Profile](#), and finally [update your e-mail address](#).



This will help us keep you up to date with current happenings and new information about the club. We want to make sure every member is aware of events they would enjoy.

Alexy Sauchenvo	Doug Wille	Jeff Thomson	Rick Mercado	Todd Buchholz
Alvin Yu	Duane Mackay	Jeffrey Leisey	Paul Torre	Kevin Lew
Andy Dawson	Eric Sutton	Joe Young	Peter Natzke	Rick Mercado
Ben Brown	Erick M. Calderon	Keith Teauge	Ralph Crow	Benjamin Peak
Chris Williams	Gerald Lefebvre	Mark Feferman Matt	Richard Baratta	Omar Reyna
David Garvin	James Goodchild	Murphy	Robert Brady	Avrim Fishkind
David McCarthy	Janaina Pereira	Michele Merdink	Ryne Manahan	
Derek Rauh	Janine Fisher	Michael Moulckers Paul	Sherman Watters	
Don Truman	Jason Hall	Elliott	Stephen Manke	



Can you see me now?

Have you ever shown up to a club function and wondered if you were in the right place? There have been times when we have met for drives in an open parking lot and folks were trying to find us amongst all the other cars in the lot. Well, we have a solution! We now have new chapter banners and flags to let folks know who we are and this is the place to be! So at the next event be on the lookout for these.

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Hans Richter
President

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Saturday: 9:00am - noon (Consultation Only)



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Rebates Up to \$1,500 BMW CCA members in good standing may be eligible for substantial rebates on the purchase or lease of a new or Certified Pre-Owned BMW from any authorized U.S. BMW Center. Rebates currently range from \$250 to \$1,500 depending on the model.

Roundel Magazine

Declared one of the finest car club magazines in the world by Car and Driver, each monthly issue has 140+ pages of articles, reviews, photography, and classifieds dedicated to all things BMW.



67 Local Chapters

BMW CCA's local chapters provide a range of social, technical, and driving events. They're your gateway to many of the club's driving schools, rallies, and autocrosses. Many events are geared toward the novice mechanic or driving event participant.

BMW Car Club
of America
Houston Chapter



MEMBER DISCOUNTS

Members receive special discounts on a wide variety of goods and services, ranging from car care to travel and more!



The Houston Chapter, is more than just a club for BMW enthusiasts. We have a diversified group of over 1,300 members participating in a wide variety of social activities. These events include:

- Dinners
- Driving Events Monthly Coffee
- Meetings
- Annual weekend getaway in Fredricksburg
- Events at the Circuit of the Americas F1 track in Austin
- Monthly Autocross at the Houston Police Academy

JOIN US
www.houston-bmwcca.com

Autocross Events

Houston Police Academy
17000 Aldine Westfield Rd, Houston,
TX 77073 United States
Time: 8:30 am - 3:30 pm

September 21
October 19
November 16
December 14

Coffee Meetings

Cedar Creek Cafe Bar & Grill
1034 W 20th St, Houston, TX 77008
United States
Time: 9:00 am - 12:00 pm

September 20
October 11
NOvember 15
December 13

Driving Schools

Teen Street Survival
Houston Police Academy
Time: 8:00 am - 4:00 pm Event

October 18



You spend hundreds if not thousands of dollars teaching your kids to play music and sports. Why not invest just \$75 and 1 day to teach them driving skills that will keep them alive to enjoy all those other events and activities that life has to offer. Not your typical Drivers Ed, Street Survival will teach your young drivers what to do when bad stuff happens out on the road so they don't panic but instead maintain or regain control of the car. Contact Brian Ken Finley at carcontrol-registration@houston-bmwcca.com or go to the website at www.streetsurvival.org. Only 30 spaces available so check those calendars and sign up early. Click on the image for a link to the registration web site. Click on the video below for an

example of what to expect.

As always, volunteers are vital to making this event a success. We need people to help reset downed cones, direct traffic, setup lunch, take water to the students, instructors and volunteers, and much more. To volunteer, contact Jim Iden at [@carcontrolvolunteers](https://www.facebook.com/carcontrolvolunteers) [@houstonbmwcca.com](mailto:houstonbmwcca.com). Qualified instructors are also needed. Our lead instructor will be announced soon.

Annual Driving Event

Fredericksburg Weekend
October 31- November 2 (see flier on page 5)

Fall Driving School:

October 26

Sponsored by:

Momentum BMW Southwest!

With the overwhelming popularity of our annual Texas Trifecta event at COTA, we are proud to announce a Fall Driving School to be held on Sunday, October 26. Additional details to be released on our website as plans are finalized.

Advertise in TORQUE OF THE TOWN!
Contact: newsletter@houston-bmwcca.com
for rates and availability.



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Direct
713.907.2396

Fax
832.772.9190

e-mail
john.crispino@bmwwest.com

website
www.bmwwest.com





VANOS Rebuild

VANOS is a German acronym for variable valve timing. In the single VANOS six cylinder engines the VANOS rotates the intake camshaft to provide better mid range power and lower emissions. The single VANOS started about 1993. VANOS systems are still used in BMW engines but are more complex than the original single VANOS.

The single VANOS unit is very similar in M50tu, M52, S50, and S52 engines. The M50tu engine in my E34 5 series was really developing an annoying rattle. This engine has S50 cams in it, so has higher lift and duration than the stock cam. The cam exacerbates rattle from the VANOS. BMW did an update to the original single VANOS with two flat plates to add a disc spring. Early M50tu and S50 engines were not built with the disc spring, and should be updated to the spring configuration. My engine had previously had the disc spring added.

Buying a new VANOS unit is fairly expensive about \$567.00 on realoem and I believe they are rebuilt. Searching internet, finds Dr. VANOS and Beisan Systems as alternative sources for parts. Dr. VANOS seems to want to sell rebuilt units for about 60% of BMW prices. Beisan Systems sells seals and a spacer ring for a DIY repair. I prefer the DIY approach, so chose parts from Beisan Systems (www.beisansystems.com) for my repair.

The Beisan Systems website is very informative and refreshingly easy to navigate. A seal kit is \$30 and an anti-rattle spacer ring is \$30. They also recommend a modified socket and soft magnetic jaws for a vice to hold the unit for disassembly. I went ahead and got both to make the job go faster. My parts arrived quickly.



Figure 1 Seal, rattle spacer, modified socket and soft vise jaws

The website has very detailed instructions. So only some highlights are covered here. I recommend printing them out as they are very detailed and helpful. However, the timing chain tensioner is not properly covered. Special tools are required to remove the VANOS unit. Needed are:

- Cam shaft retaining tool
- Flywheel crankshaft pin
- Cam chain tensioning tool (version shown also needs old style tensioner body)
- VANOS wrench
- Pin for compressing secondary cam chain tensioner
- Torx socket for cam sprocket bolts



Figure 2 Special tools needed

The tool shown is the one from Baum tools. It is steel, fits well, and is very solid. Sources for the tools are ebay and www.zdmak.com which generally have better prices than the typical BMW accessory vendors.

In addition the following BMW parts are needed:

- valve cover gasket
- valve cover grommets
- oil line seal rings (2)
- VANOS plug seal rings (2)
- VANOS unit gasket.

I also ended up replacing the primary cam chain tensioner with the newer design, one piece tensioner BMW PN 11311405081. This is highly recommended in an article on Pelican Parts (www.pelicanparts.com). Pelican Parts also has helpful articles covering the VANOS removal and reinstallation.

To get the VANOS out the valve cover is removed and the timing of the engine is set with the #1 cylinder at top dead center. This is confirmed by the mark on the timing cover and the OT mark on the vibration damper. Remove the cooling fan and radiator shroud for access. Remove the intake cam plastic cover by pulling up from the front. Make sure the transmission is in neutral. The engine is turned clockwise with a socket and ratchet. Turn slowly and only to the right. The engine can be turned with all spark plugs in place.



Figure 3 OT mark aligned to timing case

The timing is confirmed by watching the cam lobes closest to the front of the engine, the first lobe on the intake cam, and the first lobe on the exhaust cam should point up and at each other at about 45 degrees. The BMW TIS instructions show an imaginary line through the lobes and the #2 spark plug hole. I recommend rotating the engine a couple times to be familiar. With the engine aligned at the OT mark the flywheel pin can be installed to lock the crankshaft to the block. This is the recommended BMW procedure.

I find installing the pin tedious, and did not use the pin the second time. Do this at your own risk! To install the pin the car must be lifted for access. The dust plug removed and the pin pushed through the bell housing to the hole in the flywheel. It may be necessary to move the crank very slightly to get the pin in. The cam restraining tool will now fit on the back of the cams. The three (3) valve cover studs should be removed to allow the tool to fit flat.



Figure 4 Cam lobe position when at OT



Figure 5 Cam restraining tool

Initially the original VANOS was rebuilt and installed with the Beisan rattle spacer and seal. The original two-part tensioner was left in as per the Beisan instructions. The result improved the rattle somewhat but it was still alarming. Mostly the rattle was at low rpm, but continuing till about 2,500rpm. It was still very annoying at low rpm right off idle. Also the car seemed to have little torque right off idle. So at this point, the repair had little benefit.

After comparing a few other engines and searching on the internet, I tried another solenoid, with no improvement. I had purchased a reported good used VANOS unit some years ago. So after comparing this unit to the original, it had less wear on the piston and gears, so I decided to rebuild this one with a new seal and the anti-rattle spacer used previously.

The original unit I took apart had a bad o-ring with almost no elasticity, exactly as described on the Beisan site. The second one was not as bad, and was probably still serviceable. It is pretty much impossible to remove this type of seal without damaging it, so once removed it must be replaced with a new seal. The original o-ring had no resiliency, if squeezed it did not pop back to round as it should.



Figure 6 Distorted shape of original o-ring

The VANOS seal can be removed with a small screwdriver or pick. The old seal will likely be damaged to get it off. Heat the new seal in hot water for about 30 seconds and it will install easier. The key is gently stretch the seal, as the Teflon is not elastic, so the goal is to gently yield it over the largest area. It installs similar to a bicycle tire, drop the seal as far in the opposite side as possible then gently coax in the groove. Oil on the groove helps.



Figure 7 Installed seal after heating in hot water

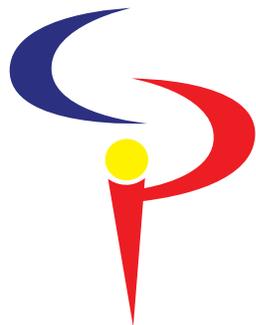
A T-30 torx bit is needed for removing the bolt if the rattle spacer is to be installed. Note this bolt is left hand thread.



Figure 8 Removing center bolt

The first VANOS unit I put the new spacer and did not have to do any sanding to get the right fit. The second one the gear would hardly turn. The rattle spacer is actually shorter than the BMW spacer, this removes the axial play. However, the gear also has radial play in the original configuration. The goal should be to have near zero axial play, but still have small radial movement. I had to sand the center washer in order to achieve the fit needed.

The instructions explain sanding, rotating, sanding, repeating, and then assembly for test. I did this about four (4) times until I was happy with the fit. I used 3M wet/dry 220 paper, then 600 paper, both wet. When done the gear turns easily with slight lateral play. Put oil on the roller bearings before assembly. For reinstallation I used the cam chain tensioning tool. BMW instructions suggest the torque on the tool is only 1.3 n-m or 12 in-lbs. This is so little I don't have a torque wrench for this, so do with a 1/4" ratchet holding only the head. Beisan instructions say the tensioner alone achieves this. I tried it their way the first time and did not like the result. Overall the project ended up a success. The engine is way quieter now. I have only small rattle at very low rpm, and it cannot be heard inside the car with the windows up. The engine feels stronger off idle. I believe this is about as quiet as this engine has ever been since putting in the S50 cams. The car now sounds like a BMW.



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Original Tech Tip published in the "Torque of the Town"	15
Original Article published in the "Torque" (500 words or more)	100
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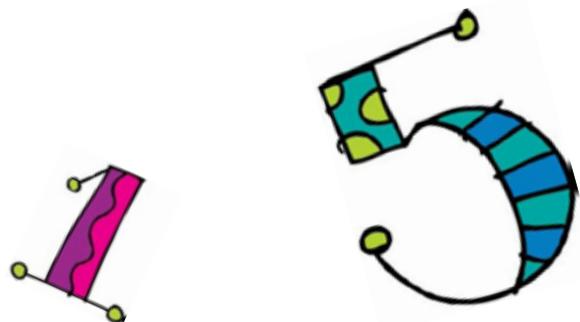
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Art Cars-Race Cars-Dream Cars



It's all the same yet different Tony Sakkis

Fabrizio Violati's car wasn't on Craigslist. It wasn't even on eBay. It was sold at auction at some famous California golf course. And it brought \$38,000,000.00. For a car?

The GTO is arguably one of the sexiest cars created by the sexiest manufacturer for the sole purpose of winning races, which is the sexiest of sports. With its big V12 and lack of insulation or creature comforts, there was no confusing this car with a normal street car. But you could absolutely drive it on the street. And nearly all of them were raced, meaning nearly all of them have historical significance. But you or I could own one and drive it to work every day (provided we had the cash to do so). Yes, it's beautiful. Yes, it's one of 39 made. Yes, it has a purebred racing pedigree. But \$38-million dollars? For a car?

If you believe this was worth that, let me point something out. This is not art. It's a car. More than that, it's a race car. By definition, race cars are beat up. They are driven to within inches of their lives by men who want only to win. They have no interest in preserving their cars. As race cars, they are abused. Engines blow up. Body panels rub. Windshields cracked. Wheels, brakes, transmissions, oil coolers, radiators are all swapped many times during a race weekend, let alone during a season-long campaign. They are repaired and sent back out to race next week. They get dented, they get rolled, they get pushed. Hard. It's what makes them historic. Or at least it should be.

But this car, owned by one guy, which was raced occasionally, never wrecked, is worth 50 million dollars. How? Mr. Violati is a mineral water magnate. He's not a race car driver. This beautiful machine wasn't driven by Mario Andretti or Jacky Ickx. It was driven by a guy who sells water. So it was never even

raced properly. In fact, think of the car as a weapon. It's a .50 Caliber, an RPG, an AR15, an M1/A1 Abrahams. How it looks is not as important as how it functions. Its value as an historical artifact is based on how successful it was and who made it that way. Captain Manfred von Richthofen's Fokker should be worth some money. And Captain Roy Brown's Sopwith Camel should be. Anything else is just an old plane.

To automobile historians, the '62-'64 GTO is the best car ever.

To most racers, there's no way this car is worth that amount.

I once did a story about a guy in California who woke up one day to find a listing for his car – A GTO with all the serial numbers and correct colors and mileage – for sale in Europe. Of course after checking to be sure his car was still in the garage, he found out the car had been counterfeited. An exact duplicate had been created down to the serial numbers and was for sale for \$11-million. The car, in fact, could be completely recreated for about \$300,000.

That moment brought the California owner a moment of existential reality (the car's existence, not his) that reminded him that as much as he loved it, it was just a freaking car. I haven't talked to him in more than 20 years, but I know he'd decided to sell after that incident.

My discussions with him converted me as well. It may be beautiful, and it may be rare. But it's insignificant. And although people are willing to pay \$38-million for it, it makes no sense. Violati is an insignificant driver; the car, although beautiful, was not a success in his hands. In fact, it wasn't really a massive success in anybody's hands.

Which, at long last, brings me to my point: of the cars BMW has made, the most successful were the Brabham BT52 and the 1939/1940 328 MM Touring.



There are others, of course, but all others should pale in consideration and historical significance. Except they don't.

BMW made some 17 far more valuable cars. The BMW Art Cars, as they are known. They are all noteworthy for their eligibility in museums solely as art. They pervert the entire conversation. Why would one of these be more significant than, say, the BT52? And the answer is that unlike the BT52, these are one-off productions by artists, not technicians.

The Art Cars, which are now extremely valuable, are, in order of creation: creator of modern sculpture Alexander Calder's 1975 CSL 3.0, which raced at Le Mans at the hand of the eventual Art Car Series creator Herve Poulain; Frank Stella's 1976 CSL, which

was raced by Peter Brock at Le Mans; Roy Lichtenstein's 1977 320i Turbo, which finished 9th overall at Le Mans and won its class with Poulain as driver; and Andy Warhol's 1979 BMW M1, which was raced (only once) again by Poulain but also with eventual F1 driver Manfred Winkelhock, finishing 6th overall at Le Mans. There were then a series of cars done by famous arts that didn't race, including Ernst Fuchs' 1983 635 CSi, Robert Rauschenberg's 1986 635, Matazo Kayama's 1990 535, Caesar Manrique's 1990 730, AR Penck's 1991 Z1, Esther Mahlangu's 1991 525, David Hockney's 850 CSR, and Olafur Eliasson's H2R, which was BMW's Hydrogen car that was then frozen and covered in water and displayed frozen (talk about perishable art ...). In the middle of those runs were some less-know racecars such as Michael Nelson Jagamarra's 1989 M3, Ken Done's



The most eye-catching is the first car, the Calder; the most intriguing is the Holtzer. The Chia is whimsical and alluring; the Rauschenberg, like all of his work, is cold and introspective. The Koons and the Hockney are what you'd expect from Koons and Hockney, and are just different type canvasses. The others, frankly, I don't know enough about to make semi-intelligent comment on.

But the first four are the most significant. Not only are they arguably the four most famous and enduring of all artists (with the exceptions of Rauschenberg, Hockney and Koons), they were created when the idea was raw art on raw race cars. These were, to use an analogy, sandcastles done by the greatest art of all times on the beaches of Normandy during D-Day. That they survived at all is amazing.

The Warhol, specifically, is incredible. Not only was the M1 one of the most cutting edge cars of its time, but it was raced at Le Mans by Manfred Winkelhock and was hand painted by one of the iconic masters of modern art. This is, in my blatantly inexpert opinion, a car worth a lot of money. This is a car that at auction should bring

\$50 million or more. When a canvas done by the same artist is worth that already, the fact that it is both historical and rare should make it even more valuable.

So what are they actually worth? BMW isn't selling them, so we'll never know. But the answer, as with any other art in any other museum, would be: Whatever somebody will pay. Five million? Fifty Million? Five hundred million? Who knows? That's the thing: they are worth whatever somebody will pay for them. They are, after all, art.

Which is, I suppose, is what the GTO is to some people. Beauty – like art – is in the eye of the beholder. If enough people say it's worth \$50 million perhaps it is.

So maybe that whole idea of what creates value is wrong. Or, if it isn't, we might want to explore why a Warhol canvas is worth 50 million when it hasn't even been used, but simply viewed; and why a GTO that was never raced and never used as designed is worth \$50 million.

So maybe the GTO is art. But for my collection, I'd prefer the Warhol M1.

It's art, and a car I understand.



1989 M3, Sandro Chia's 1989 M3 GTR, Jenny Holtzer's beautiful and intriguing Le Mans prototype 1999 V12 LMR and Koons' 2010 M3 GTR.

Editor's Corner

Jim Robinson



There's a certain DNA to racing people which separates them from other sporting events. These are the racing dynasties, fiefdoms, kings and princes. This was a working weekend for them. Seeing them doing their jobs; all the guys from mechanics to tire wranglers and others living their dreams, it was special. I mean, there he was [Roger Penske!](#) Friday was practice day for all racing events. It was exciting to see them test their cars and getting a few installation laps on their tires.

Sitting in the stands on the start/finish line I was constantly reminded that these are the guys who raced last May at the Indianapolis 500. These are the guys I've seen on TV at dozens of events over the years. [Helio Castroneves](#), [Tony Kanaan](#), [Juan Pablo Montoya](#); and all the other racing heroes.



Similar to NHRA events in Baytown reported in the last issue of the newsletter, the teams work on the cars in covered areas along the paddock. Seeing these cars close up and with some of the covers removed sets the car-nut in me in a frenzy trying to take pictures and take it all in like a kid in a candy store.

In the afternoon practice session we saw the Mazda Pro Series cars run their laps. These are the young guns moving up the ranks in the racing world.

The Mazda MX5 racers were also present. These "privateers" take a bone stock car add roll bars and a few extras and go racing.

The track set up at NRG Park is 1.69 miles. The start/finish line is in front of NRG Arena, goes around the paddock area and after a hairpin turn circles around the Astrodome and then around the NRG Center before completing the circuit.

Race 1 on Saturday's Indy Car series started from the pit lane because of the rain. A few laps into the race the pace car left the track and the race was on. Serious wet conditions continued and there was crash in the first lap after the green flag. Several more incidents took place as the race continued.

Marko Andretti had trouble getting his car started as the race began which caused him to be almost a lap down on the other cars. He was shown the blue flag indicating that his car was slower than the others and ordering him to let the leaders pass. Marko disregarded



this no less than five laps not wanting to be put a lap down. Ultimately he was given a drive through penalty as Takumo Sato continued to lead the race driving for A. J. Foyt's team.



He was extending his lead for several laps despite another caution. Later in the race he also hit the tire barriers and was out of the race. The rain continued as they raced on. But towards the end of the race the track began to dry. The rain shortened the race as the flag man gave the white flag for the next lap but before that lap ended another caution caused that to be the final lap.

Race 1 Results:

1. Carlos Huertas
2. Juan Pablo Montoya
3. Carlos Munoz



So it was a wet and exciting race. It was amazing to see those guys screaming around the track in the rain throwing high rooster-tails and creating a mist probably fifteen feet in the air above the track. The cars behind the first few couldn't have seen where they were going during the heavier rains. It was like driving in a cloud of spray. But that didn't stop them or slow them down noticeably. In the second Indy car race with no rain the cars were zipping past at an amazing clip. Helio Castroneves led several laps as did Juan Montoya but the final winner was another young gun. Simon Pagenaud driving the 77 car that had the pole in yesterday's race won the race.

Race 2 Results:

1. Simon Pagenaud
2. Mikhail Aleshin
3. Jack Hawksworth



The thing is, going to this race was more than watching the cars go around the track. That part was truly astonishing. Seeing those guys driving so fast in cars that seemed to come from another planet was amazing to say the least. These men and one woman, Argentinian Julia Ballari, in a Mazda Pro Series car were doing their jobs. This was a working weekend for them. All the team members were working putting on a show not much different from a circus. The circus of speed is a huge operation and a lot of money changes hands. From the mega rich team owners to the engine suppliers, automotive roadies and the vendors selling food, drink and souvenirs at "festival prices" it's all part of a huge industry.

There may not be a race next year; NRG & IndyCar haven't set a date.

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