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contact

THE OFFICIAL NEWSLETTER OF THE BMW CLUB OF CANADA, TRILLIUM CHAPTER.

The Art of Cornering

A Dance in Three Acts

By Al Pugh

The thrill of driving fast is one of the reasons why we are BMW Club members. Many people out on the roads are familiar with the temptation to speed at a very illegal pace on the highway. But for those of us who are experienced in the Trillium Club's advanced driving schools, the thrill of driving fast comes from more than just driving in straight, predictable lines. The true thrill comes from navigating roads and tracks that are winding, curved and cornered. Cornering well is like

dancing well: hard to do, but once you get it, it feels fantastic.

So how exactly is that done? There are three stages to cornering, including Braking, Balancing, and Accelerating. Each component, or "act" of cornering comes with its own learning curve.

Act 1: Braking

The purpose of braking is twofold. The obvious function is to slow the car. A second, and equally important function, is to settle ➔ *page 7*



Announcing the New Club Logo

As a part of the initiative taken by BMW Clubs International and BMW Club of Canada, we are re-inventing ourselves. We have designed a new logo in accordance with the new guidelines set out by BMW Clubs International. This is the first major revision since the guidelines were set up 25 years ago.

For more information visit www.bmwclub.ca. We hope you like the new look!

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President's Message

So What's Up for 2009?



Three years ago I attended my first driving school with the BMW Club and loved the experience. Well organized with friendly participants and capable instructors, it was both fun and safe. I kept coming back for more, attending multiple driving schools in the ensuing years, but meanwhile Trillium membership and driving school attendance was declining. Why?

Now that I've joined the board it's become our priority to figure it out. The club still has a good balance sheet but it's become more important as the club has lost money the last two years. This is because most of our driving schools are no longer profitable. The issue is simply attendance which is down 30% plus since 2006. It could be for a number of reasons – competition, lack of promotion, but its definitely not school quality or value for money (when you factor in the ADS tax receipt). Regardless, we will be offering incentives to reverse the trend. Borrowing a tag line: Drivers wanted!

The Trillium Chapter has got a lot to offer its members but do all of us agree? We need to hear from members – both present and past – about what they want from the club. So, as stated in the last edition of Contact, we are conducting a survey this March. We expect to use an on-line service to deliver the sur-

vey now being developed. The key question is how we rebuild the club when economic times have gotten a lot tougher. Got some ideas? Send me a message!

Publishing newsletters or magazines is usually seen as a key requirement of running a club. We want to bring in more content, especially about the BMW marque and reporting on BMW Club chapter events. There are also prior issues of Contact worth browsing, not to mention classifieds and advertising. We plan to bring them back. But it takes work, so if you would like to help then please let me know!

While publishing, whether traditional or on-line, is one way of communicating, today's wired world is increasingly turning to social networks with on-line chat, forums and even blogs. Our website could do with a refresh, both in content as well as features. Vanessa Agosta and Pierre Knobbs are exploring ways of updating our website to incorporate these ideas. This has become somewhat of a priority with the resignation of Peter Carroll as our chapter's webmaster/developer. We thank Peter for developing and maintaining our club site (www.trillium-bmwclub.ca) for the past 5+ years. We also hope we can benefit from his experience with his new project www.DriversMeeting.com, which - by the way - in-

cludes a BMW Club of Canada forum.

Lastly, some of you have been sending emails to me and other board members enquiring about their membership cards – which haven't arrived! We know. It's for a couple of reasons: First, the board decided last fall to change renewals for all members to a calendar basis – i.e. January 1 to December 31. Second, in conjunction with BMW Clubs International, we are refreshing our chapter logo to be consistent in look and feel. When the new logo is finalized this month, the cards will be printed for all of us. Expect your membership card before our first Advanced Driving School on April 24-26 ; registration opens March 1.

Meanwhile we will be working and playing hard for the rest of the winter. You will see me at the Championship Go-Kart Series. Talk about getting the competitive juices flowing - it was an absolute blast! So, if you think you are a driving enthusiast then this is where you should be for the next round of the Go-Kart Series. See you there!

If not I hope to hear from you soon,

Nigel Etherington
President, Trillium Chapter

2009 Upcoming Events

For more details about events and their locations, visit the club website at www.trillium-bmw.ca.

March

8th—Club Go-Karting Series, Grand Prix Kartways

10th —Club Meeting, Maranello BMW

22nd—Club Go-Karting Series, Grand Prix Kartways

April

5th—Club Go-Karting Series, Grand Prix Kartways

10th—Club Meeting, MegaWheelz/Tirecraft

19th—Club Autocross Series, MDS Sciex

24th-26th—Advanced Driver School, Mosport

May

12th—Club Meeting, GarageLiving.com

24th—Club Autocross Series, MDS Sciex

June

5-7th—Advanced Driver School, Mosport

9th—Club Meeting, TBA

14th—Club Autocross Series, MDS Sciex

July

14th—Club Meeting, TBA

19th—Club Autocross Series, MDS Sciex

August

23rd—Club Autocross Series, MDS Sciex

September

8th—Club Meeting, TBA

11-13th—Advanced Driver School and Club Race, Mosport

27th—Club Autocross Series, MDS Sciex

October

13th—Club Meeting, TBA

18th—Club Autocross Series, MDS Sciex

November

1st—Club Autocross Series, MDS Sciex

10th—Club Meeting, TBA

December

Holiday Party, Date and Location TBA

About Autocross

The Trillium Chapter of BMWCC has run autocrosses for many years. Competition is based on a fairly level playing field with all the other participants.

During the racing season (April to November), Trillium Chapter Autocross holds eight events at a large parking lot near Canada's Wonderland. Our host is MDS Sciex at 71 Four Valley Drive, Concord. The fee is \$15.00, a large portion of which we donate to the Hospital for Sick Kids on behalf of MDS Sciex.

Registration opens at 8:30AM, and the first car is away at 9:00AM sharp! The drivers' meeting and walk-through begin between 8:30 to 8:45AM. If you are considering attending our next autocross event, make sure that you arrive on time so that you don't miss this important orientation and walk-through. As we're usually pressed for time, latecomers cannot make up their runs.

For more information about Trillium Autocross, contact Pierre Knobbs at erre.knobbs@trillium-bmwclub.ca.



Editor's Note

The editor would like to thank those who submitted copy for this issue of Contact.

All members are encouraged to contact the editor if they have an interest in writing articles or ideas about the things they would like to read about. We'd like to hear about your experiences with current BMWs and if there is a club member that you would like to know more about let us know.

This issue of Contact was assembled and edited by Vanessa Agosta with contributions from Al Pugh, Evan Weaver David Cook, Steve Gailits, and Nigel Etherington.

Advertise to Trillium Members

Would you like to advertise your company or services to your fellow Trillium members? We offer print, web banner and t-shirt advertising. Sales booth space is available at our schools.

For more information, contact Nigel Etherington at nigel.etherington@trillium-bmwclub.ca.

2008 Club Autocross Series Results

by Dave Cook

Position	Driver	car	class	pax	May	June
1	Dave Cook	E46 330i	DS	0.812	95.46	96.82
2	Ken Algor	Cooper S	BSP	0.858	94.77	91.84
3	Tom Wolniewicz	E30 325is	DS	0.812	97.58	94.52
4	Daniel Bertoja	Cooper S JCW	SM2	0.867	100.00	100.00
5	Stephen Sanelli	Subaru RS	SM	0.845	87.97	84.93
6	Paul Bertoja	86 Alfa GTV6	GS	0.794	95.42	
7	David Bee	E30 325iT	DSP	0.843		79.06
8	Martin Singer	Mx5 Miata	CS	0.831	96.49	94.40
9	Geoff Lumby	E36 M3	BS	0.832		
10	Zeljko Dimic	Mx5 Miata	CS	0.831		89.69
11	Randar Puust	E46 330i	DS	0.812		
12	Jesse Elve	128i	BS	0.832		
13	Michael Sun	E46 330i	DS	0.812	94.61	97.31
14	Sergei Izvoztchikov	E46 M3	SM	0.845	92.83	
15	Jason Aquino	Cooper S	BSP	0.858	20.00	84.03
16	Jason Dos	Cooper S	GS	0.794	88.51	
17	Carl Spiess	E92 335i	AS	0.842		
18	Steven Dodd	Mazdaspeed3	BS	0.832		
19	Shane	E46 328	DSP	0.843		
20	Colin Mook	E30 325e	GS	0.794		
21	Rolf Lange	E30 325is	DS	0.812		
22	Eric Singer	Acura TSX	HS	0.780		97.25
23	Jason Chang	E36 M3	BS	0.832	93.46	
24	Nigel Etherington	E36 M3	BS	0.832	92.59	
25	Valentin Musta	Nissan 240 SX	GS	0.794		
26	Marcel Painchaud	E46 330i	DS	0.812	91.78	
27	Tarvo Puust	E46 330i	DS	0.812		
28	Daniel Rechtshaffen	Z4 3.0	AS	0.831	89.83	
29	Trevor Amell	V6 Mustang	GS	0.794		
30	John Conciatori	86 Alfa GTV6	GS	0.794		
31	Zeljko Dimic	911 Turbo	ASP	0.862		
32	Byron Dorey	E12 528i	FS	0.805	88.23	
33	Bruce Kennedy	E30 325is	DS	0.812		84.33
34	Ariel Garter	Boxster	AS	0.842	75.90	
35	Herman Lau	Cooper S	BSP	0.858		

July	Aug	Sept	Oct	Nov	Total
					Best 6 of 7
95.88	93.37	93.95	99.59	96.58	578.27
91.41	99.31	94.65	93.49		565.47
87.94	91.54		93.00	100.00	564.58
98.40		95.56	96.98		490.95
92.17		85.18	92.65		442.90
100.00		100.00	100.00		395.42
	88.32		83.33	91.31	342.02
	99.99				290.88
87.59		89.76	94.50		271.85
90.49			88.30		268.49
		86.75	87.72	88.31	262.78
		78.17	75.05	91.60	244.82
					191.92
	95.78				188.61
		82.14			186.17
97.03					185.53
		86.48	94.46		180.93
		81.49	86.86		168.35
			70.90	95.27	166.17
				99.18	99.18
		98.41			98.41
					97.25
					93.46
					92.59
92.06					92.06
					91.78
		91.38			91.38
					89.83
				89.44	89.44
		89.26			89.26
		Oct. Added to Miata score.			
					88.23
					84.33
					75.90
					0.00

TROPHY CLASSES		
Classes	Winners	Rank
Overall	Dave Cook	1
	Ken Algor	2
	Tom Wolniewicz	3
D Stock	Dave Cook	1
	Tom Wolniewicz	2
	Randar	3
B Stock	Geoff Lumby	1
	Jesse Elve	2
G Stock	Paul Bertoja	1
	Jason Dos	2
A Stock	Carl Speiss	1

2009 Autocross Season

This year's Autocross season begins April 19th. For more information, visit www.trillium-bmwclub.ca, or contact Pierre Knobbs at pierre.knobbs@trillium-bmwclub.ca.



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At the recent BMW CCA Club Race at Calabogie Motorsports Park in July 2008, RAVEN prepared cars dominated the field finishing 1st, 2nd, 3rd, 4th, 6th, and 7th*

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*BMW CCA Roundel Magazine, Oct 2008, p100

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The Social Network for Drivers

Whether you're a club racer or just attending your first driving school, it's never been easier to stay connected.



New Trillium Club Members

The Trillium Chapter is pleased to welcome the following new members to our club. We encourage all new members to take part in the many events we offer throughout the year so that you can be a part of the spirit that makes the Trillium Chapter a great community to be a part of.

- | | |
|-----------------|--------------------|
| Allen Borsuk | Kevin Heinemann |
| Angus Yip | Martin Kovnats |
| Borna Zlamalik | Michael Taylor |
| Cicelia Shum | Nick Krikorian |
| Clifton Strabac | Paul Repar |
| Ermino Riccioni | Philip Goncalves |
| Frank Portelli | Randar Puust |
| Gary Fetterley | Richard Szpin |
| Jason Taam | Robert Carr |
| Jeff Wilson | Robert Sanguinetti |
| Jesse Elve | Shane Brown |
| Jonathon Wong | Steven Dodd |
| Karim Riad | Tarvo Puust |
| Ken Algor | Tim Dineen |

Cornering (cont'd)

the car so that you can enter the second act of the dance (turn-in) balanced and in complete control. Many drivers fail to grasp the importance of this. Be patient – early acceleration often produces better results than late braking. And remember the aphorism: Slow in – fast out.

When learning a track, Joe Foster suggests you construct an imaginary “braking box” which is the distance required to slow for a corner. Begin by braking much earlier than you might think necessary to find how much distance it takes to slow the car. Then move the box closer to the corner until the end of the box matches the ideal turn-in point.

Trail braking is the art of blending braking and turn-in. Braking continues, at a diminishing rate, after initial turn-in, which helps to turn the car in tight corners. This works by transferring some of the kinetic energy that normally has to be absorbed by the brakes into turning the car about its axis. It requires reducing braking force as turn-in begins and is not nearly as useful in fast corners. This

technique is not recommended for beginners.

When you begin at the track it is easier to learn if you keep the car in one gear for the entire lap. As you might imagine, this is usually not the quickest way around. When you brake for a corner, it is often necessary to drop a gear or two so that the engine remains within its powerband upon exit. Heel and toe downshifting can help. The technique is to depress the clutch with left foot, brake with the ball of right foot, and gently twist the right foot to touch the throttle just enough to raise engine rpm as needed to match transmission speed as you release the clutch. In my opinion, this is a skill best learned on the street.

Those driving cars with automatic transmissions often learn to use the left foot for braking and the right for acceleration. Even in proper cars (those with a clutch – no elitism here!), using the left foot for braking can occasionally be useful in corners not requiring a downshift.

Like trail braking, these techniques are best deferred until one has become accomplished in the basics.

Act 2: Turn-in

Although most drivers do not realize it, there are two operations that must be accomplished to turn a car. The first is a change in direction. For example, the car may be moving north at corner entrance and east at corner exit. The second operation is rotation.

This is the difference in direction the car is facing from entry to exit. These are not the same thing! We have all seen cars entering into corners way too fast and simply flying off the road. The driver has managed to rotate the car (often very rapidly and many times), but has not changed direction.

Turn-in is the most interesting part of the cornering dance because it is where car control skills come to the fore. It is also in this transition between braking and acceleration where patience and smoothness are rewarded. And it is here that the skilled driver allows the car to “take a set”. Recall that driving school classroom dogma calls for braking to be accomplished in a straight line, followed by turning the car in toward the apex at a nearly constant speed, concluding with acceleration increasing at the apex and through track-out. With experience, the cornering elements blend together, as with the use of trail braking. (Data loggers show that Formula 1 cars actually continue to decelerate all the way to the apex – but they are designed very differently.)

What many book authors and driving school instructors omit is information about the attitude (rotation) of the car as it traverses around the corner. The implication is that the car is exactly parallel to the line at all times, and, in fact, this is what is usually attempted. However, a few driving coaches, most notably Rob Wilson, argue that this is

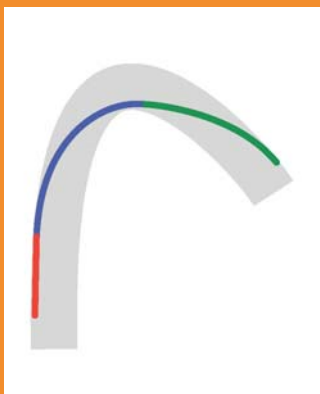
not the fastest way around. He believes the drag forces generated by side loading are substantial and need to be dispensed with as soon as possible. He proposes doing this at the slowest part of the corner – the apex.

The standard technique calls for tightening the steering wheel gradually while turning into the corner and then opening the wheel (to reduce side load and make traction available for acceleration) upon tracking out. Wilson proposes the wheel not be opened quite as quickly thus forcing the car to rotate more. The penalty is acceleration is postponed a bit while available grip is consumed by the additional rotation. The gain is the resulting track out has less side loading, thus less friction, and greater acceleration – enough to more than compensate for the initial loss. My experience with the Wilson method indicates another benefit in addition to speed – a wider safety margin. So let's amend the aphorism: Slow in and through – fast out.

Act 3: Track-out

If you have accomplished the first two acts with poise and grace, the last act is trivial. If not, it is painful (sometimes literally). The key is to never apply the throttle until you can keep it down. Now enjoy driving down the straight. Stretch your fingers. Check your mirrors and gauges. Forget that presentation due Monday morning. Just smile.

“All of the corner is prelude to the exit.” – Jackie Stewart



Brake, balance and accelerate points in a corner

Engine Oil: What is Best For Your Vehicle, Part 1

By Steve Gailits

We all know that engines are expensive to repair, and especially expensive to replace. So it is extremely important that you choose the correct oil for your vehicle. But how do you know which is best?

Before I tell you more, you should first know why an engine needs oil to run. Internal combustion engines are built with many moving parts (mostly steel & aluminum) which require a lubricant between them to prevent metal to metal contact. Metal to metal contact causes friction, heat build-up and wear. A pump is used to move the oil through many passageways to all these moving parts to prevent this wear, quite similar to the human heart pumping blood throughout the human body.

Next, what causes the deterioration of engine oil? An engine produces extreme heat through combustion, which can cause wear by destroying the lubricant. An engine also produces a great deal of internal pressure due to the forces of combustion & rotational speed. Thus engines require a lubricant which prevents wear under many conditions; i.e. extreme heat & cold, contamination, high pressures & high speeds.

Now we need to know why engine oil should be changed on a regular basis. Why does engine oil deteriorate? Many factors contribute to

the breakdown of engine oil. The process of combustion produces by-products which are able to reach the crankcase (oil supply) by passing the piston rings. These by-products, water & acids, contaminate the oil & lead to the formation of sludge, rust, & corrosion. Soot & carbon also create sludge & varnish & this can clog filters. Unburned fuel, in liquid form, also passes by the piston rings & into the oil supply. Sludge deposits can also form on the oil pump pick-up screen & limit the flow of oil to vital engine parts resulting in rapid & destructive wear. When engine oil becomes contaminated, its viscosity changes. With soot, dirt, oxidation and sludge, viscosity increases, and with fuel dilution it decreases. When the viscosity increases, it means the oil becomes thicker & will not flow as freely. This can cause excessive wear on engine startup, as the thicker oil will take longer to reach the furthest parts of the engine. When the viscosity decreases, the oil also loses some of its lubricating properties.

Engines produce a great deal of internal pressures, which can break the oil film between moving parts, resulting in marginal lubricating conditions. Movement of engine parts agitates the oil, trapping air & forming bubbles & foam. Because air is compressible, the ability of the fluid film to prevent con-



tract between moving parts is reduced & because the mixed air contains oxygen & promotes oil oxidation, which causes a deterioration in the quality of the oil. This means the oil can no longer lubricate, cool or clean as well.

Careful research & experimentation has led oil manufacturers to produce specific chemicals that combat the above problems faced by engine oils. These chemical additives are added to the base oils as a package. Typical packages include rust & corrosion inhibitors, detergents, anti-foaming agents, dispersants, oxidation inhibitors & viscosity index improvers. Each additive is designed to aid the base oil in the protection of moving parts.

In the next issues of Contact I will outline what engine oil does, what causes it to deteriorate, various types of oils, the differences between engines, present and past; driving conditions, and finally what oil is best for your vehicle.

Club Meetings

Trillium Chapter meets monthly at 7 pm on the second Tuesday of the month at various locations in the GTA.

See the club website at www.trillium-bmwclub.ca for further details.

Instructor's Corner: Steering Modulation for Advanced Drivers

By Evan Weaver

A couple of years ago, I wrote an article on modulating the controls of a car in high performance driving. Ever since I wrote it, I've always felt that I didn't quite get my point across, maybe because I got distracted by trying to define the term "modulation", which then led to other things. The point I was trying to get across was far simpler than the article I ended up writing. It was this: Jiggle the steering wheel when you drive through a corner at the limit.

This topic came back to me last fall when I was working with an advanced student at our September Mosport driving school. I was comfortable with the line he was driving, he knew where to look and when to turn in, and he was smooth with the controls. He'd obviously paid attention to his previous instructors, and so I had no problems signing him off to drive by himself. And yet

something was missing. Some laps we'd go through a particular corner quickly, and other laps we'd be well below the limit. It was almost as if he was driving by memory rather than feel. So before signing him off, I took him for a ride and asked him to observe my steering technique, where I would (you guessed it) jiggle the steering wheel through the corners. I then sent him off to work by himself, and asked him to check in with me in a few sessions.

Later that day he was eager for me to join him for a few laps. He made some comment about rather liking that steering trick I showed him. Well, I was treated to a driver transformed. He was taking all the corners faster than before, and was consistent lap after lap. Furthermore, if he did enter a corner a little more slowly than on other laps, he would compensate by getting on the power sooner. I could

tell that he was now feeling his way around the track, rather than remembering the way.

In my previous article, I identified three benefits to this technique. First, since it is hard to get the perfect steering position, it is far better to average the correct amount of steering than to be a little bit off and have to make a large correction later. Second, the jiggling action keeps your arms in motion, and if a big correction is needed, it is faster to redirect moving parts than to motivate limbs that are locked in position. Third, the slight movement of the wheel gives you an opportunity to sense the traction available - less resistance means less traction.

I still see these as valid, but I now realize that I missed explaining the biggest benefit, the one that really lets you skirt the edge of traction. Duh.

Before I tell you that, let me review an important fact about traction: once your tires lose grip, you have only something like 70% of the traction you had before starting to slide. This is why once racers lose it, you often see their cars shoot off the track. One way to regain traction is to slow down considerably. Another is to reduce the cornering load.

An instant way to reduce cornering load is to

straighten the wheels, and that is where jiggling comes in. Just as the tires start to let go, you reduce the load to regain full traction before trying again. You literally end up stretching the rubber and then unstretching it a bit just before it breaks away. If you do overstretch it and it does break away, you often get it restuck to the road before it has fully snapped back to its unstretched state. Using the jiggling technique helps especially in the early part of the corner as weight transfer, and therefore the outside tires' grip, is building.

The caveats I expressed in my previous article still apply. This should be considered an advanced technique, as novices first need to learn the practice of "quiet hands", moving the steering wheel as little as possible, before being allowed to approach traction limits. A clear distinction must be made between this jiggling, which does not upset the balance of the car, and sawing at the wheel. Also this technique must be practiced regularly if it is going to become automatic enough for you to use it instinctively.

Used skillfully, rapid modulation of the wheel is as important a technique for the advanced driver as vibrato (rapid modulation of pitch) is to a singer.



First look: 2009 BMW 5 Series Gran Turismo Concept

By Justin Couture, Sympatico/MSN Autos

Below is the first photo of BMW's latest concept car, the 5 Series Gran Turismo, which debuted for international media via an online webcast. Conceptually, it was designed to blur the boundaries between existing vehicle types – it's for the consumer that wants a vehicle in between a sport-utility vehicle and a sports sedan; the practicality of the former with the styling and dynamic abilities of the latter.

While its definition might sound like a straight-up crossover, BMW insists it isn't one. The GT Concept is a niche vehicle that's more car biased. As such, BMW is calling it a Progressive Activity Sedan (PAS).

Despite having tendered his resignation last week, Chris Bangle, Director of BMW Group Design, gave a walk-through of the concept's design at the car's online launch this morning. Visu-

ally, it's a blend of various BMWs; there are elements of the new 7 Series in its nose (particularly its wide, double-kidney grille) and new LED-powered coronating headlamps which are shaped like those of the Concept CS. With a coupe-like roofline and a stubby tail, the 5 Series Gran Turismo is reminiscent of the X6 "Sport Activity Coupe" (another niche category developed by BMW). Bangle pointed out a couple of neat details on the concept - it features four pillar-less windows to create a sporty, coupe-like feel. It also makes getting in and out easier.

One of the 5 Series Gran Turismo's calling cards is its cargo bay, which features a unique double trunk. It can open like a full tailgate - like the 5 Series Wagon - but it also has an integrated deck lid. Unlike a hatchback or an SUV, the GT's cargo compartment is completely sealed from the cabin by a bulkhead. The advantage to

this design is that it allows cargo to be loaded without letting cold air enter the cabin.

At just under five metres in length, the 5 Series Gran Turismo is smaller than a 7 Series yet offers comparable legroom. Like the X6, its rear quarters offer seating for two, though its seats shift back and forth and recline for comfort. Depending on where the rear seats are positioned, the 5 Series GT is capable of swallowing between 430 and 570 litres of luggage, which swells to 1,650 litres when the rear seats are folded down – on par with the 5 Series wagon. Despite its sweeping roofline, the 5 Series GT offers more rear-seat headroom than an X5 – impressive.

From the looks of things, the 5 Series Gran Turismo Concept is more or less production ready, with the exception of the glittery 21-inch wheels and the ultra-slim door mirrors.

In general, the 5 Series GT doesn't stray far from BMW's interior design language. The concept's console is slightly more angled for a flowing feel, while the door panels were designed as one, single flowing unit to make the cabin feel more spacious. The concept's centre console features the same iDrive and gearshift setup as the 7 Series, with a "black panel" backlit display in place of standard buttons.

BMW is keeping quiet about what powers the concept, but when the production model debuts, it's likely to mirror the lineup of the 5 and 7 Series.

The engine lineup for North America is likely to start with the twin-turbocharged 3.0-litre straight-six, with a twin-turbo V8 as an optional upgrade. The production version will also boast a new eight-speed automatic transmission. Rumours suggest the production version will only be available with rear-wheel drive at first, with xDrive all-wheel drive following later to ensure that it doesn't eat into the sales of the X6.

The BMW 5 Series Gran Turismo Concept will be unveiled to the public at the Geneva auto show next month.



Turbocharging Resurfaces

By David Booth, National Post Published: Friday, January 23, 2009

OK, so I'm going to get all technical on you here. No funny stories about my basement troll; not even some terribly erudite, yet oh so amusing treatise about the inner workings, or non-workings, of the soap opera that is now Detroit. Nope, I'm letting my inner geek run free, so if terms such as specific horsepower and frictional losses are not your bag, perhaps you might want to cut some of your, er, literary losses.

On the other hand, it's mostly good news I bring, though, as with all glad tidings, it is not without its caveat. The premise is simple: We motorheads are living in an unprecedented era of high performance that trumps even the heyday of Ferrari GTOs and split-window Corvettes. We may wistfully reminisce about a leaded-fuel yesteryear, but truly we are living in every gear head's tire-smoking, horsepower-spewing fantasy. And, best of all, despite the dual onslaught of high fuel prices (only temporarily rebated) and environmentalism, we just might keep this wheeled wonderland going.

It will require some changes and some sacrifices, albeit small, will have to be made. Cars will become lighter so that less horsepower will still result in scintillating performance. Hybrids, of course, will power an increasing number of performance-oriented sports cars. But, then, we expected that.

What is surprising is the resurgence in turbocharging. Turbocharging is the rather simple process of using the waste heat and pressure of the exhaust gases to power an impeller (basically a small fan) that force feeds the engine fuel and air, thereby increasing power. The benefits are equally simple to understand: A small engine that is turbocharged can achieve superior fuel economy when operated at normal speeds, yet it can call on a reserve of power to emulate that of a much larger engine.

Nowhere is the surge in turbocharging's popularity more surprising than at BMW. Long the very bastion of high-revving, high-performance engines (at least in the world of semi-affordable automobiles), the spinning propellor company had broken with its traditional technology and produced its first two turbocharged engines -- the 3.0-litre twin-turbo in-line six and the 4.4L V8, similarly twice turbo'd like the one tested in this issue's 750i road test (Page DT1) -- since the famed BMW 2002. In both cases, the motivation was turbocharging's constant appeal -- BMW could offer even more performance while simultaneously increasing fuel economy.

I expected BMW would limit the switchover to its family-oriented sedans, not to mention its diesels. But now come rumours that



BMW's high-performance M division will ditch its screaming 4.0L V8s and 5.0L V12s for a series of turbocharged, direct-injection powerplants, beginning as early as next year.

According to AutoWeek magazine, a V8, based on the 4.4L in the X6, will gain enough turbo boost to match the current M5's high-revving 5.0L V10's 500 hp while generating even more -- as in 516 pound-feet -- torque.

"In terms of overall performance, the new engine doesn't give anything away to the powerplant we run now, but it delivers much better consumption and lower emissions," a senior BMW M official told AutoWeek.

It's really a simple matter of friction: Even if the turbocharged V8 and the normally aspirated V10 were to have identical displacements, the

V10 would have more internal friction. Not only does it have to rev higher to make its horsepower, but those 10 smaller pistons actually have more circumferential area (that's the area around the piston) that rubs up against the cylinder wall. At low speeds when the engine is loafing along, those increased frictional losses contribute significantly to the V10's worse fuel economy.

BMW may be able to retain all its traditional performance boosted by even better fuel economy, but it will sacrifice that exotic *je ne sais quoi* that has always been part of the M cars' mystique. But, then, like I said, we knew there would be compromises.

BMW Club of Canada – Trillium Chapter

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