

bimmerfest

Bringing the BMW community together



Fast Facts 2009



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Due to low-profile tires, please note: Wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. Some models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

All vehicle specifications and features subject to change without notice.

BMW for 2009:

How to use the Fast Facts Handbook

Midyear '08 introductions of two new BMW car lines means that this Fast Facts for 2009 is the first edition to include the 1 Series and M3. This edition also covers the all-new 7 Series, which goes on sale in January '09. On the other hand, the Z4 and Z4 M sections exit for this edition and a new Z4, scheduled for introduction in spring '09, will be included in the 2010 edition.

As everyone knows, 2008 has not been a year of growth for the motor-vehicle industry, nor one of the continuing growth we have usually been able to report for BMW in previous years. Yet the near-worldwide slump has not hit BMW as sharply as many other vehicle makers. All existing BMW lines did see declines in '08, but these declines were offset by appealing new products: By the end of October, the 1 Series (start of production 12/07–3/08) had achieved 9,280 sales in the U.S., and on the Sports Activity side the new X6 (SOP 1/08 for xDrive35i, 3/09 for 50i) had racked up 3,718 sales. Thanks to these compensating new products, overall BMW-brand sales had declined only 10% in the first 9 months of '08, and a 30.2% increase in MINI sales for the same period went a long way toward canceling even that decline.

Obviously, the MINI addresses, and has benefited strongly from, the sharp rise in gasoline prices in the first half of '08. The BMW brand also had its own contributions to this scenario: the 1 Series, delivering BMW's best EPA mileage and lowest prices, is finding favor with buyers – especially younger ones – who value fuel efficiency and a lower price level for their entry into the world

of BMW ownership. The X6, quite simply, creates a kind of vehicle that didn't exist before and also offers our brand incremental achievements.

For '09, the pace of innovation continues in a big way. Our all-new flagship 7 Series leads the way with a host of new features and systems, many of them enhancing driving safety and others offering greater luxury and convenience. The new Smartphone Integration, available in most models, addresses the evolving demand for digital music in motor vehicles. An all-new, 2nd-generation iDrive system brings more intuitive, user-friendlier operation of many features and functions to the 7, 3 and 1 Series, and the new hard drive that accompanies it provides larger-capacity, more quickly accessible data storage for the Navigation system, audio, phonebook and Voice Command. The new M3 marks BMW's first offering of a Double-Clutch transmission, a concept that will find wider use in future models and one whose attributes are just as relevant to fuel efficiency as they are to high performance.

So goes the BMW evolution: always exploring new possibilities for safer and more satisfying driving, greater comfort, higher performance, enhanced efficiency and superb design. Here's an overview of the '09 car lines covered in this edition:

7 Series. This all-new masterpiece of design, technology and luxury makes its debut as two models, the **750i and 750Li** – both powered by a new twin-turbo V-8 engine that produces higher performance from smaller displacement. Its innovations are

too numerous to even summarize here; see the 7 Series section to gain knowledge of such features as Integral Active Steering, FlexRay technology, Night Vision with Pedestrian Detection and Active Blind Spot Detection ...there's much more. Production began in 11/08.

6 Series. A year of modest evolution for these two luxurious, high-performing sports 4-seaters. User-friendly iDrive enhancements and a more attractive Sport Package are among the highlights of the **650i Coupe and Convertible** for '09. Production began in 9/08.

5 Series. The same iDrive enhancements are found in this 6-model Series, plus new standard wheel designs and new AWD model designations. Models include the **528i and 535i Sedans** and their AWD counterparts with new **xDrive** designations; the **535i xDrive Sports Wagon** is also newly named, and the **550i Sedan** continues as the sole V-8 model in the Series. Production began in 9/08.

3 Series. Sedans and Sports Wagons get a major freshening, with updates to exterior and interior design and, for the first time in this Series, available front/rear Park Distance Control. Additionally, all models get the 2nd-generation iDrive (still included with the Navigation System option) and Active front head restraints. Designations for the AWD models change here as in the 5 Series ("xDrive" replacing "xi"). And there's an important new model: the 335d Sedan, bringing BMW's amazing high-performance, high-efficiency twin-turbo diesel engine to the U.S. for the first time. There are now 13 models: **328i and 335i**

Sedan and Coupe in rear-wheel-drive and **xDrive** form, **328i Sports Wagon** and its **xDrive** pendant; **328i and 335i Convertible** and the new **335d Sedan** with RWD only. Production of all '09 models began in 9/08.

1 Series. This addition to the '08 lineup continues for '09 with the same new 2nd-generation iDrive option and its attendant hard drive as in the 3 Series. A heated steering wheel is a welcome new option for winter driving. Production of the four '09 models – **128i and 135i Coupe and Convertible** – began in 9/08.

M6. The **M6 Coupe and Convertible** get two new metallic exterior colors, enhanced iDrive controls and optional Smartphone Integration. Still powered by the amazing 5.0-liter, 500-hp V-10 BMW M engine. Production of the '09 models began in 9/08.

M5. Offered in a single **Sedan** model, this high-performance "family sports car" with the 500-hp V-10 engine gets one new metallic exterior color and the enhanced iDrive controls; Smartphone Integration isn't available yet. '09 production began in 9/08.

M3. The biggest news from BMW M is the all-new M3, introduced in model year '08 in three models: **M3 Coupe, Sedan and Convertible**. With their sensational new 414-hp V-8, available M Double-Clutch Transmission, and an array of sophisticated performance technology that's unprecedented in M3 history, the M3s offer the new 2nd-generation iDrive as part of their Navigation option, as well as the new Smartphone Integration option, and one new metallic exterior color. As in the

BMW for 2009:

How to use the Fast Facts Handbook

3 Series, Active front head restraints are newly standard in all models. Of the three models, the Sedan gets the most design changes, which include a new LED taillight design and revised trunklid; all models have new interior design refinements. Production for '09 began in 9/08.

BMW Fast Facts 2009 continues with essentially the same popular format that BMW center personnel have come to appreciate, but with some updates and changes that reflect BMW's response to changing times. In the front of the book, Mobile Tradition, for example, is renamed **BMW Classic** and reflects the changed priorities of this heritage-nurturing division of BMW. **EfficientDynamics** is a new section that describes BMW's comprehensive initiative of improving our vehicles' fuel and overall efficiency while preserving their inherent, brand-defining driving dynamics. At the back of the book, **BMW Welt** (Bay-Em-Vay Welt, translates to BMW World) describes that fantastic new center in Munich, the historic home of BMW worldwide, while the section on **Taking delivery in Munich or Spartanburg** reflects the evolution of these programs and the fact that European delivery now takes place at BMW Welt.

The product sections also show evolution. As before, **BMW features** covers features found in more than one Series; this avoids repetition and thus helps keep the handbook as compact as possible in an era of proliferating models and features. The **Series sections** concentrate on information particular to the individual Series or platforms; here the listing of key features distinguishing the Series' models from each other is presented in tabular form under **Series models & key features**; then descriptive information on the Series as a whole is found in **Series key features**. Each Series section concludes with tables summarizing **standard & optional features** and **technical specifications** in considerable detail. With each of these sections at your fingertips, you can usually answer any questions you or your customers might have about the details of any given model.

As always with Fast Facts, this new edition has been designed and produced to put a wealth of information within easy reach: information on these eight Series or platforms¹ (the SAVs and Sports Activity Coupes (X6) are covered in a separate Fast Facts) and on many other areas of the BMW presence:

Background

- BMW Classic
- The new BMW Museum
- BMW Performance Center
- Safety F.I.R.S.T.: BMW's Fully Integrated Road Safety Technology
- BMW EfficientDynamics
- The BMW M brand
- BMW in America
- BMW Manufacturing Co., LLC
- BMW awards

BMW features

- Features found in more than one BMW Series

Product sections

- 7, 5, 6, 3 and 1 Series plus M6, M5 and M3 in detail

Other BMW products

- BMW Certified Pre-Owned Vehicles

Warranty/miscellaneous

- The BMW Warranty
- Summary of BMW Limited Warranties
- The BMW Maintenance Program
- BMW Roadside Attendance
- Warranty and Roadside Assistance, BMW vs. the competition
- BMW Assist
- European and Performance Center delivery
- BMW Welt.

In the back cover is a pocket for the **2009 Suggested Retail Prices** sheet, which presents base and option pricing for the entire automobile line in a compact form. There is room here for some of your business cards as well.

This handbook was produced by BMW Group University with your specific needs in mind. We know from your comments how much you use Fast Facts, and always endeavor to make it as concise and easy to use as possible. Each year we introduce changes that we hope will make it more so; if you have any suggestions as to how we might improve it further, please let us know at:

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For more information and access to various related BMW websites, go to www.bmwcenternet.com.

Thank you!
 BMW of America, LLC
 November 2008

1 - "Series" applies to the 7, 6, 5, 3 and 1 Series. Even where more than one model of a BMW M vehicle exists – as with the M6 and M3 – it is described as a "platform."

BMW Classic:

Nurturing BMW's memory & soul

BMW calls it "the memory and soul of the company." As befits a company of BMW's stature and character, BMW maintains and nurtures the appreciation of its history via BMW Classic (formerly BMW Mobile Tradition). BMW Classic coordinates all activities connected with the company's storied and successful history: Among these are historical archives, the newly expanded and renovated BMW Museum; interfacing and interacting with the BMW Car Club internationally; and, now with greater emphasis, restoration and maintenance of historic BMW automobiles, motorcycles, engines and other creations of the company's history.

BMW's historic collection

As the core of BMW Classic, the historic collection encompasses more than 400 vehicles and engines – an impressive cross-section through BMW's product history from 1916 to today.

The collection's vehicles are available for larger events where such a professional presence is appropriate; the collection's personnel drive and maintain the vehicles.

Parts for vintage BMWs

Yet another, key function of BMW Classic is to help keep vintage BMWs where they most belong: on the road. Remarkably, the majority of the more than 200,000 historic BMW cars and 70,000 motorcycles in existence are there – on the road –not only because of BMW's robust technology and construction "back then" but also because of the supply of parts available today.

The parts stock offered to help keep these wonderful machines running comprises some 24,000 individual items, most of them for 1948 and later BMW classic vehicles. As a general rule, responsibility for automobile replacement parts transfers to BMW Classic 15 years after production ends; even the limited-production Z1 sports car of the early 1990s thus benefits, as can other BMW models produced through 1994.

Available online at BMW Classic, the catalog can also be ordered on CD-ROM under the number 72 00 0 301 255.

Indeed: the "memory and soul" of BMW, in all their facets, are the role of BMW Classic – a role whose importance continues to grow now that BMW has passed its 90th anniversary.

The new BMW Museum

When BMW built its daring new world-headquarters building in Munich in 1970-72, it included an equally daring museum as a component of the headquarters' architectural ensemble. In its new manifestation, which opened in June '08, the Museum augments the original bowl-shaped building with an adjacent low-built structure to increase exhibition floor space dramatically from 10,765 to 53,820 square feet – sufficient for presenting some 120 exhibits.

In the low building, seven exhibition modules have been constructed, each with its own identity. The individual character of each module creates a context for the exhibits, and provides a set of reference points along the route through the Museum; this route is about 1 kilometer (0.62 mile) in length, has no “cross-roads” and takes the visitor to all 25 exhibition areas housed here. These are the essentially permanent exhibits; the original bowl is now reserved for temporary exhibits.

The Museum Shop and Café Bar M1, located in the low building, offer opportunities to buy souvenirs and enjoy a relaxing snack or meal. In the shop, visitors can select their dream BMW vehicles as a print, photograph or scale model. Also offered are a range of caps, T-shirts and publications; in this last category are not only the official Museum guide (which

makes for enjoyable reading after the tour as well) but also books about BMW automobiles, motorcycles and aircraft engines plus an international selection of books on architecture and design as they relate to BMW.

The Café Bar M1 is excellent not just for refreshments after the Museum tour, but as a proper restaurant with a great view of BMW Welt and the historic, yet still contemporary and exciting, Olympic grounds across the road...all from the Café's large terrace. On Monday and Tuesday, visitors can enjoy an aperitif and buffet at prix fixe from 5 to 7 pm; on Saturday, Sunday and public holidays, the Café is open until 9 pm. Every Wednesday there's an After Work happy hour, with a DJ providing the sound.

Museum opening hours are Tuesday-Friday 9 am – 6 pm and Saturday-Sunday 10 am – 8 pm. The Museum is closed on Mondays. Three extraordinary areas within the Museum are available for private events outside of regular opening hours – all the way to 4 a.m. if desired! For reservations and information, contact:

BMW Museum
Event Management
Petuelring 130
80788 Munich, Germany
Tel. +49 (0) 89 382-35402
E-mail events.museum@bmw.com

The BMW Performance Center

This unique operation, located in Spartanburg, South Carolina near the BMW Manufacturing Co., adds a special dimension to BMW's traditional focus on the benefits of skilled driving.

The BMW Performance Center Driving School was created to develop skills for everyday driving, including active safety instruction and exercises. Its state-of-the-art facilities include –

- a unique “water wall” for teaching accident avoidance
- a polished wet-surface skidpad to simulate slippery surfaces such as ice and snow
- track sections for autocross and slalom exercises
- an “other roads” course that encompasses gravel, rocks, water crossings and many up, down and lateral grades. A 22° downgrade demonstrates Hill Descent Control in BMW vehicles with xDrive.
- 35 different course variations on the nearly 2-mile track.

At the school, drivers learn from professional driving instructors to train and test their reflexes in everyday and emergency driving situations. Available programs include:

Teen Driver School. Two programs – a 1-day and a 2-day course – teach young people

car-control techniques that they may not have learned elsewhere, providing reassurance for their parents while letting them fulfill a dream of driving a new BMW themselves. These courses are designed especially for inexperienced licensed or permitted drivers, ages 15-18; they learn with their peers.

1-Day School. This car-control course offers practice in accident avoidance on several areas of the driving circuit, including water wall, skidpad, slalom, autocross and a “lifestyle” course. Participants are taught a wide variety of subjects, from vehicle dynamics and the significance of vehicle weight distribution and seating position to effective cornering in controlled and panic braking situations.

2-Day School. This advanced car-control course picks up where the 1-Day School leaves off. Participants get more time on the skidpad, and gain hands-on experience with active-safety technology to become safer, more responsible drivers.

1-day M School. Designed to give driving enthusiasts an introductory course of high-performance driver training. Students get behind the wheels of high-performance M3 and M6 Coupes as well as the M5.

2-day M School. A 2-day course in the M Cars. Participants push these cars safely to their limits while learning fundamental car-control techniques.

Advanced M School. Also a 2-day program, this course is held at various race tracks throughout the U.S. Check with the driving school for locations.

6 Series Experience. This course offers new 6 Series owners a chance to hone their driving skills at the wheel of these amazing automobiles.

Participants enjoy learning the 6 Series' amazing "active" features – Active Roll Stabilization, available Active Steering – in hands-on driving experience under the guidance of professional BMW drivers at the Performance Center.

BMW provides gourmet meals, transportation, accommodations and instruction. After a full day of driving at the Performance Center, we transport participants back to the hotel, where they can mingle before cocktails and dinner with their new 6 Series friends. The next day, before leaving South Carolina, participants can relax and see what the area has to

offer visitors. Once finished with their activities, the participants are transported back to the Greenville-Spartanburg Airport for their return home.

M Experience. Included with the purchase or lease of a new M5 or M6 model, this 1-day program allows participants to explore their new vehicles' capabilities without wearing out their own tires and brakes.

In courses other than those that are model-specific, participants drive various current models provided by BMW. More information is available at the Performance Center's toll-free number, 888-345-4BMW (4269); or at bmwusa.com/bmwexperience/performancecenter.

New-vehicle delivery

Yet another function of the Performance Center is the delivery of new vehicles to customers who desire a unique and special experience in connection with this important occasion. For details on this program, see page 447.

Safety F.I.R.S.T.:

BMW's Fully Integrated Road Safety Technology

This is another theme that the BMW Client Advisor can use effectively, because it addresses a top customer priority: Safety.

With F.I.R.S.T., we are saying:

- That safety – active safety and passive safety – is integrated into the design and engineering of each new BMW.
- That safety is a primary concern at BMW; that it is part of the conception of any BMW model, and applies at every stage of its development right up to final assembly and quality control.

Every BMW is designed to be **agile and controllable**, to support its driver's ability to avoid danger; and then **crashworthy** so that its occupants are appropriately protected when an accident does occur. These two primary categories of motor-vehicle safety are known as **active and passive safety**.

The scope and sophistication of features affecting both of these safety categories grows and evolves constantly. Examples of BMW's ceaseless activity found in this edition of Fast Facts include –

- The **Dynamic Traction Control** function, part of the Dynamic Stability Control systems of the 7, 6, 5, 3 and 1 Series.
- Extensive **DSC braking functions**, described in **BMW features** on page 81, now included in 1, 3, 5 and 6 Series as well as M3, M5 and M6.
- **Active Roll Stabilization**, standard in the 6 Series, optional in 5 and 7 Series.
- **Active Steering** as a pioneering contribution to driver control and vehicle response, optional in all rear-drive 135i, 335i and 5 Series and all 6 and 7 Series models.
- **Run-flat tires**, now standard on all 1, 3, 6 and 7 Series models. They are also included in RWD 525i and 535i Sport Packages,

and are available in combination with xDrive Sport Packages.

- **Tire Pressure Monitor**, standard on all models.
- **Night Vision**, optional on 5, 6 and 7 Series to assist the driver in foreseeing potential danger. Newly enhanced in the 7 Series with Pedestrian Detection.
- **Active Blind Spot Detection**, now optional on 5, 6 and 7 Series.
- **Lane Departure Warning**, new for '09 and available on 7 Series.
- **Rear- and side-view cameras** to enhance safety and convenience, also optional on 7 Series.
- **High Beam Assistant**, now available on 5, 6 and 7 Series; a convenience feature, but likely to improve driver's vision via increased use of high beams at night.
- The **Advanced Crash Safety Management (ACSM)** system that manages safety systems so that they protect occupants optimally and reliably.
- **Standard side-impact airbags** in the front¹ doors of all models.
- **Front and rear Head Protection Systems** in all 7 and 5 Series and 3 Series Sedans, Sports Wagons and Coupes and 1 Series Coupes; front HPS in 1 and 3 Series Convertibles and 6 Series/M6 Coupes.
- **Rollover Protection** in 1, 3 and 6 Series and M6 Convertibles.

For details on these features, see the appropriate Series section or **BMW features**.

This handbook's descriptions of BMW safety features begin on page 78. As you review these and present them to your clients, keep in mind that BMW safety isn't mere **features**. Instead, it's all part of BMW's **Fully Integrated Road Safety Technology**.

¹ – All 2-door models: "front" doors are the only doors.

BMW EfficientDynamics

This is the name – and the meaning – of BMW’s company-wide strategy of reducing fuel consumption and emissions while preserving, or enhancing, the driving dynamics that are a core value of BMW vehicles.

The word “dynamics” may not be on the tip of the average customer’s tongue, but it is the best word to describe what BMW vehicles do best: perform strongly, react directly to the driver’s inputs, give their drivers a high degree of pleasure in driving. Under the pressure to reduce fuel consumption and emissions, it would be relatively easy – and conventional – to sacrifice some of the dynamics. But that’s not the BMW way. For BMW it can’t be **either-or**; it must be **both and**. Thus the EfficientDynamics concept.

Under the EfficientDynamics concept, innovations that improve efficiency and dynamics are being introduced step-by-step. Among those introduced so far in U.S. models are:

- **Increasing use of lightweight body materials.** The previous 7 Series, introduced in 2002, has an aluminum hood and fenders; the current 5 and 6 Series’ entire front-end structure is of aluminum, and the 6 Series goes a step further with thermoplastic front side panels (fenders) as well as an SMC (Sheet Molding Compound) trunklid. The new 7 Series goes yet further, with its hood, front side panels, main roof panel and all four doors made of aluminum.
- **Lightweight materials in mechanical components.** As of '09, all but one BMW engine family is constructed mainly of aluminum. One family actually

goes beyond aluminum: The N52, the 3.0-liter inline 6-cylinder appearing in 128i, 328i, 528i and SAV models, has a composite cylinder block of magnesium and aluminum, saving further poundage. Aluminum also appears in the front suspension of all rear-wheel-drive models, and in the rear suspension of some. Note here that applying weight-saving materials to front-end structure and skin, engine, and front suspension not only reduces overall vehicle weight (Efficiency), but also helps BMW achieve its essential favorable front/rear weight distribution (Dynamics). In addition, aluminum suspension, having less “unsprung weight” (those parts that move up and down with the wheels), makes a further contribution to dynamics by reacting more gracefully to rough road surfaces.

- **Efficient power concepts.** In addition to its weight-saving construction, that N52 engine also has a highly efficient power concept. Developing 230 hp and propelling the 328i Sedan and Coupe to a 0-60-mph time of 6.2 sec. with manual transmission, it also returns 28 mpg in the EPA highway test. With automatic – all current BMW models have at least a 6-speed automatic transmission designed for optimum efficiency – the EPA ratings are the same and the 0-60 time is 6.8 sec.

For those who want even more performance in their 1, 3 and 5 Series model, the N54 engine takes a route specifically aimed at Dynamics with Efficiency. Also displacing 3.0 liters, this engine gets a fast-reacting,

BMW EfficientDynamics

low-inertia twin-turbocharger boost to 300 hp; 0-60 time for the 335i Coupe and Sedan is 5.3 sec., EPA highway mileage 26. An even more agile, efficient automatic transmission in these models delivers the same mileage. With this engine, BMW's specific goal was to achieve the performance of a 4-liter conventional engine, but with the fuel economy of a 3-liter.

- **Even more Efficient, yet amazingly Dynamic: the new diesel.** Talk about efficient power concepts! For some years now, BMW's diesel-powered vehicles have earned rave reviews in Europe for their – you guessed it – Efficiency and Dynamics. Now BMW's most powerful diesel comes to America, equipped with technology to meet the most stringent emission laws, in the 335d Sedan and one SAV model. This remarkable power unit develops a robust 265 hp, but more remarkably 425 lb-ft. of torque, almost as much as the new 750i's twin-turbo V-8. And now the Efficiency part: 23 mpg city/**36 mpg highway**. Never before has there been such a powerful expression of EfficientDynamics.
- **A new transmission concept.** M3s offer the new Double-Clutch Transmission (DCT), which provides a choice of manual or automatic shifting with higher efficiency than a conventional automatic or even a manual. With this 7-speed unit, which operates on a completely different principle from familiar automatics, the M3 Coupe and Sedan deliver not only quicker acceleration (0-60 in 4.5 sec., vs. 4.7 for the 6-speed manual) but also equal or – in the case of the M3 Convertible – better fuel economy. Watch for the DCT concept to appear in “regular” BMWs in due course with similar results.
- **Helping us drive more efficiently.** Some find this surprising, but it's true: At any given vehicle speed, the higher gear you are in the better your fuel efficiency. Thus if you're driving at 40 mph in 4th gear, you'll get better mileage if you upshift to 5th, or even 6th. If you need acceleration, you may need the lower gear; but if not, always choose the higher gear if the engine will run smoothly in that gear. This is the theory (and fact) behind the 1 Series' Upshift Indicator, which appears in the display between speedometer and tachometer.

The BMW M brand

At BMW, the letter “M” has traditional significance, going all the way back to the “M” of the Bayerische Motoren Werke (Bavarian Motor Works) and the company’s long-fabled expertise in engines. Since 1994, BMW M GmbH¹ had been the name of BMW’s subsidiary for racing and high-performance cars, with the BMW Motorsport name applied to the racing activities within the subsidiary.

These days, BMW M is a separate entity, a “company within a company” that designs and produces custom and high-performance cars as well as related products. As such it is a “brand within a brand” and an industry icon as purveyor of the finest performance technology.

High-performance automobiles: the M brand

These are BMW M’s best-known products. Over the years, M1, M3, M5, M6 and M Roadster/Coupe models have offered performance enthusiasts a line of very special, uniquely BMW interpretations of what a sports automobile should be. BMW M is responsible for the development of these high-performance cars.

For 2009, the M line evolves again, with the three new **M3** models expanding its reach considerably. The **M5**, BMW M’s 4-door sports car, continues with detail refinements. The **M6 Coupe** and **Convertible** get similar refinements and represent the BMW M performance and esthetic concept at its most powerful and elegant.

All these M models are powered by a thoroughbred BMW M engine: a 500-hp V-10 in the M5 and M6, a new 414-hp V-8 in the M3s. Details on the M6, M5 and M3 models are found on pages 336-421.

M driving schools

Three M driving courses are offered. In the **1-day M School**, students get behind the wheels of current M models – M3 Coupe, M5, M6 Coupe – at the Performance Center in Spartanburg.

In the **2-day M School**, participants push M cars to their limits while learning skid control, optimum seating positions, car balance, and “heel-and-toe” shifting of manual transmissions.

The first day emphasizes elementary high-performance driving techniques; exercises take place on the slalom and autocross segments, wet skidpad and the Real Roads Course.

The second day challenges students to be more assertive, to really put an M Car through its paces. Advanced driving techniques like trail-braking and mastering cornering transitions are covered; drivers get instruction on the high-speed advanced road course, figure-8 wet skidpad and wet-handling road course – more extreme driving demands than are likely ever to be encountered on public roads. Currently, M3 and M5 models are used in these courses.

The **Advanced M School** is a logical progression for graduates of the M School. Conducted at various race tracks, this course includes extensive skill-building:

Arrival day

- Theory session (vehicle dynamics, advanced skid control, nuances of race-course venue)

¹ – “GmbH” is the German abbreviation for a limited-liability company (LLC), normally associated with companies smaller than the AG (stock-corporation) type such as BMW AG. In fact, BMW of North America is an LLC.

The BMW M brand

1st day

- Handling course
- Timed autocross
- Drifting
- Skidpad
- Timed grand autocross
- Banked course
- Swedish Banjo
- Exit-speed autocross
- Banked course.

2nd day

- High-speed technical autocross
- Slalom course
- Exit-speed exercise
- Swedish Banjo
- Timed autocross
- Banked course.

M Driver newsletter

M Driver is now posted on bmwusa.com three times a year.

M Driving Experience

Included with the purchase or lease of every new M5 or M6, the M Driving Experience is designed to enhance the experience of owning and driving BMW M's most magnificent driving machines. A detailed description of this program is included in the M5 and M6 Owner's Welcome Kit, which is mailed to the new purchaser or lessee shortly after the sale. The offer is valid for one year, and each authorized attendee may bring one guest. The program includes –

- 1 day of driving instruction at the Performance Center
- Use of various M vehicles from the Performance Center during driving portions of the program

- Up to 2 nights' stay with breakfast, lunch and dinner
- Transportation between Greenville-Spartanburg Airport, the Greenville Marriott Hotel and the Performance Center.

Formula 1 racing

In 2008, the BMW Sauber F1 Team has been contesting its third season in Formula 1, the pinnacle of motor racing. Over the past season, the squad, based in Munich and Hinwil, Switzerland, has exceeded all expectations: Not only is it currently in its longest run of success, but in the 58-year history of Formula 1 racing only one team has finished in the points more times in succession. Robert Kubica and Nick Heidfeld are the team's drivers.

For the 2008 season, the team set itself the ambitious goal of celebrating its maiden GP win – a goal that was realized early on in the Canadian Grand Prix. Robert won the race, with Nick coming in second.

Visit the BMW Sauber F1 Team's official website, www.bmw-sauber-f1.com, for the latest information on the Formula 1 project. Learn more about the 18 Grands Prix of the season, discover the BMW Sauber F1.08 race car and keep yourself updated with our daily news bulletins.

This group brings together vehicle and engine design for current F1 rules, which call for a 2.4-liter V-8 engine. Developing more than 700 horsepower, the BMW V-8 will not only raise BMW's visibility in international racing, but prove BMW's prowess on the world's most glamorous race courses – while contributing to the development of even finer-performing M automobiles. The new M3 V-8 engine's crankcase is produced alongside that of the Formula 1 V-8 at BMW's casting facility in Landshut, Germany, and shares key construction principles (such as its bedplate design) with the racing engine.

Race-bred technology for the road

Such competitive participation, in fact, is the background behind BMW M's race-bred technology for contemporary sport driving:

- **Engines** that achieve performance well beyond that of even BMW's regular-production performance powerplants. Their engineering includes features such as an individual throttle for each cylinder, ionic-current knock control, g-sensitive lubrication and bedplate construction.
- **Transmissions** incorporating the Drivelogic system of sequential and automated shifting, as typified by the 7-speed Sequential Manual Gearbox of current M5 and M6 models and the amazing new 7-speed M Double-Clutch Transmission that's available in all M3 models.
- **Traction and handling strategies** that include the M Variable Differential Lock and M Electronic Damping Control.
- **Compound disc brakes** for track-ready fade resistance and stopping power.
- **Weight-saving technology** like the M3 and M6 Coupes' carbon-fiber roof, the composite rear bumper carrier of both M6 models, and the new M3 V-8 engine – which actually weighs less than the 6-cylinder engine it replaces.

Indeed, all M automobiles are born to win – not just to win races, but also to win the hearts of dedicated performance enthusiasts.

BMW in America

BMW of North America, LLC has been present in the United States since 1975. ROLLS-ROYCE Motor Cars NA, LLC began distributing vehicles in 2003. The BMW Group in the United States has grown to include marketing, sales and financial-service organizations for the BMW brand, the MINI brand, and the ROLLS-ROYCE brand of Motor Cars; DesignworksUSA, an industrial-design firm in California; a technology office in the Silicon Valley; and various other operations throughout the country. BMW Manufacturing Co., LLC in South Carolina is part of BMW Group's global manufacturing network and is the exclusive manufacturing plant for all X5 Sports Activity Vehicles and X6 Sports Activity Coupes worldwide. The BMW Group sales organization is represented in the U.S. through networks of 338 BMW passenger-car centers, 335 BMW Sports Activity Vehicle centers, 142 BMW motorcycle retailers, 83 MINI passenger-car dealers, and 30 Rolls-Royce motorcar dealers. BMW of North America and BMW (US) Holding Corp., the BMW Group's sales headquarters for North, Central and South America, are both located in Woodcliff Lake, New Jersey.

BMW NA has a comprehensive system of support for BMW owners and centers in the U.S., covering activities as varied as specific engineering for American needs, tastes and regulations; Consumer Services; three Vehicle Delivery Centers to provide all imported BMWs with a thorough Pre-Delivery Inspection; and **BMW Ultimate Service**, a suite of services that includes the New Vehicle Limited Warranty, BMW Maintenance Program, Roadside Assistance and BMW Assist.

To help the BMW centers provide optimum service after the sale, BMW NA maintains five regional Service Training Centers as well as six contracted service facilities, all staffed by full-time technical instructors. Service technicians who continue their training and improve their proficiency are certified by ACT, the BMW Association of Certified Technicians. BMW NA even offers training in body repairs to BMW quality standards with a 9-month program at the BMW Performance Center in South Carolina; at the Vehicle Processing Center in Oxnard, California; and at BMW facilities in Woodcliff Lake, New Jersey. Shorter courses in collision repair are also

offered to employees of BMW body shops at the California and New Jersey locations. To underpin all this service training, BMW has established eight fully equipped Service Technician Education Program (STEP) facilities in Arizona, California, Florida, Maryland, New Jersey, Ohio and Texas.

These entities function as “graduate schools” of BMW technology for new and career-oriented center technicians, providing an outstanding growth opportunity. BMW STEP offers top graduates of NATEF (National Automotive Technician Foundation)-certified post-secondary, schools and colleges 810 hours (27 weeks) of intensive classroom and lab instruction in BMW technology.

In mid-'08, BMW NA expanded its distribution network in the eastern and central U.S. with two new regional distribution centers in Pennsylvania and Illinois. These centers will store and distribute nearly 750,000 unique items, consisting of automotive and motorcycle parts as well as accessory and lifestyle items. The other U.S. distribution centers are in Mississippi, Florida and two California regions.

For efficient access to parts, each U.S. BMW center's computer system is linked to BMW NA national headquarters. In turn, BMW NA is linked by computer to the International Parts Distribution Center in Germany. BMW's stock of parts, strategically located throughout the country at five Distribution Centers, covers the more than 2.7 million BMWs on American roads.

In case of a customer complaint, the BMW center will do its best to clarify any situation. If further assistance is needed, BMW Customer Relations Representatives can be reached by calling (800) 831-1117. This and many other services, such as BMW Roadside Assistance, BMW Assist, the BMW Maintenance Program, the 4-year/50,000-mile limited warranty and the 12-year corrosion warranty, are typical of the many efforts BMW NA makes to ensure that BMW ownership is a satisfying experience.

For other BMW NA telephone numbers, please see page 436.

BMW Manufacturing Co., LLC

BMW Manufacturing Co. is an integral part of BMW Group's international production network and BMW's only factory in the United States. The X5 Sports Activity Vehicle and X6 Sports Activity Coupe are built exclusively at the Upstate South Carolina factory for distribution to more than 120 markets worldwide.

In the past, BMW has invested about \$2.8 billion in the 2.4-million-square-foot plant, which is located on 1,150 acres in Spartanburg County, South Carolina. The millionth BMW was produced in February 2006 at the factory.

More recently, a \$750 million expansion has been built to add production of the X6 and other models to come. Further planned expansion is slated to increase the plant's annual capacity from 160,000 vehicles to 240,000 by 2012; with the transfer of Z4 production to Germany, the higher-volume X3 will move from Austria to Spartanburg.

This expansion brings the BMW Group's total investment in the plant to \$4.2 billion, and 500 new jobs are being created there. The success of this local manufacturing in the U.S. is documented by its growing production in sales: Vehicle production at Spartanburg has grown from 429 vehicles in 1994, the first year of production, to 157,530 in '07. (In the same period, BMW Group volume in the U.S. increased from 65,000 to 335,000.)

At the same time, this plant along with other BMW production facilities in Munich and Leipzig, Germany are continuously undergoing efficiency improvements; BMW's target here is an efficiency gain of 7-8% per year, up from 5% in the past.

Along with BMW's plant in Landshut, Germany, the U.S. plant was featured on National Geographic Channel's "Ultimate Factories" TV show in November '07. The program featured the fascinating process of building a complete vehicle in just under 40 hours using modern, efficient and environmentally sound methods.

As BMW's worldwide presence and activities continue to expand, the role of this advanced vehicle manufacturing complex will likewise evolve.

Also located at the factory is the BMW Zentrum, a 28,000-sq.-ft. visitors' center that includes a 238-seat auditorium and conference rooms that are available for rental by the community. There are also a gift shop and a café on the premises. The Zentrum (German for "center") is the staging point for factory tours, for which reservations are available by calling 888-TOURBMW or 864-989-5300; or by writing to BMW Plant Tours, P.O. Box 11000, Spartanburg, South Carolina 29304-1100.

BMW, the award-winner – again and again

BMW and its products are a phenomenon without parallel. The frequency and number of awards bestowed upon BMW are a significant indicator of how those “in the know” recognize the special position of BMW in the world of automobiles. Here is a mere sampling of the recognition BMW has received in recent times:

Each year the British magazine *Engine Technology International* names its **International Engine of the Year** and other, categorized awards: 29 automotive journalists from 32 different countries form the panel for these awards; for '08 BMW outclassed every other vehicle maker, garnering six of the 12 awards including the top honor:

- **N54 twin-turbo 6-cylinder engine – International Engine of the Year** for the second year in a row. This is the brilliant 300-hp, high-efficiency unit that powers all “35i” models of the 1, 3 and 5 Series and X6. It also won **Best Engine 2.5 to 3.0 liters**. “Proof that BMW pushes the boundaries of engine technology more than any other manufacturer,” noted John Carey from Australia’s *Wheels* magazine, one of the journalists on the panel.
- **2.0-liter twin-turbo 4-cylinder diesel** of such European models as the 123d; this engine isn’t available in the U.S., but it shares its basic architecture and some moving components with the new 3.0-liter 6-cylinder twin-turbo diesel making its U.S. debut in the '09 335d Sedan and X5 xDrive35d.
- **1.6-liter turbo 4-cylinder** powering the MINI Cooper models. This BMW engine, developed jointly with France’s PSA, was named **Best Engine 1.4 to 1.8 liters**.

- **S65 4.0-liter V-8 engine** of the new M3s. “The victor here is the replacement for one of the Awards’ most successful winners, the 3.2-liter straight six,” commented the panel.
- **S85 5.0-liter V-10 engine** that powers M5 and M6. With its nine trophies so far in four years, this 500-hp sports engine has now surpassed the 3.2-liter six. Said Frank Markus of *Motor Trend* (another of the panelists), “Formula 1 power has arrived in the grand touring class.”

With its annual 10 Best Engines awards. *Ward’s Auto World* also recognizes outstanding automotive powerplants. Though Ward’s does not grant awards by class, like IEOY, it continues to rate BMW engines among its top 10 for '07 (at this writing, the '08 awards haven’t been announced):

- **N52 3.0-liter 6-cylinder engine** of 1, 3 and 5 Series, X3 and X5 models – “Winning a *Ward’s 10 Best Engines* award for the second time in as many chances, the N52 returns BMW’s “standard” inline 6-cyl. to its rightful place as the exemplar of what a sport-sedan engine should be,” wrote Ward’s Bill Visnic.
- **N54 twin-turbo six** – as in the IEOY ranks: “So sweet, so smooth, so willing, so immediate is BMW’s all-new turbocharged 3L DOHC I-6 that we’re convinced car enthusiasts will not know the auto maker’s hallmark inline 6-cyl. engine has forced induction.”

Taking another angle, *Edmunds.com*, a popular and credible auto website, recently named the **Top 10 High-Tech**

BMW, the award-winner – again and again

Car Safety Technologies. All of them are either standard or optional on today's BMWs:

- **Tire-pressure monitoring** – standard on all models.
- **Adaptive [Active] cruise control/collision warning** – optional on 7, 6, 5 (with Frontal Collision Warning System) and 3 Series.
- **Blind-spot detection** – optional on 7 Series.
- **Lane-departure warning/wake-you-up safety** – optional on 7, 6 and 5 Series.
- **Rollover prevention/mitigation** – standard on X5.
- **Occupant-sensitive/dual-stage airbags** – standard on all models.
- **Emergency brake assist/collision mitigation** – standard on all models.
- **Adaptive headlights and/or night-vision assist** – Adaptive headlights optional or standard on all models; Night Vision optional on 7, 6 and 5 Series.
- **Rearview camera** – optional on 7 Series, along with side-view cameras.
- **Emergency response** – part of BMW Assist, standard or optional on all models; now including Enhanced emergency calling.

And what about the cars themselves? Still winning –

- **Automobile's annual All-Stars.** "Believe it – no one here likes seeing the same winners over and over. So we didn't set out hoping to give the 3 Series another All-Star award (its 13th!). But then we got in the car and started driving. And, just like always, it was good, very good. The hills, crests, dips, curves, lumps, and bumps of our rural route through south-east Ohio create an environment that would bring most cars to their knees, but the 3 Series just reveled in it."
- **Car and Driver's annual 10Best Cars.** "And en route to its 17th-straight appearance, the 3 Series added a new model, BMW's first-ever hardtop convertible, and took top honors in two comparison tests: 'Winds of Change?' (April '07) and '40-Somethings' (June '07)... Simple, right? But in 17 years, no other carmaker has quite managed to package these attributes as successfully as BMW, although many have tried. Which is precisely why the 3 Series continues to be the perennial benchmark of the entry luxury-sports-coupe, -sedan, -convertible class."

And what were those attributes? “ultra-smooth straight-six engines...suspension tuning that confidently combines supple ride quality with autocross responses...classic coupe and sedan proportions that have evolved gracefully...”

So the cars and technologies are award-winners. But so is the company, with its timely development programs and 1st-class production facilities:

- **BMW EfficientDynamics** – recognized by the German newspaper *Bild am Sonntag* with the “Grünes Lenkrad” (Golden Steering Wheel) award; with the Environmental Prize of Austria’s ARBÖ, a national motor club; and the Green Award of Britain’s *CAR* magazine, to name just a few of the trophies EfficientDynamics has won. And at the New York International Auto Show of ’08, a panel of 47 auto journalists from 24 countries named the BMW 118d World Green Car of the Year.” Though the 118d isn’t available in the U.S., the new **335d Sedan** applies the same BluePerformance technology to achieving high efficiency and high performance in the same vehicle.
- **Best factory 2008** – engine and powertrain production at BMW’s Dingolfing factory won the year’s industrial competition, which acknowledges outstanding production management that gives companies a permanent competitive advantage...which, for the BMW customer, translates into exceptional quality and value. Dingolfing is BMW’s flagship plant; the 7, 6 and 5 Series are built there.

One could go on and on, but we try to keep Fast Facts reasonably compact. For further awards and recognition of BMW’s accomplishments, see **Fast Facts 2008**, pages 16-19, where many awards from past years are listed and described.

BMW features

The following key features appear in more than one BMW Series:

Exterior design & function

What's new for 2009 or since last edition

- Daytime Running Lamps via headlights' luminous rings on 3 Series Sedans and Sports Wagons with Xenon Adaptive headlights
- Front/rear Park Distance Control optional on 3 Series Sedans and Sports Wagons (formerly rear only)
- Welcome Light now on all models

The BMW look

Every BMW is designed to communicate an identifiable, consistent "BMW look" – have you ever met anyone who cares about cars who couldn't recognize a BMW? Each BMW is designed with restraint, good taste and an avoidance of fads or fashions that could outdate it quickly.

At the same time, a BMW's basic shape is largely determined by its engineering. For example, BMW's optimum (near-50/50) front-to-rear weight distribution dictates a distinctive look, with a long hood and the front wheels set well forward. In fact, this look is also closely related to BMW's choice of rear-wheel drive as the basic layout for all models. (Compare, for instance, the short front overhang of BMWs vs. the long front overhang of front-wheel-drive or front-drive-based vehicles such as Audi, Acura TL and TSX, and Lexus ES.

Specific elements of the BMW look include:

- **Traditional "kidneys" grille**, consisting of dual grille openings with vertical slats. Over the years these have evolved from tall ovals into low, wide, essentially rectangular shapes; yet the lineage to BMWs all the way back to the 1930s is clear.

- **BMW logo**, with blue-and-white color scheme (from the Bavarian flag) and rotating-propeller motif (from BMW's early history as a maker of aircraft engines).
- **Four headlights**. Became a BMW tradition in the Seventies. Today, the headlights are behind glass covers on all models and headlight functions vary among Series and models, but the 4-light theme continues.
- **Luminous rings**. This distinctive BMW identity feature appeared first on the 5 Series in '01, and has now spread to all models. The rings appear on all four lights on most models, and function as parking lights and daytime running lamps.
- **Large glass areas**, as both a functional (for good outward vision) and design element¹.
- **"Reverse kink"** in the rear side-window shape of closed-body models¹. Also known as the "Hofmeister Knick" for Wilhelm Hofmeister, BMW's head of design when it first appeared.
- **A dynamic feeling** to the overall design that visually communicates BMW's dynamic performance.
- **Restrained use of trim**, always within bounds of good taste.
- **Timelessness**. Fads and fashions are avoided, so that a BMW looks good for many years to come. Indeed, if BMW has any connection to fads and fashions at all, it is that BMW sets trends, not follows them.

Integrated front spoiler (all models)

Reduces the amount of air flowing underneath the car, and hence reduces front-end lift at speed. BMW designs openings in the spoiler to direct air efficiently to the radiator, engine compart-

ment and front brakes. Foglights (all except 135i and M models) are integrated into the spoiler for clean appearance. Sportier models and center-installed BMW aerodynamic kits feature deeper, more aggressive-looking front spoilers, usually with large air intakes.

Low aerodynamic drag (all closed-body models)

Each closed-body BMW model has been engineered for a low coefficient of aerodynamic drag (C_D). Air thus flows smoothly and efficiently over the body, so the engine has relatively little aerodynamic drag to overcome. Less turbulence in the airflow also means less wind noise heard inside the car.

Even BMW's open-bodied cars show excellent progress in aerodynamics: The 650i Convertible, with its innovative and uniquely shaped softtop, is even smoother at 0.32. And the 328i Convertible, with its retractable hardtop eliminating any aerodynamic disadvantage of a fabric top, achieves a remarkable 0.30. At 0.29, BMW's most aerodynamic models for '09 are the 328i Sedan and Coupe and most 5 Series Sedans; most other models have C_D of 0.30-0.32. For actual C_D ratings, see the 1st page of each line's Technical Specifications.

Low aerodynamic lift (all models)

BMW devotes just as much attention to this less widely recognized aspect of aerodynamics. BMW bodies manage airflow to minimize its lifting effect on the body, so a BMW "hugs the road" at higher speeds for excellent stability. Ultra-high-performance models, such as the M3s, M5 and M6s, have

additional features (such as a deeper front spoiler, rear diffuser, rear "flaps" on M5) to reduce lift further.

Xenon Adaptive headlights with auto-leveling

(standard 335i models, 328i Coupe & Convertible; 535i & 550i models; 6 & 7 Series; M3, M5 & M6; optional 1 Series, 328i Sedans & Sports Wagons, 528i models)

Compared to conventional halogen headlights, Xenon lamps produce whiter, more daylight-like forward illumination. For its Xenon lights, BMW employs ellipsoid or "projector-type" lamps that are small in diameter; most other BMW headlights are of the free-form type, with computer-generated reflector surfaces. Some manufacturers call this type of headlight "high-intensity discharge" or HID.

Because of their more intense illumination, it is crucial that Xenon lamps be aimed correctly to avoid undue glare to oncoming motorists. For this purpose, BMW includes auto-leveling of the headlights, in two forms:

- **1 Series** – static auto-leveling. After the engine is started and with the headlights on, the headlights are leveled every 25 seconds. Thus passengers, trunk loading and constantly changing fuel quantity are always compensated for in the headlight aiming.
- **3, 5, 6 & 7 Series, M3, M5, M6** – dynamic auto-leveling. Within milliseconds, the headlights are leveled in response

1 – Roadster and, to a lesser degree, softtop Convertible models necessarily depart from the tradition of large glass areas; all softtop models also depart from the "reverse kink" theme, though the 3 Series/M3 hardtop Convertible incorporates it.

BMW features

The following key features appear in more than one BMW Series:

to any change in vehicle attitude, whether static or dynamic; thus even transitory acceleration and braking are compensated for.

Adaptive Light Control. All Xenon headlights on U.S. BMW models include this feature. ALC literally “aims” at making night driving safer. With the headlight switch in its Automatic position, when the vehicle is stationary or moving forward (the feature is inactive when the vehicle is backing up), the outboard lights steer with the front wheels, guided by an electronic control system and swiveled by small servo motors. The system responds not simply to the steering angle, but also to vehicle speed and the “yaw rate” at which the vehicle’s direction is changing. The tangible customer benefit is enhanced night vision around corners and curves, and therefore greater driving safety.

In contrast to cornering lights, next, Adaptive headlights operate at all vehicle speeds.

Cornering lights (1 Series, 3 Series Coupes & Convertibles, 5 & 7 Series)

This feature, built into the foglights or inboard lamps of these models, provides an angled beam at each front corner to assist in situations of low speed and large steering angles. Activated in left- or rightward direction by either a large steering angle or the turn signals; does not activate at speeds over 25 mph.

When the headlights are on and reverse gear is engaged, cornering lights are activated at both sides (U.S. models only). Cornering lights are standard on 3 Series Coupes and Convertibles and

535i and 550i models; they are included with the Xenon option on 1 Series, 328i and 528i models.

Automatic headlight control (all models)

When the headlight switch is in its “A” position, this feature automatically switches on the headlights and all related lighting when ambient light drops below a certain level.

Halogen foglights (standard all except 135i, M3, M5 & M6 models)

Mounted close to the road, BMW foglights “reach under” fog to provide extra illumination. Foglights are omitted on 135i models to accommodate the deep M spoiler, and on all M models to allow large air intakes that supply their high-performance engine and other systems with necessary cooling air.

Adaptive brakelights (all models)

Additional lighting area and/or brighter illumination appears under heavy braking or anytime the ABS goes into action. This signals to following motorists that the BMW is braking hard, and can thus help avoid rear-end collisions.

Park Distance Control (optional 1 & 3 Series, 528i & 535i models, M3; standard 550i Sedan, 6 & 7 Series, M5 & M6)

PDC helps drivers avoid colliding with unseen obstructions. It comes in two forms on BMWs:

- 1 Series, 3 Series Coupes and Convertibles, M3 – rear only
- 3 Series Sedans and Sports Wagons; 5, 6 and 7 Series, M5 and M6 – front and rear.

PDC employs four ultrasonic sensors in the front (3 Series Sedans and Sports Wagons; 5, 6 and 7 Series, M5 and M6) and

four in the rear bumper (all models where PDC is available) to warn the driver when the vehicle is approaching objects or obstructions that may not be visible to the driver. All forward sensors and the rear corner sensors trigger a warning beep at approximately 2 ft. distance to the object. The beeping becomes faster as the bumper approaches the object, turning into a constant tone when the distance closes to less than 1 ft.

The center sensors in the rear bumper first trigger beeping at about 5 ft.; when the distance is less than 1 ft. the beep becomes a constant tone. The front sensors cause a higher-pitched tone; those at the rear trigger a lower-pitched tone. (The tones emanate from the appropriate end of the interior.)

PDC activates anytime the ignition is on and reverse gear is engaged, and automatically de-activates when the car is driven forward approximately 50 m (164 ft.) or reaches a speed of about 18 mph. On vehicles with front and rear PDC, it can be activated or de-activated by pressing its console switch.

Rain-sensing windshield wipers

(standard all models)

A sensor mounted on the inside of the windshield measures the amount of rain hitting the windshield. Pressing the "A" button puts the wipers in their rain-sensing mode. Sensitivity to moisture can be adjusted by turning the control on the stalk. In this mode, the wipers adjust their wiping action automatically according to the amount of rain the vehicle is encountering.

The user can leave the wiper control in its rain-sensing position most of the time. With the

ignition switch in radio mode, the wipers can then be activated manually by turning the rotary control briefly, or by activating the windshield washer. Users should take care to ensure that the system is **not** activated when in an automatic car wash.

Other useful features of BMW windshield wipers and washers include:

- Single-wipe or "flick" operation, activated by pressing the wiper control stalk downward against spring pressure.
- Automatic windshield washer, activated by pulling the control stalk toward the steering wheel. Brief activation sprays washer fluid onto the windshield; holding the stalk longer activates the wipers for a few strokes.

The rain sensor serves other purposes as well, such as Dynamic Stability Control's Brake Drying function.

"Soft" windshield wipers (all models)

This wiper construction dispenses with the usual metal reinforcements in their blades. The wipers operate more quietly at high speeds, thanks in part to the fact that they need no "fin" on the wiper arm to hold them against the windshield. They can also be adjusted for optimum fit to the windshield contours, and replacement of worn blades is easier.

Automatic tilt-down of right exterior mirror

(1 & 3 Series with power seats; all 5, 6 & 7 Series, M3, M5 & M6)

When reverse gear is engaged, the right-side mirror tilts down for a view of the curb or other obstacles not normally visible to the driver. Placing the power-mirror selector switch in its right-mirror position de-activates this feature.

BMW features

The following key features appear in more than one BMW Series:

Power-folding exterior mirrors (1 & 3 Series & M3 with Premium Package; 5, 6 & 7 Series, M5)

Via an additional button in the power-window switch panel, the mirrors fold inward or back to their normal position. Benefits include increased side clearance in tight parking spaces and reduced chance of damage, such as from car washes or vandalism.

Performance & efficiency

What's new for 2009 or since previous edition

- N54 twin-turbo 6-cylinder engine now in 135i models; 335i and 535i models continue with this engine
- N52 magnesium/aluminum 6-cylinder now in 128i models; continues in 328i and 528i models
- 135i models added to models available with Sport automatic transmission and shift paddles
- 7 Series transmission shares features of Sport automatic
- E-shift on console new to 7 Series; now in 5, 6 and 7 Series
- M DCT Drivelogic newly offered on M3 models
- 7 Series' optional Integral Active Steering adds rear-wheel steering to familiar Active Steering
- M Electronic Damping Control (EDC) newly available on M3; Dynamic Damping Control, an innovative and enhanced version of EDC, newly standard on 7 Series
- 7 Series adopts aluminum/cast-iron construction for front brake rotors

Weight-saving cylinder block and head(s)

(Aluminum head/heads all models; aluminum block all models except N52 engines' magnesium/aluminum construction, all "28i" models)

All BMW engines except the N52 have an aluminum cylinder block and cylinder head or heads. (6-cylinder engines have one cylinder head, V-type engines two.)

Compared to cast iron, aluminum saves weight, enhancing vehicle performance and handling. Block construction is as follows:

- 6-cylinder engines of 128i, 328i and 528i models – magnesium/aluminum composite block construction, integral silicon-impregnated aluminum cylinders (not liners). A "soft honing" machine removes enough aluminum from cylinders to leave extremely hard silicon crystals as their very durable working surfaces.
- 6-cylinder twin-turbo engine of 135i, 335i and 535i models – aluminum block with cast-iron cylinder liners.
- V-8 engines of 5, 6 and 7 Series, M3; V-10 engine of M5 and M6 – aluminum block with integral silicon-impregnated, soft-honed aluminum cylinders.

All these constructions achieve excellent engine life; that of V-8 and V-12 engines, and especially the magnesium/aluminum construction of 128i, 328i and 528i models' N52 6-cylinder engines, saves weight.

Dual overhead camshafts (DOHC) and four valves per cylinder (all models)

All current BMW engines have DOHC and four valves per cylinder, one of the most efficient valve mechanisms in use today. This means two camshafts in the 6-cylinder engines, four in the V-8, V-10 and V-12.

Chain camshaft drive

(all models)

The camshafts of some competitors' engines (notably some Acura, Honda, Lexus and Volvo models) are driven by a toothed belt, which requires periodic replacement. All current BMW engines have chain drive, automatically maintained at the correct tension and engineered to last the life of the car. This is a good point to make, especially for customers (such as for the 1 Series) who might have owned such cars in the past.

Double VANOS variable valve timing

(all models)

All current BMW engines employ VANOS, a system of variable valve timing. VANOS derives from **V**ARIABLE **N**Ockenwellen **S**teuerung, German for "variable camshaft control" or variable valve timing, achieved by rotating each camshaft relative to its drive sprocket. This has the effect of varying the points in the combustion cycle at which the valves open and close.

By varying valve timing according to operating conditions, VANOS enhances low- to medium-speed torque and emission control, and may positively affect fuel economy. Valve timing is varied steplessly between the system's "earliest" and "latest" settings (i.e., no simple changeover from low- to high-speed). Hydraulically actuated, the VANOS system is electronically controlled in response to engine speed, load and temperature.

VANOS operates on the intake and exhaust camshafts of all current engines, and is thus called Double VANOS. On M5/M6 engines, VANOS has its own high-pressure oil pump rather

than operating on pressure from the engine oil pump; these M systems are referred to as High-Pressure Double VANOS. The new M3 V-8 is the first M model to achieve its high-speed (8400-rpm) VANOS operation on general engine oil pressure; this contributes to its even higher power per liter.

Valvetronic variable valve lift (128i, 328i, 528i, 550i & 6 Series engines)

Valvetronic is BMW's advanced engine "breathing" concept for non-turbocharged engines. In addition to today's almost universal variable valve timing, a few manufacturers (notably Honda, Toyota and more recently Audi) employ a mechanism to change valve lift – the distance the valve is opened from its seat to admit air and fuel into the combustion chamber – on some of their engines.

Valvetronic varies lift – but to a far greater, and more fundamental, degree than any other system – indeed, so extensively that it replaces the traditional engine throttle. Engine breathing is controlled by the intake valves. This is in contrast to Audi's recently introduced Valvelift system, which provides just two settings for valve lift and does not replace the throttle. (This system appears in the A4 and A5 V-6 engine for '09 and is also expected to be in the facelifted A6.)

The BMW-patented Valvetronic mechanism sits atop the intake valves. Each of the engine's valves (4 valves per cylinder) is actuated as the camshaft lobe deflects a finger-type rocker arm. On the intake side, there is an additional element between the cam lobe and rocker arm, an intermediate follower.

BMW features

The following key features appear in more than one BMW Series:

Upon contact by the camshaft lobe, this follower actuates the rocker arm and, in turn, the valve. The follower is held in place by an eccentric shaft that can be rotated by a small servo motor. This shaft, which rotates in response to the driver's accelerator-pedal motions, determines the follower's pivot point and thus varies the valve lift. The system's highlights:

- **Intake valves assume function of throttle.** Engine breathing (air intake) is controlled by varying their lift. The driver's foot gives the commands; valve lift varies accordingly. At minimum lift, the engine is idling or decelerating; at maximum lift, it produces full power.
- **Enhanced efficiency.** A throttle imposes a restriction that incoming air must snake around. This causes so-called "pumping losses," which take an increasing portion of engine power in lower-speed driving. By eliminating the throttle, Valvetronic essentially does away with pumping losses. This is reflected in excellent EPA mileage ratings relative to engine performance, and in more spontaneous engine response to the accelerator.
- **More power.** High valve lift contributes to high power output; yet traditionally, one cannot simply increase valve lift, as too-high lift can degrade operation at low speeds and loads. With Valvetronic, valve lift is tailored precisely to operating conditions – and is extra-high at the top end. This helps Valvetronic engines achieve their remarkable power.

- **Refined engine operation.** In light-load driving, operation is extra-smooth because of relatively small valve lift of 0.5 to 2 millimeters. Customers may notice the engine's ultra-smooth idling.
- **Excellent cold starting.** The small valve opening promotes highly effective vaporization of fuel, even when the engine is being started from cold.
- **"Drive by wire" in a different form.** Non-Valvetronic BMW engines have electronically controlled throttles, so-called "drive-by-wire." With Valvetronic, this feature is even more natural: via the pedal, the driver's call for power translates into greater valve lift.
- **Lightning-fast response.** The system can vary lift all the way from minimum to maximum in just 300 milliseconds, or 0.3 sec. To achieve this, BMW developed a dedicated Valvetronic microprocessor, which networks with the 40-megahertz/32-bit primary engine computer.
- **Low friction, precision components.** Low-friction rollers transmit the Valvetronic system's motion. The follower is a precision casting, machined to a tolerance of 8/1000ths of a millimeter. For quietness, zero valve clearance is maintained by a hydraulically adjusted pedestal on which the rocker arm pivots.

Valvetronic is an important engineering and technological advance by BMW. It now appears in all of BMW's regular-production, non-turbo engines (but not, however, in the twin-turbo or BMW M engines).

Hydraulic valve adjustment (all models)

This maintains zero clearance between the valves and their actuating mechanism, virtually eliminating valve noise and making periodic adjustment unnecessary.

Two systems of hydraulic valve adjustment are used in current BMW engines. The M3 and M5/M6 engines have bucket-type hydraulic valve lifters between the camshaft lobes and valves, with no rocker arms.

In the inline-6 and V-8 and engines of 1, 3, 5, 6 and 7 Series, there are rocker arms; the hydraulic elements are not "lifters," but rather stationary adjusters that position the rocker arms' pivots to maintain zero valve clearance.

Direct ignition system (all models)

Instead of a single coil, each cylinder has its own ignition coil. This reduces the number of moving parts, and allows more precise control of ignition timing for the individual cylinders. All current M engines have advanced ionic-current ignition technology for knock control. (See also **knock control**, nearby, and **BMW M S85 5.0-liter DOHC 40-valve V-10 engine**, pages 36-39.)

DME engine management (Digital Motor Electronics) (all models)

This microprocessor system continuously monitors a wide variety of operational data, calculates the ideal fuel metering and ignition timing, and adjusts them several hundred times per second. Signals from Lambda oxygen sensors (in the exhaust

system) are processed by the DME computer with adaptive logic. The engine's idle speed is also controlled adaptively to compensate for engine break-in and wear. You could call this the ability to "learn."

Because of their high-rpm concept, BMW M engines have special engine-management capabilities. For more information, see pages 36-39.

Electronically controlled engine cooling (all except M models)

Also referred to as "map cooling." Controls the engine thermostat in response to a complex matrix of operating data – coolant and outside temperature, engine load and driving speed – rather than just coolant temperature. This allows operating the engine at higher temperatures under light-load conditions, which can increase fuel economy and benefit heater effectiveness.

Knock control (all models)

In all current BMW engines except those of the M models, knock sensors in the engine block detect any incipient knocking in the cylinders, then signal the DME to retard ignition timing at the affected cylinder(s) only until the knocking ceases. This timing can always be optimum unless knocking actually begins to occur. Knock control allows a higher compression ratio to be used (all current BMW engines have a ratio of 10.0:1 or higher), further improving performance and efficiency.

The M3 and M5/M6 engines have even more advanced technology for knock control; see pages 37-38.

BMW features

The following key features appear in more than one BMW Series:

Hydraulic engine mounts

(all models)

These employ oil as well as rubber to reduce engine vibration felt inside the car – an especially important point in highly refined BMWs.

Low-restriction exhaust system

(all models)

All BMW exhaust systems are designed for relatively free, efficient flow of exhaust gases to enhance performance. All current engines have a partial or full dual system. To facilitate their engines' very high power outputs, M models' exhaust systems are especially elaborate, voluminous and free-flowing.

Underhood beauty

(all models)

All BMW engines and engine compartments are designed to be not only logical and straightforward to service, but to look attractive when the hood is opened. Be sure to show every prospect BMW's distinctive engine and engine-compartment design – especially that of the M models, whose customers usually have heightened interest in this aspect.

N52 3.0-liter DOHC 24-valve 6-cylinder engine

(128i, 328i & 528i models)

Almost all vehicle manufacturers of 6-cylinder engines have adopted the V-6 format, whose compactness is advantageous in small or midsize cars with front-wheel drive. By contrast, BMW's inline 6-cylinder engines are brilliant for their smoothness and sound, and BMW customers (not to mention professional auto critics!) treasure them for these attributes. Thus BMW retains the

inline format while developing it toward reduced weight, more compact dimensions – and even more brilliant performance, smoothness and sound.

Outstanding fuel efficiency and even tighter control of emissions were also goals for this generation of advanced 6-cylinder engines.

Here are some of the ways in which the N52 achieves progress on their predecessor 6-cylinder engines and advantages over the competition:

Reduced weight – 22 lb. less. Had BMW engineers developed the previous engine to meet their goals, it would have weighed fully 52 lb. more than the new engine does.

More compact – Because there is just one external drive belt, overall engine length is about an inch shorter. This is not an academic point: reduced engine bulk can pay off in improved climate control and other amenities.

Valvetronic variable valve lift.

This exclusive, patented innovation, also enhancing the performance and fuel efficiency of the 4.8-liter BMW V-8 engine (and described on pages 35-36), appears in the N52 in evolved form.

Refined combustion process.

Subtle refinements to the combustion-chamber shape conspire with innovative intake-valve phasing to create more stable combustion, with benefits to fuel efficiency and emission control.

Evolved VANOS². The range over which intake-valve timing can be varied was increased by 10°, achieving further reduced pumping losses.

Higher fuel-injection pressure results in an improved injection spray, helping reduce raw hydrocarbon emissions in a cold engine.

Powerful engine electronics.

Basic ignition and valve-timing functions are duplicated. The first part is optimized for fuel consumption and emissions; the second part is programmed to pure driving parameters.

Depending upon how perfectly the engine is running at any time, control interpolates between the two strategies. Under ideal conditions, the engine always runs with its lowest possible fuel consumption. In case of poor fuel quality or unfavorable environmental conditions, the control parameters prioritize driveability.

Magnesium/aluminum composite construction. Exclusive to BMW. Structurally, the new engine block consists of three major castings:

Bedplate (magnesium alloy³) as the lower portion of the block (crankcase); similar in concept to a construction element found in some racing engines as well as the M3's 414-hp V-8 and the M5/M6 500-hp V-10. Bedplate combines with upper crankcase to form the block's outer shell; the result is an ultra-rigid engine structure.

Upper crankcase (magnesium alloy³). Joining the bedplate at the level of the crankshaft (main) bearings, this too is a weight-saving casting. It is mounted onto the bedplate from above.

Cylinder insert (silicon-impregnated aluminum alloy, or Alusil). In this sense, the N52's construction resembles that of the 5/6 Series 4.8-liter and 7 Series twin-turbo V-8s, though their blocks are all-Alusil and thus requires no cylinder inserts.

Other weight-saving materials.

Hollow camshafts save a remarkable 2.6 lb. each. Beginning as steel tubes, the camshafts are shaped in a hydroforming procedure. Being thus lighter, they have less inertia and improve engine response.

Electric water pump, electronically controlled according to coolant and oil temperatures at any moment. It runs only as much as needed, and in doing so consumes a maximum of 200 watts vs. up to 2 kilowatts (10 times as much) for a conventional pump. The electric pump has numerous tangible benefits:

- By requiring less power, contributes to the engine's power output.
- Faster engine warmup, because it doesn't circulate coolant when the engine is cold.
- Provides coolant circulation for the climate control's Heat-at-Rest feature.
- By eliminating an external drive belt, makes the engine shorter.

Variable-volume oil pump. To supply pressure to the VANOS at all speeds and temperatures without excess capacity at high engine speeds, BMW engineers developed a new type of oil pump with these advantages:

- Contributes to the engine's increased power output, by requiring less power from the engine.
- Doesn't require a bypass to divert excess flow, which can be up to 80% with a conven-

2 – VANOS = **VA**riable **NO**ckenwellen **S**teuerung = variable camshaft control, or variable valve timing.

3 – All magnesium castings in the block assembly are actually a magnesium-aluminum alloy, as pure magnesium would not have sufficient strength for these applications.

BMW features

The following key features appear in more than one BMW Series:

tional pump. This also avoids possible excess oil temperatures and oil foaming.

Oil/coolant heat exchanger.

Another feature that speeds engine warmup; during this phase of operation, it transfers heat from the coolant to the oil circuit. Under conditions of high engine power and high oil temperatures, it performs the reverse, transferring heat from the oil circuit to the coolant, from which the engine cooling system then removes excess heat.

Though available in different versions in previous models, the N52 appears in a single version in current 128i, 328i and 528i engines: developing 230 hp @ 6500 rpm and 200 lb-ft. torque @ 2750 rpm, it provides outstanding fuel efficiency of 17-19 mpg city/25-28 mpg highway in the various models it powers. (RWD models 27-28 mpg highway.)

N54 3.0-liter DOHC 24-valve 6-cylinder engine: twin turbocharging, piezo direct fuel injection, outstanding performance and efficiency (all 335i & 535i models)

With the N52 naturally aspirated⁴ engine (previous pages) and this N54 turbocharged unit, BMW reveals its approach to high performance for now and the future: Instead of ever-larger engines, BMW now achieves performance advances with smaller, lighter, more efficient and cleaner-running engines.

First: the 300-hp N54 engine is not simply a turbocharged version of the 230-hp N52. Several "core" features distinguish it and facilitate the higher performance level:

- **All-aluminum structure.** As attractive as the magnesium/aluminum concept is for saving weight, the extra strength of aluminum construction was deemed necessary for the increased power and torque. The N54 block is completely different, though it too has a bedplate.
- **Cast-iron cylinder liners.** Whereas the N52 has an aluminum-silicon cylinder casting (insert) inside its magnesium crankcase, the N54 has cast-iron sleeves inside its aluminum block.
- **Different bore and stroke.** The bore is reduced from 85.0 to 84.0 mm; the stroke is increased from 88.0 to 89.6 mm. This gives greater cylinder-wall thickness – again to handle the higher stresses within the engine – but leaves the engine's displacement essentially unchanged at 2979 cc vs. the N52's 2996 cc. Both round off to 3.0 liters.
- **Conventional valvegear.** BMW's engineers found that Valvetronic's variable intake-valve lift did not lend its advantages to the turbocharged engine. They remain valid for the non-turbo N52 engine.
- **Moderately increased weight.** Naturally, the aluminum construction, iron cylinder liners and turbochargers add some weight to the N54; so do solid camshafts, compared to the N52's hollow ones. Altogether, the N54 weighs 419 lb., vs. the N52's 357. With this moderate weight increase come 70 more horsepower and those 300 lb-ft. of torque; BMW engineers point out that a 4-liter engine of this performance would weigh a good 150 lb. more!

The performance-enhancing technologies

Several exciting technologies and features contribute to the dramatically increased power and – especially – torque that characterize the N54 engine: **Twin turbochargers.** Turbocharging increases the performance of combustion engines, and has been around in various forms for 100 years. At various times, BMW has set milestones in the development of turbocharging: In 1973, the 2002 Turbo offered 170 hp, vs. 130 for its non-turbo stablemate the 2002 tii. In 1983, a BMW-powered Brabham race-car was the first turbocharged vehicle to win a Formula 1 championship.

Yet over its history, turbocharging has also suffered some drawbacks. If a single turbo was used, it often had an unacceptable degree of “turbo lag” – the lag after the driver pressed the accelerator pedal before the turbo responded. This was at its worst at low engine speeds. Another was relatively high fuel consumption. Finally, the available materials didn’t always fare well under the operating conditions of a turbocharger, which gets its energy from hot, flowing exhaust gases and typically spins up to 5-figure rpm’s. After the 2002 Turbo, BMW set turbocharging aside. (Except for diesel engines, where turbocharging is a highly natural, almost indispensable, power enhancer.)

The N54 turbocharging concept addresses both turbo lag and durability concerns. By utilizing two small turbos – each serving three cylinders – BMW reduced the inertia that creates turbo lag. In its July 31, ’06 issue, *AutoWeek*

noted that “Turbo lag is not an issue, the motor pulls cleanly with as little as 1200 rpm showing, and throttle response feels instantaneous throughout the rev range.”

Materials innovations figure here too: BMW has drawn upon innovative and heat-resistant materials from space technology to facilitate the twin turbos’ dramatic contribution to performance. Each turbo’s turbine – the rotating component that gets its spin from the exhaust stream, drives the compressor, and is subject to the most extreme heat – is made of an advanced steel that can withstand up to 1050°C, or 1920°F.

Direct fuel injection with piezo injectors. Fuel injection, as (mostly) known over the decades, has been of the port type: fuel is injected into the engine’s intake ports, where air passes through on its way to the cylinders. Direct fuel injection sprays fuel directly into the cylinders, or more precisely the combustion chambers. If this were as simple as it sounds, direct injection would be commonplace. But the cylinder is a much hotter, higher-pressure place than the intake port and poses big hurdles for the fuel injectors and for optimizing how, when and how much fuel is injected. Until now, the only BMW gasoline engine with direct injection was the 760Li V-12 engine, where this technology brought advances in fuel efficiency, power, torque and emission control.

- 4 – In a “naturally aspirated” engine, air is drawn into the engine by the pistons’ downward, or “suction,” stroke. By contrast, a supercharger or turbocharger compresses and supplies the engine’s air in what is known as “forced induction.”

BMW features

The following key features appear in more than one BMW Series:

The N54's direct injection is a key factor in achieving BMW's goals for this engine. It gives the engineers greater freedom in the calibration of fuel quantity and timing and the distribution of the fuel-air mixture in the combustion chamber. With this concept, it's possible to utilize a "leaner" mixture – thus less fuel. The advantages in fuel efficiency, power, torque and emission control are more significant.

A further advantage to torque and fuel consumption is the cooling effect of fuel being injected into the hot combustion chambers. Typically, to avoid overheating, turbo engines have had to have a lower compression ratio. As a higher compression ratio benefits both fuel efficiency and (especially low-speed) torque, the N54 benefits mightily: its compression ratio is 10.2:1, almost exactly the same as the non-turbo N52's 10.7:1!

Positioned centrally in the combustion chambers for optimum combustion, the injectors are subject to especially high temperatures. A new-type piezo injector is another essential element in attaining BMW's ambitious performance/efficiency/emissions goals with the necessary long-term durability: A "stack" of piezo crystals reacts lightning-fast to impulses from the engine electronics, governing the injector needle's opening stroke and duration for ultra-precise control of fuel economy.

According to researchers who led the piezo injector's development, alone it contributes 2-3% fuel savings and 20% fewer emissions. Its operating principle involves applying an electrical

impulse to a non-conducting crystal to produce mechanical pressure; in turn, this action is so fast that it significantly reduces the injector's response time.

Air-to-air intercooling.

Turbocharging typically includes intercooling of the engine's induction air, that is, some method of cooling the compressed air that emerges, heated by the compression process, from the turbocharger(s). Sometimes it's done with coolant; here it's done indirectly by outside air.

Intercooling is desirable, even necessary, to reduce the temperature of incoming air to help preclude detonation or "knocking" that can reduce power or, in the extreme, damage the engine. Of course the N54, like other current BMW engines, has knock control.

Special exhaust system. For the first time in regular-production BMW models, the dual exhaust system runs at both sides of the vehicle. At low loads, a flap channels most gas through one side to reduce low-frequency exhaust "rumble." (In 335i Sedans and Coupes, the system's bulk precludes an underfloor storage compartment in the trunk.)

Oil cooler(s). In addition to the standard coolant-to-oil cooler, any 335i built in 3/07 or later with the 150-mph speed limiter (thus with Sport Package) has an air-to-oil cooler in the right front wheelwell. Before 3/07, only Sport Package-equipped vehicles with manual transmission had this cooler.

High-rpm concept, shared with the N52 engine and contributing significantly to the engine's performance character. Like its non-turbo stablemate, the N54

has a 7000-rpm redline. Its maximum power occurs at 5800 rpm – actually lower than the N52's 6250 rpm – but power stays high and vigorous well toward that 7000 rpm. Yet this engine idles at an utterly untemperamental 600 rpm!

The bottom lines. The peak power of 300 hp is fully 45 higher than the 330i, and 70 hp up on the 328i.

At least as important is the fact that this engine can deliver its peak torque all the way from 1400 rpm (not far above idling!) to 5000 rpm. Finally, the torque peak of 300 lb-ft. is significantly better than competing 3.5-liter non-turbo engines deliver: Lexus IS 350, 277 lb-ft. at a very high 4800 rpm; Infiniti G37, 270 lb-ft. at an even higher 5200 rpm.

Compared to the N52's 200 lb-ft., the N54's 300 lb-ft. is fully 50% greater. BMW engine engineers assert that to achieve this kind of torque increase, it would have taken a 4-liter naturally aspirated engine. That would have weighed too much (for a compact sports vehicle like the 3 Series), and its fuel consumption would have been unacceptably high.

In terms of measured performance, twin-turbo "35i" models deliver dramatically quick 0-60-mph times ranging from 5.1 sec. for the 135i Coupe (lightest) to 5.7 sec. for the 535i xDrive Sports Wagon (heaviest). These data are for manual transmission; with automatic they're only 0.1-0.2 sec. longer!

Road & Track (August '07) declared this revolutionary powerplant "one of the greatest engines of all times." We couldn't have said it any better.

N63 4.4-liter DOHC (4-cam) 32-valve twin-turbo V-8 engine with direct fuel injection (750i & 750Li)

This all-new engine, described in more detail in the 7 Series section on page 104-105, employs much the same technology as the N54 6-cylinder unit; with its almost 48% greater displacement, it delivers fully 400 hp and 450 lb-ft. torque. The preceding text on the twin-turbo 6-cylinder engine's performance-enhancing technologies applies essentially equally to this important new BMW high-end powerplant.

N62 TU 4.8-liter DOHC (4-cam) 32-valve V-8 engine (550i Sedan & 6 Series)

This naturally aspirated⁴ V-8 is a standout in terms of torque, power and efficiency. There are state-of-the-art engineering details throughout, but one innovative technology is the main driving force behind the engine's remarkable capabilities: Valvetronic.

Shared by this V-8 and the N52 engine of 1, 3 and 5 Series models, Valvetronic is described on pages 27-28.

The N62 TU engine⁵ produces 360 horsepower at 6300 rpm and 360 lb-ft. of torque at 3400 rpm, and delivers impressive thrust throughout its operating range. It also delivers excellent fuel efficiency considering its brilliant performance; 15 mpg city/23 mpg highway in the 550i Sedan and 650i Coupe with automatic transmission.

4 – In a "naturally aspirated" engine, air is drawn into the engine by the pistons' downward, or "suction," stroke. By contrast, a supercharger or turbocharger compresses and supplies the engine's air in what is known as "forced induction."

5 – TU = technically updated.

BMW features

The following key features appear in more than one BMW Series:

The proof is in the driving: media praise. This ground-breaking technology pays off in real-world performance, as media critics have found in their test drives:

- *AutoWeek*, August 7, '06 (650i Convertible): "There is power aplenty and it gets to the ground smoothly and with no fuss."
- *Automobil Revue*, Switzerland, September 20, '06 (650i Convertible): Comparing the V-8 to its 4.4-liter predecessor, "The familiar attributes – flexibility, linear power delivery, refinement and free revving – remain."

S85 5.0-liter DOHC 40-valve (4-cam) V-10 engine

(M5 & M6)

Let's begin the description of this amazing powerplant with some key data:

- **0-60 mph in 4.5 seconds** (M5, M6 Coupe) or 4.6 sec. (M6 Convertible). These models' M5's 0-60 time is the same with either the standard 7-speed Sequential Manual Gearbox or the optional 6-speed manual transmission.
- **Top speed 155 mph**, electronically limited. But *Road & Track* (December '04) believes that without the limiter, the M5 could achieve over 200 mph.
- **500 hp @ 7750 rpm**, 383 lb-ft. of torque at 6100 rpm.
- **Redline 8250 rpm**.

This V-10 engine sets a milestone for performance in a roomy 5-passenger sedan or relatively practical 4-seaters, with all the luxury and safety features one expects from one of the world's great vehicle makers. Let's take the key attributes of this monumental engine, and see how they contribute to the dazzling outcomes just listed.

Why 10 cylinders? Elmar Schulte, head of engine development at BMW M, has a disarmingly straightforward explanation. "We wanted 5 liters. The ideal cylinder displacement is 0.5 liter. To get 5 liters, we needed 10 cylinders."

A V-10 is also a well-balanced configuration, requiring no balance shafts to make it acceptably smooth. Reporting its driving impressions in the December '04 issue, *Road & Track* reported: "Run up through the gears out of a slow corner and the engine pulls with a smoothness that easily rivals the [previous] M5's engine, arguably one of the finest V-8s around."

Unique sound is a further attribute of the V-10. Even when idling, it sounds exotic; according to *Motor Trend* (December '04), "The yowling twin-five snarl as you sear toward max revs is an experience that etches itself deep in your memory. No, it's not super-car loud – this car always retains the vestige of sedan refinement, and you could mount a sustained assault on the *Autobahn* while a rear-seat passenger sleeps."

High-rpm concept. The V-10 exploits high engine speeds to achieve its performance. Its redline is 8250 rpm; its maximum of 500 hp comes at 7750 rpm, its maximum torque of 383 lb-ft. at 6100 rpm. This strategy lets the driver extract super performance by "revving" the engine, allows low-mass reciprocating components inside the engine, and thus helps keep overall vehicle weight moderate while optimizing front/rear weight distribution.

The S85 unit does not employ the Valvetronic system found in BMW regular-production, non-turbo 6-cylinder and V-8 engines. Instead, the V-10 has a traditional BMW M valvetrain, with 4 valves per cylinder actuated via “box-type” hydraulic lifters derived from racing practice. These are small, light and extremely rigid, as they must be for 8250 rpm.

Also light in mass are the valves themselves. And the camshafts are hollow, further reducing valvetrain inertia to enhance overall engine response. Altogether, valvetrain reciprocating mass has been reduced 17.5% from the predecessor engine – an acclaimed performer itself. So do light but ultra-strong pistons and connecting rods: all these are important facets of the high-rpm concept.

A special High-Pressure Double VANOS² system varies the intake and exhaust valves’ timing ultra-quickly. In this engine the VANOS system has its own hydraulic pump; the resulting very high pressure varies valve timing more quickly than on the regular engines – still another factor in the high-rpm concept. (The M3 engine, though conceptually similar, takes another approach to VANOS; see pages 390-391.)

Of course four overhead camshafts actuate the valves, and their configuration is literally “geared” to the high revs. Each of the two intake camshafts is driven by a simplex chain; from the camshafts’ chain sprockets, the exhaust camshafts are driven by gears. The system is extremely rigid – as it must be for this engine’s level of rotational speed.

A throttle for each cylinder. In the great BMW M tradition, the V-10 has an individual throttle for each cylinder. Compared to most engines’ single throttle (or even to the throttle-less Valvetronic system of today’s regular-production non-turbo BMW engines), these are a costly feature, reserved for the highest-performance engines. Positioned much nearer the cylinders than a single throttle can be, they eliminate a “lag time” inherent in airflow and allow the engine to react lightning-fast to throttle movements.

Via the accelerator pedal and its two potentiometers, the driver gives the commands. In turn, these commands are processed by the engine control module and received by a DC servo motor (also one per cylinder bank). The motor drives the throttle shaft through a tiny gearbox.

Via the MDrive system (see pages 50-51), the engine’s maximum power and the throttles’ response to the accelerator pedal can be set to different levels.

Ultra-high compression ratio, 12.0:1. The higher the compression ratio, the more power can be extracted from a given engine size; this too is a significant factor in the V-10’s high performance.

Ionic-current technology. BMW M engineers have applied an exotic technology to the knock control that is so crucial with such a high compression ratio. Instead of piezoelectric knock sensors in the cylinder block to detect detonation via sound-pressure level, the sparkplugs themselves do the knock-sensing.

2 – VANOS = **V**ariable **N**ockenwellen **S**teuerung = variable camshaft control, or variable valve timing.

BMW features

The following key features appear in more than one BMW Series:

A fascinating principle is applied here. The air-fuel mixture in an engine's cylinders has a certain electrical conductivity, which varies – especially as “knock,” or detonation⁶, occurs in a cylinder. Built into the engine's electronics is circuitry that applies a small voltage across the sparkplug's electrodes just after it fires; the ionic current resulting from this voltage is a function of the combustion process. If knock (detonation) is about to occur, the ionic current will so indicate; the resulting signal goes to the engine's control system and ignition timing is retarded appropriately.

As with BMW's other knock-sensing systems, each cylinder's combustion process is measured individually, and its ignition timing is adjusted individually. If only one cylinder is tending to knock, only that cylinder will have its timing retarded. The advantages of ionic-current technology over conventional block-mounted knock sensors are –

- Speed. The whole process – onset of knock, measurement of ionic current, adjustment of timing – takes place in just 0.8 milliseconds at 8000 rpm, rapid enough to adjust the timing before that sparkplug's next firing!
- Because of its sensitivity and speed, this technology allows the engine to “edge closer” to its full potential in the upper reaches of power and rpm.
- Contributes to moderate fuel consumption and tightly controlled exhaust emissions. The engine meets U.S. LEV2 (Low Emission Vehicle) standards.

Weight-efficient construction of aluminum, with bedplate construction for the lower portion of the cylinder block. Bedplate construction is inherently ultra-rigid; for the strength to withstand the massive internal forces of this engine, however, the main-bearing inserts are of cast iron. Sharing a major feature of other current BMW engines, the aluminum block is silicon-impregnated, with “soft honing” removing just enough of the aluminum to leave the silicon crystals as ultra-hard cylinder surfaces.

The entire engine weighs just 240 kg/529 lb. – almost exactly the same as its V-8 predecessor, even though the V-10 delivers fully 106 hp more output!

G-sensitive lubrication system. Given the cylinder banks' 90° vee-angle and the M5's cornering ability – *Car and Driver* measured 0.89g in January '06 – BMW M gave great attention to ensuring natural return of oil to the main sump. There are two sumps, the main and larger one behind the front frame crossmember and a smaller one forward of it; a baffle separates the two sumps. This arrangement is called a “semi-dry-sump” system.

First, the mechanically driven **main oil pump** is a variable-volume type, as also found on the N52/N54 6-cylinder and new M3 V-8 engines. By varying its output according to engine oil pressure, the engineers have achieved a pump that always delivers sufficient pressure to lubricate this demanding engine, yet never pumps more oil than necessary. Thus it –

- Contributes to the engine's high power output, by requiring less power from the engine.

- Doesn't require a bypass to divert excess flow; this helps avoid excess oil temperatures and oil foaming.

Positioned opposite the main (pressure) pump is a **recirculating pump** that picks up oil from the small front oil sump and transfers it back to the main sump. Then there are two additional, electrically driven **scavenging pumps**, one for each cylinder bank. In straight-ahead driving, these pumps pick up oil from the rear of the engine and return it to the sump. In hard cornering (0.6g or greater), the Dynamic Stability Control system's lateral-g sensor switches magnetic valves to different pickup points, at the outboard side of either head and the oil pan. This system remains active even if the driver switches off DSC.

Low-back-pressure, tuned exhaust system. Exiting through stainless-steel headers that Germany's *auto motor und sport* magazine (November 10, '04) called "an artwork in stainless steel," exhaust gas from each cylinder travels an ideal length of 560 mm/22 in. before reaching the engine-close first catalytic converter on each side. A high-pressure forming technique is used to shape the headers, enabling them to achieve the necessary strength and desirable light weight with only 0.8-mm/0.03-in. wall thickness.

Further advanced engine electronics. BMW M developed an ultra-powerful electronic control system; called MS S65, this scheme incorporates much of the experience gained from the V-10 racing engine. All the engine's electronic functions –

throttles, ignition, fuel injection, lubrication, communication with the Sequential Manual Gearbox, and more – are overseen by a central electronic module employing three 32-bit micro-processors capable of 200 million operations per second.

This system also incorporates the MDrive functions, including the three power levels and throttle calibrations described under MDrive on pages 50-51.

Variable tachometer warning zone – reminds drivers to treat a cold engine with care. Displaying a yellow "caution" segment and a red "limit" segment, this zone moves from as low as 4500 rpm (with a completely cold engine on a cold day) to the full 8250-rpm redline as the engine oil warms up.

BMW manual transmissions (31 of 33 models)

Of 33 automobile models currently offered by BMW in the U.S., fully 31 are available with a manual transmission, all 6-speeds.

Each is engineered to provide what buyers want when they choose a manual transmission: precise control and a high level of driving pleasure. Three types of 6-speed now appear in various models: Type I in 128i as well as RWD 328i and 528i models; Type H in 328i and 528i xDrive models; and the heaviest-duty Type G in 135i, 335i, 535i, 550i, 6 Series, M3, M5 and M6.

6 – Knock or detonation, also called "pinging," occurs when the air-fuel mixture gets hot enough to self-ignite. Since this occurs at an unwanted time, i.e. not when the sparkplugs fire, it is problematical. Knocking at least generates unpleasant noise; at worst it can damage the engine. Virtually all modern engines have knock control, but this technology improves it.

BMW features

The following key features appear in more than one BMW Series:

BMW automatic transmissions (25 of 33 models)

All current BMW automatic transmissions include at least the following features:

- 6 forward speeds
- Full electronic control
- Adaptive Transmission Control, which automatically selects shift modes according to driving style and operating conditions (during normal automatic operation only)
- Sport and Manual shift modes.

Two types of shift or selector lever appear in the different Series:

Mechanical shift lever (1 and 3 Series). The primary shift quadrant or “gate” offers Park, Reverse, Neutral and Drive positions. A second gate, to the left, is labeled M/S for Manual/Sport and interfaces with the primary gate at the Drive position. Moving the lever into this gate activates the Sport mode, in which shifts occur at higher speeds for a livelier performance feel. From this position, the driver can make upshifts and downshifts at will by “flicking” the lever forward for downshifts, rearward for upshifts.

Electric shift lever (E-shift) on console (5, 6 and 7 Series). A shorter lever incorporates movements similar to those of the mechanical lever. Instead of being moved from one position to the other, this lever is only “tipped” in one direction or another for most functions. The shift pattern appears on the lever itself, rather than on the console.

Here too, Reverse, Neutral and Drive are indicated as a straight line; also analogous to the mechanical lever is a leftward “gate” labeled M/S (Manual/Sport) and offering forward/rearward (-/+) motions for manual shifting.

When the engine is started, the transmission is always in neutral (N). Reverse is selected by tipping the lever forward, Drive rearward. From operation in Drive, the Sport mode is engaged by moving the lever to the left. From Sport, the Manual mode is engaged when the driver manually chooses a gear by tipping the lever forward (for downshifts) or rearward (for upshifts). To return to Drive the driver tips the lever rightward. All these movements are analogous to those of the mechanical lever, except that the lever itself returns to the same position after it is tipped or toggled (except when it is moved left into M/S. Requiring less physical space for it to assume other positions, the lever occupies less room on the console and thus leaves room for other amenities.

Instead of pushing the lever all the way forward to engage Park, the driver instead presses a P button atop the lever; in the lever’s shift pattern, P then illuminates.

Other Series-specific features

- **Steering-wheel shift paddles** are added on all 1 and 3 Series models with automatic transmission and Sport Package. Models with the shift paddles also include Direct Selection of Manual mode: If, while driving in D, the driver manually downshifts via paddle, the Manual mode engages. But if the driver makes no further manual shifts within 15 seconds, the transmission returns to automatic operation.
- **Further refinements** that had been introduced in the 3 Series in '07 now apply to all 1, 5 6 and 7 Series automatics:
 - An evolved torque converter whose mechanical lockup is engaged more of the time, reducing slippage and improving throttle response.

- Quicker shifting
- Finer adaptation to driving style and conditions.

Sport automatic transmission (optional 535i & 550i Sedans with Sport Package, 6 & 7 Series)

This transmission version includes the shift paddles plus a wide range of features and attributes that make it ideal for sports-minded drivers who prefer an automatic to a manual transmission:

- **Sport button on console.** This results in two Sport modes:
 - Standard Sport mode, selected as described earlier for the E-shift. Only the transmission functions are altered: Shifts occur at higher vehicle speeds, and the shifts themselves are quicker once initiated.
 - Via Sport button. In addition to the transmission functions, engine response to the accelerator pedal is quickened; the Servotronic power steering is switched to a Sport mode in which power assist is reduced; and the tachometer is calibrated for quicker response to this mode's even quicker engine-speed changes. This is truly a Sport mode for the vehicle, not just the transmission.
 - Modified Direct Selection. If the transmission is in Drive, Direct Selection is as described earlier under **steering-wheel shift paddles**. If the Sport mode has been selected via the Sport button, a paddle shift engages the Manual mode and it remains engaged.

In the 535i RWD and 550i models, the Sport automatic is an extra-cost option beyond the no-extra-cost automatic transmission. In

the 6 Series models, it is the only automatic transmission offered and is at no extra cost.

135i models with the optional shift paddles have a somewhat simplified Sport automatic, with the quick shifting and fast-reacting tachometer, but without the Sport button.

For further Series-specific information on each automatic transmission, see the **performance & efficiency** section for each Series. In particular, the new 7 Series embodies some variations on the above, including a standard Driving Dynamics Control that similarly affects transmission operation.

7-speed Sequential Manual Gearbox (SMG) (M5 & M6)

This unique transmission embodies Formula 1 racing technology to help drivers extract the V-10 engine's full performance capabilities. It does everything a manual transmission can do, plus several things a manual can't:

- Offers 7 forward gears, which would be awkward for a manual shift lever to manage.
- In high-performance driving, can shift much faster than even an expert driver could.
- Provides automated shifting when desired.
- Offers a wide variety of shift programs in both Automated and Sequential modes.
- Engages and disengages the twin-disc clutch, precisely coordinating its action with shifts. There is no clutch pedal.

This has sweeping implications for how the transmission operates and what it can do:

- The gears are positioned so that the gearsets with the greatest loads (1st, 2nd and

BMW features

The following key features appear in more than one BMW Series:

3rd gears) are closest to the load-carrying bearings. This promotes durability in a transmission that must transmit immense power and is sometimes shifted fast and hard.

- To be shifted by a conventional manual shift lever, this gearset placement would result in an awkward shift pattern. But this was not a problem, because all shifting is executed the SMG way.
- The entire internal mechanism – gears, shafts, bearings, shift rods – is laid out optimally for SMG's electrohydraulically powered shifting, with no compromises to accommodate conventional manual shifting as would be the case with an "added-on" SMG mechanism.
- Shifting involves simultaneous actuation of two shift rods, which helps the unit achieve lightning-quick shifts. This wouldn't be possible with a conventional manual gearbox. Also, the gear synchronizers (which facilitate shifting without gear-grinding in any manual transmission or SMG) utilize carbon-fiber cones, which further enhance the ability to shift so fast.

Now to the particulars of the system's capabilities and advantages.

Drivelogic shift programs, 11 of them. There are two basic shift modes: Sequential (S), in which most shifting is initiated by the driver; and Automated (D, for Drive), which provides operation similar – but by no means identical – to that of a conventional automatic transmission. Within these two modes are the total of 11 shift programs:

- **Sequential** – 6 programs, S1-S6 from most leisurely to sportiest. The driver initiates

shifts with the console shift lever (tip forward for downshifts, rearward for upshifts) or steering-wheel paddles. The left paddle is for downshifts, right for upshifts, different from the paddles on regular production models.

- **Automated** – 5 programs, D1-D5 with a similar progression from mildest to sportiest; additionally, as the program gets sportier, the vehicle and engine speeds at which shifts occur also move upward. Even in this D mode, if the driver manually initiates a shift, the unit switches to S and remains there until A is again selected by the driver.

Gears are shifted electrohydraulically; all shifting is managed by a 16-bit microprocessor that can make more than 12 million calculations per second.

Special functions and safeguards. The SMG incorporates many special functions and safeguards:

Launch Control for maximum acceleration from rest. DSC must be de-activated and the S6 shift program selected. Then the driver holds the shift lever forward (as if for a downshift) and presses the accelerator pedal fully down. This raises the engine to 1600 rpm. Ready to go, the driver simply releases the shift lever; the engine revs to 8000 rpm and the car launches with precisely balanced clutch slip and wheelspin.

Thus launch control gives essentially the same standing-start acceleration results as would an expert driver. To preclude overheating the clutch, the control system requires an interval of several minutes between Launch Control starts; and if the clutch monitoring logic does ever detect

clutch overheating, the clutch engages fully rather than slipping.

Use of Launch Control on public roads and highways is not recommended.

Automatic downshift to 1st gear for starting off from rest. Whether in D or S mode, SMG engages 1st gear as the vehicle comes to a stop. If the mode selector is in D, upshifts will then occur automatically; or the driver can initiate the upshifts.

Overspeed protection. If the driver calls for a downshift (S mode) that would overspeed the engine, the downshift command is ignored.

Slip Control. If a downshift occurs on a slippery road, SMG disengages the clutch for a split second to prevent sudden slip of the driving wheels that could de-stabilize the vehicle.

Start-off Assistant, active in both S and D modes. When stopped facing uphill, the driver simply holds the brake pedal until ready to start off. Upon release of the brakes, the vehicle is ready (for 1 sec.) to start off without rolling back. This function is achieved without any action on the driver's part, and via the brakes rather than by slipping the clutch.

Hill Detection. Depending on road gradient, the D shift points are modified to ensure optimum gear selection. In S mode, shift times are shortened so that the engine is always "on point" for best acceleration uphill, or engine braking downhill.

RPM matching or "throttle blipping." In D or S, Drivelogic coordinates clutch disengagement, shifting, engine speed and clutch engagement to accomplish smooth downshifts – just as a skilled driver would.

2nd-gear start in D1 program: Starting up from rest, the transmission is in 2nd rather than 1st gear; the clutch engages particularly delicately. Although the traction-control function is also there to prevent it, this reduces even the chance of transitory wheelspin.

7-speed M Double-Clutch Transmission with Drivelogic (M DCT Drivelogic) (M3 models)

This brand-new development is similar in operation to SMG, in that it provides Sequential and Automated shift models and incorporates Drivelogic with 11 shift programs. But the operating concepts and mechanisms are completely different: SMG's shifting resembles that of a manual transmission, interrupting the engine's power flow for shifting (though very little in the sportier modes); DCT shifts without power interruption. M DCT Drivelogic is described in detail in the M3 section.

Aluminum driveshaft (5 & 6 Series)

By using aluminum for the 2-piece driveshaft from transmission to differential, BMW engineers achieved a significant (6.6-lb.) weight reduction. At the same time, they were able to improve the vehicle's management of impact energy in a frontal crash: Both shaft sections are designed to collapse in a controlled manner under impact load, contributing to the vehicle's overall energy-absorption characteristics.

Ultra-rigid chassis-body structure (all models)

Solidity and minimum squeaks and rattles are obvious benefits; this also provides a "stable

BMW features

The following key features appear in more than one BMW Series:

platform” for the suspension and brake systems, helping them work precisely as they were designed to do.

Dynamic rigidity. To achieve excellent structural dynamics – a critical factor for riding comfort – BMW body engineers carefully tune the structure’s natural frequencies⁷ to be different in torsion and bending, and to be relatively high. These high frequencies are an important factor in achieving BMW bodies’ typically great resistance to vibration; the different frequencies for torsion and bending help ensure that the structure never takes on “a life of its own” when subjected to vibration influences, such as sharp bumps or “wash-board” road surfaces.

Static rigidity, critical to a feeling of solidity and precise operation of the suspension system, is also high in a BMW. Taken together, dynamic and static rigidity plus the difference in torsion and bending frequencies are essential elements of the truly remarkable level of riding comfort and handling precision every BMW offers. An excerpt from a longterm test of an '06 330i Sedan in *Car and Driver's* August '07 issue captures this key attribute:

“The car absorbs bumps and expansion joints yet never pitches or rolls much...”BMW’s uncanny combination of control and compliance takes the fatigue out of driving this car.”

Similar compliments are often paid to the other BMW Series as well. The body structure also enhances passive safety; for information on its safety qualities, see **safety & security**, pages 83-84.

Rear-wheel drive (all except all-wheel-drive models)

Although front-wheel drive can yield more space for passengers and luggage, we believe our customers prefer the handling benefits of rear-wheel drive in standard BMW passenger cars.

Among upscale automobiles, a rear-wheel-drive revival is setting in. Cadillac and Chrysler, whose automobiles all had front-wheel drive for a long time, are again offering RWD cars and it has been reported that Cadillac will drop its front-drive STS and DTS. Infiniti’s G and M series and Lexus’ SC, LS, GS and IS series have RWD as these makes try harder to compete with BMW. Dare we say, “We told you so”?

xDrive: BMW’s “intelligent” all-wheel drive system (328i, 335i, 528i & 535i xDrive models)

Increasingly, customers – particularly those who drive in snowy winter conditions – are attracted to all-wheel drive. Current 3 and 5 Series “xDrive” models incorporate BMW’s advanced xDrive AWD and traction system. xDrive operates as follows:

- Driving torque is always transmitted to the rear wheels, and most of the time to all four wheels.
- The portion of torque transmitted to the front wheels is controlled by a multi-disc clutch that can be fully open, fully engaged or at any level of partial engagement in between. The torque split between rear and front wheels is thus steplessly variable.

- Engagement pressure on the multi-disc clutch is directed by an electronic control system in response to actual road and driving conditions.

xDrive doesn't just optimize traction; it can also enhance both agility and stability on grippy as well as slippery road surfaces. Via the same type of logic that DSC employs to recognize and correct for excessive over- or understeer, xDrive adjusts the front/rear torque split to avoid these tendencies. If undesirable oversteer is sensed, the multi-disc clutch is completely closed, sending the maximum possible torque to the front wheels. If excess understeer is detected, xDrive opens the clutch completely, sending no driving torque to the front wheels. In the BMW tradition, the driver enjoys optimum vehicle dynamics under a wide range of driving and road conditions.

Germany's authoritative *auto motor und sport* (March 2, '05) described and commented on xDrive in the 5 Series Sedan this way: "When traction is lacking or the vehicle tends toward instability, the torque split changes lightning-fast.

"The driver doesn't notice any of this going on – but he or she does realize that on a slick road, the 530xi is very easy to drive. It has a high degree of stability, plus very agile handling." For dry-road capability, xDrive is praised by *Automobile* in a comparison test in its April '08 issue: "BMW doesn't install its sport suspension on AWD cars, but the 335i [xDrive] offers a blend of the silky ride quality and remarkable body control typical of other 3 Series."

Optimum weight distribution (all models)

All current BMW models have their front wheels relatively far forward and their engine as far rearward as practical. BMW even positions the battery – a heavy component – at the rear of the vehicle (and low, to help keep the center of gravity low). This gives excellent weight distribution – closer to the ideal 50% front/50% rear than most competitive vehicles. In fact, on no current BMW automobile model does the weight bias at one end of the car depart more than 3.9% from this ideal. The greatest departure from 50/50 occurs with the front weight bias of AWD models, and the rear bias of the Convertible models.

For actual weight distribution of each model, see the Technical Specifications for the various Series.

Subframe construction (all models)

All current BMW front and rear suspension systems are carried primarily on subframes, which help isolate vibration and road noise from the body structure by virtue of precisely tuned rubber mounts or bushings. See also acoustic decoupling, next page.

Thrust plates (3 Series xDrive models; 5 & 6 Series, M3, M5 & M6)

Thrust plates provide targeted reinforcement of the underbody in the areas where suspension attaches to it. Generally of relatively thick aluminum for high strength with moderate weight, they are found in the various models as follows:

- 7 – A natural frequency is that frequency at which any object tends to vibrate of its own accord once set into motion by some disturbance or input.

BMW features

The following key features appear in more than one BMW Series:

- 328i/335i xDrive models – front
- 5 and 6 Series, all models – front
- M3 – front
- M5, M6 – front, but different from 5 and 6 Series.

Acoustic decoupling

(all models)

Reduces unwanted vibration and noise. In the multi-link rear suspension systems of all models, the suspension subframe is mounted to the main structure with rubber mounts; the differential is then mounted to this subframe with further rubber mounts. By thus acoustically decoupling the differential from the main structure, transfer of gear noise from the differential into the car's structure (and hence its interior) is effectively minimized.

Unique 4-wheel independent suspension system

(all models)

Every BMW model has fully independent suspension at all four wheels. Each wheel reacts independently to bumps; if the left rear wheel hits a bump or hole while cornering, the right one stays in contact with the road and stability is retained. With a "live" or "beam" rear axle – an old-fashioned feature still found in a few vehicles, including some SUVs and pickups as well as the current Ford Mustang – when one side hits a bump, the other side is directly affected.

To reduce unsprung weight and therefore enhance the suspension's ability to deal effectively with rough road surfaces, most BMW suspension systems employ aluminum components. The extent of aluminum varies from Series to Series, with 5 Series rear-wheel-drive models and the 6 and 7 Series presently using

the highest proportions. See the **performance & efficiency** sections of the various Series for specific information on how they apply this important aspect of BMW suspension engineering.

Each BMW suspension system is unique, tailored specifically by BMW's talented engineers to the model in which it's installed. See the Series sections for descriptions of these systems.

Twin-tube gas-pressure shock absorbers

(all models)

Instead of air, an inert gas under pressure fills space inside the shock absorber not occupied by the working fluid. This prevents foaming, which can occur with conventional shock absorbers in fast driving on rough roads.

The twin-tube feature means two separate sets of valves, which provide relatively soft control of gentle undulations but firmer control when the car encounters more serious bumps. You can feel this in the remarkable compliance of BMW suspension over small, sharp bumps, yet its equally remarkable firmness when you're driving hard. It's almost like two suspension systems in one.

Sport suspension

(optional or standard all models except 328i/335i/528i/535i xDrive & 6 Series)

Most BMW models are available with sport suspension, which enhances handling at some loss in riding comfort. Essential elements of every optional sport suspension system include:

- Lowered ride height
- Firmer springs and shock absorbers

- Differently sized anti-roll (stabilizer) bars, usually larger and firmer than the standard ones. On the 5 and 7 Series, the Sport Package substitutes Active Roll Stabilization for conventional anti-roll bars.

For details on the sport suspension systems of specific models, see the **performance & efficiency** or **options & packages** section of the appropriate Series.

M Electronic Damping Control

(optional M3, standard M5 & M6)
Dynamic Damping Control
 (standard 750i/Li)

This suspension feature, which adjusts the shock absorbers to current road and driving conditions, appears in different forms in the 7 Series and M3/M5/M6. The 7 Series' newly evolved and named DDC is described in 7 Series on page 108; that of the M5 and M6 models is described next.

M Electronic Damping Control.

EDC controls the shock absorbers to any level of firmness between their softest and firmest settings, precisely adapting to the road conditions and driver's demands at any given moment. The basic advantages of EDC are (in Normal and Comfort mode, not Sport mode):

- Ride firmness is always at the optimum level for current road conditions, vehicle speed and the load the vehicle is carrying (passengers and luggage).
- On smooth roads, the shock absorbers are kept at the softest appropriate setting (considering the character of the vehicle) for best riding comfort.
- When the vehicle is rounding a sharp corner or curve, the shock absorbers are instantly adjusted to a firmer, just-right level.

- When the vehicle encounters any irregular road surface, the shocks instantly adjust to the optimum level of firmness to control ride motions, preserve riding comfort and maintain adhesion to the road.

There are three EDC modes.

They are –

- **Normal**, likely to be chosen most of the time; a judicious blend of handling precision and riding comfort.
- **Comfort**. Most appropriate for gentle, speed-controlled driving on relatively smooth and straight roads.
- **Sport**, putting full emphasis on these M Cars' tremendous road capabilities at some sacrifice of riding comfort. In this mode, the shock absorbers are set to 75% of their maximum firmness and are not altered by driving conditions.

Within the Normal and Comfort modes, EDC continuously adjusts shock-absorber firmness to actual conditions. The driver can choose from these modes via the EDC console button, and can program a preferred setting into the MDrive configuration (see pages 50-51). This comment from *Motor Trend* (March '06) vouches for the success of EDC and, indeed, BMW M's overall suspension development: "With the M5 in full battle mode, it attacked the cones in figure-eight and slalom tests with sports-car ferocity."

Self-leveling rear suspension with air springs (standard 750Li & 530xi Sports Wagon)

Air springs replace the rear coil springs that are standard in most BMW models; self-leveling is achieved by an electrically powered air compressor and

BMW features

The following key features appear in more than one BMW Series:

ride-height sensors that recognize changes in vehicle loading. Whenever the sensors detect a longer-term change in ride height at the rear (as when a full passenger load is aboard or heavy loads are carried in the trunk), the air pressure is increased to bring the vehicle back to its normal attitude.

In the 7 Series, self-leveling rear suspension is standard on the 750Li and not available on the 750i. On the 535i xDrive Sports Wagon, it is standard and is part of the unique rear suspension configuration that appears on that model.

Variable-assist rack-and-pinion power steering (all models)

All BMW models have rack-and-pinion steering, which provides an especially tight, responsive connection between the steering wheel and the tires.

Power assist. Every BMW power-steering system gives the driver natural road feel. However, there are differences in the way this assist varies to reduce steering effort further at low speeds:

- **1 and 3 Series.** Assist is increased at very low engine speeds (below 1500 rpm); this means greater assist for parking and low-speed maneuvering without any modification of assist at most driving speeds.
- **5, 6 and 7 Series, M3, M5 and M6.** Via electronic control, assist varies according to vehicle speed; greatest at low speeds, least at high speeds. This vehicle-speed-sensitive strategy, called Servotronic, allows a greater increase in power assist for parking and low-speed maneuvers than the engine-speed-sensitive system described above. In the 6 Series, M3 with MDrive, M5 and M6, Servotronic gives

the driver a choice of two levels of assist: Normal and higher-effort Sport. In the new 7 Series, the standard Driving Dynamics Control offers three levels of power assist.

Whichever system is used, BMW steering is widely praised for outstanding precision and road feel.

Steering ratio. In standard-equipped 5, 6 and 7 Series models, the steering ratio – the number of degrees the steering wheel must be turned to steer the front wheels by 1 degree – is also variable; the ratio gradually becomes “quicker” (greater steering angle relative to steering-wheel turns) as the steering wheel is turned away from its center position. 3 and 5 Series rear-wheel-drive models and all 6 and 7 Series models offer a special steering capability: electronically controlled variation of the steering ratio according to driving conditions. Called **Active Steering**, this system is described next.

Active Steering (optional 135i, 335i & 5 Series RWD models, 6 & 7 Series)

Active Steering offers remarkable benefits:

Widely variable ratio. Active Steering electronically varies the steering ratio (the number of degrees the steering wheel must be turned to achieve a 1° steering angle at the front wheels) on the basis of vehicle speed and other driving conditions. The variation in steering ratio is much greater than that achievable by the purely mechanical means of the 5, 6 and 7 Series' standard variable-ratio steering gear described above – so great, in fact, that steering-wheel movements required in parking maneuvers, U-turns and sharp corners are greatly reduced. This results not

only in greater convenience, comfort and feeling of vehicle agility, but controls located on the steering wheel – such as multi-function buttons on the wheel's face and shift paddles – can be operated more easily and naturally while the driver is steering.

Optimized driving dynamics.

Active Steering measures many factors of operating conditions and varies the steering ratio to enhance the vehicle's response to the steering wheel.

Vehicle stabilization. In situations that would normally diminish stability, Active Steering can intervene to preserve stability.

Authentic steering feel. Active Steering retains a direct mechanical connection between the steering wheel and the steered wheels, and steering assist is applied in a proven BMW way (Servotronic, vehicle-speed-sensitive). Thus authentic steering feel is retained. To put it another way, this is not a “drive-by-wire” system.

Reliability. The direct mechanical connection serves as a fail-safe provision to ensure that even if there is a system electrical or electronic failure the driver can steer the vehicle.

How Active Steering works. The steering column takes motion down from the steering wheel to the hydraulically assisted rack-and-pinion steering gear between the front wheels. Between the steering wheel and the rack, Active Steering interposes a planetary gearbox, which increases the amount of rotation there relative to the driver's turning of the steering wheel. The planetary gearbox is electrically driven; the degree to which it adds to the driver's input is determined by several electronically measured factors:

- **Vehicle speed.** We want less power assist as speed increases: more at low speeds to help us park and maneuver, less at high speeds for a firm feeling of the road. (Servotronic power assist provides this.) The electronic vehicle-speed input also feeds into Active Steering, causing the small gearbox to add to the driver's steering-wheel motions and therefore reduce the effective steering ratio. At its maximum at a standstill, this addition gradually decreases until a speed of approximately 75 mph, at which point the system stops affecting the steering ratio. From this speed on up, the ratio is “conventional.”
- **Stability.** Active Steering can add stability, even beyond the effect already provided by Dynamic Stability Control. Via its inputs of vehicle speed and steering angle, the system can compare actual vehicle motion with that desired by the driver. Even at small deviations from the desired motion, Active Steering can (unnoticed by the driver) adjust the steering to enhance stability.
- **Uneven road surfaces.** If the driver applies the brakes while the vehicle is moving on a surface with uneven traction – for example, if one side of the roadway is slick and the other isn't – the brakes' uneven effect on the two surfaces can cause the vehicle to pull to one side (yaw). Under such conditions, Active Steering recognizes and measures the incipient instability and steers against it. The driver does not have to correct, and is most likely not even aware that the system is doing it.

BMW features

The following key features appear in more than one BMW Series:

Please note: In models equipped with a console Sport button (described next), the button-selected Sport mode does not affect Active Steering. It decreases the level of power assist of the standard Servotronic steering, but not that of the Active Steering system.

Integral Active Steering

(optional 7 Series)

Exclusive to the 7 Series, this new development adds Active rear-wheel steering to the Active front steering described above. Included in the Series' Technology Package, this added capability is described in the 7 Series section on page 122.

Sport button

(optional or standard 5 & 6 Series)

Via electronic controls and a Sport button, it offers drivers a choice in driving dynamics as follows:
5 Series – included with Sport automatic transmission, which is available on 535i RWD and 550i Sedans and requires the Sport Package. Offers 2 levels of throttle action (Normal and quicker Sport), transmission shift characteristics and steering assist.

6 Series – standard. 2 levels of throttle action, automatic-transmission shift characteristics and steering assist. Here the Sport automatic is the only automatic transmission offered.

Driving Dynamics Control

(standard 7 Series)

This is a more complex version of the Sport button, providing 5 modes for engine throttle response, transmission shift characteristics, shock-absorber firmness, power-steering assist and Dynamic Stability Control. It is described in the 7 Series section on page 109.

MDrive: M technology at the driver's disposal

(optional M3, standard M5 & M6)

Via the MDrive system, the driver has up to **279 combinations** of control settings to choose from – and an MDrive button on the steering wheel that allows the 1-touch selection of the driver's preferred combination of same. Here's how it all works.

What they mean:

Power and throttle response (M5, M6).

3 settings: P400, the "comfort" setting, allows a maximum of 400 hp and gives "normal" throttle response. This is the default mode, applying anytime the engine is newly started. P500, the "normal performance" setting, allows the engine's full maximum output of 500 hp, with quicker throttle response than in P400. Both these settings may be selected conveniently via the Power button on the console, next to the shift lever.

The 3rd setting, P500 Sport, also allows full power, but provides even quicker power response to the throttles. It is selectable only within the MDrive menu on iDrive; the increment of throttle response from P500 to P500 Sport is not as dramatic as that from P400 to P500.

Throttle response (M3). A standard console button labeled POWER provides two levels of throttle response, Normal and Sport. This button doesn't affect maximum power output.

Transmission (M5, M6). SMG's Drivelogic provides 5 automated programs in Drive, D1-D5; 6 programs in Sequential, S1-S6. These are explained in more detail on pages 42-43, and of course do not apply to the available manual transmission.

Transmission (M3). Here, the M Double-Clutch Transmission (M DCT) is affected by Drivelogic in the same way as the M5/M6 SMG.

Electronic Damping Control. 3 settings: Normal, Comfort and Sport. Steering power assist is linked to these settings: Its Comfort mode (more power assist) goes only with the EDC Comfort setting. The steering's Sport mode (less assist) goes with EDC's Normal and Sport modes. In the M3, Comfort is the default mode; in the M5 and M6, Sport is the default.

Dynamic Stability Control. 3 settings: Normal, M Dynamic Mode and de-activated (though ABS always remains active).

Now let's see how MDrive arrives at those 279 combinations:

- 3 power settings x 10 SMG or DCT programs (excluding for the moment S6) x 3 EDC modes x 3 DSC choices = 270.
- Then, transmission program S6: Because it can be selected only with DSC deactivated, 3 power settings x 3 EDC modes = 9. Add these to 270 and you get the full 279 modes. One might even see the total as 280 by counting Launch Control – itself accessible within S6 – as a further program.

Selecting modes in MDrive.

Within the MDrive menu in iDrive, the driver can select every one of these settings and link them to the MDrive button on the steering wheel. Once this is done, regardless of which individual settings have been selected previously, all settings are instantly set to the selections the driver has programmed in MDrive. Conversely, the previously chosen settings will be restored when the MDrive button is pressed again.

As mentioned earlier, in M5 and M6 the power settings P400 and P500 can be summoned anytime by pressing the appropriate button on the console. So can the EDC and DSC modes; likewise the SMG program, which can be set via the shift lever and the mode selector behind it. In M3s, the Normal and Sport modes can be selected via the console button at any time.

Additional MDrive settings. Two optional features, the M version of BMW's Head-up Display (M5, M6) and the Active Seat Backrests that are part of the optional M Multi-function and Comfort seats (M5 only), can also have their settings programmed onto the MDrive button via the MDrive menu. See **M5 section, options & packages** for details.

4-wheel disc brakes (all models)

BMW brakes are generously dimensioned compared to those of most competitors. To enhance fade resistance, the front and rear discs (rotors) of all models are ventilated.

As part of Dynamic Stability Control, all current BMW models have antilock braking (ABS), Dynamic Brake Control (DBC) and other special braking functions; for explanations see **Dynamic Stability Control** on pages 80-81.

Aluminum/cast-iron brake rotors

(535i RWD & 550i Sedan, 6 & 7 Series)

In this patented construction, the brake rotor (disc) consists of two pieces: the high-carbon cast-iron outer portion, which functions conventionally as the surface onto which the brake pads grip to slow or stop the vehicle; and

BMW features

The following key features appear in more than one BMW Series:

an aluminum “hat” in the center, which mounts the rotor to the vehicle. The concept’s advantages include:

- **Reduced unsprung weight**, complementing the aluminum suspension. Compared to conventional all-cast-iron rotors, actual weight is reduced a very significant 2.2 lb. at the front, 1.5 lb. at the rear.
- **Reduced rotor deformation** under hard braking, by approximately 20%. In practical terms this means less tendency of the brakes to vibrate when hot, and reduced likelihood of rotors cracking under extreme heat.

Depending upon the model, this brake construction appears on either the front brakes only, or front and rear brakes.

Special Brembo brake system (standard 135i models)

Unique in the BMW line, this system employs conventional rotors and special fixed calipers with BMW lettering. It is described in detail in the 1 Series section on page 306.

Compound, cross-drilled brake rotors (M3, M5 & M6)

Going beyond even the 535i/550i/6/7 Series’ aluminum/cast-iron brake rotors (with benefits described above), this most elaborate BMW brake concept also employs 2-piece rotors. But whereas on the 550i and 6 Series the hat and outer portion are riveted together, here they are connected by steel pins that allow actual movement between the hat and outer portion under changing heat conditions.

The 535i/550i/6/7 Series brake construction cuts unsprung weight, and reduces rotor deformation under hard-braking,

high-heat conditions by about 20%. This construction, which fully allows the two rotor components to expand differently, saves an equal amount of weight and totally eliminates deformation. In practical terms, this means virtually no tendency of the brakes to vibrate when hot, and also virtually no likelihood of the rotors cracking even under the extreme temperatures that typically might be encountered in driving on a racetrack.

Additionally, the brake rotors are cross-drilled. Visible through the wheels, cross-drilling enhances heat dissipation beyond the rotors’ internal ventilation, further increasing fade resistance. Cross-drilling further reduces weight – unsprung weight – by a full 1.5 kg/3.3 lb. per rotor. The front calipers are fixed and have dual pistons, another upgrade; front and rear calipers – highly visible through the wheels – are painted in an eye-catching glossy black.

Dynamic Stability Control (standard all models)

This all-encompassing traction, antilock and stability system is an important safety feature that also has benefits in terms of handling and driving enjoyment, particularly in BMW M models. It is described in detail on pages 79-81.

M Variable Differential Lock (M3, M5 & M6)

BMW M engineers developed a more capable mechanical limited-slip differential, specifically suited to M Cars’ extreme performance levels and track-ready handling.

The main distinction between a conventional limited-slip “diff” and the M Variable Differential Lock is that where the former senses torque, the latter senses

wheel speed (rpm). Under dry to not-quite-dry road conditions, a 25% limited-slip had traditionally enhanced the handling of sporty rear-wheel-drive BMWs; yet under slippery conditions, this type has limited ability to improve traction when one wheel is on slippery, the other on firmer ground. It cannot transmit more torque than the slippery side permits.

On all current BMW models, electronic traction control (a function of Dynamic Stability Control, nearby) addresses this issue, although not in a manner conducive to sporty, M Car-style driving. (This is one reason why BMW provides a “DSC off” switch on most models.)

The M Variable Differential Lock specifically addresses low- and split-traction situations in a way that reinforces sporty handling, imparting a slippery-road ability no high-performance, rear-wheel-drive sports car ever before had. Any time a speed difference develops between the two rear (driven) wheels, a shear pump, driven by this difference, develops pressure in the unit’s silicon viscous fluid. This pressure is directed to a multi-disc clutch that transfers driving torque to the wheel with the better road grip (“select high”). The greater the speed difference between the two wheels, the harder the clutch engages. As this difference in wheel speeds diminishes, the clutch begins to ease off.

This mechanism accomplishes sophisticated action by entirely natural means. There is no external pump, no external source of lubrication or operating fluid. The very motion to be controlled – differences in speed between

one wheel and the other – generates its locking action. Viscous fluid is so-called because it develops internal force (via an increase in viscosity) whenever it is sheared; a relatively small difference between one wheel speed and the other can generate the necessary locking action.

Active Roll Stabilization (ARS) (5 & 7 Series Sport Package, standard 6 Series)

This high-tech innovation reduces body roll, popularly known as “lean,” in cornering. It improves handling by virtue of better suspension geometry (wheel angles relative to vertical), but there is a psychological component as well: Drivers and passengers alike marvel at the “flat cornering” that results from ARS. This system consists of:

- **Active anti-roll bars**, replacing conventional mechanical (“passive”) front and rear bars. Each bar consists of left and right portions, twisted in opposite directions by a hydraulic motor between them.
- **Valve/sensor block** containing various system valves and sensors.
- **Lateral-acceleration sensor** to detect how hard the vehicle is cornering.
- **Electronic control unit (ECU)** regulating the entire system.
- **Tandem oil pump** providing hydraulic pressure for ARS and the power steering.

Whenever the vehicle enters a corner or curve, or begins an avoidance maneuver, “lateral acceleration” is generated. This is read by the sensor, which transmits a signal to the ECU. The ECU processes this signal and transmits it to the valve/sensor block. In turn, the valve/sensor block determines the

BMW features

The following key features appear in more than one BMW Series:

hydraulic pressure applied to the active anti-roll bars to control body roll.

The key word here is “active.”

Active Roll Stabilization –

1. Generates resistance to body roll by twisting the front and rear anti-roll bars.
2. Does so in a stronger and more highly “tailored” way than can conventional anti-roll bars.
3. Does not offer resistance to bumps in straight-ahead driving, as do conventional anti-roll bars inevitably⁸.
4. Increases the vehicle’s maximum cornering capability.
5. Improves steering response, particularly in the range of cornering where body roll is most tightly controlled.

Though it delivers similar benefits, ARS differs in working principle from the Active Body Control (ABC) system Mercedes-Benz offers some models.

Mercedes’ system is more complex; it employs a hydraulic actuator at each wheel, eliminating anti-roll bars altogether. The actuators are “rams” or plungers atop each spring strut; in a corner, these rams push downward on the outside wheels’ struts and pull upward on those at the inside wheels.

ABC offers the driver a choice between two levels of roll control, Sport and Comfort – the latter allowing more body roll. ABC also influences riding qualities: Over a road surface that might set the body into gentle pitching or heaving motions – called “float” – ABC helps control the body; over road surfaces that would generate more nervous, “jiggly” body movements, ABC does not act.

With its application directly to the components most affecting cornering – the anti-roll bars – BMW feels that ARS is the appropriate solution for BMW’s dynamic handling.

Alloy wheels

(all models)

BMW alloy wheels are strong, weight-efficient, appropriately styled for each model and sized generously: Diameters (at least 16-in.; 17-in. and 18-in. on most models; 19-in. standard on M5 and M6, optional on 550i, 750i/Li and M3) are large enough to provide plenty of space around the brakes for air cooling, and widths provide a solid “footprint” for excellent cornering and braking.

Design of course plays an important role here too. Across the BMW line, all our alloy wheels display tasteful design and their construction details are elegant. Standard and optional wheel designs are chosen for each model according to that model’s character and performance capabilities, and most models offer at least one wheel-and-tire option; many models offer even more choices.

The low-profile performance tires offered on most models as standard equipment, stand-alone options or part of Sport Packages, are to be presented to customers with a disclaimer⁹.

Wide radial tires

(standard all models)

Every BMW model is equipped with premium steel-belted road tires. Performance capabilities vary according to model, ranging from standard all-season equipment on most models to the 135i Coupe’s standard performance tires to the very high-performance rubber that is standard on every

BMW M model. For details on the tires of each model, see **performance & efficiency** and **options & packages** as well as the **standard & optional features** and **technical specifications** tables within each Series section.

Tire Pressure Monitor: direct pressure measurement at the tire

(standard all models)

Pressure in each individual tire is measured directly and monitored via telemetry. If pressure in any tire drops below a defined level, this is indicated by a warning in the instrument cluster. Thus even if all tires lose pressure in unison, the driver will be warned.

Run-flat wheel-tire system (standard 1, 3, 6 & 7 Series; 525i/535i RWD Sport Package or xDrive upgrade)

BMW's run-flat wheel-tire system is an important advance in safety, convenience and space utilization. The system consists of self-supporting tires, special wheel rims and the Tire Pressure Monitor described above.

The tires are distinguished primarily by their special sidewalls, which include specific inserts and highly heat-resistant rubber compounds. A deflated tire can maintain its essential shape and guidance characteristics for a considerable distance, so that when confronted with a flat the driver can continue on at reduced speed until reaching a place to have the tire repaired or replaced.

While maintaining essentially the handling and safety standards expected of performance tires, the run-flat system offers several advantages:

No roadside tire changes. The driver need not stop and change a damaged tire. Even with no air

in the tire – a condition revealed to the driver by the Tire Pressure Monitor – one can drive on at 50 mph for up to about 90 miles.

Tire stays on rim, thanks to specially developed Extended Hump wheel rims. Stability systems remain functional. All DSC functions remain functional, even with a deflated tire.

Increased trunk space. A spare wheel and tire occupy considerable space. With the run-flat system, no spare is needed, so the trunk can be larger. In 1, 3, 6 and 7 Series models, where the system is standard, the trunk is configured to take advantage of this and the spare is eliminated. In 5 Series models with run-flats, however – Sport Package-equipped models only – a space-saver spare is provided so that the Sport Package doesn't entail a loss of standard equipment.

Customers may have read or heard that run-flats are relatively costly to replace, that tire stores may be reluctant to repair them, that they have relatively short tread life, and that given their still relatively minor market share a correct replacement may be difficult to find. The customer with such doubts should be reminded of the undeniable safety advantage of that "no roadside tire changes" factor.

8 – BMW has achieved great sophistication in the way conventional anti-roll bars work – as evidenced by the superb handling and riding comfort of all contemporary BMWs.

9 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. Some models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

BMW features

The following key features appear in more than one BMW Series:

M Mobility System

(standard M3, M5 & M6)

Run-flat tires that meet M's extreme performance requirements are not yet available. Also, M exhaust systems' bulk generally precludes a spare tire. Thus all M models include the M Mobility System for use in case of a flat tire.

M Mobility consists of a container of rapid sealant, a small compressor, and a hose to connect the compressor to the damaged tire. All this is carried in a container in the trunk or cargo area; the system can seal punctures up to approximately 1/4 inch across. Omitting the spare tire saves about 45 lb. of weight.

Like those of BMWs with run-flat tires, M models' wheels incorporate the so-called Extended Hump rim shape, which helps keep the tire on the rim in case of deflation.

Comfort & convenience

What's new for 2009 or since last edition

- 2nd-generation iDrive in 1, 3 and 7 Series, M3; includes BMW Search via Google Maps
- New iDrive controller with direct-select buttons in 5, 6 and 7 Series, M5, M6
- All models now have Programmable Memory Keys
- High Beam Assistant newly available in 7 Series
- Head-up Display newly available in 7 Series
- Frontal Collision Warning System now included in Active Cruise Control option for 5, 6 and 7 Series
- Enhanced Premium Sound System newly available in M3

- Smartphone Integration, new option for all except 5 Series and M5; requires iPod/USB Adapter
- Description of Alcantara

Heated exterior mirrors and windshield-washer jets (standard all models)

When the outside temperature drops below a specific level, the mirrors and windshield-washer jets are automatically heated if the ignition switch is on (differs between vehicles without Comfort Access and vehicles with Comfort Access or 7 Series; see Owner's Manual for specifics).

Vehicle and Key Memory (all except 1 & 3 Series) or System Personal Profile (1, 3 & 7 Series, M3)

The capabilities of microprocessor control allow considerable vehicle personalization to customer preferences. Although these choices stem from the same electronic system, BMW has divided them into two categories: functions that react the same to all remote controls; and those that are influenced by individual remote controls. (Two remote controls are provided with the vehicle; up to four remotes can be accommodated.)

All 1, 3 and 7 Series and M3 models now incorporate System Personal Profile functionality. In all Series, the system actually provides many more possibilities than outlined here; BMW believes these are the important ones for most customers. Customers who desire more detailed information may obtain it from their BMW center.

An asterisk (*) indicates functions that are captured automatically by System Personal Profile; otherwise, they must be programmed to the customer's

preference by the BMW center (Vehicle and Key Memory) or the user (System Personal Profile).

Identical function for all remotes:

- Audible confirmation (siren chirp) when the alarm is armed; can be activated or de-activated. Visual confirmation (via signal lights) is always active.
- Daytime running lamps. on or off.
- Pathway Lighting. Allows use of headlight flasher switch to turn on headlights and interior lights for 40 seconds, or not.
- Automatic locking of central locking system once vehicle is in motion (locks at 10 mph, or does not lock).
- Selective unlocking. Unlocks only driver's door on first actuation of "unlock" button on remote, then other doors, trunk or tailgate and fuel door upon second actuation; or unlocks all doors and trunk or tailgate at once.

Controls functions according to which remote (i.e. which user) is involved:

- Automatic climate control. Sets temperatures* and air distribution* to key user's last settings when vehicle is unlocked by that user's remote.
- Radio-station presets return to those last set by key user*.
- Seat/mirror/steering-wheel memory. Sets driver's seat and exterior mirrors* (1, 3 Series with power seats, M3) plus steering wheel (5, 6 and 7 Series, M5, M6) to last setting of particular user when the vehicle is unlocked by that user's remote, or does not set them. Always active.
- Audio tone settings (1 and 3 Series, M3 only) return to those last set by key user*.

- Central-locking preferences as above, but specific to each remote.
- Language of displays and voice functions. Programmed in iDrive or, in vehicles without iDrive, by BMW center.
- Lighting preferences.

In 1 and 3 Series models with iDrive, some of these choices may be made within the iDrive system; without iDrive, they are selected via the instrument cluster and turn-signal stalk. For all models, a Customer Selection Form is available for customers to indicate their specific and detailed preferences, including further choices not described here. To the extent necessary, programming of the system will then be performed by the BMW center's service department.

Multi-function remote control (all models)

The remote is standard on all models; a theft-deterrent alarm is standard on all 5, 6 and 7 Series models and the M5 and M6, and is available for BMW center installation on 1 and 3 Series and M3 models. Locking, unlocking and alarm functions are controlled by the remote. Functions include:

- **Unlock vehicle/disarm alarm** – Press unlock button once to unlock driver's door and disarm alarm; press a second time to unlock the other door(s), trunk/tailgate and fuel-filler door. (See **Vehicle & Key Memory** nearby.)
- **Lock vehicle/arm alarm** – press lock button.
- **Release trunklid or tailgate** – press release button. If alarm system is armed, it will be disarmed while trunk is open, then re-armed as it is closed.

BMW features

The following key features appear in more than one BMW Series:

- **Panic function** – Press trunk/tailgate release button and hold until alarm sounds. To de-activate panic function, press unlock button.
- **“Car finder”** – With vehicle locked, press lock button. This switches on the interior lights and (where present) exterior door illumination or Welcome Light; can help locate the car at night or confirm that alarm has been armed.
- **De-activate tilt sensor and motion detector** – With vehicle unlocked, press lock button twice. This arms the alarm, but with the tilt sensor and motion detector de-activated. Useful on ferries, for example.
- **Open windows and moonroof if present** – press and hold unlock button.

The remote's battery is charged anytime the remote itself is in the ignition slot, and thus does not have to be replaced periodically. (If a particular remote is not used for a long period of time, the battery may discharge, however.)

Start/stop button (all models)

The engine is started by pressing the button after inserting the remote in its instrument-panel slot or (7 Series, or in other models with available Comfort Access) entering the vehicle with an authorized remote. In vehicles with manual transmission, the clutch pedal must be depressed to start the engine; in vehicles with automatic transmission, DCT or SMG, the brake pedal must be applied. The engine is also shut off by pressing the button.

Comfort Access (optional all models)

Eliminates the need to activate a remote to unlock or lock the vehicle, or to insert it into the dash slot before starting the engine.

- **Keyless access** – User enters vehicle merely by pulling a door handle, or opens the trunk by pressing the trunk release. Presence of the remote (say, as in the user's pocket or purse) has already confirmed that the user is authorized.
- **Keyless starting** – User authorization is confirmed by the presence of the remote inside the vehicle; the driver starts the engine by merely pressing the start/stop button.
- **Keyless engine switch-off and vehicle locking** – Driver turns off the engine via start/stop switch, and presses a door handle to lock the vehicle after exiting.

If the user has left the remote in the interior, the vehicle will not lock. If the remote has been left in the trunk and the trunklid is closed, it will open again as a reminder to retrieve the remote.

Soft-close doors (optional 7 Series, M5 & M6)

The user closes the door gently, not needing to slam it shut; an electric mechanism draws it fully in. Inadvertent slamming of the door, though not recommended, does not interfere with its operation.

BMW Universal Transceiver (Premium Package 1 & 3 Series, 528i/535i models; otherwise standard)

According to Series, the BMW Universal Transceiver is positioned either in the roof above the windshield or in the interior rearview mirror's housing. As part of the Homelink® system, the

Transceiver can control up to three functions external to the vehicle, such as a garage-door opener or a home lighting system.

High Beam Assistant (optional 5, 6 & 7 Series, M5, M6)

Controlled by a sensor on the forward side of the interior rearview mirror, this option switches automatically between low and high beams. It is activated by setting the main light switch to Automatic while the headlights are on low beams, then actuating the steering-column lighting stalk in the high-beam direction.

The benefits are several, both convenience- and safety-related:

- The driver needs not switch between low and high beams manually, removing a distraction.
- High beams are likely to be used more often; in today's typically dense traffic, drivers often forget to even use the high beams.
- Other drivers and pedestrians are less likely to be blinded by high beams inadvertently left on.

Three conditions trigger the switch to low beams:

- Oncoming traffic
- Vehicle ahead
- Sufficient ambient illumination, as in towns and cities.

The driver can override automatic operation at any time via the steering-column stalk.

Automatic-dimming interior and exterior mirrors (Premium Package 1 & 3 Series, M3, 528/535i models; otherwise standard)

Electrochromic action reduces glare from headlights of following vehicles, progressively and almost imperceptibly; rearward vision is preserved, but potentially glaring lights appear in a soft, non-disturbing green tint. The system

can adjust from its minimum 15% to maximum 70% glare reduction in just 5 seconds.

Auto-dimming exterior mirrors are included in M3 Premium Packages; an auto-dimming interior mirror is standard.

Leather-wrapped tilt/telescopic multi-function steering wheel (standard all models)

Puts numerous frequently used controls within the driver's fingertip reach; the number and functions of these controls vary according to Series and model. Among the possible functions are:

- Search up/down:
 - Radio stations
 - CD tracks
 - Memory phone numbers¹⁰
- Audio or hands-free phone¹⁰ volume
- Radio/phone¹⁰ selector
- Phone¹⁰ (to begin or end a hands-free call)
- Programmable buttons
- Voice Command System¹¹.

Steering-wheel adjustments are as follows:

- 1 and 3 Series, M3 – manual tilt/telescopic
- 5 and 6 Series, M5 and M6 – power tilt/telescopic with automatic tilt-up for entry/exit, memory
- 7 Series – power tilt/telescopic with automatic tilt-away, memory.

(Tilt-up – moves to uppermost position when remote is removed from its slot, then returns to preset position when it is re-inserted. Tilt-away – moves to its uppermost and full-forward position.)

¹⁰ – Phone controls active when approved cellphone is paired with Bluetooth interface (vehicle must be equipped with BMW Assist.)

¹¹ – Standard 6 and 7 Series, M5, M6; included with optional Navigation System in 1, 3 and 5 Series, M3.

BMW features

The following key features appear in more than one BMW Series:

Dynamic cruise control (standard 3, 5, 6 & 7 Series)

Note that Dynamic cruise control does not appear in 1 Series and M models. Not to be confused with Active Cruise Control. In addition to controlling the engine to maintain the set speed, this system can also apply the brakes (lightly) if necessary. This gives it greater capability in controlling speed, for example, on a down-hill grade. Also specific to Dynamic cruise control is a 2-step choice of increasing or decreasing speed: A light tipping of the lever forward/rearward increases/decreases speed by 1 mph; a harder push/pull alters speed by 5 mph.

Active Cruise Control (optional 3 Series)

In addition to the speed-maintaining, acceleration and deceleration functions of the standard cruise control, ACC can adjust the BMW driver's speed according to traffic conditions.

Employing a radar sensor unit at the front of the vehicle, ACC senses the speed of vehicles traveling ahead, and adjusts the BMW driver's speed to maintain a safe following distance. Among its features:

- Four radar sensors in sensor unit, providing a field of vision of +/- 8°.
- Can interact with GPS Navigation to enhance ACC operation.
- The radar sensors' lenses are heated, so that the system functions dependably even in bad weather conditions.

Operation is as follows: When the road is clear, operation is essentially as with standard cruise control, though with certain specific nuances:

- Current speed is captured by tipping cruise-control stalk forward or rearward. Thereafter, each time stalk is tipped forward or rearward, set speed is increased or decreased by 5 mph.
- Driver can also adjust the speed (upward only) in increments of 1 mph by pressing inward on the slider button at the left end of the stalk. When cruise control has been canceled (by braking, for example), this button is used to resume.
- Set speed is indicated by an arrow at the speedometer scale and a digital display.

When traffic is encountered ahead, ACC's special capabilities come into play:

- Driver can choose from four following distances by adjusting rotary dial on control stalk. Via four bars below "vehicle ahead" icon, chosen following distance is displayed briefly after election (more bars = greater distance).
- When radar sensor detects a vehicle ahead, "vehicle ahead" icon illuminates. ACC adjusts the BMW driver's speed to maintain the selected following distance.
- In adjusting vehicle speed, ACC may apply brakes. It may also apply brakes when the driver changes set speed abruptly. If brake application causes DSC or ABS to activate, a specific warning indicator appears in the instrument-panel display.
- If a vehicle pulls into the BMW driver's lane ahead, ACC recognizes that vehicle only when it has fully moved into the lane. If the vehicle cuts suddenly into the lane, ACC may not be able to adjust speed quickly enough, in

which case the vehicle icon is surrounded by a blinking triangular warning signal indicating that the driver should take evasive action. ACC does not react to stationary vehicles or other objects ahead.

- When traffic ahead clears, ACC automatically resumes the previously set cruising speed.

ACC can also reduce vehicle speed when a curve is entered at too high a speed. However, the system does not “look ahead” to curves, so any such adjustment occurs only after the curve is entered. In sharp curves, ACC may react briefly to oncoming vehicles; the driver can cancel this action by stepping on the accelerator.

ACC is an advanced, stress-reducing driving enhancement, particularly in fast-moving yet congested traffic. The buyer of a BMW so equipped should be given a careful and thorough explanation of ACC’s functions and benefits, and should be advised to study the system’s operation. **The capabilities of ACC in no way relieve the driver of responsibility to devote full attention to driving, to traffic and to all aspects of the driving environment!**

Active Cruise Control with stop-and-go capability, Collision Warning System (optional 5, 6 & 7 Series; requires automatic transmission)

The Active Cruise Control for these three Series adds two important features:

- **Stop-and-go**, which can bring the vehicle to a complete stop if traffic calls for it. Then, when the driver presses the accelerator,

ACC accelerates the vehicle back to the set speed, or whatever speed it chooses to maintain the set following distance.

- **Frontal Collision Warning System.** Utilizes the radar sensor to detect critical closing-rate situations with standing and moving objects, even with ACC switched off. This system then takes action (function must be activated via a switch to left of steering column):
 - A “soft” warning in the instrument cluster comes first, followed by an “acute” warning both visual and audible
 - Pre-pressurizes the brakes’ hydraulic lines
 - Lowers the threshold to activate Dynamic Brake Control
 - Optimizes the emergency braking action of Dynamic Brake Control
 - Pre-tensions the front safety belts (this is reversible).

Real Time Traffic Information (standard 6 & 7 Series, M5, M6; included with Navigation option 1, 3 & 5 Series, M3)

RTTI is received in the vehicle via an FM data broadcast. It is processed in the vehicle’s Navigation System to notify the driver of potential traffic problems (i.e. congestion, construction) on the programmed route, and offers an alternate route or the option of automatic re-routing around the problem. RTTI is available in more than 50 metropolitan markets in the United States; BMW offers it to customers for a minimum of 4 years from the in-service date without recurring monthly bills – a considerable advantage over the competition, which generally charges an RTTI monthly premium or requires satellite radio service in addition to a monthly premium.

BMW features

The following key features appear in more than one BMW Series:

Ergonomic control center (all models; encompasses iDrive control display & controller where present)

A masterpiece of design and ergonomics. Immediately in front of the driver is the main cluster, with the principal instruments (including at least speedometer, tachometer and fuel gauge) and the most urgent warning lights (ABS, brake fluid, check engine and others).

BMW's "secondary" control and display zone is always above the center console. This zone includes less urgent displays and warnings (such as the On-board Computer), climate-control system and audio system, plus the iDrive control display if present. The iDrive controller and some less frequently used controls and are on the center console.

Electronic analog instruments (all models)

Every BMW main instrument cluster has round analog dials for speedometer and tachometer. The fuel and (where present) coolant- or oil-temperature gauges are also here, and relatively large. This arrangement provides not only easy reading but a distinctive, BMW-only look. The instruments are electronically driven, with no mechanical cables or connections to wear out.

In the 5, 6 and 7 Series, M5 and M6, the two main dials are complemented by a disc-type "pointer" that rotates behind the dial face to indicate –

- On the speedometer, the cruise-control speed setting
- On the tachometer, the variable warning segment.

3 Series models include the cruise-control pointer but not the variable tachometer warning

segment. Anytime the cruise control is newly set, the set speed is also displayed digitally for 3 sec.

Check Control (all models)

Placement and extent of monitored functions vary from model to model, but the purpose of this system is always to help the driver be aware of the operational readiness of important functions, such as the lighting system and fluid levels. See the appropriate Series section for details under either Check Control or Multi Information Display.

On-board Computer (all models)

Two versions are offered:

- "Basic" with 4 functions (1 and 3 Series). The functions are –
 - Acoustic freeze warning
 - Average fuel economy since last reset
 - Average speed since last reset
 - Expected range on remaining fuel.
- "Premium" with at least 8 functions; included in optional Navigation System of 1 and 3 Series and M3, and in standard iDrive system of 5, 6 and 7 Series as well as M5 and M6. Functions include –
 - Memo – reminder signal can be set to sound at a particular time
 - Timer (stopwatch function)
 - Speed limit – alert signal can be set to sound at a chosen speed
 - Distance to destination, estimated time of arrival
 - Expected range on remaining fuel
 - Average fuel consumption for two distances
 - Average speed since last reset.

iDrive, 2nd generation: more intuitive operation, expanded functions, high-res display
(optional 1 & 3 Series, standard 7 Series)

With iDrive, the predecessor 7 Series initiated a new direction in the control of vehicle features and functions; with a multi-menu color display and a mouse-like controller usable by driver and passenger alike, a potentially crowded landscape of buttons and knobs was supplanted by a computer-logic control path. Now, a 2nd generation of iDrive builds upon that pioneering development while making it more natural, more intuitive, simpler and more elegant.

An overarching attribute of iDrive was the separation of control (via the console controller) and display (the centrally placed iDrive monitor). This basic control strategy remains; the controller has been further developed and the display is larger in the 1 and 7 Series: now 8.8 in. in the 1, vs. 6.5 before; fully 10.2 in. in the 7, vs. 8.8 in. previously. The 3 Series display remains at 8.8 in.

Positioned at dash center, the new control display sets higher standards for logical, readily understood menus and attractive graphics. The controller has been refined for comfortable, intuitive selection and activation of functions via standardized turn, push and tilt motions while being augmented with more direct-select keys.

User-friendly: controller with direct-select keys. Benefiting from the newest biomechanics R&D, the state-of-the-art controller operates with tactile precision and clearly structured motions. New control elements, menu schemes and graphic

representations in the control display become evident upon first use, yet with familiarity, user appreciation grows over time. A graphic depiction of the controller in the display itself (including instructions such as Tilt or Press) helps orient the user to the next control step; the rotation, pressing and tilting motions generally correspond to those of a computer mouse.

Thus interpreted, rotation of the controller takes the user through menu selections; pressing it makes the choice. Tilting the controller to the left or right effects a navigation through various menu levels. Via clear graphic organization in the form of stacked layers and onscreen depiction of controller movements, the user enjoys highly intuitive navigation. All menus are structured according to a consistent scheme, so that one is almost immediately at ease; menus are broad so that the user can view relatively numerous options without switching to another level. Also, functions are arranged so that in longer-term use the most important options are reached more rapidly.

An additional new refinement is four direct-select keys, placed directly next to the controller, for the most frequently used menus. These allow quick selection of CD, radio, phone and navigation menus, and are augmented by three further keys of general utility: one takes the user directly to the start menu (MENU), one to the most recently active menu (BACK), and the third (OPTION) presents various options within the current area. Thus searches are likely to be shorter, or altogether unnecessary.

BMW features

The following key features appear in more than one BMW Series:

Now even more useful:

Programmable Memory Keys.

Lined up next to the audio controls, these keys (eight of them in 7 Series, six in other Series so far) allow the user to store favorite or frequently used functions (radio stations, phone numbers, navigation destinations for example) on various keys and recall them instantly. The stored functions can be as specific and detailed as a navigation map in the preferred scale, an audio balance setting or a selected chapter in the Integrated Owner's Manual (7 Series only). And because the keys are sensitive not just to being pressed but also to being merely touched by the user's finger, one can see the stored function on the control display by lightly touching the key. If it's the right one, the user need only press the key and it's there, ready to use.

Large-format display, preview maps and full-screen images.

In either of its two sizes, the display's new 1280 x 480-pixel resolution means remarkably true-to-life images. It's a system appropriate to the vehicle it's in, achieved via up-to-date hardware and software. White-on-black menu lists; effective symbols and icons; contemporary graphics; and clear, consistent color-coding are among the elements that enhance not only function but also esthetics.

Menu structures, too, make finding desired functions easier. In the Start Menu, all functional areas served by iDrive are listed. Selecting a given item leads to its menu layer, where the options of that level are listed. This consistency in navigation assists in orienting the user, as does the "stacking" of menu layers in the

display. Visual assists further contribute to clarity. And if the user gets to a place where he or she didn't mean to be, the Back key usually reverses the error.

User-friendlier GPS Navigation.

This overall refinement of functionality means simpler and more enjoyable use of the standard GPS Navigation. Full-screen map displays offer outstandingly detailed views of the geography; maps as well as specific symbols can be shown in 3-dimensional form. Selected points of interest along the travel route appear with near-photographic realism.

Mere input of destinations reveals the new system's impressive capabilities. If the destination appears on a list in the system, a preview map appears as the user scrolls the list; this can help distinguish between places with similar or identical names. If a destination (or a phone number) needs to be entered manually, this is done with a new, circular "speller" that makes the entry go more quickly.

Simultaneous voice entry and controller operation possible.

Yet another iDrive innovation is its ability to combine voice and controller entry, called Multi-mode Input. The user can go back and forth between the two methods while actually inputting; indeed, voice recognition can remain active during input via controller and the user can modify an input via voice. Voice Command is activated by its function key on the steering wheel, and de-activated either upon completion of the action or by pressing the key again. Voice Command is simplified by visual display of the available commands, yet its capabilities go further in that numerous synonyms of these commands are also recognized.

BMW Search. BMW introduces access to Google Maps (<http://maps.google.com>) search capability within the vehicle on 2009 BMW Assist and Navigation-equipped 1 and 3 Series models and the 7 Series. For the first time, subscribers to the optional BMW Assist Convenience Plan can access “BMW Search” to quickly find a desired business with just a key word, benefiting from the world’s most famous online search engine. After finding the desired information, users can immediately start route guidance or a hands-free call with the Bluetooth-linked phone at just a simple push of a button.

Utilizing newly introduced hardware operating on the AT&T Mobility GSM network, this unique service identifies the current location and destination of the vehicle automatically and then displays the local results with details of address, phone number and distance. For example, one can look up business information like the names of restaurants, hotels, service stations, banks, supermarkets, cinemas and public facilities such as schools or city halls, all by the simple use of a keyword. One can also easily ask for a search at another location.

In a nutshell, BMW Search, using Google search technology and intelligence, saves time and reduces frustration with destination entry on the Navigation System. The information you look up is continuously updated by Google. “BMW Search” is the next logical and consequential development of the link between the automobile and the Internet.

To allow customers to send business listings and street addresses with associated phone numbers from the internet

directly to their BMW, Google and BMW now offer MyInfo with all other 2009 automobile models. BMW Search now opens up access to the Internet directly from the vehicle, representing another building block in the BMW Assist services portfolio.

This newly optimized iDrive introduces a very significant step forward in the operation of automotive features and functions. Greater efficiency, improved logic and clear, attractive displays help define the character of the new 7 Series and represent a significant enhancement of the 1 and 3 Series. Indeed, the new iDrive helps create a user experience that is incomparable in automotive history.

Evolved iDrive system (5 & 6 Series, M5 & M6)

These models incorporate an evolved, simplified and user-friendlier version of the original iDrive system. For '09 it has been updated with essentially the same new controller and direct-select keys as described in **iDrive, 2nd generation** nearby; otherwise, its operation is as before. There are two versions:

Base 5 Series system, without GPS Navigation. 6.5-in. color Control Display (256 colors, 400 x 240 pixels) and 4-direction controller without Force Feedback. From the main menu (always available via the Menu button behind the controller), the user can select from four menus by pushing the controller in the appropriate direction. A fifth (“i”) menu is reached by pressing the controller while in the main menu; it allows users to choose settings, view vehicle maintenance requirements, and even turn off the display.

BMW features

The following key features appear in more than one BMW Series:

The four main-menu choices are:

Communication – phone functions¹², BMW Assist and TeleService.

Entertainment – radio, Satellite Radio when present, CD and Auxiliary functions. If the Logic7 or Enhanced Premium audio system is present, this menu also leads to these systems' special capabilities.

Climate – Functions beyond those provided via the dash hard controls include air distribution, heating balance for the available heated front seats, and (for when the car is parked) automatic ventilation.

Car Data – On-board Information, trip computer, speed limit and stopwatch. The i-menu offers choices for vehicle display and control settings as well as service requirements. Here, under the BMW Service menu option, one can observe the remaining miles to selected service and maintenance procedures, as well as legally mandated inspections. Examples: front and rear brake pads, brake fluid, sparkplugs, engine coolant.

Optional 5 Series/standard 6 Series, M5 and M6 system, with GPS Navigation.

Incorporates the "high" version (CCC = Car Communication Computer), with the following upgrades:

- 8.8-in. Control Display with higher resolution (640 x 240 pixels)
- Controller with Force Feedback (incorporates appropriate tactile feedback into controller)
- GPS Navigation with DVD database
- Voice Command System.

The Navigation menu, which replaces the Car Data menu, encompasses the On-board

Information, trip-computer, speed-limit and stopwatch functions of the base system, and adds GPS Navigation with all its functions, including Real Time Traffic Information. Its DVD player is in the center console below the audio-system hard controls and CD player. In the 6 Series/M6 iDrive system, the Climate menu does not include seat-heating balance.

Programmable Memory Keys (all models)

Programmable Memory Keys allow users to program favorite or often-used iDrive functions for 1-touch recall. In all Series except 7, six of these keys are included in a row of eight keys, one of which toggles among entertainment sources and the other between FM and AM. In the new 7 Series, all eight are Programmable Memory Keys.

Hard drive for data storage: high capacity, fast retrieval (standard 7 Series, optional 1 & 3 Series)

An 80-gigabyte hard drive is included with the 2nd-generation iDrive system, which is standard in the 7 Series and optional (in combination with the Navigation system) in the 1 and 3 Series. This drive provides data storage for the iDrive system, GPS Navigation, entertainment systems, Voice Command and phone system.

Storage capacity on the 2.5-in. hard disc is apportioned as follows:

- GPS Navigation – 65 GB
- Entertainment server – 8 GB
- Gracenote[®] music-track database – 4 GB
- iDrive system – 2 GB
- Voice Command – 0.5 GB
- Phone contacts – 0.5 GB.

The hard drive has many advantages for users:

- Facilitates complex graphics, such as 3-dimensional perspective views in Navigation.
- Makes it possible to maintain a music collection via Gracenote[®] music-track database.
- Provides faster retrieval of data, such as navigation guidance or music files.
- Significantly improves Voice Command operations and expands it to include three languages.

Head-up Display

(optional 5 & 6 Series, M5 & M6)

HUD displays important driving information in color on a 6 x 3-in. field in the windshield. A virtual image is projected onto the windshield, appearing approximately in line with the end of the hood in the driver's field of sight. Thus the driver can observe the information with essentially no diversion from the road ahead. Via the iDrive control display's i-menu, the driver decides which information is to be displayed here and the brightness of the display; the display can be turned on and off via a switch in the lighting control center, to the left of the steering column.

Information of the following categories can be displayed:

- Check Control and On-board Computer warnings, prioritized according to their urgency, such as vehicle defects, engine-oil level, low windshield-washer fluid
- Navigation instructions
- Cruise-control (standard or Active Cruise Control) set speed
- Current vehicle speed (the only HUD information that displays continuously when selected).

In addition to basic brightness selected via the iDrive system, the display's brightness is also automatically regulated according to ambient light and moisture conditions via sensors that govern the automatic headlight control and rain-sensing wipers. Settings chosen by the driver are captured by the Key Memory System, and re-captured when the individual user unlocks the car.

In M5 and M6 models, a special M version of the HUD is available; see either section for details.

Voice Command

(standard 6 & 7 Series, M5 & M6; included with optional Navigation System 1, 3 & 5 Series, M3)

The system incorporates a text-to-speech engine, which makes it possible to translate various text messages, such as radio-station names, into voice form. Also recently added is interaction of graphics and speech: For example, the user might select a radio station via Voice Command; the monitor would then display this choice. In vehicles with the Bluetooth interface and a paired cellphone, once the phone menu is selected, one can dial the number of a programmed phone contact merely by speaking his or her name. It is also possible to obtain GPS guidance to a city or town by vocally spelling its name.

In summary, Voice Command can put its advanced user interface to work controlling the –

- Phone system
- Address book
- GPS Navigation
- Short Message System (SMS)
- Audio system
- Climate control.

12 – Standard 6 Series, M5, M6; included with Navigation option in 5 Series.

BMW features

The following key features appear in more than one BMW Series:

The system can recognize 3000 words. On models with the 2nd-generation iDrive system, Voice Command is enhanced and user-friendlier.

BMW Ambiance Lighting

(standard all models)

In most Series, BMW Ambiance Lighting, or “waterfall” lighting, consists of two small LED lamps in the ceiling. These lamps, themselves barely noticeable, bathe the console area in soft orange light, helping occupants find controls at night and adding a warm, subtle touch to the cabin.

In the 3 and 7 Series, Ambiance Lighting is more extensive; see pages 112, 113 and 238 for details on those Series’ lighting features.

Automatic climate control

(standard all models)

BMW’s automatic climate control provides both effective automatic control and a high degree of manual “override” control should users desire it. In the 5, 6 and 7 as well as M5 and M6, the system provides full left/right control of most functions, plus additional functions programmable in the iDrive system. The 1 and 3 Series systems provide left/right temperature settings.

Key features of BMW automatic climate control include (in all Series unless otherwise noted):

- **Activated-charcoal microfilter ventilation** – adds a layer of active-charcoal particles to an electrostatically charged microfilter. Active charcoal has a gigantic surface area relative to its mass (over 16,100 sq ft. per gram!), which enables it to absorb and hold substances such as carbon monoxide, sulfuric acid, nitrogen dioxide

and ozone. Many odors are also reduced. The electrostatic action of BMW microfilters captures atmospheric particles down to a size of 5 microns, removing pollen, plant dust and spores; cement, coal and asphalt dust; and others. One or two filters depending upon Series; they are to be changed periodically according to the BMW maintenance schedule.

- **Versatile override controls.**

When users have specific preferences, they can override automatic functions. Air distribution to windshield, dash and footwells can be combined as desired; fan speed can be adjusted manually. In the 5 and 6 Series, M5 and M6, independent left/right controls are provided for air distribution and fan speed via iDrive; in the 1 and 3 Series these overrides have single controls.

- **Temperature- and volume-controlled air** for rear compartment (3, 5 and 7 Series, M5, M6), via controls at the outlets in the rear of the center console.

- **Fuzzy logic** (1, 3, 5, 6 and 7 Series, M5, M6) – refines temperature control by better incorporating human comfort perceptions.

- **Bi-directional solar sensor** for front compartment: takes into account the intensity and direction of solar heat to determine cooling action.

- **LED temperature displays** – showing temperature settings and current fan speed.

- **Automatic recirculation control** – recognizes high air pollution and automatically switches to recirculating air. Manual selection of recirculation is also possible from the climate-control panel. (In the 3, 5, and

7 Series and the M5, a button on the steering wheel can be programmed to control this function.)

- **Automatic reduction of blower speed** when vehicle comes to a stop, for reduced noise (currently 3 Series only).
- **Max. A/C** –1-touch selection of maximum air-conditioning output.
- **Heat at rest** – uses engine heat to warm the interior for up to 16 minutes after the engine is turned off.
- **Misting sensor** (1, 3 and 7 Series) – via the windshield wipers' rain sensor, misting of the windshield is sensed visually and system operation adjusted automatically to clear it up.
- **Climate-controlled center console compartment** (3, 5 and 7 Series, M5).

The many air outlets can be adjusted individually – all of them for airflow, the ones at dash center (in the 3 Series) for temperature and airflow. A thoughtful design for the outlets' grille slats allows them to be fully closed too.

AM/FM/CD audio system (all models)

Every BMW model's audio system includes at least the following features:

- An attractive and legible display
- Programmable memory for at least 12 FM and 6 AM stations
- Autostore of 6 FM and 6 AM stations
- Search, seek and manual tuning
- Operation of certain functions from steering-wheel controls
- Radio Data System (RDS), including Program Type (PTY)
- In-dash single-disc CD player
- Audio muting for telephone use (with approved cellphone and Bluetooth interface).
- Auxiliary audio input.

Some models' optional or standard audio systems have significant additional features, such as: Digital Sound Processing (DSP); subwoofers; Spatial Enhancement; and the numerous special features of the Logic7 system and the Enhanced Premium Sound System of M models (next). The standard CD players include MP3 capability.

For details on audio features specific to various Series, see the appropriate Series' ergonomics & luxury or options & packages section.

Logic7 audio system (standard M5 & M6; optional 3, 5, 6 & 7 Series)

This state-of-the-art audio system upgrades sound quality to audiophile level. It enhances the entire audio system with –

- Increased audio power
- Even higher-caliber speakers throughout, plus additional speakers:
 - 3 Series Sedan, Sports Wagon and Coupe, 5 Series, M5 – 13 speakers vs. standard 10
 - 3 Series Convertible – 11 speakers vs. standard 10
 - 650i/M6 Coupe – 13 speakers vs. standard 8
 - 650i/M6 Convertible – 11 speakers vs. standard 8
 - 7 Series – 16 speakers vs. standard 12
- Digital Sound Processing (DSP), adjusted along with other Logic7 parameters on the audio panel (3 Series) or iDrive monitor (3 Series with Navigation; 5 & 6 Series, M5, M6)
- Surround Sound simulation
- Vehicle-speed-dependent equalizing of bass tones.

Speakers are as follows; an asterisk (*) denotes additional speakers over the standard

BMW features

The following key features appear in more than one BMW Series:

system. Unless otherwise noted, speaker specifications are common to all models where Logic7 is offered; all speakers except subwoofers are aluminum-membrane type.

- 100-mm midrange fill speaker, center of dash*
- 100-mm midrange in each front door
- 25-mm tweeter in mirror triangle of each front door
- 100-mm midrange in each rear door (3 Series Sedan/Sports Wagon, 5 and 7 Series)* or rear side panel (3 Series Coupe/Convertible, 6 Series/M6)
- 100-mm midrange surround speaker at each side of rear shelf* (except 3/5 Series Sports Wagon and 3 Series, 6 Series and M6 Convertibles)
- 100-mm midrange surround speakers in roof (3/5 Series Sports Wagon)
- 25-mm tweeter at each side of rear shelf, inboard of surround speakers (3/5 Series Sedan)*
- 25-mm tweeters in roof (3/5 Series Sports Wagon)
- 25-mm tweeter in each rear side panel (3 Series Coupe/Convertible, 6 Series/M6)
- 25-mm tweeter in each rear door (7 Series)*
- 210-mm central bass (subwoofer) in cavities at bases of B-pillars or under the front seats (except 6 Series/M6 Convertible). Use of these "sill cavities" is patented by BMW, and enhances audio quality beyond even similar systems in competitive models.
- 210-mm central bass (subwoofer) in each rear side panel (6 Series/M6 Convertible).

Developed by Lexicon, Logic7 incorporates an exciting Surround Sound process, as in current Harman Kardon home A/V receivers. Exclusive to Harman

International brands, this process provides truly unique and realistic reproduction, generating a 360° sound field and accurately re-creating the acoustic intent of the studio master. Logic7 offers –

- A multi-channel format
- Unparalleled acoustic realism and clarity
- A benchmark for the automotive industry
- A significant point of differentiation for our customers.

Enhanced Premium Sound System

(optional M3, M5 & M6)

Logic7 set new standards for audio quality in automobiles; now BMW M goes another step toward perfection in audiophile sound systems.

Developed by BMW M audio engineers, this system addresses an audio-reproduction issue most of us didn't even know existed: delivery of audio reproduction in the correct, original time sequence. And it proves a time-honored axiom: as good as we thought things were, they can always be better.

The core challenge, determined BMW M's experts, is what vehicle interiors do to sound after it emerges from the speakers. The many surfaces, shapes and textures cause sounds to be delivered out-of-sequence, so to speak, bouncing off here and there and arriving at occupants' ears in a different order than they did when the music was recorded.

To counter this, the system employs an advanced technology called DIRAC (Dual Input Room Acoustics Calculator), which measures the interior's characteristics and cancels out the time distortions they cause. In its March 28, '07 issue, Germany's *auto motor und sport* magazine

likened the process to “electronically controlled suspension that precisely knows the surface of the road ahead – in advance.”

The other, less surprising aspect of the Enhanced system is its exotic speaker technology – after all, if we’re going to hear those audio impulses in their correct sequence, they’d better be crystal-clear in the first place. Made by German speaker specialist LPG, they are (to quote *auto motor und sport* again) “the race cars of loudspeakers, because they have strong engines (Neodym magnets) and a highly rigid, yet lightweight chassis (Hexacone membranes).” In all M3-M5-M6 models unless otherwise noted, these include:

- 100-mm coaxial center-fill midrange/tweeter atop the instrument panel (2)
- Tweeter in each front door’s mirror triangle (2)
- 100-mm midrange in each front door panel (2)
- 100-mm coaxial midrange/tweeter at each rear side (M3 Sedan/M5 doors, M6 Convertible side panels) (4)
- 100-mm midrange and separate tweeter at each rear side (M3/M6 Coupe, M3 Convertible side panels) (4)
- Two 100-mm midrange and two separate tweeters in rear shelf (M3 Sedan, M5) (4)
- Two 100-mm coaxial midrange/tweeter under rear shelf (M3-M6 Coupe) (4)
- Two 220-mm subwoofers under front seats (all M3, M5, M6 Coupe) (2)
- Two 220-mm subwoofers in rear side panels (M6 Convertible) (2).

Thus the M3 Coupe and Sedan, M5 and M6 Coupe have 16 speakers altogether (counting the coaxials as two each), the

M3 and M6 Convertible 12.

These are driven by an 825-watt (Coupes/Sedans) or 675-watt (Convertibles), 9-channel amplifier that can produce up to 112 dB of volume and a frequency range of 18 Hz – 24 kHz. Signals are transmitted from the amplifier to the midrange speakers and tweeters in the front doors and mirror triangles via two especially capable diplexers. To compensate for changing vehicle noise levels, the system includes speed-dependent volume; 7-band Digital Sound Processing is also included, controllable via iDrive (which is standard in M5/M6, required with this system in M3 models).

Designed by BMW Individual, the speaker frames and grilles signal their quality and capability visually via style and colors. Users select settings via an audio submenu within iDrive: tone, balance, fader, vehicle-speed effect, equalizer and surround settings; switching to and from surround sound is also accomplished simply within this menu. *auto motor und sport*, which regularly reviews vehicle sound systems, declared that the system “has astoundingly little self-generated sound, reproducing instead with great detail precision. One could hardly make a higher compliment...the most impressive sound system in the world.”

HD Radio (optional all models)

Higher-quality sound from terrestrial transmitters; requires no subscription and the option price is modest. FM reception is of digital quality; AM achieves virtually the quality of current FM. HD Radio represents the greatest step forward in radio sound quality since the advent of FM broadcasting.

BMW features

The following key features appear in more than one BMW Series:

HD programming is presently coming largely from established radio stations, but the compressed digital signals allow three or more stations within the bandwidth used by one conventional station; thus an expanded range of stations is expected. At this writing, about 1,800 stations have added digital transmission capability in the U.S.; some 900 are offering the extra stations (HD-2 or HD-3) that are possible.

The HD equipment receives both analog and digital signals. BMW pioneered the offering of HD Radio in motor vehicles.

Diversity antenna system (all models)

Multiple antenna lines (in various locations according to model and body type) independently receive FM signals; these signals differ from each other because of the lines' separate routing. A system computer continuously monitors the signals and selects the better or best one.

A diversity antenna system improves FM reception significantly over a single-circuit antenna. See audio-system information in the Series' **comfort & convenience** sections for locations of the various models' diversity antenna circuits.

Satellite Radio (optional all models)

As Sirius and XM have merged, we are now calling this simply Satellite Radio. At this writing, the "Sirius Everything" package offers channels of digital entertainment coast-to-coast for a nominal monthly subscription fee. (For '09, BMW includes a 1-year subscription with the option.) New is the "Sirius Everything plus the Best of XM," with 209 channels. Many of these channels are 100% commercial-free music, featuring

multiple categories as diverse as classical, opera, bluegrass and hip-hop. Further channels are devoted to news, information, sports and entertainment from content partners such as ESPN, Fox News, NPR, CNN Headline News, CBC, BBC, Discovery Channel and Radio Disney. Sirius provides 16 sports channels, Sirius + Best of XM 21; local weather and traffic are offered in many U.S. metropolitan regions and Canada. Howard Stern and Martha Stewart are among the featured personae.

Signals are delivered by multiple powerful satellites for seamless coverage anywhere in the continental U.S., and optimized for superior sound resolution by proprietary S>PLEX technology. Hardware for the vehicle consists of -

- Sirius Satellite Receiver
- Satellite antenna
- Sirius-compatible audio system.

Once the equipment is installed and activated, the customer simply selects the satellite radio mode. As with FM and AM, users are able to scan and set favorite presets. The audio display can show the channel name, channel number and (in the case of music channels) artists and music title.

BMW has extended its relationship with Sirius XM Radio through September 2011.

iPod/USB Adapter (optional all models)

Allows BMW users to listen through the vehicle audio system to music or other material stored in their iPods, flash drives or other devices

The USB port is immediately next to the auxiliary audio input, which has been standard in all models since model year '07.

Depending on how the vehicle is equipped, drivers can control the input source from iDrive or the Multi Information Display, and from the multi-function controls on the steering wheel. Unlike some of the earlier accessory kits, the new option does not utilize the CD-changer port and therefore does not conflict with installing a CD changer.

There are various connection possibilities; the factory option includes an iPod adapter cable, and suitable USB cables are available. Steering-wheel and in-dash audio controls can be used to control playback volume, start and stop music, and scroll through selections on the iPod or other source. Most USB sticks are compatible, though not all USB players. Compatible iPod versions include –

- iPod, 4th generation and newer
- nano, 1st and 2nd generation
- mini, 1st and 2nd generation.

Bluetooth cellphone interface: iPhone-ready

(standard 5, 6 & 7 Series, M5 & M6; included with optional BMW Assist in 1 & 3 Series)

In vehicles so equipped, when a BMW-approved cellphone is paired the vehicle's Bluetooth interface, BMW's in-vehicle hands-free memory, dialing and calling features are available to users. In vehicles with Voice Command, phone functions may also be voice-activated.

In keeping with our policy of accommodating contemporary technological products and the evolving lifestyles that go with them, compatibility of the iPhone with the Bluetooth interface has been secured for all BMW models produced since 10/04 for all Bluetooth-equipped models except the 7 Series; for the 7 Series, since 3/05.

Smartphone Integration (optional all models except 5 Series & M5; requires iPod/USB Adapter)

A new Smartphone (for instance iPhone) Integration option became available starting with October 2008 production. This system allows access to music stored within the phone, can improve telephone reception, and charges the phone. Smartphone Integration does not detract from the features of the iPod/USB Adapter, so the USB and AUX inputs remain in place. Smartphone Integration requires an accessory snap-in adapter to fully integrate the option into 1, 3 and 6 Series models; these adapters and phones compatible with this new option are available as center-installed accessories.

6-disc CD changer (all models)

A 6-disc CD changer is available as a center-installed accessory. CD changers are positioned as follows:

- 1 Series – trunk
- 3 Series – trunk or cargo area
- 5 Series, M5 – ahead of glove compartment
- 6 Series, M6 – in glove compartment.

The 1 and 3 Series changer is MP3-capable. For new 7 Series, a 6-disc DVD changer (rather than CD) is included in the Premium Sound Package.

Telematics

For information on BMW's telematics hardware and programs, see BMW Assist, pages 442-446.

Multi-zone seat construction (all models)

All BMW seats are built around a complex inner structure based on current orthopedic knowledge; in

BMW features

The following key features appear in more than one BMW Series:

fact, BMW always aims at having some of the best seats in the industry. Over a base of steel springs (tuned to the suspension characteristics of each BMW Series), multi-zone polyurethane foam cores provide various degrees of support and vibration damping at different points in accordance with human anatomy.

Power front seats

(optional 1 Series; 328i Sedans, Sports Wagons & Coupes; otherwise standard)

Ergonomically designed controls on the seats' outboard sides enable occupants to find the optimum seat position quickly and easily. The number and types of adjustments vary according to Series and model; please see the appropriate Series section for details on the power seats of each model.

Sport seats

(1, 3 & 6 Series Sport Package; standard M3, M5 & M6)

All BMW sport seats incorporate at least the following two features:

- **Differentiated backrest contours.** The backrests have prominent side bolsters near the bottom, then a narrower upper backrest section. The idea is to provide the desired lateral support, but without possible constriction around the shoulders.
- **Flared cushion side bolsters,** for additional lateral support.

Some models offer additional sport-seat features:

- **Variable-width backrests.** The available 1 and 3 Series and M3 sport seats have variable-width backrests. M5 and M6 (Coupe only) standard sport seats also have variable backrest width; the M5's

optional M Multi-function sport seats offer the additional capability of Active Backrest Width. Although the 5 and 7 Series Sport Packages do not include sport seats as such, the Multi-contour or Comfort seats that have replaced them include variable-width backrests among their very extensive adjustments. These are described nearby.

- **Adjustable thigh support** is included on all models' sport seats via a movable front cushion segment. In the 1, 3 and 6 Series and M6, this is manually adjustable; in the M5 it is powered.

1 and 3 Series sport seats are available in manual or power form; 5 and 6 Series, M3, M5 and M6 sport seats are always power, except for the 6 Series' and M3's manual thigh-support adjustment. 4-way power lumbar support is offered in combination with front sport seats as follows:

- 1 and 3 Series – by combining Premium and Sport Packages
- 6 Series – standard with all seats
- M3, M5, M6 – sport seats with power lumbar support are standard; M Multi-function sport seats with even more extensive features are optional.

20-way power Comfort or Multi-function front seats

(standard 7 Series; Sport Package or stand-alone option 5 Series; stand-alone option M5) Called Comfort in 7 Series and M5, Multi-contour in 5 Series; all have option code 456. These premium front seats are offered as follows:

- Standard in all 7 Series models, and do not change for Sport Package.

- In all 5 Series models, part of Sport Package and also available as a stand-alone alternate to the standard 10-way power front seats.

Beyond the standard 5 Series seats, the power adjustments include –

- 4-way lumbar support
- Thigh support
- Upper backrest angle (articulated; adjustable separately from main backrest angle)
- Backrest width (the backrests' side bolsters spread or narrow to accommodate the occupants' back and shoulders, as on some of the sport seats).
- In the 7 Series, along with the steering wheel's tilt-away function, the backrest bolsters widen out for easier entry and exit.

In addition, the head restraints incorporate adjustable side extensions that can help support the head of an occupant using them as headrests, as for example when sleeping. The Comfort seats' head restraints also provide active protection in rear-end impacts; see **safety & security**, page 88.

Heated seats (optional or standard all models)

Heated front seats provide prompt, welcome warmth in cold weather. Rear-seat heating is available in the 5 and 7 Series. The 5 and 7 Series' heated front seats include special features; see the 5 and 7 Series sections for details.

Active Seat Ventilation (7 Series & M5)

Fans inside each front seat gently blow air upward through an internal web and special perforated leather to provide pleasant ventilation and help keep occupants' clothes free of perspiration. In the

7 Series, this feature is offered as part of the Luxury Seating Package; in the M5, it is available in combination with the optional Comfort front seats.

Leather upholstery (optional or standard all models)

Extended Leather interior trim, with leather appearing on areas such as body pillars, dash, sun visors, center console, larger door areas and the back sides of front-seat backrests, is available optionally in the M3; in the 6 Series via the Pearl Leather option; and standard in M5 and M6. Although 7 Series leather interiors are not formally described as Extended Leather, they have extensive and ultra-luxurious leather.

The M5 and both M6 models come standard with an Extended treatment of Merino, BMW's finest leather grade. Here leather is extended to such areas as door armrest, center dash area and center console (M5) or front and rear center armrests (M6).

Full Leather, a further upgrading of leather quality and coverage, is offered optionally in the M5 and both M6s. The M5 instrument panel is leather-covered, and its Full treatment is also offered in Perforated leather that facilitates the available **Active Seat Ventilation**. In the M6's optional Full treatment, leather is applied to expanded seat, door and console areas as well as extensive portions of the dash and rear-compartment side panels.

Sun Reflective Technology is a treatment that significantly reduces solar heating of the upholstery in the 1, 3 and 6 Series and M6 Convertibles. The leather on these models' seats, armrests, head restraints and shift knob is so treated.

BMW features

The following key features appear in more than one BMW Series:

For greater detail about Extended and Full Leather interiors, refer to the **comfort & convenience** and **options & packages** sections of the Series mentioned here.

Alcantara

(650i & M6 Coupe, M5)

Headliner made of this very special material is included with the 650i Coupe's BMW Individual Composition and the optional Full Merino Leather in the M6 Coupe and M5.

The material's namesake, Alcantara, is a region in Spain; the Alcantara company, however, is in Italy and the material used in BMW vehicles is made there. Here's what Alcantara the company has to say about Alcantara the material:

"Those who appreciate the quality and attributes of Alcantara know that it's not merely a beautiful material, but a robust one that stands up to tough use...There could be no better alliance [than that with BMW]. Alcantara was always a concept unto itself, a unique material that doesn't fit into any category." Alcantara is suede-like, yet not made from animal hides.

In earlier models – the previous M3 and the previous 3 Series' Performance Package – Alcantara was used on the seats and even on a steering wheel, putting its "breathing" ability and durability to the test. In its current applications as headliner, its unique beauty and feel are the primary attraction.

Genuine wood interior trim (optional or standard all models)

Whether optional or standard, factory- or center-installed, BMW's wood interior trim is always genuine wood – not simulated, not imitation, not "wood-grain" as is offered by some competitors.

Greater variety and more interesting wood tones and grains are now available:

- **1 Series** – high-gloss black standard in 128i, Gray Poplar in 135i models; Light Burl Walnut and Glacier Silver Aluminum available, as are high-gloss black and Gray Poplar where not standard.
- **3 Series** – Dark Burl Walnut standard; Light Burl Walnut and new Fine Line Aluminum available in all models at no extra cost, additionally Gray Poplar in Coupes and Convertibles.
- **5 Series** – Dark Poplar standard; Light Poplar or Bamboo Anthracite available at no extra cost.
- **6 Series** – Maple or Dark Birch as no-extra-cost alternatives to the standard Brushed Aluminum.
- **7 Series** – Fine Line high-gloss wood trim standard; Fine Line matte wood and Ash Grain wood optional
- **M3** – Titanium Shadow standard; Blue-Gray Brushed Aluminum, Sycamore Anthracite wood and Carbon Leather optional.
- **M5** – Olive Ash or Walnut Madeira as no-extra-cost alternatives to standard Brushed Aluminum.
- **M6** – Walnut Madeira standard; Olive Ash at no extra cost, Carbon Fiber Black available at extra cost (matches Coupe's roof panel).

Galvanic interior trim (all models)

This elegant material appears in a variety of finishes in various current BMW models. Although its core is plastic, a true metallic surface is applied galvanically in several layers, with a clearcoat on

top to protect against corrosion. The surface is cool to the touch, though not as cool as solid metal. See the Series sections' **comfort & convenience** sections for details on the trim as it appears in the various Series.

Power windows with 1-touch and key-off operation, closing from driver's door lock, opening from remote
(all models)

Every BMW includes at least 1-touch open/close and key-off operation of all door windows:

- All Sedans and Sports Wagons have 1-touch open/close operation of all door windows.
- 1, 3 and 6 Series and M6 Coupes have 1-touch open/close for door windows, and fixed rear side windows.
- 1, 3 and 6 Series and M6 Convertibles have 1-touch open/close door windows and 1-touch open rear side windows.
- 3 Series Convertibles add an all-window switch with 1-touch open.
- 6 Series and M6 Convertibles add a power rear window (backlight) with 1-touch open, and all-window 1-touch open (including the rear window) from a single switch.

BMW's 1-touch closing allows the driver to leave a toll booth with both hands on the wheel. The 1-touch closing includes anti-trapping protection; that is, if the window encounters an obstacle on the way up, it reverses direction.

Power door-window sealing system

(1 Series, 3 Series/M3 Coupes & Convertibles, 6 Series & M6)

When a door is opened, the window (if closed) drops slightly; when the door is closed, it rises to seat firmly into the weatherseal.

Compared to arrangements that rely on the window merely pressing against the weatherseal, this system improves sealing when the windows are up, especially at higher speeds.

2-way power glass moonroof with 1-touch opening, closing from exterior door lock
(optional or standard all Sedans & Coupes except 6 Series & M6 Coupe)

This moonroof offers a choice between tilting the panel up for extra ventilation or sliding it fully open. It also includes a manual sliding interior shade, which moves forward approximately 3 in. as the glass panel closes from its fully open position to facilitate reaching back to pull it closed. The moonroof has 1-touch opening and closing; it can also be opened from the remote control. (Closing from the remote is omitted for safety reasons.)

The 6 Series Coupe has a large-area Panoramic moonroof that tilts only. M3 and M6 Coupes have a fixed carbon-fiber roof panel that reduces weight and lowers the vehicle's center of gravity, although the moonroof is available optionally on the M3 Coupe and Sedan.

Dual-panel Panoramic moonroof

(3 & 5 Series Sports Wagons)

With its extra-large roof opening, this feature gives occupants almost the feeling of being in a convertible. The power glass roof consists of two panels, both of which can be tilted up at the rear. The forward, larger panel can also be slid open.

Together, their glass area is:

- 3 Series Sports Wagon – almost 6.5 square feet (29.5 x 31.5 in.).

BMW features

The following key features appear in more than one BMW Series:

- 5 Series Sports Wagon – more than 10 square feet (34.8 x 41.9 in.)

Although the glass is effectively tinted, there is also a power-operated interior shade; a wind deflector rises at the front of the opening to reduce wind buffeting when panels are open. 1-touch operation is provided for all motions, including that of the interior shade.

Variable-capacity trunk

(1, 3, & 6 Series, M6 Convertibles)

On models with a softtop (1 and 6 Series and M6 Convertibles), a variable top storage compartment makes it possible to maximize trunk space when the top is up. Adjusted manually via a convenient lever, the compartment has two positions: up for when the top is raised, down for when the top is lowered.

With their retractable hardtop, the 3 Series and M3 Convertibles naturally have considerably more luggage capacity when the top is raised, and in fact more than that of their softtop predecessors. Yet with the top retracted, the trunk can still accommodate a 44-in. golfbag and a standard large Samsonite luggage piece at the rear, an additional 46-in. golfbag through the available pass-through opening, and a standard drink case. Additionally, there is a power-operated, fast-acting intermediate opening of the trunklid for ease of loading when the top is down.

On-board toolkit

(all models)

Every BMW model comes with at least a basic on-board toolkit. In most closed-body models, the toolkit is in a drop-down tray on the underside of the trunklid; in some models it is in another location:

- Sports Wagons – in compartment under cargo floor
- 3 Series/M3 Sedan – at right side of trunk
- 6 Series – under trunk floor.

Contents vary according to model.

Safety & security

What's new for 2009 or since last edition

- Enhanced Dynamic Stability Control, with its additional braking functions, now standard on all models
- Lane Departure Warning and High Beam Assistant newly available on 7 Series; now available on 5, 6 and 7 Series
- High Beam Assistant newly optional on 5 and 6 Series, M5 and M6
- Park Distance Control of 3 Series Sedans and Sports Wagons now front/rear, formerly rear only¹³
- Front-seat Active Head Restraints newly standard in 3 Series and M3 (previously not available); now standard in 3, 6 and 7 Series, M3, M6
- Enhanced Emergency Calling adds to user safety (all vehicles with BMW Assist)

Active safety

It is a long BMW tradition to endow our automobiles with exceptional qualities and capabilities in this area. BMW strengths include:

- Suspension, steering and brakes that communicate road conditions accurately to the driver, and respond precisely to the driver's commands
- Powerful, fade-resistant 4-wheel ventilated disc brakes
- Ergonomically correct and efficient controls, with excellent tactile feel
- Excellent outward vision for driver through large glass areas, slender roof pillars¹⁴.

Lane Departure Warning (optional 5, 6 & Series)

An especially useful feature given the many distractions inherent in today's driving environment. Employing a camera near the interior rearview mirror, this system monitors road lane markings. When switched on, anytime the vehicle begins to move across a lane marking without the turn signals activated, this system vibrates the steering wheel. If the driver does activate the turn signals, LDW does not react. Its correct operation is predicated on clear lane markings that are not obscured by rain, snow or other masking factors.

Dynamic Stability Control (all models)

DSC encompasses the functions of traction control, braking enhancements and cornering stabilization, as follows:

Traction control. Controls engine power and brakes to limit wheel-spin and thereby improves the driver's control of the vehicle under conditions where wheels might spin, primarily on slippery roads. The DSC system continually processes data from the wheel-speed sensors. Anytime a drive wheel begins to lose traction (rear wheels on most models, any wheel on AWD models), the system senses this and acts on the engine's throttle(s) or Valvetronic and ignition timing to reduce engine torque. It also acts on each brake individually as necessary to help bring wheelspin under control, enhancing driving stability on slippery surfaces (or even on dry roads under extreme acceleration or cornering).

BMW's traction control is an **all-speed system**. Engine intervention is possible at any speed. Below 25 mph, the brakes are

also applied selectively and separately as necessary to optimize traction very quickly. Between 25 and 50 mph, the rear brakes are applied as a pair. Above 50 mph, traction control operates entirely through engine intervention.

Dynamic Traction Control (DTC). Dynamic Stability Control functions (except antilock braking) can be de-activated via a console switch, except in M5 and M6 models with manual transmission. In all RWD models except M models, a capability called Dynamic Traction Control is also incorporated. DTC improves utilization of available road traction under specific conditions –

- on sand, gravel, deep snow or packed snow
- climbing hills with deep or packed snow
- when there is deep snow on only one side of the road
- when driving with tire chains.

In the 1, 3, 5 and 6 Series, DTC is selected via a brief push on the DSC console switch; full de-activation of DSC requires a longer (2 sec.) push on the switch and even if DSC is de-activated, ABS always remains functional. In the 7 Series, DTC can also be selected in this way; the Driving Dynamics Control's 4 settings also affect the DSC mode.

M Dynamic Mode (M3 with MDrive, M5 and M6 only). In these models, DSC takes on a unique M dimension by offering this special mode.

Activated by the console DSC button in the same manner as DTC in other models (see above), M Dynamic allows more over-

13 – Described in **exterior design & function**, but also has safety benefits.

14 – Because of limitations to size of rear window, this benefit applies less to softtop Convertibles.

BMW features

The following key features appear in more than one BMW Series:

steer and wheelspin, which can be useful to an expert driver on a race track. It is not recommended for use on public roads.

Electronic brake proportioning.

When the driver applies the brakes, a vehicle's front end becomes more heavily loaded; the rear "gets lighter." To deal with this, front-to-rear proportioning of braking force is varied according to braking severity. Via the wheel-speed sensors, EBP actually measures slip at each wheel when the brakes are applied¹⁵, and regulates pressure accordingly to the front and rear brakes. Braking force is thus apportioned optimally at all times, making best use of available braking traction at the tires and helping distribute brake and tire wear **more evenly**.

Antilock braking (ABS). During braking, anytime a wheel begins to lock up (slide), DSC releases and re-applies (cycles) the individual wheel brakes to prevent this from occurring. As only a rotating tire can deliver effective braking power to the road, the antilock function helps the driver achieve quick, controllable deceleration or stopping when necessary, helping avoid skidding.

Dynamic Brake Control.

Reinforces the driver's brake-pedal effort in emergency braking. The system recognizes when the driver has made a "panic" brake application, and increases the level of assistance. By forcing the ABS to function optimally, this helps ensure that the most effective braking is achieved. DBC is affected by the Frontal Collision Warning System of some models with Active Cruise Control; see page 61 for explanation.

Cornering stabilization. For this important DSC function, the following inputs are employed:

- Wheel-speed sensors
- Steering-angle sensor (measures turning of the steering)
- Lateral-acceleration sensor (measures how "hard" the vehicle is cornering)
- Yaw sensor (measures the vehicle's rotation around its vertical axis)
- Brake-pressure sensor (informs the system of any application of the brakes by the driver).

Together, these sensors precisely measure the vehicle's cornering motion. With their inputs feeding into the powerful DSC micro-processor, the system detects any deviation from the normal cornering path (abnormal understeer or oversteer) and gently applies individual wheel brakes to help the driver keep the vehicle on the intended path. Thus in these critical situations, when the driver may be attempting a maneuver beyond the normal control range of the vehicle, he or she is more likely to retain control and avoid an accident.

Although it obviously affects the vehicle's handling, this function is primarily a **safety feature**; in other words, it should not be interpreted to allow faster cornering or more abrupt maneuvers.

Hill Descent Control (AWD models only). Helps the driver maintain speed and stability on steep downhill runs. The driver presses a dedicated button on the console; HDC takes over, gently applying the brakes as necessary to keep the speed to a brisk walking pace.

Additional braking functions. In all models as of '09, a new DSC generation adds an array of func-

tions that make driving even more reassuring and pleasant. These are:

- **Brake Standby.** When the driver lifts off the accelerator pedal abruptly, DSC recognizes that sharp braking may be about to occur and applies just enough pressure in the brake system to snug up the pads against the rotors. Thus by the time the driver's foot reaches the brake pedal, the short lag normally resulting from bringing the pad to the rotor is eliminated. Actual braking sets in more quickly; the reduced stopping or deceleration distance could reduce the likelihood of an accident. If the driver does not apply the brakes after the abrupt lift-off, no actual braking occurs.
- **Brake Drying.** Acting on input from the windshield wipers' rain sensor, the pads are periodically brought up to the rotors – just enough to eliminate any film of water between pads and rotors, but not enough to cause any brake application.
- **Start-off Assistant.** This function keeps the vehicle from rolling backward when stopped facing uphill. The driver can then start up without doing a ballet with the clutch, brake and accelerator (manual transmission) or doesn't have to hold the brakes when moving off from rest on a steep hill (automatic transmission). This function holds about 1 sec.; the 7 Series adds a feature called Automatic Hold that can hold the brakes for a longer period of time before the accelerator is pressed.
- **Modulated ABS function.** Analog control of the DSC brake valves makes the anti-lockup function (ABS) smoother than before. Instead of simply

being fully applied and released, the application and release of these valves are modulated.

- **Brake Fade Compensation** (all except M models). "Brake fade" is the loss of effectiveness when brakes heat up under hard use; a given degree of deceleration requires more pressure on the brake pedal. As brake temperature rises, Brake Fade Compensation automatically increases the hydraulic pressure in the brake system relative to pedal application, so the driver need not press harder on the pedal.

Dual brake circuits (standard all models)

Even if one hydraulic circuit is ruptured and brake fluid is lost, the other circuit provides partial brake operation.

Night Vision (optional 5, 6 & 7 Series)

This advanced technology helps the driver perceive critical situations at night or during twilight. An infrared camera at the front of the vehicle transmits a picture to the iDrive display; the greater the object's warmth, the brighter its image on the display.

The infrared camera scans a range up to 1600 ft. ahead of the vehicle. Its maximum 36-degree view is relatively large, and is varied according to the road's path and driver input. To capture more distant objects at higher speeds, a digital zoom function can be activated. Brightness, contrast and other image parameters can be adjusted via the iDrive system; Night Vision can be switched on or off with a switch in the lighting control group.

15 – Tires always slip to some degree as they transmit acceleration, braking or cornering force; this is not skidding, which is an extreme form of slip.

BMW features

The following key features appear in more than one BMW Series:

Night Vision is particularly valuable under such conditions as –

- Poor vision on dark, rural, undivided highways
- Obstacles or sharp curves that low headlight beams reveal too late
- Less-than-ideal driver judgments regarding speed, following distance and other driving variables
- Blinding headlights from opposing traffic.

With Night Vision, the driver can possibly recognize danger significantly earlier than with the headlights alone. Thus conceivably, the driver might be able to begin reacting to a possible hazard sooner.

On the new 7 Series, Night Vision adds a capability: **Pedestrian Detection**, which detects the direction a pedestrian near the roadway is moving. The option code is 6UK, vs. 611 for the other Series. See the **7 Series** section, page 123, for a description of this.

As with many sophisticated technologies, Night Vision is not a substitute for careful driving or attention to traffic and the road ahead. Weather conditions can affect the function of Night Vision, in that rain or fog filters infrared light and thus degrades the quality of images it captures.

Other active-safety features

All BMW vehicles excel in features and attributes that make driving both safer and more pleasant. Here are the key points and how they contribute to active safety; because their primary benefit may not be safety, many of them are described in other sections of this BMW features section denoted by the headings that follow.

Exterior design & function:

- **Xenon Adaptive headlights with auto-leveling** – by providing outstanding forward illumination, “steering” around curves and staying aimed correctly, these advanced headlights benefit the BMW driver and passengers as well as those in other vehicles. Standard on most BMW models, optional on some.
- **Cornering lights** – provide targeted illumination to the side for turning corners or sharp curves at relatively low speeds. At present, standard on 1, 3 and 5 Series models with Xenon Adaptive headlights and both 7 Series models.
- **Automatic headlight control** – turns on the headlights in conditions of marginal ambient light, when the driver might not yet think of doing so. Standard all models.
- **Halogen foglights** – standard all except 135i and M models.
- **High Beam Assistant** – optional 5, 6 and 7 Series, M5 and M6.
- **Rain-sensing windshield wipers** – standard all models.
- **Park Distance Control** – reduces likelihood of fender-bending and bumper-scratching low-speed collisions, also of running over infants and animals. Standard front/rear on 6 and 7 Series, 550i, M5, M6; front/rear optional 3 Series Sedans and Sports Wagons, all 528i/535i models. Rear-only optional 1 Series, 3 Series Coupes and Convertibles.
- **Adaptive brakelights** – indicate to following drivers when the BMW driver brakes hard, potentially lessening the probability of a rear-end collision. Standard all models.

Performance & efficiency:

- **Responsive, predictable handling** made possible by advanced and sophisticated suspension design, generously dimensioned wheels and tires, accurate steering, and special features like Electronic or Dynamic Damping Control, Active Roll Stabilization and Active Steering.
- **Powerful 4-wheel ventilated disc brakes** with antilock braking (ABS) – enhanced by DSC braking functions described on pages 80-81.
- **Run-flat tires** – eliminate necessity of potentially dangerous roadside tire changes. Standard 1, 3, 6 and 7 Series; Sport Package 5 Series.
- **Tire Pressure Monitor** – via direct measurement of pressure at each tire, alerts driver to pressure loss. Standard all models.

Comfort & convenience:

- **Auto-dimming interior and exterior mirrors** – by automatically reducing glare from headlights and foglights of vehicles behind, improve BMW driver's ability to see ahead and concentrate on driving. Premium Package 1 and 3 Series, M3¹⁶, 528i/535i models; otherwise standard.
- **Dynamic cruise control** – can apply brakes lightly to help control downhill speed, and reduce speed in curves. Standard 3, 5, 6 and 7 Series. Cruise control of other models does not include braking capability.
- **Active Cruise Control** – adjusts vehicle speed to traffic conditions; helps maintain safe following distance to vehicles ahead. Optional 3, 5, 6 & 7 Series.

- **Active Comfort driver's seat** – helps reduce fatigue on long drives, potentially reducing chance of driver's falling asleep. Optional 7 Series.
- **Head-up Display** – by projecting selected driving information onto windshield, close to driver's natural forward line of sight, reduces distraction from road. Optional 5, 6 and 7 Series, M5, M6.
- **Real Time Traffic Information** – Navigation System function; alerts user to potential traffic problems on programmed route. Standard 6 and 7 Series, M6; included with optional Navigation System in 1, 3 and 5 Series.

Passive safety

Active safety – those qualities that help drivers avoid accidents – is a central focus of BMW vehicle concepts. Yet our vehicles are also outstandingly engineered and equipped for passive safety, which is the vehicle's capacity to protect occupants from the consequences of crash impacts.

Body structure with energy-absorbing front and rear ends (all models)

The front and rear ends of each current BMW model are carefully engineered to manage impact energy in a controlled way.

In a frontal or rear-end collision, this means that the energy is absorbed smoothly, and the forces on occupants' bodies (with safety belts fastened) are kept relatively moderate. All this occurs within a split-second – but the difference between a well engineered automobile body and one that's not so well engineered is critical.

¹⁶ – Auto-dimming interior mirror standard in M3s.

BMW features

The following key features appear in more than one BMW Series:

To help achieve optimum front-end energy absorption in a variety of real-world front impacts, BMW employs extensive crash testing in its development of each new model (see nearby).

Interlocking door anchoring system

(1, 3, 5 & 6 Series, M3, M5, M6)

In each door is a diagonal aluminum reinforcing bar. The rear end of this bar is anchored to a hook-like member that, in the event of a serious side impact, “grabs” the body pillar. Thus in 4-door models the front door is hooked into the B-pillar, the rear door into the body’s rear quarter; in 2-door models the door is hooked into the rear quarter. This helps hold the body side together as a unit for increased resistance to a side impact. The system is designed so that after most impacts, elastic “snap-back” releases the hook and the door(s) can be opened.

BMW safety testing

The list of safety tests to which a new BMW model or Series under development is subjected is staggering, and ever-increasing. As it is being developed, each BMW vehicle must survive an exhaustive matrix of tests that simulate virtually any conceivable type of crash impact. These include:

Frontal impacts –

- Straight into barrier at 30 mph, belted and unbelted occupants
- Into barrier at 30°, 30 mph, belted and unbelted occupants
- The *auto motor und sport* test, named after a prominent German auto magazine that actually conducts its own offset crash tests; 64 km/h (almost 40 mph), with just 50% of the front end contacting the crash barrier.

- Offset crash, 35 mph into barrier with 40% of front end (driver’s side) contacting rigid barrier
- Offset crash, 64 km/h with 40% of front end contacting deformable barrier
- Frontal impact into pole at 35 mph
- NCAP (New Car Assessment Program) test, frontal at 35 mph. This is the test whose results are reported to the U.S. public in terms of “stars”: 5 stars, 4 stars, etc. for driver and passenger.
- EU-NCAP (European version of NCAP test), offset at 40 mph with 40% of front end.

Side impacts –

- Vehicle-into-vehicle side-impact test
- Pole into side of vehicle at 25 mph –
 - At front seating area
 - At fuel tank
- “SUV side impact,” with a 3300-lb barrier simulating a hefty impact from a tall vehicle at 30 mph
- EU-NCAP side impact, with a 950-kg (2094-lb.) moving barrier impacting vehicle side at 50 km/h (31 mph)
...and more.

Rear impacts:

- Offset at 50 km/h (31 mph), 40% coverage, battery or fuel-filler side, with rigid barrier
- Straight impact at 30 mph
- Offset at 50 km/h (31 mph), 40% coverage on fuel-filler side with deformable barrier.

Rollovers:

- Straight rollover
- Angled rollover (one side of vehicle goes up ramp, vehicle rolls)
- Sand bed, simulating a vehicle sliding sideways into a bed of sand

- Going off road, simulating a vehicle drifting off course into bush-type vegetation and dropoff of shoulder

Pedestrian protection:

- Simulation of forces on four regions of a pedestrian's body as it is thrown over vehicle's front end upon impact
- New European regulations for pedestrian protection in frontal impacts are being introduced progressively in new models; the 7 Series' front-end design reflects this factor.

As any entirely new BMW Series or model is being developed, the latest knowledge is incorporated into the vehicle structure and safety features to achieve optimum occupant protection.

Ergonomic safety-belt system (all models)

The inboard latches of all front safety belts are attached to the seat, so they adjust with the seat position and thus also help achieve an optimum belt fit on the occupant. In all Sedan models, the outboard lap-belt anchor is also attached to the seat for the same reason.

In 3 Series/M3 and 6 Series/M6 Convertibles, the front safety belts are fully integrated with the seat structure itself. This concept virtually eliminates belt stretch between the belt mounting and seat, and always positions the belt consistently relative to the occupant for ideal restraint performance. Also, the front belts do not impede persons entering the rear seats. The belt and head-restraint height are power-adjustable in these models.

Automatic front safety-belt tensioners and force limiters (all models)

Automatic tensioners tighten the front belts in a collision impact, further optimizing the restraint of occupants. They are integrated into the belt latches, at the inboard side of each front seat. Upon impact the mechanism moves the latch downward to tighten the shoulder and lap belt portions directly.

All current BMW front safety belts are also equipped with force limiters, which once the belts are tensioned place an upper limit on the amount of force they can exert on the occupant's body. For maximum safety relative to the deployment of airbags, all adult occupants should fasten their safety belts at all times.

The new 7 Series' front belts also incorporate pre-tensioning upon emergency braking; see page 119 for details.

Automatic tensioners and force limiters are provided at outboard rear seating positions as follows:

- 7 Series – tensioners and force limiters
- 5 Series models with rear side-impact airbags – tensioners
- 3 Series Sedans and Sports Wagons – tensioners and limiters.

LATCH attachments at outboard rear seating positions (all models with rear seats)

LATCH attachments (Lower Anchors and Tethers for Children) provide for securing a child restraint seat at each outboard rear seating position. Approved child restraint seats are offered by BMW centers.

BMW features

The following key features appear in more than one BMW Series:

2-stage front-impact airbags (Smart Airbags)

(all models)

This feature is in addition to the dual-threshold feature described on page 88. To ensure that the force of airbag inflation is appropriate to the severity of the impact, both front-impact airbags are designed to provide “softer” deployment in lower-speed impacts, “harder” deployment only in higher-speed impacts.

De-activation of front passenger's airbags

(all models)

Provision for de-activating the front passenger's airbags is present in BMW models as follows:

- All models: automatic de-activation when –
 - The front passenger's seat is unoccupied
 - When a child is seated in an approved child-restraint system attached to the front passenger's seat.

The system's primary criterion for seat-occupation detection is weight, and incorporates assumptions about what a child or an adult weighs. A seat-occupant detector incorporating advanced technology is present in all U.S. models. Customers should refer to their Owner's Manual carefully and consult with their BMW center about any remaining questions, particularly those concerning transporting children.

Front Head Protection System (HPS)

(6 Series & M6 Coupes)

A hollow, flexible tube is anchored inside the windshield pillar and roof rail, and concealed by interior trim.

Upon severe side impact, an inflator unit fills the tube with inert gas. The expanding tube pops

out to form a straight tube of approximately 5-in. diameter, stretched in a straight line from the lower windshield pillar to above the rear side window. Thus the inflated tube is in just the area where a front occupant's head could contact the side of the car – windshield (A-) pillar, window, center (B-) pillar. Because of the tube's sloping position, it protects persons of small or large stature. The inflated tube is also firm enough that it can retain much of its effectiveness even if a window is broken by the impact.

Front and rear Head Protection System (HPS)

(1 Series Coupes; 3 Series Sedans, Sports Wagons & Coupes; 5 & 7 Series, M5)

In these models, BMW extends the Head Protection System concept to the rear-seat passengers. Two types of HPS are used in the various models:

AHPS II (5 Series). In this extension of the front HPS described nearby, a “sail” connects a front-to-rear inflatable tube to the roof structure. The sail is of airbag-type material; between it and the long inflatable tube itself, essentially all body-side and side-window areas likely to be impacted by an occupant's head are covered by the sail and inflatable tube.

Curtain-type (1 Series Coupes; 3 Series Sedans, Sports Wagons and Coupes; 7 Series). Instead of the tube and sail, a curtain-type inflatable element provides the protection. Though the name “curtain” implies a relatively simple shape, this system has a complex shape, designed to provide the protection where occupants' heads are likely to be in crash situations.

Sidebag-type (1 and 3 Series Convertibles). In these models only, the Series' seat-mounted side-impact airbags extend upward to add head protection for the front-seat occupants.

All types can remain inflated for several seconds after the initial impact and deployment (which takes just 20-22 milliseconds), an especially important function in case of rollover.

Rollover Protection System (standard 1, 3 & 6 Series, M3 & M6 Convertibles)

Basic occupant protection is afforded by these Convertibles' strong body, reinforced windshield frame, front- and side-impact airbags, interlocking anchoring of the side doors, seat-integrated front safety belts and 3-point rear belts. The 3 Series Convertibles bring something further to the equation: their retractable hard-top, with much of the strength of a fixed metal roof structure when it is raised.

This system, which offers additional, convertible-specific protection, consists of:

- Two interdependent modules, one behind each rear seat, each with a mechanical actuator and a deployable rollbar
- A highly sophisticated rollover sensor/control module
- A g-sensor to detect the vehicle's becoming airborne, also included in the control module.

The rollover sensor's action is based on a clinometer, with three level floats to detect body tilting as well as transverse deceleration (such as hitting a curb) for deployment of the rollbars. LED transmitters and phototransistor receivers are positioned to read the floats' air bubbles as they move in their glass tubes.

Normally, the liquid in the floats prevents transmission of the LED signal. If the vehicle starts to roll over sideways or end-to-end beyond critical angles, an air bubble will move enough to allow transmission of the LED signal. The control-module electronics then trigger the rollbar actuators.

There is also a g-sensor to deploy the rollbars should the vehicle become airborne. If either sensor system is triggered, the two electromagnetic rollbar actuators are supplied with electric power. Normally held in their retracted position, the rollbars are then deployed upward by powerful springs, and locked into position to sustain rollover forces. All this occurs in just a fraction of a second.

The rollbars and deployment modules are entirely of aluminum, and each bar has a molded pad at its top. When retracted, they are concealed by the head restraints. After deploying, the rollbars can be reset by a BMW technician.

Active Knee Protection (3 Series Convertibles, 6 Series)

To meet U.S. safety regulations, all U.S. BMW models incorporate specific knee protection in the lower instrument-panel areas. In the models listed above, BMW provides this benefit via Active Knee Protection: dedicated airbags backing up the padded surfaces that meet occupants' knees in a frontal impact. Active Knee Protection –

- Reduces the amount of space occupied by the knee protection, leaving room for features customers value.
- Increases the knee protection's effectiveness.
- For belted occupants, allows finer "tuning" of the other restraint systems (safety belts and front airbags).

BMW features

The following key features appear in more than one BMW Series:

Current 3 Series models add further features to enhance knee protection:

- The footrest is designed to crush under the possible force of the driver's left foot in a severe frontal impact to decrease the force the foot sustains.
- Brake and clutch pedals move forward under impact force, also canceling much of the force transfer to the driver's feet and legs if they are on the pedals.

Active head restraints

(optional 5 Series, M5; standard 3, 6 & 7 Series, M3 & M6)

Active Head Restraints are offered as follows:

- Standard in all 3 and 7 Series and M3 models (new in 3 and M3 for '09).
- Included with front Multi-contour seats (stand-alone option or Sport Package) in all 5 Series models.
- Included with optional front M Multi-function sport seats or Comfort seats in M5.

BMW's Active Head Restraints employ fast-reacting pyrotechnic activation. Via two additional impact sensors at the rear of the vehicle, a rear-end collision causes the front head restraints to pivot forward into close proximity with the occupants' heads. Thus for normal use occupants are able, if they prefer, to adjust the restraints away from direct contact with their heads, yet gain optimum protection against whiplash or more serious neck/head injuries.

Differentiated deployment of front-impact restraint systems (dual-threshold deployment) (all models)

In this advanced technology, BMW's differentiated deployment of passive restraint systems manages deployment as follows:

- There are two thresholds of frontal impact severity.
- At the lower threshold, if the occupant is belted, only the belt tensioner is deployed. If the occupant is not belted, the front-impact airbag deploys.
- At the higher threshold, the front-impact airbag and belt tensioner are deployed. If the occupant is not belted, only the airbag is deployed.
- If the passenger seat is not occupied, neither the belt tensioner, front-impact airbag, Head Protection System, side-impact airbag nor (if present) Active Knee Protection for that seat will be deployed.

In cases where the vehicle can be repaired after an accident, this differentiated deployment strategy can save repair costs (and therefore be favorably reflected in insurance rates).

The deployment strategy for unbelted occupants must not be seen as a rationale for not fastening one's safety belt. Maximum protection of occupants can be achieved only if the occupants are wearing their safety belts.

Advanced Crash Safety Management (all models)

Every current BMW has a highly sophisticated, all-encompassing network that manages the safety devices' and systems' complex actions and interactions. Because each new vehicle generation incorporates the latest technologies, technical details vary from Series to Series. Yet the overall philosophy and strategy are the same across the BMW vehicle line; the term Advanced Crash Safety Management applies to all vehicles' overall safety strategy.

In developing and evolving ACSM, safety engineers at BMW's Engineering and Research Center in Munich work not merely to meet governmental safety regulations, but to surpass them and to tailor the restraint systems' response to a precise reading of each accident sequence. To achieve this, ACSM employs a multitude of sensors that achieve the "tailoring" goal; they also help minimize unnecessary deployment of airbags. Though the actual count is not the same for all Series, these generally include –

- A number of deceleration sensors.
- A sensor that reads collisions under the front of the vehicle, that is, running over an obstruction.
- "Delta-V" sensors that analyze the change in velocity that occurs during the collision.
- Side-impact sensors. By sensing pressure change within the door structure, they are able to signal for deployment of side-impact airbags very early in an impact, yet still minimize the chance of an unwanted deployment.

Thanks to this elaborate constellation of sensors, the deployment of airbags – front, side, Head Protection System and in some models Active Knee Protection – can be finely tuned to actual accident circumstances. As the science of automotive safety moves ever forward, much of the progress is due to faster, more powerful electronics and such enhancements as fiber-optic cables that are not susceptible to electromagnetic disturbances. BMW safety-system software can be updated over the life of the vehicle; data useful to researchers can be retrieved from accident vehicles.

All sensing and triggering functions for the front-impact airbags and safety-belt tensioners are combined in a single highly sophisticated electromechanical unit that facilitates differentiated deployment, 2-stage airbags and other passive-safety refinements. On all but the 1 and 3 Series, side-impact airbags and the Head Protection System are controlled by additional "satellite" sensors, one for each side of the vehicle; the 3 Series has a completely centralized system.

Another function of this technology is that in case of accident, the doors are automatically unlocked, the interior lights and 4-way hazard flashers are switched on and the fuel pump is switched off. Thus even after an accident, BMW's safety strategy is still at work.

Side-impact airbags

(front – standard all models;
rear – optional 5 Series, M5)

Current models are equipped with front-door-mounted¹⁷ side-impact airbags except the 1, 3 and 7 Series, whose side airbags are built into the front seats. Where available, rear side-impact airbags are built into the doors of 4-door models.

Regarding models in which they are offered, the BMW center should discuss the issue of rear-seat side-impact airbags with the customer, pointing out that they are of clear benefit to adults riding in the rear compartment, but pose potential risks for infants or small children riding there.

Whenever the customer wishes, the rear airbags of vehicles so equipped can be activated or de-activated, free of charge and independently of the age or

¹⁷ – 2-door models: "front" doors are the only doors.

BMW features

The following key features appear in more than one BMW Series:

mileage of the vehicle. With this strategy, BMW is doing everything possible to offer the protection of these side airbags to customers, yet minimize the potential risks. In the most recently designed BMW Series – 1, 3, 6 and 7 Series, M3, M6 – BMW has provided side-impact protection without rear side airbags.

Energy-absorbing padding of pillar and roof areas

(all closed-body models)

As a further element of head protection, every closed-body model incorporates specific padding in the A-, B- and C-pillars as well as along the roof above the doors.

Fuel-tank features for safety

(all models)

In each model, the fuel-tank location has been chosen to provide protection from impacts.

Battery Safety Terminal

(all models)

In case of a severe accident impact, the Battery Safety Terminal fires a tiny pyrotechnic charge to break the connection between the battery and starter cable. This helps prevent a possible short circuit at a high-current point in the electrical system. (Because of the high power carried by the starter cable, unlike most electrical circuits in the vehicle this connection is not protected by a fuse or circuit breaker.)

The device triggers whenever an airbag deploys. Once the connection is severed, the engine cannot be cranked; but separate wiring provides power for all operating and safety systems (such as power windows, central locking system and emergency flashers).

BMW Assist

(standard 5, 6 & 7 Series, M5 & M6; optional 1 & 3 Series, M3)

This constellation of safety, security and convenience features is standard or available with all BMW models. For details, see pages 442-446.

Security features

Central locking system

(standard all models)

A central interior switch locks or unlocks all doors and the trunk or tailgate. With the system locked in this manner (that is, from the inside with the central switch), the fuel door remains unlocked and the doors can be unlocked from the inside. This offers two benefits:

- Freedom to exit. Those wishing to remain inside a vehicle that has been locked from the outside can unlock and exit the vehicle if necessary or desired.
- Security while fueling. Occupants can remain inside with the car locked while having an attendant fill the tank.

There is a way to get out in case one is locked inside the vehicle from the outside: Push the central lock switch, then pull any door handle twice. That door will be unlocked; the trunk and other doors remain locked and the alarm (if present) is triggered.

Coded Driveway Protection

(standard all models)

The key or non-key remote is equipped with a tiny transponder which stores an electronic code transmitted by an antenna at the ignition switch or slot. Each time the key is removed, this code is changed; the next time, the car can be started only if the key

matches the new code. This feature is called Coded Driveaway Protection, and it has been shown to be highly effective in reducing the frequency of theft of BMW vehicles.

Alarm system (all models)

All regular models from 528i Sedan upward plus M5 and M6 are standard-equipped with the BMW alarm system, controlled from the multi-function remote described on pages 61-62; on 1 and 3 Series and M3 models, the remote is standard but the alarm system is BMW center-installed.

Durability & reliability

Outstanding corrosion protection

BMW's thorough treatment for corrosion resistance is impressive. Dependent upon Series and model, up to 85% of the body panels are galvanized on both sides. A substantial additional portion is galvanized on one side. Galvanizing is used only where it is worthwhile, however, because it does consume a natural resource (zinc) and makes recycling somewhat more difficult.

With their aluminum front-end structure, the 5 and 6 Series include special corrosion-resistance measures; see the 5 and 6 Series sections for details on these. Reflecting BMW's general policy of process updating at the start of production of a new Series, the current 3 Series, introduced in model year '06 and expanded in '07, reflects a further evolution of BMW's rust-proofing and paint processes. For details on these, see page 220.

All current BMW models come with BMW's Rust-Perforation Warranty, which protects customers for 12 years/unlimited mileage.

Reliable electrical connectors

Many electrical connectors in current BMWs incorporate a lever locking mechanism that precludes incorrect assembly, holds tightly, and yet can be disconnected without a tool. Such connectors are widely used in aircraft, and hence are referred to as aircraft-type connectors.

Onboard diagnosis

Onboard diagnosis continuously monitors various sensors for operational faults. Faults can be recognized and stored in the system memory, then read out by the service technician on a sophisticated diagnostic machine.

Quality

BMW quality processes

In BMW production, computer-controlled techniques are combined with traditional handwork to achieve top assembly and finish quality. Although BMW production is planned to ensure that the car is built right the first time, there is also a rigorous inspection system. At BMW's largest plant (Dingolfing, Germany), some 1000 quality-control employees work to ensure that every BMW meets the company's exacting standards. Each day, four complete body shells are pulled from the production line and their dimensions are checked completely by sophisticated measuring machines.

BMW features

The following key features appear in more than one BMW Series:

Modular assembly

In this advanced assembly technique, individual elements of the car are to a large extent pre-assembled before being combined or installed on the vehicle; all their functions can thus be tested before installation.

Depending upon model, elements built this way may include the instrument panel, doors, moon-roof and tailgate assemblies.

Ultrasonic test for leaks

Each BMW body is subjected to an exhaustive ultrasonic test for leaks, both wind and water, before being released for shipment.

Fit and finish

“Fit and finish” are partially covered by the items above, in the sense that production precision and the control of body surfaces are the foundation of BMW's body quality. But a great deal more goes into ensuring that every aspect of a new BMW is fitted and finished with great precision and care. With each introduction of a new Series, BMW body engineers strive to improve fit and finish further; the changes mentioned nearby for the new 3 Series' rustproofing and paint process also favorably affect finish quality.

The Client Adviser can point out BMW's quality fit and finish to prospective customers by accompanying them around the vehicle, calling attention to the –

- smooth and consistent luster of painted surfaces

- quality of trim, light lenses, logos
- narrowness and consistency of gaps between adjacent panels (hood, bumpers, doors, trunk-lid and main body panels)
- fit of attached components such as logos, lights, mirrors and handles.

This quality of fit and finish naturally extends to the interior of each BMW, as a *Wall Street Journal* test of the 325xi Sports Wagon (February 3, '06) attests: “We didn't hear a creak, squeak or rattle and everything we touched, from the door handles and shift lever to the soft, textured top of the dashboard, had a high-quality feel.”

BMW paint quality

A look down the side of any new BMW will reveal the precise metal stamping and expert surface preparation that preceded painting, and the care with which the paint was applied. Before a BMW body is painted, its surface quality is measured electronically. Panels such as hoods, doors and trunk are hand-fitted and all surfaces are again checked – this time by hand. Then, and only then, does the body begin its long journey through numerous chemical baths and washing operations, spraying booths and drying/baking ovens. In all, more than 20 pounds of primer, color and clear coats go onto each BMW.

Cost of ownership

What's new for 2009 or since last edition

- Roadside Assistance extended from 4 years/12,000 miles to 4 years/unlimited miles (as of model year '08)

Many models with outstanding fuel economy

Excellent fuel economy isn't offered by BMW merely because of a runup in fuel prices!

Throughout the line, there are models that achieve both BMW performance and impressive EPA ratings:

Highway mileage of 25 mpg or more:

- All 1 Series models
- All 328i models
- All 335i rear-wheel-drive models
- 335d Sedan
- All 528i and 535i rear-wheel-drive models

Combined mileage of 20 mpg or more:

- All 1 Series models
- All 328i models
- All 335i rear-wheel-drive models
- 335i Sedan
- All 528i and 535i rear-wheel-drive models

M models with 20 mpg highway:

- M3 Coupe, Sedan and DCT-equipped Convertible

BMW's mileage star:

- 335d Sedan, with 23 mpg city/36 mpg highway/27 mpg combined

Condition-Based Service

(all models)

Traditionally, routine maintenance has been performed according to a rigid schedule – 7500 miles, 15,000 miles, etc. This ignores the fact that freeway driving is easier on a car than stop-and-go traffic; that hard driving and cold starts increase wear. Most other manufacturers continue with a rigid schedule.

Recognizing that each owner uses a car differently, BMW developed an onboard system to recommend routine maintenance specifically for that use. The Condition-Based Service micro-processor tracks the vehicle's use and calculates when maintenance will be needed.

The mileage and the time at which service should be performed are displayed, plus offer information as to when specific service operations should be carried out; this is communicated via the iDrive system (Navigation option 1 and 3 Series, M3; standard 5, 6 and 7 Series, M5, M6) or the instrument-cluster display (1 and 3 Series, M3 without Navigation). Also in these models, a system called TeleService communicates automatically with a designated BMW center when it's time for maintenance; see next heading for additional information on this.

Owners should follow the recommendations of Condition-Based Service and ignore anyone who recommends servicing at fixed intervals.

BMW features

The following key features appear in more than one BMW Series:

TeleService

(all models with BMW Assist)

Key vehicle data are transmitted automatically to the BMW center when the Condition-Based Service sensors detect an upcoming service need, or manually when the driver activates the Service Request button under BMW Assist in the control display. The BMW center then contacts the customer to set a service appointment. Functioning of TeleService requires that BMW Assist be current; an annual fee is required after the 4th year of ownership.

BMW Maintenance Program for 4 years/50,000 miles included in base price

As a part of BMW Ultimate Service, all models come standard with the BMW Maintenance Program, with coverage for 4 years or 50,000 miles, whichever comes first. BMW's included maintenance is an important competitive advantage over Mercedes-Benz, which has eliminated included maintenance during the warranty period. After a free diagnostic check (at between 1000 and 3000 miles) and a free tire rotation at 6500 miles, Mercedes customers pay for all maintenance, or purchase "maintenance packages" sold by dealers. As of '09, Volvo now includes maintenance – but only Scheduled maintenance, and for only 3 years/36,000 miles.

As of '07, Audi completely eliminated its included maintenance, which had been 4 years/50,000 miles of scheduled-only maintenance; now Audi only includes a "first service" at 1 year or 5000 miles, and charges extra for any scheduled maintenance after that. For a summary of BMW and competitors' warranty and maintenance provisions, see page 441.

The BMW Maintenance Program includes all factory-recommended maintenance as listed in the BMW Service and Warranty Information booklet, plus replacement of wear-and-tear items like brake linings, brake rotors, engine drive belts and wiper blades. Adjustments required by normal operating conditions are also covered. If customers raise questions about the difference between BMW Maintenance and "scheduled maintenance," this is the heart of it.

In addition to this Maintenance Program, covered in more detail on pages 438-439 of this handbook, BMW Ultimate Service also includes BMW Roadside Assistance, described on page 440; the BMW New Vehicle Limited Warranty, pages 435-437; and BMW Assist, pages 442-446. With this all-encompassing suite of valuable customer services included with every new BMW, BMW leads the industry in providing its customers real value and reassuring peace of mind.

Extended service intervals

The Maintenance Program addresses the cost of maintenance. Yet every time a vehicle requires maintenance, whether scheduled or not, there's a time expenditure for the customer. All current BMW models are engineered to require relatively infrequent routine maintenance:

- The basic Oil Service (change engine oil and filter and air filters, plus a short list of other maintenance items) can be performed at extended intervals. As always with BMWs, this is not a fixed interval; instead, the Condition-Based Service system (described on page 93) determines the interval on the basis of actual vehicle usage.
- Most BMW engines have long-life sparkplugs: 100,000-mile change interval for the 1, 3, 5 and 6 Series.
- Every current BMW engine has hydraulic valve adjustment or lifters, so that valve adjustments are never needed. And BMW engines' camshafts are driven by self-adjusting chain, so there is no timing belt to be replaced periodically.

Self-adjusting clutch

The clutch of manual-transmission models has been engineered to keep pedal effort essentially constant over the unit's life and enhance clutch life significantly.

Stainless-steel exhaust system

Typically exhaust systems have been subject to corrosion, especially if the engine was started frequently from cold without being fully warmed up before being shut off again. In all BMWs, most exhaust-system components are of stainless steel, which though costly is more resistant to corrosion than normal steel and thus results in a longer-lasting exhaust system.

The environment

Emission status of current production models: at least LEV

In states that use LEV/ULEV/SULEV emission ratings, current production BMW models satisfy at least the requirements for Low Emissions Vehicle (LEV). Many models have been upgraded recently to more stringent standards:

- **ULEV2** (Ultra Low Emissions Vehicle) – all models with 3.0-liter N52 engine (1, 3 and 5 Series), except SULEV models, below; 135i/335i/535i models, 550i, 6 Series and 750i/Li.
- **SULEV** – (Super Ultra Low Emissions Vehicle) – 128i models; 328i Sedan, Coupe and Convertible models sold in California, Connecticut, Maine, Massachusetts, New Jersey, New York, Oregon, Rhode Island and Vermont.

U.S. federal regulations (Environmental Protection Agency/EPA) are now administered under a program called Tier 2, whose ratings cannot be explained in the straightforward LEV/ULEV/SULEV terminology.

BMW features

The following key features appear in more than one BMW Series:

No CFCs used in manufacture

CFCs have been used traditionally in the manufacture of plastic components, such as seat foam and instrument-panel moldings. BMW has discontinued their use in all manufacturing operations.

Water-based paints

BMW has replaced solvent-based color coats with water-based paints. To avoid any misunderstanding: Yes, you can wash a car with water-based paint. Water is merely the dispersant, just as a conventional solvent would be; either dispersant evaporates in the drying process. The replacement of solvent-based with water-based color coats sharply reduces chemical emissions at the factory, helping protect the local environment.

An advanced type of clear coat, called powder-coat, reduces waste and emissions while further enhancing resistance to acid rain. Modern clear coats in general, with their ultraviolet protection, have been a significant factor in the excellent durability of today's BMW paints.

Saving fossil fuel in BMW production

At BMW's Spartanburg, South Carolina production plant, methane gas from a nearby landfill is being used to power turbines and heat paint ovens, very significantly reducing the factory's use of natural gas.

BMW began use of landfill gas – otherwise emitted directly into the atmosphere – in 2003 to power four turbines that generate electricity and water heating for the plant. Then in summer '06, when the plant was idled to reorganize X5 and Z4 production and prepare for upcoming X6 production, the paint ovens (where BMW's beautiful exterior finishes are baked to perfection) were also converted to operate on landfill gas. Though other automotive factories also use landfill gas to generate energy, BMW is the first to use it for painting operations.

Use of landfill gas is reducing carbon-dioxide emissions at the plant by about 17,000 tons per year – the equivalent of the emissions of more than 72,000 vehicles, according to the EPA – and achieving significant cost savings as well. This innovative, win-win energy strategy earned BMW the EPA's 2006 Energy Partner of the Year award, shared with Durr Systems Inc., which had supplied the original paint-shop equipment in 1994 and then converted it to landfill gas in '06. Additionally, in '07 Durr received a PACE honorable mention from the respected automobile-industry publication Automotive News.

The BMW Hydrogen 7

BMW continues a long-running exploration of hydrogen power with the Hydrogen 7, a 760Li that can operate on hydrogen or gasoline. BMW is building 100 of these vehicles and putting 50 of them in the hands of influential people in the U.S., including (in late October '08) Hilary Swank. This program continues to give opinion leaders direct personal experience with hydrogen power in an automobile; another purpose of the project is to seek and build support for the infrastructure that would be needed to provide hydrogen fuel to the public. Such an infrastructure of course does not yet exist.

The Hydrogen 7's engine is based on that of the 2008 760Li 6.0-liter V-12; it powers the long-wheelbase sedan through the standard 6-speed automatic transmission and rear-wheel drive. Compared to the production 760Li's 438 hp, the dual-fuel engine develops 260 hp; its liquid hydrogen fuel is carried at

-455°F in a heavily insulated tank with walls 1.2 in. thick. Tank range on hydrogen is 125 miles; the gasoline tank provides an additional 300-plus miles. Users of the vehicles are mostly in Washington, D.C. and Los Angeles, where the only two permanent U.S. hydrogen fueling stations are located; BMW is providing a fueling truck in each of the two areas.

Exhaust from the hydrogen-powered engine is ultra-clean, containing only water vapor and traces of carbon dioxide or oxides of nitrogen. Yet the challenges of claiming it for motor-vehicle fuel are immense; BMW estimates that a fueling infrastructure could take 20-30 years to create, and much further development remains to be done on the required vehicle technology. The Hydrogen 7, however, is a step along the way.

For more information, visit the website www.clubofpioneers.com and select "About."

2009 BMW 7 Series:

All-new, state-of-the-art interpretation of BMW's most luxurious automobiles.

New milestones of automotive progress are set from time to time: Now, as the all-new BMW 7 Series for 2009 makes its debut, it is that time again.

As the world's most successful purveyor of premium motor vehicles, BMW now presents the 5th generation of its flagship sedans, demonstrating once again how all-encompassing luxury can be combined and harmonized with the pleasures of truly dynamic performance.

The new 7 embodies luxury that inspires, driving dynamics that excite, and a visual presence that merits undiluted admiration. It is the product of a self-assured design philosophy and consistent yet ever-evolving engineering artistry. In great measure, these new sedans owe their unique, progressive character to an abundance of innovations whose purpose is to make driving a magnificent automobile – as well as riding in it – not only a memorable experience, but also a safer and more environmentally respectful experience.

In what are virtually all-new automobiles, the following summary lists the highlights of what's new; details follow in this 7 Series section.

What's new: the highlights

As of 11/08 production:

The models

- **750i** – regular-wheelbase model
- **750Li** – long-wheelbase model, with 5.5-in. greater wheelbase and length

Exterior design & function

- All-new body, available in two wheelbases/overall lengths
- Both models have the longest wheelbase in their class
- Graceful and smooth look, taking its place at the top end of other recently designed BMW Series
- More extensive use of aluminum panels to moderate vehicle weight
- Contour Moonroof for more refined appearance; wind deflector rises to different heights on basis of vehicle speed to reduce wind noise
- New metallic and Xirallic paint choices (some as of 3/09 production)

Performance & efficiency

- Further translation of BMW EfficientDynamics into tangible performance and efficiency attributes
- All-new twin-turbo V-8 engine: 4.4 liters, 400 hp, 450 lb-ft. torque
- 6-speed automatic transmission with enhanced response and smoothness, greater efficiency and sportier shift characteristics; new console-mounted E-shift driver interface
- All-new suspension system with multi-link double-wish-bone front, 5-link Integral rear suspension, extensive aluminum components throughout

- Aluminum/cast-iron composite brake rotors for reduced unsprung weight
- Standard Dynamic Damping Control (new, evolved form of Electronic Damping Control)
- Self-leveling rear air suspension newly standard on 750Li
- Electronic limited-slip differential, activated when Dynamic Stability Control is de-activated
- Power steering with new-type, energy-saving hydraulic pump
- Run-flat tires, standard 18-in. all-season or 19-in. performance
- Driving Dynamics Control, offering 4 driver-selected settings for shock-absorber firmness, transmission shift characteristics, engine response, steering assist and (in combination with Active Steering) steering ratio; also affects Dynamic Stability Control settings
- FlexRay technology for ultra-fast data transmission throughout vehicle
- Standard cruise control adds braking capability (Dynamic Cruise Control)
- Comfort Start: allows starting without inserting remote into slot (there is no slot). Standard, and does not require Comfort Access, which remains optional as part of Convenience Package.

Safety & security

- Further development of BMW's overall safety concept via optimized body structure, comprehensive range of passive safety systems
- All safety belts now have automatic tensioners and force limiters; formerly only front belts had both features
- Front safety belts with pre-tensioning upon emergency braking
- Enhanced emergency calling as part of BMW Assist telematics

Options & packages

Comfort & convenience

- All-new interior with many functional and esthetic innovations
- Black Panel technology for main instruments, climate controls
- 2nd-generation iDrive system: user-friendlier, expanded functionality, larger and higher-resolution control display
- All climate-control functions (except seat-heating balance and automatic ventilation) available directly from instrument-panel controls
- Hard-drive data storage for iDrive, GPS Navigation, entertainment systems, Voice Command and phone system
- World's first Integrated Owner's Manual, accessed through iDrive
- 8 packages available for 750i, 9 for 750Li
- Rearview and Sideview cameras in Camera Package
- High Beam Assistant, Lane Departure Warning and Active Blind Spot Detection in Driver Assistance Package
- 6-disc DVD changer and iPod/USB Adapter in Premium Sound Package
- Integral (front/rear) Active Steering and Active Roll Stabilization in Sport Package
- Night Vision adds Pedestrian Detection capability
- Active Cruise Control newly available in this Series; adds new capabilities
- Head-up Display newly available in this Series

7 Series models & key features

This information lists major features, and helps position and distinguish the models in the Series. For a comprehensive summary of features, see pages 126-131.

750i

The new “base” 7 Series model, built on the shorter of the Series’ two wheelbases and powered by all-new twin-turbo, 400-hp V-8 engine. The 750i’s key features and attributes include:

Exterior design & function

- Weight-saving aluminum hood, front side panels (fenders), roof panel and doors
- Xenon Adaptive headlights with luminous rings (rings function as parking lights and Daytime Running Lamps)
- Dynamic auto-leveling of headlights with topographical compensation
- Cornering lights
- Front foglights
- Park Distance Control, front and rear
- Adaptive brakelights

Performance & efficiency

- 4.4-liter twin-turbo DOHC 32-valve V-8, aluminum construction, Double VANOS¹ variable intake- and exhaust-valve timing, High Precision direct fuel injection
- Driving Dynamics Control – variable settings for engine response, transmission shifting, shock-absorber firmness, steering assist and (in combination with Active Steering) steering ratio
- 6-speed STEPTRONIC automatic transmission with E-shift selector on console, selectable Normal, Sport and Manual modes

- Aluminum multi-link double-wishbone front suspension
- Aluminum 5-link Integral rear suspension
- Dynamic Damping Control with Comfort, Normal and Sport modes
- Vehicle-speed-sensitive variable-assist, variable-ratio rack-and-pinion power steering
- 4-wheel ventilated disc brakes with weight-saving aluminum/cast-iron front rotors, aluminum front calipers
- 18 x 8.0 alloy wheels, Star Spoke design #250
- 245/50R-18 run-flat all-season tires
- Dynamic Stability Control with Dynamic Traction Control, electronic limited-slip differential, extensive braking functions including Automatic Hold (exclusive to 7 Series)
- Tire Pressure Monitor

Comfort & convenience

- Stepless door checks
- Leather-wrapped power tilt/telescopic steering wheel with auto tilt-away
- Dual power/heated auto-dimming interior and exterior mirrors, power-folding exterior mirrors
- Dynamic cruise control
- Instrument cluster with Black Panel technology
- 20-way power/heated front Comfort seats
- Memory system for both front seats, steering wheel and exterior mirrors

- 2nd-generation iDrive system with 10.2-in. high-resolution control display, GPS Navigation, Voice Command, Real Time Traffic Information and other features
- Nappa leather upholstery
- High-gloss wood interior trim
- 4-zone automatic climate control
- Power 2-way Contour Moonroof with power interior shade, vehicle-speed-sensitive wind deflector
- 12-speaker AM/FM/CD audio system with Radio Data System, CD player, auxiliary audio input, USB input port (in glove compartment) and other features
- Bluetooth cellphone interface
- Multiple power outlets for users' electronic devices

Safety & security

- Dynamic Stability Control (DSC), including Dynamic Traction Control, electronic brake proportioning, antilock braking (ABS), cornering/braking stability enhancement, Brake Fade Compensation, Brake Standby & Brake Drying, electronic limited-slip differential, Start-off Assistant, Automatic Hold
- Safety belts with automatic tensioners and force limiters at all seating positions
- Front safety belts with pre-tensioning upon emergency braking
- Front- and rear-seat Head Protection System
- Active front head restraints
- Advanced Crash Safety Management (ACSM) for control of vehicle safety systems
- Coded Driveaway Protection
- BMW Assist Safety Plan with 4-year subscription, enhanced automatic collision notification, many other features and benefits
- Anti-theft alarm system
- Pathway Lighting

Options & packages

- Available option packages:
 - Driver Assistance Package (High Beam Assist, Lane Departure Warning, Active Blind Spot Detection)
 - Camera Package (Rearview and Sideview cameras)
 - Luxury Seating Package (heated steering wheel, Active Support driver's seat, Active Ventilation on both front seats, heated rear seats, power rear-window and rear door-window sunshades, ski bag)
 - Convenience Package (Comfort Access, Soft Close Automatic doors, automatic trunk opening/closing)
 - Cold Weather Package (Heated steering wheel, heated rear seats, ski bag)
 - Sport Package (Active Roll Stabilization, Integral Active Steering, 19-in. wheels with performance tires², Shadowline exterior trim, sport steering wheel)

1 – VANOS = VArIable NOckenwellen Steuerung = variable camshaft control, or variable valve timing.

2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 7 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

7 Series models & key features

This information lists major features, and helps position and distinguish the models in the Series. For a comprehensive summary of features, see pages 126-131.

- Premium Sound Package (16-speaker Logic7 audio, 6-disc DVD changer, iPod/USB Adapter)
- Stand-alone options:
 - Active Roll Stabilization
 - Active Cruise Control
 - 19-in. wheels with performance tires
 - Night Vision with Pedestrian Detection
 - Head-up Display
 - Satellite Radio with 1-year subscription
 - Two alternate wood interior trims
 - Leather-trimmed upper instrument panel and door panels
 - Power rear-window and rear door-window sunshades
 - Rear Seat Entertainment system with 2 monitors, DVD player, dedicated remote control)
 - Smartphone Integration (see **BMW features**, page 73, for details)

750Li

Long-wheelbase model; equipped similarly to 750i, but has 5.5-in. longer wheelbase, correspondingly greater rear-seat leg room and overall length, and a distinctive roofline that adds rear-seat head room. Compared to 750i, this model's points of differentiation include:

- 126.4-in. wheelbase, vs. 120.9 for 750i
- Vehicle length 205.2 in., vs. 199.7
- Self-leveling rear air suspension
- Chrome roof moldings, vs. body-color (not with Sport Package)
- Packages and stand-alone options as 750i, plus –
 - Luxury Rear Seating Package, available in combination with Luxury Seating Package – 12-way power rear Comfort seats with Active Ventilation
 - “Massage” rear seats available in combination with Luxury Rear Seating Package

7 Series key features

Except as noted, all current 7 Series models offer the following features:

Exterior design & function

The new look: elegantly, discreetly contemporary

A harmonious blend of sportiness and elegance is the overarching theme in the new 7 Series design. A long wheelbase (in the Li, longer), long hood and short front overhang are basic attributes; a “greenhouse” set relatively rearward, a flat roofline and overall dynamic proportions say “BMW,” and at the same time “the most elegant BMW.”

At the front, generously dimensioned lighting units include BMW's distinctive use of the headlamps' luminous rings for Daytime Running Lamps, and are accented at the top by a light band that visually unifies the traditional dual headlights on each side. The BMW “kidney grilles” – another traditional element, appearing here in new form – are notable for their boldness, verticality and low placement.

In profile, the interplay of convex and concave surfaces associated with recent BMW design appears here in extended, subtly swung contours and lines. Thoroughly free of fussy design details, the clean body sides do present one small “surprise” in the form of a chromed blade that integrates the side blinker (itself a safety element) and lends character to the relatively long space between front wheelwell and windshield base. Form follows function: this proportion is a consistent attribute of BMW body design, and an outward sign of the rear-wheel drive and optimum front/rear weight balance that are enduring BMW tenets.

The profile's sculptural modeling makes for a graceful transition into the rear deck. Rooflines flow

gracefully over the flanks all the way to the bumpers, creating a sporty conclusion to this altogether graceful design. An understated chrome band connects the tail-light clusters, which continue the L-shape that has become a BMW tradition. LED technology throughout makes for warm, homogeneous illumination whether tail-, brake- or turn-signal lights or even the 3rd brakelight, set into the rear window's upper edge.

From any angle, the high proportion of tracks to vehicle width – the vehicle is no wider than before, but tracks are increased – and a very pronounced shoulder line running from front to rear, visually express the essence of these automobiles: They are BMWs, they are planted firmly on the road, they are above all driving machines; yet they are also supremely luxurious, transcendently high-tech, and conscientiously protective of their users' safety and security.

Other functional elements

Park Distance Control – multiple “eyes” in the front and rear bumper serve to assist the driver with parking and maneuvering in tight spaces. Standard on the 7 Series.

Dynamic auto-leveling with topographical compensation – to minimize glare to oncoming drivers, the headlights level themselves in response to changes in vehicle loading (passengers and cargo) as well as acceleration and braking. And, in a new 7 Series innovation, they also compensate for road topography (such as hill crests, tunnels, steep ramps) in their auto-leveling as an additional safeguard against blinding other drivers.

7 Series key features

Except as noted, all current 7 Series models offer the following features:

Headlights' luminous rings – now a signature BMW feature, these present an elegant form of parking lights and, at higher intensity, Daytime Running Lamps; they're also part of the Welcome Light feature that switches on the ground lighting at the door handles, license-plate lighting at the rear and interior lights when the vehicle is locked or unlocked by the user.

Adaptive headlights – “steering” of low beams to improve forward illumination in driving on curving roads.

Cornering lights – specific, additional illumination to the side in low-speed turns; to both sides when backing up. A separate feature from Adaptive headlights; integrated into the inner headlights.

Sideview cameras – this option (part of the Camera Package) appears as a small circle on the front wheelwell flare; it gives the driver a better view of traffic when emerging from, say, an alley or garage exit into a busy street.

Rearview camera – its wide-angle lens is visible on the trunklid.

New-look taillights – with LED technology for warm, homogeneous illumination.

Adaptive brakelights – long standard on all BMW models; a tangible enhancement of active driving safety.

Exposed, prominent exhaust outlets – integrated into the rear apron and making a statement about the new twin-turbo V-8 power.

Performance & efficiency

4.4-liter DOHC (4-cam) 32-valve twin-turbo V-8 engine with direct fuel injection

Previous BMW 7 Series models of the 750i/750Li designation were powered by a 4.8-liter, 360-hp V-8 engine – “naturally aspirated” in the tech talk of engineers and car enthusiasts, meaning not super- or turbocharged. That engine had BMW's Valvetronic system, in which variable-lift intake valves assume the function normally done by a throttle.

The all-new V-8 engine powering the 2009 7 Series takes a different approach. Its displacement is reduced to 4.4 liters. Replacing – no, surpassing – the higher displacement and Valvetronic are twin turbochargers and direct fuel injection. In quantitative terms, the new engine delivers 400 hp (40 hp more) and does so over a range from 5500 to 6400 rpm, vs. the previous 6300 rpm. Maximum torque is up even more: 450 lb-ft. vs. the previous 360, and available over the extremely broad range of 1800 to 4500 rpm, vs. 3400 rpm before. The bottom line here is, yes, greater power and torque; but more importantly, delivered over a much wider range of operating conditions. (This is typical of BMW's twin-turbo engines.) Also impressive: that 450-lb-ft. torque peak is higher than that of previous 760i/Li models' 6.0-liter V-12 engine (444 lb-ft.)!

The point of the new engineering approach is to achieve even higher performance without correspondingly higher fuel consumption. In technical terms, the approach involves some very new design details. For the first

time, twin turbochargers and the exhaust-cleansing catalytic converters are placed between the V-8's two cylinder banks. In turn, this required the exhaust camshafts and valves to be inboard so that the path from cylinders to turbochargers (which are driven by exhaust gas) would be efficiently short. The intake camshafts and valves are then positioned outboard. This is opposite to the previous layout, and results in a very different-looking engine.

And an impressive-performing one. Aside from the dramatic thrust that drivers will notice subjectively, the objective data are dramatic too: 0-60 mph in just 5.1 sec. for the 750i, 5.2 for the modestly heavier 750Li. For comparison, the '08 750i and 750Li did 0-60 in 5.8 sec., the V-12 760Li 5.4 sec.

The new technologies: twin turbocharging, direct fuel injection

Further details on these two performance-enhancing technologies are found in **BMW features** under **N54 3.0-liter DOHC 24-valve 6-cylinder engine**, with which the new V-8 shares these two dramatic advances. Here, in the context of the new 750i/Li engine, is a brief explanation of them:

The use of twin turbochargers overcomes a historic drawback of turbocharging: the so-called "turbo lag" before the engine responds to the driver's accelerator foot with strong thrust. And these twin turbos just keep delivering, over that wide rpm range. The effect is like a significantly larger-displacement engine; yet this aluminum V-8 weighs less than would such a larger, naturally aspirated engine of comparable performance.

Also contributing to the brilliant performance is BMW's High Precision Injection, a system of direct fuel injection that sprays the precise mixture of fuel and air directly into the cylinders, rather than the intake ports.

Positioned centrally in the combustion chambers for optimum combustion, the injectors are thus subject to especially high temperatures and must deliver the mixture at very high pressures. To meet BMW's ambitious performance/efficiency/emissions goals with the necessary long-term durability, a "stack" of piezo crystals reacts lightning-fast to impulses from the engine electronics, governing the injector needle's opening stroke and duration for ultra-precise control. According to researchers who developed this technology, it contributes 2-3% fuel savings and 20% fewer emissions. The new engine meets U.S. ULEV II (Ultra Low Emissions Vehicle) limits and fulfills the also strict EU5 limits in Europe. And High Precision Injection contributes to the acoustic refinement of this amazing engine.

6-speed automatic transmission with evolutionary refinements

BMW pioneered the 6-speed automatic transmission with the previous 7 Series; the new 7 evolves this concept with quicker, smoother shifting, improved torque-converter efficiency and the new-type E-shift driver interface also found in current 5 and 6 Series models. Altogether, the evolutionary changes result in a more responsive, more efficient and sportier transmission.

For example, when the driver "kicks down" the accelerator, the transmission can downshift by

7 Series key features

Except as noted, all current 7 Series models offer the following features:

as many as four gears – just as quickly as if it were shifting down only one gear. And the torque converter's mechanical lockup – an efficiency-improving arrangement – is now engaged more of the time, reducing slippage and improving throttle response, especially in the lower gears.

The new E-shift driver interface, described earlier in more detail, controls the transmission not by a mechanical connection, but rather by electrical and electronic means. It provides Normal, Sport and Manual modes, the last executed by the driver "tipping" the lever forward for downshifts, rearward for upshifts. The predecessor 7 Series also had an E-shift, though its shifter was on the steering column. This new E-shift configuration takes the 7 Series in a sportier direction, combining the traditional central shifter with electrical/electronic operation.

As a further evolution, the new Driving Dynamics Control, positioned on the center console, offers further choices in transmission operation.

All-new suspension system: BMW's leading technology gets better

True to BMW tradition, the new 7 exploits the creation of a new vehicle generation to advance the art of chassis technology and engineering. Improving both driving dynamics and riding comfort are always the core goals of the transition to a new generation, and in these regards the new 7 upholds the tradition brilliantly.

Just as the new engine combines sporting performance with luxurious refinement, all-around new suspension technology endows the new 7 with uniquely agile

handling for a luxury automobile, yet also an exceptional level of riding comfort. Beyond these "basics," these new cars allow the driver to decide at any time what priority to assign to either of these attributes via the new Driving Dynamics Control. Multiple drivers can program the vehicle to their various preferences.

Front suspension: multi-link system comes to BMW automobiles

All BMW front suspension systems since 1965³ have been of the **strut** type, in which a long, essentially vertical strut carries the shock absorber and participates in the suspension geometry – that is, along with the lower arms it helps determine the angles wheels take as they move up and down. With the double-pivot lower arms of most current BMW Series, the strut concept has been taken to a high level of sophistication in handling, straight-ahead stability and riding comfort.

However, time and progress never stop; BMW conceptualists and engineers continually seek even better solutions. So it was that when the 2nd-generation X5 made its debut in '07, BMW introduced a type of front suspension that achieves even better results, particularly in a large, relatively heavy and very powerful vehicle.

Now this system makes its debut in the automobile side of BMW's product line. In place of the strut, this new system has an upper lateral A-arm. The double-pivot lower arms are retained, so that on each side there are three links or arms. While the two lower arms preserve the double-pivot strut system's advantages, the new upper arm facilitates further

optimization of the system's handling and riding comfort by relieving the strut of its geometric duties.

Among the strengths of the previous system are:

- **Small positive steering offset**, for best steering feel and control under all road conditions. Though the two lower arms don't actually intersect, if you visually extend their axes to a point where they would intersect, you find a "virtual pivot point" that is ideal for achieving this result. Steering offset is the "lever arm" through which road forces act on the suspension system.
- **Large steering caster**, for outstanding stability in straight-line driving and excellent steering return action coming out of curves.
- **Space for large brakes**, allowed by the arrangement of the two lower arms.

The new multi-link configuration adds further virtues:

- **Reduced friction** because the shock absorber (which remains essentially concentric with the spring, as it was with the strut system) no longer helps locate the wheel, and is thus no longer subject to lateral forces. This allows the shock absorbers to damp the wheels' up-and-down motions in a more efficient, targeted way, enhancing both ride and handling (particularly on uneven road surfaces).
- **Anti-roll (stabilizer) bar attached to wheel carrier**. This arrangement, which differs from many competitors' attachment to a suspension link, applies the wheel's entire vertical movement (up or down) to the anti-roll bar, thus allowing thinner bars

to be used. Effective control of body roll (lean) and weight savings are thus achieved.

- **Greater freedom to optimize** both suspension geometry and shock-absorber action.

In keeping with another BMW tradition – the use of aluminum suspension components to reduce unsprung weight and thus improve road adhesion and riding comfort – most major elements of the new front suspension are aluminum:

- Upper and lower lateral links (1 upper, 2 lower per side)
- Steering knuckle/vertical link (1 per side).

The front brake calipers, which are also unsprung weight, are of aluminum/steel construction. The suspension subframe, which is sprung weight but important in terms of front/rear weight distribution and total vehicle weight, is aluminum and there is also an aluminum thrust plate here for additional rigidity where suspension and braking forces feed into the body structure.

Further advantages are found in certain details:

- The trailing (forward) lower arm has a **rubber/hydraulic cushion**, which provides the most effective "compliance" for reducing road shock.
- The transverse (rearward) lower arm is cushioned by a **finely tuned rubber element** that fosters direct and precise response to the steering wheel in curves and corners.

This new multi-link front suspension system achieves a significant enhancement of the 7 Series' chassis sophistication and capabilities.

3 – Except the M1, an exotic mid-engine sports car never officially offered in the U.S.

7 Series key features

Except as noted, all current 7 Series models offer the following features:

Rear suspension: also new

The rear suspension, too, is a significant evolution from its predecessor. Like the new front suspension, it is a multi-link system; BMW calls it the Integral system for its small, essentially vertical Integral Link connecting the upper and lower lateral control planes.

The Integral concept has been in use for some years in BMW automobiles, appearing currently in the 5 and 6 Series in 4-link form. (The previous 7 Series also had essentially the same system.) With one additional link per side, the Integral V system moves one step closer to perfection in its combination of handling response, road adhesion and riding comfort. Here too, most major elements are aluminum:

- Upper and lower lateral links (2 upper, 1 lower per side)
- Integral (vertical) link (1 per side)
- Wheel carrier (1 per side).

The rear suspension subframe is also of aluminum.

A complex multi-link system like this controls rear-wheel angles very precisely, minimizing unwanted effects under load changes (such as lifting off the accelerator while cornering, or hard acceleration and braking) and achieving a comfortable, supple ride. In the new 7, it adds yet another capability via the new Integral Active Steering, included in each model's Sport Package: By steering the rear wheels by a minute amount (3° maximum), a further enhancement of maneuverability, stability and riding comfort is achieved. For details, see the **Sport Package** description on pages 121-122.

Newly standard, newly evolved, new name: Dynamic Damping Control

For the first time, BMW's system of electronically controlled variable shock absorbers is standard on the V-8 models; newly named Dynamic Damping Control, it is an evolution of the familiar Electronic Damping Control (EDC). DDC controls the shock absorbers to any level of firmness between their softest and firmest settings, precisely adapting to road conditions and the driver's demands at any given moment. Ride firmness is always at the optimum level for current road conditions, vehicle speed and the load the vehicle is carrying (again, passengers and luggage). On smooth roads, the shocks are kept at the softest appropriate setting; in corners, they are instantly adjusted to a firmer, just-right level. And when the vehicle encounters any irregular road surface, they adjust to the optimum firmness level to control ride motions, preserve riding comfort and maintain adhesion to the road.

DDC is the first such system to vary the shock absorbers' jounce and rebound strokes (wheel moving upward and downward) both steplessly and independently; this capability results in a unique combination of desirable firmness (for handling) and superior comfort on bumpy road surfaces.

Steering: evolution standard, revolution optional

Years ago BMW pioneered the combination of a rack-and-pinion steering gear – notably precise and free of “slack” – with variable ratio; in the meantime all 7, 6 and 5 Series models come standard with this type of steering system.

Variable ratio means that the number of degrees of steering-wheel turning required to steer the front wheels 1° is not always the same: as the wheel is turned away from the center and out toward the locks, the ratio becomes quicker; that is, each additional degree at the steering wheel steers the road wheels more. This enables the driver to maneuver at low speeds and park the vehicle with less cranking of the wheel. With a mean ratio of 19.1:1 and just 3.1 steering-wheel turns lock-to-lock, the 7 Series' standard steering provides excellent agility. Power assist remains the Servotronic type, i.e. vehicle-speed-sensitive, with maximum assist at a standstill (for easy parking) and then progressively diminishing power assist as speed increases (for firm road feel).

A brand-new option is BMW's new **Integral Active Steering**. Expanding on the familiar concept of Active Steering, which electronically varies the steering ratio according to vehicle speed and is available on 1, 3, 5 and 6 Series models, this advanced option adds rear-wheel steering for further benefits. Included in both models' Sport Package, Integral Active Steering is described in **Options & packages** on page 122.

Driving Dynamics Control: the driver chooses vehicle dynamics

Adjacent to the E-shift lever is the Driving Dynamics Control selector (logically, on the driver's side). DDC provides four settings that tailor vehicle characteristics to different drivers, one driver's different moods, driving conditions – or all of the above. The settings

are Comfort, Normal, Sport and Sport Plus; these vehicle-dynamics parameters are affected:

- Shock-absorber firmness (within the Dynamic Damping Control system)
- Engine throttle response
- Transmission shift characteristics
- Power-steering assist level
- Dynamic Stability Control mode.

Clearly the vehicle's driving dynamics can be widely affected by these different calibrations of so many elements. In addition, via iDrive, the driver can program his or her preferences for all five parameters into the Normal setting for a personal, instantly recallable mode.

Another control in this area affects Dynamic Stability Control alone. A brief push on this button switches the system to Dynamic Traction Control, in which DSC's intervention threshold is raised; one effect of this setting is to improve starting off from rest on snow. A long push on the same button de-activates DSC altogether, though one function (antilock braking) is always active.

Electronic limited-slip differential

When DSC is fully de-activated, BMW's electronic limited-slip differential – a sporty driving feature recently introduced on the 1 and 3 Series – comes into play in vigorous driving. By judicious application of the individual rear-wheel brakes while cornering, DSC simulates a traditional mechanical limited-slip differential. This has the effect of better apportioning power between the two rear wheels and thus improving traction in this driving situation. (Which, like use of the

7 Series key features

Except as noted, all current 7 Series models offer the following features:

Sport Plus mode, is not recommended on public roads; it's more of a racetrack or driving-school exercise.)

Intelligent driving dynamics: Integrated Chassis Management and FlexRay

All such driving-dynamics functions are coordinated and overseen by BMW's Integrated Chassis Management. Via sensing and analysis of a multitude of inputs, this powerful electronic control scheme applies and governs the interaction of these functions to ensure maximum stability. Under rapidly changing conditions, such as changing road surface, spontaneous steering input, abrupt acceleration or sudden braking, ICM reacts with ultra-quick and ultra-precise interventions via the DSC actuators, Dynamic Damping Control and – where present – Active Roll Stabilization and Integral Active Steering.

For this extremely sensitive and powerful networking of functions, the new 7 Series employs FlexRay data-transmission technology. Developed by a consortium of which BMW is a leading member, FlexRay achieves heretofore unheard-of communication speed, some 20 times that previously possible. In the 7 Series, up to 16 electronic control units can be networked; in no other current automobile can longitudinal, lateral and vertical vehicle motions be so precisely monitored and influenced. BMW was the first motor-vehicle manufacturer to offer FlexRay technology in production vehicles; it made its debut in the current X5, is also employed in the X6 and now comes to BMW automobiles in the new 7.

Intelligent Lightweight Design for maximum agility, efficiency and solidity

Thanks to BMW's Intelligent Lightweight design process, in the new 7 Series body structure, weight efficiency and solidity exist in a highly beneficial proportion to each other. Targeted applications of higher- and highest-strength steels as well as aluminum for numerous elements and components allowed BMW to achieve greater passive safety, yet reduce the structure's weight. Compared to the predecessor's body shell, the new models are approximately 20% more rigid in torsion – which in turn positively influences driving dynamics. Expressed another way, the so-called "lightweight index," which quantifies torsional rigidity relative to the vehicle footprint and weight, has been improved significantly.

Novel in the 7 Series' market segment is its brand-new combination of a steel main structure and aluminum roof: The light-metal roof saves approximately 7 kg/15 lb., and because this savings is at the vehicle's highest point, lowers the center of gravity and further contributes to vehicle dynamics. The doors are newly of aluminum, saving a further 48.5 lb. As on the predecessor, the hood and front side panels (fenders) are also aluminum, for a significant contribution to these automobiles' overall weight efficiency.

Generously dimensioned disc brakes with composite rotors

In this patented construction, each front brake rotor (disc) consists of two pieces: the high-carbon cast-iron outer portion, which functions conventionally as the surface onto which the brake pads grip to slow or stop the

vehicle; and an aluminum “hat” in the center, which mounts the rotor to the vehicle. The concept’s advantages include reduced unsprung weight, complementing the aluminum suspension in benefiting ride comfort and road adhesion.

Reduced rotor deformation under hard braking is the other benefit. This means less tendency of the brakes to vibrate when hot, and reduced likelihood of rotors cracking under extreme heat conditions. Shared with 6 Series and 550i models, this construction is described in more detail in **BMW features** on pages 51-52.

The brake system is also supported by the comprehensive functions of Dynamic Stability Control (DSC). These include antilock braking (ABS), Automatic Stability Control (ASC), Cornering Brake Control and Dynamic Brake Control; each of these functions contributes to vehicle stability and some of them do so specifically during braking. Other braking enhancements via DSC include Brake Fade Compensation, which compensates for loss of braking power (fading) under hard or repeated brake use; Brake Standby, which snugs the brake pads up to the rotors upon sharp acceleration to reduce inherent lag time in brake application; and Brake Drying, which brings the pads to the rotors periodically during wet-weather driving to keep the brakes ready. Like most other current BMW models, the 7 Series’ DSC system also includes Start-off Assistant, which when the vehicle is stopped facing uphill, briefly holds the brakes after the pedal is released to prevent rollback. Automatic Hold, an exclusive 7 Series function, holds the brakes for an indefinite time when the vehicle

is stopped anywhere, preventing rollback or creep; it can be activated or de-activated by the driver with a console button.

Wheels and tires: 18-in. standard, 19-in. optional, run-flat across the board

Both models come standard with 18 x 8.0 alloy wheels in the 10-spoke Star Spoke design #250, fitted with 245/50R-18 run-flat all-season tires. All wheel designs are new; so are run-flat tires, which had been available optionally for a time on the previous 7 Series but not in '08. Each model offers 19-in. equipment in differentiated front/rear widths (8.5 front/9.5 rear) and in two wheel designs: Radial Spoke #252 (15 spokes, very elegant) or Multi-Spoke #235 (also 15 spokes, narrow and reaching out to the rim) in the Sport Package, or #235 as a stand-alone option. The 19-in. tires – 245/45 front / 275/40 rear² – are also run-flats, but performance-type instead of all-season.

Comfort & convenience

Advanced, luxurious, inviting: the all-new interior

Generous space – it goes almost without saying that occupants of the new 7 enjoy plenty of knee, head and elbow room in the front and rear compartments. And contemporary design – the ambiance is exclusive, high in quality and advanced in its amenities and functions. The contours, color coordination and choice of materials symbolize

2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 7 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

7 Series key features

Except as noted, all current 7 Series models offer the following features:

taste and harmony. With its center stack lightly angled toward the driver, the control center promotes the driver's intuitive mastery of the vehicle: always a hallmark of BMW interior design. And yet this interior isn't just for the driver; its concept, layout, technology and design focus equally on the driver's needs and passengers' well-being.

The feeling of generous space and harmonious design is enhanced by horizontal color gradations pervading the entire cabin. High-quality materials and meticulous workmanship communicate the innate precision of these automobiles; details such as visible seams on the dash and door ledges, and double-framed central air outlets, are evidence of passionate devotion to details. The leatherette covering the upper instrument-panel surfaces and upper door surfaces/ledges has been newly developed to be as close to leather as can be imagined – and yet soft Nappa leather is optionally available here, along with the upper door sections.

As always in BMWs, the harmony of design and function is visible everywhere: for example, in the integration of door handles into the door panels' chrome trim lines, or the door pulls as part of their contrasting trim material. Speaking of which: there are three choices of wood trim, four Nappa-leather interior color schemes⁴, and the optional additional leather surfaces.

All these refinements and choices provide the interior counterpoint to the 12 available exterior colors, and enable customers to highlight classic elegance, sportiness or sheer luxury according to their personal tastes and preferences.

Stepless door checks

Even with the excellent 2- or 3-position door checks of other BMWs, often we wish there were another position in which to hold the door open. The 7 Series' door checks, unique in the BMW line, are hydraulic and stepless, holding the door open at any position to which the user opens it; they are effective with the vehicle pointing uphill up to 10°, or leaning to one side or the other up to 6°.

Soft-close doors are available as part of the Convenience Package for both 750 models; see **options & packages**.

Effective and elegant interior lighting

Elegant light bars set accents on the new 7's door handles, door panels and storage pockets. U.S. models add as standard equipment a new way of distributing ambiance lighting, whose rays are "broken" by a prism structure to bathe certain interior surfaces with a subtle glow. This harmonious illumination not only helps occupants orient themselves in the cabin at night, but also enhances the interior's high-quality character.

7 Series lighting includes –

- Illuminated doorsill trims
- Exit/entry lighting in door panels (in addition to ground lighting/handle illumination at the exterior door handles)
- Illuminated doorsills
- Ambiance lighting: the familiar two LEDs in the ceiling, which bathe the front center console and rear seating area with their soft illumination at night; also on door panels to illuminate door handles and storage pockets, and back sides of front backrests

- Glovebox, center-console and trunk lighting
- Separately switched front and rear reading lamps
- Front/rear footwell illumination.

Multi-function tilt/telescopic steering wheel

BMW's multi-function steering wheel, described in **BMW features**, appears in its most elaborate form in the 7 Series. It is power-adjustable for tilt (height) and reach, included in the driver's memory settings, and equipped with auto tilt-away for a further enhancement of entrance and exit convenience. (See **BMW features**, page 59, for an explanation of tilt-away and the 5/6 Series' tilt-up function.) Both steering-wheel designs (standard and sport) have three spokes.

Auto-dimming interior and exterior mirrors

Standard. Also standard on the 7 Series are power-folding exterior mirrors, useful for parking in tight spots or going through some car washes.

20-way front Comfort seats

BMW's lavishly accommodating 20-way Comfort seats continue as standard equipment, with power adjustment of –

- Fore-aft
- Head-restraint height
- Seat height
- Seat (cushion) angle
- Backrest angle
- Upper-backrest angle, separately from main backrest angle
- Adjustable backrest width
- Adjustable thigh support
- Lumbar-support firmness
- Lumbar-support height.

Additionally, the backrest automatically expands to its widest position for ease of exit and entry,

then returns to its previously set position upon re-entry. The widening action occurs when a door is opened (either side), or when the safety belt is unfastened (passenger's seat only).

Active head restraints provide safety benefits described on page 88. The distance of these head restraints from the occupant's head may be varied via the upper-backrest adjustment; they also include adjustable side extensions that help support the occupant's head when used as headrests, as for example when sleeping.

2-position (per user) memory is provided for both front seats. The power controls are newly positioned on the door armrests, the memory controls on the door panels. Also included here is a press-to-activate button that enables the driver to adjust the front passenger's seat.

Further details on the Comfort seats are found in **BMW features** on pages 74-75.

Heated front seats with special features

Controlled by switches in the center stack. Beyond the familiar 3-stage heating, the system incorporates two functional and sophisticated capabilities.

- **Rapid heating.** Each seat incorporates four heating zones: center of cushion and backrest, edges of cushion and backrest. When the heating is first switched on, the center zones heat at full power almost to their regulated heat level; then the outer zones are brought up to the regulated level.

4 – Not all colors are available at start of production.

7 Series key features

Except as noted, all current 7 Series models offer the following features:

- **Heating balance.** Relative cushion and backrest temperatures can be varied by as much as 5° from each other via the Climate menu selection in the main menu; the heated levels are depicted in a graphic of the seat as this is done. Included in Key Memory.

Clear, intuitive control concept for greater driving pleasure and comfort

Control of the many interior functions and amenities is via a freshly thought-out and executed overall concept that is clear and intuitive. To begin with the simplest aspect of this, ample storage is provided by a spacious glove compartment, bins in the door panels and pockets on the front-seat backrests. Two cupholders are provided on the front center console.

The basic concept for all controls rests upon a philosophy of a clear, functionally logical arrangement of the entire interior. Thus driving-related functions are all on the driver's side, comfort-related functions around the center. This principle goes for the placement of buttons, keys and levers around the cockpit as well as controls on the steering wheel, where those for cruise control are separated from those for the audio and phone systems.

Analogous to this "horizontal" division of functions is the arrangement of all displays in a more "vertical" separation. In the upper areas – and thus at about the driver's eye level – are the primary displays, such as the speedometer and tachometer. Below that are less frequently viewed instruments like the fuel and oil-temperature gauges.

At a still lower level are actual controls, optimally accessible and mostly operable without looking at them such as the turn-signal and low/high-beam/flasher stalks. Controls that need to be seen to be used are generally grouped together, for example those for the driver-assistance functions clustered around the main lighting control: this too is highly logical, as all these support the driver's need to perceive the vehicle's surroundings and situations.

Everything at a glance: instrument cluster in Black Panel technology.

The new 7's instrument cluster combines classic elements and new solutions into a complete, harmonious presentation of driving information. For the first time in a BMW, the entire cluster is a high-resolution Black Panel display, in which four classic circular instruments are most prominent; other driving-relevant displays and readouts – including GPS Navigation, vehicle-monitoring functions, upcoming service requirements and other information – also appear here in their various (and function-related) graphic forms.

In "dormant" state, this display is a mostly blank black form, defined by its chrome-toned periphery and including only pointer needles, scale markings and the tachometer's red warning zone within it (all in subdued illumination). The circular instruments' numerals, as well as the integrated displays for current fuel economy and range on remaining fuel, are entirely electronic, and not visible until a door is opened; then they illuminate.

So it is that the advantages of mechanical and electronic displays are ideally combined – with fascinating visual and graphic effects. As the user enters the vehicle, the circular instruments’ “chrome rings,” until now open at the bottom, close and become brighter. Once the ignition is activated (upon pressing the Start/Stop button), the numerals plus all other displays and warnings illuminate. As the engine starts, functions that have been previously activated by the driver are then revealed as well.

The instrument cluster interacts in new ways with the iDrive control display and the available Head-up Display. According to selected function, users can call up phone numbers or radio stations via the steering-wheel controls. The cluster also augments the iDrive GPS Navigation display (Navigation is standard) with a new capability called High Guiding: With clear, realistic arrow symbols, the driver gets directions to change lanes or make a turn at an obscured intersection. If the Head-up Display is activated, the relevant directions appear primarily there; otherwise they appear in the instrument cluster. Current climate-control settings are indicated in a second Black Panel display in the center stack, along with the system’s controls – almost all of them, as only the seat-heating balance and automatic ventilation function are managed via iDrive.

2nd-generation iDrive

This all-new, much-evolved and user-friendlier iDrive system makes its debut in 2009 7, 3 and 1 Series models. Though essentially the same in all these Series, it is especially dramatic in the 7

with its extra-large (10.2-in.) control display. See **BMW features**, pages 63-65, for a detailed description of this great new advance in the control and enjoyment of a top-class, ultra-high-tech luxury automobile.

E-shift transmission selector: now on center console

While retaining the E-shift concept first introduced on the predecessor – no mechanical linkage from shift lever to transmission, all control via electrics and electronics – the transmission selector migrates from steering column to center console. Recently phased into the 5 and 6 Series, this concept is explained in **BMW features** on page 40.

Driving Dynamics Control

Adjacent to the E-shift lever are the Driving Dynamics Control selector (logically, on the driver’s side) and the iDrive controller. DDC provides four settings that tailor vehicle characteristics to different drivers, one driver’s different moods, driving conditions – or all of the above. The settings are Comfort, Normal, Sport and Sport Plus; this feature is described in detail in **Performance & efficiency** on page 109.

Hard drive for data storage: high capacity, fast retrieval

Appearing in a BMW for the first time, an 80-GB hard drive provides data storage for the iDrive system, GPS Navigation, entertainment systems, Voice Command and phone system. As this also appears in the 1 and 3 Series for '08 and will appear in other Series later on, it is described in **BMW features** on pages 66-67.

7 Series key features

Except as noted, all current 7 Series models offer the following features:

4-zone automatic climate control: optimum comfort for all occupants

The previous 7 Series already included many premium features in its automatic climate-control system, such as dual-zone controls for the front compartment, automatic recirculation, automatic ventilation to use when the vehicle is left standing in the sun, heat-at-rest providing heating for several minutes after the engine is shut off, and temperature/volume-controlled air for the rear seating compartment.

Yet here too, BMW has not simply rested on existing excellence: U.S. models of the new 7 come standard with 4-zone climate control, which provides individual left/right control of temperature and air delivery just as in the front.

4-zone automatic climate control gives the rear-seat passengers a degree of control over their climate comfort similar to that afforded front-seat occupants. Beyond the dual-zone system of the previous 7 Series (and that of the 5 Series), the new 7 Series system includes –

- All climate-control functions (except seat-heating balance, rear climate-control on/off and automatic ventilation) available from instrument-panel controls; thus unnecessary to use iDrive menus
- Dash center air outlets with a choice of direct or draft-free air delivery
- Separate rear blower
- Additional air outlets in B-pillars
- Full rear control panel with left/right temperature and air-distribution settings
- Individual heating elements in the foot space
- Separate automatic programs front/rear.

Audio systems

The standard 12-speaker audio system (up from 10 previously) includes a center front fill speaker, two subwoofers, a CD/DVD player and an auxiliary audio input. Available options include a Premium Sound Package, consisting of upgraded amplification and speakers, a 6-disc DVD changer and an iPod/USB adapter. The optional Satellite Radio option includes a 1-year subscription to the service. Newly standard is HD Radio, which BMW pioneered as an automotive audio enhancement. With HD Radio, two DAB (Digital Audio Broadcasting) tuners provide not only enhanced FM and AM sound, but also allow a given station's audio program and traffic advisories to be received. Should the vehicle leave the station's digital broadcast area, the system automatically reverts to the same station's conventional broadcasting.

Music data from a CD, MP3 player or USB stick can be transferred ("ripped") to the hard drive, then accessed at will via the Gracenote® music-track database. The available capacity corresponds to about 100 music CDs; individual music pieces ("songs") are listed alphabetically by their title and performer, and thus easily located.

Upholstery and interior trim

Both models come standard with Nappa leather, one of BMW's traditional premium grades, as the main upholstery material. Nappa appears on the seat facings, door armrests and areas above them, head restraints and center console; other leather grades are used for some areas, such as the front seats' backrests and steering wheel.

As an option, the upper dash section and upper door panels (all the way to the ledges) can also be in Nappa leather; otherwise these are in an amazingly leather-like synthetic material. Three colors – Oyster/Black, Oyster and Black – are available from start of production; Saddle/Black is available as of 3/09 production.

The standard wood trim, appearing on the dash, console and doors, is dark and elegant Finesse Gloss; Finesse Matte and the lighter Ash Grain are optional at no extra cost. All wood trims can be combined with any interior color.

A unique new option is ceramic-trimmed controls, described on page 125.

New moonroof design

An esthetic subtlety is delivered by a new moonroof design, standard on U.S. models. Its 60 x 92-cm (23.6 x 36.2-in.) glass area makes the interior feel brighter and roomier; its front edge is curved parallel to the roof's front edge for an unusual and subtle design touch. Functional improvements figure in this concept too: a powered interior shade replaces the former manual one, obviating the need for a handgrip recess. The forward wind deflector rises to different heights on the basis of vehicle speed, more effectively taming potential low-speed air drumming or high-speed wind roar.

750Li: lavish space for rear-seat passengers

If the standard-wheelbase 750i already offers generous interior space, the long-wheelbase 750Li provides truly lavish accommodations for rear-seat passengers. And in the new 7, the meaning of "L" isn't confined to just length: rather, this model also has its own, flatter roofline, providing 0.6 in. of additional rear head

room as well as the extra 5.9 in. of rear leg room. Thus BMW's typical Joy of Driving is complemented by an even greater measure of that special enjoyment of Being Driven, as for example by a chauffeur.

Even this extra space can be further enhanced, by two available options. One, the Luxury Rear Seating Package available only in the Li model, includes individual left and right Comfort seats with multiple adjustments, including fore-aft (70 mm/2.76-in. range), cushion and backrest angles, and head-restraint positions. Additionally, this Package provides Active Ventilation for the rear seats. An additional stand-alone option, also available only in the Li in combination with the Luxury Rear Seating Package, is brand-new: "massaging" rear seats.

The Rear Seat Entertainment system adds yet another dimension to rear-seat luxury: a DVD player with color monitors integrated into the front seats' backrests, controlled from a dedicated remote. This option is available on both 750i and 750Li.

World's first Integrated Owner's Manual

The amazing spectrum of new features, technologies and capabilities offered by the new 7 Series is rounded out by yet another "first": the Integrated Owner's Manual.

In an analogy to the Help functions in, or accessible from, today's computers, BMW now delivers the owner's manual electronically, via iDrive. In just seconds, the user can access information on virtually any detail of the vehicle's equipment, systems, operation, etc...like a traditional owner's manual, only better and in thoroughly contem-

7 Series key features

Except as noted, all current 7 Series models offer the following features:

porary form. Subjects are presented in animations or slide shows with sound, in clearly understandable form. So that users can study the IOM at home, a separate DVD and a printed Quick Reference Guide are supplied with the new vehicle.

In another new-age, highly desirable departure from the traditional owner's manual, the IOM is vehicle-specific; that is, the version that goes with each new 7 Series vehicle corresponds to that exact vehicle, with its specific model designation and options. Various information paths – brief instructions, visual search, keyword and context searches – are available to the user, and particularly important subjects can be stored on the Programmable Memory Keys. Further, the IOM can be updated as appropriate via the BMW center.

So it is, then, that with this fitting innovation, BMW proclaims the fully contemporary motor vehicle in a unique, wholly appropriate and contemporary way. And yet – a traditional owner's manual is also included with every new U.S. 7 Series model.

Safety & security

Generally, the 7 Series is equipped with the same range of safety features as other BMW Sedans; and like any new-generation BMW platform, it incorporates the latest and best active- and passive-safety engineering and technology.

Active safety

The most significant safety news is on the **active** side, in that a number of new features and systems are available to enhance

the driver's ability to avoid accidents. Described in greater detail in **options & packages**, these are:

- **High Beam Assistant** – included in the Driver Assistance Package, effectively improves the driver's forward vision at night by making it more likely that the high beams will be used when it is safe to do so. Many if not most drivers are reluctant to switch back and forth between low and high beams as traffic conditions rapidly change; the Assistant does this for them.
- **Night Vision** – previously available on 7 Series (as well as 5 and 6); adds new Pedestrian Detection to help make driver aware of pedestrians or critters near the roadway. A stand-alone option.
- **Active Blind Spot Detection** – appearing for the first time in a production BMW; also part of the Driver Assistance Package. Via radar sensors, monitors traffic in adjacent lanes and displays a warning in an exterior mirror if there is a vehicle in a critical area that may not be covered by the mirror itself. If driver activates turn signal, ABSD vibrates the steering wheel.
- **Lane Departure Warning** – already available in 5 and 6 Series; newly available in 7 as part of Driver Assistance Package. Employing a camera near the interior rearview mirror, detects when vehicle begins to move across a lane marking without turn signals activated, and vibrates the steering wheel.
- **Rearview camera** – adds a wide-angle view to rear of vehicle, plus lines depicting vehicle trajectory, to the stan-

ard Park Distance Control for additional driver perception. Part of Camera Package.

- **Sideview cameras** – provide views to sides at front of vehicle that driver couldn't necessarily see directly, such as when pulling out into a busy street. Also part of Camera Package.
- **Integral Active Steering** – enhances the 7 Series' already outstanding directional stability at higher speeds by slight, precise countersteering of the rear wheels. The front-wheel aspect of Integral Active Steering also contributes to stability at speed by progressively increasing the steering ratio up to approximately 75 mph, then holding its maximum ratio at speeds beyond that.

Passive safety

Additional passive-safety features standard in 7 Series

The 7 Series includes certain features that enhance crash safety beyond those standard in other models:

- **Active front head restraints** – standard in 3, 6 and 7 Series, optional in 5 Series and M5.
- **Automatic tensioners and force limiters on all safety belts** – first BMW Series to include these as standard at all seating positions. All other Series have them on the front seats; 3 Series Sedans and Sports Wagons have them at the outboard rear positions, 5 Series have tensioners when equipped with their optional rear side airbags.
- **Pre-tensioners on front safety belts** – upon emergency braking (determined by preset criteria), the front belts are pre-tensioned prior to a possible crash. To remind users of the

value of this important new feature, when either front belt is fastened with the engine running, it is briefly pre-tensioned, then returned to its normal state.

- **Enhanced emergency calling.** Automatic emergency calling, long a standard feature of the BMW Assist telematics scheme, is meaningfully enhanced in the new 7: In the event of a collision of a certain severity, the system transmits the vehicle's location and specifications, as well as data from several onboard sensors that define the type of collision and probability of occupant injury to the BMW Call Center. At the same time, the Call Center attempts to establish a voice connection with the vehicle occupants. BMW Assist is standard with all 7 Series models.

Options & packages

Factory-installed options

Driver Assistance Package (750i & 750Li, code ZDA)

This Package enhances the new 7 Series' active safety in three ways:

- **High Beam Assistant**, code 5AC. Switches automatically between low and high beams, according to whether or not there are oncoming headlights. High beams are likely to be used more often; in today's typically dense traffic, drivers sometimes forget to use the high beams, or are reluctant to switch back and forth as often as traffic changes. Details in **BMW features**, page 59.
- **Lane Departure Warning**, code 5AD. Employing a camera near the interior rearview mirror,

7 Series key features

Except as noted, all current 7 Series models offer the following features:

monitors road lane markings. If the vehicle begins to move across a lane without the turn signals activated, LDW vibrates the steering wheel. Details in **BMW features**, page 79.

- **Active Blind Spot Detection**, code 5AG. Radar sensors at the rear of the vehicle monitor traffic in adjacent lanes, taking in an area from the driver's blind spot rearward 60 meters/ almost 200 ft. An illuminated triangular warning LED appears in the exterior mirror if there is a vehicle in this critical area; if the driver activates the turn signal, the LED blinks and, as with Lane Departure Warning, the steering wheel vibrates to warn the driver not to make a lane change. A new feature, exclusive to the 7 Series for '09.

Camera Package

(750i & 750Li, code ZCE)

Park Distance Control, BMW's ultrasonic-based parking assist system, remains standard as the 7 moves into its new generation. PDC warns the driver via beep tones when the vehicle approaches obstacles, at the front or rear, that may be unseen; and displays a "plan view" of the vehicle and obstacles on the iDrive monitor.

New to BMW Automobiles are two features that further assist parking and maneuvering convenience and safety:

- **Rearview camera**, code 3AG. Transmits a high-resolution image to the iDrive control display, plus –
 - a graphic representation of the vehicle's actual path
 - static lines showing the vehicle's trajectory with maximum steering angle (minimum turning radius).

These two paths are visually differentiated from each other. Also, the PDC vehicle image appears next to the camera image in the display, so that the two images mutually enhance each other.

- **Sideview cameras**, code 5DK. Two further cameras, one each in the front bumper's corners, transmit views up to about 330 ft. from the sides to the control display. This feature resolves that troublesome situation when one is emerging from, say, an alley or garage exit onto a busy street by giving the driver an up-front view of traffic – and helping avoid an accident. Conveniently switched on via a console switch.

Both of these camera systems are de-activated at normal driving speeds.

Luxury Seating Package

(750i & 750Li, code ZLS)

This Package brings together an array of features that truly live up to its name:

- **Heated steering wheel**, code 248, for quick warmth in a cold vehicle.
- **Active Support** on the driver's seat, code 451. This exclusive 7 Series option employs two stretchable hollow cavities, filled and emptied alternately with a freeze-proof liquid. The slow, gentle process (about once a minute) creates a cyclical raising and lowering of the cushion's left and right halves by about half an inch, and can be switched on and off as desired. The movement is virtually imperceptible, yet helps relieve fatigue during extended trips.

- **Active Ventilation** on both front seats, code 453. Described in **BMW features** on page 75. With this equipment, the cushion and backrest center areas are in perforated Dakota leather rather than Nappa.
- **Rear-seat heating**, code 496. 3-stage heating as on the front seats.
- **Power rear-window and rear door-window sunshades**, codes 415-416.
- **Ski bag**, code 464, for carrying skis “indoors.”

Luxury Rear Seating Package (750Li only, code ZLU; requires ZLS)

Adds two further luxury-seating features that are appropriate for the long-wheelbase model:

- **12-way rear Comfort seats**, code 460. The adjustments include:
 - Fore-aft
 - Cushion angle
 - Backrest angle
 - Firmness of lumbar support
 - Height of lumbar support
 - Head-restraint height.

The head restraint automatically rises to its preset position when an occupant sits in the seat, and retracts when the seat is not occupied; this is to preserve the driver’s rearward view.

These are thus 12-way power seats (8-way + 4-way lumbar). As a convenience bonus, the front passenger’s seat can be adjusted from the right rear seat’s power controls by pressing a switch for the purpose, and there is a switch that returns the rear Comfort Seat to its “home” or base position. Finally, each seat includes a 2-position memory system.

These seats are separated by a fold-down center armrest and transform the 7 Series cabin into a 4-seater configuration.

- **Active Ventilation**, code 454. Functions like that in the front seats, and also has Dakota leather for the perforated cushion and backrest center sections.

Another new option is the **massaging rear seat**, available as a stand-alone option and described on page 124.

Convenience Package (750i & 750Li, code ZCV)

The three features included in this Package are:

- **Soft-close doors**, code 323. The user closes the door gently; an electric mechanism draws it fully in.
- **Automatic trunk opening/closing**, code 316. Trunk release from the remote or interior is standard; this feature adds power opening and closing of the lid.
- **Comfort Access**, code 322. Described in **BMW features** on page 58.

Cold Weather Package (750i & 750Li, code ZCW)

This more specialized and limited Package includes three features that also appear in the Luxury Seating Package:

- **Heated steering wheel**
- **Heated rear seats**
- **Ski bag**.

Naturally, it is not available in combination with the larger ZLS.

Sport Package (750i & 750Li, code ZSP)

Sport Packages are always popular with our customers, even for these ultimate luxury sedans. That for the two V-8 7 Series

7 Series key features

Except as noted, all current 7 Series models offer the following features:

models is quite different from that of their predecessors and consists of the following features:

- **Active Roll Stabilization**, code 229. This high-tech system reduces body roll, popularly known as “lean,” in cornering. It improves handling by virtue of better suspension geometry (wheel angles relative to vertical), but there is a psychological component as well: Drivers and passengers alike marvel at the “flat cornering” that results from ARS. For details on how ARS works, see **BMW features**, pages 53-54.
- **Integral Active Steering**, code 2VH. Active Steering is familiar from the 1, 3, 5 and 6 Series. Offered in the 7 Series for the first time, it appears here in a new version, adding rear-wheel steering to the variable-ratio front-wheel Active Steering. (For details on the front system, see **BMW features**, pages 48-50.

Via a servo motor acting on track rods, the rear wheels can be steered up to a maximum of 3°. At low speeds, they are steered oppositely to the front wheels; depending on vehicle speed, the turning circle can be reduced by more than 2 ft. – which, combined with the front wheels’ reduced steering ratio, dramatically improves maneuverability. Varying the rear-wheel steering according to vehicle speed, the system steers them in the same direction as the fronts at higher speeds, which enhances the more important attribute of stability at these speeds. A further, and less expected, benefit is that the yaw rate in a given road-speed maneuver is reduced, which

would be perceived by rear-seat passengers as an improvement in riding comfort.

- **19-in. wheels with performance tires**. In place of the standard 18 x 8.0 wheels and 245/50 run-flat all-season tires, ZSP specifies 19 x 8.5 front/19 x 9.5 rear wheels and 245/45 front / 275/40 rear performance tires². Two elegant and sporty 15-spoke wheel designs are available: Radial Spoke #252 (code 2HL) or Multi-Spoke #235 (2ST). Either way, these wheel-and-tire dimensions result in a fine-tuning of 7 Series handling and esthetics.
- **Body-color roof trim strips**, code 466. These are standard on the 750i, but on the 750Li, 466 gets body-color strips into this Package.
- **Shadowline exterior trim**, code 760. High-gloss black trim around side windows, on B-pillars and rear door-window dividers, and exterior mirrors’ bases.
- **Sport steering wheel**, code 255. Slightly smaller diameter, different design with galvanic trim at multi-function control groups.

Premium Sound Package (750i & 750Li, code ZPS)

While retaining the acclaimed Logic7 sound system, this Package represents a significant upgrade of all three of its features from the previous 7 Series’ Package of the same name. These are:

- **Logic7 sound system** (code 677), now with 16 speakers and 600-watt amplification. As the Logic7 system is also available in other Series, it is described in **BMW features** on pages 69-70.

- **6-disc DVD changer** (code 696) in place of the former CD changer. Concealed in upper section of 2-level glove compartment, the changer is accessible to the driver and front passenger.
- **iPod/USB Adapter** (code 6FL) with input jack in center console.
- **Safety-belt tensioning.** (This tensioning is reversible, in that the belt tensioner can be returned to its normal un-tensioned state.)

These functions go into action, for example, when the vehicle ahead decelerates sharply.

Further functions, shared with 5 and 6 Series models with ACC, include activation of –

- **Brake Standby** – brake pads snugged up to rotors
- **Lower threshold for Dynamic Brake Control** (panic application recognized earlier) to optimize braking force.

Stand-alone options

Active Roll Stabilization (both models, code 229)

In addition to being part of the Sport Package, this important handling feature is offered as a stand-alone option.

19-in. wheels with performance tires (750i & 750Li, code 2ST)

This is the stand-alone version of one of the two wheel/tire combinations included in the Sport Package: 19 x 8.5 front/19 x 9.5 rear Multi-Spoke wheels (design #235) with 245/45R-19 front / 275/40R-19 rear run-flat performance tires².

Active Cruise Control with Stop-and-Go function, Collision Warning System (750i & 750Li, code 5DF)

In addition to the functions described in **BMW features** on pages 60-61, this most capable version of Active Cruise Control utilizes the ACC radar sensors to detect critical closing-rate situations with standing and moving objects, even with ACC off (this function must be activated via a switch to the left of the steering column):

- “Soft” warning (visual, in instrument cluster)
- “Acute” warning, visual and audible, for higher closing rate

Night Vision with Pedestrian Detection (750i & 750Li, code 6UK)

Via an infrared camera, Night Vision scans a range up to 1600 ft. ahead of the vehicle over a 36-degree-wide range, and is varied according to the road’s path and driver input. Another first for the new 7 is this additional capability: detection of the direction a pedestrian near the roadway is moving. If it’s parallel to the road, the system senses and displays the presence on the iDrive display (or, if present, Head-up Display) but doesn’t warn the driver; if the pedestrian is on a path to cross the road, it displays a warning⁵.

2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 7 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

5 – Pedestrian Detection functions only at ambient temperatures of 82.4°F or below.

7 Series key features

Except as noted, all current 7 Series models offer the following features:

Head-up Display

(750i & 750Li, code 610)

Described in detail in **BMW features** on page 67, the HUD makes its first appearance in the 7 Series, adding functions that are also new, such as the Pedestrian Detection function of Night Vision.

Satellite Radio

(750i & 750Li, code 655)

The satellite system beams programming to satellites orbiting the earth; equipped vehicles receive the programming. For details on this option, see **BMW features**, page 72.

Rear Seat Entertainment

(750i & 750Li, code ZRP)

Adding yet another dimension to rear-seat luxury, this option includes:

- A DVD player at the back of the center console
- Two high-resolution, angle-adjustable 8-in. color monitors integrated into the front seats' backrests
- A dedicated remote.

The system functions with 1 internal input and 1 external input, or 2 external inputs as follows:

- Rear DVD, in-dash single-disc DVD or 6-disc front DVD changer of optional Premium Sound Package (internal inputs)
- Internal DVD (front or rear) on one monitor, an external input (Playstation, a personal DVD player, MP3/AVI player, etc.) on the other. Each monitor has its own video input that accepts the standard red-yellow-white input jacks; if an external source is plugged into either, it overrides the internal source and that monitor will show the external input.

Wired and wireless earphones are available.

Smartphone Integration

(750i & 750Li, code 6NF; requires Premium Sound Package)

Not only does this new option facilitate playing music files stored in one's own smartphone through the vehicle audio system, it also charges the phone and provides a hard-wired connection of the phone to the vehicle phone system. Requires adaptor for specific, BMW-approved smartphone model. For more information on this feature, see **BMW features**, page 73.

Massaging rear seats

(750Li only, code 4UM; requires ZLS & ZLU)

As a further enhancement to the Rear Luxury Seating Package, this option adds a massaging capability to the rear seatback and cushion. 12 massage units in the seatback apply a gentle massaging action from the upper to the lower back, relieving stress and reducing tension on long rides. Another 6 rotating units around the outer cushion have the same effect on the shoulders, thorax and lower back. This is the first time BMW has offered a massaging effect as such; it differs from the Active Support function described on page 120.

Leather instrument panel and upper doors

(750i & 750Li, code 4ND)

This option applies elegant Nappa leather to the upper surfaces of the instrument panel and doors in place of the standard (and already quite rich and elegant) leather-like material.

Alternate interior trims

(750i & 750Li, codes 4CA & 4CB)

Fineline Matte and Ash Grain are optional at no extra cost as alternatives to the standard Fineline Gloss.

Ceramic trim

(750i & 750Li, code 4U1)

This unique new stand-alone option includes ceramic trim on the shift knob, iDrive controller surround, and audio and climate controls.

Power rear-window and rear door-window sunshades

(Both models, codes 415-416)

In addition to being part of the Luxury Rear Seating Package, these glare-reducing, privacy-enhancing shades are newly offered as a stand-alone option.

BMW center-installed accessories

Among the accessories planned for the new 7 Series are:

- 21-in. chrome wheels with tires, set
- 21-in. Ferric Gray wheels with tires, set
- Mud flaps
- Clear front protective cover
- Car covers
- Smoked sun/wind deflector
- Front-seat savers
- Rear-seat protective cover
- Base support system
- License-plate frames
- Floor mats, carpet and rubber
- Trunk mat, rubber
- Trunk tray

For details and a complete listing, see the **Original BMW Accessories** catalog for the new 7 Series.

Standard & optional features

2009 7 Series

Bold within table indicates new feature for 2009.

Exterior design & function	750i	750Li
Aluminum hood, front side panels (fenders), roof panel & doors	S	S
Xenon Adaptive headlights with luminous rings	S	S
Dynamic auto-leveling of headlights with topographical compensation	S	S
Cornering lights	S	S
Automatic headlight control	S	S
High Beam Assistant	ZDA	ZDA
Daytime Running Lamps via luminous rings	S	S
Retractable high-intensity headlight cleaning system	S	S
Front foglights	S	S
Rain-sensing windshield wipers & heated washer jets	S	S
Power-folding exterior mirrors	S	S
Choice of standard, metallic or Xirallic paints	S	S
Park Distance Control with graphic display	S	S
Ground lighting at door handles	S	S
Adaptive brakelights	S	S
Chrome roof moldings	NA	S
Body-color roof moldings	S	ZSP
High-gloss Shadowline exterior trim around side windows & bases of exterior mirrors	ZSP	ZSP
Performance & efficiency	750i	750Li
4.4-liter twin-turbo V-8 engine	S	S
Engine features:		
Aluminum construction	S	S
Dual overhead camshafts & 4 valves/ cylinder (32 valves)	S	S
Double VANOS ¹ variable valve timing	S	S
High Precision direct fuel injection with piezo injectors	S	S
Electronically controlled engine cooling	S	S
Electric water pump	S	S
Volume-controlled oil pump	S	S
Electronic sensing of oil level and grade	S	S

Performance & efficiency (cont.)	750i	750Li
Driving Dynamics Control – 4 settings for engine response, transmission shift characteristics, shock-absorber firmness & steering assist²	S	S
6-speed STEPTRONIC automatic transmission with Adaptive Transmission control, E-shift, selectable Normal, Sport & Manual modes	S	S
Liquid-cooled alternator	S	S
Aluminum multi-link double-wishbone front suspension	S	S
Aluminum 5-link Integral rear suspension	S	S
Active Roll Stabilization (ARS)	ZSP/OPT	ZSP/OPT
Dynamic Damping Control with Comfort, Normal & Sport modes	S	S
Self-leveling rear suspension with air springs	NA	S
Vehicle-speed-sensitive variable-assist, variable-ratio rack-and-pinion power steering	S	S
Integral Active Steering	ZSP	ZSP
4-wheel ventilated disc brakes with aluminum/cast-iron front rotors	S	S
Electromechanical parking brake	S	S
Automatic Hold	S	S
Dynamic Stability Control with Dynamic Traction Control, electronic limited-slip differential	S	S
18 x 8.0 Star Spoke alloy wheels, design #250	S	S
19 x 8.5 front/19 x 9.5 rear alloy wheels: Radial Spoke design #252	ZSP	ZSP
Multi-Spoke design #235	ZSP/OPT	ZSP/OPT
245/50R-18 run-flat all-season tires	S	S
245/45R-19 front / 275/40R-19 rear run-flat performance tires ³	ZSP/OPT	ZSP/OPT
Tire Pressure Monitor	S	S

1 – VANOS = VArIable NOckenwellen Steuerung = variable camshaft control, or variable valve timing.

2 – Also affects steering ratio if vehicle is equipped with Integral Active Steering (Sport Package).

3 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 7 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

ZCV – Convenience Package

ZDA – Driver Assistance Package

ZSP – Sport Package

S – Standard

OPT – Optional

NA – Not available

Standard & optional features

2009 7 Series

Bold within table indicates new feature for 2009.

Comfort & convenience	750i	750Li
Vehicle & Key Memory with Personal Profile user-specific settings	S	S
Keyless entry with multi-function remote control:		
Selective unlocking	S ⁴	S ⁴
Comfort Access	ZCV	ZCV
Stepless door checks	S	S
Soft-close doors	ZCV	ZCV
Dual power/heated/auto-dimming/power-folding exterior mirrors	S	S
Automatic tilt-down of right exterior mirror for visibility of low obstructions when backing up	S	S
BMW Universal Transceiver (3-function garage-door opener)	S	S
Comprehensive lighting amenities:		
Welcome Light (automatic switch-on of front luminous rings, taillights, license-plate lights, ground lighting & interior lights upon unlocking & locking vehicle)	S	S
Fade-in/fade-out operation of interior lights	S	S
Actuation from remote	S	S
Ground lighting in exterior door handles	S	S
Illuminated doorsills	S	S
Front & rear left/right reading lamps	S	S
BMW Ambiance Lighting, including front & rear center, door handles & storage pockets, back sides of front backrests	S	S
Illuminated visor vanity mirrors	Front	Front & rear
Illuminated 2-section front console compartment	S	S
Front & rear footwell illumination	S	S
Leather-wrapped power tilt/telescopic steering wheel with fingertip cruise, audio & phone controls, auto tilt-away for entry & exit	S	S
Sport steering wheel with same features	ZSP	ZSP
Heated steering wheel	ZCW	ZCW
Dynamic cruise control	S	S
Active Cruise Control with Stop-and-Go function & Frontal Collision Warning System	OPT	OPT
Instrument cluster with Black Panel technology	S	S
Head-up Display	OPT	OPT
Condition-Based Service system	S	S

Comfort & convenience (cont.)	750i	750Li
Integrated owner's manual via iDrive	S	S
20-way power/heated front Comfort seats, including articulated upper backrests, adjustable backrest width & thigh support, active head restraints with adjustable side support, easy-entry feature	S	S
Memory system for both front seats, steering wheel & exterior mirrors, 2 settings per user	S	S
Active Support feature on driver's seat	ZLS	ZLS
Active Ventilation feature, both front seats	ZLS	ZLS
Automatic ventilation function for use in parked vehicle	S	S
Balance control for heated front seats	S	S
Heated rear seats	ZCW/ZLS	ZCW/ZLS
12-way power rear Comfort seats, including 4-way lumbar support, head-restraint height & automatic retraction, Active Ventilation	NA	ZLU⁵
Active Support rear seats ("massage seats")	NA	OPT⁶
Check Control vehicle monitor system, with information displayed in main instrument cluster	S	S
Nappa leather upholstery	S	S
Nappa leather-trimmed upper instrument panel & door panels	OPT	OPT
Fine Line high-gloss wood interior trim	S	S
Fine Line matte wood interior trim	NC	NC
Ash Grain wood interior trim	NC	NC
Ceramic trim on controls	OPT	OPT
Power windows with key-off operation, 1-touch open/close, anti-trapping feature	S	S
4-zone automatic climate control with full left/right temperature & air-distribution controls, automatic recirculation control, draft-free air delivery , misting control, bi-directional solar sensor, temperature-controlled rear air outlets, activated-charcoal ventilation & other features	S	S
Power 2-way Contour Moonroof with 1-touch operation, power interior shade & vehicle-speed-sensitive wind deflector	S	S

4 – Selectable via iDrive.

5 – Requires Luxury Seating Package.

6 – Requires Luxury Seating Package & Luxury Rear Seating Package.

ZCV – Convenience Package

ZCW – Cold Weather Package

ZDA – Driver Assistance Package

ZLS – Luxury Seating Package

ZLU – Luxury Rear Seating Package

ZSP – Sport Package

S – Standard

OPT – Optional

NC – No extra cost

NA – Not available

Standard & optional features

2009 7 Series

Bold within table indicates new feature for 2009.

Comfort & convenience (cont.)	750i	750Li
2nd-generation iDrive system with 10.2-in. high-resolution control display, GPS Navigation; direct-select radio, CD, phone & Navigation menus; 8 Programmable Memory Keys, Voice Command, Real Time Traffic Information & other features	S	S
AM/FM/CD/DVD audio system with 12 speakers, Radio Data System (RDS), in-dash single-disc CD/DVD player, auxiliary audio input & FM diversity antenna system; includes front center-fill speaker & 2 subwoofers	S	S
Logic7 audio system w/ 16 speakers , Digital Sound Processing, Surround Sound; includes upgraded audio power & components, all features of standard system	ZPS	ZPS
6-disc DVD changer	ZPS	ZPS
80-GB hard drive providing data storage for Navigation, audio, phonebook & Voice Command; ripping capability from CD, MP3 player or USB stick	S	S
HD Radio	S	S
Auxiliary audio input	S	S
iPod/USB Adapter	ZPS	ZPS
Smartphone Integration	OPT⁷	OPT⁷
Rear Seat Entertainment with dual monitors	OPT	OPT
Satellite Radio with 1-year subscription	OPT	OPT
Bluetooth cellphone interface with high-capacity phonebook download	S	S
Power outlets in front ashtray/storage tray, center console & front passenger footwell	S	S
Seatback storage compartments	S	S
Power rear-window & rear door-window sunshades	ZLS/OPT	ZLS/OPT
Trunk opening from remote or interior	S	S
Fully finished trunk with inside trunk release	S	S
Soft Close trunklid	S	S
Automatic trunk opening & closing	ZCV	ZCV
Ski bag	ZCW	ZCW
Safety & security	750i	750Li
Dynamic Stability Control (DSC), including Dynamic Traction Control, electronic brake proportioning, antilock braking (ABS), cornering/braking stability enhancement, Brake Fade Compensation, Brake Standby, Brake Drying, electronic limited-slip differential	S	S

Safety & security (cont.)	750i	750Li
Night Vision with pedestrian detection	OPT	OPT
Rearview camera	ZCE	ZCE
Sideview cameras	ZCE	ZCE
High Beam Assistant	ZDA	ZDA
Lane Departure Warning	ZDA	ZDA
Blind Spot Detection	ZDA	ZDA
Dual front-impact airbag Supplementary Restraint System (SRS) with dual-threshold deployment, 2-stage Smart Airbags	S	S
Active head restraints, front seats	S	S
Safety belts with automatic tensioners & force limiters at all seating positions	S	S
Automatic pre-tensioning of front safety belts upon emergency braking (reversible)	S	S
LATCH attachments in rear seat for installation of child restraint seats	S	S
Front- & rear-seat Head Protection System	S	S
Front-seat side-impact airbags	S	S
Advanced Crash Safety Management for deployment of safety systems	S	S
Post-impact safety measures:		
Unlocking of central locking system	S	S
Switch-on of hazard flashers	S	S
Switch-on of interior lighting	S	S
Disconnect of alternator, fuel pump & starter from battery (via Battery Safety Terminal)	S	S
BMW Assist, including Enhanced Automatic Collision Notification , SOS button, Enhanced Roadside Assistance, TeleService [®] , BMW Assist Safety Plan [®]	S	S
Central locking system with double-lock anti-theft feature, selective unlocking	S	S
Coded Driveaway Protection	S	S
Pathway Lighting	S ⁹	S ⁹
Alarm system with operation from remote, interior motion detector	S	S

7 – Requires Premium Sound Package.
 8 – Requires BMW Assist annual fee after 4th year.
 9 – Duration adjustable via iDrive.
 ZCE – Camera Package
 ZCV – Convenience Package

ZCW – Cold Weather Package
 ZDA – Driver Assistance Package
 ZLS – Luxury Seating Package
 ZPS – Premium Sound Package
 S – Standard
 OPT – Optional

Technical specifications

2009 7 Series

Virtually all specifications are new for 2009.

General	750i	750Li
Curb weight, lb.	4564	4640
Weight distribution, front/rear, %	51.4/48.6	51.5/48.5
Wheelbase, in.	120.9	126.4
Track, front/rear, in.	63.4/65.0 ¹	
Length, in.	199.7	205.2
Width, in.	74.9 ¹	
Height, in.	58.3 ¹	

Accommodations	750i	750Li
Seating capacity, persons	5 ¹	
Shoulder room, front/rear, in.	59.2/57.4	59.2/57.6
Head room, front/rear, in.	39.3/38.3	39.6/38.9
Leg room, front/rear, in.	41.2/38.4	41.2/44.3
EPA passenger volume, cu ft.	106.4	114.9
EPA cargo volume, cu ft.	14.0 ¹	

Body	750i	750Li
Type	4-door sedan ¹	
Aerodynamic drag coefficient	0.31 ¹	
EPA size classification	Large ²	

Engine & electrical	750i	750Li
Engine type	DOHC (4-cam) 32-valve V-8, direct fuel injection with piezo injectors, twin turbochargers, Double VANOS ³ steplessly variable intake- & exhaust-valve timing ¹	
Bore x stroke, mm/in.	89.0 x 88.3/3.50 x 3.48	
Displacement, cc/cu in.	4395/268	
Compression ratio	10.0:1	
Power @ rpm, hp	400 @ 5500-6400	
Torque @ rpm, lb-ft.	450 @ 1800-4500	
Engine-management system	Motronic MSD851	
Fuel requirement	Premium unleaded	
Fuel capacity, U.S. gal.	21.7 ¹	
Battery capacity, amp-hr.	70 ¹	
Alternator output, amp./W	210/2940 ¹	

Drivetrain	750i	750Li
Drive system	Front engine/rear drive ¹	
Automatic transmission	ZF 6 HP 26 TU, 6-speed ¹	
Ratios: 1st	4.17:1 ¹	
2nd	2.34:1 ¹	
3rd	1.52:1 ¹	
4th	1.14:1 ¹	
5th	0.87:1 ¹	
6th	0.69:1 ¹	
Reverse	3.40:1 ¹	
Final drive ratio	3.46:1 ¹	

1 – Specification applies to both models.

2 – At very low speed.

3 – VANOS = **V**ariable **N**ockenwellen

Steuerung = variable camshaft control, or variable valve timing.

Technical specifications

2009 7 Series

Virtually all specifications are new for 2009.

Chassis	750i	750Li
Body/frame construction	Unitized all-steel structure with aluminum hood, front side panels, doors & roof	
Front suspension	Multi-link double-wishbone system: aluminum upper & lower lateral links (double-pivot lower links), steering knuckle; coil springs, Dynamic Damping Control with adjustable twin-tube gas-pressure shock absorbers, anti-roll bar ¹ ZSP: Active Roll Stabilization ¹	
Rear suspension	5-link Integral V suspension with aluminum upper & lower links & wheel carriers; coil springs (750i), self-leveling air springs (750Li); Dynamic Damping Control with adjustable twin-tube gas-pressure shock absorbers, anti-roll bar ¹ ZSP/optional: Active Roll Stabilization ¹	
Steering system: Standard	Variable-ratio rack & pinion, vehicle-speed-sensitive power steering with variable assist level ¹	
Optional Integral Active Steering (ZSP)	Rack & pinion front steering, vehicle-speed-sensitive ratio & assist; vehicle-speed-sensitive rear-wheel steering up to 3° via servo motor & spindles ¹	
Overall ratio, standard steering	Mechanically variable; mean ratio is 19.1:1	
Overall ratio, Integral Active Steering	Electronically variable over wide range	
Turns lock-to-lock: standard steering	3.1 ¹	
Integral Active Steering, min.	2.1 ¹	
Turning circle, ft.: standard steering	40.0	41.7
Integral Active Steering	37.7 ²	39.4 ²

Chassis (cont.)	750i	750Li
Brakes	4-wheel ventilated discs with lightweight aluminum/cast-iron rotors, aluminum front/cast-iron rear calipers ¹	
Diameter, front, mm/in.	374/14.7 ¹	
Diameter, rear, mm/in.	370/14.5 ¹	
Wheels (standard)	Cast alloy, 18 x 8.0 ¹	
Wheels (optional)	Cast alloy, 19 x 8.5 front/ 19 x 9.5 rear (ZSP or stand-alone option) ¹	
Tires (standard)	245/50R-18 run-flat all-season ¹	
Tires (optional)	245/45R-19 front / 275/40R-19 rear run-flat performance ^{1,4}	
Stability-enhancement system	Dynamic Stability Control (DSC); includes Dynamic Traction Control, electronic brake proportioning, antilock braking (ABS), cornering/braking stability enhancement, Brake Fade Compensation, Brake Standby, Brake Drying, electronic limited-slip differential	

Performance data	750i	750Li
Acceleration, 0-60 mph, sec. ⁵	5.1	5.2
Top speed, mph	150 ^{1,6}	
EPA estimated MPG, city/highway	TBD	TBD

1 – Specification applies to both models.

2 – At very low speed.

4 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 7 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

5 – BMW AG test results. Actual acceleration results may vary depending on specification of vehicle; road and environmental conditions; testing procedures and driving style. These results should be used for comparison only, and verification should not be attempted on public roads. BMW urges you to obey all posted speed limits and to please wear your safety belt at all times.

6 – Electronically limited.
TBD – To be determined.

2009 BMW 6 Series:

New iDrive features, an updated BMW Individual Composition and a more dramatic Sport Package keep BMW's luxury-sports Coupe and Convertible fresh.

"Whoa, mama – this has to be one of the best pieces on the road," raved *AutoWeek* in its May 7, '07 issue. "The smooth V-8 and slick 6-speed combine for perfect control over the powertrain, while all the BMW suspension bits, steering and brakes handle the rest. Put it all together in a superquiet cabin with one of the most stylish wrappers on the road today, and the 6 Series is clearly a car for those few who appreciate automotive perfection when they see it. For someone who has a few bucks and no more than two kids, this is as good as it gets."

But then it got better for '08, with a round of updates that included freshened exterior design and functions, a new Sport automatic transmission, functional and esthetic improvements to the interior, numerous new options and a lavish BMW Individual Composition to take the 6 to the pinnacle of luxury and distinction. For '09 it gets still better. A new-type iDrive controller is augmented by user-friendly direct-select keys. The Individual Composition gets new exterior and interior colors, and the Sport Package becomes a much more comprehensive sport treatment for both models. Here are the details:

What's new for 2009

As of 9/08 production:

Comfort & convenience

- New iDrive controller, with 7 direct-select buttons clustered around it (essentially same as new 7 Series arrangement)

Options & packages

- Sport Package adds new features:
 - Sportier exhaust sound
 - Hood with additional character lines, raised center section
 - Black Chrome exhaust tips
 - Anthracite-color headliner (Alcantara material in Coupe only)
 - Exclusive exterior colors for Package-equipped vehicles: Imola Red and Carbon Black Metallic; otherwise limited color selection
- BMW Individual Composition:
 - Azurite Black Metallic replaces Midnight Blue Metallic exterior color
 - Ruby Black Metallic replaces Brilliant White Xirallic
 - Rust Brown replaces Canyon Brown interior color
- Smartphone Integration

6 Series models & key features

This information lists major features, and helps position and distinguish the models in the Series. For a comprehensive summary of features, see pages 156-161.

650i Coupe

Graceful sport-luxury Coupe offering luxurious 2+2 accommodations in a closed-body format; powered by BMW's 4.8-liter, 360-hp V-8 engine and offered with a no-extra-cost choice of 6-speed manual transmission or the advanced, enjoyable Sport automatic transmission.

Exterior design & function

- Xenon Adaptive headlights with dynamic auto-leveling
- Halogen free-form front foglights
- High-intensity headlight cleaning system
- Rain-sensing windshield wipers
- Power-folding exterior mirrors
- Choice of standard or metallic paints at no extra cost
- Park Distance Control, front and rear
- Advanced weight-saving materials: aluminum front-end structure, hood and doors; thermoplastic front fenders; Sheet Molding Compound trunklid

Performance & efficiency

- 4.8-liter DOHC 32-valve V-8 engine with Valvetronic variable intake-valve lift, Double VANOS¹ variable intake- and exhaust-valve timing, 2-stage induction system and aluminum construction; 360 hp/360 lb-ft.
- Choice of 6-speed manual or Sport automatic transmission
- Aluminum double-pivot strut-type front suspension
- Aluminum 4-link Integral rear suspension
- Active Roll Stabilization (ARS), standard
- Vehicle-speed-sensitive variable-assist, variable-ratio rack-and-pinion power steering
- 4-wheel ventilated disc brakes
- 18 x 8.0 alloy wheels, Star Spoke design #248

- 245/45R-18 run-flat all-season tires²
- Dynamic Stability Control
- Tire Pressure Monitor

Comfort & convenience

- Power tilt/telescopic leather-wrapped steering wheel with auto tilt-up
- Dual power/heated auto-dimming interior and exterior mirrors
- 12-way power front seats with easy-entry feature
- Memory system for driver's seat, steering wheel and exterior mirrors
- iDrive system with GPS Navigation, Voice Command, Real Time Traffic Information; new direct-select keys for CD, radio, phone and Navigation menus plus Menu, Back and Option keys; and other features
- Dakota leather upholstery
- Brushed Aluminum interior trim
- Power door windows with 1-touch open/close
- Automatic climate control with separate left/right controls
- Power tilting glass Panoramic moonroof
- Anti-theft AM/FM/CD/MP3 audio system with Radio Data System, 8 speakers
- Bluetooth cellphone interface

Safety & security

- Dual-airbag Supplementary Restraint System
- Front safety belts with automatic tensioners and force limiters
- Front-seat Active Head Restraints

1 – VANOS = **V**ariable **N**ockenwellen **S**teuerung = variable camshaft control, or variable valve timing.

2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 6 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

6 Series models & key features

This information lists major features, and helps position and distinguish the models in the Series. For a comprehensive summary of features, see pages 156-161.

- Front-seat Head Protection System
- Front-seat side-impact airbags
- Active Knee Protection
- Coded Driveaway Protection
- Anti-theft alarm system
- BMW Assist Safety Plan with 4-year subscription
- Pearl leather upholstery + Nappa leather instrument-panel trim
- Dark Birch wood interior trim
- Maple wood interior trim

Options & packages

- Available option packages:
 - Sport Package (19-in. forged wheels in differentiated front/rear sizes with performance tires, sporty exhaust system with chrome tips, specially contoured hood, limited exterior color selection but available exclusive exterior colors, Shadowline exterior trim, front sport seats, Anthracite-color Alcantara headliner)
 - Premium Sound Package (Logic7 audio system, 6-disc CD changer, iPod/USB Adapter)
 - Cold Weather Package (heated steering wheel, heated front seats, ski bag)
 - BMW Individual Composition (extensive exterior and interior features, special wheels)
- Stand-alone options:
 - Sport automatic transmission
 - Active Steering
 - 19-in. wheels in differentiated front/rear sizes with performance tires (different wheel design from that in Sport Package)
 - Active Cruise Control
 - BMW Individual exterior colors (require BMW Individual Composition)
 - Night Vision
 - Lane Departure Warning
 - High Beam Assistant
 - Comfort Access
 - Head-up Display
 - Sirius Satellite Radio
 - HD Radio

650i Convertible

With essentially the same 2+2 seating, an innovative softtop and Convertible-specific safety features, one of the most exciting open-bodied luxury-performance automobiles ever built. Compared to 650i Coupe, this model's points of differentiation include:

- Convertible-specific body structure
- Fully automatic, fully lined power softtop of unique design
- Different acceleration and fuel-economy data (Convertible weighs more than Coupe)
- Power rear side windows, vs. fixed
- All-window operation via one switch
- Retractable rear window; can be lowered with top up for flow-through ventilation, or raised with top down for draft control
- Unique front seats, with seat-integrated safety belts, power head-restraint/belt-height adjustment and power easy-entry feature
- Leather on seats, armrests, head restraints and shift knob has Sun Reflective technology
- Sport Package headliner newly in Anthracite color, but in fabric (Coupe: Alcantara)
- Rollover Protection System instead of Head Protection System
- Variable softtop storage compartment; maximizes trunk space when softtop is raised
- Available Logic7 audio system has 11 speakers
- Available wind deflector, BMW center-installed

6 Series key features

Except as noted, both current 6 Series models offer the following features:

Exterior & aerodynamics

The look: esthetics and function

With this performance-luxury Coupe and Convertible line, the Bavarian automaker shows in yet another way “what it can do” in terms of contemporary design. From the bold BMW “kidney” grilles and the freely shaped lighting clusters flanking them... through a very long hood signifying power... through a sleek and graceful silhouette... to BMW’s characteristic (and “highly” functional) rear deck: This is BMW in the 21st century. And this is 4-wheeled excitement.

Technology of the body: strong and light structure

Though the structure and hood are of aluminum as on the 5 Series, the front side panels are of thermoplastic. Chosen primarily for the “formability” that makes the elegant turn-signal repeaters possible, this material saves weight similarly to aluminum. On the other hand, the doors are aluminum, vs. steel on the 5 Series; these also save pounds and there was no comparable esthetic reason to make them of plastic. Finally, the SMC rear deck, yet another weight-saver, offers extra resistance to bending – important in a large-area component like this. (Structural Engineer Ralf Grün notes that in a 50-mph rear-impact crash test, the trunklid did not break!)

Even the hood tells a materials story. Its aluminum outer and inner skins – the latter essential to its strength – are bonded together with an advanced adhesive that gives it both longitudinal strength (a factor in crash-energy absorption) and vibration resistance.

At the bottom line of all these materials is an automobile that’s impressively light for its strength and performance: The Coupe body/chassis unit, complete with doors, hood and trunklid, weighs just 728 lb.

In keeping with BMW’s policy of relatively even front/rear distribution, the Coupe’s weight distribution is 52.6% front/47.4% rear; the Convertible is even more precisely balanced, with 49% front/51% rear.

Convertible structural details

It’s an unavoidable rule: remove the roof, lose rigidity. Automotive body engineers beef up the lower body to compensate. Measures taken to ensure the Convertible’s structural integrity include:

- Additional diagonal braces, front and rear
- Specific front subframe
- Front thrust plate of 3-mm aluminum, vs. 2.5 mm on Coupe
- Specific reinforcements to side sills (rocker panels)
- Strengthened attachment of B-pillar to lower body
- Reinforced attachments for diagonal braces at rear subframe
- Lateral lower-body reinforcement

Measures relating to rollover integrity:

- Ultra-strong windshield frame
- Rollover Protection System

(For information on the last two items, see **safety & security**.)

The windshield frame is made in an “inside high-pressure forming” process that optimizes strength without rendering it unduly bulky or heavy. Under high heat, the frame is formed with oil inside it, which ensures even distribution of the forming pressure and thus consistent wall thickness.

6 Series key features

Except as noted, both current 6 Series models offer the following features:

Between this immensely staunch windshield frame and the automatic Rollover Protection System, the Convertible has in effect its own “rollover cage.”

In terms of torsional rigidity – an important measurement of a vehicle body’s resistance to twisting and thus squeaks – the Convertible attains 15,000 Newton-meters per degree without windshield glass; impressively, this is slightly more rigid than the Coupe with the opening for its Panoramic moonroof, also without its glass panes.

Switzerland’s *Automobil Revue* (March 17, '04) credited the Convertible’s impressive structure with “astounding torsional rigidity.”

With all glass panes in place – the rear side windows are fixed – the Coupe will of course have greater rigidity than the Convertible. But the 650i Convertible is certainly one of the strongest open 4-seaters ever offered.

Aerodynamics: not just on the surface, but also underneath

The 6 Series’ exterior shape implies excellent aerodynamics. Yet there are also details – some small but fascinating – that help these beautiful automobiles achieve smooth progress through the air.

One such detail, and an important contributor to excellent aerodynamics, is the very extensive underbody fairing, reaching from just behind the front bumper nearly back to the rear suspension. As on the 5 Series, the material used for the largest portion of the underbody fairing is Superlite, which is some 40% lighter than materials previously used for such cladding.

Rain-sensing windshield wipers with advanced wiper-blade design

“Soft” windshield wipers dispense with the usual metal reinforcements in their blades. Though these don’t make a big contribution to a low aerodynamic drag coefficient, they do operate more quietly at high speeds, because they need no “fin” on the wiper arm to hold them against the windshield. They can also be adjusted for optimum fit to the windshield contours, and replacement of worn blades is easier than before.

Standard headlight cleaning system

BMW’s high-intensity headlight cleaning system is standard on both 6 Series models.

Standard Park Distance Control

Park Distance Control (front and rear) is also standard equipment on both 6 Series models.

Performance & efficiency

4.8-liter DOHC (4-cam) 32-valve V-8 engine with Valvetronic (both models)

Widely acclaimed by virtually all who have driven or tested the BMW models it powers, this unique and advanced engine endows the 650i Coupe and Convertible with not merely strong, relatively fuel-efficient power, but also enticing sonorities. “The familiar attributes of this V-8,” commented Switzerland’s authoritative *Automobil Revue* in its September 20, '06 issue of the then-new 4.8-liter engine, “ – good elasticity, linear power delivery, smooth running and rpm capability – are retained. The typical V-8 rumble is even more prominent, signaling to all within earshot, ‘Here comes Kurt!’”

AutoWeek (August 7, '06) reported that one editor noted, "Not once did I see a space in traffic or a merge I couldn't get to due to lack of oomph. Frankly this car hauls Bangle butt," and added that "The V-8 coupled with the smooth-shifting 6-speed manual is a joy to operate."

In the 6 Series Coupe, the V-8 delivers 0-60-mph times of 5.3 sec. with manual transmission, 5.4 with the STEPTRONIC automatic; in the Convertible the number is 5.6 sec for manual, 5.7 for automatic. For a detailed description of this amazing engine, see **BMW features**, pages 35-36 and 27-28.

6-speed manual transmission (standard both models)

This is the ZF Type G, the heaviest-duty of current BMW 6-speed gearboxes. Shared with the 550i, all models powered by the new twin-turbo 6-cylinder, and even the M5 and M6, it is relatively light, yet robust enough to handle the torque of the V-8 engine.

6-speed Sport automatic transmission

(optional at no extra cost, both models)

This is BMW's sportiest automatic transmission; it is described in **BMW features** on page 41. In the 6 Series it is controlled by an E-shift lever and steering-wheel shift paddles, also described in **BMW features** (page 40).

Driving Dynamics Control (Sport button)

(standard both models)

When the 6 Series driver selects DDC's Sport mode via the Sport button on the console, an LED in the button illuminates and vehicle behavior is modified as follows:

- The engine's response to the accelerator is "quicker."

- With the automatic transmission, automatic shifts occur more "sharply" or quickly, and at higher road/engine speeds. (Shifts occur even more quickly than when Sport is selected via the shift lever.)
- Steering power assist (with standard steering only, not Active Steering) is reduced.

The scope of the Driving Dynamics Control varies according to Series; for a pan-Series overview, see **BMW features**, page 50.

Overall chassis concept

With the 6 Series, BMW advances the state of the art in handling, ride and braking capabilities yet another step. The 6 Series chassis is of course related to the 5 Series, and being somewhat more compact than the 5, is a bit more agile than even that very agile Sedan/Sports Wagon Series. Virtually every suspension component and every kinematic factor have been specifically tailored to the 6 Series' trim, low build; the standard suspension settings put the accent on handling to such a degree that the Sport Package does not need a sportier calibration. Active Roll Stabilization is standard. So is Servotronic power steering; Active Steering is optional. Brake dimensions correspond to those of the 535i and 550i, and also share those models' weight-saving aluminum/cast-iron construction.

Front suspension: full aluminum, specific 6 Series kinematics

The front suspension system is a further evolution of BMW's aluminum double-pivot system; its general concept and design are shared with other Series, but specific characteristics, dimen-

6 Series key features

Except as noted, both current 6 Series models offer the following features:

sions and kinematics – including the 6's lower ride height and center of gravity – endow this Series with its own, definitively sporty handling and riding characteristics.

Double-pivot is a BMW system that has proven benefits in handling stability and response. In the 6 Series, most of its components are of aluminum, which reduces unsprung weight and thus optimizes the suspension's response to irregular road surfaces. In less technical terms, this simply means that when a wheel encounters a bump, it offers less resistance and inertia and deals with that bump more willingly. In turn, this allows the suspension engineers to achieve a supple ride in combination with precise, responsive and enjoyable handling.

Aluminum components include:

Unsprung –

- Both lower arms (two per side)
- Steering knuckles
- Strut tubes

Sprung (reduce vehicle weight but don't improve ride or handling) –

- Spring pads
- Subframe
- Thrust plate
- Steering rack.

Other aluminum components in this area, though not part of the suspension system, save further weight: engine mounting brackets, transmission crossmember and mounting brackets, power-steering pump housing.

Key customer-relevant distinctions between the 6 and 5 Series front suspension (650i vs. 550i) include:

- Stronger self-centering feel in steering
- Shorter wheel travel in jounce (80 vs. 100 mm, 3.15 vs. 3.94 in.)

- Shorter wheel travel in rebound (100 vs. 110 mm, 3.94 vs. 4.33 in.)
- Firmer springs and shock absorbers compared to standard 550i calibration, not quite as firm as 550i sport calibration.

Rear suspension system: here too, specific calibration of a proven system

Like the 5 Series, the 6 employs BMW's Integral rear suspension system in its 4-link version. (The new 7 Series has a 5-link version of the same concept.)

Highly refined rear suspension is particularly important in high-performance rear-wheel-drive vehicles; a complex multi-link system like this controls rear-wheel angles very precisely, minimizing unwanted effects under load changes (such as lifting off the gas while cornering, and hard acceleration or braking) and achieves a remarkably comfortable ride.

Here, parallel to the 7 and 5 Series, aluminum is extensively employed. Because supple reaction of the suspension to bumps is especially critical for good road adhesion at the powered rear wheels, the benefits are if anything more important here than at the front. Aluminum components include:

Unsprung –

- All links of 4-link Integral system
- Shock-absorber tubes

Sprung –

- Subframe
- Spring pads.

Key customer-relevant distinctions between the 6 and 5 Series rear suspension (650i vs. 550i) include:

- Wider rear track, 62.7 vs. 62.3 in.
- Greater negative camber, 2 vs. 1.5 degrees (wheels lean in more at top)
- Lower roll center

- Shorter wheel travel in jounce (80 vs. 100 mm, 3.15 vs. 3.94 in.)
- Shorter wheel travel in rebound (100 vs. 120 mm, 3.94 vs. 4.72 in.).

The aluminum subframe, which carries the entire rear suspension system and final drive (differential), is mounted to the main structure with four large rubber bushings that help absorb road shocks. The final drive unit is mounted to the subframe through its own rubber bushings.

Standard Active Roll Stabilization

This remarkable feature, which enables the 6 Series to corner amazingly “flat” with minimal body roll, is described in **BMW features** on pages 53-54.

Variable-ratio steering with Servotronic power assist

In essence the standard 6 Series steering system is like that of the 5 and 7 Series: thus a variable-ratio rack-and-pinion system with Servotronic vehicle-speed-sensitive variable power assist. BMW power-steering concepts and systems are explained in **BMW features** on pages 48-50.

Innovative brakes: abundant stopping power, weight-saving technology

An innovative, weight-saving construction of the brake discs is standard on both 6 Series models. In this construction, patented by BMW, the brake rotor (disc) consists of two sections: the high-carbon cast-iron outer portion, which functions conventionally as the surface onto which the brake pads grip to slow or stop the vehicle; and an aluminum “hat” in the center,

which mounts the rotor to the vehicle. For further details, see **BMW features**, pages 51-52.

The front brake calipers are of aluminum, which further reduce unsprung weight. Thus with the 6 Series, BMW has again taken the lead in combining top handling with amazing riding comfort.

Wheels and tires: 18- or 19-in. equipment, run-flat standard

Standard 6 Series wheel/tire equipment encompasses 18 x 8.0 alloy wheels in a V Spoke design (#248) with five V-shaped pairs of spokes; these carry 245/45R-18 run-flat performance tires² that give standard-equipped 650i models excellent all-around performance and traction.

Included in the Sport Package for both models are 19-in. wheels in a Star Spoke design (#249) with five wide single spokes; these are 8.5 in. wide at the front, 9.0 wide at the rear. The Sport Package wheels are of forged, rather than the usual cast, construction. This costlier process saves unsprung weight and thus improves riding comfort; it also results in a finer, more elegant finish.

At 245/40R-19², the front tires are the same width as the standard ones but with a lower-profile cross-section; the rears move up to 275/35R-19². Also of run-flat construction, these Sport Package tires are performance-type, and thus what are sometimes referred to as “summer” tires.

2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 6 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

6 Series key features

Except as noted, both current 6 Series models offer the following features:

Another alternative is the stand-alone option of differently designed 19-in. Star Spoke wheels (#218, with 10 spokes) and performance tires.

Although run-flat tires have a reputation for a relatively hard ride, BMW's talented handling-and-ride engineers have, typically, risen above the usual compromises. Wrote Switzerland's authoritative *Automobil Revue* in its test of the 650i Convertible on September 20, '06: "In its as-tested configuration [with Active Steering], the 650i showed itself to be a class act, walking the line between pleasant riding comfort and sportscar-like dynamics."

Because both of its models come with run-flat tires, the 6 Series was designed without a spare wheel/tire; this contributes to the Series' generous trunk capacity.

Comfort & convenience

The 2+2 concept

As befits a high-end BMW performance-luxury Coupe/Convertible line, the 6 Series presents luxurious, ergonomically engineered 2+2 accommodations for its fortunate driver and passengers. In an atmosphere of tasteful design and high-caliber materials, typical BMW attention to instrumentation, controls and seating supports attentive, yet relaxed driving and pleasant, comfortable riding. The cabin is intimate, but also roomy for the two front occupants; "occasional" rear seating is equally inviting and offers sufficient space for shorter trips.

Such an elegant space for enjoying the 6 Series' magnificent road capabilities is part of the reward for discerning buyers that these BMW sports models represent.

Control center: contemporary BMW design in an elegantly sporty form

With its traditionally configured instrument cluster and iDrive-dominated center dash area, the 6 Series presents the sportiest interpretation of the iDrive-centered cockpit concept yet.

This layout is different from all the other Series, in that the trim material (Brushed Aluminum is standard) does not extend all the way across the dash; instead, it is concentrated in the center area, and repeats on the right side above the glove compartment. Graceful sweeps of certain surfaces – from dash top into door panel, for example – lend elegance and visual interest while contrasting materials set visual and tactile accents.

Advanced material for instrument panel

The 6 Series employs an advanced material for the molded instrument-panel forms. Called TPU (Thermoplastic Urethane), the material helped make it possible to achieve such precisely complex design features as the contour that begins just under each A-pillar and sweeps gracefully back into the door. One no longer sees the line where a deploying passenger-side airbag would open on the dash's right side, and precisely drawn color divisions have been achieved on the same molding (thus not necessarily at a junction between two pieces). The surface grain is identical to that in the 5 Series, but the underlying material and forming process are unique to the 6 Series.

Control strategy: an overview

GPS Navigation and Voice Command are standard; the 6 Series Car Communication Computer (i.e. the entire iDrive system) is essentially identical to that in the 5 Series with optional GPS Navigation.

In its control strategy, the 6 Series closely resembles the 5 Series:

- Console shift lever, controlling the manual or automatic transmissions described earlier; E-shift for the automatic.
- Power-seat controls on the seats' outboard edges.
- Traditional pull-up handbrake as in 5 Series.
- A visual driver orientation. As in the 5 Series, this is underscored by the handbrake on the driver's side of the stylishly asymmetrical console.

The instrument cluster

The 6 Series instrument cluster features two main analog dials, two lower fields of digital displays between them, and an upper field of indicators, warnings and graphic displays.

Each of the two round dials has a disc-type "pointer" that rotates behind the dial face to indicate –

- On the speedometer, the cruise-control speed setting
- On the tachometer, the variable warning segment.

The two main dials include these distinctions from the 5 Series dials:

- Chronometer design, with finer scale graduations (speedometer 2 mph, tachometer 100 rpm)
- An oil-temperature gauge at the bottom of the tachometer, in place of the 5 Series' fuel-economy indicator.

Premium lighting features

In addition to the familiar left/right front reading lights and BMW Ambiance Lighting that emanates from above the windshield to softly illuminate the console area at night, the 6 Series incorporates additional premium lighting features:

- LED ground lighting in the exterior mirror housings. Switches on with the interior lighting, including when the vehicle is unlocked via the remote. Brightness is controlled along with that of the instrument lighting.
- Illuminated doorsills
- Illumination of interior door handles
- Illumination of door storage bins via LED, similar to overhead Ambiance Lighting.

Auto-dimming interior and exterior rearview mirrors

Providing maximum protection from the glare of following vehicles' headlights and foglights, these are standard on both 650i models. Power-folding exterior mirrors are also standard.

Power-window features

6 Series specific features include: Both models –

- 1-touch open/close door windows with anti-trapping feature
- Power door-sealing system for door windows, as in other 2-door BMW models.
- Windows may be opened from the outside by pressing and holding the remote's "unlock" button.

Convertible only –

- 1-touch open-only rear side windows with anti-trapping feature
- Retractable rear window.

The Convertible's power-window control panel adds two switches: for all windows (including the rear window) and one for the rear window only. When the user

6 Series key features

Except as noted, both current 6 Series models offer the following features:

selects one or the other of these, the left- or right-rear switch (respectively) performs the selected function once, then reverts to its usual function.

3-spoke sport steering wheel

Both models come standard with a 3-spoke sport steering wheel of 379-mm/14.9-in. diameter, with elegant Brushed Aluminum trim on the spokes. The multi-function controls – including two programmable switches – are conveniently arrayed on the wide horizontal spokes. The wheel is power-adjustable over a range of 42 mm/1.7 in. tilt and 40 mm/1.6 in. telescopic. When the remote is removed from its slot, or in vehicles with Comfort Access when Start/Stop button is actuated a second time after engine shutoff, the wheel rises to its highest position (automatic tilt-up) for ease of exit and entry.

Optional steering-wheel heating is controlled by a switch on the steering column's left side.

Evolved iDrive system

Whereas the 5 Series comes standard with a 6.5-in. color monitor with four menu directions and offers GPS Navigation with larger monitor as an option, the 6 Series incorporates the “high” version (CCC=Car Communication Computer) as standard equipment. This means the following key features:

- 8.8-in. monitor (control display) with higher resolution (640 x 240 pixels)
- Controller with Force Feedback
- GPS Navigation with DVD database
- Voice Command System.

The system includes Real Time Traffic Information and six Programmable Memory Keys for

ease in reaching specific iDrive functions. iDrive, GPS Navigation and Voice Command are described in **BMW features** on pages 65-67. The Head-up Display is optional; see **BMW features**, page 67, for details.

Automatic climate control

Essentially identical with the 5 Series system (except for that Series' climate-controlled console compartment and rear air outlets), this is a comprehensive unit that includes the full range of BMW climate-control systems. See **BMW features**, pages 68-69, for details.

Audio systems

Two audio systems are offered, standard and optional premium; the latter is newly offered in a Premium Sound Package, described in **options & packages** on page 151.

The standard AM/FM/CD system includes 8 speakers:

- 2 subwoofers, 210 mm, one each in cavities at bases of the B-pillars (Coupe) or in rear side panels (Convertible)
- 2 conical midrange, 100 mm, in front doors (both models)
- 2 conical midrange, 100 mm, in rear shelf (Coupe) or rear side panels (Convertible)
- 2 tweeters, 25 mm, in the front-door mirror triangles (both models)

Circuits for a reception-enhancing diversity antenna system are embedded in the Coupe rear window or Convertible trunklid. In both models, the trunklid accommodates antennas for GPS Navigation and the available Satellite Radio. The diversity antenna amplifier is in the C-pillar of the Coupe, the trunklid of the Convertible. Because the trunklid

is made of electrically neutral material, it accommodates all these antenna functions satisfactorily and there is no need for a roof “fin” antenna.

Upholstery and trim

Dakota leather upholstery is standard, and is now available in two colors – Cream Beige and Black – with Black as the contrast color to the Cream Beige. Dakota leather also appears on the –

- Head restraints
- Door inserts, armrests and pulls
- Front center armrest
- Rear side-panel inserts and armrests.

Other, compatible leather grains appear on the –

- Gearshift boot
- Handbrake boot and handle.

The standard trim is Brushed Aluminum, appearing on the –

- Steering-wheel spokes
- Shift-lever clasp (boot to lever)
- Shift paddles when present
- iDrive controller
- Dash center and above glove compartment
- Console
- Door handles
- Door and rear armrests
- Movable cupholder.

Galvanic material trims the, soft-touch control knobs for climate control and audio volume; this is an elegant and contemporary galvanic material, described in **BMW features** on pages 76-77.

The center console is leather-trimmed; two wood interior trims are offered at no extra cost. Pearl leather upholstery continues as an option; it is available in four colors and comes with a Nappa leather-faced instrument panel. All these options are described in **options & packages** on page 155.

Front seats: two choices in each model

The Coupe's standard 12-way power seats include these adjustments:

- Fore-aft position
- Seat height
- Seat angle
- Backrest angle
- Position of lumbar support
- Firmness of lumbar support.

Their power controls include a 3-position memory system for driver's seat, steering wheel and outside mirrors. Head restraints are manually adjustable for height and angle; when a front backrest is folded over, the entire seat can be moved 90 mm/3.54 in. forward to facilitate access to rear seating; this is called the **easy-entry feature**.

To the Coupe's standard front seats, those in the Convertible add:

- Power head-restraint/shoulder-belt height
- Powered easy-entry feature.

Upon actuation of a switch at the backrest's upper outer edge, the seat moves forward at double its normal power adjustment speed.

Actuating the switch in the other direction returns the seat to its previously adjusted position.

Another special feature of the Convertible's front seats is their seat-integrated safety belts, described in **BMW features** on page 85. The entire safety-belt system is mounted directly to the seat, clearing the way for easy entry and exit of rear-seat passengers.

Sport seats are included in each model's Sport Package and are described in **options & packages**.

6 Series key features

Except as noted, both current 6 Series models offer the following features:

Front center armrest and compartments

The upper compartment can accommodate a cellphone. By securing the console compartments via the central locking system, BMW has achieved critical security for the Convertible with its top down, and an extra measure of security for the Coupe. The leather-covered center armrest is adjustable vertically to three positions.

Power-tilting Panoramic moonroof (Coupe)

The Coupe's short roof precludes a conventional tilt-and-slide moonroof; the Panoramic moonroof more than compensates with its own functional and esthetic attributes. Its glass panel, an extra-large 43.3 inches wide and 29.8 in. front-to-rear, has a see-through area of 31.7 x 22.8 in.; because it does not slide, the panel is especially well integrated into the roof's contours. Made of tinted 4-mm-thick safety glass and double-sealed when closed, it keeps out wind noise almost as well as a fixed roof; thanks to folding side seals, wind noise is low even in the tilt-up position. All functions, including the interior sunshade, are electrically powered, with 1-touch operation and anti-trapping protection. A double-click forward or rearward causes the glass panel and interior shade to close or open together.

Fully automatic, fully lined power softtop (Convertible)

The Convertible's softtop is a work of art and science in its own right. Available in Black or Dark Gray to harmonize with exterior and interior colors, it is –

- Unique in design, with vertical rear window and “fins” extending rearward of it
- Elegant, giving this Convertible an unusually sleek profile with the top raised.

It's elegant on the inside, too, with the full lining concealing the framework and folding mechanism. Yet beauty and elegance aren't all this design has to offer, for it also excels functionally:

- A quiet, fully automatic electro-hydraulic power mechanism raises or lowers it in about 25 sec.
- Minimal wind noise heard by passengers inside the vehicle with the top up.
- The full lining and sleek profile enhance weather protection and further reduce wind noise.
- Lowered with the top up, the retractable rear window enhances openness and ventilation.
- Raised with the top down, the rear window can function as a wind deflector for rear-seat passengers. (A wind deflector for those up front is available as a center-installed accessory.)

Advanced technology for improving softtop “performance” is part of the 6 Series' softtop concept. Instead of the usual flock, the top's inner surface (not the lining) is coated in polyurethane; even though the total thickness is less, wind noise and the tendency to vibrate are reduced. In fact, the material's thickness varies at different sections of the top to maximize these noise and vibration advantages while also improving other functional criteria such as foldability. Low-frequency vibrations of the kind sometimes heard inside closed convertibles are eliminated, even at maximum

speed; at 90 mph, BMW has measured an impressively low 75 decibels (dBA) inside.

A polyurethane panel serves as a cover for the lowered top and base for the “fins” of the raised top. Thus functioning as both an exterior and interior surface, this panel is formed in a Reaction Injection Molding process. Its high-quality surface (in black) was developed as an optical continuation of the interior’s fine leather grain.

Rear seats: intimacy and luxury

Though the 6 Series’ rear seats don’t provide stretch-out adult accommodations for long journeys, they do provide luxury for the occasional “+2” adults on shorter trips, and for children anytime. In character, they continue a tradition set by BMW Coupes of the past, with deeply cradling seat contours, quality fittings and well designed safety belts. The Convertible’s rear shoulder room is equal to that of the Coupe.

Cupholder concept: innovative, functional

Space in the intimate 6 Series cabin limited BMW’s designers to a single cupholder front and rear, so they devised an innovative, functional and attractive solution. There’s a storage compartment at the aft end of the center console, where a beautiful galvanic-finish cupholder can be stored or used. This cupholder can also be removed from the compartment and positioned at the right side of the front console, where it is accessible to the driver or the front passenger, leaving a well-type cupholder for rear passengers.

Roomy trunk with attractive, functional features

At 13.0 cubic feet, the Coupe trunk is only 1 cu ft. smaller than that of the 5 Series Sedans. The Convertible’s trunk encloses 12.4 cu ft. with its adjustable softtop storage compartment raised, 10.6 cu ft. with it lowered. In either model, two large golfbags can ride here, and the Coupe accommodates a suitcase as well. With the optional ski bag (Cold Weather Package, either model), two pairs of skis or a snowboard can be loaded. Standard run-flat tires allow omission of a spare tire, a factor in achieving such a spacious cargo compartment.

BMW’s clever reversible floor mat, with flock on one side and slide-resistant rubber finish on the other, is standard. The slide-resistant finish is remarkably effective at keeping smaller objects in place in the trunk.

Safety & security

Except for the Advanced Head Protection System described next, 6 Series safety and security features are shared with those of other BMW Series. For details on this Series’ features and systems, see **BMW features**, pages 78-90.

Advanced Head Protection System (AHPS I) (Coupe)

The Coupe incorporates a unique form of BMW’s pioneering Head Protection System, meant essentially for front occupants even though it extends rearward of the B-pillar. As in the 5 Series, it employs an inflatable tubular element, with a “sail” spanning between the tube and the ceiling as it deploys to cover the body-

6 Series key features

Except as noted, both current 6 Series models offer the following features:

side and side-window areas likely to be impacted by a front occupant's head. According to BMW safety engineers, this system –

- Combines the best protective attributes of BMW's original tubular HPS concept and curtain-type systems.
- After deployment, remains inflated for approximately 7 sec., offering protection in extended crash sequences such as a rollover.
- Because of the tube's relative rigidity once inflated, offers some protection against shattered glass and intrusions from the outside.

BMW safety engineers assert that in the 6 Series Coupe, extending the AHPS farther rearward would not achieve significant additional protection. In the Series' 2+2 seating, rear passengers' heads are close to the C-pillar, which itself is effectively padded.

Options & packages

Factory-installed options

Sport Package

(optional both models, code ZSP)

This Package is the same for both models, except that the Coupe version includes more extensive Shadowline exterior trim and Alcantara headliner. (In both models, the headliner is newly in Anthracite color). Here are the contents:

- **19-in. wheels and performance tires.** In place of the sporty standard 18-in. wheels and tires, the Sport Package includes even sportier equipment: 19 x 8.5 front/19 x 9.0 rear wheels in a 5-spoke Star Spoke design (#249), with 245/40R-19 front / 275/35R-19 rear performance tires². Like the

standard equipment, the Sport Package tires are run-flats.

These wheels are of forged, rather than the usual cast, construction – a costlier process that saves unsprung weight and thus improves riding comfort. Forged alloy also offers a finer, more elegant finish. The Sport Package price reflects the value of these more premium wheels.

- **Special exhaust system** with sportier sound and black-chrome tips
- **Specially contoured hood** – new for '09; features raised center section with delineating character lines.
- **Exterior color availability** – vehicles with Sport Package are available only in Alpine White, Space Gray, Titanium Silver, Black Sapphire and Deep Sea from the regular selection, plus the classic Imola Red (non-metallic) and elegant Carbon Black Metallic, which are available only with the Package.
- **High-gloss Shadowline exterior trim** around the Coupe's side windows, along the Convertible's beltline, on the exterior mirrors' bases, and around the windshield-washer jets on the hood. This all-black treatment replaces the standard combination of matte black and chrome.
- **Front sport seats**, with more prominent side bolsters on the cushions and lower backrests, enhance lateral support; manually adjustable thigh support is also added. Other adjustments – 12-way power in the Coupe, 14-way power in the Convertible plus power easy-entry feature – are the same as for the standard seats.
- **Anthracite-color headliner** – Alcantara in Coupe, textile in Convertible.

Premium Sound Package (optional both models, code ZPS)

Combines the premium audio system with a CD changer and iPod/USB Adapter:

- **Logic7 audio system.** Except for the number and placement of speakers, this system corresponds to the Logic7 system of other Series. Compared to the standard 6 Series system, it features –
 - Increased audio power
 - Even higher-caliber speakers, plus additional speakers (total 13 in Coupe, 11 in Convertible, vs. standard 8)
 - Digital Sound Processing (DSP), adjusted along with other Logic7 parameters on iDrive monitor
 - Surround Sound simulation.

Speakers are as follows; an asterisk (*) denotes additional speakers over the standard system –

- 100-mm midrange fill speaker, center of dash*
- 100-mm midrange in each door
- 25-mm tweeter in mirror triangle of each door
- 100-mm midrange in each rear side panel
- 100-mm midrange surround speaker* at each side of rear shelf, Coupe only
- 25-mm tweeter in each rear side panel*
- 210-mm central bass (subwoofer) in cavities at the bases of the B-pillars (Coupe); this placement is patented by BMW and can be described to customers as “underseat.”
- 210-mm subwoofer in each rear side panel (Convertible).

Developed by Lexicon, this audio system incorporates an exciting digital Surround Sound process, which provides truly unique and realistic reproduc-

tion, generating a 360° sound field and accurately re-creating the acoustic intent of the original studio master.

In the 6 Series, there are just 2 choices for “room acoustics,” vs. 10 in the 5 Series. This is for reasons of the 6 Series’ interior size and configuration, and does not signify a compromise in quality. Indeed, Germany’s *auto motor und sport* magazine evaluated this system in its April 28, ’04 issue and concluded “Bravo Harman³: When one cranks back 500 and 5000 Hertz on the equalizer, one gets such a balanced tonality that it’s not just the V-8 that makes audio-ophile hearts beat a little faster.”

- **6-disc CD changer**, glove-compartment-mounted, magazine-type.
- **iPod/USB Adapter**, addressing the growing demand for in-vehicle digital programming. Enables the vehicle’s audio system to play and control an MP3 player or a flash drive; there is no conflict with the CD changer.

Cold Weather Package (optional both models, code ZCW)

Package contents include:

- **Heated front seats.** 3-stage heating, without the balance control of the 7 and 5 Series.
- **Heated steering wheel**
- **Ski bag**, concealed behind centerpiece of rear seats and accessible through trunk.

2 – Due to low-profile tires, please note: Wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 6 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

3 – Referring to Harman Kardon, whose Lexicon division developed the system

6 Series key features

Except as noted, both current 6 Series models offer the following features:

BMW Individual Composition: making the 6 Series even more exclusive

With this unique and elegant option (code Z11 for both models), the 6 Series offers discerning customers the exclusivity of BMW Individual design, features and materials; it is an ultimate expression of BMW's premium character. This Composition of features – because of its highly custom nature we are not calling it a Package – underscores the 6 Series' sporty, luxurious product substance, and consists of the following enhancements:

BMW Individual exterior colors

Available at extra cost beyond that of the Individual Composition equipment itself. These are special paints, applied in a multi-coat process and incorporating various special effects according to which of the available three colors is selected. All are metallics:

- **Ruby Black Metallic** – a “black cherry” color with BMW Individual's especially dramatic metallic effect. New for '09.
- **Azurite Black Metallic** – taking its name from a blue mineral occurring in nature. New for '09.
- **Moonstone** – with titanium-dioxide pigments that change color between blue and white depending upon light conditions.

19-in. wheels and performance tires²

Same dimensions as for Sport Package or the new stand-alone wheel/tire option; but with the unique BMW Individual design #152. These have seven double spokes in a curved V-form, and are the same design as that of

the previous 7 Series' Individual Composition 20-in. wheels.

BMW Individual Merino Full Leather upholstery

Merino, BMW Individual's own special, premium grade of leather, appears instead of the standard Dakota leather on the –

- Seats, including head restraints and front seats' back sides
- Main door panels, including armrest softpads; 2-tone color effect within inset sections
- Center console and armrest
- Lower section of instrument panel
- Gearshift boot, eShift or manual.

Nappa leather appears in place of the standard grained leatherette as follows:

- Upper door panels including ledges
- Upper section of instrument panel.

As with the standard Dakota and optional Pearl leather for '08, the Merino leather on the Convertible's seats, armrests, head restraints and shift knob incorporates Sun Reflective Technology. The Individual interior is offered in three colors: Platinum, which has a subtle green cast; Champagne; and new Rust Brown. All employ color contrasts that are fine-tuned for elegant effects.

Merino is much more than just a different name and a merely “higher-grade” leather. In contrast to the 3-layer color process of BMW's standard leathers, Merino gets just two layers of color; the usual finishing coat is eliminated, and for a specific reason: to achieve an even more natural, rarer look.

Continued on next page

But this also requires that only first-choice Southern Germany or Austrian hides, with no lesions or insect bites, can be used. These hides are also 30% thicker (cows and black-and-white cattle are thinner-skinned, therefore not used) and thus provide softer feel, greater volume and superior respiration.

Additionally, BMW Individual Merino leather is final-milled and ironed again after the second color coat is applied; this adds further softness and a distinctive 3-dimensional effect with glossy "hills" and matte "valleys." For the Convertible, the Sun Reflective Technology pigments are added at the drum-dying stages that make up two of the five overall process steps.

Special interior trim materials

Three trim materials are offered, each available only from BMW Individual:

- **Piano Black**, with an ultra-high-gloss surface normally achieved only by leading piano makers. In combination with Merino leather, this trim produces a unique statement of beauty and exclusivity.

Sport automatic transmission (no-cost option both models, code 2TB)

In the 6 Series, the Sport automatic is the only automatic offered, and of course it's entirely appropriate to the sporty nature of these automobiles. Now employed in several BMW models, this advanced, efficient and fun-to-use transmission is described in **BMW features** on page 41.

- **Olive Ash Red-Brown** or **Walnut Amarone** fine wood, each specially created by, and available only from, BMW Individual.

Additional Individual details

Several further details round out the 6 Series Composition:

- **BMW Individual High-gloss Shadowline exterior trim** around the Coupe's side windows, along the Convertible's beltline, around both models' windshield-washer jets on the hood, and on both models' exterior mirrors. This especially lustrous trim replaces the standard combination of matte black and chrome.
- **BMW Individual steering wheel** with wood ring inlays.
- **Special headliner:** in the Coupe, Alcantara in Platinum color or standard material in Anthracite color, vs. standard Gray or Beige material depending on interior color; in the Convertible, standard material but in Anthracite color, vs. standard Black. (For '09, the 6 Series Sport Package includes similar headliners.)
- **Illuminated doorsill trims** with BMW Individual lettering.
- **Storage net** in front passenger's footwell.

So well-tailored is this transmission to the Valvetronic V-8's torque curve that with it, the 0-60-mph time is only 0.1 sec. less quick than with the manual transmission.

- 2 – Due to low-profile tires, please note: Wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 6 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions..

6 Series key features

Except as noted, both current 6 Series models offer the following features:

Active Cruise Control with Stop-and-Go function

(optional both models, code 5DF; requires Sport automatic)

In addition to the usual speed-maintaining, acceleration and deceleration functions of the standard cruise control, ACC can adjust the BMW driver's speed according to traffic and road conditions, and incorporates other valuable functions as well.

As of '08, this option acquired new capabilities – Stop-and-Go and the Collision Warning System – and a new option code. It is described in **BMW features** on pages 60-61.

Active Steering

(optional both models, code 217)

Achieves amazing agility at lower speeds while retaining stability at higher speeds; also enhances stability in certain driving conditions. See **BMW features**, pages 48-50.

19-in. wheels/performance tires (optional both models)

As another choice for customers, this option specifies wheels and tires that are sized and rated identically to those of the Sport Package. But these 10-spoke Star Spoke #218 wheels are distinct in design from those in the Sport Package, and are cast instead of forged.

Lane Departure Warning

(optional both models, code 5AD)

Employing a camera near the interior rearview mirror, this system monitors road lane marking and alerts the driver anytime the vehicle begins to move across them without the turn signals activated. An especially useful feature given the many distractions inherent in today's driving environment. Described in **BMW features** on page 79.

Night Vision

(optional both models, code 611)

This new technology helps the driver perceive critical situations at night and during twilight. An infrared camera at the front of the vehicle transmits a picture to the iDrive display; the greater the object's warmth, the brighter its image on the display. Pedestrians and animals are thus recognized before the driver might perceive them.

For details on Night Vision, see **BMW features**, pages 81-82.

High Beam Assistant

(optional both models, code 5AC)

Switches the headlights automatically between low and high beams. Turns on the high beams whenever traffic conditions allow, relieving the driver of this duty and ensuring that the driver always has the best possible forward vision at night. The driver can also take control at any time by using the steering-column beam control.

For more detailed information on High Beam Assistant, see **BMW features**, page 59.

Comfort Access

(optional both models, code 322)

Eliminates the need to activate a remote to unlock or lock the vehicle, or to insert it into the dash slot before starting the engine. Details are found in **BMW features** on page 58.

Head-Up Display

(optional both models, code 610)

HUD displays important driving information in color on a 6 x 3-in. field in the windshield. A virtual image is projected onto the windshield, approximately in line with the end of the hood in the driver's field of sight. Thus the driver can observe the information with essentially no diversion from the road ahead. More details are found on page 57 in **BMW features**.

Satellite Radio

(optional both models, code 655)
See **BMW features**, page 72, for details on Sirius.

HD Radio

(optional both models, code 653)
HD Radio significantly enhances the sound quality of both FM and AM reception. It is described in **BMW features** on pages 71-72.

Pearl leather upholstery (optional both models, upholstery codes LE)

This option is for 6 Series customers who want that “extra something” in interior luxury.

All areas upholstered in the standard Dakota leather are upgraded to Pearl, a finer grade of leather. Seating surfaces are textured and the stitching pattern also differs subtly. In detail, the upgrade consists of the following; the upgrades from standard apply to both Coupe and Convertible:

Pearl in place of Dakota leather – seating surfaces and side bolsters, head restraints, door and rear side-panel inserts, door and rear side armrest surfaces, rear center armrest.

Nappa in place of Nasca Leather – center console.

Leather in place of synthetic materials – sun visors (Nasca, as in previous 7 Series).

The Pearl interior is available in four color schemes: Black, Chateau, Saddle Brown/Black and Cream Beige.

Nappa instrument panel
(optional both models, code 4M5; requires and is required with Pearl leather)

This traditional premium leather grade creates an even more elegant atmosphere in Pearl-equipped 6 Series models.

Heated front seats

(optional both models, code 494)
This option provides 3-stage, thermostatically controlled heating, without the balance control as found in the 5 Series. The heated seats are also available as part of the Cold Weather Package.

Wood interior trim

(no-cost option, both models; code 436 or 4BW)

New brushed-aluminum trim is standard in both 6 Series models; yet some customers prefer the more traditional luxury of wood interior trim. For those customers, BMW offers two elegant woods:

- **Dark Birch** – a contemporary dark-gray tone
- **Maple** – lighter in color than the Birch but darker than the former Light Birch.

Smartphone integration

(optional both models, code 6NF)

This new option allows users to play audio material from their BMW-approved personal cell-phones. Described in **BMW features** on page 73.

BMW center-installed accessories

Among the items offered for the 6 Series are –

- **Wheels and tires**
- **Wind deflector** (Convertible only)
- **Roof-rack systems and attachments**
- **License-plate frames**
- **6-disc CD changer**
- **Aluminum pedals and footrest**
- **Special shift knobs**
- **Glove-compartment accessory-power adapter**
- **Umbrella and holder**
- **Clear protective coverings**
- **Car covers**

For details, see the latest **Original BMW Accessories** catalog for the 6 Series.

Standard & optional features

2009 6 Series

Bold within table indicates new feature for 2009.

Exterior design & function	650i Coupe	650i Conv.
Aluminum front-end structure	S	S
Aluminum hood & doors	S	S
Thermoplastic front fenders	S	S
Sheet Molding Compound (SMC) trunklid	S	S
Specially contoured hood	ZSP	ZSP
Front & rear body-color bumpers	S	S
Xenon Adaptive headlights with dynamic auto-leveling	S	S
Automatic headlight control	S	S
High-intensity headlight cleaning system	S	S
Daytime Running Lamps via luminous rings	S ¹	S ¹
Halogen free-form foglights	S	S
Park Distance Control (front & rear) with graphic display	S	S
Rain-sensing windshield wipers with flat blade design, articulated passenger's-side wiper arm, single-wipe control, windshield-washer system with heated washer jets	S	S
Choice of standard or metallic paint	S	S
BMW Individual metallic exterior colors	OPT ²	OPT ²
Power/heated exterior mirrors with right-mirror auto tilt-down	S	S
Power-folding exterior mirrors	S	S
LED ground lighting	S	S
High-gloss Shadowline exterior trim	ZSP	ZSP
BMW Individual High-gloss Shadowline exterior trim	ZI1	ZI1
Adaptive brakelights	S	S
Dual stainless-steel exhaust tips	S	S
Black-chrome exhaust tips	ZSP	ZSP
Performance & efficiency	650i Coupe	650i Conv.
4.8-liter DOHC (4-cam) 32-valve V-8 engine	S	S
Aluminum block & cylinder heads	S	S
Valvetronic system	S	S
2-stage induction system	S	S
Electronically controlled engine cooling (map cooling)	S	S
Direct ignition system with knock control	S	S

Performance & efficiency (cont.)	650i Coupe	650i Conv.
6-speed manual transmission	S	S
6-speed Sport automatic transmission	NC	NC
Driving Dynamics Control (provides 2 levels of throttle response & steering effort plus Sport mode for automatic transmission via Sport button)	S	S
Aluminum double-pivot strut-type front suspension	S	S
Aluminum 4-link Integral rear suspension	S	S
Active Roll Stabilization (ARS)	S	S
Sport suspension calibration	S	S
Aluminum front & rear subframes	S	S
Specially reinforced body structure	-	S
Twin-tube gas-pressure shock absorbers	S	S
Variable-ratio rack-&-pinion power steering with Servotronic vehicle-speed-sensitive power assist	S	S
Active Steering	OPT	OPT
4-wheel ventilated disc brakes with weight-saving aluminum/cast-iron rotors, aluminum front calipers	S	S
Dynamic Stability Control	S	S
18 x 8.0 cast-alloy wheels, V Spoke design #248	S	S
19 x 8.5 front/19 x 9.0 rear alloy wheels: Star Spoke design #249, forged	ZSP	ZSP
BMW Individual V Spoke design #152	ZI1	ZI1
Star Spoke design #218	OPT	OPT
245/45R-18 run-flat all-season tires ³	S	S
245/40R-19 front / 275/35R-19 rear run-flat performance tires ³	ZSP/ZI1/ OPT	ZSP/ZI1/ OPT
Tire Pressure Monitor	S	S

1 - Selectable via Vehicle Memory System (programming by user or BMW center).

2 - Requires BMW Individual Composition.

3 - Due to low-profile tires, please note: Wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 6 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

S - Standard

OPT - Optional

NC - No extra cost

ZI1 - BMW Individual Composition

ZPS - Premium Sound Package

ZSP - Sport Package

Standard & optional features

2009 6 Series

Bold within table indicates new feature for 2009.

Comfort & convenience	650i Coupe	650i Conv.
Vehicle & Key Memory	S	S
Keyless entry with multi-function remote control:		
Selective unlocking ¹	S	S
Remote trunk release	S	S
Comfort Access	OPT	OPT
BMW Universal Transceiver (3-function garage-door opener)	S	S
Illuminated doorsill trims	S	S
BMW Individual illuminated doorsill trims	Z11	Z11
Exit/entry lighting in front door panels	S	S
Auto-dimming interior & exterior mirrors	S	S
Power-folding exterior mirrors	S	S
High Beam Assistant	OPT	OPT
Courtesy lights with fade-in/fade-out feature, actuation from remote, automatic switch-on when engine is turned off	S	S
Front reading lights, separately controlled left/right	S	S
BMW Ambiance Lighting	S	S
Illumination of interior door handles & door storage bins, front footwell lighting	S	S
Lockable glove compartment with rechargeable take-out flashlight	S	S
Door storage compartments	S	S
Power tilt/telescopic leather-wrapped sport steering wheel with auto tilt-up & fingertip cruise, audio & phone ⁴ controls	S	S
BMW Individual steering wheel with wood ring inlays	Z11	Z11
Heated steering wheel	ZCW	ZCW
Dynamic cruise control	S	S
Active Cruise Control with Stop-and-Go capability & Collision Warning System	OPT ⁵	OPT ⁵
12-way power front seats (including 4-way power lumbar support), easy-entry feature	S	-
14-way power front seats (including 4-way power lumbar support), power easy-entry feature	NA	S
12-way power front sport seats (including 4-way power lumbar support) with manually adjustable thigh support, easy-entry feature	ZSP	-
14-way power front sport seats (including 4-way power lumbar support) with manually adjustable thigh support, power easy-entry feature	NA	ZSP

Comfort & convenience (cont.)	650i Coupe	650i Conv.
Memory system for driver's seat, steering wheel & exterior mirrors (3 settings)	S	S
3-stage heated front seats	OPT/ZCW	OPT/ZCW
Adjustable front center armrest	S	S
Center console compartment with provision for phone handset	S	S
Electronic analog speedometer & tachometer; tachometer includes variable warning segment	S	S
LCD main & trip odometers	S	S
Comprehensive Check Control vehicle monitor system	S	S
Head-Up Display	OPT	OPT
iDrive system with five menus, controller, direct-select radio, CD, phone & Navigation menus ; 6 Programmable Memory Keys (includes On-board Computer & GPS Navigation w/DVD database & Real Time Traffic Information)	S	S
Voice Command System	S	S
Dakota leather upholstery (seating & doors)	S	S
Leather-covered center console	S	S
Pearl leather upholstery	OPT ⁶	OPT ⁶
Nappa leather-faced instrument panel	OPT ⁶	OPT ⁶
BMW Individual full leather upholstery, choice of 3 special colors	ZI1	ZI1
Brushed Aluminum interior trim	S	S
Dark Birch interior trim	NC	NC
Maple wood interior trim	NC	NC
Power door windows with key-off operation, 1-touch opening & closing, anti-trapping feature, opening from remote, closing from exterior lock	S	S
Power rear side windows with key-off operation; 1-touch opening, opening from remote, closing from exterior lock	NA	S
All-window switch with 1-touch opening	NA	S
Power retractable rear window	NA	S
Power door-window sealing system	S	S

1 – Selectable via Vehicle Memory System (programming by user or BMW center).

4 – Phone controls active when approved cellphone is paired with Bluetooth interface.

5 – Requires Sport automatic transmission.

6 – Pearl leather & Nappa leather-faced instrument panel are automatically ordered together.

S – Standard

OPT – Optional

NC – No extra cost

NA – Not available

— – Not applicable

ZCW – Cold Weather Package

ZSP – Sport Package

Standard & optional features

2009 6 Series

Bold within table indicates new feature for 2009.

Comfort & convenience (cont.)	650i Coupe	650i Conv.
Automatic climate control with separate left/right temperature & air-distribution controls, automatic recirculation control, humidity control, bi-directional solar sensor & other features	S	S
Activated-charcoal microfilter ventilation	S	S
BMW Individual special headliner	ZI1	ZI1
Anthracite-color headliner (Alcantara in Coupe)	ZSP	ZSP
Power tilting glass Panoramic moonroof with power-operated interior shade	S	-
Fully automatic, fully lined softtop	-	S
Anti-theft AM/FM/CD audio system with 8 speakers incl. 2 subwoofers, Radio Data System (RDS), auxiliary audio input & diversity antenna system	S	S
Logic7 audio system with Digital Sound Processing, Surround Sound simulation & 6-disc CD changer; includes upgraded components throughout & all features of standard system:		
13 speakers including 2 subwoofers	ZPS	-
11 speakers including 2 subwoofers	-	ZPS
HD Radio	OPT	OPT
Satellite Radio	OPT	OPT
Pre-wiring for installation of CD changer	S	S
6-disc CD changer in glove compartment	ZPS	ZPS
iPod/USB Adapter	ZPS	ZPS
Smartphone Integration	OPT⁷	OPT⁷
Bluetooth cellphone interface	S	S
Velour floor mats	S	S
Front & rear cupholders	S	S
Dual front sun visors with illuminated mirrors	S	S
Storage net in passenger's-side footwell area	ZI1	ZI1
Seatback storage nets	S	S
Rear center storage compartment	S	S
Ski bag	ZCW	ZCW
Rear-window defroster	S	S
Interior trunk release, electrically operated	S	S
Fully finished trunk with toolkit under floor, reversible anti-slip trunk mat	S	S
Wind deflector	-	C
Variable softtop storage compartment	-	S

Safety & security	650i Coupe	650i Conv.
Dynamic Stability Control (DSC), including Dynamic Traction Control, electronic brake proportioning, antilock braking (ABS), Dynamic Brake Control, Brake Fade Compensation, Brake Standby, Brake Drying, Start-off Assistant & cornering/braking stability enhancement	S	S
Lane Departure Warning	OPT	OPT
Night Vision	OPT	OPT
Dual-airbag Supplementary Restraint System with 2-stage Smart Airbags	S	S
Automatic front safety-belt tensioners & force limiters	S	S
Seat-integrated front safety belts with power height adjustment	NA	S
Automatic-locking retractors (ALR) on all passenger safety belts (for installation of child restraint seats)	S	S
LATCH attachments for attachment of child restraint seats	S	S
Front-seat Head Protection System	S	—
Rollover Protection System	—	S
Front-seat side-impact airbags	S	S
Front-seat Active head restraints	S	S
Active Knee Protection	S	S
Battery Safety Terminal	S	S
Automatic fuel-pump shutoff after severe accident impact	S	S
Advanced Crash Safety Management for deployment of safety systems	S	S
BMW Assist, including automatic collision notification, SOS/Assist button, enhanced Roadside Assistance; TeleService ⁸ , BMW Assist Safety Plan ⁸	S	S
Central locking system with selective unlocking & interior locking switch	S	S
Coded Driveaway Protection	S	S
Alarm system with operation from remote, interior motion detector	S	S

7 – Requires iPod/USB Adapter.

8 – Requires BMW Assist annual fee after 4th year.

S – Standard

OPT – Optional

NA – Not available

— – Not applicable

ZCW – Cold Weather Package

ZPS – Premium Sound Package

Technical specifications

2009 6 Series

Bold within table indicates new specification for 2009.

General	650i Coupe	650i Convertible
Curb weight, lb.:		
Manual transmission	3814	4277
Automatic transmission	3814	4277
Weight distribution, front/rear, %:		
Manual transmission	52.6/47.4	49.0/51.0
Automatic transmission	52.6/47.4	49.0/51.0
Wheelbase, in.	109.4 ¹	
Track, front/rear, in.	61.3/62.8 ^{1,2}	
Length, in.	190.2 ¹	
Width, in.	73.0 ¹	
Height, in.	54.1 ¹	
Body	650i Coupe	650i Convertible
Type	2-door coupe	2-door convertible
Aerodynamic drag coefficient	0.30	0.32
EPA size classification	Subcompact	Subcompact
Accommodations	650i Coupe	650i Convertible
Seating capacity, persons	4	4
Shoulder room, front/rear, in.	56.4/49.4 ¹	
Head room, front/rear, in.	37.6/35.6	37.8/36.5 ³
Leg room, front/rear, in.	42.0/30.1	42.0/29.0
EPA interior volume, cu ft.	81.0	82.0
EPA cargo volume, cu ft.	13.0	12.4/10.6 ⁴
Engine & electrical	650i Coupe	650i Convertible
Engine type	DOHC (4-cam) 32-valve V-8, Valvetronic variable intake-valve lift & Double VANOS ⁵ steplessly variable intake- & exhaust-valve timing ¹	
Bore x stroke, mm/in.	93.0 x 88.3/3.66 x 3.48 ¹	
Displacement, cc/cu in.	4798/293 ¹	
Compression ratio	10.5:1 ¹	
Power @ rpm, hp	360 @ 6300 ¹	
Torque @ rpm, lb-ft.	360 @ 3400 ¹	

Engine & electrical	650i Coupe	650i Convertible
Engine-management system	Motronic ME9 with knock control; variable valve lift & timing, 2-stage induction system, engine cooling & other functions included in control strategy ¹	
Fuel requirement	Premium unleaded ¹	
Fuel capacity, U.S. gal.	18.5 ¹	
Battery capacity, amp-hr.	110 ¹	
Alternator output rating, amp./W	170/2380 ¹	

Drivetrain	650i Coupe	650i Convertible
Drive system	Front engine/rear-wheel drive ¹	
Manual transmission	ZF Type G, 6-speed ¹	
Ratios: 1st	4.05:1 ¹	
2nd	2.40:1 ¹	
3rd	1.58:1 ¹	
4th	1.19:1 ¹	
5th	1.00:1 ¹	
6th	0.87:1 ¹	
Reverse	3.68:1 ¹	
Final drive ratio	3.46:1	3.46:1
Automatic transmission	ZF 6 HP 26 TU, 6-speed Sport Automatic, with Adaptive Transmission Control, selectable Sport & Manual modes, steering-wheel shift paddles, rpm matching & other special features ¹	
Ratios: 1st	4.17:1 ¹	
2nd	2.34:1 ¹	
3rd	1.52:1 ¹	
4th	1.14:1 ¹	
5th	0.87:1 ¹	
6th	0.69:1 ¹	
Reverse	3.40:1 ¹	
Final drive ratio	3.46:1 ¹	

1 – Specification applies to both models.

2 – With standard wheels.

3 – With softtop raised.

4 – Softtop raised/lowered, variable softtop storage compartment adjusted accordingly (volumes according to DIN, or German Industry Standards. EPA volume is 10.0 cu ft.).

5 – VANOS = **V**ARiable **N**Ockenwellen

Steuerung = variable camshaft control, or variable valve timing.

Technical specifications

2009 6 Series

Bold within table indicates new specification for 2009.

Chassis	650i Coupe	650i Convertible
Body/frame construction	Unitized; aluminum front-end structure, aluminum hood & doors, thermoplastic front fenders, Sheet Molding Compound (SMC) trunklid ¹	
Front suspension	Struts, double-pivot lower arms, coil springs, twin-tube gas-pressure shock absorbers, Active Roll Stabilization; aluminum suspension system, thrust plate & subframe ¹ (Convertible: additional diagonal braces)	
Rear suspension	4-link Integral suspension, coil springs, twin-tube gas-pressure shock absorbers, Active Roll Stabilization; aluminum suspension system & subframe ¹ (Convertible: additional diagonal braces)	
Steering type	Rack & pinion, Servotronic vehicle-speed-sensitive variable power assist ¹	
Overall ratio, standard steering	Mechanically variable; mean ratio is 14.4:1 ¹	
Overall ratio, Active Steering (optional)	Electronically variable over wide range of 10:1 – 18:1 ¹	
Turning circle, ft.	37.4 ¹	
Brakes	4-wheel ventilated discs with lightweight aluminum/cast-iron rotors, aluminum front/cast-iron rear calipers ¹	
Diameter, front, mm/in.	348/13.7 ¹	
Diameter, rear, mm/in.	345/13.6 ¹	

Chassis (cont.)	650i Coupe	650i Convertible
Wheels (standard)	Cast alloy, 18 x 8.0 ¹	
Wheels (optional)	19 x 8.5 front/19 x 9.0 front: Forged alloy (Sport Package) Cast alloy (BMW Individual Composition or stand-alone option)	
Tires (standard)	245/45R-18 run-flat all-season ^{1,7}	
Tires (optional)	245/40R-19 front / 275/35R-19 rear run-flat performance (Sport Package or stand-alone option) ^{1,7}	
Stability-enhancement system	Dynamic Stability Control (DSC); includes Dynamic Traction Control, electronic brake proportioning, antilock braking (ABS), Dynamic Brake Control, Brake Fade Compensation, Brake Standby, Brake Drying, Comfort Stop, Start-off Assistant & cornering/braking stability enhancement ¹	

Performance data	650i Coupe	650i Convertible
Acceleration, 0-60 mph, sec. ⁸ :		
Manual transmission	5.3	5.6
Automatic transmission	5.4	5.7
Top speed, mph	150 ⁹	150 ⁹
EPA estimated MPG, city/highway:		
Manual transmission	15/22	14/21
Automatic transmission	15/23	15/23

1 – Specification applies to both models.

7 – Due to low-profile tires, please note: Wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 6 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

8 – BMW AG test results. Actual acceleration results may vary depending on specification of vehicle; road and environmental conditions; testing procedures and driving style. These results should be used for comparison only, and verification should not be attempted on public roads. BMW urges you to obey all posted speed limits and to please wear your safety belt at all times.

9 – Electronically limited.

2009 5 Series:

Evolutionary refinements to BMW's iconic "middle" Sedan and Sports Wagon Series.

The 5 Series has long been one of BMW's true core products, elegantly defining the middle of the BMW line with compact exterior dimensions, ample interior space and a perfectly calibrated blend of sport, luxury and practicality. For '08 this Series received an extensive freshening that included refined exterior design, upgraded interior materials, new and more powerful 6-cylinder engines for the 528i and 535i models, new transmission choices and some significant new high-tech options. For '09, it builds on this appealing concept with subtle refinements:

What's new for 2009

As of 9/08 production:

Model designations

- 528xi and 535xi designations discontinued; all-wheel-drive models now called 528i xDrive and 535i xDrive, and have new "xDrive" script on front side panels (fenders)

Exterior design & function

- 528i models – new standard wheels, Double Spoke design #278
- 535i models – new standard wheels, V Spoke design #277

Comfort & convenience

- New iDrive controller, with 7 direct-select buttons clustered around it (essentially same as 7 Series arrangement)

5 Series models & key features

This information lists major features, and helps position and distinguish the models in the Series. For a comprehensive summary of features, see pages 188-199.

528i Sedan

The Series' "basic" model, powered by the naturally aspirated (not turbocharged) version of the weight-saving, fuel-efficient magnesium/aluminum N52 6-cylinder engine.

Exterior design & function

- Halogen free-form headlights and foglights
- Rain-sensing windshield wipers
- Dual power/heated exterior mirrors
- Ground lighting
- Choice of standard or metallic paints at no extra cost
- Adaptive brakelights
- Aluminum front-end structure and exterior panels

Performance & efficiency

- 3.0-liter DOHC inline 6-cylinder engine with magnesium/aluminum composite construction, Valvetronic variable intake-valve lift, Double VANOS¹ variable intake- and exhaust-valve timing; 230 hp/200 lb-ft.
- Choice of 6-speed manual or STEPTRONIC automatic transmission; automatic has optimized operation and E-shift control lever
- Aluminum double-pivot strut-type front suspension
- Aluminum 4-link Integral rear suspension
- Vehicle-speed-sensitive variable-assist, variable-ratio rack-and-pinion power steering
- 4-wheel ventilated disc brakes
- 17 x 7.5 alloy wheels, Double Spoke design #278
- 225/50R-17 all-season tires²
- Dynamic Stability Control
- Tire Pressure Monitor

Comfort & convenience

- Vehicle & Key Memory
- Power tilt/telescopic leather-wrapped steering wheel with auto tilt-up
- 10-way power front seats with power head restraints
- Memory system for driver's seat, steering wheel and exterior mirrors
- iDrive control system with new direct-select menu keys and 6 Programmable Memory Keys
- Leatherette upholstery
- Dark Poplar wood interior trim
- Power windows with 1-touch open/close
- Automatic climate control with separate left/right controls
- 2-way power moonroof with 1-touch open/close
- Anti-theft AM/FM/CD/MP3 audio system with Radio Data System, 10 speakers
- Bluetooth cellphone interface

Safety & security

- Dual-airbag Supplementary Restraint System
- Front safety belts with automatic tensioners and force limiters
- Front- and rear-seat Head Protection System
- Front-seat side-impact airbags
- Active Knee Protection
- Coded Driveaway Protection
- Anti-theft alarm system
- BMW Assist Safety Plan with 4-year subscription

Options & packages

- Available option packages:
 - Premium Package (Dakota leather upholstery, BMW universal transceiver, auto-

1 – VANOS = **V**Ariable **N**Ockenwellen **S**teuerung = variable camshaft control, or variable valve timing.

2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. Performance tires are not recommended for driving in snow and ice conditions.

5 Series models & key features

This information lists major features, and helps position and distinguish the models in the Series. For a comprehensive summary of features, see pages 188-199.

dimming interior and exterior mirrors, power-folding exterior mirrors, Ambient Light Package, 4-way power front-seat lumbar support

- Sport Package (Active Roll Stabilization, sport suspension, 18-in. wheels with run-flat performance tires², Shadowline exterior trim, sport steering wheel, 20-way Multi-contour seats)
- Cold Weather Package (headlight cleaning system, heated steering wheel and front seats)
- Stand-alone options:
 - 6-speed STEPTRONIC automatic transmission (no extra cost)
 - Active Cruise Control
 - Active Steering
 - Park Distance Control
 - Xenon Adaptive headlights with dynamic auto-leveling
 - Night Vision
 - Comfort Access
 - Dakota leather upholstery
 - Light Poplar or Bamboo Anthracite wood interior trim (no extra cost)
 - 20-way front Multi-contour seats
 - Split folding rear seats and ski bag
 - Navigation System
 - Head-up Display
 - Lane Departure Warning
 - High Beam Assistant
 - 13-speaker Logic7 audio system
 - HD Radio
 - iPod/USB Adapter
 - Satellite Radio
 - Heated front seats
 - Heated rear seats
 - Power rear/manual rear side-window sunshades
 - Rear-seat side-impact airbags and safety-belt tensioners

528i xDrive Sedan

Powered by same 230-hp engine and equipped essentially like 528i Sedan, but gains all-wheel traction from its xDrive system. Compared to 528i, this model's points of differentiation include:

- Vehicle height increases from 57.8 to 58.3 in.
- xDrive all-wheel drive system, electronically controlled with variable front/rear torque split and traction control
- Heavier-duty manual transmission
- Performance and fuel efficiency somewhat affected by additional weight and mechanism of AWD system, steel front suspension
- Wheel construction differs; same rim width, but different offset
- Same options and packages as 528i, except:
 - Sport Package deletes sport suspension calibration (AWD models have own calibration, same with or without Sport Package); also deletes Active Roll Stabilization; wheels and tires same as standard
 - 18 x 8.0 Star Spoke wheels (#246) with 245/40R-18 run-flat performance tires² available as stand-alone option in combination with Sport Package (same wheels and tires as those of 528i Sport Package)
 - Active Steering not available

535i Sedan

The premium 6-cylinder Sedan, with higher performance and more extensive standard equipment than its 528i counterpart.

- Standard Xenon Adaptive headlights with dynamic auto-leveling

- Twin-turbo inline 6-cylinder engine, 300 hp/300 lb-ft.
- Brakes with larger dimensions and aluminum/cast-iron rotor construction
- Standard 4-way power front-seat lumbar support
- Same options and packages as 528i, except:
 - Premium Package deletes front-seat lumbar support, which is standard
 - Sport Package wheels are 18 x 8.0 front/18 x 9.0 rear Star Spoke (design #124) with 245/40R-18 front / 275/35R-18 rear run-flat performance tires²
- Sport automatic transmission with sportier programming, Sport mode selected by button, shift paddles on steering wheel, rpm matching and other special features; optional in combination with Sport Package

535i xDrive Sedan

Combines twin-turbo 535i engine and xDrive to elevate the level of performance offered in an all-wheel-drive 5 Series Sedan. Essentially parallel to 528i xDrive vs. 528i, the 535i xDrive differs from the 535i as follows:

- Vehicle height increases from 57.8 to 58.3 in.
- xDrive all-wheel drive system, electronically controlled with variable front/rear torque split and traction control
- Performance and fuel efficiency somewhat affected by additional weight and mechanism of AWD system, steel front suspension
- Wheel construction differs; same rim width, but different offset
- Same options and packages as 535i, except:
 - Sport Package deletes sport suspension calibration (AWD models have own calibration,

same with or without Sport Package); also deletes Active Roll Stabilization; wheels and tires same as standard

- 18 x 8.0 front/18 x 9.0 rear Star Spoke (design #124) with 245/40R-18 front / 275/35R-18 rear run-flat performance tires² available as stand-alone option in combination with Sport Package (same wheels and tires as those of 535i Sport Package)
- Sport automatic transmission not available
- Active Steering not available

535i xDrive Sports Wagon

5 Series design, twin-turbo performance and AWD technology plus sports-wagon versatility make the 5 Series Wagon an outstanding choice for active lifestyles. Ahead of windshield, Sports Wagon is essentially identical to 535i xDrive Sedan; from there rearward, it differs in many ways and there are also some engineering distinctions:

- 0.4 in. taller, 199 lb. additional curb weight
- Rear suspension differently configured to maximize cargo space; includes standard self-leveling air springs
- Standard roof rails, accommodating BMW roof carrier systems
- Dual-panel Panoramic moonroof (standard, as is the conventional moonroof of Sedans)
- Standard split folding rear seats

² – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. Performance tires are not recommended for driving in snow and ice conditions.

5 Series models & key features

This information lists major features, and helps position and distinguish the models in the Series. For a comprehensive summary of features, see pages 188-199.

- Variable cargo area, with straight side walls and level floor:
 - Cargo volume ranges from 17.6 to 58.3 cu ft. with seats upright or folded, height of loaded cargo (see pages 180-181 for details)
 - Carpet-lined
 - Enclosed storage compartment on each side
 - Two storage spaces under cargo floor, one lockable; both include dividers to partition the space as desired. Spare tire is under the rearward, lockable compartment.
 - Bag holders – short strap on left side, longer one on right
 - Accessory power outlet on right side (Sedan has one in trunk)
 - Four tie-down hooks in floor
 - Standard cargo net, usable with rear seats upright or folded
- Tailgate with separately opening rear window (both open upward)
 - Electrically released from remote or interior switch
 - Soft Close; user closes gently, power mechanism draws it in
 - Cargo cover rises automatically when window or tailgate is opened; no cord or prop; also can be removed from vehicle
 - Red light at left bottom of tailgate for safety; visible when tailgate is open
- Same options and packages as 535i xDrive Sedan, except:
 - Premium Package adds power tailgate with programmable opening height
 - Cold Weather Package adds ski bag (which is included with optional folding rear seats in all Sedans)
 - Sunshades offered for rear door windows only (manual)

550i Sedan

Top 5 Series Sedan model, powered by BMW's potent 4.8-liter Valvetronic V-8 engine and adding significant incremental standard equipment. Points of differentiation from 535i include:

- 4.8-liter DOHC 32-valve V-8 engine with Valvetronic variable intake-valve lift, Double VANOS¹ variable intake- and exhaust-valve timing, 2-stage induction system and aluminum construction; 360 hp/360 lb-ft.
- Different wheel design: V Spoke design #245
- Additional standard equipment:
 - Park Distance Control
 - Auto-dimming interior and exterior mirrors
 - Power-folding exterior mirrors
 - BMW Universal Transceiver
 - Dakota leather upholstery
 - Ambient Light Package
- Options and packages as 535i, except:
 - Premium Package not offered, as all its features are standard
 - Sport Package largely distinct from other Sport Packages in Series. Its specific features include even firmer sport suspension calibration, sportier-sounding exhaust system with Chrome Shadow tips, shorter shift lever with manual transmission, 19 x 8.0 front/19 x 9.5 rear Double Spoke wheels (design 172M, with M badging), 245/35R-19 front / 275/30R-19 rear non-run-flat performance tires², limited exterior color selection with one exclusive color (Carbon Black), and aerodynamic exterior components.

5 Series key features

Except as noted, all current 5 Series models offer the following features:

Exterior design & function

The 5 Series look: esthetics and function

Look at those lines: tightly dimensioned, short overhangs, lean-forward dynamics, compact overall. That's 5 Series tradition – the unique combination of practicality and BMW sportiness that has characterized this Series through all its generations. (This is the 5th generation.)

The “kidney” grilles, a key link to BMW tradition, are up-front and prominent, surrounded by painted surfaces and flanked by “quad” headlights (with BMW's popular luminous rings) under break-resistant clear covers. The body sides are ultra-clean, deriving their esthetic interest not from lots of lines and trim, but from a complex interplay of concave and convex surfaces best perceived in strong light that elicits brightness and shadows.

Side windows are framed in matte black, with a discreet chrome accent in the familiar BMW manner; with Sport Package the chrome is omitted and Shadowline appears instead.

Deeply wrapped-around lighting clusters at the front and rear not only add visual interest, but perform their functional duties (turn signals, side markers) admirably. The turn signals have clear (“white”) lenses front and rear but appear in amber when functioning; only the side clearance lights are permanently amber. On Sedans, generous window areas incorporate the traditional BMW “reverse kink” in the rear door window, while allowing for the beefy roof pillars that contribute to occupant protection.

At the rear, Sedans express BMW's trunklid concept – featuring a high lid for increased cargo capacity – with an elegant and flowing integration into the silhouette and attractive, highly functional taillight wraparounds.

The Sports Wagon design

In profile. The Sports Wagon exudes sportiness, power and prestige. In side view, its roofline – reaching a maximum height of 58.7 in., or 0.4 in. higher than the all-wheel-drive Sedans – preserves passenger head room and cargo space while sloping gracefully toward the rear. At its rearmost point, there is an elegantly integrated spoiler that, like the rear window and lower tailgate, wraps into the side.

Black-finished roof rails do their part for esthetics and function, accenting the curved roofline and accommodating a wide range of BMW roof carrier systems.

At the rear. Here too, the integrated roof spoiler adds to both form and function. It elegantly frames the rear window at the top, and incorporates the 3rd brakelight. The separately opening rear window appears unframed, wrapping clearly all the way to the edge of the opening; when the entire tailgate is opened, it affords up to more than 6 ft. of overhead clearance.

1 – VANOS = **VA**riable **NO**ckenwellen **St**euering = variable camshaft control, or variable valve timing.

2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. Performance tires are not recommended for driving in snow and ice conditions.

5 Series key features

Except as noted, all current 5 Series models offer the following features:

Technology of the look: aluminum/steel construction

If “stronger and lighter” seems paradoxical, chalk the paradox up to progressive technology.

By employing aluminum for the entire front end – structure as well as skin – BMW’s body engineers have pared approximately 44 pounds off the body/chassis shell’s weight while simultaneously improving strength and occupant protection. This is the most extensive use ever of structure-and-skin aluminum in a regular-production BMW.

As is customary at BMW, nearly all steel panels are galvanized. Aluminum components receive a titanium/zircon coating that hinders oxidation and ensures clean, smooth surfaces for bonding with adhesives.

Once fully constructed, the body structure is dipped in a phosphate bath and then a cathodic primer. All contact points between aluminum and steel are bonded together in such a way that the adhesive fully covers the joint, protruding at least 1 mm outside the joint. Thus direct contact between the aluminum and steel is completely avoided and any chance of corrosion arising from this advanced construction is eliminated.

Performance & efficiency

N52 3.0-liter DOHC 24-valve inline 6-cylinder engine with Valvetronic

(528i Sedans)

These models are powered by the advanced N52 engine, whose engineering features include –

- **Valvetronic variable valve lift**, replacing the traditional throttle and enhancing power, efficiency and response to the driver’s demands.

- **Magnesium/aluminum composite construction**, saving weight and thus also contributing to enhanced performance.
- **Electric water pump**, requiring less power, speeding engine warmup and making the engine more compact.
- **Variable-volume oil pump**, also requiring less power and enhancing lubrication; thus contributes to performance and durability.

In the 528i Sedans, this wonderfully smooth and agile engine delivers 230 lb and 200 lb-ft. of torque. The torque peak occurs at a relatively low 2750 rpm, making for robust response to the driver’s accelerator foot. The strong power comes through in lively 0-60-mph acceleration times: 528i Sedan – 6.5 sec. with manual transmission, 7.1 sec. with automatic.

528i xDrive Sedan – 7.1 sec. with manual, 7.6 with automatic.

EPA mileage ratings reflect the engine’s and vehicles’ excellent efficiency:

528i Sedan – 18 mpg city/28 mpg highway, combined 21 mpg with manual transmission; 18/27/21 with automatic.

528i xDrive Sedan – 17/25/20 with manual or automatic.

N54 3.0-liter DOHC 24-valve twin-turbo inline 6-cylinder engine

(all 535i models)

This unique engine sets new milestones for combining high performance with high fuel efficiency. Its customer-relevant highlights include the following remarkable attributes:

- **300 hp from 3.0 liters.** That’s fully 100 hp per liter. Just think: only four model years ago, the 4.4-liter V-8 offered in 5, 6 and 7 Series models generated

335 hp; and even now, the Z4 M models' ultra-high-performance 3.2-liter 6-cylinder delivers 330. Thus this new engine approaches the former M level of power per liter.

- **High torque too** – 300 lb.-ft., hitting its peak from a remarkably low 1400 rpm all the way to 5000 rpm. For contrast, the Z4 M engine puts out 262 lb.-ft. at a high 4900 rpm. One aspect of this is that the M engine is engineered as a pure sports machine, so one assumes its drivers will “use the gears” to extract maximum performance, and with much pleasure in doing so. The N54, on the other hand, employs twin turbochargers to boost torque and power right across the rpm range, and this makes it suitable for luxurious Sedans and Sports Wagons like those in this Series.
- **Ultra-smooth and quiet.** You'd think you had a conventional engine of, say, 4 liters at your accelerator foot's command.

Here are some media impressions of this engine in '07 335i models:

- *Motor Trend*, September '06: “It's like butter, that twin-turbo six, and the turbo lag you might expect melts into smooth acceleration. But there's still a power surge to tell you turbos are in place hard and early.
- *Road & Track*, March '07: “More impressive than the actual numbers is the consummate ease with which this inline-6-powered BMW achieves them. ‘Ample bottom-end torque,’ said one staffer, ‘yet dip into the throttle and it really comes alive, zinging to redline.’”

Those “actual numbers” are plenty impressive too:

535i Sedan – 0-60 mph in just 5.6 sec. with manual, 5.7 sec. with automatic transmission. The EPA ratings are 17 mpg city/26 mpg highway/20 mpg combined.

535i xDrive Sedan – Despite its extra weight (242 lb.), the all-wheel-drive model actually attains 60 mph more quickly: 5.6 sec., also with automatic. (This may be due to the AWD model's superior traction.) EPA ratings are 16/24/19, a relatively modest penalty for AWD.

535i xDrive Sports Wagon – Weighing another 199 lb. over its Sedan counterpart, the Wagon takes an almost inconsequential 0.1 sec. longer to reach 60 mph, and delivers the same EPA mileage ratings as the Sedan.

For a detailed description of this dazzling engine, including an explanation of the term “turbo lag,” see **BMW features**, pages 32-35.

4.8-liter DOHC (4-cam) 32-valve V-8 engine with Valvetronic (550i)

The 550i's predecessor was widely acclaimed by most who drove or tested the 545i not merely for its strong, relatively fuel-efficient power, but also its highly pleasing sound. *Car and Driver* (May '04) summed it up as “among the friendliest, most enthusiastic engines in existence.”

These days the 5 Series V-8 model delivers even more brilliant performance. With its standard 6-speed manual transmission, the 550i attains 60 mph from rest in just 5.4 sec.; with automatic, it's only a tick less quick at 5.5 sec. And in addition to such official data, this engine just

5 Series key features

Except as noted, all current 5 Series models offer the following features:

delivers strong performance throughout its speed range with that unmistakably throaty, robust V-8 sound. After explaining its VANOS variable valve timing, *Edmund.com's* writer concluded that "The result is torque band like a rainbow. This engine is as smooth and comfortable on winding canyon roads as on the highway." (August 9, '06 posting.)

For a detailed description of this amazing engine, see **BMW features**, pages 35-36.

6-speed manual transmission (all models)

Three transmission types are offered in 5 Series models, each tailored to the engine it is combined with. Conceptually identical, both provide –

- Effective synchronization of gear changes
- Light, precise feel as the lever is moved from gear to gear
- Short "throws" from gear to gear.

The 528i with rear-wheel drive employs the Type I unit. With xDrive, the 528i gets the heavier-duty Type H. All 535i models and the 550i have the Type G, BMW's heaviest-duty manual gearbox – so robust, in fact, that it also appears in BMW's most powerful current models, the M5 and M6.

6-speed STEPTRONIC automatic transmission (all models)

All 5 Series models offer a STEPTRONIC automatic transmission, whose 6 forward speeds complement the Valvetronic engines' wide rpm range, providing a virtually seamless flow of power and a highly relaxed 6th gear for cruising at Interstate and freeway speeds.

There are also three automatic-transmission types in this Series, all of them versions of the 6-speed ZF 6 HP unit. In both 528i models and 535i models without Sport Package, it's the 6 HP 19, which last year received wide-ranging functional improvements that included quicker shifting, finer adaptation to driving style and conditions, and improved efficiency. With its high-torque V-8 engine, the 550i without Sport Package gets the more robust but operationally similar 6 HP 26.

With Sport Package, the rear-drive 535i and 550i Sedans offer the Sport version of their respective automatics, with sportier programming, a Sport button, steering-wheel shift paddles and other features. For details on BMW automatic transmissions, including the Sport automatic, see **BMW features**, pages 40-41.

5 Series suspension and steering

The 5 Series shares its basic chassis concept with the 6 Series. Thanks to the lighter weight of its aluminum suspension, when a wheel encounters a bump, it offers less resistance and inertia and thus deals more willingly with that bump. In turn, this allows suspension engineers to achieve a supple ride in combination with precise, responsive and enjoyable handling. (5 Series RWD models have aluminum suspension front and rear, AWD models only at the rear; thus the RWD models have an advantage in supple riding comfort.) To maximize cargo space, the Sports Wagon's rear suspension is configured differently from that of the Sedans; it also substitutes auto-leveling air springs for the

Sedans' steel coil springs to accommodate the heavier cargo loads it is likely to carry.

The 5 Series' standard steering system provides a **variable ratio**, not to be confused with variable assist. Its steering rack's teeth are profiled to make the steering become quicker (that is, more steering effect for a given steering-wheel motion) as the wheel is turned outward from its center position. This fine-tunes steering response.

Servotronic power assist is standard on all 5 Series models. Assist is varied according to vehicle speed, progressively decreasing from maximum assist at a standstill to minimum at high road speeds.

A comparison test of the latest 5 Series vs. the Mercedes-Benz E-Class lends an independent voice to BMW's clear lead in handling: "[The Mercedes won't disappoint] those who value stress-free gliding over engaging cornering ability, whereas the BMW entices with its amazing agility. [The BMW] steers spontaneously, precisely and specifically in a way that makes driving enjoyable; is faster in our driving-dynamics tests; and upholds BMW's brand values." This from the April 11, '07 issue of Germany's authoritative *auto motor und sport* magazine.

Active Steering, available as a stand-alone option on RWD models, expands dramatically on the variable-ratio concept; it is described in **BMW features** on

pages 48-50. Another innovative BMW chassis feature, **Active Roll Stabilization**, is included with the Sport Package of all RWD models and is also described in the **BMW features** section (pages 53-54).

4-wheel ventilated disc brakes

Every 5 Series model has generously dimensioned brakes for abundant stopping power and excellent resistance to brake fade. Brake dimensions for all models are listed in the table below.

All discs are ventilated; the 528i models' cast-iron construction is optimized for a modest reduction of unsprung weight, thus contributing to the suspension's supple response to bumps.

An innovative rotor construction, saving yet more unsprung weight, appears on the 535i and 550i models. These aluminum/cast-iron rotors, also shared with the 6 Series, are described in **BMW features** on pages 51-52.

All brake calipers on 6-cylinder models are of aluminum; the front calipers of V-8 models are of aluminum. Thus with the 5 Series, BMW has maintained or extended its lead in reducing unsprung weight, continuing to set standards in combining top handling with amazing riding comfort.

Wheels and tires: 17-, 18- or 19-in. equipment throughout the Series

Wheel and tire equipment is tailored specifically to each model's performance capabilities and product character:

Brake dimensions, diameter x thickness:

	Front discs, mm/in.	Rear discs, mm/in.
528i	324 x 30/12.8 x 1.18	320 x 20/12.6 x 0.79
535i, 550i	348 x 30/13.7 x 1.18	345 x 24/13.6 x 0.94

5 Series key features

Except as noted, all current 5 Series models offer the following features:

Standard equipment. All models come standard with 17-in. wheels and non-run-flat all-season tires of equal front/rear dimensions, with different designs for 528i, 535i and 550i models. Wheel designs for the 528i and 535i models are new for '09; the 550i's standard wheels are a half-inch wider than those of the 528i and 535i models.

Sport Packages. There are three approaches here. In RWD form, the 6-cylinder Sedans (528i and 535i) with the Sport Package move up to 18-in. wheels with run-flat performance tires; on the 535i these are in differentiated front/rear sizes. The 550i's more extensive and expressive Sport Package includes 19-in. wheels in differentiated front/rear sizes, with non-run-flat performance tires.

With Sport Package, the AWD 528i and 535i xDrive models retain their standard wheel-tire equipment, thus 17-in. wheels with all-season tires for optimum bad-weather traction. Then, as stand-alone options in combination with their Sport Package, they offer the same equipment as in the RWD Sport Packages as an upgrade for those customers who prioritize dry-weather performance over all-season traction; thus there's an extra choice here. One exception: the 535i xDrive Sports Wagon's upgrade specifies equal-width 18 x 8.0 wheels front and rear because its body doesn't accommodate the wider rear wheels and tires.

All 5 Series wheel/tire equipment is listed in the table below.

Model	Wheel size & design	Tires	Changes for '09
528i standard	17 x 7.5 Double Spoke #278	225/50R-17 all-season	Wheels: new design
535i standard	17 x 7.5 V Spoke #277	225/50R-17 all-season	Wheels: new design
550i standard	17 x 8.0 V Spoke #245	225/50R-17 all-season	No changes
528i Sport Package, 528i xDrive upgrade (requires Sport Package)	18 x 8.0 Star Spoke #246	245/40R-18 run-flat performance ²	No changes
535i Sport Package, 535i xDrive Sedan upgrade (requires Sport Package)	18 x 8.0 front/ 18 x 9.0 rear Star Spoke #124	245/40R-18 front / 275/35R-18 rear run-flat performance ²	No changes
535i xDrive Sports Wagon upgrade (requires Sport Package)	18 x 8.0 Star Spoke #124	245/40R-18 run-flat performance ²	No changes
550i Sport Package	M Double Spoke #172M 19 x 8.0 front/ 19 x 9.5 rear	245/35R-19 front / 275/30R-19 rear performance ²	No changes

xDrive: BMW's "intelligent" all-wheel drive system

Like other all-wheel-drive BMWs, the newly named 528i and 535i xDrive models incorporate BMW's advanced xDrive all-wheel drive and traction system. xDrive delivers –

- Excellent traction at all times, especially noticeable on slippery road surfaces
- Optimum handling agility
- Surefooted, neutral handling in curves.

xDrive is described in detail in **BMW features**, pages 44-45.

Ergonomics & convenience

Cockpit design and amenities: flowing lines, tasteful colors

As always with BMW, there is a wealth of thoughtful ideas to make the going comfortable, pleasant and esthetically satisfying.

In the instrument cluster, the two main dials include an analog fuel gauge (in the speedometer) and BMW's traditional Energy Control fuel-economy indicator (in the tachometer).

In its overall shape, the dash is dominated by a "double wave" theme: one wave over the instrument cluster, defining the driver's area; another that begins over the Comfort zone (dash center) and sweeps toward the right side.

The asymmetrically shaped center console compartment is large. Both front cupholders are to the right of dash center, with the driver's cupholder swinging out to the left when opened. The front door panels pick up the color scheme and carry it rearward with a very attractive, sweeping design.

Control strategy: an overview

The 5 Series iDrive system's control strategy and layout are essentially shared with the 6 Series. Key attributes include:

- A simplified version of iDrive; or a more extensive version when the vehicle is equipped with the (optional) On-board Navigation System. For '09, the Series gets the new-style controller with surrounding direct-select keys, but the system remains essentially unchanged.
- E-shift control of available automatic transmission, with which the driver "tips" the lever instead of moving it into another position for most selections. This is shared with the 6 and 7 Series' automatic transmissions; the same concept also serves the M3s' M Double-Clutch and M5/M6 Sequential Manual Gearbox.
- Traditional pull-up handbrake instead of the 7's electro-mechanical device with control button on the console.
- A visual driver orientation that is emphasized by the handbrake.

Shared with the 6 Series is the placement of two push-push controls on the turn-signal stalk, one for On-board Computer functions, the other for Check Control functions. (Depending on how the vehicle is equipped, there can be up to 185 functions that Check Control monitors.)

Instrument cluster

The 5's instrument cluster is more "conventional" than that of the 7 Series, in that it doesn't use the dial faces for as many indicator lights. A feature shared

- 2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. Performance tires are not recommended for driving in snow and ice conditions.

5 Series key features

Except as noted, all current 5 Series models offer the following features:

with the 6 and 7 Series as well as current M Cars also as appears here: a variable tachometer warning segment. Via a rotating disc behind the instrument face, the warning segment extends downward as far as 4200 rpm when the engine is cold, then gradually increases the rpm limit to normal as the engine warms up. On the speedometer, a similar disc carries a pointer indicating the set speed for the cruise control.

There is no coolant-temperature gauge, but of course there is a warning to indicate overheating should it occur.

3-spoke steering wheel standard in all models

All models have a 3-spoke steering wheel of BMW's usual 385-mm/15.2-in. diameter. Multi-function controls – including two programmable switches – are conveniently arrayed on the wide horizontal spokes, whose lower edges and the sides of the lower spoke are attractively trimmed in the same metal-finish trim as the door pulls. The wheel is tilt/telescopically power-adjustable, quick and quiet. When the remote is removed, the wheel rises to its highest position (automatic tilt-up) for ease of exit and entry.

iDrive in the 5 Series

Base equipment in all U.S. models is an iDrive setup with a 6.5-in. color Control Display (256 colors, 400 x 240 pixels). Its controller provides four menu directions: Communication, Car Data, Entertainment and Climate, where “Navigation” replaces “Car Data” when the vehicle is equipped with the (optional) GPS Navigation system. In rotary motion, the base-equipment controller does not incorporate force feedback, but rather a “clicking” feel to give the user a firm sense of rotation. Six

Programmable Memory Keys allow users to store frequently used functions; adjacent to them are dedicated AM/FM and Entertainment Mode keys.

For information on the various Series' iDrive systems, refer to **BMW features**, pages 63-66.

Automatic climate control

All U.S. 5 Series models come standard with the “high” automatic climate-control system, which includes such premium climate features as –

- Separate left and right temperature controls
- Air-distribution manual override, differentiated left/right
- Inclusion of front footwells in left/right separation
- Variable rear-compartment ventilation and heating
- Heat at Rest (allows heating the interior for a limited time with the engine off)
- Automatic parked-car ventilation (allows programming of interior ventilation to occur during periods when vehicle is standing)
- Active-charcoal microfilter ventilation
- Bi-directional solar sensor for front compartment (takes into account the direction of solar heat in determining cooling of interior)
- Storage of individual users' climate settings in Key Memory
- Maximum a/c setting for rapid cool-down at a single touch of a button
- Automatic recirculation control, with specific sensing capability for diesel exhaust
- Rotary temperature and blower-speed controls
- Humidity control – avoids over-dehumidification.
- Climate-controlled console storage compartment

- Multiple defroster outlets to accommodate optional Head-Up Display:
 - Main outlets, centrally located
 - Side outlets for defrosting in A-pillar areas
 - Outboard outlets for mirror-triangle areas and entire front side windows.

Audio systems

Two audio systems are offered: standard and optional premium.

The standard AM/FM/CD/MP3 system includes 10 speakers:

- 2 subwoofers, 210 mm, one each in cavities at the bases of the B-pillars
- 2 conical midrange, 100 mm, in the front doors
- 2 conical midrange, 100 mm, in the rear shelf (Sedans) or in roof (Sports Wagon)
- 2 tweeters, 25 mm, in the front-door mirror triangles
- 2 tweeters, 25 mm, in the rear shelf (Sedans) or in roof (Sports Wagon).

Circuits for the reception-enhancing diversity antenna system are embedded in the rear window. The amplifier for these circuits is positioned centrally at the rear of the roof, close to the antenna circuits for even better FM reception.

A fin-type roof antenna serves the phone³ and/or Navigation System, as well as the GPS aspect of the standard telematics system; the housing for this antenna (present on all models) also accommodates an antenna for the optional Sirius Satellite Radio.

A 6-disc CD changer, mounted in the glove compartment, is offered for BMW center installation; the premium Logic7 audio system is available as a stand-alone option. For details on this

system, see **options & packages**, page 186, and **BMW features**, pages 69-70.

Upholstery and trim

Leatherette upholstery is standard in the 6-cylinder models. Dakota leather upholstery (stand-alone option or Premium Package in the 6-cylinders) is standard in the V-8 550i.

Door panels are handsomely upholstered, contoured and trimmed; in all models, the interior door handles of all models are finished in a metallic-look material. Wood interior trim, standard in all models, appears on the dash, console and door pulls. Dark Poplar is standard in all models; Light Poplar and Bamboo Anthracite are available at no extra cost. This Bamboo is distinctive in a highly contemporary way, and harmonizes well with all interior colors.

Front seats: many choices

528i models come standard with 10-way power front seats, including these adjustments:

- Fore-aft position
- Seat height
- Seat angle
- Backrest angle
- Head-restraint height.

The power controls are on the outboard edge of each front seat. Driver's-seat memory controls are on this same panel; they can capture two preferred positions for each user (via Key Memory and the individual user's remote).

4-way power lumbar support is standard in 535i and 550i models, bringing their power-adjustment count to 14-way; the power lumbar is included in the 528i Premium Package.

3 – Phone controls active when approved cellphone is paired with Bluetooth interface.

5 Series key features

Except as noted, all current 5 Series models offer the following features:

20-way Multi-contour seats⁴ are included in all Sport Packages, and also continue as a stand-alone option for all models. These add power adjustments for –

- The articulated upper sections of their backrests
- Thigh support
- Backrest width (the backrests' side bolsters spread or narrow to accommodate the occupant's back and shoulders).

These seats also have memory on both driver's and passenger's sides. Head-restraint height is coupled with the fore-aft position as on the standard seats, but fine adjustment is powered (standard seats: manual). The head restraints incorporate adjustable side extensions that help support the head of an occupant using them as headrests, as for example when sleeping. The Multi-contour seats' head restraints also provide active protection in rear-end impacts; see **safety & security**.

Heated front seats are available as part of the Cold Weather Package or as a stand-alone option. Rear-seat heating is available as a stand-alone option in combination with the Cold Weather Package and leather upholstery.

Versatile center console

Storage space is provided in the console's rearward portion. On the right side is a padded lid that serves as the passenger's center armrest; when released, this lid springs up to 35° and can then be opened wider. Underneath is a 2-part compartment: upper and climate-controlled lower. The padded left side can be moved forward by nearly 2.5 in. to give the driver two armrest positions to choose from.

Roomy rear seat

The Sedans' rear seat offers ample space for two passengers or an occasional three. 3-point safety belts and head restraints are provided at all seating positions; as the center rear head restraint is built into the center armrest, the driver can maximize rearward vision by keeping the armrest down unless there is a center rear passenger. Cupholders are built into the center armrest's forward end.

Accessory power outlets

In addition to cigarette-lighter sockets front and rear, there are power outlets under the glove compartment and in the Sedans' trunk.

Sedan trunk: plenty of space, thoughtful features

The 5 Series Sedans' trunk has a "transverse orientation" that allows it to accommodate four golfbags laterally (3 x 46 in. + 1 x 45 in.). Generous overall cargo space is a testament to the functional value of the trunklid design. A reversible mat has flock on one side and a slide-resistant rubber finish on the other; the latter can be used to prevent objects from sliding around while the vehicle is in motion, and is amazingly effective in this regard.

The toolkit is mounted conveniently on the trunklid's underside. Shared with the 7 Series are tubular hinges, which eliminate any intrusion of the hinges into the trunk space.

Sports Wagon interior and cargo area

Up front, the Sports Wagon offers the same accommodations as the Sedans, except as affected by the Wagon's dual-panel Panoramic moonroof. Front and

rear leg room are identical for the two body styles; front head room is essentially identical, but the Sports Wagon offers 0.6 in. greater head room for rear passengers. The Wagon's standard split folding rear seats offer essentially the same functions and benefits as those that are optional in the Sedan, except of course that they cannot be locked.

The big difference is aft of the rear seats, where in terms of load-carrying ability and versatility the Sports Wagon offers numerous advantages. As always with a BMW Sports Wagon, the 535i abounds with rational design and thoughtful details:

- High-lift tailgate – almost 73 in. head clearance – with Soft Close feature. Electrically released from remote or interior switch.
- Separately opening rear window, for convenient loading without opening the tailgate.
- Fully lined cargo area – floor, sides, back sides of rear seats – with luxurious, yet long-wearing carpet.
- With its straight, essentially vertical sides, the cargo area presents various cargo possibilities:
 - 17.6 cu ft. of volume with the seats upright and cargo loaded to the top of the seats
 - 33.6 cu ft. with the seats upright and cargo loaded to the ceiling
 - 58.3 cu ft. with the seats folded and cargo loaded to the ceiling.
- Four tie-down hooks in the floor, at the front and rear corners of the compartment.
- A 12-volt accessory power outlet on the right-hand wall.
- An enclosed storage compartment on each side.

- Two storage spaces under the cargo floor, one lockable; both include dividers to partition the space as desired. The spare tire is under the rearward, lockable compartment.
- Bag holders – a short strap on the left side, a longer one on the right side.
- Instead of hooking into its raised position, the floor rises, and stays in its raised position, once released via a convenient handle at the rear of the compartment.
- A cargo net, carried in a roller assembly, that can be mounted with the rear seats either upright or folded. At each side of the cargo area is a flat surface on which this assembly can be slid rearward for removal from vehicle; one does not have to reach in awkwardly and lift the assembly out.
- A cover, concealing cargo when the seats are upright; automatically rises when tailgate is opened and stays up. The cover can also be removed from the vehicle.
- If, once raised, a rear-seat backrest is not fully locked into place, a red tab appears to help call users' attention to it.
- Red light at bottom of tailgate, for safety; visible when tailgate is open.

A power tailgate is available as part of the Premium Package; see **Options & packages** for details.

Dual-panel Panoramic moonroof

With its overall roof opening of 41.9 x 34.8 in., this feature gives occupants almost the feeling of being in a convertible. For details on this appealing feature, see **BMW features**, pages 77-78.

- 4 – These are essentially the same as the Comfort front seats of other Series, and have the same option code (456).

5 Series key features

Except as noted, all current 5 Series models offer the following features:

Safety & security

5 Series safety and security features are shared with those of other BMW Series.

The Insurance Institute for Highway Safety has tested the current 5 Series Sedan in its demanding 40-mph frontal-offset crash test – and awarded its coveted Best Pick rating. This is dramatic proof of the value of BMW's safety engineering.

For details on BMW safety features and systems, see **BMW features**, pages 78-90.

Options & packages

Factory-installed options

Premium Package

(528i & 535i models, code ZPP)

All features of this Package are standard in the 550i. It includes the following for all four 6-cylinder models –

- Dakota leather upholstery
- BMW Universal Transceiver, the familiar 3-function device that can operate garage doors and other external electrical devices or systems
- Auto-dimming interior and exterior mirrors
- Power-folding exterior mirrors
- Ambient Light Package, consisting of –
 - LED ground lighting in the exterior mirrors
 - Ambiance lighting at interior door handles and storage bins
 - Exit/entry lighting in rear door panels (front standard)
 - Additional lighting in trunklid (Sedans) or tailgate (Sports Wagon).

For specific models, there are additional features in this Package: for 528i Sedans –

- 4-way power lumbar support on both front seats. Not included in the 535i models' Package because it is standard there.

for the 535i Sports Wagon –

- **Power tailgate** – opening from the interior or exterior release or remote; closing from tailgate itself only; includes power cargo cover.

Sport Package

(528i & 535i Sedans, code ZSP)

Essentially the same for the RWD 528i and 535i Sedans, but includes different wheel-and-tire equipment for each model. Its contents are –

- **Active Roll Stabilization**, which dramatically reduces body roll or "lean" in corners and curves. Drivers and passengers alike marvel at the "flat cornering" it engenders. For a detailed description of this advanced suspension technology, see **BMW features**, pages 53-54.
- **Sport suspension**. Firmer springs and shock absorbers. The usual larger conventional anti-roll bars are replaced by ARS. Ride height is lowered by 15 mm/0.6 in.
- **Sporty wheels and performance tires**, specific to the various models:
 - 528i Sedan** – 18 x 8.0 Star Spoke wheels (design #246) with 245/40R-18 run-flat performance tires²
 - 535i Sedan** – 18 x 8.0 front/ 18 x 9.0 rear Star Spoke wheels (design #124) with 245/40R-18 front / 275/35R-18 rear run-flat performance tires².

Even though it is not strictly necessary with the run-flat tires, a space-saver spare is included so that there is no perceived loss of a feature with the Package.

- **High-gloss Shadowline exterior trim.** Premium all-black trim around the side windows replaces the standard black-plus-chrome window framing.
- **20-way power front Multi-contour seats.** Described on pages 74-75.
- **Sport steering wheel** with different spoke design, circular center section and galvanic trim as distinguishing features from the standard wheel. All 5 Series steering wheels have three spokes.

Sport Package

(528i & 535i xDrive models, code ZSP)

Tailored to the AWD models' specific considerations:

- **No sport suspension.** The AWD chassis has its own specific suspension calibration, the same for standard-equipped or Sport Package vehicles.
- **Regular-profile, all-season tires,** putting more accent on all-weather traction and handling. Customers who prioritize dry-road handling may order the same wheels and tires as included in the corresponding RWD model's Sport Package, as a stand-alone upgrade; see the table on page 176.

As with the RWD models' Sport Packages, **high-gloss Shadowline trim, Multi-contour front seats and sport steering wheel** are included in the AWD models' Packages.

Sport Package

(550i Sedan, code ZSP)

The 550i's Sport Package departs from those of the other Series models and packs more intense sports excitement into

this most powerful, highest-torque model. Its special features include –

- **M aerodynamic exterior features.** Special front bumper/spoiler ensemble, side sills and rear bumper/apron.
- **Shorter shift lever** with manual transmission.
- **M sport suspension** – a different and more aggressive sport calibration for the 550i suspension, with even firmer auxiliary springs, shock absorbers and Active Roll Stabilization (ASR). A 15-mm/0.6-in. lowering of ride height is shared with 528i/535i RWD models' sport suspension.
- **M Double Spoke wheels** (design #172M), 19 x 8.0 front/19 x 9.5 rear with 245/35R-19 front / 275/30R-19 rear performance tires². Unlike the Series' other performance tires, these are non-run-flats.
- **Sportier exhaust sound and Chrome Shadow exhaust tips.**

Features shared with other models' Sport Packages include ASR, space-saver spare, high-gloss Shadowline exterior trim, 20-way Multi-contour seats and sport steering wheel.

Cold Weather Package

(all models, code ZCW)

For all models, this Package includes:

- **Heated front seats** with variable heating balance via iDrive.
- **Heated steering wheel.**
- **Headlight cleaning system.** High-intensity jets, normally retracted, pop out to spray the lights with washer fluid.

2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. Performance tires are not recommended for driving in snow and ice conditions.

5 Series key features

Except as noted, all current 5 Series models offer the following features:

For the 535i xDrive Sports Wagon, the Package adds –

- **Ski bag.** On the Sedans, this is included with the optional split folding rear seats.

6-speed STEPTRONIC automatic transmission

(optional models, code 205)

This advanced, performance-enhancing and velvety-smooth automatic is offered as a stand-alone option, now at no extra cost on all models.

Sport automatic transmission (optional 535i & 550i Sedans only, code 2TB; requires Sport Package)

Available only on these RWD models, this new approach to a sportier automatic transmission includes –

- **Specific shift lever**, with leather boot
- **Paddles on steering wheel** for manual shifting
- **Sport button** on console for selecting sharper shifting and engine response
- **Rpm matching** on downshifts (also referred to as “throttle blipping”).

The “sharper shifting” means even quicker shifting response than that already present in the updated 6-speed automatic; “sharper engine response” means quicker response to the accelerator pedal, as found in M models. More details on the Sport automatic in **BMW features** on page 41.

Active Cruise Control with new Stop-and-Go function (optional all models, code 5DF; requires automatic transmission)

In addition to the usual speed-maintaining, acceleration and deceleration functions of the standard cruise control, ACC can adjust the BMW driver’s

speed according to traffic and road conditions, and incorporates other valuable functions as well. Includes Stop-and-Go capability and Collision Warning System; for details on this comprehensive system, see **BMW Features**, page 61.

Active Steering

(optional 528i, 535i & 550i Sedans, code 217)

Active Steering is offered on RWD models only, thus the 528i, 535i and 550i Sedans without xDrive. Active Steering offers unique benefits, described in detail in **BMW features**, pages 48-50.

Lane Departure Warning

(optional all models, code 5AD; requires Premium Package on all 528/535 models)

An especially useful option, given the many distractions inherent in today’s driving environment. Employing a camera near the interior rearview mirror, this system monitors road lane markings. When switched on, it vibrates the steering wheel anytime the vehicle begins to move across a lane marking without the turn signals activated. If the driver does activate the turn signals, LDW does not react. For a more detailed description, see **BMW features**, page 79.

Park Distance Control

(optional 528i & 535i models, standard 550i Sedan; code 508)

PDC employs four ultrasonic sensors each in the front and rear bumpers to warn the driver when the vehicle is approaching obstacles that may not be visible to the driver. The front sensors cause a higher-pitched tone that emanates from the front of the cabin; the rear ones trigger a lower-pitched tone at the rear.

In this Series, PDC includes a graphic display of obstacles in the iDrive monitor.

Xenon Adaptive headlights with dynamic auto-leveling (optional 528i models, standard 535i models & 550i Sedan; code 522)

This forward lighting enhancement is described under **BMW features** on pages 23-24.

Night Vision (optional all models, code 611; requires Cold Weather Package & Navigation System)

Helps the driver perceive critical situations at night and during twilight. An infrared camera at the front of the vehicle transmits a picture to the iDrive display; the greater the object's warmth, the brighter its image. Pedestrians and animals are thus recognized before the driver might perceive them.

For details on Night Vision, see **BMW features**, pages 81-82.

High Beam Assistant (optional all models, code 5AC; requires Xenon headlights on 528i models)

Switches the headlights automatically between low and high beams. Turns on the high beams whenever traffic conditions allow, relieving the driver of this duty and ensuring that the driver always has the best possible forward vision at night. The driver can also take over at any time by using the steering-column beam control.

For more detailed information on High Beam Assistant, see **BMW features**, page 59.

Comfort Access (optional all models, code 322) Eliminates the need to activate a remote to unlock or lock the vehicle, or to insert it into the

dash slot before starting the engine. Details are found in **BMW features** on page 58.

Dakota leather upholstery (optional 528i & 535i models, standard 550i Sedan; codes LC) This luxurious leather is available as either this stand-alone option or part of the 6-cylinder models' Premium Package.

Light Poplar wood interior trim (no extra cost, all models; code 437)

An interesting alternative to the standard Dark Poplar.

Bamboo Anthracite wood interior trim (no extra cost, all models; code 4BY)

With its gray color, Bamboo Anthracite is especially distinctive and contemporary, and harmonizes well with all interior colors. The wood trim appears on the instrument panel and center console.

20-way Multi-contour seats (optional all models, code 456; require leather upholstery on 528i & 535i models)

Described in detail under **BMW features** on pages 74-75, these seats incorporate additional power adjustment and memory for both driver and passenger. In 528i and 535i models, they require leather upholstery (Premium Package or stand-alone option).

Split folding rear seats and ski bag (optional all Sedan models, code 465)

The seats are split 60% left/40% right; in Sedans they are released from inside the trunk. The pass-through for the ski bag is in the center, and thus part of the 60% side; as with the standard rear seat, there are three head restraints.

5 Series key features

Except as noted, all current 5 Series models offer the following features:

In the Sports Wagon, folding rear seats are standard and the ski bag is included in the Cold Weather Package.

Heated front seats

(optional all models, code 494)

In addition to being part of the Cold Weather Package, the heated front seats are also available as a stand-alone option.

Rear-seat heating

(optional all models, code 496; requires Cold Weather Package; also requires leather upholstery in 528i & 535i models)

This option offers 2-stage heating of the seating positions. The controls are at the rear of the center console.

BMW On-board Navigation System

(optional all models, code 609)

iDrive is standard in all 5 Series models; vehicles equipped with the optional Navigation System get a larger (8.8-in.) screen, a controller incorporating Force Feedback, Voice Command, Real Time Traffic Information and other distinctive features.

A basic description of BMW On-board Navigation Systems is found in **BMW features** on pages 63-66.

Head-Up Display

(optional all models, code 610; requires Navigation System)

This feature displays important driving-related information in color on a 6 x 3-in. field in the windshield. See **BMW features**, page 67, for details.

Logic7 audio system

(optional all models, code 677)

Compared to the standard 10-speaker system, Logic7 features –

- Increased audio power
- Even higher-caliber speakers, plus additional speakers (13 speakers total)
- Digital Sound Processing (DSP), adjusted along with other Logic7 parameters on iDrive monitor
- Surround Sound simulation.

Speakers are as follows. An asterisk (*) denotes additional speakers over the standard system:

- 100-mm midrange fill speaker, center of dash*
- 100-mm midrange in each front door
- 25-mm tweeter in mirror triangle of each front door
- 100-mm midrange in each rear door*
- 100-mm midrange surround speaker at each side of rear shelf (Sedans) or in roof (Sports Wagon)
- 25-mm tweeter at each side of rear shelf, inboard of surround speakers (Sedans) or in roof (Sports Wagon)
- 210-mm subwoofer in cavities at bases of B-pillars. This placement is patented by BMW and can be described to customers as an “underseat” location.

HD Radio

(optional all models, code 653)
Significantly enhances the sound quality of both FM and AM reception. It is described in **BMW features** on pages 71-72.

Satellite Radio

(optional all models, code 655)
The system beams programming to satellites orbiting the earth; Sirius-equipped vehicles receive the programming. For details on this option, see **BMW features**, page 72.

Power rear sunshade and manual rear side-window sunshades

(optional all Sedan models, code 416)

Manual rear side-window shades

(optional 535i xDrive Sports Wagon, code 417)

Available only in Sedans, the rear-window shade is powered, and controlled from a console switch. The side-window shades, included with the Sedan option and available separately for the Sports Wagon, are manual and easily positioned by rear-seat passengers; each of these consists of two portions, for the main window and the fixed quarter pane.

iPod/USB Adapter

(optional all models, code 6FL)
This option addresses the growing demand for in-vehicle digital programming. It enables the vehicle's audio system to play an MP3 player or a flash drive; there is no conflict with the available CD changer. For more details, see **BMW features**, pages 72-73.

Rear-seat side-impact airbags and safety-belt tensioners

(optional all models, code 261)
In the 5 Series, this option also includes automatic tensioners on the rear outboard safety belts.

BMW center-installed accessories

Among the many accessories available for 5 Series models are:

- Aerodynamic body kits
- Complete wheel and tire sets, 18- and 19-in.
- Rear spoiler
- Nose mask
- Roof cargo carriers
- Racing-cycle carrier, lockable
- License-plate frames
- Illuminated doorsill trims
- Car covers, outdoor and indoor types
- Windshield sunshade
- Sun/wind deflector for moonroof
- Floor mats, carpet and rubber.
- Umbrella and holder
- Cargo liners and other trunk/cargo-area accessories

For details and a complete listing, see the latest **Original BMW Accessories** catalog for the 5 Series.

Standard & optional features

2009 5 Series

Bold indicates new feature for 2009 (528i xDrive vs. 2008 528xi, 535i xDrive vs. 2008 535xi).

Exterior design & function

Aluminum front-end structure & skin (hood & fenders)

Front & rear body-color bumpers

Halogen free-form headlights

Xenon Adaptive headlights with dynamic auto-leveling

Automatic headlight control

High-intensity headlight cleaning system with retracting nozzles

Daytime running lamps via luminous rings

Halogen free-form foglights

Cornering lights

Welcome Light

Power-folding exterior mirrors

Park Distance Control, front & rear with graphic display

Rain-sensing windshield wipers with articulated passenger's-side wiper arm, single-wipe control, windshield-washer system with heated washer jets

Rear-window wiper/washer with adjustable wiping interval

Roof rails (accommodate various BMW carrier systems)

Choice of standard or metallic paint

Aerodynamic body components: front bumper/spoiler, side sills & rear bumper/apron

Chrome/matte-black side-window trim

High-gloss Shadowline exterior trim

Adaptive brakelights

Performance & efficiency

DOHC 24-valve inline 6-cylinder engine:

3.0-liter

3.0-liter twin-turbo

4.8-liter DOHC (4-cam) 32-valve V-8 engine

Engine features:

Magnesium/aluminum composite construction

Aluminum engine construction

Twin turbochargers

High Precision direct fuel injection with piezo injectors

Valvetronic system

Double VANOS³ steplessly variable valve timing

Single-stage induction system

2-stage induction system

Special sporty exhaust sound

Electronically controlled engine cooling

1 – Selectable via Vehicle & Key Memory System (programming by user or BMW center).

2 – Included with optional Xenon Adaptive headlights.

3 – VANOS = **V**ARIABLE **N**Ockenwellen **S**teuerung = variable camshaft control, or variable valve timing.

528i Sedan	528i xDrive Sedan	535i Sedan	535i xDrive Sedan	535i xDrive Sp Wagon	550i Sedan
S	S	S	S	S	S
S	S	S	S	S	S
S	S	—	—	—	—
OPT	OPT	S	S	S	S
S	S	S	S	S	S
ZCW	ZCW	ZCW	ZCW	ZCW	ZCW
S ¹	S ¹	S ¹	S ¹	S ¹	S ¹
S	S	S	S	S	S
OPT ²	OPT ²	S	S	S	S
OPT ²	OPT ²	S	S	S	S
ZPP	ZPP	ZPP	ZPP	ZPP	S
OPT	OPT	OPT	OPT	OPT	S

S	S	S	S	S	S
NA	NA	NA	NA	S	NA
NA	NA	NA	NA	S	NA
NC	NC	NC	NC	NC	NC

NA	NA	NA	NA	NA	ZSP
S	S	S	S	S	S
ZSP	ZSP	ZSP	ZSP	ZSP	ZSP
S	S	S	S	S	S

528i Sedan	528i xDrive Sedan	535i Sedan	535i xDrive Sedan	535i xDrive Sp Wagon	550i Sedan
S	S	—	—	—	—
		S	S	S	—
NA	NA	NA	NA	NA	S
S	S	—	—	—	—
—	—	S	S	S	S
NA	NA	S	S	S	NA
NA	NA	S	S	S	NA
S	S	—	—	—	S
S	S	S	S	S	S
S	S	S	S	S	—
NA	NA	—	—	—	S
NA	NA	NA	NA	NA	ZSP
S	S	S	S	S	S

S – Standard
 OPT – Optional
 NC – No extra cost
 NA – Not available

— – Not applicable
 ZCW – Cold Weather Package
 ZSP – Sport Package (in 528i/535i models, requires leather upholstery)

Standard & optional features

2009 5 Series

Bold indicates new feature for 2009 (528i xDrive vs. 2008 528xi, 535i xDrive vs. 2008 535xi).

Performance & efficiency (cont.)

Electric water pump

Volume-controlled oil pump

Direct ignition system with knock control

6-speed manual transmission

6-speed STEPTRONIC automatic transmission with Sport & Manual shift modes

6-speed Sport automatic transmission with sportier programming, rpm matching on downshifts, steering-wheel shift paddles & Sport mode including engine response

Double-pivot-type front suspension

Aluminum front suspension components

Aluminum 4-link Integral Link rear suspension

Self-leveling rear suspension with air springs

Front & rear anti-roll (stabilizer) bars

Twin-tube gas-pressure shock absorbers

Sport suspension calibration

Active Roll Stabilization (ARS)

Vehicle-speed-sensitive variable-assist, variable-ratio rack & pinion power steering

Active Steering

4-wheel ventilated disc brakes

Dynamic Stability Control

xDrive fulltime all-wheel drive system, electronically controlled with variable front/rear torque split & traction control

Alloy wheels:

17 x 7.5 **Double Spoke (design #278)**

17 x 7.5 **V Spoke (design #277)**

17 x 8.0 V Spoke wheels (design #245)

18 x 8.0 Star Spoke (design #246)

18 x 8.0 Star Spoke wheels (design #124)

18 x 8.0 front/18 x 9.0 rear Star Spoke wheels (design #124)

19 x 8.0 front/19 x 9.5 rear M Double Spoke wheels (design #172M)

Tires:

225/50R-17 all-season

245/40R-18 run-flat performance⁶

245/40R-18 front / 275/35R-18 rear run-flat performance⁶

245/35R-19 front / 275/30R-19 rear performance⁶

Tire Pressure Monitor

4 – Require(s) Sport Package.

5 – Special sport calibration; differs from that of other Series models.

6 – Due to low-profile tires, please note: Wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. Performance tires are not recommended for driving in snow and ice conditions.

528i Sedan	528i xDrive Sedan	535i Sedan	535i xDrive Sedan	535i xDrive Sp Wagon	550i Sedan
S	S	S	S	S	NA
S	S	S	S	S	NA
S	S	S	S	S	S
S	S	S	S	S	S
OPT	OPT	OPT	OPT	OPT	OPT
NA	NA	OPT ⁴	NA	NA	OPT ⁴
S	S	S	S	S	S
S	NA	S	NA	NA	S
S	S	S	S	S	S
NA	NA	NA	NA	S	NA
S	S	S	S	S	S
S	S	S	S	S	S
ZSP	NA	ZSP	NA	NA	ZSP ⁵
ZSP	NA	ZSP	NA	NA	ZSP
S	S	S	S	S	S
OPT	NA	OPT	NA	NA	OPT
S	S	S	S	S	S
S	S	S	S	S	S
NA	S	NA	S	S	NA
S	S	-	-	-	-
-	--	S	S	S	-
NA	NA	NA	NA	NA	S
ZSP	OPT ⁴	NA	NA	NA	NA
NA	NA	NA	NA	OPT ⁴	NA
NA	NA	ZSP	OPT ⁴	NA	NA
NA	NA	NA	NA	NA	ZSP
S	S	S	S	S	S
ZSP	OPT ⁴	-	-	OPT ⁴	-
NA	NA	ZSP	OPT ⁴	NA	-
NA	NA	NA	NA	NA	ZSP
S	S	S	S	S	S

S – Standard
OPT – Optional
NA – Not available

-- – Not applicable
ZSP – Sport Package (in 528i/535i models, requires leather upholstery)

Standard & optional features

2009 5 Series

Bold indicates new feature for 2009 (528i xDrive vs. 2008 528xi, 535i xDrive vs. 2008 535xi).

Comfort & convenience

Vehicle & Key Memory

Multi-function remote control with selective unlocking¹ & remote trunk or tailgate release

Comfort Access

Start/Stop button

Dual power/heated exterior mirrors

Automatic tilt-down of right exterior mirror for visibility of curb when backing up

Automatic-dimming interior & exterior mirrors

High Beam Assistant

BMW Universal Transceiver (3-function garage-door opener)

Courtesy lights with fade-in/fade-out feature, actuation from remote, automatic switch-on when engine is turned off

Front & rear reading lights, separately controlled left/right

BMW Ambiance Lighting

Exit/entry lighting in front door panels

Illumination of interior door handles & door storage bins, front footwell lighting, exit/entry lighting in rear door panels, additional trunk lighting & LED exterior ground lighting (Ambient Light Package)

Lockable glove compartment

Power tilt/telescopic leather-wrapped steering wheel with fingertip cruise, audio & phone⁸ controls, automatic tilt-up for entry & exit

Sport steering wheel with same features

Heated steering wheel

Dynamic cruise control

Active Cruise Control with Stop-and-Go function & Collision Warning System

10-way power front seats with power head restraints

12-way power front sport seats with adjustable thigh support

Memory system for driver's seat, steering wheel & exterior mirrors (2 settings per user)

4-way power lumbar support, both front seats

20-way power Multi-contour front seats, including articulated upper backrests & adjustable backrest width, 4-way lumbar support, passenger's-seat memory & Active Head Restraints with adjustable side support

1 – Selectable via Vehicle & Key Memory System (programming by user or BMW center).

7 – Requires Premium Package & Xenon Adaptive headlights.

8 – Phone controls active when approved cellphone is paired with Bluetooth interface.

9 – Requires automatic transmission.

10 – Require leather upholstery (Premium Package or stand-alone option).

528i Sedan	528i xDrive Sedan	535i Sedan	535i xDrive Sedan	535i xDrive Sp Wagon	550i Sedan
S	S	S	S	S	S
S	S	S	S	S	S
OPT	OPT	OPT	OPT	OPT	OPT
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
ZPP	ZPP	ZPP	ZPP	ZPP	S
OPT ⁷	OPT ⁷	OPT ⁷	OPT ⁷	OPT ⁷	OPT
ZPP	ZPP	ZPP	ZPP	ZPP	S
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
ZPP	ZPP	ZPP	ZPP	ZPP	S
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
ZPP	ZPP	ZPP	ZPP	ZPP	S
S	S	S	S	S	S
ZSP	ZSP	ZSP	ZSP	ZSP	ZSP
ZCW	ZCW	ZCW	ZCW	ZCW	ZCW
S	S	S	S	S	S
OPT ⁹	OPT ⁹	OPT ⁹	OPT ⁹	OPT ⁹	OPT ⁹
S	S	S	S	S	S
ZSP	ZSP	ZSP	ZSP	ZSP	ZSP
S	S	S	S	S	S
ZPP	ZPP	S	S	S	S

ZSP/OPT¹⁰ ZSP/OPT¹⁰ ZSP/OPT¹⁰ZSP/OPT¹⁰ ZSP/OPT¹⁰ ZSP/OPT

S – Standard
 OPT – Optional
 ZCW – Cold Weather Package

ZPP – Premium Package
 ZSP – Sport Package (in 528i/535i models, requires leather upholstery)

Standard & optional features

2009 5 Series

Bold indicates new feature for 2009 (528i xDrive vs. 2008 528xi, 535i xDrive vs. 2008 535xi).

Comfort & convenience (cont.)

3-stage heated front seats with balance control

2-stage rear-seat heating

Adjustable front center armrest

2-level center console compartments with climate-controlled lower compartment

Electronic analog speedometer & tachometer (tachometer has variable warning segment)

LCD main & trip odometers

Check Control vehicle monitor system

Head-up Display (HUD)

iDrive system with 5 menus, controller, **4 direct-select keys + MENU, BACK & OPTION keys**, On-board Computer

BMW On-board Navigation System, encompassing expanded iDrive system, Real Time Traffic Information & Voice Command System; includes expanded On-board Computer functions, automatic ventilation & other features

Leatherette upholstery

Dakota leather upholstery

Dark Poplar wood interior trim

Light Poplar wood interior trim

Bamboo Anthracite wood interior trim

Power windows with key-off operation; 1-touch opening & closing of all door windows, anti-trapping feature, opening from remote, closing from exterior lock

Automatic climate control with separate left/right temperature & air-distribution controls, automatic recirculation control, humidity control, bi-directional solar sensor, Heat at Rest, temperature- & volume-controlled rear outlets, activated-charcoal microfilter ventilation & other features

2-way power moonroof with 1-touch opening & closing, anti-trapping feature, opening from remote, opening & closing from exterior door lock, sliding interior sunshade

Dual-panel Panoramic Moonroof: front panel slides open, both panels tilt up; power interior shade, all functions 1-touch

11 – Requires Cold Weather Package & (in 528i/535i models) leather upholstery.

12 – Requires Navigation System.

S – Standard

OPT – Optional

NC – No extra cost

528i Sedan	528i xDrive Sedan	535i Sedan	535i xDrive Sedan	535i xDrive Sp Wagon	550i Sedan
OPT/ZCW	OPT/ZCW	OPT/ZCW	OPT/ZCW	OPT/ZCW	OPT/ZCW
OPT ¹¹	OPT ¹¹	OPT ¹¹	OPT ¹¹	OPT ¹¹	OPT ¹¹
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
OPT ¹²	OPT ¹²	OPT ¹²	OPT ¹²	OPT ¹²	OPT ¹²
S	S	S	S	S	S
OPT	OPT	OPT	OPT	OPT	OPT
S	S	S	S	S	–
OPT/ZPP	OPT/ZPP	OPT/ZPP	OPT/ZPP	OPT/ZPP	S
S	S	S	S	S	S
NC	NC	NC	NC	NC	NC
NC	NC	NC	NC	NC	NC
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	–	S
NA	NA	NA	NA	S	NA

NA – Not available
 – – Not applicable

ZCW – Cold Weather Package
 ZPP – Premium Package

Standard & optional features

2009 5 Series

Bold indicates new feature for 2009 (528i xDrive vs. 2008 528xi, 535i xDrive vs. 2008 535xi).

Comfort & convenience (cont.)

Anti-theft AM/FM/CD/MP3 audio system with 10 speakers including 2 subwoofers, Radio Data System (RDS) & FM diversity antenna system

Logic7 audio system with 13 speakers, Digital Sound Processing & Surround Sound simulation; includes 2 subwoofers, upgraded componentry & all features of standard system

HD Radio

Satellite Radio

iPod/USB Adapter

Pre-wiring for installation of CD changer

6-disc CD changer in glove compartment

Bluetooth cellphone interface

Power outlets in front passenger's footwell & trunk (Sedans) or cargo area (Sports Wagon)

Dual cupholders front & rear

Dual front sun visors with illuminated mirrors

Open storage compartments in front & rear doors

Fold-up rear center armrest

Seatback storage compartments

Split folding rear seats

Ski bag

Power-operated rear & manual rear door-window sunshades

Manual rear door-window sunshades

Rear-window defroster

Interior or tailgate trunk release, electrically operated

Fully finished trunk with reversible floormat to keep smaller cargo from sliding

Variable cargo area with cargo cover, cargo net, storage compartments at both sides of cargo area & under cargo floor

Split tailgate with separately opening rear window; electric release from exterior or remote; Soft Close feature, rear-window wiper/washer

Power tailgate

13 – Included with optional folding rear seats.

S – Standard
OPT – Optional

528i Sedan	528i xDrive Sedan	535i Sedan	535i xDrive Sedan	535i xDrive Sp Wagon	550i Sedan
S	S	S	S	S	S
OPT	OPT	OPT	OPT	OPT	OPT
OPT	OPT	OPT	OPT	OPT	OPT
OPT/C	OPT/C	OPT/C	OPT/C	OPT/C	OPT/C
OPT	OPT	OPT	OPT	OPT	OPT
S	S	S	S	S	S
C	C	C	C	C	C
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
OPT	OPT	OPT	OPT	S	OPT
OPT ¹³	OPT ¹³	OPT ¹³	OPT ¹³	ZCW	OPT ¹³
OPT	OPT	OPT	OPT	—	OPT
—	—	—	—	OPT	—
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	—	S
NA	NA	NA	NA	S	NA
—	—	—	—	S	—
—	—	—	—	ZPP	—

NA – Not available
 — – Not applicable

C – BMW center-installed
 ZCW – Cold Weather Package
 ZPP – Premium Package

Standard & optional features

2009 5 Series

Bold indicates new feature for 2009 (528i xDrive vs. 2008 528xi, 535i xDrive vs. 2008 535xi).

Safety & security

Dynamic Stability Control (DSC), including Dynamic Traction Control, electronic brake proportioning, antilock braking (ABS), cornering/braking stability enhancement, Dynamic Brake Control, Brake Fade Compensation, Brake Standby, Brake Drying & Start-off Assistant plus Hill Descent Control

Lane Departure Warning

Night Vision

Dual front-impact Supplementary Restraint System (SRS) with dual-threshold deployment, 2-stage Smart Airbags

Front safety belts with automatic tensioners & force limiters

Automatic-locking retractors (ALR) on all passenger safety belts (for installation of child restraint seats)

Interlocking door anchoring system for side impacts

Front- & rear-seat Head Protection System (AHPS II)

Front-seat side-impact airbags

Rear-seat side-impact airbags & automatic tensioners on rear outboard safety belts

Active front head restraints

Advanced Crash Safety Management system (ACSM) for deployment of safety systems

Battery Safety Terminal

BMW Assist, including automatic collision notification, SOS button, enhanced Roadside Assistance; TeleService, Concierge¹⁷ & BMW Assist Safety Plan¹⁴

Central locking system with selective unlocking

Coded Driveaway Protection

Alarm system with operation from remote, interior motion detector

14 – Requires Premium Package.

15 – Requires Cold Weather Package & Navigation System.

16 – Included with optional Multi-function front seats.

17 – Requires BMW Assist annual fee after 4th year.

528i Sedan	528i xDrive Sedan	535i Sedan	535i xDrive Sedan	535i xDrive Sp Wagon	550i Sedan
S	S	S	S	S	S
NA	S	NA	S	S	NA
OPT ¹⁴	OPT ¹⁴	OPT ¹⁴	OPT ¹⁴	OPT ¹⁴	OPT
OPT ¹⁵	OPT ¹⁵	OPT ¹⁵	OPT ¹⁵	OPT ¹⁵	OPT ¹⁵
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
OPT	OPT	OPT	OPT	OPT	OPT
ZSP/OPT ¹⁶	ZSP/OPT ¹⁶	ZSP/OPT ¹⁶	ZSP/OPT ¹⁶	ZSP/OPT ¹⁶	ZSP/OPT ¹⁶
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S
S	S	S	S	S	S

S - Standard
OPT - Optional

NA - Not available
ZSP - Sport Package

Technical specifications

2009 5 Series

Bold indicates new spec. for 2009 (528i xDrive vs. 2008 528xi, 535i xDrive vs. 2008 535xi).

General	528i Sedan	528i xDrive Sedan
Curb weight, lb.:		
Manual transmission	3505	3770
Automatic transmission	3571	3814
Weight distribution, front/rear, %:		
Manual transmission	49.7/50.3	51.8/48.2
Automatic transmission	50.3/49.7	52.0/48.0
Wheelbase, in.	113.7 ¹	
Track, front/rear, in. (with standard wheels)	61.3/62.3 ¹	
Length, front/rear, in.	191.1 ¹	
Width, in.	72.7 ²	
Height, in.	57.8	58.3
Body	528i Sedan	528i xDrive Sedan
Type	4-door sedan ²	
Aerodynamic drag coefficient	0.29	0.29
EPA size classification	Compact ²	
Accommodations	528i Sedan	528i xDrive Sedan
Seating capacity, persons	5 ²	
Shoulder room, front/rear, in.	57.3/57.2 ²	
Head room, front/rear, in.	37.7/37.0 ¹	
Leg room, front/rear, in.	41.5/36.0 ²	
EPA passenger-compartment volume, cu ft.	99.1 ¹	
EPA cargo volume, cu ft.	14.0 ^{1,3}	
Engine & electrical	528i Sedan	528i xDrive Sedan
Engine type	DOHC inline 24-valve 6-cylinder, magnesium/aluminum composite construction, Valvetronic variable intake-valve lift & Double VANOS ⁵ variable intake- & exhaust-valve timing ⁶	
Bore x stroke, mm/in.	85.0 x 88.0/3.35 x 3.46 ⁶	
Displacement, cc/cu in.	2996/183 ⁶	
Compression ratio	10.7:1 ⁶	
Power @ rpm, hp	230 @ 6500 ⁶	

1 – Specification applies to all Sedan models.

2 – Specification applies to all models.

3 – Can be expanded via available folding rear seats.

4 – Rear seats upright, loaded to top of seats/rear seats upright, loaded to ceiling/rear seats folded, loaded to ceiling.

535i Sedan	535i xDrive Sedan	535i xDrive Sports Wagon	550i Sedan
3660	3902	4100	3946
3703	3946	4144	3968
51.2/48.8	53.1/46.9	49.2/50.8	51.4/48.6
51.8/48.2	53.4/46.6	49.2/50.8	51.7/48.3
		113.6	
		61.3/62.2	
		191.2	
57.8	58.3	58.7	57.8
535i Sedan	535i xDrive Sedan	535i xDrive Sports Wagon	550i Sedan
		5-door wagon	
0.29	0.31	0.33	0.29
		Midsized station wagon	
535i Sedan	535i xDrive Sedan	535i xDrive Sports Wagon	550i Sedan
		37.6/37.6	
		96.5	
		17.6/33.6/58.3 ⁴	
535i Sedan	535i xDrive Sedan	535i xDrive Sports Wagon	550i Sedan
DOHC inline 24-valve 6-cylinder, aluminum construction with cast-iron cylinder liners, direct fuel injection with piezo injectors, twin turbochargers, Double VANOS ⁵ steplessly variable intake- & exhaust-valve timing ⁷			DOHC (4-cam) 32-valve V-8, Valvetronic variable intake-valve lift & Double VANOS ⁵ variable intake- & exhaust-valve timing
84.0 x 89.6/3.31 x 3.53 ⁷			93.0 x 88.3/3.66 x 3.48
2979/182 ⁷			4799/293
10.2:1 ⁷			10.5:1
300 @ 5800 ⁷			360 @ 6300

5 – VANOS = VAriable NOckenwellen Steuerung = variable camshaft control, or variable valve timing.

6 – Specification applies to 528i models.
7 – Specification applies to 535i models.

Technical specifications

2009 5 Series

Bold indicates new spec. for 2009 (528i xDrive vs. 2008 528xi, 535i xDrive vs. 2008 535xi).

Engine & electrical (cont.)	528i Sedan	528i xDrive Sedan
Torque @ rpm, lb-ft.	200 @ 2750 ⁶	
Engine-management system	MSV70 with knock control; Valvetronic, variable valve timing, engine cooling & other functions included in control strategy ⁶	
Induction system	Single-stage ⁶	
Fuel requirement	Premium unleaded ²	
Fuel capacity, U.S. gal.	18.5 ²	
Battery capacity, amp-hr.	110 ²	
Alternator output rating, amp./W	180/2520⁶	
Drivetrain	528i Sedan	528i xDrive Sedan
Drive system	Front engine/ rear-wheel drive	Front engine/ all-wheel drive
Manual transmission	6-speed: Type I	Type H
Ratios: 1st	4.32:1	4.35:1
2nd	2.46:1	2.50:1
3rd	1.66:1	1.66:1
4th	1.23:1	1.23:1
5th	1.00:1	1.00:1
6th	0.85:1	0.85:1
Reverse	3.94:1	3.93:1
Final drive ratio	3.38:1	3.46:1
Automatic transmission	ZF 6 HP 19 TU, 6-speed STEPTRONIC with Adaptive Transmission Control, selectable Manual & Sport modes ⁸	
Ratios: 1st	4.17:1 ²	
2nd	2.34:1 ²	
3rd	1.52:1 ²	
4th	1.14:1 ²	
5th	0.87:1 ²	
6th	0.69:1 ²	
Reverse	3.40:1 ²	
Final drive ratio	3.73:1	3.91:1

2 – Specification applies to all models.

5 – VANOS = **V**ARIABLE **N**OCKERWELLEN **S**TEUERUNG = variable camshaft control, or variable valve timing.

535i Sedan	535i xDrive Sedan	535i xDrive Sports Wagon	550i Sedan
1400-5000 ⁷			360 @ 3400
MSD80 with knock control; direct fuel injection, variable valve timing, engine cooling & other functions included in control strategy ⁷			ME9 with knock control; Valvetronic, variable valve timing, engine cooling & other functions included in control strategy
			2-stage
			170/2380
535i Sedan	535i xDrive Sedan	535i xDrive Sports Wagon	550i Sedan
Front engine/rear-wheel drive	Front engine/all-wheel drive	Front engine/all-wheel drive	Front engine/rear-wheel drive
Type G ⁹			
4.06:1 ⁹			
2.40:1 ⁹			
1.58:1 ⁹			
1.19:1 ⁹			
1.00:1 ⁹			
0.87:1 ⁹			
3.68:1 ⁹			
3.08:1	3.08:1	3.08:1	2.93:1
ZF 6 HP 19 TU as other 6-cylinder models; Sport version with ZSP			ZF 6 HP 26 TU, as other Series models but heavier-duty; Sport version with ZSP
3:46:1	3:46:1	3:46:1	3:38:1

6 – Specification applies to all 528i models.
7 – Specification applies to all 535i models.
8 – Specification applies to all 528i & 535i models.

9 – Specification applies to all 535i & 550i models.
ZSP – Sport Package

Technical specifications

2009 5 Series

Bold indicates new spec. for 2009 (528i xDrive vs. 2008 528xi, 535i xDrive vs. 2008 535xi).

Chassis	528i Sedan	528i xDrive Sedan
Body/frame construction	Unitized; aluminum front end, otherwise steel ²	
Front suspension	Struts, double-pivot lower arms, coil springs, twin-tube gas-pressure shock absorbers, anti-roll bar, subframe ² (528i & 535i RWD Sedans, 550i Sedan: aluminum lower arms, steering knuckles, strut tubes, subframe & thrust plate) (528i, 535i & 550i Sedans ZSP: sport suspension calibration, Active Roll Stabilization)	
Rear suspension	4-link Integral suspension; coil springs, twin-tube gas-pressure shock absorbers, anti-roll bar; aluminum suspension system & subframe ² (528i, 535i & 550i ZSP: sport suspension calibration, Active Roll Stabilization)	
Steering type, standard	Rack & pinion, Servotronic vehicle-speed-sensitive power assist ²	
Overall ratio	Mechanically variable; mean ratio is 13.7:1 ²	
Steering type, optional (528i, 535i & 550i only)	Rack & pinion, Active Steering; Servotronic vehicle-speed-sensitive power assist	
Overall ratio	Electrically/electronically variable over wide range of 10.8:1 – 18.0:1	
Turning circle, ft.	37.4	39.0
4-wheel ventilated disc brakes with aluminum calipers:		
Front, diameter x thickness, mm/in.	324 x 30/12.8 x 1.18 ⁶	
Rear, diameter x thickness, mm/in.	320 x 20/12.6 x 0.79 ⁶	
Cast-alloy wheels: standard	17 x 7.5 ⁸	
optional (ZSP or stand-alone)	18 x 8.0 ⁶	
Tires: standard	225/50R-17 all-season ²	
optional (ZSP or stand-alone)	245/40R-18 run-flat performance ^{6, 11}	

2 – Specification applies to all models.

6 – Specification applies to all 528i models.

7 – Specification applies to all 535i models.

8 – Specification applies to all 528i & 535i models.

9 – Specification applies to all 535i & 550i models.

10 – Specification applies to 535i Sedans only.

535i Sedan

535i xDrive
Sedan535i xDrive
Sports Wagon

550i Sedan

37.4

39.0

39.0

37.4

348 x 30/13.7 x 1.18⁹345 x 24/13.6 x 0.94⁹

17 x 8.0

18 x 8.0 F/18 x 9.0 R¹⁰

18 x 8.0

19 x 8.0 F/
19 x 9.5 R245/40R-18 F / 275/35R-18 R
run-flat performance^{10, 11}245/40R-18
run-flat
performance¹¹245/35R-19 F/
275/30R-19 R
performance¹¹

11 – Due to low-profile tires, please note:
Wheels, tires and suspension parts are
more susceptible to road hazard and
consequential damages. Performance
tires are not recommended for driving
in snow and ice conditions.

F – Front
R – Rear
RWD – Rear-wheel drive
ZSP – Sport Package

Technical specifications

2009 5 Series

Bold indicates new spec. for 2009 (528i xDrive vs. 2008 528xi, 535i xDrive vs. 2008 535xi).

Chassis	528i Sedan	528i xDrive Sedan
Stability-enhancement system	Dynamic Stability Control (DSC), including Dynamic Traction Control, electronic brake proportioning, antilock braking (ABS), cornering/braking stability enhancement, Dynamic Brake Control, Brake Fade Compensation, Brake Standby, Brake Drying & Start-off Assistant (xDrive models: add Hill Descent Control)	

Performance data	528i Sedan	528i xDrive Sedan
Acceleration, 0-60 mph, sec. ¹² :		
Manual transmission	6.5	7.1
Automatic transmission	7.1	7.6
Top speed, mph:		
Manual transmission	150 ²	
Automatic transmission	150 ²	
Fuel economy, EPA est. MPG, city/highway:		
Manual transmission	18/28 ¹³	17/25
Automatic transmission	18/27 ¹³	17/25

¹² – BMW AG test results. Actual acceleration results may vary depending on specification of vehicle; road and environmental conditions; testing procedures and driving style. These results should be used for comparison only, and verification should not be attempted on public roads. BMW urges you to obey all posted speed limits and to please wear your safety belt at all times.

¹³ – Preliminary data.

535i Sedan**535i xDrive
Sedan****535i xDrive
Sports Wagon****550i Sedan****535i Sedan****535i xDrive
Sedan****535i xDrive
Sports Wagon****550i Sedan**

5.6

5.5

5.7

5.4

5.7

5.6

5.8

5.5

17/26¹³

16/25

16/23

15/22

17/26¹³

17/25

16/24

15/23

2009 BMW 3 Series:

LCI-freshened Sedans and Sports Wagons, new BMW AdvancedDiesel-powered 335d, 2nd-generation iDrive optional in all models.

The 3 Series continues to be BMW's core Series, evolving with new technology, new features, new options and new models. For 2009, the process is particularly intense as the Sedans and Sports Wagons receive an extensive Life Cycle Impulse freshening; BMW addresses the demand for even more fuel-efficient power by introducing the first diesel 3 Series model ever offered in the U.S.; and all models get the new 2nd-generation iDrive system that's also making its debut in the all-new 7 Series as well as the '09 1 Series.

What's new for 2009

As of 9/08 production:

New model

- **335d Sedan** – powered by a new generation of BMW's acclaimed 3.0-liter twin-turbo AdvancedDiesel engine; brings the Series to a total of 13 models

Model designations

Sedans, Sports Wagons and Coupes:

- 328xi and 335xi designations discontinued; all-wheel-drive models now called 328i xDrive and 335i xDrive, and have new "xDrive" script on front flanks

Exterior design & function

All models:

- Exterior color changes:
 - Tasman Green Metallic (A81) replaces Deep Green Metallic (A43)
 - Blue Water Metallic (896) replaces Arctic Metallic (A34)

Sedans and Sports Wagons only:

- New hood, with sculptured concave-convex, tapered center section
- New grilles, rounded and reaching up into hood

- New front lighting clusters, with headlights set into chrome tubular forms, turn-indicator lamps with grid lenses; luminous rings newly functioning as parking lights and Daytime Running Lamps, all models with standard halogen headlights (328i models) or Xenon Adaptive headlights (optional 328i, standard 335i/335d models). Xenon Adaptive headlights also newly include cornering lights.
- New design of front foglights
- New front bumper design
- Larger exterior mirrors for improved rearward view
- New side sills (rocker panels)
- New trunklid contours (Sedans) or tailgate (Wagons)
- New taillight design, reviving BMW's traditional L-form; luminous strips and LED turn signals, 3D effects
- New rear bumper design
- New standard wheel designs:
 - 328i models – 16-in. Multi-Spoke #282
 - 335i models, 335d Sedan – 17-in. Double Spoke #284
- New Sport Package wheel designs:
 - 328i models – 17-in. Star Spoke #286 (also 328i xDrive Sport Package upgrade)
 - 328i xDrive models – 17-in. Double Spoke #284
 - 335i Sedan – 18-in. Star Spoke #287 (also 335i xDrive Sport Package upgrade)
 - 335i xDrive Sedan – 17-in. Double Spoke #161 (previously in 328i Sport Package)
 - 335d Sedan – 18-in. Double Spoke #195
- Color changes:
 - Space Gray Metallic (A52) replaces Sparkling Graphite (A22)

Coupes and Convertibles:

- Color changes:
 - Mojave Metallic (A17) replaces Sparkling Graphite (A22)

Performance & efficiency

335d Sedan only:

- 3.0-liter twin-turbo diesel engine, aluminum construction, 265 hp/425 lb-ft. torque; meets emission standards for 50 states, significantly greater fuel efficiency than other 3 Series engines. Available with automatic transmission only.

Comfort & convenience

All models:

- Chrome trim on cupholders, start/stop button, lighting controls at left of dash, climate controls
- Improved center-console storage arrangement
- Fine Line Aluminum interior trim (4B9) replaces Brushed Aluminum (4AD)
- Light Burl Walnut interior trim (4A3) replaces Light Poplar Natural (4AC)

Sedans and Sports Wagons only:

- Power-window controls on door positioned closer to driver
- Leather upholstery: total of 6 colors now offered –
 - Oyster (LCCZX) and Saddle Brown (LCD3) colors added
 - Chestnut Brown (LCCZ) replaces Terracotta (LCB8)
- Improved color coordination of safety belts

Coupes and Convertibles only:

- Pearl-gloss trim on cupholders changed from Pearl Gray to Chrome

Convertibles only:

- Revised logic for retractable-hardtop switch

Safety & security

All models:

- Active head restraints on front seats

Options & packages

All models:

- 2nd-generation iDrive system: user-friendlier, expanded functionality, direct-select keys, higher-resolution control display; includes hard drive (next)
- With Navigation/iDrive option, an 80-GB hard drive provides data storage for the iDrive system, GPS Navigation, entertainment systems, Voice Command and phone system.
- Heated steering wheel added to Cold Weather Package
- Smartphone Integration (6NF) newly available

All 328i models:

- Active Steering no longer offered

328i Sedan and Sports Wagon models only:

- New optional 17-in. wheels, V Spoke design #285 (with all-season tires)

335i Sedan:

- New Sport Package wheel design, Star Spoke design #287

335d Sedan:

- New Sport Package wheel design, Double Spoke #195

335i xDrive Sedan:

- New Sport Package wheel design, Double Spoke design #161
- New wheel design for Sport Package upgrade, same Star Spoke design #287 as 335i Sport Package

All 335i/335d models:

- Logic7 sound system now optional

All Sedans and Sports Wagons:

- Front/rear Park Distance Control (508) replaces former front-only (507)

All Coupes only:

- High-gloss Shadowline exterior trim added to Sport Package

3 Series models & key features

This information lists major features, and helps position and distinguish the models in the Series. For a comprehensive summary of features, see pages 248-261 and 272-287.

328i Sedan

The Series' "basic" model, powered by its own version of the advanced and unique N52 magnesium/aluminum 6-cylinder engine. Offers 3 Series' inimitable driving experience at its most attainable price; relatively roomy 4-door body configuration can be made more versatile and practical by adding optional split folding rear seats.

Exterior design & function

- Halogen free-form low-beam headlights and foglights; luminous rings as parking lights and Daytime Running Lamps
- Automatic headlight control
- Rain-sensing windshield wipers
- Dual power/heated exterior mirrors
- Ground lighting via illumination on door handles
- Welcome Light: Upon locking or unlocking vehicle, activation for 20 seconds of front luminous rings, taillights, license-plate lights, ground lighting and interior lights
- Adaptive brakelights
- Matte-chrome exhaust tips

Performance & efficiency

- 3.0-liter DOHC inline 6-cylinder engine with magnesium/aluminum composite construction, Valvetronic variable intake-valve lift, Double VANOS¹ variable intake- and exhaust-valve timing; 230 hp/200 lb-ft.
- Choice of 6-speed manual or STEPTRONIC automatic transmission
- Aluminum double-pivot strut-type front suspension
- 5-link rear suspension
- Vehicle-speed-sensitive variable-assist rack-and-pinion power steering
- 4-wheel ventilated disc brakes
- 16 x 7.0 alloy wheels, Multi-Spoke design #282

- 205/55R-16 all-season tires
- Dynamic Stability Control
- Tire Pressure Monitor

Comfort & convenience

- Vehicle & Key Memory
- Tilt/telescopic leather-wrapped steering wheel with multi-function controls
- Dynamic cruise control
- Dual power/heated exterior mirrors
- 6-way adjustable front seats
- Leatherette upholstery
- Burl Walnut wood interior trim
- Power windows with 1-touch open/close on all windows
- Automatic climate control with separate left/right controls
- 2-way power moonroof with 1-touch open/close
- Anti-theft AM/FM/CD/MP3 audio system with Radio Data System, 10 speakers, auxiliary audio input

Safety & security

- Dual-airbag Supplementary Restraint System
- Front & outboard rear safety belts with automatic tensioners and force limiters
- Front- and rear-seat Head Protection System
- Front-seat Active head restraints
- Front-seat side-impact airbags
- Coded Driveaway Protection
- BMW Assist Safety Plan with 4-year subscription

Options & packages

- Available option packages:
 - Premium Package (Dakota leather upholstery, BMW universal transceiver, auto-dimming interior and exterior mirrors, power-folding exterior mirrors, digital compass in interior mirror, 8-way power front seats + 4-way power front-seat lumbar support, BMW Assist, Bluetooth cellphone interface)

- Sport Package (sport suspension, 17-in. wheels with run-flat performance tires² in differentiated front/rear sizes, sport steering wheel, 10-way front sport seats with power-adjustable backrest width, 150-mph top-speed limiter)
- Cold Weather Package (headlight cleaning system, heated steering wheel, heated front seats, split folding rear seats)
- Stand-alone options:
 - 6-speed STEPTRONIC automatic transmission
 - Shift paddles for automatic transmission (require Sport Package)
 - Active Cruise Control
 - Xenon Adaptive headlights with dynamic auto-leveling
 - Park Distance Control, front and rear
 - Comfort Access
 - Dakota leather upholstery
 - Light Burl Walnut interior trim (no-cost option)
 - Fine Line Aluminum interior trim (no-cost option)
 - 8-way power front seats
 - Split folding rear seats
 - 2nd-generation GPS Navigation and iDrive system with direct-select keys, Voice Command, Programmable Memory Keys and Real Time Traffic Information
 - Logic7 audio system
 - HD Radio
 - Satellite Radio including 1-year subscription
 - iPod/USB Adapter and Smartphone Integration (separate options, but must be ordered together)
 - Heated front seats
 - Power rear/manual rear side-window sunshades
 - BMW Assist and Bluetooth cellphone interface

328i xDrive Sedan

Newly named model (formerly 328xi Sedan). Powered by same 230-hp engine and equipped essentially like 328i Sedan, but gains all-wheel traction from xDrive system. Compared to rear-wheel-drive 328i, this model's points of differentiation include:

- xDrive all-wheel drive system
- DSC system adds Hill Descent Control
- Heavier-duty manual transmission
- Front suspension and subframe in steel, vs. 328i's aluminum; aluminum thrust plate added for enhanced strength
- Performance and fuel efficiency somewhat affected by additional weight and mechanism of AWD system, steel front suspension
- Standard headlight cleaning system
- Same options and packages as RWD 328i, except:
 - Sport Package deletes sport suspension calibration (AWD models have own calibration, same with or without Sport Package), 150-mph top-speed limiter; includes 17-in. wheels with run-flat all-season tires², same size front and rear
 - 17-in. wheels and performance tires in differentiated front/rear sizes², optional in combination with Sport Package

1 – VANOS = VArIable NOckenwellen Steuerung = variable camshaft control, or variable valve timing.

2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 3 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

3 Series models & key features

This information lists major features, and helps position and distinguish the models in the Series. For a comprehensive summary of features, see pages 248-261 and 272-287.

- 17-in. wheels with all-season tires (stand-alone option, not available in combination with Sport Package)
- Cold Weather Package deletes headlight cleaning system, because standard
- Chrome/black side-window trim, vs. all-black
- Body-color roof-seam trim, vs. black
- Standard 8-way power front seats with driver's-seat/ exterior-mirror memory, vs. Premium Package or stand-alone option

335i Sedan

With the 335i, 3 Series performance reaches its zenith while holding the 3 Series price position and retaining the expected running refinement and riding comfort. As the upscale 3 Series Sedan, it features a unique high-performance engine and incorporates numerous distinctions in its drivetrain, chassis, exterior details and interior features. Contents of its optional Sport and Premium Packages also differ from those of the 328i. Key points of differentiation from the 328i Sedan include:

- 3.0-liter DOHC 24-valve inline 6-cylinder engine with aluminum construction, twin turbochargers, High Precision direct fuel injection and piezo injectors, Double VANOS¹ variable valve timing; 300 hp/300 lb-ft. torque
- Manual transmission has higher torque capacity, different ratios (also differs from 328i xDrive transmission)
- Larger brake dimensions front and rear
- Standard 17-in. wheels and tires: 17 x 8.0 Double Spoke wheel design #284, 245/45-17 all-season tires (same equipment as included in the 328i xDrive Sedan Sport Package)
- Xenon Adaptive headlights standard, vs. optional
- Chrome vertical grille slats, vs. black
- Titanium-finish horizontal slats in lower air intakes, vs. flat black

- Standard auto tilt-down of right-hand exterior mirror for backing up, vs. Premium Package or included with stand-alone power seats
- Underfloor storage compartment deleted
- Same options and packages as 328i Sedan, except:
 - Premium Package deletes power seats, memory and auto mirror tilt-down because standard
 - Sport Package: 18-in. wheels with run-flat performance tires² in differentiated front/rear sizes, vs. 17-in.; wheel design also different, Star Spoke design #287; power sport seats vs. manual (backrest-width adjustment is power on all models)
 - Automatic transmission has different ratios
 - Active Steering available

335d Sedan

New model; essentially like 335i Sedan but powered by all-new 3.0-liter twin-turbo diesel engine. Standard equipment, packages and options essentially as for 335i Sedan, but some differences as listed here. Available only with automatic transmission, ideally suited to power and torque characteristics of diesel engine; substantially higher EPA mileage ratings than for 335i. Specifically, 335d differs from 335i as follows:

- 3.0-liter DOHC 24-valve inline diesel engine with aluminum construction, twin turbocharg-

ers, common-rail direct fuel injection and piezo injectors; 265 hp/425 lb.-ft. torque; peak power occurs at 4200 rpm, vs. 5800 for 335i; peak torque occurs at 1750 rpm, vs. 1400-5000 rpm for 335i.

- Automatic transmission only: 6-speed with same internal ratios as in other models, heavier-duty version 6 HP 26 TU vs. 6 HP 19 for 335i
- Final drive ratio 2.81:1, vs. 3.08:1 for 335i
- Curb weight 3825 lb., vs. 3605 for 335i with automatic transmission
- Performance and fuel efficiency somewhat affected by additional weight and mechanism of AWD system, steel front suspension
- Sport Package 18-in. wheels/tires in same front/rear differentiated sizes as 335i but different wheel design: Double Spoke design #195

335i xDrive Sedan

Like other AWD models, the 335i xDrive is newly named for '09 (formerly 335xi Sedan). It combines spectacular twin-turbo performance with xDrive all-weather capabilities. Compared to the RWD 335i Sedan, its points of differentiation include:

- Front suspension and sub-frame in steel, vs. 335i's aluminum; aluminum thrust plate added for enhanced strength
- Performance and fuel efficiency somewhat affected by additional weight and mechanism of AWD system, steel front suspension
- Standard headlight cleaning system
- Same options and packages as 335i, except:
 - Sport Package deletes sport suspension calibration (AWD models have own calibration,

same with or without Sport Package), 150-mph top-speed limiter; includes 17-in. wheels of unique design (#161) with run-flat all-season tires², same front/rear size)

- 18-in. wheels and performance tires in differentiated front/rear sizes, optional in combination with Sport Package
- Cold Weather Package deletes headlight cleaning system, because standard
- Active Steering not available

328i Sports Wagon

Sports Wagons share same freshening as Sedans for '09. This is the RWD model, companion to the 328i Sedan but offering the additional cargo versatility of a Wagon.

Compared to its Sedan, this model's points of differentiation include:

- Unique Sports Wagon body; completely different from B-pillar rearward
- Standard roof rails, accommodating BMW roof carrier systems
- Dual-panel Panoramic moonroof (standard, as is the conventional moonroof of Sedans)
- Body-color roof-seam trim, vs. black
- Standard split folding rear seats
- Variable cargo area, with straight side walls and level floor:

1 – VANOS = VARIable NOckenwellen Steuerung = variable camshaft control, or variable valve timing.

2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 3 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

3 Series models & key features

This information lists major features, and helps position and distinguish the models in the Series. For a comprehensive summary of features, see pages 248-261 and 272-287.

- Cargo volume ranges from 16.2 to 60.9 cu ft. with seats upright or folded, depending on height of loaded cargo (see pages 238-239 for details)
- Carpet-lined
- Luggage straps on right side
- Bag holder at either side
- Accessory power outlet on left side
- Standard cargo net, usable with rear seats upright or folded
- Tailgate with separately opening rear window (both open upward)
 - Electrically released from remote or interior switch
 - Cargo cover rises automatically when rear window is opened separately, but not when complete tailgate is opened; no cord or prop
 - Red light at left bottom of tailgate, for safety; visible when tailgate is open
- Same options and packages as 328i Sedan, except:
 - Split folding rear seats standard, vs. optional
 - Rear door-window sunshades only, vs. Sedan's door and rear-window shades

same 3.0-liter, 230-hp engine as 328i Sedan; points of differentiation from 328i Sedan include:

- Body shell with two doors, dimensions and proportions distinctive from Sedan
- Different front-end contours and hood; hood's character lines run from grilles' outer top corners to A-pillars; chrome-ringed foglights
- Xenon Adaptive lights with luminous rings standard, vs. optional; dynamic auto-leveling vs. Sedans' static leveling
- 17-in. wheels and tires standard, vs. optional; standard wheels are Star Spoke design #157 (5 spokes)
- Distinctive side-mirror design
- Different rear-end contours, including taillights that wrap farther into body sides
- 2 additional metallic exterior colors available: Atlantic Blue and Mojave (a brown)
- Firmer/lowered sport suspension calibration standard, vs. part of Sedans' Sport Package
- Upholstery colors specific to Coupes:
 - Standard leatherette – Cream Beige
 - Optional leather – Cream Beige, Coral Red/Black and Saddle Brown/Black
- Distinctive upholstery seam design and application
- Center console extends front to rear; divides rear seats to create 4-passenger configuration (Sedans: 5-passenger). Includes three storage compartments, climate-control air outlets, rear footwell lighting.
- Belt presenter for driver and front passenger, brings safety belt forward for convenient fastening
- Standard folding rear seats, vs. optional

328i xDrive Sports Wagon

Parallel to 328i xDrive Sedan, this Wagon gains all-wheel traction from xDrive system. Points of differentiation from 328i Sports Wagon are same as for 328i xDrive vs. 328i Sedan.

328i Coupe

More than ever, a thoroughbred BMW sports coupe. 4-seater configuration with front-to-rear center console emphasizes innate sportiness and differentiates Coupes more markedly than ever from Sedans. Powered by

- Height-adjustable rear-seat head restraints: elegant, help preserve driver's rearward view
- Ambiance Lighting: in addition to Sedans' front and rear illumination from ceiling, doors and rear side panels illuminated from top as in 7 Series
- Closable compartments in doors, configured for coins, CDs and sunglasses
- Same options and packages as 328i Sedan, except:
 - Sport Package: sport suspension not in Package, as standard; 18-in. wheels and performance tires in differentiated front/rear sizes, vs. 17-in.; sport steering wheel not in Package, as standard
 - Cold Weather Package: deletes folding rear seats as they are standard
- In addition to same interior trim choices as Sedans, Poplar Gray available in Coupes
- Power rear-window sunshade only; option does not include rear side-window shades

328i xDrive Coupe

This AWD Coupe assumes a position comparable to the 328i xDrive Sedan vs. its rear-wheel-drive counterpart. Compared to 328i Coupe, its points of differentiation are the same as between the 328i xDrive and 328i Sedans with the following exception:

- Sport Package: wheels are Star Spoke design #185. This is the 17-in. size and 7-spoke design that's standard on the 335i Coupe.
- 18-in. wheels and performance tires in differentiated front/rear sizes (as in 328i Coupe Sport Package) available as stand-alone upgrade in combination with Sport Package

335i Coupe

Like the 335i Sedan, this upscale 3 Series model features a unique high-performance engine, plus numerous distinctions in its drivetrain, chassis, exterior details and interior features. Contents of optional Sport and Premium Packages also differ from those of 328i. Key differentiating features from 328i Coupe include:

- 3.0-liter DOHC 24-valve inline 6-cylinder engine with aluminum construction, twin turbochargers, direct fuel injection and piezo injectors, Double VANOS¹ variable valve timing; 300 hp/300 lb-ft. torque
- Same transmission choices as 328i Coupe, but –
 - Manual transmission has higher torque capacity, different ratios (also differs from 328i xDrive transmission)
 - Automatic transmission has different ratios
- Larger brake dimensions front and rear
- Same standard 17-in. wheel and tire dimensions and speed rating, but Star Spoke wheel design #185 (7 spokes)
- Front airscoop with grilles in Gray (except with Active Cruise Control; then black)
- Side-window framing in black with Pearl Gray chrome, vs. all-black
- Dual matte-chrome exhaust tips, one on left side, one on right side of vehicle, 80-mm diameter; vs. smaller-diameter pipes with chrome tips on left side of vehicle
- 8-way power front seats with driver's-seat/exterior-mirror memory, auto mirror tilt-down: standard, vs. optional (Premium Package or stand-alone)

1 – VANOS = VArIable NOckenwellen Steuerung = variable camshaft control, or variable valve timing.

3 Series models & key features

This information lists major features, and helps position and distinguish the models in the Series. For a comprehensive summary of features, see pages 248-261 and 272-287.

- Underfloor storage compartment deleted
- Same options and packages as 328i Coupe, except:
 - Premium Package lower-priced because power seats are standard
 - Sport Package wheels: 5-spoke design #189, vs. 328i's Cross Spoke design. Both these RWD models get 18-in. wheels and performance tires² in differentiated front/rear sizes.
 - 19-in. wheels and performance tires² in differentiated front/rear sizes, available in combination with Sport Package: Star Spoke design #230.

335i xDrive Coupe

This most powerful AWD Coupe differs from 335i Coupe in essentially same way as does 335i xDrive Sedan from its RWD counterpart, plus these particulars:

- Deletes sport suspension, which is standard on 335i Coupe
- Sport Package includes 17-in. wheels and all-season tires in V Spoke design #188
- 18-in. wheels and performance tires in differentiated front/rear sizes (as in 335i Coupe Sport Package) available as stand-alone upgrade in combination with Sport Package
- Does not offer 19-in. wheel/tire option

328i Convertible

BMW's sophisticated retracting hardtop expresses itself in a design that is graceful and uncompromised whether the top is raised or lowered. Like RWD Coupes and Sedans, the new Convertible is offered in two

- models, 328i and 335i. The 328i's points of differentiation from its Coupe counterpart are:
- Power retracting hardtop, fully automatic. Lowers in just 22 seconds, including the side windows; raises in 23 sec.
 - Special structural underbody reinforcements: V-braces added at front and rear
 - Performance and fuel economy affected by greater weight of Convertible (+441 lb.)
 - Standard 10-way power front seats with power head-restraint/shoulder-belt height, vs. 8-way driver's/6-way passenger's manual seats
 - Memory and exterior-mirror auto tilt-down also standard, vs. optional
 - Rear side windows open, include 1-touch opening; vs. Coupe's fixed windows
 - Variable AM/FM antenna position, hardtop raised/lowered
 - 1-piece folding rear backrest; converts rear seat into additional cargo space, with hooks for grocery bags. Split folding rear seats not available.
 - Storage compartment behind rear backrest
 - Variable trunk space with top up/down
 - Front seat-integrated safety belts; belt presenters not necessary
 - Side-impact airbags deploy upward to provide head protection, vs. Coupe's Head Protection System deployed from roof
 - Rollover Protection System
 - Active Knee Protection
 - Same options and packages as for 328i Coupe, except:
 - Leather upholstery with Sun Reflective Technology significantly reduces solar heating

of leather; this treatment not available in other models (Premium Package or stand-alone option)

- Sport Package adds sport suspension, as not standard on Convertible
- Cold Weather Package – cargo bag replaces Coupe's ski bag, can hold 2 small golf bags
- Comfort Access includes Comfort Loading (intermediate hardtop position for easy trunk loading) and other specific Convertible features
- Cargo bag as stand-alone option
- Navigation System adds Convertible climate-control mode
- Optional Logic7 audio system has 11 speakers, vs. Coupe's 13
- Power rear-window sunshade not available
- Automatic transmission has different ratios
- Larger brake dimensions front and rear
- Same wheel and tire dimensions and speed rating, but Star Spoke wheel design #185 (7 spokes)
- Front airscoop with grilles in gray (except with Active Cruise Control; then black)
- Dual matte-chrome exhaust tips, one on left side, one on right side of vehicle, 80-mm diameter; vs. smaller-diameter pipes with chrome tips on left side of vehicle
- 8-way power front seats with driver's-seat/exterior-mirror memory, auto mirror tilt-down: standard, vs. optional (Premium Package or stand-alone)
- Underfloor storage compartment deleted
- Same options and packages as 328i Convertible, except:
 - Sport Package wheels: 5-spoke design #189, vs. 328i's Cross Spoke design. Both models get 18-in. wheels and performance tires² in differentiated front/rear sizes.
 - 19-in. wheels and performance tires² in differentiated front/rear sizes, available in combination with Sport Package: Star Spoke design #230
 - Active Steering available

335i Convertible

Top of Line, combining the beautiful and functional retractable hardtop with twin-turbo performance. Also embodies a higher level of standard equipment, as listed nearby; it is the Series' most lavish, highest-performing Convertible. Key points of differentiation from 328i Convertible include:

- 3.0-liter DOHC 24-valve inline 6-cylinder engine with aluminum construction, twin turbochargers, direct fuel injection and piezo injectors, Double VANOS¹ variable valve timing 300 hp/300 lb-ft. torque
- Same transmission choices as 328i, but –
 - Manual transmission has higher torque capacity, different ratios

1 – VANOS = VArIable NOckenwellen Steuerung = variable camshaft control, or variable valve timing.

2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 3 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

3 Series key features

Except as noted, all current 3 Series models offer the following features:

Exterior design & function

3 Series design strategy

The Series expresses BMW's tradition of compact, dynamic, elegant sports sedans, wagons, coupes and convertibles. BMW's established rhythm of modest design steps (2nd generation, 1983-92) alternating with more dramatic steps (3rd generation, 1992-99) is once again confirmed: the 5th-generation 3 Series is a dramatic step forward from the 4th generation.

At the front

Sedans and Sports Wagons. A face with strong character, radiating agility and alertness. Distinctively formed headlight units, with traditional four behind clear covers, wrap around decisively and taper to a precise point, emphasizing in the front view the vehicle's width and in profile its short front overhang. Now with both Xenon Adaptive lights (optional 328i models, standard 335i/d models) and the 328i standard halogen lights, BMW's distinctive and popular luminous rings function as parking lights and Daytime Running Lamps.

Expressing another BMW tradition are the "kidney" grilles, now more harmoniously set into, and accented by, the newly shaped hood. In this view, too, one notes the exterior mirrors, whose new shape expands the driver's rearward view.

Points of distinction between 335i/d and 328i models include:

- Grille vertical slats – 335 chrome, 328 black
- Horizontal slats in lower air intakes – 335 in Titanium finish, 328 flat black.
- **Cornering lights.** Adaptive headlights "steer" the head-

lights themselves and operate at all speeds in response to steering angle, vehicle speed and yaw rate. Cornering lights, now included on all 3 Series models with Xenon Adaptive lights, provide an angled beam at each front corner to assist in situations of low speed and large steering angles.

- **Luminous rings.** Now on all models, beams of each Xenon lighting unit have the attractive rings; in addition to functioning as parking lights, they also serve (at higher lighting power) as Daytime Running Lights, lending "BMW identity" of four circular lights to this function.
- **Welcome Light.** When user unlocks vehicle (by pressing the remote's Unlock button, or with available Comfort Access by touching the door handle), not only the interior lights but also the luminous rings, ground lighting, taillights and license-plate lights illuminate. All dim out after 20 sec., and come on when the vehicle is again locked.

Coupes and Convertibles. All models have chrome vertical slats, vs. the Sedans' 328i black and 335i/d chrome. Lighting clusters are shaped specifically for these sportier variants, as is the entire impact-absorbing front bumper/airscoop ensemble. And the hood's character lines, which sweep up from the center bumper section on the Sedans and Wagons, emanate from the outboard top grille corners. Overall, the effect is of a longer hood, even though its actual length differs little between the body groups.

Distinctive look, functional technology. The Coupe/Convertible look isn't just

esthetics; it embodies extensive technology that enhances both esthetics and function. Features include –

- **Standard Xenon Adaptive headlights** on all Coupe and Convertible models.
- **Dynamic auto-leveling.** Sedans' and Sports Wagons' Xenon headlights include static auto-leveling, which levels the headlights every 25 seconds and therefore compensates mainly for loads carried in the vehicle. Coupes and Convertibles have **dynamic auto-leveling**, which also responds to transient conditions such as braking or acceleration; this premium feature was previously included only on 5, 6 and 7 Series models.

In profile

Sedans. There is much “swing” in the side view: the hood cut line, sloping upward and then continuing to become the beltline and on past the C-pillar; a strong character line setting up a pronounced convex/concave intersection. Taillights that wrap well around into the body sides create an esthetic “punctuation” while enhancing visibility of the vehicle from the side – an active-safety factor. 328i Sedans have all-black side-window framing; 335i and 335d have chrome and black.

Sports Wagons. Identical from A-pillars forward and using the same front doors, the Sports Wagon body assumes its own (but consistent) character from the B-pillar rearward. The roofline and the side windows' upper line taper downward while the beltline continues upward, creating an expressly sporty and “wedgy” wagon profile. Standard roof rails add both swing and function to the profile as well.

Coupes. While sharing the same Series wheelbase, the Coupes are somewhat longer, narrower and lower than the Sedans. The greater length and lower height naturally contribute to a sportier profile; the roofline is particularly graceful, beginning its rearward slope at about the position of a tall front occupant's head. Coupe doors are of course longer than Sedans' front doors, and the B-pillar is farther back. Other points of Coupe-Sedan differentiation include –

- Specific wheel designs
- Chrome/black side-window surrounds on all Coupes, vs. black on 328i Sedans and chrome/black on 335i Sedans.

In this view, there's weight-saving technology: as on the 6 Series, the front side panels – “fenders” in traditional parlance – are of plastic. Because of these panels and other measures, the Coupe body shell weighs some 20 lb. less than that of the Sedans.

Convertibles. Stowing a 4-seater's long hardtop within a well-proportioned body is a challenge for the engineers and designers. BMW mastered it with a 3-piece hardtop whose linkage folds it compactly enough to fit into an aft end that's as well-proportioned as that of the Coupes. While retaining the Coupes' body-side character lines and even the same taillight design, the team created a profile as attractive as the Coupes, yet also distinct enough to proclaim a different body style.

With the top retracted, this is as exciting a Convertible as there ever was: the wedge shape is clear, the side windows' graceful slope complements it nicely when raised, and the rear deck is about as high as that of the

3 Series key features

Except as noted, all current 3 Series models offer the following features:

Coupes. All in all, it's a masterful achievement – stylistically and functionally. For details on the hardtop, see pages 230-231.

At the rear

Sedans. No less eye-catching than the other views, the rear aspect has its own interplay of interesting surfaces. For '09 it is significantly refined, with taillights that express BMW's L-form more clearly and a reshaped trunklid.

Sports Wagons. The side beltline wraps around to become an across-the-tailgate character line just under the separately opening rear window. Taillight units are newly shaped similarly to those of the Sedan, but conform to a tailgate that's wider than the Sedan's trunklid. An integrated roof spoiler forms a graceful conclusion to the roofline, helping smooth airflow and incorporating the 3rd brake light. Like the Sedan's trunklid, the tailgate reaches down into the bumper to achieve a low loading height.

Coupes. As at the front, most details here are Coupe-specific. The taillights differ from those of the Sedans and Wagons, wrapping farther into the body sides and having an inverted version of the traditional L-form. As on the Sedans, a discreet spoiler lip punctuates the trunklid. Bumper contours are distinct from those of the Sedans, but shared with the Convertibles. Exhaust outlets are differentiated between the 328i and 335i models: two 60-mm/2.36-in. tips on the former's left side, one 80-mm/3.15-in. tip on each side on the latter.

Convertibles. This aspect of the Convertibles is theirs alone, with a more discrete trunkline as both necessary for the top's folding

geometry and a stylistic element. Taillight design and a similarly contoured license-plate recess mark the family resemblance to the Coupes, while the 3rd brake light appears here in the trunklid rather than the rear window.

Aerodynamics

The smoothest 3 Series yet. Sedans' aerodynamic drag coefficient (C_D) range from 0.29 to 0.32; "slipperiest" of all current 3 Series models is the 328i Coupe, with a CD of just 0.28 – one of the better values among contemporary automobiles.

The overall shape of each body style is calibrated to maintain low aerodynamic lift at higher speeds; attention to design details helps ensure efficient airflow at the rear.

Advanced corrosion-proofing and paint processes

With the current 3 Series, BMW further developed its rustproofing and paint processes. The enhancements include:

- **Body shell now virtually fully galvanized**, for enhanced corrosion resistance. Standing behind this claim is BMW's Rust-Perforation Warranty, protecting customers for 12 years/unlimited mileage.
- **Pre-paint preparation further improved.** Bodies are cleaned and prepared for priming in a 12-zone process.
- **Rotation dipping** is used in both pre-paint preparation and primer application. This improves the cleaning process, and means that primers and corrosion-proofing coats reach even more fully into the body's nooks and crannies.

All this means that the beauty of this 3 Series will be satisfyingly long-lasting.

Performance & efficiency

N52 3.0-liter DOHC 24-valve inline 6-cylinder engine with Valvetronic

(all 328i models)

These models are powered by the amazing N52 engine, whose engineering features include –

- **Valvetronic variable valve lift**, replacing the traditional throttle and enhancing power, efficiency and response to the driver's demands.
- **Magnesium/aluminum composite construction**, saving weight and thus also contributing to enhanced performance and efficiency.
- **Electric water pump**, requiring less power, speeding engine warmup and making the engine more compact. Contributes to efficiency.
- **Variable-volume oil pump**, also requiring less power and enhancing lubrication; thus contributes to performance, efficiency and durability.

This wonderfully smooth and sonorous engine delivers 230 hp @ 6500 rpm and 200 lb-ft. of torque at 2750 rpm. Thus the torque peaking speed is relatively low; this and the strong torque value make for a robust response to the driver's accelerator foot. This comes through in strong 0-60-mph acceleration times and remarkably favorable EPA mileage:

328i models – Sedan 6.3 sec. with manual transmission, 6.9 with automatic; Sports Wagon 6.5/7.1; Coupe 6.2/6.8; Convertible 6.7/7.2; City EPA ratings range from 17 to 18 mpg, highway 27-28.

328i xDrive models – Sedan 6.9/7.1; Sports Wagon 7.1/7.3; Coupe 6.8/7.0. City EPA ratings 17 mpg, highway 25.

For more extensive details on the N52 engine family, see **BMW features**, pages 30-32.

N54 engine: twin turbocharging, piezo direct fuel injection, high compression ratio

(all 335i models)

With the N52 naturally aspirated³ engine and this N54 turbocharged unit, BMW revealed to the world its approach to high performance for now and the future: Instead of ever-larger engines, BMW will achieve its performance goals with smaller, lighter, more efficient and cleaner-running engines.

The 300-hp N54 engine is completely distinct from the N52. Its distinguishing features include –

- **Twin turbocharging** with air-to-air intercooling to control the temperature of the air being charged into the engine.
- **Special exhaust system** to match the engine's forced-induction system.
- **All-aluminum structure**, vs. the N52's magnesium/aluminum construction.
- **Cast-iron cylinder liners**, combining with the all-aluminum structure to handle the greatly increased internal loads of this engine.
- **Conventional valvetrain**, vs. the N52's Valvetronic.

If the 328i models' performance is "strong," that of the 335i models is dramatically, stunningly strong. Here are their 0-60-mph

3 – In a "naturally aspirated" engine, air is drawn into the engine by the pistons' downward stroke. By contrast, a supercharger or turbocharger compresses and supplies the engine's air in what is known as "forced induction."

3 Series key features

Except as noted, all current 3 Series models offer the following features:

times and EPA mileage:

335i models – Sedan 5.4 sec. with manual transmission, 5.6 with automatic; Coupe 5.3/5.5; Convertible 5.5/5.7. City EPA ratings 17 mpg, highway 26-27.

335i xDrive models – Sedan 5.3/5.4; Coupe 5.3/5.5; Convertible 5.5/5.7. City 16-17 mpg, highway 25.

For a detailed explanation of this revolutionary powerplant, which *Road & Track* (August '07) calls "one of the greatest engines of all time," see **BMW features**, pages 32-35.

M57 engine: BMW Advanced Diesel with BluePerformance, twin turbocharging, piezo common-rail fuel injection (335d Sedan)

Displacing 3.0 liters, the same as other 3 Series engines, this all-new inline 6-cylinder diesel brings to the U.S. the dazzling diesel progress that has enabled Europeans to enjoy high performance with remarkable fuel efficiency. Expressing this in numbers, the M57 produces 265 hp and an amazing peak torque of 425 lb-ft.

To achieve such results, this weight-efficient aluminum powerplant applies a full range of advanced diesel performance/efficiency technologies:

- **Common-rail, high-pressure direct fuel injection.** "Common rail" (CR) refers to the fact that that fuel is delivered to the individual cylinders via a shared conduit – standard practice in gasoline engines, but until recently not employed in diesels. A single, very high-pressure fuel-delivery pump supplies all cylinders, the fuel traveling along a common "rail" or distributor line. From there,

fuel is injected at extremely high pressure (180 bar/2645 lb./sq in.) directly into the cylinder.

The basic advance of common-rail injection was to divorce the production of fuel pressure from the actual injection process; this was necessary to give the diesel engine what gasoline engines had long had, namely fully electronically controlled fuel injection. CR also facilitates multiple injections per combustion cycle. In all, CR was a breakthrough that made possible dramatic strides in diesel power, efficiency and emission control. CR has also resulted in much quieter-running diesel engines.

- **Piezo injectors.** A further breakthrough, already applied by BMW in the 335i and new 750i twin-turbo gasoline engines. With direct injection, the injectors – that critical component injecting fuel into each cylinder's combustion chamber – are subject to especially high temperatures and pressures. Instead of most injectors' conventional electrical valves, a "stack" of piezo crystals reacts lightning-fast to impulses from the engine electronics, governing the injector needle's opening stroke and duration for ultra-precise control. This too facilitates major advances in fuel economy and emission control, in gasoline as well as diesel engines.
- **Variable Twin Turbo technology.** In contrast to the two small, equal-size turbochargers of BMW's twin-turbo 6-cylinder and V-8 engines, the diesel employs two turbos of different sizes.

At low engine speeds, intake air does pass through the large turbo, but it's the smaller, lower-inertia one that does the air compressing (turbocharging). Thanks to its optimum efficiency within this rpm range, it provides effective boost for driving from a standstill up to modest acceleration rates and driving speeds. So it is that this engine develops a good 390 lb-ft. of torque at as low as 1500 rpm – a remarkable achievement that will amaze first-time 335d drivers and continue to thrill those who drive this BMW regularly.

With increasing engine speed, the larger turbocharger begins to take over: first as a pre-compressor for the smaller one, then progressively until it becomes the primary turbo. The engine reaches its maximum of 425 lb-ft. by 1750 rpm, then maintains this immense torque level until 2250 rpm, going on to reach its peak power of 265 hp at 4200 rpm.

- BMW BluePerformance technology.** In standard European form, this engine is equipped with a diesel particulates filter (to trap black smoke particles) and an oxidation catalyst; along with the basic engine technologies already described, this equipment helps it meet current EU emission standards for automotive diesel engines. To meet upcoming, more stringent EU limits and the strictest U.S. passenger-car emission limits – that is, both Federal and those of the states with their own standards – BMW is equipping its diesel engines with new BluePerformance technology, which adds a

selective catalytic reaction (SCR) catalyst to the aforementioned measures. This catalyst employs platinum, palladium and rhodium, which cause a reaction of nitrogen oxide and nitrogen dioxide with barium carbonate introduced into the catalyst, with the result that these substances are stored in the form of barium nitrate. Then, during a brief period of engine operation with an after-injection of fuel, this nitrate is fully burned. An additional benefit of this process is that sulfuric oxide resulting from diesel combustion is eliminated. For this phase of the emission control, which reduces oxides of nitrogen (NO_x) emissions to the stringent U.S. limits, the injection of urea, or Diesel Exhaust Fluid (DEF), is required.

- Two DEF tanks, infrequent filling, free service.** The DEF is supplied by a 2-tank system that ensures convenience for the vehicle user. The required amount is injected from the 1.6-gallon Active tank via a dosage pump. As this fluid freezes at 12°F, this tank is heated. Then there is a reservoir, or Passive, tank that carries the longer-term supply of 4.5 gal. Periodic replenishment of the DEF – at the same interval as oil changes – is included within the BMW Maintenance Program and is therefore free of charge to the customer for 4 years or 50,000 miles.

Diesel combustion, power and torque characteristics. In its most basic distinction from gasoline engines, a diesel engine achieves its combustion not with a sparkplug, but by much “harder”

3 Series key features

Except as noted, all current 3 Series models offer the following features:

compression of the fuel-air mixture; the 335d engine, for example, has a compression ratio of 16:5:1, vs. 12.0:1 in today's ultra-high-performance BMW M gasoline engines and the 10.2:1 of the 335i twin-turbo gasoline unit. For one thing, this requires a significantly stronger engine structure; indeed the 335d engine weighs more than its 335i counterpart.

The diesel combustion process also produces very different torque and power characteristics. Whereas the 335i engine reaches a maximum torque of 300 lb-ft. @ 1400-5000 rpm and a maximum power of 300 hp @ 5800 rpm, the 335d attains its maximum torque of 425 lb-ft. @ 1750-2250 rpm and its maximum power of 265 hp @ just 4200 rpm. In general, diesels have this low-speed-torque, lower-rpm character and in their vehicular application they are geared differently. The 335d, for example, comes only with automatic transmission – an automatic is the ideal partner for a diesel engine – and its final drive ratio is 2.81:1, vs. 3.46:1 for the 335i with automatic transmission.

Diesel engines also employ a different fuel, the product of a different refining process from that of gasoline. The two fuels are not interchangeable; gasoline cannot be used in a diesel engine, and vice versa. Their prices typically diverge; at any time or in any location, demand may be different for the two, and government taxation policies for gasoline and diesel fuel also diverge.

Stellar pulling moxie, full-bore acceleration – and fuel efficiency. The huge torque output of 425 lb-ft. at relatively low engine

speeds speaks for itself; 335d drivers will marvel at this engine's robust response at low to medium speeds. The peak power output of 265 hp also speaks for itself, as does the resulting 0-60-mph time of 6.0 sec. What cannot be precisely quantified at this time is the 335d's official EPA mileage ratings. Yet it is possible to get an idea of just how fuel-efficient the diesel engine is by looking at EU mileage ratings:

These ratings, which are for EU models in the EU's combined (city/highway) test cycle, are 35.1 mpg for the 335d vs. 25.9 mpg for the 335i. CO₂ outputs, which are closely related to fuel consumption, are 218 grams/km for the 335i, 177 for the 335d.

6-speed manual transmission (standard all models except 335d, not available 335d)

335i models use the Type G transmission, a heavy-duty unit also found in 5 Series V-8 and 6 Series models and even the M5 and M6. 328i xDrive models employ the Type H unit. The RWD 328i models have a somewhat lighter-duty version, called Type I, that's about 10% lighter than Type H and has even higher mechanical fuel efficiency, contributing to fuel economy.

6-speed STEPTRONIC automatic transmission (optional all models)

A 6-speed automatic is optional in all 3 Series models except the 335d, where it is standard. It is available with optional steering-wheel shift paddles in all models in combination with the Sport Package; these are described in **options & packages** on page 243. For information on BMW's automatic transmissions, see **BMW features**, pages 40-42.

Double-pivot front suspension

The entire 3 Series employs this uniquely BMW type of front suspension, featuring two lower arms working in combination with the spring/shock-absorber strut. These two lower arms are the reason for its name “double-pivot.”

By employing two lower arms, this system provides several fundamental advantages:

- **Small positive steering offset**, for best steering feel and control under all road conditions. Though the two arms don't actually intersect, if you extend their axes to a point where they do intersect, you find a “virtual pivot point” that is ideal for achieving this result. Steering offset is the “lever arm” through which road forces act on the suspension system.
- **Large steering caster**, for outstanding stability in straight-line driving and excellent steering return action coming out of curves.
- **Space for large brakes**, by virtue of the arrangement of the two lower arms.

Further advantages are found in the details:

- The trailing (forward) lower arm has a rubber/hydraulic cushion, which provides the most effective “compliance” for reducing road shock and thus improving riding comfort.
- The transverse (rearward) lower arm is cushioned by a finely tuned rubber element that fosters direct and precise response to the steering wheel in curves and corners.

On the RWD models (328i/335i/335d), there is extensive aluminum componentry for low unsprung weight. This improves the suspension's response to bumps and other road irregularities; it can markedly enhance riding comfort

and, on any irregular road surface, handling as well. Aluminum components on each side include –

- Both lower arms (forged aluminum)
- Steering knuckle (also forged)
- Brake caliper (not part of suspension, but part of unsprung weight as it moves up and down with the wheel)
- Brake shield (stamped piece; also not part of suspension, but part of unsprung weight).

In addition, the subframe that carries the front suspension on RWD models is of aluminum, as is the steering rack on all models; these are not unsprung components, but do contribute to overall weight reduction – and being up front, also to the “typical BMW” near-50/50 weight distribution of RWD models⁴. This subframe adds rigidity, enhances steering precision and is also an integral element in the vehicle's management of energy in a frontal crash.

Because an AWD vehicle's front suspension must handle engine torque as well as cornering and braking forces, 3 Series vehicles with xDrive substitute steel for aluminum in most front-suspension components for additional robustness.

5-link rear suspension

This system could be described as a double-A-arm system⁵ with an additional lateral track rod; the upper and lower A-arms

4 – AWD models naturally have a higher percentage of their weight on the front wheels than their RWD counterparts, but their weight distribution is still within BMW's philosophy of outstanding balance.

5 – “Double A-arm” refers to the classic system of two A-shaped lateral arms, one upper and one lower, determining suspension geometry. This principle also appears in the new 7 Series' front suspension, and is sometimes referred to as “double-wishbone.”

3 Series key features

Except as noted, all current 3 Series models offer the following features:

actually consist of two links each, their vertical positions differing. (This is similar to the front suspension's dual lower arms.)

Advantages are extensive:

- As at the front, there is a virtual pivot point for each pair of links, giving the engineers similar freedom in optimizing the system's geometry. The result is very precise handling, especially insensitive to road disturbances.
- Under cornering forces, the system controls geometry in such a way as to achieve great agility while also ensuring predictable, stable handling.
- Contributing to this outstanding geometry is the wide and rigid basis on which the rear tires are "planted" on the road. The lateral links are extremely rigid too, as is the subframe.
- All the suspension's links connect to the subframe; no link pivots directly from the body structure. This further reduces any effects of road irregularities on passenger comfort, and improves handling precision as well.
- Here too, the large and elaborate subframe contributes to energy management in a rear-end crash.

Observant "gearheads" may note that the new 7 Series also has a 5-link rear suspension system. But the two systems are not the same. Whereas the 7 Series' "5th element" is a so-called Integral link, essentially vertical and connecting the upper and lower forward lateral arms, the 5th element here is an additional lateral link. Each serves essentially the same purpose: to help optimize suspension geometry in a highly sophisticated way, each appro-

priate to the size and weight class of these two very different-size Series.

Steering: evolution standard, revolution optional

The 3 Series' engine-speed-sensitive variable-assist power rack-and-pinion steering system has generated universal praise; an auto magazine once described it as "nearly telepathic." This standard system continues, steadily evolving to keep the 3 Series at the head of its pack as a driver's car: In its August '07 issue, *Road & Track* referred to "precise steering action" as part of the BMW "prescription every enthusiast driver is looking for."

The "revolution" here is the optional **Active Steering**, offered as a stand-alone option on 335i models and incorporating evolutionary refinements. For details, see **BMW features**, pages 48-50.

4-wheel ventilated disc brakes: generous dimensions, advanced technology

All 3 Series brake systems feature ventilated cast-iron rotors and (as another contribution to balanced weight distribution) aluminum calipers at the front. Here are some details:

328i models. For '08 the 328i Sedans and Coupes got a further enhancement that brought their front brakes into line with the heavier 328i Convertible: The front brakes' diameter is now 312 mm/12.3 in.; that of the rear is 300/11.6, also a generous dimension.

335i/335d models. To go with these models' additional performance and weight, their front brakes are dimensioned 348mm/13.7 in.; the rear discs are 336/13.2.

335i/335d models also have a larger vacuum booster than their 328i counterparts. A refinement on all models is that the discs (rotors) have a Geomet coating to eliminate rusting on the rotor areas not swept by the brake pads. In the context of Condition-Based Service, there are separate front and rear wear sensors via which the mileage remaining on the front and rear pads can be displayed and appropriate service scheduled.

Wide selection of wheel designs; all-season or performance tires, all run-flats

Maintaining a BMW tradition, each model offers standard or Sport Package wheel-and-tire equipment, plus in the case of some models an additional option. Coupe/Convertible wheel designs differ from those of the Sedans and Sports Wagons; there are even differences between the 335i and 335d Sedans. 17-in. wheels are standard on most models. The table on the following page summarizes all available combinations and reveals the changes they embody for '09.

Differentiated front/rear sizes are part of all RWD models' Sport Package; the xDrive models are available with differentiated sizes and performance tires as stand-alone options, equivalent to their front-wheel-drive counterparts' Sport Package equipment.

Every current 3 Series model comes with BMW's run-flat system, which consists of self-supporting tires and wheel rims shaped to help keep a flat tire securely in place. There is no spare tire; on 328i Sedans, Sports Wagons and Coupes the

saved space is available as underfloor trunk storage. The run-flat system is described in **BMW features**, page 55.

xDrive: BMW's "intelligent" all-wheel drive system (all xDrive models)

These newly named models incorporate BMW's advanced xDrive all-wheel drive and traction system. xDrive provides a widely, steplessly and fast-acting variable torque split between the front and rear wheels and has many advantages for both traction and handling. It is described in **BMW features**, pages 44-45.

Comfort & convenience

Interior design: new elegance, enhanced functionality

Driving pleasure has always been the central focus of the 3 Series; the current 3 takes this traditional emphasis to more sophisticated levels of elegance and functionality than ever.

The most central informational element remains the traditional pair of round analog instruments, the speedometer and tachometer with their white numerals on black dials.

Like the exterior, the 3's interior design presents a visually fascinating interplay of convex and concave surfaces. The instrument panel has a predominantly horizontal format with a larger expanse of the trim material (wood is standard). Leatherette upholstery, standard in all models but the 335i Convertible, comes in Black or Beige (Cream Beige in the Coupes and Convertibles). Colors for the Dakota leather upholstery, optional in all but the 335i Convertible, differ for the two sets of models:

3 Series key features

Except as noted, all current 3 Series models offer the following features:

Model & version	Wheel size & design
328i all Sedan & Sports Wagon standard	16 x 7.0 Multi-Spoke #282
328i RWD Sedan & Sports Wagon Sport Package, 328i xDrive Sedan & Sports Wagon upgrade	17 x 8.0 front/17 x 8.5 rear Star Spoke #286
328i xDrive Sedan & Sports Wagon Sport Package, 335i & 335d Sedan standard	17 x 8.0 Multi-Spoke #284
328i all Sedan & Sports Wagon stand-alone option (not with Sport Package)	17 x 8.0 V Spoke #285
335i xDrive Sedan Sport Package	17 x 8.0 Double Spoke #161
335i RWD Sedan Sport Package, 335i xDrive Sedan upgrade	18 x 8.0 front/18 x 8.5 rear Star Spoke #287
335d Sedan Sport Package	18 x 8.0 front/18 x 8.5 rear Double Spoke #195
328i all Coupe & Convertible standard	17 x 8.0 Star Spoke #157
328i RWD Coupe & Convertible Sport Package, 328i xDrive Coupe upgrade	18 x 8.0 front/18 x 8.5 rear Cross Spoke #197
328i xDrive Coupe Sport Package, 335i Coupe & Convertible standard	17 x 8.0 Star Spoke #185
335i RWD Coupe & Convertible Sport Package, 335i xDrive Coupe upgrade	18 x 8.0 front/18 x 8.5 rear Star Spoke #189
335i xDrive Coupe Sport Package	17 x 8.0 V Spoke #188
335i RWD Coupe & 335i Convertible Sport Package upgrade	19 x 8.0 front/19 x 9.0 rear Star Spoke #230

- **Sedans and Sports Wagons** – Beige, Black and Gray; new Oyster, Chestnut Brown and Saddle Brown.

- **Coupes and Convertibles** – Cream Beige, Black, Gray, Coral Red/Black and Saddle Brown/Black.

Detail trim elements are in the “galvanic” mode that appears as accents in interiors throughout the BMW line. That on Sedans’ and Sports Wagons’ cupholders, start/stop button, lighting controls and climate controls is a new chrome tone for '09; Coupes and Convertibles get this on their cupholders.

Door designs differ between the two model groups. In either, a sharp eye will notice that the two front door panels differ in design: On the passenger side there’s a sloped vertical door pull; on the driver’s side, where the power-window controls are grouped on the armrest, the door pull is integrated into that armrest for access to the window controls. For '09, the Sedans’ and Sports Wagons’ window control panel has been moved closer to the driver.

Though handles and controls are placed similarly to those of the Sedans and Sports Wagons, the Coupe/Convertible door storage

Run-flat tires	Change from '08
205/55R-16 all-season	Wheels: new design
225/45R-17 front/ 255/40R-17 rear performance ²	Wheels: new design
225/45R-17 all-season ²	Wheels: new design
225/45R-17 all-season ²	New option
225/45R-17 all-season ²	Wheels: new design
225/40R-18 front/ 255/35R-18 rear performance ²	Wheels: new design
225/40R-18 front/ 255/35R-18 rear performance ²	Wheels: new design
225/45R-17 all-season ²	No change
225/40R-18 front/ 255/35R-18 rear performance ²	No change
225/45R-17 all-season ²	No change
225/40R-18 front/ 255/35R-18 rear performance ²	No change
225/45R-17 all-season ²	No change
225/35R-19 front/ 255/30R-19 rear performance ²	No change

scheme is specific. In place of the Sedans' large open storage space, the Coupes have a large pull-out bin below each door's armrest: its forward portion is configured as a sunglasses compartment; its rear section can function as a coinholder. At the extreme rear of each door is an open storage space. The selected trim material appears here as a long, curved strip alongside the armrest.

An especially elegant touch – in this Series unique to the Coupes and Convertibles – is that Ambiance Lighting streams down from under the door ledge.

The primary front cupholders are on the dash, above the glove compartment; but there is also a single one in the center console compartment. The center console sweeps cleanly back to a standard center armrest, below which there is a climate-controlled storage compartment.

² – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 3 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

3 Series key features

Except as noted, all current 3 Series models offer the following features:

Coupes and Convertibles: easing entrance and exit

Entering and exiting a 2-door vehicle's rear seats always requires a bit more effort than those of a 4-door model; passengers must release and fold forward the front seats' backrests, then thread themselves through a relatively narrow passageway.

A thoughtful feature of the Coupes' front seats is that their releases are at a very convenient spot at the backrests' top outboard corners. An entering passenger grasps this release and pulls it upward; the higher position gives good leverage, reducing the physical effort of folding the backrest over.

For many years now, BMW has provided forward movement of the front seats to widen the entryway. Called the **easy-entry feature**, this function is now powered in all Coupe models with power front seats; the seat motors forward when the release lever is raised, then returns to its previously set position when the backrest is put back in place. Power easy-entry has long been a feature of the Convertibles.

Sophisticated concept: the Convertible's retractable hardtop

Retractable hardtops aren't exactly new. Peugeot built one in the 1930s; Ford introduced one in 1957 and sold it for three model years. The Ford Skyliner, as it was called, was a huge convertible, seating six people, and its folded hardtop required a compartment so long that the car looked almost like a pickup truck. Today, that Skyliner is a coveted collectible.

In the last decade, retractable hardtops have appeared on a number of 2-seaters; that's an

easier thing to design and still have acceptable vehicle proportions. But BMW decided to do it with a full 4-passenger convertible. As described in **exterior design & function**, pages 215-216, BMW has accomplished it with typical style and grace.

Yet this car offers the all-weather comfort and anti-theft traits of a closed coupe, combined with the open-air joys of a convertible. It fairly brims over with attractive, convincing, even fascinating features and attributes. The attention to detail in its design and engineering is remarkable:

- Lowers and raises in just 22 sec. on the way down, 23 sec. on the way up.
- Can be lowered or raised inside some garages, reaching a maximum height of 67.3 in. That's lower than a BMW X5.
- Remote lowering with optional Comfort Access.
- Comfort loading, also with optional Comfort Access.
- Quiet, precise operation.
- Can be stopped at any point during lowering or raising by pressing the interior button (on console) or remote.
- Water drainage when retracted after rain: carefully designed to channel the water away, so that the top can be raised or lowered when wet.
- AM/FM antenna in rear window, active when top is raised.
- Elegant kinematics without "capers" such as the Volvo's flipping the rear shelf forward.
- Attractive finisher panel just behind rear seats; this is analogous to the cover for a folded softtop.
- Trimmed like a coupe, with body-color longitudinal strips and Pearl Gray Matte aluminum trim around the side windows.

- Full headliner without visible crossbows; just like a coupe inside.
- Large rear window – more than twice the area of the predecessor softtop Convertible.
- Large side windows – about 30% more area than on predecessor.

The 3-piece hardtop consists of approximately 400 components and is operated by 8 hydraulic cylinders; an electric drive secures it to the windshield. The three pieces fold and stack compactly, in straightforward motions, into the trunk, whose lid (including the “cover”) opens rearward for this process. Storage space underneath the finisher panel is accessible through a center opening.

Convertibles are nearly always heavier than their closed-body counterparts; the retractable hardtop is heavier than a softtop. Against this one disadvantage, the hardtop has many inherent advantages:

- Greater rigidity with the top up, making this car almost as rigid as the Coupe model, enhances its BMW-typical driving dynamics and riding comfort.
- Reduced wind noise compared to a raised softtop, approaching that of a closed body.
- Improved aerodynamics. Measured with raised top, the new Convertible achieves an aerodynamic drag coefficient (C_D) of 0.30 (328i) or 0.31 (335i), little different from Sedan or Coupe models. This in turn is reflected in its performance and fuel efficiency at higher speeds.

Extensive seat-adjustment modes

All 3 Series seats now have a vertical adjustment, and the Coupes' manual driver's seat adds a separate cushion-angle

adjustment, so BMW has eliminated the vertical/angle component of the fore-aft adjustment. With manual front seats, this makes the fore-aft adjustment easier; the driver can adjust the seat height and cushion angle separately, and the passenger can adjust seat height to suit his or her preference. Both power seats (standard 335i models, optional 328i models) provide these height and angle adjustments for driver and passenger; the sport seats (Sport Package, all models) add power-adjustable backrest width and manually adjustable thigh support.

Coupes: belt presenters for more convenient “buckle-up”

Unlike some competitors, 3 Series Coupes have a B-pillar; this allows placing the front belts' upper anchor points at a favorable height for an effective belt fit on the driver and front passenger. But because a 2-door car's doors are long, reaching back for the belt can be awkward for the occupants. The Coupes' safety-belt presenter addresses this issue neatly and ergonomically.

Cleanly integrated into the ledge of each rear side window, the presenter emerges –

- when the driver closes the left door after entering (with Comfort Access: key inside vehicle, start button activated)
- when the passenger seat is occupied and the door is closed

– and moves (electrically) 13.8 in. forward. This moves the belt with its buckle tongue to a position where the occupant can grasp it without turning around, taking less than 2 sec. to do so. As soon as the occupant clicks the tongue into the belt latch, the presenter motors back to its

3 Series key features

Except as noted, all current 3 Series models offer the following features:

normal recessed position. In case the occupant doesn't fasten his or her belt – as for example when sitting in the car but not driving – the presenter retracts after one minute or if the vehicle reaches a speed of about 4 mph. (The system's actual logic is more complex than this, but this is an adequate description.)

The Convertibles have front safety belts that, being fully mounted onto the seats themselves, are out of the way for rear passengers' entry and exit.

Expanded Key Memory functions

Pursuing BMW's goal of making our vehicles even more adaptable to customer preferences, the 3 Series offers an extensive array of Key Memory functions, by which settings chosen by a particular user (identified by his or her remote) during use of the vehicle are automatically stored and then recalled the next time that person uses the vehicle.

These functions are:

- Audio tone settings and presets
- Language of displays and voice functions
- Climate-control temperature and air-distribution settings
- Seat/mirror memory setting
- Central-locking preferences
- Lighting preferences.

Some of these are set from the radio display or, in Navigation-equipped vehicles, the iDrive display.

Control strategy: an overview

The 3 Series offers buyers a choice of with or without iDrive. Either way, the instrument cluster is similar to that of the 5 Series; the optional Navigation System comes with a second hood over a centrally placed iDrive control

display. Elements of the control layout include:

- Manual tilt/telescopic steering wheel.
- Console shift lever, controlling the choice of manual or automatic transmission.
- Traditional pull-up handbrake.
- Seat controls on the seats' outboard edges, except the manual fore-aft adjuster on vehicles without power seats (328i Sedan/Coupe standard), at the inboard front edge.
- Power-window controls for all windows on the driver's door.
- Driver orientation of the control center, at a "light" (3°) orientation of the center dash area toward the driver.

The instrument cluster

The analog speedometer and tachometer are in a style similar to that of the 5 Series; also as in the 5 Series, the fuel gauge is at the bottom of the speedometer and the analog fuel-economy readout is at the bottom of the tachometer.

Additional features include:

- Condition-Based Service indications (required service, miles to service, inspection dates)
- Via a rotating disc behind the speedometer face, a pointer at the dial's periphery indicates the cruise control's set speed.
- Active Cruise Control if present.

3-spoke steering wheel standard in all models

All models come standard with a 3-spoke steering wheel. Both wheel styles (standard and sport) have leather-wrapped rims, and their arrangement of multi-function controls on the steering-wheel face is the same. Included here are –

- Audio volume

- Audio presets
- Air recirculation
- Make/end phone call (with available Bluetooth interface)
- Voice Command (with iDrive/Navigation option)
- Entertainment-system mode or, with iDrive/Navigation, programmable key for various iDrive functions.

The 375-mm/14.8-in. standard wheel has a larger center face; the 369-mm/14.5-in. sport wheel has a smaller raised and padded center hub and a thicker rim. The sport wheel, which includes galvanic trim on its spokes, comes with the Sport Package for Sedans and Sports Wagons; in Coupes and Convertibles it is standard.

iDrive, 2nd generation

In vehicles without the Navigation/iDrive option, there is a single hood over the main instrument cluster, and all functions are operated either by hard controls or via the audio display. With the Navigation/iDrive option, the dash has a “double wave” look: The second hood frames the iDrive control display at dash center, and many functions (including those of the Navigation System) are operated via the display and the controller between the front seats.

As before, iDrive is included in the Navigation option; but now, as in the 7 Series, iDrive appears in its 2nd generation with more natural, user-friendlier operation, a simpler yet more useful operation system, and greatly expanded functionality. The 3 Series iDrive, however, does not adopt such a large control display as in the 7 Series, remaining with an 8.8-in. display that incorporates the dramatically improved graphics and higher resolution (1280 x

480 pixel, vs. 640 x 240 before) that characterize the new generation.

Details of the 2nd-generation system are found in **BMW features** on pages 63-65; here are some of the highlights as they apply to the 3 Series:

- **New-type controller**, with direct-select keys grouped near or around it. These allow quick selection of CD, radio, phone and navigation menus, and are augmented by three further keys: one that takes the user directly to the start menu (MENU), one to the most recently active menu (BACK), and the third (OPTION) to various options within the current area. Thus searches are likely to be shorter, or altogether unnecessary.
- **6 Programmable Memory Keys.** Whereas the 7 Series, which is completely redesigned, goes to 8 keys, the 3 Series remains with 6 PMK plus one for Entertainment-system mode and one for toggling between AM and FM.
- **Expanded and user-friendlier GPS Navigation** with detailed views of the geography and 3-dimensional displays.
- **Simultaneous voice entry and controller selection** when preferred by user.

For a more detailed description of iDrive, including the 2nd generation, see **BMW features**, pages 63-67.

Hard drive for data storage: high capacity, fast retrieval

With the Navigation/iDrive option, an 80-GB hard drive provides data storage for the iDrive system, GPS Navigation, entertainment systems, Voice Command and phone system. As this also appears in the 1 and

3 Series key features

Except as noted, all current 3 Series models offer the following features:

7 Series for '09 and will appear in other Series later on, it is described in **BMW features** on pages 66-67.

Outstanding automatic climate control

Though previous 3 Series generations have always had excellent automatic climate control, the new present system attains an even higher level of performance, sophistication and features.

These include:

- **Separate left/right temperature controls.**
- **Temperature- and volume-controlled rear air outlets.**
- **Climate-controlled center console compartment.** The temperature is oriented to that of the rear outlets; airflow to the compartment can be turned off.
- **Misting sensor.** Via the wipers' rain sensor, misting of the windshield is sensed visually and system operation adjusted automatically to clear it up.
- **Heat at Rest.** Allows heating the interior for a limited time with the engine off; facilitated by the engine's electric water pump.
- **Maximum a/c setting** for rapid cool-down at a single touch of a button.
- **High blower power,** for vigorous maximum cooling or heating power, plus quiet operation at normal blower speeds that are a relatively small proportion of maximum.
- **Optimized design of ducts and outlets,** also for reduced airflow noise.
- **Automatic reduction of blower speed** when vehicle comes to a stop, another noise-reducing function.
- **Indirect airflow** via outlets atop the dash, for pleasant, draft-free climatization, not defrosting or demisting.
- **Recall of individual users' settings** via Key Memory:
 - Temperature
 - Manually selected air distribution (windshield, body-level, footwells).
- **Convertible mode** for Convertibles with Navigation System; this adjusts air distribution and intensity for driving with the top down and is a 4th mode in addition to the Soft-Medium-Intensive choices offered within the available iDrive system.

All in all, this system is one of the best on the market. Its combination of soft-touch keys for mode and function selection and rotary knobs for the dual temperature controls is convenient and logical.

Audio systems

Two systems are offered:

- **Standard system,** 10 speakers including 2 subwoofers
- **Optional Logic7 system.** 11 speakers in Convertibles, 13 in other models.

The subwoofers are in BMW's patented positions, in cavities at the bases of the B-pillars (generally referred to as "under the front seats").

Antennas. Both systems employ BMW's well developed, reception-enhancing diversity antenna system, with its multiple circuits in the rear window of Sedans, Sports Wagons and Coupes. A fin-type roof antenna serves the phone system and/or GPS functions. The housing for this antenna also accommodates an antenna for the available Satellite Radio; see **options & packages** for details on the optional features.

For the Convertibles, with no fixed roof or rear window, the antenna system is more complex:

- AM/FM antenna – one set in the rear-seat side panels, the other in the rear bumper. Via a switching circuit, the former are active when the hardtop is lowered, the latter when it's raised.
- Diversity – the necessary distance between the two circuits of a diversity antenna system is created by placing the second antenna in the rear bumper.
- GPS – in the front overhead console, which on Convertibles is in the windshield frame.
- Phone – in left-front side panel (fender).
- Satellite Radio – needs a free view upward, thus mounted on trunklid.
- 2 midrange, 100 mm, in front doors
- 2 midrange, 100 mm, rear shelf (Sports Wagons – rear doors; Convertibles – rear side panels)
- 2 subwoofers, 217 mm, under front seats
- 2 tweeters, 25 mm, in front-door mirror triangles
- 2 tweeters, 25 mm, in rear shelf (Sports Wagons – rear doors; Convertibles – rear side panels)

The premium Logic7 system, now optional in all models, is described in **options & packages** on page 246.

Upholstery and trim: new materials, colors, choices

The standard leatherette upholstery (all models except 335i Convertible) is available in Beige or Black, whereby the Sedan/ Sports Wagon Beige is warmer, the Coupe/Convertible Cream Beige lighter in color. Dakota is the 3 Series leather and is available in six colors in Sedans and Sports Wagons, five in Coupes and Convertibles:

Sedans and Sports Wagons

- A warm tone of Beige
- Black
- Gray

New for '09:

- Oyster
- Chestnut Brown
- Saddle Brown

Coupes and Convertibles

- Cream Beige
- Black
- Gray
- Coral Red/Black
- Saddle Brown/Black

(With the /Black combinations, the dash and carpets are black.)

In Convertibles, the leather on seats, armrests, head restraints and shift knob is treated with

Standard system. Features include:

- Programmable memory for 12 FM and 6 AM stations
- Autostore of 6 FM and 6 AM stations
- Search, seek and manual tuning
- Double tuner (only when Navigation System is present; displays all available FM radio stations)
- Audio volume and scroll-through-presets from steering-wheel controls
- Radio Data System (RDS), including Program Type (PTY)
- In-dash single-disc CD player, MP3-capable
- Audio muting for phone use (with Bluetooth interface, included with available BMW Assist).
- Time and outside-temperature display
- Auxiliary audio input (in center console)
- 180 watts of audio power
- 10 speakers (all body styles except as noted):

3 Series key features

Except as noted, all current 3 Series models offer the following features:

Sun Reflective Technology, which significantly reduces surface heating from solar rays.

Just entering a 3 Series vehicle is a gracious experience. At night, one appreciates the Welcome Light: Upon locking or unlocking vehicle, activation for 20 seconds of front luminous rings, taillights, license-plate lights, ground lighting and interior lights.

Dark Burl Walnut wood trim remains standard in all models. In all models, Light Burl Walnut wood and Fine Line Aluminum (both new for '09) are available at no extra cost; in Coupes and Convertibles, Gray Poplar is also offered.

Whatever the trim material, it is abundantly and tastefully applied: especially the full-width dash strip is generously dimensioned, and the material is repeated on a large area of the center console and as a handsome strip on each door.

Independently of the main trim materials just described, galvanic material appears on the –

- Speedometer and tachometer rings
- Start/stop button's ring
- Ashtray touch strip
- Cupholder touch strips
- Interior door handles
- Climate-control and audio knobs
- Center air outlets' adjusting tabs
- Open and Trunk/Tailgate buttons on remote
- iDrive controller if present.

Front seats: three choices in 328i, two in 335i/335d

The manual front seats, standard in the 328i models except Convertible, are height-adjustable; the Coupe driver's seat adds a cushion-angle adjustment.

8-way power front seats are available as part of the Premium Package or as a stand-alone option for 328i Sedans, Sports

Wagons and Coupes; they are standard in the 335i Sedan and Coupe and 335d Sedan. Power controls are on the seats' out-board edges.

Sport seats, offered as part of each model's Sport Package, add electropneumatic adjustment of backrest width and a manual adjustment for thigh support. Where it is not present on the standard manual seat (both 328i Sedan/Wagon front seats, 328i Coupe passenger's seat), they also add a manual cushion-angle adjustment. These can appear in combination with manual or power for the other adjustments, depending upon equipment combinations (see **options & packages**).

Convertible front seats: unique features

In contrast to the 328i/335i/d contrast of the other three body types, both Convertibles come standard with power seats, and they are specific to the Convertibles. Their special features are:

- **Seat-integrated safety belts**, which further optimize the belts' fit on the occupant and ease entry into the rear seats
- **Power-adjustable head-restraint/shoulder-belt height.**

Otherwise, the power adjustments of the standard and sport seats correspond to those of the Sedans, Sports Wagons and Coupes. All 2-door models have the easy-entry feature, by which the front seats can be moved forward to enter the rear seats; in all vehicles with power front seats this is powered.

Because the seat-integrated belts are out of the way when the seat is folded over, the Convertibles don't have the belt presenters of the Coupe.

Front center armrest and storage compartment

As in the other 3 Series models, a front center armrest is standard; a climate-controlled compartment resides under it.

A third cupholder is included in the compartment. In vehicles equipped with the Navigation/iDrive option, the iDrive controller sits toward the rear of the console.

Coupe/Convertible center console: not just up front

In combination with the individual rear seats, a long center console is part of these models' "sporty 4-seater" ambiance. Up front, as in the Sedans and Sports Wagons, it includes the climate-controlled storage compartment capped by part of a 2-piece center armrest. Just behind the front backrests there's a section, finished on top in the chosen trim material, that contains the climatized rear air outlets, a closable compartment and footwell lights on either side. In the Coupes, aft of that there are an open tray with rubber mat and, at the very rear of the console, a bin with rolltop cover.

For rear-seat passengers, the long console adds practicality, luxury, and an intimate atmosphere that's appropriate to these sporty cars.

Coupe and Convertible rear seats: contoured for luxury and comfort

BMW has built luxurious 4-seat Coupes before; the CS Series of 1968-75, 6 Series of 1976-89 and 8 Series of 1991-97 come to mind, not to mention the current 6 Series. In each case, the rear seats were configured for two persons only, making these Coupes less "family cars" and more "sporty cars for two or more persons."

Today's 3 Series Coupes have similar character, though their Sedan platform enables a roomier back seat than, say, the clearly "+2" rear compartments of some of these sporty-elegant heritage models. Leg room is 1.5 in. less than in the Sedans and Sports Wagons. There is a broad fold-up center armrest containing dual cupholders, folding backrests are standard, and a pass-through with ski bag is available as part of the Cold Weather Package. On the back of each front backrest is a storage net.

The rear-seat head restraints are height-adjustable; at their lowest position, they help preserve the driver's line of rearward vision. Bottom line: the Coupes' rear seats are real seats, if not Sedan-roomy.

Convertible rear seating is laid out essentially as in the Coupes, but the retractable hardtop's linkage reduces shoulder room from that of the Coupes – not an issue because of the 2-seat configuration. Leg room is also shorter in the Convertibles, by 1.8 in.

In place of the Coupes' split-folding rear backrests and fold-down center armrest, the Convertibles have a 1-piece folding backrest, a removable armrest, and a small center compartment with a net to help secure objects stored there.

Thoughtful features throughout

From front to rear in the 3 Series cabin, there are numerous thoughtful features that enhance luxury and convenience:

- **Auto-dimming interior and exterior mirrors**, with digital compass in interior mirror; part of optional Premium Package.

3 Series key features

Except as noted, all current 3 Series models offer the following features:

- **Interior trunk release**, in familiar location ahead of left front door.
- **Standard power 2-way moonroof** on Sedans and Coupes; dual-panel Panoramic type on Sports Wagons.
- **Storage compartment/ashtray** at front of center console, with glide-up cover.
- **Voice Command** switch on steering wheel, active only with Navigation/iDrive option.
- **Bluetooth cellphone interface**, included with BMW Assist option.
- **Front and rear⁶ overhead consoles:**
 - Included in the front one are BMW Assist buttons and the Passenger Airbag Off indicator. An interior light, separately switched left/right reading lights, BMW Ambiance Lighting, moonroof control if present, and microphones for hands-free phone use are also here.
 - The rear one, behind the moonroof, includes another interior light, separate left/right reading lights, Ambiance Lighting and space for the center-installed alarm system's motion detector.
- **Fold-up rear center armrest** in Sedans, Sports Wagons and Coupes; includes two cupholders. Convertibles have a take-out centerpiece and the cupholders are in the rear center console.

Practical cargo space and trunk features in Sedans and Coupes

Elimination of the spare tire and jack (possible because run-flat tires are standard) results in approximately 12% more cargo space in Sedans, 17% more in Coupes than in their predecessors.

Moreover, this official measurement does not include the well under the trunk floor of 328i models, which encloses an additional 1.76 cubic feet and offers the possibility of storing smaller objects without concern for their moving around when the vehicle is in motion.

The trunk of U.S. models includes an open storage bin on the left side with ribs to accommodate CDs; the BMW center-installed CD changer goes under this bin. Split folding rear seats are optional in Sedans (stand-alone option or Cold Weather Package) and standard in Coupes to increase effective cargo space and add storage versatility; a ski bag is included with the Coupes' Cold Weather Package. In Convertibles, the rear seat's 1-piece backrest folds down for extra space, and a cargo bag comes with the Cold Weather Package or as a stand-alone option.

Sports Wagon interior and cargo area

Up front, the Sports Wagons offer the same accommodations as the Sedans, except as affected by the Wagons' dual-panel Panoramic moonroof. Front and rear leg room are identical for the two body styles; front head room is essentially identical, but the Sports Wagons offer 0.2 in. less head room for rear passengers. The Wagons' standard split folding rear seats offer essentially the same functions and benefits as those that are optional in Sedans. The big difference is aft of the rear seats, where in terms of load-carrying ability and versatility the Sports Wagons offer advantages over the Sedans and abound with practical design and thoughtful details:

- High-lift tailgate, electrically released from remote or interior switch.
- Separately opening rear window, for convenient loading without opening the tailgate.
- Fully lined cargo area – floor, sides, back sides of rear seats – with luxurious, yet long-wearing carpet.
- With its straight, essentially vertical sides, the cargo area presents various cargo possibilities:
 - 16.2 cu ft. of volume with the seats upright and cargo loaded to the top of the seats
 - 24.8 cu ft. with the seats upright and cargo loaded to the ceiling
 - 60.9 cu ft. with the seats folded and cargo loaded to the ceiling
- Umbrella holder on the right side
- Bag holder at either side
- 12-volt accessory power outlet on the left-hand wall.
- Cargo cover, concealing cargo when pulled back from its cassette with the rear seats either upright or folded. If the rear window only is opened (from the outside only), the cover rises with it. If the entire tailgate is opened (from interior, outside or remote), the cover stays in place.
- A cargo net, carried in the cassette with the cargo cover, that can be mounted with the rear seats either upright or folded. At each side of the cargo area is a flat surface on which this assembly can be slid rearward for removal from vehicle; one does not have to reach in awkwardly and lift the assembly out.
- Red light at left bottom of tailgate, for safety; visible when tailgate is open.

Various accessories are available at BMW centers to further enhance the utility of the cargo area; see the latest Accessories catalog for information.

Dual-panel Panoramic Moonroof

(Sports Wagons)

With its large roof opening, this feature gives occupants almost the feeling of being in a convertible. The power glass roof consists of two panels, both of which can be tilted up at the rear. The forward, larger panel can also be slid open; together, their glass area is almost 6.5 square feet (29.5 x 31.5 in.). Although the glass is effectively tinted, there is also a power-operated interior shade; a wind deflector rises at the front of the opening to reduce wind buffeting when panels are open. 1-touch operation is provided for all motions, including that of the interior shade.

Safety & security

Safety and security features of the 3 Series Sedans and Sports Wagon are shared with those of other BMW Series, and represent BMW's state of the art in these all-important areas of vehicle attributes. Two safety features, however, are exclusive to the 3 Series:

- **Pedals that rotate forward** (decouple) in a frontal impact. The Mastervac (brake vacuum booster) is mounted so that as the front end deforms, it rotates, and with it the brake and clutch pedals. This has the effect that the pedals retreat forward, canceling much of the force transfer to the driver's feet and legs if they are on the pedals.

6 – Not present in Convertibles.

3 Series key features

Except as noted, all current 3 Series models offer the following features:

- **Crushable footrest.** Designed to crush under the force of the driver's left foot, so that the full impact force is not transmitted to his or her foot and leg.

For '09, all models get new Active head restraints on their front seats; these and other safety features and systems shared with other Series are described in **BMW features** on pages 78-90.

Options & packages

Factory-installed options

Premium Package

(optional all models, code ZPP) Continuing a popular offering for 3 Series models, this Package adds desirable and popular features to each 3 Series model.

All models:

- **Auto-dimming exterior and interior mirrors.**
- **Power-fold exterior mirrors.** A valued convenience for parking in tight spaces and for navigating some car washes.
- **Digital compass in interior rearview mirror.**
- **BMW Universal Transceiver,** the 3-function device that can operate garage doors and other external electrical devices or systems. Its controls are positioned in the front overhead console.
- **4-way power lumbar support** on the front seats.
- **BMW Assist,** BMW's customer-services and in-vehicle telematics system. For details, see CenterNet or pages 442-446.
- **Bluetooth cellphone interface.**

All except 335i Convertible:

- **Dakota leather upholstery,** as described on pages 235-236, is standard in this model.

328i Sedans, Sports Wagons and Coupes only (standard 335i models and 328i Convertible):

- **Power front seats,** 8-way power + 4-way power lumbar support. Include driver's-seat and exterior-mirror memory, with two memory settings for each driver.
- **Auto tilt-down feature** for right-hand exterior mirror; mirror tilts down for view of the curb or other possible obstruction when the transmission is shifted into reverse.

Sport Package for rear-wheel-drive models

(optional 328i & 335i RWD models, code ZSP)

The Sport Package of all RWD models includes wheels and tires in differentiated front/rear sizes. Package contents are attractive for sports-oriented drivers:

328i Sedan, Sports Wagon and Convertible; 335i Sedan and Convertible (standard on 328i and 335i Coupes):

- **Sport suspension,** consisting of firmer springs, shock absorbers and anti-roll (stabilizer) bars, plus polyurethane auxiliary springs at the front. Ride height is lowered by 15 mm/0.6 in.

All 328i, 335i & 335d models:

- **Sport wheels and tires,** as follows for the various models:
 - **328i Sedan, Sports Wagon –** 17 x 8.0 front/17 x 8.5 rear Star Spoke wheels (design #286) with 225/45R-17 front / 255/40R-17 rear run-flat performance tires².

- **328i Coupe** – 18 x 8.0 front/18 x 8.5 rear Cross Spoke wheels (design #197) with 225/40R-18 front / 255/35R-18 rear run-flat performance tires².
 - **335i Sedan** – 18 x 8.0 front/18 x 8.5 rear Star Spoke wheels (design #287) with 225/40R-18 front / 255/35R-18 rear run-flat performance tires².
 - **335d Sedan** – 18 x 8.0 front/18 x 8.5 rear Double Spoke wheels (design #195) with 225/40R-18 front / 255/35R-18 rear run-flat performance tires².
 - **335i Coupe, Convertible** – 18 x 8.0 front/18 x 8.5 rear Star Spoke wheels (design #189) with 225/40R-18 front / 255/35R-18 rear run-flat performance tires².
 - **Sport seats** with the following adjustments in addition to the electropneumatically power-adjustable backrest width:
 - **328i Sedans, Sports Wagons and Coupes without Premium Package** or power-seats option 459 – 10-way manual adjustment for fore-aft, cushion height and angle, backrest angle and thigh support.
 - **328i Sedans, Sports Wagons and Coupes with Premium Package** or power-seats option 459, **335i Sedan and Coupe, 335d Sedan** – 8-way power adjustment for fore-aft, cushion height and angle, and backrest angle; 2-way manual adjustment of thigh support.
 - **All Convertibles** – 12-way power front sport seats.
 - **150-mph top-speed limiter** in place of standard 130-mph limiter.
- 328i/335i/335d Sedans, 328i Sports Wagon (standard on Coupes and Convertibles):**
- **Sport steering wheel**, with smaller, round center hub, wider spokes (especially the bottom one), slightly smaller diameter and thicker rim.
- Sport Package for xDrive models**
(optional 328i & 335i models, code ZSP)
Tailored for the AWD models' specific attributes:
- **No sport suspension;** the AWD chassis has its own specific suspension calibration, the same for standard- or Sport Package-equipped vehicles.
 - **Specific wheels and tires:**
 - **328i xDrive Sedan and Sports Wagon.** 17 x 8.0 Multi-Spoke wheels (design #284) with 225/45R-17 all-season tires². This equipment, also standard on the 335i and 335d Sedans, puts the accent on all-season traction and handling.
 - **328i xDrive Coupe.** 17 x 8.0 Star Spoke wheels (design #185) with 225/45R-17 all-season tires². This equipment is standard on the 335i Coupe and Convertible.
 - **335i xDrive Sedan.** 17 x 8.0 Double Spoke wheels (design #161) with 225/45R-17 all-season tires².
 - **335i xDrive Coupe.** 17 x 8.0 V Spoke wheels (design #188) with 225/45R-17 all-season tires².
 - **Sport steering wheel and seats** as in 328i/335i RWD Package.
- 2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 3 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

3 Series key features

Except as noted, all current 3 Series models offer the following features:

Sport Package Upgrade wheels/tires

(optional 328i & 335i xDrive models, codes 2S1, 2DA, 2S2 or 2C6; require Sport Package)

For customers who desire all-wheel drive but prefer the enhanced dry-road handling of performance tires and differentiated front/rear sizes, this option provides Sport Package-equipped AWD models with the same wheel/tire equipment as their RWD counterparts. Not recommended for driving in snow and ice conditions:

- **328i xDrive Sedan, Sports Wagon** – 17 x 8.0 front/17 x 8.5 rear Star Spoke wheels (design #286) with 225/45R-17 front / 255/40R-17 rear run-flat performance tires².
- **328i xDrive Coupe** – 18 x 8.0 front/18 x 8.5 rear Cross Spoke wheels (design #197) with 225/40R-18 front / 255/35R-18 rear run-flat performance tires².
- **335i xDrive Sedan** – 18 x 8.0 front/18 x 8.5 rear Star Spoke wheels (design #287) with 225/40R-18 front / 255/35R-18 rear run-flat performance tires².
- **335i xDrive Coupe** – 18 x 8.0 front/18 x 8.5 rear Star Spoke wheels (design #189) with 225/40R-18 front / 255/35R-18 rear run-flat performance tires².
- **150-mph top-speed limiter**, instead of the standard 130-mph limiter.

Non-Sport Package Upgrade wheels/tires

(328i Sedan & Sports Wagon, code 2KU)

New for '09, this option provides 17-in. wheels and all-season tires of equal front/rear dimensions as an alternative to the standard 16-in. equipment of non-ZSP-equipped

328i Sedan and Sports Wagon models, both RWD and xDrive. The wheels are 17 x 8.0 V Spoke #285, the tires 225/45R-17².

Sport Package Upgrade wheels/tires

(335i RWD Coupe & 335i Convertible only, code 2R4; require Sport Package)

This option further enhances the 335i Sport Package's sportiness with the only 19-in. wheel/tire equipment offered on a regular-production 3 Series model. The wheels are in an ultra-sporty Star Spoke design (#230) and, at 19 x 8.0 front/19 x 9.0 rear, are a half-inch wider at the rear than the Package's 18-in. equipment. The performance tires' widths are the same as those of the Package, but one step lower in profile: 225/35R-19 front, 255/30R-19 rear².

Cold Weather Package

(optional all models, code ZCW)

For all models, this Package includes:

- **Heated front seats.** Also available as a stand-alone option.
- **Heated steering wheel,** a new feature for '09.

All Coupe and Sports Wagon models' Package adds:

- **Ski bag,** the familiar narrow type.

All Convertible models' Package adds:

- **Cargo bag,** larger than the traditional ski bag.

All Sedan Packages add –

- **Split folding rear seats,** 60% left/40% right. These are standard in the Sports Wagons and Coupes. The ski bag formerly included in the Sedans' and Sports Wagons' Packages is no longer available.

All 328i/335i RWD models'

Package adds:

- **Headlight cleaning system.**
High-intensity jets, normally retracted, pop out to spray the lights with washer fluid. These are standard on xDrive models.

6-speed STEPTRONIC automatic transmission

(optional all models, code 205)

This advanced, performance-enhancing and velvety-smooth automatic is offered as a stand-alone option on all models except the 335d, where it is standard. General features of BMW automatic transmissions, and distinctions among various versions of them, are described in **BMW features** on pages 40-42.

Shift paddles

(optional all models, code 2XA)

Offered for the automatic transmission in combination with the Sport Package. There are two paddles above the steering wheel's horizontal spokes. Analogous to the shift lever, tipping the paddle(s) rearward produces an upshift; tipping the paddle forward effects a downshift.

The paddle-shifted automatic (drivers can still shift with the lever as well) also incorporates Direct Selection of the Manual mode. If, while driving in D, the driver manually downshifts via paddle, the Manual mode engages and the transmission holds that gear. But if the driver makes no further manual shifts within 15 seconds, the transmission returns to automatic operation.

Active Cruise Control (optional all models, code 541)

Active Cruise Control is described in **BMW features** on pages 60-61. Note that the 3 Series option continues with code 541 and does not include the Stop-and-Go and Collision Warning functions that have been added to the Active Cruise Control system of 5, 6 and 7 Series models.

Active Steering (optional 335i RWD models only, code 217)

Active Steering offers heretofore unheard-of benefits, described in detail in **BMW features** on pages 48-50.

Park Distance Control (optional all models; code 508 for Sedans & Sports Wagons, 507 for Coupes & Convertibles)

PDC employs four ultrasonic sensors each in the front and rear bumpers (Sedans and Sports Wagons) or rear bumper only (Coupes and Convertibles) to detect when the vehicle is approaching obstacles that may not be visible to the driver. A warning tone emanates from the front or rear of the interior respectively, increasing in frequency as the vehicle approaches the obstacle until the tone becomes constant.

When combined with the Navigation/iDrive option, PDC includes a plan-view vehicle diagram in the iDrive monitor, which graphically depicts obstacles' location relative to the vehicle.

2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 3 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

3 Series key features

Except as noted, all current 3 Series models offer the following features:

Xenon Adaptive headlights with auto-leveling

(optional 328i Sedans and Sports Wagons; standard Coupes, Convertibles & 335i/335d Sedans; code 522)

The Adaptive feature “steers” the headlights via an electronic control system and small servo motors; other features included with this option are auto-leveling of the headlights to reduce glare to oncoming drivers; and cornering lights, which improve the driver’s forward view in low-speed corners and when backing up. Features and functions of these lighting systems are described in **BMW features** pages 23-25.

Metallic paint

(optional all models, color codes)

The beauty of BMW metallic paints needs no introduction; with improvements to the painting process for the current 3, its beauty promises to be even longer-lasting. Several new colors are offered for ‘09; for details on 3 Series color choices, see pages 424-427.

Comfort Access

(optional all models, code 322)

No need to activate a remote to unlock or lock the vehicle, or to insert it into the dash slot before starting the engine. Details in **BMW features**, page 58. On Convertibles, this option includes remote lowering of hardtop as well as an intermediate hardtop position for loading (Comfort Loading).

Dakota leather upholstery

(optional all except 335i Convertible, where standard; codes LC)

Available as either this stand-alone option or part of the Premium Package. In the Convertibles, it benefits from Sun Reflective Technology, which significantly reduces heating from sunlight.

Alternate wood or Fine Line Aluminum interior trim

(optional all models at no extra cost; code 4A3, 4B9 or 4AS)

While galvanic trim materials (see pages 76-77 and 236) for accents and functional elements appears in all vehicles, customers have no-extra-cost choices in the major trim across the dash, on the center console and doors, and on the rear side panels of Coupes and Convertibles. The standard wood trim is 4AB Burl Walnut; the options are –

- All models – Light Burl Walnut (4A3) or Fine Line Aluminum (4B9)
- Coupes and Convertibles only – Gray Poplar (4AS).

Power front seats and memory system

(optional 328i models, standard 335i/335d models & all Convertibles; code 459)

Available as a stand-alone option for customers who do not want the Premium Package. The memory provides two positions for each user, as identified by the remote he or she is using. Also included is auto tilt-down of the right-hand exterior mirror when the transmission is shifted into reverse, a very useful feature especially in parallel-parking.

This option does not include the power-adjustable lumbar support that comes with the Premium Packages; with that feature, the number of power adjustments rises by 4.

Heated front seats (optional all models, code 494)

Available as this stand-alone option or as part of the Cold Weather Package, the heated seats have impressive features:

- **Large heated area**, extending to the side bolsters.
- **High heating power**, fully 130 watts.

Split folding rear seats (optional all Sedans, code 465)

The seats are split 60% left/40% right. As with the standard rear seat, a fold-up center armrest is provided. Releases for folding the seats are in the trunk.

In the Sports Wagons and Coupes, folding rear seats are standard and the Wagons' releases are on top of the seats; a ski bag is part of the Coupes' and Sports Wagons' Cold Weather Package. In Convertibles, a 1-piece folding rear backrest is standard, and a pass-through and cargo bag are available as part of in the Cold Weather Package or as a stand-alone option, next.

Cargo bag and pass-through (optional Convertibles, code 4UT)

In addition to being part of the Convertibles' Cold Weather Package, this option is available on a stand-alone basis. It further enhances their load-carrying

versatility beyond the standard fold-down rear backrest and small opening. Larger than the customary BMW ski bag, the cargo bag can accommodate one large or two small golfbags. It is accessible through the pass-through opening that's also part of this option.

Navigation system + iDrive (optional all models, code 609)

With this option, the instrument panel gains a "second wave" that houses the iDrive monitor, and a controller sits on the clean, uncluttered console behind the shift lever. The entire system is BMW's new CIC (Car Information Computer) with –

- 8.8-in. Control Display, new higher-resolution 1280 x 480 pixels
- New-type controller, with surrounding direct-select keys
- GPS Navigation with new hard-drive database
- Voice Command system
- Programmable Memory Keys, which enable users to program frequently used functions and recall them with a single key-stroke.

In all '09 3 Series models, the iDrive system (including GPS Navigation) is the essentially all-new 2nd-generation system also introduced in the new 7 Series as well as the '09 1 Series. An overview of BMW On-board Navigation Systems, including details on the new 2nd-generation system, is in **BMW features** on pages 63-67.

3 Series key features

Except as noted, all current 3 Series models offer the following features:

Logic7 audio system

(optional all models)

Compared to the standard system, the 3 Series version of Logic7 offers –

- Increased audio power, 300 watts (as in 5 Series)
- Even higher-caliber speakers throughout, plus additional speakers over the standard 10:
 - Sedans, Sports Wagons and Coupes – 13 speakers total
 - Convertibles – 11 speakers total
- Digital Sound Processing (DSP), adjusted along with other Logic7 parameters on the audio panel or (with Navigation/iDrive) the control display
- Surround Sound simulation.

The upgraded speakers are as follows; an asterisk (*) denotes additional speakers over the standard system –

- 1 aluminum-membrane midrange fill speaker, 100 mm, center of dash*
- 2 aluminum-membrane midrange, 100 mm, in front doors
- 2 aluminum-membrane midrange, 100 mm, rear shelf (Sports Wagons – roof; Convertibles – rear side panels)
- 2 aluminum-membrane midrange, 100 mm, in rear doors* (Coupes – rear side panels; not present in Convertibles)
- 2 subwoofers, 217 mm, upgraded, under front seats

- 2 aluminum-membrane tweeters, 25 mm, in front-door mirror triangles
- 2 aluminum-membrane tweeters, 25 mm, in rear shelf (Sports Wagons – rear doors; Convertibles – rear side panels).

HD Radio

(optional all models, code 653)

The HD receiver provides digital-quality sound on FM, and improves AM sound to something like conventional FM. A more detailed description of HD Radio is found on pages 71-72.

Satellite Radio

(optional all models, code 655)

See **BMW features**, page 72, for details on this system; includes 1-year subscription. On Convertibles, the vehicle preparation for Satellite Radio can be deleted at no cost via code ZPD).

iPod/USB Adapter

(optional all models, code 6FL)

This option addresses the growing demand for in-vehicle digital music, and is positioned in the center console.

Smartphone Integration

(optional all models, code 6NF; requires iPod/USB Adapter

Not only does this new option facilitate playing music files stored in one's own smartphone in the vehicle audio system, it also charges the phone and provides a hard-wired connection of the phone to the vehicle phone system. Requires adaptor for specific, BMW-approved smartphone model.

Power rear-window sunshade and manual rear door-window shades

(optional all Sedan models, code 417)

Manual rear door-window shades

(optional 328xi Sports Wagon, code 417)

Power rear-window sunshade
(optional all Coupe models, code 415)

The power rear-window shade is controlled from a console switch. The side-window shades are manual and easily raised or lowered by rear-seat passengers; each of these consists of two portions, for the main window (opening vertically) and the fixed quarter pane (opening radially).

BMW Assist

(optional all models, code 639)

In addition to being part of the Premium Package for all models, BMW Assist is also available as a stand-alone option. BMW Assist is BMW's comprehensive system of customer services and in-car telematics; for detailed information, see CenterNet or pages 442-446. The option price includes a 4-year subscription to BMW Assist Safety Services.

BMW center-installed accessories

The following items are available:

- Carbon-fiber front chin spoiler
- Complete wheel and tire sets, 17-, 18- and 19-in.
- Wind deflector for Convertibles
- Rear spoiler
- Dark-lens ("smoked") taillights
- Park Distance Control, rear only (aftermarket version, not same as factory option)
- Strut reinforcing braces, running from the front suspension's strut towers to the cowl area
- Sport muffler for more "sound of performance"
- Alarm system
- Nose mask
- Car covers, outdoor and indoor types
- Windshield sunshade
- Sun/wind deflector for moonroof
- Cargo Compartment Package for Sports Wagons
- Floor mats, carpet and rubber
- Aluminum pedals.

For details, see the latest **Original BMW Accessories** catalog for the 3 Series.

Standard & optional features

2009 3 Series Sedans & Sports Wagons

Bold within table indicates new feature for 2009 (xDrive models vs. 2008 xi models).

Exterior design & function	328i Sedan	328i xDrive Sedan
Halogen free-form foglights	S	S
Xenon Adaptive headlights with auto-leveling	OPT	OPT
Luminous rings as parking lights & Daytime Running Lamps	S	S
Automatic headlight control	S	S
High-intensity headlight cleaning system	ZCW	S
Daytime Running Lamps	S ¹	S ¹
Rain-sensing windshield wipers	S	S
Heated windshield-washer jets	S	S
Park Distance Control, front & rear	OPT	OPT
Power-fold exterior mirrors	ZPP	ZPP
Welcome Light ²	S	S
Ground lighting in door handles	S	S
Adaptive brakelights	S	S
Metallic paint	OPT	OPT
Chrome grille vertical slats	NA	NA
Titanium-finish horizontal slats in lower front air intakes	NA	NA
Chrome/black side-window trim	All-black	All-black
Shadowline side-window trim	ZSP	ZSP
Roof-seam trim in body color	Black	Black
Matte-chrome exhaust tips	S	S
Performance & efficiency	328i Sedan	328i xDrive Sedan
DOHC 24-valve inline 6-cylinder engine:		
3.0-liter naturally aspirated	S	S
3.0-liter twin-turbo	–	–
3.0-liter twin-turbo diesel	–	–
Engine features:		
Magnesium/aluminum composite construction	S	S
Aluminum construction	–	–
Twin turbochargers	–	–
Direct fuel injection with piezo injectors	–	–
Valvetronic system	S	S
Double VANOS ³ steplessly variable valve timing	S	S

1 – Selectable via Vehicle & Key Memory.

2 – Upon locking or unlocking vehicle, activation for 20 sec. of front luminous rings, taillights, license-plate lights, ground lighting and interior lights.

3 – VANOS = **V**ariable **N**ockenwellen

Steuerung = variable camshaft control, or variable valve timing.

328i Sp Wagon	328i xDrive Sp Wagon	335i Sedan	335i xDrive Sedan	335d Sedan
S	S	S	S	S
OPT	OPT	S	S	S
S	S	S	S	S
S	S	S	S	S
ZCW	S	ZCW	S	ZCW
S ¹	S ¹	S ¹	S ¹	S ¹
S	S	S	S	S
S	S	S	S	S
OPT	OPT	OPT	OPT	OPT
ZPP	ZPP	ZPP	ZPP	ZPP
S	S	S	S	S
S	S	S	S	S
S	S	S	S	S
OPT	OPT	OPT	OPT	OPT
NA	NA	S	S	S
NA	NA	S	S	S
All-black	All-black	S	S	S
ZSP	ZSP	ZSP	ZSP	ZSP
S	S	S	S	S
S	S	S	S	S
328i Sp Wagon	328i xDrive Sp Wagon	335i Sedan	335i xDrive Sedan	335d Sedan
S	-	-	-	-
-	-	S	S	-
-	-	-	-	S
S	S	-	-	-
-	-	S	S	S
-	-	S	S	S
-	-	S	S	S
S	S	-	-	-
S	S	S	S	-

S – Standard
 OPT – Optional
 NA – Not available
 — – Not applicable

ZCW – Cold Weather Package
 ZPP – Premium Package
 ZSP – Sport Package

Standard & optional features

2009 3 Series Sedans & Sports Wagons

Bold within table indicates new feature for 2009 (xDrive models vs. 2008 xi models).

Performance & efficiency (cont.)	328i Sedan	328i xDrive Sedan
Electronically controlled engine cooling	S	S
Electric water pump	S	S
Volume-controlled oil pump	S	S
Direct ignition system with knock control	S	S
Dual exhaust system	Partial dual	Partial dual
6-speed manual transmission	S	S
6-speed STEPTRONIC automatic transmission with Normal, Sport & Manual shift modes	OPT	OPT
Shift paddles on steering wheel	OPT ⁴	OPT ⁴
Double-pivot-type front suspension	S	S
Aluminum front suspension components	S	NA
5-link rear suspension	S	S
Front & rear anti-roll (stabilizer) bars	S	S
Aluminum front/steel rear subframes	S	Both steel ⁶
Twin-tube gas-pressure shock absorbers	S	S
Sport suspension calibration	ZSP	NA
Engine-speed-sensitive variable-assist power steering	S	S
Active Steering with Servotronic vehicle-speed-sensitive power steering	NA	NA
4-wheel ventilated disc brakes	S	S
Dynamic Stability Control	S	S
xDrive fulltime all-wheel drive system, electronically controlled with variable front/rear torque split & traction control	NA	S
Alloy wheels (design number):		
16 x 7.0 Multi-Spoke (#282)	S	S
17 x 8.0 Double Spoke (#161)	NA	NA
17 x 8.0 Double Spoke (#284)	NA	ZSP
17 x 8.0 Star Spoke (#285)	OPT⁷	OPT⁷
17 x 8.0 front/17 x 8.5 rear Star Spoke (#286)	ZSP	OPT⁵
18 x 8.0 front/18 x 8.5 rear Star Spoke (#287)	NA	NA
18 x 8.0 front/18 x 8.5 rear Double Spoke (#195)	–	–

4 – Require Sport Package & automatic transmission.

5 – Require Sport Package.

6 – Steel front subframe with aluminum thrust plate.

7 – Not available in combination with Sport Package.

328i Sp Wagon	328i xDrive Sp Wagon	335i Sedan	335i xDrive Sedan	335d Sedan
S	S	S	S	S
S	S	S	S	S
S	S	S	S	S
S	S	S	S	—
Partial dual	Partial dual	S	S	S
S	S	S	S	NA
OPT	OPT	OPT	OPT	S
OPT ⁴	OPT ⁴	OPT ⁴	OPT ⁴	OPT ⁵
S	S	S	S	S
S	NA	S	NA	S
S	S	S	S	S
S	S	S	S	S
S	Both steel ⁶	S	Both steel ⁶	S
S	S	S	S	S
ZSP	NA	ZSP	NA	ZSP
S	S	S	S	S
NA	NA	OPT	NA	NA
S	S	S	S	S
S	S	S	S	S
NA	S	NA	S	NA
S	S	—	—	—
NA	NA	NA	ZSP	NA
NA	ZSP	S	S	S
OPT⁷	OPT⁷	NA	NA	NA
ZSP	OPT⁵	—	—	—
NA	NA	ZSP	OPT⁵	NA
—	—	—	—	ZSP

S – Standard
 OPT – Optional
 NA – Not available

— – Not applicable
 ZSP – Sport Package

Standard & optional features

2009 3 Series Sedans & Sports Wagons

Bold within table indicates new feature for 2009 (xDrive models vs. 2008 xi models).

Performance & efficiency (cont.)	328i Sedan	328i xDrive Sedan
Run-flat tires:		
205/55R-16 all-season	S	S
225/45R-17 all-season ⁸	NA	ZSP
225/45R-17 front / 255/40R-17 rear performance ⁸	ZSP	OPT ⁵
225/40R-18 front / 255/35R-18 rear performance ⁸	NA	NA
Tire Pressure Monitor	S	S
Comfort & convenience	328i Sedan	328i xDrive Sedan
Aluminum/rubber doorsill trim plates with BMW lettering	S	S
Vehicle & Key Memory	S	S
Multi-function remote control with selective unlocking ¹ & remote trunk or tailgate release	S	S
Dual power/heated exterior mirrors	S	S
Automatic-dimming interior & exterior mirrors	ZPP	ZPP
Digital compass in interior mirror	ZPP	ZPP
BMW Universal Transceiver (3-function garage-door opener)	ZPP	ZPP
Courtesy lights with fade-in/fade-out feature, actuation from remote, automatic switch-on when engine is turned off, separately controlled left/right front & rear reading lights, front footwell lighting & illuminated visor vanity mirrors	S	S
BMW Ambiance Lighting, front & rear	S	S
Lockable glove compartment	S	S
Tilt/telescopic 3-spoke leather-wrapped steering wheel with fingertip audio, air recirculation & phone controls:		
Standard wheel, 375 mm/14.8 in.	S	S
Sport wheel, 369 mm/14.5 in.	ZSP	ZSP
Dynamic Cruise Control	S	S
Active Cruise Control	OPT	OPT
6-way adjustable front seats	S	S
10-way manual front sport seats plus power-adjustable backrest width	ZSP	ZSP

1 – Selectable via Vehicle & Key Memory System.

5 – Require Sport Package.

8 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard

and consequential damages. 3 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

328i Sp Wagon	328i xDrive Sp Wagon	335i Sedan	335i xDrive Sedan	335d Sedan
S	S	—	—	—
NA	ZSP	S	S	S
ZSP	OPT ⁵	—	—	—
NA	NA	ZSP	OPT ⁵	ZSP
S	S	S	S	S
328i Sp Wagon	328i xDrive Sp Wagon	335i Sedan	335i xDrive Sedan	335d Sedan
S	S	S	S	S
S	S	S	S	S
S	S	S	S	S
S	S	S	S	S
ZPP	ZPP	ZPP	ZPP	ZPP
ZPP	ZPP	ZPP	ZPP	ZPP
ZPP	ZPP	ZPP	ZPP	ZPP
S	S	S	S	S
S	S	S	S	S
S	S	S	S	S
S	S	S	S	S
ZPP	ZPP	ZPP	ZPP	ZPP
S	S	S	S	S
OPT	OPT	OPT	OPT	OPT
S	S	—	—	—
ZSP	ZSP	—	—	—

S – Standard
 OPT – Optional
 NA – Not available

— – Not applicable
 ZPP – Premium Package
 ZSP – Sport Package

Standard & optional features

2009 3 Series Sedans & Sports Wagons

Bold within table indicates new feature for 2009 (xDrive models vs. 2008 xi models).

Comfort & convenience (cont.)	328i Sedan	328i xDrive Sedan
8-way power front seats	OPT/ZPP	OPT/ZPP
4-way power front-seat lumbar support	ZPP	ZPP
8-way power + 2-way manual front sport seats plus power-adjustable backrest width	OPT/ZPP + ZSP ⁹	OPT/ZPP + ZSP ⁹
Memory system for driver's seat & exterior mirrors (2 settings per user)	OPT/ZPP ¹⁰	OPT/ZPP ¹⁰
Auto tilt-down of right-hand exterior mirror for backing up	OPT/ZPP ¹⁰	OPT/ZPP ¹⁰
3-stage, thermostatically controlled heated front seats	OPT/ZCW	OPT/ZCW
Front center armrest	S	S
Climate-controlled center console compartment with single integral cupholder	S	S
Electronic analog speedometer & tachometer	S	S
LCD main & trip odometers	S	S
Check Control vehicle monitor system	S	S
2nd-generation iDrive system with high-resolution control display, GPS Navigation; direct-select radio, CD, phone & Navigation menus; 6 Programmable Memory Keys, Voice Command, Real Time Traffic Information & other features	OPT	OPT
Leatherette upholstery	S	S
Dakota leather upholstery	OPT/ZPP	OPT/ZPP
Burl Walnut wood interior trim	S	S
Light Burl Walnut wood interior trim	NC	NC
Fine Line Aluminum interior trim	NC	NC
Pearl-gloss galvanic trim (speedometer & tachometer, sport steering wheel, climate-control & radio knobs, start/stop button, interior door handles, etc.)	S	S
Power windows with key-off operation; 1-touch open & close of all door windows, anti-trapping feature, open from remote	S	S

9 – Power sport seats in 328i models when Sport Package is combined with Premium Package or stand-alone power-seats option.

10 – Included with all power seats.

328i Sp Wagon	328i xDrive Sp Wagon	335i Sedan	335i xDrive Sedan	335d Sedan
OPT/ZPP	OPT/ZPP	S	S	S
ZPP	ZPP	ZPP	ZPP	ZPP
OPT/ZPP + ZSP ⁹	OPT/ZPP + ZSP ⁹	ZSP	ZSP	ZSP
OPT/ZPP ¹⁰	OPT/ZPP ¹⁰	S	S	S
OPT/ZPP ¹⁰	OPT/ZPP ¹⁰	S	S	S
OPT/ZCW	OPT/ZCW	OPT/ZCW	OPT/ZCW	OPT/ZCW
S	S	S	S	S
S	S	S	S	S
S	S	S	S	S
S	S	S	S	S
S	S	S	S	S

OPT	OPT	OPT	OPT	OPT
S	S	S	S	S
OPT/ZPP	OPT/ZPP	OPT/ZPP	OPT/ZPP	OPT/ZPP
S	S	S	S	S
NC	NC	NC	NC	NC
NC	NC	NC	NC	NC

S	S	S	S	S
S	S	S	S	S

S – Standard
 OPT – Optional
 NC – No extra cost

ZCW – Cold Weather Package
 ZPP – Premium Package
 ZSP – Sport Package

Standard & optional features

2009 3 Series Sedans & Sports Wagons

Bold within table indicates new feature for 2009 (xDrive models vs. 2008 xi models).

Comfort & convenience (cont.)	328i Sedan	328i xDrive Sedan
Automatic climate control with separate left/right temperature settings, automatic recirculation control, misting control, bi-directional solar sensor, Heat at Rest, temperature- & volume-controlled rear air outlets, activated-charcoal microfilter ventilation & other features	S	S
2-way power moonroof with 1-touch opening & closing, anti-trapping feature, opening from remote, sliding interior sunshade	S	S
Dual-panel Panoramic moonroof: front panel slides open, both panels tilt up; power interior shade, all functions 1-touch	NA	NA
Anti-theft AM/FM/CD/MP3 audio system with 10 speakers including 2 subwoofers, Radio Data System (RDS), FM diversity antenna system, auxiliary audio input & other features	S	S
Logic7 audio system with 13 speakers, Digital Sound Processing & Surround Sound simulation; includes subwoofers, upgraded componentry throughout & all features of standard system	OPT	OPT
HD Radio	OPT	OPT
Satellite Radio	OPT	OPT
iPod/USB Adapter	OPT	OPT
Pre-wiring for 6-disc CD changer	S	S
6-disc CD changer	C	C
80-GB hard drive providing data storage for Navigation, audio system, phonebook & Voice Command; ripping capability from CD, MP3 player or USB stick	OPT¹¹	OPT¹¹
Bluetooth cellphone interface with high-capacity phonebook download	OPT/ZPP ¹²	OPT/ZPP ¹²
Smartphone Integration	OPT¹³	OPT¹³
Dual cupholders front & rear	S	S
Dual front sun visors with illuminated mirrors	S	S
Open storage compartments in front doors	S	S
Fold-up rear center armrest	S	S
Seatback storage compartments	S	S
Split folding rear seats	OPT/ZCW	OPT/ZCW

11 – Included with Navigation/iDrive option.

12 – Bluetooth interface included with BMW Assist.

13 – Requires iPod/USB Adapter.

S – Standard

OPT – Optional

NA – Not available

328i Sp Wagon	328i xDrive Sp Wagon	335i Sedan	335i xDrive Sedan	335d Sedan
S	S	S	S	S
-	-	S	S	S
S	S	NA	NA	NA
S	S	S	S	S
OPT	OPT	OPT	OPT	OPT
OPT	OPT	OPT	OPT	OPT
OPT	OPT	OPT	OPT	OPT
OPT	OPT	OPT	OPT	OPT
S	S	S	S	S
C	C	C	C	C
OPT¹¹	OPT¹¹	OPT¹¹	OPT¹¹	OPT¹¹
OPT/ZPP ¹²	OPT/ZPP ¹²	OPT/ZPP ¹²	OPT/ZPP ¹²	OPT/ZPP ¹²
OPT¹³	OPT¹³	OPT¹³	OPT¹³	OPT¹³
S	S	S	S	S
S	S	S	S	S
S	S	S	S	S
S	S	S	S	S
S	S	S	S	S
S	S	OPT/ZCW	OPT/ZCW	OPT/ZCW

— — Not applicable
C – BMW center-installed

ZCW – Cold Weather Package
ZPP – Premium Package

Standard & optional features

2009 3 Series Sedans & Sports Wagons

Bold within table indicates new feature for 2009 (xDrive models vs. 2008 xi models).

Comfort & convenience (cont.)	328i Sedan	328i xDrive Sedan
Power-operated rear & manual rear door-window sunshades	OPT	OPT
Manual rear side-window sunshades	—	—
Rear-window defroster	S	S
Interior or tailgate trunk release, electrically operated	S	S
Trunk features: underfloor storage compartment, storage tray, 4 cargo tie-downs	S	S
Variable cargo area with cargo cover, cargo net, luggage straps, bag tie-downs at both sides of cargo area, umbrella holder, concealed storage under floor, accessory power outlet	—	—
Split tailgate with separately opening rear window; electric release of tailgate from interior, exterior or remote; window release from exterior; rear-window wiper/washer	—	—
Safety & security	328i Sedan	328i xDrive Sedan
Dynamic Stability Control, including Dynamic Traction Control, electronic brake proportioning, antilock braking (ABS), cornering/braking stability enhancement, Dynamic Brake Control, Brake Fade Compensation, Brake Standby, Brake Drying & Start-up Assistant	S	S
plus – Hill Descent Control	NA	S
Dual front-impact airbag Supplementary Restraint System (SRS) with dual-threshold deployment, 2-stage Smart Airbags	S	S
3-point safety belts at all seating positions	S	S
Front & outboard rear safety belts with automatic tensioners & force limiters	S	S
LATCH attachments at outboard rear seating positions (for installation of child restraint seats)	S	S
Head restraints at all seating positions	S	S

S – Standard
OPT – Optional

NA – Not available
— – Not applicable

328i Sp Wagon	328i xDrive Sp Wagon	335i Sedan	335i xDrive Sedan	335d Sedan
NA	NA	OPT	OPT	OPT
OPT	OPT	-	-	-
S	S	S	S	S
S	S	S	S	S
-	-	S	S	S
S	S	-	-	-
S	S	-	-	-
328i Sp Wagon	328i xDrive Sp Wagon	335i Sedan	335i xDrive Sedan	335d Sedan
S	S	S	S	S
NA	S	NA	S	NA
S	S	S	S	S
S	S	S	S	
S	S	S	S	S
S	S	S	S	S
S	S	S	S	S

Standard & optional features

2009 3 Series Sedans & Sports Wagons

Bold within table indicates new feature for 2009 (xDrive models vs. 2008 xi models).

Safety & security (cont.)	328i Sedan	328i xDrive Sedan
Interlocking door anchoring system for side impacts	S	S
Front & rear-seat Head Protection System	S	S
Front-seat Active head restraints	S	S
Pedals that rotate forward (decouple) under frontal impact	S	S
Footrest designed to crush under force of driver's left foot	S	S
Front-seat side-impact airbags, seat-mounted	S	S
Advanced Crash Safety Management for deployment of safety systems	S	S
Post-impact safety measures:		
Unlocking of central locking system	S	S
Switch-on of hazard flashers	S	S
Switch-on of interior lighting	S	S
Disconnect of alternator, fuel pump & starter from battery (via Battery Safety Terminal)	S	S
BMW Assist, including enhanced automatic collision notification, Assist & SOS buttons, enhanced Roadside Assistance, TeleService ¹⁴ , BMW Assist Safety Plan ¹⁴ , Bluetooth cellphone interface	OPT/ZPP	OPT/ZPP
Central locking system with selective unlocking & interior locking switch ¹	S	S
Coded Driveway Protection	S	S
Alarm system with operation from remote, interior motion detector	C	C

14 – Requires BMW Assist annual fee after 4th year.

S – Standard
OPT – Optional

Technical specifications

2009 3 Series Sedans & Sports Wagons

Bold within table indicates new spec. for 2009 (xDrive models vs. 2008 xi models).

General	328i Sedan	328i xDrive Sedan
Curb weight, lb.:		
Manual transmission	3362	3605
Automatic transmission	3428	3649
Weight distribution, front/rear, %:		
Manual transmission	50.5/49.5	52.6/47.4
Automatic transmission	51.1/48.9	52.9/47.1
Wheelbase, in.	108.7 ¹	
Track, front/rear, in. (with standard wheels)	59.1/ 60.2 ^{1,2}	
Length, in.	178.8 ³	
Width, in.	71.5 ¹	
Height, in.	55.9 ³	
Body	328i Sedan	328i xDrive Sedan
Type	4-door sedan	4-door sedan
Aerodynamic drag coefficient (C _D)	0.29	0.30
EPA size classification	Compact	Compact
Accommodations	328i Sedan	328i xDrive Sedan
Seating capacity, persons	5 ¹	
Shoulder room, front/rear, in.	55.4/55.1 ¹	
Head room, front/rear	37.4/37.1 ³	
Leg room, front/rear	41.5/34.6 ¹	
EPA passenger-compartment volume, cu ft.	93.0 ³	
EPA cargo volume, cu ft.	12.0 ^{3,5}	

1 – Specification applies to all models.

2 – With standard wheels.

3 – Specification applies to all Sedan models.

4 – Specification applies to both Sports Wagon models.

5 – Does not include compartment under trunk floor of 328i Sedans, which encloses about 1.8 cu ft.; can be expanded via available folding rear seats.

328i Sp Wagon	328i xDrive Sp Wagon	335i Sedan	335i xDrive Sedan	335d Sedan
3527	3770	3594	3814	–
3594	3814	3605	3825	3825
48.4/51.6	50.9/49.1	50.8/49.2	53.8/46.2	–
48.8/51.2	51.2/48.8	51.1/48.9	53.9/46.1	51.0/49.0

178.6⁴

55.8⁴

328i Sp Wagon	328i xDrive Sp Wagon	335i Sedan	335i xDrive Sedan	335d Sedan
5-door wagon	5-door wagon	4-door sedan	4-door sedan	4-door sedan
0.30	0.31	0.30	0.32	0.30
Small Station Wagon	Small Station Wagon	Compact	Compact	Compact
328i Sp Wagon	328i xDrive Sp Wagon	335i Sedan	335i xDrive Sedan	335d Sedan

37.3/36.9⁴

92.6³

16.2/24.8/60.9^{4,6}

6 – Rear seats upright, loaded to top of seats / rear seats upright, loaded to ceiling / rear seats folded, loaded to ceiling.

Technical specifications

2009 3 Series Sedans & Sports Wagons

Bold within table indicates new spec. for 2009 (xDrive models vs. 2008 xi models).

Engine & electrical	328i Sedan	328i xDrive Sedan
Engine type	DOHC inline 24-valve 6-cylinder, magnesium/aluminum composite construction, Valvetronic variable intake-valve lift & Double VANOS ⁷ steplessly variable intake-valve & exhaust-valve timing ⁸	
Bore x stroke, mm/in.	85.0 x 88.0/3.35 x 3.46 ⁸	
Displacement, cc/cu in.	2996/183 ⁸	
Compression ratio	10.7:1 ⁸	
Power @ rpm, hp	230 @ 6500 ⁸	
Torque @ rpm, lb-ft.	200 @ 2750 ⁸	
Engine-management system	MSV80 with knock control (2 sensors); Valvetronic, variable valve timing, engine cooling & other functions included in control strategy ⁸	
Induction system	Single-stage ¹	
Fuel requirement	Premium unleaded ^{8,9}	
Fuel capacity, U.S. gal.	16.1 ¹	
Battery capacity, amp-hr.	70 ¹	
Alternator output rating, amp./W	180/2520 ¹	

1 – Specification applies to all models.

7 – VANOS = VArIable NOckenwellen Steuerung = variable camshaft control, or variable valve timing.

8 – Specification applies to all 328i models.

9 – Specification applies to both 335i models.

328i Sp Wagon	328i xDrive Sp Wagon	335i Sedan	335i xDrive Sedan	335d Sedan
		DOHC inline 6-cylinder, Aluminum construction with cast-iron cylinder liners, direct fuel injection with piezo injectors, twin turbochargers, Double VANOS ⁷ steplessly variable intake- & exhaust-valve timing ⁹		Diesel DOHC inline 24-valve 6-cylinder, aluminum construction with cast-iron cylinder liners, direct fuel injection with piezo injectors, variable twin turbochargers
		84.0 x 89.6/3.31 x 3.53 ⁹		84.0 x 90.0/3.31 x 3.54
		2979/182 ⁹		2993/183
		10.2:1 ⁹		16.5:1
		300 @ 5800 ⁹		265 @ 4200
		300 @ 1400-5000 ⁹		425 @ 1750
		MSD80 with knock control (2 sensors); direct fuel injection, variable valve timing, engine cooling & other functions included in control		DDE 7.3, BMW Blue Performance with direct fuel injection, oxidation catalyst, SCR catalyst, DEF injection & particle filter included in control strategy
				Diesel fuel

Technical specifications

2009 3 Series Sedans & Sports Wagons

Bold within table indicates new spec. for 2009 (xDrive models vs. 2008 xi models).

Drivetrain	328i Sedan	328i xDrive Sedan
Drive system	Front engine/ RWD	Front engine/ AWD
Manual transmission	6-speed ^{8,9} Type I	Type H
Ratios: 1st	4.32:1	4.35:1
2nd	2.46:1	2.50:1
3rd	1.66:1	1.66:1
4th	1.23:1	1.23:1
5th	1.00:1 ¹	
6th	0.85:1 ⁸	
Reverse	3.94:1	3.93:1
Final drive ratio	3.23:1	3.38:1
Automatic transmission	6-speed ¹ GM6 ⁸	
Ratios: 1st	4.06:1 ⁸	
2nd	2.37:1 ⁸	
3rd	1.55:1 ⁸	
4th	1.16:1 ⁸	
5th	0.85:1 ⁸	
6th	0.67:1 ⁸	
Reverse	3.20:1 ⁸	
Final drive ratio	3.73:1	3.91:1
Chassis	328i Sedan	328i xDrive Sedan
Body/frame construction	Unitized steel ¹	
Front suspension	Struts, double-pivot lower arms, coil springs, twin-tube gas-pressure shock absorbers, tubular anti-roll bar, subframe ¹ (all RWD models: aluminum lower arms, steering knuckle & subframe) (RWD Sport Package: sport suspension calibration)	
Rear suspension	5-link system, coil springs, twin-tube gas-pressure shock absorbers, tubular anti-roll bar ¹ (RWD Sport Package: sport suspension calibration)	

1 – Specification applies to all models.

8 – Specification applies to all 328i models.

9 – Specification applies to both 335i models.

328i Sp Wagon	328i xDrive Sp Wagon	335i Sedan	335i xDrive Sedan	335d Sedan
Front engine/ RWD	Front engine/ AWD	Front engine/ RWD	Front engine/ AWD	Front engine/ RWD
Type I	Type H	Type G ⁹		NA
4.32:1	4.35:1	4.06:1 ⁹		–
2.46:1	2.50:1	2.40:1 ⁹		–
1.66:1	1.66:1	1.58:1 ⁹		–
1.23:1	1.23:1	1.19:1 ⁹		–
		0.87:1 ⁹		–
3.94:1	3.93:1	3.68:1 ⁹		–
3.23:1	3.38:1	3.08:1 ⁹		–
		6 HP 19 TU ⁹		6 HP 26 TU
		4.17:1 ¹⁰		
		2.34:1 ¹⁰		
		1.52:1 ¹⁰		
		1.14:1 ¹⁰		
		0.87:1 ¹⁰		
		0.69:1 ¹⁰		
		3.40:1 ¹⁰		
3.73:1	3.91:1	3.46:1 ⁹		2.81:1
328i Sp Wagon	328i xDrive Sp Wagon	335i Sedan	335i xDrive Sedan	335d Sedan

10 – Specification applies to 335i & 335d models.

AWD – All-wheel drive
RWD – Rear-wheel drive

Technical specifications

2009 3 Series Sedans & Sports Wagons

Bold within table indicates new spec. for 2009 (xDrive models vs. 2008 xi models).

Chassis (cont.)	328i Sedan	328i xDrive Sedan
Rack-&-pinion steering: Standard system	Engine-speed-sensitive power assist ¹	
Overall ratio	16.0:1	18.2:1
Turns lock-to-lock	3.0 ¹¹	3.2 ¹²
Optional Active Steering		
Overall ratio		
Turns lock-to-lock		
Turning circle, ft.	36.1 ¹³	38.7 ¹²
4-wheel ventilated disc brakes, vacuum-assisted:		
Front, diameter x thickness, mm/in.	312 x 24/12.3 x 0.94 ⁸	
Caliper material	Aluminum	
Rear, diameter x thickness, mm/in.	300 x 20/11.8 x 0.79 ⁸	
Caliper material	Cast iron	
Cast-alloy wheels:		
standard	16 x 7.0 ⁸	
optional (Sport Package)	17 x 8.0 F/ 17 x 8.5 R	17 x 8.0
optional (stand-alone)	NA	17 x 8.0 F/ 17 x 8.5 R ¹⁴
Sedan		
Run-flat tires:		
standard	205/55R-16 all-season ⁸	
optional (Sport Package)	225/45R-17 F/ 255/40R-17 R	225/45R-17 all-season ¹⁵ performance ¹⁵
optional (stand-alone)	NA	225/45R-17 F/ 255/40R-17 R performance ^{14, 15}

8 – Specification applies to all 328i models.

10 – Specification applies to 335i & 335d models.

11 – Specification applies to RWD 335i models.

12 – Specification applies to all AWD (xDrive) models.

13 – Specification applies to all RWD models.

14 – Require Sport Package.

328i Sp Wagon	328i xDrive Sp Wagon	335i Sedan	335i xDrive Sedan	335d Sedan
16.0:1	18.2:1	16.0:1	18.2:1	16.0:1
		Vehicle-speed-sensitive ratio & power assist		
		Electrically/electronically variable over wide range of 10.8:1 – 18.0:1		
		1.8-3.0		
		348 x 30/13.7 x 1.18 ¹⁰		
		336 x 22/13.2 x 0.87 ¹⁰		
		17 x 8.0 ¹⁰		
17 x 8.0 F/ 17 x 8.5 R	17 x 8.0	18 x 8.0 F/ 18 x 8.5 R	17 x 8.0	18 x 8.0 F/ 18 x 8.5 R
NA	17 x 8.0 F/ 17 x 8.5 R ¹⁴	NA	18 x 8.0 F/ 18 x 8.5 R ¹⁴	
		225/45R-17 all-season ^{10, 15}		
225/45R-17 F/ 255/40R-17 R performance ¹⁵	225/45R-17 all-season ¹⁵	225/40R-18 F/ 255/35R-18 R performance ¹⁵	Same as std.	225/40R-18 F/ 255/35R-18 R performance ¹⁵
NA	225/45R-17 F/ 255/40R-17 R performance ^{14, 15}	NA	225/40R-18 F/ 255/35R-18 R performance ^{14, 15}	

15 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 3 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

F – Front
R – Rear

Technical specifications

2009 3 Series Sedans & Sports Wagons

Bold within table indicates new spec. for 2009 (xDrive models vs. 2008 xi models).

Chassis (cont.)	328i Sedan	328i xDrive Sedan
Stability-enhancement system	Dynamic Stability Control, including Dynamic Traction Control, electronic brake proportioning, antilock braking (ABS), cornering/braking stability enhancement, Dynamic Brake Control, Brake Fade Compensation, Brake Standby, Brake Drying & Start-up Assistant ¹ plus – Hill Descent Control (xDrive AWD models)	
Performance data	328i Sedan	328i xDrive Sedan
Acceleration, 0-60 mph, sec. ¹⁶ :		
Manual transmission	6.3	6.9
Automatic transmission	6.9	7.1
Top speed, mph ¹⁷ :		
Standard	130 ¹	
Sport Package	150	130
Sport Package + optional tires	NA	150
EPA estimated MPG, city/highway:		
Manual transmission	18/28 ¹⁸	17/25
Automatic transmission	18/28¹⁸	17/25

1 – Specification applies to all models.

16 – BMW AG test results. Actual acceleration results may vary depending on specification of vehicle; road and environmental conditions; testing procedures and driving style. These results should be used for comparison only, and verification should not be attempted on public roads. BMW urges you to obey all posted speed limits and to please wear your safety belt at all times.

17 – Electronically limited.

18 – Preliminary data.

AWD – All-wheel drive

ND – No data available at presstime.

328i Sp Wagon	328i xDrive Sp Wagon	335i Sedan	335i xDrive Sedan	335d Sedan
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328i Sports Wagon	328i xDrive Sports Wagon	335i Sedan	335i xDrive Sedan	335d Sedan
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6.5	7.1	5.4	5.3	6.0
-----	-----	-----	-----	------------

7.1	7.3	5.6	5.4	6.3
-----	-----	-----	-----	------------

150	130	150	130	130
-----	-----	-----	-----	-----

NA	150	150	150	150
----	-----	-----	-----	-----

17/27 ¹⁸	17/25	17/26 ¹⁸	16/25	–
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18/27 ¹⁸	17/25	17/26 ¹⁸	17/25	23/36
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Standard & optional features

2009 BMW 3 Series Coupes & Convertibles

Bold within table indicates new feature for 2009 (xDrive models vs. 2008 xi models).

Exterior design & function	328i Coupe	328i xDrive Coupe
Front & rear body-color bumpers	S	S
Xenon Adaptive headlights with luminous rings & auto-leveling	S	S
Cornering lights	S	S
Automatic headlight control	S	S
High-intensity headlight cleaning system	ZCW	S
Daytime Running Lamps via luminous rings	S ¹	S ¹
Halogen free-form foglights	S	S
Rain-sensing windshield wipers	S	S
Heated windshield-washer jets	S	S
Park Distance Control, rear only	OPT	OPT
Ground lighting in door handles	S	S
Adaptive brakelights	S	S
Metallic paint	OPT	OPT
Chrome grille vertical slats	S	S
Grilles in front-bumper air intakes	Black	Black
Fully automatic power-retracting hardtop	–	–
Side-window trim	Black/ chrome	Black/ chrome
Roof-seam trim in body color	S	S
Matte-chrome exhaust tips	S	S
Performance & efficiency	328i Coupe	328i xDrive Coupe
DOHC 24-valve inline 6-cylinder engine:		
3.0-liter	S	S
3.0-liter twin-turbo	–	–
Engine features:		
Magnesium/aluminum composite construction	S	S
Aluminum construction	–	–
Twin turbochargers	NA	NA
High Precision direct fuel injection with piezo injectors	NA	NA
Valvetronic system	S	S
Double VANOS ³ steplessly variable valve timing	S	S
Electronically controlled engine cooling	S	S

1 – Selectable via Vehicle & Key Memory System.

2 – On vehicles with Active Cruise control, these grilles are always black.

3 – VANOS = **V**ariable **N**ockenwellen **S**teuerung = variable camshaft control, or variable valve timing.

335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
ZCW	S	ZCW	ZCW
S ¹	S ¹	S ¹	S ¹
S	S	S	S
S	S	S	S
S	S	S	S
OPT	OPT	OPT	OPT
S	S	S	S
S	S	S	S
OPT	OPT	OPT	OPT
S	S	S	S
Gray ²	Gray ²	Black	Gray ²
–	–	S	S
Black/matte chrome	Black/matte chrome	Matte aluminum	Matte aluminum
S	S	S	S
S	S	NA	S
335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
–	S	S	–
S	S	–	S
–	–	S	–
S	S	–	S
S	S	NA	S
S	S	NA	S
–	–	S	–
S	S	S	S
S	S	S	S

S – Standard
 OPT – Optional
 NA – Not available

– – Not applicable
 ZCW – Cold Weather Package

Standard & optional features

2009 BMW 3 Series Coupes & Convertibles

Bold within table indicates new feature for 2009 (xDrive models vs. 2008 xi models).

Performance & efficiency (cont.)	328i Coupe	328i xDrive Coupe
Electric water pump	S	S
Volume-controlled oil pump	S	S
Direct ignition system with knock control	S	S
Dual exhaust system	S	S
6-speed manual transmission	S	S
6-speed STEPTRONIC automatic transmission with Normal, Sport & Manual shift modes	OPT	OPT
Shift paddles on steering wheel	OPT ⁴	OPT ⁴
Double-pivot-type front suspension	S	S
Aluminum front suspension components	S	NA
5-link rear suspension	S	S
Front & rear anti-roll (stabilizer) bars	S	S
Aluminum front/steel rear subframes	S	Both steel ⁵
Convertible-specific underbody reinforcements	–	–
Twin-tube gas-pressure shock absorbers	S	S
Sport suspension calibration	S	NA
Engine-speed-sensitive variable-assist power steering	S	S
Active Steering with Servotronic vehicle-speed-sensitive power assist	OPT	NA
4-wheel ventilated disc brakes	S	S
Dynamic Stability Control	S	S
xDrive fulltime all-wheel drive system, electronically controlled with variable front/rear torque split & traction control	NA	S
Alloy wheels:		
17 x 8.0 Star Spoke (design #157)	S	S
17 x 8.0 Star Spoke (design #185)	NA	ZSP
17 x 8.0 V Spoke (design #188)	NA	NA
18 x 8.0 front/18 x 8.5 rear Cross Spoke (design #197)	ZSP	OPT ⁶
18 x 8.0 front/18 x 8.5 rear Star Spoke (design #189)	NA	NA
19 x 8.0 front/19 x 9.0 rear Star Spoke (design #230)	NA	NA

1 – Selectable via Vehicle & Key Memory System (programming by user or BMW center).

4 – Require Sport Package & automatic transmission.

5 – Steel front subframe with aluminum thrust plate.

6 – Require Sport Package.

335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
OPT	OPT	OPT	OPT
OPT ⁴	OPT ⁴	OPT ⁴	OPT ⁴
S	S	S	S
S	NA	S	S
S	S	S	S
S	S	S	S
S	Both steel ⁵	S	S
—	—	S	S
S	S	S	S
S	NA	ZSP	ZSP
S	S	S	S
OPT	NA	OPT	OPT
S	S	S	S
S	S	S	S
NA	S	NA	NA
—	—	S	—
S	S	NA	S
NA	ZSP	NA	NA
NA	NA	ZSP	—
ZSP	OPT ⁶	NA	ZSP
OPT ⁶	NA	NA	OPT ⁶

S – Standard
 OPT – Optional
 NA – Not available

— – Not applicable
 ZSP – Sport Package

Standard & optional features

2009 BMW 3 Series Coupes & Convertibles

Bold within table indicates new feature for 2009 (xDrive models vs. 2008 xi models).

Performance & efficiency (cont.)	328i Coupe	328i xDrive Coupe
Run-flat tires:		
225/45R-17 all-season ⁷	S	S
225/40R-18 front / 255/35R-18 rear performance ⁷	NA	NA
225/35R-19 front / 255/30R-19 rear performance ⁷	NA	NA
Tire Pressure Monitor	S	S
Comfort & convenience	328i Coupe	328i xDrive Coupe
Doorsill trim plates with chrome trim & BMW lettering	S	S
Vehicle & Key Memory	S	S
Multi-function remote control with selective unlocking ¹ & remote trunk release	S	S
Remote lowering of hardtop	–	–
Comfort Loading	NA	NA
Comfort Access	OPT	OPT
Dual power/heated exterior mirrors	S	S
Automatic-dimming interior & exterior mirrors, power-folding exterior mirrors	ZPP	ZPP
Digital compass in interior mirror	ZPP	ZPP
BMW Universal Transceiver (3-function garage-door opener)	ZPP	ZPP
Courtesy lights with fade-in/fade-out feature, actuation from remote, automatic switch-on upon engine shutoff, separately controlled left/right front & rear reading lights, front & rear footwell lighting & illuminated visor vanity mirrors	S	S
Welcome Light ⁹	S	S
BMW Ambiance Lighting, overhead, doors & rear side panels	S	S
Lockable glove compartment	S	S
Tilt/telescopic 3-spoke leather-wrapped sport steering wheel with fingertip audio & phone controls ¹⁰	S	S

1 – Selectable via Vehicle & Key Memory.

6 – Require Sport Package.

7 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 3 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
S	S	S	S
ZSP	OPT ⁶	NA	ZSP
OPT ⁶⁶	NA	NA	NA
S	S	S	S
335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
S	S	S	S
S	S	S	S
S	S	S	S
—	—	OPT ⁸	OPT ⁸
NA	NA	OPT ⁸	OPT ⁸
OPT	OPT	OPT	OPT
S	S	S	S
ZPP	ZPP	ZPP	ZPP
ZPP	ZPP	ZPP	ZPP
ZPP	ZPP	ZPP	ZPP
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S

8 – Included with optional Comfort Access.

9 – Upon locking or unlocking vehicle, activation for 20 sec. of front luminous rings, taillights, license-plate lights, ground lighting & interior lights.

10 – Phone controls active when vehicle is equipped with BMW Assist and approved cellphone is used in combination with Bluetooth interface.

S – Standard

OPT – Optional

NA – Not available

— – Not applicable

ZPP – Premium Package

ZSP – Sport Package

Standard & optional features

2009 BMW 3 Series Coupes & Convertibles

Bold within table indicates new feature for 2009 (xDrive models vs. 2008 xi models).

Comfort & convenience (cont.)	328i Coupe	328i xDrive Coupe
Dynamic Cruise Control	S	S
Active Cruise Control	OPT	OPT
8-way adjustable driver's/6-way adjustable front passenger's seat	S	S
10-way manual front sport seats plus power-adjustable backrest width	ZSP	ZSP
8-way power front seats with power easy-entry feature	OPT/ZPP	OPT/ZPP
10-way power front seats with power head-restraint/shoulder-belt height & power easy-entry feature	NA	NA
4-way power front-seat lumbar support	ZPP	ZPP
8-way power + 2-way manual front sport seats plus power-adjustable backrest width & power easy-entry feature	OPT/ ZPP + ZSP ¹¹	OPT/ ZPP + ZSP ¹¹
12-way power front sport seats with power-adjustable backrest width, 2-way manual thigh-support adjustment on both seats, power head-restraint/shoulder-belt height, power easy-entry feature	NA	NA
Memory system for driver's seat & exterior mirrors (2 settings per user)	OPT/ZPP ¹²	OPT/ZPP ¹²
Front safety-belt presenters	S	S
Auto tilt-down of right-hand exterior mirror for backing up	OPT/ZPP ¹¹	OPT/ZPP ¹¹
3-stage, thermostatically controlled heated front seats	OPT/ZCW	OPT/ZCW
Front center armrest	S	S
Full-length console (see p. 237 for features of rear section)	S	S
Climate-controlled front center console compartment with single integral cupholder	S	S
Electronic analog speedometer & tachometer	S	S
LCD main & trip odometers	S	S
Check Control vehicle monitor system	S	S

11 – Power sport seats in 328i Coupes when Premium & Sport Packages are combined, or when stand-alone power-seats option & Sport Package are combined. If Premium Package, 4-way power lumbar support is also included.

12 – Included with all power seats.

S – Standard
OPT – Optional
NA – Not available
— – Not applicable

335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
S	S	S	S
OPT	OPT	OPT	OPT
-	-	-	-
-	-	-	-
S	S	-	-
NA	NA	S	S
ZPP	ZPP	ZPP	ZPP
ZSP	ZSP	-	-
NA	NA	ZSP	ZSP
S	S	S	S
S	S	-	-
S	S	S	S
OPT/ZCW	OPT/ZCW	OPT/ZCW	OPT/ZCW
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S

ZCW – Cold Weather Package

ZPP – Premium Package

ZSP – Sport Package

Standard & optional features

2009 BMW 3 Series Coupes & Convertibles

Bold within table indicates new feature for 2009 (xDrive models vs. 2008 xi models).

Comfort & convenience (cont.)	328i Coupe	328i xDrive Coupe
2nd-generation iDrive system with high-resolution control display, GPS Navigation; direct-select radio, CD, phone & Navigation menus; 6 Programmable Memory Keys, Voice Command, Real Time Traffic Information & other features	OPT	OPT
Leatherette upholstery	S	S
Dakota leather upholstery (Convertibles: with Sun Reflective Technology)	OPT/ZPP	OPT/ZPP
Dark Burl Walnut wood interior trim	S	S
Light Burl Walnut wood interior trim	NC	NC
Gray Poplar wood interior trim	NC	NC
Fine Line Aluminum interior trim	NC	NC
Pearl-gloss galvanic trim (speedometer & tachometer, steering wheel, climate-control & radio knobs, start/stop button, interior door handles, etc.)	S	S
Power door windows with key-off operation; 1-touch opening & closing, anti-trapping feature, opening from remote	S	S
Power rear side windows with 1-touch opening, opening from remote	NA	NA
All-window switch with 1-touch opening	NA	NA
Automatic climate control with separate left/right temperature settings, automatic recirculation control, mist control, bi-directional solar sensor, temperature- & volume-controlled rear air outlets, activated-charcoal microfilter ventilation & other features	S	S
Convertible mode for automatic climate control	–	–
2-way power moonroof with 1-touch opening & closing, anti-trapping feature, opening from remote, sliding interior sunshade	S	S
Fully automatic power-retracting hardtop	–	–

12 – Included in Navigation System option.

S – Standard

OPT – Optional

NC – No extra cost

NA – Not available

– – Not applicable

ZPP – Premium Package

335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
OPT	OPT	OPT	OPT
S	S	S	-
OPT/ZPP	OPT/ZPP	OPT/ZPP	S
S	S	S	S
NC	NC	NC	NC
NC	NC	NC	NC
NC	NC	NC	NC
S	S	S	S
S	S	S	S
NA	NA	S	S
NA	NA	S	S
S	S	S	S
-	-	OPT ¹²	OPT ¹²
S	S	-	-
-	-	S	S

Standard & optional features

2009 BMW 3 Series Coupes & Convertibles

Bold within table indicates new feature for 2009 (xDrive models vs. 2008 xi models).

Comfort & convenience (cont.)	328i Coupe	328i xDrive Coupe
Anti-theft AM/FM/CD/MP3 audio system with 10 speakers including 2 subwoofers, Radio Data System (RDS), FM diversity antenna system, auxiliary audio input & other features	S	S
Variable AM/FM antenna position, hardtop raised/lowered	–	–
Logic7 audio system with 11 speakers (Convertibles) or 13 speakers (other models), Digital Sound Processing & Surround Sound simulation; includes subwoofers, upgraded componentry throughout & all features of 10-speaker system	OPT	OPT
HD Radio	OPT	OPT
Satellite Radio	OPT	OPT
iPod/USB Adapter	OPT	OPT
Pre-wiring for 6-disc CD changer	S	S
6-disc CD changer	C	C
80-GB hard drive providing data storage for Navigation, audio system, phonebook & Voice Command; ripping capability from CD, MP3 player or USB stick	OPT¹²	OPT¹²
Bluetooth cellphone interface with high-capacity phonebook download	OPT/ZPP	OPT/ZPP
Smartphone Integration	OPT¹³	OPT¹³
Front cupholders	S	S
Dual front sun visors with illuminated mirrors	S	S
Open & closable storage compartments in front doors including sunglasses compartments & coinholder	S	S
Fold-up rear center armrest with dual cupholders	S	S
Seatback storage compartments	S	S
Split folding rear seats	S	S
1-piece folding rear backrest	–	–
Rear center storage compartment	NA	NA
Ski bag	ZCW	ZCW
Cargo bag (can hold 2 small golf bags)	NA	NA

12 – Included in Navigation System option.

13 – Requires iPod/USB Adapter.

S – Standard

OPT – Optional

C – BMW center-installed

335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
—	—	S	S
—	—	S	S
S	S	OPT	S
OPT	OPT	OPT	OPT
OPT	OPT	OPT	OPT
OPT	OPT	OPT	OPT
S	S	S	S
C	C	C	C
OPT¹²	OPT¹²	OPT¹²	OPT¹²
OPT/ZPP	OPT/ZPP	OPT/ZPP	OPT/ZPP
OPT¹³	OPT¹³	OPT¹³	OPT¹³
S	S	S	S
S	S	S	S
S	S	S	S
S	S	NA	NA
S	S	S	S
S	S	NA	NA
—	—	S	S
NA	NA	S	S
ZCW	ZCW	—	—
NA	NA	OPT/ZCW	OPT/ZCW

NA – Not available
 — – Not applicable

ZCW – Cold Weather Package
 ZPP – Premium Package

Standard & optional features

2009 BMW 3 Series Coupes & Convertibles

Bold within table indicates new feature for 2009 (xDrive models vs. 2008 xi models).

Comfort & convenience (cont.)	328i Coupe	328i xDrive Coupe
Power-operated rear-window sunshade	OPT	OPT
Rear-window defroster	S	S
Interior trunk release, electrically operated	S	S
Trunk features:		
Underfloor storage compartment	S	S
4 cargo tie-downs	S	S
Side compartments (capacity depends on options present)	S	S
Variable overall capacity, top raised/lowered	–	–
Comfort Loading (intermediate hardtop position for convenient trunk loading)	–	–
Safety & security	328i Coupe	328i xDrive Coupe
Dynamic Stability Control, including electronic brake proportioning, antilock braking (ABS), cornering/braking stability enhancement, Dynamic Brake Control, Brake Fade Compensation, Brake Standby, Brake Drying & Start-off Assistant	S	S
plus –		
Dynamic Traction Control	S	NA
Hill Descent Control	NA	S
Dual front-impact airbag Supplementary Restraint System (SRS) with dual-threshold deployment, 2-stage Smart Airbags	S	S
3-point safety belts at all seating positions (4)	S	S
Front safety belts with automatic tensioners & force limiters	S	S
Front safety-belt presenters	S	S
Seat-integrated front safety belts	NA	NA
LATCH attachments at rear seating positions (for installation of child restraint seats)	S	S
Head restraints at all seating positions (4)	S	S
Front-seat Active head restraints	S	S
Front & rear-seat Head Protection System	S	S

8 – Included with optional Comfort Access. S – Standard
OPT – Optional

335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
OPT	OPT	NA	NA
S	S	S	S
S	S	S	S
NA	NA	S	NA
S	S	S	S
S	S	S	S
-	-	S	S
-	-	OPT ^a	OPT ^a
335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
S	S	S	S
S	NA	S	S
NA	S	NA	NA
S	S	S	S
S	S	S	S
S	S	S	S
S	S	-	-
NA	NA	S	S
S	S	S	S
S	S	S	S
S	S	S	S
S	S	NA	NA

NC – No extra cost
NA – Not available

— – Not applicable
ZCW – Cold Weather Package

Standard & optional features

2009 BMW 3 Series Coupes & Convertibles

Bold within table indicates new feature for 2009 (xDrive models vs. 2008 xi models).

Safety & security (cont.)	328i Coupe	328i xDrive Coupe
Active Knee Protection	NA	NA
Rollover Protection System	–	–
Pedals that rotate forward (decouple) under frontal impact	S	S
Footrest designed to crush under force of driver's left foot	S	S
Front-seat side-impact airbags, seat-mounted	S	S
Front-seat side-impact airbags, seat-mounted with head protection	–	–
Advanced Crash Safety Management for deployment of safety systems	S	S
Post-impact safety measures:		
Unlocking of central locking system	S	S
Switch-on of hazard flashers	S	S
Switch-on of interior lighting	S	S
Disconnect of alternator, fuel pump & starter from battery (via Battery Safety Terminal)	S	S
BMW Assist, including enhanced Automatic Collision Notification, SOS button, Enhanced Roadside Assistance, TeleService ¹⁴ , BMW Assist Safety Plan ¹⁴	OPT/ZPP	OPT/ZPP
Central locking system with double-lock anti-theft feature, selective unlocking (Convertibles: includes glove compartment)	S	S
Coded Driveaway Protection	S	S
Alarm system with operation from remote, interior motion detector	C	C

14 – Requires BMW Assist annual fee after 4th year.

S – Standard
OPT – Optional
C – BMW center-installed

335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
NA	NA	S	S
-	-	S	S
S	S	S	S
S	S	S	S
S	S	-	-
-	-	S	S
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
OPT/ZPP	OPT/ZPP	OPT/ZPP	OPT/ZPP
S	S	S	S
S	S	S	S
C	C	C	C

NA – Not available

— – Not applicable

ZPP – Premium Package

Technical specifications

2009 BMW 3 Series Coupes & Convertibles

Bold within table indicates new spec. for 2009 (xDrive models vs. 2008 xi models).

General	328i Coupe	328i xDrive Coupe
Curb weight, lb.:		
Manual transmission	3351	3582
Automatic transmission	3417	3627
Weight distribution, front/rear, %:		
Manual transmission	50.3/49.7	52.9/47.1
Automatic transmission	50.6/49.4	52.9/47.1
Wheelbase, in.	108.7 ¹	
Track, front/rear, in. (with standard wheels)	59.1/59.6 ¹	
Length, in.	180.6 ¹	
Width, in.	70.2 ¹	
Height, in.	54.1	54.9
Body	328i Coupe	328i xDrive Coupe
Type	2-door coupe ¹	
Aerodynamic drag coefficient (C _D)	0.29	0.31
EPA size classification	Subcompact ¹	
Accommodations	328i Coupe	328i xDrive Coupe
Seating capacity, persons	4 ¹	
Shoulder room, front/rear, in.	55.3/51.9 ³	
Head room, front/rear	37.1/36.1 ^{3,5}	
Leg room, front/rear	41.8/33.7 ³	
EPA passenger-compartment volume, cu ft.	88.5 ³	
EPA cargo volume, cu ft.	11.1 ^{3,6}	
Engine & electrical	328i Coupe	328i xDrive Coupe
Engine type	DOHC inline 24-valve 6-cylinder, magnesium/aluminum composite construction, Valvetronic variable intake-valve lift & Double VANOS ⁷ steplessly variable intake- & exhaust-valve timing ⁸	
Bore x stroke, mm/in.	85.0 x 88.0/3.35 x 3.46 ⁸	
Displacement, cc/cu in.	2996/183 ⁸	
Compression ratio	10.7:1 ⁸	

1 – Specification applies to all models.

2 – With hardtop raised.

3 – Specification applies to all Coupes.

4 – Specification applies to both Convertibles.

5 – Coupe models have standard moon-roof, which reduces head room somewhat.

6 – Can be expanded via folding rear seats in Coupes, or augmented via folding rear backrest in Convertibles.

335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
3571	3759	3792	4001
3582	3770	3858	4023
51.2/48.8	52.8/47.2	46.8/53.2	47.7/52.3 ²
51.4/48.6	52.9/47.1	47.1/52.9	47.9/52.1 ²

54.1	54.1	54.5 ²	54.5 ²
335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
0.30	0.33	0.30	0.31

335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
		55.3/49.3 ⁴	
		38.0/36.5 ⁴	
		41.8/31.9 ⁴	
		84.0 ⁴	
		9.0 ^{2,4,6}	

335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
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DOHC inline 24-valve 6-cylinder cylinder, aluminum construction with cast-iron cylinder liners, direct fuel injection with piezo injectors, twin turbochargers, Double VANOS⁷ steplessly variable intake- & exhaust-valve timing⁹

84.0 x 89.6/3.31 x 3.53⁹

2979/182⁹

10.2:1⁹

7 – VANOS = **V**ariable **N**ockenwellen **S**teuerung = variable camshaft control, or variable valve timing.

8 – Specification applies to all 328i models.

9 – Specification applies to all 335i models.

Technical specifications

2009 BMW 3 Series Coupes & Convertibles

Bold within table indicates new spec. for 2009 (xDrive models vs. 2008 xi models).

Engine & electrical (cont.)	328i Coupe	328i xDrive Coupe
Power @ rpm, hp	230 @ 6500 ⁸	
Torque @ rpm, lb-ft.	200 @ 2750 ⁸	
Engine-management system	MSV80 with knock control (2 sensors); Valvetronic, variable valve timing, engine cooling & other functions included in control strategy ⁸	
Induction system	Single-stage ^{1,10}	
Fuel requirement	Premium unleaded ¹	
Fuel capacity, U.S. gal.	16.1 ¹	
Battery capacity, amp-hr.	70 ¹	
Alternator output rating, amp./W	180/2520 ¹	
Drivetrain	328i Coupe	328i xDrive Coupe
Drive system	Front engine/ RWD	Front engine/ AWD
Manual transmission	6-speed ¹ , Type I	Type H
Ratios: 1st	4.32:1	4.35:1
2nd	2.46:1	2.50:1
3rd	1.66:1	1.66:1
4th	1.23:1	1.23:1
5th	1.00:1	1.00:1
6th	0.85:1	0.85:1
Reverse	3.94:1	3.93:1
Final drive ratio	3.23:1	3.38:1
Automatic transmission	6-speed ¹ , GM6	GM6
Ratios: 1st	4.06:1 ⁸	
2nd	2.37:1 ⁸	
3rd	1.55:1 ⁸	
4th	1.16:1 ⁸	
5th	0.85:1 ⁸	
6th	0.67:1 ⁸	
Reverse	3.20:1 ⁸	
Final drive ratio	3.73:1	3.91:1

1 – Specification applies to all models.

8 – Specification applies to all 328i models.

9 – Specification applies to all 335i models.

10 – N51 engine for SULEV emission standards (328i Coupe & Convertible in certain states) has 3-stage induction system.

335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
300 @ 5800 ⁹			
300 @ 1400-5000 ⁹			
MSD80 with knock control (2 sensors); direct fuel injection, variable valve timing, engine cooling & other functions included in control strategy ⁹			

335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
Front engine/ RWD	Front engine/ AWD	Front engine/ RWD	Front engine/ RWD
Type G ⁹		Type I	
4.06:1 ⁹		4.32:1	
2.40:1 ⁹		2.46:1	
1.58:1 ⁹		1.66:1	
1.19:1 ⁹		1.23:1	
1.00:1 ⁹		1.00:1	
0.87:1 ⁹		0.85:1	
3.68:1 ⁹		3.94:1	
3.08:1 ⁹		3.91:1	
ZF 6 HP 19 TU ⁹		GM6	
4.17:1 ⁹			
2.34:1 ⁹			
1.52:1 ⁹			
1.14:1 ⁹			
0.87:1 ⁹			
0.69:1 ⁹			
3.40:1 ⁹			
3.46:1 ⁹		3.91:1	

RWD – Rear-wheel drive
 AWD – All-wheel drive

Technical specifications

2009 BMW 3 Series Coupes & Convertibles

Bold within table indicates new spec. for 2009 (xDrive models vs. 2008 xi models).

Chassis	328i Coupe	328i xDrive Coupe
Body/frame construction	Unitized steel ¹	
Front suspension	Struts, double-pivot lower arms, coil springs, twin-tube gas-pressure shock absorbers, tubular anti-roll bar, subframe ¹ (RWD models: aluminum lower arms, steering knuckle & subframe; sport suspension calibration.) (xDrive Coupes have all-steel suspension but add aluminum front thrust plate.)	
Rear suspension	5-link system, coil springs, twin-tube gas-pressure shock absorbers, tubular anti-roll bar ¹ (Sport suspension calibration: RWD Coupes standard, Convertibles in Sport Package, xDrive Coupes not available)	
Rack-&-pinion steering: Standard system	Engine-speed-sensitive power assist ¹	
Overall ratio	16.0:1	18.2:1
Turns lock-to-lock	3.0	3.2
Optional Active Steering	Vehicle-speed-sensitive ratio & power assist (available 328i & 335i models only)	
Overall ratio	Electrically/electronically variable over wide range of 10.8:1 – 18.0:1	
Turns lock-to-lock	1.8-3.0	
Turning circle, ft.	36.1	38.7
4-wheel ventilated disc brakes, vacuum-assisted:		
Front, diameter x thickness, mm/in.	312 x 24/12.3 x 0.94 ⁸	
Caliper material	Aluminum	
Rear, diameter x thickness, mm/in.	300 x 20/11.8 x 0.79 ⁸	
Caliper material	Cast iron	
Cast-alloy wheels: standard	17 x 8.0 ¹	
optional (Sport Package)	18 x 8.0 F/ 18 x 8.5 R ¹¹	17 x 8.0 ¹²
optional (stand-alone)	NA	18 x 8.0 front/ 18 x 8.5 rear ^{12, 13}

1 – Specification applies to all models.

8 – Specification applies to all 328i models.

9 – Specification applies to all 335i models.

11 – Specification applies to RWD models.

335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
16.0:1	18.2:1	16.0:1	16.0:1
3.0	3.2	3.0	3.0
36.1	38.7	36.1	36.1
348 x 30/13.7 x 1.18 ⁹			
336 x 22/13.2 x 0.87 ⁹			
19 x 8.0 front/ 19 x 9.0 rear ¹³		NA	NA

12 – Specification applies to xDrive models.

13 – Require Sport Package.

RWD = Rear-wheel drive

Technical specifications

2009 BMW 3 Series Coupes & Convertibles

Bold within table indicates new spec. for 2009 (xDrive models vs. 2008 xi models).

Chassis (cont.)	328i Coupe	328i xDrive Coupe
Run-flat tires:		
standard	225/45R-17 all-season ^{1, 14}	
optional (Sport Package)	225/40R-18 F/ 255/35R-18 R performance ^{11, 14}	Same as standard ^{12, 14}
optional (stand-alone)	NA	225/40R-18 F/ 225/35R-18 R performance ^{12, 13, 14}
Stability-enhancement system	Dynamic Stability Control, including Dynamic Traction Control, electronic brake proportioning, antilock braking (ABS), cornering/braking stability enhancement, Dynamic Brake Control, Brake Fade Compensation, Brake Standby, Brake Drying & Start-up Assistant ¹ plus – Hill Descent Control (xDrive AWD models)	
Performance data	328i Coupe	328i xDrive Coupe
Acceleration, 0-60 mph, sec. ¹⁵ :		
Manual transmission	6.2	6.8
Automatic transmission	6.8	7.0
Top speed, mph ¹⁶ :		
Standard	130 ¹	
Sport Package	150	130
Sport Package + optional tires	NA	150
EPA estimated MPG, city/highway:		
Manual transmission	18/28 ¹⁷	17/25
Automatic transmission	18/28 ¹⁷	17/25

1 – Specification applies to all models.

11 – Specification applies to RWD models.

12 – Specification applies to xDrive models.

13 – Require Sport Package.

14 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 3 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

15 – BMW AG test results. Actual acceleration results may vary depending on specification of vehicle; road and environmental conditions; testing procedures and driving style. These results should be used for comparison only, and verification should not be attempted on public roads. BMW urges you to obey all posted speed limits and to please wear your safety belt at all times.

335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
225/35R-19 F/ 255/30R-19 R performance ^{13, 14}	NA	NA	NA

335i Coupe	335i xDrive Coupe	328i Convertible	335i Convertible
5.3	5.2	6.7	5.5
5.5	5.3	7.2	5.7
150	130	150	150
NA	150	NA	NA
17/26 ¹⁷	16/25	17/27 ¹⁷	17/26 ¹⁷
17/26 ¹⁷	17/25	18/27 ¹⁷	17/26 ¹⁷

16 – Electronically limited.

17 – Preliminary data.

F – Front

R – Rear

AWD – All-wheel drive

2009 BMW 1 Series:

Only in its 2nd year, the compact BMW offers new features and more customer appeal.

The new compact BMW, the 1 Series, got off to a solid start in its first model year: by the end of September 2008, nearly 10,000 units had been delivered in the U.S. But as we know, BMW never stands still; so it is that for '09, the 4-model 1 Series gets meaningful enhancements that include the 2nd-generation iDrive, new options and a new exterior color. Especially the new, user-friendlier iDrive system that comes with the optional Navigation system should significantly boost this youthful line's appeal.

Whether '08 or '09, the 1 Series is making it possible for younger, aspiring people to enter the BMW customer base. Yes, it's smaller and less costly than its 3 Series counterparts – especially in Convertible form, where the soft-top enables the 128i Convertible to base-price more than \$10,000 below the 328i Convertible; but even the 1 Coupes are substantially more attainable, with the 135i coming in \$6,400 below the 335i Coupe.

And every 1 Series model fairly abounds with the attributes that make BMWs the vehicles to beat when it comes to pure enjoyment of driving and ownership. Of the 135i Coupe, for example, *AutoWeek's* June 2, '08 issue opined that "Even in stock form, this is a serious performance car and not the cute little Bimmer the country-club set buys for the prom queen on her 16th birthday while Daddy drives the 'real' BMW."

Of the 128i Coupe, the same magazine's Mac Morrison reported on June 17, '08 that "the 128i's smaller engine does not make it

feel altogether different from its 135i sibling. In fact, I suspect that some around these parts will say that they would opt for this package regardless...I might be one of them."

And of the Convertible, *Car and Driver's* June '08 issue credited the 128i Convertible with a "sports-car-like driving experience, effortless [soft]top and a very sweet six."

It's clear: BMW has a home run here, a kind of automobile no one else offers. Customers and experts alike are recognizing it.

What's new for 2009

As of 9/08 production:

Exterior design & function

- New metallic paint color: Space Gray replaces Sparkling Graphite

Options & packages

- Active Steering no longer offered on 128i models
- 2nd-generation iDrive system: user-friendlier, expanded functionality, direct-select keys; larger, higher-resolution control display, fixed display vs. retractable before
- Hard drive for Navigation, entertainment, Voice Command and phone system (included with Navigation option)
- Heated steering wheel added to Cold Weather Package (128i models) or offered as stand-alone option (135i models)
- Detail leather change: no more gloss leather, all leather in Boston grade
- Smartphone Integration (6NF) newly available

1 Series models & key features

This information lists major features, and helps position and distinguish the models in the Series. For a comprehensive summary of features, see pages 320-329.

128i Coupe

The Series' "basic" model, powered by its own version of the advanced and unique N52. This is the least costly, most attainable BMW of all. Its naturally aspirated 6-cylinder is the pure definition of "sweet," and it features that special and unique blend of performance, refinement and quality that is supremely satisfying – to just about everyone, but especially to those whose tastes run to elegant balance.

Exterior design & function

- Halogen free-form low-beam headlights and foglights
- Automatic headlight control
- Rain-sensing windshield wipers
- Dual power/heated exterior mirrors
- Adaptive brakelights
- Matte-chrome exhaust tips

Performance & efficiency

- 3.0-liter DOHC inline 6-cylinder engine with magnesium/aluminum composite construction, Valvetronic variable intake-valve lift, Double VANOS¹ variable intake- and exhaust-valve timing; 230 hp/200 lb-ft.
- Choice of 6-speed manual or STEPTRONIC automatic transmission
- Aluminum double-pivot strut-type front suspension
- 5-link rear suspension
- Vehicle-speed-sensitive variable-assist rack-and-pinion power steering
- 4-wheel ventilated disc brakes

- 17 x 7.0 alloy wheels, Star Spoke design #256
- 205/50R-17 run-flat all-season tires
- Dynamic Stability Control
- Tire Pressure Monitor

Comfort & convenience

- Vehicle & Key Memory
- Tilt/telescopic leather-wrapped steering wheel with multi-function controls
- Dynamic cruise control
- Dual power/heated exterior mirrors
- 6-way adjustable front seats
- Leatherette upholstery
- High-gloss black interior trim
- Power door windows with 1-touch open/close
- Automatic climate control with separate left/right controls
- 2-way power moonroof with 1-touch open/close
- Anti-theft AM/FM/CD/MP3 audio system with Radio Data System, 10 speakers, auxiliary audio input
- Manual easy-entry feature for access to rear seats
- Split folding rear seats

Safety & security

- Dual-airbag Supplementary Restraint System
- Front & outboard rear safety belts with automatic tensioners and force limiters
- Front- and rear-seat Head Protection System
- Front-seat side-impact airbags
- Coded Driveaway Protection

1 – VANOS = **V**ariable **N**Ockenwellen **S**teuerung = variable camshaft control, or variable valve timing.

1 Series models & key features

This information lists major features, and helps position and distinguish the models in the Series. For a comprehensive summary of features, see pages 320-329.

Options & packages

- Available option packages:
 - Premium Package (Boston leather upholstery, choice of wood or aluminum interior trim, BMW universal transceiver, auto-dimming interior and exterior mirrors, power-folding exterior mirrors, digital compass in interior mirror, 8-way power front seats + 4-way power front-seat lumbar support, ambient light package, BMW Assist, Bluetooth cellphone interface)
 - Sport Package (sport suspension, 17-in. wheels with run-flat performance tires² in differentiated front/rear sizes, Shadowline exterior trim, sport steering wheel, 8-way front sport seats with power-adjustable backrest width, 150-mph top-speed limiter)
 - Cold Weather Package (headlight cleaning system, heated steering wheel, heated front seats, ski bag)
 - Stand-alone options:
 - 6-speed STEPTRONIC automatic transmission
 - Shift paddles for automatic transmission (require Sport Package)
 - Xenon Adaptive headlights with dynamic auto-leveling
 - Park Distance Control, rear only
 - Comfort Access
 - Boston leather upholstery
 - Light Burl Walnut or Gray Poplar wood interior trim
 - 8-way power front seats
 - 2nd-generation GPS Navigation and iDrive system with direct-select keys, Voice Command, Programmable Memory Keys and Real Time Traffic Information

- Premium audio system
- HD Radio
- Satellite Radio including 1-year subscription
- iPod/USB Adapter
- Smartphone Integration (requires iPod/USB Adapter)
- Heated front seats
- Rear-mounted preparation for bicycle rack
- BMW Assist and Bluetooth cellphone interface

128i Convertible

Convertible companion to 128i Coupe, with same powertrain and essentially same equipment level as the Coupe. It is notable here that in comparison to the 3 Series, the price increment from Coupe to Convertible is less because the 1 Series has a softtop rather than the 3's retractable hardtop. Compared to the 128i Coupe, this model's points of differentiation include:

- Fully lined, fully automatic power softtop, choice of Black or Taupe standard colors
- 16 x 7.0 alloy wheels, V Spoke design #255, vs. Coupe's 17-in. equipment
- 205/55R-16 all-season run-flat tires
- Narrower rear seat, though still quite sufficient for 2 passengers
- Greater rear head room
- No storage tray between rear seats
- Fixed backrest, vs. Coupe's split folding, with small storage compartment
- Take-out piece for access to storage compartment, vs. Coupe's fold-up rear center armrest
- Variable trunk space, top raised/lowered, via adjustable storage box for softtop

- Special structural underbody reinforcements: stronger side sills, diagonal reinforcements from front subframe and rear crossmember/trunk floor to side sills
- Performance and fuel economy somewhat affected by greater weight of Convertible (+242 lb.)
- Head protection for front occupants provided by upward-deploying side airbags, vs. Coupe's front-to-rear curtain-type HPS
- Head protection for rear occupants provided by automatic-deploying Rollover Protection System (tubular rollbars behind rear passengers)
- Same options and packages as for 128i Coupe, except:
 - Leather upholstery with Sun Reflective Technology (Premium Package or stand-alone option) significantly reduces solar heating of leather; this treatment not available in Coupe
 - Premium Package – aluminum interior trim not available
 - Cold Weather Package – through-loading system with cargo bag replaces Coupe's ski bag, can hold up to four pairs of standard skis, two snowboards or a medium-sized golf bag
 - Moonlight Black softtop available as stand-alone option
 - Through-loading system with cargo bag as stand-alone option
 - Navigation System option adds Convertible climate-control mode via iDrive
 - Aluminum interior trim not available

135i Coupe

This more upscale of the two 1 Series Coupes features BMW's unique twin-turbo 6-cylinder engine plus numerous distinctions in its drivetrain, chassis, exterior details and interior features. BMW positions it as an especially sporty model, standard-equipping it with 18-in. wheels and tires and sport suspension, plus an M aerodynamic package that gives it almost a Sport Package look. Here's a listing of the key features that distinguish it from its 128i counterpart:

- 3.0-liter DOHC 24-valve inline 6-cylinder engine with aluminum construction, twin turbochargers, direct fuel injection and piezo injectors, Double VANOS¹ variable valve timing; 300 hp/300 lb-ft. torque
- Same transmission choices as 328i Coupe, but –
 - Manual transmission has higher torque capacity, different ratios
 - Automatic transmission has different ratios (also see shift paddles, below)
- Standard sport suspension
- Special Brembo high-performance brake system with larger rotor dimensions, 6-piston front/2-piston rear fixed calipers, finished in black and with BMW lettering
- 18 x 7.5 front/18 x 8.5 rear alloy wheels, Star Spoke design #264

1 – VANOS = **V**ARIABLE **N**OCKENWELLEN **S**TEUERUNG = variable camshaft control, or variable valve timing.

2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 1 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

1 Series models & key features

This information lists major features, and helps position and distinguish the models in the Series. For a comprehensive summary of features, see pages 320-329.

- 215/40R-18 front / 245/35R-18 rear performance run-flat tires²
- Additional standard equipment:
 - Xenon Adaptive headlights with auto-leveling, cornering lights, Daytime Running Lamps via luminous rings
 - High-intensity headlight cleaning system
 - Gray Poplar wood interior trim
- Same options and packages as 128i Coupe, except:
 - Sport Package doesn't affect wheel and tire equipment; omits sport suspension (because standard), adds M Sport steering wheel
 - Premium Package doesn't include wood or aluminum interior trim because wood is standard
 - Cold Weather Package omits headlight cleaning system (because standard), heated steering wheel
 - Steering-wheel shift paddles have different option code (7XA vs. Coupe's 2XA); option includes Sport automatic transmission and quicker-acting tachometer
 - Active Steering available as stand-alone option
 - 17 x 7.0 alloy wheels, Star Spoke design #142, same size front/rear with 205/50R-17 run-flat all-season tires, available as stand-alone option
- Light Burl Walnut wood, High Gloss Black or Glacier Silver Aluminum interior trim available at no extra cost
- Heated steering wheel as stand-alone option; not available in combination with Sport Package because M Sport steering wheel not offered with heating

135i Convertible

This top-of-line 1 Series model relates to the 135i Coupe as does the 128i Convertible to its Coupe counterpart, in that it comes standard with less sporty tires; it offers the Coupe's standard wheels and tires as part of its Sport Package. Except as affected by its modest extra weight, it offers the same dazzling twin-turbo performance as the Coupe and has essentially the same equipment level unless a difference is listed here. In detail, its distinctions from the Coupe are:

- Fully lined, fully automatic power softtop, choice of Black or Taupe standard colors
- 17 x 7.0 alloy wheels, Star Spoke design #142, vs. Coupe's 18-in. equipment (this equipment and the tires below are a stand-alone option on Coupe)

- 205/50R-17 run-flat all-season tires
- Narrower rear seat, though still quite sufficient for 2 passengers
- Greater rear head room
- No storage tray between rear seats
- Fixed backrest, vs. Coupe's split folding, with small storage compartment
- Take-out piece for access to storage compartment, vs. Coupe's fold-up rear center armrest
- Variable trunk space, top raised/lowered, via adjustable storage box for softtop
- Special structural underbody reinforcements: stronger side sills, diagonal reinforcements from front subframe and rear crossmember/trunk floor to side sills
- Performance and fuel economy somewhat affected by greater weight of Convertible (+287 lb.)
- Head protection for front occupants provided by upward-deploying side airbags, vs. Coupe's front-to-rear curtain-type HPS
- Head protection for rear occupants provided by automatic-deploying Rollover Protection System (tubular rollbars behind rear passengers)
- Same options and packages as for 135i Coupe, except:
 - Leather upholstery with Sun Reflective Technology (Premium Package or stand-alone option) significantly reduces solar heating of leather; this treatment not available in Coupe
 - Cold Weather Package – through-loading system with cargo bag replaces Coupe's ski bag, can hold up to four pairs of standard skis, two snowboards or a medium-sized golf bag
 - Moonlight Black softtop available as stand-alone option
 - Through-loading system with cargo bag as stand-alone option
 - Navigation System option adds Convertible climate-control mode via iDrive
 - Aluminum interior trim not available

2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 1 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

1 Series key features

Except as noted, all current 3 Series models offer the following features:

Exterior design & function

1 Series design strategy

The 1 Series made its European debut as a 5-door hatchback, and later added a 3-door hatchback. In these forms it has been a robust success.

Yet U.S. tastes in the premium-car field do not run to hatchbacks. Thus BMW developed – for world markets but especially for the U.S. – the two body types now being offered here: a Coupe and a Convertible, both 2-doors as Coupes and Convertibles usually are. As such, these two new compact BMWs exemplify a longstanding BMW ideal: the trim, efficient automobile that offers practical transportation while also delivering a sporting, enjoyable driving experience. Their exterior design visually expresses this character.

Both ride a 104.7-inch wheelbase, exactly 4 in. shorter than that of the 3 Series; at 172.2 in. long they're 8.4 in. shorter than the 3 Series Coupes and Convertibles. Within this architecture, they live up to BMW tradition with a long hood that announces their front-mounted inline 6-cylinder engine; a passenger cabin ("greenhouse") set well back in the chassis, and a short rear deck.

At the front, it's all BMW, with the traditional "kidney" grilles and a 4-headlight lighting configuration that, with the 128i optional/135i standard Xenon Adaptive headlights, include luminous rings as parking lights and Daytime Running Lamps, and cornering lights to help the driver see around tight corners and to the sides when backing up. On 135i models, a deep M front bumper/

spoiler ensemble proclaims Sport and, as on M Cars themselves, lets extra-large air intakes take precedence over foglights. (128i models do come standard with foglights.)

In profile: Coupe. A sharply defined shoulder line, starting at the front and running all the way to the trunklid, sets a strong accent and emphasizes the long-hood/short deck proportions. The trapezoidal greenhouse is graceful while providing plenty of glass area for the driver's outward view; its set-back position draws the eye to the rear wheels, highlighting the fact of BMW's rear-wheel drive. On both models, standard Chrome Line trim around the side windows lends a filigree character signaling that this is no ordinary small car. On the 135i, M aerodynamic side sills accent the profile; a trunklid spoiler emphasizes the taut lines while adding downforce that enhances stability at speed.

Convertible. Of course there are two possibilities here: softtop down, softtop up. With the top down, the Convertible naturally seems longer, more graceful; here Chrome Line, also standard, adds the filigree touch with a delicate chrome definition of the beltline from A-pillar to A-pillar.

Top up, the Convertible is 0.4 in. lower than the Coupe, but looks lower than that. The softtop intersects more sharply with the lower body than does the Coupe's roofline; and as it also makes a color and texture break with the lower body, adds a touch of elegant formality as well. The top comes in a choice of two standard colors, Black and Taupe, and is offered optionally in new Moonlight

Black, a special material with metallic silver highlights. Like its Coupe counterpart, the 135i Convertible also has the M aerodynamic side sills.

The rear view. BMW's now-traditional L-shaped taillights feature horizontal LED strips for sparkle and function. At the rear, too, 135i models have a bolder bumper/spoiler ensemble; here it has a black center section framing a center air diffuser and, at the left, dual exhaust tips in matte chrome on 128i, black chrome on 135i models.

Performance & efficiency

N52 3.0-liter DOHC 24-valve inline 6-cylinder engine with Valvetronic (128i models)

These models are powered by the amazing N52 engine, whose engineering features include –

- **Valvetronic variable valve lift**, replacing the traditional throttle and enhancing power, efficiency and response to the driver's demands.
- **Magnesium/aluminum composite construction**, saving weight and thus also contributing to enhanced performance and efficiency.
- **Electric water pump**, requiring less power, speeding engine warmup and making the engine more compact. Contributes to efficiency.
- **Variable-volume oil pump**, also requiring less power and enhancing lubrication; thus contributes to performance, efficiency and durability.

This wonderfully smooth and sonorous engine delivers 230 hp @ 6500 rpm and 200 lb-ft. of torque at 2750 rpm. This torque peaking speed is relatively low

and, with the strong torque value itself, makes for a robust response to the driver's accelerator foot. This comes through in strong 0-60-mph acceleration times and remarkably favorable EPA mileage:

128i Coupe – 6.1 sec. with manual transmission, 6.7 with automatic; EPA ratings 18 mpg city/28 mpg highway manual, 19/28 automatic.

128i Convertible – 6.4 sec. with manual transmission, 7.0 with automatic; 18 mpg city/28 mpg highway manual, 18/27 automatic.

For more extensive details on the fascinating N52 engine, see **BMW features**, pages 30-32.

N54 engine: twin turbocharging, piezo direct fuel injection, high compression ratio (135i models)

With the N52 naturally aspirated³ engine and this N54 turbocharged unit, BMW revealed to the world its approach to high performance for now and the future: Instead of ever-larger engines, BMW will achieve its performance goals with smaller, lighter, more efficient and cleaner-running engines.

The 300-hp N54 engine is completely distinct from the N52. Its distinguishing features include –

- **Twin turbocharging** with air-to-air intercooling to control the temperature of the air being charged into the engine.
- **Special dual exhaust system** to match the engine's special forced-induction system.
- **All-aluminum structure**, vs. the N52's magnesium/aluminum construction.

³ – In a "naturally aspirated" engine, air is drawn into the engine by the pistons' downward stroke. By contrast, a supercharger or turbocharger compresses and supplies the engine's air in what is known as "forced induction."

1 Series key features

Except as noted, all current 3 Series models offer the following features:

- Cast-iron cylinder liners, combining with the all-aluminum structure to handle the greatly increased internal loads of this engine.
- Conventional valvetrain, vs. the N52's Valvetronic though retaining the Double VANOS variable valve timing.

If the 128i models' performance is "strong," that of the 135i models is dramatically, stunningly strong. Here are their 0-60-mph times and EPA mileage:

135i Coupe – 5.1 sec. with manual transmission, 5.2 with automatic; 17 mpg city/25 mpg highway manual, 18/25 automatic.

135i Convertible – 5.4 sec. automatic, 5.5 automatic; 17 mpg city/26 mpg highway manual or automatic.

"Still," wrote *Automobile* in January '08 after generally describing the 1 Series, "the first thing that hits you is just how blazingly quick the 135i is... The engine emits a glorious roar, one that threatens to rip your ears from the side of your head. It's angrier, coarser, and deeper than the noise that comes from the 335i, and it's capped with just the slightest hint of turbo whoosh."

For a detailed explanation of this revolutionary powerplant, see **BMW features**, pages 32-35.

6-speed manual transmission (standard all models)

135i models use the Type G transmission, a heavy-duty unit also found in 5 Series V-8 and 6 Series models and even the M5 and M6. The 128i models have a somewhat lighter-duty version, called Type I, that operates with even higher mechanical fuel efficiency, contributing to fuel economy.

6-speed STEPTRONIC automatic transmission (optional all models)

A 6-speed automatic is optional in all 1 Series models. It is available with optional steering-wheel shift paddles in all models in combination with the Sport Package; 135i models so equipped get BMW's Sport automatic, with quicker shifting in its Manual mode plus a "dynamic tachometer" that can respond to the resulting sharp rpm changes. For information on BMW's automatic transmissions, see **BMW features**, pages 40-42.

Double-pivot front suspension

The 1 Series shares with the 3 Series this unique BMW type of front suspension, featuring two lower arms working in combination with a spring/shock-absorber strut. These two lower arms are the reason for its name "double-pivot."

By employing two lower arms, this system provides several fundamental advantages:

- **Small positive steering offset**, for best steering feel and control under all road conditions. Though the two arms don't actually intersect, if you extend their axes to a point where they do intersect, you find a "virtual pivot point" that is ideal for achieving this result. Steering offset is the "lever arm" through which road forces act on the suspension system.
- **Large steering caster**, for outstanding stability in straight-line driving and excellent steering return action coming out of curves.
- **Space for large brakes**, by virtue of the arrangement of the two lower arms.

Further advantages are found in the details:

- The trailing (forward) lower arm has a rubber/hydraulic cushion, which provides the most effective “compliance” for reducing road shock and thus improving riding comfort.
- The transverse (rearward) lower arm is cushioned by a finely tuned rubber element that fosters direct and precise response to the steering wheel in curves and corners.

In all 1 Series models there is extensive aluminum componentry in the front suspension for low unsprung weight. This improves the suspension’s response to bumps and other road irregularities; it can markedly enhance riding comfort and, on any irregular road surface, handling as well. Aluminum components on each side include –

- Both lower arms (forged aluminum)
- Steering knuckle (also forged)
- Brake caliper (not part of suspension, but part of unsprung weight as it moves up and down with the wheel)
- Brake shield (stamped piece; also not part of suspension, but part of unsprung weight).

In addition, the subframe that carries the front suspension is of aluminum, as is the steering rack; these are not unsprung components, but do contribute to overall weight reduction – and being up front, also to the “typical BMW” near-50/50 weight distribution. This subframe adds rigidity, enhances steering precision and is also an integral element in the vehicle’s management of energy in a frontal crash.

5-link rear suspension

This system could be described as a double-A-arm system⁴ with an additional lateral track rod; the upper and lower A-arms actually consist of two links each, their vertical positions differing. (This is similar to the front suspension’s dual lower arms.)

Advantages are extensive:

- As at the front, there is a virtual pivot point for each pair of links, giving the engineers similar freedom in optimizing the system’s geometry. The result is very precise handling, especially insensitive to road disturbances.
- Under cornering forces, the system controls geometry in such a way as to achieve great agility while also ensuring predictable, stable handling.
- Contributing to this outstanding geometry is the wide and rigid basis with which the rear tires are “planted” on the road. The lateral links are extremely rigid too, as is the subframe.
- All the suspension’s links connect to the subframe; no longer does any link pivot directly from the body structure. This further reduces any effects of road irregularities on passenger comfort, and improves handling precision as well.
- Here too, the large and elaborate subframe contributes to energy management in a rear-end crash.

Observant “gearheads” may note that the new 7 Series also has a 5-link rear suspension system. But the two systems

4 – “Double A-arm” refers to the classic system of two A-shaped lateral arms, one upper and one lower, determining suspension geometry. This principle also appears in the new 7 Series’ front suspension, and is also referred to as “double wishbone.”

1 Series key features

Except as noted, all current 3 Series models offer the following features:

are not the same. Whereas the 7 Series' "5th element" is a so-called Integral link, essentially vertical and connecting the upper and lower forward lateral arms, the 5th element here is an additional lateral link. Each serves essentially the same purpose: to help optimize suspension geometry in a highly sophisticated way, each appropriate to the size and weight class of these two very different-size Series.

Steering: evolution standard, revolution optional

BMW's engine-speed-sensitive variable-assist power rack-and-pinion steering system, standard in the 1 Series, has generated universal praise; *Car and Driver* (May '08) credited it with "switch-blade steering response that jabs the nose at corners with a firm, steady equipoise that is BMW's trademark."

The "revolution" here is the optional **Active Steering**, offered as a stand-alone option on 135i models and incorporating evolutionary refinements. For details, see **BMW features**, pages 48-50.

4-wheel ventilated disc brakes: generous dimensions, advanced technology

The 128i models' brake system features ventilated cast-iron rotors and (as another contribution to balanced weight distribution) aluminum calipers at the front. But the 135i models go a step further, actually including some features not found on any other current BMW model. Here are some details for both model sets: **128i models.** All four wheels have 300-mm/11.8-in. ventilated rotors, in the good BMW tradition a generous dimension considering these models' trim weights. As on other BMW models, single-

piston "floating" calipers apply stopping force to the rotors.

135i models. A special high-performance brake system, developed with world-famous brake supplier Brembo and unique among BMW models, delivers not only more powerful braking to match these models' spectacular performance but also perceptibly firmer pedal feel. Here are the key 135i upgrades:

- **Larger rotor dimensions** – front 338 mm/13.3 in., rear 324 mm/12.8 in.
- **High-performance calipers** – 6-piston fixed front, 2-piston fixed rear. Front and rear calipers are made of aluminum to minimize the weight increase associated with these more complex calipers. For visual appeal, they are finished in glossy, heat-resistant black; their special heritage is revealed via BMW lettering, visible through the wheels.

This is the first appearance of fixed calipers on a regular-production BMW since the floating type became essentially universal some years ago. A floating caliper has a piston on only one side of the rotor; when the brake is applied, part of the caliper moves ("floats") to effect braking. In a fixed caliper, there are pistons on both sides of the rotor, pressing on the pads from opposite directions. The simplest fixed caliper has 2 pistons; 6-piston front calipers show that BMW has gone all-out to achieve braking performance appropriate to the race track as well as normal public roads. In particular, the front brakes' 6 pistons promote an ultra-firm, ultra-linear feel at the brake pedal that is sure to thrill enthusiasts, especially on the track.

A refinement on all models is that the discs (rotors) have a Geomet coating to eliminate rusting on the rotor areas not swept by the brake pads. In the context of Condition-Based Service, there are separate front and rear wear sensors via which the mileage remaining on the front and rear pads can be displayed and appropriate service scheduled.

Special 135i feature: “limited-slip differential”

Another enthusiast-oriented 135i feature, now shared with 335i models and 7 Series, is a Dynamic Stability Control function that simulates a traditional BMW M limited-slip differential. With DSC de-activated via the switch, in cornering the rear-wheel brakes are applied gently and left/right selectively to limit the difference between left and right rear wheel speeds – as appreciated by sporting and skilled BMW drivers for decades. In contrast to other stability-control interventions, this function does not trigger the DSC indicator in the instrument cluster; this is because it’s a pure traction function, not related to stability.

This feature was developed for true driving enthusiasts and is meant for use on closed road courses or on a race track.

Wide selection of wheel designs; all-season or performance tires, all run-flats

Maintaining a BMW tradition, each model offers at least two wheel-and-tire combinations; all 1 Series tires, whether all-season or performance-type, are run-flats. The standard equipment combinations are tailored to the product character of each model: for example, 17-in. same-size front/rear with all-season tires on 128i Coupe and 135i Convertible; 18-in. in differentiated front/rear sizes with performance tires on 135i Coupe; 16-in. same-size with all-season tires on 128i Convertible, the mildest-mannered 1. Sport Package combinations are similarly model-specific, and on the most aggressively standard-equipped model, the 135i Coupe, 17-in. all-season equipment is optional for customers who prioritize bad-weather traction.

The table below summarizes all available combinations. There are no wheel or tire changes for '09.

2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 1 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

Model & version	Wheel size & design	Run-flat tires
128i Convertible standard	16 x 7.0 V Spoke #255	205/55R-16 all-season
128i Coupe standard	17 x 7.0 Star Spoke #256	205/50R-17 all-season
135i Convertible standard, 135i Coupe option	17 x 7.0 Star Spoke #142	205/50R-17 all-season
128i Coupe & Convertible Sport Package	17 x 7.0 front/17 x 7.5 rear Star Spoke #262	205/50R-17 front/225/45R-17 rear performance ²
135i Coupe standard, 135i Convertible Sport Package	18 x 7.5 front/18 x 8.5 rear Star Spoke #264	215/40R-18 front/245/35R-18 rear performance ²

1 Series key features

Except as noted, all current 3 Series models offer the following features:

Differentiated front/rear sizes are part of all models' Sport Package; every model is also available, either standard or optionally, with all-season equipment.

Every 1 Series model comes with BMW's run-flat system, which consists of self-supporting tires and wheel rims shaped to help keep a flat tire securely in place. With no spare tire, trunk space is unexpectedly generous. The run-flat system is described in **BMW features**, page 55.

Comfort & convenience

Interior design: comfort and practicality in a compact package

The 1 Series cabin presents its driver and passengers with BMW's traditional levels of design, quality, premium materials and satisfying functionality in a new, sporting, compact format. "The interior is up to snuff with BMW's other offerings," reported *AutoWeek* on June 2, '08, "something that would almost certainly have suffered had the company aimed to build a poor man's car."

Typical BMW: the ergonomic control center

The control center is laid out essentially as in other BMWs, with round analog speedometer and tachometer plus fuel gauge and the most urgent warning indicators directly in front of the driver. The standard On-board Computer display is between the two main instruments; via the left-hand steering-column stalk the driver can toggle through time, ambient temperature and range on remaining fuel. In vehicles with manual transmission, an upshift indicator here

can assist the driver in achieving optimum fuel economy. (For best fuel economy at any given road speed, one should drive in the highest possible gear.) Manual adjustment of the steering wheel for height and reach is standard.

3-spoke sport steering wheel standard in all models

All models come standard with a 3-spoke steering wheel. Both wheel styles (standard and M sport) have leather-wrapped rims, and their arrangement of multi-function controls on the steering-wheel face is the same. Included here are –

- **Audio** – volume, preset scroll and audio source or, with iDrive/Navigation, programmable key for various iDrive functions
- **Air recirculation** – to switch recirculation on and off manually
- **Phone functions** – for hands-free operation, active if vehicle has the Bluetooth cellphone interface and an approved phone model is paired with it
- **Voice Command** – active if vehicle has Navigation/iDrive option.

The standard wheel has a larger center face and galvanic-trimmed lower spokes. Presenting an even sportier look, the M sport wheel of the 135i Sport Package has a different spoke design, omits the bright trim, displays the M logo on its bottom spoke, and adds a sporty leather perforation to portions of the rim. (Perforated leather also appears on the handbrake grip with this Package.)

Steering-wheel heating is available with the standard wheel, but not with the M sport wheel.

iDrive, 2nd generation

Like the 3 Series, the 1 is available with or without iDrive. Along with the iDrive itself, the iDrive display is new for '09.

As before, iDrive is included in the Navigation option; but now, as in the 7 and 3 Series, iDrive appears in its 2nd generation with more natural, user-friendlier operation, a simpler yet more useful operation system, and greatly expanded functionality. In place of the previous retractable pod with 6.5-in. screen and 400 x 240-pixel resolution, the display is now housed in a fixed nacelle at dash-top center and measures 8.8 in. Screen resolution is improved dramatically, to 1280 x 480 pixels.

Details of the 2nd-generation system are found in **BMW features** on pages 63-65; here are some of the highlights as they apply to the 1 Series:

- **New-type controller**, with direct-select keys grouped near or around it. These allow quick selection of CD, radio, phone and navigation menus, and are augmented by three further keys: one that takes the user directly to the start menu (MENU), one to the most recently active menu (BACK), and the third (OPTION) to various options within the current area. Thus searches are likely to be shorter, or altogether unnecessary.
- **6 Programmable Memory Keys**. Whereas the 7 Series, which is completely redesigned, goes to 8 keys, the 1 Series remains with 6 PMK plus one for Entertainment-system mode and one for toggling between AM and FM.
- **Expanded and user-friendlier GPS Navigation** with detailed views of the geography and 3-dimensional displays.
- **Simultaneous voice entry and controller selection** when preferred by user.

There are many more advances and new features. And because the new system is so intuitive, one can learn even more about it by simply getting in the vehicle and exploring it!

Hard drive for data storage: high capacity, fast retrieval

With the Navigation/iDrive option, an 80-GB hard drive provides data storage for the iDrive system, GPS Navigation, entertainment systems, Voice Command and phone system. As this also appears in the 3 and 7 Series for '09, and will appear in other Series later on, it is described in **BMW features** on pages 66-67.

Dual-zone automatic climate control

A decidedly premium feature of all 3 Series models is its full-featured automatic climate control, which includes –

- **Separate left/right temperature controls** (dual-zone control).
- **Misting sensor**. Via the wipers' rain sensor, misting of the windshield is sensed visually and system operation adjusted automatically to clear it up.
- **Heat at Rest**, a great feature that allows heating the interior for a limited time with the engine off. BMW's electric engine water pump facilitates this.
- **Automatic recirculation control** shuts off outside air when a sensor detects a high level of air pollution.
- **Indirect airflow** via outlets atop the dash, for pleasant, draft-free climate control. (With

1 Series key features

Except as noted, all current 3 Series models offer the following features:

the Navigation/iDrive option, users have further choices in air delivery.)

- **Recall of individual users' settings** via Key Memory: temperature and any manually selected air distribution.

More detailed information on the features of BMW climate control is found in **BMW features** on pages 68-69.

Audio systems

Two systems are offered:

Standard system, 10 speakers including 2 subwoofers:

- 2 midrange in the doors
- 2 midrange in rear shelf (Coupe) or rear side panels (Convertible)
- 2 tweeters in the doors' mirror triangles
- 2 tweeters in rear shelf (Coupe) or rear side panels (Convertible)
- 2 subwoofers in BMW's patented positions beneath the front seats.

The 8 midrange and tweeter speakers are powered by 4 channels of 25 watts each, or 100 watts. The 2 subwoofers get 40 watts each, for a total system power of 180 watts.

Premium system, also with 10 speakers, in the same locations but higher in quality. Higher audio power: 4 x 40 watts + 2 x 70, for a total of 300 watts. This system also adds switchable Surround Sound.

The head unit is the same for both audio systems, but does differ between vehicles with and without the Navigation/iDrive unit.

Both systems include BMW's reception-enhancing diversity antenna system, with multiple circuits in the Coupe's rear

window frame; on Convertibles a mast antenna on the left rear body panel and circuits in the rear bumper provide the diversity benefit.

Other antennas. On Coupes, a fin-type roof antenna serves the phone and/or Navigation System as well as the GPS aspect of the available BMW Assist. On Convertibles, the phone antenna is in the rear bumper; the GPS/BMW Assist antenna is in the softtop hard cover. The Satellite Radio antenna is in the trunklid of all models.

Upholstery and trim: BMW quality – of course

Upholstery choices begin with standard **leatherette**, in Black or a Taupe color that is distinctive from either of the Beige tones in the 3 Series. **Boston leather**, a grade specific to the 1 Series, comes in the Premium Packages or as a stand-alone option in no fewer than five colors: Black, Taupe, Gray, Savanna Beige and Coral Red.

Interior trim – what some might call “trim accents” – appears on the dash, center console and door pulls – and is offered in five materials, all of which contribute to a pervasive feeling of quality while satisfying our customers' diverse esthetic tastes.

- **High-gloss black** – standard in both 128i models; optional at no extra cost, both 135i models
- **Gray Poplar wood** – Premium Package or stand-alone option, both 128i models; standard both 135i models
- **Light Burl Walnut** – alternate with Premium Package or stand-alone option, both 128i models; optional at no extra cost, both 135i models

- **Glacier Silver Aluminum** – alternate with Premium Package, 128i Coupe only; optional at no extra cost, 135i Coupe. Not available in Convertibles.

Beyond these “feature trims” – thus present in all models – is BMW’s elegant galvanic material (see **BMW features**, pages 76-77) in Pearl-gloss finish on the –

- Speedometer and tachometer rings
- Start/stop button’s ring
- Interior door handles
- Climate-control and audio knobs
- Center air outlets’ adjusting tabs
- Glove-compartment opener.

No wonder, then, that *AutoWeek*’s Bob Gritzinger wrote in the magazine’s June 3, ’08 issue: “I don’t look at this as an entry-level car in any way, shape or form. It isn’t priced like one or built like one, and it certainly does not perform like one.”

More details on the option scheme in **options & packages**.

Seating: intimate and sporty

1 Series models are configured as pure 4-seaters; as such, they have particular appeal to younger buyers, with or without children. Up front, spacious seating is provided by two individual, highly supportive seats with a center console separating them. In the rear, there are likewise two individual seats; in the Coupe there are a separating console between them and a fold-down armrest; also in the Coupe, both backrests fold for versatility in loading cargo. (The Convertible has a fixed backrest with center opening into a small storage compartment.) In all models, entry into the rear seats is facilitated

by a manual easy-entry feature that allows moving the front seat forward, then returning it to its previously set position.

Front seats: several choices in every model

As always in BMWs, the individual front seats are contoured, padded and upholstered for excellent support and comfort: firm, but not overly so. Driver and passenger get a great feeling of being “one” (or two) with the vehicle.

All 1 Series models come standard with 6-way manually adjustable front seats that include a height adjustment. These contrast with the 3 Series, all of whose Convertibles have power seats. Beyond this, the possibilities are:

- **8-way power** – included with Premium Package for every model, or available as a stand-alone option. Includes driver’s-seat memory with 2 settings for each user.
- **4-way power lumbar support** – included with Premium Package; not available as stand-alone option.
- **Sport seats** – in the usual BMW format with more prominent side bolsters, power-adjustable backrest width and manually adjustable thigh support. These added adjustments apply equally to either manual or power sport seats.

3-stage heating is available with all seat choices, as part of the Cold Weather Package or as a stand-alone option.

Front center console and cupholders

There are two open-type cupholders in the front center console. With the Navigation/iDrive option, the iDrive controller takes up the space of one of

1 Series key features

Except as noted, all current 3 Series models offer the following features:

them, so a removable cupholder is added. This cupholder can be inserted into a slot at the passenger side of the console, or stored away – arrangement similar to that in the 6 Series.

Rear seats: specific configurations for Coupe and Convertible

Coupes' rear seating is similar to that of 3 Series Coupes.

Individual cushions for two passengers are separated by a low console containing a storage tray divided into two portions, small and larger. The backrest is split folding and divided 60/40, with the wider right-hand portion including a fold-up armrest and (with the Cold Weather Package) pass-through for a ski bag.

Each backrest portion can be folded essentially flat to extend cargo space from the trunk into the interior. The head restraints are height-adjustable and removable, but do not have to be removed to fold the backrests.

Convertibles' rear seating is similar in character to that of the Coupes – elegantly contoured and upholstered – but there are significant differences:

- Less space, because the folded softtop and its mechanism must be accommodated. There are 10.8 in. less shoulder room (though still enough for two adults) and 0.7 in. less leg room. On the other hand, there's fully 1.1 in. more head room than in the Coupes.
- Fixed backrest, vs. the Coupes' split folding.
- Centerpiece between cushions, padded but with no storage tray.
- No center armrest
- Available through-loading system with cargo bag (see options & packages).

So – not as roomy as the Coupes' rear seat, but for a good cause. In its February 6, '08 issue, Switzerland's authoritative *Automobil Revue* sums up the Convertible's interior space as “a roomy 2+2,” and adds that it's adequate for “a trip to Italy for four persons.” That's from Switzerland, of course, a day trip by car.

In all models, entry into the rear seats is facilitated by a manual easy-entry feature. LATCH attachments (Lower Anchors and Tethers for children) provide for securing child restraint seat at each position.

The Convertibles' power softtop: classic design, fully powered

Both Convertible models come standard with a fully automatic, fully lined power softtop. Though not as quiet inside with the top up as the 3 Series' retractable hardtop, the softtop saves weight and helps keep 1 Series Convertibles' pricing well below that of their 3 Series counterparts.

The top itself. As a classic softtop, it imparts clean exterior lines when up, and folds compactly under a hard cover when lowered. Its heated glass rear window is frameless, adding to the design's simple elegance, and relatively thick 3.8-mm glass helps reduce interior noise. A full interior lining covering the top's bows and links gives a finished appearance inside, enhances weather insulation and also reduces wind noise over the top – this last quality in addition to the acoustically optimized outer material. Black is its standard color, Taupe available at no extra cost.

Optional Moonlight Black. First-ever offering of a special material with silver metallic highlights, at nominal extra cost.

Lowering and raising the top. Normally via the switch in the center stack. Occurs in 22 seconds, not including the lowering of the side windows that also occurs. The softtop cover opens and closes automatically. Lowering can be started at any vehicle speed up to 20 mph, and continued up to 25 mph... all with wind gusts up to 30 mph.

The softtop cover. Displaying BMW's usual attention to detail, it is bordered in chrome, thinly and elegantly. With the Sport Package, this trim is high-gloss Shadowline black.

Using the remote (only in vehicles with Comfort Access), the top can be lowered or raised from closer than 13 feet. At 13 ft. or more, it can only be lowered, and if the windows were up to begin with, they do not return to their closed position.

Variable softtop storage. As in other BMW Convertibles, cargo space can be maximized when the top is up by adjusting the variable storage box. For the top to be lowered, the box must be set in its lower position. (The Owner's Manual refers to this box as a "partition.") For more information, see **variable cargo space in Convertibles** at right.

Thoughtful features throughout the cabin

From front to rear in the 1 Series cabin, numerous thoughtful features enhance luxury and convenience:

- **Interior trunk release**, in familiar location ahead of left front door.
- **Standard power 2-way moonroof** on Coupes.
- **Voice Command** switch on steering wheel, active with Navigation/iDrive option.
- **Bluetooth cellphone interface**, included with BMW Assist option.
- **Front overhead console** with BMW Assist buttons and the Passenger Airbag Off indicator. An interior light, separately switched left/right reading lights⁵, BMW Ambiance Lighting⁵, moonroof control in Coupe, and microphones for hands-free phone use⁵ are also here.
- **Fold-up front center armrest** in all models.

Variable cargo space in Convertibles

To maximize trunk volume, 1 Series Convertibles have variable cargo space via the adjustable softtop storage box. When the top is up, the box can be adjusted to its upper position for maximum space. For the top to be lowered, the box must be set in its lower position.

In BMW's never-ceasing product development, the softtop's folding has been further refined; thus compared to the previous-generation (E46) 3 Series softtop, even though the 1 Series' top is only 0.8 in. shorter, the box could be made fully 20% smaller. This helped BMW achieve an excellent trunk volume of 8.0 cubic feet with the top up, 7.0 cu ft. with it lowered.

5 – With Premium Package.

1 Series key features

Except as noted, all current 3 Series models offer the following features:

Safety & security

Most safety and security features of the 1 Series are shared with those of other BMW Series, and represent BMW's state of the art in these all-important areas of vehicle attributes. One feature, however, made its first appearance in here and is specific to this Series:

- **Crash-optimized front seats**, an enhancement for the safety of front occupants in rear-end crashes. Specially padded head restraints and backrests significantly reduce the risk of injury in such impacts.

Certain other 1 Series safety features should be stressed because this is the most attainable BMW Series:

- **Full-featured Dynamic Stability Control** with the outstanding braking functions explained in **BMW features**
- **Front- and rear-seat Head Protection System** in the Coupes
- **Front-seat head protection** provided by tall side-impact airbags in the Convertibles
- **Auto-deploying Rollover Protection System** in the Convertibles
- **BMW's targeted structural engineering** for energy absorption and management, optimum occupant protection.

These and other safety features and systems shared with other Series are described in **BMW features** on pages 78-90.

Options & packages

Factory-installed options

Premium Package

(optional all models, code ZPP)
This Package, continuing a popular offering for other BMW Series, adds desirable and popular features to each 1 Series model.

All models:

- **Boston leather upholstery**, available in 5 attractive colors; includes Sun Reflective Technology on the seats, armrests, head restraints and shift knob in Convertibles.
- **Auto-dimming exterior and interior mirrors.**
- **Power-fold exterior mirrors.** A valued convenience for parking in tight spaces and for navigating some car washes.
- **Power front seats**, 8-way power + 4-way power lumbar support. Include driver's-seat and exterior-mirror memory, with two memory settings for each driver.
- **Auto tilt-down feature** for right-hand exterior mirror; mirror tilts down for view of the curb or other possible obstruction when the transmission is shifted into reverse.
- **Digital compass in interior rearview mirror.**
- **Ambient light package**, consisting of exterior ground lighting, separately controlled left/right front reading lights, illuminated visor mirrors, front BMW Ambiance Lighting and front footwell lighting.
- **BMW Universal Transceiver**, the 3-function device that can operate garage doors and other external electrical devices or systems. Its controls are positioned in the front overhead console.

- **BMW Assist**, BMW's customer-services and in-vehicle telematics system. For details, see CenterNet or pages 442-446.
- **Bluetooth cellphone interface.**

128i Coupe:

- **Interior trim**, choice of Gray Poplar or Light Burl Walnut wood or Glacier Silver Aluminum

128i Convertible:

- **Interior trim**, choice of Light Burl Walnut or Gray Poplar wood.

Sport Package

(all models, code ZSP)

Another BMW tradition and a very popular one, the Sport Package is tailored to the character of each 1 Series model: Its contents are –

All models:

- **High-gloss Shadowline exterior trim** – around side windows, mirror frames and triangles on Coupes; A-pillar and softtop-cover edge trim, beltline, doorsill inlays and BMW lettering, mirror frames and triangles on Convertibles.
- **Sport seats** – more prominent side bolsters on cushion and backrest, power-adjustable backrest width, manually adjustable thigh support. Other adjustments 6-way manual, or if combined with Premium Package or power-seats option, 8-way power.
- **150-mph top-speed limiter.**

Both 128i models:

- **Sport suspension** – vehicle lowered by 15 mm/0.6 in., firmer springs and shock absorbers, Standard on 135i models.
- **17-in. wheels and performance tires** – 17 x 7.0 front/17 x 7.5 rear Star Spoke wheels #262, 205/50R-17 front / 225/45R-17 rear tires²

Both 135i models:

- **M Sport steering wheel** with M logo, perforated leather on portions of rim and on hand-brake grip
- **18-in. wheels and performance tires** – 18 x 7.5 front/18 x 8.5 rear Star Spoke wheels #264, 215/40R-18 front / 245/35R-18 rear tires² (on Coupe, same as standard).

Cold Weather Package

(all models, code ZCW)

This highly functional group has been expanded by a heated steering wheel for '09 128i models, and now includes these features:

All models:

- **Heated front seats**, 2-stage thermostatically controlled heating of extensive surface area

Both 128i models:

- **Retractable headlight cleaning system** (standard on 135i models)
- **Heated steering wheel**

Both Coupes:

- **Ski bag**

Both Convertibles:

- **Through-loading system and cargo bag.**

6-speed STEPTRONIC automatic transmission

(optional all models, code 205)

This advanced, performance-enhancing and velvety-smooth automatic is offered as a stand-alone option on all models. General features of BMW automatic transmissions, and distinctions among various versions of them, are described in **BMW features** on pages 40-42.

2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 1 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

1 Series key features

Except as noted, all current 3 Series models offer the following features:

Shift paddles

(optional all models, code 2XA or 7XA; requires and is required with automatic transmission + Sport Package)

There are two paddles above the steering wheel's horizontal spokes. Analogous to the shift lever, tipping the paddle(s) rearward produces an upshift; tipping the paddle forward effects a downshift.

The paddle-shifted automatic (drivers can still shift with the lever as well) also incorporates Direct Selection of the Manual mode. If, while driving in D, the driver manually downshifts via paddle, the Manual mode engages and the transmission holds that gear. But if the driver makes no further manual shifts within 15 seconds, the transmission returns to automatic operation.

For 128i models, the option code is 2XA. For 135i models, it is 7XA and this includes a Sport version of the transmission, with quicker shifting in its Manual mode plus a "dynamic tachometer" that can respond to the resulting sharp rpm changes. As this option is required when Sport Package and automatic transmission are combined, in effect 1 Series models with automatic and Sport Package come only with shift paddles and the transmission characteristics described here.

Active Steering

(optional 135i models only, code 217)

Active Steering offers dramatic benefits in terms of handling agility, described in detail in **BMW features** on pages 48-50.

All-season tires for 135i Coupe (code 2CH, no extra cost)

This stand-alone option provides 17 x 7.0 Star Spoke wheels of design #142, same size front/rear with 205/50R-17 run-flat all-season tires, as an all-weather alternative to the Coupe's standard 18-in. equipment with differentiated front/rear sizes and performance tires. These are the same wheels and tires that are standard on the 135i Convertible.

Park Distance Control

(optional all models; code 507)

On 1 Series models, PDC employs four ultrasonic sensors in the rear bumper to detect when the vehicle is approaching obstacles that may not be visible to the driver. A warning tone emanates from the rear of the interior, increasing in frequency as the vehicle approaches the obstacle until the tone becomes constant.

When combined with the Navigation/iDrive option, PDC includes a plan-view vehicle diagram in the iDrive monitor, which graphically depicts obstacles' location relative to the vehicle.

Xenon Adaptive headlights with auto-leveling

(optional 128i models, standard 135i models; code 522)

The Adaptive feature "steers" the headlights via an electronic control system and small servo motors. Other features included with this option are **auto-leveling** of the headlights to reduce glare to oncoming drivers; and **cornering lights**, which improve the driver's forward view in low-speed corners and when backing up. Features and functions of these lighting systems are described in **BMW features** pages 23-25.

Metallic paint (optional all models, color codes)

The beauty of BMW metallic paints needs no introduction; with recent improvements to the painting process, its beauty promises to be even longer-lasting. For details on 1 Series color choices, see pages 426-427.

Moonlight Black soffitop (Convertibles only, code 3YA)

A BMW first: special soffitop material with silver metallic highlights, offered at nominal extra cost. Operation of the fully automatic power soffitop is not affected by this option, and it is offered only in the one color, Black. Customers may also choose the standard soffitop material in Taupe as a no-extra-cost alternative to the standard Black.

Comfort Access (optional all models, code 322)

No need to activate a remote to unlock or lock the vehicle, or to insert it into the dash slot before starting the engine. Details in **BMW features**, page 58. On Convertibles, this option includes remote lowering and raising of the top from closer than 13 feet, and remote lowering from 13 ft. or more. See the Owner's Manual for more details on this capability.

Boston leather upholstery (optional all models, codes LW)

Available in 5 colors as either this stand-alone option or part of the Premium Package. In the Convertibles, it benefits from Sun Reflective Technology, which significantly reduces heating from sunlight.

Many choices of interior trim
(optional 128i models, optional at no extra cost 135i models; code 4A3, 4AS, 4AT or 4 MG)
While galvanic trim materials for

accents and functional elements appear in all vehicles, customers have extensive choices in the major trim across the dash, on the center console and on the door pulls. Here's the option scheme:

- **Gray Poplar wood**, code 4AS – Premium Package or stand-alone option, both 128i models; standard both 135i models
- **Light Burl Walnut**, code 4A3 – alternate with Premium Package or stand-alone option, both 128i models; optional at no extra cost, both 135i models
- **Glacier Silver Aluminum**, 4MG – alternate with Premium Package, 128i Coupe only; optional at no extra cost, 135i Coupe. Not available in Convertibles.
- **High-gloss black**, code 4AT – optional at no extra cost, both 135i models; standard both 128i models.

Power front seats and memory system
(optional all models, code 459)
Manually adjustable front seats are standard in all 1 Series models; the power seats are offered as a stand-alone option for customers who do not want the Premium Package. The memory provides two positions for each user, as identified by the remote he or she is using. Also included is auto tilt-down of the right-hand exterior mirror when the transmission is shifted into reverse, a very useful feature especially in parallel-parking.

Option 459 does not include the power-adjustable lumbar support that comes with the Premium Packages; with that feature, the number of power adjustments rises by 4.

1 Series key features

Except as noted, all current 3 Series models offer the following features:

Heated front seats

(optional all models, code 494)

Available as this stand-alone option or as part of the Cold Weather Package, the heated seats have impressive features:

- **Large heated area**, extending to the side bolsters.
- **High heating power**, fully 130 watts.

Heated steering wheel

(optional 135i models, code 248; not available with Sport Package)

Whereas the heated wheel is included in the 128i models' Cold Weather Package, for the 135i models it is offered as this stand-alone option but not in combination with the Sport Package. This is because there is not currently a heated version of the M Sport steering wheel that comes with the 135i Sport Package.

Navigation system + iDrive

(optional all models, code 609)

With this option, the instrument panel gains a dashtop center nacelle that houses the new fixed iDrive monitor, and a controller sits on the clean, uncluttered console behind the shift lever. The entire system is BMW's CIC (Car Information Computer) with –

- 8.8-in. Control Display, larger and higher-resolution (1280 x 480 pixels) than before
- New-type controller, with surrounding direct-select keys
- GPS Navigation with new hard-drive database
- Voice Command system
- Programmable Memory Keys, which enable users to program frequently used functions and recall them with a single keystroke.

In all '09 1 Series models, the iDrive system (including GPS Navigation) is the essentially all-new 2nd-generation system also introduced in the new 3 and 7 Series. An overview of BMW On-board Navigation Systems, including details on the new 2nd-generation system, is in **BMW features** on pages 63-65.

Premium audio system

(optional all models, code 677)

Like the standard audio system, the premium system also has 10 speakers including 2 subwoofers, in the same locations as those of the standard system but higher in quality and with higher audio power: 4 x 40 watts + 2 x 70, for a total of 300 watts.

Switchable Surround Sound is also included with the premium system; in Navigation-equipped 1 Series vehicles the controls for this feature appear in the iDrive system.

HD Radio

(optional all models, code 653)

The HD receiver provides digital-quality sound on FM, and improves AM sound to something like conventional FM. A more detailed description of HD Radio is found on pages 71-72.

Satellite Radio

(optional all models, code 655)

See **BMW features**, page 72, for details on this system; includes 1-year subscription. On Convertibles, the vehicle preparation for Satellite Radio can be deleted at no cost via code ZPD).

iPod/USB Adapter

(optional all models, code 6FL)

This option addresses the growing demand for in-vehicle digital music, and is positioned in the center console.

Smartphone Integration

(optional all models, code 6NF; requires iPod/USB Adapter)

Not only does this new option facilitate playing music files stored in one's own smartphone through the vehicle audio system, it also charges the phone and provides a hard-wired connection of the phone to the vehicle phone system. Requires adaptor for specific, BMW-approved smartphone model. Explained in more detail in **BMW features** on page 73.

Through-loading system and cargo bag

(optional Convertibles, code 4UT)

In addition to being part of the Convertibles' Cold Weather Package, this system is available on a stand-alone basis. It adds significantly to the Convertibles' cargo-carrying versatility.

The standard fixed rear backrest is replaced by one with a large (9 x 12-in.) through-loading opening. Normally this opening is concealed by a filler panel, which integrates with the backrest but may be taken out to reveal the opening. The panel can also be flipped over to form a flat surface.

The cargo bag, similar to that offered in 3 Series Convertibles, is larger than a conventional ski bag: It is designed and dimensioned to provide safe, clean transport of up to four pairs of standard skis, two snowboards or a medium-sized golf bag. It also includes a zipper for access to contents from the interior, and a retaining strap to secure contents against rattles and shifting around during vehicle maneuvers.

BMW Assist

(optional all models, code 639) In addition to being part of the Premium Package for all models, BMW Assist is also available as a stand-alone option. BMW Assist is BMW's comprehensive system of customer services and in-car telematics; for detailed information, see CenterNet or pages 442-446. The option price includes a 4-year subscription to BMW Assist Safety Services.

BMW center-installed accessories

The following items are available:

- Complete wheel and tire sets, 17-, 18- and 19-in.
- Wind deflector for Convertibles
- Rear spoiler
- Park Distance Control, rear only (aftermarket version, not same as factory option)
- Strut reinforcing braces from the front suspension's strut towers to the cowl area
- Sport muffler for more "sound of performance"
- Alarm system
- Nose mask
- Car covers, outdoor and indoor types
- Windshield sunshade
- Sun/wind deflector for moonroof
- Floor mats, carpet and rubber
- Aluminum pedals.

For details, see the latest **Original BMW Accessories** catalog for the 1 Series.

Standard & optional features

2009 BMW 1 Series

Bold within table indicates new feature for 2009.

Exterior design & function

Front & rear body-color bumpers

Xenon Adaptive headlights with luminous rings & auto-leveling

Cornering lights (included with Xenon lights)

Automatic headlight control

High-intensity headlight cleaning system

Daytime Running Lamps via luminous rings

Halogen free-form foglights

Heated windshield-washer jets

Rain-sensing windshield wipers

Power-folding exterior mirrors

Park Distance Control, rear only

Adaptive brakelights

Metallic paint

Chrome vertical grille slats

Fully automatic, fully lined power softtop, operable up to 25 mph

Moonlight Black softtop

M aerodynamic body components: front & rear bumper/spoiler ensembles, side sills

Trunklid spoiler

Black/chrome side-window trim

High-gloss Shadowline exterior trim

Matte-chrome exhaust tips

Black-chrome exhaust tips

Performance & efficiency

DOHC 24-valve inline 6-cylinder engine:

3.0-liter

3.0-liter twin-turbo

Engine features:

Magnesium/aluminum composite construction

Aluminum construction

Twin turbochargers

High Precision direct fuel injection with piezo injectors

Valvetronic system

Double VANOS¹ steplessly variable valve timing

Electronically controlled engine cooling

Electric water pump

Volume-controlled oil pump

Direct ignition system with knock control

Dual exhaust system

1 – VANOS = **V**ariable **N**ockenwellen

Steuerung = variable camshaft control, or variable valve timing.

S – Standard

OPT – Optional

NA – Not available

128i Coupe	128i Convertible	135i Coupe	135i Convertible
S	S	S	S
OPT	OPT	S	S
OPT	OPT	S	S
S	S	S	S
ZCW	ZCW	ZCW	ZCW
OPT	OPT	S	S
S	S	NA	NA
S	S	S	S
S	S	S	S
ZPP	ZPP	ZPP	ZPP
OPT	OPT	OPT	OPT
S	S	S	S
OPT	OPT	OPT	OPT
Black	Black	S	S
-	S	-	S
-	OPT	-	OPT
NA	NA	S	S
NA	NA	S	NA
S	-	S	-
ZSP	ZSP	ZSP	ZSP
S	S	-	-
NA	NA	S	S
128i Coupe	128i Convertible	135i Coupe	135i Convertible
S	S	-	-
-	-	S	S
S	S	-	-
-	-	S	S
NA	NA	S	S
NA	NA	S	S
S	S	-	-
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
Partial dual	Partial dual	S	S

— — Not applicable
ZCW – Cold Weather Package

ZPP – Premium Package
ZSP – Sport Package

Standard & optional features

2009 BMW 1 Series

Bold within table indicates new feature for 2009.

Performance & efficiency (cont.)

6-speed manual transmission

6-speed STEPTRONIC automatic transmission with Normal, Sport & Manual shift modes

Shift paddles on steering wheel

Double-pivot-type front suspension

Aluminum front suspension components

5-link rear suspension

Aluminum front/rear subframes

Convertible-specific underbody reinforcements

Twin-tube gas-pressure shock absorbers

Sport suspension calibration

Engine-speed-sensitive variable-assist power steering

Active Steering with Servotronic vehicle-speed-sensitive power assist

4-wheel ventilated disc brakes

Special high-performance brake system with larger rotors, 6-piston front/2-piston rear fixed aluminum calipers; heat-resistant black finish & BMW lettering on calipers

Dynamic Stability Control

Alloy wheels:

16 x 7.0 V Spoke (design #255)

17 x 7.0 Star Spoke (design #256)

17 x 7.0 Star Spoke (design #142)

17 X 7.0 front/17 x 7.5 rear Star Spoke (design #262)

18 x 7.5 front/18 x 8.5 rear Star Spoke (design #264)

Run-flat tires:

205/55R-16 all-season

205/50R-17 all-season

205/50R-17 front / 225/45R-17 rear performance

215/40R-18 front / 245/35R-18 rear performance

Tire Pressure Monitor

2 – Required with automatic transmission & Sport Package.

3 – Required with automatic transmission & Sport Package; include Sport automatic transmission with special shift programming & other features.

4 – Includes electronic limited-slip-differential function.

128i Coupe	128i Convertible	135i Coupe	135i Convertible
S	S	S	S
OPT	OPT	OPT	OPT
OPT ²	OPT ²	OPT ³	OPT ³
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
—	S	—	S
S	S	S	S
ZSP	ZSP	S	S
S	S	S	S
NA	NA	OPT	OPT
S	S	S	S
NA	NA	S	S
S	S	S ⁴	S ⁴
—	S	—	—
S	NA	—	—
NA	NA	OPT	S
ZSP	ZSP	—	—
NA	NA	S	ZSP
—	S	—	—
S	S	OPT	S
ZSP	ZSP	—	—
NA	NA	S	ZSP
S	S	S	S

S – Standard
 OPT – Optional
 NA – Not available
 — – Not applicable

ZCW – Cold Weather Package
 ZPP – Premium Package
 ZSP – Sport Package

Standard & optional features

2009 BMW 1 Series

Bold within table indicates new feature for 2009.

Comfort & convenience

Doorsill trim plates with chrome trim & BMW lettering

Vehicle & Key Memory

Multi-function remote control with selective unlocking⁵

BMW Ambiance Lighting

Comfort Access

Dual power/heated exterior mirrors

Automatic-dimming interior & exterior mirrors

Digital compass in interior mirror

BMW Universal Transceiver (garage-door opener)

Courtesy lights with fade-in/fade-out feature, actuation from remote, automatic switch-on upon engine shutoff

Exterior ground lighting, separately controlled left/right front reading lights, illuminated visor mirrors, front BMW Ambiance Lighting & front footwell lighting

Lockable glove compartment

Tilt/telescopic 3-spoke leather-wrapped sport steering wheel with fingertip audio, air recirculation, Voice Command⁶ & phone⁷ control

M Sport steering wheel with same features

Heated steering wheel

Dynamic cruise control

6-way adjustable front seats

8-way power front seats

4-way power front-seat lumbar support

8-way adjustable front sport seats with power-adjustable backrest width, manual thigh-support adjustment

10-way power front sport seats with power-adjustable backrest width, manual thigh-support adjustment

Memory system for driver's seat & exterior mirrors (2 settings per user)

Auto tilt-down of right-hand exterior mirror for backing up

3-stage, thermostatically controlled heated front seats

Fold-up front center armrest

Dual cupholders in front center console

Accessory power outlet in front center console

Electronic analog speedometer & tachometer

LCD main & trip odometers

Check Control vehicle monitor system

5 – Selectable via Vehicle & Key Memory.

6 – This control active when vehicle is equipped with Navigation/iDrive option.

7 – Phone controls active when vehicle is equipped with BMW Assist and approved cellphone is used in combination with Bluetooth interface.

8 – Requires Cold Weather Package; not available in combination with Sport Package.

9 – Power sport seats when Premium & Sport Packages are combined, or when stand-alone power-seats option & Sport Package are combined. If Premium Package, 4-way power lumbar support is also included.

10 – Included with all power seats.

128i Coupe	128i Convertible	135i Coupe	135i Convertible
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
OPT	OPT	OPT	OPT
S	S	S	S
ZPP	ZPP	ZPP	ZPP
ZPP	ZPP	ZPP	ZPP
ZPP	ZPP	ZPP	ZPP
S	S	S	S
ZPP	ZPP	ZPP	ZPP
S	S	S	S
S	S	S	S
NA	NA	ZSP	ZSP
ZCW	ZCW	OPT⁸	OPT⁸
S	S	S	S
S	S	S	S
ZPP/OPT	ZPP/OPT	ZPP/OPT	ZPP/OPT
ZPP	ZPP	ZPP	ZPP
ZSP	ZSP	ZSP	ZSP
OPT/ZPP + ZSP ⁹	OPT/ZPP + ZSP ⁹	OPT/ZPP + ZSP ⁹	OPT/ZPP + ZSP ⁹
OPT/ZPP ¹⁰	OPT/ZPP ¹⁰	OPT/ZPP ¹⁰	OPT/ZPP ¹⁰
OPT/ZPP ¹⁰	OPT/ZPP ¹⁰	OPT/ZPP ¹⁰	OPT/ZPP ¹⁰
OPT/ZCW	OPT/ZCW	OPT/ZCW	OPT/ZCW
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S

S – Standard
OPT – Optional
NA – Not available

ZCW – Cold Weather Package
ZPP – Premium Package
ZSP – Sport Package

Standard & optional features

2009 BMW 1 Series

Bold within table indicates new feature for 2009.

Comfort & convenience (cont.)

On-board computer monitoring current & cumulative fuel economy, average speed, ambient temperature, date & time; also includes freeze warning

2nd-generation iDrive system with 8.8-in. high-resolution control display, GPS Navigation; **direct-select radio, CD, phone & Navigation menus**; 6 Programmable Memory Keys, Voice Command, Real Time Traffic Information & other features

Hard drive for Navigation, entertainment, Voice Command & phone system

Leatherette upholstery

Boston leather upholstery (Convertibles: with Sun Reflective Technology)

High-gloss black interior trim

Light Burl Walnut interior trim

Gray Poplar interior trim

Glacier Silver Aluminum interior trim

Power door windows with key-off operation; 1-touch opening & closing, anti-trapping feature, opening from remote

Power rear side windows with 1-touch opening, opening from remote

Automatic climate control with separate left/right temperature settings, automatic recirculation control, misting sensor, activated-charcoal microfilter ventilation, draft-free airflow & other features

Convertible mode for automatic climate control

Fully automatic, fully lined power softtop

Anti-theft AM/FM/CD/MP3 audio system with 10 speakers including 2 subwoofers, Radio Data System (RDS), diversity antenna system, auxiliary audio input & other features

Premium audio system with Surround Sound simulation; increased audio power, upgraded componentry throughout & all features of standard system

HD Radio

Satellite Radio

iPod/USB Adapter

Smartphone Integration

Pre-wiring for 6-disc DC changer

6-disc CD changer

Bluetooth cellphone interface with high-capacity phonebook download

Open storage compartments & bins in doors & center console (Coupe only: also between rear seats)

Split folding rear seats

11 – Included with Navigation/iDrive option.

12 – Requires iPod/USB Adapter.

S – Standard

OPT – Optional

NC – No extra cost

128i Coupe	128i Convertible	135i Coupe	135i Convertible
S	S	S	S
OPT	OPT	OPT	OPT
OPT¹¹	OPT¹¹	OPT¹¹	OPT¹¹
S	S	S	S
OPT/ZPP	OPT/ZPP	OPT/ZPP	OPT/ZPP
S	S	NC	NC
ZPP/OPT	ZPP/OPT	NC	NC
ZPP/OPT	ZPP/OPT	S	S
ZPP	NA	NC	NA
S	S	S	S
NA	S	NA	S
S	S	S	S
-	OPT ¹¹	-	OPT ¹¹
-	S	-	S
S	S	S	S
OPT	OPT	OPT	OPT
OPT	OPT	OPT	OPT
OPT	OPT	OPT	OPT
OPT	OPT	OPT	OPT
OPT¹²	OPT¹²	OPT¹²	OPT¹²
S	S	S	S
C	C	C	C
OPT/ZPP	OPT/ZPP	OPT/ZPP	OPT/ZPP
S	S	S	S
S	NA	S	NA

C – BMW center-installed
 NA – Not available

— – Not applicable
 ZPP – Premium Package

Standard & optional features

2009 BMW 1 Series

Bold within table indicates new feature for 2009.

Comfort & convenience (cont.)

Ski bag

Through-loading system & cargo bag

Rear-window defroster

Interior trunk release, electrically operated

Storage net & tie-down strap in trunk

Variable trunk capacity, softtop raised/lowered

Safety & security

Dynamic Stability Control, including electronic brake proportioning, antilock braking (ABS), cornering/braking stability enhancement, Dynamic Traction Control, Dynamic Brake Control, Brake Fade Compensation, Brake Standby, Brake Drying & Start-off Assistant

Dual front-impact airbag Supplementary Restraint System (SRS) with dual-threshold deployment, 2-stage Smart Airbags

3-point safety belts at all seating positions (4)

Front safety belts with automatic tensioners & force limiters

LATCH attachments at rear seating positions

Front seats optimized for protection in rear impact

Head restraints at all seating positions (4)

Front- & rear-seat Head Protection System

Rollover Protection System

Front-seat side-impact airbags, seat-mounted

Front-seat side-impact airbags, seat-mounted with head protection

Post-impact safety measures:

Unlocking of central locking system

Switch-on of hazard flashers

Switch-on of interior lighting

Disconnect of alternator, fuel pump & starter from battery (via Battery Safety Terminal)

BMW Assist, including **enhanced** collision notification, Assist & SOS buttons, enhanced Roadside Assistance, TeleService¹³, BMW Assist Safety Plan¹³, Bluetooth cellphone interface

Central locking system with selective unlocking⁵

Coded Driveway Protection

Alarm system with operation from remote, interior motion detector

5 – Selectable via Vehicle & Key Memory.

13 – Requires BMW Assist annual fee after 4th year.

S – Standard

OPT – Optional

C – BMW center-installed

128i Coupe	128i Convertible	135i Coupe	135i Convertible
ZCW	—	ZCW	—
NA	OPT/ZCW	NA	OPT/ZCW
S	S	S	S
S	S	S	S
S	S	S	S
—	S	—	S
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
S	—	S	—
—	S	—	S
S	—	S	—
—	—	S	S
S	S	S	S
S	S	S	S
S	S	S	S
S	S	S	S
OPT/ZPP	OPT/ZPP	OPT/ZPP	OPT/ZPP
S	S	S	S
S	S	S	S
C	C	C	C

NA – Not available
 — – Not applicable

ZCW – Cold Weather Package
 ZPP – Premium Package

Technical specifications

2009 BMW 1 Series

Bold within table indicates new feature for 2009.

General

Curb weight, lb.:

Manual transmission

Automatic transmission

Weight distribution, front/rear, %:

Manual transmission

Automatic transmission

Wheelbase, in.

Track, front/rear, in. (with standard wheels)

Length, in.

Width, in.

Height, in.

Body

Type

Aerodynamic drag coefficient (C_D)

EPA size classification

Accommodations

Seating capacity, persons

Head room, front/rear, in.

Leg room, front/rear, in.

EPA passenger-compartment volume, cu ft.

EPA cargo volume

Engine & electrical

Engine type

Bore x stroke, mm/in.

Displacement, cc/cu in.

Compression ratio

Power @ rpm, hp

Torque @ rpm, lb-ft.

Engine-management system

- 1 – Specification applies to all models.
2 – Specification applies to both Coupe models.

- 3 – Specification applies to both Convertible models; cargo volumes for Convertibles with softtop compartment up/down.

128i Coupe	128i Convertible	135i Coupe	135i Convertible
3252	3494	3373	3660
3329	3571	3384	3671
50.8/49.2	48.3/51.7	52.3/47.7	50.3/49.7
51.3/48.7	49.1/50.9	52.4/47.6	50.5/49.5
104.7 ¹			
58.3/59.6	58.3/59.6	57.9/58.9	58.0/59.3
172.2 ¹			
68.8 ¹			
56.0	55.6	55.4	55.6
128i Coupe	128i Convertible	135i Coupe	135i Convertible
2-door Coupe ²			
0.31	0.34	0.33	0.34
Subcompact ¹			
128i Coupe	128i Convertible	135i Coupe	135i Convertible
4 ¹			
36.7/35.9 ²	38.6/37.0 ³		
41.4/32.0 ²	41.2/31.3 ³		
85.6 ²	78.0 ³		
10.0 ²	8.0/7.0 ³		
128i Coupe	128i Convertible	135i Coupe	135i Convertible
DOHC inline 24-valve 6-cylinder, magnesium/aluminum composite construction, Valvetronic variable intake-valve lift & Double VANOS ⁴ steplessly variable intake- & exhaust-valve timing ⁵		DOHC inline 24-valve 6-cylinder, aluminum construction with cast-iron cylinder liners, direct fuel injection with piezo injectors, twin turbochargers, Double VANOS ⁴ steplessly variable intake- & exhaust-valve timing ⁶	
85.0 x 88.0/3.35 x 3.46 ⁵		84.0 x 89.6/3.31 x 3.53 ⁶	
2996/183 ⁵		2979/182 ⁶	
10.7:1 ⁵		10.2:1 ⁶	
230 @ 6500 ⁵		300 @ 5800 ⁶	
200 @ 2750 ⁵		300 @ 1400-5000 ⁶	
MSV80 with knock control (2 sensors); Valvetronic, variable valve timing, engine cooling & other functions included in control strategy		MSD80 with knock control (2 sensors); direct fuel injection, variable valve timing, engine cooling & other functions included in control strategy ⁶	
4 – VANOS = VA riable NO ckenwellen S teuerung = variable camshaft control, or variable valve timing.		5 – Specification applies to both 128i models.	
		6 – Specification applies to both 135i models.	

Technical specifications

2009 BMW 1 Series

Bold within table indicates new feature for 2009.

Engine & electrical (cont.)

Induction system

Fuel requirement

Fuel capacity, U.S. gal.

Battery capacity, amp-hr.

Alternator output rating, amp./W

Drivetrain

Drive system

Manual transmission

Ratios: 1st

2nd

3rd

4th

5th

6th

Reverse

Final drive ratio

Automatic transmission

Ratios: 1st

2nd

3rd

4th

5th

6th

Reverse

Final drive ratio

Chassis

Body/frame construction

Front suspension

Rear suspension

1 – Specification applies to all models.

5 – Specification applies to both 128i models.

6 – Specification applies to both 135i models.

128i Coupe	128i Convertible	135i Coupe	135i Convertible
Single-stage ¹			
Premium unleaded ¹			
14.0 ¹			
70 ¹			
150/2100 ¹			

128i Coupe	128i Convertible	135i Coupe	135i Convertible
Front engine/rear-wheel drive ¹			
6-speed ¹ , Type I ⁵		Type G ⁶	
4.32:1 ⁵		4.06:1 ⁶	
2.46:1 ⁵		2.40:1 ⁶	
1.66:1 ⁵		1.58:1 ⁶	
1.23:1 ⁵		1.19:1 ⁶	
1.00:1 ¹		1.00:1 ¹	
0.85:1 ⁵		0.87:1 ⁶	
3.94:1 ⁵		3.68:1 ⁶	
3.23:1 ⁵		3.08:1 ⁶	
6-speed ¹ , GM 6 ⁵		6 HP 19 TU ⁶	
4.06:1 ⁵		4.17:1 ⁶	
2.37:1 ⁵		2.34:1 ⁶	
1.55:1 ⁵		1.52:1 ⁶	
1.16:1 ⁵		1.14:1 ⁶	
0.85:1 ⁵		0.87:1 ⁶	
0.67:1 ⁵		0.69:1 ⁶	
3.20:1 ⁵		3.40:1 ⁶	
3.73:1 ⁵		3.46:1 ⁶	

128i Coupe	128i Convertible	135i Coupe	135i Convertible
Unitized steel ¹			
Struts, double-pivot lower arms, coil springs, twin-tube gas-pressure shock absorbers, tubular anti-roll bar, subframe; aluminum lower arms, steering knuckle & subframe (sport suspension calibration standard 135i models, ZSP 128i models) ¹			
5-link system, coil springs, twin-tube gas-pressure shock absorbers, tubular anti-roll bar (sport suspension calibration standard 135i models, ZSP 128i models) ¹			

ZSP – Sport Package

Technical specifications

2009 BMW 1 Series

Bold within table indicates new feature for 2009.

Chassis (cont.)

Rack-&-pinion steering:

Standard system

Overall ratio

Turns lock-to-lock

Optional Active Steering

Overall ratio

Turns lock-to-lock

4-wheel ventilated disc brakes, vacuum-assisted:

Front diameter, mm/in.

Rear diameter, mm/in.

Caliper type/material, front

Caliper type/material, rear

Cast-alloy wheels:

standard

optional

Run-flat tires:

standard

optional

Stability-enhancement system

Performance data

Acceleration, 0-60 mph, sec.⁸:

Manual transmission

Automatic transmission

Top speed, mph⁹:

Standard

Sport Package

EPA estimated MPG, city/highway¹⁰:

Manual transmission

Automatic transmission

1 – Specification applies to all models.

5 – Specification applies to both 128i models.

6 – Specification applies to both 135i models.

7 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. 1 Series models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

128i Coupe		128i Convertible		135i Coupe		135i Convertible	
Engine-speed-sensitive power assist ¹							
16.0:1 ¹							
3.0 ¹							
Vehicle-speed-sensitive ratio & power assist (available 135i models only)							
Electrically/electronically variable over wide range of 10.8:1 – 18.0:1							
1.8-3.0							
300/11.8 ⁵				338/13.3 ⁶			
300/11.8 ⁵				324/12.8 ⁶			
Floating/aluminum				6-piston fixed/aluminum			
Floating/cast iron				2-piston fixed/aluminum			
17 x 7.0		16 x 7.0		18 x 7.5 front/ 18 x 8.5 rear		17 x 7.0	
17 x 7.0 front/ 17 x 7.5 rear ⁵ (ZSP)				17 x 7.0 (stand-alone)		18 x 7.5 front/ 18 x 8.5 rear (ZSP)	
205/50R-17 all-season		205/55R-16 all-season		215/40R-18 F/ 245/35R-18 R performance ⁷		205/50R-17 all-season	
205/50R-17 front/ 225/45R-17 rear performance ^{5,7} (ZSP)				205/50R-17 all-season (stand-alone)		215/40R-18 front/ 245/35R-18 rear performance ⁷ (ZSP)	
Dynamic Stability Control, including electronic brake proportioning, antilock braking (ABS), cornering/braking stability enhancement, Dynamic Traction Control, Dynamic Brake Control, Brake Fade Compensation, Brake Standby, Brake Drying & Start-up Assistant ¹ ; 135i models only add electronic limited-slip differential							
128i Coupe		128i Convertible		135i Coupe		135i Convertible	
6.1		6.4		5.1		5.4	
6.7		7.0		5.2		5.5	
130 ¹							
150 ¹							
18/28		18/28		17/25		17/26	
19/28		18/27		18/25		17/26	

8 – BMW AG test results. Actual acceleration results may vary depending on specification of vehicle; road and environmental conditions; testing procedures and driving style. These results should be used for comparison only, and verification should not

be attempted on public roads. BMW urges you to obey all posted speed limits and to please wear your safety belt at all times.

9 – Electronically limited.

10 – Preliminary data.

ZSP – Sport Package

2009 BMW M6 Coupe & Convertible:

Ultimate BMW M Power, sophistication and style, discreetly updated for the new model year.

In their technology and engineering, the M6 Coupe and Convertible are essentially the same as the M5; in their style and seating capacity, they present ultimate BMW Power in a sportier, more stylish form. In a comparison test of these two M masterpieces, *Road & Track* (February '06) put the contrast this way: "If you need space, the M5 is the one. For those who don't, the M6 performs ever so slightly better according to the numbers." As for the obvious differences in the two models' designs, the magazine commented that the M6 draws more attention – no surprise given the M6s' more overt sportiness and greater exclusivity. *R&T* also recognized the excellence of both choices with the opinion that "truth is that you'll be hard-pressed to find two more competent, confidence-inspiring cars for high-speed traveling."

Regarding the choice between M6 and M5, in the end it's a question of priorities. BMW M offers the choice: the pleasure of choosing belongs to the customer.

Road & Track was evaluating and commenting on the M6 Coupe, but since '07 there has also been the M6 Convertible: essentially identical in size, technology and format, yet adding the appeal of a daringly designed, fast-folding, luxuriously weatherproofed softtop and special safety features such as seat-integrated safety belts and the Rollover Protection System.

For 2008, the two basic Series (6 and 5) and their BMW M counterparts all get a freshening; for the M6s, this consists of esthetic and functional enhancements listed below.

What's new for 2009

As of 9/08 production:

Both models

- New metallic exterior colors: Carbon Black, Stratus Gray
- New iDrive controller, with direct-select buttons clustered around it (essentially same as new 7 Series arrangement)
- Optional Smartphone Integration

M6 models & key features

This information lists major features, and helps position and distinguish the models in the Series. For a comprehensive summary of features, see pages 350-355.

M6 Coupe

BMW's ultimate performance Coupe, based on the 650i Coupe. While offering luxurious 2+2 accommodations in a closed-body format, the M6 Coupe takes 6 Series design, performance and handling to another dimension altogether. The listing here focuses on features that differentiate the M6 from its 650i counterpart.

Exterior design & function

- Unique front bumper/spoiler/air-intake ensemble
- Subtly different trim on body sides at turn-signal indicators, with M logo
- More boldly sculpted side sills/rocker panels
- Carbon-fiber roof
- Standard Satin Chrome Shadowline side-window trim
- M exterior mirrors, shaped to enhance aerodynamics and reduce wind noise
- Rear bumper/spoiler/diffusor ensemble with carbon-fiber structural bumper carrier
- Four round stainless-steel exhaust outlets
- Four unique BMW M metallic paint colors

Performance & efficiency

- 5.0-liter V-10 engine – 500 hp, 383 lb-ft. torque (650i: 4.8-liter V-8, 360 hp, 360 lb-ft.)
- 7-speed Sequential Manual Gearbox with DRIVELOGIC and Launch Control
- M Variable Differential Lock
- Specially modified and calibrated front and rear suspension

- Electronic Damping Control (EDC), conceived and calibrated for M6 performance
- Special steering system: “quicker” than 6 Series, two levels of Servotronic power assist tied to EDC's Comfort, Normal and Sport settings. Active Steering not available.
- Compound, cross-ventilated disc brakes – sharing with M5 BMW's largest-dimensioned, most powerful brakes ever – with black-painted calipers, 2-piston front calipers
- 19 x 8.5 front/19 x 9.5 rear M Radial Double Spoke wheels (design #167M) with 255/40R-19 front / 285/35R-19 rear performance tires¹
- BMW M-calibrated Dynamic Stability Control (DSC) with selectable M Dynamic Mode
- MDrive (submenu in iDrive system) – allows driver to combine personal preferences into a single setting, selectable via button on steering wheel:
 - Three levels of engine power and throttle response
 - SMG DRIVELOGIC shift-program settings²
 - DSC modes and de-activation
 - EDC/steering settings
 - Settings of available Head-Up Display (standard or M display)

In addition to these selections within MDrive menu, the power (two of the three levels), SMG², DSC and EDC settings can be selected via console controls.

1 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. M6 models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

2 – Applies only to vehicles equipped with SMG.

M6 models & key features

This information lists major features, and helps position and distinguish the models in the Series. For a comprehensive summary of features, see pages 350-355.

Comfort & convenience

- Power-folding exterior mirrors
- Doorsill trims with M6 logo, illuminated as in 6 Series
- Unique speedometer and tachometer dials with –
 - Outer rings in Titanium II finish
 - Illuminated scale rings
 - Red indicator needles
 - Specific scales (speedometer to 200 mph/330 km/h, tachometer to 9000 rpm)
 - M logo and oil-temperature gauge on tachometer face
- Specific range of information displayed in Head-up Display (in addition to standard set)
- Digital/acoustic engine oil-level warning
- Short, illuminated SMG² selector/shift lever
- Power, DSC, EDC and SMG² mode switches on console
- MDrive submenu in iDrive
- Standard 13-speaker Logic7 audio system
- Heated M sport front seats standard (14-way power adjustment including 4-way lumbar and backrest width; manual thigh-support adjustment)
- Extended Leather upholstery with Merino leather, BMW's finest grade –
 - Numerous upgrades to interior materials
 - Unique BMW M color selection
 - Full Leather optional

- Walnut Madeira wood interior trim (Dark) standard
- Titanium II shift paddles², shift-lever surround, interior door handles and iDrive controller
- Anthracite-color headliner (Alcantara material with Full Leather interior)

Options & packages

- 6-speed manual transmission at no extra cost
- High Beam Assistant
- Soft-close doors
- Comfort Access
- Heated steering wheel
- Full Leather upholstery, with Merino leather additionally on instrument panel, larger areas of doors, center console and rear side panels; roof pillars and headliner in Alcantara material
- Madera Walnut (Dark) or Olive Ash (Light) wood interior trim at no extra cost
- Carbon Fiber Black interior trim at extra cost
- M Head-up Display
- Enhanced Premium Sound System
- HD Radio
- Satellite Radio
- iPod/USB Adapter
- Smartphone Integration³

M6 Convertible

With essentially the same 2+2 seating, an innovative softtop and Convertible-specific safety features, the M6 Convertible differs from the M6 Coupe in the same ways that the 650i Convertible differs from its Coupe stablemate. Compared to the M6 Coupe, this model's distinguishing points include:

- Convertible-specific body structure
- Fully automatic, fully lined power softtop of unique design; same Black and Gray color choices as 650i
- Different acceleration and fuel-economy data (Convertible weighs more than Coupe)
- Power rear side windows
- All-window operation via one switch
- Retractable rear window; can be lowered with top up for flow-through ventilation, or raised with top down for draft control
- Unique front seats, with seat-integrated safety belts, power head-restraint/belt-height adjustment and power easy-entry feature; do not have Coupe's backrest-width adjustment
- Rollover Protection System instead of Head Protection System
- Variable softtop storage compartment; maximizes trunk space when softtop is raised
- Standard Logic7 audio system has 11 speakers
- Available wind deflector, BMW center-installed

2 – Applies only to vehicles equipped with SMG.

3 – Requires iPod/USB Adapter.

M6 key features

Based on the 6 Series, the two M6 models differ from their 6 Series counterparts in the following key features:

Exterior design & function

Exciting 6 Series shape, expressive M details

From the bold BMW “kidney” grilles and freely shaped lighting clusters flanking them...through a long hood signifying power... through a sleek and graceful silhouette...to BMW’s characteristic (and “highly” functional) rear deck...the 6 Series shape is one of BMW’s boldest and most exciting ever. Within this overall concept, BMW M applies specific details that enhance these automobiles’ inherent visual sportiness as well as their high-caliber functionality. Indeed, this is the BMW M tradition and philosophy: Accommodate and express the heightened performance capabilities of the M model while maintaining the elegance and good taste of BMW design. M6 exterior design adheres strictly to this precept – and in doing so, subtly but clearly communicates the spectacular performance of which this duo of ultimate BMWs is capable.

At the front: the thrust of BMW M performance, expressed visually

Typically BMW M, the M6 front end masterfully combines esthetics and function. The center air intake is quite large, as it must be to supply the immensely powerful V-10 engine’s cooling systems. At each side, a supplementary air intake also admits air for engine induction. The functional requirement of supplying air to the powertrain precludes front foglights; they aren’t offered on M6s.

In profile

Both models. All current BMW models incorporate additional turn-signal indicators, so-called “repeat blinkers,” in their front

flanks. On the 6 Series, these are especially elegant: parallelogram lenses, set flush into a recess that forms the origin of a side character line and split by a long, thin molding. Here the contours are so delicately drawn that the front side panels – “fenders” in traditional parlance – had to be made of thermoplastic material. In turn, this material saves weight and enhances front/rear weight distribution. Distinctive from regular-production 6 Series models is an M6 logo, set onto the long molding.

Coupe. Satin Chrome Shadowline side-window trim, as included in the 650i Sport Package, is standard on the M6 Coupe; gracefully shaped M side mirrors accommodate airflow smoothly while setting a visual accent with a horizontal dividing line between their upper and lower surfaces. Because the lower portion is always in high-gloss black, the mirrors make a color contrast with all exterior colors except Black Sapphire or Carbon Black.

Also distinctive in the profile view: a more aggressively sculpted rocker panel and the 19-in. M Double Spoke wheels.

Convertible. Here the Satin Chrome Shadowline appears along the Convertible’s beltline, and the differences between the two models’ silhouettes are as described in the 6 Series section on page 148.

At the rear

As at the front, M6 character in rear view is dominated by a bumper/spoiler ensemble that is exclusive in both appearance and function. Lighting equipment in the bumper itself – including backup lights and reflectors – is set higher than on the 6 Series,

and in a uniquely sculpted, nearly full-width recess. At the center is a diffusor, which helps –

- smooth the exit of airflow under the vehicle
- facilitate cooling of the final drive and its M Variable Differential Lock.

Together with “flaps” at the sides, this helps control aerodynamic lift. The flaps also visually frame the dual chrome exhaust tips at each side.

Special M exterior colors

As befits BMW M's premier models, M6s offer 10 exterior colors, four of them exclusive to M Cars:

- **Interlagos Blue** – a deep blue metallic
- **Sepang Bronze** – a metallic that departs daringly from the conventional
- **Indianapolis Red** – also metallic, dramatically bold
- **Silverstone** – a bluish-gray metallic.

From the regular-production color palette, BMW M offers non-metallic Alpine White and four metallics: Stratus Gray, Black Sapphire, Monaco Blue and Space Gray. An additional special metallic, Carbon Black, is also available on the 6 Series and 550i with Sport Package and thus not M-exclusive.

Carbon-fiber roof (Coupe)

One of the M6 Coupe's most intriguing exterior details is its carbon-fiber main roof panel, and it's not merely an esthetic feature. Extending laterally between the outer (steel) roof panels and longitudinally from the windshield to the rear window, this innovative panel saves almost 10 pounds. This may not seem

like much until one notes that this savings is at the very top of the vehicle; thus the M6's center of gravity is lowered. As the M6's suspension is also set lower than that of a 650i, its center of gravity is significantly lower; handling and stability are enhanced.

The roof panel's “grain” or texture adds an attractive esthetic accent too; it is protected by a clear coat. With the optional Carbon Fiber Black interior trim, an intriguing visual connection between exterior and interior is created. (This material is also available in the Convertible.)

Because of this unusual roof feature, the 6 Series' Panoramic Moonroof is not present on the M6.

Carbon-fiber rear bumper carrier and other innovative materials

Both M6 models share the 6 Series' extensive application of advanced, weight-saving materials in its body/chassis structure:

- Full aluminum front-end structure
- Aluminum hood
- Thermoplastic front side panels (fenders)
- Aluminum doors
- SMC (Sheet Molding Compound) trunklid.

In addition, the M6 rear bumper carrier – the structure that receives and absorbs impact forces from the bumper – is made of carbon fiber. In every such application, the advanced material saves weight while maintaining at least the strength of conventional steel; this reduces weight without compromising function, and thus enhances performance.

M6 key features

Based on the 6 Series, the two M6 models differ from their 6 Series counterparts in the following key features:

Performance & efficiency

5.0-liter DOHC (4-cam) 40-valve V-10 engine

With this amazing V-10 engine, BMW M presents more than just an unusual number of cylinders. Called the S85, it positively bristles with advanced, high-performance-oriented technology and is described in detail in **BMW features** on pages 36-39.

The S85 catapults the M6 Coupe from 0 to 60 mph in just 4.5 sec.; the heavier Convertible accomplishes this sprint in 4.6 sec. EPA mileages are 11 mpg city/17 mpg highway for all M6 Coupe and Convertible versions.

7-speed Sequential Manual Gearbox

For '09 the 7-speed SMG remains standard in both M6s. For details on this amazing transmission, fully as innovative as the V-10 engine, see **BMW features**, pages 41-43.

6-speed manual transmission (optional at no extra cost)

By popular request, a 6-speed manual transmission is available as a no-extra-cost alternative to the SMG. It is controlled by a handsome shift knob with illuminated 6-speed pattern and M logo.

Other differences from SMG-equipped M6 models include:

- No shift paddles on steering wheel
- Power button and SMG program selector deleted from console
- DSC switch in console replaced by MDM (M Dynamic Mode) switch in center stack.

M6 suspension system: targeted modifications

Handling and roadability modifications from the 650i models on which M6s are based fall into multiple categories: changes to the fundamental suspension system and its connections to the body structure; addition of a special M version of Electronic Damping Control; the M Variable Differential Lock; Servotronic steering with two levels of power assist; hugely dimensioned, cross-drilled brakes; and wheels and tires that give M6s an awesome footprint. All feed into a chassis configuration that produces two of the most road-competent Grand Touring vehicles ever created.

Start with the suspension hardware, the 6 Series' advanced all-aluminum system. The vehicle's frontal structure is also aluminum, helping conserve weight and optimize weight distribution. Other special materials in the 6 Series (see page 139) also spare weight and fine-tune weight distribution; the M6 Coupe's carbon-fiber roof saves weight while also lowering the center of gravity, and its carbon-fiber rear bumper structure saves yet more weight.

At the front, the modifications are in the details: modified (still aluminum) subframe and thrust plate, fine-tuning of the geometry, more rigid bushings, 0.4-in. wider track. At the rear, the changes are more extensive:

- The subframe is modified.
- The links are M6-specific.
- Bushings are stiffer.
- Axle halfshafts are hollow for reduced weight, yet greater strength.
- Geometry is tailored to the much greater torque that will be poured through the whole system.

Here the track is actually narrower (by 0.4 in.) than that of 650i models with standard wheels, because the 9.5-in.-wide rear wheels' center plane must be farther inboard for their massive 285/35 tires¹ to clear the bodywork.

And at all four wheels, specially calibrated springs and shock absorbers – the latter made variable by Electronic Damping Control – complete a sporting suspension setup that only BMW M could create.

M Electronic Damping Control

EDC steplessly controls the shock absorbers to any level of firmness between their softest and firmest settings, precisely adapting to the road conditions and driver's demands at any given moment. M EDC is now offered in all M Cars: standard on M6 and M5, optional on M3. For a detailed description, see **BMW features**, page 47.

M Variable Differential Lock: putting power to the road, the BMW M way

Mechanical limited-slip differentials are part of the BMW M tradition of ultimate road handling. BMW M engineers developed a more capable mechanical limited-slip differential; called the M Variable Differential Lock, this concept appears in all current BMW M models; for an explanation of how it works, see **BMW features**, pages 52-53.

Servotronic steering with two effort levels

Like all current 7, 6 and 5 Series models (plus 1 and 3 Series models with Active Steering), the M6's rack-and-pinion steering system has Servotronic vehicle-

speed-sensitive power assist. Servotronic provides the strongest assist at low vehicle speeds for ease in parking and low-speed maneuvers, and then progressively decreases assist to preserve steering feel as road speed increases. All these models also have a variable steering ratio, which gradually becomes "quicker" (greater steering angle relative to steering-wheel turns) as the steering wheel is turned away from its center position. (Active Steering, not available on M Cars, varies steering ratio more widely, and in a different way.) For details on BMW's power-steering systems, see **BMW features**, pages 48-50.

The M6 steering system offers the driver a choice of **two levels of assist**: Normal, with the typical BMW level of assist, and Sport, with a higher overall level of effort (less assist) for sportier feel. Within these two settings, Servotronic still varies the assist according to vehicle speed.

Immensely powerful, fade-resistant compound, cross-drilled brakes

Powerful brakes are always a BMW strength; even more so with the M Cars, which take all aspects of BMW performance to an even higher level. M6 brakes are immensely dimensioned, 4-wheel ventilated **compound disc brakes**; shared with the M5 and (with different dimensions) the new M3s too, these ultimate brakes are described in **BMW features** on page 52.

1 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. M6 models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

M6 key features

Based on the 6 Series, the two M6 models differ from their 6 Series counterparts in the following key features:

Wheels and tires: ultimate grip and style

In its wheel-tire equipment, M6s take the 6 Series platform to its ultimate level of performance and style. The wheels, in an ultra-open, tastefully aggressive M Double Spoke design (five double spokes; design #167M), are sized 19 x 8.5 front/19 x 9.5 rear and carry 255/40R-19 front / 285/35R-19 high-performance tires¹ that have been specially developed for the M5 and M6. The wheels are of forged alloy, saving almost 4 lb. per wheel compared to the more common cast-alloy construction.

These are not run-flat tires; there are not yet run-flats that meet BMW M parameters in terms of speed rating and weight. The 6 Series body does not provide space for a spare tire, so M6s are equipped with the M Mobility System, described in BMW features on page 56.

Specially calibrated, variable Dynamic Stability Control

DSC is standard on all BMW models; on M models, this electronic traction and stability system is complementary to the M Variable Differential Lock.

Additionally, the DSC of M models incorporates M-specific features, including a selectable M Dynamic Mode. For details on DSC, including the M versions, see BMW features, pages 79-81.

MDrive: M technology at the driver's disposal

Via the MDrive system, the driver has fully 279 combinations of control settings to choose from² – and an MDrive button on the steering wheel that allows the 1-touch selection of the driver's preferred combination of same. How it all works is explained in BMW features, pages 44-45.

Comfort & convenience

The M6 interior presents luxurious, ergonomically engineered 2+2 accommodations for its fortunate driver and passengers. In an atmosphere of tasteful design and high-caliber materials, typical BMW attention to instrumentation and controls supports attentive, yet relaxed driving and pleasant, comfortable riding.

To this elegant space, BMW M adds its heightened emphasis on performance driving and even more premium materials. Merino, BMW's finest leather grade, is standard and a Full Leather treatment is optional. Rich Walnut Madeira wood trim is also standard; two alternate trim materials are available. Instrumentation is specific, reflecting BMW M esthetic values and the M6's stunning performance capabilities. The descriptions here focus on features specific to the M6; for features shared with the 6 Series, see the 6 Series section.

Illuminated M doorsill trims

Elegantly and atmospherically illuminated, they are fashioned of aluminum and feature an M6 logo with the traditional M colors.

Special M instrumentation

Both main instruments have unique fulltime-illuminated white scales and red pointers. The speedometer scale reads to 200 mph, the tachometer to 9000 rpm. A variable tachometer warning segment in yellow, with red normally beginning at the limit of 8250 rpm, is included. Via a rotating disc behind the instrument face, this segment extends downward to as low as 4500 rpm with a completely cold engine on a cold day, then gradually moves up to the full 8250 rpm as the engine warms

up. On the speedometer, a similar disc carries a pointer indicating the set speed for the cruise control.

With such a high-performance engine, oil temperature is a critical factor (and the factor to which the variable rpm limit is related). Accordingly, an oil-temperature gauge is set into the lower portion of the tachometer. As a further differentiation from that of 6 Series models, via the On-board Computer the driver can select oil level to be shown in the display between speedometer and tachometer; and in the optional Head-up Display there is a choice of standard or M displays.

Unique M sport steering wheel

The M6 steering wheel is sized, proportioned and designed to be “as sporty as it gets.” Its distinctions include –

- Thick rim, padded leather with M-color stitching
- Thumb contours at 10 and 2 o'clock
- SMG paddles above lateral spoke: right upshift, left downshift; illuminated at night²
- MDrive button (see pages 44-45) replaces one of 6 Series' programmable buttons.

As in the 6 Series, the steering wheel has power tilt/telescopic adjustment and is included in the memory system.

Illuminated SMG shift lever, special console controls

The M6 center console is highly distinctive, dominated by the shift lever and flanked by MDrive controls. In detail, features here include –

- The ultra-short SMG² shift lever, with its illuminated SMG shift pattern (R–N–D/S and +/- for sequential shifting)²

- Power button, for 2 settings of engine power and throttle response
- DSC button, for 3 Dynamic Stability Control settings
- EDC button, for 3 Electronic Damping Control settings
- SMG control, for selecting from Sequential Manual Gearbox's 11 shift programs².

Set into a neatly designed panel at console center, these controls are surrounded by the standard wood or one of the two optional trim materials; the iDrive controller, menu selector and Voice Command button are behind them.

With the available 6-speed manual transmission, the shift lever is also illuminated, and any other controls associated with the SMG (steering-wheel paddles, shift-program selector) are not present.

Merino leather, Extended or Full

Unique upholstery is standard in the M6 – indeed, BMW's finest leather grade, available in two versions and with unique M colors making up most of the palette.

Standard equipment is an Extended treatment of Merino leather, with this beautiful leather appearing not only on the seats, head restraints and door panels, but also the front and rear center armrests. In the optional Full treatment, leather appears on further seat, door and console

1 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. M6 models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

2 – Applies only to vehicles equipped with SMG.

M6 key features

Based on the 6 Series, the two M6 models differ from their 6 Series counterparts in the following key features:

areas as well as extensive portions of the dash and the rear-compartment side panels.

The color selection is as follows (see color chart on pages 428-429):

- Extended Merino leather – Black, Silverstone II and Sepang Bronze Light
- Full Merino leather – Black, Portland Brown, Sepang Bronze Light, Silverstone II and Indianapolis Red.

In all M6 interiors, the roof pillars (Convertible: A-pillars only) and headliner are in Anthracite color. In the Coupe with Full Leather, these and other areas are in Alcantara material, also Anthracite in color. In the Convertible with Full Leather, the A-pillars are black and the softtop's knitwear headliner remains Anthracite.

In the Convertible, the leather incorporates Sun Reflective Technology on seats, armrests, head restraints and shift knob to reduce solar heating.

Special interior trim

To give customers the freest choice, M6 interior trim – appearing across the dash and on the door pulls – is always specified as an option in the ordering system. There is no extra cost for either wood. The three available trims are:

- Walnut Madeira, a reddish-brown wood with relatively linear grain
- Olive Ash, a medium-tone wood with burl grain
- Carbon Fiber Black, matching the carbon-fiber roof panel, at extra cost.

This scheme contrasts with the 6 Series' standard Brushed Aluminum trim and optional Birch or Maple wood. In another contrast to the 6 Series, the M6's Titanium II trim replaces the standard 6 Series trim on the instrument rings, shift paddles, shift-lever surround, interior door handles and iDrive controller. M's attention to detail is extensive and impressive.

M sport seats

BMW sport seats are widely praised for their excellent anatomical support and extensive adjustability; BMW M sport seats embody even more comprehensive design and features for supporting the driver in sporty driving.

In addition to the adjustments provided by the 6 Series' available front sport seats, the M6 Coupe's standard M front sport seats include power-adjustable backrest width, which enhances their adaptability to various human statures. As with the 6 Series Sport Package's sport seats, manually adjustable thigh support is included. Along with the steering wheel and exterior mirrors, each driver's preferred adjustments are stored in Vehicle & Key Memory and are reset to those adjustments when that driver unlocks the vehicle with his or her remote.

Convertible front seats add power-adjustable head-restraint/shoulder-belt height and a powered easy-entry feature as well as seat-integrated safety belts; the Coupe's power backrest-width adjustment is deleted. See **BMW features**, pages 74-85.

Logic7 audio system, standard

This audiophile-quality system is optional in the 6 Series, standard in both M6 models. Compared to the standard 6 Series system, it includes –

- Increased audio power
- Very high-caliber speakers (aluminum-membrane type for all but subwoofers); 13 speakers in Coupe, 11 in Convertible, both including 2 subwoofers
- Digital Sound Processing (DSP), adjusted along with other Logic7 parameters on iDrive Control Display
- Surround Sound simulation.

Fully automatic, fully lined power softtop (Convertible)

The Convertible's softtop is a work of art and science in its own right. Available in Black or Gray, it is –

- Unique in design, with powered vertical rear window and “fins”
- Elegant, giving this Convertible an unusually sleek profile with the top raised.

Incorporating many special esthetic and functional features, the softtop is described in the 6 Series section on pages 148-149.

Safety & security

M6 safety and security features are shared with those of other BMW Series, and are identical to those of the 6 Series including the new Active Head Restraints. For details on this Series' features and systems, see **BMW features**, pages 78-90; and **6 Series**, pages 149-150.

Options & packages

Factory-installed options

Comfort Access

(optional both models, code 322)
Eliminates the need to activate a remote to unlock or lock the vehicle, or to insert it into the dash slot before starting the engine; described in **BMW features** on page 58.

Soft-close doors

(optional both models, code 323)

The user closes the door gently; an electric mechanism draws it fully in.

High Beam Assistant

(optional both models, code 5AC)

Assumes the task of switching between high and low beams, eliminating a source of distraction for drivers and likely increasing the proportion of nighttime driving in which the high beams are used. Details in **BMW features** on page 59.

Heated steering wheel

(optional both models, code 248)

Available as a stand-alone option only.

Full Leather upholstery

(optional both models, upholstery codes X3)

This leather option, even more extensive than M6s' standard Extended treatment, is also in the fine Merino grade. Whereas the standard leather (also Merino) appears on seats, head restraints, door panels and front/rear center

M6 key features

Based on the 6 Series, the two M6 models differ from their 6 Series counterparts in the following key features:

armrests, this adds further leather to dash, door and console areas as well as the rear-compartment side panels. In addition to the standard selection of Black, Silverstone II and Sepang Bronze Light, it is available in two further M colors: Portland Brown and Indianapolis Red.

The Coupe's headliner, roof pillars, sun visors and rear shelf – Anthracite in color as in the standard interior – are in rich Alcantara material. In the Convertible, Alcantara is not used; the softtop's headliner remains in the standard Anthracite-colored knitwear material, the A-pillars are trimmed in black, the visors are in Nappa leather and the rear shelf, a molded panel, is always black.

The luxury and functional aspects of Alcantara are explained in **BMW features** on page 76.

Interior trim choices (codes 4ME, 4MK & 4MC)

Three choices of interior trim (which might be referred to as "accents") are offered, each with an option code. There is no extra cost for the two wood trims; the Carbon Fiber Black trim is at extra cost. Each of these appears –

- on the center dash area surrounding the climate controls and below the CD/DVD slots
- on the forward console storage compartment's lid and at the periphery of the shift-lever surround
- above the glove compartment
- on the door and rear side armrests.

The three choices are:

- Walnut Madeira (code 4ME), a wood with reddish-brown tone and relatively linear grain
- Olive Ash (code 4MK), a medium-tone wood with burl grain
- Carbon Fiber Black (code 4MC), matching the Coupe roof panel's exterior pattern, at extra cost.

M Head-up Display (optional both models, code 610)

In M6s the Head-up Display is the special M version, in which either the standard selection of information or a special M set can be displayed. A switch in the lighting control center, to the left of the steering column, serves to turn on the HUD; selection between the standard and M display sets occurs in the MDrive menu, and that selection can be stored on the MDrive button.

- For the standard set, the user selects the iDrive i-menu and chooses any or all of Navigation instructions, cruise-control set speed and current vehicle speed.
- The M set includes –
- Dynamic engine-speed band in green, yellow and red
- Upshift indicator (engine-speed band flashes as the rpm limit is reached)
- The gear currently engaged
- As with the standard display, the vehicle speed.

Further details on BMW's Head-up Display are found in **BMW features**, page 67.

Enhanced Premium Sound System

(optional both models, code 752)

Both M6 models come standard with the premium audio system that's optional in the 6 Series.

The optional Enhanced Premium Sound System offers M6 customers an even higher-performing audio experience.

This ultra-audiophile system features high-end speakers with neodymium magnetic drives and lightweight, extremely stiff hexacone membranes as well as an extensive range of other high-tech audio features. The system includes 16 speakers in the Coupe, 12 in the Convertible. Described in more detail in **BMW features** on pages 70-71.

iPod/USB Adapter

(optional both models, code 6FL)

This option addresses the growing demand for in-vehicle digital programming. It enables the vehicle's audio system to play an MP3 player or a flash drive; there is no conflict with the available CD changer. For more details, see **BMW features**, pages 72-73.

Smartphone Integration

(optional both models, code 6NF; requires iPod/USB Adapter)

Not only does this new option facilitate playing music files stored in one's own smartphone in the vehicle audio system, it also

charges the phone and provides a hard-wired connection of the phone to the vehicle phone system. Requires adaptor for specific, BMW-approved smart-phone model. Explained in more detail in **BMW features** on page 73.

HD Radio

(optional both models, code 653)

HD Radio significantly enhances the sound quality of both FM and AM reception. It is described in **BMW features** on pages 71-72.

Sirius Satellite Radio

(optional both models, code 655)

The Sirius system is described in **BMW features** on page 72.

BMW center-installed accessories

Among the accessories available for the M6 are:

- Car covers, outdoor and indoor types
- Windshield sunshade
- Wind deflector for Convertible
- 6-disc CD changer
- Umbrella and holder
- Floor mats, carpet and rubber.
- Trunk accessories
- Special BMW valve-stem caps

For details and a complete listing, see the latest **Original BMW Accessories** catalog covering the M6 models.

Standard & optional features

2009 BMW M6 Coupe & Convertible

Bold within table indicates new feature for 2009.

Exterior design & function	M6 Coupe	M6 Conv.
Special BMW M front bumper/spoiler/ air-intake ensemble	S	S
Xenon Adaptive headlights with dynamic auto-leveling	S	S
Automatic headlight control	S	S
High-intensity headlight cleaning system with retracting nozzles	S	S
Daytime running lamps	S ¹	S ¹
Park Distance Control	S	S
Rain-sensing windshield wipers with articulated passenger's-side wiper arm, single-wipe control, windshield-washer system with heated washer jets	S	S
BMW M exterior mirrors, power-folding	S	S
BMW M exterior paint selection, choice of standard or metallic	S	S
Carbon-fiber roof panel	S	–
Side gills with M6 logos	S	S
Satin Chrome Shadowline exterior trim	S	S
Unique side sills	S	S
Illuminated door handles	S	S
Integrated rear spoiler	S	S
Special BMW M rear bumper/diffuser ensemble with "flaps," carbon-fiber structural bumper carrier	S	S
Four chrome exhaust tips	S	S
Performance & efficiency	M6 Coupe	M6 Conv.
5.0-liter DOHC 40-valve V-10 engine: Aluminum cylinder block & heads, bedplate construction	S	S
Double high-pressure VANOS steplessly variable valve timing ²	S	S
10 individual throttles, electronically controlled, with variable throttle response & maximum power level (3 settings)	S	S
Machined intake ports & combustion chambers	S	S
Special BMW MS S65 electronic engine management system	S	S
Direct ignition system with pencil coils	S	S
Ionic-current knock control	S	S
Semi-dry-sump, G-sensitive lubrication system	S	S

Performance & efficiency (cont.)	M6 Coupe	M6 Conv.
7-speed Sequential Manual Gearbox (SMG) with DRIVELOGIC & 11 shift programs	S	S
6-speed manual transmission	NC	NC
Specialty equipped & calibrated BMW M suspension system:		
Double-pivot-type aluminum front suspension	S	S
4-link Integral aluminum rear suspension	S	S
M Electronic Damping Control (EDC) with Normal, Comfort & Sport modes	S	S
Vehicle-speed-sensitive variable-assist, variable-ratio power steering with Comfort & Sport levels of power assist	S	S
4-wheel compound, ventilated & cross-ventilated disc brakes	S	S
M Double Spoke alloy wheels (design #167M), 19 x 8.5 front/19 x 9.5 rear	S	S
255/40ZR-19 front / 285/35ZR-19 rear performance tires ³	S	S
Tire Pressure Monitor	S	S
M Mobility System	S	S
BMW M-calibrated Dynamic Stability Control with M Dynamic Mode	S	S
M Variable Differential Lock	S	S
MDrive system, providing 1-touch selection of preferred combination of 3 throttle/power settings, 11 SMG programs, 3 EDC modes, 2 DSC modes & de-activated DSC	S	S

1 – Selectable via Vehicle Memory system (programming by user or BMW center).

2 – VANOS = **V**ariable **N**ockenwellen **S**teuerung = variable camshaft control, or variable valve timing.

3 – Due to low-profile tires, please note: Wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. M6 models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

NC – No extra cost

Standard & optional features

2009 BMW M6 Coupe & Convertible

Bold within table indicates new feature for 2009.

Comfort & convenience	M6 Coupe	M6 Conv.
Vehicle & Key Memory	S	S
Multi-function remote:		
Selective locking	S	S
Remote trunk release	S	S
Soft-close doors	OPT	OPT
Comfort Access	OPT	OPT
Dual power/heated exterior mirrors	S	S
Automatic tilt-down of right exterior mirror for visibility of curb when backing up	S	S
Automatic-dimming interior & exterior mirrors	S	S
High Beam Assistant	OPT	OPT
BMW Universal Transceiver (3-function garage-door opener)	S	S
Illuminated doorsill trims with M logo & colors	S	S
Courtesy lights with fade-in/fade-out feature, actuation from remote, automatic switch-on when engine is turned off	S	S
Front reading lights, separately controlled left/right	S	S
BMW Ambiance Lighting	S	S
Illumination of interior door handles & door storage bins, front footwell lighting	S	S
Cruise control	S	S
Power tilt/telescopic leather-wrapped M sport steering wheel with fingertip cruise, audio & phone ⁴ controls, programmable button & MDrive selector	S	S
Illuminated shift lever	S	S
Heated steering wheel	OPT	OPT
Power/heated M front sport seats with 14-way power adjustment including lumbar support & backrest width, manually adjustable thigh support	S	-
Power/heated M front sport seats with 14-way power adjustment including lumbar support; manually adjustable thigh support, power easy-entry feature	NA	S
Memory system for driver's seat, steering wheel & exterior mirrors (3 settings)	S	S
Adjustable front center armrest	S	S
2-level center console compartment with provision for phone handset	S	S

Comfort & convenience (cont.)	M6 Coupe	M6 Conv.
BMW M instrumentation with – Illuminated white scales on speedometer & tachometer	S	S
Red pointers	S	S
Oil-temperature gauge	S	S
Variable warning segment on tachometer	S	S
LCD main & trip odometers	S	S
Comprehensive Check Control vehicle monitor system	S	S
iDrive system with five menus, controller, direct-select radio, CD, phone & Navigation menus plus Menu, Back and Option keys; 6 Programmable Memory Keys, automatic ventilation, MDrive submenu, Voice Command; includes On-board Computer & GPS Navigation w/DVD database & Real Time Traffic Information	S	S
M Head-up Display	OPT	OPT
Merino Leather upholstery: Extended Leather	S	S
Full Leather	OPT	OPT
Sun Reflective Technology	NA	S
Alcantara headliner	OPT ⁵	NA
Power tilting glass Panoramic moonroof with power-operated interior shade	S	–
Fully automatic, fully lined softtop	–	S
Walnut Madeira wood interior trim	NC	NC
Olive Ash wood interior trim	NC	NC
Carbon Fiber Black interior trim	OPT	OPT
Power front-door windows with key-off operation; 1-touch opening & closing, anti-trapping feature, opening from remote, closing from exterior lock	S	S
Power rear side windows with key-off operation; 1-touch opening, opening from remote, closing from exterior lock	NA	S
All-window switch with 1-touch opening	NA	S
Power retractable rear window	NA	S
Power door-window sealing system	S	S

4 – Phone controls active when approved
cellphone is paired with Bluetooth
interface.

5 – Included with optional Full Leather
upholstery.

S – Standard

OPT – Optional

NC – No extra cost

NA – Not available

– – Not applicable

Standard & optional features

2009 BMW M6 Coupe & Convertible

Bold within table indicates new feature for 2009.

Comfort & convenience (cont.)	M6 Coupe	M6 Conv.
Automatic climate control with separate left/right temperature & air-distribution controls, automatic recirculation control, bi-directional solar sensor, Heat at Rest, humidity control, temperature- & volume-controlled rear outlets, activated-charcoal microfilter ventilation & other features	S	S
Anti-theft Logic7 AM/FM/CD/MP3 audio system with Digital Sound Processing, Surround Sound simulation, Radio Data System (RDS), auxiliary audio input & FM diversity antenna system:		
13 speakers including 2 subwoofers	S	–
11 speakers including 2 subwoofers	–	S
Enhanced Premium Sound System ⁶	OPT	OPT
6-disc CD changer in glove compartment	C	C
iPod/USB Adapter	OPT	OPT
HD Radio	OPT	OPT
Satellite Radio	OPT	OPT
Bluetooth cellphone interface with high-capacity phonebook download	S	S
Smartphone Integration	OPT⁷	OPT⁷
Front & rear cupholders	S	S
Dual front sun visors with illuminated mirrors	S	S
Fold-up rear center armrest	S	S
Seatback storage compartments	S	S
Ski bag	S	S
Rear-window defroster	S	S
Interior trunk release, electrically operated	S	S
Fully finished trunk with toolkit under floor, reversible anti-slip mat to keep smaller cargo from sliding	S	S

Safety & security	M6 Coupe	M6 Conv.
BMW M-calibrated Dynamic Stability Control (DSC), including all-speed traction control, electronic brake proportioning, antilock braking (ABS), cornering/braking stability enhancement, Dynamic Brake Control, Brake Standby, Brake Drying, Start-off Assistant & M Dynamic Mode	S	S
Dual front-impact Supplementary Restraint System (SRS) with dual-threshold deployment, 2-stage Smart Airbags	S	S
Automatic front safety-belt tensioners & force limiters	S	S
Seat-integrated front safety belts with power height adjustment	NA	S
Automatic-locking retractors (ALR) on all passenger safety belts (for installation of child restraint seats)	S	S
LATCH attachments at outboard rear seating positions (for installation of child restraint seats)	S	S
Interlocking door anchoring system for side impacts	S	S
Front-seat Head Protection System (AHPS I)	S	–
Rollover Protection System	–	S
Front-seat side-impact airbags	S	S
Active Head Restraints	S	S
Active Knee Protection	S	S
Active Crash Safety Management (ACSM) for deployment of safety systems	S	S
Battery Safety Terminal	S	S
BMW Assist, including Enhanced collision notification, SOS button, enhanced Roadside Assistance, TeleService [®] , BMW Assist Safety Plan [®]	S	S
Central locking system with double-lock anti-theft feature, selective unlocking & interior locking switch	S	S
Coded Driveaway Protection	S	S
Alarm system with operation from remote, interior motion detector	S	S

6 – 16 speakers in Coupe, 12 in Convertible.
 7 – Requires iPod/USB Adapter.
 8 – Requires BMW Assist annual fee after 4th year.

S – Standard
 OPT – Optional
 C – BMW center-installed
 NA – Not available
 — – Not applicable

Technical specifications

2009 BMW M6 Coupe & Convertible

General	M6 Coupe	M6 Convertible
Curb weight, lb., manual transmission or SMG	3909	4398
Weight distribution, front/rear, %	53.5/46.5	49.9/50.1
Wheelbase, in.	109.5 ¹	
Track, front/rear, in.	61.7/62.4 ¹	
Length, in.	191.8 ¹	
Width, in.	73.0 ¹	
Height, in.	54.0	54.2

Body	M6 Coupe	M6 Convertible
Type	2-door coupe	2-door convertible
Aerodynamic drag coefficient	0.32	0.34
EPA size classification	Subcompact	Subcompact

Accommodations	M6 Coupe	M6 Convertible
Seating capacity, persons	4 ¹	
Shoulder room, front/rear, in.	56.4/49.4 ¹	
Head room, front/rear, in.	37.6/35.6	37.8/36.5
Leg room, front/rear, in.	42.0/30.1	42.0/29.0
EPA passenger-compartment volume, cu ft.	81.0	82.0
EPA cargo volume, cu ft.	13.0	12.4/10.6 ²

Engine & electrical	M6 Coupe	M6 Convertible
Engine type	DOHC (4-cam) 40-valve V-10, high-pressure Double VANOS ³ steplessly variable valve timing, 10 individual electronically controlled throttles with P400, P500 & P500 S settings ¹	
Bore x stroke, mm/in.	92.0 x 75.2/3.62 x 2.96 ¹	
Displacement, cc/cu in.	4999/305 ¹	
Compression ratio	12.0:1 ¹	
Power @ rpm, hp	500 @ 7750 ¹	
Torque @ rpm, lb-ft.	383 @ 6100 ¹	
Engine-management system	MS S65 with ionic-current knock control, variable valve timing, electronic throttles, variable maximum power level, g-sensitive lubrication system, oil-level/temperature sender, variable tachometer warning segment, catalyst protection & other functions included in control strategy ¹	

Engine & electrical (cont.)	M6 Coupe	M6 Convertible
Fuel requirement	Premium unleaded ¹	
Fuel capacity, U.S. gal.	18.5 ¹	
Battery capacity, amp-hr.	90 ¹	
Alternator output rating, amp./W	170/2380 ¹	

Drivetrain	M6 Coupe	M6 Convertible
Drive system	Front engine/rear-wheel drive ¹	
Manual transmission	ZF Type G, 6-speed ¹	
Ratios: 1st	4.06:1 ¹	
2nd	2.40:1 ¹	
3rd	1.58:1 ¹	
4th	1.19:1 ¹	
5th	1.00:1 ¹	
6th	0.87:1 ¹	
Reverse	3.68:1 ¹	
Final drive ratio	3.62:1 ¹	
Sequential Manual Gearbox (SMG)	Electrohydraulically actuated, electronically controlled 7-speed Sequential Manual Gearbox with 6 Sequential & 5 Automated shift programs; twin-disc clutch ¹	
Ratios: 1st	3.99:1 ¹	
2nd	2.65:1 ¹	
3rd	1.81:1 ¹	
4th	1.39:1 ¹	
5th	1.16:1 ¹	
6th	1.00:1 ¹	
7th	0.83:1 ¹	
Reverse	3.99:1 ¹	
Final drive ratio	3.62:1 ¹	

1 – Specification applies to both models.

2 – Softtop raised/lowered, variable soft-top storage compartment adjusted accordingly (according to DIN, or German Industry Standards. EPA volume is 10.0 cu ft.).

3 – VANOS = **VA**riable **NO**ckenwellen

Steuering = variable camshaft control, or variable valve timing.

Technical specifications

2009 BMW M6 Coupe & Convertible

Chassis	M6 Coupe	M6 Convertible
Body/frame construction	Unitized; aluminum front-end structure, aluminum hood & doors, thermoplastic front fenders & Sheet Molding Compound (SMC) trunklid ¹ Coupe only: carbon-fiber roof panel	
Front suspension	BMW M sport suspension in aluminum; struts, double-pivot lower arms, coil springs, electronically controlled twin-tube gas-pressure shock absorbers with Normal, Comfort & Sport modes, anti-roll bar, subframe, thrust plate ¹	
Rear suspension	BMW M sport suspension in aluminum; 4-link Integral system, coil springs, electronically controlled twin-tube gas-pressure shock absorbers with Normal, Comfort & Sport modes, anti-roll bar ¹	
Steering type	Rack & pinion, Servotronic vehicle-speed-sensitive power assist with Comfort & Sport assist levels ¹	
Overall ratio	Variable; mean ratio is 13.0:1 ¹	
Turning circle, ft.	41.0 ¹	
4-wheel compound, ventilated & cross-ventilated disc brakes:		
Front, diameter x thickness, mm/in.	374 x 36/14.7 x 1.42 ¹	
Front calipers	Aluminum ¹	
Rear, diameter x thickness, mm/in.	370 x 24/14.6 x 0.94 ¹	
Rear calipers	Cast iron ¹	

Chassis (cont.)	M6 Coupe	M6 Convertible
Wheels	Cast alloy, 19 x 8.5 front/19 x 9.5 rear ¹	
Tires	255/40R-19 front / 285/35R-19 rear special performance ^{1,4}	
Stability-enhancement system	BMW M-calibrated Dynamic Stability Control (DSC), including all-speed traction control, electronic brake proportioning, antilock braking (ABS), cornering/ braking stability enhancement, Dynamic Brake Control, Brake Standby, Brake Drying, Start-off Assistant & M Dynamic mode; M Variable Differential Lock	

Performance data	M6 Coupe	M6 Convertible
Acceleration, 0-60 mph, sec., manual transmission or SMG ⁵	4.5	4.6
Top speed, mph	155 ^{1,6}	
Fuel economy, EPA est. MPG, city/highway, manual transmission or SMG	11/17	11/17

1 – Specification applies to both models.

4 – Due to low-profile tires, please note:
Wheels, tires and suspension parts are
more susceptible to road hazard and
consequential damages. M6 models
are not equipped with a spare tire and
wheel. Performance tires are not
recommended for driving in snow and
ice conditions.

5 – BMW AG test results. Actual accelera-
tion results may vary depending on
specification of vehicle; road and
environmental conditions; testing
procedures and driving style. These
results should be used for comparison
only, and verification should not be
attempted on public roads. BMW urges
you to obey all posted speed limits
and to please wear your safety belt at
all times.

6 – Electronically limited.

2009 BMW M5:

Unique blend of sports car and luxury sedan continues, with functional and esthetic refinements.

The M5 is BMW M's unique combination of sports car and luxury sedan, combining M's most potent powertrain and most sophisticated performance technology with the luxury and practicality of the 5 Series Sedan.

The M5's design reveals its spirit: bold esthetics express BMW M's quintessential mastery of performance and roadworthiness. At the front, a massive central air intake admits the air its V-10 engine requires to produce 500 horsepower. The already energetic 5 Series design is made more heroic by exclusive 19-in. wheels, BMW M's traditional "gills" and the strong accent of unique rocker panels. And at the rear, four polished exhaust tips and a shapely, functional diffuser communicate awesome performance and aerodynamic capabilities to the majority: those who will be viewing the M5 from behind.

Among today's BMW M models, the M5 has the longest heritage. The first M5 appeared in Europe in 1984, and was offered in the

U.S. for just a single model year, '88; since then, three more M5 generations have carried this key BMW M tradition forward. The current, 4th-generation M5 explodes conventional conceptions of what an automobile can be. As an integral, essential element of its character, it embodies unique new features and technology that enable the driver to make the choice of which M5 it will be right here, right now: Sports car. Luxury sedan. Or any desired blend of the two. The driver decides.

What's new for 2009

As of 9/08 production:

Both models

- New metallic exterior color: Carbon Black
- New iDrive controller, with direct-select buttons clustered around it (essentially same as new 7 Series arrangement)

M5 key features summary

BMW's ultimate performance Sedan, based on the 550i. While offering luxurious Sedan accommodations and everyday practicality, the M5 takes 5 Series design, performance and handling to another dimension altogether: As *Automobile* put it, it's "the first ultraexotic with a sedan body." The listing here focuses on features that differentiate the M5 from its 550i Sedan counterpart.

Exterior design & function

- Front bumper/spoiler/air-intake ensemble
- Traditional BMW M side "gills"
- 19-in. BMW M Double Spoke wheels
- Unique rocker panels (side sills) with sharp accent line
- Standard Satin Chrome Shadowline side-window trim
- M exterior mirrors, shaped to enhance aerodynamics and reduce wind noise
- Distinctively shaped lower section of trunklid
- Rear bumper/spoiler/diffuser ensemble
- Four round stainless-steel exhaust outlets
- Four unique BMW M metallic paint colors offered

Performance & efficiency

- 5.0-liter V-10 engine – 500 hp, 383 lb-ft. torque (550i: 4.8-liter V-8, 360 hp, 360 lb-ft.)
- 7-speed Sequential Manual Gearbox with DRIVELOGIC
- M Variable Differential Lock
- Specially modified and calibrated front and rear suspension
- M Electronic Damping Control (EDC), specially conceived and calibrated for M5 performance

- Special M5 steering system: "quicker" than 5 Series, two levels of Servotronic power assist tied to EDC's Comfort, Normal and Sport settings. Active Steering not available.
- Compound, cross-ventilated disc brakes with black-painted calipers, 2-piston front calipers
- 19 x 8.5 front/19 x 9.5 rear M Radial Spoke wheels with 255/40R-19 front / 285/35R-19 rear performance tires¹
- BMW M-calibrated Dynamic Stability Control (DSC) with selectable M Dynamic Mode
- MDrive (submenu in iDrive): allows driver to combine personal performance preferences into a single setting, selectable via button on steering wheel:
 - Three levels of engine power and throttle response
 - SMG DRIVELOGIC shift-program settings²
 - DSC modes and de-activation
 - EDC/steering settings
 - Settings of available Head-Up Display (standard or M)
 - Active Seat Backrest settings (three programs for optional Comfort or M Multi-function Seats)

In addition to these selections within MDrive menu, the power (two of the three settings), SMG², DSC and EDC settings can be selected directly via console controls.

1 – Due to low-profile tires, please note: Wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. The M5 is not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

2 – Applies only to vehicles equipped with SMG.

M5 key features summary

Comfort & convenience

- Doorsill trims with M5 logo
- Unique speedometer and tachometer dials with –
 - Titanium-finish outer rings
 - Illuminated scale rings
 - Red indicator needles
 - Specific scales (speedometer to 200 mph/330 km/h, tachometer to 9000 rpm)
 - M logo on tachometer face
 - Oil-temperature gauge replaces fuel-economy display of 5 Series
- Specific range of information displayed in Head-up Display (in addition to standard set)
- Short, illuminated SMG² selector/shift lever
- Power, DSC, EDC and SMG² mode switches surrounding shift lever
- MDrive submenu in iDrive
- Heated M sport front seats standard (18-way power adjustment including 4-way lumbar)
- Extended Leather upholstery with Merino leather, BMW's finest grade –
 - Additional leather over regular-production 5 Series upholstery includes center section of instrument panel, center console, handbrake boot, door panels and door armrests
- Unique BMW M color selection
- Brushed-aluminum interior trim standard, choice of two optional woods
- Anthracite-color headliner (with Full Leather interior, in Alcantara material)

Options & packages

- 6-speed manual transmission (no-cost option)
- M Multi-function front sport seats with –
 - Active Backrests
 - Power-adjustable shoulder support
 - Active head restraints
- 20-way Comfort front seats
- Active Seat Ventilation (requires Comfort front seats and perforated Full Leather upholstery)
- Soft-close doors
- Comfort Access
- Full Leather upholstery, with leather additionally on expanded area of instrument panel; roof pillars and headliner in Alcantara
- Olive Ash Natural wood interior trim
- Walnut Madeira red-brown wood interior trim
- High Beam Assistant
- M Head-up Display
- Enhanced Premium Sound System
- iPod/USB Adapter
- HD Radio
- Satellite Radio
- iPod/USB Adapter
- Smartphone Integration³
- Split folding rear seats and ski bag
- Heated steering wheel
- Heated rear seats
- Power rear and manual rear door-window sunshades
- Rear side-impact airbags and outboard rear safety-belt tensioners
- Rear-spoiler delete

M5 key features

Based on the 550i Sedan, the M5 differs from that model in the following key features:

Exterior design & function **In profile**

Discreet and elegant, yet expressive and muscular design characterizes every BMW M car. With each succeeding M5 generation, BMW M has begun with a regular-production BMW model and applied a consistent philosophy to its own treatment of the model: accommodate and express the heightened performance capabilities of the M model while maintaining the elegance and good taste of BMW design. The M5's exterior design adheres strictly to this concept – and in doing so, communicates the spectacular performance of which it is capable.

At the front: the thrust of BMW M performance, expressed visually

Typically BMW M, the M5 front end masterfully combines function and esthetics. To supply the immensely powerful V-10 engine with air, the center intake is large. At each side, a supplemental intake also admits air to the engine as well as for other purposes, such as cooling the transmission and brakes. At the bottom of each side, aerodynamic “flaps” not only help manage airflow for minimizing front-end lift at speed, but lend an additional forward thrust to the entire ensemble. The bottoms of these flaps are flared forward to form side airdams.

The functional requirement of supplying air to the mechanical elements of this magnificent machine precludes front foglights.

Like all other M5 perspectives, the profile view subtly but vigorously proclaims the M5's mission: to combine luxury and spacious accommodations with breathtaking performance.

“Gills” are a now-traditional BMW M element; set into them is an M5 logo. A sharp ridge in the rocker panel enhances the profile lines; the 19-in. Radial Spoke wheels and ultra-low-profile tires¹ add muscle that's every bit as functional as it is visual. Satin Chrome Shadowline side-window trim, as included in 5 Series Sport Packages, is standard on the M5; distinctively shaped M mirrors accommodate airflow smoothly while setting a visual accent with a horizontal line.

At the rear

As at the front, the M5's character in rear view is dominated by an exclusive bumper/spoiler ensemble. The bumper's main vertical surface is accentuated by a character line that sweeps downward to define the lower edge of a central diffuser, which helps smooth the exit of airflow under the vehicle. Together with “flaps” at the sides, this helps control aerodynamic lift. The flaps also visually frame the dual stainless-steel exhaust tips at each side.

Also specific to the M5 is a revised lower trunklid surface that frames the license plate differently than that on 5 Series models.

- 1 – Due to low-profile tires, please note: Wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. The M5 is not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.
- 2 – Applies only to vehicles equipped with SMG.
- 3 – Requires iPod/USB Adapter.

M5 key features

Based on the 550i Sedan, the M5 differs from that model in the following key features:

Special M exterior colors

The M5 offers nine exterior colors, four of them exclusive to M Cars:

- **Interlagos Blue** – a deep blue metallic.
- **Sepang Bronze** – a metallic that departs daringly from the conventional.
- **Indianapolis Red** – also metallic, dramatically bold.
- **Silverstone** – a blue-toned silver metallic.

From the regular-production color palette, BMW M offers non-metallic Alpine White and three metallics: Black Sapphire, Monaco Blue, Space Gray and Carbon Black.

Performance & efficiency

5.0-liter DOHC (4-cam)

40-valve V-10 engine

With this amazing V-10 engine, BMW M presents more than just an unusual number of cylinders. Called the S85, it positively bristles with advanced, high-performance-oriented technology and is described in detail in **BMW features** on pages 36-39.

With either of the two available transmissions, the S85 catapults the M5 from 0 to 60 mph in just 4.5 sec. EPA mileages are 11 mpg city/17 mpg highway, also for either transmission.

7-speed Sequential Manual Gearbox

For '09 the 7-speed SMG remains standard in the M5. For details on this amazing transmission, fully as innovative as the V-10 engine, see **BMW features**, pages 41-43.

6-speed manual transmission (optional at no extra cost)

By popular request, a 6-speed manual transmission is available as a no-extra-cost alternative to the SMG. It is controlled by a handsome shift knob with illuminated 6-speed pattern and M logo.

A dual-mass, hydraulically damped flywheel between engine and clutch is specially tuned to the 10-cylinder engine's power pulses. The primary clutch plate is made of forged steel for high strength. The clutch is self-adjusting, maintaining consistent pedal forces over the life of the clutch; this helped the engineers achieve the necessary high torque capacity with reasonable pedal effort.

Included with the manual transmission is a change in the M5's controls layout:

- On the console, the Power button and SMG program selector are omitted.
- The console DSC switch is replaced by an MDM switch in the center stack, with which the M Dynamic Mode can be selected with a brief push, and DSC can be de-activated by pressing the switch longer.
- There are no steering-wheel shift paddles, and no Launch Control feature.

The M5 suspension system: targeted modifications

Handling and roadability modifications from the 550i Sedan on which the M5 is based fall into multiple categories: changes to the suspension hardware and its connections to the body structure; an M version of Electronic Damping Control; the M Variable Differential Lock; Servotronic steering with two levels of power assist; hugely dimensioned, cross-drilled brakes; wheels and tires¹ that make an awesome footprint.

5 Series suspension, already an advanced all-aluminum system, is the basis. The vehicle's frontal structure too is aluminum, helping contain overall weight and contributing to BMW's typically near-perfect front/rear weight distribution.

At the front, there are detail modifications: modified (still aluminum) subframe and thrust plate, fine-tuning of geometry, more rigid bushings, 0.9-in. wider track. At the rear, the changes are more extensive:

- The subframe is modified.
- Suspension links are specific to the M5.
- Bushings are stiffer.
- Axle halfshafts are hollow for reduced weight with greater strength.
- Geometry has been tailored to the much greater torque that will be transmitted.

Here the track is actually narrower (by 0.6 in.) than that of a 5 Series with standard wheels, because 9.5-in.-wide rear wheels' center

plane must be farther inboard for their massive 285/35 tires¹ to clear the bodywork. The actual footprint, however, is larger: M5 rear tires are 10 mm wider than those of the 550i Sport Package.

At all four wheels, specially calibrated springs and shock absorbers – the latter made variable by Electronic Damping Control, next – complete a sporting suspension setup that only BMW M could create.

M Electronic Damping Control

EDC controls the shock absorbers to any level of firmness between their softest and firmest settings, precisely adapting to the road conditions and driver's demands at any given moment. M EDC is now offered in all M Cars: standard on M6 and M5, optional on M3. For a detailed description, see **BMW features**, page 47.

M Variable Differential Lock: putting power to the road, the BMW M way

Mechanical limited-slip differentials are part of the BMW M tradition of ultimate road handling. BMW M engineers developed a more capable mechanical limited-slip differential; called the M Variable Differential Lock, this concept appears in all current BMW M models. For details on this unique feature, see **BMW features**, pages 52-53.

1 – Due to low-profile tires, please note: Wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. The M5 is not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

M5 key features

Based on the 550i Sedan, the M5 differs from that model in the following key features:

Servotronic steering with two effort levels

Servotronic provides the strongest assist at low vehicle speeds for ease in parking and low-speed maneuvers, then progressively decreases assist to preserve steering feel as road speed increases. For details on BMW's power-steering systems, see **BMW features**, pages 48-50.

The M5 steering system offers the driver a choice of **two levels of assist**: Normal, with the typical BMW level of assist, and Sport, with a higher overall level of effort (less assist) for sportier feel. Within these two settings, Servotronic still varies the assist according to vehicle speed.

M5 steering is also "quicker" than that of the standard 5 Series, with a 12.4:1 ratio vs. the Series' 13.7:1. (For a definition of steering ratio, see **BMW features**, page 48.)

Immensely powerful, fade-resistant compound, cross-drilled brakes

Powerful brakes are always a BMW strength; even more so with the M Cars. Thus the M5 gets huge ventilated disc brakes. At the front, they are 374 mm/14.7 in. in diameter and 36 mm/1.42 in. thick (550i: 348 x 30 mm, already generous). At the rear, they're 370 mm/14.6 in. in diameter and 24 mm/0.94 in. thick (550i: 345 x 24). These are even larger dimensions than those on the heavier 7 Series.

But like its steering, the M5's brakes go further. Whereas the 535i, 550i and 6 Series have aluminum/cast-iron brake rotors, the M5 takes the full leap to

compound brakes for ultimate performance in hard, and repeated braking. Both concepts are explained in **BMW features** on page 52.

Wheels and tires: ultimate grip and style

In its wheel-tire equipment, the M5 takes the 5 Series platform to its ultimate level of performance and style. The wheels, in an open, discreetly aggressive M Radial Spoke design (#166M), are sized 19 x 8.5 front/19 x 9.5 rear and carry 255/40R-19 front / 285/35R-19 high-performance tires¹, specially developed for the M5 and M6.

These are not run-flat tires; there are not yet run-flats that meet BMW M parameters in terms of performance capability and weight. The M5 exhaust system, with its four main mufflers clustered at the rear of the vehicle, does not provide space for a spare tire, so the M5 is equipped with the M Mobility System, described in **BMW features** on page 56.

Specially calibrated, variable Dynamic Stability Control

DSC is standard on all BMW models; on M models, this electronic traction and stability system is complementary to the M Variable Differential Lock.

Additionally, the DSC of M models incorporates M-specific features, including a selectable **M Dynamic Mode**. For details on DSC, including the M versions, see **BMW features**, pages 79-81.

MDrive: M technology at the driver's disposal

Via the MDrive system, the driver has fully 279 combinations of control settings to choose from² – and an MDrive button on the steering wheel that allows the 1-touch selection of the driver's preferred combination of same. How it all works is explained in **BMW features**, pages 50-51.

Comfort & convenience

Imagine the sportiest and most luxurious 5 Series interior you have seen so far. Then imagine it even sportier, more luxurious, and equipped with special features that enhance your enjoyment of the ultimate BMW performance. That would be the M5 interior – upholstered in Merino leather; offering unique colors; trimmed in brushed aluminum or a choice of two elegant woods; including special instrumentation and displays; and offering the optional M Head-up Display and M Multi-function sport seats with Active Backrest Width.

Special M instrumentation

Both main instruments have unique fulltime-illuminated white scales and red pointers. The speedometer scale reads up to 200 mph, the tachometer to 9000 rpm. A variable tachometer warning segment in yellow, with red normally beginning at the limit of 8250 rpm, is included. Via a rotating disc behind the instrument face, this segment extends down-

ward to as low as 4500 rpm with a completely cold engine on a cold day; then gradually moves up to the full 8250 rpm as the engine warms up. On the speedometer, a similar disc indicates the cruise control's set speed.

With such a high-performance engine, oil temperature is a critical factor; accordingly, an oil-temperature gauge is set into the lower portion of the tachometer. As a further differentiation point of M5 instrumentation, via the On-board Computer the driver can select oil level (instead of average speed) to be shown in the display between speedometer and tachometer.

Unique M sport steering wheel

The M5 steering wheel is as sporty as it gets:

- Smaller diameter: 381 mm/ 15.0 in. vs. 5 Series' 385 mm/ 15.2 in.
- Thicker rim, padded leather with M-color stitching
- Thumb contours at 9 and 3 o'clock
- SMG paddles above lateral spoke: right upshift, left downshift²
- Round center and unique spoke shape
- MDrive button (see pages 50-51) replaces one programmable button.

As in the 5 Series, the steering wheel includes power tilt/telescopic adjustment and is included in the memory system.

1 – Due to low-profile tires, please note: Wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. The M5 is not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

2 – Applies only to vehicles equipped with SMG.

M5 key features

Based on the 550i Sedan, the M5 differs from that model in the following key features:

Illuminated SMG shift lever, special console controls

The M5 center console is highly distinctive, dominated by the SMG shift lever² and flanked by MDrive controls. In detail, features here include –

- The ultra-short SMG² shift lever, with its illuminated SMG shift pattern (R–N–D/S and +/- for sequential shifting)
- Power button, for 3 settings of engine power and throttle response
- DSC button, for 3 Dynamic Stability Control settings
- EDC button, for 3 Electronic Damping Control setting
- SMG control, for selecting from Sequential Manual Gearbox's 11 shift programs².

Set into a neatly designed panel at console center, these controls are surrounded by the standard brushed-aluminum or optional wood trim.

With the available 6-speed manual transmission, the shift lever is also illuminated, and any other controls associated with the SMG (steering-wheel shift paddles, program selector) are not present. The Power button is also deleted, and the console DSC button is replaced by an MDM (for M Dynamic Mode) switch in the center stack.

Merino leather, Extended or Full

BMW's finest leather grade is standard; three upholstery versions and unique M colors are available.

Standard is an Extended treatment of Merino leather, with this beautiful leather appearing not only on the seats and door panels, but also on the door armrests, center-dash area,

center console (including armrest) and handbrake boot. In the optional Full treatment, leather is also applied to the entire dash width and the door panels' upper portions. Perforated Merino is available only in the Full version, and is mandatory with the optional Active Seat Ventilation.

The color selection is as follows (see color chart on pages 428-429):

- Extended Merino and Full Perforated Leather – Black, Silverstone and Sepang Bronze Light
- Full Leather, non-perforated – Black, Portland Natural Brown, Sepang Bronze Light, Silverstone and Indianapolis Red.

In all M5 interiors, the headliner and roof pillars are Anthracite color; with the optional Full leather, they are in Alcantara material.

Special interior trim

The standard interior trim – appearing across the dash, on the door pulls and on the center console's main horizontal surface – is a boldly brushed aluminum. Optional at no extra cost are two elegant woods:

- Olive Ash, a medium-tone wood with burl grain
- Walnut Madeira, reddish brown with more linear grain.

M sport seats

BMW sport seats are widely praised for their excellent anatomical support and extensive adjustability; BMW M sport seats embody even more comprehensive design and features for supporting the driver in sporting driving.

In addition to the adjustments provided by the 5 Series' available front sport seats, the M5's standard M sport seats

include adjustable backrest width. Along with the steering wheel and exterior mirrors, each driver's preferred adjustments are stored in Vehicle & Key Memory and are reset to those adjustments when that driver unlocks the vehicle with his or her remote.

The amazing M Multi-function sport seats are optional; see [options & packages](#) for details.

Navigation System and MDrive: standard in M5

Optional in the 5 Series, Navigation is standard in the M5. Its features include –

- GPS Navigation System with DVD database, incorporating all the latest refinements and enhancements
- High-resolution (640 x 240 pixels), 8.8-in. Control Display
- Controller with new direct-select keys for CD, radio, phone and navigation menus, plus Menu, Back and Option keys
- Voice Command system for phone, Navigation, audio and climate functions
- Real Time Traffic Information
- 6 Programmable Memory Keys.

For details on BMW Navigation Systems, see [BMW features](#), pages 65–67.

Logic7 audio system, standard

This audiophile-quality system is optional in 5 Series models, standard in the M5. It includes –

- Increased audio power
- Very high-caliber speakers (aluminum-membrane type for all but subwoofers); 13 speakers, including 2 subwoofers
- Digital Sound Processing (DSP), adjusted along with other Logic7 parameters on iDrive Control Display
- Surround Sound simulation.

For a description of the newly available Enhanced Premium Sound System, see pages 69–70.

Other premium features standard in M5

In addition to features already described, the list of further features that are standard in the M5 but optional in some or all 5 Series models is extensive. It includes:

- Xenon Adaptive headlights with auto-leveling
- Headlight cleaning system
- Park Distance Control
- Auto-dimming interior and exterior mirrors
- Ambient Light Package, plus M5-specific entry lights on the doors
- BMW Universal Transceiver
- Heated front seats.

Thus the M5 options list is shorter, for all the right reasons.

Safety & security

M5 safety and security features are shared with those of other BMW Series, and are identical to those of the 5 Series.

The Insurance Institute for Highway Safety has tested the current 5 Series Sedan in its demanding 40-mph frontal-offset crash test – and awarded its coveted Best Pick rating. This is dramatic proof of the value of BMW's safety engineering, and of course applies directly to the M5.

For details on BMW safety and security features and systems, see [BMW features](#), pages 78–90.

2 – Applies only to vehicles equipped with SMG.

M5 key features

Based on the 550i Sedan, the M5 differs from that model in the following key features:

Options & packages

Factory-installed options

6-speed manual transmission (no extra cost, code 2MA)

This more conventional transmission is offered as a no-extra-cost alternative to the standard 7-speed Sequential Manual Gearbox. It is described on page 39.

M Multi-function sport seats (codes 4MA + 4MF; not available with Active Seat Ventilation or X2 perforated Full Leather)

In addition to the already extensive adjustments and features of the M5's standard M sport seats, these add:

- **Active Backrest Width.**

Responding to cornering forces, the lower backrest side bolsters "tighten" the curve-outer side to provide extra lateral support to the occupants. That is, in a hard right corner, the driver's and passenger's left lower backrest bolsters move inward; in a hard left corner, the right bolsters tighten. Moreover, there are 3 settings for this function:

Comfort, Normal and Sport, in order of aggressivity, programmable within the MDrive menu.

- **Active head restraints.** A rear-end collision causes the front head restraints to pivot forward into close proximity with the occupants' heads. Thus occupants are able, if they prefer, to adjust the restraints away from direct contact with their heads, yet gain optimum protection against whiplash or more serious head/neck injuries.

20-way Comfort front seats (code 456, require Active Seat Ventilation & Active Backrest Width)

This M5 option, known from other Series and described in **BMW features** on pages 74-75, is the only type of M5 front seats available with Active Seat Ventilation and, in the M5 only, adds Active Backrest Width.

Active Seat Ventilation (code 453, requires Comfort front seats & X2 perforated Full Leather)

Fans inside each front seat gently blow air upward through an internal web and special perforated leather to provide pleasant ventilation and help keep occupants' clothes free of perspiration.

Comfort Access (code 322)

Eliminates the need to activate a remote to unlock or lock the vehicle, or to insert it into the dash slot before starting the engine. Described in **BMW features** on page 58.

Soft-close doors (code 323)

The user closes the door gently; an electric mechanism draws it fully in.

High Beam Assistant (code 5AC)

Assumes the task of switching between high and low beams, eliminating a source of distraction for drivers and likely increasing the proportion of nighttime driving in which the high beams are used. Details in **BMW features** on page 59.

Heated steering wheel (code 248)

Available as a stand-alone option only, as other typical Cold Weather Package features are standard on the M5.

Full Leather upholstery (perforated or not perforated, codes X2 or X3)

This leather treatment (even more extensive than the M5's standard Extended treatment) is in the fine Merino grade. Whereas the standard leather (also Merino) appears on seats, door panels, door armrests, center-dash area, center console and handbrake boot, the Full version includes leather across the entire dash width and the door panels' upper portions. With either Full option, the headliner and roof pillars are in Alcantara material.

Like the standard leather, the perforated Full leather is available in Black, Silverstone II and Sepang Bronze Light. The non-perforated Full treatment offers two additional colors: Portland Brown and Indianapolis Red.

Alternate interior trim (Olive Ash code 4MK, Walnut Madeira code 4ME)

In place of the standard brushed aluminum, optional at no extra cost are two elegant woods:

- Olive Ash, a medium-tone wood with burl grain
- Walnut Madeira, reddish brown with more linear grain.

See color chart, pages 428-429.

M Head-up Display (code 610)

BMW's Head-up Display displays important driving information in color on a 6 x 3-in. field in the windshield; it is described in **BMW features** on page 67.

The M5's Head-up Display is a special M version, in which either the standard selection of information or a special M set can be displayed. The HUD is switched on and off in the same manner as in other Series, via a switch in the lighting control center to the left of the steering column; selection between the standard and M display sets occurs in the MDrive menu, and that selection is stored on the MDrive button.

- For the standard set, the user selects the iDrive's I-menu and chooses any or all of Navigation instructions, cruise-control set speed and current vehicle speed.
- The M set includes –
 - Dynamic engine-speed band in green, yellow and red
 - Upshift indicator (engine-speed band flashes as the rpm limit is reached)
 - The gear currently engaged (SMG only)
 - As with the standard display, the vehicle speed.

M5 key features

Based on the 550i Sedan, the M5 differs from that model in the following key features:

Enhanced Premium Sound System

(code 752)

The M5 comes standard with the premium audio system that's optional in the 5 Series. The optional Enhanced Premium Sound System offers M5 customers an even higher-performing audio experience. This ultra-audiophile system features high-end speakers with neodymium magnetic drives and lightweight, extremely stiff hexacone membranes; and an extensive range of other high-tech audio features. The system includes 16 speakers, and is described in more detail in **BMW features** on pages 70-71.

iPod/USB Adapter

(code 6FL)

Addresses the growing demand for in-vehicle digital programming. It enables the vehicle's audio system to play and control an external MP3 player or a flash drive; there is no conflict with the available (center-installed) CD changer. For more details, see **BMW features**, pages 72-73.

HD Radio

(code 653)

HD Radio significantly enhances the sound quality of both FM and AM reception. It is described in **BMW features** on pages 71-72.

Satellite Radio

(code 655)

The Sirius system is described in **BMW features** on page 72.

Split folding rear seats and ski bag

(code 465)

The seats are split 60% left/40% right. The pass-through for the ski bag is in the center, as part of the 60% side; as with the standard rear seat, there are three head restraints. Releases for folding the seats are in the trunk.

Rear-seat heating

(code 496)

Like the heated front seats that are standard in the M5, this option offers 3-stage/2-zone heating of the outer seating positions. The controls are at the rear of the center console.

Power rear sunshade and manual rear door-window sunshades

(code 416)

The rear-window shade is powered, and controlled from a console switch. Door-window shades are manual and easily positioned by rear-seat passengers; each of these consists of two portions, for the main window and the fixed quarter pane.

Rear-seat side-impact airbags and rear safety-belt tensioners

(code 261)

As in the 5 Series, rear-seat side-impact airbags are offered as optional equipment so that customers can decide on the basis of their own priorities whether or not to have them. This option includes automatic tensioners on the rear outboard safety belts.

Rear-spoiler delete

(code ZSD)

At no extra cost, the M rear spoiler that is standard on the U.S. M5 can be deleted.

BMW center-installed accessories

Among the accessories available for the M5 are:

- Clear protective coverings for hood and mirrors and front bumper
- Roof cargo carriers
- Car covers, outdoor and indoor types
- Windshield sunshade
- Sun/wind deflector for moonroof
- Umbrella and holder
- M5 embroidered trunk mat and other trunk accessories

For details and a complete listing, see the latest **Original BMW Accessories** catalog covering the M5.

Standard & optional features

2009 BMW M5

Bold within table indicates new feature for 2009.

Exterior design & function	
Special BMW M front bumper/spoiler/air-intake ensemble with "flaps"	S
Xenon Adaptive headlights with dynamic auto-leveling	S
Automatic headlight control	S
High-intensity headlight cleaning system with retracting nozzles	S
Daytime running lamps	S ¹
Park Distance Control, front & rear with graphic display	S
Rain-sensing windshield wipers with articulated passenger's-side wiper arm, single-wipe control, windshield-washer system with heated washer jets	S
BMW M exterior mirrors, power-folding	S
BMW M exterior paint selection, choice of standard or metallic	S
Side gills with M5 logos	S
Satin Chrome Shadowline side-window trim	S
Unique side sills	S
Rear spoiler	S ²
Special BMW M rear bumper/diffusor ensemble with "flaps"	S
Four stainless-steel exhaust tips	S
Performance & efficiency	
5.0-liter DOHC (4-cam) 40-valve V-10 engine: Aluminum cylinder block & heads, bedplate construction	S
Double high-pressure VANOS steplessly variable valve timing ³	S
10 individual throttles, electronically controlled, with variable throttle response & maximum power level (3 settings)	S
Machined intake ports & combustion chambers	S
BMW MS S65 electronic engine management system	S
Ionic-current knock control	S
Semi-dry-sump, G-sensitive lubrication system	S

Performance & efficiency (cont.)

7-speed Sequential Manual Gearbox (SMG) with DRIVELOGIC, 11 shift programs & Launch Control	S
6-speed manual transmission	NC
Specialty equipped & calibrated BMW M suspension system:	
Double-pivot-type aluminum front suspension	S
4-link Integral Link aluminum rear suspension	S
BMW M Electronic Damping Control (EDC) with Normal, Comfort & Sport modes	S
Vehicle-speed-sensitive variable-assist, variable-ratio power steering with Normal & Sport levels of power assist	S
4-wheel compound, ventilated & cross-ventilated disc brakes	S
M Radial Spoke alloy wheels (design #166M), 19 x 8.5 front/19 x 9.5 rear	S
255/40ZR-19 front / 285/35ZR-19 rear performance tires ⁴	S
Tire Pressure Monitor	S
M Mobility System	S
BMW M-calibrated Dynamic Stability Control (DSC) with M Dynamic Mode	S
M Variable Differential Lock	S
MDrive system, providing 1-touch selection of preferred combination of 3 throttle/power settings, 11 SMG programs, 3 EDC modes, 2 DSC modes & de-activated DSC	S

1 – Selectable via Vehicle Memory system (programming by user or BMW center).

2 – May be deleted at no extra cost.

3 – VANOS = **V**ARIABLE **N**Ockenwellen **S**teuerung = variable camshaft control, or variable valve timing.

4 – Due to low-profile tires, please note: Wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. The M5 is not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

S – Standard

OPT – Optional

NC – No extra cost

Standard & optional features

2009 BMW M5

Bold within table indicates new feature for 2009.

Comfort & convenience	
Vehicle & Key Memory	S
Multi-function remote:	
Selective locking	S
Remote trunk release	S
Soft-close doors	OPT
3-position door stops	S
Comfort Access	OPT
Dual power/heated exterior mirrors, power-folding	S
Automatic tilt-down of right exterior mirror for visibility of curb when backing up	S
Automatic-dimming interior & exterior mirrors	S
High Beam Assistant	OPT
BMW Universal Transceiver (3-function garage-door opener)	S
Courtesy lights with fade-in/fade-out feature, actuation from remote, automatic switch-on when engine is turned off	S
Front & rear reading lights, separately controlled left/right	S
BMW Ambiance Lighting	S
BMW M exit/entry lighting in door panels	S
Illumination of interior door handles & door storage bins, front footwell lighting & LED exterior ground lighting	S
Power tilt/telescopic leather-wrapped M sport steering wheel with fingertip cruise, audio & phone ⁵ controls, programmable button & MDrive selector	S
Heated steering wheel	OPT
Start/Stop button	S
Illuminated shift lever	S
18-way power/heated M front sport seats, including adjustable thigh support, 4-way power lumbar support & backrest width	S
18-way power/heated M Multi-function sport seats, including Active Backrest Width, 4-way power lumbar support & Active head restraints	OPT
20-way power/heated Comfort front seats, including articulated upper backrests & adjustable backrest width, Active Backrest Width, 4-way lumbar support; passenger's-seat memory & Active Head Restraints with adjustable side support	OPT ⁶

Comfort & convenience (cont.)

Memory system for driver's seat, steering wheel & exterior mirrors (2 settings per user)	S
Balance control for front-seat heating	S
Active Seat Ventilation, front seats	OPT ⁷
Adjustable front center armrest	S
2-level center console compartments with climate-controlled lower compartment	S
BMW M instrumentation with –	
Illuminated white scales on speedometer & tachometer	S
Red pointers	S
Oil-temperature gauge	S
Variable warning segment on tachometer	S
LCD main & trip odometers	S
Service Interval Indicator with miles-to-service readout	S
iDrive system with five menus, controller, direct-select radio, CD, phone & Navigation menus plus Menu, Back & Option Keys ; 6 Programmable Memory Keys, automatic ventilation, MDrive submenu, Voice Command; includes On-board Computer & GPS Navigation w/DVD database & Real Time Traffic Information	S
M Head-up Display	OPT
Merino leather upholstery:	
Extended Leather	S
Full Leather	OPT
Perforated Full Leather	OPT
Alcantara headliner	OPT ⁸
Brushed-aluminum interior trim	S
Olive Ash wood interior trim	NC
Walnut Madeira wood interior trim	NC

5 – Phone controls active when approved cellphone is paired with Bluetooth interface.

6 – Require Active Seat Ventilation & perforated leather upholstery.

7 – Requires Comfort sport seats & perforated leather upholstery.

8 – Included and only available with Full Leather upholstery.

S – Standard

OPT – Optional

NC – No extra cost

Standard & optional features

2009 BMW M5

Bold within table indicates new feature for 2009.

Comfort & convenience (cont.)

Power windows with key-off operation; 1-touch opening & closing of all door windows, anti-trapping feature, opening from remote, closing from exterior lock	S
Automatic climate control with separate left/right temperature & air- distribution controls, automatic recirculation control, bi-directional solar sensor, Heat at Rest, humidity control, temperature- & volume-controlled rear outlets, activated-charcoal microfilter ventilation & other features	S
2-way power moonroof with 1-touch opening & closing, anti-trapping feature, opening from remote, opening & closing from exterior door lock, sliding interior sunshade	S
Anti-theft Logic7 audio system with 13 speakers incl. 2 subwoofers, Digital Sound Processing, Surround Sound simulation, Radio Data System (RDS), auxiliary audio input & FM diversity antenna system	S
Enhanced Premium Sound System with 16 speakers	OPT
6-disc CD changer in glove compartment	C
iPod/USB Adapter	OPT
HD Radio	OPT
Satellite Radio	OPT
Bluetooth cellphone interface	S
Power outlets in front passenger's footwell & trunk	S
Dual cupholders front & rear	S
Dual front sun visors with illuminated mirrors	S
Open storage compartments in front & rear doors	S
Fold-up rear center armrest	S
Seatback storage compartments	S
Rear-seat heating	OPT
Split folding rear seats & ski bag	OPT
Power-operated rear & manual rear door-window sunshades	OPT
Rear-window defroster	S
Interior trunk release, electrically operated	S
Fully finished trunk with reversible floormat to keep smaller cargo from sliding	S

Safety & security

BMW M-calibrated Dynamic Stability Control (DSC), including all-speed traction control, electronic brake proportioning, antilock braking (ABS), cornering/braking stability enhancement, Dynamic Brake Control, Brake Standby, Brake Drying, Start-off Assistant & M Dynamic Mode	S
Dual front-impact Supplementary Restraint System (SRS) with dual-threshold deployment, 2-stage Smart Airbags	S
Front safety belts with automatic tensioners & force limiters	S
Automatic-locking retractors (ALR) on all passenger safety belts (for installation of child restraint seats)	S
Interlocking door anchoring system for side impacts	S
Front- & rear-seat Head Protection System (AHPS II)	S
Front side-impact airbags	S
Rear-seat side-impact airbags & automatic tensioners on rear outboard safety belts	OPT
Active front head restraints	OPT ⁹
Advanced Crash Safety Management (ACSM) for deployment of safety systems	S
Battery Safety Terminal	S
BMW Assist, including enhanced collision notification, SOS button, enhanced Roadside Assistance, TeleService, BMW Assist Safety Plan ¹⁰	S
Central locking system with double-lock anti-theft feature, selective unlocking	S
Coded Driveaway Protection	S
Alarm system with operation from remote, interior motion detector	S

9 – Included with M Multi-function or Comfort front sport seats.

10 – Requires BMW Assist annual fee after 4th year.

S – Standard

OPT – Optional

C – BMW center-installed

Technical specifications

2009 BMW M5

General

Curb weight, lb., manual transmission or SMG	4012
Weight distribution, front/rear, %	52.2/47.8
Wheelbase, in.	113.7
Track, front/rear, in.	62.2/61.7
Length, in.	191.5
Width, in.	72.7
Height, in.	57.8

Body

Type	4-door sedan
Aerodynamic drag coefficient	0.31
EPA size classification	Compact

Accommodations

Seating capacity, persons	5
Shoulder room, front/rear, in.	57.3/57.2
Head room, front/rear, in.	37.7/37.8
Leg room, front/rear, in.	41.5/36.0
EPA passenger-compartment volume, cu ft.	99.1
EPA cargo volume, cu ft.	14.0 ¹

Engine & electrical

Engine type	DOHC (4-cam) 40-valve V-10, high-pressure Double VANOS ² steplessly variable valve timing, 10 individual electronically controlled throttles with P400, P500 & P500 S settings
Bore x stroke, mm/in.	92.0 x 75.2/3.62 x 2.96
Displacement, cc/cu in.	4999/305
Compression ratio	12.0:1
Power @ rpm, hp	500 @ 7750
Torque @ rpm, lb-ft.	383 @ 6100
Engine-management system	MS S65 with ionic-current knock control, variable valve timing, electronic throttles, variable maximum power level, g-sensitive lubrication system, oil-level/temperature sender, variable tachometer warning segment, catalyst protection & other functions included in control strategy

Engine & electrical (cont.)

Fuel requirement	Premium unleaded
Fuel capacity, U.S. gal.	18.5
Battery capacity, amp-hr.	90
Alternator output rating, amp./W	170/2380

Drivetrain

Drive system	Front engine/rear-wheel drive
Manual transmission	ZF Type G, 6-speed
Ratios: 1st	4.05:1
2nd	2.40:1
3rd	1.58:1
4th	1.19:1
5th	1.00:1
6th	0.87:1
Reverse	3.68:1
Final drive ratio	3.62:1
Sequential Manual Gearbox (SMG)	Electrohydraulically actuated, electronically controlled 7-speed Sequential Manual Gearbox with 6 Sequential & 5 Automated shift programs; twin-disc clutch
Ratios: 1st	3.99:1
2nd	2.65:1
3rd	1.81:1
4th	1.39:1
5th	1.16:1
6th	1.00:1
7th	0.83:1
Reverse	3.99:1
Final drive ratio	3.62:1

- 1 – Can be expanded via available folding rear seats.
- 2 – VANOS = **V**ARIABLE **N**OCKENWELLEN **S**TEUERUNG = variable camshaft control, or variable valve timing.

Technical specifications

2009 BMW M5

Chassis	
Body/frame construction	Unitized; aluminum front end, otherwise steel
Front suspension	BMW M sport suspension in aluminum; struts, double-pivot lower arms, coil springs, electronically controlled twin-tube gas-pressure shock absorbers with Normal, Comfort & Sport modes, anti-roll bar, subframe, thrust plate
Rear suspension	BMW M sport suspension in aluminum; 4-link Integral system, coil springs, electronically controlled twin-tube gas-pressure shock absorbers with Normal, Comfort & Sport modes, anti-roll bar
Steering type	Rack & pinion, Servotronic vehicle-speed-sensitive power assist with Normal & Sport assist levels
Overall ratio	Variable; mean ratio is 12.4:1
Turning circle, ft.	40.7
4-wheel compound, ventilated & cross-ventilated disc brakes:	
Front, diameter x thickness, mm/in.	374 x 36/14.7 x 1.42
Front calipers	Aluminum
Rear, diameter x thickness, mm/in.	370 x 24/14.6 x 0.94
Rear calipers	Cast iron

Chassis (cont.)

Wheels	Cast alloy, 19 x 8.5 front/19 x 9.5 rear
Tires	255/40R-19 front / 285/35R-19 rear special performance ³
Stability-enhancement system	Dynamic Stability Control (DSC), including all-speed traction control, electronic brake proportioning, antilock braking (ABS), cornering/ braking stability enhancement, Dynamic Brake Control, Brake Standby, Brake Drying, Start-off Assistant & M Dynamic mode; M Variable Differential Lock

Performance data

Acceleration, 0-60 mph, sec., manual transmission or SMG ⁴	4.5
Top speed, mph	155 ⁵
Fuel economy, EPA est. MPG, city/highway, manual transmission or SMG	11/17

3 – Due to low-profile tires, please note: Wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. The M5 is not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

4 – BMW AG test results. Actual acceleration results may vary depending on specification of vehicle; road and environmental conditions; testing procedures and driving style. These results should be used for comparison only, and verification should not be attempted on public roads. BMW urges you to obey all posted speed limits and to please wear your safety belt at all times.

5 – Electronically limited.

2009 BMW M3:

“BMW M within reach” – the amazing new V-8 M Car, available in three models.

With the all-new M3, BMW M has broken the mold of existing stereotypes and limitations. Following an M3 generation (2001-06) that won the near-universal praise of critics and buyers alike, the all-new M3 is not only quicker, even more talented at conquering curves and corners, even more responsive to its driver's commands – it is also more refined and sophisticated in the creature comforts it offers. It is, according to *AutoWeek's* April 9, '07 issue, “a car that takes the sonorous engine note, rabid performance, superb chassis balance, impressive build quality and pure technical brilliance of its predecessor and hauls every last nuance of it to a whole new plane.”

Beyond all this, the new 3-model lineup adds yet another dimension. “When I found out that BMW was going to make the new M3 in a 4-door,” wrote one participant of the same magazine's AutoFile survey in the September 29, '08 issue, “it sounded like the perfect family car to me. Who said a family car has to be boring?”

This M3 section of Fast Facts 2009 focuses on the attributes and features that distinguish the three M3 models from their 335i counterparts; consult the 3 Series section for a comprehensive listing and descriptions of key attributes and features shared with the 3 Series.

What's new for 2009

All models

- Metallic exterior colors: Sparkling Graphite discontinued, Le Mans Blue added
- Chrome trim on cupholders, start/stop button, lighting controls at left of dash
- Optional 2nd-generation iDrive system: user-friendlier, expanded functionality, direct-select keys, higher-resolution control display; includes hard drive (next)
- With Navigation/iDrive option, an 80-GB hard drive provides data storage for the iDrive system, GPS Navigation, entertainment systems, Voice Command and phone system.
- Active front head restraints
- Smartphone Integration (6NF) newly available

Sedan only

- New taillight design, reviving BMW's traditional L-form; luminous strips and LED turn signals, 3D effects

M3 models & key features

This information lists major features, and helps position and distinguish the three M3 models. For a comprehensive summary of features, see pages 404-415.

M3 Coupe

As the “core” M3 model, the Coupe has the longest tradition: there has always been a 2-door, closed-body M3. Like all the new M3s, it is powered by the magnificent 4.0-liter, 414-hp BMW M V-8 engine and available with either a 6-speed manual transmission or the spectacular new 7-speed M Double-Clutch Transmission (M DCT) with Drivelogic. As the listing here clearly shows, the Coupe leads the way with an impressive array of key attributes and features. Like this section overall, the listing here focuses on the features and attributes that differentiate the M3 models from their 335i counterparts.

Exterior design & function

- Front bumper/spoiler ensemble with 3 large lower air intakes; foglights omitted for maximum airflow
- Aluminum hood, entirely different from 3 Series, with –
 - “Power dome,” making space for engine’s voluminous induction system
 - Additional air intake, to left of power dome (simulated intake on right side for visual symmetry)
- 18-in. BMW M Double Spoke wheels
- More extensive underbody fairing, with special cooling airflow to differential
- Traditional BMW M side “gills” with M3 logo and integrated side blinkers
- Unique side sills (rocker panels) with sharp accent lines

- Standard Satin Chrome Shadowline side-window trim
- M exterior mirrors, shaped to enhance aerodynamics and reduce wind noise; distinctive appearance too, with body-color shell, contrasting black base and double-bridge connection to body¹
- Carbon-fiber roof
- Discreet but effective trunklid spoiler lip
- Rear bumper/spoiler/diffuser ensemble
- Four polished stainless-steel exhaust outlets

Performance & efficiency

- BMW M 4.0-liter V-8 engine – 414 hp, 295 lb-ft. torque (335i: 3.0-liter twin-turbo inline 6-cylinder; 300 hp, 300 lb-ft.)
- 6-speed manual transmission, Type G
- Optional all-new M Double-Clutch Transmission with Drivelogic (M DCT Drivelogic)
- Larger fuel tank than in 3 Series: 16.6 gal., vs. 16.1
- M Variable Differential Lock
- Specially modified and calibrated front and rear suspension, almost completely distinct from 3 Series
- Special M3 steering system: “quicker” than 3 Series, with Servotronic vehicle-speed-sensitive power assist (Servotronic available on 335i models only in connection with optional Active Steering)
- Compound, cross-ventilated disc brakes with black-painted calipers; larger dimensions than 335i

1 – With Black paint colors, there is less contrast here.

M3 models & key features

This information lists major features, and helps position and distinguish the three M3 models. For a comprehensive summary of features, see pages 404-415.

- 18 x 8.5 front/18 x 9.5 rear M Double Spoke wheels with 245/40R-18 front / 265/40R-18 rear performance tires²
- BMW M-calibrated Dynamic Stability Control (DSC)

Comfort & convenience

- Doorsill trims with M3 logo
- M sport steering wheel with extra-thick rim, M logo on bottom spoke
- Unique speedometer and tachometer dials with –
 - Titanium-finish outer rings
 - Red indicator needles
 - Specific scales (speedometer to 200 mph/330 km/h, tachometer to 9000 rpm)
 - M logo on tachometer face
 - Oil-temperature gauge, also in tachometer face
 - Color-coded variable warning segment on tachometer, yellow/red; with M DCT, Upshift Lights added at top of tachometer
- Short shift lever with illuminated shift pattern and M logo, Nappa-leather grip; with M DCT, an even shorter E-shift lever
- Power and DSC switches adjacent to shift lever; EDC switch added in vehicles so equipped
- M power front sport seats (14-way power adjustment including 4-way lumbar and adjustable backrest width; manual thigh-support adjustment)
- Cloth/Novillo leather upholstery in Anthracite/Black
- Titanium Shadow interior trim standard; other trims optional (see right column))
- Wirkvelours headliner in Anthracite color

Options & packages

- Available option packages:
 - Technology Package (Electronic Damping Control, Comfort Access, Navigation + iDrive + MDrive)
 - Premium Package (auto-dimming, power-folding exterior mirrors, digital compass in interior rearview mirror, BMW Universal Transceiver, Novillo leather upholstery, choice of 3 interior trims, BMW Assist)
 - Cold Weather Package (headlight cleaning system, heated front seats, ski bag)
- Stand-alone options:
 - 7-speed M Double-Clutch Transmission with Drivelogic (M DCT Drivelogic)
 - M Electronic Damping Control
 - 19-in. wheels and performance tires²
 - Park Distance Control, rear only
 - 2-way power moonroof
 - Novillo leather upholstery
 - Extended Novillo leather upholstery³
 - Blue-Gray Brushed Aluminum, Carbon Leather or Sycamore Anthracite interior trim
 - Heated front seats
 - Navigation system + iDrive (includes HD Radio)
 - Enhanced Premium Sound System³
 - HD Radio
 - Satellite Radio
 - iPod/USB Adapter
 - Smartphone Integration⁴
 - Power rear-window sunshade
 - Rear-spoiler delete
 - BMW Assist

M3 Sedan

Now our customers who desire M3 performance, but also prioritize family or passenger-carrying capacity, can have their M3 and Sedan practicality too. This is neither glib nor an overstatement: the Sedan weighs only 22 lb. more than the Coupe and has the same aerodynamic drag coefficient ($C_D = 0.31$); wheel-bases are the same and the Sedan is shorter, though wider than the Coupe. Functionally and in its appointments, the Sedan also differs little from the Coupe. Here are its distinguishing features:

- 4-door Sedan model, vs. 2-door Coupe
- 1.4 in. shorter, 0.5 in. wider, 1.2 in. taller
- Conventional steel roof, vs. Coupe's carbon-fiber panel
- Trunklid does not have separate spoiler
- 4 doors, thus no easy-entry feature for rear seats and no safety-belt presenters
- 5-passenger seating capacity, vs. 4
- Roomier rear seating: 0.9 more leg room, 0.7 in. more head room, 3.2 in. more shoulder room
- Split folding rear seats optional

Same options and packages as M3 Coupe, except:

- Cold Weather Package substitutes split folding rear seats for ski bag
- Moonroof option price higher because it doesn't delete carbon-fiber panel

- Power rear-window sunshade adds manual rear door-window sunshades
- Split folding rear seats also available as stand-alone option

M3 Convertible

With this top-of-line M3 model, our customers can truly have it all: M3 performance, plus all the new M3 technology and luxury, plus the beautiful and functional retractable hardtop for glamour, open-air driving enjoyment and Coupe-like weather protection. Key points of differentiation from M3 Coupe include:

- Power retracting hardtop, fully automatic. Lowers in just 22 seconds, including the side windows; raises in 23 sec.
- Additional underbody reinforcements
- Performance and fuel economy somewhat affected by greater weight of Convertible (+441 lb.)
- Retractable hardtop does not have carbon-fiber panel
- Trunklid does not have separate spoiler
- Rear side windows open, include 1-touch opening; vs. Coupe's fixed windows
- Variable AM/FM antenna position, hardtop raised/lowered
- 1-piece folding rear backrest; converts rear seat into additional cargo space, with hooks for grocery bags. Split folding rear seats not available.

2 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. M3 models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

3 – Requires Technology Package or Navigation option.

4 – Requires iPod/USB Adapter & Premium Package or BMW Assist.

M3 models & key features

This information lists major features, and helps position and distinguish the three M3 models. For a comprehensive summary of features, see pages 404-415.

- Storage compartment behind rear backrest
- Variable trunk space with top up/down
- Front seat-integrated safety belts; belt presenters not necessary
- Side-impact airbags deploy upward to provide head protection, vs. Coupe's Head Protection System deployed from roof
- Rollover Protection System
- Active Knee Protection
- Same options and packages as for M3 Coupe, except:
 - Leather upholstery standard, cloth/leather not available; Sun Reflective Technology significantly reduces solar heating of leather; this treatment not available in other models
- Technology Package – Comfort Access includes Comfort Loading (intermediate hardtop position for easy trunk loading) and other specific Convertible features
- Premium Package – leather not included, as standard
- Cold Weather Package – cargo bag replaces Coupe's ski bag, can hold 2 small golf bags
- Cargo bag as stand-alone option
- Navigation System adds Convertible climate-control mode
- Optional Enhanced Premium Sound System has 12 speakers, vs. Coupe's 16
- Moonroof not available
- Power rear-window sunshade not available

M3 key features

Except as noted, all current M3 Series models offer the following features:

Exterior design & function

Familiar 3 Series shapes, expressive M details

The three 3 Series body types on which M3s are based – Coupe, Sedan, Convertible – are plenty sporty; after all, they're BMWs. From these shapes, BMW M has crafted three models that express M3 capability in a consistent way, "showing what an M3 can do" by its functional and esthetic distinctions from the 3 Series counterparts.

At the front

Extensive changes here; every panel from the A-pillars forward is M3-exclusive. Three large openings, spanning essentially the entire width of the front bumper/spoiler ensemble, supply the 414-hp V-8 with the large volumes of air it requires; they also supply air to the cooling systems for engine, steering system and transmission fluid. These air intakes are shaped to harmonize with the headlight units; at the spoiler's outer edges are downward extensions that could be called "flaps" and have the function of optimizing airflow around the wide tires. This spoiler shape elongates the front end slightly, so that the Coupe and Convertible are 1.2 in. longer, the Sedan 2.2 in. longer than the 3 Series counterpart.

The hood is not only all-new, but also made of aluminum (3 Series: steel) to save weight and enhance weight distribution. It includes a "power dome" that clears the engine's big air plenum. This is flanked by an air intake on the left that provides extra air for the engine; a simulated intake on the right is there for visual symmetry.

In profile

Evidence of M3 distinction is ample and dramatic. The longer nose, dropping lower at the very front, is visible in side view. So is the projection of the main side character line into the front side panels, where it wraps into side gills with a chrome "fin" integrating the side blinker and M3 logo.

Strongly profiled side sills (rocker panels) lend visual energy too, while M Double Spoke wheels and ultra-low-profile performance tires (18-in. standard, 19-in. forged wheels optional). On the Coupe only, the carbon-fiber roof panel forms a curved line that becomes the rear window's edge; a discreet but effective trunklid spoiler adds a functional and esthetic accent to the tail of Coupe and Sedan, and can be deleted at no extra cost.

At the rear

On the Coupe and Sedan, the trunklid spoiler is much in evidence. On all models, an expressly sporty bumper/spoiler ensemble forms a central diffuser and, below that, frames the four chrome exhaust outlets that speak M Power so eloquently.

Special M exterior colors

Exclusive BMW M colors further enhance M3 distinctiveness. In addition to three standard colors, the M3s offer five of these, all metallic and all named after famous race courses:

- **Interlagos Blue** – a deep blue
- **Silverstone** – a bluish-gray tone, silver-like
- **Le Mans Blue** – a bright medium blue
- **Jerez Black** – adding sparkle to a traditional favorite
- **Melbourne Red** – warm red with copper-like cast.

M3 key features

Except as noted, all current M3 Series models offer the following features:

Performance & efficiency

4.0-liter DOHC (4-cam)

32-valve V-8 engine

Today's new M3, the 4th generation, brings not just a leap in cylinder count but also in power (414 hp) and rpm (8400). Called S65 and sharing its general concept with the V-10 that powers M5 and M6 models, this new V-8 employs exotic sports features and attributes to achieve such dramatic results:

Weight-efficient aluminum construction with bedplate-type cylinder block for immense strength, yet lighter weight than the 6-cylinder engine it replaces.

4.0-liter displacement, fully 23% more than its predecessor but still less than in some M3 competitors. This relates to the engine's...

High-rpm path to performance.

To increase an engine's power, engineers can enlarge it or increase its rotational speed. The latter path, chosen by BMW M, saves weight in the powertrain (engine, transmission, driveshaft, differential) and vehicle as a whole, enhancing agility. It also makes for a sportier driving experience, featuring the sound of a finely honed engine at high rpm.

Induction system. A single induction path and throttle for each cylinder. The M5/M6 V-10 engine shares this M-definitive feature as well as the high-rpm strategy.

Low-inertia valvetrain. Like other M engines, the S65 does not employ the Valvetronic variable valve lift of BMW's regular 6-, 8- and 12-cylinder engines except the twin-turbo units. Its 4 valves per cylinder are opened via barrel-type hydraulic lifters derived from racing practice. Combined with hollow camshafts, the valves are

ultra-light to reduce valvetrain inertia and enhance engine response.

Low-pressure M Double VANOS system. For the first time in an M engine, the extra-rapid variation of valve timing necessary at engine speeds over 8000 rpm is achieved without a separate oil pump. This reduces weight and internal power loss.

Advanced electronics, with ionic-current knock control. This technology enables quicker, more precise and cylinder-specific sensing of, and response to, incipient knock; the engine can "edge closer" to its full potential in the upper power and rpm reaches.

No air-mass meter. Conventionally, an engine's air intake is measured by a meter. This is accurate, but imposes a slight restriction on that airflow. To eliminate this little impediment, M engineers took advantage of the extremely high computing power to calculate air mass from intake air pressure and engine speed without a meter.

Lubrication system: g-sensitive lubrication with two oil sumps and two pumps for effective lubrication even at the high cornering performance the M3 can achieve.

Ultra-efficient exhaust system, with elaborate headers at the engine, dual pipes leading rearward, and quad outlets. Resistance to exhaust flow is minimized.

Via the console-mounted Power button, the M3 driver can choose between two levels of response to the accelerator pedal: Normal, already quick and pleasing; and Sport, ultra-quick and exploiting the V-8's inherent reflexes (no

extra horsepower as with the M5 or M6). With the available MDrive (Technology Package), a third response level, Sport Plus, is available.

In its September 29, '08 issue, *AutoWeek* raved in one of its AutoFile surveys that "The engine turns out power all over the tach, giving as much as you ask with your right foot." An M3 owner added: "The motor is a masterpiece that never stops revving and climbs smoothly to the stratospheric redline. The sound is so intoxicating that I usually leave the stereo off!"

6-speed manual transmission (standard all models)

Standard in all M3s is a conventional 6-speed manual transmission, with BMW's typical precise, driver-pleasing shift linkage and short shift lever. For always-sufficient lubrication, this "gearbox" has its own oil pump and oil cooler.

A dual-mass, hydraulically damped flywheel between engine and clutch helps ensure smooth engagement. The clutch itself is also "dual" in that it has two sets of discs so as to be able to transmit the M3 engine's tremendous performance without taking up too much space or demanding undue effort from the driver's left foot. (This is not to be confused with the M DCT's dual clutches!)

Each primary clutch plate is made of forged steel for high strength. The clutch is self-adjusting, maintaining consistent pedal forces over its service life; this helped the engineers achieve the necessary high torque capacity with reasonable pedal effort.

The gearbox is the high-capacity ZF Type G, as also used in the M5 and M6, and has the same gear ratios as in those models.

7-speed M Double-Clutch Transmission with Drivelogic (M DCT Drivelogic)

(optional all models)

DCT concept. Though double-clutch transmissions have been offered by Audi and Volkswagen in recent years, the new M3 marks an important migration of this concept into sports automobiles of the highest performance levels; also the first application of the principle to such a high-revving engine.

Double-clutch signifies the presence of two clutches, each of which transmits engine torque to its own gearset. One clutch serves to –

- Disengage the engine from the drivetrain so that it can idle when the vehicle is stopped.
- Engage the drivetrain and thus move the vehicle off from rest ("start-up").
- Engage 1st, 3rd, 5th, 7th and Reverse gears.

The other clutch engages 2nd, 4th and 6th gears.

How it shifts. DCT shifts sequentially, that is, from one gear to the next – though the driver can "jump" more than one gear at a time by activating the shift lever (or steering-wheel paddles) in rapid succession.

Each shift occurs via the simultaneous release of one clutch and engagement of the other. For example, in moving off from rest, clutch 1 conveys engine torque to gearset 1, which is in 1st gear and transmits torque on to the drive-shaft, differential and rear wheels.

For the upshift to 2nd gear, clutch 1 disengages and clutch 2 engages. Via the gearbox's electronic/hydraulic controls, 2nd gear is already engaged on gearset 2 and torque now flows through gearset 2.

M3 key features

Except as noted, all current M3 Series models offer the following features:

For the upshift to 3rd gear, clutch 2 disengages and clutch 1 again engages. Torque now flows through gearset 1 again, but that gearset is now in 3rd gear. And so on, all the way to 7th gear. For downshifts, this process occurs oppositely.

Manual or automatic shifts. At all times the driver has the choice of shifting manually or letting DCT do the shifting. The shift lever, essentially identical to that of the M5/M6 SMG transmission, provides S (Sport, or manual) and D (Drive, or automated) operation, selected by toggling the lever to the right. As in automatic-transmission 3, 5, 6 and 7 Series and X5/X6 vehicles, the lever is of the E-shift type, which the driver “tips” in the desired direction rather than moving from one position to another.

The driver can execute shifts in two ways: by tipping the lever forward for downshifts (-), rearward for upshifts (+); or by pulling the steering-wheel paddles, the left one for downshifts, the right one for upshifts. If, while operating in D, the driver initiates a shift via lever or paddle, the transmission switches to its S mode.

Drivelogic functions as with SMG, providing five shift programs in D (D1-D5) and six in S (S1-S6).

Clutches, not a torque converter. Conventional automatic transmissions employ a device called a torque converter: a highly developed fluid coupling that allows the engine to idle with the vehicle stationary; cushions start-up; and helps smooth shifts. These functions are handled by DCT’s two clutches, which are mechanical in nature rather than fluid couplings.

Driving with DCT

For the enthusiastic and technically interested – descriptions that apply to many if not most M Car owners – M DCT Drivelogic offers technical fascination, maximum performance, and the possibility of automatic driving for those times (as when in heavy commuter traffic) when one wants more relaxed motoring. Some might even say that this is all transmissions wrapped into one, missing only one thing that some enthusiasts want: a clutch pedal.

One of the most remarkable aspects of this transmission is how well it works in the automatic mode if and when the driver so desires; in the “lower” or less sporty ranges like D1–D3, its shifting is butter-smooth. Taken to its other extreme, say S5 or S6, shifts are snappier and more perceptible. Here are some notes on driving with DCT:

- Even in S, it shifts down automatically when you’re approaching a stop. But after starting up again, it won’t upshift unless the driver chooses – or selects D.
- When the engine is switched off, Park engages automatically. Park cannot be engaged with the engine running.
- For maneuvering in tight places, such as parallel-parking, the driver taps the accelerator lightly. Engine speed increases slightly, and the driver then controls vehicle speed with the brake pedal.
- If you’re at a stop, such as a traffic light, on level ground you don’t need to hold the brakes as you would with an automatic transmission.
- Rpm matching is noticeable mainly upon downshifting at higher speeds, or when downshifting more than one gear at

a time (done by multiple actuations of the lever or paddles). It's accompanied by thrilling sound effects.

- Upshift lights at the top of the tachometer illuminate sequentially to alert the driver to shift right at the redline. But this happens so fast, you'll have to be quick!

To learn more

The concept, technologies, detail engineering and special features of M DCT make all of this possible. From maneuvering into a tight parking space, to rolling along in that urban or suburban setting, to cruising at today's high freeway/parkway/turnpike speeds, to exploring the M3's capabilities on a traffic-free mountain road or on a racetrack at a club event – M DCT Drivelogic is a development for every M Car enthusiast to get acquainted with, perhaps to love.

To delve more deeply into the conceptual and technical details of M DCT, and to learn how DCT compares to SMG and BMW's automatic transmissions, please refer to Product Knowledge on Demand, M3 section.

M3 suspension system: purpose-engineered and -built for performance driving

Working from the outstanding concept of the 3 Series' suspension system, BMW M's chassis engineers changed virtually every detail to achieve M Car handling and roadability. All its links, except one in the rear suspension, are new and M3-specific. There's more aluminum in the rear suspension. Some of the rubber bushings have been replaced with firmer, more precise balljoints. And every facet of calibration and fine-tuning has been determined and specified for M3 alone.

One thing that doesn't change from regular 3 Series models: typical BMW weight distribution, with no M3 model varying no more than 2.8% from the ideal 50% front/50% rear weight distribution.

Front suspension

M3 front suspension is conceptually 3 Series, but fully "worked over" by BMW M for ultimate handling on road or racetrack.

It's BMW's time-honored **double-pivot** strut-type system, with two lower arms to provide great stability under all road conditions and space for extra-large brake discs. Both of these lower arms are of light, yet strong forged aluminum. Additionally, on M3s only, the strut tubes are of aluminum.

A **thrust plate**, a feature first seen on the previous M3 generation, is added behind the suspension subframe. Made of thick aluminum, this reinforcement handles the immense lateral thrust generated by the M3's tires in hard cornering.

All M3s' **front track** is 60.6 in., fully 1.5 in. greater than that of the already sporty and competent 335i models. And finally, every aspect of the front suspension system – spring rates, shock-absorber tuning, anti-roll-bar diameters and all links – has been exhaustively **tested and calibrated** to help give M3s what inspired the BMW Car Club magazine *Roundel* to write that "it handles superbly, supple with surgical precision."

Rear suspension

M3 rear suspension is analogous to M3 front suspension in that it retains the 3 Series' elaborate, sophisticated concept while changing virtually every component to suit M3 handling priorities.

M3 key features

Except as noted, all current M3 Series models offer the following features:

Actually, aside from the retention of one of the five links per side, all rear suspension links have been changed from steel to aluminum and so have the shock-absorber tubes. Three of the regular models' rubber bushings – themselves chosen and finely calibrated to the more general usage of those 3 Series models – have been replaced by firmer, more precise steel balljoints that contribute to M3s' razor-sharp handling response. The M3 rear track is still 0.4 in. greater than that of 335i models after their track increase for '09.

Of course here, as at the front, all calibrations – of spring rates, shock-absorber tuning, anti-roll-bar diameters and the remaining rubber bushings – are M3-specific and arrived at through intense testing and development. Long V-braces are added to reinforce the M3' body structure in the area of the rear suspension.

M Electronic Damping Control (optional all models, in Technology Package or stand-alone)

For the first time, M EDC is offered in M3s (it is standard on M5 and M6 models). This system is described in detail in **BMW features** on pages XX-XX, and here's what **Roundel** had to say about it in its September '07 issue: "I notice not only good handling traits but a surprising good ride...Usually I find the stiff setting way too stiff...But in the new M3, all three settings are good."

M Variable Differential Lock: putting power to the road, the BMW M way

Mechanical limited-slip differentials are part of the BMW M tradition of ultimate road handling. BMW M engineers developed a more capable mechanical "l-s diff";

called the M Variable Differential Lock, this concept appears in all BMW M models. For an explanation of how it works, see **BMW features**, pages 52-53.

M3 steering system: M precision, two choices

All M3 models come standard with a steering system specially engineered to guide these sporting vehicles precisely and with strong road feel. Its features:

- **Hydraulic power assist** as on all current BMW models.
- **Servotronic car-speed-sensitive power assist.** To keep the effort level low in parking and low-speed maneuvers, Servotronic delivers maximum assist at a standstill, then progressively decreases assist with increasing vehicle speed to preserve road feel. With the new models, Servotronic is making its first appearance in M3s.
- **Quicker ratio:** 12.5:1 overall steering ratio vs. 3 Series rear-wheel-drive models' 16.0:1, or about 22% quicker. This means less turning of the steering wheel for any given maneuver.
- **Driver-selectable assist level** (only with MDrive, Technology Package). Via the M Settings within MDrive, the driver may choose between two overall levels of power assist and capture the selected setting on the M button. The Normal (default) setting gives a level of assist most drivers will perceive as sporty, but not greatly different from that of regular-production BMW models. The Sport setting gives a noticeably higher level of driver effort to convey an impression of greater sportiness. In either setting, Servotronic varies assist as described above.

The M3's steering system is mostly like that of M5 and M6, except that its ratio is constant whereas the M5/M6 system has a variable ratio that becomes quicker as the steering wheel is turned toward its outer extremes.

Immensely powerful, fade-resistant compound, cross-drilled brakes

Powerful, highly fade-resistant brakes are always a BMW strength; even more so with the M Cars, which take all aspects of BMW performance to an even higher level.

So it is that the M3 now includes compound, cross-drilled brakes as standard equipment; formerly, this most elaborate, fade-resistant brake technology was part of the M3s' optional Competition Package. (M5 and M6 have the same type of brake system, though with larger dimensions.) M3 dimensions are as follows:

Front – 360-mm diameter/30-mm thickness (14.2/1.18 in.), vs. 345/28 in previous M3s.

Rear – 350-mm diameter/24-mm thickness (13.8/0.94 in.) vs. 328 x 20 before.

For comparison, 335i models come with 348 x 30 front, 336 x 22 rear brakes (13.7/1.18 in. front / 13.2/0.87 in. rear) that are internally ventilated, but not cross-drilled and not of compound construction.

The **brake calipers** – highly visible through the 18-in., open-design wheels – are painted in an eye-catching, heat-resistant semi-gloss black.

For an explanation of compound, cross-drilled brakes as used on all current M models, see **BMW features**, page 52.

Wheels and tires: ultimate grip and style

18-in. equipment continues as standard, but with dimensions increased over previous M3s. The standard M Double Spoke wheels (design #219M) are now in 18 x 8.5 front/18 x 9.5 rear sizes, vs. 18 x 8.0/18 x 9.0 before and 18 x 8.0/18 x 8.5 on 335i models with Sport Package. Standard performance tires are 245/40R-18 front / 265/40R-18 rear, vs. 225/45 front / 255/40 rear on previous M3s and 225/40 / 255/35 with the 335i Sport Package.

Forged/polished 19-in. wheels and even lower-profile tires are optional; these are described in **options & packages** on pages 399-400.

Specially calibrated, variable Dynamic Stability Control

DSC is standard on all models; on M models, this electronic traction and stability system is complementary to the M Variable Differential Lock.

Additionally, the DSC of M models incorporates M-specific programming; M3s with MDrive (Technology Package) provide an **M Dynamic Mode**, which can be useful to an expert driver on a race track. This is described under Technology Package in **options & accessories**.

MDrive: M technology at the driver's disposal

(Technology Package, all models) Via the MDrive system, the driver has up to 279 combinations of control settings to tailor M3s' performance and handling characteristics to individual preferences and moods. MDrive is described under Technology Package in **options & accessories**.

M3 key features

Except as noted, all current M3 Series models offer the following features:

Comfort & convenience

Every BMW is an Ultimate Driving Machine – yet some BMW driving machines are more Ultimate than others. That's where M Cars in general, and the new M3s in particular, come in.

More than even their illustrious forebears, the new M3s elevate the already outstanding 3 Series driving and riding experience to even higher levels of driver involvement and passenger enjoyment of the BMW experience. Power front sport seats, now standard in all M3 models, include variable lateral backrest width; their basic contours and padding are specifically M-firm, yet ergonomic and comfortable. Instrumentation is specially designed, and calibrated to M performance parameters. Driver commands are transmitted via a thick-rimmed M sport steering wheel, a short shift lever (or the DCT E-shift) with illuminated shift pattern and M3-specific console switches for tailoring vehicle characteristics to drivers' preferences. Distinctive door-panel design, upholstery materials and color configurations plus a selection of special M interior trims complete a cockpit that combines "sport" and "Luxury" in new, unique and elegant ways – while retaining the everyday practicality that has always accompanied M3 driving excitement.

M3 interiors are based on their 3 Series counterparts; for basic features please refer to the 3 Series sections. Here are some details that distinguish the M3s:

Special M instrumentation

Except for the road ahead, the M3 driver's focus will often be the instrument cluster. Into the basic 3 Series cluster design,

BMW M sets special instruments that both display and enable M performance. White illumination, traditional red pointers and an M logo on the tachometer face highlight the main dials, as do M-appropriate scales: 200-mph speedometer, 9000-rpm tachometer. Oil temperature (gauge at bottom of tach) is the controlling factor for the engine redline, which can be as low as 6800 rpm with a cold engine and rising to the full 8400 rpm with a fully warm engine. A rotating disc behind the tachometer face provides this **variable rpm limit** and displays the yellow warning zone and red "no-go" zone. (Cruise-control set speed is shown in a similar manner on the speedometer.)

In M3s with the available M DCT Drivelogic, seven Upshift Lights atop the tachometer illuminate sequentially to alert the driver to upshift by the 8400-rpm redline. The first five are yellow, the last two red; given the engine's eagerness to get there, this is certainly no frill.

In M3s the central Multi-Information Display takes on additional display and information functions; in the DCT version it shows which shift program is selected and which gear is currently selected.

M sport steering wheel

The M3 steering wheel is sized, proportioned and designed to be "as sporty as it gets." Its distinctions include –

- Thick rim, padded leather with M-color stitching
- Thumb contours at 10 and 2 o'clock
- M logo on bottom spoke
- DCT paddles above lateral spoke: right upshift, left downshift; illuminated at night⁵

- MDrive button (see pages 52-53) replaces one of the standard programmable buttons.

As in the 3 Series, the steering wheel has manual tilt/telescopic adjustment.

Illuminated shift lever, special console controls

Typically BMW M: the transmission shift pattern (6-speed manual or M DCT Drivelogic) is illuminated, adding function and style. Naturally the M logo is also present on the knob. Logically and functionally clustered around the shift lever are other tools that give the M3 driver a high degree of control over vehicle dynamics: the POWER selector for engine response; DSC OFF for expert driving on the track; EDC (if present) to select settings of the optional Electronic Damping Control; and program selector for available M DCT Drivelogic.

Unique upholstery choices

All upholstery choices are unique to the M3s. There are three upholstery treatments:

- **Cloth/leather** – maintaining an M3 tradition, the Coupe and Sedan come standard with this treatment, available in Anthracite cloth/Black leather. Novillo, M3's exclusive new leather grade, covers outer seat portions with cloth on the middle sections; console face and door-panel center inserts are also in Novillo. BMW's traditional Nappa leather appears on the shift knob, hand-brake grip and handbrake boot. The headliner is Wirkvelours (a velour-like material) in Anthracite color.
- **Novillo leather** – optional in Coupe and Sedan (Premium Package or stand-alone), standard in Convertible; available in exclusive M colors Silver, Fox

Red and Bamboo Beige as well as Black. Here the entire seat facings are in Novillo, including head restraints with embossed M logo; Novillo appears additionally on door armrests and pulls and the front center armrest.

- **Extended Novillo leather** – optional in all models, same colors as Novillo interior. Novillo is extended to the lower dash, glove-compartment door and door pulls.

Special interior trim choices

"Interior trim choices" refers to the various trim materials that set off the dash, doors (all four in the Sedan) and rear side panels (those panels flanking the Coupe and Convertible rear seats).

Here's the availability scheme:

- **Titanium Shadow** – standard in all models for a "technical" look that's quite appropriate to M3s.
- **Carbon Leather** – familiar from the M Roadster and Coupe, making its first M3 appearance. Available as one of three choices in the Premium Package, or as a stand-alone option.
- **Blue-gray Brushed Aluminum** – another Premium Package choice; also available as a stand-alone option.
- **Sycamore Anthracite wood** – one of the gray-toned woods BMW has offered in various models in recent years; elegant and contemporary, with high-gloss finish. Yet another Premium Package choice, or a stand-alone option.

The beauty and quality of these materials lie not just in the materials themselves, but in the diverse esthetic choices they offer our customers.

5 – Applies only to vehicles equipped with M DCT Drivelogic

M3 key features

Except as noted, all current M3 Series models offer the following features:

M3 audio systems

The M3's standard 10-speaker audio system is identical to that of the 3 Series, with all the features described in the **3 Series** section. Its speaker array:

- Midrange, 4 speakers –
 - Front doors, 2 (all models)
 - Rear shelf, 2 (Sedan)
 - Rear side panels, 2 (Coupe, Convertible)
- Tweeters, 4 speakers –
 - Front-door mirror triangles, 2 (all models)
 - Rear shelf, 2 (Sedan)
 - Rear side panels, 2 (Coupe, Convertible)
- Subwoofers, 2 speakers –
 - Under front seats, 2 (all models)

An amazing **Enhanced Premium Sound System** is optional, and is described in **options & packages** on pages 401-402; additional information on this system as it appears in all BMW M models is presented in **BMW features** on pages 70-71.

M sport seats, standard

All three models have standard front sport seats with 14-way power adjustment, including backrest width and 4-way power lumbar support – the first time all this is standard in an M3. Coupe and Convertible add power easy-entry; the Coupe adds safety-belt presenters to make “buckling up” easier for front-seat occupants. All models also include manual adjustment of thigh support.

Along with the power exterior mirrors, each driver's preferred power adjustments are stored in Vehicle & Key Memory and are reset to those adjustments when the driver unlocks the vehicle with his or her remote.

The Convertible adds two special features:

- **Seat-integrated safety belts**, which further optimize the belts' fit on the occupant and ease entry into the rear seats
- **Power-adjustable head-restraint/shoulder-belt height.**

Otherwise, the power adjustments of the standard and sport seats correspond to those of the Sedan and Coupe. Because the seat-integrated belts are out of the way when the seat is folded over, the Convertible doesn't have the belt presenters of the Coupe.

Sophisticated concept: the Convertible's retractable hardtop

Thanks to the highly refined engineering and design of its fully automatic retractable hardtop, the M3 Convertible offers the all-weather comfort and anti-theft traits of a closed coupe, combined with the open-air pleasures of a convertible. This advanced concept is described in detail in the **3 Series** section on pages 230-231.

Safety & security

M3 safety and security features are shared with those of other BMW Series, and are identical to those of the three M3 models' 3 Series counterparts, including the Active front head restraints that are new for '09.

Options & packages

Factory-installed options

Technology Package

(optional all models, code ZTP)

An M3-specific package, unlike any other in the current BMW line, and one that adds performance and luxury features in equal measure. It includes:

- **M Electronic Damping Control**, as described in **BMW features** on page 47.

- MDrive, as described in **BMW features** on pages 90-91.
- **Comfort Access**, as described in **BMW features** on page 58.
- **Navigation System/iDrive**, as described in **BMW features** on pages 63-65.
- **HD Radio**, as described in **BMW features** on pages 71-72.

Premium Package

(optional all models, code ZPP)

Continuing a popular offering for 3 Series models, this Package adds desirable and popular features to each 3 Series model.

All models:

- **Auto-dimming exterior mirrors** (an auto-dimming interior rearview mirror is standard in M3s).
- **Power-folding exterior mirrors.** A valued convenience for parking in tight spaces and for navigating some car washes.
- **Digital compass** in interior rearview mirror.
- **BMW Universal Transceiver**, the 3-function device that can operate garage doors and other external electrical devices or systems. Its controls are positioned in the front overhead console.
- **4-way power lumbar support** on the front seats.
- **BMW Assist**, BMW's customer-services and in-vehicle telematics system. For details, see CenterNet or pages 442-446.
- **Bluetooth cellphone interface.**

Sedan and Coupe:

- **Novillo leather upholstery**, as described on page 397 (standard in the Convertible). Combined with the Premium Package, Extended Novillo can be added at an option price lower than that for non-ZPP-equipped vehicles.

Cold Weather Package

(optional all models, code ZCW)

For all M3 models, this Package includes:

- **Heated front seats.** Also available as a stand-alone option.
- **Headlight cleaning system.** High-intensity jets, normally retracted, pop out to spray the lights with washer fluid.

The Coupe package adds:

- **Ski bag.**

The Sedan package adds:

- **Split folding rear seats**, 60% left/40% right. These are standard in the Coupe.

The Convertible package adds:

- **Cargo bag**, larger than the Coupe's traditional ski bag. This is also referred to as a Through-Loading System.

M Double-Clutch Transmission (M DCT) with Drivelogic

(optional all models, code 2MK)

This advanced new transmission concept is available as a stand-alone option on all BMW models, and is expected to have a take rate of about 50% in '09 M3 orders. Described in detail on pages 391-393.

M Electronic Damping Control

(optional all models, code 223)

Though included in the Technology Package, this ride- and handling-enhancing system is also available as a stand-alone option. Described in **BMW features** on page 47.

19-in. wheels and tires

(optional all models, code 2MT)

Forged/polished 19-in. wheels and even lower-profile tires are optional; the wheel design is #220M. Rim and tire widths are the same as standard but the tires are lower-profile so that vehicle height is essentially the same: 245/35R-19 front /

M3 key features

Except as noted, all current M3 Series models offer the following features:

265/35R-19 rear. Like the standard wheels, the optional ones have 10 double spokes; but the optional design is quite distinctive from the standard.

Metallic paint

(optional all models, color codes)

The beauty of BMW metallic paints needs no introduction; with improvements to the painting process for the current 3, its beauty promises to be even longer-lasting. The M3 selection includes five exclusive M colors: Silverstone, Interlagos Blue, Jerez Black, Melbourne Red and (new for '09) Le Mans Blue. For details on M3 exterior and interior color combinations, see pages 430-431.

Park Distance Control

(optional all models, code 507)

This is the rear-only system, employing four ultrasonic sensors in the rear bumper to detect when the vehicle is approaching obstacles that may not be visible to the driver. A warning tone emanates from the rear of the interior, increasing in frequency as the vehicle approaches the obstacle until the tone becomes constant.

Deletion of rear spoiler

(Coupe & Sedan, code 326)

For buyers who want their exterior styling to be a bit more subtle. The Convertible does not have a separate trunklid spoiler.

2-way power glass moonroof

(optional Coupe at no extra cost, Sedan at extra cost; code 403)

BMW's moonroof design is described in **BMW features** on page 77.

Novillo leather upholstery

(optional Coupe & Sedan, codes NC)

This "basic" leather treatment is standard in the Convertible, included in the Coupe and Sedan Premium Package, and also available as this stand-alone option. Detailed description on page 397.

Extended Novillo leather upholstery

(optional all models, codes ND)

Also described on page 397, this more extensive leather interior is available as a stand-alone option in all models; in combination with the Coupe and Sedan Premium Package and for the Convertible its option price is reduced.

Interior trim choices

(optional all models; codes 4MX, 4MZ or 4MY)

As alternatives to the standard Titanium Shadow interior trim, three optional choices are available:

- **Blue-gray Brushed Aluminum** – included in all models' Premium Package or available as a stand-alone option. Code 4MX.
- **Sycamore Anthracite wood** – one of the gray-toned woods BMW has offered in various models in recent years; elegant and contemporary, with high-gloss finish. An alternate trim in the Premium Package, or a stand-alone option. Code 4MZ.
- **Carbon Leather** – familiar from the M Roadster and Coupe, making its first M3 appearance. Another alternate choice in the Premium Package, or a stand-alone option. Code 4MY.

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Heated front seats

(optional all models, code 494)

Available as this stand-alone option or as part of the Cold Weather Package, the heated seats have impressive features:

- **Large heated area**, extending to the side bolsters.
- **High heating power**, fully 130 watts.

Split folding rear seats

(optional Sedan, standard Coupe, not available Convertible; code 465)

The seats are split 60% left/40% right. As with the standard rear seat, a fold-up center armrest is provided. Releases for folding the seats are in the trunk. Also included in the Sedan's Cold Weather Package.

Cargo bag and pass-through (Through-Loading System)

(optional Convertible only, code 4UT)

In addition to being part of the Convertible's Cold Weather Package, this option is available on a stand-alone basis. It further enhances load-carrying versatility beyond the standard fold-down rear backrest and small opening. Larger than the customary BMW ski bag, the cargo bag can accommodate one large or two small golfbags. It is accessible through the pass-through opening that's also part of this option.

Navigation system + iDrive

(optional all models, code 609)

With this option, the instrument panel gains a "second wave" that houses the iDrive monitor, and a controller sits on the clean, uncluttered console behind the shift lever. The entire system is BMW's CIC (Car Information Computer) with –

- 8.8-in. Control Display, new higher-resolution 1280 x 480 pixels

- New-type controller, with surrounding direct-select keys
- GPS Navigation with new hard-drive database
- Voice Command system
- Programmable Memory Keys, which enable users to program frequently used functions and recall them with a single keystroke.

In all '09 M3 models, the iDrive system (including GPS Navigation) is the essentially all-new 2nd-generation system also introduced in the new 7, 3 and 1 Series. An overview of BMW On-board Navigation Systems, including details on the new 2nd-generation system, is in **BMW features** on pages 63-67.

Hard drive for data storage: high capacity, fast retrieval

(included with Navigation option)

An 80-gigabyte hard drive is included with the 2nd-generation iDrive system; it provides data storage for the iDrive system, GPS Navigation, entertainment systems, Voice Command and phone system. See **BMW features**, pages 66-67, for details on this timely new amenity.

Enhanced Premium sound system

(optional all models, code 752)

All M3 models come standard with the premium audio system that's optional in the 3 Series. The optional Enhanced Premium Sound System offers M3 customers an even higher-performing audio experience. This ultra-audiophile system features high-end speakers with Neodym magnetic drives and lightweight, extremely stiff hexacone membranes as well as an extensive range of other high-tech audio

M3 key features

Except as noted, all current M3 Series models offer the following features:

features. Speakers contrast with those of the standard system as follows:

Standard system, 10 speakers

- Midrange, 4 speakers –
 - Front doors, 2 (all models)
 - Rear shelf, 2 (Sedan)
 - Rear side panels, 2 (Coupe, Convertible)
- Tweeters, 4 speakers –
 - Front-door mirror triangles, 2 (all models)
 - Rear shelf, 2 (Sedan)
 - Rear side panels, 2 (Coupe, Convertible)
- Subwoofers, 2 speakers –
 - Under front seats, 2 (all models)

Enhanced Premium system, 16 speakers (Coupe, Sedan) or 12 speakers (Convertible)

The Enhanced Premium system retains all these speaker categories and locations but with the high-end Neodym technology, and adds these speakers:

- Coaxial midrange+tweeter, count as 2 –
 - Dash center (all models)
- Coaxial midrange+tweeter, count as 4 –
 - Rear shelf (Coupe)
 - Rear doors (Sedan).

More detailed information on the Enhanced Premium system for all M models is found in **BMW features** on pages 70-71.

HD Radio

(optional all models, code 653)

The HD receiver provides digital-quality sound on FM, and improves AM sound to something like conventional FM. A more detailed description of HD Radio is found on pages 71-72.

Satellite Radio

(optional all models, code 655)

See **BMW features**, page 72, for details on this system; includes 1-year subscription. On Convertibles, the vehicle preparation for Satellite Radio can be deleted at no cost via code ZPD).

iPod/USB Adapter

(optional all models, code 6FL)

This option addresses the growing demand for in-vehicle digital music, and is positioned in the center console.

Smartphone Integration

(optional all models, code 6NF; requires iPod/USB Adapter

Not only does this new option facilitate playing music files stored in one's own smartphone in the vehicle audio system, it also charges the phone and provides a hard-wired connection of the phone to the vehicle phone system. Requires adaptor for specific, BMW-approved smartphone model.

Power rear-window sunshade and manual rear door-window shades

(optional Sedan, code 417)

Power rear-window sunshade
(optional Coupe, code 415)

The power rear-window shade is controlled from a console switch. The Sedan's side-window shades are manual and easily raised or lowered by rear-seat passengers; each of these consists of two portions, for the main window (opening vertically) and the fixed quarter pane (opening radially).

BMW Assist

(optional all models, code 639)

In addition to being part of the Premium Package for all models, BMW Assist is also available as a stand-alone option. BMW Assist is BMW's comprehensive system of customer services and in-car telematics; for detailed information, see CenterNet or pages 442-446. The option price includes a 4-year subscription to BMW Assist Safety Services.

BMW center-installed accessories

The following items are available:

- Wind deflector for Convertible
- Alarm system
- M and M3 license-plate frames
- Nose mask
- Clear paint protection for hood, mirrors and front bumper
- Car covers, outdoor and indoor types
- Smoked sun/wind deflector for moonroof, Sedan and Coupe
- Windshield sunshade
- Sun/wind deflector for moonroof
- Illuminated doorsills
- Floor mats, carpet and rubber
- Trunk mat, rubber

For details, see the latest **Original BMW Accessories** catalog for M3 models.

Standard & optional features

2009 BMW M3

Bold within table indicates new feature for 2009.

Exterior design & function

Front & rear BMW M bumper/spoiler ensemble with:

Extra-large front air intakes

Rear diffusor

Aluminum hood with power dome

Underbody fairing

Xenon Adaptive headlights with luminous rings & auto-leveling

Cornering lights

Automatic headlight control

High-intensity headlight cleaning system

Daytime Running Lamps via luminous rings

Rain-sensing windshield wipers

Power-folding, heated M exterior mirrors, body-color with black double bridge

Heated windshield-washer jets

Park Distance Control, rear only

Ground lighting in door handles

Adaptive Brake Lights

Metallic paint, including special M colors

Chrome grille vertical slats

Fully automatic power-retracting hardtop

Carbon-fiber roof panel

Side gills with M3 logos

High-gloss Shadowline exterior trim

Trunklid spoiler

Polished stainless-steel exhaust tips

Performance & efficiency

4.0-liter DOHC 32-valve V-8 engine:

Aluminum cylinder block & heads, bedplate construction

Double VANOS³ steplessly variable valve timing

8 individual throttles, electronically controlled, with variable throttle response (2 settings standard, 3 with optional MDrive)

Machined intake ports & combustion chambers

Special MS S60 electronic engine management system

Direct ignition system with pencil coils & knock control

Ionic-current knock control

Semi-dry-sump, G-sensitive lubrication system

Dual exhaust system

1 – Selectable via Vehicle & Key Memory System.

2 – May be deleted at no extra cost.

3 – VANOS = **V**Ariable **N**Ockenwellen

Steuerung = variable camshaft control, or variable valve timing.

S – Standard

OPT – Optional

NA – Not available

— – Not applicable

ZCW – Cold Weather Package

M3 Coupe	M3 Sedan	M3 Convertible
S	S	S
S	S	S
S	S	S
S	S	S
S	S	S
S	S	S
S	S	S
ZCW	ZCW	ZCW
S ¹	S ¹	S ¹
S	S	S
S	S	S
S	S	S
OPT	OPT	OPT
S	S	S
S	S	S
OPT	OPT	OPT
S	S	S
-	-	S
S	NA	NA
S	S	S
S	S	S
S ²	S ²	NA
S	S	S
M3 Coupe	M3 Sedan	M3 Convertible
S	S	S
S	S	S
S	S	S
S	S	S
S	S	S
S	S	S
S	S	S
S	S	S
S	S	S

Standard & optional features

2009 BMW M3

Bold within table indicates new feature for 2009.

Performance & efficiency (cont.)

6-speed manual transmission

7-speed Double-Clutch Transmission (M DCT) with Drivelogic & 11 shift programs

Paddle shifters on steering wheel

Specially equipped & calibrated BMW M suspension system:
Double-pivot-type aluminum front suspension

5-link aluminum rear suspension

Front & rear anti-roll (stabilizer) bars

Aluminum front/steel rear subframes

Aluminum front thrust plate

Rear V-braces, subframe to body

Convertible-specific underbody reinforcements

Twin-tube gas-pressure shock absorbers

M Electronic Damping Control (EDC) with Normal, Comfort & Sport modes

Vehicle-speed-sensitive variable-assist power steering (Servotronic)

Normal & Sport levels of power assist

4-wheel compound, ventilated & cross-drilled disc brakes, calipers finished in heat-resistant black

M Variable Differential Lock

M Double Spoke alloy wheels (design #219M),
18 x 8.5 front/18 x 9.5 rear

M Double Spoke forged/polished alloy wheels (design #220M),
19 x 8.5 front/19 x 9.5 rear

245/40R-18 front / 265/40R-18 rear performance tires⁶

245/35R-19 front / 265/35R-19 rear performance tires⁶

Tire Pressure Monitor

M Mobility System

BMW M-calibrated Dynamic Stability Control

M Dynamic Mode for DSC

MDrive system, providing 1-touch selection of preferred combination of 3 throttle-response settings, 3 EDC modes, 2 DSC modes & de-activated DSC; also 11 shift programs on vehicles with M DCT

4 – Included with M DCT Drivelogic.

5 – Included with MDrive (Technology Package).

6 – Due to low-profile tires, please note: wheels, tires and suspension parts are more susceptible to road hazard and consequential damages. M3 models are not equipped with a spare tire and wheel. Performance tires are not recommended for driving in snow and ice conditions.

7 – Included with optional Comfort Access (Technology Package).

M3 Coupe	M3 Sedan	M3 Convertible
S	S	S
OPT	OPT	OPT
OPT ⁴	OPT ⁴	OPT ⁴
S	S	S
S	S	S
S	S	S
S	S	S
S	S	S
S	S	S
—	—	S
S	S	S
OPT/ZTP	OPT/ZTP	OPT/ZTP
S	S	S
OPT ⁵	OPT ⁵	OPT ⁵
S	S	S
S	S	S
S	S	S
OPT	OPT	OPT
S	S	S
OPT	OPT	OPT
S	S	S
S	S	S
S	S	S
OPT ⁵	OPT ⁵	OPT ⁵
ZTP	ZTP	ZTP

S – Standard
 OPT – Optional
 NA – Not available
 — – Not applicable
 ZTP – Technology Package

Standard & optional features

2009 BMW M3

Bold within table indicates new feature for 2009.

Comfort & convenience

Doorsill trim plates with chrome trim & BMW M logo

Vehicle & Key Memory

Multi-function remote control with selective unlocking¹ & remote trunk release

Remote lowering of retractable hardtop

Comfort Loading

Comfort Access

Automatic-dimming interior rearview mirror

Automatic-dimming exterior mirrors, power-folding exterior mirrors

Dual power/heated exterior mirrors

Digital compass in interior mirror

BMW Universal Transceiver (3-function garage-door opener)

Courtesy lights with fade-in/fade-out feature, actuation from remote, automatic switch-on upon engine shutoff, separately controlled left/right front & rear reading lights, front & rear footwell lighting & illuminated visor vanity mirrors

Welcome Light (automatic switch-on of front luminous rings, taillights, license-plate lights, ground lighting & interior lights upon unlocking & locking vehicle)

BMW Ambiance Lighting:
overhead

doors & rear side panels

Tilt/telescopic 3-spoke leather-wrapped sport steering wheel with fingertip audio & phone controls⁸

Cruise control

14-way power + 2-way manual front sport seats, including power-adjustable backrest width, 4-way power lumbar support & manually adjustable thigh support

Power easy-entry feature

Power-adjustable front head-restraint & safety-belt height

Memory system for driver's seat & exterior mirrors
(2 settings per user)

Front safety-belt presenters

Auto tilt-down of right-hand exterior mirror for backing up

3-stage, thermostatically controlled heated front seats

Front center armrest

Full-length console (see p. 237 for features of rear section)

Climate-controlled front center console compartment with single integral cupholder

1 – Selectable via Vehicle & Key Memory System.

7 – Included with optional Comfort Access (Technology Package).

8 – Phone controls active when vehicle is equipped with BMW Assist and a approved cellphone is used in combination with Bluetooth interface.

M3 Coupe	M3 Sedan	M3 Convertible
S	S	S
S	S	S
S	S	S
–	–	OPT ⁷
NA	NA	OPT ⁷
ZTP	ZTP	ZTP
S	S	S
ZPP	ZPP	ZPP
S	S	S
ZPP	ZPP	ZPP
ZPP	ZPP	ZPP
S	S	S
S	S	S
S	S	S
S	NA	S
S	S	S
S	S	S
S	S	S
S	–	S
NA	NA	S
S	S	S
S	–	–
S	S	S
OPT/ZCW	OPT/ZCW	OPT/ZCW
S	S	S
S	NA	S
S	S	S

S – Standard
 OPT – Optional
 NA – Not available
 – – Not applicable

ZCW – Cold Weather Package
 ZPP – Premium Package
 ZTP – Technology Package

Standard & optional features

2009 BMW M3

Bold within table indicates new feature for 2009.

Comfort & convenience (cont.)

BMW M instrumentation with –

Illuminated white scales on speedometer & tachometer

Red pointers

Oil-temperature gauge

Variable warning segment on tachometer

LCD main & trip odometers

Comprehensive Check Control vehicle monitor system

2nd-generation iDrive system with high-resolution control display, GPS Navigation; **direct-select radio, CD, phone & Navigation menus**; 6 Programmable Memory Keys, Voice Command, Real Time Traffic Information & other features

Cloth/leather upholstery

Novillo leather upholstery

Extended Novillo leather upholstery

Titanium Shadow interior trim

Blue-Gray Brushed Aluminum interior trim

Sycamore Anthracite wood interior trim

Carbon Leather interior trim

Pearl-gloss galvanic trim (speedometer & tachometer, steering wheel, climate-control & radio knobs, start/stop button, interior door handles, etc.)

Power door windows with key-off operation; 1-touch opening & closing, anti-trapping feature, opening from remote

Power rear side windows with 1-touch opening, opening from remote

All-window switch with 1-touch opening

Automatic climate control with separate left/right temperature settings, automatic recirculation control, mist control, bi-directional solar sensor, temperature- & volume-controlled rear air outlets, activated-charcoal microfilter ventilation & other features

Convertible mode for automatic climate control

2-way power moonroof with 1-touch opening & closing, anti-trapping feature, opening from remote, sliding interior sunshade

Fully automatic power-retracting hardtop

Anti-theft AM/FM/CD/MP3 audio system with 10 speakers including 2 subwoofers, Radio Data System (RDS), FM diversity antenna system, auxiliary audio input & other features

Variable AM/FM antenna position, hardtop raised/lowered

Enhanced Premium Sound System with 12 speakers (Convertible) or 16 speakers (Coupe & Sedan); includes Neodym speaker technology, variable equalizing & surround settings, & other ultra-audiophile features, plus all features of standard system

9 – Included with Navigation option (Technology Package or stand-alone option).

10 – Requires Technology Package or Navigation option.

S – Standard

OPT – Optional

NC – No extra cost

NA – Not available

M3 Coupe	M3 Sedan	M3 Convertible
S	S	S
S	S	S
S	S	S
S	S	S
S	S	S
S	S	S
OPT/ZTP	OPT/ZTP	OPT/ZTP
S	S	NA
OPT/ZPP	OPT/ZPP	S
OPT	OPT	OPT
S	S	S
OPT/ZPP	OPT/ZPP	OPT/ZPP
OPT/ZPP	OPT/ZPP	OPT/ZPP
OPT/ZPP	OPT/ZPP	OPT/ZPP
S	S	S
S	S	S
NA	S	S
NA	NA	S
S	S	S
-	-	OPT/ZTP ⁹
NC	OPT	NA
-	-	S
S	S	S
-	-	S
OPT ¹⁰	OPT ¹⁰	OPT ¹⁰

— — Not applicable
ZPP – Premium Package
ZTP – Technology Package

Standard & optional features

2009 BMW M3

Bold within table indicates new feature for 2009.

Comfort & convenience (cont.)

HD Radio

Satellite Radio

iPod/USB Adapter

Pre-wiring for 6-disc CD changer

6-disc CD changer

80-GB hard drive providing data storage for Navigation, audio system, phonebook & Voice Command; ripping capability from CD, MP3 player or USB stick

Bluetooth cellphone interface with high-capacity phonebook download

Smartphone Integration

Front cupholders

Dual front sun visors with illuminated mirrors

Open & closable storage compartments in front doors including sunglasses compartments & coinholder

Fold-up rear center armrest with dual cupholders

Seatback storage compartments

Split folding rear seats

1-piece folding rear backrest

Rear center storage compartment

Ski bag

Cargo bag (can hold 2 small golf bags)

Power-operated rear-window sunshade

Manual rear door-window sunshades

Rear-window defroster

Interior trunk release, electrically operated

Trunk features:

4 cargo tie-downs

Side compartments (capacity depends on options present)

Variable overall capacity, hardtop raised/lowered

Comfort Loading (intermediate hardtop position for convenient trunk loading)

9 – Included with Navigation option (Technology Package or stand-alone option).

11 – Requires iPod/USB Adapter.

12 – Rear & door-window sunshades are combined into a single option for Sedans.

13 – Included with Comfort Access (Technology Package).

M3 Coupe	M3 Sedan	M3 Convertible
OPT/ZTP	OPT/ZTP	OPT/ZTP
OPT	OPT	OPT
OPT	OPT	OPT
S	S	S
C	C	C

OPT⁹	OPT⁹	OPT⁹
OPT/ZPP	OPT/ZPP	OPT/ZPP
OPT¹¹	OPT¹¹	OPT¹¹
S	S	S
S	S	S
S	S	S
S	S	NA
S	S	S
S	OPT/ZCW	NA
-	-	S
NA	NA	S
ZCW	NA	-
NA	NA	OPT/ZCW
OPT	OPT ¹²	NA
NA	OPT ¹²	NA
S	S	S
S	S	S
S	S	S
S	S	S
-	-	S
-	-	OPT ¹³

S – Standard
 OPT – Optional
 C – BMW center-installed
 NA – Not available

— – Not applicable
 ZCW – Cold Weather Package
 ZPP – Premium Package
 ZTP – Technology Package

Standard & optional features

2009 BMW M3

Bold within table indicates new feature for 2009.

Safety & security

BMW M-calibrated Dynamic Stability Control (DSC), including all-speed traction control, electronic brake proportioning, antilock braking (ABS), cornering/braking stability enhancement, Dynamic Brake Control, Brake Standby, Brake Drying & Start-off Assistant

Dual front-impact airbag Supplementary Restraint System (SRS) with dual-threshold deployment, 2-stage Smart Airbags

3-point safety belts at all seating positions

Front safety belts with automatic tensioners & force limiters

Front safety-belt presenters

Seat-integrated front safety belts

LATCH attachments at rear seating positions (for installation of child restraint seats)

Head restraints at all seating positions

Front-seat Active head restraints

Front & rear-seat Head Protection System

Active Knee Protection

Rollover Protection System

Pedals that rotate forward (decouple) under frontal impact

Footrest designed to crush under force of driver's left foot in frontal crash impact

Front-seat side-impact airbags, seat-mounted

Front-seat side-impact airbags, seat-mounted with head protection

Advanced Crash Safety Management for deployment of safety systems

Post-impact safety measures:
Unlocking of central locking system

Switch-on of hazard flashers

Switch-on of interior lighting

Disconnect of alternator, fuel pump & starter from battery (via Battery Safety Terminal)

BMW Assist, including **Enhanced** Automatic Collision Notification, SOS button, Enhanced Roadside Assistance, TeleService¹⁴, BMW Assist Safety Plan¹⁴

Central locking system with double-lock anti-theft feature, selective unlocking (Convertible: includes glove compartment)

Coded Driveaway Protection

Alarm system with operation from remote, interior motion detector

14 – Requires BMW Assist annual fee after 4th year.

S – Standard
OPT – Optional

Technical specifications

2009 M3

General

Curb weight, lb.:

Manual transmission

M Double-Clutch Transmission

Weight distribution, front/rear, %:

Manual transmission

Automatic transmission

Wheelbase, in.

Track, front/rear, in. (with standard wheels)

Length, in.

Width, in.

Height, in.

Body

Type

Aerodynamic drag coefficient (C_D)

EPA size classification

Accommodations

Seating capacity, persons

Shoulder room, front/rear, in.

Head room, front/rear:

without moonroof

with moonroof

Leg room, front/rear

EPA passenger-compartment volume, cu ft.

EPA cargo volume, cu ft.

Engine & electrical

Engine type

Bore x stroke, mm/in.

Displacement, cc/cu in.

Compression ratio

Power @ rpm, hp

Torque @ rpm, lb-ft.

Engine-management system

1 – With hardtop raised.

2 – Specification applies to all models.

3 – Can be expanded via folding rear seats.

4 – Can be augmented via folding rear backrest.

M3 Coupe	M3 Sedan	M3 Convertible
3704	3726	4145
3704	3726	4145
51.2/48.8	52.2/47.8	47.2/52.8 ¹
51.2/48.8	52.2/47.8	47.2/52.8 ¹
108.7 ²		
60.6/60.6 ²		
181.8	180.4	181.8
71.0	71.5	71.0
55.8	57.0	54.8

M3 Coupe	M3 Sedan	M3 Convertible
2-door coupe	4-door sedan	2-door convertible
0.31	0.31	0.32 ¹
Subcompact ²		

M3 Coupe	M3 Sedan	M3 Convertible
4	5	4
55.3/51.9	55.4/46.1	55.3/49.3
38.4/36.8	38.5/37.5	38.0/36.5
37.1/36.1	37.4/37.1	–
41.8/33.7	41.5/34.6	41.8/31.9
88.5	93.0	8.0
11.1 ³	12.0 ³	9.0 ^{1,4}

M3 Coupe	M3 Sedan	M3 Convertible
DOHC (4-cam) 32-valve V-8, Double VANOS ⁵ steplessly variable valve timing, 8 individual electronically controlled throttles with Normal & Sport response settings ²		
92.0 x 75.2/3.62 x 2.96 ²		
3999/244 ²		
12.0:1 ²		
414 @ 8300 ²		
295 @ 3900 ²		
MS S60 with ionic-current knock control, variable valve timing, electronic throttles, variable throttle response, g-sensitive lubrication system, oil-level/temperature sender, variable tachometer warning segment, catalyst protection & other functions included in control strategy ²		

5 – VANOS = **V**Ariable **N**Ockenwellen

Steuerung = variable camshaft control,
or variable valve timing.

Technical specifications

2009 M3

Engine & electrical (cont.)

Fuel requirement

Fuel capacity, U.S. gal.

Battery capacity, amp-hr.

Alternator output rating, amp./W

Drivetrain

Drive system

Manual transmission

Ratios: 1st

2nd

3rd

4th

5th

6th

Reverse

Final drive ratio

M Double-Clutch Transmission (M DCT Drivelogic)

Ratios: 1st

2nd

3rd

4th

5th

6th

7th

Reverse

Final drive ratio

Chassis

Body/frame construction

Front suspension

Rear suspension

Optional M EDC

2 – Specification applies to all models.

M3 Coupe	M3 Sedan	M3 Convertible
Premium unleaded ²		
16.6 ²		
70 ²		
180/2520 ²		

M3 Coupe	M3 Sedan	M3 Convertible
Front engine/rear-wheel drive ²		
6-speed, Type G ²		
4.06:1 ²		
2.40:1 ²		
1.58:1 ²		
1.19:1 ²		
1.00:1 ²		
0.87:1 ²		
3.68:1 ²		
3.85:1 ²		
7-speed, M DKG 436 with dual clutches & partial gearboxes; 6 Sequential & 5 Automated shift programs, driver control via E-shift, steering-wheel shift paddles & mode selector		
4.78:1 ²		
2.93:1 ²		
2.15:1 ²		
1.68:1 ²		
1.39:1 ²		
1.20:1 ²		
1.00:1 ²		
4.45:1 ²		
3.15:1 ²		

M3 Coupe	M3 Sedan	M3 Convertible
Unitized steel with aluminum hood, thermoplastic front fenders ² (Coupe only: carbon-fiber roof panel)		
BMW M sport suspension in aluminum; struts, double-pivot lower arms, coil springs, twin-tube gas-pressure shock absorbers, tubular anti-roll bar, subframe, thrust plate ²		
BMW M sport suspension in aluminum; 5-link system, coil springs, twin-tube gas-pressure shock absorbers, tubular anti-roll bar, reinforcing V-brace to underbody ²		
Electronically controlled shock absorbers with Comfort, Normal & Sport modes ²		

Technical specifications

2009 M3

Chassis¹ (cont.)

Steering system

Overall ratio

Turns lock-to-lock

Turning circle, ft.

4-wheel compound, ventilated & cross-ventilated disc brakes,
vacuum-assisted:

Front, diameter x thickness, mm/in.

Rear, diameter x thickness, mm/in.

Calipers front/rear

Alloy wheels:

standard

optional

Performance tires:

standard

optional

Stability-enhancement system

Performance data

Acceleration, 0-60 mph, sec.⁶:

Manual transmission

M DCT

Top speed, mph⁷

EPA estimated MPG, city/highway:

Manual transmission

M DCT

1 – With hardtop raised.

2 – Specification applies to all models.

6 – BMW AG test results. Actual acceleration results may vary depending on specification of vehicle; road and environmental conditions; testing procedures and driving style. These results should be used for comparison only, and verification should not be attempted on public roads. BMW urges you to obey all posted speed limits and to please wear your safety belt at all times.

M3 Coupe	M3 Sedan	M3 Convertible
Rack & pinion, vehicle-speed-sensitive power assist ¹		
12.5:1 ²		
2.5 ²		
38.4 ²		
360 x 30/14.2 x 1.18 ²		
350 x 24/13.8 x 0.94 ²		
2-piston aluminum/1-piston cast iron, floating ²		
cast alloy, 18 x 8.5 front/18 x 9.5 rear ²		
forged alloy, 19 x 8.5 front/19 x 9.5 rear ²		
245/40R-18 front / 265/40R-18 rear ²		
245/35R-19 front / 265/35R-19 rear ²		
BMW M-calibrated Dynamic Stability Control (DSC), including all-speed traction control, electronic brake proportioning, antilock braking (ABS), cornering/braking stability enhancement, Dynamic Brake Control, Brake Standby, Brake Drying & Start-off Assistant; M Variable Differential Lock ²		

M3 Coupe	M3 Sedan	M3 Convertible
4.7	4.7	5.1
4.5	4.5	4.8
155 ²		
14/20	14/20	13/19
14/20	14/20	14/20

7 – Electronically limited.

Exterior/interior color combinations

2009 7 Series

Interior colors	Exterior colors		
	Standard colors	Metallic colors	
	Alpine White 300	Jet Black 668	Titanium Silver 354
Oyster/Black NACX	●	●	●
Saddle/Black NAD5 ¹			
Oyster NADH	●	●	●
Black NASW	●	●	●

● – Combination available

All interior trim options are available with all exterior/interior color combinations.

1 – Available as of 3/09 production; exterior/interior color combinations to be determined.

2009 6 Series

Interior colors	Exterior colors				
	Standard colors			Metallic colors	
	Alpine White 300	Imola Red ¹ 405	Jet Black ² 668	Titanium Silver 354	Carbon Black ¹ 416
Dakota leather ³					
Black LCSW	●	● ■	●	● ■	●
Cream Beige LCGE	●	● ■	●	● ■	●
Pearl leather ^{3,4}					
Chateau LECH	● ■		●	● ■	●
Saddle Brown/Black LED5	● ■	● ■	●	● ■	●
Cream Beige LEGE	●	● ■	●	● ■	●
Black LESW	●	● ■	●	● ■	●

● – Combination available (Convertible with standard Black softtop, Coupe)

■ – Combination available (Convertible with Gray softtop, optional at no extra cost)

Blank space – Combination not available

1 – Available only in combination with Sport Package.

2 – Not available in combination with Sport Package.

3 – Leather in Convertible incorporates Sun Reflective Technology on seats, armrests, head restraints & shift knob.

4 – Optional. Center console & dash in Black Nasca leather.

All interior trim options are available with all exterior/interior color combinations.

Metallic colors

Black Sapphire 475	Space Gray A52	Cashmere Silver A72	Imperial Blue A89	Sophisto Gray A90	Mineral White A96
--------------------------	----------------------	---------------------------	-------------------------	-------------------------	-------------------------

●	●	●	●	●	●
---	---	---	---	---	---

●	●	●	●	●	●
---	---	---	---	---	---

●	●	●	●	●	●
---	---	---	---	---	---

Metallic colors

Stratus Gray ² 440	Black Sapphire 475	Atlantic Blue ² A13	Mineral Silver ² A14	Monaco Blue ² A35	Barbera Red ² A39	Space Gray A52	Deep Sea Blue A76
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● ■	●	●	● ■	●	●	● ■	●
-----	---	---	-----	---	---	-----	---

● ■	●	●	● ■	●	●	● ■	●
-----	---	---	-----	---	---	-----	---

	●					● ■	
--	---	--	--	--	--	-----	--

● ■	●	●	● ■	●		● ■	●
-----	---	---	-----	---	--	-----	---

● ■	●	●	● ■	●	●	● ■	●
-----	---	---	-----	---	---	-----	---

● ■	●	●	● ■	●	● ■	● ■	●
-----	---	---	-----	---	-----	-----	---

Exterior/interior color combinations

2009 5 Series

Interior colors ²	Exterior colors			
	Standard colors		Metallic colors	
	Alpine White 300	Jet Black 668	Titanium Silver 354	Carbon Black 416 ¹
Leatherette^{3,4}				
Beige KBBA	●	●		
Black KBSW	●	●	●	
Dakota leather^{5,6}				
Cream Beige LCBE	●	●		●
Gray LCAD	●	●	●	●
Natural Brown LCNG	●	●		●
Black LCSW	●	●	●	●

● – Combination available

Blank space – Combination not available

1 – Available only on 550i Sedan; requires Sport Package.

2 – Not available in combination with 550i Sport Package.

3 – Beige leatherette comes with Beige interior color, Black leatherette with Black interior color.

4 – Leatherette not available in 550i Sedan.

2009 3 Series Sedans & Sports Wagons

Interior colors	Exterior colors				
	Standard colors			Metallic colors	
	Alpine White 300	Jet Black 668	Crimson Red A61	Titanium Silver 354	Black Sapphire 475
Leatherette					
Beige KAB4	●	●	●	●	●
Black KASW	●	●	●	●	●
Dakota leather					
Gray LCAD	●	●	●	●	●
Beige LCB4	●	●	●	●	●
Oyster LCCX	●	●	●	●	●
Chestnut Brown LCCZ	●	●		●	●
Saddle Brown LCD3	●	●		●	●
Black LCSW	●	●	●	●	●

● – Combination available

1 – This combination not available on Sports Wagons.

2 – This combination not available on Sedans.

Blank space – Combination not available

All interior trim options are available with all exterior/interior color combinations.

Metallic colors

Black Sapphire 475 ²	Monaco Blue A35 ²	Deep Green A43 ²	Space Gray A52	Platinum Bronze A53 ²	Platinum Gray A68	Deep Sea Blue A76
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●	●	●	●	●	●	●

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●	●	●		●		●
●	●	●	●	●	●	●

5 – Standard in 550i Sedan, optional in all other models.

6 – Cream Beige leather comes with Cream Beige interior color, Gray leather with Gray interior color, Natural Brown leather with Black interior color including Black/Natural Brown door panels, Black leather with Black interior color.

All interior trim options are available with all exterior/interior color combinations.

Metallic colors

Blue Water 896	Monaco Blue A35	Barbera Red A39	Montego Blue A51	Space Gray A52	Platinum Bronze A53	Tasman Green A81
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●	●	●	●	●	●	●

● ¹	●	●	●	●	● ²	●
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●	●	●	●	●	●	●
●			●	● ²		● ¹
●	●		●	● ²		●
●	●	●	●	●	●	●

Exterior/interior color combinations

2009 3 Series Coupes & Convertibles

Interior colors	Exterior colors					
	Standard colors			Metallic colors		
	Alpine White 300	Jet Black 668	Crimson Red A61	Titanium Silver 354	Black Sapphire 475	Blue Water 896
Leatherette						
Cream Beige KAGE	●	●	●		●	●
Black KASW	●	●	●	●	●	●
Dakota leather¹						
Cream Beige LCB4	●	●	●		●	●
Gray LCAD	●	●	●	●	●	●
Coral Red/Black LCD1	●	●	● ²	●	●	
Saddle Brown/Black LCD3	●	●	● ²	● ³	●	●
Black LCSW	●	●	●	●	●	●

● – Combination available

Blank space – Combination not available

1 – Leather in Convertible incorporates Sun Reflective Technology on seats, armrests, head restraints & shift knob. Leather standard, leatherette not available in 335i Convertible.

2009 1 Series

Interior colors	Exterior colors				
	Standard colors			Metallic colors	
	Alpine White 300	Jet Black 668	Crimson Red A61	Titanium Silver 354	Black Sapphire 475
Leatherette					
Taupe KAA5	●■◆	●■◆	●■◆	● ²	●■◆
Black KASW	●■◆	●■◆	●■◆	●◆	●■◆
Boston leather³					
Taupe LWA5	●■◆	●	●■◆	● ²	●■◆
Gray LWAL	●◆	●■	●◆	●◆	●◆
Savannah Beige/Black LWB4	●◆	●◆	●◆	● ²	●◆
Coral Red/Black LWD1	●■◆	●■◆	● ²	●■◆	●■◆
Black LSW	●◆	●■◆	●■◆	●◆	●■◆

● – Combination available (Convertible with standard Black softtop, Coupe)

■ – Combination available (Convertible with Taupe softtop, optional at no extra cost)

◆ – Combination available (Convertible with Moonlight Black softtop, optional at extra cost)

Blank space – Combination not available

Metallic colors

Atlantic Blue A13	Mojave A17	Monaco Blue A35	Barbera Red A39	Montego Blue A51	Space Gray A52	Platinum Bronze A53	Tasman Green A81
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	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●
					●		
	● ³	●		●	● ³	●	●
●	●	●	●	●	●	●	●

2 – This combination not available on Convertibles.

3 – This combination not available on Coupes.

All interior trim options are available with all exterior/interior color combinations.

Metallic colors

Blue Water 896	Monaco Blue A35	Montego Blue A51	Space Gray A52	Cashmere Silver A72	Sedona Red ¹ A79
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●■◆	●■◆	●■◆	●◆	●■◆	●
●■◆	●■◆	●■◆	●◆	●■◆	●
●■◆	●■◆	●■◆	●◆	●■◆	●
●◆	●◆	●◆	●◆	● ²	●
●◆	●◆	●◆	● ²		●
			●◆	●■◆	
●■◆	●■◆	●■◆	●◆	●■◆	●

1 – Sedona Red not available on Convertibles.

2 – This combination not available on Convertibles.

3 – Leather in Convertible incorporates Sun Reflective Technology on seats & armrests.

All interior trim options are available with all exterior/interior color combinations.

Exterior/interior color combinations

2009 M6 Coupe & Convertible

Interior colors	Exterior colors		
	Standard colors	Metallic colors	
	Alpine White 300	Carbon Black 416	Stratus Gray 440
Extended Merino leather¹			
Sepang LKA8	●	●	●
Silverstone II LKA9	●	●	
Black LKSW	●	●	●
Full Merino leather¹			
Indianapolis Red X3A7	●	●	●
Sepang X3A8		●	●
Silverstone II X3A9	●	●	
Portland Brown Natural X3B1		●	
Black X3SW	●	●	●

● – Combination available

Blank space – Combination not available

Convertible softtop: Black (standard) or Gray (optional); both softtop colors available with all color combinations.

2009 M5

Interior colors	Exterior colors		
	Standard colors	Metallic colors	
	Alpine White 300	Carbon Black 416	Black Sapphire 475
Extended Merino leather			
Sepang LKA8	●	●	●
Silverstone II LKA9	●	●	●
Black LKSW	●	●	●
Full Merino leather			
Indianapolis Red X3A7	●	●	●
Sepang X3A8		●	●
Silverstone II X3A9	●	●	●
Portland Brown Natural X3B1		●	●
Black X3SW	●	●	●
Full Merino leather perforated¹			
Sepang X2A8		●	●
Silverstone II X2A9	●	●	●
Black X2SW	●	●	●

● – Combination available

Blank space – Combination not available

Metallic colors

Black Sapphire 475	Silverstone A29	Interlagos Blue A30	Indianapolis Red A31	Sepang Bronze A32	Monaco Blue A35	Space Gray A52
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●				●		
●	●	●	●	●	●	●

All interior trim options are available with all exterior/interior color combinations.

1 – Leather in Convertible incorporates Sun Reflective Technology on seats, armrests, head restraints & shift knob.

Metallic colors

Silverstone A29	Interlagos Blue A30	Indianapolis Red A31	Sepang Bronze A32	Monaco Blue A35	Space Gray A52
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●	●			●	●
●	●	●	●	●	●
●		●			●
●	●		●		●
●	●	●	●	●	●
			●		
●	●			●	●
●	●	●	●	●	●

All interior trim options available with all exterior/interior color combinations.

1 – Only with optional Comfort seats & Active Seat Ventilation.

Exterior/interior color combinations

2009 M3 Coupe, Sedan & Convertible

Interior colors	Exterior colors		
	Standard colors	Standard colors	Metallic colors
	Alpine White 300	Jet Black 668	Le Mans Blue 381
Cloth/leather			
Anthracite/Black GEAT	●	●	●
Novillo leather¹			
Silver NCH1	●	●	●
Fox Red NCH2	●	●	
Bamboo Beige NCH3	●	●	●
Black NCSW	●	●	●
Extended Novillo leather¹			
Silver NDH1	●	●	●
Fox Red NDH2	●	●	
Bamboo Beige NDH3	●	●	●
Black NDH3	●	●	●

● – Combination available

Blank space – Combination not available

Convertible softtop: Black (standard) or Gray (optional); both softtop colors available with all color combinations.

Metallic colors

Silver- Stone A29	Interlagos Blue A30	Space Gray A52	Jerez Black A73	Melbourne Red A75
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●	●	●	●	●
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All interior trim options are available with all exterior/interior color combinations.

1 – Leather in Convertible incorporates Sun Reflective Technology on seats, armrests, head restraints & shift knob.

BMW Certified Pre-Owned Vehicles

One of the most important recent developments in the U.S. auto market is the rise of the market for premium pre-owned vehicles. This market's growth is a result of several key industry and societal trends:

- The durability, quality and reliability of new vehicles has improved dramatically. Vehicles are not only better; they also last longer.
- Baby Boomers need to put money aside for their retirement, to pay for their children's college education, and to help care for their aging parents. They are thus forced to be more prudent and value-oriented in their spending decisions.
- New-vehicle price escalation has forced manufacturers to turn to leasing to make their products affordable. Vehicles that come off lease (typically after 30-40 months) enter the pre-owned market and offer a more affordable alternative to a new vehicle.

These factors have led most makers of high-end vehicles to institute programs for Certified Pre-Owned Vehicles. Typically, Certified Pre-Owned (CPO) Vehicles have undergone inspection and reconditioning to varying degrees (depending upon the manufacturer and program) and carry some kind of warranty or protection plan. Studies have shown that customers in the market for a pre-owned vehicle overwhelmingly prefer to purchase it from a new-vehicle dealer with a manufacturer's CPO program.

To qualify as a **Certified Pre-Owned BMW**, a pre-owned BMW must have no more than

60,000 miles on it and be no more than five years old from its in-service date. A vehicle becomes Certified only after it passes a thorough Certification Inspection at a BMW center. Both the inspecting Technician and the BMW center's Service Manager must sign the Certified Inspection Checklist. The completed checklist should be available for the prospect to inspect during the sales process for the following reasons:

- **It's a valuable sales tool**, helping convince the customer that a Certified Pre-Owned BMW is more than a mere "used vehicle."
- **It helps give the customer peace of mind**, reinforcing the customer's perception that he or she has made a wise choice.

As part of the CPO BMW Vehicle Program, a vehicle will be covered by BMW NA's Certified Pre-Owned BMW Protection Plan, which is similar to the BMW New Vehicle Limited Warranty though not as comprehensive. This Plan takes effect immediately upon the expiration of the new-vehicle warranty, and covers the vehicle for up to 2 additional years or 50,000 more miles (whichever comes first). (See graphic, top of next page.) Under the Protection Plan (which covers defects in workmanship or materials in most of the vehicle's major electrical, powertrain and mechanical systems), covered repairs are handled by a BMW center much as they would be under the new-car warranty. The CPO plan also includes BMW Roadside Assistance for the additional 5 or 6 years/unlimited miles from expiration of the 4/unlimited included with the new vehicle.

Certified Pre-Owned BMW Protection Plan

BMW covers the vehicle for up to 6 years or 100,000 miles (whichever comes first).	
BMW New Vehicle Limited Warranty 4 years/50,000 miles (whichever comes first)	Certified Pre-Owned BMW Limited Warranty Up to 2 years/50,000 miles (whichever comes first)
← Original In-Service Date →	← Expiration of BMW New Vehicle Limited Warranty →

BMW NA also offers an extension of the Full Maintenance program for older and high-mileage vehicles that customers can add to their purchase to further enhance the value of their newly acquired CPO vehicles. See **The BMW Maintenance Program**, pages 438-439, for information.

BMW NA launched its CPO BMW Vehicle Program in 1996. Vehicle sales have grown steadily ever since; BMW leads the luxury/performance segment in CPO sales. Since its inception, the CPO program has been further developed to respond to buyers' increasing tendency to use the Internet for their shopping.

Many new-car purchases begin with information-gathering on the Internet; now BMW facilitates online shopping for CPO vehicles as well. The new Certified Pre-Owned section of BMW's "Virtual Center" website (bmwusa.com/certified) helps consumers find accurate information about pre-owned BMWs, search for a particular BMW model, and locate a CPO BMW in their area. To learn about availability of desired vehicles, the user enters his or her zip code and some basic information about the vehicle

desired (such as Series, body style, price range and transmission type). A search engine then matches the customer's preferences with vehicles in a database of all CPO BMWs available at the time.

If the desired vehicle is not available nearby (within 25 miles of the customer's zip code), one can expand the search up to a 500-mile radius. If it still isn't available, the customer can ask to be placed on a waitlist and be notified by e-mail when the vehicle becomes available.

The CPO program is a "win-win" proposition for customers and BMW centers alike:

- Customers win because they now have access to a large supply of affordable, exciting, high-quality BMW automobiles.
- BMW centers win because they can offer a premium class of pre-owned vehicles that will increase their profits, support BMW resale and residual values, and attract new customers to the BMW brand.
- BMW wins because we extend our brand to new customers, protect our residuals, and build a broader base of satisfied customers for the future.

BMW Certified Pre-Owned Vehicles

BMW's CPO program also wins in that it is the most successful in the U.S. luxury market segment: In calendar 2007, the program set another record with 89,795 Certified Pre-Owned BMWs sold – up 11% over '06. And for the 7th year in a row, BMW led the luxury/performance market segment in CPO sales, far outpacing its nearest competitor.

The Certified Pre-Owned BMW business is supported with a full range of advertising and point-of-sale initiatives. In fall '08, three newly produced TV commercials are being introduced, supported by eight radio ads and eight print executions.

On a national basis, CPO advertises in *Business Week*, *AutoWeek*, *Time* and the *Wall Street Journal*. In 2008, BMW NA expanded its national advertising effort to cyberspace, forming relationships with www.Autotrader.com and Cars.com. All CPO inventory in the United States is now automatically listed on 10 popular automotive websites.

The TV and radio spots are run by the Market Co-Ops, with 50% of the funding coming from BMW NA's CPO marketing funds.

In addition, more than \$18 million of CPO center Co-Op funds have been allocated in '08. For every dollar that a BMW center spends advertising its Certified Pre-Owned BMW inventory – assuming, of course, that the ads meet BMW's Co-Op advertising criteria – BMW matches it with a dollar of CPO Co-Op funds.

On the point-of-sale side, BMW NA makes a complete range of merchandising materials for Certified Pre-Owned BMWs available. Some of the most popular items include CPO 'Monroney' labels, model-year window clings, license plates with special offers, full-line CPO brochures, and Certified Pre-Owned BMW Protection Plan brochures. All of these materials are available at no cost by going online to the BMW Marketing Portal on CenterNet.

For further information on the Certified Pre-Owned BMW Vehicle Program, please see bmwusa.com or contact Bill Bates at 201-307-4067.

Backing the product: the BMW Warranty

All 2009 model year BMW vehicles are covered by a number of comprehensive warranties (valid only in the U.S.A and Puerto Rico):

New Vehicle Limited Warranty

BMW of North America, LLC (BMW NA), warrants all U.S.-specification BMW vehicles distributed by BMW NA, or sold through the BMW NA European Delivery program or the BMW NA Military Purchase program, against defects in material or workmanship for the first four years or 50,000 miles, whichever occurs first.

All applicable coverage begins on the date of the first retail sale or the date that the vehicle is first placed in service either as a demonstrator, service loaner or company vehicle, whichever is earlier. All applicable coverage, either in full or the residual portion, applies to the first retail purchaser and each subsequent purchaser.

Items that are subject to wear and tear or deterioration, due to driving habits or conditions, are specifically limited to defects in materials or workmanship.

Tires are warranted by their respective manufacturers, as detailed in the applicable tire manufacturer's warranty statement.

Rust-Perforation Limited Warranty

BMW NA warrants all new vehicles against defects in materials or workmanship that result in rust perforation of the vehicle body for the first 12 years, without mileage limitation. This coverage begins with the commencement of the New Vehicle Limited

Warranty. In order to keep this warranty in effect, the vehicle must be inspected at least every two years. Preventive repairs must be performed on any areas of the vehicle, when identified.

Federal Emissions-System Defect Warranty

BMW NA warrants that the vehicle (a) was designed, built and equipped so as to conform, at the time of sale, to all regulations of the U.S. Environmental Protection Agency (EPA) applicable at the time of manufacture; and (b) is free from defects in materials and workmanship which would cause it to fail to conform to applicable regulations for a period of 2 years or 24,000 miles, whichever occurs first, except for specific emission-control components, for which the warranty period is 8 years or 80,000 miles, whichever occurs first.

Federal Emissions Performance Warranty

BMW NA warrants that if the car is eligible for coverage under this warranty, any non-conformities in the car which cause it to fail an EPA-approved emissions test will, without charge for parts or labor (including diagnosis), be adjusted, repaired or replaced, at the option of BMW NA, to proper specifications, in order to make the vehicle comply with applicable emissions standards.

California Emission-Control-System Limited Warranty

Vehicles registered in California, or in a state that has adopted the California Low Emission Vehicle (LEV) program, are warranted by a specific California Emissions Warranty.

Backing the product: the BMW Warranty

Repair

To obtain service under any of these warranties, the vehicle must be brought to the service department of an authorized BMW center located in the continental United States, Alaska, Hawaii, or Puerto Rico.

For more information

For coverage details on these limited warranties, please refer to the 2009 model year Service and Warranty Information booklet for the corresponding model.

BMW Group Telephone Numbers

BMW Customer Assistance
Center
800-831-1117

BMW Group Headquarters
(New Jersey)
201-307-4000

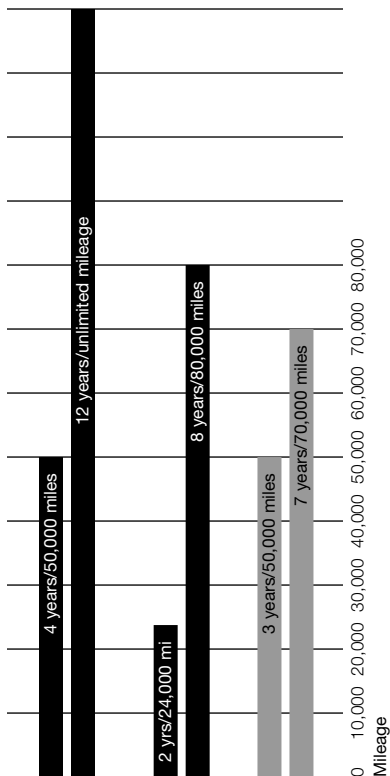
Eastern Region
201-571-5024

Central Region
847-310-2700

Southern Region
770-552-3800

Western Region
909-975-7300

Summary of BMW Limited Warranties



* The California Emissions Control System Limited Warranty applies to all 2009 model year U.S.-specification BMW vehicles registered in the following states: California, Connecticut, Maine, Massachusetts, New Jersey, Oregon, Pennsylvania, Rhode Island, Vermont and Washington.

The BMW Maintenance Program

All 2009 model year BMW vehicles are covered by the BMW Maintenance Program for the first 4 years or 50,000 miles, whichever occurs first. This coverage begins with the commencement of the New Vehicle Limited Warranty.

Coverage

The BMW Maintenance Program covers the following scheduled factory-recommended maintenance items, when the service is required during the applicable coverage period:

- Engine oil service
- Vehicle check
- Engine air filter
- Passenger compartment microfilter(s)
- Brake-fluid replacement
- Sparkplugs (gasoline engines only)
- Fuel filter (diesel engines only)
- Diesel Exhaust Fluid (only in conjunction with an engine oil service)
- Manual-transmission oil, differential fluid (M cars only)

The program also covers the following items, when replacement is required due to normal wear and tear, during the applicable coverage period:

- Brake pads and discs
- Windshield-wiper blade inserts
- Engine drive belts
- Manual-transmission clutch disc

These items are included, provided that wear and tear meets the applicable replacement specifications listed in the BMW Repair and Technical Data manual. Any adjustment required by normal operating conditions is also included.

Maintenance Intervals

Specific intervals are determined by the BMW Maintenance System, which appears in two forms on the following models:

- On the 1, 3, 5, 6 and 7 Series and the M3, M5 and M6 models, the time or mileage at which one or more specific maintenance services are required to be performed is displayed. This system is called Condition-Based Service (CBS). The status of specific maintenance service intervals is communicated either through the instrument cluster display (1 and 3 Series, M3 models without Navigation), or the iDrive control display (1 and 3 Series, M3 models with Navigation; and all 5, 6, 7 Series, M5 and M6 models).

Additional vehicle maintenance service intervals not displayed by the BMW Maintenance System are listed either in the corresponding Service Maintenance Checklist, or the Service and Warranty Information booklet.

The maintenance intervals are based on normal driving and operating conditions. Should the customer request more frequent maintenance service intervals, the cost of these services is **not be covered** by the Maintenance Program.

Repair

To obtain service under any of these warranties, the vehicle must be brought to the service department of an authorized BMW center located in the continental United States, Alaska, Hawaii, or Puerto Rico.

Exclusions

- Items reimbursable to the customer under the New Vehicle Limited Warranty
- Fuel and fuel additives
- Windshield-washer additive, except when in conjunction with scheduled maintenance
- Tires, replacement, balance, rotation and wheel alignment
- Wear and tear of soft trim items, such as seats, carpets, moldings, headliner and door panels; and all chrome trim
- Damage detected when performing the rust-perforation inspection
- Damage due to poor-quality fuel, abuse, misuse, neglect, alteration, fire, accident, flood, improper repair or negligence, and installation of non-BMW accessories
- Altered or unreadable Vehicle Identification Number, odometer irregularities, or vehicles on which the true mileage cannot be determined
- Maintenance or repair after the vehicle is deemed a total loss
- Maintenance or repairs performed by other than authorized BMW centers within the United States and Puerto Rico
- Vehicles used in competitive events
- Oil changes, inspections and other applicable services performed outside the recommended maintenance intervals, as indicated by the BMW Maintenance System, the corresponding Maintenance Service Checklist or the Service and Warranty Information booklet.

Please note that a BMW Maintenance Program is not a warranty and cannot be referred to as such for legal reasons.

Maintenance Program Upgrade

BMW owners may have the opportunity to purchase an optional Maintenance Program Upgrade (MPU). The MPU agreement extends the total maintenance coverage period up to a total of 6 years or 100,000 miles, whichever occurs first.

Excluded models

The following models are currently excluded from the optional Maintenance Program Upgrade: M3 Sedan E90; M3 Coupe E92; M3 Convertible E93; M5 Sedan E60; M6 Coupe E63; and M6 Convertible E64.

For more information on vehicle eligibility related to the Optional BMW Maintenance Upgrade, please refer to Service Information bulletin 01 03 07 or the Optional BMW Maintenance Program Automotive Sales bulletin; both are posted on CenterNet.

Care for the BMW driver: BMW Roadside Assistance

Even the most reliable and durable vehicle may someday need roadside attention. Should this happen, BMW Roadside Assistance is ready to help. Here is a summary of the services and benefits offered by BMW Roadside Assistance.

Service/Benefit	Notes/Limitations
<ul style="list-style-type: none"> Emergency towing and/or wrecker service for mechanical breakdowns and accidents is provided free of charge 	Towing to nearest BMW center, or to center of choice if located within 50 miles of the nearest center.
<ul style="list-style-type: none"> On-site assistance for: <ul style="list-style-type: none"> – Changing flat tires – Jump-starting – Out of gasoline – Winching service 	Limited to \$100 per incident
<ul style="list-style-type: none"> Emergency locked-out assistance, or towing to authorized BMW center 	Up to \$100 per locksmith incident, or towing as described above
<ul style="list-style-type: none"> Trip-interruption protection for reimbursement of lodging, meals, substitute transportation, and travel to bring car and driver together after warranty-covered repairs by BMW center. 	For mechanical breakdowns covered under warranty when 100 miles or more from home. Limit \$1,000 per incident up to 5 days.
<ul style="list-style-type: none"> Emergency Valet Service 	In event of mechanical breakdown covered under warranty, provides a personal assistant who will help with alternate transportation, lodging, airline reservations or directions. He or she will even contact up to three individuals to relay emergency information.
<ul style="list-style-type: none"> Trip routing 	Direct/scenic; maps (2-3 sectional details/1 destination); points of interest; dealer listings; customer can request more maps.
<ul style="list-style-type: none"> Multi-driver protection 	At no extra cost
<ul style="list-style-type: none"> Car-rental discounts 	According to current offers
<ul style="list-style-type: none"> Renewable beyond warranty period with additional coverage included 	Available for \$69.90 per year

Owners of Certified Pre-Owned BMW vehicles can find full details about BMW Roadside Assistance in the Consumer Information Statement provided by their BMW center at the time of delivery.

The toll-free Roadside Assistance number is: 800-332-4BMW (800-332-4269)

Please see Service & Warranty book for complete details on the BMW Roadside Assistance program.

Warranty, Roadside Assistance & Included Maintenance

BMW vs. the competition

(Data as of November 15, 2008)

	Basic (yr./mi.)	Powertrain/ major component (yr./mi.)	Corrosion (yr./mi.)	Roadside Assistance (yr./mi.) ¹	Included Maintenance (yr./mi.) ²
BMW	4/50,000	4/50,000	12/unlimited	4/unlimited	4/50,000
Acura	4/50,000	6/70,000	5/unlimited	4/50,000	NO
Audi	4/50,000	4/50,000	12/unlimited	4/unlimited	NO
Cadillac	4/50,000	5/100,000	6/unlimited	5/100,000	NO
Chevrolet/GMC	3/36,000	5/100,000	6/100,000	5/100,000	NO
Ferrari	3/unlimited	3/unlimited	3/unlimited	3/unlimited	NO
Honda	3/36,000	5/60,000	5/unlimited	OPT ³	NO
Hummer	4/50,000	5/100,000	6/unlimited	5/100,000	NO
Infiniti	4/60,000	6/70,000	7/unlimited	4/unlimited	NO
Jaguar	4/50,000	4/50,000	6/unlimited	4/50,000	NO
Jeep/Chrysler	3/36,000	Lifetime ⁴	5/100,000	3/36,000	NO
Lamborghini	2/24,000	2/24,000	2/24,000	2/24,000	NO
Land Rover	4/50,000	4/50,000	6/unlimited	4/50,000	NO
Lexus	4/50,000	6/70,000 ⁵	6/unlimited	4/unlimited	NO
Lincoln	4/50,000	6/70,000	5/unlimited	6/70,000	NO
Mazda	3/36,000	5/60,000	5/unlimited	3/36,000	NO
Mercedes-Benz	4/50,000	4/50,000	4/50,000	Unlimited/ unlimited	Note 6
Nissan	3/36,000	5/60,000	5/unlimited	–	NO
Porsche	4/50,000	4/50,000	10/unlimited	4/50,000	NO
Saab	4/50,000	5/100,000	10/unlimited ⁷	5/100,000	NO
Toyota	3/36,000	5/60,000 ⁵	5/unlimited	NA	NO
Volkswagen	3/36,000	5/60,000	12/unlimited	4/50,000	NO
Volvo	4/50,000	4/50,000	10/100,000	4/50,000	3/36,000 ⁸

1 – See page 440 for details on BMW Roadside Assistance.

2 – See pages 438-439 for details on the BMW Maintenance Program.

3 – Roadside Assistance provided only with available Extended Service Plan.

4 – Limited coverage. Items not covered include on-board computers, navigation systems, starters, power windows & mirrors, & MyGIG entertainment systems. Any subsequent owners after 1st owner of vehicle are also not covered.

5 – Hybrid models only: 8/100,000 on hybrid components.

6 – "Service welcome" with diagnostic check (between 1000 & 3000 mi.) & tire rotation (6500 mi.) are included; Maintenance Plans available at extra cost.

7 – 9-7X 6/unlimited.

8 – Scheduled maintenance only; new for '09.

BMW Assist™ Safety & Convenience Services

The BMW Assist system is standard on all 5, 6 and 7 Series models, as well as the M5 and M6. It is optional on the 1 and 3 Series and M3 as part of the Premium Package or as stand-alone option 639.

The BMW Assist system includes Bluetooth® hands-free calling capability with speech recognition. Various handsets can be “paired” to the BMW Assist system, allowing hands-free cellphone use in the vehicle. For the current list of BMW-recommended cellphones, visit www.bmwusa.com/bluetooth. Optional snap-in adapters are also available to allow many mobile phones to connect to the vehicle's external antenna for better reception and to recharge the phone battery.

BMW Assist safety and convenience services are offered as the BMW Assist Safety Plan and the optional BMW Assist Convenience Plan. 2007 and later models include 4 years of the Safety Plan at no additional charge. New to the BMW Assist Safety Plan for MY09 is **MyInfo**, which allows subscribers to send business listings and street addresses with associated phone numbers from the internet, directly to their BMW (available on all 2009 and later BMWs except X3). New to the BMW Assist Convenience Plan is **BMW Search**, which allows 2009 and later vehicles equipped with both the new 2nd-generation BMW Navigation system (2009 1, 3 and 7 Series initially) and the BMW Assist system to gain online access to the Google Maps™ database inside the vehicle to quickly find a desired business with just a key word.

Enrollment, activation and delivery. On 2007 and later BMW Assist-equipped models, the BMW Assist Safety Plan is included as part of BMW Ultimate Service at no cost for 4 years from the vehicle's in-service date. For 2006 and earlier models, BMW pays for the BMW Assist Safety Plan for the first year from the vehicle's in-service date (customer billing information is required when 1-year BMW-paid term or less remains). When 2 months or less of the BMW-paid term of service remains, the Safety Plan costs \$199 per year, plus applicable taxes. The optional Convenience Plan costs \$199 per year. All subscribers are required to enroll at your center through DCSnet under Sales I BMW Assist, or services will be terminated approximately 60 days after the vehicle is delivered. Enrollment incentives may be available to BMW center staff for selling Safety Plan and/or Convenience Plan term extensions. If the customer declines to subscribe, the center must complete a waiver on DCSnet. In both cases, the customer must sign both copies of the printed document and be given one copy with the second copy placed in the deal jacket. During vehicle delivery or handover, call the BMW Assist response center with the customer by pushing the SOS button to activate the service and confirm subscriber details. All services are subject to the terms and conditions of the subscriber agreement.

BMW Assist Safety Plan (4 years BMW-paid for 2007 and later models, 1 year BMW-paid for 2006 and earlier models, then \$199/year) includes:

Enhanced Automatic Collision Notification. In the event of a severe accident, the BMW Assist system automatically transmits the vehicle location and crash information to a response specialist, who will speak to the vehicle occupants to determine if they are all right, while a second specialist requests dispatch of emergency services to your customer's location as needed.

Emergency Request (SOS). By pushing the SOS button, the vehicle occupants can manually initiate the same services as described above. Also the response specialist can notify emergency contacts upon request.

Enhanced Roadside Assistance. In the event of a vehicle malfunction, the driver may contact BMW Assist as follows:

- 2009 1, 3 and 7 Series, M3 (all with Navigation) – From the main menu, select “BMW Assist” and then “Roadside Assistance” on the iDrive display.
- 2008 and earlier 1 and 3 Series, M3 (all with Navigation) 5 and 6 Series, M5 and M6 – From the main menu, select “Communication”, “BMW Assist” and then “Roadside Assistance” on the iDrive display.
- 2009 1 and 3 Series, M3 (all without Navigation) – Push the “MENU” button and select “ASSIST” and then “RDASST” on the radio display.
- 2008 and earlier 7 Series – From the main menu, select “BMW Assist”, “BMW center” and then “Roadside Assistance” on the iDrive display.
- MY08 and earlier Z4 – press the “Wrench” button on the center console.

The BMW Assist system will transmit the location and vehicle information to the BMW Assist response center, which will transfer the data and establish a voice call to BMW Roadside Assistance for a prompt, accurate dispatch of assistance to the vehicle location.

Stolen Vehicle Recovery. If the vehicle is ever stolen, the subscriber must file a police report and then notify the BMW Assist response center by calling toll-free 888-333-6118 and provide his or her password and police report number. The response center can remotely activate the BMW Assist system to locate the vehicle and help police recover it. This service may reduce the lessee/owner's comprehensive insurance premium; it is available on all 7 Series models effective with 09/05 production and all other BMW Assist-equipped models produced 10/04 or later. This feature also protects your center's inventory, demos and service loaners.

Door Unlock. If the keys are accidentally locked inside the vehicle, the subscriber may be able to gain access to the vehicle by calling toll-free 888-333-6118. Once the response specialist has confirmed the subscriber's name and password, a signal is sent to the vehicle to unlock it remotely. This service is available in all 2008 BMW Assist-equipped Z4 models and all other 2007 and later BMW Assist-equipped models produced 9/06 and later.

TeleService (Service Request). Our unique TeleService function automatically transmits the vehicle's Key Data to the subscriber's preferred BMW center when the Condition-Based Service (CBS) sensors detect the

BMW Assist™ Safety & Convenience Services

need for upcoming service. Your BMW center's service department then contacts the customer to set up a convenient appointment to perform the needed service.

The driver can also send a service request manually by:

- 2009 1, 3 and 7 Series, M3 (all with Navigation) – From the main menu, select “BMW Assist” and then “Service Request” on the iDrive display.
- 2008 and earlier 1 and 3 Series, M3 (all with Navigation); 5 and 6 Series, M5 and M6 – From the main menu, select “Communication,” “BMW Assist” and then “Service Request” on the iDrive display.
- 2009 1 and 3 Series, M3 (all without Navigation) – Push the “MENU” button and select “ASSIST” and then “SERV” on the radio display.
- 2008 and earlier 7 Series – From the main menu, select “BMW Assist,” “BMW center” and then “Your BMW center” on the iDrive display.

TeleService is available on all 2004 and later 5 and 6 Series; 2006 and later 7 Series and 3 Series Sedans and Sports Wagons; 2007 and later X5 3 Series; 2008 and later 1 Series.

MyInfo. Search for a business or street address at Google Maps™ and click “Send.” Select “BMW” for car and “BMW US” for country and enter the subscriber's e-mail address on file with BMW Assist, as entered into the Electronic Subscriber Agreement (ESA) application on DCSnet. Then press the “Send” button. In the vehicle the subscriber can now call the phone number directly with a Bluetooth®-linked mobile phone or, if the BMW is equipped

with the BMW Navigation system, the subscriber can immediately start route guidance.

The MyInfo messages are found as follows:

- 2009 1, 3 and 7 Series, M3 (all with Navigation) – From the main menu, select “BMW Assist” and then “Messages” on the iDrive display.
- 2009 5 and 6 Series, M5 and M6 – From the main menu, select “Communication,” “BMW Assist” and then “MyInfo” on the iDrive display.
- 2009 1 and 3 Series, M3 (all without Navigation) – Push the “MENU” button and select “ASSIST” and then “MYINF” on the radio display for the phone number and address.

MyInfo is available on all 2009 BMW models except X3.

Customer Relations. Drivers can speak with BMW Customer Relations at the push of a button:

- 2009 1, 3 and 7 Series, M3 (all with Navigation) – From the main menu, select “BMW Assist” and then “Customer Relations” on the iDrive display.
- 2008 and earlier 1 and 3 Series, M3 (all with Navigation); 5 and 6 Series, M5 and M6 – From the main menu, select “Communication,” “BMW Assist” and then “Customer Relations” on the iDrive display.
- 2009 Z4, 1 and 3 Series, M3 (all without Navigation) – Push the “MENU” button and select “ASSIST” and then “BMW” on the radio display.
- 2008 and earlier 7 Series – From the main menu, select “BMW Assist,” “BMW center” and then “Roadside Assistance” on the iDrive display.
- 2008 and earlier Z4 – press the “SOS” or “Wrench” button on the center console.

BMW Assist Convenience Plan (optional at \$199/year; requires Safety Plan enrollment) includes access to:

Concierge. Need a good restaurant or hotel recommendation? Looking for today's fuel price of your favorite brand? Picking someone up at the airport and need to know the gate and arrival time? Need to know traffic and weather conditions on your commute? Whenever your customers are on the road, the BMW Assist Concierge is there to serve as a helpful travel companion, providing answers to their questions 24/7. Your customers contact the Concierge as follows:

- 2009 1, 3 and 7 Series, M3 (all with Navigation) - From the main menu, select "BMW Assist," "Concierge" and then "Start service" on the iDrive display.
- 2009 1 and 3 Series, M3 (all without Navigation) – Push the "MENU" button and select "ASSIST" and then "CONCIE" on the radio display. Scroll to "<Concierge>" and push the knob on the right side of the radio to establish the call.
- 2008 and earlier 7 Series – From the main menu, select "BMW Assist," "Concierge" and then "New information."
- 2008 and earlier Z4 – push the "SOS" button on the center console.

On 2007 and later BMW Assist-equipped models produced 9/06 and later, except Z4 and X3 (but will be available on the 2009 and later Z4), the subscriber can request to have the destination and phone number sent to his vehicle to call the number with his Bluetooth®-linked mobile phone or, if the vehicle is equipped with the BMW Navigation system, to immediately start route guidance.

Directions, Traffic and Weather.

BMW Assist Convenience Plan subscribers can request directions to a street address or a point of interest, with traffic information along the way as well as the weather forecast locally or at their destination. Your customer initiates these services as follows:

- 2009 Z4, 1, 3 and 7 Series, M3 (all with Navigation) - From the main menu, select "BMW Assist," "Concierge" and then "Start service" on the iDrive display.
- 2009 Z4, 1 and 3 Series, M3 (all without Navigation) – Push the "MENU" button and select "ASSIST" and then "CONCIE" on the radio display. Scroll to "<Concierge>" and push the knob on the right hand of the radio to establish the call.
- 2008 and earlier 7 Series – From the main menu, select "BMW Assist," "Concierge" and then "New information."
- 2008 and earlier Z4 – push the "SOS" button on the center console.

On 2007 and later BMW Assist-equipped models produced 9/06 and later, except Z4 and X3 (will be available on the 2009 and later Z4), the subscriber can request to have the destination and phone number sent to his vehicle to call the number with his Bluetooth®-linked mobile phone or, if the vehicle is equipped with the BMW Navigation system, to immediately start route guidance.

BMW Search: Allows online access to the dynamic reach of the Google Maps™ database inside the vehicle to quickly find a desired business with just a key word. and then start route guidance or a call with the Bluetooth®-linked mobile phone – all with a simple selection of a menu option.

BMW Assist™ Safety & Convenience Services

To use BMW Search, select “BMW Assist” in the main menu, then select “BMW Search” and press the iDrive controller to establish an online connection. Select where you want to search and enter what you want to search. Then select the desired search result and select the Flag or Phone symbol for route guidance or to establish a phone call.

Available on 2009 and later vehicles equipped with both the new BMW Navigation system (2009 and later 1, 3 and 7 Series initially) and the BMW Assist system.

Critical Calling. If the subscriber forgets to bring a mobile phone or its battery is discharged, but urgently needs to make a phone call, he or she can simply push the SOS button. Critical Calling allows the subscriber to request up to four operator-assisted calls per year from the vehicle. The BMW Assist response specialist connects the subscriber to the requested party for up to five minutes per call.

Enroll your customers in the Convenience Plan or extend their Safety Plan term when you complete the subscriber agreement on DCSnet, and you may be eligible for financial incentives. For additional information on BMW Assist, go to CenterNet | BMW | BMW Assist, visit www.bmwassist.com, or call 888-333-6118.

Taking delivery in Europe or at Spartanburg

BMW customers have two exciting “special delivery” options: taking possession of their new BMW in BMW’s home city of Munich, Germany; or at the BMW Performance Center in Spartanburg, South Carolina. All models except those built in Spartanburg are available for European delivery; all models are available for delivery at the Performance Center.

European delivery

BMW’s European Delivery program combines the excitement of exploring Europe with the thrill of driving one of the world’s premier performance automobiles in the European driving environment. Say goodbye to the timetables of trains and tour buses; the distance between destinations becomes an exciting experience. Savor the performance of your own BMW on the *Autobahn*; conduct your own “road test” for performance and comfort on the highways, back roads and cobblestone streets your BMW is built to conquer.

Customers now pick up their vehicles at the fantastic new **BMW Welt** (BMW World) in Munich, described on the next page. Start there by viewing BMW technology and history; then spend the rest of the day exploring the BMW 3 Series production facility and the also new BMW Museum nearby (see page 7).

- Tourist registration of vehicle
- Insurance for 14 days
- Inland transportation to European port for shipment home
- Ocean freight
- Marine insurance and port processing
- Customs duty and clearance
- Wharfage and handling fees.

To be eligible the customer must:

- Be a resident of the U. S.
- Be 18 years of age or older
- Have a valid driver’s license.

BMW European Delivery customers can also enjoy exclusive European driving adventures. Choose from a choice of 6-day/5-night itineraries that begin behind the wheel of a new BMW; or design your own trip and create an adventure that’s all yours.

Delivery at the BMW Performance Center

Located along the scenic foothills of the Blue Ridge Mountains, BMW’s Performance Center in Spartanburg, South Carolina offers an exciting and unique opportunity. At no extra charge, any newly ordered BMW model is eligible for the Performance Center’s Ultimate Delivery Experience, which includes:

- Hotel accommodations for the evening prior to delivery, along with meals for two persons
- A chance to witness assembly of BMWs at the Spartanburg plant, and learn about BMW’s heritage at the Zentrum museum.
- Professional driving instruction, demonstrating the handling, braking and traction control of a current BMW vehicle (participants must be 18 years of age or older, and possess valid driver’s licenses).
- Personalized vehicle delivery presentation with a BMW product specialist.

Vehicles delivered by the Performance Center are still subject to the applicable destination and handling fee. Customers are responsible for their own transportation to and from the Performance Center. This program may not be used in conjunction with European Delivery.

Further details on both are available on CenterNet, or online at www.bmwusa.com/europeandelivery or www.bmwusa.com/bmwexperience/PerformanceCenter/delivery.

BMW Welt:

“BMW World” is the company’s new, and dazzling, international face to the world.

Since 1972, BMW’s “face to the world” has been its spectacular 21-story “4-Cylinder” headquarters building, northward across Munich’s busy Mittlerer Ring road – one of those thoroughfares that encircle European urban cores – from the also spectacular Olympia Park that hosted the 1972 Olympic Games.

In the past few years, BMW has completely renovated the 4-Cylinder high-rise (so-called because it consists of four vertical cylindrical towers) right down to its central core while preserving its landmark Modernist beauty inside and out; the accompanying bowl-shaped BMW Museum has also been renovated, and expanded, as described on page 7. BMW Welt – “Bay-Em-Vay Welt,” which translates from German into English as “BMW World” – is entirely new, and situated across the adjacent perpendicular street.

BMW’s European Delivery customers automatically get an inside view of BMW Welt, as it assumed this function from the former location in a northern Munich suburb upon its opening on October 17, 2007. Inside dramatically expressive contours, as spectacular and architecturally significant in the 21st century as the 4-Cylinder was in the 20th

(and remains), a variety of exhibits and cultural events now attract visitors from all over the world. Additionally, more than 220 external events have attracted many participants to the BMW Welt Events Forum, many of them taking the opportunity to admire the unique architecture and enjoy a delicious meal in one of its restaurants. In summer ’08 the Royal Institute of British Architects in London presented its auspicious RIBA Award to the facility. The architects were Wolf D. Prix and his Vienna-based Coop Himmelb(l)au, itself a German word play appropriately signifying “construction” and “blue sky” and even “skyscraper.”

Not just the architecture, but also the size and scope of BMW Welt are dazzling: an Airbus A380 jumbo jet would actually fit in here. Yet for all the esthetic drama and excitement of the place itself, the experiences offered to visitors, and especially to those taking delivery of a new BMW here, are the overarching theme of BMW Welt. For example, a simulator lets visitors pilot a virtual X5 over snowy terrain while “watching” how torque is distributed to each wheel. Or listen on earphones to the sound of an M5/M6 V-10 engine at full song.

But when customers arrive to pick up their new BMW, they'd better be ready for a good show! There's a representative, a "conciierge" for every customer, 60 in all (600 young multilinguals applied for the jobs initially). The representative receives the customer; for those (such as Americans) who may have a long flight behind them, a shower or a place to nap is offered.

Below ground level, up to 20 transporter trips daily bring in new BMWs from the factories for delivery. When ready, the customer is led to a large touch-screen table, where his or her own new vehicle is simulated – with the correct equipment, color and even license plate. Features, such as iDrive or Active Blind Spot Detection, are explained and the customer can practice using them on the simulator. Then, perfectly timed, the vehicle – freshly washed and fueled – is brought up via glass-walled elevator for its Premiere. Up to 20 vehicles can be positioned, each on its own turntable and dramatically lighted.

After the vehicle has completed its rotations, it is then driven off the turntable – by the new owner. A elegant quartz floor surface keeps the tires from squealing. Then the owner(s) and vehicle proceed down a gently curved ramp, still inside the building, emerging from the BMW World into the outside world of the exciting city of Munich, the surrounding Bavarian countryside, and wherever else the lucky new owners have decided to go exploring.

In the future, visitors will continue to enjoy an exclusive presentation of all BMW vehicle lines, interactive exhibits, and classical and jazz concerts. A gift shop offers attractive souvenir possibilities; there are two restaurants, a bistro and a coffee bar. For now and the future, BMW Welt is a fitting presentation of BMW the product, BMW the company, BMW the philosophy of responsible business – indeed, BMW the phenomenon – to the international clientele it serves so elegantly. Right up to BMW standards.



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