



## U.S. Press Information SPIES

**or Release:** IMMEDIATE

**Contact:**



### THE NEW BMW 3 SERIES

**Highlights include styling updates inside & out, new technology and the introduction of BMW Advanced Diesel with BluePerformance**

-----  
**Woodcliff Lake, NJ - July 16 2008...** The 2009 3 Series Sedan and Sport Wagon is poised to maintain its market leadership with updated exterior and interior styling, new technologies, enhanced ergonomics and, as previously announced, the U.S. introduction of BMW Advanced Diesel with BluePerformance in the form of the 335d Sedan.

#### Highlights.

- The new BMW 3 Series Sedans and Sports Wagons, already and always leaders in their class, widen their lead in driving dynamics, premium quality and innovative technology.
- These vehicles combine unique BMW elegance with a driving experience that's widely imitated, yet really inimitable.
- A brand-new twin-turbo diesel engine, thoroughly BMW in its performance and character, powers the new 335d Sedan and expands the scope of BMW EfficientDynamics.
- Subtle freshening of exterior design features a new front end, more dynamic profile, and wider appearance at the rear. Headlights and taillights are new, yet present a typically BMW look, innovative lighting technology and 3-dimensional effects.
- Refinement of interior design and amenities includes new colors and materials. Overall design of interior reflects and complements the distinctive exterior design. Among functional updates are ergonomically enhanced placement of power-window controls for the driver and new, expanded storage possibilities.



## SPIES



## SPIES

- New generation of BMW iDrive, available in 3 Series in combination with optional Navigation system: ergonomically optimized iDrive controller with function selection and activation via turn, push and tilt motions; new direct-select keys; more Programmable Memory Keys than before. The newly enhanced Navigation system offers greater functionality.
- BMW Advanced Diesel with BluePerformance: all-new inline 6-cylinder twin-turbo diesel engine with an impressive array of new features for high performance, high fuel efficiency and clean exhaust. To achieve these targets, this aluminum powerplant applies common-rail, high-pressure direct fuel injection with piezo injectors; 2-stage turbocharging; exhaust particulates filter; and Selective Catalytic Reduction exhaust after-treatment to reduce NOx. Displacing 3.0 liters, this truly advanced engine enables BMW to introduce diesel power in all 50 U.S. states; it produces 265 hp and an amazing peak torque of 425 lb-ft.; 0-60 mph in 6.0 sec. with 6-speed automatic transmission. EPA mileage ratings have not been finalized, but are expected to set new “mile”-stones in the simultaneous achievement of performance with fuel economy.
- Continuation of two other trailblazing BMW inline 6-cylinder performance concepts in the other 3 Series models: the 3.0-liter naturally aspirated unit in 328i models with weight-saving magnesium/aluminum composite construction and Valvetronic induction technology for 230 hp; and the 3.0-liter twin-turbocharged engine of 335i models with its direct fuel injection (piezo injectors here, too) and large-volume dual exhaust system. This unit delivers 300 hp, and a peak torque that is remarkable not only for its quantity (300 lb-ft.) but for the range over which it’s at the driver’s disposal (1400 to 5000 rpm). Both of these gasoline engines have been acclaimed widely for their respective qualities: for the 328i unit, silky and strong performance with remarkable fuel economy; for the 335i, dramatically sporty performance with fuel economy that’s notable in view of the power.
- BMW’s acclaimed xDrive all-wheel drive is featured in the newly named 328i and 335i xDrive Sedans and 328i xDrive Sports Wagon. This intelligently engineered AWD system steplessly varies the torque split between front and rear wheels to enhance not only traction, but also agility and stability on grippy, as well as slippery road surfaces.
- Comprehensive safety concept with extremely rigid body structure; carefully defined “force paths” that lead and distribute collision forces optimally

through the structure; targeted application of high-strength steels and deformation elements; six airbags including front side-impact and front/rear head protection; new Active front head restraints.

- The 2009 models are: 328i Sedan and Sports Wagon; 328i xDrive Sedan and Sports Wagon; 335i, 335i xDrive and 335d Sedans. The 3 Series also encompasses Coupes and retractable-hardtop Convertibles; these continue with less extensive updates for 2009.

### **Segment original remains segment leader.**

The BMW 3 Series is an internationally recognized symbol of the intelligently sporty motor vehicle. It is also the best-selling premium vehicle in the world. Updates for the 2009 Sedan and Sports Wagon models include –

- A subtle exterior-design freshening
- Refinement of interior design and functions
- New and/or revised options
- A new generation of the iDrive control and display system
- Expansion of ConnectedDrive functions
- An all-new turbodiesel engine in a new model - the 335d Sedan.

Fundamentally unchanged – and still not successfully challenged in other quarters – are the Series' essential attributes of rear-(or all-)wheel drive, harmonious front/rear weight balance, outstandingly precise steering and skillfully engineered suspension...all of which conspire to produce the uniquely satisfying driving experience that is quintessentially BMW.

And, more than ever, this inimitable driving experience in combination with growing attention to fuel efficiency and environmental consciousness. Thanks to the various facets of BMW EfficientDynamics – especially via the new turbodiesel-powered 335d Sedan – the BMW experience is more satisfying than ever before.

### **New design accents for greater sportiness and elegance.**

The new Sedans are distinguished by a freshened design at the front, in profile and in the rear view; the new Sports Wagons receive the same front-end and profile updates, as well as most elements of the rearview changes.

**At the front,** width is more strongly accented, though actual width is unchanged. BMW's traditional 4-headlight look is emphasized by the lamps' setting in new chromed "tubes;" the more recently traditional luminous rings around the headlights newly serve as Daytime Running Lamps on vehicles with Xenon Adaptive lights (optional 328i models, standard 335i models). The turn-signal lamps get a new, vertically layered look; in combination with the Xenon headlights these are in LED technology.

**In profile,** the side sills/rocker panels set a stronger lower accent; newly shaped side mirrors not only have crisp new contours, but also provide an enlarged visual field for the driver.

**At the rear,** the bumper, taillights and (on the Sedans) trunklid are all newly shaped for a stronger emphasis on the 3's sporty character. The taillights' typical L-shape is now more in evidence, and new LED lighting sources illuminate the taillights and turn-signal lamps. And an actual increase in rear track adds new emphasis to these vehicles' wide stance in rear and  $\frac{3}{4}$  views.

**Interior: high-quality materials, enhanced ergonomics and a new-generation iDrive system.**

Subtle updates to materials and surface textures make the 3 Series interior even more attractive; refinement of interior design and amenities include enhanced placement of power-window controls for driver and new, expanded storage possibilities.

In the 3 Series, BMW's iDrive control and display system is included in the Navigation option. As in the new 7 Series (where iDrive and Navigation are standard), a 2nd generation of iDrive sets new standards for ergonomics, efficiency and logical functionality with its new, higher-definition, 8.8-in. Control Display. More uniformly structured menus, and an optimized control strategy for the display and console-mounted controller are also signature new features.

Other new details include keys for direct selection of the Radio, CD, Navigation and Telecommunications menus, grouped conveniently next to the controller. Visual assists and consistent hierarchies in the display simplify choices within the individual menus. In the Navigation section, users will experience a new and superior level of brilliance, detail and variability of map displays. A "map preview"

function facilitates selection of the navigation destination from a list; in a new operational logic, letters of the alphabet and numerals are arranged in circular form for more intuitive input of addresses and phone numbers.

### **Hard drive for audio and Navigation data storage.**

Newly included in the Navigation option is a hard drive for storage of Navigation data (such as destinations) and audio material (such as music). The large capacity hard drive means quick access, and allows transfer of material from a CD, MP3 player or a USB stick to the hard drive, which can hold up to 8-GB of music.

### **BMW Assist: expanded capabilities**

As a dynamically evolving array of valuable functions, the new 3 incorporates BMW Assist and TeleService functions (both included in the BMW Assist option). Automatic emergency calling, a long-standing standard feature of the BMW Assist telematics scheme, is meaningfully enhanced in the new 3: In the event of a collision of a certain severity, the system transmits to the BMW Call Center 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. At the same time, the Call Center attempts to establish a voice connection with the vehicle occupants and deploys emergency services as appropriate.

BMW Advanced Diesel with BluePerformance: high-performance, high-efficiency twin-turbo diesel engine in the 335d Sedan.

As an important element of BMW EfficientDynamics, the new 335d Sedan represents a significant step forward in combining high performance with high fuel efficiency. The 3.0-liter, twin-turbocharged inline 6-cylinder diesel engine powering the 335d – its predecessor has been widely acclaimed in Europe – is completely new to the U.S. also new is its BMW BluePerformance emission-control technology.

Among the turbodiesel engine's advanced attributes are aluminum construction, high-pressure direct fuel injection with piezo injectors (also a feature of BMW's twin-turbo gasoline engines), and a turbocharging system that employs both a small and larger turbocharger for optimum response at low and higher speeds.

As a worldwide advance also being newly introduced in Europe, BMW BluePerformance controls emissions to a strict level that enables the 335d to be sold in all 50 U.S. states. Specific features of this system include an exhaust

particulates filter and a Selective Catalytic Reduction exhaust after-treatment system.

Given the stringent emission control and fuel economy that will truly raise eyebrows (official EPA mileage ratings are not yet available), one might expect performance to suffer. On the contrary: this new power concept achieves not only abundant power (265 hp, 0-60 mph in 6.0 seconds with the standard 6-speed automatic transmission), but immense torque (425 lb-ft.) that gives the 335d all-speed acceleration response that simply has to be experienced to be believed. And – a quality of smoothness and sound that fully lives up to the BMW reputation for sonorous power.

### **Gasoline-powered 3 Series models: continuing the BMW tradition of smoothness, great sound and outstanding fuel efficiency.**

All other 3 Series models continue with their (also) acclaimed 3.0-liter inline 6-cylinder gasoline engines.

The 328i models are powered by a naturally aspirated (i.e., non-turbo) engine that features advanced, weight-saving magnesium/aluminum construction – still unique among the world’s automobiles. Its Valvetronic system enhances efficiency by employing variable valve lift, rather than a throttle, to regulate engine power. This engine produces 230 hp, 200 lb-ft. of torque, and EPA highway mileage ratings as high as 28 mpg (depending on model and transmission) in 2008. It is a sterling example of BMW’s long-standing tradition of the smooth, sonically delightful “inline six” that delivers excellent performance.

For those who desire more than merely excellent performance, the 335i models are powered by a completely distinct 3.0-liter six, boosted by twin turbochargers and fed with fuel by High Precision direct fuel injection. This unique and highly advanced unit delivers 300 hp and 300 lb-ft. of torque, 0-60-mph times as quick as 5.4 sec., and EPA highway mileage ratings up to 26 mpg. If the 328i engine has been enthusiastically acclaimed, the 335i unit has garnered downright deliriously praise, particularly by the automotive enthusiast media.

### **Intelligent all-wheel drive in the 3 Series: the xDrive models.**

Continuing for '09 are the two Sedan models and one Sports Wagon model with BMW's truly intelligent AWD system, now taking the system's name into their model designations: 328i xDrive Sedan and Sports Wagon, 335i xDrive Sedan. The Coupe models also have xDrive.

At the core of this permanent AWD system is an electronically controlled multi-disc clutch that steplessly varies torque distribution between the front and rear wheels, and does so with near-instantaneous speed. xDrive doesn't just optimize traction; it can also enhance both agility and stability on grippy as well as slippery road surfaces..

**Superlative chassis technology; Active Steering optional on 335i models.**

Part and parcel of BMW's tradition as The Ultimate Driving Machine is sophisticated chassis technology. All 3 Series models have BMW's patented double-pivot strut-type front suspension with aluminum components on rear-wheel drive models for reduced unsprung weight. The rear suspension is a 5-link system engineered for a unique combination of agility and reassuring stability.

BMW's steering is just as essential to the driving experience. All 3 Series models come standard with a hydraulic power-steering system whose road feel and precision are legendary; optional on 335i Sedans is Active Steering, which varies both the steering ratio and power assist to further enhance agility, particularly at low to medium driving speeds. Active Steering is another of those BMW innovations that truly has to be experienced to be believed.

**Optimized occupant protection: including new Active head restraints on the front seats.**

The 3 Series safety concept is based on a solid and rigid body structure that utilizes high-strength steels and targeted deformation elements to channel and absorb collision forces in the most effective way for crash safety. Specific safety equipment and systems include 3-point safety belts and adjustable head restraints at all (five) seating positions. LATCH attachments for child safety seats are standard at the outboard rear seating positions.

New for 2009 are Active front head restraints, which in a rear-end impact employ fast-acting pyrotechnic activation to pivot the restraints' forward portion into close proximity with the occupants' heads: the head restraint, or headrest, moves up to 60 mm/2.4 in. forward and 40 mm/1.6 in. upward. This

reduces their heads' rearward motion, lessening the likelihood of whiplash or other head/neck injuries.

Standard airbag equipment in all current 3 Series Sedans and Sports Wagons includes 2-stage, optimally configured front-impact airbags; front-seat side-impact airbags; and a front-to-rear, curtain-type Head Protection system deployed from the interior ceiling.

### **Advanced forward illumination contributes to active safety.**

A significant contribution to active safety, that is the avoidance of accidents, is Xenon Adaptive headlight technology, standard on 335i/335d models and optional on 328i models. In addition to the greater luminous power of Xenon lights, Adaptive means that the headlights "steer" with the front wheels, governed by the vehicle's speed and the "yaw rate" at which its direction is changing. This occurs at all speeds and is especially beneficial at speed on curving rural roads at night.

---

Newly included on Sedans and Wagons with the Adaptive headlights are Cornering Lights, which direct an angled beam at each front corner to assist in situations of low speed and sharp turns. Additionally, on U.S. models both of these lamps illuminate when reverse gear is engaged. Also included is auto-leveling, which maintains accurate aiming with changing vehicle loading, acceleration and braking to reduce glare to oncoming motorists.

### **Class-leading automatic climate control.**

BMW's automatic climate control provides both effective automatic operation and a high degree of manual "override" control when desired. The 3 Series system is of recent design that incorporates highly refined airflow that is both high-volume and quiet. Fuzzy logic assists in effective temperature regulation, separately for the driver and passenger sides. Other features include activated-charcoal microfilter ventilation; temperature- and volume-controlled air to the rear passenger compartment; a bi-directional solar sensor to account for solar effects; automatic air recirculation when excessive air pollution is sensed; automatic reduction of blower speed when the vehicle comes to a stop; and a misting sensor that detects windshield fogging and adjusts system operation to clear it up.

**The design: unique, unmistakable, elegant.**



- Subtle new details accent 3 Series' dynamic character.
- New headlights, taillights and side sills.
- Even better ergonomics and esthetics inside.

The current 3 Series, already strong on BMW dynamism and identity, now gains an additional measure of both by virtue of discreet updates and refinements. At the rear, a widened track enhances these vehicles' planted-on-the-road stance; careful and subtle modifications to the front, sides and aft end make the total design even more harmonious.

**At the front.** A new, bolder front spoiler/bumper ensemble imparts sportier, stronger character. Its center air intake is larger than before, enhancing the air supply for mechanical components; upswept lines in the lower air intakes, the bumper itself and the newly shaped headlight clusters emphasize the wide stance. Double longitudinal hood lines, more 3-dimensional than ever, rise toward the A-pillars and frame the hood's power dome. New lighting features include the layered turn-signal lenses, and on models with Xenon Adaptive headlights, BMW's distinctive luminous rings now serve as Daytime Running Lamps (on all models, they also function as parking lights). The optional Park Distance Control now includes front and rear monitoring.; formerly PDC was offered on the 3 Series in a rear-only version.

**In profile.** The lower character line that runs from just behind the front wheel well to just ahead of the rear wheel well, is more prominently contoured and strongly expresses the low stance. On Sport Package-equipped models, new high-gloss Shadowline (black) trim more elegantly frames the side windows. And new wheel designs freshen the 328i models' 16-in. and the 335i/335d models' 17-in. standard equipment.

**At the rear.** Restating BMW's traditional L-form are the taillight clusters of both Sedan and Sports Wagon models. Their two main segments, for the taillights and turn signals, are composed of LED rows for an even higher-tech look than before. On Sedans, the trunklid is newly shaped to go with the new taillight design. And the 0.6-in.-wider rear track does its part to strengthen an already road-gripping stance.

**New colors.** BMW paint colors are notable for their richness and eye-catching appeal. A total of 12 colors are offered with three new metallics for '09: Space Gray, Tasman Green and Blue Water.

**Interior:** newly refined materials, surfaces and colors. Here too, subtle updates and refinements mark the newest 3 Series Sedan and Sports Wagon interiors. Materials and surface quality add appeal; certain functional elements including the optional iDrive controller and climate and audio controls offer refined appearance and tactile qualities.

The doorsill trims with their distinctive BMW script are new. The somewhat smaller iDrive controller has a fine galvanic surface, and is newly surrounded by the direct-select keys that enhance iDrive's user-friendliness. There's a larger storage tray in the center console including the auxiliary audio input and providing an appropriate place to lay an audio source. Door-panel design has been refined too; on the driver's door the power-window and -mirror controls have been moved 2 cm rearward for an easier, more natural reach.

Colors and color contrasts have been improved, as well. Three new colors for the optional Dakota leather upholstery are offered: Oyster, Saddle Brown and Chestnut Brown. Interior trim choices are updated, too, with a new Fine Line aluminum trim replacing the former brushed aluminum and Light Burl Walnut replacing Light Poplar among the available wood trims.

Lastly, a heated steering wheel – much appreciated by drivers of other BMW Series in winter weather – has been added to the optional Cold Weather Package for all models.

In general, the interior space – with its attractive interplay of convex and concave surfaces, its sporty elegance and technology-oriented esthetics is more appealing than ever.

**BMW Efficient Dynamics in the new 3 Series: BMW Advanced Diesel with Blue Performance meets emission standards in all 50 states.**

- New inline 6-cylinder twin-turbo diesel engine in 335d Sedan.
- BluePerformance technology meets diesel-engine emission standards in all 50 U.S. states.

In its competitive field, BMW is known for powertrains that achieve an outstanding combination of performance and fuel efficiency. In addition to the

commendable mileage ratings of the 3 Series' gasoline engines, the newest evidence of BMW's EfficientDynamics approach is the new twin-turbo diesel engine of the likewise new 335d Sedan model, which combines the new-age diesel performance that has swept European motoring in recent years with truly remarkable Miles per Gallon.

**The new 335d Sedan: power, torque and remarkable fuel efficiency. All with refinement and sound worthy of a BMW.**

In Europe, where fuel prices have historically been – and remain – much higher than in the U.S., vehicle manufacturers have achieved dramatic gains in the performance, smoothness, quietness and emission control of diesel engines...while maintaining the diesel's historic superiority in fuel efficiency. Now, with the new 335d Sedan, BMW brings this progress to the U.S., with brand-new technology that meets the U.S.' strictest emission standards.

Like all '09 BMW gasoline engines, the 335d's new diesel is constructed with a weight-saving aluminum cylinder block – something that's not taken for granted given the diesel's much higher compression pressures. (All BMW engines have... aluminum cylinder heads.) It is an inline 6-cylinder engine maintaining a defining BMW tradition that means exceptional smoothness and unique sound.

In addition, several diesel-specific technologies of this new engine contribute to its achievement of true high performance, diesel fuel economy and clean exhaust:

**Common-rail direct fuel injection.** One of the most important innovations of recent diesel development, this has replaced the individual-cylinder or distributor-type injection systems of earlier diesel engines.

Common Rail (CR) means that 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 novelty 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 have long had, namely completely electronically controlled fuel injection. CR also facilitates multiple injections per combustion cycle. In all, this was a breakthrough that made possible dramatic strides in diesel power, efficiency and emission control.

**Piezo injectors.** A further breakthrough, already applied by BMW in the 335i (and other BMWs) models' 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 lighting-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.

**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” 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. While official EPA mileage estimates are not yet available, preliminary tests indicate 23 mpg city and 33 highway.

---

**Most advanced exhaust gas management: SCR catalyst with AdBlue injection.**

BMW Advanced Diesel with BluePerformance optimizes emission management by incorporating an oxidation catalyst placed close to the engine, a diesel particulate filter housed in the same unit, and an SCR catalyst with urea injection. Apart from filtering out even the smallest particles from the flow of exhaust gases, this combination ensures effective reduction of nitric oxides (NOX) by way of a chemical reaction within the exhaust system initiated by the injection of a small dose of urea referred to as AdBlue. The ammonia (NH<sub>3</sub>) generated in this process within the SCR catalyst subsequently converts the nitric oxides (NO and, respectively, NO<sub>2</sub>) in the exhaust gas into environmentally compatible nitrogen (N<sub>2</sub>) and vapor (H<sub>2</sub>O).

BMW has developed a two-tank system for AdBlue ensuring convenient use of this new technology with all the benefits and ease required by the customer: The amount of AdBlue required in each case is drawn from the active tank comprising approximately 1.6 gallons by means of a dosage pump. And since the urea solution would freeze at a temperature of –11°C, this active tank, as well as the dosage pipes are heated.

**AdBlue technology by BMW: reduced emissions without additional service appointments.**

The active tank is connected to a second reservoir, the so-called passive tank. With its additional capacity of approximately 4.5 gallons, this passive tank offers a plentiful supply of the urea solution required within the car. The average range provided on this supply capacity is indeed sufficient to have the tank system replenished as part of normal scheduled maintenance.

From the active tank AdBlue is delivered to the dosing valve and atomized into the exhaust emissions. Consistent distribution of AdBlue within the flow of exhaust emissions is ensured by the SCR mixer. The ammonia generated in this way in the hot emission gas subsequently acts in the SCR catalyst as a reduction agent and converts environmentally harmful nitric oxides into nitrogen and water vapor in a process referred to as selective catalytic reduction.

This process gives the special SCR catalyst its name with the SCR system as such being masterminded by highly efficient engine management. A nitric oxide sensor, finally, provides information on the concentration of NOX in the exhaust emissions.

The large amount of AdBlue provided in the reservoir enables the customer to go on driving as before without having to change service intervals or observe any particular requirements, thus benefiting from the advantages of this environmentally friendly emission technology throughout the entire running life of the car without any additional service or visits to the workshop. During the first four years or 50,000 miles, the replenishment of AdBlue will be covered as part of the BMW Scheduled Maintenance program: not only will there be no additional inconvenience, but no additional cost during that period.

**Other 3 Series powertrains: smooth, strong and efficient 6-cylinder gasoline engines, diverse transmission choices.**

- 328i and 335i models powered by two distinct inline 6-cylinder engines.
- Dynamic performance in the great BMW tradition.
- Many transmission choices, all with 6 speeds.

Two quite distinct inline 6-cylinder gasoline engines power all other 3 Series models; these remain unchanged in the new '09 models.

**328i models: 3.0-liter inline 6-cylinder engine, naturally aspirated.**

In the 328i models – Sedan and Sports Wagon, rear-wheel- and all-wheel-drive models – a 3.0-liter unit with advanced, weight-saving magnesium/aluminum composite construction and Valvetronic variable valve lift provides smooth, sonorous and fuel-efficient power.

Valvetronic, a patented BMW innovation, varies valve lift to regulate engine power; when the driver steps down on the accelerator pedal, instead of a throttle opening wider, intake-valve lift increases. A throttle imposes a restriction to incoming air; Valvetronic eliminates this restriction, significantly enhancing efficiency particularly at low to medium speeds. This is reflected in excellent fuel economy, plus very spontaneous response to that accelerator pedal. Valvetronic also enhances engine smoothness in idling and gentle driving, and makes for excellent cold starting.

This engine delivers 230 hp @ 6500 rpm and has a 7000-rpm redline, so it is in the great tradition of smooth, powerful and high-revving BMW gasoline engines. Yet its torque peak of 200 lb-ft. occurs at relatively low engine speed for a gasoline engine – 2750 rpm – so it's also a responsive partner in everyday driving, not requiring frequent shifting to maintain a brisk pace with the standard 6-speed manual transmission. 0-60-mph times for the 328i Sedan are 6.3 sec. for the manual, 6.9 sec. for the automatic; 2008 EPA city/highway mileage ratings are 18/28 mpg with manual, 19/28 with automatic. Acceleration times and EPA ratings vary for the Sports Wagon, and for the Sedan and Sports Wagon in their xDrive (all-wheel-drive) versions.

**335i models: also 3.0-liter inline 6, twin-turbo, even more brilliant performance.**

The 335i Sedan and its AWD stablemate 335i xDrive are powered by a totally distinct 3.0-liter inline 6, with an aluminum block, different bore and stroke dimensions, and most importantly twin turbochargers. High-pressure direct fuel injection with piezo injectors, a concept shared with the 335d diesel engine, and special turbo-related cooling features complete the description of an engine that has garnered almost delirious praise in the enthusiast media and beyond. It develops a full 300 hp @ 5800 rpm, has the same 7000-rpm redline as the 328i engine, and generates a fulsome 300 lb-ft. of torque all the way from 1400 to 5000 rpm – a somewhat diesel-like characteristic.

Here the twin turbochargers are both small, each of them serving 3 of the 6 cylinders. Their smallness enables them to respond quickly to the driver's

demands reducing turbo engines' historical "turbo lag" to a minimum. This engine does not have Valvetronic, as turbocharging works best on a gasoline engine with a conventional throttle. On-the-road performance is stunning: 0-60 mph in just 5.4 sec. with manual transmission, 5.6 with automatic; and that broad, generous torque band produces abundant acceleration even at lower speeds in the upper gears. EPA mileage ratings are equally impressive: 17/26 mpg with either transmission for the 335i, slightly less for the xDrive version.

**Transmission choices: 6-speed manual or automatic, shift paddles optional.**

All 3 Series transmission choices are 6-speeds. The manual gearbox, standard on all models, is engineered to provide what buyers want when they choose it: precise control and a high level of driving pleasure.

BMW also places a high priority on active driving pleasure with its automatic transmissions. Recent refinements to the 3 Series' automatics have improved their sportiness, precision and efficiency: a torque converter that slips less, quicker shifting, finer adaptation to driving style and conditions. All BMW automatics include a Sport mode that quickens shifting and holds the lower gears longer; and a Manual mode that allows the driver to take charge of virtually all shifting.

Steering-wheel-mounted shift paddles are added on all automatic 3 Series models with the Sport Package, and include a Direct Selection feature: When the driver is motoring along in Drive and makes a shift via paddle, the transmission goes into the Manual mode.

**BMW iDrive, 2<sup>nd</sup> generation: new graphics and controls.**

- New controller concept, high-resolution 8.8-in. control display.
- Optimized menu structures, high-resolution graphics, expanded range of functions.
- Greater convenience and more intuitive operation via direct-select keys at the controller, plus more Programmable Memory Keys.

In the 3 Series, BMW's iDrive system of controls and displays is offered in combination with the optional Navigation system. In the new 3 Series Sedans and Sports Wagons, iDrive enters its 2nd generation building upon this



pioneering development, while making it more natural, more intuitive, simpler and more elegant in its functionality – and more esthetically pleasing and enjoyable. In offering this new generation of iDrive, the 3 Series joins the new 7 Series that is also being introduced this autumn.

### **More intuitive operation, expanded functions.**

With the 2002 7 Series, BMW initiated a new direction in the control of vehicle features and functions; via 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.

An overarching attribute of iDrive was the separation of control (via the console controller) and display (the centrally placed iDrive monitor). This basic arrangement remains; the controller has been further developed and the display has evolved markedly.

Positioned centrally in the instrument panel, 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 new direct-selection keys for specific menus, plus more of the Programmable Memory Keys that were added to the system in the 3 Series in 2007-08.

### **Greater functionality, satisfying to use: controller with direct-selection 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 user appreciation grows over the longer term. A graphic depiction of the controller in the display itself helps orient the user to the next control step; the rotation, pressing and tipping 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 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-selection keys, placed adjacent 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 unnecessary.

### **Familiar and proven, yet now more useful: Programmable Memory Keys.**

An iDrive enhancement recently introduced in various BMW models represents a further user convenience: Programmable Memory Keys. When first introduced, there were six of them; now there are eight. Lined up above the audio controls, these allow the user to capture and 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 or an audio balance setting. And because the keys are sensitive not just to being pressed but also to being merely touched, 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.**

### **High-resolution display, preview maps and full-screen images.**

With its 8.8-in., high-resolution monitor, the new iDrive displays remarkably attractive images. It's a system appropriate to the vehicle it's in, achieved via up-to-date hard- 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 also 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 Navigation.**

This overall refinement of functionality means simpler and more enjoyable use of the optional 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.

### **Convenient combination of voice entry and controller operation.**

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 recognition – BMW calls it 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.

This newly enhanced 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 and advance the 3 Series' unique product character. The new iDrive helps the freshened 3 Series Sedans and Sports Wagons create a user experience that is truly unique.

### **BMW Assist: networking for greater convenience, safety and security.**

- Intelligent networking of driver, vehicle and driving environment.

- Expanded range of services and capabilities.

BMW pioneered Navigation as an automotive feature in 1994, for the first time bringing data from outside the vehicle into the driver's cabin. In 2002, the 7 Series introduced iDrive integrating GPS Navigation into a more comprehensive grouping of vehicular functions and capabilities. For 2009, this evolution continues with introduction of the 2nd-generation iDrive, further development of the Navigation system's potentials and an expanded range of telematics services within the BMW Assist system.

In its most fundamental precepts, BMW Assist emphasizes "warning and serving, not intervening." The driver (or more generally, user) retains the responsibility for his or her vehicle. It lightens the user's burdens by offering as much information and assistance as the user desires in each specific situation.

**BMW Assist: telematics enhance users' convenience, safety and security.**

BMW Assist safety and convenience services are offered as the BMW Assist Safety Plan (standard with BMW Assist) and Convenience Plan (an option expanding BMW Assist). The Safety Plan is in effect for the first 4 years or 50,000 miles from new and includes the following services:

**Automatic Collision Notification.** In the event of an airbag deployment or severe impact, the BMW Call Center is notified and emergency services are deployed as appropriate. **New for '09:** if the collision is of a certain severity or worse, 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.

**Emergency Request.** Vehicle occupants may request emergency services 24/7 by pressing the SOS button.

**Enhanced Roadside Assistance** may also be summoned from the vehicle in a similar manner. Adds features and services beyond the 4-year/unlimited-miles Roadside Assistance that is standard with every current BMW model.

**Remote Vehicle Unlock** from the Call Center when the user gets locked out.

**Stolen Vehicle Recovery.** The user files a police report and notifies the Call Center, which can remotely activate the BMW Assist system to locate the vehicle and help police recover it.

**TeleService** automatically transmits key vehicle data to the subscriber's preferred BMW center when the vehicle's Condition-Based Service sensors detect a need for upcoming service; in turn the BMW Center contacts the owner.

The driver can also initiate a service request.

**Customer Relations.** Users can speak with BMW Customer Relations at the push of a button.

The **Convenience Plan**, optional on a yearly basis, expands these services by offering:

**Directions, traffic and weather information.**

**Critical Calling.** If the subscriber forgets to bring a mobile phone or its battery is discharged, yet urgently needs to make a phone call, four operator-assisted calls per year via the SOS button are included.

**Concierge Service** including travel planning, dining and hotel reservations, shopping assistance and event tickets.

**There are additional services for vehicles equipped with the Navigation system:**

**Real Time Traffic Information** is received in the vehicle via an FM data broadcast. It is processed in the system to notify the driver of potential traffic problems 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 U.S; BMW provides it to customers for a minimum of 4 years without recurring monthly bills.

**Expanded Navigation capabilities.** The new 2nd-generation iDrive system incorporates many enhancements to Navigation capabilities. Among these are directions to change lanes or make a turn at an obscured intersection, 3-dimensional screens depicting topography along the route and selected points of interest.

**Bluetooth cellphone interface** included with BMW Assist option. When a BMW-approved cellphone is paired with the interface, BMW's in-vehicle hands-free memory, dialing and calling features are available to users. Voice Command, included with the Navigation option, enables phone (and other) functions to be voice-activated. In keeping with BMW's policy of accommodating contemporary technological products and the evolving lifestyles that go with them, the latest iPhone models are among the approved BMW cellphones.

**BMW xDrive: intelligent all-wheel drive that's infinitely variable, satisfying agile, always reassuring.**

- BMW is the world's most successful producer of premium vehicles with all-wheel drive.

- Now smoother and more precise than ever, thanks to modulated brake intervention and torque compensation.
- Available in three Sedan and Sports Wagon models, plus two Coupe models.

Increasingly, customers – particularly those who drive in snowy winter conditions – want all-wheel drive. In the 3 Series, five models – with new “xDrive” model designations – incorporate BMW’s unique and advanced AWD system of the same name.

This permanent, electronically controlled system varies the split between front- and rear-wheel driving torque according to driving conditions to produce an incomparable degree of comfort, traction and agility. Via a smooth, precisely controlled central multi-disc clutch, it directs torque to the wheels where the traction is best, reacting amazingly quickly to each change in driving conditions.

In most normal driving situations, xDrive apportions 40% of the driving torque to the front wheels, 60% to the rear to provide a typical BMW rear-wheel-drive handling feel. Sensors continuously and sensitively monitor the four wheels, detecting even the tiniest amount of slip; torque distribution adjusts in fractions of a second to match changing conditions. It all occurs so quickly, in fact, that the system almost seems to be anticipating slip; the driver is unlikely to perceive the need to adjust the torque split before xDrive accomplishes it.

Enhancing xDrive’s quick and precise action is the networking of xDrive and Dynamic Stability Control, the traction and stability system that’s standard on all BMW models. As part of BMW’s overall Integrated Chassis Management (ICM), this powerful and capable networking helps calibrate xDrive torque distribution and other chassis functions to instantaneous conditions. Thus xDrive and DSC react to varying road traction or abrupt steering, braking or acceleration by the driver, always endowing the vehicle with optimum stability and agility.

Via ICM, xDrive and DSC detect any incipient excessive over- or understeer, adjusting 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 excessive understeer is detected, xDrive opens the clutch completely, sending all the torque to the rear wheels. In true BMW tradition, the driver enjoys optimum vehicle dynamics under a wide range of driving and road conditions. Finely dosed application of individual wheel brakes compensates for side-to-side traction variations, as well: this aspect of DSC was improved upon the current 3 Series’ introduction, via new

analog brake actuation in this situation, as well as other stability-related or anti-lock brake interventions.

### **An illustrious history: from pioneering sports sedan to world leader in its class.**

- 1975: a new vehicle category is born.
- Unending progress: BMW 3 Series as cutting edge.
- Over five generations, always the benchmark.

Strictly speaking, the 3 Series' chronicle begins in March 1966, when the BMW 1600-2 was introduced at the Geneva Salon (automobile show). That was the launch of the smallest BMW of the time, a compact 2-door sedan with a bit of coupe character, BMW's front-engine/rear-drive layout and a definite sporting flavor. When a larger, 2.0-liter engine was installed, the model that captured the imagination of enthusiast in the U.S., the 2002 was born. The actual 3 Series designation made its debut in the U.S. in 1976 – when the 2002 was succeeded by an all-new 2-door.

Over five generations, the 3 Series has always remained true to the values set by the 2002: a compact, sporty, maneuverable, stylish and nicely powered automobile – that was also practical for everyday transportation for at least four persons. Yet, this Series has nurtured another role: that of the cutting edge of automotive progress and the benchmark of what has become an established market segment. A segment, by the way, that didn't exist then; the 1600-2 and 3 Series created it.

### **1st generation: the 3 Series was a true Original.**

That 1st-generation 3 Series, offered in the U.S. from 1976 through 1983 as the 320i, was offered elsewhere first with four, then later five different engines. In the U.S. 320i with a 2.0-liter motor, that was later updated with a smaller but more advanced 1.8-liter 4-cylinder engine. In Europe, the crowning version was the 323i introducing the Series' first 6-cylinder engine and heralding a new era in compact, yet sophisticated and powerful sports sedans.

### **2nd generation: model proliferation brings many choices.**

Offered in the U.S. from 1983 into 1994, the 2nd generation began as a discreet, but thorough updating of the 1st-generation 2-door (but soon added

the first 4-door body in the Series). At the same time, the first 6-cylinder 3 Series U.S. models appeared with the 325e, powered by an enlarged (2.7-liter) version of the 323i's 2.3-liter six, specifically engineered for high fuel economy. Other variations included a convertible and an all-wheel-drive system; eventually the 325e and its variants were replaced by smaller-engine (2.5-liter), yet higher-performance 325i models. "s" versions of both were offered in North America giving the Series' sporty image a boost.

### **3rd generation: a "big leap" in design.**

This generation debuted here in the U.S. in 1991 and was offered into 2000. It looked much more different from its predecessor than had the 2nd from the 1st; conceived with greater comfort and safety in mind, it was also significantly larger. 4- and 6-cylinder engines were offered ranging over time all the way to 2.8 liters and 190 hp. With a long hood and its cabin set farther back, the 2-door became a true coupe. The convertible became a mainstay of the Series, and the Compact, offered as 318ti in the U.S., was developed to extend the Series' price range downward. This version of the 3 Series first appeared on *Car and Driver* Magazine's 10Best list in 1992. The 3 Series would go on to appear on every list since then, a feat achieved by no other car.

### **4th generation: the 3 Series struts its stuff.**

This time the styling evolution reverted to gentle; the 4th generation updated its predecessor's design theme, but aimed it elegantly toward the 21st century. Production began in 1998 and continued through 2006: 4-door sedans came first, then coupes, convertibles and the first 3 Series sports wagon to be offered in the U.S. As another 3 Series first, this generation was offered only with 6-cylinder engines from beginning to end growing from the initial 2.8 liters to 3.0.

Another strong trend took shape as the Series acquired higher levels of luxury and electronic driving assists: antilock braking, traction control and eventually stability control became standard. BMW's pioneering Head Protection System also made its 3 Series debut with this generation. Vehicle and Key Memory introduced the concept of variable, customer-selected functions, while new options such as Xenon headlights, Navigation and the STEPTRONIC automatic transmission enhanced the driving experience and maintained the Series' innovation role.

### **5th generation: bringing the Series up to today.**



The Geneva Salon of 2005 saw the debut of today's 3 Series generation. As usual the 4-door sedans came first; soon after the sedans made their U.S. debut as '06 models, they were joined by the sports wagon. This was another more dramatic design step, accompanied by a revolutionary new engine: with the magnesium/aluminum composite construction that continues in the newest 328i models. Yet, another innovation followed shortly: the xDrive all-wheel-drive system, replacing the mechanical concept of earlier BMW AWD systems with fully electronic control.

Other significant innovations included aluminum front suspension, new braking functions within the DSC system, Active Steering and Active Cruise Control. iDrive also appeared in the 3 for the first time, in combination with the Navigation option, as it continues to be today. When the new coupes were introduced for '07, they brought with them an innovation under the hood: the world's first twin-turbocharged inline 6-cylinder engine in the 335i Coupe.

And shortly, thereafter, came another first for BMW: the 3 Series' retractable-hardtop Convertible models with the magnesium/aluminum naturally aspirated engine (328i), and the twin-turbo engine (335i). Today's Sedans, Coupes and Convertibles continue with this choice of engines, while U.S. Sports Wagon models are offered only as 328i.

It's a story of focus, care, adherence to clear values – a consistent vision of quality and a sporting yet practical driving and ownership experience. The latest round of 3 Series evolution and improvement, described in this release, is a validation and continuation of this story.