



PORSCHE

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The new 911 GT3

All information provided in this document is correct as of February 2009. Porsche reserves the right to alter the design, technical specification, prices, equipment and final scope of delivery at any time prior to the market launch of the new 911 GT3. The basis of the descriptions in this article is the EU model.

The main focus of the features and equipment described here is on the new developments and modifications compared with the previous model and on the unique selling points of the new 911 GT3. Features adopted from the new 911 Carrera generation are identified by a note. For detailed basic information, please refer to the Product Information releases for the previous 911 GT3 model and the new 911 Carrera models.

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1. The new 911 GT3

The predecessor GT3 set a high standard. It has won numerous media awards, come out top in countless head-to-head tests and acquired an ever-growing legion of fans. The last generation of this purist version of the 911 achieved an unprecedented level of popularity. The task of designing a successor to such a popular car presented the Porsche Motorsport development team with an enormous challenge. The result is a car that offers the perfect synthesis of race circuit performance and day-to-day usability. All of the virtues of the previous model have been consistently enhanced with the result that the new 911 GT3 is even better able to meet target group expectations in relation to performance and an emotional driving experience.

The larger and more powerful engine, the chassis that has been optimized in terms of its driving dynamics, the significantly improved downforce values and last but not least a look that is functional, yet elegant and dynamic, will ensure that the 911 GT3 remains the leader in its market segment.



Fig. 1: The new 911 GT3

The new 911 GT3 is based on the new generation of the 911 Carrera. The new 911 GT3 shares a number of other key elements with the 911 GT2 and its motor sports brothers – the 911 GT3 Cup and 911 GT3 RSR. The transfer of technology from motor racing to roadway is evident in the new 911 GT3, as it was designed by the same development team responsible for the 911 GT3 racing cars. The new 911 GT3 with its motor sports pedigree embodies the historical core of the brand. It delivers consistent sportiness, performance and above all the fascination of the world of motor sports.

A new 911 GT3 RS, which will extend the 911 GT3 families and serve as a basis for homologation for future 911 GT3 racing cars, is currently in development and is expected to join the new 911 GT3 at the beginning of 2010.

2. The Main contents, Changes and Highlights

2.1 Design

The unique design of the new 911 GT3 is in keeping with its intended character as a thoroughbred standard production sports car and near-series racing car. Its styling communicates the enormous performance potential while also fulfilling all the aerodynamic functions which are required to realize this potential. In terms of dynamic appearance and distinctive design, it offers excellent prospects for the continued success of the 911 GT3.



Fig. 2: The new 911 GT3

Front

The striking flared outer cooling air intakes are defining features of the new front end. They enhance the powerful appearance of the new 911 GT3 and ensure the required supply of cooling air. Their shape and design, including the vertical bars, lends the new 911 GT3 its distinctive character within the 911 model range. The slightly protruding middle cooling air intake extends up to the spoiler lip and forms a gentle wedge shape which enhances the car's aerodynamic efficiency. The middle cooling air intake is further emphasized by the joint between the front end and spoiler lip. The spoiler lip has been made even more striking and supports downforce on the front axle with its continuous profile.

A further characteristic design feature of many GT vehicles of the 911 model range is the additional air outlet in front of the luggage compartment lid. In the new 911 GT3 it has been

redesigned and blended to the contour of the front end with two striking bars. The large opening signals the effectiveness of the air management for the central radiator and the additional support for downforce on the front axle.



Fig. 3: Front view

A completely new and unmistakable style element of the new 911 GT3 is the additional air intake grilles in all air intakes. Their delicate yet strong lattice structure protects the radiators from damage and allows high air flow rates. Another feature of the new 911 GT3 is the new light design with standard Bi-Xenon headlights and optional cornering light. The design also features a new front light module above the external air intakes with new direction indicators and LED daytime driving and position lights.



Fig. 4: Side view

Side view

The new 911 GT3 is instantly recognizable as belonging to the 911 model range by virtue of its classic 911 silhouette. A distinctive side view results above all from the fact that the vehicle is 30 mm lower than the 911 Carrera, from the muscular look of the fixed rear wing and the unique wheel design.

The new one-piece 19-inch GT3 wheels with center lock system have evolved from the highly successful wheel design of the previous model. The now V-shaped wheel spokes have a more pronounced spoke contour that extends far outwards up to the rim flange. This makes the wheel appear bigger, while the titanium paint finish in all exterior colors demonstrates high quality. The outstanding looks are further enhanced by the wheel bolt with center lock system, which is being used in the 911 GT3 for the first time. The titanium-colored, anodized central screw is a distinguishing feature with a characteristic shape and a unique association with motor sports.

The side view also features the new double-arm exterior mirrors of the current 911 Carrera generation. Their shape has been redesigned in order to increase the field of vision to the rear and comply with future legal requirements. Improved water management also means that there is much less dirt on the mirror glass.



Fig. 5: Rear wing

Rear wing

The fixed rear wing is a traditional element of all 911 GT3 models and along with the front end constitutes the most striking design feature of the new 911 GT3. The rear wing design, which features a new wing contour that extends beyond the wing supports, is based on the design of the previous 911 GT3 RS model and the 911 GT3 Cup and 911 GT3 RSR vehicles. The new 911 GT3 thus has an even more pronounced motor sports-oriented wing design, with greater efficiency to support aerodynamic performance and further increase downforce on the rear axle.

The side plates seamlessly follow the contour of the wing profile. Their characteristic shape improves aerodynamics and blends in with the overall design. The inlays in the sideplates featuring the “3.8” logo make a clear reference to the higher displacement and performance of the new 911 GT3. The use and design of the logo was inspired by a similar side plate logo in the 1993 racing-oriented 911 RS 3.8 (type 964).

Additional design features can be found on the rear lid of the new 911 GT3. There are two additional ram air boxes and a narrow black spoiler lip (gurney flap) on the rear edge of the

lower wing profile. The blade-shaped ram air boxes allow efficient air intake for the engine as well as improved supply of cooling air to the engine compartment. The additional, highly effective spoiler lip produces effective air flow with a pronounced rear spoiler to support the downforce on the rear axle.



Fig. 6: Rear view

Rear end

The unique rear end of the new 911 GT3 is characterized by the centrally positioned tailpipe and lateral air outlet openings. The design features a new air outlet opening located centrally under the rear lid.

The central dual tailpipes are painted in Black and are generously dimensioned. They extend from the middle of the rear end and lend the rear of the new 911 GT3 a muscular appearance. Adapted from the motor racing design of the 911 GT3 Cup and 911 GT3 RSR vehicles, this design feature provides a visual reference to the flow and resistance-optimized sports exhaust system on the new 911 GT3.

The two lateral air outlet openings continue the design style of the rear wheel opening. The bottom edge of these openings produces a slight lip contour extending to the tailpipes, for which it provides a harmonious surround. The large outlet openings perform thermal ventilation for the mufflers and catalytic converters located in the side wings while also improving the aerodynamics of the air flow around the new 911 GT3. To prevent foreign

items from entering and to maintain the style of the overall design, the openings feature grilles similar to those in the front end.

The additional air outlet opening under the rear lid is another unique feature of the new 911 GT3. It supports ventilation of the engine compartment. Its design with additional bars and an air outlet grille is in the style of the air outlet opening in front of the luggage compartment lid in the front end.

The new rear design is rounded off with the redesigned LED tail lights. The brake lights improve active safety through their fast response time. They taper outward to a point and are integrated elegantly into the new rear of the vehicle. The LED's appearance also emphasizes the width of the new 911 GT3, giving them a dynamic daytime and night design in particular.

Interior

The interior equipment has been revised for the new 911 GT3. The key features are a new 3-spoke GT3 steering wheel, extension of the optional leather interior with additional items in Alcantara and enhanced audio features based on the current 911 generation.

A characteristic feature of the interior in the new 911 GT3 is the additional finishing of items in Alcantara, such as the steering wheel rim, shift and handbrake lever grip and the seat inserts. This integrated material concept enhances the appearance of the interior by establishing associations with motor racing while at the same time improving functionality by offering a better grip and slip resistance. The new 911 GT3 steering wheel is based on the new 3-spoke sports steering wheel of the current 911 Carrera generation. It has a modified spoke design and redesigned steering wheel rim contour compared with the previous model, but with the same steering wheel diameter.

Another characteristic element of the 911 GT3 is the instrument cluster with differentiated color concept. As in the Carrera GT, the pointers and increment markings are yellow, while the central rev counter catches the eye with its titanium instrument dial and "GT3" logo.

The optionally available leather equipment includes items finished in Alcantara in addition to leather items, such as the upper part of the switch panel. As on the previous model, the following are also available in Alcantara: door handles, lid of door storage box, extension of door storage box and lid of center console storage box. As a harmonious addition to this option, the new 911 GT3 also features Alcantara on the switch panel lower section, including glove-compartment lid.



Fig. 7: Interior

The new 911 GT3 is equipped with sports seats including thorax airbag as standard. The optional sports bucket seats also feature a thorax airbag and provide very good lateral support and a weight reduction of approx. 53 lbs (24 kg) per vehicle. In addition, the integration of a foldable backrest, which is unusual for full bucket seats, ensures excellent day-to-day usability for loading the rear of the vehicle. The seat options also include adaptive sports seats with electric adjustment and many seat settings. All seat variants are upholstered in leather and have a center section finished in Alcantara.



Fig. 8: The new 911 GT3

2.2 Performance

The new 911 GT3 is the most agile vehicle within the 911 model range, offering the highest performance in particular on race circuits with its naturally aspirated engine. Apart from an excellent chassis and a very low vehicle weight, efficient aerodynamics and a dynamic drive concept are also crucial to achieving such performance. A perfectly tuned chassis, aerodynamic downforce and the right combination of engine and transmission play a vital role here. A combination of these factors including a light, high-revving naturally aspirated engine with high output and a manual transmission featuring short transmission ratios represents a successful formula in motor racing, too. Development of the new 911 GT3 thus focused on the engine with an increase in power output and torque, enhanced performance of selected chassis elements, optimization of the front and rear ends including the rear wing and in particular optimization of the high engine speed concept.

With an increase in maximum engine speed from 8,400 rpm (previous model) to 8,500 rpm, the new 911 GT3 is among the absolute front runners in its direct competitive environment and its specific output of 114.6 hp per liter surpasses virtually all direct competitors with a naturally aspirated engine. This level of output is dependent not only on high revving stability of the engine, but also on excellent aspiration (gas cycle). The low flow resistance of all components is to be emphasized here, particularly the new exhaust system with central dual tailpipes. This set-up results in the following performance data:

	New 911 GT3	911 GT3 /GT3 RS (MY'08)	911 Carrera S (MY'09)
Displacement	3,797	3,600	3,800
max. power – hp	435	415	385
at rpm	7,600	7,600	6,500
max. torque – lb ft	317	299	310
at rpm	6,250	5,500	4,400
max. engine speed	8,500	8,400	7,500

The engine of the new 911 GT3 is essentially a development of the flat-six engine familiar from the previous model with an increase in displacement from 3.6 l to 3.8 l, which has its origins in the race-tested engine of the 911 GT1. Its characteristic features are the classic dry-sump lubrication with external engine oil tank, titanium connecting rods, forged pistons, bucket tappets which are able to cope with high engine speeds and a variable intake system with two tuning flaps and a sport exhaust system featuring reduced backpressure.

New features are the higher displacement of 3.8 l achieved by increasing the cylinder diameter and the enhancement of VarioCam. In the VarioCam system of the new 911 GT3 both the intake and the outlet camshafts are continuously adjusted. This not only leads to an increase in horsepower and torque, but also supports compliance with the stricter emissions legislation in Europe from EU4 to EU5.

Porsche Stability Management (PSM)

For the first time, the new 911 GT3 features the vehicle stability system. PSM provides a significant increase in active safety compared with the Traction Control System (vehicle stability system during acceleration) used in the previous model. The system available as standard is based on the 911 GT2 and its specific tuning means that it not only provides an increase in active safety, but also satisfies requirements with regard to driving dynamics for extremely sporty performance. Its unique strategy for deactivation, which can be completely disengaged in two steps, has been developed particularly for sporty driving on race circuits.

The new 911 GT3 is equipped with a 6-speed manual transmission as standard with separate transmission oil cooling and steel synchronizer rings for third to fifth gear. The manual transmission is extremely lightweight and combines a high level of efficiency with excellent power and high stability. It offers the best conditions for extraordinary driving performance and is the ideal component for a racing-oriented vehicle such as the new 911 GT3. The shift throws are short and precise for short shifting times and a direct driving experience. In combination with friction optimized control cable shifting the manual transmission provides maximum precision and stability.

Like its predecessor, the new 911 GT3 has actively adjustable damping as standard. The Porsche Active Suspension Management (PASM) has been adapted specifically for the new 911 GT3. It enables extremely sporty performance and superior handling on race circuits.

The basic tuning of the new 911 GT3 is comparable to the sporty PASM mode of the 911 Carrera models. It offers a good basis for high driving dynamics when driving on partially uneven surfaces (e.g. the Nordschleife of the Nürburgring). For a further increase in driving performance, the PASM Sport mode in the new 911 GT3 offers a chassis tuning option designed especially for race circuits with even surfaces.

The anti-roll bars, the camber and the toe are also individually adjustable on the new 911 GT3 for use on race circuits. The suspension system including vehicle height can also be equipped with racing springs to enable adaptation to the individually desired handling characteristics. (Note: These modifications are only permissible for driving on roads/tracks away from public traffic, as they affect the vehicle's handling characteristics substantially).

Just like its predecessor, the new 911 GT3 also comes with an asymmetric mechanical limited slip differential as standard. The locking values are still 28% (acceleration) and 40% (deceleration). They are adapted to the specific handling of the new 911 GT3 and offer high traction as well as precise cornering, particularly during load changes.

The new 911 GT3 is being offered with optional dynamic engine mounts for the first time, which further improve traction and driving performance. The engine mounts, which are expected to be available from 09/2009, minimize vibration of the entire power unit and of the engine in particular; such vibration is detected automatically by an electronically controlled mounting system. This is done by changing the mount hardness using a magnetizable (magneto-rheological) fluid and an electrically generated magnetic field.

The mass moment of inertia of the engine when steering into a corner or for a quick series of alternating bends, for example, produces a delayed power impulse that affects the body and consequently the chassis. The result is impaired driving stability with "after-pressure" on the rear. Hard engine mounts significantly reduce this effect and lead to more stable and precise handling. To minimize this effect, the engine is firmly bolted to the body in racing vehicles. However, this has the disadvantage of noticeable engine vibration and reduced day-to-day usability. This vibration is filtered by means of softer mounts. The dynamic engine mounts combine both of these advantages and at the same time reduce vertical engine vibration during acceleration at full throttle. The result is more uniform and higher drive power to the rear axle with better traction and acceleration.

The lifting system front axle for increasing day-to-day usability is a completely new development, which is available for the first time as an option with the new 911 GT3. Using an electro pneumatic system, the body can be raised via the PASM dampers on the front axle. The front is lifted by approx. 30 mm at a speed of up to approx. 30 mph (50 km/h) using a button in the center console. The lifting system front axle significantly reduces the risk of impact, e.g. when driving over ramps, driveways and speed bumps in urban and residential areas.

The standard brake system has been completely redesigned for the new 911 GT3. In addition to an increase in the brake disc diameter on the front axle from 350 mm to 380 mm (rear axle unchanged at 350 mm), the new 911 GT3 features iron and aluminum composite brake discs for the first time. The brake discs on the front and rear axles are made of grey cast

iron and the brake disc center sections are made of lightweight aluminum. These components are connected with several steel pins arranged radially. Thanks to the aluminum brake disc center section it has been possible to reduce the un-sprung weight by approx. 5 lbs (2.2 kg) per vehicle in total despite the larger brake discs on the front axle. This contributes to enhanced driving dynamics and performance. Another new feature is additional brake air ducts for the rear brake system. They are located at the side in the underbody area in front of the rear axle and direct the cooling air to the rear brakes. They contribute to improved braking performance under high loads.

The optional Porsche Ceramic Composite Brake (PCCB) with ceramic composite brake discs has also been enhanced. The brake disc diameters remain unchanged at 380 mm on the front axle and 350 mm on the rear axle. The aluminum brake disc center sections on the rear axle are new. In combination with the aluminum brake disc center sections on the front axle, they reduce the un-sprung weight by approx. 11 lbs (4.8 kg) per vehicle compared with a conventional design featuring brake disc center sections made of stainless steel. The composite technology between the aluminum brake disc center sections and the ceramic brake discs has also been modified. The addition of clip-type springs allows limited axial displacement and improves true running of the brake discs under high thermal load.

Like its predecessor, the new 911 GT3 has 19-inch GT3 wheels in aluminum with sports tires and revised "GT3" design. The wheel spokes have been restyled, have a more pronounced contour and extend far outwards up to the rim flange. This makes the wheel appear larger. The new titanium paint finish in all exterior colors as standard emphasizes the high quality of the wheels. The sports tires, which also come as standard, give the new 911 GT3 exceptional driving dynamic potential at an extremely high performance level. There is increased danger of aquaplaning on wet roads due to reduced tread depth.

A completely new feature of the 911 GT3 is the wheel bolts with center lock system. This technology, which has been adapted from motor racing, features a high-quality anodized central bolt and stands out clearly from the rest of the wheel. Furthermore, the enclosed system enhances day-to-day usability thanks to less soiling compared with an open 5-hole wheel nut system.

The objectives for the new 911 GT3 also included low weight for high performance and a great range. This is achieved through the narrow body based on the current 911 Carrera models and the box-shaped body shell of the current 911 Carrera 4 models. In the new 911 GT3, this combination also enables a low vehicle weight, low drag and road resistance. The luggage compartment lid and doors of the 911 GT3 are made of aluminum, thus supporting and realizing the low gross weight of 3,076 lbs (1,395 kg) (DIN empty).

The aerodynamics have been significantly revised for the new 911 GT3. The redesigned front end provides improved exhaust air management for the central radiator including larger air outlet opening in front of the luggage compartment lid. This has facilitated improved cooling and greater down-force on the front axle. The downforce on the front axle is also supported by the redesigned front spoiler lip. The wing on the rear spoiler has also been made larger to increase the downforce on the rear axle. All of these measures together made it possible to

more than double the aerodynamic downforce of the entire vehicle to further improve driving stability at high speeds.

The overall effect of these improvements in the new 911 GT3 is a significant improvement in performance.

Compared to the previous model, the new 911 GT3 accelerates from 0 – 62 mph (0 to 100 km/h) in 4.1 seconds rather than 4.3. In terms of the acceleration from 0 – 124 mph (0 to 200 km/h) now 12.3 instead of 13.5 seconds and the flexibility from 50 – 75 mph (80 – 120 km/h), while in 5th gear, of 5.9 Instead of 6.2 seconds – the new 911 GT3 is significantly faster than its predecessor. Despite the enhanced performance, it was possible to keep the fuel consumption at the same low level.

2.3 Comfort and personalization

The new 911 GT3 features completely revised audio and communications. As standard, the new 911 GT3 features the familiar audio system currently used in the Boxster and Cayman models, the CDR-30 with 5 inch display (monochrome), MP3-capable CD drive and as an option the latest generation of Porsche Communication Management 3.0 (PCM 3.0) including Sound Package Plus and the navigation module. For the first time, a six-disc CD or CD/DVD auto-changer (with PCM 3.0) which can be integrated into the current audio system can also be ordered. The optional universal audio interface, voice control in combination with the PCM 3.0 and the Bluetooth[®] function for the optional PCM 3.0 telephone module is likewise new.

New metallic and special colors round off the personalization offer. In contrast to the previous model, 7 of the 11 colors on offer are new. In total, customers can now order 5 metallic colors and 6 special colors in addition to the 4 standard colors (solid) for the new 911 GT3.

2.4 Overview

The overview is based on the EU model and presents the main product features and highlights of the new 911 GT3 as well as the changes compared with the previous model. Subject to changes in offering, technical data and availability until start of production.

The new 911 GT3	Changes compared with the previous model are marked in bold .
1. Offer	<ul style="list-style-type: none"> • Worldwide offer • Offer for China, Taiwan and Korea currently under evaluation
2. Engine	<ul style="list-style-type: none"> • Water-cooled flat-six engine with 3.8 l displacement • Max. Power: 435 hp (320 kW) @ 7,600 rpm • Max. Torque: 310 lb ft @ 6,250 rpm • Specific output: 114.6 hp/l • Max. engine speed: 8,500 rpm • Torque increase in the range between 3,000 and 4,000 rpm by up to 26 lb ft via the SPORT button • Titanium connecting rods

	<ul style="list-style-type: none"> • VarioCam with camshaft control for intake and outlet valves • Variable intake system with two tuning flaps • Dry-sump lubrication with external engine oil tank • Sports exhaust system with two central single tailpipes • Emissions standards EU5 and LEV II/LEV
3. Transmission	<ul style="list-style-type: none"> • 6-speed manual transmission with dual-mass flywheel and control cable shifting • Transmission oil cooling via oil-water heat exchanger and oil spray lubrication • Steel synchronizer rings in third to fifth gear
4. Drive	<ul style="list-style-type: none"> • Rear wheel drive • Mechanical limited slip differential with asymmetrical action (28% acceleration, 40% deceleration)
5. Chassis	<p><u>Chassis</u></p> <ul style="list-style-type: none"> • Vehicle stability system Porsche Stability Management (PSM) with sporty tuning, can be completely disengaged in two steps (SC OFF and SC+TC OFF as in 911 GT2) • Variable Porsche Active Suspension Management (PASM) damper system • McPherson front suspension with special spring and damper tuning, Unibal support bearings • Rear multi-link suspension axle with fixed bolted axle carriers and special spring and damper tuning • Lowering (by approximately 30 mm compared to the 911 Carrera) with adapted front and rear axle kinematics • Adjustable chassis for race circuit use (height, camber, toe) • Anti-roll bars with adapted diameter adjustable for race circuit use • Variable steering ratio <p><u>Standard brake system</u></p> <ul style="list-style-type: none"> • 6-piston front brake calipers, 4-piston rear brake calipers • Composite brake discs with grey cast iron brake discs with brake disc diameter of 380/350 mm at front/rear that are internally vented and cross-drilled with aluminum brake disc center sections front and rear • Brake calipers painted red • Integrated air ducts for brake cooling on the front axle and cooling air ducts on the rear axle <p><u>Ceramic brake system PCCB (optional)</u></p> <ul style="list-style-type: none"> • 6-piston front brake calipers, 4-piston rear brake calipers • Ceramic composite brake discs with internally vented and cross-drilled with aluminum brake disc center sections front and rear with brake disc diameter of 380/350 mm at front/rear • Brake calipers painted yellow

The new 911 GT3	Changes compared with the previous model are marked in bold .
5. Chassis (continued)	<p>Wheels and tires</p> <ul style="list-style-type: none"> • 19-inch GT3 wheels with center lock and revised design • Front: 8.5J x 19 (RO 53) with sports tires 235/35 ZR 19 • Rear: 12J x 19 (RO 60) with sports tires 305/30 ZR 19 • Tire repair system with compressor and additional air pressure tester
6. Body	<ul style="list-style-type: none"> • 2-seater coupe based on 911 Carrera (narrow rear) with front body shell of 911 Carrera 4 • Sheet steel hot-dip galvanized on both sides • Discard of insulation (heavy-duty film and insulating mats) • New exterior mirrors • New front end with air intake grille and additional air outlet opening in the central radiator in front of the luggage compartment lid • New rear end with side air outlet openings and additional air outlet opening under the rear lid • Rear lid with two ram air boxes and new fixed double-deck wing including spoiler lip (Gurney flap) • One-piece side roof rails without preparation for roof transport system • Aluminum doors including bow-type handles • Aluminum luggage compartment lid • Fuel tank capacity 17.7 gallon (67 l) • Reduced PVC underbody protection • "GT3" logo on rear lid (Black) <p><u>Differences for USA</u></p> <ul style="list-style-type: none"> • Emergency luggage compartment release (Trunk Entrapment) • Rear end with bumper horns in exterior colors • Windscreen with grey top tint • HomeLink® as standard • (Note: The electric slide/tilt roof from the previous version has been omitted)

7. Interior	<ul style="list-style-type: none"> • Instrument cluster with yellow pointers and increment markings. Rev counter with titanium- colored dial and “GT3” logo. Shift indicator • Upgraded vehicle key • New 3-spoke GT3 steering wheel with steering wheel rim in Alcantara and spoke trim painted in Volcano Grey, with manual reach and height adjustment • Sports seats including thorax airbag as standard worldwide • 3-point seat belts in Black with belt tensioners and belt-force limiters • POSIP including driver, passenger and separate head and thorax airbags • Door entry guards and rear carpet with “GT3” logo • Reduced scope of interior and comfort features (e.g. sound insulation) • Automatic air conditioning with active carbon filter • Black interior equipment • Various items painted in Volcano Grey • Items in Alcantara: Seat center sections, steering wheel, shift lever, handbrake lever grip <p><u>Differences for USA</u></p> <ul style="list-style-type: none"> • Passenger seat occupancy detection (Advanced Airbag: USA, Canada and Mexico) • Cruise control as standard
8. Electrics	<ul style="list-style-type: none"> • Bi-Xenon headlights including dynamic headlight leveling and headlight washer system as standard worldwide • New front light modules with LED daytime driving and position light • New tail lights and third brake light in LED technology • Heated windscreen washer jets • Heated rear window • Power windows with short-stroke lowering • Electrically adjustable and heated exterior mirrors • Theft protection including alarm system with interior surveillance • Weight-optimized battery (60 Ah) <p><u>Differences for USA</u></p> <ul style="list-style-type: none"> • Front end with side marker lights in yellow including reflectors • Tail lights with red flashing direction indicator pilot lights
9. Audio and communication	<ul style="list-style-type: none"> • CDR-30 audio system with 2 x 25 Watt amplifiers and 4 loudspeakers
10. Options	<p>New key options compared with the previous model:</p> <ul style="list-style-type: none"> • Dynamic cornering light • Lightweight headlights (halogen headlights, optional at no extra cost) • Dynamic engine mounts¹⁾ • Lifting system front axle¹⁾ • Sports bucket seats • New Porsche Communication Management 3.0 (PCM 3.0) with touchscreen • Voice control

	<ul style="list-style-type: none"> • Telephone module with cordless handset • Universal audio interface • CD/DVD auto-changer • Electronic logbook • Various exclusive features <p>For a detailed overview of the available options, see Section 7 (Optional equipment and V numbers).</p> <p>¹⁾ Available as of 09/2009 at the earliest</p>
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3. Dates

Lifting of press embargo	January 29, 2009
1st auto show introduction	<ul style="list-style-type: none"> • Geneva: March 3 – 4, 2009 (press days) March 5 – 15, 2009 (public days)
Presentation to the press	<ul style="list-style-type: none"> • April 20 – May 1, 2009
Start of production	<ul style="list-style-type: none"> • 04/2009 (LHD), 08/2009 (RHD/USA)
Market launch	<ul style="list-style-type: none"> • LHD worldwide (except for USA) -> market-specific from 05/2009 • RHD worldwide -> market-specific from 09/2009 • USA -> from 10/2009

4. The new features in detail

4.1 Drive



Fig. 9: Engine

4.1.1 Engine

The engine of the new 911 GT3 is a further development based on the flat-six engine of the previous model with an increase in displacement, from 3.6 l to 3.8 l. The engine, which was originally adapted from the 911 GT1, provides an excellent mechanical basis and has proven its worth over several evolutionary milestones in the racing engines of the 911 GT3 Cup and 911 GT3 RSR and possesses adequate potential for further development.

During the development process there was a special focus on further increasing the maximum power output in conjunction with a higher torque curve throughout the entire rev range. This has been accomplished by increasing displacement, applying state-of-the-art technologies, fine tuning all components affecting power output and using motor racing materials.

The improvements compared with the previous model have been achieved primarily by means of the following measures:

- Higher displacement through an increase in cylinder diameter

- Enhancement of VarioCam variable valve control with additional control of the outlet camshafts
 - Increase in the maximum engine speed to 8,500 rpm (high engine speed concept)
- The new 911 GT3 thus offers a further improvement in driving performance.

Specific output

Like its predecessor, the new 911 GT3 has outstanding specific output, which serves as a quantitative and qualitative power characteristic indicating an engine's development level and thus providing a measure of its power-related efficiency. With a specific output of 114.6 hp/l (84.3 kW/l) the new 911 GT3 is a leader among the naturally aspirated engines in today's sports car segment and is surpassed in only a small number of cases worldwide.

High engine speed concept

The high engine speed concept for increasing maximum engine output that was used with previous 911 GT3 models has been further enhanced for the new 911 GT3. The **maximum engine speed** has increased from 8,400 rpm (previous model) to **8,500 rpm**. This is an absolutely exceptional value for road-licensed standard production vehicles and places the new 911 GT3 among the front runners in the sports car segment.

The low moving masses required for the valve and crank drive in particular, e.g. lighter valves and small, light-weight 911 GT3-specific bucket tappets, have been retained from the previous model. The weight of the highly stressed pistons, including piston pins, remains at the same level as the previous model despite the higher piston displacement and diameter.

The weight of the dual-mass flywheel has been reduced. By adapting the material strengths it was possible to reduce the weight by approx. 2 lbs (1 kg) compared to the original version. This measure has improved not only the gross weight, but also the rotating mass and the speed dynamics of the engine.

In order to make optimum use of the high maximum engine speed and to enable ideal timing of gear-shifting when accelerating, the new 911 GT3 features a shift indicator in the instrument cluster.

Apart from the high power and torque values of the extremely compact engine, the new 911 GT3 stands out in particular by virtue of its vast revving capability and excellent response throughout the entire rev range. These characteristics ensure a very sporty driving experience in all driving conditions.

	New 911 GT3	911 GT3 (MY'08)
Max. power	435 hp (320 kW) at 7,600 rpm	415 hp (305 kW) at 7,600 rpm
Max. torque	317 lb ft at 6,250 rpm	299 lb ft at 5,500 rpm
Specific output	114.6 hp/l (84.3 kW/l)	115.3 hp/l (84.7 kW/l)
Specific torque	83.4 lb ft/l	83.0 lb ft/l

Torque increase

Like its predecessor, the new 911 GT3 has a function for increasing torque in the mid rev range. This function is activated by pressing a SPORT button on the center console as was the case in the previous model. When this button is pressed, the torque is increased by up to 26 lb ft in the mid rev range.

The exhaust backpressure in the variable exhaust system is additionally reduced and the gas cycle is improved, resulting in a noticeable boost in torque in the rev range between approx. 3,000 and 4,000 rpm. The torque levels are increased by between approx. 22 and 26 lb ft. The maximum torque of 317 lb ft at 6,250 rpm remains unchanged.

Unlike in the previous model, pressing the SPORT button does not automatically activate sportier tuning for the Traction Control (TC) system (vehicle stabilization during acceleration) at the same time. Similarly, the vehicle stability system Porsche Stability Management (PSM) introduced with the new 911 GT3 is not affected when the SPORT button is pressed. This distinct separation between the engine and vehicle stability systems facilitates unique and clear selection of the features desired by the driver.

Main technical features

- 3.8 l displacement
- 4 valves per cylinder
- Water cooling
- Vertically split crankcase made of die-cast light alloy
- Cylinder housing separate from crankcase
- Crankshaft running on eight bearing points
- Titanium connecting rods
- Forged pistons
- Dry-sump lubrication with external engine oil tank
- Continuous intake and outlet camshaft control (VarioCam)
- Bucket tappets designed to cope with high engine speeds, with crowned contact surface and hydraulic valve clearance compensation

- Static high-voltage ignition distribution with individual ignition coils
- Ram air intake system
- Variable intake system with two tuning flaps
- Sports exhaust system with one catalytic converter located close to the engine per exhaust tract, two front silencers and one rear silencer per exhaust tract, with two central single tailpipes
- Stereo lambda control with one lambda probe up- and down-line of the catalytic converter in each exhaust tract
- On-Board Diagnosis

Key changes on the new 911 GT3:

Component	New 911 GT3	911 GT3(MY'08)	Improvement
Pistons	Diameter 102.7 mm displacement increase	Diameter 100.0 mm	Gas cycle (including cylinder charging)
Camshaft	Exhaust valve lift 12.0 mm	Exhaust valve lift 11.1 mm	
VarioCam	Additional continuous control for the exhaust valves via vane adjuster (adjustment range 20° CA)	Continuous control for the intake valves via vane adjuster	
Double-mass flywheel	Reduced weight	Basic weight	High engine speed concept

Basic engine

Like its predecessors, the engine of the new 911 GT3 has a vertically split alloy crankcase, which was originally used in the 911 GT1 and is also used in the racing versions of the 911 GT3. The highly stable crankshaft running on eight bearing points and the "sandwich" design of the short block engine also originate from the 911 GT1 and the previous model. The sandwich design means that the cylinder housing, cylinder head and camshaft housing for each cylinder bank are individual components which are bolted to the crankcase.

The **displacement increase** from 3,600 cm³ to 3,797 cm³ of the new 911 GT3 was achieved by increasing the cylinder and piston diameter from 100.0 mm to 102.7 mm. Due to the larger cylinder bores, the Nikasil-coated cylinder sleeves integrated in the light alloy cylinder housing which are made of aluminum had to be changed from aluminum to steel. This measure was necessary in order to ensure adequate component strength with unchanged cylinder spacing, larger cylinder bores and reduced wall thickness between the cylinders.

The diameter of the piston pins was increased from 21 mm to 22 mm to ensure component strength even with further load increases. Despite this measure and the additional increase in piston diameter, it was possible to maintain the component weight of the pistons, including pins, at the same level as the previous model through fine tuning of the design.

Lightweight titanium connecting rods are part of the high speed engine concept of the new 911 GT3. They ensure that the components retain the required strength throughout their service lives at high engine speeds (8,500 rpm) and provide the necessary speed reserves (up to over 9,500 rpm) as the basis for racing engines. The weight reduction over a comparable steel connecting rod stands at approx. 150 gram per rod, or around 26%.

As on the previous model, the intake valves on the new 911 GT3 are controlled by means of **VarioCam** with continuous valve adjustment via a vane adjuster. The maximum adjustment range remains unchanged at 52° crank angle. A new feature is the additional adjustment of the **exhaust valves**. This additional adjustment supports an increase in power output and torque with the new 911 GT3 in compliance with the stricter emissions legislation compared to the previous model (from EU4 to EU5).

Like the intake valves, the exhaust valves are controlled by means of continuous angle adjustment via a vane adjuster. The maximum adjustment range is 20° crank angle. The new 911 GT3 has a total of four vane adjusters with an identical design and basic function for improving engine characteristics with regard to power output, torque and exhaust behavior.

The basic design of the camshafts is the same as that of the previous model. Due to the higher power requirements, the exhaust cams have been modified and the lift of the exhaust valves has been increased from 11.1 mm to 12.0 mm.

The cam shape and the 12.7 mm lift of the intake valves have been adopted. Also identical are the intake valves with a diameter of 41 mm and the exhaust valves with a diameter of 35.5 mm as well as the double valve springs and the small and lightweight bucket tappets with hydraulic valve clearance compensation.

Like its predecessor, the new 911 GT3 is supplied with oil using classic **dry-sump lubrication** with an external engine oil tank. The oil pump is driven by the crankshaft, via the intermediate shaft and connecting shaft. The oil pump itself consists of three segments, whereby one pump segment is responsible for pressure oil feed to the engine. This segment draws in the engine oil from the separate oil tank via an oil/water heat exchanger and the oil filter and subsequently feeds it into the engine oil circuit. The two other pump segments extract the oil which accumulates in the crankcase and pump it back into the separate oil tank.

The **cylinder head extraction** has been revised. In the previous model, this function was performed on each cylinder side via a dual oil extraction pump driven by the exhaust camshaft. The new 911 GT3 has vane adjusters on the exhaust camshaft drive for additional adjustment of the exhaust valves by VarioCam. The total of four oil pumps for cylinder head extraction of the new 911 GT3 have thus been moved and are now located centrally in a

separate module together with the water pump at the back of the engine. The changes also include new connecting lines between the cylinder heads and the oil extraction pumps.

The new cylinder head extraction also ensures the fastest possible return of engine oil from the cylinder heads, even at high levels of lateral and longitudinal acceleration. The new 911 GT3 has, like its predecessor, a total of **seven oil pumps** (one oil pressure pump in the crankcase, two oil extraction pumps in the crankcase and four oil extraction pumps in the cylinder heads).

The cylinder heads of the new 911 GT3 are produced from an extremely temperature-stable light alloy with additional cooling of the exhaust valve seats. The intake and exhaust ports have also been machined to improve flow conditions and, in turn, the gas cycle and output.

Intake system

Like its predecessor, the intake system of the new 911 GT3 consists of the following elements:

- Ram air intake system
- Flow-optimized air cleaner, throttle valve and intake manifold
- Switch-able intake manifold with two tuning flaps

Like the previous model, the engine of the new 911 GT3 is supplied with air directly via the scoops of the ram air system on the rear lid. The ram air system consists of two ram air boxes, which are mounted on the rear lid. They use the air flowing over the vehicle and improve both the supply of cooling air to the engine compartment (left scoop) and the intake of combustion air for the engine (right scoop).

The air cleaner housing and the throttle valve with a diameter of 82 mm have been adopted from the previous model. They provide low flow resistance for a high gas cycle. Also adopted was the variable intake system with two switch-able tuning flaps for achieving high power output and torque values. The resonance intake system essentially comprises two plenum chambers (on the right and left above the cylinders), three connecting pipes (one distributor pipe and two connecting pipes with tuning flaps) and individual intake pipes for the cylinders.

A flow-promoting intake system with smooth surfaces and large cross-sections is necessary for good charging of the cylinders and consequently high output values. The plenum chambers and intake pipes have thus been generously dimensioned and their interiors have been designed and finished with meticulous care. In addition to the flow characteristics, intensive utilization of the air resonance pulsating in the intake system is necessary to ensure good charging of the cylinders. This is carried out via the switch-able connecting pipes with tuning flaps, which are controlled via the Motronic system.

For the purposes of a uniform and high torque curve, the shift strategy for the tuning flaps has been revised for the new 911 GT3. At low and medium engine speeds, the tuning flaps are closed. From a speed of approx. 5,400 rpm, the thin connecting pipe is opened by means of the first tuning flap. At approx. 6,450 rpm, the thin connecting pipe is closed and the thick connecting pipe is opened by means of the second tuning flap. From approx.

7,500 rpm, both tuning flaps are opened. This shift strategy enables not only a high torque curve over a large rev range and high maximum torque, but also a high maximum output.

Exhaust system

Like its predecessor, the sports exhaust system of the new 911 GT3 consists of the following elements:

- High-performance manifolds
- Two catalytic converters located close to the engine
- Two switch able front silencers
- Common rear silencer with central dual tailpipes

In conjunction with the other power-enhancing measures, this system enables high engine output to be achieved with an extremely low level of exhaust backpressure. The high-performance manifolds offer both reduced flow resistance and enhanced mixing, thus improving pre-conditioning of the raw emissions before they are subsequently converted in the catalytic converters. A catalytic converter is located on each cylinder side directly behind the respective manifold. This position close to the engine enables faster heating-up and response, resulting in reduced exhaust emissions, particularly after cold starting.

The silencer system has two front silencers which can be map-controlled and an additional rear silencer. The front silencers are activated and deactivated via vacuum-controlled exhaust flaps. When these flaps are closed, the exhaust gas is directed exclusively via the front silencers to the main silencer. When the exhaust flaps open, this provides a direct passage to the main silencer, resulting in a reduction in exhaust backpressure and further increase in engine power output. The exhaust flaps are controlled according to the prevailing loads and speeds.

Exhaust gas

Despite the increase in power, the new 911 GT3 already complies with the **EU 5** emissions legislation, will come into force in Europe on September 1, 2009 for all new vehicles to be classified. Compared with the EU4 standard, the tightening of the emissions standard involves, in particular, a reduction in nitrogen oxides (NOx) by 25%. This will be supplemented by extended durability and stricter monitoring of the exhaust cleaning and monitoring components with earlier fault indication in the instrument cluster (European On-Board Diagnosis - EOBD). In the USA and Canada, the new 911 GT3 is approved to the LEV II/LEV (Low Emission Vehicle) emissions legislation in force in these countries.

The new 911 GT3 complies with the EU5 emission limits by virtue of efficient catalytic converter technology, the position of the catalytic converters close to the engine, enhanced VarioCam with additional adjustment of the exhaust valves and improved secondary-air injection. The fine tuning of injection and ignition also supports compliance with EU5 emission limits.

In the new 911 GT3, secondary air (additional air injected in the exhaust system) is controlled via a vacuum-controlled valve for the entire exhaust system. In the previous model,

secondary-air injection was controlled via a separate secondary-air pump and a self-opening pressure relief valve for each cylinder bank. More precise secondary-air injection control with a vacuum-controlled valve in the new 911 GT3 means targeted after-combustion of the exhaust gases and more uniform heating-up of the right and left catalytic converter. This helps to reduce exhaust emissions and supports compliance with the stringent EU5 emissions legislation.

Engine management

For the new 911 GT3, the ME 7.8/40 engine control system has been enhanced. Like the previous model, the new **ME 7.8.2** engine control system has a clock speed of 40 MHz and is responsible, for sending the required signals to the fuel injectors of the intake manifold injection and to the ignition, for example. Further fine tuning of injection and ignition also supports the realization of lower fuel consumption and exhaust emissions.

The new ME 7.8.2 controls the 911 GT3-specific tuning flaps of the intake system, the exhaust flaps of the sports exhaust system and the variable controller of the front radiator fan. The increased processing power and memory capacity of the ME 7.8.2 is used to provide the additional VarioCam outlet camshaft control.

4.1.2 Transmission

The new 911 GT3 has a manual **6-speed transmission**. The manual transmission is extremely lightweight and combines a high level of efficiency with excellent power. Its functionality and stability have already been proven in many 911 GT models as well as in motor racing. It offers the best conditions for extraordinary driving performance and is the ideal component for a racing-oriented vehicle such as the new 911 GT3.

Short and precise shift throws provide short shifting times and a direct driving experience. In combination with the friction-optimized control cable shifting and the reduced-weight dual-mass flywheel, the manual transmission provides maximum precision and stability. To further improve shift precision, the new 911 GT3 features a shift console bearing made of aluminum instead of plastic.

Overview of characteristic transmission features of the new 911 GT3 compared with the current 911 Carrera models with 6-speed manual transmission:

- Control cable shifting with direct actuation through low shift lever ratio on the transmission input lever and shift console with aluminum bearing
- Oil spray lubrication with pressure oil feed via oil pump
- Transmission oil cooling through transmission oil/water heat exchanger to ensure durability even under extreme strain
- Steel synchronizer rings for third to fifth gear for more exact gear changes even under very high strain
- Adjustable gear ratios thanks to gearwheels that are slotted into the transmission shaft rather than molded on (only for use on race circuits)
- Shorter transmission ratios

The additional oil-water heat exchanger and spray cooling have been adopted from the previous model. This guarantees the necessary transmission oil cooling for a high load capacity even under extreme conditions, which can occur, e.g. on a race circuit.

Mechanical limited slip differential

Just like its predecessor, the new 911 GT3 also comes with an asymmetric mechanical limited slip differential as standard. The locking values are still 28% (acceleration) and 40% (deceleration). They are adapted to the specific handling of the new 911 GT3 and offer high traction as well as precise cornering, particularly during load changes.

4.2 Chassis

The chassis of the new 911 GT3 is based on that of the previous model. The new 911 GT3 also has the following characteristic features compared with the current 911 Carrera models:

- Lowering by approx. 30 mm (in comparison to the 911 Carrera), accompanied by a corresponding lowering of the vehicle's center of gravity
- Porsche Active Suspension Management (PASM) adjustable damper system with special tuning
- Adjustable anti-roll bars at front (four settings) and rear (three settings) for adaptation to individually desired handling characteristics¹⁾
- Spring system compatible with racing springs to enable adaptation to different race circuit characteristics¹⁾
- Axle geometry adjustment range to accommodate the use of racing tires and related specific requirements
- Reinforcement of relevant components (e.g. pivot bearings) for possible use of racing tires¹⁾ and the associated higher load on individual components (especially on front axle)
- Optimization of wheel guidance by means of support bearings on the front axle with Unibal joints and connection of the rear-axle sub frame to the body via metal bushings
- Sports tires²⁾ as standard
(e.g. camber adjustment)¹⁾

¹⁾ These modifications are only permissible in off-road use, as they have a very pronounced effect on the vehicle's handling characteristics. When changing vehicle settings and/or modifying components, reciprocal interactions must be taken into consideration.

²⁾ There is increased danger of aquaplaning on wet roads due to reduced tread depth.

The following features are new:

- Porsche Stability Management (PSM) vehicle stability system with special tuning. Can be completely disengaged in two steps (SC OFF und SC+TC OFF) as with the 911 GT2
- Dynamic engine mounts (option available as of 09/2009 at the earliest)
- Front axle lift system (option available as of 09/2009 at the earliest)
- New wheel carriers on the front axle (like the 911 GT2) to reduce the tendency to under-steer and improve driving stability at high speeds
- New spring, damper and anti-roll bar tuning with reduced-weight springs on the rear axle
- Reinforced standard brake system with composite brake discs made of grey cast iron and brake chambers made of aluminum on the front and rear axle
- Ceramic composite brake system – Porsche Ceramic Composite Brake (PCCB) – available as an option. With brake chambers made of aluminum on the front and rear axle and improved composite technology
- New 911 GT3 wheels with center lock system
- Tire Pressure Monitoring (TPM) as standard worldwide

For basic information on the chassis, please refer to the Product Information release for the 911 GT3 (997).

4.2.1 Porsche Stability Management (PSM)

For the first time, the new 911 GT3 features the vehicle stability system Porsche Stability Management (PSM). It is available as standard equipment and is based on the system specially adapted for the 911 GT2. It enables the deactivation of individual function components, which means that even extremely sporty drivers are offered a sufficient number of variations, in particular for personal dynamic requirements. Thus, the new 911 GT3 avails itself of a control system that provides a significant increase in active safety and takes full advantage of the dynamic potential.

Customer benefits of PSM with GT3 tuning
<ul style="list-style-type: none">• Increase in active safety• Can be completely disengaged in two steps to satisfy individual requirements with regard to driving dynamics

Basics

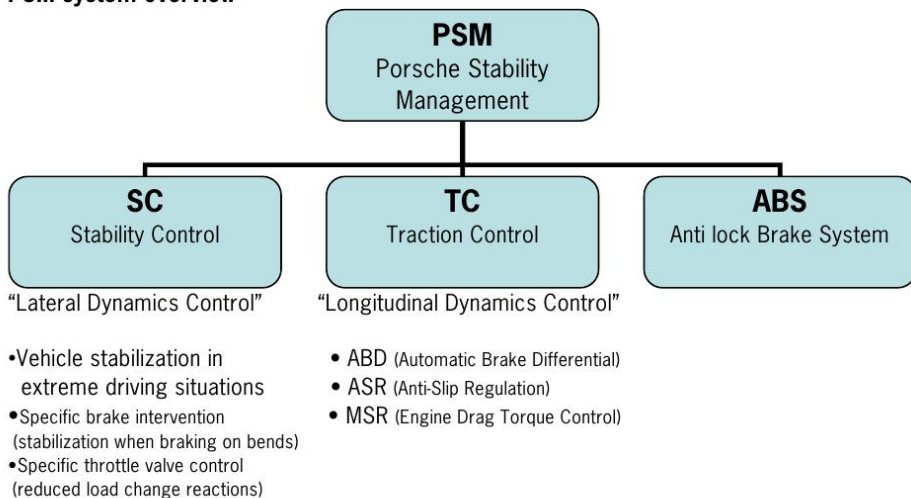
Since its introduction in 1998, Porsche Stability Management (PSM) comprises the following: longitudinal dynamics control Traction Control (TC) with ABD (automatic brake differential), ASR (anti-slip regulation), MSR (engine drag torque control) systems, ABS (anti-lock braking system) and the Stability Control (SC) lateral dynamics control. Stability Control (SC) controls vehicle stability in a vehicle with over-steer or under-steer. It does this by wheel-selective braking and through specific intervention in the engine control (throttle valve) to reduce load change reactions.

Specially tuned anti-slip regulation developed specifically for the new 911 GT3 and integrated in PSM results in more dynamic and faster control behavior with the following advantages:

- Improved acceleration, e.g. in case of spinning wheels on a loose surface or on wet roads
- More stable and precise handling, particularly in wet conditions
- More neutral self-steering properties even in the case of significant delays within the ABS control range

Improved acceleration when the wheels are spinning is achieved by means of a throttle valve that is kept open for as long as possible during the control process. The reduced power required to stabilize the vehicle is produced by reducing the ignition angle and fuel injection. The throttle valve is closed as well only if necessary.

PSM system overview



Function and shift strategy

The PSM function and shift strategy for the new 911 GT3 was adopted from the 911 GT2. It is based on the longitudinal dynamics control Traction Control (TC) used in the Carrera GT and in the previous 911 GT3 model and has been enhanced to include the Stability Control (SC) lateral dynamics control. The special feature of this system is the tuning of the control interventions for driving dynamics and system-specific deactivation for racing-oriented use on race circuits.

As is the case with the 911 GT2, PSM is not deactivated on the 911 GT3 using a PSM OFF button, but in two stages using an SC OFF and an SC+TC OFF button. Just like the PSM OFF button, these buttons are located in the front center console.

The SC OFF button deactivates lateral dynamics control as well as wheel-specific braking and targeted throttle valve control during over steering or under steering and during load changes. In addition to the lateral dynamics control, the SC+TC OFF button deactivates the longitudinal dynamics control when drive wheels with ABD (automatic brake differential), ASR (anti-slip regulation) and MSR (engine drag torque control) systems spin or lock.



Fig. 10: SC OFF and SC+TC OFF buttons

Reactivation of the disabled stability systems is another special feature. With the familiar PSM OFF function, lateral dynamics control (Stability Control) is reactivated automatically when you brake within the ABS control range in order to stabilize the vehicle. As is the case with the 911 GT2, the lateral dynamics control (Stability Control) of the new 911 GT3 is not reactivated during braking, even in the ABS control range, when either SC OFF or SC+TC OFF has been selected. This unique function and shift strategy is an enhancement of PSM and enables personal racing-oriented dynamics for an extreme and personal performance on the race circuit.

The ABS (Anti-lock Braking System) function remains active in all function levels and switch settings, as it does not affect race circuit performance.

Area of operation and analogy:

		Area of operation	Analogy
(PSM ON)	Basic setting	Public roads	PSM new for 911 GT3
SC OFF	Switch-off level 1	Race circuit for drivers with sporty ambitions and racing drivers on wet roads	Function like that of 911 GT2 and previous model 911 GT3 in basic setting (TC ON)
SC+TC OFF	Switch-off level 2	Race circuit for high performance and racing drivers on dry roads	Function like that of 911 GT2 and previous model 911 GT3 with traction control off (TC OFF)

The following sections describe the customer benefits of the individual switch settings.

Basic setting (PSM ON)

Noticeable increase in active safety. Traction Control (TC) for longitudinal dynamics, with ABD (automatic brake differential), ASR (anti-slip regulation) and MSR (engine drag torque control) systems as well as ABS (Anti-lock Braking System). Stability Control (SC) for lateral dynamics, particularly through wheel-selective braking when over- or under-steering.

SC OFF

Increases dynamics on race circuits by deactivating Stability Control. This enables the vehicle to be steered around corners with the required drift using targeted steering movements and/or accelerator pedal control. Sportily tuned Traction Control remains active, has high traction through ABD and active safety through ASR and MSR.

SC+TC OFF

Complete deactivation of dynamic control systems for personalized racing oriented handling on the race circuit. This enables, e.g. fast and controlled cornering with defined drift through targeted destabilizing of the vehicle in front of corners by short sharp braking.

For detailed information on Porsche Stability Management (PSM) for the new 911 GT3, please refer to the Product Information release for the 911 GT2 (997).

4.2.2 Porsche Active Suspension Management (PASM)

Like its predecessor, the new 911 GT3 features the PASM adjustable damper system as standard with special new tuning compared with the 911 Carrera models.

Customer benefits of PASM with 911 GT3 tuning

- Normal mode with firm, sporty damping for driving on public roads
- Sport mode for uncompromisingly sporty damping, especially for smooth race circuits

The new 911 GT3 also has two characteristic maps. Unlike the current 911 Carrera models, however, the system features tuning and program definitions for meeting the increased driving dynamics requirements:

Program	New 911 GT3		911 Carrera models
Normal mode	PASM button not pressed	Sporty and rigid tuning for public roads and race circuits with uneven surfaces (e.g. the Nordschleife of the Nürburgring)	Sporty and comfortable tuning for enhanced comfort
Sport mode	PASM button pressed*	Uncompromisingly sporty tuning for particularly high driving dynamics and reduced body movements, especially for smooth race circuits	Sporty and rigid tuning for enhanced driving dynamics

* including "PASM Sport" in the instrument cluster display

PASM also combines two types of chassis in one on the new 911 GT3. In the basic setting (Normal mode) the system is not used for greater comfort as it is in the 911 Carrera models, but rather to offer sportiness and agility without compromising on everyday comfort. On the new 911 GT3, this setting is sufficient to ensure excellent driving dynamics on public roads and race circuits with varying road conditions and uneven surfaces (e.g. the Nordschleife of the Nürburgring). To increase the driving dynamics potential of the new 911 GT3 even further, especially on level race circuits, PASM in Sport mode allows particularly precise and targeted driving by reducing body movements to a minimum. To improve traction on race circuits, particularly on narrow sections and therefore at lower speeds, the PASM dampers have a softer setting in Sport mode. The design and mode of functioning of the PASM system correspond to the features and shift strategies of the previous 911 GT3 model.

4.2.3 Dynamic engine mounts

(option available as of 09/2009 at the earliest)

The new 911 GT3 uses dynamic engine mounts for the first time to improve driving performance. The dynamic engine mounts adjust rigidity and damping automatically depending on the driving situation. This variability eliminates apparent contradictions. The dynamic engine mounts improve both driving dynamics and driving comfort. They minimize the transmission of vibration in the entire power unit and of the engine in particular to the body. The system does this using a magnetizable (magneto-rheological) damper fluid and an electrically generated magnetic field. Using a defined electric current, a magnetic field is generated and magnetization of the particles in the fluid is increased or decreased. This changes the viscosity of the fluid and the engine mounts are made harder or softer.

Principle and customer benefits

In racing vehicles such as the 911 GT3 CUP and 911 GT3 RSR, for example, the power units (engine and transmission) are bolted to the body for high driving dynamics without engine and

transmission mounts (unit mounts). In road vehicles, unit mounts with harder or softer tuning are used depending on the required level of comfort.

Dynamic driving situations, e.g. braking and steering into a corner as well as series of alternating bends, produce a high level of relative motion between the power unit and the body with conventional unit mounts. This results in impaired direct handling, particularly in highly dynamic driving situations. The engine mounts play a major role in this situation, particularly in vehicles with a rear engine where the mounts are located right at the back.

When braking before a corner, the raising of the vehicle with conventional engine mounts on the rear axle is delayed due to the mass moment of inertia of the engine and the flexibility in the engine mounts. The result is a reduced wheel load and lower braking potential on the rear axle. This effect is intensified on uneven road surfaces in particular due to the instability of the entire system. The dynamic engine mounts minimize this effect and produce more stable braking with increased braking potential on the rear axle.

When steering into a corner, the vehicle follows the steering movement directly. However, the engine tries to continue following a straight line in accordance with the principle of mass moment of inertia. The engine will only follow the steering direction when the flexibility in the engine mounts is overcome. In the case of vehicles with a rear engine, the result is a delayed lateral impulse on the rear axle, which in turn produces an over-steer impulse when driving very dynamically. To stabilize the vehicle, additional steering corrections or performance reducing vehicle stability system actions are required.

In this driving situation the dynamic engine mounts are set to hard automatically. There is no delayed power impulse and the vehicle can move more precisely and without disruptive side effects in extreme driving situations, just like a racing car. The result is significantly improved driving performance.

To reduce the effects of the mass moment of inertia of the engine, damping of the dynamic engine mounts is increased for series of alternating bends and load changes. This reduces "after-pressure" on the rear and allows more stable and precise handling.

The dynamic engine mounts also offer significant advantages during acceleration from a standing start at full throttle. Vertical engine vibration is reduced for the most part. The result is more uniform and higher drive power to the rear axle with better traction and acceleration.

At low speeds and for comfort-oriented driving, the dynamic engine mounts are made softer according to the condition of the road surface. This reduces the amount of natural vibration affecting the body and the interior, particularly when driving on bad road surfaces. The result is enhanced driving comfort combined with reduced vibration, thus creating an overall impression of high quality and stability.

Function

The dynamic engine mounts contain an electric coil and two chambers filled with magnetizable (magneto-rheological) fluid. The upper chamber is connected to the body, while the lower chamber is connected to the power unit. The chambers are connected to each other by means of an annular gap. The electric coil is located directly next to this annular gap. Relative motion between the engine and the body pushes the fluid through the annular gap. With a defined electric current through the coil, an electromagnetic field is generated in this annular gap, the viscosity of the magneto-rheological fluid changes and the engine mounts are made softer or harder.



Figure 11: Dynamic engine mounts

When there is no current flowing through the coil, the fluid is relatively less viscous and the flow resistance is lower. The mount characteristics demonstrate low rigidity and damping and are thus soft. When a defined current is applied to the coil, the iron particles in powder form in the fluid are magnetized and join together to create chains. The fluid becomes viscous and the flow resistance high. The mount characteristics demonstrate high rigidity and damping and are thus hard.

The system is controlled by a separate control unit with a highly dynamic control loop and response times of just a few milliseconds when switching between soft and hard engine mounts. A large amount of information is processed, including the steering angle, lateral, longitudinal and vertical acceleration as well as the fluid pressure in the respective engine mount. To ensure excellent driving dynamics and functionality, the new 911 GT3 features separate and independent control of the right and left engine mounts. For high agility even in the basic setting, the soft system setting of the dynamic engine mounts corresponds to the

characteristics of the conventional engine mounts in the new 911 GT3 and in the previous model.

The control strategy of the dynamic engine mounts is also influenced by the PSM vehicle stability system pre-setting. Depending on the function setting – PSM ON / SC OFF / SC+TC OFF – the pre-set damping of the engine mounts is decreased or increased as required for sporty driving. In the sportiest setting SC+TC OFF, for example, a control strategy suitable for race circuits with very high damping of the engine mounts is selected.

4.2.4 Front axle lift system

(option available as of 09/2009 at the earliest)

To achieve high driving performance, the new 911 GT3 has a low body in the style of a racing car. This gives the vehicle a low centre of gravity and excellent aerodynamics. However, the lower body position means that the ground clearance and approach angle are reduced compared with conventional vehicles and day-to-day usability is restricted. This restriction affects the front of the body in particular, e.g. when driving over ramps, driveways and speed bumps in urban and residential areas.

Customer benefits of front axle lift system

- Significant increase in day-to-day usability
- Increase in front ground clearance by approx. 1.2 inch (30 mm) at a speed of up to approx. 31 mph (50 km/h).

The front axle lift system, available as an option with the new 911 GT3 for the first time, significantly improves day-to-day usability. It allows the body to be lifted by approx. 1.2 inch (30 mm) at the front at a speed of up to approx. 31 mph (50 km/h). This prevents damage to the body and significantly reduces the risk of impact, e.g. in underground parks and on speed bumps. Curbs are also less of an obstacle. The lift system is also extremely useful, e.g. when loading vehicles onto race car transporters.

Function

Using an electro pneumatic function module, the PASM dampers on the front axle can be raised by approx. 20 mm. This corresponds to a rising of the body by approx. 1.2 inch (30 mm) at the front edge of the front spoiler. The system is activated by means of a special operating button in the center console.

When the engine is running, pressing this operating button while the vehicle is stationary or moving at a speed of approx. 31 mph (50 km/h) raises the vehicle quickly and continuously at the front axle. The lifting operation is completed in approx. 2-3 seconds. When the vehicle is fully raised, "LIFT" appears in the display of the central rev counter in the instrument cluster.

If the vehicle exceeds a speed of approx. 31 mph (50 km/h), it is lowered back down to its basic level automatically. When the vehicle falls below a speed of approx. 31 mph (50 km/h), it can also be lowered manually by pressing the operating button again. When the lower end position is reached through either automatic or manual lowering, "LIFT" no longer appears in the on-board computer display of the rev counter'.

To avoid damaging the chassis by, for example, parking the vehicle with the front end over a curb, the vehicle should be parked in the lowered position. If the compressed air accumulator is not actively refilled, i.e. the engine is off; the system will not allow the chassis to be maintained in the raised position for a long period of time.

Design

The front axle lift system of the new 911 GT3 comprises the following components:

- Electro pneumatic function module with pneumatic compressor, pressure reservoir and valve block unit
- PASM dampers on the front axle with additional compressed air connection underneath
- Control unit (integrated under the driver's seat)
- Operating button in the center console

The function module is a compact unit located at the front of the center tunnel. The pneumatic compressor generates pressure of up to 247 PSI (17 bar) if necessary. The pressure reservoir has a filling volume of approx. 2.0 l and supplies the pressure for system operation after use of the compressor. The compressed air system is controlled by means of a valve block unit.

Pneumatic connecting lines feed the pressure generated in the function module to the lower chambers of the PASM dampers on the front axle. For the lift function, the conventional PASM dampers in the lower area were given an additional compressed air connection. The entire system is controlled by a modular control unit located under the driver's seat. The input signals for operating button, vehicle speed and air pressures in the pressure accumulator and in the dampers are used for control purposes. The upper and lower end position of the system is recorded by means of the pressure in the dampers. The system weight of all components of the front axle lift system is approx. 13 lbs (6 kg).

A front axle lift system is occasionally offered by competitors (e.g. Lamborghini Gallardo Superleggera). However, these systems are usually hydraulic. The pneumatic system of the new 911 GT3 offers greater day-to-day usability. The extension speed of the dampers and thus the raising of the body are considerably faster (approx. 2-3 times faster). Driving comfort, including suspension and damping characteristics, is not restricted by the special system design of the new 911 GT3. Furthermore, because the system is operated using air, it is considerably less sensitive than a separate oil-operated lift system in the event of a leak caused by damage.

4.2.5 Standard brake system

The new 911 GT3 has an enhanced standard brake system on the front and rear axles. There are larger brake discs on the front axle and new composite brake discs with aluminum brake disc center sections on the front and rear axle. Furthermore, brake ventilation on the rear axle has been improved compared to the previous model with additional brake air ducts.

The main new feature is the composite brake discs. They consist of a brake disc (friction ring) made of grey cast iron and a aluminum brake disc center section made of aluminum. This technology is already in use in motor racing, particularly in the 911 GT3 RSR and 911 GT3 Cup S. In the new 911 GT3, the brake disc center section and brake discs (friction rings) are connected using several stainless steel pins arranged radially. Compared with one-piece grey cast iron brake discs, the composite brake discs of the new 911 GT3 provide an un-sprung mass weight saving of approx. 5 lbs (2.2 kg) per vehicle, despite the fact that the diameter of the brake discs on the front axle has been increased from 13.8" (350 mm) to 15.0" (380 mm).

Customer benefits of composite brake discs

- Reduction in un-sprung weight of approx. 5 lbs (2.2 kg) per vehicle
- Improved braking performance under very high loads
- Reduced noise level

A further advantage is the improved braking performance, even under very high loads with high temperatures, thanks to the more stable position of the friction ring in relation to the brake pads. The design of conventional one-piece grey cast iron brake discs is such that irregular expansion occurs at very high temperatures (bowl-like warpage). The brake pads thus no longer lie flat against the friction ring. With composite brake discs, temperature-induced stress is significantly reduced and the varying expansion between brake disc center section (aluminum) and friction ring (grey cast iron) is compensated. Compensation is provided by the radial expansion capability of the steel pins in the friction ring. As a result, the brake pads sit better against the friction ring and the effective braking force can be built up more quickly. The improved axial run-out between the brake pads and the friction ring also reduces noise.

The production of composite brake discs involves a number of steps. After casting and pre-machining the grey cast iron friction ring, the stainless steel pins are secured in the friction ring with a light press fit. This unit is placed in a chill mould. When aluminum is poured into the chill mould the steel pins are cast-in, the brake disc center section is formed by the inner mould of the chill mould and a fixed connection is created between the friction ring and brake chamber. During the casting process for the brake disc center sections for the rear axle, an additional grey cast iron friction ring for the handbrake is incorporated. The composite brake disc takes on its ultimate shape during final machining of the friction ring and brake disc center section.

On the front axle the new 911 GT3 has, like its predecessor, high-performance 6-piston aluminum monobloc fixed brake calipers and efficient brake ventilation via brake-air spoilers

and air deflection vanes. By increasing the brake disc diameter from 13.8" (350 mm) to 15.0" (380 mm), control and braking performance have been further enhanced and adapted to the increased performance.

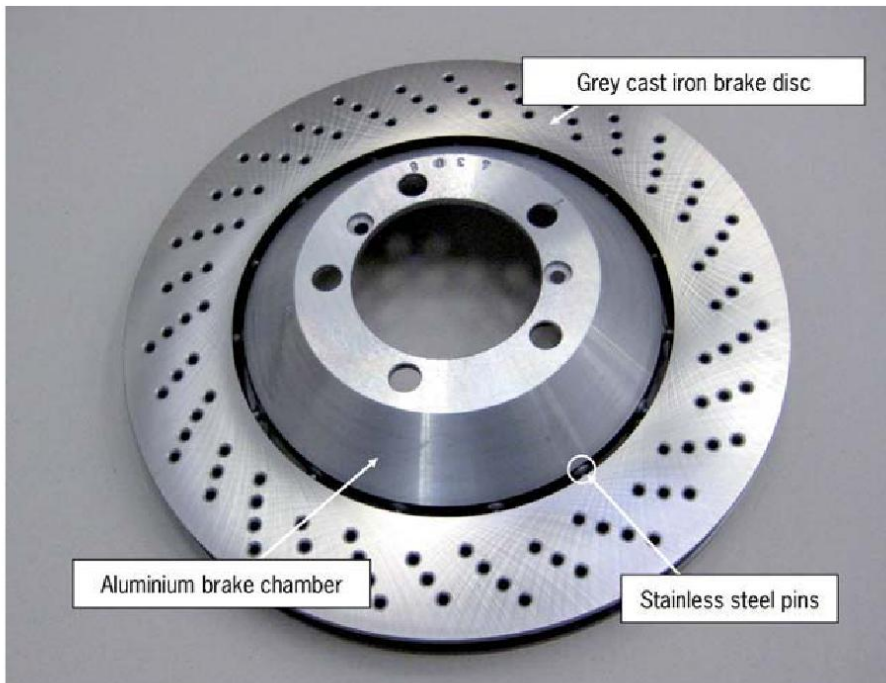


Figure 12: Composite brake disc

Additional customer benefits of the new 911 GT3 standard brake system

- Improved braking performance due to larger brake discs on the front axle
- Improved braking performance and stability due to additional brake air ducts on the rear axle

On the rear axle the new 911 GT3 has, like its predecessor, proven 4-piston aluminum fixed brake calipers with a brake disc diameter of 13.8" (350 mm). Additional brake air ducts for the rear brake system are a new feature. They are located at the side in the underbody area in front of the rear axle. The brake air ducts also remove air from below the underbody paneling and channel it to the rear brake system. This results in lower brake temperatures leading to greater braking performance under high loads and reduced wear.

The brake pads on the rear axle have also been redesigned to improve responsiveness and control.

4.2.6 Porsche Ceramic Composite Brake (I 450)

As on the previous model, the Porsche Ceramic Composite Brake (PCCB) is also available as an option for the new 911 GT3.

Changes compared with the previous model:

- Aluminum brake disc center sections also on the rear axle
- New composite technology between the brake disc center section and ceramic brake disc



Figure 14: Porsche Ceramic Composite Brake (PCCB)

On the new 911 GT3 the brake disc center section of the PCCB on both the front axle (as on the previous model) and the rear axle are made of aluminum. Together with the light ceramic brake discs, this product feature, which is exclusive to the 911 GT3 models, further reduces the un-sprung mass. The use of aluminum reduces the weight of the brake disc center section by approx. 50% compared with the conventional stainless steel brake disc center section of the PCCB. There is an overall reduction in un-sprung mass of approx. 11 lbs (4.8 kg) per vehicle for the same brake disc diameter dimensions compared with the optional PCCB with stainless steel brake disc center section available for the 911 Turbo.

Also new is the screwed connection technology between the aluminum brake disc center section and the ceramic brake discs (friction rings). With the introduction of the PCCB in 2001, the brake discs were fastened to the brake disc center section using several screws and specially shaped threaded sleeves. This technology guarantees a tight connection axially and expansion compensation for the different materials between the brake disc center section and brake disc radially. In the new 911 GT3, clip-type springs are added to the

connecting elements, allowing limited axial displacement and improved radial compensation between the brake disc center section and brake disc. This improves true running of the brake discs under high thermal load and prevents brake judder even under extreme strain. The acoustic insulation of the brake discs is also improved and noise is reduced.

The ceramic composite brake system Porsche Ceramic Composite Brake (PCCB) offers familiar advantages over a brake system of comparable design and size with steel brake discs for the new 911 GT3:

- Faster responsiveness on dry roads
- Very high fading stability thanks to consistent friction values
- High safety reserves under high levels of stress
- Approx. 50% lighter than the comparable grey cast iron brake discs of the standard brake system
- The brake discs (or more precisely: the brake-disc friction rings) are corrosion-resistant

For basic information, please refer to the Product Information release for the 911 GT3 (12/2005).

4.2.7 Wheels and tires

Like its predecessor, the new 911 GT3 has 19-inch aluminum alloy wheels with sports tires and revised "GT3" design. The new features are the wheel bolts with center lock system and titanium paint finish for the wheels in all exterior colors



Figure 15: 19-inch GT3 wheel

The U-shaped, slightly curved spokes of the previous model have been replaced by V-shaped spokes with a more pronounced spoke contour in the wheel **design** of the new 911 GT3. Instead of ending in the rim well, the spokes extend far outwards up to the rim flange. This makes the wheel appear larger.

A key component of the new wheel design is the **center lock system**. Instead of five open wheel bolts, the center lock system involves one wheel bolt that is integrated flush in the wheel center. The surface of this multiple-tooth wheel nut is titanium-colored as well as anodized and contains a wheel hub cover with the GT3 logo with black shading. The lasered lettering on the collar of the central screw is a technical design feature, which indicates the direction of rotation for loosening the screw as well as the tightening torque.

Technical data	19-inch GT3 wheel	
Summer wheels	FA	8.5J x 19 (RO 53) with sports tires 235/35 ZR 19
	RA	12J x 19 (RO 63) with sports tires 305/30 ZR 19
Winter wheels	FA	8.5J x 19 (RO 53) with winter tires 235/35 ZR 19
	RA	11J x 19 (RO 67) with winter tires 295/30 ZR 19

Changes compared with the previous model are **marked in bold**.

The **wheel dimensions** (see overview) remain unchanged since the previous model apart from the rim offset on the rear axle and the dimensions of the winter wheels on the front axle. For the summer wheels, the new wheels have a rim offset of 63 mm on the rear axle instead of 68 mm. This change is compensated by 5 mm spacers used as standard on the previous model.

The sports tires, which were also fitted as standard on the previous model, give the new 911 GT3 exceptional performance potential, particularly on dry surfaces. They provide high traction, high lateral acceleration and short braking distances. There is, however, increased danger of aquaplaning on wet roads due to reduced tread depth compared with conventional tires.

In combination with the sports tires, including larger wheel contact surface and chassis designed especially for the vehicle, the new 911 GT3 wheels offer the following advantages:

- Very high lateral acceleration at high cornering speeds
- Precise handling and steering
- Optimum acceleration and braking performance

The new 911 GT3 is provided worldwide as standard with enhanced Tire Pressure Monitoring (TPM) and permanent monitoring of the air pressure on all four wheels. Compared to the previous model, this new system adopted from the current 911 Carrera models allows faster pressure display after the ignition is switched on, faster and continuous pressure update during the filling process and a faster teaching process for the new set of tires following a

wheel change. The new system no longer has individual antennas in the wheel housings, but has trigger transmitters, a central antenna under the floor of the vehicle and enhanced wheel electronics.

Like the previous model, the new 911 GT3 also has a space-saving tire repair system as standard. This consists of a tire sealing compound, electric pneumatic compressor and, specifically for the 911 GT3, a separate air pressure tester.

4.3 Body

Low weight for high performance. Like the previous model, the new 911 GT3 meets this requirement with a slim-line body based on the current 911 Carrera models. Strictly speaking, the body of the new 911 GT3 is actually a combination of the body shell of the current 911 Carrera 4 models and the outer skin of the current 911 Carrera models.

Customer benefits of body

- Reduced body weight due to redesign of body shell
- Visual differentiation from previous model with new front and rear apron including grille and rear wing
- Improved driving stability at high speeds through increased down-force on the front and rear axle

The characteristic changes in the new 911 GT3 involve, in particular, weight reductions in the body shell, a new front and rear end including additional air intake and outlet grilles as well as a completely redesigned rear wing. The redesigned exterior mirrors of the current 911 Carrera generation has also been adopted.

Body shell

To ensure high stability in the body front section, the new 911 GT3 is essentially a combination of the body shell of the 911 Carrera 4 and the “crash insert” of the 911 Carrera. In order to minimize the vehicle weight, the luggage compartment lid and doors of the new 911 GT3 are made of aluminum. The luggage compartment lid is approximately 13 lbs (6 kg) lighter and the doors are approximately 31 lbs (14 kg) lighter per vehicle compared with the corresponding sheet steel variants.

The weight of the new 911 GT3 has been further reduced by modifying the body shell in the rear seat well area. Given the fact that the 911 GT3 is only available as a 2-seater, it was possible to omit the body structure reinforcements for the seat belts of the rear seat assembly through a change in the production technology. This measure provides an additional weight saving of approx. 2.4 lbs (1.1 kg) per vehicle.

Weight savings were also made in the roof area. As with previous models, a roof transport system is not offered for the new 911 GT3 due to its specific product positioning with an emphasis on driving dynamics. The roof area therefore does not require a preparation for a

roof transport system which includes fastening points and body structure reinforcements. This provides a weight saving of approx. 3.5 lbs (1.6 kg) per vehicle. The weight reduction in the roof area is particularly efficient, as it reduces the vehicle's center of gravity and promotes driving dynamics. By omitting the preparation for a roof transport system, it was also possible to omit the flaps for securing the roof transport system supports in the side roof rails. The side roof rails of the new 911 GT3 thus have a one-piece design.

Front apron

The front apron and spoiler lip were newly developed for the 911 GT3. The design incorporates increased cooling requirements, improved aerodynamics with significantly increased downforce and improved day-to-day usability with additional grilles in front of the air intakes.

New characteristic features of the front apron of the new 911 GT3 include:

- Larger cooling air intakes
- Improved air outlet in front of the luggage compartment lid including exhaust air duct
- Additional grilles in front of the air intakes
- Redesigned spoiler lip

Aeration and ventilation of the central radiator have been enhanced to improve overall cooling performance. This has been achieved by increasing the size of the central opening in the front end and by tilting the central radiator forward. An exhaust air duct for the central radiator has also been added (similar to the 911 GT2) and the air outlet opening in front of the luggage compartment lid has been redesigned with a larger cross-section and integration into the shape of the front end.

The spoiler lip has also been redesigned. The redesigning and enlarging of the front spoiler lip has not only improved the air flow to the air intakes, but also significantly increased aerodynamic downforce on the front axle. To improve the aerodynamic characteristics, the ventilation openings for the front brake system that were integrated at the side of the spoiler lip in the previous model have been omitted. This is compensated for by a redesign of the air flow in the underbody area and by the efficient ventilation of the front brake system in the area of the wheel housing liners and the brake-air spoiler adopted from the previous model.

New characteristic features of the new 911 GT3 are additional grilles in all air intakes and outlets. These elements, which are similar to those used in motor sport, e.g. in the 911 GT3 Cup and 911 GT3 RSR, protect the radiators against damage in the air intake area in particular and thus increase day-to-day usability. The delicate shape and design of the grilles was specially developed for the new 911 GT3. When designing and selecting the grille structure, particular attention was paid to minimal obstruction, high stability and easy replacement of the grille elements. All grilles are powder-coated in Dark Grey for corrosion protection and to blend in with the overall design of the new 911 GT3.

Rear apron

In addition to a new shape, the rear apron of the new 911 GT3 has larger lateral air vents, including air outlet grille and an additional central air outlet opening under the rear lid.

The rear apron of the new 911 GT3 has the following characteristic features:

- Recess in the middle for the central dual tailpipes
- Large lateral air outlet openings including air outlet grille
- Additional central air outlet opening including air outlet grille

As in the previous model, the lateral air vents of the new 911 GT3 permit the specific discharge of heat from the catalytic converters and front silencers located to the side under the rear apron. To increase efficiency, the openings have been enlarged and fitted with a grille as in the front end.

The design features a new air outlet opening under the rear lid. Its shape and design is in the style of the air outlet opening in front of the luggage compartment lid in the front apron. This opening is also fitted with a grille and supports ventilation of the engine compartment, particularly when the vehicle is stationary.

Rear lid with rear wing

Like its predecessor, the new 911 GT3 has a rear lid with double-deck wing; two ram air boxes and a separate spoiler lip (Gurney flap).

The double-deck wing of the 911 GT3, including wing supports and wing contour, has been completely revised in comparison to the previous model. It provides greater aerodynamic efficiency with significantly increased down-force on the rear axle. The inlays in the sideplates featuring the “3.8” logo are new. They are a distinguishing feature inspired by the 1993 racing-oriented 911 RS 3.8 (type 964) and are a reference to the displacement and performance increase of the new 911 GT3. The angle of the upper wing can be adjusted to suit specific requirements in relation to aerodynamics for use on a race circuit.

As in the previous model, two ram air boxes are mounted on the rear lid of the new 911 GT3 for separate and efficient engine air intake and engine compartment ventilation. The air box on the left in the direction of travel is responsible for purging the engine compartment, while the air box on the right supplies intake air to the engine. For the new 911 GT3, ram air technology supports accumulation of the air flowing around the vehicle, in particular the engine’s air intake at high speeds. This is accompanied by a slight increase in pressure throughout the intake system and a reduction in the intake work required of the pistons. The overall outcome is a slight increase in engine performance at high speeds.

The separate black spoiler lip (Gurney flap) on the lower section of the rear double-deck wing improves the air outflow and supports downforce on the rear axle.

Aerodynamics

Components that are highly effective aerodynamically such as the front apron, spoiler lip and double-deck wing have been redesigned for the new 911 GT3 to improve driving dynamics and stability at high speeds.

Customer benefits of aerodynamics compared to previous model

- Downforce on the front and rear axle more than doubled
- Increased lateral acceleration as well as greater driving and steering stability at high speeds

Although the result is a slight deterioration in the c_w value from 0.29 to 0.32, the downforce on the front and rear axle of the new 911 GT3 is more than doubled. The high downforce that is specifically exploited in motor sport provides high lateral acceleration for fast cornering as well as excellent steering and driving stability at high speeds.

Interior

The interior of the new 911 GT3 is largely the same as that of the previous model. The new features are the 911 GT3 steering wheel, the center console including new climate control panel and new audio equipment as well as an enhanced Alcantara package in combination with the optional leather interior.

Like its predecessor, the new 911 GT3 has the following characteristic features as standard:

- 2-seater without rear seat assembly
- Sports seats with seat center section in Alcantara
- Steering wheel rim, shift lever and parking brake lever in Alcantara
- Distinctive instrument cluster with titanium-colored instrument dial, yellow pointers and increment markings as well as shift indicator
- Rev counter, door entry guards and carpeted rear wall with GT3 logo

The styling of the new 911 GT3 steering wheel is based on the new 3-spoke sports steering wheel of the current 911 Carrera generation. The new 911 GT3 steering wheel has a modified spoke design and redesigned steering wheel rim contour compared with the steering wheel from the previous model, but with the same steering wheel diameter.

As in the previous model, the new 911 GT3 also features the steering wheel rim with Alcantara finish and the leather-covered airbag module as standard. The steering wheel rim diameter remains unchanged at 370 mm and the grip size also corresponds to the previous model and to the new 3-spoke sports steering wheel of the current 911 Carrera generation.

The Alcantara options for the optional leather interior have been extended. As with the previous model, the new 911 GT3 features specific items finished in Alcantara in combination with the optional leather interior. The items covered are the door handles, exterior

mirrors, lid of door storage box, extension of door storage box and lid of center-console storage box. As a harmonious addition to this option, the new 911 GT3 also features Alcantara on the switch panel lower section, including glove-compartment lid.

For basic information on the interior, please refer to the Product Information release for the 911 GT3 (997).

4.4 Electrics

4.4.1 Front and tail lights

The new 911 GT3 features the following key changes compared with the previous model:

- Bi-Xenon headlights with headlight washer system and dynamic headlight leveling as standard
- New daytime driving lights and position light in LED technology, no fog lights
- Dynamic cornering light (optional)
- Lightweight headlights (optional)
- Redesigned tail lights in LED technology

Headlights and front light modules

As in the current 911 Carrera models, the new front lights emphasize the forward-looking character of the new 911 GT3, including the standard Bi-Xenon headlights and the use of modern LED lighting technology.

Compared with the Bi-Xenon headlights which were available as an option for the previous model, the standard lighting system for the new 911 GT3 includes a headlight cleaning system as well as dynamic headlight leveling. The transparent, clear-glass design of the headlights is an attractive feature and gives an unrestricted view of the sophisticated lighting technology, particularly for the dynamic cornering light, which is available as an option.

A horizontally arranged front light unit, which is integrated harmoniously into the front end, is positioned above the front side air intakes. Their new design includes the LED daytime driving lights and position lights as well as the direction indicators. The direction indicators are fitted with new-type bulbs that last much longer and have an excellent light output. The LED daytime driving light replaces the previously installed fog light. Fog lights are no longer needed because the Xenon dipped beam, which is now standard, has been optimized to reduce scattered light and side-light output, thereby taking over the function previously performed by the fog lights. The LED daytime driving light is designed as 6 LEDs, while the position light has 1 LED with a light guide.

Customer benefits of Bi-Xenon head lights

- Light output is 2.5 times that of halogen lights
- Good color vision thanks to proven Xenon technology
- Xenon headlights have a longer service life

- Headlight beam adjustment adapted to driving situation

The Bi-Xenon light offers the following advantages over halogen lights for dipped beam headlights:

- Light output is 2.5 times that of halogen lights
- Good color vision due to a high color temperature

When designing the front lights, attention was paid to ensuring sufficient luminous intensity while avoiding, as far as possible, any interference with the air flow to the radiators located behind them and thus maintaining the required radiator performance. This is possible thanks to the compact design of the LED technology used, which also has lower energy consumption and offers a long service life of more than 10,000 hours (ordinary bulbs: 200 - 1,000 hours).

Unless prohibited by law in a specific country, the daytime driving light function is pre-set to 'activated', but can be deactivated at the request of the customer using the instrument cluster menu. When the dipped beam headlight is activated, the daytime driving light is switched off automatically and the position light is activated.

Dynamic cornering light (optional)

A dynamic cornering light is being offered as an option for the new 911 GT3 for the first time. It is integrated into the new, striking inner styling of the double-lens projection system in the front headlights. The dynamic cornering light can be identified by the modified shape of the inner headlight cover adopted from the current 911 Carrera generation.

Customer benefits of dynamic cornering light:

- Enhanced active safety through optimum illumination of the carriageway even on bends
- Obstacles may be seen earlier on bends
- Optimal sensor-controlled adjustment of dynamic cornering light for every driving situation

This technology improves active safety for night-time driving by providing optimal illumination in corners. The light beam is projected on to the road to a maximum range without dazzling oncoming traffic. When driving in the dark on twisting roads, the driver can see which way the road is going and detect any obstacles much earlier and can adapt his driving style accordingly. At the same time, it provides a significant increase in safety when driving on country roads and on longer motorway bends.

The dipped beam light in the Bi-Xenon headlights follows the driver's steering movements and continuously adjusts to the current driving speed. Sensors continuously record the driving speed, lateral acceleration and steering angle and use this information to 'measure' the corner. A control unit uses the data it receives to work out the best angle for the dynamic cornering light. The dipped beam headlights are swiveled to the highest setting during cornering.

The dynamic cornering light is activated from a speed of 6 mph (10 km/h). The headlight adjustment angles depend on the vehicle speed and how sharply the driver turns the steering wheel. Viewed from the center axis of the vehicle, the maximum adjustment angle of the headlight at the inside of the bend is 15°, while the headlight angle at the outside of the bend is 7°. The different adjustment angles ensure maximum illumination of corners because the two light beams do not focus their light on one point. The cornering light also remains active when the high beam is switched on and therefore improves the driver's visibility. When the vehicle stops in a bend, the headlight swivel angle is adjusted slowly back to the zero position to give a calm overall impression. The dynamic cornering light is not activated when reverse gear is engaged due to legal stipulations.

Lightweight headlights (optional)

To reduce the vehicle weight, particularly for driving on race circuits, a halogen headlight system is available as an option for the new 911 GT3. In addition to differentiated headlight technology and individual product characteristics, this system, which was fitted as standard in the previous model, does not have dynamic headlight leveling or a headlight cleaning system including washer fluid container. The removal of these components and the specific design of the halogen headlights reduce the vehicle weight by approx. 4 lbs (6 kg).

Tail lights

The redesigned tail lights in LED technology are not just a further characteristic feature of the new 911 GT3, they also contribute actively to improving safety. The shape of the tail lights has been adapted to the new rear end design. They taper outward to a point and are integrated elegantly into the rear of the vehicle. Red and white (clear glass) functional areas create a homogenous and sporty look.

Customer benefits of LED tail lights:

- Improved active safety thanks to earlier warning for vehicles traveling behind
- Visual differentiation
- LED lights have a longer service life and use less power
- Increased illumination compared with conventional bulbs

The tail lights are designed as a single unit and combine the indicator light, reversing light, brake light, marker light, side marker light and reflector in one housing. The rear fog light is always fitted on the driver's side - in the left tail light on right-hand-drive vehicles and in the right tail light on left-hand-drive vehicles.

Apart from their new design, the most conspicuous feature of the new tail lights is the use of 60 LEDs for rear and brake lights, direction indicators and for the rear fog light. As a result, it was possible to achieve a very striking night design, particularly for the rear view.

The use of LED technology for the tail lights has the following advantages over tail lights fitted with ordinary bulbs:

- Response time is 1,000 times faster
- Considerably longer service life (> 10,000 hours)
- Reduced energy consumption
- Better illumination
- Compact design

The much shorter response time of LEDs for the brake lights, in particular, contributes significantly to active safety on the road. Whereas the response time of conventional bulbs is approx. 100 ms, this is only approx. 0.1 ms for LEDs. This difference corresponds to a distance of almost 9.8 ft. (3 m) at a speed of 60 mph (100 km/h). Considerably earlier signaling of braking therefore provides a faster warning for traffic traveling behind. These could be the decisive few meters that prevent a traffic accident. Earlier warning to traffic traveling behind was already achieved in the previous model by the high-mounted 3rd brake light in LED technology. Now the additional use of LED technology in the two tail lights greatly reinforces this effect. The increased illumination of the LEDs compared with conventional bulbs also helps to provide a better warning for vehicles traveling behind.

4.4.2 Battery

Like the previous model, the basic equipment of the new 911 GT3 features a battery with a capacity of 60 Ah to reduce the vehicle weight. The weight saving is approx. 6 lbs (2.8 kg) compared to the current 911 Carrera models, which feature a 70 Ah battery in the basic equipment. In cold countries (Canada, Russia, Finland, Estonia, Latvia, Lithuania, Norway, Sweden and Iceland) batteries with a higher capacity are used as is the case with the current 911 Carrera models.

4.5 Audio and communication

4.5.1 CDR-30 audio system (including combinable options)

Worldwide, the new 911 GT3 is equipped as standard with the CDR-30 audio system from the new Boxster and Cayman models, including CD storage box in glove compartment, two tweeters in the switch panel, two woofers in the door panels as well as two power amplifiers rated at 25 W each. The other features of the CD radio are FM double tuner with RDS diversity, a total of 30 memory locations, dynamic autostore and speed-dependent volume control. There are also numerous components for the multimedia area available on request.



Fig. 18: CDR-30 audio system

	Standard audio equipment and options for the CDR-30 audio system • = Standard O = Optional equipment W = Optional at no extra cost	911 GT3
Standard	CDR-30 audio system 2-DIN CD radio with 5-inch display (monochrome), MP3 play function, 4 loudspeakers and integrated amplifier (2 x 25 watt) as well as CD storage in glove compartment	•
490	Sound Package Plus Analog sound system with 9 loudspeakers and 235 watt output	O
692	Remote CD auto-changer (6-disc) Integrated in the CDR-30 radio instead of the standard single CD drive. Includes audio playback of MP3 music	O
870	Universal audio interface (AUX) Comprises an AUX interface in the center console storage bin (rear) for connecting other external audio sources which are then controlled directly via the connected device	O
619	Mobile phone preparation With Bluetooth® interface to connect a mobile phone to the Hands-free Profile (HFP). Includes the hands-free function and muting as well as operation of the basic functions via the CDR-30 CD radio. Includes microphone, wiring and GSM vehicle antenna	O
639	Chrono Package Consists of an analog stopwatch on the switch panel, digital stopwatch function in the instrument cluster	O
461	Rod antenna For improved medium wave reception. Now mounted on front fender.	W

For more detailed information on the new audio components, please refer to the Product Information release for the 911 Carrera (09/2008).

4.5.2 Porsche Communication Management 3.0 (PCM 3.0) with Sound Package Plus and Navigation module (including combinable options)

The display and operating concept of the optional Porsche Communication Management 3.0 (PCM 3.0) system has been developed with a view to improved operating ergonomics. The PCM 3.0 can be operated via a 6.5-inch color touch screen. As a result, virtually all functions of the new PCM 3.0 system can be selected by touching the color screen. This allows fast and simple navigation through the various menus. Of course, PCM 3.0 can still be operated using the familiar rotary/pushbutton switch as required.

The convenient arrangement of the controls contributes significantly to driver guidance. For simplicity, the number of operating buttons on the PCM 3.0 panel was significantly reduced from 32 down to 16, while at the same time increasing functionality.

As the central control unit for all audio and communication equipment, it is now even more efficient, more versatile and yet easier to use compared to the previous generation.

	<p>Audio options available in combination with PCM 3.0</p> <p>● = Standard O = Optional equipment w = Optional at no extra cost</p>	911 GT3
P23	<p>Porsche Communication Management 3.0 (PCM 3.0) with Sound Package Plus and navigation module</p> <p>Central multimedia system including - 6.5-inch TFT color screen (touch screen) - Radio with RDS double tuner and scan/phase diversity for improved reception - CD/DVD drive including audio playback of audio/video DVDs and MP3 music Sound Package Plus: Analog sound system including - 9 loudspeakers and 235 W total output Navigation module including - Hard disk with map data - Dynamic route guidance (TMC) - Perspective map display -Automatic route tracing and subsequent backtrack navigation as well as navigation in non-digitally mapped areas using a compass and GPS</p>	0
693	<p>In-dash CD/DVD auto-changer (6-disc)</p> <p>Integrated in the PCM 3.0 instead of the standard single CD drive. Including audio playback of audio/video DVDs and MP3 music</p>	0
870	<p>Universal audio interface (AUX, USB, iPod®)</p> <p>Comprises three connections in the center console storage bin (rear): - iPod® connector and cable to connect and charge various iPod® models (from iPod® 4th generation and iPod® mini). Includes operation via the PCM 3.0 or voice control. USB connection for USB memory sticks with MP3 music as well as MP3 players. Includes operation via the PCM 3.0 or voice control -AUX interface for connecting other external audio sources which are then controlled directly via the connected device. The USB connection can also be used to download electronic logbook data.</p>	0
619	<p>Mobile phone preparation With Bluetooth®</p> <p>Interface to connect a mobile phone to the Hands-free Profile (HFP). Includes the hands-free function and muting as well as operation of the basic functions via the PCM 3.0. Includes microphone, wiring and GSM vehicle antenna</p>	0
641	<p>Electronic logbook</p> <p>Allows the automatic recording of current mileage, distance covered, date and time as well as the starting point and destination for each trip. Includes PC software for later analysis of the data.</p>	0
671	<p>Voice control</p> <p>Allows all PCM 3.0 functions to be controlled almost exclusively using voice commands. With whole-word input of e.g. navigation destinations, phonebook entries or radio station names. Simplified operation by means of interactive input and display of menu-specific selection lists</p>	0

640	Chrono Package Plus Comprising analog stopwatch on the switch panel and digital stopwatch function in the instrument cluster, additional performance display in the PCM 3.0 as well as individual memory for light, windscreen wiper, climate and door lock settings	0
461	Rod antenna For improved medium wave reception. Now mounted on front fender.	w

For more detailed information on the new audio components, please refer to the Product Information release for the 911 Carrera (09/2008).

5. Standard equipment

Engine:
6-cylinder flat engine, 3.8 l displacement, maximum output 435 hp (320 kW), maximum torque 317 lb ft
Engine technology:
- aluminum engine block and cylinder head
- water cooling
- 4-valve technology
- titanium connecting rod
- camshaft adjustment VarioCam
- hydraulic valve clearance compensation
- dry-sump lubrication with external engine oil tank
- electronic engine management (Motronic ME7.8)
- electronic gas pedal
- hot-film air flow sensor
- sequential fuel injection (multipoint)
- cylinder-selective knock control
- two 3-way catalytic converters
- Stereo Lambda control
- individual ignition coils, static high-voltage ignition system
- variable intake system with 2 switch able tuning flaps
- on-board diagnosis system for monitoring emission control system
- sport exhaust system with 2 center tailpipes
Transmission:
6-speed manual transmission with dual-mass flywheel and transmission fluid cooling
Rear-wheel drive
Locking differential with asymmetrical action (28% acceleration, 40% deceleration)
Chassis:
8.5J x 19 GT3 light-alloy wheels, titanium-colored, with center lock and 255/35 ZR 19 sports tires, front
12J x 19 GT3 light-alloy wheels, titanium-colored, with center lock and 305/30 ZR 19 sports tires, rear
Central wheel bolts with GT3 logo

Anti-theft protection provided by center lock system
Tire Pressure Monitoring (TPMS)
Tire sealing compound with electric compressor and separate air pressure tester
Power-assisted steering with variable steering ratio
McPherson spring strut axle, front anti-roll bar
LSA multi-link rear axle, rear anti-roll bar
Vehicle stability system PSM (Porsche Stability Management) with sport setup, including ABS, ASR, ABD and MSR
Adjustable damper system PASM (Porsche Active Suspension Management) with sport setup and 30 mm lower than 911 Carrera
Adjustable chassis for use on race circuits (toe, camber, anti-roll bar)
Brake system:
6-piston aluminum monobloc fixed-caliper brakes at front and 4-piston aluminum monobloc fixed-caliper brakes at rear
Composite brake discs with a diameter of 380 mm at front and 350 mm at rear, internally vented and perforated
ABS 8.0 (integrated in PSM)
Brake pad wear sensors on each brake pad
Brake calipers painted red
Body:
Two-seater sports coupe
Sheet steel hot-dip galvanized on both sides
Underbody paneling
Front apron with integrated air intakes including dark grey grilles. Spoiler lip and air outlets in front of luggage compartment lid
Rear apron with additional air outlets and two center tailpipes
Rear lid with 2 ram air boxes and fixed double-deck wing
Logo GT3 on rear lid, black
Aluminum luggage compartment lid
Aluminum doors
Curved door handles
Door stops with 3 index positions
Door windows with hydrophobic coating
Electrics:
Power windows with one-touch operation and short-stroke lowering
Windscreen washer system with 2 wiping speeds, adjustable intermittent wipe and heated washer jets
Electrically adjustable heated exterior mirrors (double-arm), aspherical on driver's side
Heated rear window
CDR-30 audio system with 2 x 25 Watt, 4 loudspeakers
Uniform lighting concept for the entire interior, continuously variable dimming in white
Interior orientation lighting
Foot well lighting
Remote central locking including luggage compartment
Power luggage compartment and engine lid release

Weight-reducing battery
Lighting system:
Bi-Xenon headlights, including dynamic headlight leveling and headlight washer system
Separate additional lights in the front end with daytime driving and marker lights in LED technology, as well as indicator lights
Rear fog light on driver's side
Tail lights and raised third brake light in LED technology
Coming home lights
Instruments:
5 dial-type instruments integrated in the cockpit
Instrument cluster with yellow pointers and increment markings as well as multi-function indicator in dot-matrix display
Central tachometer with titanium-colored dial, GT3 logo and shift indicator
Analog displays for engine speed, vehicle speed and oil pressure, oil temperature, coolant temperature and fuel level
Permanent digital display of total mileage, trip mileage, time, outside temperature and speed
On-board computer
Passive safety:
Full-size airbags for driver and front passenger
Porsche Side Impact Protection System (POSIP), comprising side impact protection in the doors, thorax airbags integrated in the side sections of the front seats and head airbags for driver and front passenger integrated in the door panels
3-point automatic seat belts, front, with buckle on seat
Belt height adjustment, seat belt pre-tensioners and force limiters
Preparation for subsequent installation of the child seat anchoring system ISOFIX on the front passenger seat and deactivation
Immobilizer (transponder system) with central locking and remote control, safe locking system, alarm system and interior radar surveillance system
Deformation zones at front and rear with integrated alloy bumpers, fixed to impact elements
Air conditioning:
Automatic air conditioner with integrated active charcoal filter
Green tinted heat-insulating glass
Interior equipment:
Sports seats with leather covers and Alcantara seat inserts, electric backrest adjustment as well as manual front/aft and height adjustment, without rear seat system
3-spoke GT3 steering wheel with Alcantara steering wheel rim and leather airbag module, manual front/aft and height adjustment
Alcantara shift lever and parking brake handle
Black interior with plastic components painted in black soft-touch paint
Various interior parts painted in Volcano Grey
Roof liner in Alcantara
Lockable, large glove compartment
Door storage bins
Center console with 3 storage compartments

Cup holders located above the glove compartment (integrated behind the decorative switch panel trim)
Illuminated vanity mirrors in both sun visors (driver and front passenger side)
Door entry guards, rear carpet and tachometer with GT3 logo
Colors:
Exterior standard colors: Black, Guards Red, Carrara White, Speed Yellow
Interior standard color: Black

6. Product differentiation

The new 911 GT3 is sold as a 2-seater coupe with 6-speed manual transmission. The key differences in relation to the current 911 Carrera S are:

911 GT3 package

Design/Body

- GT3 front apron with air intake grille and additional air outlet openings in front of the luggage compartment lid
- GT3 rear apron with additional air outlet openings and two central single tailpipes
- GT3 rear lid with two ram air boxes and fixed rear wing
- 911 Carrera 4 front body shell
- One-piece side roof rail (without preparation for roof transport system)
- Aluminum doors
- Reduced PVC underbody protection
- "GT3" logo on rear lid (Black)

Interior

- 2-seater including sports seats with Alcantara center section
- 3-spoke GT3 steering wheel with steering wheel rim in Alcantara
- Shift lever and parking brake lever in Alcantara
- GT3 instrument cluster with yellow pointers and increment markings, rev counter with titanium-colored instrument dial
- Door entry guards, rear carpet cover and rev counter with "GT3" logo
- Reduced sound insulation
- CDR-30 audio system including 2 x 25 Watt amplifiers and 4 loudspeakers

Engine

- GT3 engine with titanium connecting rods, forged pistons, bucket tappets suitable for high engine speeds
- Dry-sump lubrication with external engine oil tank
- Max. power 435 hp (320 kW)
- Max. torque 317 lb ft
- Max. engine speed 8,500 rpm

911 GT3 package (continued)

- Torque increase in the range between 3,000 and 4,000 rpm by up to 26 lb ft via the SPORT button
- VarioCam with control of intake and exhaust camshafts
- Variable intake system with two tuning flaps
- GT3 sports exhaust system
- 60 Ah battery

Transmission

- 6-speed manual transmission with short transmission ratios, additional transmission oil cooling and steel synchronizer rings in third to fifth gear
- Mechanical limited slip differential with asymmetrical locking effect

Chassis

- PSM with GT3-specific tuning (SC+TC OFF)
- PASM with GT3-specific tuning
- Lowered by approx. 30 mm as compared to the 911 Carrera
- Adjustable chassis (height, camber and toe)
- Unibal supporting mounts on front axle
- Rear axle with rigidly mounted axle bracket
- Composite brake discs with aluminum brake disc chambers
- Brake system with: 6-piston aluminum fixed calipers and brake disc diameter of 380 mm on the front axle, 4-piston aluminum fixed calipers and brake disc diameter of 350 mm on the rear axle
- 19-inch GT3 wheels with center lock including wheel hub cover with "GT3" logo
- Sports tires
- Tire Pressure Monitoring (TPMS) as standard worldwide

Options

Reduced scope with the following 911 GT3-specific add-ons:

- Lightweight headlights (halogen headlights)
- Front axle lift system*
- Dynamic engine mount*
- Lightweight bucket seats made of carbon fiber
- Porsche Communication Management 3.0 (PCM 3.0) including Sound Package Plus and navigation system
- Various 911 GT3 adapted interior and exclusive equipment, in particular with GT3 logos, carbon options and Alcantara

*Available as of 09/2009 at the earliest

7. Optional equipment

Compared with the previous model, the individual options of the new 911 GT3 have been adapted to new features of the current 911 Carrera models (e.g. dynamic cornering light and new audio options) and extended to include new 911 GT3 specific options such as dynamic engine mounts and front axle lift system.

Exclusive	911 GT3		New options compared with the 911 GT3 (MY 08) O = Optional equipment w = Available at no extra charge ● = Standard equipment
			Exterior
	O	Code	Metallic paint Colors: Arctic Silver Metallic, Basalt Black Metallic, Meteor Grey Metallic, Aqua Blue Metallic, Macadamia Metallic
	O	Code	Special colors Special colors represent a selection of previously developed colors, some of which were in use in the past. Color range: GT Silver Metallic, Creme White, Nordic Gold Metallic, Porsche Racing Green Metallic, Ruby Red Metallic, Malachite Green Metallic Minimum lead time: 2 months
	O	603	Dynamic cornering light Headlight that automatically pivots into the corner, depending on the steering angle and vehicle speed, once the vehicle reaches a speed of more than 10 km/h. Note: Not in combination with lightweight headlights (Order No. 600)
	w	600	Lightweight headlights Halogen headlights (without headlight washer system). Weight advantage compared to standard Bi-Xenon headlights with headlight washer system approx. 6 kg.
EXC	O	XXG	Clear glass look tail lights (available as of 10/2009 at the earliest) Clear glass look lens with red reflector. Functions and dimensions correspond to those of the standard tail lights.
	O	P12	Automatically dimming interior/door mirrors with integrated rain sensor Integrated rain sensor with four-stage control for automatic wiper interval
EXC	O	XUB	Painted headlight washer system cover Painted in exterior color
EXC	O	XUZ	Door mirror housing in Aluminum Look, matt (available as of 06/2009 at the earliest) With Aluminum Look matt paint finish: Door mirror (lower part of housing shell)

EXC	0	CMA	Mirror attachment point finisher painted Painted in exterior color: Door mirror attachment point finisher (left/right). Note: Painted in different exterior color only upon request
EXC	0	XUC	Painted model designation Painted in exterior color: Model designation at rear
	w	498	Without model designation
	0	450	Porsche Ceramic Composite Brake (PCCB) Ceramic brake system, carbon fiber-reinforced ceramic composite brake discs, internally vented and cross-drilled, brake disc diameter 380 mm front and 350 mm rear, 6-piston brake calipers on front axle and 4-piston brake calipers on rear axle, lightweight aluminum brake disc chambers on front and rear axle, yellow painted finish on calipers
	0	474	Lifting system front axle (available as of 09/2009 at the earliest) Front of chassis can be raised pneumatically by approx. 30 mm. To increase ground clearance at speeds of up to approx. 50 km/h. Note: When the vehicle is parked, the lift system should be moved to its lowered position as the air pressure is only maintained for a certain period of time.
	0	140	Dynamic engine mount (available as of 09/2009 at the earliest) Electronically controlled engine mount with variable rigidity and damping. System for automatic changing of engine mount characteristics by a magnetizable (magneto-rheological) fluid and an electrically generated magnetic field. This increases both driving dynamics and driving comfort. Depending on the driving conditions, lateral dynamics are increased with an almost completely rigid link of the power unit to the chassis in the style of the 911 GT3 Cup and 911 GT3 RSR racing cars. Or a more flexible link can be selected to provide increased driving comfort.
	w	346	Silver-colored wheels The wheels are entirely painted in silver and have hub covers with a full-color Porsche Crest.
EXC	0	XD9	Wheels painted in exterior color (available as of 08/2009 at the earliest)
EXC	0	XDA	Wheels painted in Black (available as of 08/2008 at the earliest) Painted in part in Black
EXC	0	CRX	Wheels painted in different exterior color Painted in part in different exterior color - Note: Available in standard and special colors. Individual colors upon request
			Interior
EXC	0	XFG	Instrument cluster dials in Guards Red (available as of 08/2009 at the earliest) With GT3 logo

EXC	0	XFH	Instrument cluster dials in Speed Yellow (available as of 08/2009 at the earliest) With GT3 logo
EXC	0	XFJ	Instrument cluster dials in Carrara White (available as of 08/2009 at the earliest) With GT3 logo
EXC	0	CGG	Guards Red instrument dial Chrono clock
EXC	0	CGH	Speed Yellow instrument dial Chrono clock
EXC	0	CGJ	Carrara White instrument dial Chrono clock
	0	P01	Adaptive sports seats Sports seats with electrical adjustment of all seat functions including lumbar support and 4-way side-piece adjustment for driver and front passenger sides (no memory function). Leather seat covering with center strips in Alcantara
	0	P03	Sports bucket seats Lightweight racing bucket seats with folding backrest, integrated thorax airbag and manual fore/aft adjustment for driver and front passenger sides. Seat shell made from carbon fiber-reinforced plastic (GFRP/CFRP) with a surface of exposed carbon. Leather seat covering with center strips in Alcantara.
	0	342	Heated seats Left and right, two-stage Note: Not available in combination with standard sports bucket seats (Order No. P03)
	0	509	Fire extinguisher Compact DIN EN3 powder fire extinguisher containing 1 kg of extinguishing agent. Stored at the front, under the driver's seat Note: Not in combination with sports bucket seats (Order No. P03)
EXC	0	XXZ	Sports-look footrest New design footrest installed in footwell on the driver's side, designed to match the standard pedals, made of durable material with a stainless steel frame (brushed matt)
	0	810	Floor mats Black with Nubuk edging and embroidered Porsche logo at front (2-piece set)
EXC	0	XSA	Sports seat backrests in exterior color Painted in exterior color: Bucket sports seat backrest (5.9e), seat controls trim (5.9a), plating trim (5.9c). Note: Available only in standard and special colors. Not in combination with sports bucket seats (Order No. P03)
EXC	0	XSH	Seat belts in Silver Grey For driver's and front passenger seat
EXC	0	XSX	Seat belts in Guards Red For driver's and front passenger seat

EXC	0	XSY	Seat belts in Speed Yellow For driver's and front passenger seat
EXC	0	CXB	Door entry guards in stainless steel, illuminated Stainless steel door entry guards (left/right, 3.6) with white, illuminated GT3 logo
EXC	0	XME	Rear section of center console in painted finish Paint finish in exterior color: Rear of center console including ashtray cover (4.4a), rear center console storage bin (4.4d). Smooth leather finish in interior color: handbrake lever handhold trim (4.4b)
EXC	0	CME	Rear of center console in painted finish, different exterior color Paint finish in different exterior color: Rear of center console including ashtray cover (4.4a), rear center console storage bin (4.4d). Smooth leather finish in interior color: handbrake lever handhold trim (4.4b)
EXC	0	CDG	Interior package with dashboard in painted finish Paint finish in exterior color: Side vents (2.5a), center vent including switch trim (2.6a). Smooth leather finish in interior color and with decorative seams in part: defroster trim (2.4a), side vent vanes (2.5b), center vent vanes (2.6b). Note: Combination with painted (Order No. XDM) or leather (Order No. XVP) dashboard trim strip and leather defroster vents (Order No. CNB) is recommended
EXC	0	CUF	PCM 3.0 package in painted finish Paint finish in exterior color: PCM 3.0 trim (partial 4.0b), air-conditioning control panel trim (4.0c), lower control panel trim (4.0d), lower storage compartment trim (4.0e)
EXC	0	CET	Door release lever trim in painted finish Paint finish in exterior color: Door release lever trim (3.2c) Note: Combination with painted B-pillar belt outlet trim (Order No. XDR) is recommended.
EXC	0	CMC	Door opener in painted finish Paint finish in exterior color: Door opener (3.2b)
EXC	0	XDP	Instrument surround in painted finish Paint finish in exterior color: Instrument surround (2.0d)
EXC	0	XDM	Dashboard trim in painted finish Paint finish in exterior color: Dashboard trim including cup holder trim (five-part; 2.3)
EXC	0	CDN	Air vent vanes in painted finish Paint finish in exterior color: Side air vent vanes (2.5b), center vent vane (2.6b). Smooth leather finish in interior color and with decorative seams in part: side vents (2.5a), center vent with switch trim (2.6a)
EXC	0	XDJ	Gear lever trim in painted finish Paint finish in exterior color: Gear lever trim (4.2)

EXC	0	XDR	B-pillar belt outlet trim in painted finish (available as of 06/2009 at the earliest) Paint finish in exterior color: B-pillar belt outlet trim (left/right, 1.3b)
EXC	0	CMG	Interior package with dashboard in Black painted finish In Black paint finish: Side air vents (2.5a), center vent including switch trim (2.6a). Smooth leather finish in interior color and with decorative seams in part: Defroster trim (2.4a), side vent vanes (2.5b), center vent vanes (2.6b) Note: Combination with painted Black finish (Order No. CMM) or leather (Order No. XVP) dashboard trim strip and leather defroster vents (Order No. CNB) is recommended
EXC	0	CMF	PCM 3.0 package in Black painted finish In Black paint finish: PCM 3.0 trim (partial 4.0b), air-conditioning control panel trim (4.0c), lower trim of control panel (4.0d), lower storage compartment trim (4.0e)
EXC	0	CMK	Door opener trim in Black painted finish In Black paint finish: Door opener trim (3.2c). Note: Combination with Black paint finish B-pillar belt outlet trim (order no. CMR) is recommended.
EXC	0	CDC	Door opener in Black painted finish In Black paint finish: Door opener (3.2b)
EXC	0	CMP	Instrument surround in Black painted finish In Black paint finish: Instrument surround (2.0d)
EXC	0	CMM	Dashboard trim in Black painted finish In Black paint finish: Dashboard trim including cup holder trim (five-part; 2.3)
EXC	0	CMN	Air vent vanes in Black painted finish In Black paint finish: Side air vent vanes (2.5b), centre vent vane (2.6b). Smooth leather finish in interior color and with decorative seams in part: side vents (2.5a), center vent with switch trim (2.6a)
EXC	0	CMJ	Gear lever trim in Black painted finish In Black paint finish: Gear lever trim (4.2)
EXC	0	CMD	Rear section of center console in Black painted finish In Black paint finish: Rear of center console including ashtray cover (4.4a), rear center console storage bin (4.4d). Smooth leather finish in interior color: handbrake lever handhold trim (4.4b)
EXC	0	CMR	B-pillar belt outlet in Black painted finish In Black paint finish: B-pillar belt outlet trim (left/right, 1.3b)
			Leather and natural leather interior

	0	Code	Black leather interior Additional scope of leather features for standard interior: Trim A-pillar/windscreen frame (1.0a), B-pillar trim (1.3a), C-pillar trim (1.4a), front part of dashboard including airbag cover (2.0a), upper part of dashboard including instrument cluster cover (2.0b), door trim including head airbag cover (3.0a), front side trims (4.0a), rear side trims (3.1a), all leather items in smooth leather. Additional items in Alcantara: Door handle (3.2a), door mirror (3.0c), door storage compartment lid (3.3a), extension of door storage compartment (3.3c), center console storage compartment lid (4.4c), dashboard, lower part, including glove compartment lid (2.1a)
	0	998	Leather interior in natural leather Natural Dark Grey. Leather through-dyed by means of a gentle process that maintains the material's natural characteristics. Same features as leather equipment. Plastic items finished in soft touch Black paint. Note: Center seat strips in Alcantara, as for standard seats.
EXC	0	EAF	Additional interior package in leather Smooth leather finish in interior color: Instrument surround (2.0d), side vents (2.5a), side vent vanes (2.5b), center vent including switch trim (2.6a), center vent vane (2.6b), door opener trim (3.2c)
	w	841	3-spoke sports steering wheel in smooth leather Smooth leather finish in interior color: Steering wheel rim (2.2a) and airbag module (2.2b). Silver-colored spoke trim
EXC	0	XNG	Instrument surround leather Smooth leather finish in interior color: Instrument surround (2.0d)
EXC	0	XNS	Steering column casing leather Smooth leather finish in interior color: Steering column casing (three-part; 2.2i). Painted in interior color: Hands-free microphone cover
EXC	0	XSC	Porsche Crest on head restraints Embossed on head restraints (5.3a and 8.1) on front seats
EXC	0	XMZ	Rear section of center console in leather Smooth leather finish in interior color: Center console at rear including ashtray cover (4.4a), rear center console storage bin (4.4d), handbrake lever handhold trim (4.4b)
EXC	0	XMA	Leather roof-liner Made of smooth leather in interior color
EXC	0	EAK	A-pillar interior package, leather Smooth leather finish in interior color and with decorative seams in part: Dashboard end-trim (2.1b), ignition lock surround (2.7a), mirror attachment point finisher (not mirror switch and base plate; 3.0b)
EXC	0	DAB	B-pillar interior package, leather Smooth leather finish in interior color: B-pillar belt outlet trim (left/right, 1.3b), B-pillar cover for belt height adjustment (left/right; 1.3c), B-pillar clothes hook (left/right; 1.3d), seat backrest clothes hook (5.3b)

EXC	0	CUR	PCM 3.0 package, leather Smooth leather finish in interior color: PCM 3.0 trim (partial 4.0b), air-conditioning control panel trim (4.0c), lower trim of control panel (4.0d), lower storage compartment trim (4.0e)
EXC	0	XVT	Leather grilles for door loudspeakers and rear loudspeakers (available as of 06/2009 at the earliest) Smooth leather finish in interior color and with decorative seams in part: Rear speaker grille (3.1b), door panel trim (3.4), mid-range speaker grille (3.8a), bass speaker grille (3.8b). Painted in interior color: Loudspeaker grille.
EXC	0	XV1	Leather defroster trim Smooth leather finish in interior color and with decorative seams in part: Defroster vent trim (2.4a), dashboard speaker grille (center; 2.8b)
EXC	0	CNB	Leather defroster vents Smooth leather finish in interior color: Defroster vents frames (2.4b). Painted in interior color, soft-touch paint: Defroster vent vanes
EXC	0	XMP	Leather sun visors Smooth leather finish in interior color (left/right;1.0b), including cover of vanity mirror
EXC	0	XZD	Interior light cover, leather Smooth leather finish in interior color and with decorative seams: Interior light cover (1.1)
EXC	0	XVW	Leather interior mirror (available as of 06/2009 at the earliest) Smooth leather finish in interior color: Interior mirror surround (1.2a), interior mirror housing (1.2b), interior mirror base (1.2c)
EXC	0	XVP	Leather dashboard trim Smooth leather finish in interior color: Dashboard trim including cup holder trim (five-part; 2.3)
EXC	0	XDZ	Leather gear lever trim Smooth leather finish in interior color and with decorative seams: Gear lever trim (4.1b)
EXC	0	XSB	Sports seat backrests, leather Smooth leather finish in interior color: Sports seat backrest shell (5.9e), with Aluminum Look paint finish: Seat control panel trim (5.9a), plating trim (5.9c). Note: Not in combination with sports bucket seats (Order No. P03)
EXC	0	XVY	Clothes hook on seat backrest, leather (available as of 06/2009 at the earliest) Smooth leather finish in interior color: Clothes hook on seat backrest (5.3b). Note: Part of B-pillar interior package, leather (Order No. DAB). Not in combination with sports bucket seats (Order No. P03)
EXC	0	CDT	Leather seat belt buckles Smooth leather finish in interior color: Seat belt buckles (front; 5.8)
EXC	0	XDU	Leather B-pillar belt outlet trim (available as of 06/2009 at the earliest) Smooth leather finish in interior color: B-pillar belt outlet trim (left/right, 1.3b). Note: Part of B-pillar leather interior package (Order No. DAB).

EXC	0	CUJ	Leather fuse box cover Smooth leather finish in interior color and with decorative seams: Fuse box cover (3.9)
EXC	0	XTG	Inner door-sill guards in leather Smooth leather finish in interior color and with decorative seams: Interior door-sill guard (3.5)
EXC	0	XJX	Floor mats with leather trim Two-piece set. Black carpet. With black leather trim and double stitching. Inlay made from leather in black with embossed Porsche logo and decorative stitching
EXC	0	CFX	Individual floor mats with leather trim Additional scope for floor mats with leather trim: Choice of color for leather trim and decorative stitching
EXC	0	CPU	Leather key pouch Smooth leather finish in interior color, with embossed Porsche Crest and decorative stitching
			Alcantara interior
EXC	0	CLE	Alcantara dashboard trim With black Alcantara finish: Dashboard trim including cup holder trim (five-part; 2.3)
EXC	0	XLG	Lid of storage compartment in Alcantara with Porsche logo Finished in black Alcantara with decorative seams: Lid of storage compartment, center console (4.4c), with Porsche logo
EXC	0	XXH	Alcantara sun visors (possibly available as of 06/2009 at the earliest) With black Alcantara finish (left/right;1.0b), including cover of vanity mirror
			Carbon interior
EXC	0	EZA	Carbon interior package Carbon finish: Decorative dashboard trim including cup holder trim, (five-part; 2.3), shift lever (in part; 4.1a), upper part of handbrake lever (4.3b). With Alcantara finish: Shift lever (4.1a) including decorative trim (4.1e) in Volcano Grey with white shift pattern, handbrake lever handle (4.3a) including insert in Volcano Grey with white GT3 logo
EXC	0	EZB	Additional Carbon interior package Carbon finish: Side vents (2.5a), center vent (2.6a), door handle trim (3.2c). Smooth leather finish in interior color: Side vent vanes (2.5b), center vent vanes including switch trim (2.6b)
EXC	0	XMJ	Rear section of center console in Carbon Carbon finish: Rear of center console including ashtray cover (4.4a), rear center console storage bin (4.4d). Smooth leather finish in interior color: Handbrake lever handhold trim (4.4b)
EXC	0	XJJ	Carbon B-pillar belt outlet trim (available as of 06/2009 at the earliest) Carbon finish: B-pillar belt outlet trim (left/right, 1.3b)

EXC	0	X69	Carbon door-entry guards With GT3 logo
EXC	0	CXD	Carbon door entry guards, illuminated Carbon door entry guards (left/right, 3.6) with white, illuminated GT3 logo
			Audio and communication for vehicles w/ the CDR-30 audio system
	•		CDR-30 audio system 2-DIN CD radio with 5-inch display (monochrome), MP3 play function, 4 loudspeakers and integrated amplifier (2 x 25 watt) and CD storage in glove compartment
	0	490	Sound Package Plus Analog sound system with total of 9 loudspeakers and 235 Watt output. Dashboard: Two 1.9 cm high-frequency loudspeakers, one 7.0 cm mid-frequency loudspeaker (center speaker) Doors: Two 20.0 cm low-frequency loudspeakers, two 10.0 cm mid-frequency loudspeakers Rear: Two 10.0 cm mid-frequency loudspeakers
	0	692	Remote 6-disc CD auto-changer Integrated in the CDR-30 instead of the standard single CD drive. Includes audio playback of MP3 music
	0	870	Universal audio interface Includes an AUX interface in the storage compartment of the center console (rear) to connect an external audio source, whereby it is controlled directly using the end device connected
	0	619	Mobile phone preparation With Bluetooth® interface to connect a mobile phone to the Hands-Free Profile (HFP). Includes the hands-free function and muting as well as operation of the basic functions via the CDR-30. Includes microphone, wiring and GSM vehicle antenna
	0	639	Chrono package Comprising analog stopwatch on the dashboard and digital stopwatch function in the instrument cluster
	0	461	Rod antenna For improved medium-wave reception. Now mounted on front fender.
			Audio and communication for vehicles with PCM 3.0

0	P23	<p>Porsche Communication Management 3.0 (PCM 3.0) with Sound Package Plus and navigation module</p> <p>Central multimedia system including - 6.5-inch TFT color screen (touch screen)</p> <ul style="list-style-type: none"> - Radio with RDS dual-tuner and scan/phase diversity for improved reception - CD/DVD drive including audio playback of audio/video DVDs and MP3 music <p>Sound Package Plus: Analog sound system including</p> <ul style="list-style-type: none"> - 9 loudspeakers and 235 Watt total output, including navigation module - Hard disk with map data - Dynamic route guidance (TMC) - Perspective map display - Automatic route tracing and subsequent backtrack navigation as well as navigation in non-digitally mapped areas using a compass and GPS
0	693	<p>In-dash 6-disc CD/DVD auto-changer</p> <p>Integrated in the PCM 3.0 instead of the single CD/DVD drive. Including audio playback of MP3 music and audio/video DVDs</p>
0	870	<p>Universal audio interface (AUX, USB, - iPod®)</p> <p>Comprises three connections in the center console storage compartment (rear):</p> <ul style="list-style-type: none"> - iPod® connector and cable for connecting and charging various iPod® models (iPod® 4th generation and up, and iPod® mini). Includes operation via the PCM 3.0 or voice control. - USB connection for USB memory sticks with MP3 music as well as MP3 players Includes operation via the PCM 3.0 or voice control. - AUX interface for connecting an external audio source which is then controlled directly via the connected end device. The USB connection can also be used to download electronic logbook data.
0	619	<p>Mobile phone preparation</p> <p>With Bluetooth® interface to connect a mobile phone to the Hands-Free Profile (HFP). Includes hands-free function and muting as well as operation of the basic functions via the PCM 3.0. Includes microphone, wiring and GSM vehicle antenna.</p>
0	641	<p>Electronic logbook</p> <p>Allows the automatic recording of current mileage, distance covered, date and time as well as the starting point and destination for each trip. Includes PC software for later analysis of the data. The software meets the requirements of the German tax authorities for documenting automatic logbook recording.</p>
0	671	<p>Voice control</p> <p>Allows almost all PCM 3.0 functions to be controlled using voice commands. With whole-word input of navigation destinations, phonebook entries and radio station names, for example, without the system having to learn them. Simplified operation by means of interactive input and display of menu-specific selection lists.</p>

	0	640	Chrono Plus package Comprising analog stopwatch on dashboard, digital stopwatch function in the instrument cluster, additional performance display in the PCM 3.0 and individual memory for light, wiper, air-conditioning and door-locking settings
	0	461	Rod antenna For improved medium-wave reception. Now mounted on front fender.
			Factory collection
	0	900	911 GT3 factory collection

8. Technical data

Data - related to the EU-specification model, left-hand drive, Germany, unless otherwise specified

Bold entries - Denote points where the new 911 GT3 deviates from the 911 GT3 (MY'08)

No details - No figures available at time of going to press

		New 911 GT3	911 GT3 (MY'08)	911 GT3 RS (MY'08)
1. Engine				
Number of cylinders		6	6	6
Valves/cylinders		4	4	4
Displacement (effective)	cm ³ / cu. in	3,797 / 231.6	3,600 / 219.7	3,600 / 219.7
Bore x stroke	mm	102.7 x 76.4	100 x 76.4	100 x 76.4
	in	4.04 x 3.01	3.94 x 3.0	3.94 x 3.0
Max. output	kW	320	305	305
	hp	435	415	415
at engine speed	rpm	7,600	7,600	7,600
Max. torque	Nm / lb ft	430 / 317	405 / 300	405 / 300
	at engine speed	rpm	6,250	5,500
Compression ratio		12.0:1	12.0:1	12.0:1
		New 911 GT3	911 GT3(MY'08)	911 GT3 RS (MY'08)
Volumetric efficiency	kW/L	84.3	84.7	84.7
	hp/l	114.6	115.3	115.3
Engine cooling (cylinder head)		Cross flow	Cross flow	Cross flow

Engine controller/mixture preparation		Digital engine electronics ME 7.8.2	Digital engine electronics ME 7.8/40	Digital engine electronics ME 7.8/40
Fuel type (RON 95 can be used but will reduce performance)		RON 98 unleaded	RON 98 unleaded	RON 98 unleaded
Generator	W	2,100	2,100	2,100
Starter	kW	2.2	1.7	1.7
Battery capacity	Ah	60	60	60
Idle speed	rpm	720 ±40	780 ±40	780 ±40
Maximum engine speed	rpm	8,500	8,400	8,400
2. Trans.				
Manual gearbox Transmission ratio	1st gear	3.82	3.82	3.82
	2nd gear	2.26	2.26	2.26
	3rd gear	1.64	1.64	1.64
	4th gear	1.29	1.29	1.29
	5th gear	1.06	1.06	1.06
	6th gear	0.92	0.92	0.92
Reverse		2.86	2.86	2.86
Final drive ratio, rear axle		3.44	3.44	3.44
Clutch diameter	mm / in	240 / 9.45	240 / 9.45	240 / 9.45
3. Chassis				
Front axle		PASM chassis. Spring strut suspension, wheels suspended individually on wishbones with trailing links and spring struts, divided control arm (camber adjustment), Unibal front supporting mount (McPherson type, Porsche optimized). One cylindrical spring per wheel with progressive characteristic and internal single-tube gas-filled shock	PASM chassis. Spring strut suspension, wheels suspended individually on wishbones with trailing links and spring struts, divided control arm (camber adjustment), Unibal front supporting mount (McPherson type, Porsche optimized). One cylindrical spring per wheel with progressive characteristic and internal single-tube gas-filled shock	PASM chassis. Spring strut suspension, wheels suspended individually on wishbones with trailing links and spring struts, divided control arm (camber adjustment), Unibal front supporting mount (McPherson type, Porsche optimized). One cylindrical spring per wheel with progressive characteristic and internal single-tube gas-filled shock

	absorber Shock absorber with double clamping to the wheel carrier	absorber Shock absorber with double clamping to the wheel carrier	absorber Shock absorber with double clamping to the wheel carrier
Toe-in	0 (±2')	+6' (±2')	+6' (±2')
Camber	-1°30' (±5')	-1°20' (±5')	-1°20' (±5')
Rear axle	PASM chassis. Multi-link suspension, wheels supported individually on 5 control arms, control arm divided (adjustable camber), one cylindrical coil spring per wheel with coaxial internal, double-acting hydraulic single-tube gas-filled shock absorber	PASM chassis. Multi-link suspension, wheels supported individually on 5 control arms, control arm divided (adjustable camber), one cylindrical coil spring per wheel with coaxial internal, double-acting hydraulic single-tube gas-filled shock absorber	PASM chassis. Multi-link suspension, wheels supported individually on 5 control arms, control arm divided (adjustable camber), one cylindrical coil spring per wheel with coaxial internal, double-acting hydraulic single-tube gas-filled shock absorber
Toe-in	+13' (±2')	+13' (±2')	+13' (±2')
Camber	-1°30' (±5')	-2° (±5')	-2° (±5')
Steering			
Ratio center position - - variable	17.1:1 13.8:1	17.1:1 13.8:1	17.1:1 13.8:1
Steering wheel revolutions from lock to lock	2,62	2,62	2,62
Steering wheel diameter mm / in	370 / 14.57	370 / 14.57	370 / 14.57

¹⁾ The technical specifications are provisional; no official values were available at the time of going to press.