presse • news • prensa • tisk • imprensa • prasa • stampa • pers • 新闻界

Volkswagen

New Golf GTI

International Press Presentation

Saint Tropez, April 2013

Notes:

You will find this press release and graphic motifs of the Golf GTI online at: www.volkswagen-media-services.com.
User ID: gtisieben | password: 04-2013

Features and technical data apply to models offered in Germany. They may differ in other countries.

Contents.

New Golf GTI has up to 230 PS of power and is 18 per cent more fuel efficient

Progressive steering, xenon headlights and ambience lighting are standard

Handling of the Golf GTI Performance model crosses over to high-performance sports cars

Golf GTI – brief summary.

Wolfsburg/Saint Tropez, April 2013. To date, nearly 1.9 million Golf GTI cars have been produced at the Volkswagen plant in Wolfsburg and sold worldwide. Back in 1976, when the GTI was invented, no one could have predicted such success. 5,000 units were planned, of a car that is the most successful of its type in the world. A phenomenon. The first Golf GTI, launched 37 years ago, defined a fundamental standard for dynamic performance that was more precise than any other compact car. The affordable Volkswagen also made automotive sportiness more attainable than ever for people. Everything was simply right about it – the safe and taut chassis, the agile and fuel-efficient injection engine and the car's styling that was as unmistakable as it was timeless. All of this combined with the insignias of a future icon – a red stripe around the radiator grille, a black border around the rear windscreen, a sport steering wheel like in the Scirocco Coupé, a golf ball as a gear shift grip, ergonomically perfect sport seats with a classic tartan design and a name that would never be forgotten: GTI. Now a new seventh generation GTI is launching. It will arrive at dealers starting in May, and advance sales have begun.

› **100 per cent more power**. The engine of the first Golf GTI produced exactly 81 kW/110 PS. Now, the seventh generation Golf GTI sends at least 162 kW/220 PS to the front wheels – which is exactly double the power of the first Golf GTI. In addition, Volkswagen is offering a factory installed power enhanced engine that produces an additional 10 PS (169 kW/230 PS) – it is on-board the Golf GTI Performance.

› **2.0-litre turbocharged direct injection engine**. The turbocharged engine of the GTI is from the third generation of the EA888 engine series and has a completely newly developed cylinder head. A unique feature in this power class is the water-cooled exhaust gas circulation loop to the turbocharger that is fully integrated in the cylinder head. This type of exhaust gas cooling makes a crucial contribution towards improving fuel consumption at full load in the new Golf GTI. In addition, the 1,984 cc TSI features variable valve timing with dual camshaft adjustment. In addition, the valve lift on the exhaust side is adjustable over two stages. This enables optimal control of the charge exchange process for better performance, fuel economy and low emissions.

› **18 per cent better fuel economy with manual gearbox**. Both GTI versions, equipped with a stop/start system and a 6-speed gearbox as standard, attain the same low NEDC fuel consumption value of 6.0 l/100 km (CO_2: 139 g/km). The combined fuel consumption of the Golf GTI was reduced by 1.3 litres or 18 per cent compared to the previous model (155 kW/210 PS).

› **14 per cent lower fuel consumption with DSG**. A 6-speed dual-clutch gearbox (DSG) that offers uninterrupted propulsive power is optional for both power levels; it matches the character of the sporty icon to perfection. In this case, the fuel consumption of the 220-PS version is 6.4 l/100 km (equivalent to 149 g/km CO_2); in the 230-PS version it is 6.5 l/100 km (150 g/km CO_2). In the DSG version, fuel consumption of the 220 PS GTI is 1.0 l/100 km (14 per cent) less than that of the previous 210 PS model.

› **42 kg lower weight**. The significantly improved fuel economy values of the new Golf GTI can be traced back to actions that fought for every tenth of a litre in savings. The sports car, like the base model, is based on the new modular transverse matrix (MQB). And, similar to the base model, the weight of the GTI was also reduced compared to the previous model – from 1,393 kg to 1,351 kg

(42 kg savings). The car's aerodynamics were also improved. Its aerodynamic drag (cD x A) shrank from 0.73 m^2 in the already very good previous model to 0.70 m^2. In urban traffic and in traffic jams, the standard Stop/Start system of the GTI has a positive effect on fuel economy. The substantially higher torque of 350 Nm (instead of the 280 Nm of the previous model) made it possible to also reduce the gear ratios for lower engine speeds, adapting them to the engine's lower rev levels. Precisely this reduces fuel consumption. Last but not least, internal engine modifications were made – including a new and innovative thermal management system; they contribute towards the noted 18 per cent improvement in fuel economy in the 2.0-litre TSI.

› **10 km/h faster**. The low fuel consumption and emission values of the Golf GTI contrast with the car's simply dominating driving performance data. The 220 PS Golf GTI accelerates to 100 km/h in 6.5 seconds and has a top speed of 246 km/h (DSG: 244 km/h). The 230-PS Performance version completes the sprint in 6.4 seconds and reaches a top speed of 250 km/h (DSG: 248 km/h); the top version is therefore 10 km/h faster than the previous model. Based on its handling properties, the new Golf GTI is impressively penetrating into the market segment of high-class and considerably more expensive sports cars more than ever before. This is especially true of the Golf GTI Performance with its front differential lock that was exclusively developed for this version. The Performance Pack itself not only consists of a power boost and the differential lock, it also offers a braking system with larger dimensions and internally-ventilated discs at all four wheels.

› **GTI exterior**. Of course, the new Golf GTI is distinguished from other cars in the model series by numerous additional features and classic GTI insignia. On the exterior, they include the red painted brake callipers, smoked LED rear lights in a custom design as well as chrome tailpipes on the left and right. The production colours Red ("Tornado Red") and "Black" as well as "Pure White" have been typical for the Golf GTI since its early days. Also standard on-board the most powerful, fastest and most fuel-efficient Golf GTI ever are the newly designed 17-inch "Brooklyn" alloy wheels with size 225/45 tyres.

› **GTI interior**. The typical GTI insignia are indispensible in the interior as well. Consider the seat covers: The first GTI had them already: seat covers in the legendary tartan pattern. The fabric known as "Jacky" in the previous model was redesigned and is now known as "Clark"; naturally, it was kept in the classic tartan pattern. New: the fabric design of the sport seats can now be obtained

for the first time with side panels and head restraints in Alcantara. In addition, the seats and door trim panels can also be ordered with “Vienna” leather upholstery. One way or another: the top sport seats offer exceptionally good ergonomic properties. The GTI instrument cluster also makes a strong statement with a colour display and unique instrument graphics. The GTI-specific look in the interior is rounded out by such features as an independent leather sport steering wheel (with multifunction keys), red ambience lighting (in front, in the trim strips of the doors and the stainless steel door sill guards) and pedals made of brushed stainless steel.

› **High-tech GTI**. The seventh generation of the sporty icon is the first Golf GTI to launch with standard technology highlights such as progressive steering, the Driver Alert System, Automatic Post-Collision Braking System and the further advanced XDS+ vehicle dynamics function. Also new are optional systems that further perfect driving with the new GTI. They include adaptive cruise control (ACC), the surroundings monitoring system Front Assist with City Emergency Braking, the Lane Assist lane-keeping assistant and a driving profile selector. With the debut of the GTI, the Golf will also be available with a 400-Watt sound system by the high-end Danish brand Dynaudio that was individually engineered for the car. Also available as a new optional feature: Car-Net for transmitting online information such as the Google Earth™ map service.

230 PS Golf GTI engine consumes just 6.0 l/100 km

Golf GTI buyers can choose between 220 PS and 230 PS of power

Fuel economy of new GTI engine was improved by up to 18 per cent

Wolfsburg/Saint Tropez, April 2013. The Golf GTI VII is powered by an advanced engine of the EA888 series – a two-litre turbocharged direct-injection petrol engine (TSI) with a new cylinder head design. The TSI produces 162 kW/220 PS (from 4,500 to 6,200 rpm). The sports car icon is optionally available in a performance-enhanced version as the Golf GTI Performance. In this version, the engine produces 169 kW/230 PS (from 4,700 to 6,200 rpm). Both GTI versions are equipped with a Stop/Start system as standard and, with a 6-speed gearbox, they attain the same low NEDC fuel consumption of 6.0 l/100 km (CO_2: 139 g/km). The combined fuel consumption of the new Golf GTI was thereby reduced by 1.3 litres per 100 km, or 18 per cent, compared to the previous model (155 kW/210 PS). A 6-speed dual-clutch gearbox (DSG) is available as an option for both power levels. The recognised high agility of the Golf GTI has been increased once again in the new model compared to the previous model. In two stages:

Stage 1 – the standard GTI: The 220 PS base version now outputs 10 PS more than the previous model. At the same time, its maximum torque was increased by a considerable 70 Nm to 350 Nm (from 1,500 to 4,400 rpm). Equipped in this way, the Golf GTI makes its appearance with highly superior flexibility values: in fourth gear, the Golf GTI accelerates from 80 to 120 km/h in 5.0 seconds; in fifth

gear, it takes 6.0 seconds. Other data that must not be overlooked in a GTI: the new one accelerates to 100 km/h in 6.5 seconds and reaches a top speed of 246 km/h.

Stage 2 – the GTI Performance: Those choosing a Golf GTI with the performance pack ignite the second stage. As mentioned, the car's power is increased by 10 PS here, while its maximum torque is identical. The 230 PS of power enables a top speed of 250 km/h and just 6.4 seconds for the sprint to 100 km/h. Its maximum torque of 350 Nm is available from 1,500 to 4,600 rpm.

Advanced petrol turbocharged direct injection engine (TSI)

The engine of the new Golf GTI is based on the EA888 four-cylinder engine series – now in its third generation. Compared to the previous engine generation, numerous technical details were modified to reduce fuel consumption and emissions while simultaneously increasing power and torque values. As a result, the new model is the first Golf GTI to conform to limits of the Euro-6 emissions standard.

Efficient thermal management. The turbocharged direct petrol injection engine is marked by innovative technical modifications such as exhaust gas cooling integrated in the cylinder head and a dual injection system with both direct injection and multi point injection. The new fully-electronic coolant control system of the TSI enables significantly more efficient thermal management with a shorter warm-up phase; this reduces friction losses, which efficiently improves fuel economy. A new type of rotary vane module was developed for intelligent thermal management control. This makes it possible to fully block coolant entry into the engine or adjust to a minimal volumetric flow in the engine warm-up phase. In the hot operating state, the coolant temperature can be adjusted quickly and fully variably to various temperatures as a function of engine load and external constraints.

Newly developed cylinder head. A unique innovation in this power class is a water-cooled exhaust gas circulation loop to the turbocharger that is fully integrated in the newly developed cylinder head. This type of exhaust cooling makes an important contribution towards reducing fuel consumption at full load in the new Golf GTI. In addition, the 1,984 cc TSI has variable valve timing with dual camshaft adjustment. In addition, the valve lift on the exhaust side can be switched over two stages. This enables optimal control of the charge exchange process for better performance, fuel economy and low emissions.

GTI fulfils Euro-6 emissions standard. As noted, a dual injection system – with direct injection and multi point injection – was also implemented to conform to the Euro-6 emissions standard. Since the system can freely choose the injection type that is optimal at any given time, it possible to reduce particulate emissions over broad map regions and also reduce fuel consumption. Another focus of development was to significantly reduce internal friction. This involved such modifications as changing over the balancer shafts to anti-friction bearings, optimising the crankshaft drive and developing an oil pump that operates only as needed. In parallel, the weight of the GTI engine was reduced as well. A large portion of the savings came from the new thin-wall crankcase that is only 3 mm thick, a weight-optimised crankshaft, exhaust gas cooling by integrating the exhaust manifold in the cylinder head, a plastic oil pan and the use of aluminium screws.

Golf GTI has sport suspension and new progressive steering

New progressive steering of GTI resolves conflict between comfort and sportiness

New front differential lock is used exclusively in the Golf GTI Performance

Wolfsburg/Saint Tropez, April 2013 The Golf GTI is offered with a standard sport suspension that is tuned to the higher power of the Volkswagen car. Therefore, the body was lowered 15 mm compared to the less powerful Golf models. In front, a MacPherson suspension provides for precise tracking; at the rear, there is the modular performance suspension. Equipped as standard with the further advanced XDS+ vehicle dynamic function and the new progressive steering system (significantly smaller steering angle input required from one end stop to the other: just over two full turns), the Golf GTI is advancing more than ever into the realm of high-class and significantly more expensive sports cars with its agile and safe handling properties.

Golf GTI Performance

The Golf GTI Performance, whose power was boosted to 230 PS, makes an especially impressive appearance with its front differential lock that was exclusively developed for this version. In this Volkswagen, the advantages of the GTI-specific sport suspension, new progressive steering system, further advanced XDS+ vehicle dynamic function and electronic front differential lock all add up to handling that is far superior to that of the majority of competitors. The Golf GTI Performance is also equipped with internally-ventilated disc brakes at all four wheels. The brake system uses 340 x 30 mm

discs at the front and 310 x 22 mm at the rear wheels. The 220-PS GTI has internally-ventilated discs at the front wheels and unventilated discs at the rear (front: 314 x 30 mm; rear: 300 x 12 mm).

Vehicle dynamics

The running gear layout of the new Golf GTI has been tuned for maximum driving fun combined with a high level of vehicle stability. Drivers will notice that steering response is now even more agile than in the previous model thanks to more direct steering gear ratios. Maximum attainable speeds through bends were also increased, because of more neutral running gear tuning and optimisations of the XDS+ system. In the Golf GTI Performance, the transverse acceleration potential was further increased by the front differential lock; this is especially true of the car's acceleration out of bends. Applicable to both versions of the new Golf GTI, is that their neutral handling in bends goes hand in hand with very good vehicle stability right up to the maximum speed range, thanks to an innovative and careful layout of all running gear components. This exceptionally high vehicle stability is especially noticeable during lane changes and during engine load changes. The development team also made a special effort to tune the new Golf GTI for harmonious and predictable reactions of the running gear. The results: drivers will be able to quickly and intuitively master handling of the GTI after a very short time.

In parallel to improvements to vehicle dynamics, the suspension comfort was also enhanced relative to the previous model. For example, the acceleration forces acting on passengers when driving over small and large road bumps have been noticeably reduced. The comfort levels realised in the new Golf GTI show that sporty handling does not necessarily involve unpleasant ride harshness. The described broad array of positive handling properties – direct, neutral and stable handling up to performance limits combined with a high level of ride comfort – make the driving properties of the seventh generation Golf GTI unique in the competitive field.

XDS+

The XDS system that was first introduced in the Golf VI was further developed into the advanced XDS+ system for the new Golf GTI. Technically, the XDS+ electronic differential lock is a functionality that is integrated in the electronic stabilisation programme (ESC) for improved vehicle dynamics. XDS+ is an extension of XDS, which is familiar from the previous model; its functionality has now been extended to cover all unbraked driving states. The new system improves agility and reduces the need for steering angle inputs by targeted brake interventions at the wheels on the inside of the bend of both axles. In addition, XDS+ is effective over all conceivable road friction values; it results in more precise handling,

even on snow. The well-known benefits of XDS – such as significantly reduced understeer and improved traction – were also perfected.

Front differential lock

A newly engineered electronic front differential lock is being used exclusively in the Golf GTI Performance. To date, Volkswagen is the only carmaker to utilise an electronically controlled differential lock in a front-wheel drive production model. Compared to purely mechanical locks, the front differential lock integrated in the Golf GTI Performance offers advantages such as a variable degree of locking and comprehensive interfaces to the ESC, EDS and XDS+ functions. This makes it possible to completely avoid negative effects on steering response and steering precision that otherwise occur with mechanical locks. As a result, the system realises the full potential and maximum performance of a differential lock with regard to vehicle dynamics, because comfort is not impaired under any circumstances.

Functionality of the front differential lock. The front differential lock operates without any power losses here, so that the power produced by the engine is transferred 100 per cent to the road and is fully available to propel the GTI.

The electronic front differential lock utilises a multi-plate unit located between the right side driveshaft and the differential case. The hydraulic pressure needed to actuate the plates is generated by an electric motor driven piston pump. The locking moment that is generated here is proportional to the hydraulic pressure. The hydraulic pressure is controlled by the pump speed that is prescribed by a control module. This control module takes numerous parameter inputs – such as wheel speed, vehicle speed, yaw rate and transverse acceleration – and computes the ideal locking moment.

1,600 Nm maximum locking moment. If the control module detects wheel slip at one of the front wheels, the plates are actuated to redistribute the drive torque from the wheel with the lower grip level to the wheel with the higher level. The maximum locking moment is 1,600 Nm, so that if necessary all of the drive torque can be directed to just one front wheel; that corresponds to a locking value of 100 per cent. This produces maximum traction for a front-wheel drive vehicle, even under difficult roadway conditions and in turning situations.

Torque vectoring effect. When accelerating out of a bend, the drive torque is increased at the wheel on the outside of the bend. This produces an asymmetrical drive torque distribution that matches

the dynamic wheel load distribution. This is known as a “torque vectoring effect” which reduces acceleration-related understeer. As a result, the Golf GTI Performance handles neutrally and precisely tracks along the ideal line. The existing grip level is optimally exploited. This lets the driver apply much greater force to the accelerator pedal at the apex of a bend, which in turn results in significantly higher speed exit speeds of the Golf GTI Performance out of bends.

ESC intervenes more gently and with delay. In highly dynamic situations, such as in fast driving through alternating curves, unexpected avoidance manoeuvres or load changes, the front differential lock is used to dampen yaw movements. When oversteer occurs, the front differential lock generates a stabilising yaw moment; this means that ESC interventions can be made gentler and later or might even be avoided altogether. So, the controlled front differential lock stands for even more driving fun and better performance.

ESC Sport

In the new Golf GTI, Volkswagen is offering the “ESC Sport” function for very experienced drivers. The system is activated by a two-stage switch on the centre console. If the driver pushes the button once briefly, it deactivates the ASR function (traction control). When the button is pressed longer than three seconds, Electronic Stability Control (ESC) switches to the “ESC Sport” mode. In very fast driving with lots of bends – such as on a race course – the ESC system reacts with a delay, which enables even greater agile handling properties. As an alternative to activation by the pushbutton on the centre console, ESC can now also be activated or deactivated by settings in the CAR menu.

Progressive steering

The progressive steering system is celebrating its debut in the new Golf GTI. It is a standard feature for both power levels. This steering system lets drivers make a turn of a given radius with smaller steering wheel movements. That is, the driver does not need to reach over the steering wheel as often in tight bends. With progressive steering, it takes 2.1 turns of the wheel (380°) to reach the end stop; in the standard steering system of the less powerful Golf models it takes 2.75 turns (500°). Background: Conventional steering systems operate with a constant gear ratio. The new steering of the Golf GTI, meanwhile, operates with a progressive steering gear ratio. This reduces steering work perceptibly when manoeuvring and parking. On country roads with lots of bends, and when making turns, the driver experiences a plus in dynamics due to the more direct layout.

Technically, progressive steering differs from the basic steering system primarily by the rack's variable tooth spacing and a more powerful electric motor. Its functional difference: Unlike with constant steering ratios, which by necessity always represent a compromise between dynamic performance and comfort, here the steering rack's toothing is significantly modified by the steering stroke. This results in more precise and relaxed driving in the middle steering range up to high speeds; due to the smaller steering input angles that are required, the system offers significantly greater agility and more driving fun on roads with lots of bends. At lower speeds, on the other hand, such as in city driving or parking situations, the Golf GTI is much easier to handle thanks to the lower steering input angles – offering a perceptible gain in comfort.

DCC dynamic chassis control

A second generation DCC dynamic chassis control system is at work in the Golf GTI. DCC offers the three driving modes "Comfort", "Normal" and "Sport", which are now selected and displayed under "Driving profile selector" on the touchscreen of the centre console. Besides offering a "Normal" mode, the DCC system, which was specially tuned for the GTI, now offers the "Comfort" mode, which is indeed comfort-oriented but still reflects typical GTI properties. In "Sport" mode, especially dynamic and agile handling is implemented. In the "Individual" driving profile, the DCC mode can even be configured with any other desired driving profile properties.

The DCC system adaptively regulates the damper valves via a further developed and refined Volkswagen control algorithm which sets the damper characteristic. In doing so, DCC evaluates input signals from wheel displacement sensors and accelerometers as well as vehicle bus information from the Chassis-CAN bus. It then computes the optimal damper force for every driving situation and adaptively adjusts this force. Damping forces are selectively applied to the four wheels individually.

In the new DCC generation, it is now also possible to fully independently vary rebound and compression damping for transverse dynamic manoeuvres – a significant benefit in optimising vehicle dynamics. The damper valves were also modified for further improved response.

MacPherson-type front suspension

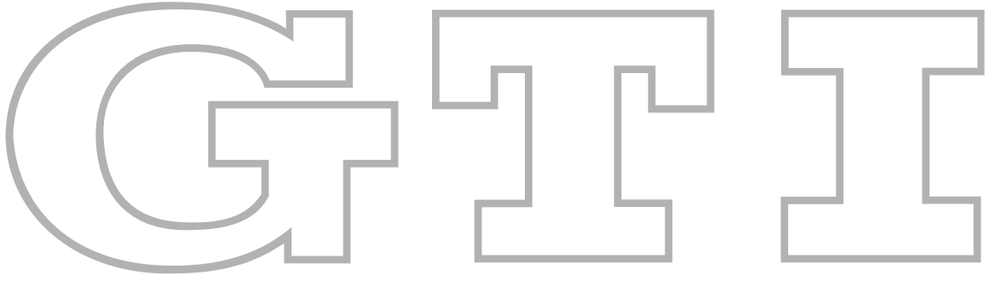
A MacPherson front suspension (spring struts) with a newly developed low wishbone and track-stabilising scrub radius enables optimal handling and steering in the GTI as well as a balanced response to vibration. All components were reworked for improved functionality, weight and cost. This resulted in a weight savings of 1.6 kg compared to the previous model. This was made possible, for example, by the use of high-strength steel in the transverse links and an innovative bionic approach to designing the pivot bearings. The subframe is centrally positioned on the front axle; its frame – designed for maximum transverse rigidity – handles loads from the engine mounts and steering as well as loads of the front suspension components.

The now fully tubular anti-roll bar has a spring rate that was specifically tuned for the handling of the new GTI. The rubber bearings are vulcanised directly onto the painted anti-roll tube; this assures optimal acoustic properties and optimises the responsiveness of the anti-roll bar which is important to vehicle dynamics. A new aluminium pivot bearing was also designed for the GTI. The use of aluminium and the bionic design of this pivot bearing enabled a weight reduction of 2.8 kg. Compared to the previous model, the location of the centre of motion was moderately raised for quicker and more precise response of the new GTI front suspension.

Modular performance rear suspension

The rear suspension of the Golf GTI was further developed from the perspectives of improved kinematics, acoustics, weight situation and modularity. However, nothing has changed with regard to its fundamental approach of consistently separating longitudinal and transverse rigidities. The low longitudinal rigidity has been preserved by the soft axle control of the trailing link; this was a necessary precondition for further improving ride comfort.

Furthermore, Volkswagen successfully improved the transverse rigidity of the modular performance suspension, which is important for steering behaviour, by a new tie rod bearing tuning. Tracking and camber values are individually tuned by eccentric screws on the spring link and at the upper transverse link according to requirement for each vehicle type. Key design changes to the rear suspension are the connections of the tubular anti-roll bar and the suspension damper, which are now made at the spring link. This reduces forces within the suspension; there are also significant package advantages. In addition, the suspension was made 4.0 kg lighter in weight by structural optimisations of many components and the use of high-strength steels.


GTI

Never before has a GTI had such sharp proportions

Design dynamics of the new Golf GTI benefit from the modular transverse matrix

Precise lines, taut proportions, charismatic front end

Wolfsburg/Saint Tropez, April 2013. When discussion of the new Golf GTI turns to its design, the car's technical layout needs to be discussed first. That is because the 2013 Golf GTI is based on the new modular transverse matrix (MQB). The technocratic impression that this term – "modular", "transverse matrix" – leaves, hardly speaks to the great potential associated with the MQB. This acronym signifies a completely new design layout of the Golf (and of many other Volkswagen Group models). And this new layout is perceived as a very welcome present by Group designers, because they can now implement entirely new vehicle proportions. The seventh generation Golf GTI is a superb example of this.

More dynamic proportions

Compared to the previous model, the wheelbase was extended 53 mm to 2,631 mm, but at the same time the front overhang was shortened 12 mm. In parallel, the A-pillar "wandered" further towards the rear, which makes the bonnet longer and visually shifts the entire vehicle cabin rearwards. This "cab-backward effect" makes the GTI more of a premium class car than a compact class car. In addition, the height of the GTI was reduced 27 mm to 1,442 mm. The car's length grew 55 mm to 4,268 mm now, and the width grew 13 mm to 1,799 mm. Many values that add up to an important result: the proportions of the new Golf GTI made unmistakable gains in dynamics.

Design uses GTI insignia

The designers have systematically exploited this potential of proportions to give the Golf GTI a more impressive stance on the road than ever before. Like the very first Golf GTI, the seventh generation also sports typical GTI insignia. On the new model they include the red trim strip on the radiator grille that now extends into the headlights. Also typically GTI VII are the additional air inlet openings in the front spoiler; a honeycomb structure of the air inlet screens; vertical fog lights; xenon headlights with an unmistakable light signature; the larger rear spoiler; distinctive, large tailpipes of the exhaust system that are arranged far outboard and finally the alloy wheels that were specially designed for the Golf GTI. Certainly, the visual effect of the standard 17-inch alloy wheels (“Brooklyn” type) and their interplay with the GTI sport suspension (with a 15 mm lower ride height) should not be underestimated.

Front end in detail. In the front area with its LED fog lights (optional) that were customised to the GTI, there is another strong and significant GTI element that was completely reinterpreted: the red line on the radiator grille. At one time, on the first Golf GTI, it completely surrounded the rectangular radiator grille. On the sixth generation GTI, two red stripes were used which framed the top and bottom of the grille. Now, in the seventh generation, the red stripe terminates the lower edge of the radiator grille, but then it is further extended to the left and right into the housings of the standard bi-xenon headlights. So, the red line runs across the entire width of the front end; as a horizontal element it runs parallel to the bonnet seam and the bumper.

At the very bottom of the bumper, beneath the cross panel painted in body colour, the black air inlet (with its honeycomb structure screen) is now no longer surrounded by another black area, rather by surfaces painted in body colour. In this way, the air inlet makes a stronger impression; simultaneously, the three lateral, high-gloss black aerodynamic fins beneath the headlights also terminate the front end. Another detail fitting in with the precisely contoured styling is the black splitter (lower edge of the front spoiler), which is familiar from motorsport.

Side profile in detail. In a side view, the sportiest Golf can be readily made out by the even longer look of its roof section due to the larger rear spoiler and by the alloy wheels specially designed for the GTI (17-inch standard, 18- and 19-inch optional). Even in side profile, the light contours of the optional LED daytime running lights and the standard LED rear lights stand out.

In addition, the new Golf GTI is marked by new dynamic proportions and styling that is more precisely formed than ever. Below the door handles, we have integrated the now clearly visible and very sharp character line. While this line is interrupted by the wheel arches, it is otherwise continuous and is stylistically reflected in the chrome bars of the radiator grille and headlights and at the back in the white lateral bars of the rear light clusters. Set deep down all the way around, this line lowers the visual centre of gravity and gives the car a more solid stance on the road. Another striking element is the new line along the side shoulder directly below the windows. This line begins at the front in the headlight, and then glides under the wing mirror, which is positioned right on the line, all the way through to the rear side window, underscoring the premium proportions of the Golf GTI.

Just as characteristic of the car's side profile is the unmistakable C-pillar, whose design also references the GTI I, and especially the Golf GTI IV, which itself developed into an icon with its clean shapes. On the previous Golf, the character line still cut through the C-pillar. This is no longer the case on the new GTI. The C-pillar runs along one homogenous surface from the start of the roof all the way to the rear wheel arch. Above the wheel arch, however, it picks up more strongly the entire width of the car – and as a result, when viewed from behind or diagonally from the rear, the new Golf GTI looks more solid and powerful.

For the first time, the sporty Volkswagen also has, in addition to the GTI badges at the front and rear, red plates on the front wings at the height of the character line with the same typographic interpretation of the GTI logo that has been used for decades.

Rear section in detail. Another example of the harmonious integration of GTI specific elements is the new roof spoiler design, which is considerably larger than its counterpart on Golf versions with less powerful engines; it is integrated to be flush to the boot lid and the body. The spoiler, painted in body colour, seamlessly transitions into black aerodynamic elements on the sides of the boot lid, which makes a visual reference to the use of black colour in the first generation Golf GTI. Another feature that is designed in black, along with the aerodynamic elements and the front splitter, is the diffuser at the rear. To the left and right of the diffuser are the chrome tailpipes of the exhaust system.

Comfort and quality of the Golf GTI redefine class boundaries

More space in the Golf GTI interior thanks to significantly larger wheelbase

Typical tartan upholstery for the GTI sport seats now combined with Alcantara for the first time

Wolfsburg/Saint Tropez, April 2013. Possibly one of the most important properties of the new Golf GTI – related to the interior – is the fact that the car simply fits – as though cast to be ergonomic. The driver simply opens the door, sits down on the standard sport seat, adjusts it, adjusts the height and length of the sport steering wheel, buckles up, starts the engine, puts the hand on the gear shift lever in golf ball design (for a manual gearbox) and drives off.

Ergonomics benefit from MQB

Significantly more room and even better ergonomics define the GTI driver's area. Taller drivers in particular will welcome the seat position that has been shifted back by 20 mm; the steering wheel's adjustment range has also been modified. Pedal distances have been optimised as well thanks to the modular transverse matrix; the space between the brake and accelerator pedals, for example, has increased by 16 mm. Another ergonomic improvement: compared to the previous model, Volkswagen has raised the position of the gearbox controls by 20 mm; the gear shift grip now rests better in the driver's hand.

Configuration in legendary GTI style

The typical GTI insignia are important in the interior as well. Consider the seat covers: the first GTI already had seat covers in the legendary tartan pattern. The fabric of the Golf GTI VI known as “Jacky” was – as in the transition to every new GTI generation – redesigned and is now named “Clark.” Naturally, the tartan pattern was retained. The top sport seats offer exceptionally good ergonomic properties. In addition, the front seats have height adjustment and a manually adjustable lumbar support. Red decorative seams provide a sporty contrast; the black roofliner that is always part of the GTI emphasises the sporty layout of the interior.

It is also quite clear that the standard leather multifunction sport steering wheel in GTI design with red contrasting seams was upgraded, as was the gear shift gaiter. It matches the red ring in the lens top of the leather gear shift grip. Accents on the dashboard are in “Checkered Black” and the same applies to the decorative inlays in the door trim panels and on the centre console. Also making a strong statement is the GTI instrument cluster with a colour display and independent instrument graphics. It is no coincidence that they are reminiscent of high-end chronometers. When the engine is started, the pointers of the tachometer and speedometer swing once to the end scale position and then back. The GTI specific look of the interior is rounded out by red ambience lighting, special trim strips and panels (trim strips in the front doors with ambience lighting), brushed stainless steel pedals and foot rest (on left), door sill entry plates in front with a stainless steel application and ambience lighting that is also integrated here.

Quality and image overcome class boundaries. It is the entirely new fundamental concept for the interior design of the seventh generation Golf that represents a breakthrough for the GTI’s sporty and high-end interior architecture: especially noticeable is the wide centre console that is oriented towards the driver; it is more characteristic of the premium class than the compact class. In the middle of the centre console, beneath the switch for the hazard warning lights, is the five- to eight-inch infotainment touchscreen with its menu keys and dials. For the first time, Volkswagen is using a touchscreen generation here (as an option) that features proximity sensors and functionality that reacts to wiping movements of the fingers (wipe and zoom gestures as with a smartphone).

Located beneath the infotainment module are the well laid-out controls for the standard dual-zone automatic climate control system (Climatronic). This is followed by the lower section of the centre console

that runs in a line up to the large centre armrest. To the right of the driver are the buttons for the new electronic parking brake and its Auto Hold function. Next to it, there is a closing storage compartment with integrated multimedia interfaces (AUX-IN, USB and optional Apple); the compartment is large enough to hold a smartphone.

There is a wide storage compartment hidden under the centre armrest that can be adjusted by up to 100 mm in length and five stages in height. This compartment is also of a good size. A new feature here in conjunction with the “Comfort” mobile phone interface is an inductive external antenna interface: The smartphone is placed in a universal holder in the stowage bin where the phone’s antenna is inductively “coupled” and connected to the vehicle’s external aerial. Sophisticated: the decorative inlays of the GTI trim panels exhibit, as mentioned, a light seam as part of the standard ambience lighting system.

More space over its length. Despite all of its sportiness, the Golf GTI is more than just a sports car; it is an all-round talent. And that describes the seventh generation GTI as well. This would make the Golf GTI a good choice as a business car for any day of the year. Background: larger body dimensions in

overall length and width, a larger wheelbase, optimised track widths and MQB-modified package all have a positive effect on comfort. The GTI interior is now 14 mm longer (1,750 mm), for example. In the rear seating area of the optional four-door Golf GTI, passengers enjoy 15 mm more leg room. In front, shoulder room has increased by 31 mm to 1,420 mm, and elbow room has now gone up by 22 mm to a width of 1,469 mm. In the rear seating area, shoulder room was also improved by an additional 31 mm and elbow width by 20 mm.

In addition, the rear seat bench folds and has a 60:40 split. When folded, a nearly level cargo floor is created with a length of 1,558 mm. From the Comfortline, the Golf can also be equipped with a cargo opening at the middle of the rear backrest. The successfully implemented space concept of the new Golf exhibits many other improvements as well. Cargo capacity, for example, has grown by 30 litres to 380 litres; the variable cargo floor can also be lowered by 100 mm. Perfection in the details: the load sill to the bootspace is now just 655 mm high – the best value in the core segment. In parallel, the maximum bootspace width has grown by 228 mm to 1,272 mm. Volkswagen has also increased the width of the bootspace opening by 47 mm to 1,023 mm.

New GTI comes with xenon and new progressive steering as standard

Golf GTI Performance launches with new front differential lock

Automatic climate control, radio-CD with touchscreen and multifunction steering wheel are standard

Wolfsburg/Saint Tropez, April 2013. Like all six Golf GTI generations before it, the seventh generation is distinguished from other Golf models by numerous additional equipment features and classic GTI insignia. The new Golf GTI is also one of the best equipped cars in its class with standard features like the innovative progressive steering, Automatic Post-Collision Braking System, Driver Alert System, xenon headlights, a radio-CD system with touchscreen and automatic climate control.

Exterior features

On its exterior, GTI-specific standard features are the red painted brake callipers, sport suspension (15 mm lower ride height), the progressive steering system being used in the GTI for the first time, bi-xenon headlights with cornering lights, licence plate lighting in LED technology, dark red LED rear lights, the GTI-typical honeycomb structure of the air inlet screens, a roof spoiler (in body colour) with side-mounted aerodynamic elements (high gloss black), GTI bumpers, ParkPilot (acoustic and visual warning signals), tyre pressure monitoring indicator, GTI logos on the front wings (sides of body in area of A-pillars) and chrome 80-mm diameter tailpipes, one on the left and one on the right. In the chassis electronics area, on-board features also include the extensively reengineered XDS+ electronic differential lock.

Extended performance features. On its exterior, the Golf GTI Performance (169 kW/230 PS) is distinguished by the GTI logo on the front brake callipers and larger internally-ventilated brake discs (front: 340 mm, rear: 310 mm) for the GTI with 162 kW/220 PS. Technical features of the Golf GTI Performance also include a newly developed front differential lock.

Colours and wheels. The production colours Red ("Tornado Red") and "Black" as well as "Pure White" have been typical for the Golf GTI since its beginning days. As a special feature, the new Golf GTI can also be ordered in seven metallic or pearl effect paints: "Carbon Steel Grey Metallic", "Reflex Silver Metallic", "Tungsten Silver Metallic", "Limestone Grey Metallic", "Night Blue Metallic", "Deep Black Pearl Effect" and "Oryx White Mother of Pearl Effect".

Volkswagen has further developed its standard "Denver" GTI wheels; their styling characteristics flowed into the design of the new machine-polished 17-inch "Brooklyn" alloy wheels that replace them. The new wheels have a lighter visual look and are in fact lighter in weight. The wheels are fitted with size 225/45 tyres. In addition, the new 18-inch "Austin" alloy wheels and 19-inch alloy wheels in "Santiago" design are available as options.

Interior features

The car with the golf ball. Along with its many standard features such as air conditioning, Driver Alert system and the Composition Touch radio system, numerous GTI features refine the interior. They include the customised leather sport steering wheel and a special gear shift grip. The latter is once again reminiscent of a golf ball, which also makes it a tribute to the first GTI just like the new leather-trimmed steering wheel design. The sporty flat-bottomed steering wheel with its three metal spokes and trim in high-gloss black has a lightweight look, and it is remarkably handy and easy to grip. On its two cross spokes it has multifunction keys as standard, and at its centre - in contrast to all other Golf steering wheels - it has a round impact absorber whose form is similar to that of the component in the first GTI.

GTI instruments and ambience lighting. Also making a strong statement is the GTI instrument cluster with a colour display and independent graphics of its instruments. It is no coincidence that it resembles high-end chronographs. The GTI specific look of the interior is rounded out by red ambience lighting, special trim strips and panels (trim strips in the front doors with ambience lighting), brushed stainless steel pedals and foot rest (on left), door sill entry plates in front with a stainless steel application and ambience lighting that is also integrated here.

Classic seat now also in Alcantara. Also important are the typical top sport seats and seat covers. The first GTI had them already: seat covers in the legendary tartan pattern. As in the transition to every new GTI generation, the fabric of the Golf GTI VI known as “Jacky” was redesigned and is now named “Clark.” Naturally, the tartan pattern was kept. A new optional feature: the fabric sport seats in “Clark” design can now be ordered for the first time with side panels and head restraints in Alcantara. Moreover, the seats and door trim panels can also be ordered in “Vienna” upholstery. The front seats also offer height adjustment and a manually adjustable lumbar support. Electric adjustment of the driver’s seat is available as an option. Red decorative seams in the area of the seats and the gear shift trim provide a sporty contrast, and the black roofliner that is always part of the GTI emphasises the sporty layout of the interior.

Other optional features

In addition, the Golf GTI can be customised with a nearly limitless range of optional features. Here is an overview of these features (in alphabetical order):

› Adaptive cruise control (ACC) with Front Assist and City Emergency Braking
› Anti-theft warning system plus

› Auxiliary heating
› Car-Net (online information is directly transmitted to the GTI, including navigation with point of interest search, Google-Earth™ map service and Google Street View™, online traffic information)
› Comfort and Premium mobile phone interfaces and Nokia Asha 300 mobile phone
› Composition Colour radio
› Composition Media radio
› Cruise control system
› Digital radio reception: DAB+
› Discover Media navigation function for Composition Media radio
› Discover Pro navigation system
› Driver assistance pack (includes ACC, Front Assist, City Emergency Braking, anti-theft warning system, Dynamic Light Assist, automatic running light switching, vehicle stop function with DSG, speed limiter, automatically dipping rear-view mirror, dynamic cornering lights, rain sensor, Lane Assist)
› Driver's seat with electric adjustment
› Driving profile selector

› Dynamic chassis control (DCC) with driving profile selector
› Dynamic Light Assist dynamic main beam control
› DYNAUDIO Excite sound system
› Fire extinguisher
› Fog lights in LED technology
› Folding door mirrors with surroundings illumination and lowering of passenger's side mirror
› Keyless Access: keyless locking and engine starting system
› Lane Assist lane-keeping assistant
› Light and Sight pack (with automatic running light switching, leaving home and coming home function, automatically dipping rear-view mirror and rain sensor)
› Light Assist - main beam control
› MEDIA-IN with iPod/iPhone adapter cable
› MEDIA-IN with iPod/iPhone adapter cable and USB charging port
› Mirror pack (with folding door mirrors, surroundings illumination and lowering of passenger side mirror)
› Multifunction display "plusPlus"

› Panoramic tilt sunroof
› ParkAssist park steering assistant with ParkPilot
› PreCrash preventive occupant protection
› Rear Assist reversing camera
› Rear doors (including electric rear windows)
› Road sign recognition
› Side airbags and belt tensioners at rear seats
› Smoked side windows and rear windscreen absorb 65 per cent of light
› Towbar unit (swivelling)
› “Vienna” leather upholstery
› Voice control
› Wheels/tyres, 18- and 19-inch
› Windscreen with wireless heating and infrared reflecting
› Winter wheels, 16- or 17-inch

First GTI to feature city emergency braking and driving profile selector

Innovative assistance systems of the Golf GTI for ideal safety

Golf GTI has new infotainment generation and new Dynaudio sound system

Technologies – safety, comfort and infotainment.

Wolfsburg/Saint Tropez, April 2013. An entire armada of innovative assistance and convenience systems is at work aboard the new Golf GTI as standard or optional equipment. These new technologies are completely redefining conventional class barriers with regard to safety, long-distance comfort and the infotainment world.

The assistance and convenience systems in the Golf GTI include the standard Automatic Post-Collision Braking System, also standard progressive steering, the standard and further advanced XDS+ electronic differential lock, PreCrash preventive occupant protection system, adaptive cruise control “ACC plus”, Front Assist with City Emergency Braking, Lane Assist lane-keeping assistant, Driver Alert System, road sign recognition and the latest generation of the ParkAssist park steering assistant as well as the automated lighting functions Light Assist and Dynamic Light Assist. Other new technologies have been added such as a driving profile selector with up to five programmes (“Eco”, “Sport”, “Normal”, “Individual” and in combination with DCC plus “Comfort”), an electronic parking brake and a new generation of infotainment systems. The Golf GTI Performance also has the front differential lock as standard equipment.

Assistance systems – automatic protection

Driver Alert system. This system, which is a standard feature in the Golf GTI, detects waning driver concentration and warns the driver with an acoustic signal lasting five seconds. A visual message also appears on the instrument cluster recommending taking a break from driving. If the driver does not take a break within the next 15 minutes, the warning is repeated once. At the beginning of each trip, the system analyses a range of factors, including the driver's characteristic steering behaviour. Once under way, the driver alert system continually evaluates signals such as steering angle. If monitored parameters indicate a deviation from the steering behaviour recorded at the beginning of the trip, then visual and acoustic warnings are produced.

Automatic Post-Collision Braking System. An innovative new feature is the Golf's Automatic Post-Collision Braking System which has already won a safety innovation award from Germany's largest automobile club (ADAC). When it is involved in collision, the Automatic Post-Collision Braking System automatically brakes the vehicle to significantly reduce its residual kinetic energy. Triggering of the Automatic Post-Collision Braking System is based on detection of a primary collision by the airbag sensors. Vehicle braking by means of the Automatic Post-Collision Braking System is limited by the ESC control unit to a maximum deceleration rate of 0.6 g. This value matches the deceleration level of Front Assist; it ensures that the driver can take over handling of the car even in case of automatic braking.

The driver can "override" the Automatic Post-Collision Braking System at any time; for example, if the system recognises that the driver is accelerating, it gets disabled. The automatic system is also deactivated if the driver initiates hard braking at an even higher rate of deceleration. In essence, the Automatic Post-Collision Braking System applies the brakes until a vehicle speed of 10 km/h is reached. This residual vehicle speed can be used to steer to a safe location after the braking process.

PreCrash preventive occupant protection. If the proactive occupant protection system detects a potential accident situation – such as by the initiation of hard braking via an activated brake assistant – the seatbelts of the driver and front passenger are automatically pre-tensioned to ensure the best possible protection by the airbag and belt system. When a highly critical and unstable driving situation is detected – such as severe oversteer or understeer with ESC intervention – the side windows are closed (except for a small gap) and so is the sunroof. Background: When the windows and roof are nearly closed, the head and side airbags offer optimal energy absorption and thereby achieve their best possible effectiveness.

Adaptive Cruise Control (ACC). This system uses a radar sensor integrated in the front of the car. The driver can set the car speed over a range from 30 to 160 km/h. ACC operates with either a manual gearbox or a DSG (dual clutch gearbox). In the Golf GTI with DSG, ACC comfortably brakes to a standstill when the vehicle ahead stops. After being enabled by the driver, ACC together with DSG can also automatically start off again. ACC maintains the vehicle speed preselected by the driver as well as a predefined distance to the vehicle ahead, and it automatically brakes or accelerates in flowing traffic. The system dynamics can be individually varied by selecting one of the driving programmes or by the optional driving profile selector.

Front Assist surroundings monitoring system. Front Assist uses a radar sensor integrated in the front of the car to continuously monitor the distance to traffic ahead. Front Assist assists the driver in critical situations by preconditioning the brake system and alerting the driver to any required reactions by visual and audible warnings, and in a second stage by a brief warning jolt. If the driver fails to brake hard enough, the system automatically generates sufficient braking force to avoid a collision. Should the driver, meanwhile, not react at all, Front Assist automatically brakes the car to give the driver more reaction time. Ideally, this lets the driver avoid an impending collision, or it at least reduces the speed at impact. The system also assists the driver by an alert if the car is getting too close to the vehicle in front. The City Emergency Braking function is part of Front Assist.

City Emergency Braking. The City Emergency Braking function, now available for the Golf GTI for the first time, is a system extension of Front Assist. Using a radar sensor, it monitors the area in front of the car. The system works in the speed range below 30 km/h. If the car is at risk of colliding with a moving or stationary vehicle ahead and the driver fails to react, the brake system is preconditioned in the same way as with Front Assist. If necessary, City Emergency Braking then automatically initiates hard braking to reduce the severity of the impact. In addition, if the driver presses the brake pedal with insufficient force, the system assists with maximum braking power. Under optimal conditions, City Emergency Braking can avoid an impending frontal collision at the last second.

Lane Assist. In the Golf GTI this camera-based assistance system with steering intervention to maintain the car's position within the driving lane works with extended functionality: If desired, the system – being implemented for the first time in the Golf – can now also maintain continuous tracking support, which optimises comfort and convenience. Whenever necessary, Lane Assist also intervenes with a steering correction when it detects that the driver is leaving the driving lane or is driving over lane markings without setting the direction indicator. The system then gently steers in the other direction.

Convenience systems – technology assists and is fun too

Progressive steering. The progressive steering system is celebrating its debut in the new Golf GTI. It is a standard feature for both power levels. This steering system lets drivers make a turn of a given radius with fewer turns of the steering wheel. That is, the driver does not need to reach over the steering wheel as often in tight bends. With progressive steering, it takes 2.1 turns of the wheel (380°) to reach the end stop; in the standard steering system of the less powerful Golf models it takes 2.75 turns (500°). Background: Conventional steering systems operate with a constant gear ratio. The new steering of the Golf GTI, meanwhile, operates with a progressive steering gear ratio. This perceptibly reduces steering work when manoeuvring and parking. On country roads with lots of bends, and when making turns, the driver experiences a plus in dynamics due to the more direct layout.

Technically, progressive steering differs from the basic steering system primarily by the rack's variable tooth spacing and a more powerful electric motor. Its functional difference: Unlike with constant steering ratios, which by necessity always represent a compromise between dynamic performance and comfort, here the steering rack's toothing is significantly modified by the steering stroke. This results in more precise and relaxed driving in the middle steering range up to high speeds; due to the smaller steering input angles that are required, the system offers significantly greater agility and more driving fun on roads with lots of bends. At lower speeds, on the other hand, such as in city driving or parking situations, the Golf GTI is much easier to handle thanks to the lower steering input angles – offering a perceptible gain in comfort.

XDS+. The XDS system that was first introduced in the Golf VI was further developed to the advanced XDS+ system for the new Golf GTI. Technically, the XDS+ electronic differential lock is a functionality that is integrated in the electronic stabilisation programme (ESC) for improved vehicle dynamics. XDS+ is an extension of XDS, which is familiar from the previous model; its functionality has now been extended to cover all unbraked driving states. The new system improves agility and reduces the need for steering angle inputs by targeted brake interventions at the wheels on the inside of the bend of both axles. In addition, XDS+ is effective over all conceivable road friction values, and it results in more precise handling. The well-known benefits of XDS – such as significantly reduced understeer and improved traction – were also perfected.

Front differential lock. A newly engineered electronic front differential lock is being used exclusively in the Golf GTI Performance. To date, Volkswagen is the only carmaker to utilise an electronically controlled differential lock in a front-wheel drive production model. Compared to purely mechanical locks, the front differential lock integrated in the Golf GTI Performance has a variable degree of locking and comprehensive interfaces to ESC, EDS and XDS+ functions. This makes it possible to entirely avoid negative effects on steering handling or steering precision that otherwise occur with mechanical locks. As a result, the system realises the full potential and maximum performance of a differential lock with regard to vehicle dynamics, because comfort is not impaired under any circumstances (for detailed information on the functionality of the front differential lock, see “Running Gear” chapter).

Electronic parking brake. Instead of a handbrake lever, a control switch plus an Auto Hold switch are located on the centre console of the Golf GTI. The electronic parking brake offers numerous advantages: eliminating the conventional handbrake frees up more space on the centre console; in addition, the brake is automatically released when driving off. And that simplifies driving off up a hill. Last but not least, the Auto Hold function prevents unintentional rolling from a stopped position by automatically holding the GTI in place. Waiting phases, such as a red traffic light, are made more comfortable, because it is no longer necessary to continually press the brake pedal.

DCC. A second generation DCC dynamic chassis control system is at work in the Golf GTI. DCC offers the three driving modes “Comfort”, “Normal” and “Sport”, which are now selected and displayed under “Driving profile selector” on the touchscreen of the centre console. Besides offering a “Normal” mode, the DCC system, which was specially tuned for the GTI, now offers the “Comfort” mode, which is indeed comfort-oriented but still reflects typical GTI properties. In “Sport” mode, especially dynamic and agile handling is implemented. In the “Individual” driving profile, the DCC mode can even be configured with any other desired driving profile properties.

The DCC system adaptively regulates the damper valves via a further developed and refined Volkswagen control algorithm which sets the damper characteristic. In doing so, DCC evaluates input signals from wheel displacement sensors and accelerometers as well as vehicle bus information from the Chassis-CAN bus. It then computes the optimal damper force for every driving situation and adaptively adjusts this force. Damping forces are selectively applied to the four wheels individually.

In the new DCC generation, it is now also possible to fully independently vary rebound and compression damping for transverse dynamic manoeuvres – a significant benefit in optimising vehicle dynamics. The damper valves were also modified for further improved response.

Driving profile selector. The Golf GTI is now available with a driving profile selector for the first time. A total of four programmes are available, and in conjunction with DCC (dynamic chassis control) five driving programmes: Eco, Sport, Normal, Individual, and in combination with DCC the additional Comfort. In the Eco driving profile, the engine controller, air conditioning and other auxiliary units are controlled for optimal fuel economy. In addition, vehicles with the optional dual-clutch gearbox (DSG) have an additional coasting function in Eco mode; when the driver releases the accelerator pedal – e.g. when slowing down to a traffic light or in route segments with descents – the DSG disengages and the engine idles. This enables optimal utilisation of the kinetic energy of the Golf. In “Sport” mode, on the other hand, damping is increased (which further reduces movements of the body structure) and engine response and shift points of the DSG are configured to be even more dynamic.

Dynamic Light Assist dynamic main beam control. Via a camera on the windscreen this system analyses the traffic in front and the vehicles coming in the opposite direction. Based on this data, the main beam automatically comes on at speeds of over 60 km/h and stays on. This is how Dynamic Light Assist works: with the help of the camera, the main beam modules of the bi-xenon headlights with dynamic cornering lights are masked only in those areas that the system has determined could

potentially disturb other road users. Technically, this function is implemented by a pivoting masking aperture between the reflector with the xenon filament and the lens. Along with lateral swivelling of the entire module and independent control of the left and right headlights, this additional aperture geometry is able to mask the light source and thereby avoid glare to traffic ahead or any oncoming traffic.

Light Assist main beam control. For models with headlights with no dynamic cornering lights the base version of automatic full-beam control is available in the form of Light Assist. Light Assist analyses traffic ahead and oncoming traffic – via a camera in the windscreen – and automatically controls activation and deactivation of the main beam (at 60 km/h and above).

Road sign recognition. In the new Golf GTI, this feature will be available in combination with a navigation system, because the traffic signs are also shown in the display of the active navigation window (map and/or pictograms). If the system detects any speed limit or 'No overtaking' signs via a camera (integrated in the windscreen near to the rear-view mirror), up to three of these will get shown on the instrument cluster in front of the driver and on the navigation system display. This will also

include all additional information and the signs will appear in a logical order: ones that immediately apply (e.g. a “130” km/h speed limit) get shown in first place, while signs that only apply at certain times (e.g. “80 km/h” “When wet”) appear in second place. If the rain sensor registers that it is starting to rain, the traffic sign that is now most pertinent, i.e. the “When wet” sign, moves up into first place.

Park Assist parking assistant. The latest version of the parking assistance system now facilitates not only assisted parking parallel to the carriageway, but also reverse parking at right angles to the road. In addition, Park Assist 2.0 is also equipped with a braking and parking space exit function. The system can be activated at speeds of up to 40 km/h by pressing a button on the centre console. Using the indicators, the driver selects the side on which the car is to be parked. If, using the ultrasound sensors, Park Assist detects a large enough parking space (a manoeuvring distance of 40 cm, front and rear, is sufficient), the assisted parking can begin: having put the vehicle into reverse, all the driver has to do is operate the accelerator and brake. The car takes care of the steering. Acoustic signals and visual information on the multifunction display assist the driver. If a collision is looming, the system can also actively apply the vehicle’s brakes.

More intelligent climate control. The new Climatronic of the Golf regulates the interior temperature fully automatically via 2-zone temperature control (separate for driver and front passenger). The intensity of the climate control can be influenced by selecting a profile (‘Gentle’, ‘Moderate’, ‘Intensive’). The fully automatic control unit operates with various sensors – a sun sensor, air quality sensor and new humidity sensor. The sun sensor detects the intensity and direction of solar radiation, and the system is controlled accordingly. The positive effects of the optional deluxe climate windscreen are considered in this control as well. When information from the air quality sensor indicates that the concentration of nitrogen oxides or carbon monoxide in the outside air has exceeded a defined limit, then the recirculation flap of the Climatronic system closes.

Deluxe climate windscreen. This new windscreen combines the advantages of conventional wire heating with those of heat-insulating glass. Wires are no longer used in the window. This was made possible by a very thin electrically-conductive layer within the glass laminate that can be heated. In the winter, this function prevents fogging of the window, and it accelerates defrosting. In the summer, the new windscreen results in less heating of the interior, because the extremely thin coating reflects most of the solar radiation. Along with an increase in thermal comfort, the environment also benefits,

since the air conditioning does not need to supply as much cooling power due to the reduced heating. At the same time, this improves the fuel economy of the GTI.

Panoramic tilt/slide sunroof. A transparent system was developed here, which utilises a maximum roof area, offers optimal ventilation and opening functions, does not impair the torsional rigidity of the car and has the visual effect of lengthening the windscreen. What is referred to as the light transparency area – the incident light in the closed state – was enlarged by 33 per cent compared to a normal tilt/slide sunroof. Incidentally, the tinted, heat-insulating glass reflects away 99 per cent of UV radiation, 92 per cent of incident heat radiation and 90 per cent of incident light.

Infotainment – always with touchscreen

Radio and radio-navigation systems. Volkswagen is equipping the Golf GTI with a new generation of radio and radio/navigation systems with completely new designs. All systems have a touchscreen as standard. The new device generation is available in three different display sizes: 5 inches, 5.8 inches and 8 inches. For the first time, Volkswagen is implementing displays that have proximity sensors (5.8-inch display and above): as soon as the driver or front passenger moves a finger near to the

touchscreen, the system automatically switches from display mode to input mode. The display mode shows a screen that is reduced to just the essentials. In the operating mode, on the other hand, the elements that can be activated by touch are specially highlighted to simplify intuitive operation. The displays also have a function that lets users scroll through lists or browse CD covers in the media library with a wipe of the hand.

“Composition Touch” radio (5-inch). The standard system on-board the Golf GTI is Composition Touch. It offers three buttons to the left and three to the right of the touchscreen that are used to activate the ‘Radio’, ‘Media’, ‘Car’, ‘Setup’, ‘Sound’ and ‘Mute’ menus/functions. It also offers a SD card slot, aux-in interface and two push dials (e.g. for on/off, volume, mute). This standard module also includes an FM/AM radio, loudspeakers (front), an interface for SD cards and an aux-in interface. “Composition Colour” radio (5-inch). Similar to the Composition Touch in its device layout, the Composition Colour is also equipped with such features as a colour display, FM/AM radio as well as front and rear loudspeakers and a CD drive (MP3 compatible). The CD drive is located in the glove box along with the SD card slot.

“Composition Media” radio (5.8-inch). Equipped to offer even more extensive features is the Composition Media radio. Its capacitive colour display is 5.8 inches in size, and it is coupled with a proximity sensor that is integrated across the area beneath the display. The display also responds to wiping and zooming gestures, as used in similar fashion on modern smart phones. There are now also four buttons to the left and four to the right of the touchscreen; in contrast to the 5-inch systems they also enable access – depending on vehicle features – to the ‘Phone’ and ‘Voice’ (voice control) menu levels. The Composition Media radio is equipped with these features in addition to those of the Composition Colour radio: optional telephone preparation (Bluetooth) and a USB interface. The USB and aux-in interfaces, meanwhile, are integrated in a separate compartment on the centre console in front of the gear shifter; this compartment also offers storage space for a smart phone.

“Discover Media” navigation function (5.8-inch). The Composition Media radio can have a navigation module (Discover Media) added to it. The features and functions are identical except for the navigation system that is then integrated with European map data and the associated second SD card slot; the navigation computer is located in the glove box together with the CD player and SD card slot. The price for all units with a navigation module includes updates of the European navigation maps for a period of three years.

“Discover Pro” radio-navigation system (8-inch). The top radio-navigation system with a large 8-inch capacitive touchscreen is known as the Discover Pro. Features installed here – beyond those of the Discover Media – are a DVD drive instead of a CD drive (audio and video), extended premium voice control (base version is available as option for Composition Media and Discover Media), 3D navigation and a 64-GB Flash memory; a UMTS telephone module is available as an option. Integration of the Compact Disc Database from Gracenote also enables state-of-the-art playback and management of media. In addition, the Discover Pro also operates as a WLAN hotspot (Internet access) for WLAN-capable mobile devices (smart phone or tablet).

Mobile phone. For den Golf GTI, Volkswagen is offering the two mobile phone interfaces “Comfort” and “Premium” as well as a smartphone (“Nokia Asha 300”) integrated via the hands-free unit. The “Comfort” and “Premium” mobile phone interfaces can be ordered together with the “Composition Media” (only “Comfort”), “Discover Media” and “Discover Pro” audio/navigation systems. The “Comfort” interface offers such features as an external antenna interface to a newly designed charging cradle on the centre console, voice control and the use of phone contact and address data for inputting a destination in the navigation system. The “Premium” interface omits the external antenna interface

from the charging cradle; instead it offers a GSM/UMTS transceiver with a SIM card slot and WLAN hotspot.

Car-Net. Car-Net is offered for the Golf GTI in conjunction with the Discover Pro radio-navigation system and the “Premium” mobile phone interface. It consists of a set of new mobile online services. For example, Car-Net lets drivers integrate highly up-to-date traffic information into dynamic route guidance and input online Points of Interest (POI) into the navigation system. It also integrates the 360-degree panoramic street perspective images of Google Street View. Realistic photographic satellite images can also be displayed, which are based on the Google-Earth™ map service (Google Maps).

Dynaudio Excite sound system. New in the Golf – and therefore in the GTI as well – is a sound system from Danish hi-fi specialist Dynaudio. This system makes the GTI a concert hall on wheels with its eight high-end loudspeakers plus subwoofer, a digital 10-channel DSP amplifier and 400 watts of system output power. The system can be customised by choosing from four sound characteristics (“Authentic”, “Dynamic”, “Soft” and “Speech”) which are tuned to the interior of the Golf and four seating configurations (“Driver”, “Front passenger”, “All occupants” and “Rear”) for the audio output.

Key aspects in alphabetical order

AUTOMATIC GEARBOX:
› 6-speed DSG

CARGO CAPACITY:
› 380 litres to 1,270 litres

CD VALUE:
› 0.318

CHARACTER:
› The original!

COLOURS (EXCERPT):

› Standard colours “Tornado Red”, “Black”, “Pure White”
› Optional colours “Carbon Steel Grey Metallic”, “Reflex Silver Metallic”, “Tungsten Silver Metallic”, “Limestone Grey Metallic”, “Night Blue Metallic”, “Deep Black Pearl Effect” and “Oryx White Mother of Pearl Effect”

DIMENSIONS:

› Length – 4,268 mm
› Width – 1,799 mm without mirrors, 2,027 mm with mirrors
› Height – 1,442 mm
› Wheelbase – 2,631 mm

DRIVE SYSTEM:

› Front-wheel drive.

DRIVER ASSISTANCE AND HANDLING SYSTEMS:

› Electronic Stability Control (ESC) including ABS, brake assistant, traction control, electronic XDS+ differential lock, engine braking control, counter-steering assist and trailer stabilisation (standard)
› ESC Sport (ESC mode, e.g. for race courses)
› Driver Alert System (standard)
› Automatic Post-Collision Braking System (standard)
› Progressive steering (standard)
› ParkPilot (standard)
› Tyre pressure monitoring indicator (standard)
› Front differential lock (standard on GTI Performance)
› Adaptive chassis control : DCC
› Adaptive cruise control (ACC) plus surroundings monitoring system Front Assist with City Emergency Braking
› Dynamic main beam control: Dynamic Light Assist
› Driving profile selection

› Light Assist main beam control
› Cruise control
› Park Assist park steering assistant
› PreCrash preventive occupant protection system
› Rear Assist
› Lane Assist lane-keeping assistant
› Traffic Road sign recognition

ENGINES – PETROL:
› 2.0 TSI with 162 kW / 220 PS
› 2.0 TSI with 169 kW / 230 PS

EQUIPMENT LINES:
› GTI
› GTI Performance

FUEL TANK:
› 50 litres; theoretical driving range: up to 833 km

INFOTAINMENT:
› Standard “Composition Touch” radio (5-inch screen)
› “Composition Colour” radio (5-inch screen)
› “Composition Media” radio (5.8-inch screen)
› “Composition Media” radio with navigation function “Discover Media” (5.8-inch screen)
› “Discover Pro” radio with navigation system (8-inch screen)
› Dynaudio sound system
› Car-Net (online services)

MARKET LAUNCH, EUROPE:
› May 2013

PRICES (GERMANY):
› Golf GTI (220 PS) – from 28,350 euros
› Golf GTI Performance (230 PS) – from 29,475 euros

PRODUCTION LOCATION:
› Wolfsburg plant

RUNNING GEAR:
› Front: MacPherson strut suspension
› Rear: modular performance suspension
› Progressive steering

STANDARD GEARBOX:
› 6- speed manual gearbox

TURNING CIRCLE:
› 10.9 m

WHEELS:
› Standard wheels: 17-inch alloy wheels (“Brooklyn”)
› Optional wheels 18-inch alloy wheels (“Austin”) and 19-inch alloy wheels (“Santiago”)

Technical data – tables.

Golf GTI		162 kW (220 PS)
Engine, electrics		
Type of engine		4-cyl. petrol engine TSI BMT
Effective displacement	cm^3	1,984
Valves per cylinder, drive		4 at an angle/indirect, roller rocker finger
Mixture formation		Direct petrol injection
Type of charging and pressure		Turbocharger/charge pressure
Power output	kW (PS) at rpm	162 (220) 4,500 - 6,200
Max. torque	Nm at rpm	350/1,500 - 4,400
Performance (at curb weight + 200 kg)		
Acceleration 0–80/100 km/h	s	5.0 / 6.5
Top speed	km/h	246
Fuel consumption (99/100/EC)		
Fuel type		Premium 95 RON
Combined cycle	l/100km	6.0
Emissions (CO_2)	g/km	139
Efficiency label		C
Exhaust emissions classification		Euro 6
Power transmission		
Gearbox		Six-speed manual gearbox

Exterior dimensions		
Number of doors		2
Length/width/height	mm	4,268/1,799/1,442
Wheelbase	mm	2,631
Track, front/rear	mm	1,538/1,517
Luggage compartment		
Length, rear seat raised/folded down	mm	839/1,558
Volume by VDA measurement: rear seat raised/folded down	l	380 / 1,270
Weights		
Unladen weight (EU, incl. 75 kg driver)	kg	1,351
Permitted gross weight	kg	1,820
Payload	kg	544
Perm. axle load, front/rear	kg	1,000/870
Perm. trailer load up to 12%, braked/unbraked	kg	1,600/670
Capacities		
Fuel tank	l	50

Golf GTI		162 kW (220 PS)
Engine, electrics		
Type of engine		4-cyl. petrol engine TSI BMT
Effective displacement	cm^3	1,984
Valves per cylinder, drive		4 at an angle/indirect, roller rocker finger
Mixture formation		Direct petrol injection
Type of charging and pressure		Turbocharger/charge pressure
Power output	kW (PS) at rpm	162 (220) 4,500 - 6,200
Max. torque	Nm at rpm	350/1,500 - 4,400
Performance (at curb weight + 200 kg)		
Acceleration 0–80/100 km/h	s	5.0 / 6.5
Top speed	km/h	244
Fuel consumption (99/100/EC)		
Fuel type		Premium 95 RON
Combined cycle	l/100km	6.4
Emissions (CO_2)	g/km	148
Efficiency label		D
Exhaust emissions classification		Euro 6
Power transmission		
Gearbox		Six-speed direct shift gearbox (DSG)

Exterior dimensions		
Number of doors		2
Length/width/height	mm	4,268/1,799/1,442
Wheelbase	mm	2,631
Track, front/rear	mm	1,538/1,517
Luggage compartment		
Length, rear seat raised/folded down	mm	839/1,558
Volume by VDA measurement: rear seat raised/folded down	l	380 / 1,270
Weights		
Unladen weight (EU, incl. 75 kg driver)	kg	1,370
Permitted gross weight	kg	1,840
Payload	kg	545
Perm. axle load, front/rear	kg	1,020/870
Perm. trailer load up to 12%, braked/unbraked	kg	1,600/680
Capacities		
Fuel tank	l	50

Golf GTI "Performance"		169 kW (230 PS)
Engine, electrics		
Type of engine		4-cyl. petrol engine TSI BMT
Effective displacement	cm^3	1,984
Valves per cylinder, drive		4 at an angle/indirect, roller rocker finger
Mixture formation		Direct petrol injection
Type of charging and pressure		Turbocharger/charge pressure
Power output	kW (PS) at rpm	169 (230) 4,700 - 6,200
Max. torque	Nm at rpm	350/1,500 - 4,600
Performance (at curb weight + 200 kg)		
Acceleration 0–80/100 km/h	s	5.0 / 6.4
Top speed	km/h	250
Fuel consumption (99/100/EC)		
Fuel type		Premium 95 RON
Combined cycle	l/100km	6.0
Emissions (CO_2)	g/km	139
Efficiency label		C
Exhaust emissions classification		Euro 6
Power transmission		
Gearbox		Six-speed manual gearbox

Exterior dimensions		
Number of doors		2
Length/width/height	mm	4,268/1,799/1,442
Wheelbase	mm	2,631
Track, front/rear	mm	1,538/1,517
Luggage compartment		
Length, rear seat raised/folded down	mm	839/1,558
Volume by VDA measurement: rear seat raised/folded down	l	380 / 1,270
Weights		
Unladen weight (EU, incl. 75 kg driver)	kg	1,382
Permitted gross weight	kg	1,850
Payload	kg	543
Perm. axle load, front/rear	kg	1,020/880
Perm. trailer load up to 12%, braked/unbraked	kg	1,600/690
Capacities		
Fuel tank	l	50

Golf GTI "Performance"		169 kW (230 PS)
Engine, electrics		
Type of engine		4-cyl. petrol engine TSI BMT
Effective displacement	cm^3	1,984
Valves per cylinder, drive		4 at an angle/indirect, roller rocker finger
Mixture formation		Direct petrol injection
Type of charging and pressure		Turbocharger/charge pressure
Power output	kW (PS) at rpm	169 (230) 4,700 - 6,200
Max. torque	Nm at rpm	350/1,500 - 4,600
Performance (at curb weight + 200 kg)		
Acceleration 0–80/100 km/h	s	5.0 / 6.4
Top speed	km/h	248
Fuel consumption (99/100/EC)		
Fuel type		Premium 95 RON
Combined cycle	l/100km	6.4
Emissions (CO_2)	g/km	149
Efficiency label		D
Exhaust emissions classification		Euro 6
Power transmission		
Gearbox		Six-speed direct shift gearbox (DSG)

Exterior dimensions		
Number of doors		2
Length/width/height	mm	4,268/1,799/1,442
Wheelbase	mm	2,631
Track, front/rear	mm	1,538/1,517
Luggage compartment		
Length, rear seat raised/folded down	mm	839/1,558
Volume by VDA measurement: rear seat raised/folded down	l	380 / 1,270
Weights		
Unladen weight (EU, incl. 75 kg driver)	kg	1,402
Permitted gross weight	kg	1,870
Payload	kg	543
Perm. axle load, front/rear	kg	1,040/880
Perm. trailer load up to 12%, braked/unbraked	kg	1,600/700
Capacities		
Fuel tank	l	50

PICTURE CREDITS

WWW.PHOTOCASE.DE: Page 02: Thomas Ruppel / Page 56: owik2 / Page 94: fraueva / Page 106: suze / Page 118: Alexandra Falken

WWW.VOLKSWAGEN-MEDIA-SERVICES.COM