

New Golf GTI I Media / Launch









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#### The New Golf GTI -

Australian Launch, Victorian Alps, October 2009

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#### Important:

All the data and descriptions included in this press folder are valid for the programme of models available for sale in Australia. Different details may apply in other countries. This information may be subject to change or correction.

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# Introduction

# The New Golf GTI

# Background

More than three decades after a small band of engineers started work on the first prototype Golf GTI, the very latest evolution and sixth generation of the original hot hatch has arrived.

The original Golf GTI was planned as a limited series of 5,000 cars. Since then – and five generations of GTI later – more than 1.7 million have been sold worldwide.

The elements of the original GTI remain; sharp dynamics, a responsive four-cylinder engine and driver involvement are at the core of the new GTI. Yet it has evolved – the Golf GTI generation VI is faster and more powerful than any standard GTI before it. However, the day-to-day usability of the GTI has not been forgotten and it is cleaner, safer and more efficient than ever before.

An advanced new 2.0-litre TSI engine producing 155 kW, available linked to either a six-speed manual or 6-speed DSG gearbox, is at the heart of the new GTI. Despite the rise in power output, the new GTI is assured of greater grip in all conditions thanks to Extended Electronic Differential Lock (XDL). The XDL improves traction and reduces the tendency to understeer. Unique springs and dampers combine with lowered suspension give GTI drivers the on-road experience they expect of the brand. In addition, Volkswagen's innovative optional Adaptive Chassis Control system, featuring electronically controlled damper units, is offered for the first time on the GTI. This allows the driver to select from normal, comfort or sport modes to define the desired suspension, steering and accelerator response settings for any particular journey.

The mechanical changes are joined by subtle cosmetic additions. The basis of the GTI is the chassis structure of the new Golf, onto which is added an aggressive new front bumper.

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This features a deep honeycomb airdam framed by vertical foglights which sit below a new grille element adorned by a GTI badge. As with the new Golf, the GTI uses horizontal lines to make the new car appear lower and wider than it really is. In reality, the new GTI is 27 mm wider than the car it replaces. At the rear, a diffuser is located between an all-new exhaust system with separated tailpipes to further lower the stance of the car. A subtle rear wing sits above a pair of smoked rear light lenses and a single "GTI" badge.

As with the entire Golf range, the new GTI features classleading levels of safety with ABS, ESP (Electronic Stabilisation Programme) and seven airbags, including for the first time a knee airbag, all standard. The Golf was awarded a maximum five-star rating by the EuroNCAP crash testing agency along with a maximum five-star safety rating by the Australasian New Car Assessment Program (ANCAP).

<sup>/</sup> The New Golf GTI\_Australian Launch\_Victorian Alps\_October 2009 /

#### Summary

- Sixth generation Golf GTI was first unveiled in concept form at the Paris Motor Show in September 2008
- The sixth generation of the original hot hatch evolves the virtues of the first generation GTI with greater power, performance and sharper responses than the car it replaces. By contrast, it is also cleaner and more efficient
- Powering the GTI is an advanced new version of Volkswagen's 2.0-litre TSI engine, available with either a six-speed manual or six-speed DSG gearbox
- The result is an output of 155 kW delivered between 5,300 and 6,200 rpm, which allows the vehicle to accelerate from standstill to 100km/h in 6.9 seconds
- Emissions fall from 197 to 180 g/km (DSG: 178) and economy improves from a combined 8.2/100km to 7.7 L/100km (DSG: 7.6 L/100km). Maximum torque 280 Nm between 1,700 and 5,200 rpm is delivered over an even broader engine speed range allowing greater flexibility and response
- The GTI is equipped with unique springs and dampers with ride height lowered by 22 mm at the front (15 mm rear) compared to the standard Golf
- Adaptive Chassis Control is available as an option on GTI. This allows the driver to select from normal, comfort or sport modes to define the desired suspension, steering and accelerator response settings for the conditions
- Exterior styling draws on the new design direction; simple, clean surfaces mix with sharp creases and large honeycomb grille elements. The use of horizontal lines around the front of the vehicle makes the new GTI appear lower and wider than it really is

<sup>/</sup> The New Golf GTI\_Australian Launch\_Victorian Alps\_October 2009 /

- Standard equipment highlights on the new GTI include red and black tartan sports seats with red stitching and headrests featuring the "GTI" logo, a flat-bottomed GTI multifunction steering wheel, red brake callipers, 17-inch "Denver" alloy wheels and dual zone automatic climate control
- As with the rest of the Golf range, the new GTI features classleading levels of safety with ABS, ESP (Electronic Stabilisation Programme) and seven airbags, including for the first time a knee airbag, all as standard

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# Design

#### The New Golf GTI

The new Golf GTI is slightly longer and lower than its standard Golf counterpart, giving it a more dynamic stance. Yet it shares many of the standard Golf's evolutionary styling cues. Compared to the previous generation GTI the new dimensions mean there is more room for five adults inside, thanks to the additional width. The new Golf GTI is available in three- and five-door hatchback bodystyles.

#### Exterior

The sixth generation of standard Golf established an elegant new design direction in the evolution of the iconic model. Led by the three-strong team of Walter de Silva (Head of Design, Volkswagen Group), Klaus Bischoff (Head of Design for the Volkswagen brand) and Marc Lichte (Head of Exterior Design) the styling of the Golf draws on the design language and new Volkswagen family look.

On unveiling the Golf, Walter de Silva commented: "The Golf is the global icon of carmaking so the architecture and styling of the new model are also absolutely clear and unique." Clean, minimalist lines mix with sharp, intricate detailing to create a look inspired by all five previous generations of Golf yet which remains fresh and contemporary.

The nose of the new Golf marks a departure from the vertical lines of the previous Golf, replacing them with horizontal elements – most apparent in the grille between the headlights and the air dam mounted in the front bumper. This use of horizontal lines lends the new Golf a stance that appears lower and wider than it actually is.

In penning the new GTI, the established team took the Golf's design even further. They wanted to combine the new elements of the latest generation Golf with the design cues of the generation VI Golf GTI, while at the same time evoking the spirit of the first generation GTI. De Silva explains: "We wanted a consistently clear GTI design, a car that has power, but style as well." Bischoff adds: "Also cast in stone was the goal of evoking the character of the first GTI a bit more." Lichte concludes: "And that is why it was decided that – with the exception of the aerodynamically important rear spoiler – the new GTI would not have a single exterior add-on, unlike the usual practice in this segment."

At the front, the GTI has an aggressive new front bumper, featuring a deep honeycomb airdam framed by vertical foglights which sit below a new grille element with red highlights. A simple GTI badge reinforces the model's identity. Along with the horizontal grille fins, elegant yet purposeful new headlights featuring individual lamp pods behind a translucent cover denote this new generation of Golf.

Extending back, the Golf's wing mirrors feature integrated, high level indicators. The wing mirror casings have a small groove running their length to channel rain water and ensure that the mirror remains clean regardless of conditions.

In profile the side skirts of the Golf generation V that extended the length of the sill are replaced by subtle wraparound versions that extend only partially along the lower edge of the vehicle. At the rear of the GTI, a set of smoked rear light lenses are joined by a rear diffuser channelling air from beneath the vehicle that's in turn framed by a pair of chrome tailpipes. A subtle rear wing sits above the rear window, while a single "GTI" badge adorns the hatch.

Between the rear lights is the Volkswagen badge which swivels to act as a boot release and also, if specified, it also houses the rear-view camera.

The distinctive "telephone dial" wheels from the generation V of the Golf GTI make a reappearance on the latest model.

#### Interior

In conceiving the interior for the new Golf, Volkswagen's designers unashamedly set themselves the target of defining new benchmarks in quality in this class. This goal extends to all aspects, from ergonomics, through the feel and look of the materials used to the overall refinement within the cabin.

After sitting for just a few moments in the Golf's cabin, it becomes clear that all functional components are easy and instinctive to operate. These include the controls for the air conditioning system, as well as the switches for the electric windows and wing mirrors which now sit further forward in the driver's door panel, making them easier to reach.

Also of note is the new adjustment handle for the steering wheel. Rather than being in the centre, and effectively between the driver's knees, the lever is now offset to the left hand side where it is easier to reach and use.

Further examples of attention to detail in the Golf's cabin include a new type of leather and two hooks in the boot to enable shopping bags and other items to be safely stowed.

The Golf's instrument panel was completely redesigned for the sixth generation. Clearly defined dials sit in recessed, individual cowls behind a three-spoke steering wheel.

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High quality, soft touch plastics are integrated with tasteful aluminium and chrome highlights. Volkswagen's traditional blue back-lighting makes way for white backlit dials which are illuminated regardless of whether the car's exterior lights are on.

The engineers also completely redesigned the new Golf's door trim panels to improve ergonomics and incorporate higher quality materials, once again giving the feeling that you are sitting in a car from a higher class.

Inside the GTI standard equipment highlights include red and black tartan ("Jacky" cloth) sports seats with red stitching and headrests featuring the "GTI" logo, a flat-bottomed GTI multifunction steering wheel as well as aluminium-look pedals and "Black Stripe" decorative inserts in the dash and door panels.

#### Stowage Space

There are plenty of useful stowage areas within the Golf's cabin. In addition to the lockable and cooled glovebox there is a driver's side storage compartment which can accommodate a drink can and generous door bins.

In the GTI there is a further large storage area between the front seats complete with two cup holders. The overhead console, which houses the front interior lights and their controls, also has a sunglasses compartment. In the rear seating useful storage pockets are located for smaller items.

Showing attention to detail, almost every storage area in the Golf has a purpose. One example is the bottle opener, which fits into the small gap between the cup holders in the space next to the handbrake lever.

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### **Climate Control**

The Golf GTI has fully automatic dual zone automatic climate control air conditioning. This two-zone device allows driver and front-seat passenger to adjust their own climates individually and independently. Temperatures within the two zones are maintained to an accuracy of a degree, with no readjustment necessary whatever the outside conditions. The intelligent control system even takes into account the amount of sunlight penetration into the cabin, and makes separate calculations to compensate for it on both the driver and passenger sides.

As an example of further attention to detail, the system switches automatically to recirculating-air mode when reversing and when the windscreen washer sprays are used; the fresh air supply is momentarily cut to prevent smells – of exhaust and windscreen wash – from entering.

### Refinement

The Golf's interior look is combined with advances made by Volkswagen engineers in reducing wind noise, including a completely new design of door and window seals, a new sounddamping (film) inter-layer within the laminated windscreen and a new engine mounting system. The result is the quietest Golf yet produced. Yet it should be noted that in any alterations to sound-deadening, weight was always taken into consideration and heavy noise-damping materials have been systematically replaced with new, lighter materials wherever possible.

Damping technologies and materials were redesigned in the areas of the mounting points for the body panels, engine firewall, foot pedals, centre tunnel, around the air conditioning and heating system and in the cargo area. This was following ultrasonic measurements and so-called "near-field holography" which analysed the key areas in which noise could be reduced.

In addition, many secondary noises were eliminated or reduced at source, for example in all belt drives, the turbocharger and charge air distribution as well as in the heating and cooling blower. Usually reserved for cars of the luxury class, the windows of the Golf were also addressed by noise control measures. At the same time, the thickness of the front side windows was increased by ten per cent. Development engineers also came up with a new sealing concept for the doors with new dual-lip window guide seals, for example, giving a quiet interior.

One exterior change which benefits occupants and improves refinement is the Golf's wing mirror design. These have better aerodynamic properties, reduce wind noise and minimise dirt sticking to the mirrors in poor weather conditions. Also in the area of aerodynamics are the Golf's newly designed rain channels at the A-pillars which cut wind noise.

As a result of the aerodynamic changes, the new Golf GTI has a Cd value of 0.32. Not only does this mean better refinement, it also of course leads to lower fuel consumption and emissions. The latest Golf also maintains the high quality production benefits of its predecessor, including for example laser welding which facilitates smaller panel gaps and in turn by design makes the car quieter, more rigid, more refined and safer to drive.

# **The New Golf GTI** GTI: 2.0-litre TSI, 1984 cc, 16-valve 4-cyl, 155 kW

The Golf GTI features a 2.0-litre four-cylinder TSI petrol engine. It has a power output of 155 kW delivered between 5,300 and 6,200 rpm, which allows the vehicle to accelerate from standstill to 100km/h in 6.9 seconds. Maximum torque – 280 Nm – is delivered between 1,700 and 5,200 rpm, an exceptionally wide range to provide excellent in-gear performance and keen throttle response. The GTI is available with a six-speed manual or six-speed DSG gearbox. Carbon dioxide emissions are reduced to 180 g/km (DSG: 178 g/km) and economy improves to a combined figure of 7.7L/100km (DSG: 7.6 L/100km).

Although sharing the same 1,984 cc displacement as the 2.0-litre T-FSI engine from the Golf GTI generation V, the new TSI unit features substantial changes including modified pistons and piston rings, an uprated oil pump, new induction system and a high-pressure fuel pump. This engine was also completely redesigned for Euro V compliance, lower CO2 emissions, fuel efficiency, ease of servicing and "packaging". Packaging means reducing the external dimensions of the engine, plus accessories to allow appropriate under-bonnet space for engine movement, service access and crumple zones.

#### Gearboxes

The Golf GTI is available with a choice of six-speed manual or six-speed DSG gearbox.

#### Six-speed Manual

The Golf's manual six-speed gearbox features a magnesium selector housing and cable operation with very short lever movements. Three-cone synchromesh for the lower gears ensures a pleasant shift action. Reduced-friction bearings further increase the efficiency of the unit and cut fuel consumption.

# DSG – Direct Shift Gearbox

At launch in 2005, Volkswagen's Direct Shift Gearbox was a true innovation, combining the comfort of an automatic gearbox with the responsiveness and economy of a manual unit.

The six-speed, transversely mounted DSG unit has two wet clutches with hydraulic pressure regulation. One clutch controls the "odd" gears plus reverse, while the other operates the "even" gears. Essentially it is two gearboxes in one.

With this clutch management system, the interruptions in power that are typical of even an automatic-shift manual gearbox no longer occur. This is achieved by an intelligent hydraulic and electronic (mechatronic) gearbox control system, the two wettype clutches and the two input and output shafts in each half of the gearbox.

This combination enables the next-higher gear ratio to remain engaged but on standby until it is actually selected. In other words, if the car is being driven in third gear, fourth is selected but not yet activated. As soon as the ideal shift point is reached, the clutch on the third-gear side opens, the other clutch closes and fourth gear engages under accurate electronic supervision.

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Since the opening and closing actions of the two clutches overlap, a smooth gearshift results and the entire shift process is completed in less than four-hundredths of a second. In addition to its fully automatic shift mode, DSG has a Tiptronic function to permit manual gear selection.

All GTI models feature a multifunction steering wheel; if DSG is selected this also has a "paddle shift" to allow up and down gear changes without the driver needing to remove his or her hands from the steering wheel.

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# **Running Gear**

#### The New Golf GTI

A new era for Volkswagen suspension design was ushered in with the arrival of the Golf generation V and the new model retains the key characteristics of this successful and award-winning set-up, namely strut-type front and four-link rear suspension. The GTI also use this basic structure.

The GTI's running gear, however, has been substantially modified to give it the dynamic ability it deserves. One key change is the addition of standard XDL, which aim to improve traction and handling (more details in separate XDL section). The GTI's sporty driving characteristics are also enhanced thanks to the addition of specially tuned springs, dampers and anti-roll bars. What's more, the GTI has a narrower front track than the standard Golf, measuring 1,533 mm instead of 1,540 mm. The rear track remains almost unchanged at 1514 mm (standard Golf 1513 mm). Sports suspension is also applied, lowering the GTI by approximately 22 mm at the front and 15 mm at the rear.

Available as an option on all GTI models is Volkswagen's Adaptive Chassis Control system which was first seen on the Passat CC. Naturally the Golf also features ABS with the latest incarnation of ESP to ensure safe handling and deceleration where necessary.

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#### Front Running Gear

At the front all Golf models use proven strut-type front suspension to offer direct steering feedback, high rigidity under cornering loads and minimal body roll.

Ride and handling benefit from the car's clever mounting concept for the lower wishbone, with separate mountings for spring and damper on the suspension strut tower, including a lightweight twin-sleeve damper unit and optimised spring rates.

# Multi-link Rear Axle

The introduction of a four-link rear suspension system was a major stride forwards for the Golf's market segment in terms of providing the optimum combination of handling dynamics and ride comfort.

The compact four-link layout features three lateral control arms – the spring mounting, the track rod and the upper control arm – and a trailing link at each wheel. Suspension assemblies are attached by way of a rear-axle subframe and, as at the front, rubber-and-metal mountings that are soft in torsion but stiff radially are used to ensure that the anti-roll bar responds immediately and suppresses body roll effectively. This combines accurate handling with good ride and low road noise levels.

The spring and damper on each side are located separately; the spring bears directly on the trailing link and the damper unit is attached to the wheel hub assembly. The suspension geometry on the compression stroke generates a toe steering effect that maintains neutral behaviour or slight understeer in all driving and load-carrying situations.

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Among the benefits of the almost neutral layout are excellent straight-running stability characteristics on highly uneven road surfaces and minimised tyre wear.

### **Electro-mechanical Power Steering**

The Golf uses a third generation electro-mechanical power steering system (EPS) which is able to vary the feel of the steering wheel to suit the speed and driving situation: firm and direct when driving hard, effortless at parking speeds.

Other advantages of the system include its mild self-centring action, its ability to compensate for different driving hazards, like crosswinds and steep road cambers, and a beneficial effect on fuel economy.

The Golf GTI has a turning circle of 10.9 metres, and three turns lock to lock.

#### **Braking System**

The Golf GTI features a sophisticated braking system, with ABS and ESP (Electronic Stabilisation Programme) as standard across the range.

Ventilated discs measuring 312 mm in diameter are fitted at the front, with solid discs at the rear (282 mm on GTI).

The latest-generation ESP system developed for the Golf has a range of features designed to have a direct and positive effect on active safety.

# ESP – Electronic Stabilisation Programme

Essentially, ESP is a sophisticated system that automatically senses any tendency for the car to slide. Should this situation occur, ESP reacts by applying the brakes to one, two, three or all four wheels and adjusts the engine's power. In this way, it is possible that a skid is corrected even before the driver is aware that one has started.

This can be useful if a tendency to understeer or oversteer develops in a bend. In such circumstances ESP can help prevent the car skidding or spinning off the road and is particularly helpful in wet or icy conditions.

The latest generation of ESP fitted to all Golf models has a finer response and counter-steering recommendation.

#### Hydraulic Brake Assist

Working in conjunction with the other elements of the braking system, this latest form of brake assist recognises from the speed at which the brake pedal is depressed whether it is a "normal" braking situation or an emergency stop. In the event of an emergency stop, brake assist automatically increases braking pressure, activating ABS and ensuring the level of braking meets the needs of the conditions. The application of brake assist makes it possible even for unskilled drivers to reduce braking distances by up to 25 per cent.

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### XDL – Extended Electronic Differential Lock

All GTI models are fitted with XDL, an electronic cross-axle traction control system for improved traction and handling. Technically speaking, XDL is a functional extension of the electronic differential lock (EDL).

When cornering, the XDL responds to the unloading of the front wheel on the inside of the corner. The ESP hydraulics are used for the XDL to apply pressure to the wheel on the inside of the corner in order to prevent wheel spin. This improves traction and reduces the tendency to understeer which is typical of front-wheel drive cars. As a direct result of the one-sided and precise braking pressure, cornering is sportier, quicker and more accurate.

# Adaptive Chassis Control

Engineers have in the past been constrained to design a suspension system which is biased either towards comfort or sportiness, always resulting in some form of compromise. The ideal, it was decided, would be to produce a chassis that could continually adapt to road conditions and the particular wishes of the driver or passengers. This has been achieved for the Golf, and all models in the range can be specified with an Adaptive Chassis Control system. Here not only can the suspension's damping characteristics be controlled at the touch of a button, but the electro-mechanical power steering and accelerator response are also modified at the same time.

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Adaptive Chassis Control functions via a set of four electrically adjustable dampers operated through electronically controlled valves. Each damper is fitted with characteristic map control, a gateway control module that serves as an interface with the CAN data networks in the Golf - these comprise three sensors for measuring wheel displacement, three sensors for measuring movements of the body structure and a control module for the damping. These sensors constantly (up to 1,000 times per second) measure the vehicle's behaviour - be it under braking, acceleration or cornering - and react almost instantaneously to ensure the optimum mix of chassis agility and comfort at all times. The vehicle defaults to "Normal" mode in which the system strikes a balance for general use. Should the driver select "Sport" mode the steering assistance is reduced, the damping is hardened and the throttle responses are sharpened as the mapping changes. This is intended for either twisty roads or track driving. In "Comfort" the damping is softened and the steering assistance is increased to provide a smooth and controlled ride best suited to motorway driving.

#### Hill Start Assist

All Golf models with a DSG gearbox feature a hill start assist as standard. The system is useful when the car stops for short periods (such as in heavy town traffic). Hill Start Assist (HSA) holds the vehicle when the foot brake is released by temporarily locking the brake pressure (for a maximum of 1.5 seconds) to provide comfortable starting-off without rolling back. Hill Start Assist (HSA) operates on inclines greater than 5% and is fitted in combination with the Direct Shift Gearbox (DSG).

# **Equipment Highlights**

# The New Golf GTI

# Equipment and Trim

Sitting at the top of the Golf range, the GTI models have a high level of standard features as you would expect. Equipment highlights are shown below:

#### Golf GTI

- GTI styling pack: uniquely shaped front and rear bumpers with integrated front fog lights and honeycomb front air intake
- Rear diffuser, black with chrome exhaust tailpipes left and right
- Red brake callipers
- Black honeycomb radiator grille with red strips top and bottom
- Unique GTI badging
- Carpet mats front and rear with red edging
- Leather trimmed three-spoke steering wheel with GTI logo and red stitching
- "Jacky" black, white and red tartan cloth upholstery
- "Denver" alloy wheels (4), size 7 1/2 J x 17
- Sports suspension lowered by approx. 22 mm front and 15 mm rear
- XDL Extended Electronic Differential Lock (see Running Gear section for details)

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# Safety and Security

### The New Golf GTI

The Golf brand has always been synonymous with safety, and in designing the sixth generation, developers were set the task of making this car the safest Golf yet.

That's why the Golf is being offered with a seamless package of standard safety features. On the passive side, there is a further perfected safety body with seven airbags including a knee airbag on the driver's side and a safety optimised head restraint system for driver and front passenger. Furthermore, a new sensor concept for crash detection is also introduced on the new Golf. Naturally the GTI has the same level of safety features as their standard Golf counterparts.

# New Sensor Concept for Crash Detection

The sixth generation of Golf is equipped with a new sensor concept for detecting crash intensity and correspondingly influencing airbag ignition. This involves the electronics, which are located centrally in the passenger compartment, evaluating the "felt" low-frequency deceleration signals. At the same time, specially tuned accelerometers measure the frequency components in the mid or "audible" range. These signal components are generated as a body wave when load-bearing structures in the front car area rapidly deform. They propagate at high speed throughout the vehicle structure and supply precise and quickly available information about the severity of the crash.

By intelligently linking "felt" and "audible" signal components, it is possible to obtain a faster and at the same time more reliable impression of the crash from the airbag sensors. That enables better adaptation of airbags and seatbelt tensioners to the crash situation, to protect passengers in the most appropriate way.

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The Golf's sensor system was awarded the Bavarian Innovation Prize in Germany.

# Knee Airbag

Standard equipment on the Golf includes two front airbags, two side airbags and two head airbags. For the first time the Golf GTI also has a knee airbag system on the driver's side. The special mounting location of the knee airbag – beneath the knee impact area on the instrument panel – ensures that there is no contact between the airbag door and the lower leg.

In the event of a crash the airbag deploys in front of the driver's knees in less than 20 milliseconds and absorbs – in conjunction with the seatbelt and front airbag – a significant share of the crash energy.

In general, the knee airbag protects the driver's legs from a hard collision with the steering column and instrument panel. In an offset impact, the feet are also better protected against lateral ankle twist.

# Front, Side and Head Airbags

The driver and front passenger airbags together with the knee airbag and seatbelt system, form a precisely co-ordinated front restraint system on the Golf. As on previous generation models, the side airbags are still integrated in the seatbacks of the front seats, which ensures they are always in the best position to protect the driver and front passenger. These protect the chest, abdomen and pelvis and have been optimally tuned to the car's more rigid lateral structure.

Furthermore, standard head airbags help to prevent high biomechanical loads on the head. Specifically, these airbags cover the side window area from the A to the C-pillar and from the roofliner to the door window sill. This means maximum protection at all seating positions regardless of body size because protection over a large area prevents the head and extremities from swinging out and prevents objects from penetrating the car's interior. Due to the long holding time of the head airbags, they remain largely effective even in secondary collisions such as those occurring in the event of a rollover.

### Safety Optimised Head Restraint System

Injuries caused by hyperextensions of the cervical spine – or whiplash – are extremely common following car accidents. Volkswagen has developed its Safety Optimised Head Restraint System – to counteract whiplash injuries by co-ordinating the movements of the head and upper body as synchronously as possible via the seatbacks and head restraints. The latest generation of Safety Optimised Head Restraint System is implemented as standard on the Golf.

To reduce the risk of injury, excellent protection is afforded by achieving defined deceleration velocity of the upper body via the seatback, co-ordinated deceleration of the head via the head restraint, and balanced motions of head and upper body. Key to this are the special contour of the head restraints and seatbacks as well as the hardness of the foam material used here. The contoured shape of the head restraints is being patented by Volkswagen.

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# Euro NCAP Test Results

The sixth generation Golf was tested ahead of launch by the Euro NCAP (European New Car Assessment Programme) crash test agency.

It achieved 36 out of a possible 37 points for occupant protection leading to a five-star award. In the area of child safety the Golf scored four stars; a further three stars were awarded for pedestrian safety. This makes it one of the safest cars available in this segment.

# **ANCAP** Test Results

In Australia, The Australasian New Car Assessment Program (ANCAP) has awarded the sixth generation Golf with the highest score achieving a maximum five-star safety rating.

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# The New Golf GTI

# Pricing

#### Models

Golf GTI 2.0 Litre TSI 155kW 3 door 6-speed manual	\$38,990
Golf GTI 2.0 Litre TSI 155kW 3 door 6-speed DSG	\$41,490
Golf GTI 2.0 Litre TSI 155kW 5 door 6-speed manual	\$40,490
Golf GTI 2.0 Litre TSI 155kW 5 door 6-speed DSG	\$42,990

#### Options

Metallic/Pearl Effect Paint	\$700
Adaptive Chassis Control	\$1,500
Electric Glass Sunroof	\$1,900
Vienna Leather Appointed Upholstery	\$3,300
Bi-Xeonon headlights with dynamic cornering lights	\$2,000
Dark tinted rear side and rear window glass	\$400
RNS510 Satellite Navigation system	\$2,500
Dynaudio Excite 300W Premium Audio	\$1,300
Rear View Camera (RVC)	\$500
Media Device Interface (MDI)	\$270
Park Assist with front and rear parking sensors	\$1,400
Electrically adjustable driver's seat (5 door in combination	
with leather)	\$600
Detroit 18" Alloy Wheels (4)	\$1,200

# **Factory-fit Options**

#### The New Golf GTI

A number of factory options and retailer-fit accessories are available on the new Golf GTI, allowing buyers to customise their vehicles further. These include 18-inch alloy wheels, adaptive chassis control, bi-Xenon headlights, parking assistance systems, satellite navigation and leather upholstery. For full details on option availability please see the latest price list.

# Gas-discharge (Bi-Xenon) Headlights

Ultra-efficient gas discharge (bi-Xenon) headlights are offered on GTI models. These provide a well focused, blue-white light approximately two and a half times more powerful than standard lights, and come with a self-levelling mechanism, high pressure headlight wash as well as dynamic curve lighting. This turns with the steering to a maximum swivelling angle of 15 degrees to provide better visibility around bends.

#### Park Assist, Parking Sensors and Rear-view Camera

Useful for tight manoeuvres is the option of Volkswagen's Park Assist system. This option also adds optical parking system parking sensors, and using a series of these located at the front, rear and side of the car, plots the ideal manoeuvring path into a parallel space either to the right or left of the vehicle.

When driving at speeds of under 30km/h, an ultrasonic sensor system detects all parallel parking spaces to the right or left with a total space of 1.1 metres more than the vehicle. A control unit then notifies the driver that an appropriate space has been found and calculates the ideal parking path.

<sup>/</sup> The New Golf GTI\_Australian Launch\_Victorian Alps\_October 2009 /

Once in the recommended "start" position, the driver engages reverse gear. During the parking process the driver has no steering input, but is in control of the throttle and brake.

Even if Park Assist is not being used, when reverse gear is engaged, the Golf driver benefits from the parking sensors which allow objects behind the car to be pinpointed. The system produces an audible warning signal to guide the driver up to a safe distance to any objects behind. Not only does this help to avoid car park knocks, it could also prevent accidents, for example, if a child runs out who may not have been seen.

One option which can be specified with or without Park Assist on the new Golf GTI is a rear-view camera. This is located behind the rear badge – so the lens is always clean – and transmits an image of what is behind the car to the screen in the central display. This allows the driver to see and recognise obstacles behind the car, and manoeuvre into the tightest parking spaces. This facility can also be extremely useful when hooking up to a tow hitch.

#### DVD Touchscreen Navigation/Radio System

Volkswagen's latest touchscreen DVD navigation and entertainment system is offered with the Golf GTI. The installation uses a touchscreen for fast, intuitive operation of the entertainment and navigation menus and displaying of information.

With this system, as well as playing CDs in the usual manner, favourite tracks can also be stored onto the internal, 30 GB harddrive via an SD card slot in the front of the unit. The system can also be used to play DVDs when the car is stationary.

<sup>/</sup> The New Golf GTI\_Australian Launch\_Victorian Alps\_October 2009 /

The hard-drive can also be used to store navigation mapping, freeing up the CD/DVD drive. In addition routes can be recorded while driving and then re-traced by following guidance provided by the stored waypoints. This can be particularly useful in off-road situations and regions for which digital mapping does not exist.

For the navigation to function, rear ABS wheel sensors are used to determine the distance the car has covered and to provide information when the car is turning. Further system components include a three-way roof aerial for radio and GPS (Global Positioning System). The aerial receives signals from the satellites in orbit from which the system is able to calculate the position of the car on the surface of the earth.

#### Dynaudio Sound System

A 300 watt premium entertainment system from Danish hi-fi specialist Dynaudio provides exceptional sound quality especially compared with other systems in this market sector. The eightchannel system delivering up to a true 300 watts RMS without unwanted vibrations in the vehicle structure sets a new standard in this class.

#### For further information:

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