

Volkswagen

The New Scirocco – International Driving Presentation

Portugal, June 2008



Note:

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Scirocco

To the Point

Comeback of a sports car legend: Third generation of the Scirocco to be launched

New Scirocco will be available across Europe by mid-November

Scirocco is the right choice as an affordable sports car for every day of the year

- Wolfsburg, June 2008. The countdown is running for the new era Scirocco: the third generation of the sports car will already be arriving on the market in August. Volkswagen is staging the comeback of a legend with the debut of the two-door car – Scirocco generations I and II wrote history as the most successful Volkswagen coupé of all time with about 800,000 units sold.
- **Cult status.** In particular, it is the original Scirocco presented in 1974 that has long held cult status. Because, in contrast to many of its competitors of that time, the Scirocco – designed by Giorgetto Giugiaro – was an affordable car with everyday utility, and front-wheel drive also made it a safe sports car for use every day of the year.

Scirocco unites passion and logic

- **Fascination.** The new Scirocco is extending this tradition. It offers pure driving pleasure, a new powerful design, high-end technologies such as DCC adaptive chassis control and the new 7-speed DSG dual clutch transmission. Plus: exclusive use of efficient turbo engines with up to 147 kW / 200 PS

power, space for four adults despite its sporty lines, an extremely high level of safety and the everyday utility that is typical of every Volkswagen. This mix of passion and logic costs far less than one might guess based on the car's key data.

- **New paths.** Although the third generation of the Scirocco follows exactly the same positioning as the first one, Volkswagen very intentionally avoided retro elements. In this regard too, the Scirocco of the year 2008 is a conceptually counterpart to the original version: because in the mid-1970s the successor to the Karmann Ghia also set out on new paths, both technically and visually.

Front end design of a new era

- **High-sheen black headlamp housing.** The third Scirocco is the first Volkswagen to sport the front end design of a new era. Especially characteristic here are the chrome lamp bodies and high-sheen black interior surfaces of the headlamp housings that are joined by the radiator grille cross bar that is also painted in high-sheen black.
- **Flawless sports car fundamentals.** The Volkswagen design team created a wagon-coupé based on flawless sports car fundamentals. This resulted in a side profile that had the potential to imbue this new Volkswagen too with a status that goes beyond class distinctions. Thanks to its long

sweeping roofline and near-vertical rear window, it also frees up space for variability and up to 755 liters of cargo capacity.

- **Crisp dimensions.** Other benchmark figures of the new sports car also speak a clear language. With its short overhangs, the Scirocco efficiently utilizes its 2,578 millimeter wheelbase to offer ample space. The Volkswagen is 1,404 millimeters tall, exactly 4,256 millimeters long and its width measures 1,810 millimeters.

Four turbo engines at market introduction

- **A lot of power for just a little fuel.** One challenge in creating an affordable sports car involves the engines. On the one hand, they must absolutely be agile, yet it is also essential that they be economical and widely affordable. There are two approaches to resolving this apparent conflict Both of them have three letters: TDI and TSI – turbocharged diesel and gasoline direct injection engines.
- **One TDI and three TSIs.** At the market introduction Volkswagen will offer the Scirocco with two TSI engines (118 kW / 160 PS and 147 kW / 200 PS). Shortly thereafter, a TDI (common rail turbo-diesel, 103 kW / 140 PS) and another TSI (90 kW / 122 PS) will be added to the engine lineup. Decisive here is the fact that even the 122-PS base engine offers a maximum of torque at extremely low engine

speeds (200 Newton-meter starting at 1,500 rpm). Its average fuel consumption of 6.1 liters per 100 kilometers shows considerable restraint.

- **5.4 to 7.7 liters fuel consumption.** The combination of maximum torque and minimum consumption is a common theme running through the entire engine lineup. In the case of the latest TSI with 160 PS, 240 Newton-meter torque contrasts with just 6.5 liters super unleaded per 100 kilometers. And even on the 200-PS TSI with its considerable 280 Newton-meter of torque, fuel consumption is just 7.7 liters. As would be expected, the TDI also makes a brilliant showing here: 320 Newton-meter of powerful torque while being satisfied with just 5.4 liters of fuel. Incidentally, all engines up to 160 PS already satisfy the future Euro-5 emissions standard*.

Two crisply shifting dual clutch transmissions

- **6-speed and 7-speed DSG.** Standard equipment on the Scirocco is the smoothly and precisely shifting 6-speed transmission. The DSG dual clutch transmission is offered as an option on the three engines starting at 140 PS. A 6-speed DSG is used with the TDI and the powerful 200 PS TSI. The 160-PS TSI distributes its power over an even broader range of gears with the 7-speed DSG.

Optional sport chassis with three level settings

- **Clever Chassis.** Ideally tailored to the Scirocco is the new DCC adaptive chassis control system. Not only is the damper characteristic controlled here, but also tuning of the electro-mechanical power steering. Adaptive chassis control offers the three programs "Normal", "Sport" and "Comfort". Significant here is the fact that adaptive chassis control improves the driving characteristics of the Scirocco full-time. That is, the suspension is continually adapted to the roadway and driving situation. The system also reacts to accelerator, brake and steering inputs. It is able to resolve the conflict in goals between a tight sport suspension and a comfortable one.

Standard features

- **Full program.** The new Scirocco is one of the most attractive sports cars in terms of price. And yet its standard features place it on the same level as far more expensive coupés. Always on board are 17-inch alloy wheels, height-adjustable driver and front passenger seats, leather steering wheel, parking brake handle and shifting lever grip, sport seats, split folding rear seatbacks, power windows, air conditioning, ESP, braking assistant, six airbags, power steering and of course a sport chassis. On the top 200 PS model, standard equipment also includes chrome tailpipes, a "Titanium black" roof liner and a sound generator.

Panorama vent sunroof

- **Transparent roof.** Supplying vast amounts of light to the interior is an optional large panorama vent sunroof that extends from the A-pillars to the B-pillars. At the press of the button the transparent roof opens up to 39 millimeters. When the sun is intense, a sunshade can be driven into place. But that is not likely to be necessary very often, since the glass of the panorama vent sunroof only transmits 8.2 percent of the UV radiation, 2.8 percent of the infrared radiation (heat) and 6.9 percent of the visible light.

* Due to current vehicle registration laws, the vehicles can only be registered for the current Euro-4 emission standard initially. It will then be possible for the car owner to re-classify or re-register the vehicle at additional charge.

Key aspects in alphabetical order

- **Automatic transmission:** 6-speed and 7-speed DSG
- **Body:** With panorama vent sunroof upon request
- **Cargo capacity:** 292 liters to 755 liters
- **Character:** Genuine, affordable sports car with space for four adults, status beyond class distinctions
- **Chassis:** McPherson front suspension, four-link rear suspension, ESP is standard
- **Colors:** “Candy white”, “Rising blue metallic”, “Deep black pearl effect”, “Reflex silver metallic”, “Shadow blue metallic”, “Beryllium gray metallic”, “Dark maroon metallic”, “Opal silver metallic”, “Salsa red”, “Viper green metallic” (the latter in homage to the first generation of Sciroccos)
- **Debut of generation I:** 1974; 504,153 units built
- **Debut of generation II:** 1981; 291,497 units built
- **Design:** Visual look of flawless sports car fundamentals, first Volkswagen with new front end design, wagon-coupé with extremely long roof (1.8 meters).
Design responsibility: Walter de Silva (Group), Klaus Bischoff (Brand)

- **Dimensions:** 4,256 mm long, 1,810 mm wide, 1,404 mm tall, extremely wide tread width (front 1,569 mm, rear 1,575 mm)
 - **Drive:** Front-wheel
 - **Engine power range:** 90 kW / 122 PS to 147 kW / 200 PS, all engines are charged, all engines up to 160 PS satisfy Euro-5 emissions standard*
 - **Engines – diesel (TDI):** 103 kW / 140 PS, 125 kW / 170 PS
 - **Engines – gasoline (TSI):** 90 kW / 122 PS, 118 kW / 160 PS, 147 kW / 200 PS
 - **Fuel consumption range:** 5.4 to 7.7 liters fuel per 100 kilometers
 - **High-tech driving systems:** DCC adaptive chassis control, ACC automatic distance control (starting early 2009)
- Infotainment:** Two radio systems, two radio-navigation systems, 300 Watt Dynaudio sound system, MEDIA-IN port (USB)
- **Market introduction:** August 29, 2008 in Germany and Great Britain, by November across Europe, in May 2009 in Japan
 - **Production site:** “Volkswagen Autoeuropa – Automóveis Ltda.” in Palmela, Portugal

- **Racing use:** At the start of the 24-hour race on the Nürburgring in May 2008 with powerful 238 kW / 325 PS racing version; results: double victory in its class.
- **Safety:** Six airbags, exceptionally rigid body, ESP, Isofix child seat mounting brackets, special pedestrian protection features, front passenger airbag can be deactivated (for rear-facing child seat), in case of crash: automatic activation of hazard flasher and interior lights, automatic door opening, automatic deactivation of fuel pump
- **Standard features:** Include 17-inch alloy wheels, height-adjustable driver and front passenger seats, leather steering wheel and parking brake handle, newly designed sport seat system, split folding rear seatbacks, power windows, air conditioning, ESP, braking assistant, six airbags, power steering with countersteer feature, sport chassis

* Due to current vehicle registration laws, the vehicles can only be registered for the current Euro-4 emission standard initially. It will then be possible for the car owner to re-classify or re-register the vehicle at additional charge.

- **Standard transmission:** 6-speed manual

Scirocco

Body

Beginning of a new era:

Scirocco is frontrunner an with extremely clear design philosophy

Remarkable front end: Scirocco design shows new Volkswagen lines

A sure thing: Scirocco offers top notch passive safety

Wolfsburg, June 2008. The events are remarkably similar, although they are separated by a span of more than three decades: in 1974 Volkswagen introduced the new Scirocco to the market just a few months before the debut of the first generation Golf. The sports car was a sensation, since it not only replaced the rear engine Karmann Ghia, but also initiated – after the Passat presented before it – a whole new era of design. The fact is that the original Scirocco designed by Italian Giorgetto Giugiaro (Italdesign) offered an initial glimpse of the future Golf that was also drawn up at Italdesign. 34 years later, this history is now repeating itself in some aspects. The reason: this third generation Scirocco is the first Volkswagen to exhibit the new front end design for a new era.

A distinctive characteristic of the Scirocco front end are its chrome headlamp bodies and the high-sheen black inside surfaces of the headlamp housings that are joined by a radiator grille cross bar, also in high-sheen black. On this sports car, the VW emblem is not integrated in the radiator grille, rather it is mounted on the engine hood.

THE DESIGN OF THE SCIROCCO IN DETAIL

Designers configured the third generation Scirocco unmistakably as a pure sports car. Even more powerful than the original Scirocco of the 1970s and the second generation in the 1980s, the new Scirocco still offers significantly more interior space. That is because – in contrast to its two predecessors – the Scirocco of the year 2008 does not have a sloped hatch, rather a steep hatch with a long roof and vertical tailgate. That offers two crucial advantages. First: the Scirocco exhibits very crisp proportions. Especially when viewed from the rear, it immediately becomes clear that the 1.80 meter long roof together with the lateral lines of the windows stand on very broad and powerful shoulder sections. So the Scirocco's design is based on flawless sports car fundamentals. Second: the new model also has space in back for two adults and their luggage. Altogether, the progressively styled Scirocco combines a high level of everyday utility with high-end design.

With its short overhangs, the Scirocco efficiently utilizes its 2,578 millimeter wheelbase for interior space. The Volkswagen is 1,404 millimeters tall, exactly 4,256 millimeters long and 1,810 millimeters wide.

Front end

The Scirocco's front end exhibits, as already described, a completely new Volkswagen design language. On the one

hand, it preserves historical elements, yet at the same time it takes a great leap forward. The radiator grille and bumpers are characterized by a timelessly impressive dynamism. Technically, the front car concept satisfies Volkswagen's stringent requirements for pedestrian safety.

Stylistically, horizontal lines dominate in the upper area of the Scirocco's front end. Spanning the distinctive, high-sheen black background of the dual headlamps, is a very narrow cross bar, also glistening in luxurious black. Beneath it is a similarly shaped, very clearly defined area in car color. This double band of the high-sheen radiator grille and the bumper painted in car color – both defined by crisp lines – will become a new character trait. In the lower section of the front end, the image is defined by the central air inlet with its diamond pattern in black, and the turn signal and fog lamps integrated to its left and right.

Side profile

When one runs their hand over one of the headlamps, then over the fender and a door, one notices that the surfaces of the side profile alternate in curvature. This the side image changes like a moving muscle in response to the viewer's perspective and incident lighting. This powerful appearance is reinforced by the standard 17-inch wheels, which due to the car's large tread width (1,569 in front, 1,575 millimeters in the rear) are practically flush with the body.

Furthermore, the hidden B pillar, the line of windows that ascends steeply toward the rear, and the very distinctive C pillar are features that convey a very independent presence and dynamic together with the seemingly endless roof line. In the rear area, an integrated roof spoiler adds to the dynamics and applies additional downforce at the rear axle. The sculpted taillights, also very distinctive when the car is viewed from the side, offers a very special counterpoint.

Rear end

The sculptural form of the wide taillights – with their unmistakable night design – is most impressive from the rear perspective. Here the vehicle's character is defined by the ratio of proportions between roof and shoulder section, i.e. the belt line. It is sharply contoured, since the roof runs substantially narrower than the car body. These stylistic properties produce a design typical of a very powerful, high-performance sports car. The already quite wide tread width looks even wider. From the rear, the posts of the C pillars cannot be made out visually, since the window of the tailgate spans the entire width of the vehicle. The overall design of the rear end – with a wider, heftier bumper plus large tread width plus roof line plus roof spoiler plus wrap-around rear window – all convey an exceptionally powerful image.

Panorama vent sunroof

Supplying a vast amount of light to the interior is a large panorama vent sunroof that extends from the A-pillars to the B-pillars. At the press of a button the transparent roof opens up to 39 millimeters. When the sun is shining intensely, a sunshade can be driven into place. But that is not likely to happen very often, since the glass of the panorama vent sunroof only transmits 8.2 percent of the UV radiation, 2.8 percent of the infrared radiation (heat) and 6.9 percent of the visible light.

The panorama vent sunroof, with its black exterior, is made of safety glass. Its visual appearance was made to extend toward the windshield frame by a high-sheen black surface (polycarbonate) that is part of the glass-fiber reinforced polyurethane roof frame. The low-profile design of the panorama vent sunroof does not reduce headroom in the sports car in any way. On the contrary: the lack of a roof liner in the area of the glass section frees up more space than would be available without the transparent roof.

SAFETY ON THE SCIROCCO

The new Scirocco is characterized by passive safety that is on the same recognized excellent level as the Golf and Passat. It is based on an extremely rigid body structure, energy absorbing deformation zones all around, and restraint systems specifically tuned to the sports car.

The combination of a highly rigid occupant cell and deformation zones laid out according to computations is a prerequisite for good crash performance. The concept applied to the Scirocco is profile-intensive lightweight construction with cold-worked, high-strength sheet metal. All real tests and computer simulations confirm that the steel body designed in shell construction offers optimal protection even under the most difficult crash conditions.

A key aspect of the development of the Scirocco was pedestrian safety. All relevant components at the front of the vehicle were adapted to this objective. Engineers paid special attention to the engine hood, e.g. to optimize the hinge area for pedestrian protection. Also contributing here is a newly designed foam piece mounted behind the bumper fascia, whose soft consistency reduces the severity of leg injuries.

Six airbags and optimal safety for children

Besides its highly safe body structure, the car's standard front, side and window airbags also make the new Scirocco one of the safest cars in its class. As is usual at Volkswagen, the front passenger airbag can be deactivated by a "key switch" in the glove box, and if a small child is traveling in a rear-facing seat. Moreover, child safety is further supplemented by standard Isofix mounting fixtures at the rear seat positions.

An important aspect aside: not only are the airbags and belt tensioners triggered at a specific load via a central ECU, but in parallel the hazard flashers are activated, the doors unlocked, the interior lights are turned on and the fuel pump is shut off.

Electro-mechanical power steering perfected

The Scirocco – like all Golf, Jetta, Eos, Tiguan, Touran and Passat Volkswagen models – is delivered with electro-mechanical power steering as standard equipment. Its characteristic can be tuned to the specific car model. In this case, a newly programmed Scirocco characteristic map is used; among other things it offers stronger self-aligning torques and somewhat higher steering forces. And precisely these aspects give the driver more direct steering contact to the road.

Also new is the electro-mechanical steering gear: the steering angle sensor, utilized by both the electro-mechanical steering system and ESP, has now been integrated in the pinion gear housing for the first time. That means that it no longer needs to be housed in the steering column switch module. Sensor quality is improved substantially. Another new development is the Scirocco's steering column. Volkswagen engineers improved both its crash behavior and stiffness. Furthermore, the Scirocco's electro-mechanical power steering saves on

fuel: compared to a conventional power steering system it offers a savings advantage of 0.2 liters per 100 kilometers.

Impressive braking system

The new Scirocco is equipped with high-performance sliding caliper disk brakes, large brake disks (internally air-cooled in front) and a master brake cylinder specially designed for the sports car. The new brake cylinder enables very quick braking response as well as short pedal travel. The disks for engine versions up to 160 PS have a diameter of 288 millimeters in front, and 255 millimeters in the rear. The powerful 200 PS Scirocco TSI is braked by 312 millimeter disks in front; at the rear axle the brake calipers grip 286 millimeter disks.

An advanced generation of ESP is also included as a standard feature. New here: the sensors for acquiring yaw rate and transverse acceleration are integrated in the ESP control module; this made it possible to omit the typical sensor cluster in the car's interior that was previously used.

Scirocco

Interior

Space for four adults:

Scirocco debuts with new sport seating system

More than a 2+2 seater: Scirocco also offers space for two adults in the rear

Almost a station wagon: up to 755 liters cargo volume under its long roof

Wolfsburg, June 2008. The new Scirocco commends itself as a sports car for every day of the year. One reason for this: its four full-fledged seats. In this case, full-fledged means that two adults can be comfortably seated in the rear. Even when a 1.90 meter tall driver takes the driver's seat, there is still plenty of knee room behind him. That is, there is no hint of crowding. If only two persons are on board, the Scirocco provides up to 755 liters cargo capacity.

New sport seating system

Guaranteeing comfortable conditions in this new sports car are four sport seats. Similar to those on the new Passat CC, ideal ergonomically contoured bucket seats are also used in the rear of the Scirocco. The head restraints permanently attached to the rear seats provide a high level of safety here.

The new front sport seats offer rear passengers easier entry and exit. That is, when the seatbacks are unlatched the front seats travel forward; afterwards they automatically return to their previously set positions. Also standard: height-adjustable front seats. A power driver's seat may be ordered as an option.

Breathable fabrics are used as the standard seat upholstery. “Vienna” leather can be requested as an option in “Titanium black” or “Truffle” color; in this case, electrically adjustable lumbar supports and seat heating (front seats) are included. Incidentally, Volkswagen exclusively uses high-quality leather tanned with natural materials and is therefore also compatible for people with allergies.

“Sport package” with Alcantara seats

As an alternative to leather, seat covers in a fabric/Alcantara combination are available as part of a “Sport package”. Body contact surfaces are designed in fabric, while lateral surfaces are in Alcantara. Available as colors here are “Titanium black”, “Silver black / Titanium black” and “Cashmere”. Complementing the fabric/Alcantara is the “Titanium black” roof liner.

All four Scirocco seats offer exceptionally good ergonomic properties and the kind of lateral support that one expects from a sports car. In addition, the sport seats contribute to optimal utilization of the available interior space. The reason: despite its low overall height, the Scirocco still offers very good headroom. In front, the interior height is 948 millimeters, and in the rear it is 923 millimeters. These favorable values are attained by a very low seat position that simultaneously emphasizes the sporty tuning of the Scirocco.

Cargo area

The cargo area also exhibits ample size. Constructed similar to the area on a station wagon, when loaded to the height of the cargo cover it offers a volume of 292 liters. When the seatbacks of the individual rear seats are folded down, this frees up a cargo capacity of 755 liters.

Clarity in cockpit design

The driver and front passenger of the Scirocco experience a sporty and ergonomically mature cockpit environment. Especially pleasing to the touch and in visual appearance are the finely designed door trim panels with their distinctive interior door handles. Gauges and instruments were also laid out intuitively and clearly. The center console with its controls arranged up high exhibits a welcome accessible layout. Located directly beneath the two central air outlets is the audio system.

Latest radio and navigation systems

The latest generation of radio and navigation system is used on the Scirocco (RCD 210 to RCD 510). Always there: a MP3-capable CD player or changer. Two radio-navigation systems will be offered in parallel. The top model, designated RNS 510, offers up refinements such as a 6.5-inch touchscreen and

an extremely fast 30 gigabyte hard drive. The Scirocco also has a customized instrument cluster with white instrument illumination.

Moreover, Volkswagen worked together with Scandinavian sound specialist Dynaudio to customize a sound system of the ultra class for the Scirocco, with a total of eight loudspeakers and eight output amplifiers integrated inconspicuously in the interior. Not until the installed audio system's power button comes into play does the 300 Watt system reveal what is within it.

Scirocco

Engines and Transmissions

More fun and economy:

Efficient turbo engines with 122 PS to 200 PS power

TSI: 122-PS entry level engine consumes just 6.1 liters super unleaded

TDI: 140-PS turbo-diesel with 5.4 liters average fuel consumption

Wolfsburg, June 2008. Volkswagen will be offering the Scirocco as the first sports car in the world to have a full lineup of charged four cylinder engines. The three TSI gasoline direct injection engines output 90 kW / 122 PS, 118 kW / 160 PS and 147 kW / 200 PS. The TDI – a highly advanced common rail turbo-diesel – develops 103 kW / 140 PS. In the coming year, another TDI will follow that delivers 125 kW / 170 PS of power. All of the Sciroccos come with a standard manual 6-speed transmission. Engine versions 140 PS and higher can be ordered with an optional dual clutch transmission (6 or 7-speed DSG) that is as sporty as it is efficient.

TSI – GASOLINE ENGINES OF THE SCIROCCO

TSI with 90 kW / 122 PS

Maximum power with minimum fuel consumption – that is the property of the TSI four cylinder engines that has become synonymous with a new generation of economical and simultaneously sporty Volkswagen engines in just a short period of time. The entry-level Scirocco engine clearly

demonstrates why: its average consumption of 6.1 liters super unleaded per 100 kilometers and conformance to the future Euro-5 emissions standard* makes it one of the most economical and cleanest engines of its class. The 122-PS TSI is capable of a top speed of 200 km/h. This Scirocco puts the classic 0-100 km/h sprint behind it in 9.7 seconds.

The highly acclaimed engine represents the entry level into the TSI world with its 90 kW / 122 PS (at 5,000 rpm). Thanks to its turbocharger, the torque-strong gasoline engine complements the sports car's character. In the Scirocco, the four cylinder engine develops its maximum torque of 200 Newton-meter between 1,500 and 4,000 rpm; in addition, 80 percent of its maximum torque is available at just 1,250 rpm.

Technically speaking, gasoline direct injection, charging and reduced engine displacement are among the most efficient methods for significantly reducing fuel consumption while improving vehicle dynamic properties just as distinctly. That is why Volkswagen is taking precisely this approach on its TSI engines: low specific fuel consumption and better efficiency are attained by reducing engine displacement with lower friction and charge exchange losses. Charging is performed – depending on the power class – either by a combination of turbocharger and supercharger or, as on the 122-PS TSI, with the help of a specially developed turbocharger.

TSI with 118 kW / 160 PS

This is the latest TSI: a four cylinder charged by turbocharger and supercharger that outputs 118 kW / 160 PS (at 5,900 rpm). Interesting here is a look at its specific power. The 1.4 liter engine achieves 84.3 kW, or 114.3 PS, per liter displacement. Like all TSIs, this engine is also exceptionally economical (average consumption: 6.5 liter super unleaded per 100 kilometers) and torque strong (maximum of 240 Newton-meter at just 1,750 rpm). In this case, the high torque maximum is continuously available up to 4,500 rpm. Similar to the 122-PS TSI, the 160-PS version also already satisfies the future Euro-5 emissions standard*.

The Scirocco TSI, with its 118 kW, reaches the 100 km/h mark from a stop after just 8.0 seconds; its top speed is 218 km/h. Optionally, the 160-PS TSI can be combined with the world's first transverse-mounted 7-speed DSG dual clutch transmission.

Especially interesting from a technical perspective are the complementary modes of operation of the supercharger and turbocharger. The supercharger – mechanically driven by a belt – boosts the TSI's torque at low engine speeds. In this case, the charger unit is based on the Roots Principle. A special feature of the supercharger that is used is its internal gear ratio, which enables high supercharger power boost at low engine rpms.

At elevated engine speeds the turbocharger (with wastegate control) kicks in. The supercharger and turbocharger operate in series here. The supercharger is actuated by a magnetic clutch integrated in a module within the water pump. A control flap ensures that the fresh air needed for the specific operating point is fed to the turbocharger or supercharger. In pure turbocharger operation the control flap is open. Then the air travels the conventional route of turbo engines via the front intercooler and throttle to the exhaust pipe. Starting at an engine speed of 3,500 rpm the supercharger turns all of the work over to the turbocharger.

TSI with 147 kW / 200 PS

At the highest performance level, a powerful 147 kW / 200 PS (5,100 to 6,000 rpm) TSI is used in the Scirocco. On the 2.0 liter engine that is designed even more for maximum dynamics, a larger turbocharger inhales steam furiously. It can be said in general that this TSI also shines with very good torque and fuel economy values. The 280 Newton-meter (from 1,700 to 5,000 rpm) torque-strong four cylinder consumes just 7.7 liters of fuel per 100 kilometers. Nonetheless, it still delivers a top speed of 235 km/h. The strongest Scirocco of all times handles the sprint to 100 km/h in 7.2 seconds. Just as on the Golf GTI with the same engine, on the Scirocco too this engine can be ordered with an innovative 6-speed dual clutch transmission.

TDI -DIESEL ENGINES OF THE SCIROCCO

TDI with 103 kW / 140 PS

A clean and torque-strong 140-PS TDI (103 kW at 4,200 rpm) will be available on the Scirocco at the time of its market launch in Europe. The highly advanced common rail diesel is especially quiet. It already develops its maximum torque of 320 Newton-meters at a low 1,750 rpm. The Scirocco completes the 0-100 km/h sprint in just 9.3 seconds with this TDI. Its top speed of 207 km/h contrasts with average fuel consumption of just 5.4 liters per 100 kilometers. Like the 1.4 liter TSI, the TDI will already fulfill the Euro-5 emissions standard*. Offered as an option with the TDI is 6-speed DSG.

Fuel induction in the TDI is handled by the latest generation common rail system. Up to 1,800 bar injection pressure and special eight-hole injection nozzles produce extremely fine atomization of the diesel fuel.

The latest generation of piezo in-line injectors handles control of the eight-hole injection nozzles. The electrically controllable piezo crystals trigger the injection in just fractions of a second with the support of a hydraulic element. Compared to conventional solenoid valves, piezo technology enables more flexible injection processes involving smaller and more precisely metered amounts of fuel. The advantage: very quiet and pleasantly gentle engine running, exceptionally spontaneous response behavior and low fuel consumption and emissions values. The crankshaft's toothed

belt drive, which is completely maintenance-free, also has a positive effect on acoustics. In the upcoming year, a TDI with 125 kW / 170 PS that utilizes the same technical basis will follow.

DSG – AUTOMATIC TRANSMISSION OF THE SCIROCCO

6 and 7-speed DSG dual clutch transmission

The new Scirocco is offered with a 7-speed DSG (160-PS TSI) and a 6-speed DSG (140-PS TDI and 200-PS TSI). Both automatic transmissions are characterized by maximum economy and gear shifting dynamics previously unattainable in this form. New in the transmission lineup is a 7-speed DSG with two dry clutches; the dual clutch of the 6-speed DSG runs wet in an oil bath. This is true of both transmissions: the most practiced drivers cannot even approach the shifting speed of the DSG versions. Another fact: more than any other automatic, the dual clutch transmissions have the potential to reduce fuel consumption and in turn emissions. Depending on the engine, this savings can amount to up to twelve percent compared to a manual transmission, and compared to an automatic with lock-up torque converter it may even reach twenty percent.

Both DSG variants are specialists in their applications. While the 6-speed DSG, thanks to its torque characteristic, is particularly brilliant when paired with large, torque-strong

engines (up to 350 Newton-meter), the 7-speed DSG is especially recommended in tandem with smaller engines (up to 250 Newton-meter).

* Due to current vehicle registration laws, the vehicles can only be registered for the current Euro-4 emission standard initially. It will then be possible for the car owner to re-classify or re-register the vehicle at additional charge.

Scirocco

**Sporty performance:
Agile tuning and low center of gravity**

Standard: Sport chassis, 17-inch alloy wheels and ESP

Optional: Adaptive chassis control for even greater dynamics and comfort

Wolfsburg, June 2008. The Scirocco is characterized by chassis tuning that is true to the “sport chassis” concept in every respect. The engineered suspension modules originate from the practice-proven “Volkswagen toolbox”; this reduces costs and yields an impressively high level of vehicle dynamics. Nonetheless, parts of this system were significantly modified for use on the Scirocco. The new sports car has a very low center of gravity; one example of the struggle to attain optimal handling properties with every millimeter is in the design of the tailgate hinges: to maintain as low an overall height of the Scirocco as possible – with its standard 17-inch alloy wheels – the tailgate hinges extend up into the roof as small bulges. Without this clever design detail the entire roof line would have had to run higher.

BASIC LAYOUT OF THE SCIROCCO CHASSIS

In front, a McPherson suspension delivers precise tracking and balanced comfort properties. In the rear, it is a four-link suspension that takes up the challenge of achieving a

balance between sporty and comfortable tuning. As an option, the Scirocco can also be equipped with the newly developed DCC adaptive chassis control. The full-time electronic control of the suspension resolves the conflict in goals between stiff sporty suspension tuning and comfortable tuning.

The basic layout of the Scirocco suspension system has been taken from the recognized agile chassis of the Golf GTI. Compared to the Golf cult car, however, tuning of the springs, dampers and stabilizers were specifically modified for the lower seating positions and the specific weight distribution of the Scirocco.

Among other things, the new sports car exhibits significantly broader tread widths. In front, it is 1,569 millimeters (gain of 35 millimeters compared to the Golf GTI), and in the rear 1,575 millimeters (gain of 59 millimeters compared to the Golf GTI). The rear tread width is the greatest in the entire competitive field.

To increase tread width and reduce unsprung masses, aluminum steering knuckles are used in the rear suspension. At a high agility level the Scirocco's chassis was also tuned to offer a maximum degree of stability and driving safety. Also incorporated in this concept are the standard 17-inch tires, size 225/45 (205/50 for 122 PS). They support the sports car's maximum transverse dynamic capabilities.

ADAPTIVE CHASSIS CONTROL OF THE SCIROCCO

Ideally tailored to a sports car like the Scirocco is the newly developed DCC adaptive chassis control. The system adapts suspension damping to the specific roadway and for individual wheels full-time, based on signals from three body sensors and three wheel sensors. Damping can be stiffened in just fractions of a second – in response to accelerator, brake or steering inputs – to optimally fulfill vehicle dynamic requirements.

In less demanding vehicle dynamic situations, this automatic DCC variability delivers significantly enhanced comfort. It resolves the conflict in goals between stiff sporty tuning and a comfortable configuration. To let drivers modify system behavior according to their wishes, besides the “Normal” program (in which all control functions are fully active) DCC also offers “Sport” and “Comfort” modes.

“Sport” mode

In the “Sport” program mode, suspension damping is significantly harder; the vehicle has optimal contact to the road. In this mode, the steering boost is also adapted to the wishes of the sport-oriented driver.

“Comfort” mode

This mode is tuned for maximum driving comfort and is especially well suited to poor roadways as well as city traffic and long freeway drives.

DCC system components

Three accelerometers and three wheel displacement sensors continually measure the motion states of the car body and suspensions. The signals from these sensors – together with other CAN data from the steering, engine, transmission and braking systems – are processed by a newly developed control algorithm in a high-performance control module, which sends its commands to the four map-controlled shock absorbers in millisecond cycles. They enable wide variation of damping forces within fractions of a second – in both the “hard” and “soft” directions – thereby achieving optimal system behavior.

Scirocco

Standard and Optional Features

No compromises:

Standard with ESP, Climatic and sport seat system

One for all: Scirocco launches with extensive standard features

Individualization: Transparent roof, 300 Watts of sound, strong “Sports package”

Wolfsburg, June 2008. The new Scirocco will be one of the most attractively priced sports cars in the world. And yet its standard features are on par with far more expensive coupés.

Like the Eos, Passat CC, Touareg and Phaeton, the Scirocco is being offered in a single equipment line. The only differences are in the area of interior trim and the type of alloy wheels, which are a function of the engine and special options. For example, all Sciroccos at the power levels 122 PS, 140 PS, 160 PS and 170 PS can be ordered with a roof liner in “Pearl gray”. The top version with 200 PS, on the other hand, has a roof liner in “Titanium black”. “Titanium black” is also the roof liner for all engine versions ordered with the “Sport package” or leather seats. In the case of Sciroccos with the “Sport package”, the bezels of the four air outlets in the instrument panel area are also detailed in high-sheen “Black” instead of “Satin finish chrome”.

STANDARD FEATURES OF THE SCIROCCO

Always included as features are 17-inch alloy wheels, height-adjustable driver and front passenger seats, leather steering

wheel and parking brake handle, split folding rear seatbacks, power windows, semi-automatic climate control (“Climatic”), speed-dependent power steering, ESP, brake assistant, six airbags, daytime running light switch, multifunctional display and of course a sport chassis.

OPTIONAL FEATURES OF THE SCIROCCO

Volkswagen is fulfilling wishes for further individualization of the Scirocco with an extensive lineup of special options. They include features that further customize the sports car to personal tastes, such as: four different alloy wheels up to 19 inches in size, an extensively equipped “Sport package” as well as bi-xenon headlights with static curve lighting and daytime running lights, panorama vent sunroof, fabric/Alcantara or leather seats, various radio and navigation systems, a Dynaudio sound system, ACC automatic distance control and DCC adaptive chassis control (both starting in early 2009).

“Sport package”

The “Sport package” developed for the Scirocco will likely become a bestseller, since it includes a whole bundle of high-end extras at a low additional price. They include 17-inch “Donington” alloy wheels with size 235/45 R17 tires, tinted glass from the B-pillars back (65 percent light absorbing),

fog lamps, titanium black roof liner, high-sheen black air outlets, aluminum look pedals, seat covers in the refined fabric/Alcantara combination as well as steering wheel, gear shift knob, parking brake grip and fabric floor mats with seams in contrasting color.

Dynaudio Excite sound system

Together with the Scandinavian sound specialist Dynaudio, Volkswagen has customized a sound system of the ultra class to the Scirocco. The total of eight loudspeakers and eight output amplifiers were integrated inconspicuously in the car's interior. When the installed audio system is turned on, the 300 Watt system reveals what it can do.

The Dynaudio sound system offers pure high-tech audio: the four 168 millimeter bass loudspeakers – made of a magnesium-silicate membrane, a very lightweight 74 millimeter voice coil and internal magnet design in a rigid plastic basket – deliver precise and powerful bass with high pulse fidelity in the doors and in the rear side panels. The 50 millimeter and 60 millimeter tweeters in the door and side trim complement the system with uncommonly clear transparency and detail definition.

The loudspeaker system is fed by a newly developed, digital 300 Watt audio amplifier module; it consists of eight Class AB output amplifiers. The ability of the digital sound processor

(DSP) to perform so-called propagation time correction (goal: to have the sound waves of all loudspeakers reach the listener's ears simultaneously, regardless of seating position in the vehicle) and harmonic equalization guarantee a sound experience on the highest level in the Scirocco.

Panorama vent sunroof

It supplies vast amounts of light to the interior, since the transparent roof extends from the A-pillars to the B-pillars. At the press of the button it opens up to 39 millimeters. When the sunshine is very intense, a sunshade can be driven into place (for further information see "Body" chapter).

Automatic distance control

Already offered on the Phaeton, Touareg, Passat, Passat Variant and Passat CC, the automatic distance control system ACC (Adaptive Cruise Control) will also be offered on the Scirocco over the course of the next year. When ACC is activated the sports car automatically brakes and accelerates within a speed range preset by the driver (up to 210 km/h).

Infotainment

At its market introduction, the Scirocco will be offered with two radio systems and two radio-navigation systems. All of

these devices have an MP3-capable CD player, and the top version also offers a 30 GB hard drive. The radio systems carry the designations RCD 210, RCD 310 and RCD 510. The RNS 300 and RNS 510 are the names of their counterparts with an additional navigation module. The top model of the new generation of systems – the RNS 510 – has features that include intuitive touchscreen control and hard drive supported navigation system.

An option that can be ordered on all Scirocco models is the new “MEDIA-IN” multimedia socket. This USB port lets users integrate iPods (with suitable adapter cables) and many other commercially available MP3 players in the installed audio system. The devices are operated via the Scirocco’s radio or radio-navigation system controls.

Scirocco

Chronology

Democratization of the sports car:

First Scirocco in 1974 signified debut of an affordable dream

Most successful Volkswagen coupé: 795,650 units sold by 1992

All-round talent: from the start, the Scirocco was a sports car for 365 days a year

Wolfsburg, June 2008. Its name refers to a hot desert wind that the Sahara sends in the direction of the Mediterranean – Scirocco. With the car by this name, the first front-wheel drive coupé under the “VW” label, Volkswagen democratized the world of sports cars more than three decades ago: for the first time there was an affordable, fuel-efficient and – thanks to front-wheel drive – a truly safe coupé. And in 2008, just as it was in 1974, the Scirocco is an all-round sports car for every day of the year, thanks to its four full-fledged seats, a full-grown cargo area and practical tailgate. It is precisely this mixture of talents that won over hundreds of thousands of car drivers. For Volkswagen, the first generation of the Scirocco marked the beginning of a new era.

Background: Just a few months after the world premiere of the Passat, and shortly before the launch of the Golf that was new at that time, the successor to the Karmann Ghia marked the end of Volkswagens with boxer engines and rear-mounted engines in Europe. In parallel, the Scirocco contributed to general acceptance of a new production system – the modular principle that would soon cause a furor in the automotive

industry. That is because much of what customers got a little later on the Golf was already on the Scirocco.

World premiere in 1974 in Geneva

The 3.85 meter long Scirocco debuted at the Geneva Motor Show in the year 1974. As described, it succeeded the Karmann Ghia – internally designated the Type 14 – that since 1966 had written automotive history with a fascinating design, proven Beetle technology and affordable prices. Like the Type 14, the Scirocco – developed under the code name EA398 – was created at Karmann in Osnabrück.

While the Karmann Ghia tended to appeal to women customers, the Scirocco, designed by Italdesign in Turin, appealed equally to female and male car drivers. With its clear, defined edges, emphatic wedge shape, low belt line and taut rear end, the design originated from the same form language that Giorgetto Giugiaro also favored for the first Golf. At the same time, the car was clearly differentiated from the more baroque forms of its competitors from the German states of Nordrhein-Westfalen and Hessen.

Classic sports car proportions

The impression that the coupé communicated to its audience was one of a unified whole. Its wheelbase (2.40 Meter)

was as long as possible, the extended hood and short fastback with integrated Bürzel spoiler created – together with its generous tread widths – classic sports car proportions. The Scirocco of Generation I conceptualized in Wolfsburg was also one of the first cars with integrated drip moldings, which fit in ideally with its overall very “clean”, unpretentious appearance.

Added to the cool design was a contemporary technology package. For a sports coupé, its well-organized layout was astonishingly good; the large tailgate and folding rear seats turned the Scirocco into a wagon-coupé with up to 533 liters cargo capacity. Moreover, Volkswagen implemented the most advanced drive technology of its time: transverse-mounted engines, which were now of course water-cooled, and whose overhead camshafts were driven by a quiet toothed belt. In addition to the front independent McPherson suspension with A-arms and negative offset, a semi-independent rear suspension arrived as a genuine innovation.

“Tartan diamonds” in style of the times

The interior of the first Scirocco spoke to the styles of the 1970s. The diamond tartan pattern of the seat covers in the top TS model was as much a part of those contemporary taste trends as the corduroy materials and a steering wheel whose three spokes had stamped out holes. In the more

sporty versions, two additional instruments (clock and voltmeter) in the center console added another dose of visual dynamics. Later, as part of an initial model facelift, Volkswagen replaced the steering wheel by a version with a deeply drawn impact absorber – which was with genuine affection called the “spittoon” in popular language.

At its market introduction in June, Volkswagen offered the new coupé with three engines: 1.1 liter with 50 PS and 1.5 liter with 70 PS and 85 PS. The transmission made do with just four forward gears, and the optional automatic had three driving levels.

The strongest desert wind stormed at a speed of 175

Depending on the version (Basis, L or TS), a first generation Scirocco had either single rectangular or dual round headlamps. In the most powerful variant, the Scirocco TS, the sports car reached 175 km/h, impressive for those times, and it handled the classic Sprint from 0 to 100 km/h in eleven seconds; Volkswagen meant business when it came to sportiness.

Customers understood: over the remainder of 1974 the company sold 24,555 Sciroccos, and in its first full year of production (1975) 58,942 units were sold. A representative survey among Scirocco buyers confirmed the accuracy of the concept embedded in the specification: 42 percent of

respondents purchased the Volkswagen based on its design, 25 percent due to its sportiness, and a full eleven percent cited “economy” as the main criterion for their decision to buy.

Manfred Winkelhock began his career in the Scirocco

In 1976, Volkswagen achieved a top quality marketing coup. Volkswagen Motorsport in Hannover issued a special series of 50 identical cars for the newly established Junior Cup, every one of them painted in black. On one of these 110 PS models, no less than the likes of Manfred Winkelhock – who would go on to become a Formula-1 driver – would earn his first spurs in car racing. The driver from Swabia not only won the final race in Hockenheim, but his winnings for the season, totaling 30,000 DM, were phenomenal for those times.

Non-racing drivers should not be left out of the picture – thought Volkswagen – and beginning in the summer of 1976 it offered the 110-PS engine fed by a Bosch K-Jetronic in the Scirocco GTI for regular street use too. This model, with a 14 millimeter larger tread width, has passed many a large sedan on the German freeways at 185 km/h, excelling especially when it elasticity was required. The GLI version also had 110 PS under its flat hood, but it emphasized luxurious attributes with its bronze tinted windows, high-end fabrics and metallic paint.

For the 1978 model year, Volkswagen subjected the Scirocco to a careful model facelift. The front turn signal lights and the bumpers covered with dark PVC impact protection profiles wrapped around the fenders, and the B-pillars were tinted black. At the same time the radiator grille got a decorative frame. The engine lineup was now: 50, 70 and 110 PS.

The modest makeover came at the peak of the Scirocco program: worldwide 87,902 new Sciroccos hit the roads in 1977; in Germany Volkswagen had acquired a 15 percent share in the segment of sporty coupés. When the last of the 504, 153 first generation Sciroccos left the assembly line at the Karmann factory in Osnabrück in February 1981, the consolidated Volkswagen brand was long on its way to the very top, in no small part based on the service of this small sports car.

The Scirocco II follows in 1981

The second generation Scirocco (EA 491) was based on the engineering platform of the Golf I; like its predecessor, it was being produced again at Karmann.

Thanks to the car's length, which was extended from 3.85 to 4.05 meters, the overall softer lines of the Scirocco II had a very elegant effect and also offered more space for people and luggage. In addition, aerodynamics were further optimized (cw value = 0.38) and more fuel-efficient powertrain technology was introduced. In May 1981, the new Scirocco

was in the sales rooms of the Volkswagen dealers. And indeed with 60 PS (1.3 liter), 70 PS (1.5 liter), 85 PS (1.6 liter) and 110 PS (as GTI and GLI). The advertising was a continuation of slogans for the first Scirocco: "If it was just beautiful, it would not come from us" or "Please excuse us for talking about savings in the company of such exciting cars", were the slogans of two marketing campaigns at market introduction.

In July 1985, the most powerful production Scirocco of its times appeared: the GTI/GTX could move at 208 km/h with a 1.8 liter, 16-valve engine and Bosch KA-Jetronic. Volkswagen had adapted the storming whirlwind to the higher power output with rear disk brakes, reinforced transverse links and driveshafts, and a larger rear -spoiler. It now accelerated from 0 to 100 km/h 8.1 seconds. Used in tandem with the three-way catalytic converter, which was still mandatory at that time, was the 129 PS engine that was also used in the Golf; without the exhaust-cleaning converter it could even deliver 139 PS. "Valves like those of a world champion" was the title of Volkswagen advertising for the Scirocco with the red "16V" emblem in the grille that was built until 1990.

White was already a trendy color on the Scirocco in 1985

From 1983 to 1987, Volkswagen introduced a number of special models onto the market within a short period of time. It began with the "GTS", followed by the "GTX". It was the first car to sport an antenna mounted to the rear edge of the roof.

Back in 1985, Volkswagen demonstrated – with its special edition “White Cat” which was only available in “Alpine white” – that the trendy color white was not just a phenomenon of our times. The Scirocco “Tropic” of 1986, on the other hand, made a colorful impression with the colors “Madison turquoise” and “Kiwi brown” on the outside; inside it had seat covers with “Olive/turquoise” stripes. A special attraction of the “Scala”, launched in the same year, was its all-around spoiler/body kit painted in car color.

Starting in 1989, two engines were offered on the Scirocco: a 1.6 liter (72 PS and non-regulated catalytic converter) and a 1.8 liter engine (95 PS, fuel injection with regulated catalytic converter). The last version built, the “GT II 16V”, was sumptuously equipped with steel sunroof, tinted glass, power steering and height-adjustable sport seats. In the last model year, three-point seatbelts were added to the rear bench seat as were side turn signal lights. But the days of the second generation of Sciroccos were numbered – the last of 291,497 units built left the assembly plant halls on September 7, 1992. Looking back, the Scirocco was clearly an exceptional success for nearly two decades. And now it’s time to continue this brilliant outcome; the third generation of the Scirocco has the potential to do just that.