Service Training

Self-study programme 419

The Scirocco 2009

The new Scirocco model year 2009 - Making a comeback 34 years after the world premiere of the first Scirocco. With the third generation, the Scirocco marks a return to the market.

The shape of the new Scirocco is unique and unmistakable.
This keeps it in line with the tradition of its two predecessors that also differed in basic shape from most of the coupés of the competition quite considerably.

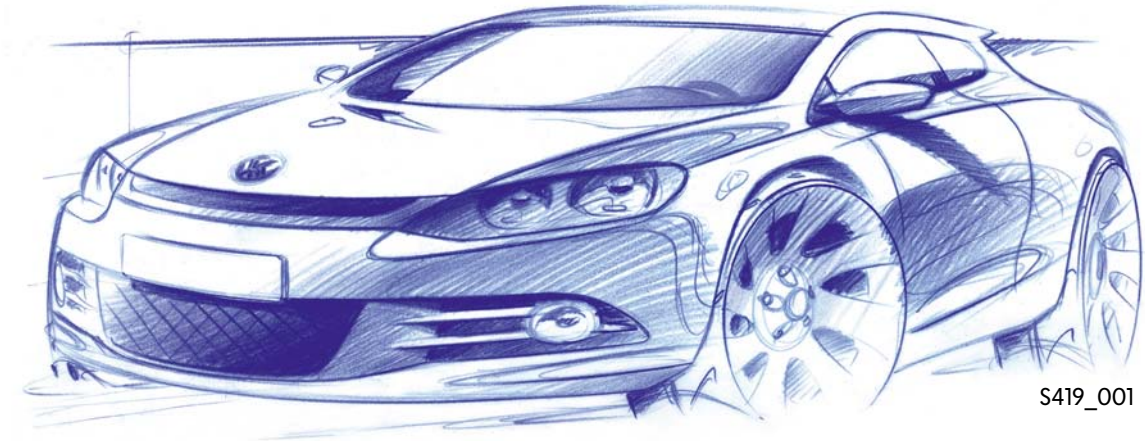
High quality technologies meet low running costs, dynamic driving properties meet high comfort and a surprisingly spacious interior meets a sporty design without compromise.

From high performance and high torque engines, from a low centre of gravity and the deep seating position, the new Scirocco offers an intensive driving experience.

The Scirocco uses a high proportion of existing and improved basic developments, whereby particular emphasis has been placed on the function and the design.

This modular strategy is consistently further developed and is also reflected in new future models.

As a result, a high and sustained level of quality is achieved.



S419_001

The self-study programme portrays the design and function of new developments! The contents will not be updated.

For instructions on testing, adjusting and repairs, please refer to the relevant service literature.

NEW

Warning Note

At a glance







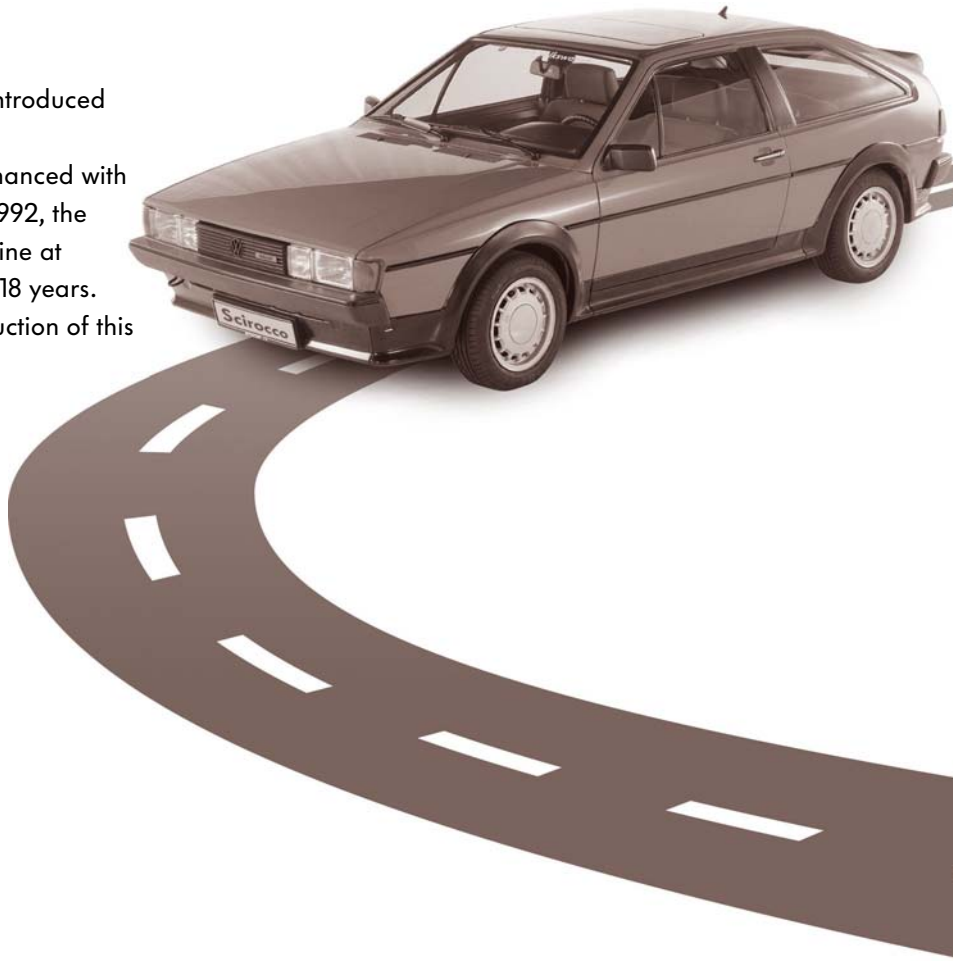
The Scirocco history

Scirocco 1974

As the first front-wheel drive sports coupé from Volkswagen, the Scirocco saw its debut in the spring of 1974, whereupon it quickly became a bestseller. After just nine months, the 25,000th Scirocco rolled off the production line in October 1974. By 1981, 500,000 Sciroccos had been produced.

Scirocco 1981

In the spring of 1981, the Scirocco was introduced with a completely reworked body.
By 1992, the model range had been enhanced with various special editions. In September 1992, the final Scirocco rolled off the production line at Karman in Osnabrück (Germany) after 18 years. After approx. 800,000 Sciroccos, production of this model series ceased.



Scirocco 2009

34 years after the world premiere of the first Scirocco, the Scirocco returns in its third generation. But the times have really changed.
Even the basic version of the new Scirocco has a notably higher engine output than the original and the standard equipment is considerably more sumptuous these days.
The new Scirocco is built at the AutoEuropa factory in Palmela, Portugal.

S419_007

The Scirocco

The overview shows you the important standard and optional equipment of the Scirocco.
Deviations are possible in different countries.

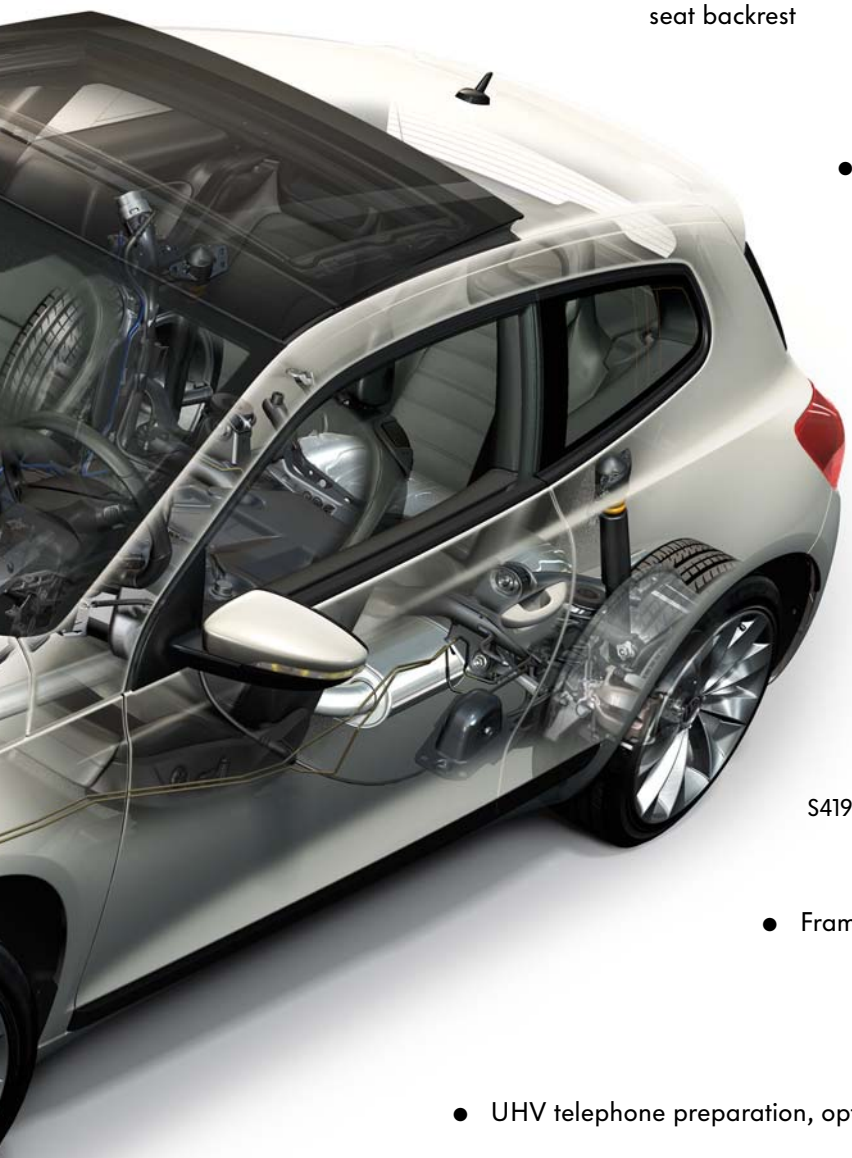
- Electromechanical power steering, 3rd generation
- Driver's seat, electrically adjustable with electric easy entry function, optional
- High-end sound system from DYNAUDIO, optional
- Climatic
- Brake assist system
- Sports suspension
- Adaptive suspension DCC, optional

- Panoramic sunroof, optional

- Symmetrically split folding rear seat backrest

- Optical parking system (OPS), optional

- New ESP generation



S419_004

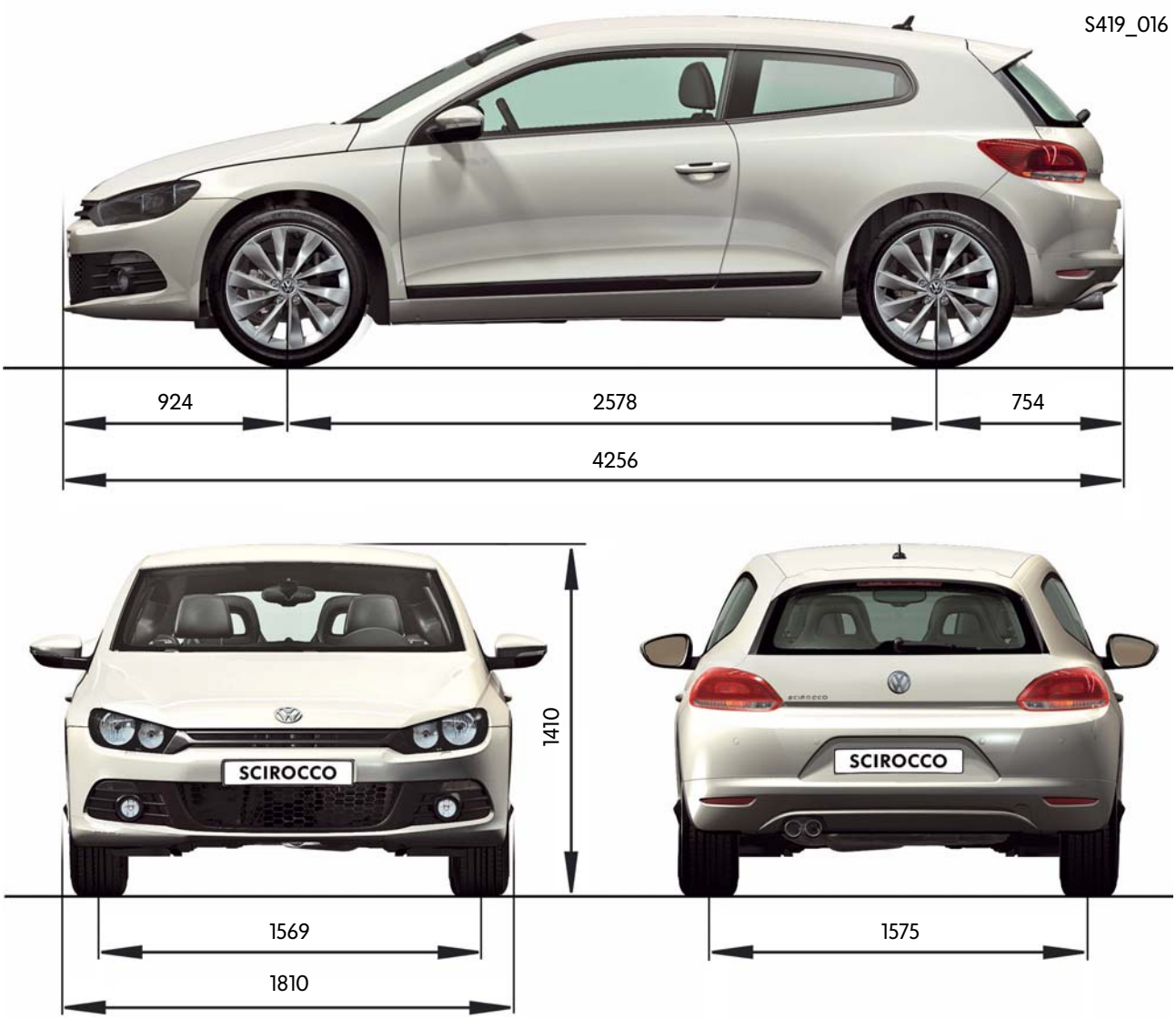
- Frameless doors

- UHV telephone preparation, optional

- Media device interface box (MDI), optional

Technical data

External dimensions and weights



External dimensions

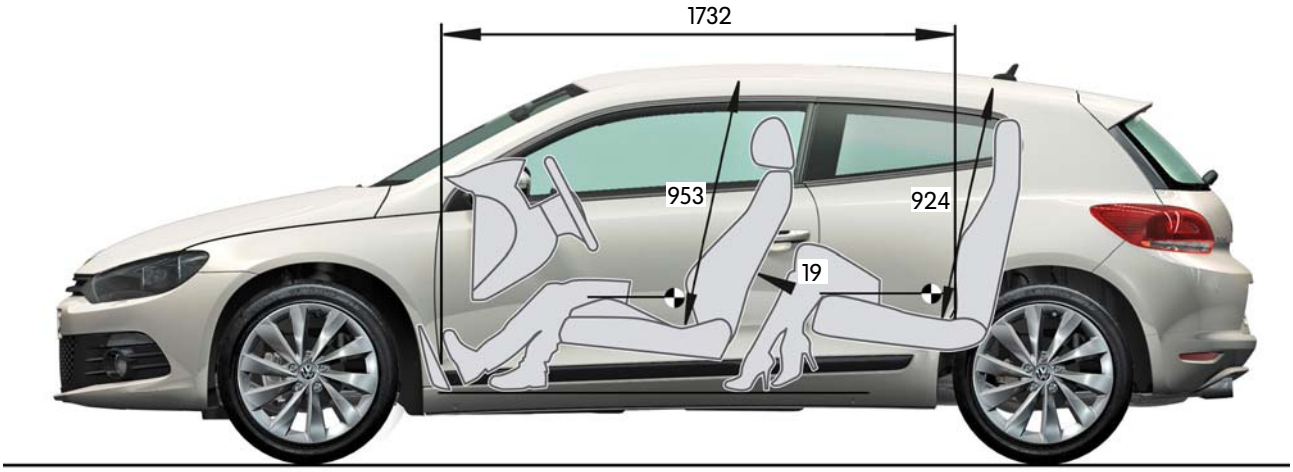
Length	4256 mm
Width	1810 mm
Height	1410 mm
Wheelbase	2578 mm
Track width at front	1569 mm
Track width at rear	1575 mm

Weights/other data

Maximum permissible weight	1690 kg**
Kerb weight without driver	1244 kg**
Max. roof load	75 kg
Tank capacity	55 l
Drag coefficient	0.34 c_w*

* Standard equipment with 2.0 l 147 kW TSI engine
** Standard equipment with 1.4 l 90 kW TSI engine

Interior dimensions



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S419_012

Internal dimensions and volumes

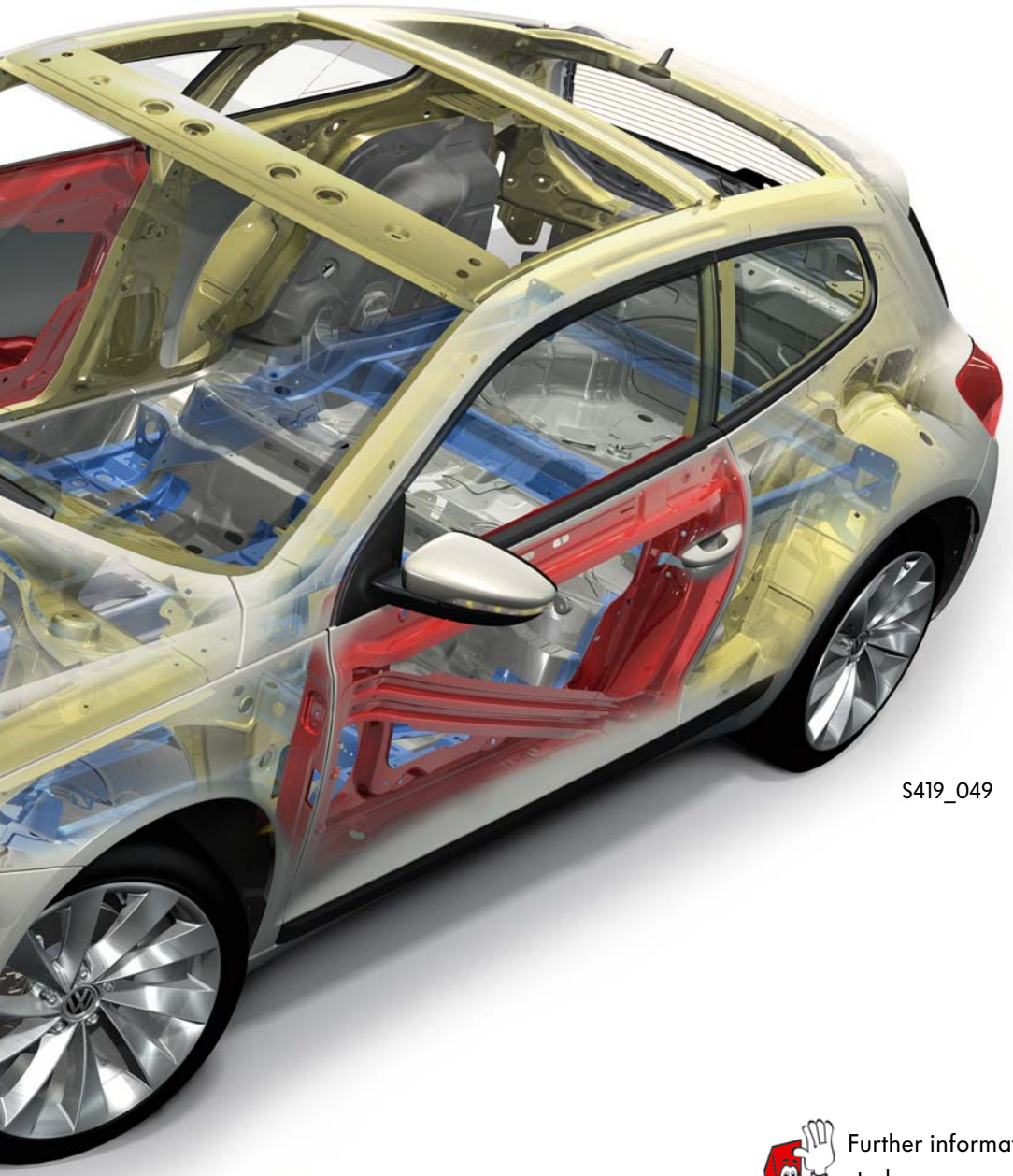
Interior length	1732 mm
Luggage compartment volume	292 l
Luggage compartment volume with rear seat backrest folded down	755 l

Front headroom	953 mm
Rear headroom	924 mm
Knee room - 2nd seat row	19 mm

Body structure

The body of the Scirocco is based on the floorpan of the Golf 2004.
The so-called "hat", i.e. the body above the floorpan, is a new development that also draws on the design features of the Golf 2004, however. For example, the B-pillar of the Scirocco is made from highest tensile hot-formed panels, as on the Golf 2004.

The colours used serve purely to highlight the structures.
They do not represent the panel qualities.



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Further information can be found in self-study programme no. 318 "The Golf 2004".

Panoramic sunroof

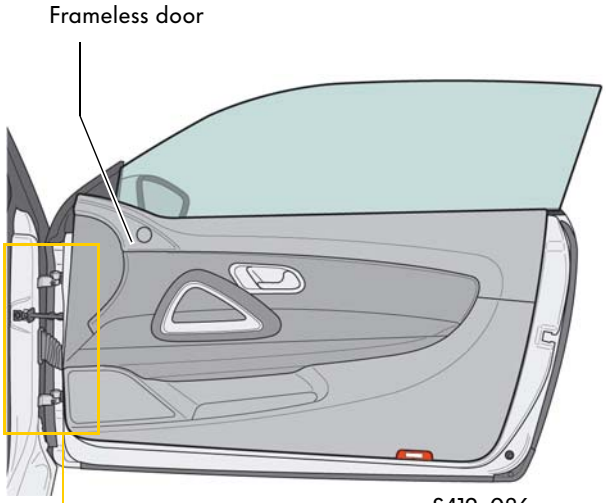
As an option, the Scirocco is offered with the panoramic sunroof, which is the same as the Passat CC.

Further information about the panoramic sunroof can be found in self-study programme no. 417 "The Passat CC 2009".

S419_051

Doors

The doors have a frameless design.
This means that the window panes of the doors have to be adjusted.



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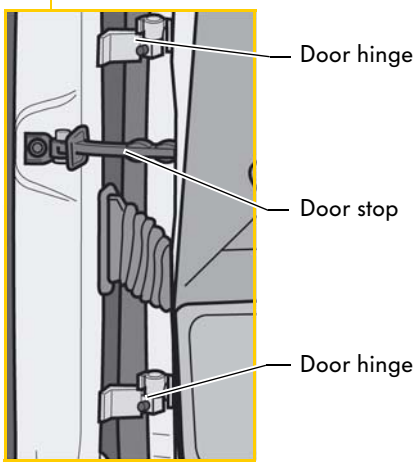
The door stops are designed to be separate from the door hinges.



S419_088

Further information about the frameless doors can be found in self-study programme no. 417 "The Passat CC 2009".

Interior equipment

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Front seats

As standard, the Scirocco is equipped with mechanically adjustable front seats. An electrically adjustable driver's seat is available as an option.

The front sports seats offer an easy entry function so rear passengers can enter and exit the vehicle easier. This is a standard feature.

On the electrically adjustable driver's seat, the easy entry function is also electrically operated.

Rear seating system

Similar to the Passat CC, two single seats are used for the rear seating arrangement.

The rear seat backrests have a 50:50 split and can be folded down. The head restraints are integrated into the backrests.

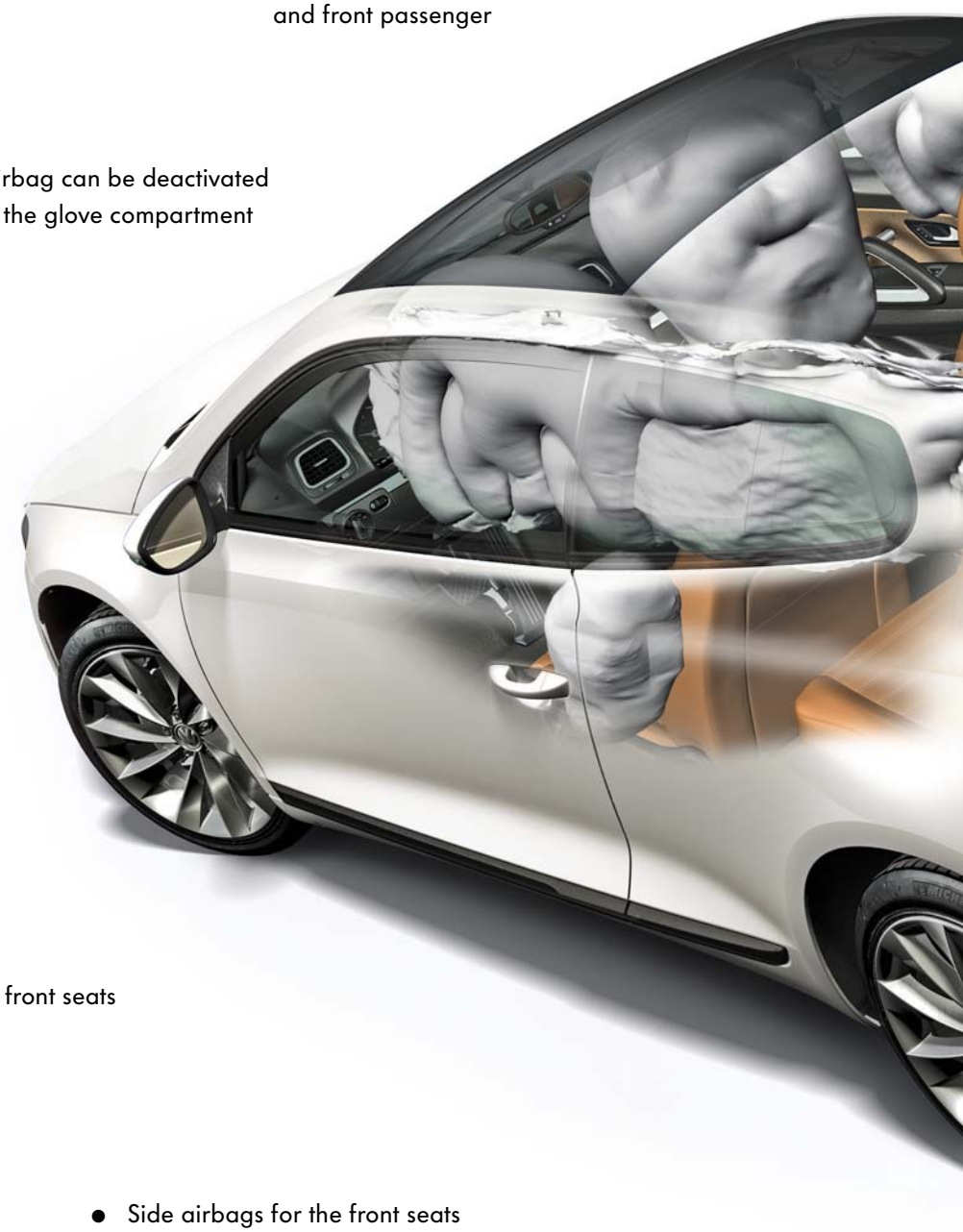
Both rear seats feature Isofix child seat mountings.

Occupant protection

Safety equipment

The Scirocco is fitted with the safety equipment familiar from the Golf 2004.

- Single stage airbags for driver and front passenger
- Front passenger airbag can be deactivated via a key switch in the glove compartment



- Belt tensioners for the front seats
- Side airbags for the front seats

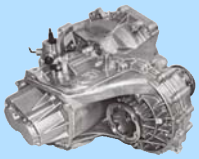
- Curtain airbags

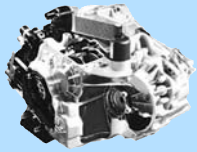
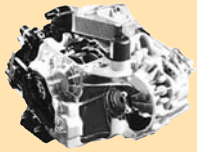
S419_053

- Seat occupied sensor for front passenger seat to remind passenger to wear seat belt

Engines

Engine/gearbox combinations

Petrol engine Diesel engine	6-speed manual gearbox MQ200GA-6 0AJ	6-speed manual gearbox MQ250-6F 02S
 1.4 l 90 kW TSI engine with turbocharger		
 1.4 l 118 kW TSI engine with dual charging		
 2.0 l 147 kW TSI engine with turbocharger		
 2.0 l 103 kW CR TDI engine		

6-speed manual gearbox MQ350-6F 02Q	7-speed double clutch gearbox DQ-200-7F 0AM	6-speed double clutch gearbox DQ250-6F DSG 02E
		
		
		

1.4 l 90 kW TSI engine with turbocharger

This is the entry level engine in the Scirocco.

Technical features

- Homogeneous mode (Lambda 1)
- Stratified high pressure start
- Turbocharger with wastegate
- Dual circuit cooling system
- Liquid-cooled charge air cooling
- Intake manifold with liquid-cooled charge air cooler
- Regulated duo-centric oil pump
- Oil filter as metal cartridge
- Demand-based fuel system
- High pressure fuel pump with integrated pressure control valve

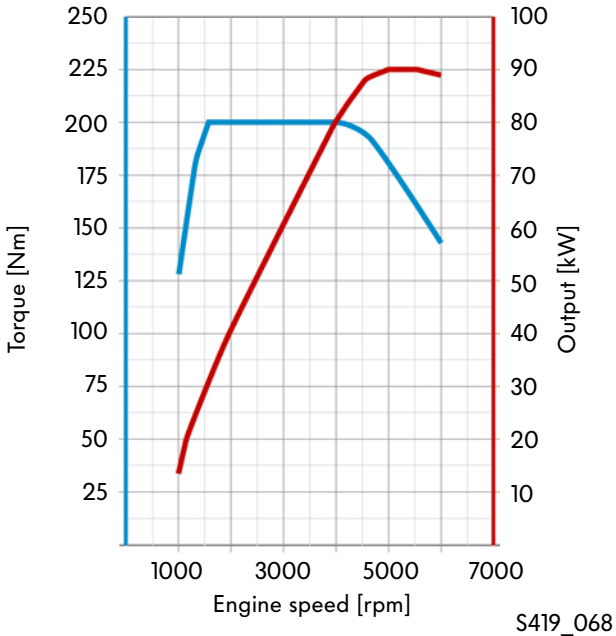
S419_095

Further information about this engine can be found in self-study programme no. 405 "The 1.4l 90kW TSI engine with turbocharger".

Technical data

Engine code	CAXA
Engine type	4-cylinder inline engine
Capacity	1390cm³
Bore	76.5mm
Stroke	75.6mm
Valves per cylinder	4
Compression ratio	10:1
Max. output	90kW at 5000 to 5500 rpm
Max. torque	200Nm at 1500 to 4000 rpm
Engine management	Bosch Motronic MED17.5.5
Fuel	Super unleaded RON 95
Exhaust gas treatment	Three-way catalytic converter, one upstream wide band Lambda probe and one downstream two-state Lambda probe
Emissions standard	EU4

Torque and performance graph



S419_068

1.4l 118kW TSI engine with dual charging

This engine, familiar from the design and function, has been remapped to an output of 118kW.

S419_093

Technical features

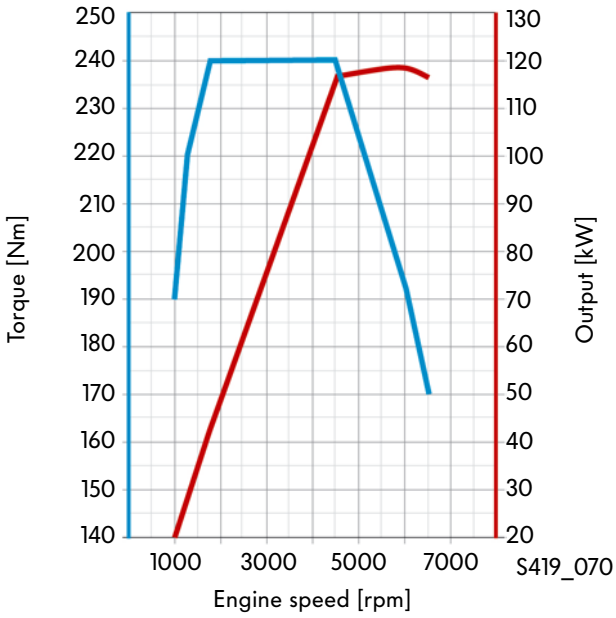
- Homogeneous mode (Lambda 1)
- Stratified high pressure start
- Turbocharger with wastegate
- Mechanical supercharger that can be activated separately
- Charge air cooling
- Dual circuit cooling system
- Demand-based fuel system
- High pressure fuel pump with integrated pressure control valve
- No intake manifold flap changeover
- Non-regulated duo-centric oil pump
- Oil filter as metal cartridge

Further information about this engine can be found in self-study programme no. 359 "The 1.4l TSI engine with dual charger".

Technical data

Engine code	CAVD
Engine type	4-cylinder inline engine
Capacity	1390cm³
Bore	76.5mm
Stroke	75.6mm
Valves per cylinder	4
Compression ratio	10:1
Max. output	118kW at 5900 rpm
Max. torque	240Nm at 1750 to 4500 rpm
Engine management	Bosch Motronic MED17.5.5
Fuel	Super unleaded RON 95
Exhaust gas treatment	Three-way catalytic converter, one upstream wide band Lambda probe and one downstream two-state Lambda probe
Emissions standard	EU4

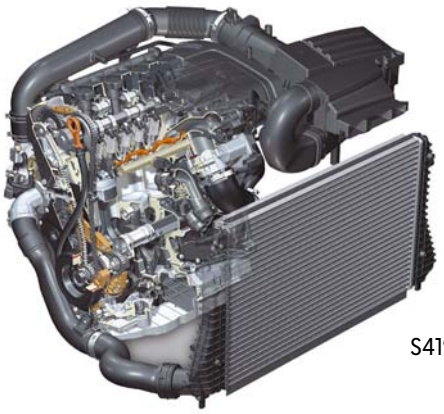
Torque and performance graph



S419_070

2.0l 147kW TSI engine with turbocharger

The 2.0l TSI engine belongs to the new engine-generation of the EA888 four cylinder inline series. It has the same design as the 1.8l TSI engine, though the capacity has been increased.



S419_031

Technical features

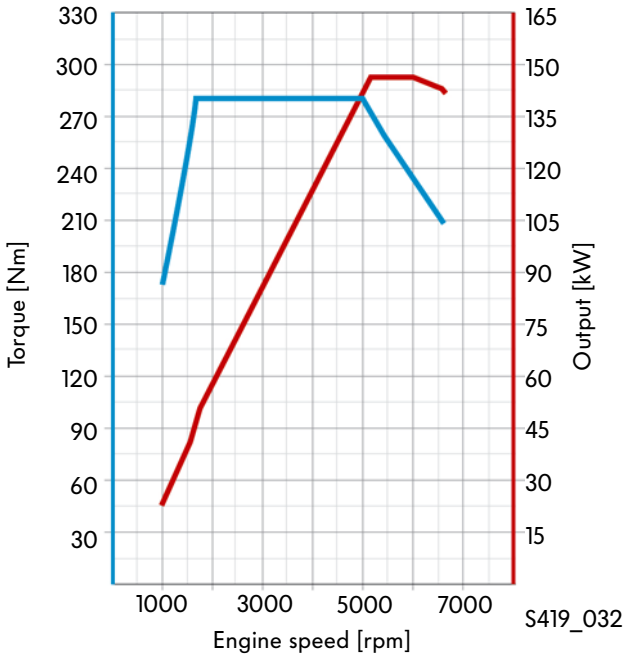
- The larger capacity is achieved by modified pistons, conrods and crankshaft.
- The pressure accumulator of the turbocharger CANNOT be exchanged or adjusted.
- Balancer shaft system with two shafts, featuring three bearing points and height offset.
- Reduced repair complexity thanks to different housing location of oil filter module.
- Basic engine configured for a very wide performance spread.

Further information about this engine canbe found in self-study programme no. 401 "The 1.8l 118kW TFSI engine with timing chain".

Technical data

Engine code	CAWB
Engine type	4-cylinder inline engine
Capacity	1984cm³
Bore	82.5mm
Stroke	92.8mm
Valves per cylinder	4
Compression ratio	9.6:1
Max. output	147kW at 5100 to 6000 rpm
Max. torque	280Nm at 1700 to 5000 rpm
Engine management	Bosch Motronic MED 17.5
Fuel	Super unleaded RON 95 (Normal unleaded RON 91 with performance reduction)
Exhaust gas treatment	Starter catalytic converter close to engine, main catalytic converter, one downstream two-state Lambda probe
Emissions standard	EU4

Torque and performance graph



S419_032

2.0l 103kW CR TDI engine

The 2.0l 103kW CR TDI engine with common rail injection system was initially installed in the Tiguan. In the Scirocco, this engine has an intake manifold upper part and a throttle valve made from synthetic material.

Technical features

- Common rail fuel injection system with piezo injectors
- Diesel particulate filter with upstream oxidising catalytic converter
- Synthetic intake manifold with tumble flap adjustment
- Throttle valve module with synthetic throttle valve
- Electric exhaust gas recirculation valve
- Adjustable turbocharger with travel response
- Low temperature exhaust gas recirculation cooling

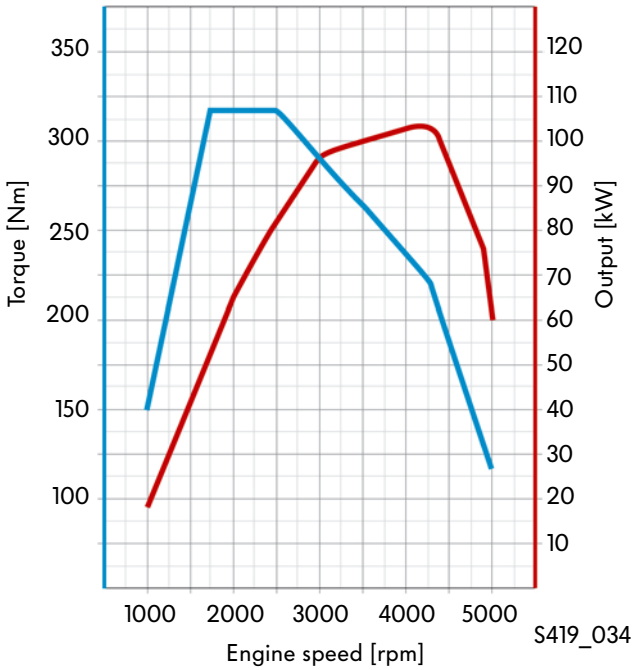
S419_033

Further information about this engine can be found in self-study programme no. 403 "The 2.0l TDI engine with common rail injection system".

Technical data

Engine code	CBAB
Engine type	4-cylinder inline engine
Capacity	1968cm^3
Bore	81mm
Stroke	95.5mm
Valves per cylinder	4
Compression ratio	16.5:1
Max. output	103kW at 4200 rpm
Max. torque	320Nm at 1750 to 2500 rpm
Engine management	Bosch EDC 17 (common rail fuel injection system)
Fuel	Diesel, complying with DIN EN 590
Exhaust gas treatment	Exhaust gas recirculation, oxidising catalytic converter and diesel particulate filter
Emissions standard	EU4

Torque and performance graph



S419_034

Overview of running gear

The running gear of the Scirocco is based essentially on the running gear of the Golf 2004 and the EOS. There are slight differences depending on the equipment. For the first time in this vehicle category, the Scirocco is equipped with adaptive suspension DCC, as used on the Passat CC. Also installed are a new lighter, more crash-sensitive steering column, a new generation ESP and a new electromechanical steering system.

- New steering column concept (sheet metal steering column)

- Lightweight suspension strut front axle based on the McPherson principle

- Adaptive chassis control DCC

- Electromechanical power steering of the 3rd generation with integrated steering angle sensor

- Leather steering wheel, as standard

- Four-link rear suspension

S419_061

- 7" alloy wheels

- Breakdown set (tyre fit), optional

- New ESP generation MK60 EC system from Continental Teves with integrated sensor cluster

More detailed information about the adaptive suspension can be found in self-study programme no. 406 "The adaptive chassis control DCC".

Adaptive chassis control DCC

Adaptive chassis control DCC offers the driver the opportunity to adapt the suspension to the road conditions by means of electrically adjustable dampers.

Via the DCC button in the centre console, three programmes can be chosen from: "Normal", "Sport" and "Comfort".

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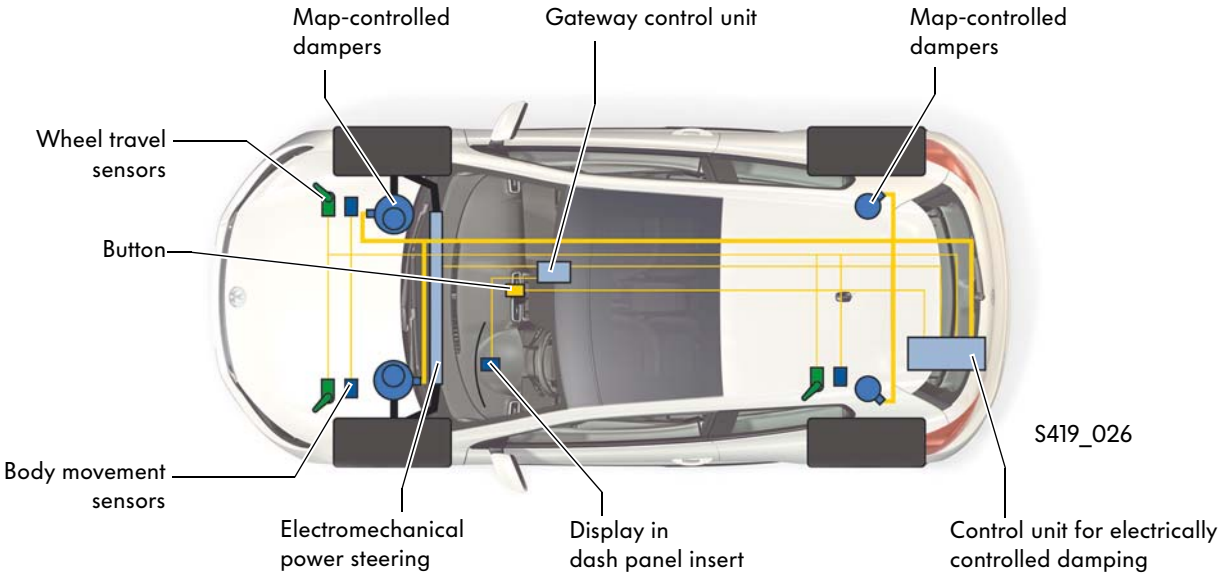
S419_058

Among the components of adaptive chassiscontrol DCC are four dampers with adjustable characteristics, one Gateway control unit as an interface to the CAN databus systems of the Scirocco, the control unit for electrically controlled damping, three sensors to measure the wheel travel and three sensors to measure the body movements. The modes "Normal", "Sport" and "Comfort" are indicated in the dash panel insert.



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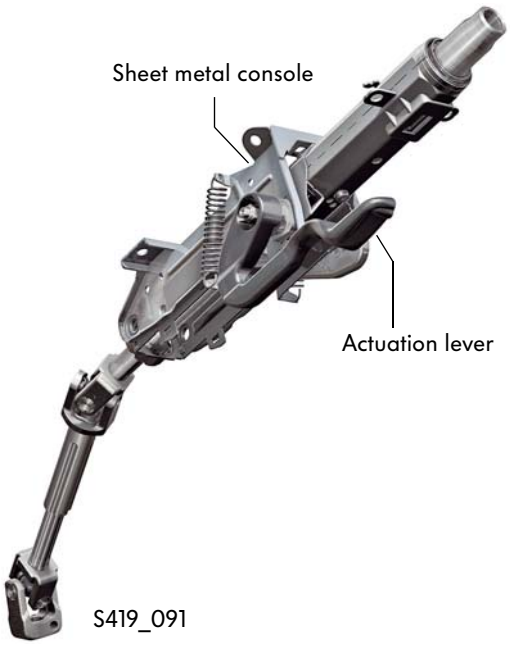
Detailed information about the adaptive suspension DCC can be found in self-study programme no. 406 "The adaptive chassis control DCC".

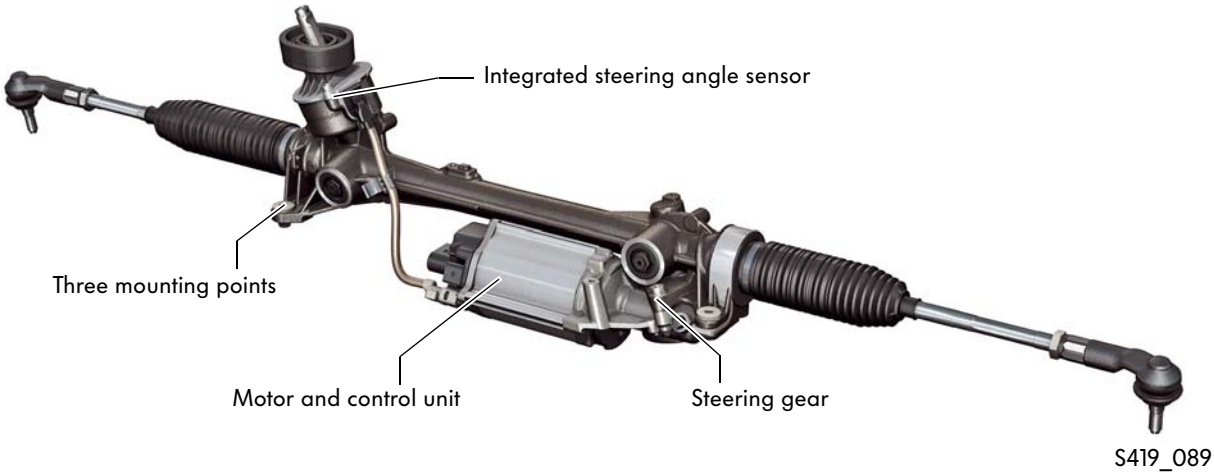
Steering column



The new steering column used in the Scirocco has the following attributes:

- Console and swing lever made from sheet metal
- Optimised in weight, cost and crash safety
- Side actuation lever
- Infinitely variable rake adjustment
- Height adjustment with 12 stage tooth engagement

Electromechanical power steering



Installed in the Scirocco is the 3rd generation of electromechanical power steering from ZF.
The main new features are:

- Integration of steering angle sensor, superseding steering angle sensor on steering column switch,
- software upgrade in control unit, e.g. for steering angle sensor and lane departure warning,
- three mounting points on assembly carrier.

ABS/ESP mark 60 EC

A new ESP unit from the product family MK 60 EC has been introduced in the Scirocco.
The main new feature is that the previous sensor cluster, which contains the yaw rate sensor and also longitudinal and lateral acceleration sensor, has been omitted. These sensors are now integrated on a circuit board in the ABS/ESP control unit.

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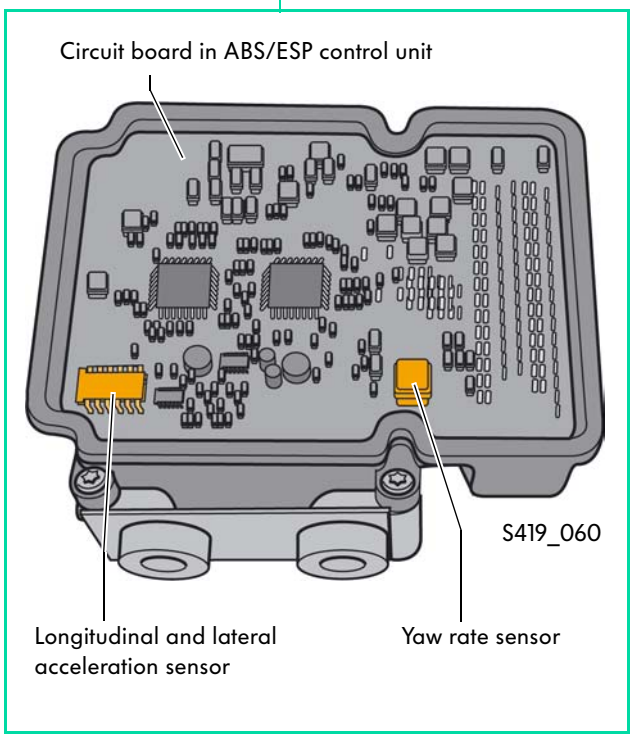
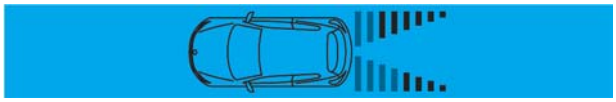


S419_060

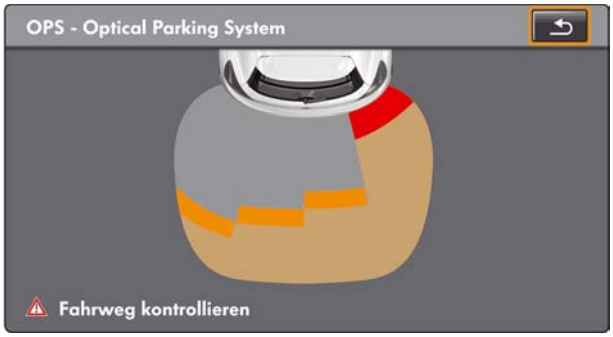
Optical parking system

OPS image display for RCD 310



S419_074

OPS image display for RCD 510/RNS 510



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The Scirocco features an optical parking system (OPS). The system was installed in the Passat CC initially. The optical parking system is a software extension of the parking aid system. The driver is supported not just acoustically but also optically.

If fitted with park distance control, the Scirocco features ultrasound sensors, which are located in the rear area. The distance control system therefore only works for objects located behind the vehicle.

OPS is made possible by sector-dependent processing of the distance information in the parking aid control unit, which transmits the data to the display unit. To do this, use is made of the operating and display protocol BAP in the CAN data bus.

The optical display is represented on the screen installed in the radio and navigation system. This is possible via the RCD 310/510 radio and the navigation system RNS 300/510.

The advantages of the optical parking system are:

- The position of the obstacle is shown in relation to the position of the vehicle.
- Manoeuvering by watching the image is possible.
- Simple check of the actual condition by looking at the display.

Further information about the optical parking system can be found in self-study programme no. 417 "The Passat CC 2009".

The high-end sound system from DYNAUDIO

The DYNAUDIO brand is a pledge of highquality sound. Since introduction of the DYNAUDIO high-end sound system in the Passat, Volkswagen offers this system in a very similar form in the EOS, Touareg, Multivan and Tiguan as well.
This high quality sound system is now introduced for the first time in the A-class segment in the Scirocco.

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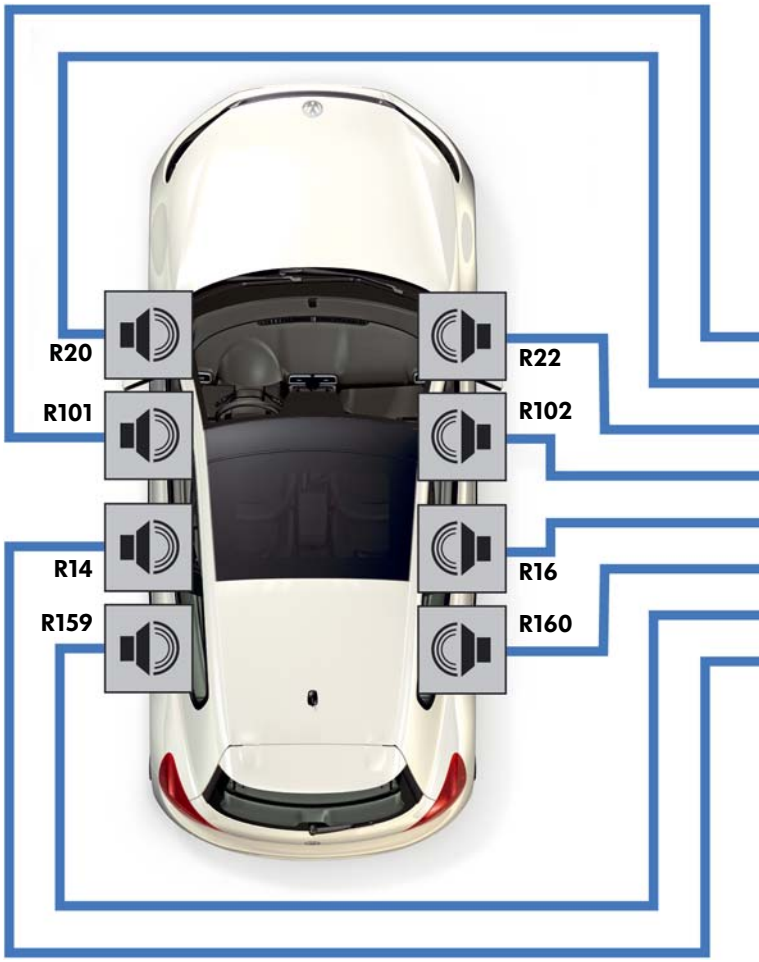


Key

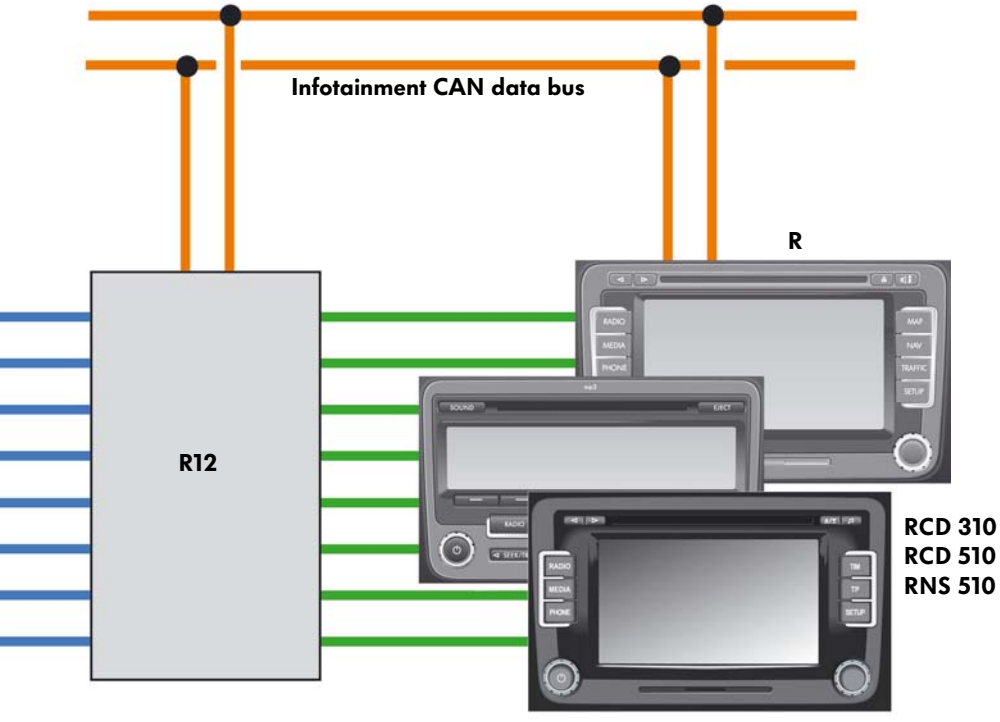
R	Radio
R12	Amplifier
R14	Rear left treble loudspeaker
R16	Rear right treble loudspeaker
R20	Front left treble loudspeaker
R22	Front right treble loudspeaker
R101	Front left mid tone loudspeaker
R102	Front right mid tone loudspeaker
R159	Rear left mid tone loudspeaker
R160	Rear right mid tone loudspeaker

The high-end soundsystem DYNAUDIO comprises bass loudspeakers and treble loudspeakers.

The four bass loudspeakers (mid tone loudspeakers) are located in the front left and front right doors and also in the side panels on the left and right in the rear. They provide a very precise and powerful bass with sharp impulse response.

For authentic music playback, transparency and detail there are four treble loudspeakers in the door panels and side panel trims.

The loudspeaker system is operated by the newly developed 300 Watt digital high output amplifier. The system can be combined with the RCD 310, RCD 510 radios and RNS 510 radio/navigation system.



S419_108

Further information about the sound system from DYNAUDIO can be found in self-study programme no. 342 "Radio systems 2006".

Radio, navigation and telephone

Radio systems in the Scirocco 2009

For the Scirocco, the RCD 210, RCD 310 and RCD 510 radios are available and also the RNS 300 and RNS 510 radio/navigation systems.

RCD 210 radio

Technical features

- Monochrome display with a resolution of 122 x 36 pixels
- FM, TP and RDS reception via a single tuner
- TP button; stations that do not transmit TP information are shown with "No TP".
- AM reception
- 24 memory slots for AM and FM stations over 2 memory levels respectively, each with 6 slots.
- The autostore function fills the currently selectedmemory level with the 6 strongest stations.
- "Initial autostore" occupies all 24 memory levels with receivable FM and AM stations
- Two or four loudspeakers with up to 20 Watt output can be connected
- Treble, bass and balance sound adjustments
- Fader adjustment only possible with four loudspeakers
- Integrated CD drive
- Brightness of display backlight can be controlled independently of the dim signal for the vehicle interior lighting
- Driving school function with speed and turn signal display
- Service test mode

S419_067

Combination and expansion possibilities

- UHV telephone preparation (mono playback only)
- Compatible telephone hands-free systems from third-party manufacturers
- Reduction in volume on vehicles with park distance control
- Can be operated via multifunction steering wheel and displayed in dash panel insert
- VW CD changer or VW Individual iPod adapter or USB adapter
- Audio input interface (Aux-In)

Detailed information about the RCD 210 radio can be found in self-study programme no. 404 "The Tiguan 2008".

RCD 310 radio

Technical features

- FSTN monochrome display with 302 x 45 pixel resolution
  (FSTN=Film Super Twisted Nematic, or liquid crystal display)
- Twin tuner with phase diversity
- Integrated DAB tuner (digital radio) (depending on equipment)
- Integrated CD drive
- Media support for MP3 and WMA audio data (with ID3 tag)
- Optical parking system (OPS)
- Information from air conditioning
- RDS FM/AM Europe radio
- Two or four loudspeakers with up to 20 Watt output can be connected
- Speed-dependant volume control(GALA)
- Self-diagnosis and loudspeaker diagnosis
- TP button; stations that do not transmit TP information are shown with "No TP".
- Control and display protocol (BAP)

S419_144

Combination and expansion possibilities

- UHV telephone preparation
- Support of display in dash panel insert via BAP operating and display protocol as well as DDP display data protocol
- External amplifier can be activated
- Control via multifunction steering wheel and multifunction display
- External CD changer (without MP3 support)
- Audio input interface (AUX-IN)
- Media device interface (MDI)

Detailed information about the RCD 310 radio can be found in self-study programme no. 417 "The Passat CC 2009".

RCD 510 radio

Technical features

- Touch-sensitive 6.5" TFT colour display with a resolution of 400 x 240 pixels
- Twin-tuner for FM, TP and RDS reception
- Integrated aerial diversity for two aerials
- AM reception
- Two or four loudspeakers with up to 20 Watt output can be connected
- Integrated 6-disc CD changer
- Integrated memory for TIM information (depending on equipment)
- Integrated DAB tuner (digital radio) (depending on equipment)
- SDARS tuner (SAT radio) (depending on equipment)
- Integrated SD memory card reader (SD=Secure Digital)
- Media support for MP3 and WMA audio data
- Audio input interface (AUX-IN)
- Interface for connection of a reversingcamera on version equipped with radio RCD 510 RVC (Rear View Camera)
- Self-diagnosis and loudspeaker diagnosis
- Display of climate conditions (information displayed temporarily)
- Optical parking system (OPS)

S419_069

Combination and expansion possibilities

- External sound amplifier
- Support of display in dash panel insert via BAP operating and display protocol as well as DDP display data protocol
- UHV telephone preparation
- Compatible, external telematics units
- Control via multifunction steering wheel
- External CD changer (without MP3 support)
- Media device interface (MDI)

Detailed information about the RCD 510 radio can be found in self-study programme no. 404 "The Tiguan 2008".

RNS 300 radio/navigation system

Technical features

- 5" monochrome display with a resolution of 240 x 128 pixels
- Two or four loudspeakers with up to 20 Watt output can be connected
- RDS FM/AM Europe radio
- FM single tuner with one aerial
- Integrated CD drive (MP3 compatible)
- Navigation symbols shown in display of dash panel insert (only on Highline version of dash panel insert control unit)
- Route guidance using symbols and voice output
- Navigation without inserted navigation CD (corridor function)
- Dynamic guidance with TMC
- CD navigation
- Media support for MP3
- Control and display protocol (BAP)

S419_105

Combination and expansion possibilities

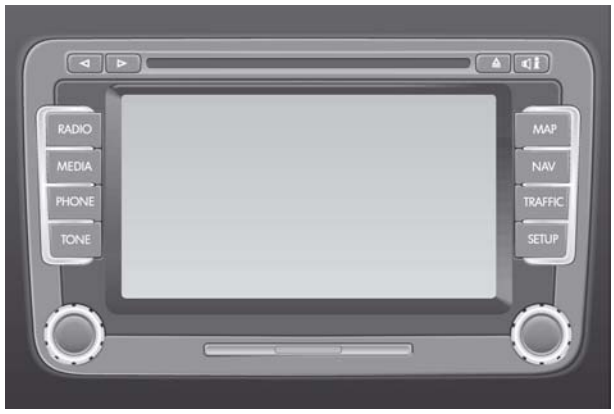
- UHV telephone preparation
- Support of display in dash panel insert via BAP operating and display protocol as well as DDP display data protocol
- Can be combined as an option with multifunction steering wheel
- Can be combined as an option with external CD changer (CDC)
- Media device interface (MDI)

Detailed information about the RNS 300 radio/navigation system can be found in self-study programme no. 397 "Radio/navigation 2007".

RNS 510 radio/navigation system

Technical features

- Touch-sensitive 6.5" multi-colour display (MFD) with a resolution of 800 x 480 pixels
- Two or four loudspeakers with up to 20 Watt output can be connected
- RDS, FM and AM Europe radio
- FM twin tuner with two aerials
- Integrated DAB tuner (digital radio) (depending on equipment)
- SDARS tuner (depending on equipment)
- Integrated DVD drive for navigation, audio and video
- Integrated hard-drive for storage of navigation and audio data
- Integrated SD memory card reader
- Media support for MP3 and WMA audio and video data
- Map display in 2D, 3D bird's eye view and topographical view
- Navigation function with map, split screen and language
- TMC function (current traffic messages are stored), dynamic navigation (Europe, North America)
- Offroad functions
- 3 screens (styles) can be programmed, coded ex-factory according to the model
- Display of climate conditions (information displayed temporarily)
- Optical parking system (OPS)



S419_107

Combination and expansion possibilities

- Controllable via multifunction steering wheel
- Support of display in dash panel insert via BAP operating and display protocol as well as DDP display data protocol
- Can be combined as an option with Volkswagen Sound and DYNAUDIO and also Volkswagen TV-tuner
- Display of navigation symbols via the control unit in dash panel insert (Highline)
- Video and TV playback from external sources, such as DVD player, reversing camera
- Extraction of video signals for external display units, such as Rear Seat Entertainment (RSE)
- Audio playback of external sources, such as CD players, iPods
- UHV telephone preparation
- Media device interface (MDI)

Detailed information about the RNS 510 radio/navigation system can be found in self-study programme no. 397 "Radio/navigation 2007".

All of the radios and radio/navigation systems used by Volkswagen feature a convenience coding.

Aerial concept in the Scirocco 2009

The Scirocco 2009 features 3 versions of roof aerial.

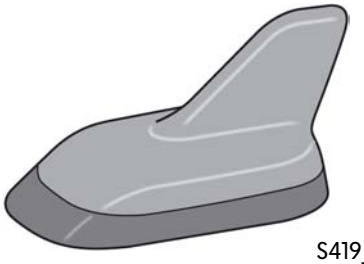
Dummy

A dummy is installed on the vehicle roof and has no aerial technology. It is used when only AM and FM reception is required in the vehicle.

S419_076

Roof aerial

The roof aerial is installed if at least one of the following signals is required: Navigation (GPS), telephone (GSM), remote control of the auxiliary heater (FFB) or satellite radio for NAR (SDARS).

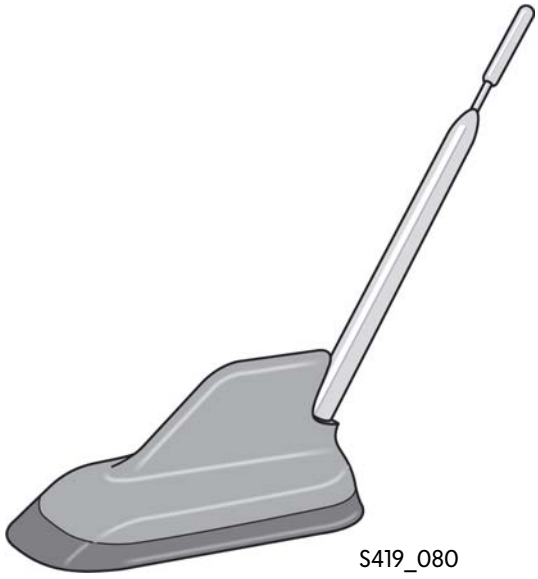


S419_078

Roof aerial with DAB

The roof aerial with DAB is installed on the vehicle roof so that signals for digital radio (DAB), navigation (GPS), telephone (GSM) or remote control for the auxiliary heater (FFB) can be received for relevant vehicle systems.

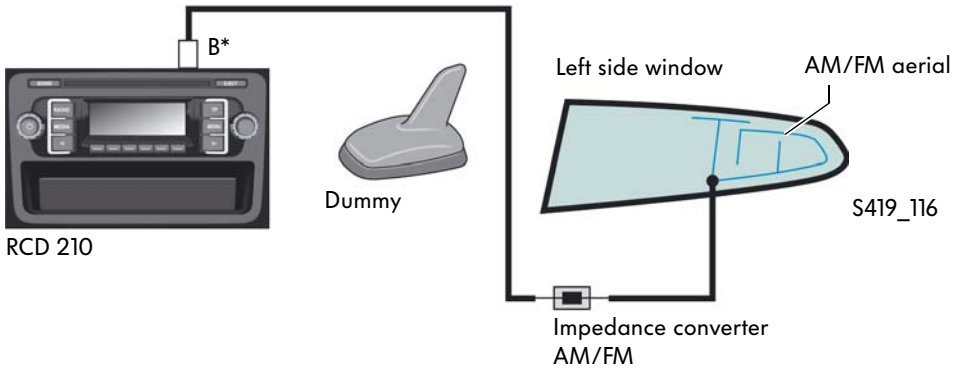
In the next model year, the DAB aerial from the roof aerial module will change to a module for the side window aerials.



S419_080

Radio with single aerial

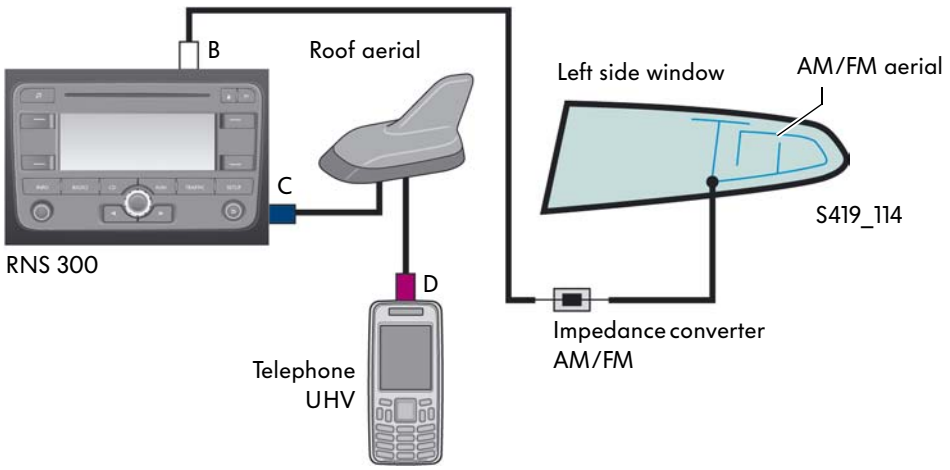
Vehicles with the RCD 210 radio have a dummy in the relevant roof aperture instead of a roof aerial. The radio signals are received via the aerial in the side window.



* An explanation of the connector coding can be found in the table on page 38.

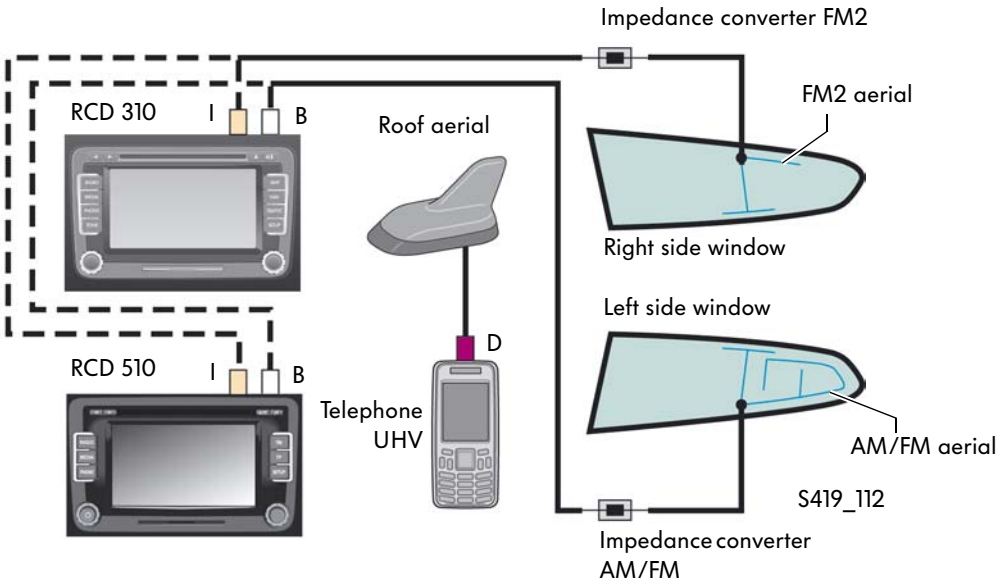
Radio/navigation system with single aerial and telephone

The GPS satellite signals for navigation and also the GSM telephone signals for telephony are received via the roof aerial. To receive the radio signals, the aerial in the side window is used.



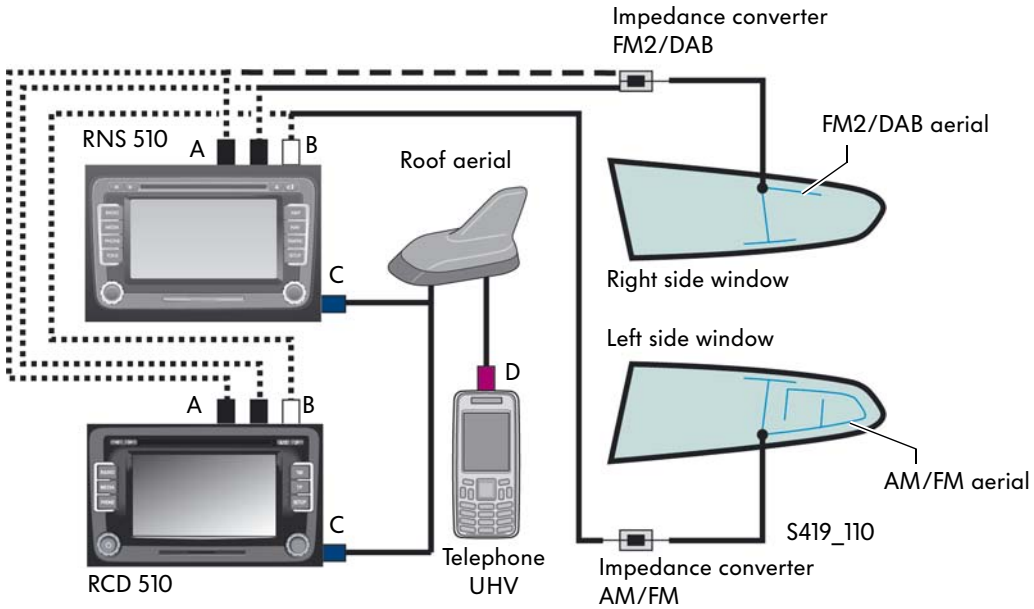
Radio with diversity and telephone

The GSM telephone signals for telephony are received via the roof aerial. The aerials in the side windows are used to receive the radio signals for the two-tuner diversity receiver.



Radio/navigation system with diversity and telephone

The GPS satellite signals for navigation and also the GSM telephone signals for telephony are received via the roof aerial. The aerials in the side window are used to receive the radio signals for the two-tuner diversity receiver.



Radio, navigation and telephone

Aerial connections

FAKRA interfaces are used to connect the aerials. These interfaces are standardised and are the same among all vehicle manufacturers and system or component producers.
The following table provides an overview of the aerial connections used in the Scirocco, depending on the equipment, and their coding.

Overview of aerial connection codes

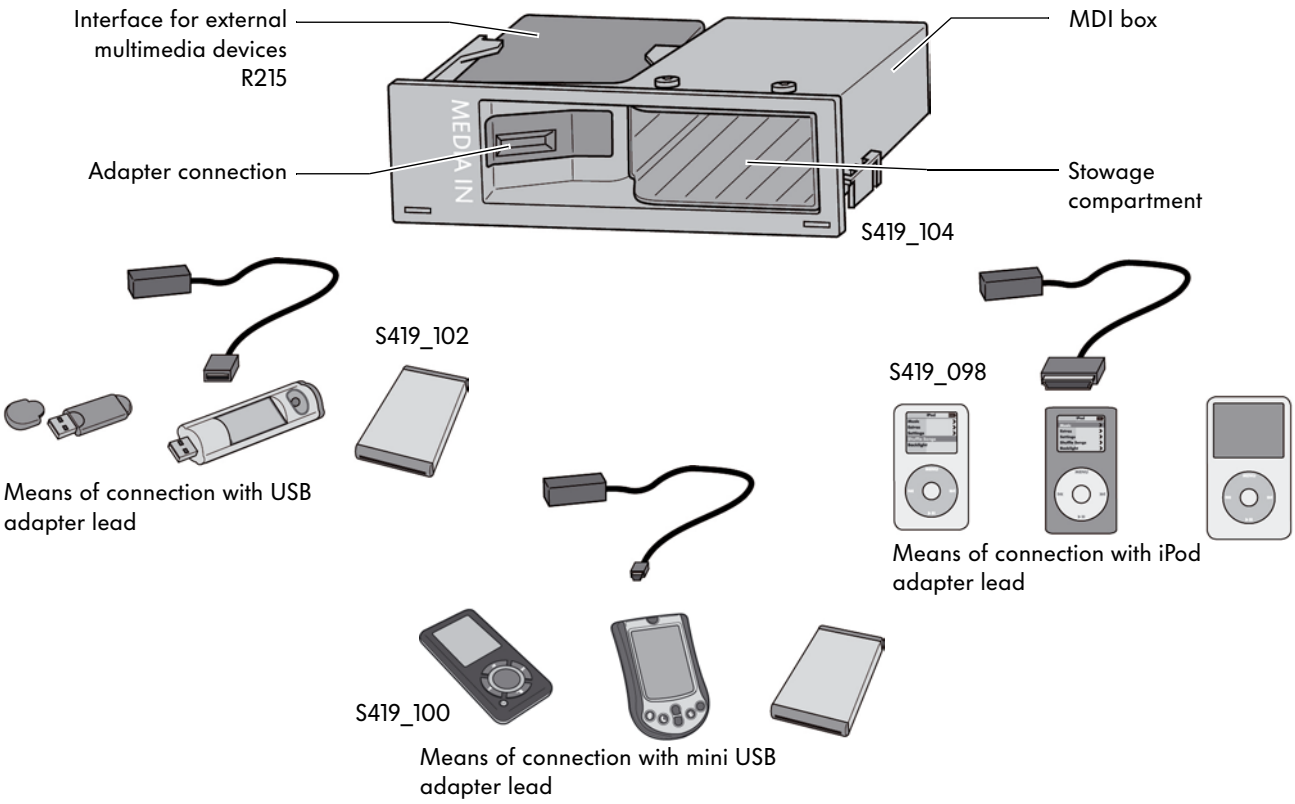
Code	Symbol	Colour		Use
A		Jet black RAL 9005		Radio without supply voltage
B		Cream white RAL 9001		Radio with supply voltage
C		Signal blue RAL 6005		GPS All except GPS for telematics and navigation
D		Claret violet RAL 4004		Telephone
I		Beige RAL 1001		Auxiliary aerial Diversity Radio remote control for auxiliary heater

Detailed information about the aerial connections can be found in self-study programme no. 342 "Radio systems 2006".

The media device interface box

The Scirocco is equipped with the media device interface box as an option. This was first installed in the Passat CC.
With the media device interface, or MDI for short, mobile audio or multimedia equipment can be connected to the infotainment system. Their audio contents can then be displayed, operated and played back via the loudspeaker system and infotainment monitors in the vehicle.

The interface for external multimedia devices R25 is located in a plastic housing of the MDI box. The MDI box offers space to store the mobile multimedia device safely and securely and has the dimensions of a 1 DIN compartment. The MDI box is inserted in the installation slot for the CD changer. This means that if one is installed, the other cannot be.



Means of connection

Connection of the mobile device, depending on the type, is via a special adapter lead, which is connected to the central interface or adapter connection. The following audio formats are currently supported and can therefore be played back: MP3, WMA and OGG Vorbis (licence-free audio data compression codec). The AAC format, also supported, is the licensed format from Apple.

UHV telephone preparation

Two telephone preparation systems are used in the Scirocco 2009: UHV with audio streaming and UHV Premium.

UHV (Bluetooth™ only) with audio streaming

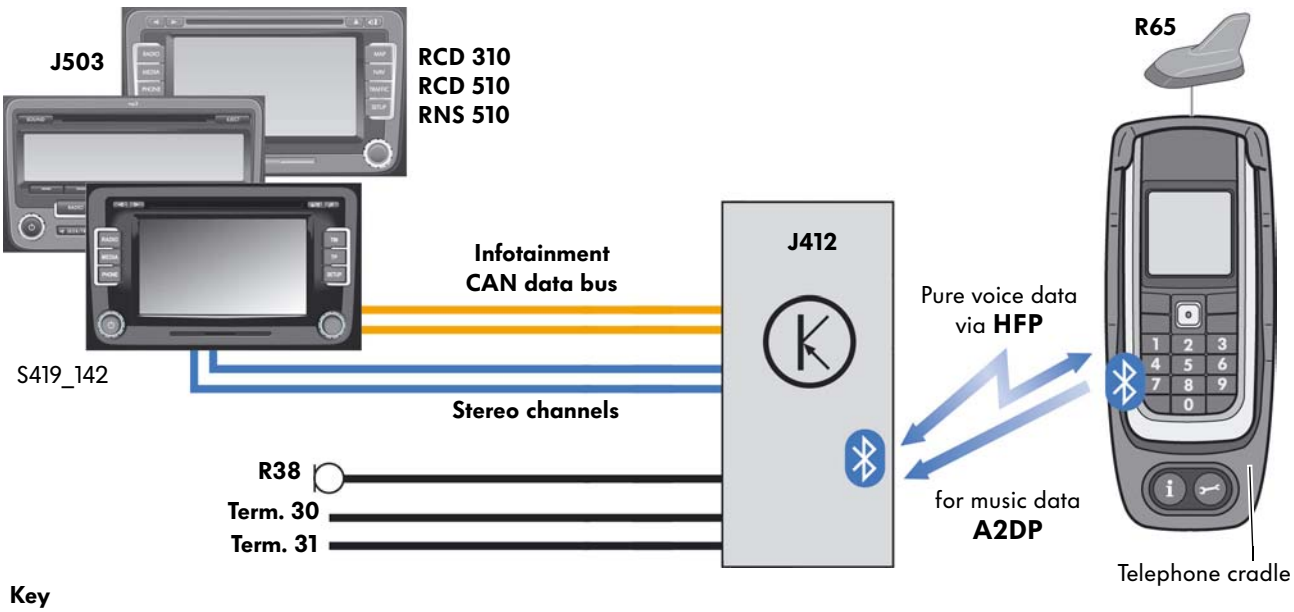
For UHV with audio streaming, two Bluetooth™ profiles are used:

- HFP stands for hands-free profile and is a Bluetooth™ profile for the telephone, audio/ voice channel. Purely voice data is transmitted in this instance.

- With the new Bluetooth™ profile A2DP audio streaming (Advanced Audio Distribution Profile) music files can be sent from the registered Bluetooth™ device in stereoquality to the UHV control unit. Considerably greater amounts of data are transmitted here than pure voice data.

Range of functions

- Operation and display on cellphone
- Hands-free device and radio mute switch
- Charging of cellphone via telephone cradle
- Info and breakdown recovery buttons on cellphone holder
- CAN data bus interface to CAN infotainment data bus
- Data transfer between cellphone and control unit for operating electronics of cellphone is carried out via Bluetooth™
- UHV is capable of diagnosis
- Run-on time adjustable (max. 60 minutes)



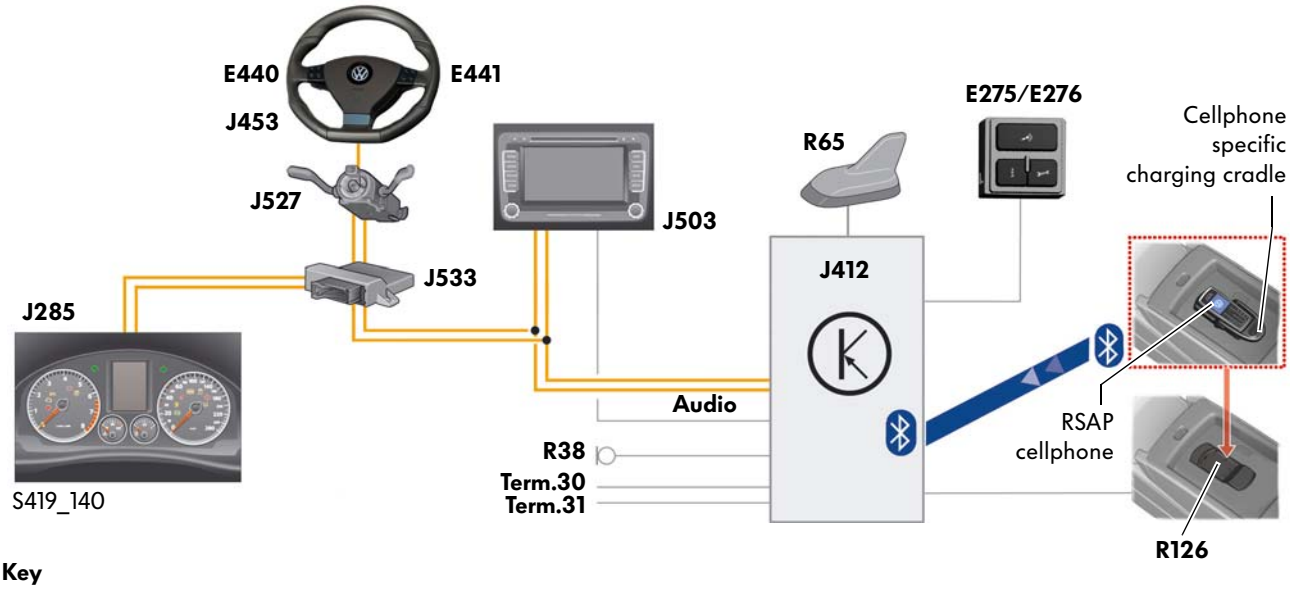
Key

J412 - Control unit for cellphone operating electronics
J503 - Control unit with display for radio and navigation system
R38 - Telephone microphone
R54 - Mobile telephone
R65 - Telephone aerial

UHV Premium with Bluetooth™

Range of functions

- Operation via multifunction steering wheel
- Display of telephone information via screen of Highline dash panel insert
- Telephone data transfer and cellphone connection via Bluetooth™
- Hands-free system and audio mute
- GSM aerial directly on telephone preparation amplifier module
- SIM data inc. telephone book in universal telephone preparation
- Separate button module for information and breakdown recovery
- As an option, a cellphone cradle can be connected for charging
- Run-on time can be set for up to 60 minutes
- UHV is capable of diagnosis



Key

E275 - Breakdown recovery button
E276 - Emergency call button
E440 - Multifunction buttons on left in steering wheel
E441 - Multifunction buttons on right in steering wheel
J285 - Control unit for dash panel insert
J412 - Control unit for cellphone operating electronics
J453 - Control unit for multifunction steering wheel
J503 - Control unit with display for radio and navigation system
J527 - Control unit for steering column electronics
J533 - Data bus diagnosis interface
R38 - Telephone microphone
R65 - Telephone aerial
R126 - Telephone holder

CAN powertrain
LIN data bus
Serial cable
Optional
Bluetooth™

Air conditioning

In the Scirocco, there are two different types of air conditioning system, which are already in service in the Golf 2004:

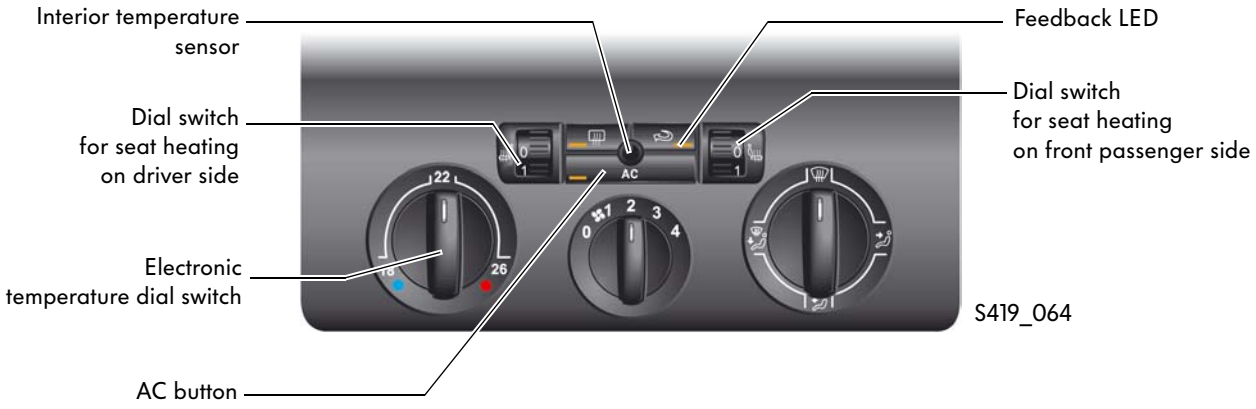
- The semi-automatic heater and air conditioner Climatic
- The fully automatic 2C Climatronic heater and air conditioner

S419_022

The Climatic system

The vehicle interior forms one climate zone with the Climatic system.
The desired temperature is set by the temperature dial switch. The temperature requirement is sent from a potentiometer, which is joined to the dial switch, directly to the control unit. The desired temperature is reached by adjustment of the temperature flap.
The Climatic system is able to control the preset temperature by monitoring the outlet and interior temperature.
The AC button is used to switch the air conditioner on and off.

S419_029



S419_064

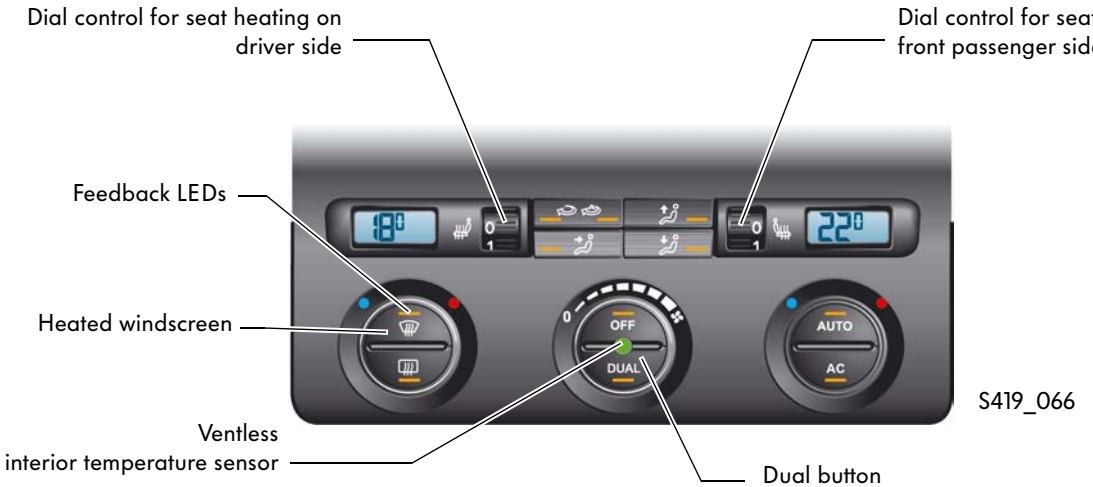
2C Climatronic system

S419_027

In the 2C Climatronic system, the interior is divided into two climatic zones. This means that temperatures in a range between 16°C and 29.5°C can be set for the driver and front passenger independently of each other. When doing this, it should be noted that the temperature difference is 4 degrees max. between the climate zones.

The two climate zones are divided by two temperature flaps inside the air conditioner unit. All flaps of the air conditioning unit are actuated via servomotors with integrated potentiometers. The preset interior temperature is maintained and optimal air distribution is controlled and monitored by the Climatronic control unit.

The 2C Climatronic can be operated with an automatic function or manually.



S419_066

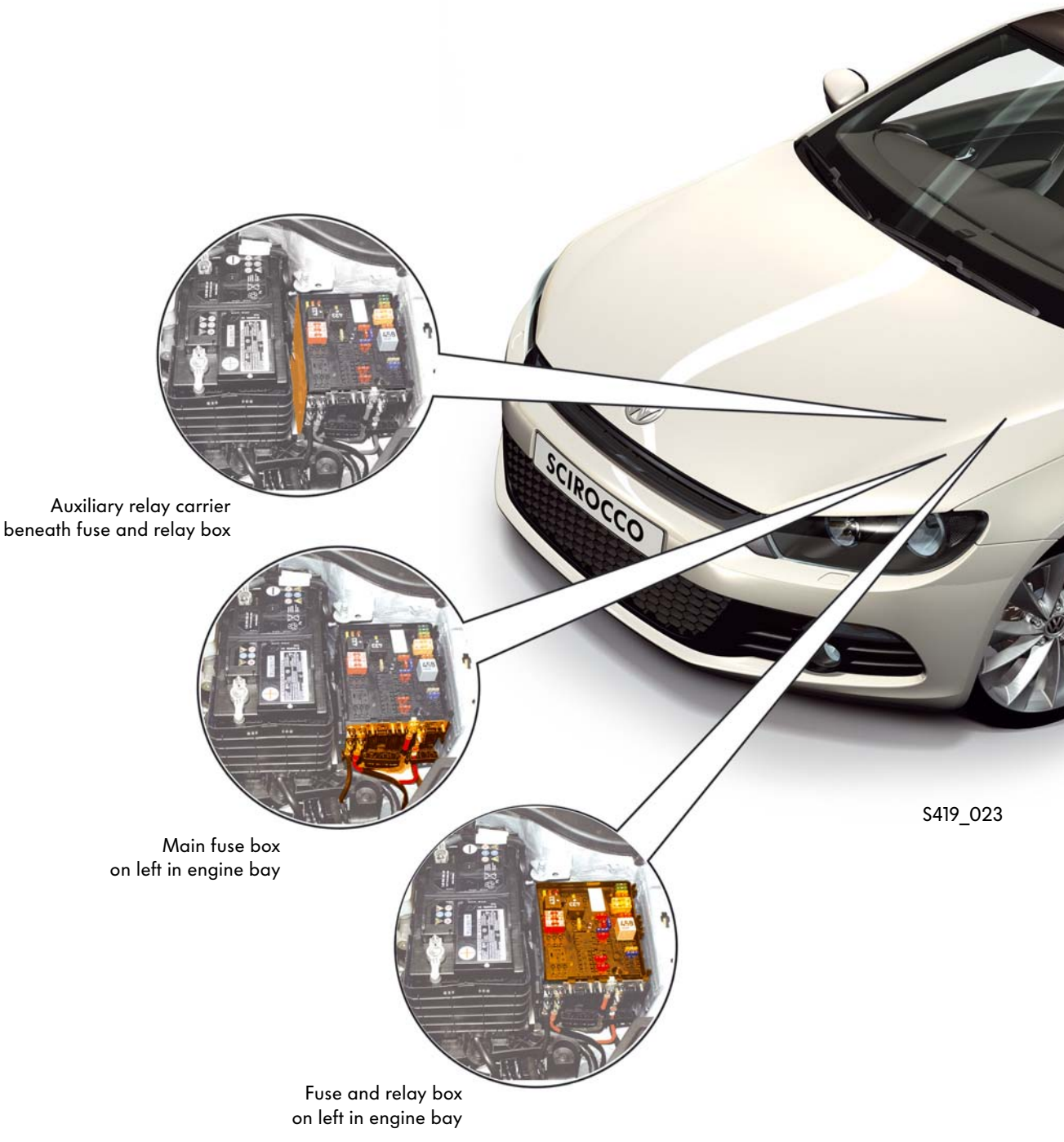
Dual button
When the dual button is activated, the Climatronic system works in dual climate zone mode.
When the dual button is off, single climate zone is in operation.

Further information about the Climatic and Climatronic system can be found in self-study programme no. 318 "The Golf 2004" and no. 339 "The Passat 2006".

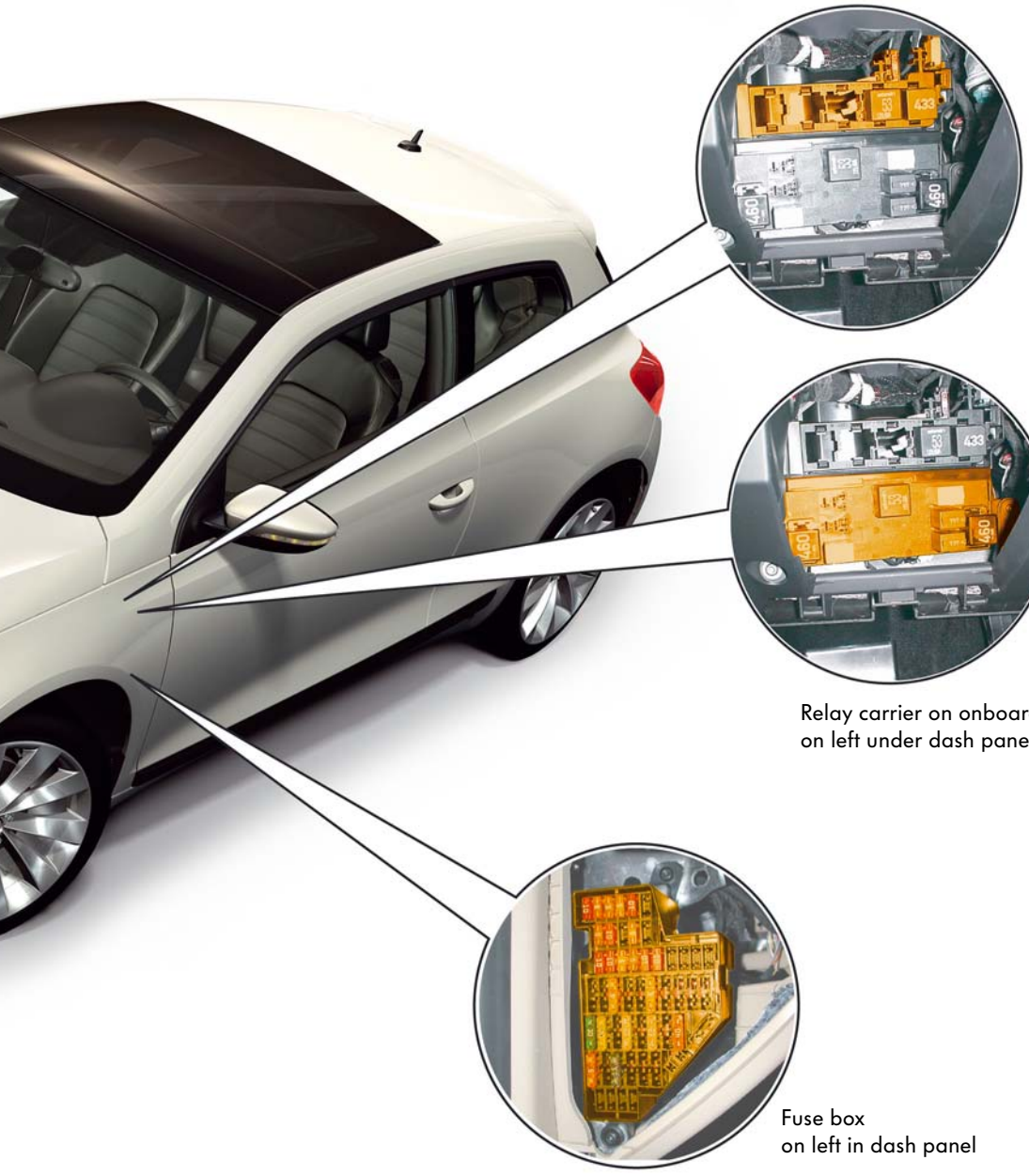
Fuse boxes and relay locations in onboard supply system

Installation locations

The battery is located on the left in the engine bay.



Relay carrier
on left under dash panel,
above onboard supply control unit



Relay carrier on onboard supply control unit
on left under dash panel

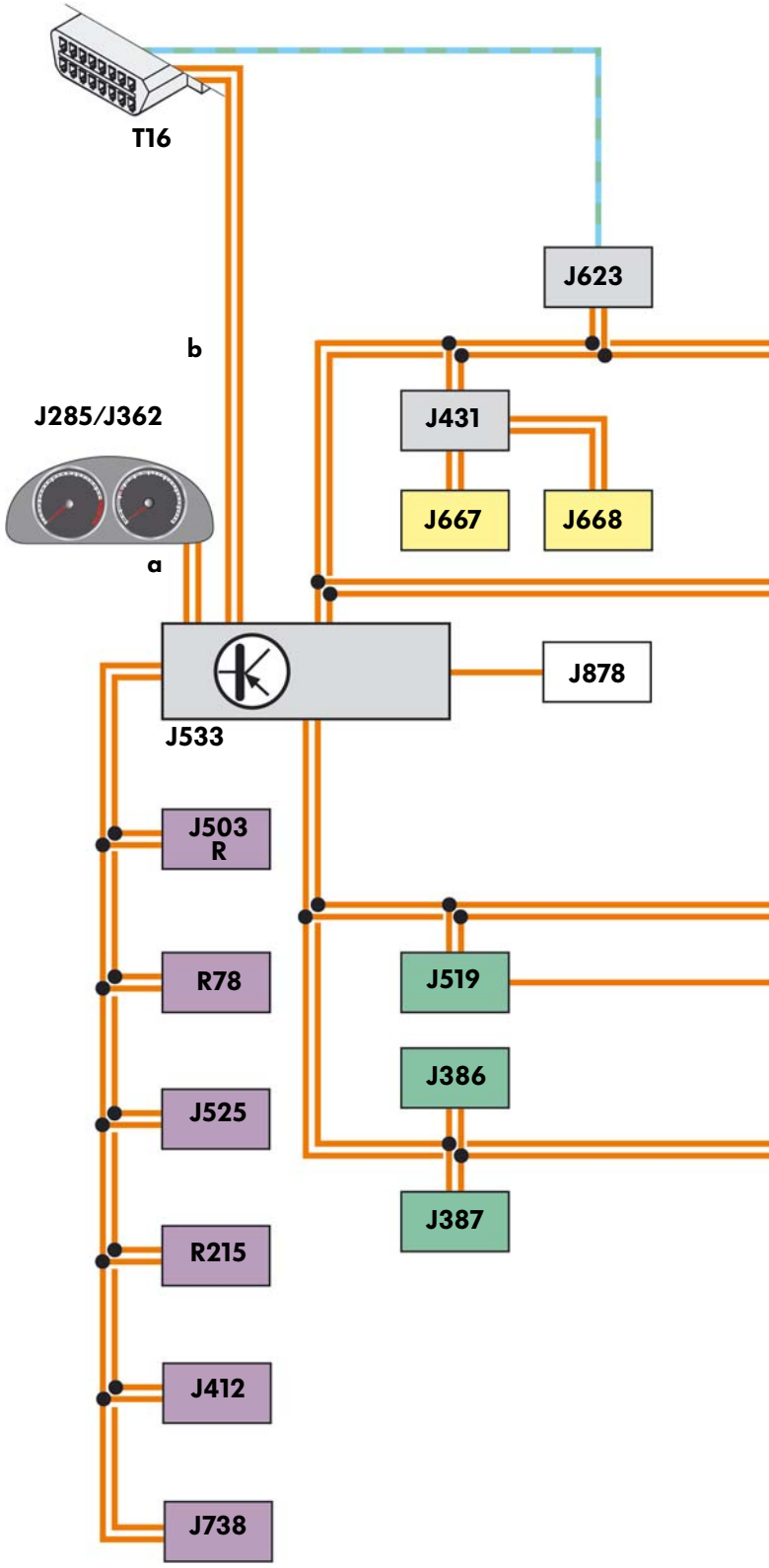
Fuse box
on left in dash panel

Networking concept

The data bus diagnosis interface J533 forms the interface for communication between data bus systems:

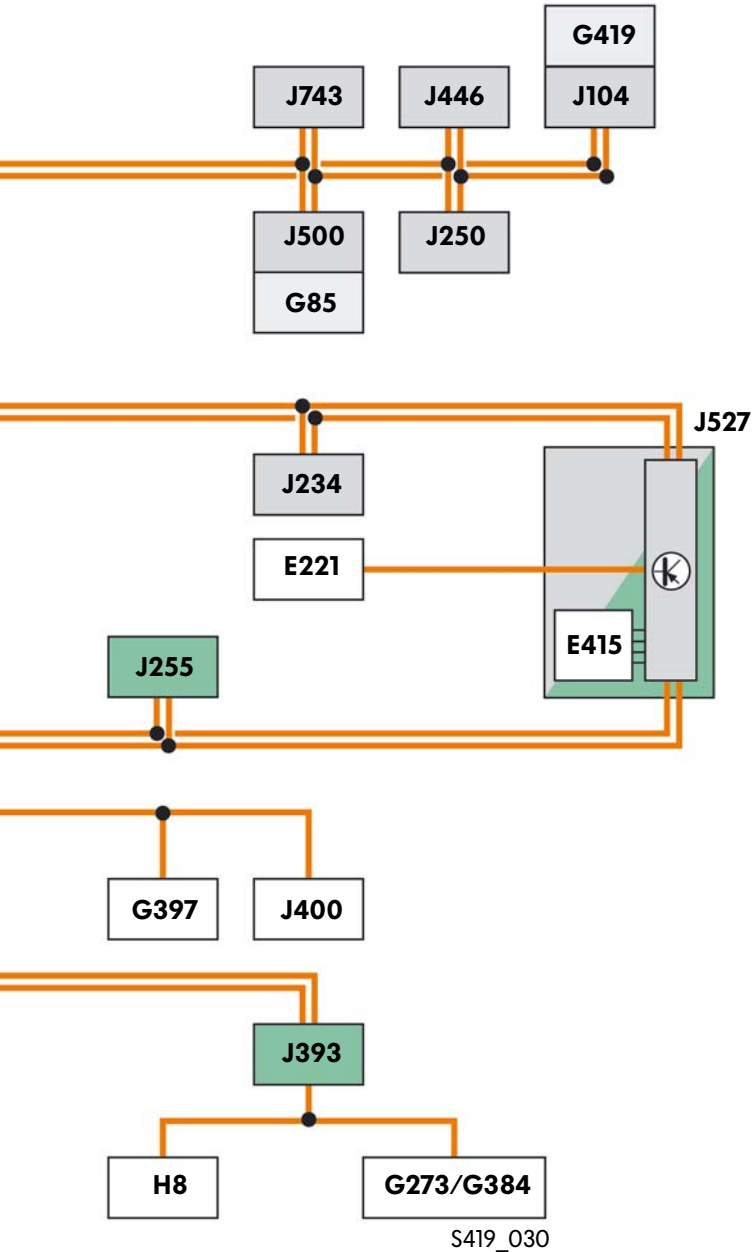
- CAN powertrain data bus
- Convenience CAN data bus
- Infotainment CAN data bus
- Combi CAN data bus
- Diagnosis CAN data bus

The LIN data bus is next in line to CAN data bus as a sub-system.



Key

- CAN powertrain data bus
- Convenience CAN data bus
- Infotainment CAN data bus
- **a** Combi CAN data bus
- **b** Diagnosis CAN data bus
- Light CAN data bus
- LIN data bus
- CAN data bus line
- LIN data bus line
- COM line



S419_030

Key

E221	Operating unit in steering wheel (multifunction steering wheel)
E415	Entry and start authorisation switch
G85	Steering angle sender
G273	Interior monitoring sensor
G384	Vehicle inclination sender
G397	Rain and light sensor
G419	ESP sensor unit
H8	Anti-theft alarm system horn
J104	ABS control unit
J234	Airbag control unit
J250	Control unit for electrically controlled damping
J255	Climatronic control unit
J285	Control unit in dash panel insert
J362	Immobilizer control unit
J386	Driver door control unit
J387	Front passenger door control unit
J393	Convenience system central control unit
J400	Wiper motor control unit
J412	Control unit for cellphone operating electronics
J431	Control unit for headlight range control
J446	Parking aid control unit
J500	Power steering control unit
J503	Control unit with display for radio and navigation
J519	Onboard supply control unit
J525	Digital sound package control unit
J527	Control unit for steering column electronics
J533	Data bus diagnosis interface
J623	Engine control unit
J667	Power output module for left headlight
J668	Power output module for right headlight
J738	Control unit for cellphone controls
J743	Mechatronic unit for double clutch gearbox
J878	Control unit for sunroof
R	Radio
R78*	TV tuner
R215	Interface for external multimedia devices
T16	Diagnosis interface

* Only Japan

Glossary

AM

Amplitude modulation, for transmission of electromagnetic waves used for messages.
With amplitude modulation, the amplitude of the high frequency is altered.

BAP

The operating and display protocol BAP is used for communication between function control units and operating and display control units. BAP consistently separates the function from the display and the controls.

FM

Frequency modulation, for transmission of electromagnetic waves used for messages.
With frequency modulation there is a change in the frequency of the carrier wave to the rhythm of the information voltage. The amplitude remains constant.

GPS

Global Positioning System, a satellite system from the US ministry of defence, which allows navigation around the globe.

GSM

Global system of mobile telecommunication
Standard for digital cellular phone networks, which is used mainly for telephony but also for data transfer and also short messaging (SMS).

Impedance converter

An impedance converter is an electronic amplifier, which adapts the impedance, i.e. the alternating current resistance of a source such as, for example, an aerial from a consumer (e.g. radio).

Impulse response

Impulse response is the capacity of a loudspeaker to follow a pulse-shaped output signal of an amplifier with as little delay, loss or distortion as possible, thereby facilitating optimal playback.

Convenience code

If the device was removed or the vehiclebattery was disconnected, the anti-theft coding does not have to be manually disabled as the code number was stored in the vehicle following initial entry.
However, if the vehicle and radio code numbers do not match because the radio has been fitted in another vehicle, for example, the electronic lock will have to be disabled manually.

MP3

Motion Pictures expert group layer 3 (MPEG layer 3)
Data compression standard for video, audio and image formats.

NAR

North America region.

NF

Low frequency.

RDS

Radio Data System.
A standardised system for transmission of non-audio auxiliary information for radios, radio stations, e.g. station name, track title, etc.

RSAP

Remote SIM Access Profile
This profile makes it possible for the control unit for cellphone operating electronics (Premium) to access the data from the GSM card of the cellphone in order to logon to the GSM network in its place.

RSE

Rear Seat Entertainment offers rear passengers multi-media-based entertainment. The main components are screen, DVD player and an additional control panel as well as headphone sockets and an extra video and audio input to which an external source, for example a games console, can be connected. Playback of the DVD sound is also possible via the loudspeakers of the radio system. To enable the driver and other passengers to listen to the radio while the DVD is playing, however, separate operation for Rear Seat Entertainment and radio is possible.

SD

Secure digital card,
small and sturdy memory cards, e.g. for digital photos, MP3 players, etc.

SDARS

Satellite Digital Audio Radio Services
A digital radio standard for commercial satellite radio in North America.

TFT

Thin Film Transistor Display
(TFT display = flat screen).

TMC

Traffic Message Channel
A digital radio service for transmission of traffic messages

UHV

Universal telephone preparation.

USB

Universal Serial Bus
Universal serial interface between different computers and periphery devices

WMA

Windows Media Audio
Special audio format under Microsoft Windows.

Glossary

Notes

000.2812.14.20
Technical status 07.2008

Volkswagen AG
Service Training VSQ-1
Brieffach 1995
38436 Wolfsburg