

Self Study Program 800153

2016 Passat and New Technologies



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This Self-Study Program provides information regarding the design and function of new models. This Self-Study Program is not a Repair Manual. This information will not be updated.

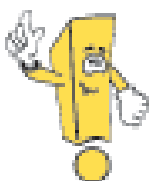
For maintenance and repair procedures, always refer to the latest electronic service information.



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2016 Passat Product Features

The illustration lists new and important product features of the Passat..



Not all features listed are standard equipment.

Introduction

2016 Passat Distinguishing Features

- Bumper and Body Panel Changes



- Headlamp Design/
LED Headlamps

- Foglamp Redesign

- Trunk and Bumper Redesign



- Taillamp Design/
LED Taillamps

Technical Data

Exterior Dimensions and Weights



Exterior Dimensions

Passat	2012	2016
Length	191.6 in	191.9 in
Width	72.2 in	72.2 in
Height	58.5 in	58 in
Wheelbase	110.4 in	110.4 in
Track width at front	62.1 in	62.1 in
Track width at rear	61.0 in	61.0 in
Turning circle	36.4 ft	36.4 ft

Weights/Details

Passat	2012	2016
Gross vehicle weight	4387 lb	4519 lb
Curb weight	3165 - 3446 lb	3206 - 3313 lb
Maximum roof load	220 lb	220 lb
Tank capacity	18.5 gal	18.5 gal
Drag coefficient	0.291cd	0.29cd

Engines and Transmissions

1.8L TSI Engine

Technical Features

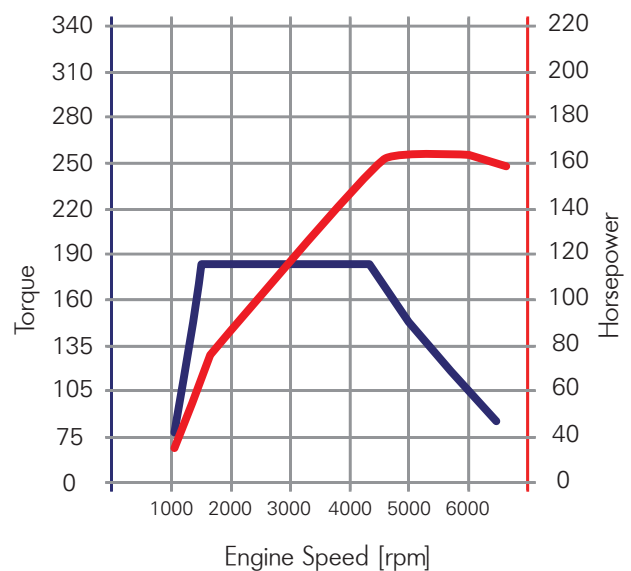
- Cylinder head with integrated exhaust manifold
- Roller bearing balance shafts
- Smaller crankshaft main bearings with only four counterweights
- Turbocharger with electrical wastegate flap actuation
- Reduced oil pressure
- Sump with upper aluminum section and lower plastic section
- Accessory bracket with integrated oil filter and oil cooler
- Total weight savings of 7.8 kg (17.2 lb)



s522_123

Technical Data

Displacement	1798 cm ³
Bore	82.5 mm
Stroke	84.1 mm
Valves Per Cylinder	4
Compression Ratio	9.6:1
Horsepower	125 kW (170 hp) from 3,800 to 6,200 rpm
Torque	249 Nm (184 lb/ft) from 1,400 to 3,700 rpm
Engine Management	SIMOS 18.1
Fuel	Premium
Emission Treatment	Three-way catalytic converter, one upstream broadband lambda probe of the turbocharger and one step-type lambda probe downstream of the catalytic converter
Emission Standard	SULEV



Engines and Transmissions

3.6L FSI Engine

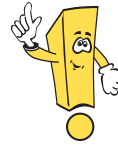
The 3.6L FSI engine with 4-valves per cylinder is based on the VR engine series.

Technical features

- Oil pump output reduced and oil pressure lowered to 3.6 bar
- Non-engaged chain tensioner
- 89° opening temperature of coolant thermostat
- One-part oil pump chain sprocket
- Exhaust camshaft adjuster with 32° setting range
- Vibration damper secured with 7 bolts



S488_233

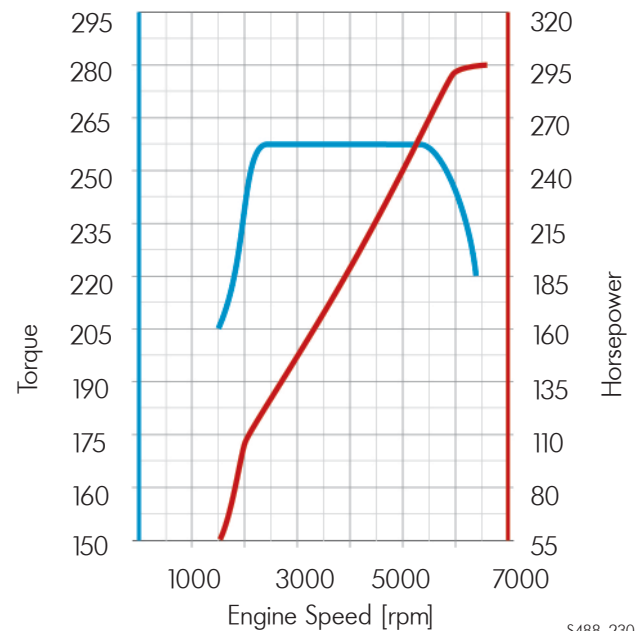


Additional information on this engine is available in SSP 823603, the 3.2L and 3.6L Engines.

Technical data

Engine Code	BWS
Type	6-cylinder in-line engine
Displacement	219.5 in ³ (3597 cm ³)
Bore	3.5 in (89 mm)
Stroke	3.8 in (96.4 mm)
Valves Per Cylinder	4
Compression Ratio	11.4:1
Maximum Output	280 hp (206kW) at 6600 rpm
Maximum Torque	258 lb/ft(350Nm) at 2400 to 5300 rpm
Engine Management	Bosch Motronic MED 17.1
Fuel	Premium unleaded
Exhaust Gas Treatment	Three-way catalytic converter with lambda control
Emissions Standard	ULEV 2

Torque and power diagram



S488_230

Engines and Transmissions

2.0L TDI Engine

Technical Features

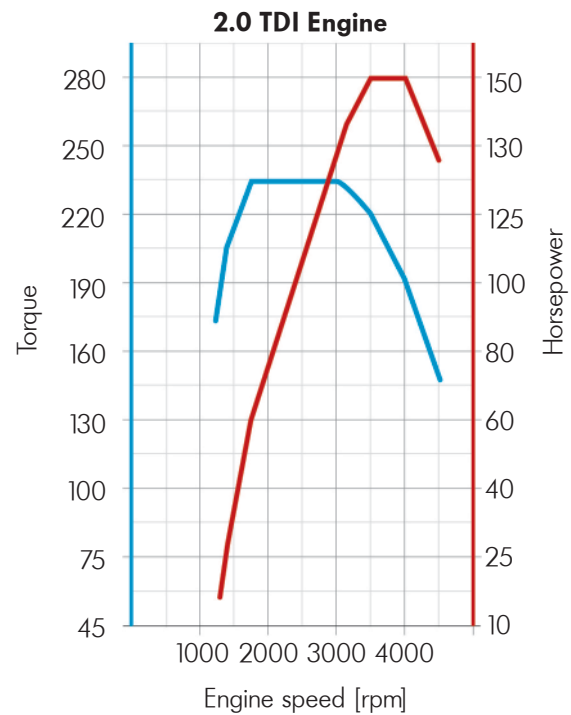
- Camshaft bearings in camshaft housing (modular design)
- Oil pump and vacuum pump in one housing with a shared drive shaft
- Thermal management with switchable coolant pump
- Intake manifold with water-cooled charge air cooler
- Exhaust purification module with integrated oxidizing catalytic converter and diesel particulate filter
- Low pressure exhaust gas recirculation
- Balance shaft integrated in the cylinder block



s513_056



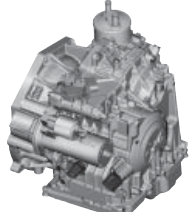
Technical Data

Engine Code	CRBC
Design	4-cylinder inline engine
Displacement	1968 cm ³
Bore	81.0 mm
Stroke	95.5 mm
Valves per Cylinder	4
Compression Ratio	16.2:1
Max. Output	150 hp (110kW) from 3500 - 4000 rpm
Max Torque	235 lb/ft (320 Nm) from 1750 - 3000 rpm
Engine Management	Bosch EDC 17
Fuel	Ultra-Low Sulfur Diesel
Exhaust Gas After-treatment	Exhaust gas recirculation, oxidizing catalytic converter, diesel particulate filter
Emissions Standard	BIN5



S514_100

Engines and Transmissions

Transmission Type	Technical Data
 <p data-bbox="321 745 532 808">6-Speed Manual Transmission 02Q</p>	<p data-bbox="618 506 1198 533">The 02Q transmission based on the 02M transmission.</p> <p data-bbox="618 579 1360 646">The gearshift shaft, the selector forks with stops in the housing, and the mounting have been changed.</p> <p data-bbox="618 693 1377 760">The transmission has been designed without a speedometer sensor (gets this signal from ESP control module).</p>
 <p data-bbox="300 1081 552 1144">6-Speed Dual-Clutch Transmission 02E</p>	<p data-bbox="618 840 1409 982">The 02E 6-speed dual clutch transmission is equipped with a hydraulic dual clutch. It combines the advantages of a manual transmission such as high-efficiency, durability, and sportiness with the advantages of an automatic transmission such as increased comfort with ease of shifting.</p>
 <p data-bbox="305 1459 539 1522">6-Speed Automatic Transmission 09G</p>	<p data-bbox="618 1171 1404 1501">The 09G 6-speed automatic transmission is a compact, light, electronically controlled transmission for transverse installation. The 2012 Beetle utilizes the 2nd generation of this transmission. In the development of the transmission, the main focus was on reducing consumption and reducing CO2 emissions. As a result of improved damping in the newly developed torque converter, the car can be driven with less fuel consumption when the lockup clutch is engaged, even in 2nd gear. Also, the newly developed linings of the multi-plate clutch and the friction-optimized bearings – in conjunction with low-friction oil – significantly increase efficiency.</p>

Running Gear

Driver Assistance Systems at a Glance

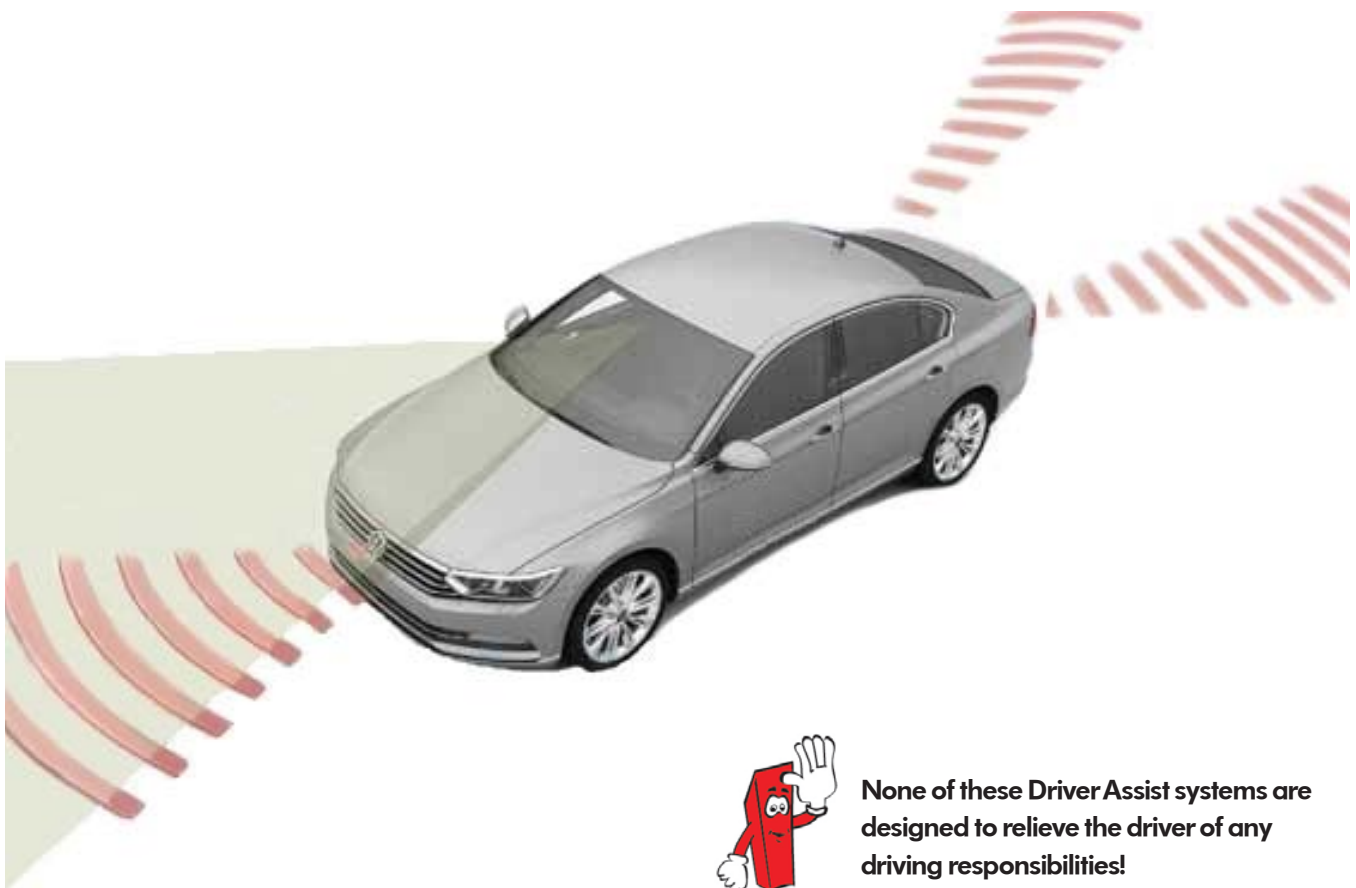
The Passat has many new driver assistance systems. This SSP will provide a short overview of these systems.

Driver Assistance Systems:

- Front Assist with Autonomous Emergency Braking
- Adaptive Cruise Control (ACC)
- Lane Assist (Lane Departure Warning)
- Blind Spot Monitoring
- Rear Traffic Alert
- Park Distance Control
- Park Assist (Automatic Parking Assistant)



These systems are described in detail in the Volkswagen Driver Assistance Systems SSP 890253



None of these Driver Assist systems are designed to relieve the driver of any driving responsibilities!

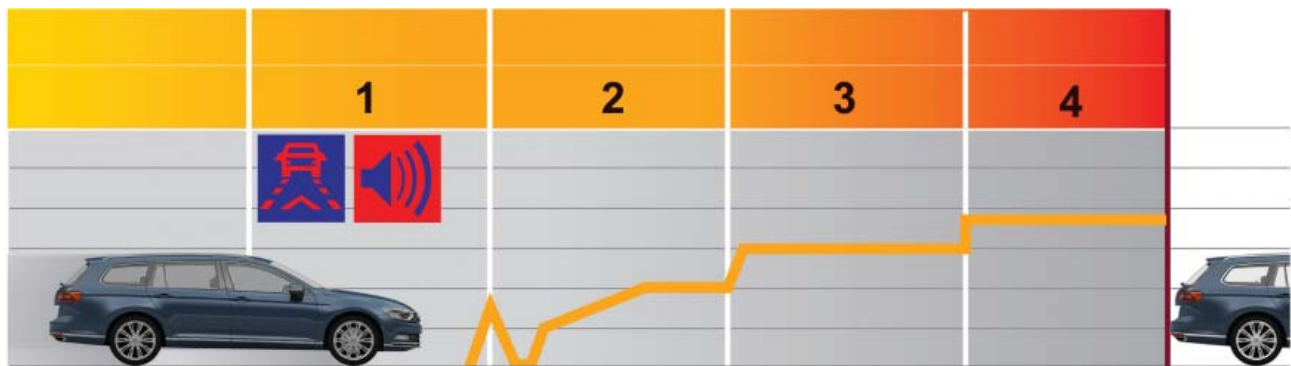
Front Assist Overview

The Forward Collision Warning system is designed to alert the driver when the following distance is less than 0.9 seconds. A radar sensor in the front bumper is used to detect the distance between vehicles.



The Front Assist system not only alerts the driver audibly and visually, but also has the capability to apply the brakes. The warning and brake applications occur in four stages:

1. Visual and acoustic warning. Brake system prepares for braking
2. Brake jolt to further alert driver
3. Advanced automatic partial braking
4. Full braking to avoid a collision



Running Gear

Adaptive Cruise Control Overview

The Adaptive Cruise Control (ACC) system is designed to enhance the cruise control system by altering the vehicle speed to match the pace of traffic. When there is no traffic, the vehicle will maintain a preset speed, just like cruise control. If the ACC vehicle comes up on a slower vehicle, ACC will automatically match the speed of the slower vehicle and follow at a preset following distance. When the vehicle ahead is no longer there, ACC will speed up to maintain the preset speed.

A radar sensor located at the front of the vehicle is constantly scanning to detect objects or vehicles ahead. The ACC multifunction steering wheel controls or stalk on the steering column allow for activation, deactivation and setting a preferred distance to the vehicle ahead.

There are two main ACC system designs:

ACC Basic

When the ACC is actively regulating vehicle speed and the vehicle ahead slows, ACC can only reduce the speed to about 12 mph (18 km/h) before ACC speed regulation is deactivated and the driver is prompted to take control by visual and audible signals. ACC does not reduce vehicle speed to a standstill. The brake pedal must be pressed by the driver to fully stop the vehicle.

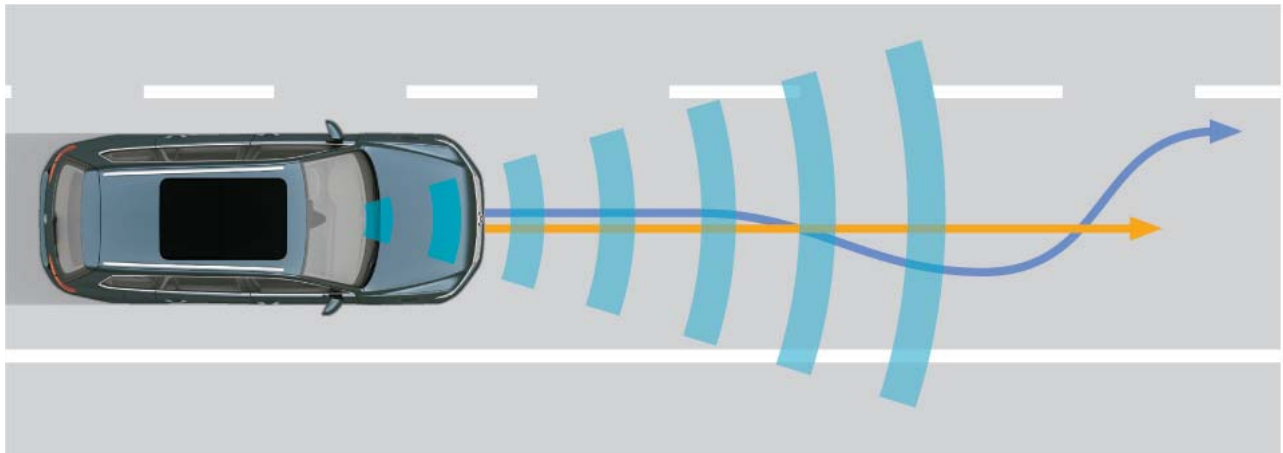


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Lane Assist Overview

There are Lane Assist systems with different capabilities. For the 2016 Passat, the Lane Assist will both warn the driver and turn the steering wheel.

The front camera at the base of the rearview mirror is constantly scanning the road ahead for lane markings. It processes these lane markings with other signals to determine if the vehicle is staying in the lane or leaving the lane.



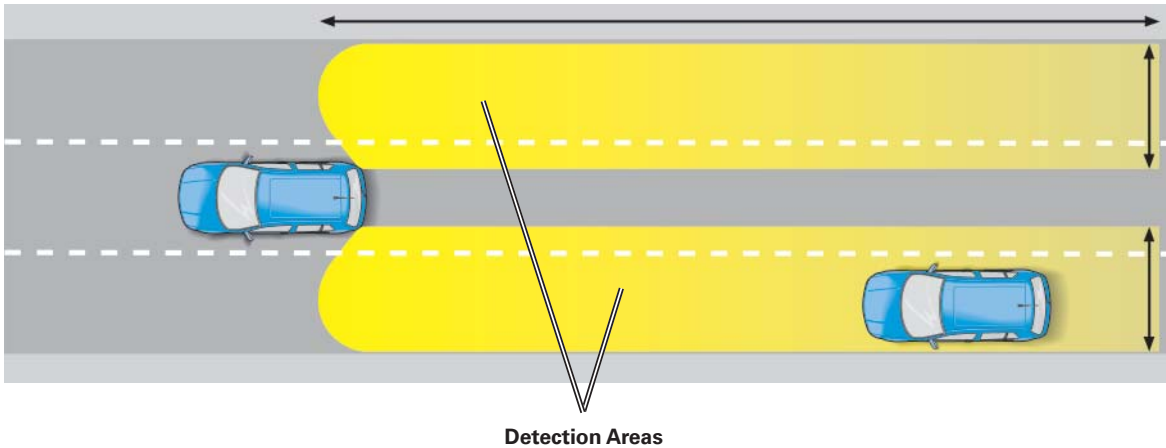
s543_021

If the vehicle seems likely to leave the lane without driver input, the system automatically counteracts the steering to keep the vehicle in the lane. This countersteering is continual and gentle. However, it can be overridden by the driver at any time with relative ease.

Running Gear

Blind Spot Monitoring

The Blind Spot Monitoring system uses radar sensors at the rear of the vehicle to continually scan for traffic next to and behind the vehicle. It warns the driver when a vehicle is in a "blind spot," helping to avoid accidents.



The system has an information stage and a warning stage. If the system detects a potential risk without a lane change being indicated (turn signal not activated), the driver is informed by the warning lamp in the corresponding exterior mirror housing.

The warning stage is activated if there is a potentially hazardous situation and the driver indicates a lane change by using the corresponding turn signal.

Information Stage



s543_079

Warning Stage

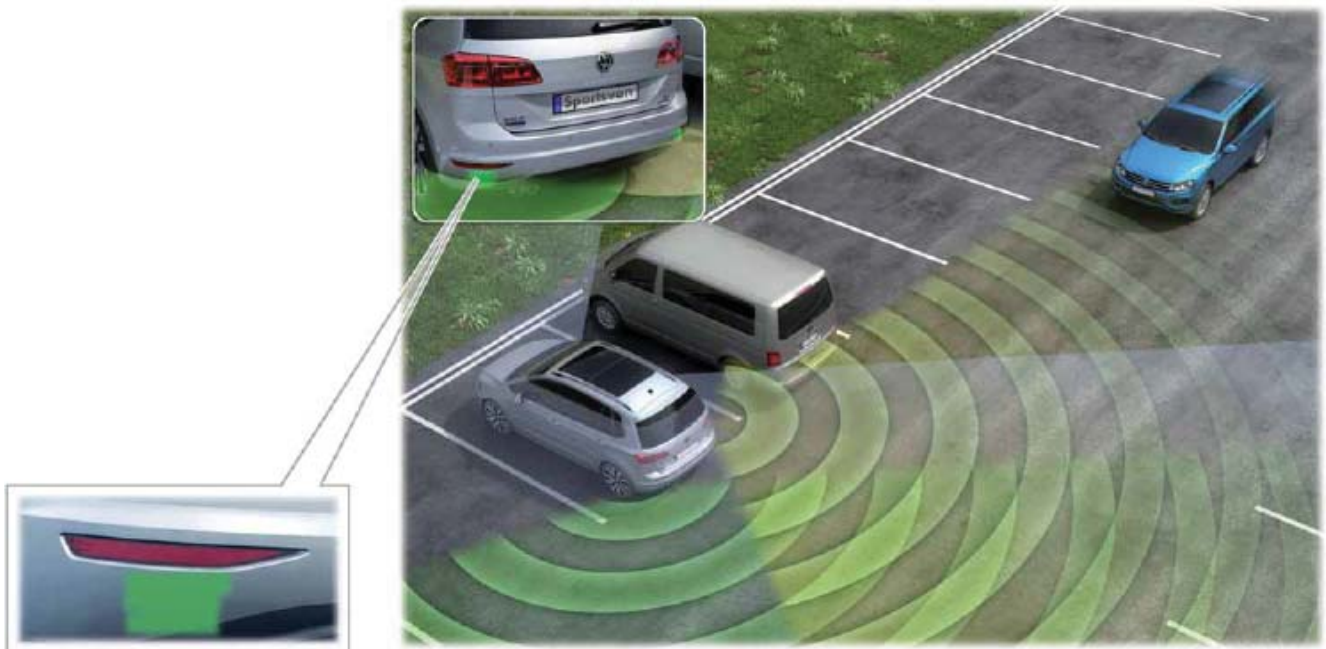


s543_081

Rear Traffic Alert Overview

The rear radar sensors used for Blind Spot Monitoring are also used for Rear Traffic Alert. Rear Traffic Alert warns of approaching vehicles when backing out of a parking spot.

The radar sensors measure the distance and the speed difference between your vehicle and an approaching object and use this to calculate the time until a possible collision.

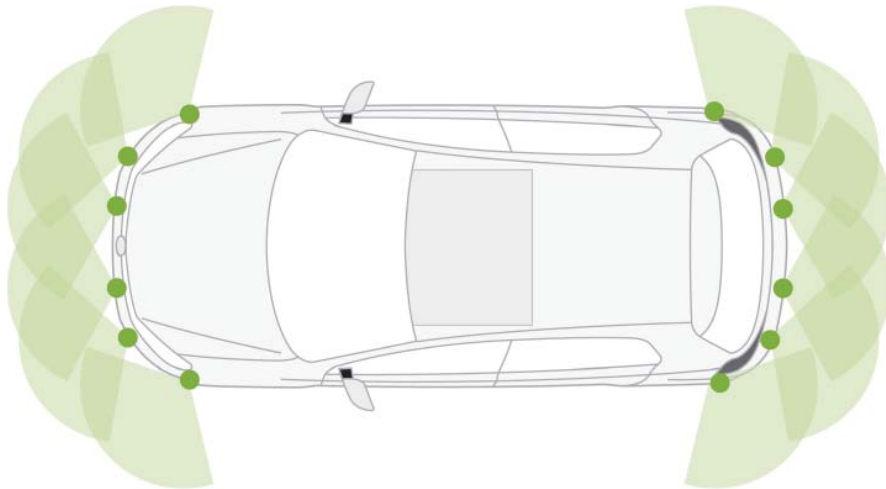


Running Gear

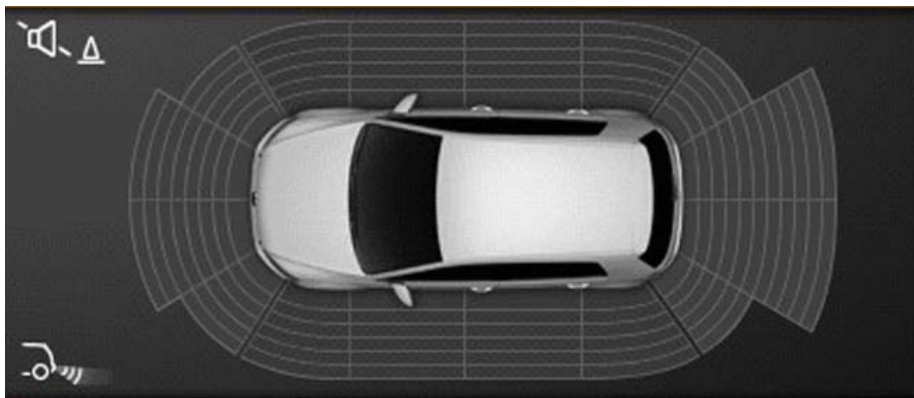
Park Distance Control 360° Overview

Park Distance Control uses ultrasonic sensors to alert the driver of objects in front of and behind the vehicle when parking or backing up. In this section we will discuss the system that has 360° visibility.

The 360° PDC monitors and displays the front, rear and sides of the vehicle.



The Infotainment display of the side areas is calculated from the PDC sensors because their scanning does not include the vehicle sides. Objects that appear on the sides are remembered from the front or rear sensors, and move along the side based on driving direction, steering angle and the ABS system (distance).



Park Assist Overview

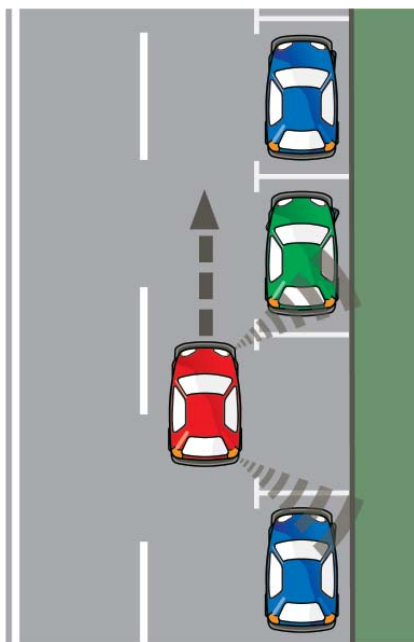
Park Assist helps the driver to park a vehicle in parallel or perpendicular parking spots. It controls the vehicle steering while the driver must control the accelerator and brake inputs.

This semi-automatic parking system allows for perpendicular parking (spaces 90° to the lane) and parallel parking on the right or left of the lane. It will not only park the vehicle, but can also be used to get the vehicle out of parking spots.

Parking Distance Control (PDC) sensors sense the vehicle and open areas. This system has six sensors, just like the PDC 360° system. These side sensors are used to detect open spaces when the system is active.

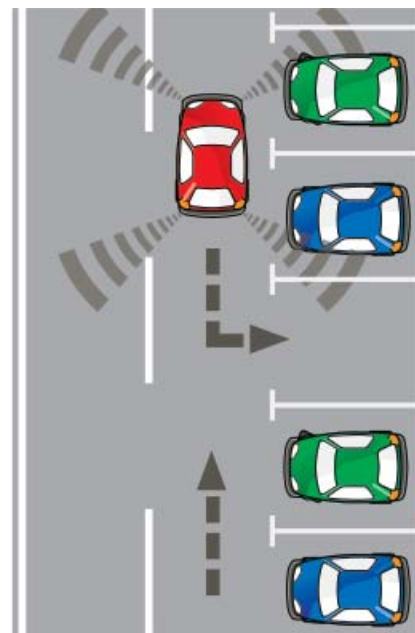
The sensor information, vehicle speed from the ABS Control Module and the steering angle is used to calculate the location of an open spot relative to the vehicle.

Parallel Parking



s516_038

Perpendicular Parking



s516_039

The Parallel Parking specifications are:

- Vehicle length plus,
- Extra space of at least 1.3 ft (0.4 m) at both the front and rear for maneuvering and safety
- Maximum speed of 25 mph (40 km/h)

The Perpendicular Parking specifications are:

- Vehicle width plus,
- Extra space of at least 1.1 ft (0.35 m) for maneuvering and safety
- Maximum speed of 25 mph (40 km/h)

Electrical Systems

Depending on the equipment level, the 2016 Passat has an alternator with either a 140 A or 180 A output. This alternator load is controlled by the Data Onboard Diagnostic Interface J533 using a LIN-Bus network.

The battery is located in the engine compartment for all models except the V6 engine. The battery for the V6 engine is located in the luggage compartment.

Electrical Boxes

Three electrical boxes/fuse holders distribute electricity in the vehicle:

- SA - Located on the front of the electrical box in the engine compartment. Contains larger, higher voltage supply cables
- SB - Located on the top of the electrical box in the engine compartment. Contains fuses and relays
- SC - Located at the bottom left of the instrument panel. Contains relays and fuses



To find out the precise location of various fuses and relays, please refer to the relevant wiring diagram in ElsaPro.

Alternator

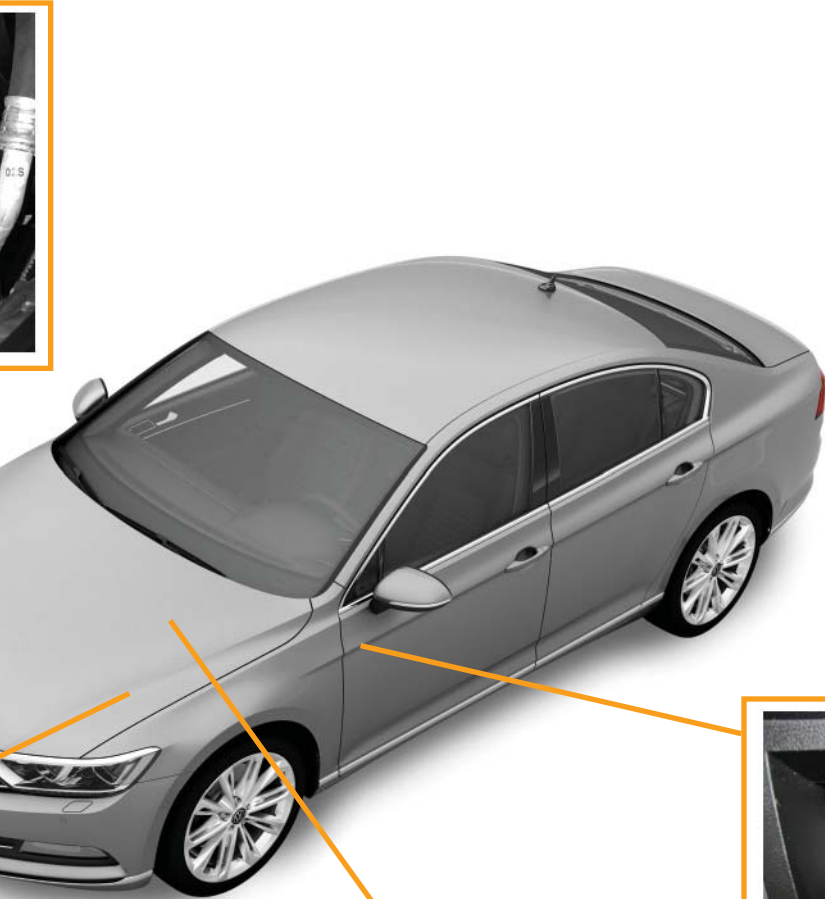


Electrical Box with SA and SB



SA Electrical Distribution Panel

Electrical Systems



s545_010



12 V Battery in Engine Compartment



Relay and Fuse Holder SC at the Bottom Left of the Instrument Panel



European Passat shown. Electrical components are in the same places.

Electrical Systems

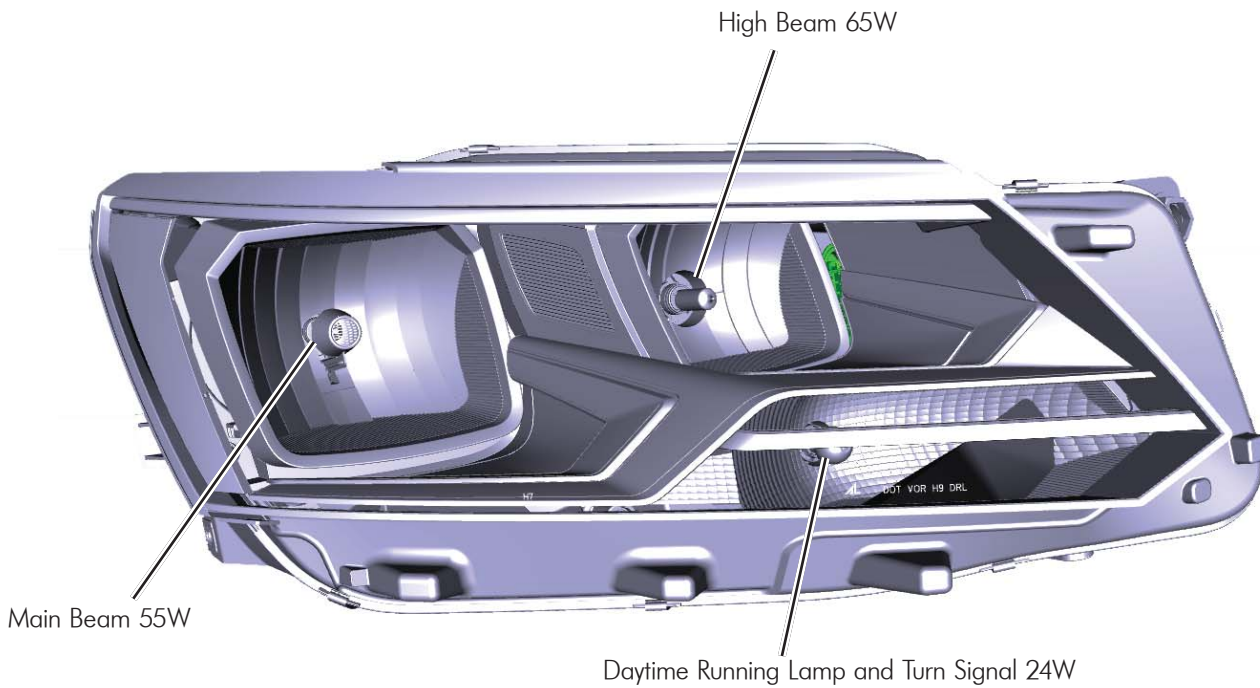
Lighting System

Front lights

Two types of headlight are available for the 2016 Passat NMS:

- Halogen headlights with conventional long-life bulbs
- LED headlights using reflector technology

Halogen headlights



Foglamps

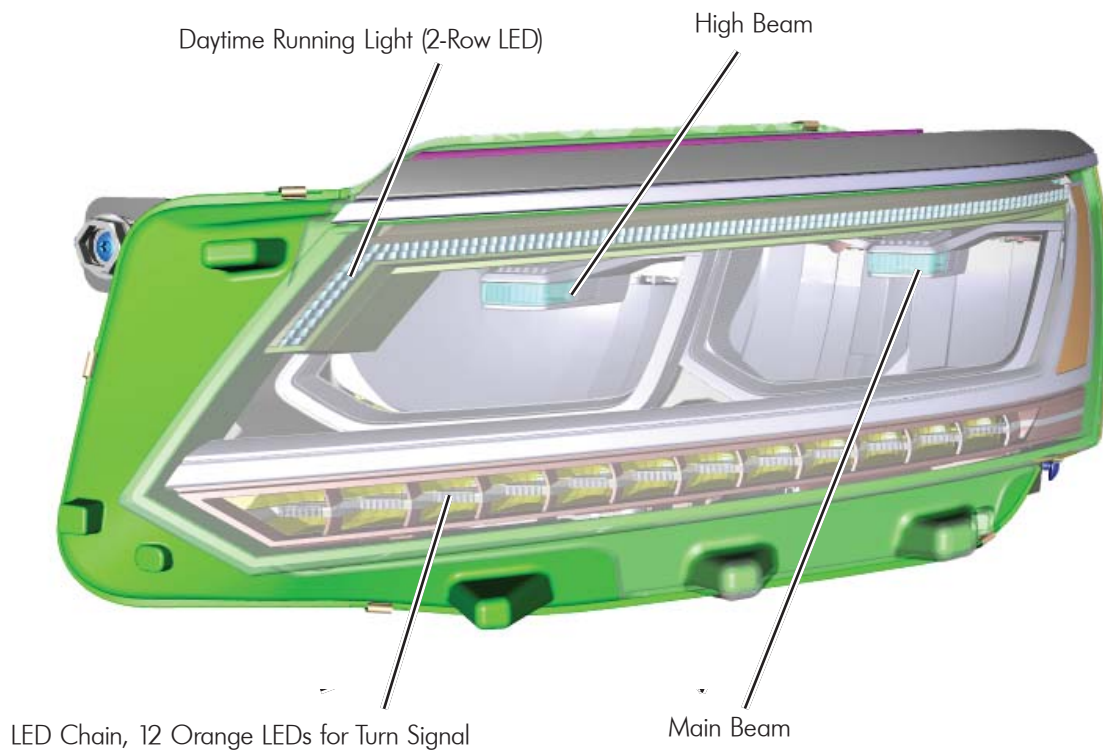
The foglamps have been redesigned and are located in the lower part of the bumper.



LED Headlights

The LED headlights have multiple LED components:

- Main beams
- High beams
- Daytime running lights
- Turn signal (orange)



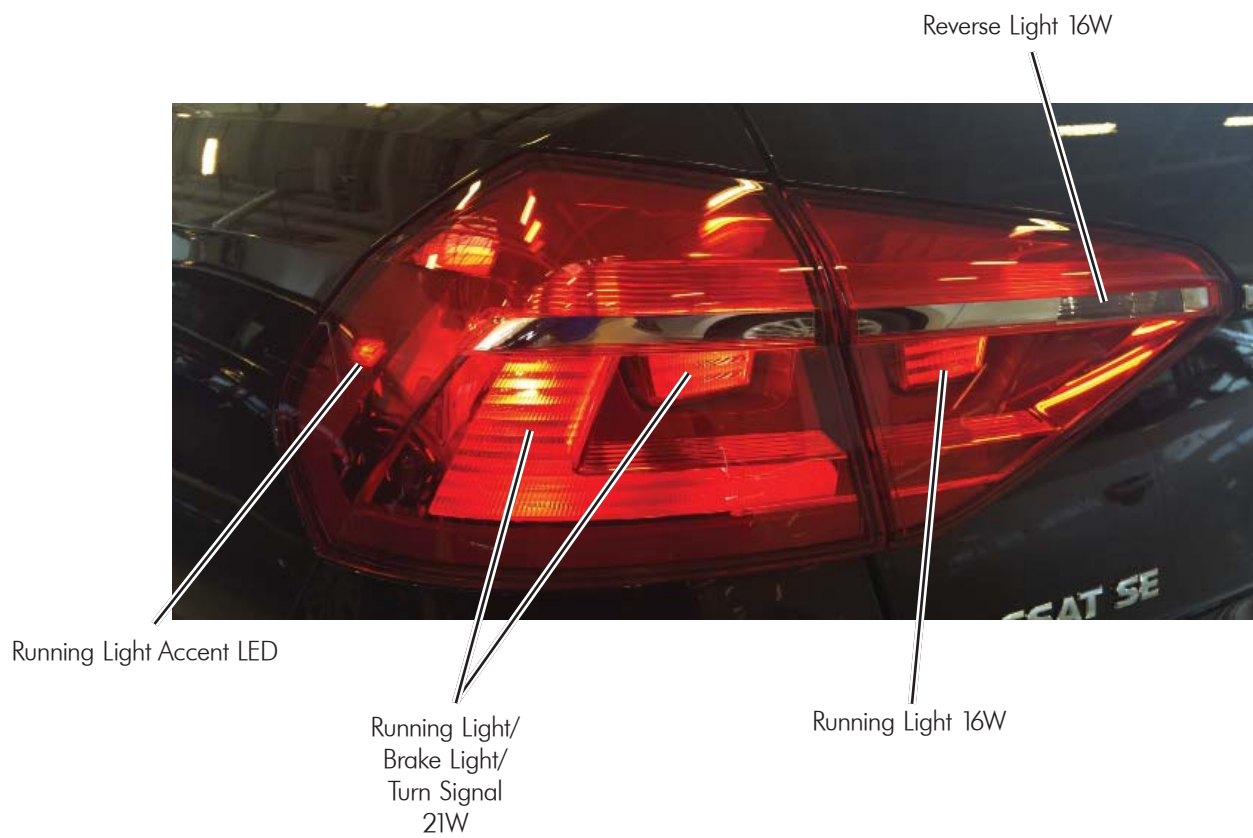
Electrical Systems

Rear Lights

Two types of rear lights headlight are available for the 2016 Passat NMS:

- Halogen rear lights with conventional long-life bulbs
- LED rear lights

Incandescent Taillamps



LED Taillamps



Running Light Accent

Brake Light

Reverse Light

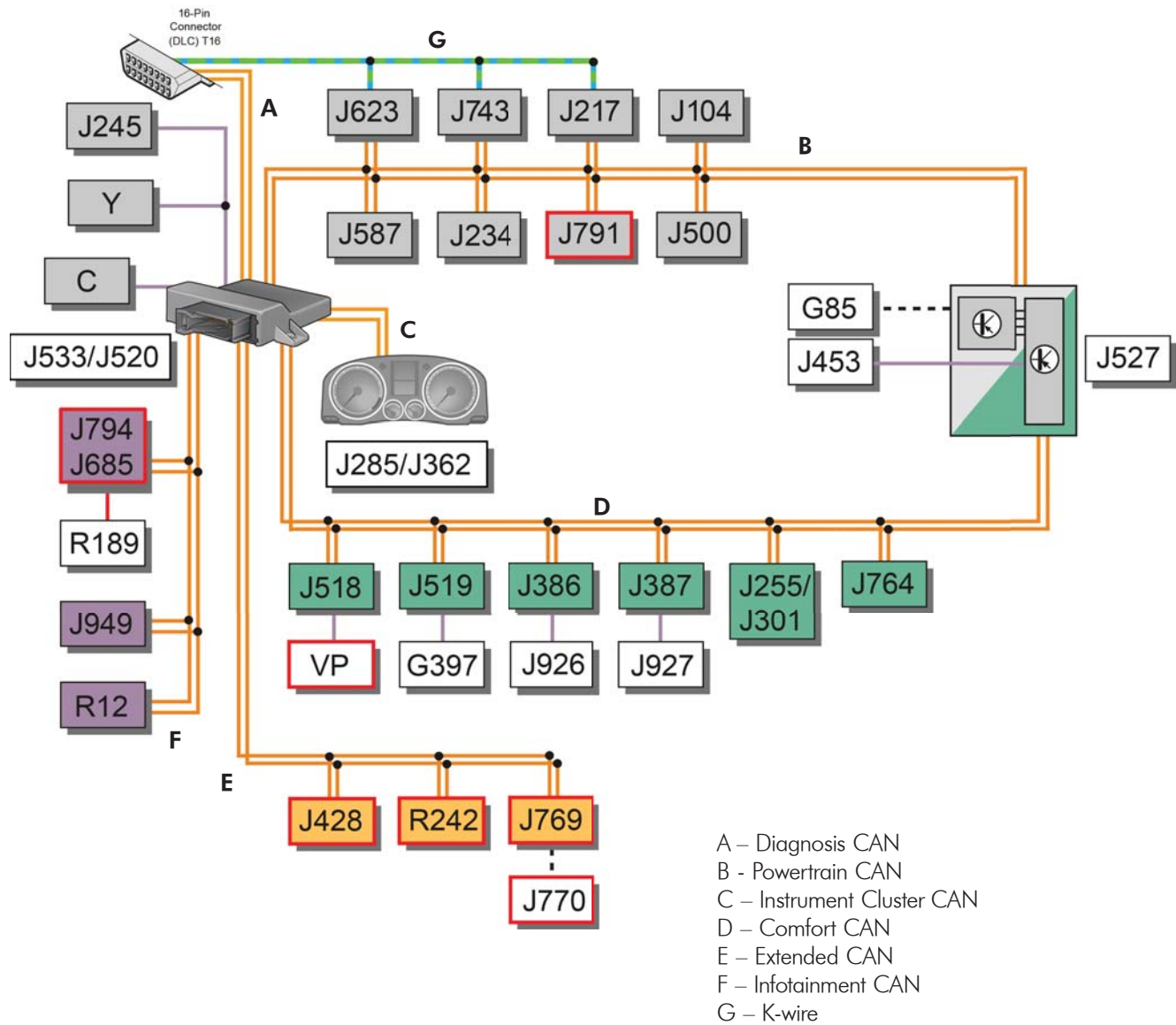
Turn Signal

Electrical Systems

Network design

The vehicle electrical system is very similar to the previous Passat NMS.

The data bus diagnostic interface J533 is still the main Gateway to exchange information between the different CAN and LIN Busses.



New control modules are outlined in red.

Key

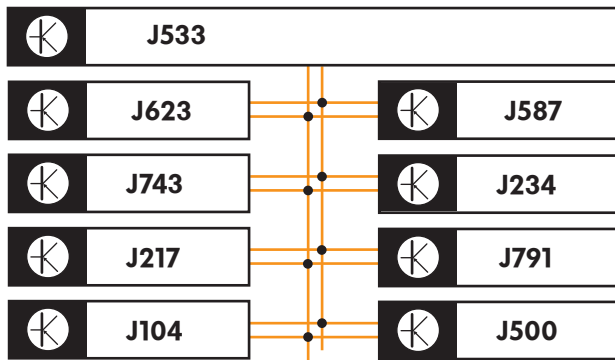
C	Alternator
G397	Rain/Light Recognition Sensor
J104	ABS Control Module
J217	Transmission Control Module
J234	Airbag Control Module
J245	Power Sunroof Control Module
J255	Climatronic Control Module
J301	A/C Control Module
J386	Driver Door Control Module
J387	Front Passenger Door Control Module
J428	Distance Regulation Control Module
J453	Multifunction Steering Wheel Control Module
J500	Power Steering Control Module
J518	Access/Start Authorization Control Module
J519	Vehicle Electrical System Control Module
J527	Steering Column Electronics Control Module
J533	Data Bus Onboard Diagnostic Interface
J587	Selector Lever Sensor System Control Module
J623	Engine Control Module
J685	Front Information Display Control Head
J743	DSG Transmission Mechatronic
J764	Electronic Steering Column Lock Control Module
J769	Lane Change Assistance Control Module
J770	Lane Change Assistance Control Module 2
J791	Parallel Parking Assistance Control Module
J794	Information Electronics Control Module
J926	Drivers Side Rear Door Control Module
J927	Passenger Side Rear Door Control Module
J949	Control Module for Emergency Call Module and Communication Unit
R12	Amplifier
R189	Rearview Camera
R242	Driver Assistance Systems Front Camera
VP	Virtual Pedal
Y	Analog Clock

Electrical Systems

The CAN-Buses

Powertrain CAN-Bus

The Powertrain CAN-Bus is relatively unchanged from the previous Passat with one exception; the Parallel Parking Assistant Control Module. This control module works with the Power Steering Control Module to turn the steering wheel when the parallel parking function is active.

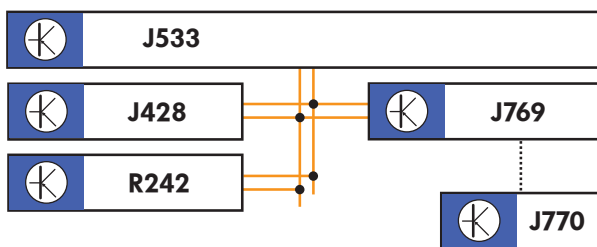


Key

- J104 ABS Control Module
- J217 Transmission Control Module
- J234 Airbag Control Module
- J500 Power Steering Control Module
- J533 Data Bus Onboard Diagnostic Interface
- J587 Selector Lever Sensor System Control Module
- J623 Engine Control Module
- J743 DSG Transmission Mechatronic
- J791 Parallel Parking Assistance Control Module

Running Gear CAN-Bus

The Passat NMS has an additional CAN-Bus to accommodate the driver's assist functions. This CAN-Bus is the Running Gear CAN-Bus. This is the most substantial change to the networking system in the 2016 Passat NMS.

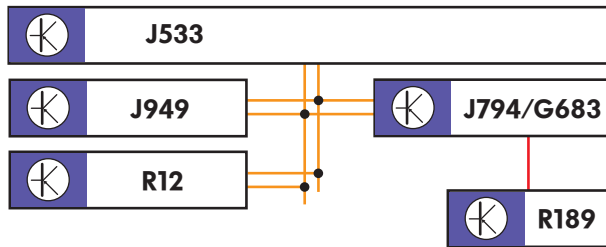


Key

- J428 Distance Regulation Control Module
- J533 Data Bus Onboard Diagnostic Interface
- J769 Lane Change Assistance Control Module
- J770 Lane Change Assistance Control Module 2
- R242 Driver Assistance Systems Front Camera

Infotainment CAN-Bus

The rearview is connected directly to the Control Module with Radio/Navigation Display Unit J506. The image processing and line overlays are performed within the Rearview Camera R189.

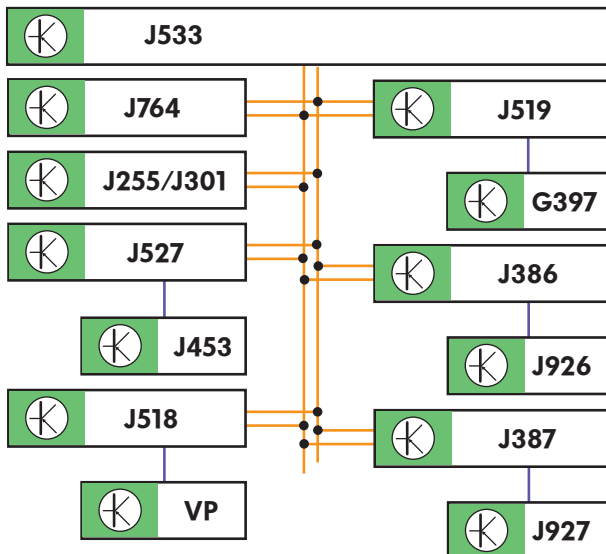


Key

- G683 Front Information Display Control Head
- J794 Information Electronics Control Module
- J533 Data Bus Inboard Diagnostic Interface
- J949 Control Module for Emergency Call Module and Communication Unit
- R Radio
- R12 Amplifier
- R189 Rearview Camera

Convenience CAN-Bus

The Convenience CAN-Bus is very similar to the previous Passat. However, the Virtual Pedal control module is added and connected directly to J518.



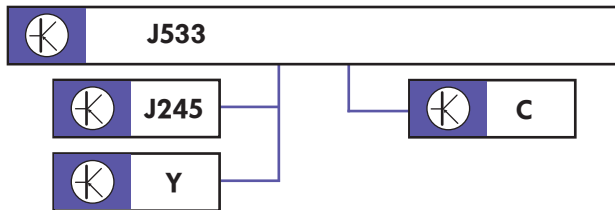
Key

- G397 Rain/Light Recognition Sensor
- J301 A/C Control Module
- J255 Climatronic Control Module
- J386 Driver Door Control Module
- J387 Front Passenger Door Control Module
- J453 Multifunction Steering Wheel Control Module
- J518 Access/Start Authorization Control Module
- J519 Vehicle Electrical System Control Module
- J527 Steering Column Electronics Control Module
- J533 Data Bus Onboard Diagnostic Interface
- J764 Electronic Steering Column Lock Control Module
- J926 Drivers Side Rear Door Control Module
- J927 Passenger Side Rear Door Control Module
- VP Virtual Pedal

Electrical Systems

Extended CAN-Bus

The Extended CAN-Bus contains the LIN-Bus control modules controlled directly from the Data Bus Onboard Diagnostic Interface J533. J533 acts as the load management and controls the alternator charging via LIN-Bus.



Key

- C Alternator
- J245 Power Sunroof Control Module
- Y Analog Clock

Keyless Access Systems

KESSEY “Keyless Access”

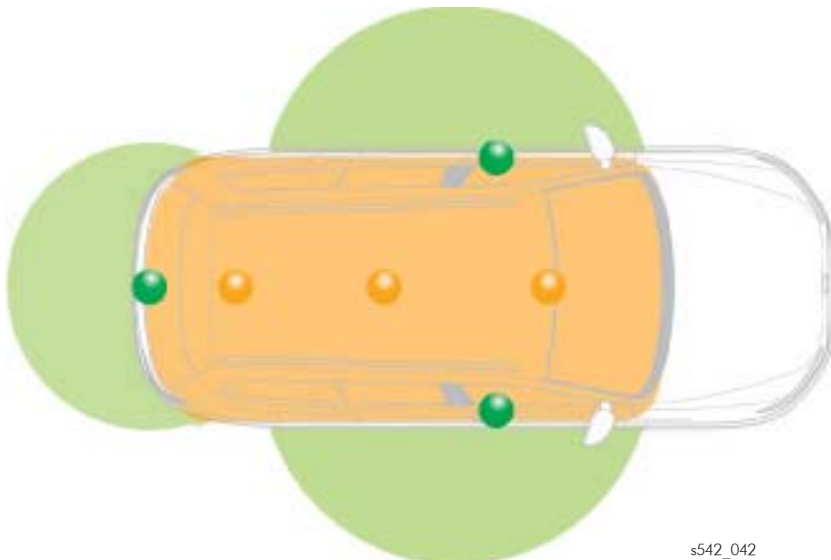
The KESSEY keyless access system on the Passat provides for:

- Vehicle access
- Vehicle starting

The KESSEY vehicle access system has the following:

- A touch sensor/antenna in each front door handle
- An access/start antenna in the console in front of the shifter
- An access/start antenna in behind the back seat
- An access/start antenna under the rear shelf
- An access/start antenna integrated into the rear bumper
- A start/stop button in the console

All of these components are connected to the Access/Start Authorization Control Module J518 except for the start/stop button, which is connected to the Electronic Steering Column Lock Control Module J764.



s542_042

Key

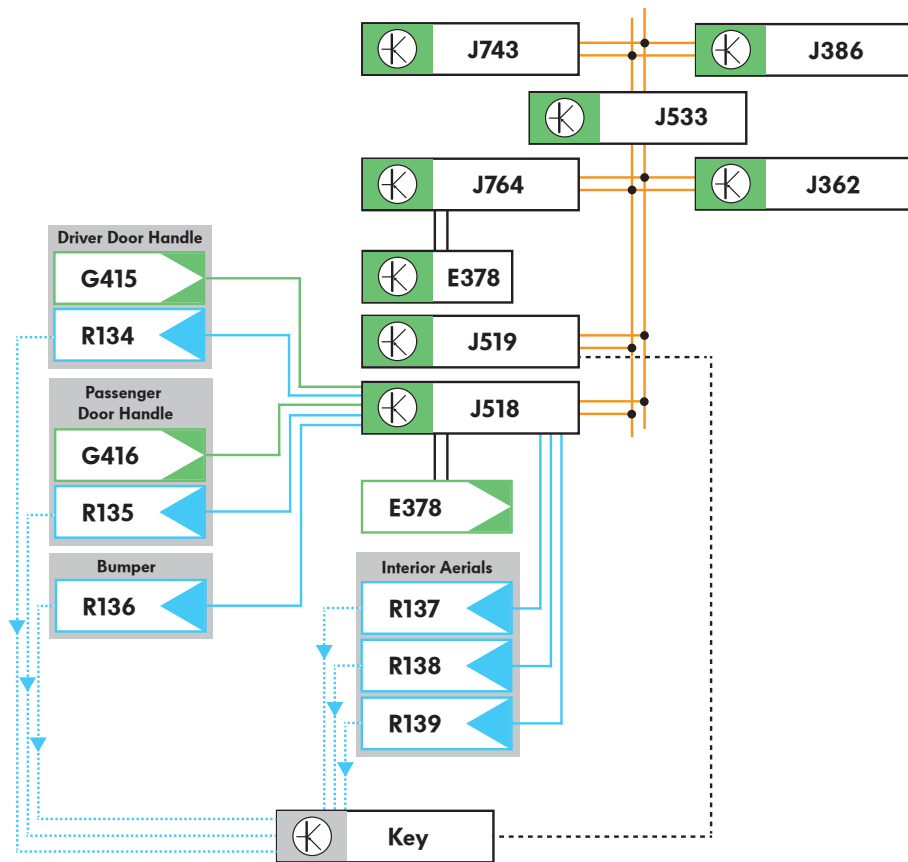
- Interior Aerial
- External Aerial



European Passat shown. Electrical components are in the same places on North American vehicles.

Electrical Systems

KESSEY Networking



Key

- | | | | |
|------|---|------|--|
| E378 | Start System button | R137 | Access/Start System Antenna in Luggage Compartment |
| G415 | Driver Exterior Door Handle Touch Sensor | R138 | Access/Start System Antenna 1 in Vehicle Interior |
| G416 | Front Passenger Exterior Door Handle Touch Sensor | R139 | Access/Start System Antenna 2 in Vehicle Interior |
| J362 | Anti-Theft Immobilizer Control Module | | |
| J518 | Access/Start Authorization Control Module | | |
| J519 | Vehicle Electrical System Control Module | | |
| J533 | Data Bus Onboard Diagnostic Interface | | |
| J623 | Engine Control Module | | |
| J743 | DSG Transmission Mechatronic | | |
| J764 | Electronic Steering Column Lock Control Module | | |
| R134 | Driver Access/Start System Antenna | | |
| R135 | Front Passenger Access/Start System Antenna | | |
| R136 | Access/Start System Antenna in Rear Bumper | | |

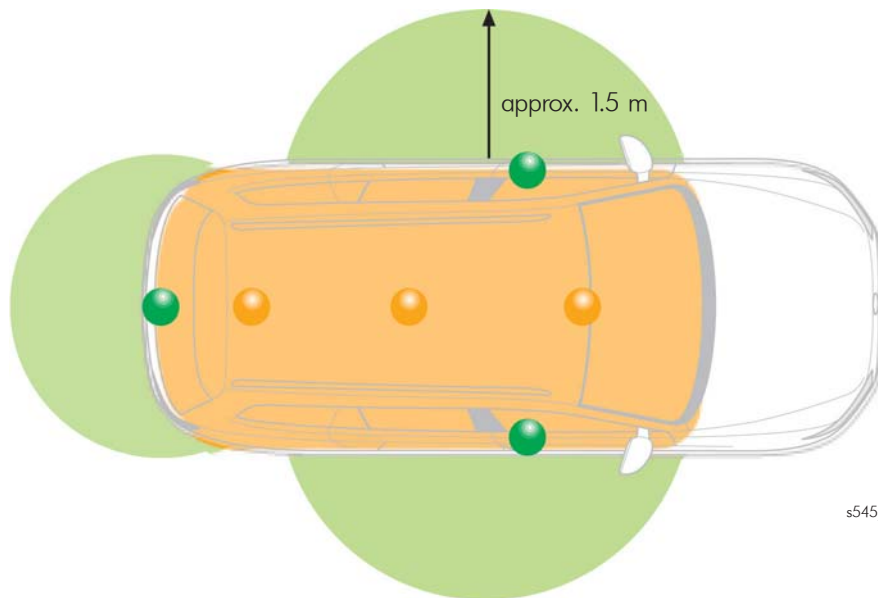
- | | |
|--|---------------------|
| | Sensor wire |
| | Actuator |
| | Low Frequency (LF) |
| | High Frequency (HF) |
| | CAN-Bus wire |

Locking/Unlocking Authorization Procedure

The detection area of the exterior antennas is approximately 5 ft (1.5 m). The Passat has exterior antennas in the front door handles and in the trunk area.

There are three interior antennas that cover the inside of the vehicle.

When an exterior antenna picks up key signal plus an input from an exterior antenna, it sends this signal to the vehicle Access/Start Control Module J518. J518 sends this signal across the CAN-Bus to the Vehicle Electrical System Control Module J519. J519 sends a signal out to the key, and the key sends a signal back to J519 for authentication. J519 validates the key and locks or unlocks the doors or trunk.



s545_060

Electrical Systems

Starting Authorization Procedure

Turning ON Terminal 15

The Start System Button E378 is pressed. The Access/Start Authorization Control Module J518 processes the signal, wakes the convenience CAN-Bus and asks the Anti-Theft Immobilizer Control Module J362 if terminal 15 can be turned ON. To determine whether there are authorized keys inside the vehicle, J518 transmits the search pattern (LF signal of 125 kHz) via the interior aerials for the keys already matched. The authorized key recognizes its signal pattern and sends its transponder data at a frequency of 433 MHz to J519. J519 forwards this transponder data to J362.

J362 verifies the transponder data. If the key is authorized, J362 sends the command via the convenience CAN-Bus for release of the electric steering column to the Electronic Steering Column Lock Control Module J764. This same message is transmitted to the Vehicle Electrical System Control Module J519 and, at the same time, also via a discrete wire so that terminal 15 is turned ON. The remaining CAN-Buses are woken by the Data-Bus Onboard Diagnostic Interface J533.

Starting the Engine

As soon as all of the data buses are awake, immobilizer communication across all buses can take place. The Anti-Theft Immobilizer Control Module J362 authorizes the ECM to start the engine if the data match is successful. If the DSG Transmission Mechatronic J743 is installed, it sends its query and authorisation request to J362.



Virtual Pedal

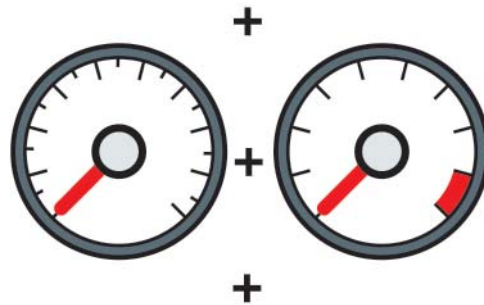
The Virtual Pedal function opens the trunk when an authorized key is in the vicinity, and a certain motion is performed. The motion is sensed using a capacitive sensor under the rear bumper, which recognizes certain movements in the rear area of the vehicle.

The capacitive sensor is connected to the Access/Start Authorization Control Module J518. The sensor has two electrodes that work on the capacitor principle. If an object is brought into the vicinity of the two electrodes, the capacity of the sensor changes and so does its current flow.

Prerequisite

The Virtual Pedal function is only active if:

- There is an authorized remote control key within 1.5 m of the rear of the vehicle
- The speed of the vehicle equals 0 km/h
- The ignition (term. 15) is OFF
- The engine is OFF



Terminal 15 off



Virtual Pedal Open

s545_138

Electrical Systems

Function

The user stands in the center of the rear of the vehicle and sweeps a leg quickly to the bumper and back. The shin bone enters the area of the capacitive sensor.

The sensor and the rear lid trunk release recognize movement and send a signal to the Access/Start Authorization Control Module J518. Using the Access/Start System Antenna in Rear Bumper R136 (LF signal with 125 kHz), J518 checks whether there is at least one remote control key in the rear area. If an authorized key is detected, the 3rd brake light lights up (in the upper area of the rear window) and the rear lid latch releases. This will take place even if the vehicle is locked.



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Modular Infotainment Matrix (MIB) II

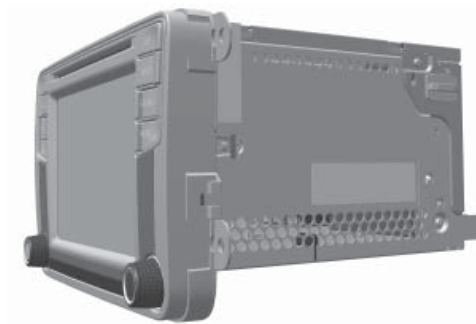
The 2016 Passat NMS has three different MIB II Infotainment Systems available: These are:

- Composition Color
- Composition Media
- Discover Media

Some MIB II overview information is presented in the following pages. More details about these systems can be found in the SSP 890153, the Volkswagen MIB II Infotainment System.

MIB II Configuration

The MIB configuration for the Passat is slightly different than MQB vehicles. All versions are a single unit, located in the dash. This unit has all CD/DVD and SD card slots located in the infotainment face.



Infotainment Systems

Composition Color



Technical Features

- 5-inch color resistive touchscreen
- Six side keys for functions
- Single-disc, MP3 compatible CD player
- Eight speakers (4 X 20 Watt output)
- AUX-IN and SD card slot in radio face
- One USB input that operates like an AUX-IN input, but provides charging capability
- Bluetooth with audio capability (HFP, A2DP, PBAP, AVRCP)
- Static display of photo files using SD card (JPEG and PNG)
- Double tuner with phase diversity for radio signal reception
- Not compatible with Car-Net features
- No hard drive storage for music or image files

Composition Media



Technical Features

All functions of the Composition Color plus:

- 6.5 or 6.33-inch capacitive touchscreen with proximity sensors, depending on model
- Swipe and zoom gesture capability
- Golf models have (1) SD and (1) CD input in glove box. All other versions have (1) SD and (1) CD in the face of the MIB unit
- Golf models will have the CAR hard key on the face of the MIB unit. Other models will access CAR menus using the MFI
- 1 smartphone-compatible USB port.
 - This port is backwards compatible and will charge and import media from iPods, MP3 devices, etc. using the device's USB cable. It operates like the MDI in previous vehicles
 - iPods and other media devices are not integrated into App-Connect and can be accessed through the Media hardkey
 - More USB ports may be available depending on model and trim
- Eight side keys for functions. Hardkeys may vary between MQB and non-MQB units
- Compatible with Car-Net App-Connect, Security and Service features. MQB models offer the ThinkBlue Trainer for eco-tips

Infotainment Systems

Discover Media



Technical Features

All functions of the Composition Media plus:

- Navigation module with 2D/3D map display
- Navigation can be entered in a single string of text instead of needing to enter state, city and street first
- Three routes can be calculated:
 - Shortest time
 - Shortest distance
 - Economical
- Speed limit display
- Dynamic route guidance (four years no charge, using Sirius Traffic)
- Sirius Travel Link
- Preset Point of Interests (POIs)
- Completely Car-Net compatible:
 - App-Connect
 - Guide and Inform
 - Security and Service
- Golf models have two SD card inputs and a CD input in glove box. All other versions have SD and CD slots in the face of the MIB unit
 - Either SD input can be used for navigation data

SWaP (SoftWare as a Product)

Starting in MY 2015, some Volkswagen vehicles will begin coming with a feature called SWaP. This feature allows certain vehicle functions to be unlocked using a purchased code, sometimes additional parts and a scan tool.

The SWaP functions for 2015 are based around the Driver Assistance Systems and the MIB II Infotainment Systems. At the time of publication the following SWaP capabilities were possible:

- MIB II
 - Voice Recognition
 - Navigation
- Driver Assistance Systems
 - Enabling of Adaptive Cruise Control, requires Front Assist already installed and additional parts such as steering wheel buttons

The approximate cost for the SWaP enabling is about the same as if the customer had ordered the vehicle with that function.

Note that additional SWaP capabilities will be added in the future.

SWaP Procedure

The SWaP Procedure is relatively straightforward.

1. Determine if the vehicle is capable of activating the function
2. If the vehicle is capable, a SWaP code is purchased from the parts department for the desired function. If necessary, additional parts are ordered for installation
3. Any additional parts are installed on the vehicle
4. A special program is run using Software Version Management in ODIS Service
5. The code is entered
6. The VIN and code are sent to the FAZIT server, the License server and the Carport servers in Germany for validation
7. The function is activated in the vehicle
8. The VWAG servers update the vehicle profile with the new function and the PR number is added to the vehicle build

Knowledge Assessment

An on-line Knowledge Assessment (exam) is available for this Self-Study Program.

The Knowledge Assessment may or may not be required for Certification.

You can find this Knowledge Assessment at:

www.vwwebservice.com

For Assistance, please call:

Volkswagen Academy

Certification Program Headquarters

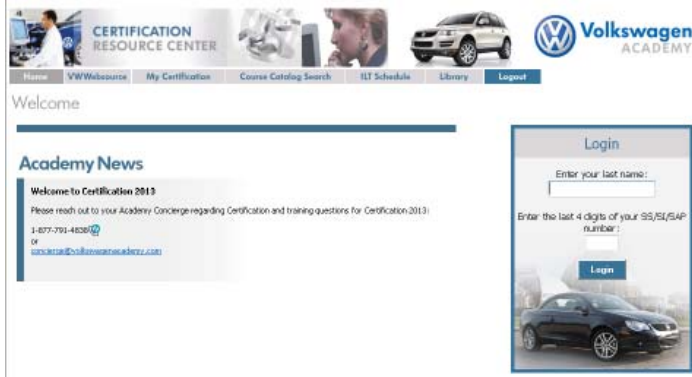
1-877-791-4838

(8:00 a.m. to 8:00 p.m. EST)

Or, E-mail:

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