Self Study Program 890183

The 2019 Jetta Introduction

Design and Function - Tablet Format Version 2.0





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The New Jetta - Fun to be in!

The Jetta has been a great sales success in the North American market, and the 2019 Jetta has three outstanding values:

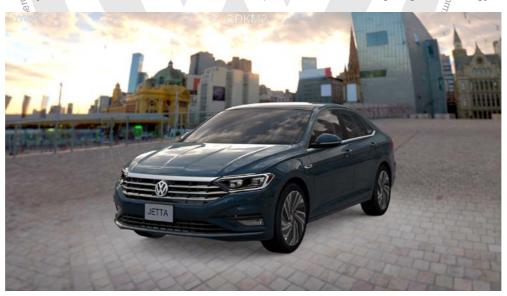
Fresh interior and exterior design: The front view is enhanced by the wide chrome grill and LED headlights. On the inside, the ambient lighting on the front doors and instrument cluster puts the spotlight on the new Jetta's personality. This helps the Jetta to project a solid, secure image.

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Fun to be in: Exclusive features include a 10.25 inch instrument cluster, state of the art radios with up to 8-inch screens and more connectivity with up to two USB ports.

High level of safety and comfort. State-of-the-art driver assistance systems including Adaptive Cruise Control and Blind Spot Monitoring, Lane Assist and Light Assist. The new Jetta has improved safety and driving comfort.

These values make the new Jetta a family car that combines the traditional European ride with cutting-edge technology.



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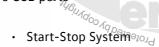


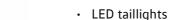
The instrument cluster's multi-function indicator displays and infotainment displays shown in this Self-Study Program are just examples and do not necessarily correspond to the features and languages for all countries.

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Outstanding Features

- · Panoramic sliding sunroof
- Information screen display up to 8"
- Ambient light color selection
- 5.5 liter (1.4 gallon) capacity center console
- · LED headlights
 - Driving mode selection
 - · Up to two USB ports





- · Keyless Access
- Heated and ventilated seats
- Driver Assistant





Features included depend on trim level and options.

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Distinctive Features



Heated and Ventilated Seats

Ambient Light Color Selection

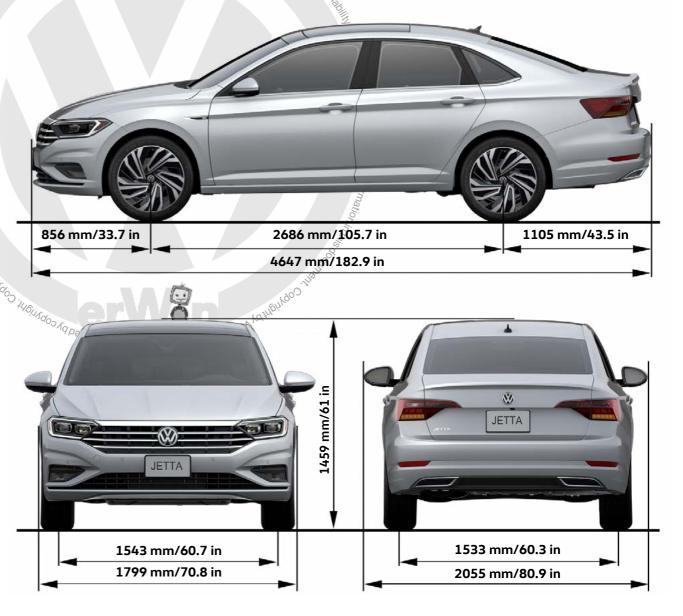
Panoramic Sunroof

The Technical Data

This Jetta data refers to a vehicle with a 1.41 TSI engine, a 6-speed manual transmission and 225/55 R17 tires and an empty vehicle.

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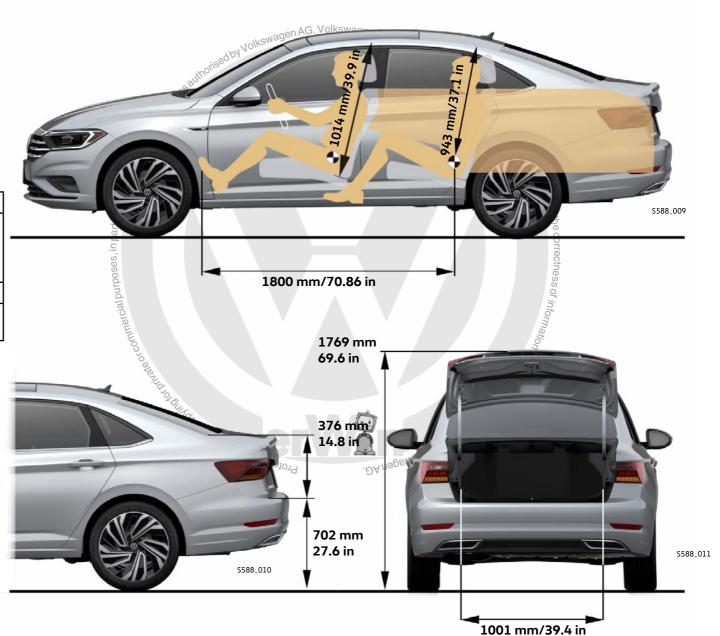
Turning Diameter	11.2 m	36.7 tt
Maximum Vehicle Weight	1830 kg	4034 lb
Wheelbase	2686 mm	105.7 in
Curb Weight	1309-1373 kg	2887-3027 lb
Maximum roof load	75 kg	165.3 lb



Interior Dimensions and Volumes

Interior Dimensions and Volumes

Trunk Volume	510 Liters	135 Gallons
Trunk Volume with Rear Seat Backrest Folded Forward	986 Liters	34.8 Cubic ft
Fuel Tank Capacity	50 Liters	13.2 Gallons
Back Seat Knee Space	70 mm	2.75 in

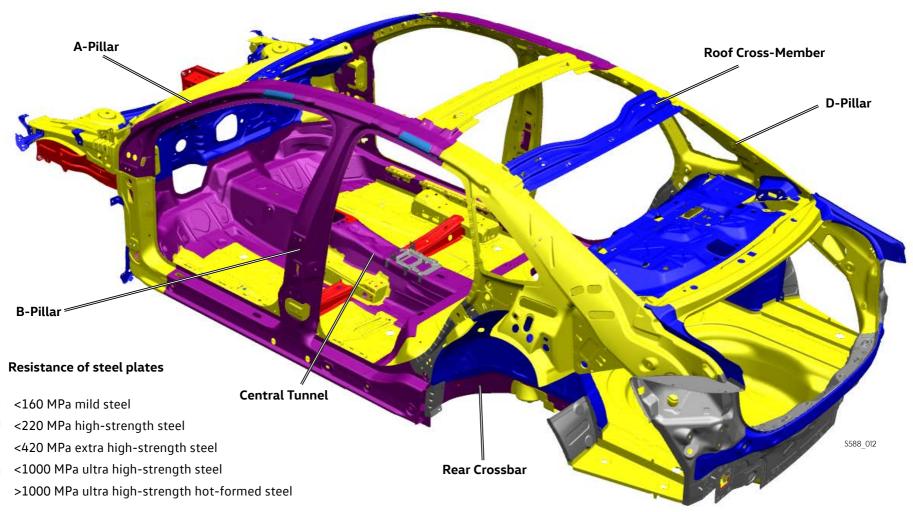


Body

Body Structure

The body is based on the Modular Transverse Matrix (MQB) platform.

As in other vehicles based on this platform, it is built with varying strength steels to provide the highest passenger safety possible.



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Instrument Panel and Center Console

The new Jetta's instrument panel is a complete innovative design. It has a fantastic view when driving, is elegant and of high quality. In addition, the infotainment system is more prominent than ever before. The center of the instrument panel is slightly tilted towards the driver, as is the center console.

The new front center armrest with storage compartment ensures driver comfort.

New ambient lighting can change intensity and color depending on the desires of the occupants.



Body

Driver Side Front Seat

There are three different driver seat types on the new Jetta:

- Manual adjustment
- · Electric adjustment
- · Electric adjustment with memory

In addition, the electric seats have an available heating element and seat ventilation.





Body

Passenger Side Front Seat

There are three passenger seat types. All have an occupant detection sensor:

- · Without heating element
- · With heating element
- · With heating element and seat ventilation





Panoramic Sunroof with Wind Deflector

The panoramic sunroof with wind deflector is mounted to the roof. It has pinch protection and a manual sunshade.



The glass cover is mounted using an R2R (Rail2Rail) system. This design eliminates roof side moldings.

Occupant Protection

Passenger Protection

Features

- · Single-stage driver airbag
- · Dual-stage passenger airbag
- Front side airbags
- · Left and right curtain airbags
- Audible and visual alert to remind occupants to use driver side safety belt
- Passenger seat occupant detection sensor to change passenger airbag to active mode

- Safety belts with force limiters
- Safety belt force limiters in the front and outer rear seats

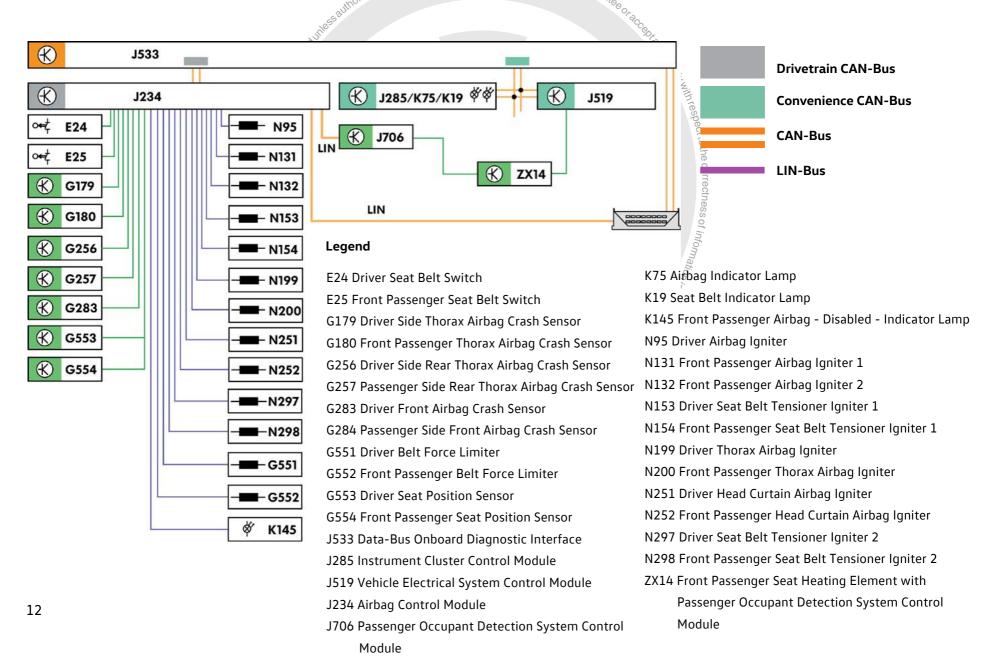
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- Top Tether system
- Lower Anchors and Tethers for CHildren (LATCH) system



Occupant Protection

Passenger Protection Electrical Diagram



Engines

Combinations of Engines and Transmissions

Engines	1.4 I TSI DJXA Engine	1.4 I TSI DGXA Engine	
		en G. Volksv	ragen AG does not guarantee or accept and lability with respect
Transmissions	Ŏ		Waith
6 speed Manual Transmission MQ250 02S			(espec
8 speed Automatic Transmission AQ300 09S	and V		S. WORMANON THE STATE OF THE ST

Engines

1.4L TSI 147 hp Engine Wagen AG. Volkswagen AG does

This engine is based on the EA211 generation engine and has different engine codes to meet different emission regulations.

Technical Specifications

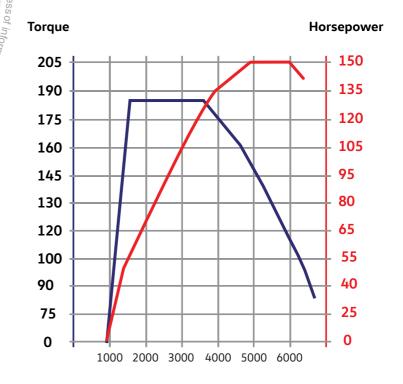
are or commercial purposes, in part or in whole, is holder,

- Coolant pump integrated into the thermostat housing of under the contract of the
- Turbocharger with electric boost pressure actuator
- · Intake and exhaust camshaft adjustment
- Oil pump with external gear to allow two-stage oil pressure regulation
- Two element pan (top element made of aluminum, bottom element made of sheet metal)

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Engines	Jay Volkswagen AG. Volkswagen AG does not out			
dunlessautho	DJXA DGXA Inline 4-cylinder engine 1,395 cm3 74.5 mm 80 mm	C _C _{Dr}		
Engine Code	DJXA DGXA	TA Hability		
Architecture	Inline 4-cylinder engine	with respe		
Cylinder Capacity	1,395 cm3	ect to the		
Cylinder Diameter	74.5 mm	Torc rrectn	que and Pov	ver Diagram
Strokend re	80 mm	rrectness of information in this document	Torque	
Valves per Cylinder	4	ormation	205	-
Compression Ratio	10.0:1	in this clock	190	
Maximum Power	147 hp at 5000-6000 rpm	BUIL	175 160	
Maximum Torque	147 np at 3000-8000 rpm		145	+
Engine Control Module	Bosch Motronic ME 17		130	
Fuel	87 octane unleaded	-	120	
Exhaust Gas Treatment	3-way catalytic converter, lambda sensor upstream and another downstream of the catalytic converter	-	90 75	
	Catalytic Converter	_	0	

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Transmission

8 speed 09S Automatic Transmission

The new Jetta uses a new 8 speed 09S automatic transmission.

Manufacturer	AISIN AW Co. LTD. Japan
Production Code	AQ300
Service Code	095

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The AISIN 8 speed 09S automatic transmission is a variant of the 8 speed 09P automatic transmission currently used in the Tiguan LWB and Atlas.

The 8 forward speeds are created using a modified planetary gear system.

The O9S automatic transmission is designed with Start-Stop capability using a new solenoid valve that keeps the clutch engaged shifting to first gear while stopping or starting, ensuring a smooth take off or slow down Protected by copyrights to things on commercial purpos transition.



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Outstanding Features

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- The B1 band brake was replaced with a multi-disc brake
- The F125 Multi-Function Transmission Range Switch was replaced by the J587 Selector Lever Sensor System Control Module
- · The manual valve has been removed
- Hydraulic pump now chain driven
- New ATF transmission fluid with high friction properties
- Several pressure switches were added to monitor working pressure

Transmission

Application of Clutch and Brakes in the 8 speed 09S Transmission

The following is the sample chart showing how clutch and brakes are applied, depending on the operational gear.

Gear	Components						
	К1	К2	КЗ	К4	B1	B2	F
I	0					0	0/6, /6/ ₀
II	0				0		or commercial purposes, in part or in whole Son
III	0		0				i, in pari
IV	0			0			urposes
V	0	0					ercial P
VI		0		0			or comi
VII		0	0				х
VIII		0			0		
Reverse			0		х	0	

O - applied/operational/on

X - not applied/off

Where:

- The letter "K" designates the different plates in the multi-plate clutch (from 1 to 4)
- The term B1 designates the multi-disc brakes
- · The term B2 designates the multi-disc brakes
- The letter F designates the free wheel mechanism

Engine braking happens when selecting the first gear in Tiptronig mode to control specific driving conditions such as downhill driving.

The B2 disc in the multi-disc brake only closes in first gear when the Tiptronic mode is activated. This mode is also known as first manual gear.

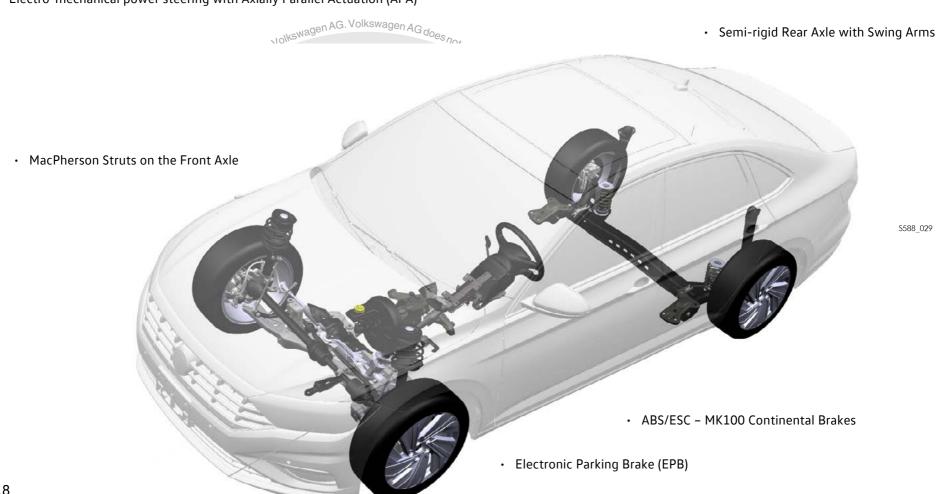
Running Gear

Running Gear Overview

The Jetta chassis may be equipped with a standard chassis or sport chassis.

Running Gear:

• Electro-mechanical power steering with Axially Parallel Actuation (APA)





Lane Assist

Running Gear

Driver Assistance Systems Descriptions

Multi-Function Camera (MFC) for the following systems:

- **Light Assist (FLA)** Recognizes oncoming traffic and vehicles that are in front of the camera. The system automatically switches between low beam and high beam at speeds above 38 mph (60 km/h).
- Lane Assist Lane markers are recognized by the camera; if the car moves over to a lane without having activated the turn signal, Lane Assist can help steer you to keep you in the current lane.

Medium Range Radar (MRR) for the following functions:

- Forward Collision Warning (FCW) Developed especially for city driving, this system can help reduce or prevent a front collision when traveling at speeds of up to 18 mph (30 km/h).
- Adaptive Cruise Control (ACC) ACC works like conventional cruise control but has an additional functionality based on radar: If the system recognizes vehicle movement ahead, it automatically adjusts the speed to match. When it no longer recognizes the car, it will reestablish the speed set by the driver. If necessary, the system can even bring the Jetta to a complete stop.

Front Assist:

• Front Assist monitors the traffic situation in front of your car, warning you when you get too close and applies the brakes to help avoid collision. It uses radar sensors to measure the distance and relative speed of other vehicles ahead and provides you with an early warning system. If it detects a potential collision, Front Assist alerts you visually and audibly, while also preparing the brakes for emergency braking.

Blind Spot Monitoring - The radar sensors mounted in the rear of the vehicle can detect vehicles in the blind spot up to about 80 feet away and alert the driver with indicators on the outside mirrors. This system can assist to prevent accidents, especially when changing lanes.

Rear Traffic Alert - When backing out of a parking spot, the system can spot a car coming down the street and alert the driver of the risk. If the driver does not react, the vehicle will automatically apply the vehicle's brakes.

Running Gear

Drive Mode Selection

Push button drive mode selection

Option to change the car's operation. With the push of a button, depending on the driver's needs:

- · Sport
- Comfort
- Eco
- Custom

All modes have the option to save ambient light settings if Automatic is selected.

New ECO button (in some trim levels)

By activating the ECO function, the vehicle electronically adjusts certain features like the engine rpm, torque, air conditioning, gear changing, and ambient lighting.

Other relevant safety systems:

ABS with ESP / Traction Control / Automatic Post Collison Braking



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Front Radar Sensor

In the new Jetta, the front radar sensor for the Front Assist and ACC is mounted behind the Volkswagen emblem. This emblem is specially designed so radar signals can pass directly through it.

The new Jetta has a new generation of fadar sensor. The sensor's calculation capacity is much greater to provide better detection, evaluation and differentiation between objects.

Sensor technical specifications:

Mid-range radar sensor

· Manufacturer: Bosch

• Frequency: 77GHz

· Range: 525 ft (160 m)

The Control Module for Adaptive Cruise Control, J428, is located behind the Volkswagen emblem



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Running Gear

Static Calibration

There is a procedure for dynamic calibration of the sensors using the scan tool. However, after some repairs, it is necessary to perform static calibration. For static calibration, the VAS 6430/10 adjustment fixture must be aligned correctly to the front of the vehicle.

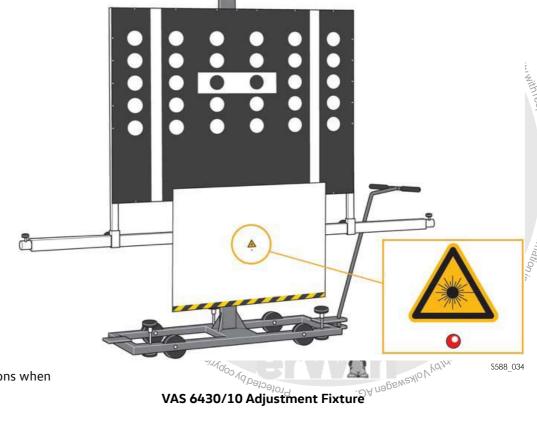
During calibration, the front radar sensor self-adapts based on the adjustment fixture's orientation to the vehicle's axle. The calibration procedure is activated in the Scan Tool test program, and is performed automatically. A mechanical adjustment with adjustment screws is no longer possible, nor necessary.

The Control Module for Adaptive Cruise Control J428 needs calibration when:

- The J428 control module has been replaced
- The locking plate has been replaced
- · The rear axle toe has been adjusted
- The locking plate has been placed in the service position
- · There is a customer claim
- · There is a record in the event memory



Always follow the ElsaPro and ODIS Service instructions when performing vehicle procedures.



Heating and Air Conditioning

Climate Control System

The new Jetta uses the (MQB) climate control systems. The basic system is manual climate control. A Climatronic dual-zone system is available as an option.

Electric Manual Regulation Climate Control

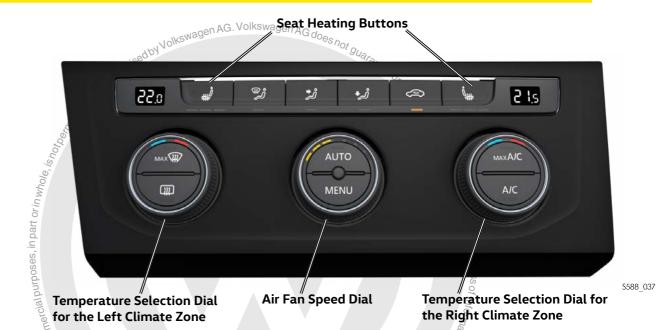
This is the same as the version used in the 2017 Tiguan. To reduce impurities present in the outside air from coming into the vehicle, it uses an allergen filter.



Heating and Air Conditioning

Climatronic Dual-zone Automatic Climate Control

The Climatronic dual-zone climate control allows different temperatures for the driver side and the passenger side. Temperature regulation is completely automatic.



Just as in the 2017 Tiguan, Climatronic has the MENU function which can be used to control climate settings and activate functions.

S588 038

Heating and Air Conditioning

Seat Heating and Ventilation Good

Seat heating and ventilation is operated with buttons located on the Climatronic control module. Both heating and ventilation have three intensity levels and may also be operated from the temperature control command or the Infotainment screen.

Legend

E77 Left Rear Heated Seat Switch

E78 Right Rear Heated Seat Switch

J519 Vehicle Electrical System Control Module

J533 Data-Bus Onboard Diagnostic Interface

J786 Rear Seat Heating Control Module

V512 Left Front Seat Backrest Fan 1

V514 Left Front Seat Cushion Fan 1

V516 Right Front Seat Backrest Fan 1

V518 Right Front Seat Cushion Fan 1

Z7 Driver Backrest Heating Element

Z9 Front Passenger Backrest Heating Element

ZX10 Left Rear Seat Heater

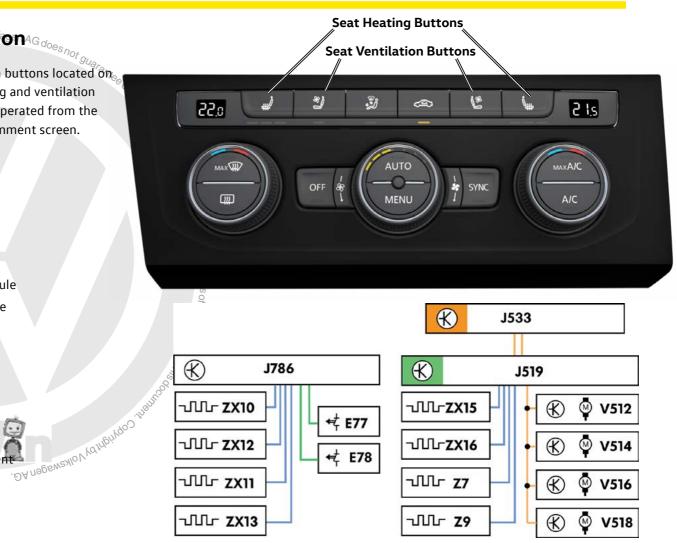
ZX11 Left Front Seat Heater

ZX12 Right Rear Seat Heater

ZX13 Right Front Seat Heater

ZX15 Driver Side Heated Seat

ZX16 Front Passenger Side Heated Seat



LIN-Bus

Convenience CAN-Bus



If equipped with seat heater and passenger side occupant detection sensor, Z16 is replaced by the Z14 heating elements with occupant detection sensors. See the Wiring Diagram for more information.

Electric System and Infotainment System Overview

There may be differences depending on trim levels.



New Generation MIB

Onboard Network Locations

Depending on vehicle features included, various alternators and batteries may be used. All Jetta models will have an Enhanced Flooded Battery (EFB+). This battery requires either the VAS 6161 or the GRX 3000 for testing and/or charging, with the EFB battery type selected.

Power Supply

- · 12V Battery in the engine compartment
- Three fuse panels distribute the electricity to the vehicle:
 - A SA multifuse fuse panel in the engine compartment fuse box
 - An SB relay panel and fuse panel in the fuse box
 - An SC relay panel and fuse panel under the left side of the instrument cluster behind the storage compartment

Alternator





12V Battery in the Engine Compartment





Electrical System od North State AG do North Sta







Ambient Lighting with Dynamic Light Change

A warm atmosphere is created when the car turns on, creating a sensory experience, depending on the driving profile selected. The driving profile button, together with the ambient lighting change, instantaneously lets you feel the Volkswagen experience of "Fun2Drive" in Sports moder "Innovative Comfort" in Comfort Mode, or "Environmentally Friendly" in Eco Mode.



Ambient Lighting Electric Diagram

Terminal 31

Left Door

Light Module

Vehicle Electrical Systems
Control Module J519

LIN-Bus

W86

L243

L244

L245

W87

Instrument Panel

Light Modules (3)

Modes of operation: "Sport" (Bright Red),
"Comfort" (Candle light), "Eco" (Bright blue) and
Individual.

Up to 10 different colors can be selected in the Individual mode, including Red, White, Amber, Blue, Orange, Green, Yellow and Pink. This is adjusted on the Infotainment screen.

The colors also change instantaneously in combination with the drive mode selector button, depending on settings.

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Right Door

Light Module

Headlights

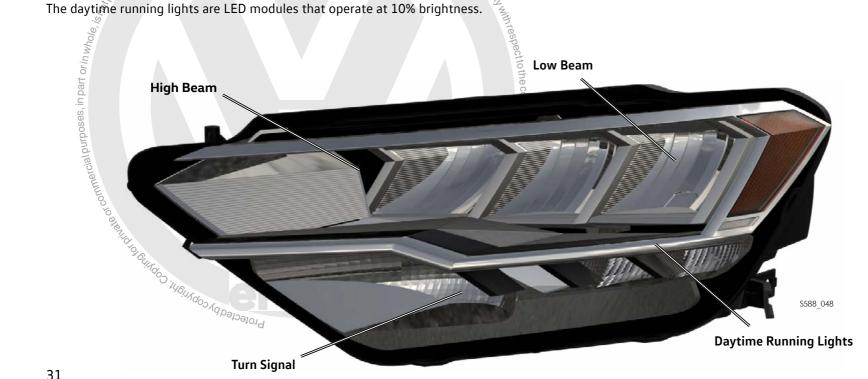
Two types of headlights are available for the new Jetta:

- · LED Eco headlights
- · LED High headlights with optional Light Assist.

LED Eco Headlights

Eco LED headlights have the following functions: low beam, high beam, position lamp, turn signal and daytime running light. With the exception of the turn signal, all the light functions use LED technology.

The daytime running lights are LED modules that operate at 10% brightness.



High LED Headlight

The High LED headlight is another headlight available in the new Jetta.

The High LED headlight has the following functions: low beam and high beam generated from the same light module using a projection lens, turn signal with incandescent bulb and LED daytime running light.

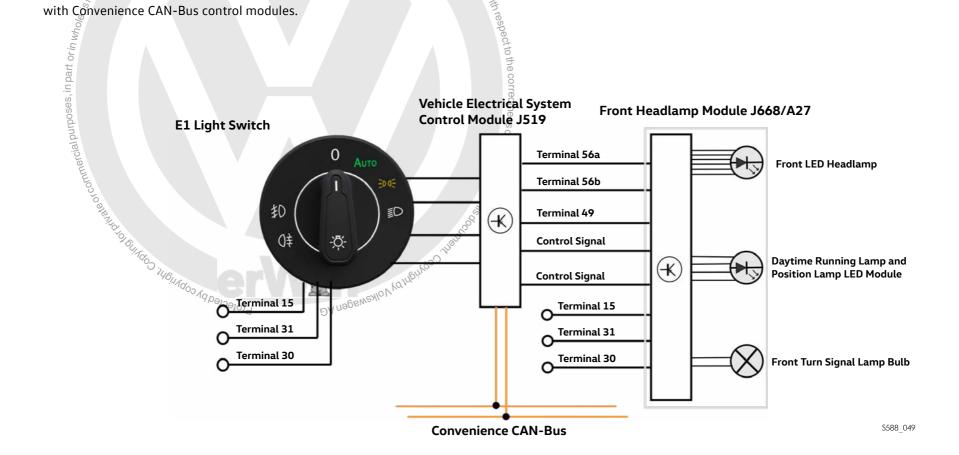
The daytime running lights are LED modules that operate at 10% brightness.



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Electric Connections

The Front Headlamp Module J668 is responsible for the headlight control and is connected to the Convenience CAN-Bus. This allows quick data exchange with Convenience CAN-Bus control modules.

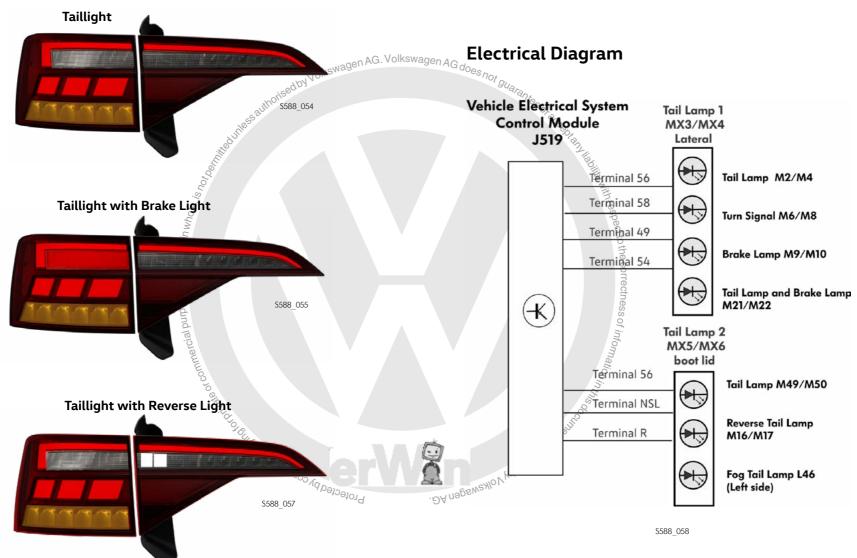


Taillights

The taillights in the new Jetta are equipped exclusively with LED technology.



Light Functions



Instrument Cluster



- Center screen, color with 240x320 pixel resolution.
- Transitions between images with animations
- Multi-function indicator with the following information:
 - Time, odometer, trip odometer
 - Vehicle warning light messages in symbols and text in 24 languages
 - Driving range or gear shift indicator
 - Onboard computer with efficiency indicator
 - Outside temperature, ice warning
 - Speed regulator indicator
 - Speed limit indicator
 - Speed warning
 - Date indicator
 - Service reminder display
 - Additional driver assistance systems
 - Navigation destination guidance
 - Telephone numbers list
 - Radio station list
 - Oil temperature indicator

New Instrument Cluster Warning Lights







Limited electro-mechanical power steering functionality



Rain and light sensor fault



Windshield wiper damaged



Adaptive Cruise Control (ACC) not available



· Fault or high temperature in the DSG transmission



· Auto Hold function Nagen AG.



Front Assist System deactivated



Exit Assist



· Dynamic Light Assist



· Low consumption ECO driving

Digital Cockpit



In the Digital Cockpit the analog gauges are presented virtually. The following warning lights, relevant to driver safety, are still set indicators and are available separately on the screen:

- Turn signal
- · Warning light for exhaust gas issues
- · Anti-lock braking system warning light
- Central warning light (depending on the message displayed)
- Electro-mechanical power steering warning light
- Brake system warning light
- Electronic parking brake warning light
- · Airbag warning light

A custom driver profile can show additional information about the driving, DA NOW WENT OF THE WASSEN AG. navigation and assistance functions in the center zone in the speedometer and RPM gauge.

Functions and Features

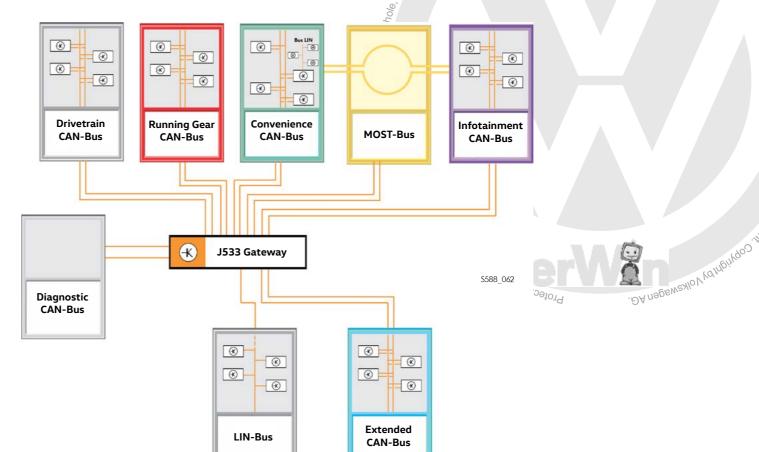
- 10.25" screen with 133 dpi resolution
- Has all the basic functions
- Engine temperature and fuel level indicators
- Several display options are available
- Automatically switch between displays depending on the active function
- Graphic display in 2D and 3D
- Navigation and media indication display

Networking System

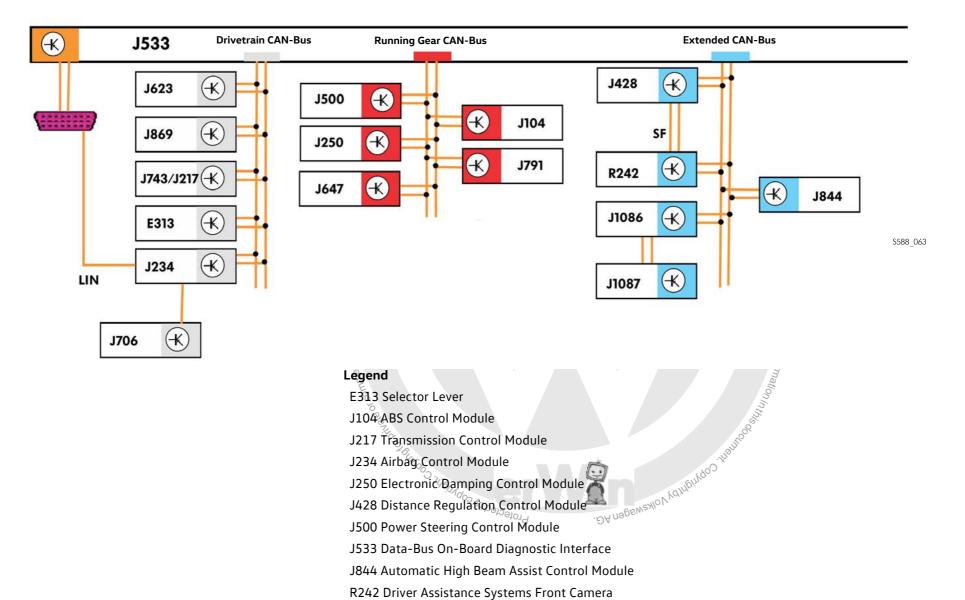
Chart of the Data-Bus Systems Used

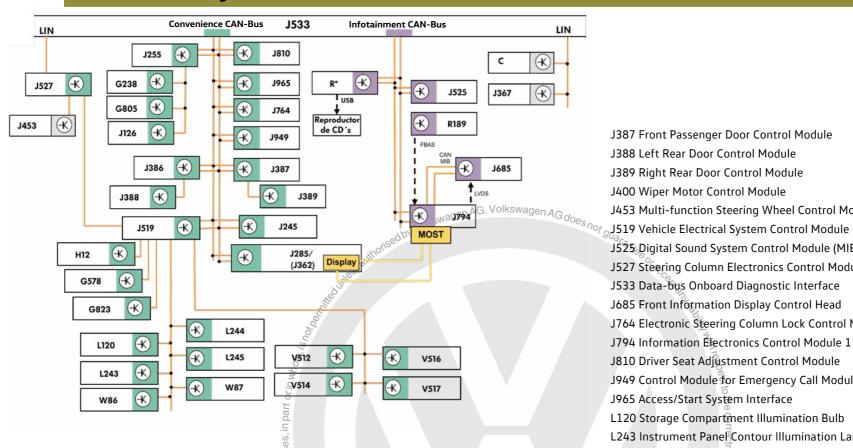
MOST150 Data-Bus All of the Jetta's CAN-Bus systems have a transmission speed of 500 kBit/s. The LIN-Busses transmit at a speed of 19.2 kBit/s, while the MOST150 Data-Bus with fiber optic technology transmit at a rate of 150 MBit/s.

The Data-Bus Onboard Diagnostic Interface J533 controls some LIN-Busses and acts as a Gateway between the CAN-Bus systems. Other LIN-Busses are connected to different control modules.



Networking System





Legend

C Alternator

G238 Air Quality Sensor

G355 Humidity Sensor

G578 Anti-theft Alarm System Sensor

G805 Refrigerant Circuit Pressure Sensor

G823 Rain Light and Air Humidity Sensor

H12 Alarm Horn

J126 Fresh Air Blower Control Module

J245 Sunroof Control Module

J255 Climatronic Control Module

9285 Instrument Cluster Control Module

J362 Anti-Theft Immobilizer Control Module

J367 Battery Monitoring Control Module

J386 Driver Door Control Module Protectedby

J387 Front Passenger Door Control Module

J388 Left Rear Door Control Module

J389 Right Rear Door Control Module

J400 Wiper Motor Control Module

J453 Multi-function Steering Wheel Control Module

J525 Digital Sound System Control Module (MIB)

J527 Steering Column Electronics Control Module

J533 Data-bus Onboard Diagnostic Interface

J685 Front Information Display Control Head

J764 Electronic Steering Column Lock Control Module

J794 Information Electronics Control Module 1

J810 Driver Seat Adjustment Control Module

J949 Control Module for Emergency Call Module and Communication Unit

J965 Access/Start System Interface

L120 Storage Compartment Illumination Bulb

L243 Instrument Pane®Contour Illumination Lamp 1

L244 Instrument Pane Contour Illumination Lamp 2

L245 Instrument Panel Contour Illumination Lamp 3

R* Radio when there's no J794 or J685 installed

R189 Rearview Camera

W86 Driver door ambient light

W87 Passenger door ambient light

LVDS Low Voltage Differential Signaling

MIB Infotamment modular system CAN-Bus

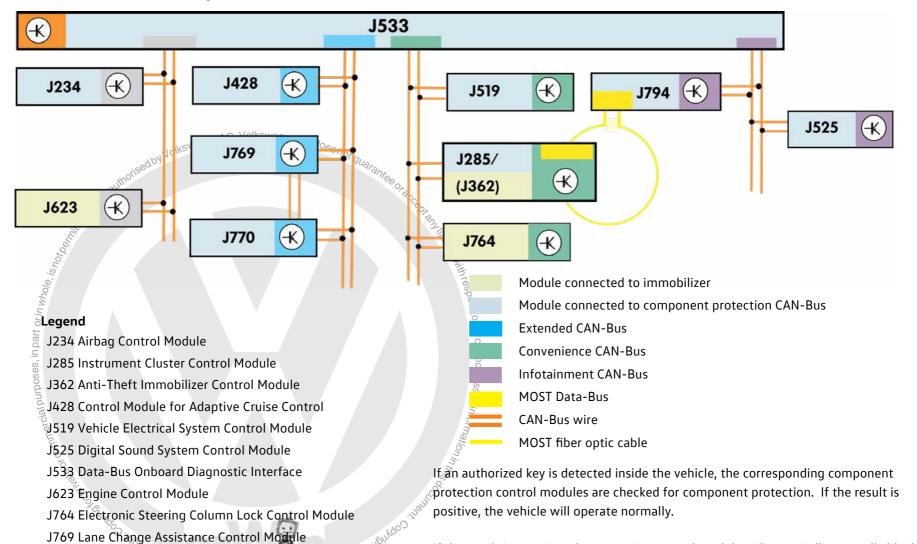
FBAS Color image tracking and synchronization signal

DA nage trackii Universal Serial Bus

Immobilizer and Component Protection

J770 Lane Change Assistance Control Module 2

J794 Information Electronics Control Module 1



If the result is negative, the respective control module either partially or totally blocks its operation (i.e., the radio may be turned on but no sound comes from the speakers). At that point the scan tool should be used to go online to enable the component protection function. This online connection may be established with the FAZIT database responsible for enabling component protection and for all immobilizer component adaptations.

Modular Infotainment System (MIB)

The new Jetta has the second-generation modular infotainment system (MIB II). It can have the following radio and navigation systems: Composition Color, Composition Media, Discover Media and BeatsAudio.

Composition Color

Features

- 6.5" color touchscreen with 145 pixel resolution (800x480)
- · 4x20 watt output
- · Bluetooth to connect mobile phones
- · Phase diversity antennas
- SD card reader and AUX-IN multimedia port
- · USB multimedia interface
- · Compatible with MP3, WMA, AAC and FLAC audio formats
- JPEG Viewer (image viewer)
- Basic mobile phone interface with Bluetooth profiles: HFP, PBAP, A2DP, AVRCP, MAP
- App-Connect standard
- · Rear view camera





The image shows the standard model. Depending on features included, button names or functions may vary.

Composition Media

Features

- 8" color touchscreen with 117 dpi resolution, 800x480 pixels
- · CD reader
- · Phase diversity antennas
- · Proximity sensor
- · SD card reader and AUX-IN multimedia port
- · USB multimedia interface
- Speed-dependent dynamic compression (GADK)
- · Compatible with MP3, WMA, AAC and FLAC audio formats
- · JPEG Viewer (image viewer)
- Basic mobile phone interface with Bluetooth profiles: HFP, PBAP, A2DP, AVRCP, MAP, two mobile phones may be paired simultaneously by HFP
- · App-Connect standard
- · Rear view camera
- BeatsAudio

Composition Media Front View





The image shows the standard model. Depending on features included, button names or functions may vary.

Discover Media

Features

- 8" color touchscreen with 117 dpi resolution, 800x480 pixels
- · CD reader
- · Phase diversity antennas
- Proximity sensor
- · SD card reader and AUX-IN multimedia port
- USB multimedia interface
- Speed-dependent dynamic compression (GADK)
- · Compatible with MP3, WMA, AAC and FLAC audio formats
- JPEG Viewer (image viewer)
- Basic mobile phone interface with Bluetooth profiles: HFP, PBAP, A2DP, AVRCP, MAP, two mobile phones may be paired simultaneously by HFP
- App-Connect
- · Rear view camera
- U Search Blitton internation of the state of BeatsAudio
- Navigation

Discover Media Front View



S588 070



The image shows the standard model. Depending on features included, button names or functions may vary.

BeatsAudio

Features:

- · 400 watt amplifier
- · 8 speakers
- · 1 Subwoofer



BeatsAudio Diagram

Speaker in Rear Doors

17 liter **Subwoofer Box**

Modular Infotainment System (MIB)

The new Jetta has the second-generation Modular Infotainment System (MIB). Since the release of the Composition Media model, the Information Electronics Control Module 1 J794 is mounted in the glove compartment. The following table compares the functions of the 3 radio versions available.

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Function	Composition Color	Composition Media	Discover Media
rinw	PR.Nr.: 18C	₹R.Nr.: 18F	PR.Nr.: 18F+7UF
6.5" 8" 8" screen	6.5"	the 8"	8"
Glass touch screen	S	orre S	S
Radio frequencies	AM/FM	AM/FM	AM/FM
RDS and	S	s S	S
DAB Egg	N/A	O	0
Radio station ogos	N/A	n _{atic}	S
Diversity system	S	S	S
CD reader	N/A	S S	S
USB Type A port	S	JIT'S S	S
SD card reader	S (NO)	S	S (double)
AUX-IN interface	N/A NA NOW PRINTED	N/A	N/A
AUX-IN interface Output volume adjustment Output	3 areas 10 1	5 areas	5 areas
Output	4x20 Watt	4x20 Watt	400 Watt
Voice command	N/A	S	S
Front speakers	S	S	S
Rear speakers	S	S	S
Compatibility with backup camera	S	S	S
Bluetooth basic interface	S	S	S
BeatsAudio Sound system	N/A	S	S
MP3, WMA	S	S	S
AAC, FLAC, OGG, WAV	S	S	S
Navigation	N/A	N/A	S
App-Connect	S	S	S

S STANDARD
O OPTIONAL
N/A Not Available

Antenna System

The antennas for AM, FM, and DAB radio reception are on the rear window. The GPS antenna is part of the roof antenna.

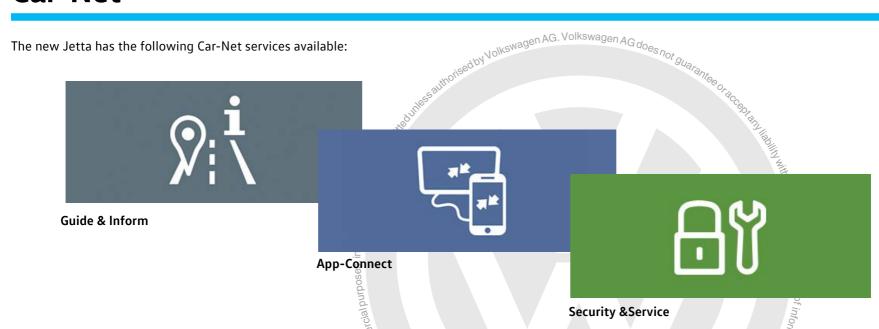
Antennas mounted on the new Jetta roof cover GSM, Satellite Radio, GPS and Emergency Call Module. The actual telephone antenna installed depends on the vehicle trim and options.

Roof Antenna RX5 (R170 - Satellite Radio, R2055 GSM, R263 Emergency Call Module) Right Antenna Module R109 with Impedance Transformer for AM/FM **Left Antenna Module** Frequency Filter for Frequency R108 with Impedance Modulation (FM) in the Negative **Transformer for** Wire R178. Frequency Filter for **Frequency Modulation** (FM) in the Positive Wire S588 074

FM2/DAB

R179.

Car-Net



Control Module for Emergency Call Module and Communication Unit J949

The Control Module for Emergency Call Module and Communication Unit J949 is a data interface with subscriber identification. It transfers and receives data and commands for Car-Net Security & Service.

The J949 can establish an Internet connection through the mobile phone network. This allows receiving, processing and executing commands with the ignition switched on or off. Data exchange is direct and coded. There is no direct data transmission between the customer terminal, the CP (Customer portal) or smartphone (application) and vehicle. The control module is located behind the instrument cluster.





The online applications and functions depend on the country and features included. All services are not available at vehicle launch. You may consult the Car-Net functions available in your market on the following information page: www.volkswagen-carnet.com

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.vwwebsource.com

For Assistance, please call: Volkswagen Academy, Certification Program Headquarters 1 877 791 4838 (8:00 a.m. to 8:00 p.m. EST)





Volkswagen Group of America 2200 Ferdinand Porsche Drive Herndon, VA 20171 April 2018



Cautions & Warnings

Please read these WARNINGS and CAUTIONS before proceeding with maintenance and repair work. You must answer that you have read and you understand these WARNINGS and CAUTIONS before you will be allowed to view this information.

- If you lack the skills, tools and equipment, or a suitable workshop for any procedure described in this manual, we suggest you leave such repairs to an authorized Volkswagen retailer or other qualified shop. We especially urge you to consult an authorized Volkswagen retailer before beginning repairs on any vehicle that may still be covered wholly or in part by any of the extensive warranties issued by Volkswagen.
- Disconnect the battery negative terminal (ground strap) whenever you work on the fuel system or the electrical system. Do not smoke or work near heaters or other fire hazards. Keep an approved fire extinguisher handy.
- Volkswagen is constantly improving its vehicles and sometimes these changes, both in parts and specifications, are made applicable to earlier models. Therefore, part numbers listed in this manual are for reference only.
 Always check with your authorized Volkswagen retailer parts department for the latest information.
- Any time the battery has been disconnected on an automatic transmission vehicle, it will be necessary to reestablish Transmission Control Module (TCM) basic settings using the Volkswagen Factory Approved Scan Tool (ST).
- Never work under a lifted vehicle unless it is solidly supported on stands designed for the purpose. Do not support a vehicle on cinder blocks, hollow tiles or other props that may crumble under continuous load. Never work under a vehicle that is supported solely by a jack. Never work under the vehicle while the engine is running.
- For vehicles equipped with an anti-theft radio, be sure of the correct radio activation code before disconnecting the battery or removing the radio. If the wrong code is entered when the power is restored, the radio may lock up and become inoperable, even if the correct code is used in a later attempt.
- If you are going to work under a vehicle on the ground, make sure that the ground is level. Block the wheels to keep the vehicle from rolling. Disconnect the battery negative terminal (ground strap) to prevent others from starting the vehicle while you are under it
- Do not attempt to work on your vehicle if you do not feel well. You increase the danger of injury to yourself and others if you are tired, upset or have taken medicine or any other substances that may impair you or keep you from being fully alert.
- Never run the engine unless the work area is well ventilated. Carbon monoxide (CO) kills.
- Always observe good workshop practices. Wear goggles when you operate machine tools or work with acid.
 Wear goggles, gloves and other protective clothing whenever the job requires working with harmful substances.
- Tie long hair behind your head. Do not wear a necktie, a scarf, loose clothing, or a necklace when you work near machine tools or running engines. If your hair, clothing, or jewelry were to get caught in the machinery, severe injury could result.
- Do not re-use any fasteners that are worn or deformed in normal use. Some fasteners are designed to be used
 only once and are unreliable and may fail if used a second time. This includes, but is not limited to, nuts, bolts,
 washers, circlips and cotter pins. Always follow the recommendations in this manual replace these fasteners
 with new parts where indicated, and any other time it is deemed necessary by inspection.

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Cautions & Warnings

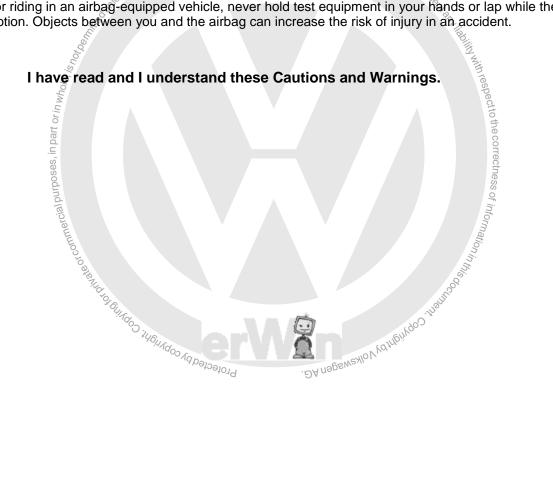
- Illuminate the work area adequately but safely. Use a portable safety light for working inside or under the vehicle. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.
- Friction materials such as brake pads and clutch discs may contain asbestos fibers. Do not create dust by grinding, sanding, or by cleaning with compressed air. Avoid breathing asbestos fibers and asbestos dust. Breathing asbestos can cause serious diseases such as asbestosis or cancer, and may result in death.
- Finger rings should be removed so that they cannot cause electrical shorts, get caught in running machinery, or be crushed by heavy parts.
- Before starting a job, make certain that you have all the necessary tools and parts on hand. Read all the
 instructions thoroughly; do not attempt shortcuts. Use tools that are appropriate to the work and use only
 replacement parts meeting Volkswagen specifications. Makeshift tools, parts and procedures will not make good
 repairs.
- Catch draining fuel, oil or brake fluid in suitable containers. Do not use empty food or beverage containers that
 might mislead someone into drinking from them. Store flammable fluids away from fire hazards. Wipe up spills
 at once, but do not store the oily rags, which can ignite and burn spontaneously.
- Use pneumatic and electric tools only to loosen threaded parts and fasteners. Never use these tools to tighten fasteners, especially on light alloy parts. Always use a torque wrench to tighten fasteners to the tightening torque listed.
- Keep sparks, lighted matches, and open flame away from the top of the battery. If escaping hydrogen gas is ignited, it will ignite gas trapped in the cells and cause the battery to explode.
- Be mindful of the environment and ecology. Before you drain the crankcase, find out the proper way to dispose of the oil. Do not pour oil onto the ground, down a drain, or into a stream, pond, or lake. Consult local ordinances that govern the disposal of wastes.
- The air-conditioning (A/C) system is filled with a chemical refrigerant that is hazardous. The A/C system should be serviced only by trained automotive service technicians using approved refrigerant recovery/recycling equipment, trained in related safety precautions, and familiar with regulations governing the discharging and disposal of automotive chemical refrigerants.
- Before doing any electrical welding on vehicles equipped with anti-lock brakes (ABS), disconnect the battery negative terminal (ground strap) and the ABS control module connector.
- Do not expose any part of the A/C system to high temperatures such as open flame. Excessive heat will
 increase system pressure and may cause the system to burst.
- When boost-charging the battery, first remove the fuses for the Engine Control Module (ECM), the Transmission Control Module (TCM), the ABS control module, and the trip computer. In cases where one or more of these components is not separately fused, disconnect the control module connector(s).
- Some of the vehicles covered by this manual are equipped with a supplemental restraint system (SRS), that
 automatically deploys an airbag in the event of a frontal impact. The airbag is operated by an explosive device.
 Handled improperly or without adequate safeguards, it can be accidentally activated and cause serious personal
 injury. To guard against personal injury or airbag system failure, only trained Volkswagen Service technicians
 should test, disassemble or service the airbag system.

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Cautions & Warnings

- Do not quick-charge the battery (for boost starting) for longer than one minute, and do not exceed 16.5 volts at the battery with the boosting cables attached. Wait at least one minute before boosting the battery a second
- Never use a test light to conduct electrical tests of the airbag system. The system must only be tested by trained Volkswagen Service technicians using the Volkswagen Factory Approved Scan Tool (ST) or an approved equivalent. The airbag unit must never be electrically tested while it is not installed in the vehicle.
- Some aerosol tire inflators are highly flammable. Be extremely cautious when repairing a tire that may have been inflated using an aerosol tire inflator. Keep sparks, open flame or other sources of ignition away from the tire repair area. Inflate and deflate the tire at least four times before breaking the bead from the rim. Completely remove the tire from the rim before attempting any repair.
- When driving or riding in an airbag-equipped vehicle, never hold test equipment in your hands or lap while the vehicle is in motion. Objects between you and the airbag can increase the risk of injury in an accident.



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