Service Training

Commercial Vehicles

Self-study programme 565

The Amarok 2017

2016 will be a very eventful year in the pick-up segment. Almost all competitors have launched new variants on the market.
With the Amarok 2017, we are continuing what started a good 6 years ago – the concept of "robustness combined with innovative technology". The newly designed front end and a new dash panel emphasise the great impact of the Amarok. They increase the perceived quality of the vehicle together with its new ergonomic seats. To be successful in the highly competitive pick-up segment, it is necessary to offer a modern vehicle with a powerful engine. The EU6 emission standard applies in EU countries. The engine that meets this standard in the Amarok 2017 is the new 3.0 l V6 TDI engine. To cope with the increased engine power, an uprated 8-speed automatic gearbox or 6-speed manual gearbox are used.

S565_002

The Amarok 2017 is equipped with a new generation of radio and navigation systems. In addition, there are driver assist and safety systems. New features include, for example, the multi-collision brake and the tyre pressure monitoring system.

The self-study programme shows the design and function of new developments. In addition, technologies are described which have been introduced as model uprating points.
The contents will not be updated.

For current testing, adjustment and repair instructions, refer to the relevant service literature.

Important note

Contents

The product characteristics of the Amarok 2017

The overview lists new and striking product characteristics of the Amarok 2017. Deviations are possible depending on the country.

- 3.0 l V6 TDI engine in 3 performance levels
- Tyre pressure monitoring system
- Multicollision brake
- Extensive range of accessories such as styling bar, sports bar and light bar

S565_042

- New generation of radios and navigation systems

S565_043

- SCR system for emission control
- Disc brakes on the front and rear axle
- New range of colours

The notable characteristics of the Amarok 2017

Newly designed front bumper including fog lights

Newly designed dash panel with numerous storage possibilities

Optimised front seats and 14-way seat

New radios and navigation systems

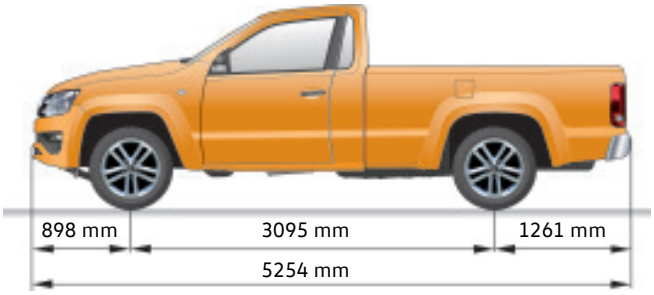
V6 badge on the radiator grille

Gearshift paddle for automatic gearbox

S565_044

Technical data

External dimensions of single cab



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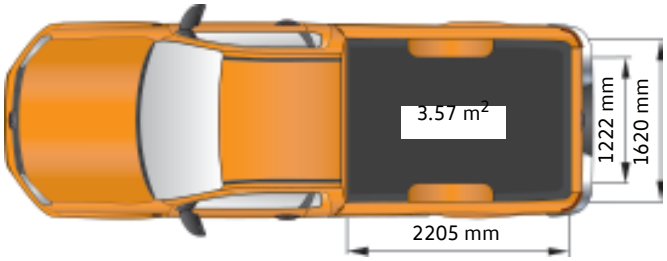

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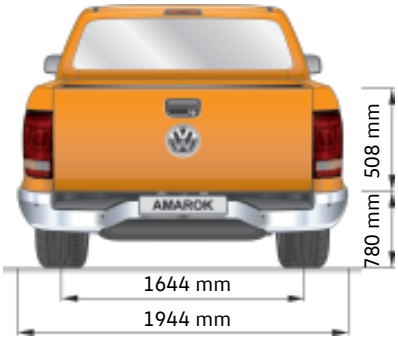
S565_005



S565_006

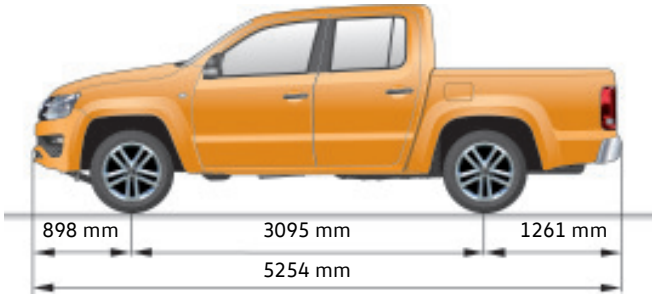
Exterior dimensions

Length	5254 mm
Width	1944 mm
Height	1820 mm
Wheelbase	3095 mm
Track width at front	1648 mm
Track width at rear	1644 mm
Length of cargo floor	2205 mm
Width of cargo floor	1620 mm
Cargo floor	3.57 m^2
Loading width between the wheel houses	1222 mm
Height of tail lift	508 mm

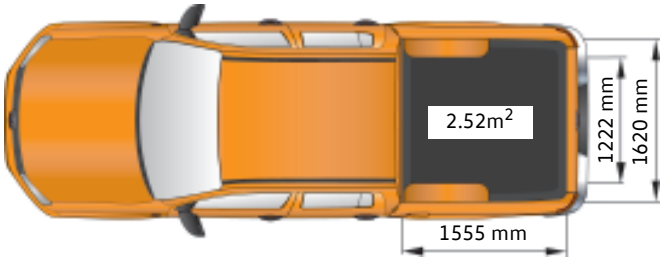
Weights/other data

Gross vehicle weight rating	3040 kg
Unladen weight with driver	1775 kg
max. payload	1265 kg*
max. rear axle load	1860 kg
Trailer load braked, max.	2800 kg
max. roof load	100 kg
max. permitted combination weight	5500 kg
max. drawbar load	120 kg
Ground clearance at front	194 mm

External dimensions of double cab



S565_004



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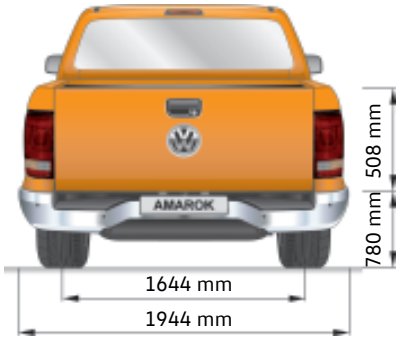
S565_005



S565_006

Exterior dimensions

Length	5254 mm
Width	1944 mm
Height	1834 mm
Wheelbase	3095 mm
Track width at front	1648 mm
Track width at rear	1644 mm
Length of cargo floor	1555 mm
Width of cargo floor	1620 mm
Cargo floor	2.52 m^2
Loading width between the wheel houses	1222 mm
Height of tail lift	508 mm

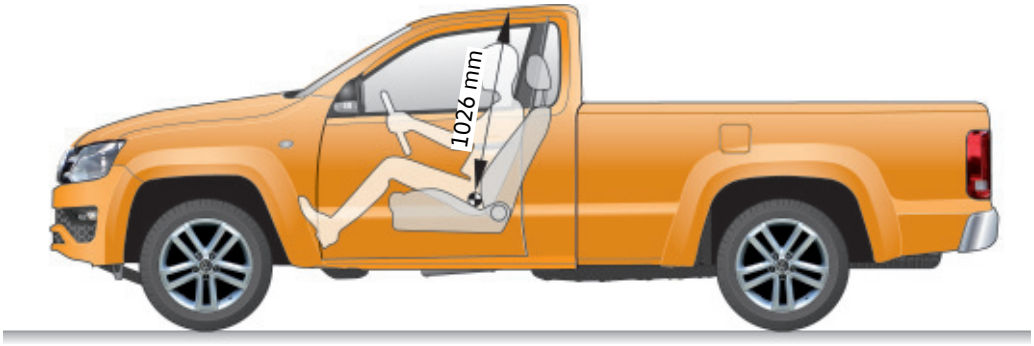
Weights/other data

Gross vehicle weight rating	2820 kg
Unladen weight with driver	1743 kg
max. payload	1040 kg*
max. rear axle load	1930 kg
Trailer load braked, max.	3500 kg
max. roof load	100 kg
max. permitted combination weight	6000 kg
max. drawbar load	140 kg
Ground clearance at front	192 mm

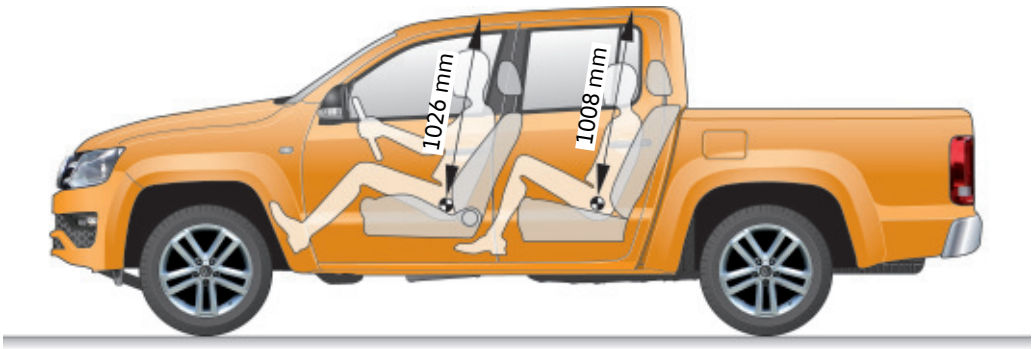
* Depending on the rear axle configuration
** ML1 (driver only)

Technical data

Interior dimensions and volumes



S565_047



S565_007

Interior dimensions

	Single cab	Double cab
Number of seats	2	5
Front legroom	1019 mm	1019 mm
Rear legroom	–	865 mm
Front headroom	1026 mm	1026 mm
Rear headroom	–	1008 mm
Front entry height	520 mm	520 mm
Rear entry height	–	529 mm
Front seat height	331 mm	331 mm
Rear seat height	–	364 mm

Further technical data

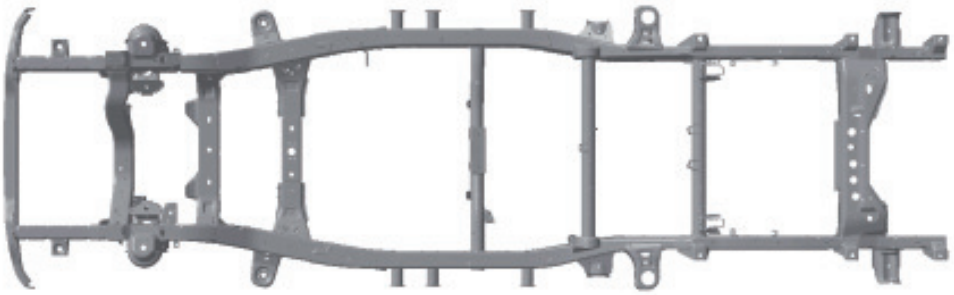
	Single cab	Double cab
Turning circle	12.95 m	12.95 m
Fording depth	500 mm	500 mm
Fuel tank capacity	80 l	80 l
Drag coefficient	0.43 c_d	0.43 c_d

The body

Frame design

The basic design of the ladder frame has been taken from the first generation Amarok.
Refer to the Workshop Manual for maintenance measures.

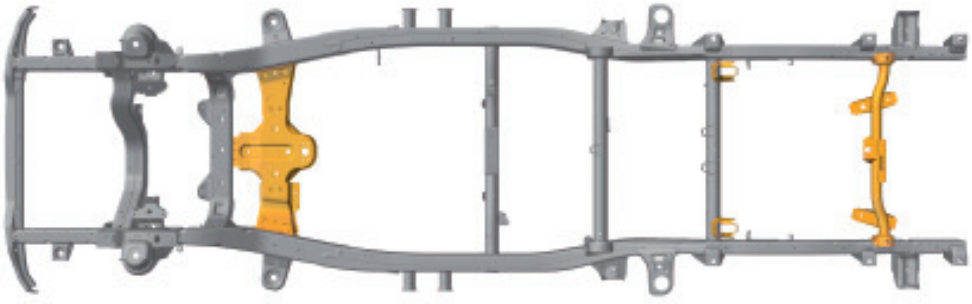
Previous version



S565_009

New version

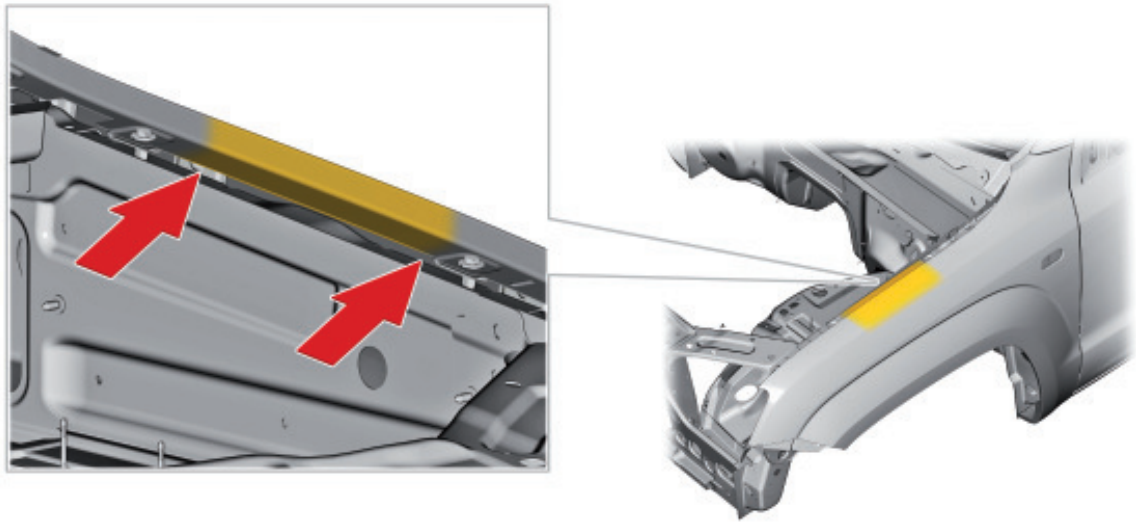
Some changes have been made to the frame for the launch of the 3.0 l V6 TDI engine.
These concern the mounting points for the power unit, the spare wheel mounting, the SCR tank as well as the mounting points on the crossmember.



S565_010

Wings

The front wings have been adapted to increase pedestrian protection in the event of an accident. As a result of these adaptations, the support bracket can no longer be placed directly on the wing during work on the engine. Instead, the new supports of the support bracket developed for this purpose must be placed underneath the wing (red arrows).



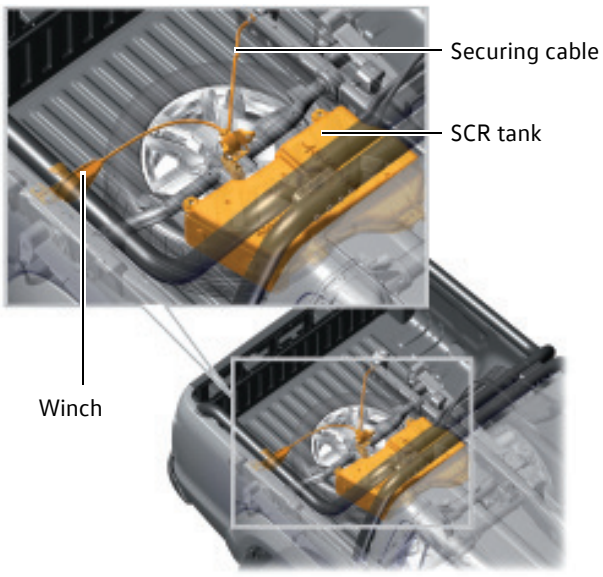
S565_022

The changes to the wing will be introduced at a later stage.

Spare wheel

The position of the spare wheel has changed because of the installation position of the SCR tank. The spare wheel is now at a slight angle. This means there is sufficient room for the SCR tank. This orientation requires changes to the winch which is used for lowering the spare wheel.

A winch concept for the spare wheel has been developed with optimised weight and function for the model change of the Amarok. The previously used mechanical second lock has been replaced by a securing cable. This retains the double protection function.



S565_065

Electrically adjustable driver and front passenger seats (14-way seat)

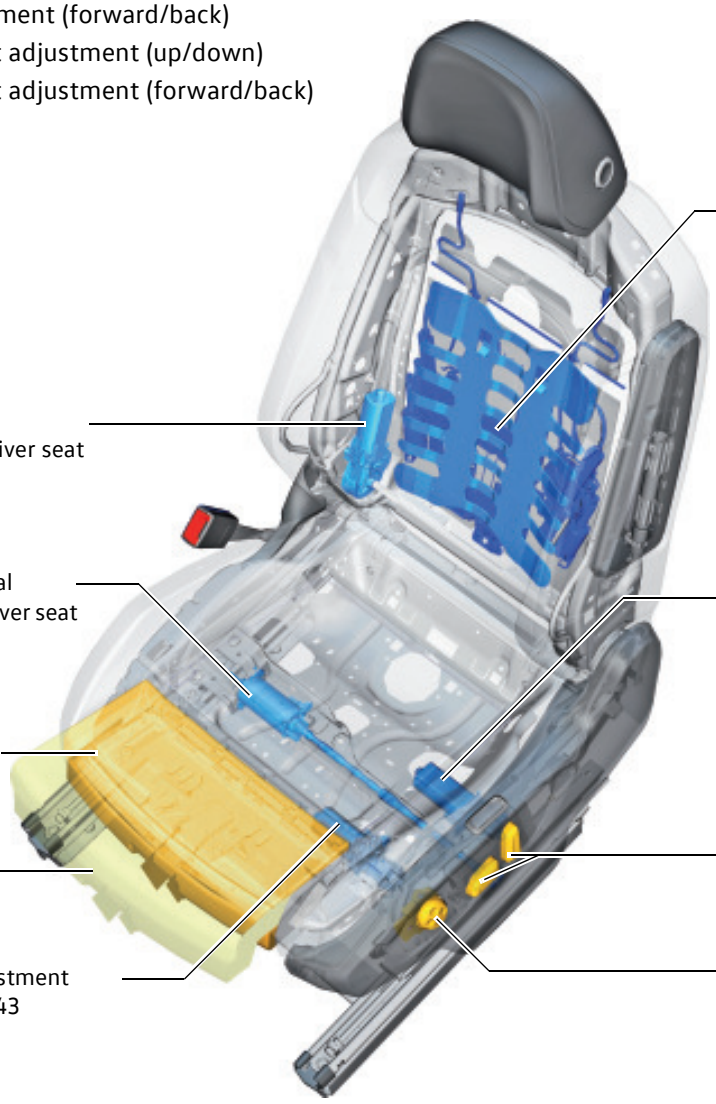
The 14-way seat guarantees comfortable and fatigue-free travelling – even over long distances. The comfortable feeling is achieved by setting an individually matching seat position. This is achieved by the extensive adjustment options of the seat, allowing it to adapt to different physiques. The lumbar support integrated in the backrest reduces strain on the spine. The seat has already received the official seal of approval from AGR (Campaign for Healthier Backs) for these outstandingly good ergonomic characteristics.

Electric setting (12-way):

- Seat longitudinal adjustment (forward/back)
- Angle adjustment of the seat cushion at the front (up/down)
- Angle adjustment of the seat cushion at the rear (up/down)
- Backrest adjustment (forward/back)
- Lumbar support adjustment (up/down)
- Lumbar support adjustment (forward/back)

Mechanical setting (2-way):

- Multistage depth adjustment of the seat cushion (forward/back)



S565_021

The 3.0 l V6 TDI engine

The 3.0 l V6 TDI engine represents the new top-level engine in the Amarok 2017. It is the only engine available in numerous markets, especially in Europe. The engine is available with different drivetrain types and gearboxes on 3 performance levels.

S565_048

Engine/gearbox combination

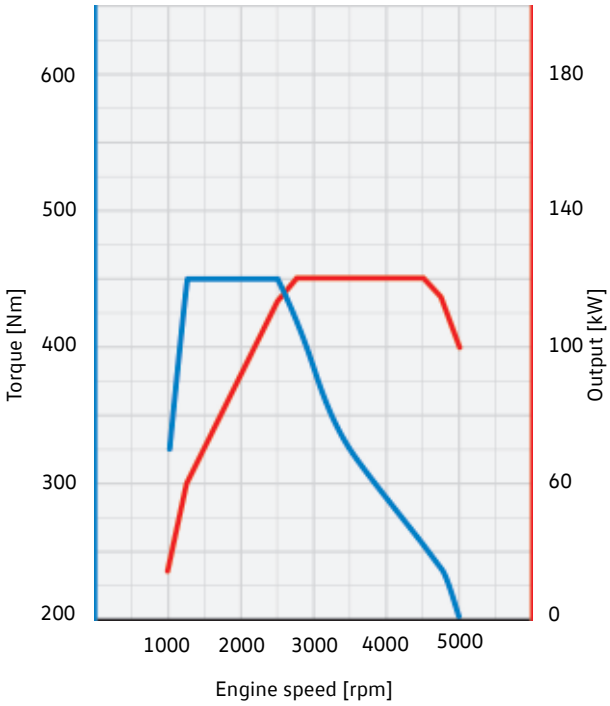
	3.0 l V6 TDI engine 120 kW DDXA	3.0 l V6 TDI engine 150 kW DDXB	3.0 l V6 TDI engine 165 kW DDXD	3.0 l V6 TDI engine 165 kW DDXC
				
6-speed manual gearbox 0F6 rear-wheel drive				
6-speed manual gearbox 0F6 four-wheel drive				
8-speed Automatic gearbox 0DR four-wheel drive				

3.0 l 120 kW V6 TDI engine

Technical data

Engine code	DDXA
Displacement	2967 cm^3
Type	6-cylinder V engine
Valves per cylinder	4
Bore	83 mm
Stroke	91.4 mm
Compression ratio	17 : 1
Max. power	120 kW at 2750 – 4500 rpm
Max. torque	450 Nm at 1250 – 2500 rpm
Engine management system	Bosch EDC 17
Fuel	Diesel acc. to DIN EN 590
Exhaust gas recirculation	yes
Emission standard	EU6

Torque and power diagram



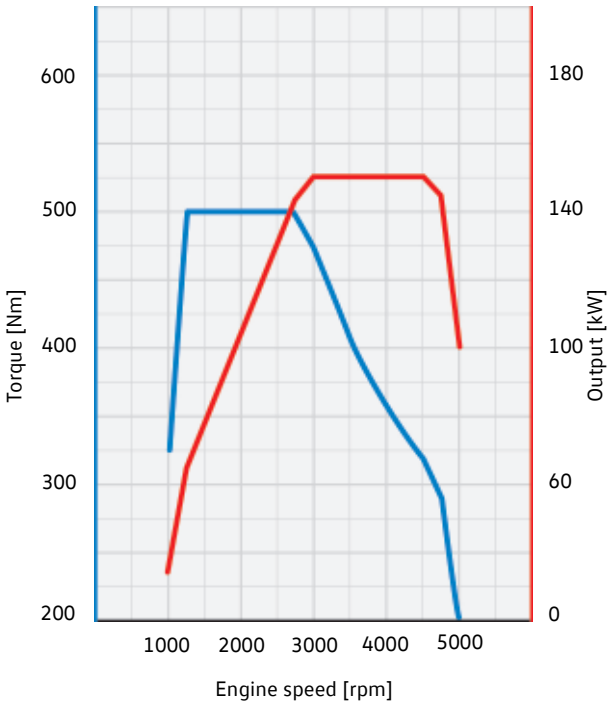
S565_036

3.0 l 150 kW V6 TDI engine

Technical data

Engine code	DDXB
Displacement	2967 cm^3
Type	6-cylinder V engine
Valves per cylinder	4
Bore	83 mm
Stroke	91.4 mm
Compression ratio	17 : 1
Max. power	150 kW at 3000 – 4500 rpm
Max. torque	500 Nm at 1250 – 2750 rpm
Engine management system	Bosch EDC 17
Fuel	Diesel acc. to DIN EN 590
Exhaust gas recirculation	yes
Emission standard	EU6

Torque and power diagram



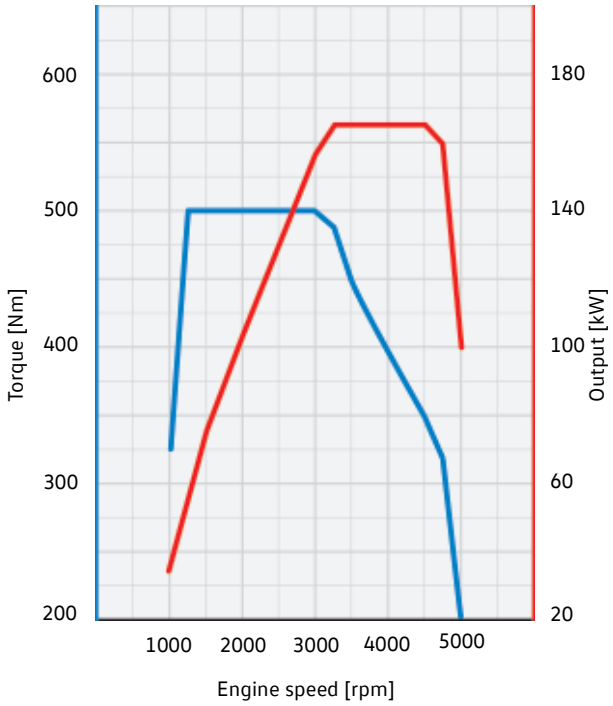
S565_037

3.0 l 165 kW V6 TDI engine (EU5, PL6)

Technical data

Engine code	DDXD
Displacement	2967 cm^3
Type	6-cylinder V engine
Valves per cylinder	4
Bore	83 mm
Stroke	91.4 mm
Compression ratio	17 : 1
Max. power	165 kW at 3250 – 4500 rpm
Max. torque	500 Nm at 1250 – 3000 rpm
Engine management system	Bosch EDC 17
Fuel	Diesel, acc. to DIN EN 590 Diesel, acc. to S500
Exhaust gas recirculation	yes
Emission standard	EU5 PL6

Torque and power diagram



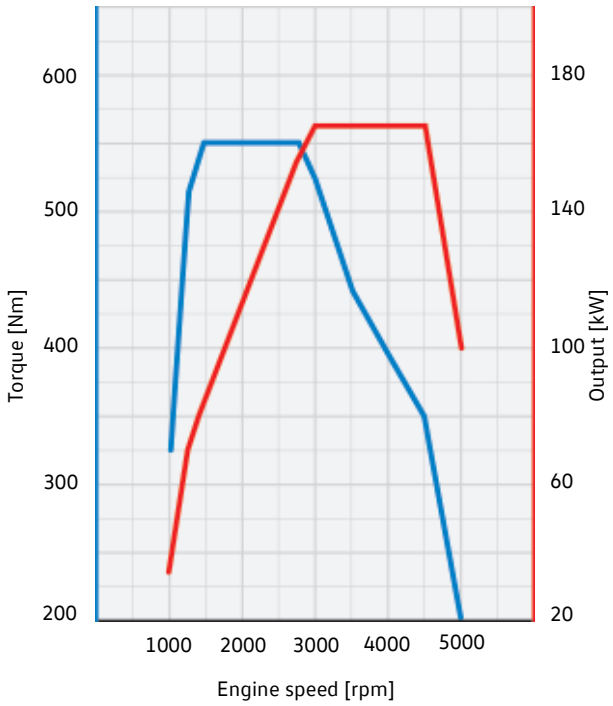
S565_038

3.0 l 165 kW V6 TDI engine (EU6)

Technical data

Engine code	DDXC
Displacement	2967 cm^3
Type	6-cylinder V engine
Valves per cylinder	4
Bore	83 mm
Stroke	91.4 mm
Compression ratio	17 : 1
Max. power	165 kW at 3000 – 4500 rpm
Max. torque	550 Nm at 1400 – 2750 rpm
Engine management system	Bosch EDC 17
Fuel	Diesel acc. to DIN EN 590
Exhaust gas recirculation	yes
Emission standard	EU6

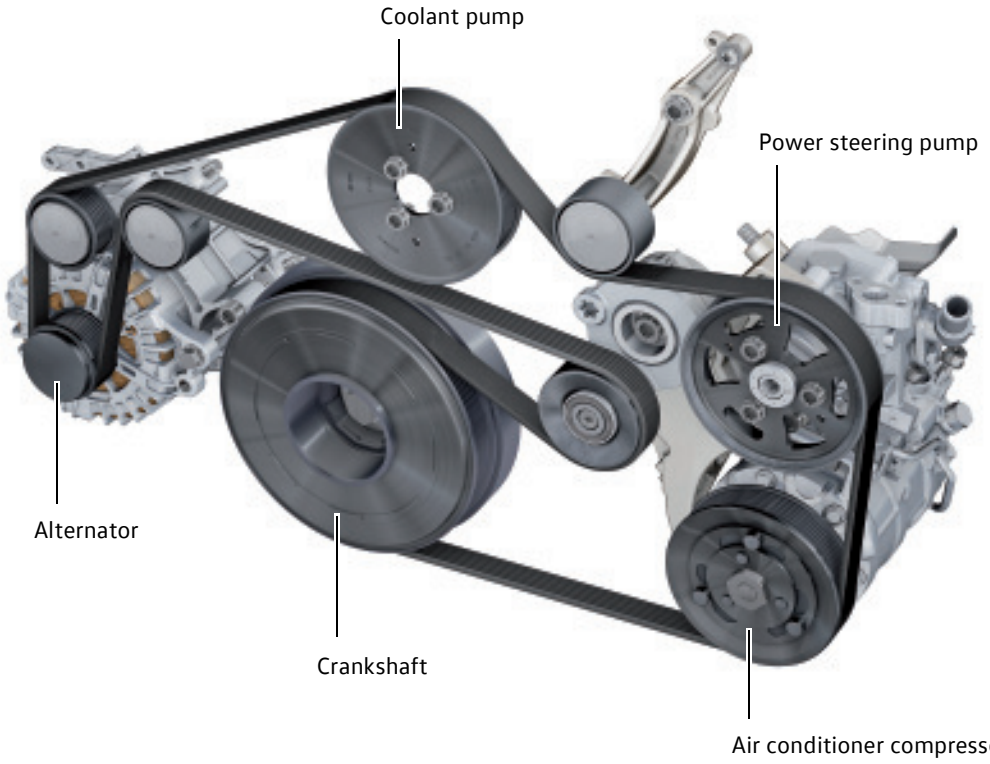
Torque and power diagram



S565_064

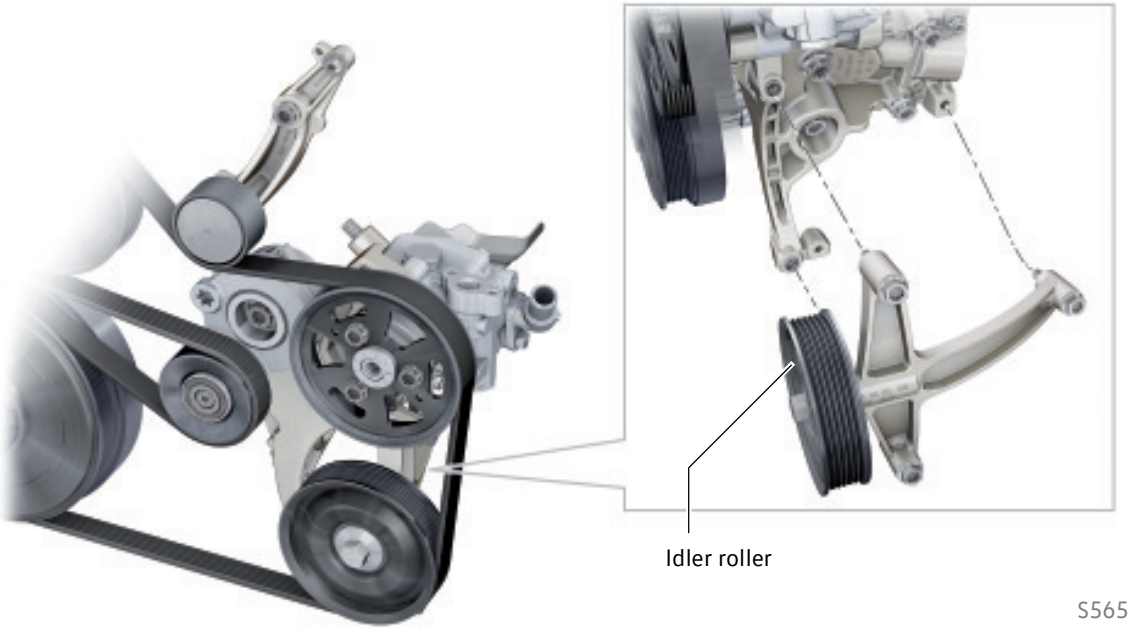
The belt drive of the V6 engine

The belt drive is designed to be robust for driving off-road.
Its particular features are: steel rollers, special bearing seals and a flocked belt.



S565_025

An idler roller is fitted instead of the air conditioner compressor in vehicles without an air conditioning system.
This means the belt drive remains the same in both variants.

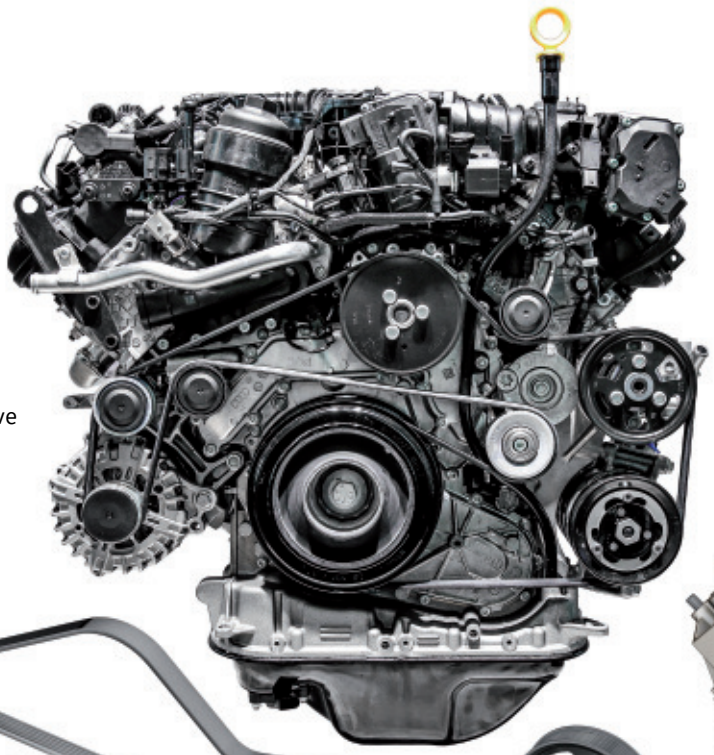


S565_026

Special design features

The 3.0 l V6 TDI engine has been adapted for use in the Amarok 2017. This overview shows the main differences between it and the engine used in Volkswagen Passenger Cars.

Preliminary cooler of the exhaust gas recirculation



Adapted belt drive

Holder for power steering pump and air conditioner compressor

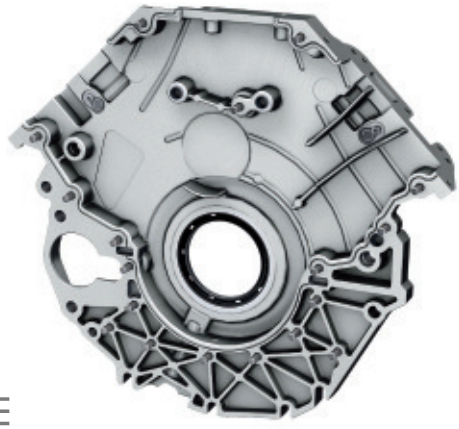
Pulley of the power steering pump

Poly V-belt

Vibration damper

The design and function of this diesel engine series are described in Self-Study Programme no. 495 "The 3.0 l V6 TDI engine (generation 2)".

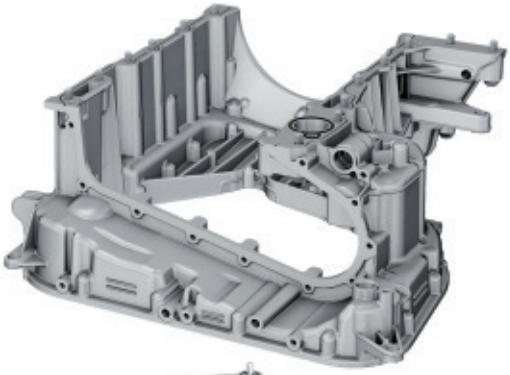
Rear sealing flange



Piston

Oil dipstick and guide tube

Top section of sump



Oil/vacuum pump

Honeycomb insert

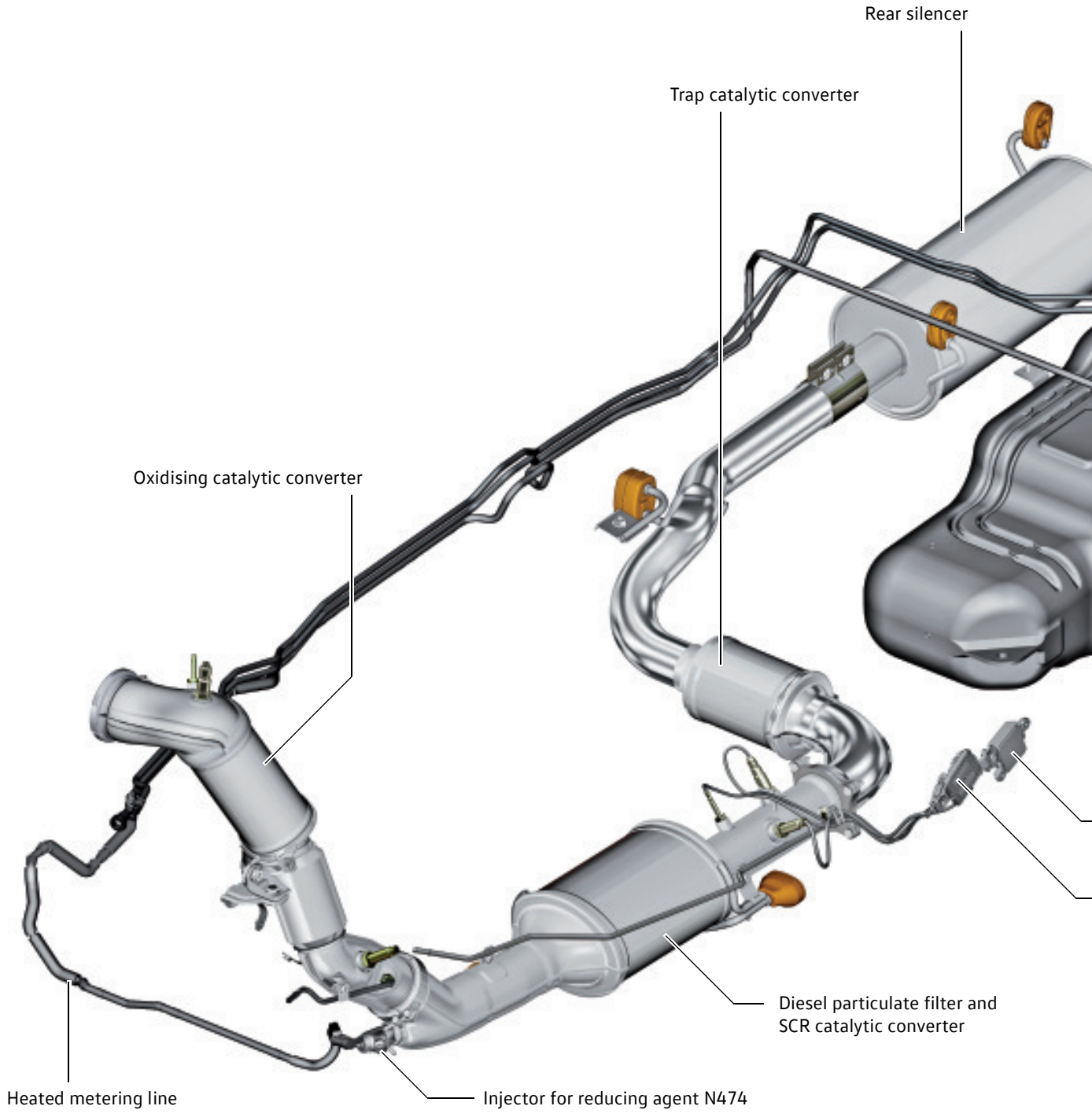
Bottom section of sump

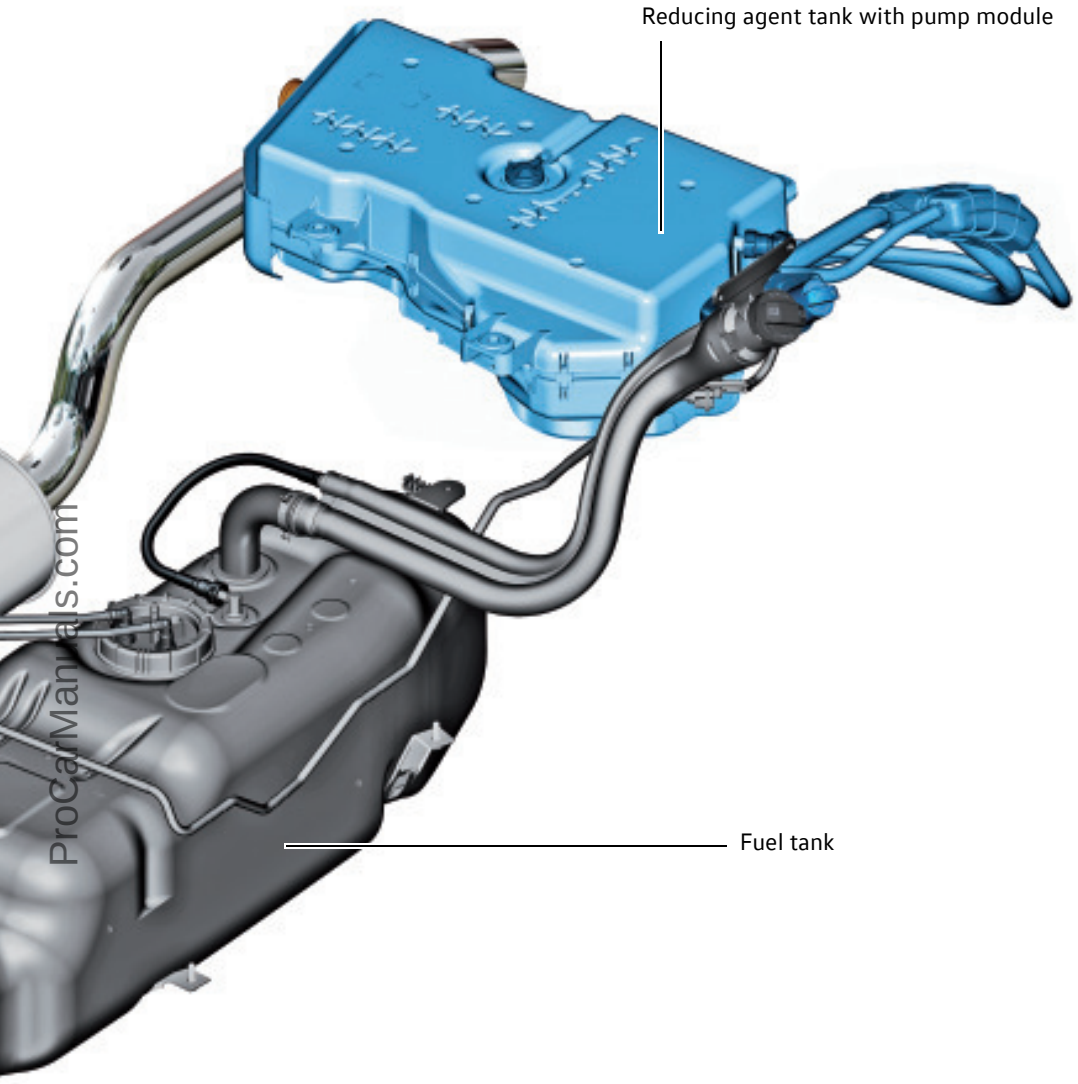
S565_067

The exhaust post-treatment with SCR system

In order to achieve EU6 emission limit values, the Amarok 2017 with 3.0 l V6 TDI engine uses an SCR system (selective catalytic reduction). This means only the nitrogen oxides specifically are reduced amongst the exhaust gas constituents. The nitrogen oxides (NO_x) are converted in the reduction catalytic converter into nitrogen (N_2) and water (H_2O). To do this, a reducing agent is continuously injected into the exhaust gas stream.

Overview





For additional information about the SCR system, refer to Self-Study Programme nos. 424 "The Selective Catalytic Reduction exhaust post-treatment system" and 564 "The 2.0 litre TDI engine in the T6".

Filling the tank for reducing agent

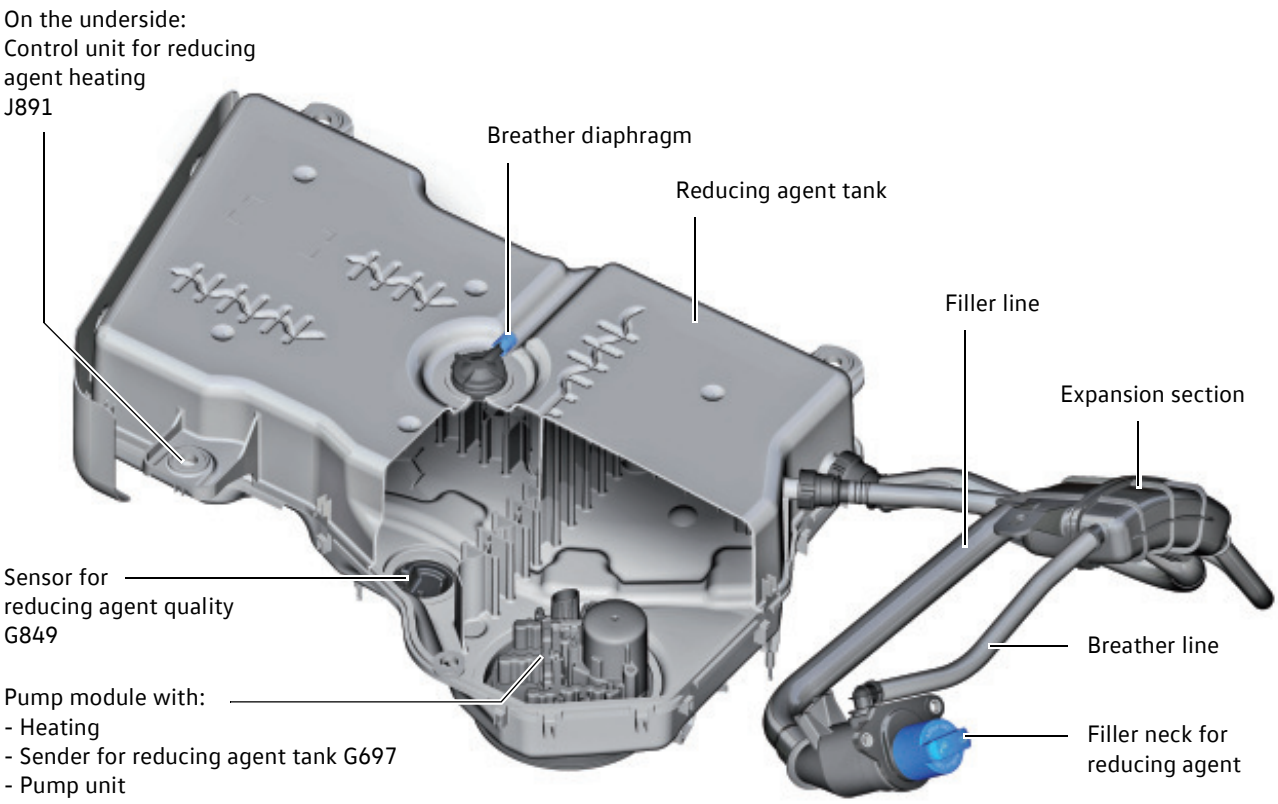
In addition to the fuel tank with a capacity of about 80 litres, there is also a tank for reducing agent with a capacity of about 13 litres.
The reducing agent consumption depends on the individual driving style, operating temperature of the system and ambient temperature.

The tank for reducing agent is replenished via the filler neck for reducing agent next to the fuel filler neck, and is sealed by a blue tank cap.

The tank for reducing agent is located on the underbody close to the spare wheel. A compensation volume has been integrated in the top part of the vent in order for the reducing agent flowing in at high speed to be filled.

S565_013

Tank for reducing agent – structure



S565_012

The boost function on the V6 engine

Using the boost function, the engine power is increased by up to 15 kW under particular driving conditions. This function is fully available between 50 and 120 km/h. It can be enabled subject to restrictions at speeds of 120 km/h or more. The function is deactivated at 140 km/h.
The engine power increase is controlled using the pedal value sender GX2. The boost function starts from a pedal value of about 70 %. The full power increase is achieved from a pedal value of 95 % onwards. The duration of the boost procedure is limited to 10 seconds.

The function is blocked for 5 seconds before a further boost procedure can be activated.

The function is deactivated under the following conditions:

- Towing a trailer
- Charge air temperature greater than 55 °C
- Exhaust gas temperature greater than 830 °C

The boost function is activated or deactivated using a characteristic map ramp so as to avoid noticeable torque jumps.

Engine/gearbox combinations (4-cylinder engines)

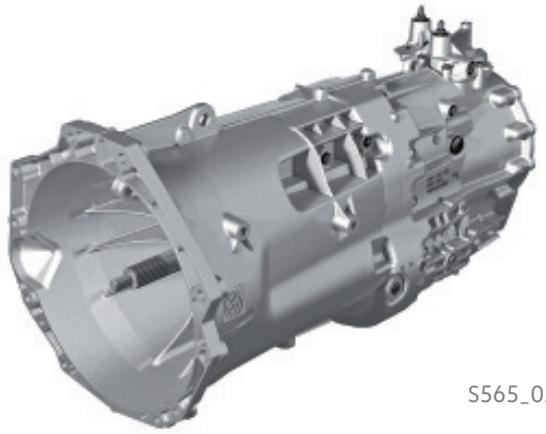
Until further notice, the tried-and-tested 4-cylinder engines will continue to be offered in specific EU4 markets.

	2.0 l TDI engine 103 kW CNFB	**2.0 l TDI engine 132 kW CNEA, CSHA**	**2.0 l TSI engine 118 kW CFPA**
			
6-speed Manual gearbox 0C6 rear-wheel drive			
6-speed Manual gearbox 0C6 four-wheel drive			
8-speed Automatic gearbox 0CM four-wheel drive			

For more information about the 4-cylinder engines, please refer to the Self-Study Programme no. 463 "The Amarok 2010".

The 6-speed manual gearbox 0F6

- The newly developed 6-speed manual gearbox is used in conjunction with the V6 engine.
- The gearbox has a robust structure and is designed for the specific requirements of commercial vehicles.



S565_050

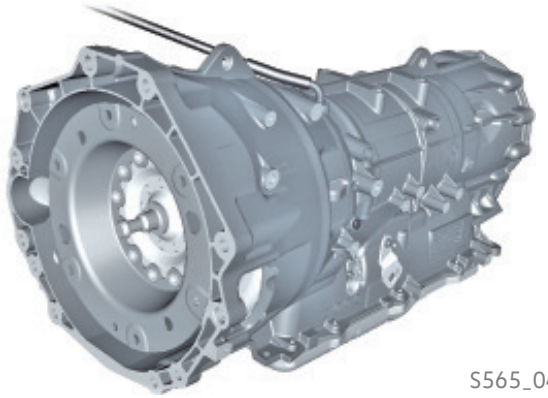
Technical data

Developer/manufacturer	ZF Friedrichshafen AG
Gearbox designation	at ZF: 6S480VO at VW: ML410-6A in service: manual gearbox 0F6
Gearbox features	2-shaft manual gearbox with single and multi-synchronised gear stages. The gearbox comprises an input shaft in conjunction with a coaxial output shaft, as well as a layshaft and a reverse shaft for reverse gear. The same gear ratios are used with all engines.
Gearbox code in service	e.g. RKJ (4x4 without neutral sensor) RKK (4x4 with neutral sensor) RKM (4x2 with neutral sensor)
Torque	max. 500 Nm
Gear spread	7.8
Gear oil specification	Synthetic gear oil (SAE 75W-80)
First fill by the manufacturer	approx. 1.8 l
Oil change interval	Lifetime fill
Length	727 mm
Weight	59 kg
Shaft clearance	92 mm

The familiar 6-speed 0C6 manual gearbox continues to be used for the 4-cylinder TDI and 4-cylinder TSI engines.

The 8-speed automatic gearbox 0DR

- 2-damper converter
- Lightweight construction by design measures
- 1st gear as low-ratio moving-off gear for off-road use and towing trailers (no additional reduction box required)
- 8th gear with high ratio for reducing engine rpm and consumption



S565_049

Technical data

Developer/manufacturer	ZF Friedrichshafen AG
Gearbox designation	at ZF: 8HP70 at VW: AL550-8A in service: automatic gearbox 0DR
Gearbox features	Electro-hydraulically controlled 8-speed planetary gearbox with hydrodynamic torque converter and torque converter lock-up clutch with controlled slip
Control	Mechatronics (integration of the hydraulic control unit and electronic controller in one unit)
Torque	max. 550 Nm
Achieving maximum speed	150 kW engine: in 8th gear 165 kW engine: in 7th gear
Operating modes	Automatic, S and Tiptronic mode
Gear ratios	8 forward gears, 1 reverse gear
Gear spread	7.071
First fill by the manufacturer	approx. 10 l
Fill quantity of ATF cooling system	approx. 0.6 l
Oil change interval	Lifetime fill
Length	726.9 mm

Basic information on the 8-speed automatic gearbox in the Amarok is available in Self-Study Programme no. 507 "Amarok 2012 - The 8-speed automatic gearbox 0CM".

The familiar 8-speed automatic gearbox 0CM continues to be used for the 4-cylinder TDI engine CSHA .

Running gear and driver assistance systems at a glance

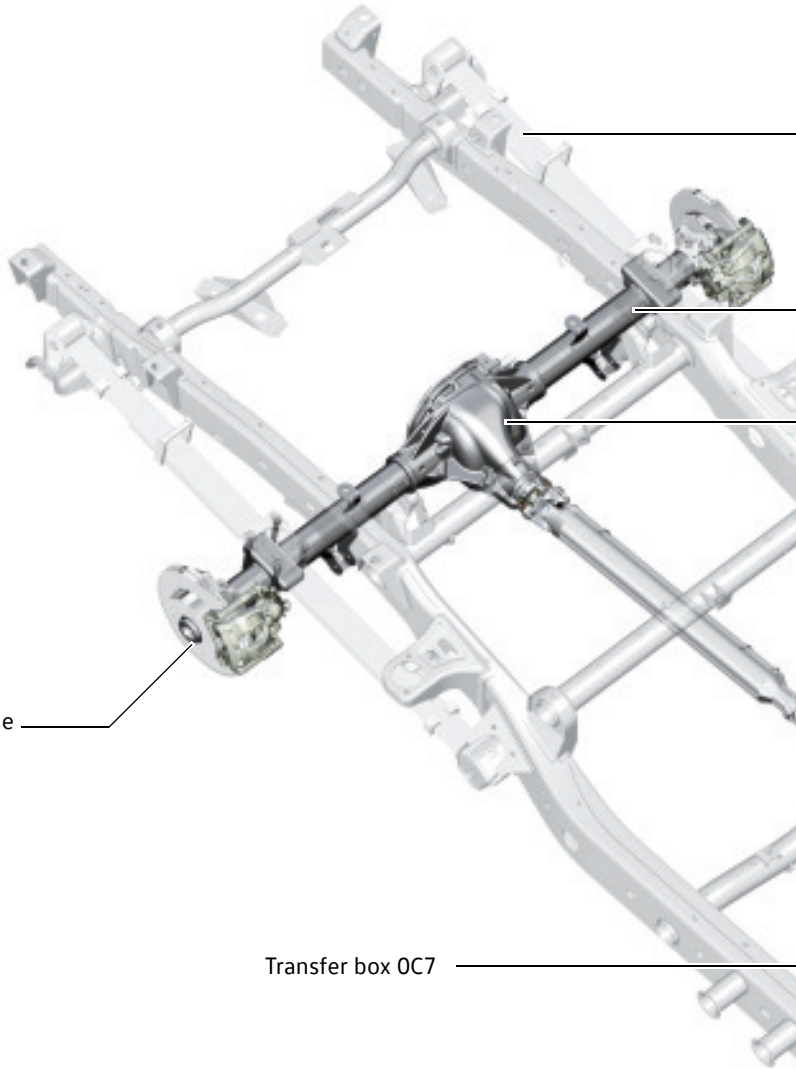
The overview shows important running gear equipment of the Amarok 2017 that is fitted as standard and optionally.

Running gear

The design of the running gear and brake system is based on the technology of the previous model.

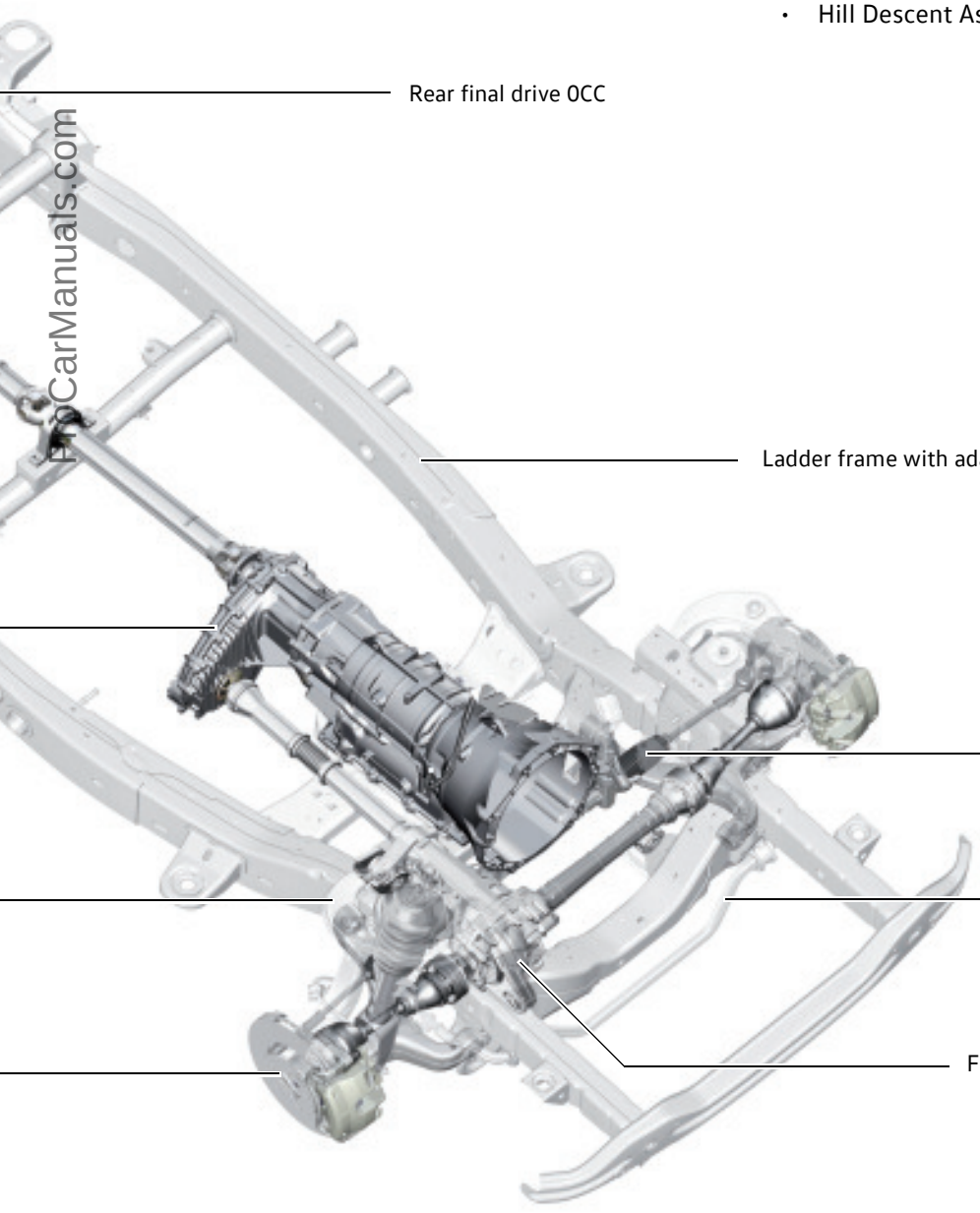
- McPherson strut front suspension
- Rear axle with leaf springs
- Ladder frame

The 150 kW and 165 kW vehicles with 3.0 l V6 TDI engine are equipped as standard with disc brakes on the rear axle.



Driver assist systems

- Cruise control system (CCS)
- Multicollision brake
- Parking aid
- Reversing camera system (rear-view camera system)
- Tyre pressure monitoring system
- Hill Descent Assist



S565_020

Rear brake system

With the launch of the V6 engine, 16-inch disc brakes are used on the rear axle of the Amarok for the first time. This applies both to the 150 kW and the 165 kW variants.

The situation is different in vehicles with the 120 kW engine. These continue to be fitted with 16-inch disc brakes at the front and drum brakes at the rear. Depending on the market, vehicles with this engine version can also be equipped with 17-inch disc brakes at the front and 16-inch disc brakes at the rear.

The direction of rotation for resetting the rear pistons is different on the right and left sides of the vehicle. Observe the details in the workshop manual.

S565_018

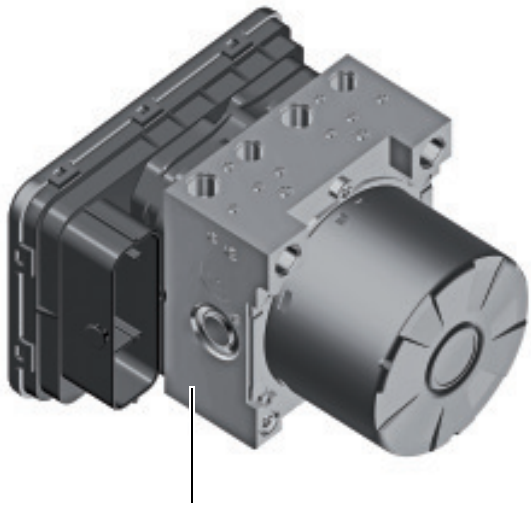
The electronic brake system

The brake system in the Amarok has familiar functions such as:

- ESC
- ABS/Offroad-ABS
- Hill Hold Assist
- Hill Descent Assist
- Multicollision brake

The ABS control unit J104 is the MK 100 model from Continental. It contains the following components:

- Yaw rate sender G202
- Lateral acceleration sender G200
- Longitudinal acceleration sender G251



ABS control unit J104

S565_019

The multicollision brake

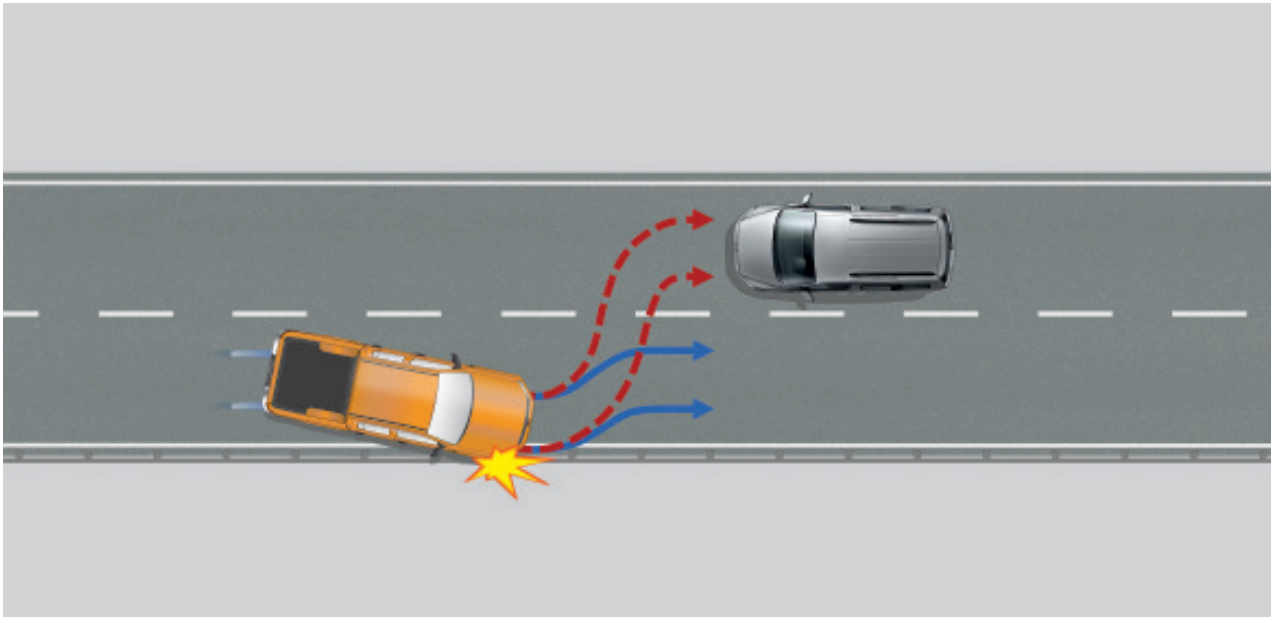
About 22 % of all accidents involving personal injury are multicollisions. Multicollisions are collisions in which the first impact is followed by further collisions, e.g. with side barriers or oncoming traffic.

Function

The multicollision brake triggers automatic brake intervention when a first collision is detected. The automatic application of the brakes aims to prevent subsequent collisions or, at least, reduce the impact energy of a subsequent collision. The multicollision brake decelerates the vehicle at maximum 6 m/s^2, at the same time as activating the emergency brake light and the hazard warning lights.
The ESP lamp in the instrument cluster informs the driver about the brake intervention. In all cases, the multicollision brake performs braking down to a vehicle speed of 10 km/h. In this way, the vehicle can remain under the driver's control even after a collision, depending on the accident situation.

To trigger the multicollision brake, the airbag control unit sends a corresponding message to the ABS control unit. Exclusively the sensors of the airbag control unit are used for activating the multicollision brake.

The multicollision brake can be overridden by the driver at any time. If the driver accelerates or presses the brake pedal for an even higher deceleration, the system is overridden.



S565_024

Tyre Pressure Monitoring System with autolocation function

The Tyre Pressure Monitoring System (TPMS) is used for monitoring the tyre pressures. Depending on the equipment, the driver can select the tyre type in the instrument cluster. The associated nominal and actual pressures are shown on the display of the MFD Plus or MFD Premium.

No pressures are shown on the display if the simple MFD is fitted. In this case, the system is selected and calibrated using the Menu/Time and Trip/Set buttons.

At cyclical intervals, the tyre pressure sensors fitted in the wheels send information to the tyre pressure control unit J502. This includes the ID of the sensor, the direction of rotation and the current tyre pressure of the wheel in question. This data is sent both while driving and when stationary. The sensors send information to the control unit via an HF datagram. The tyre pressure control unit evaluates the datagrams and, together with the level evaluation, the sensors are automatically assigned their positions on the vehicle.

Display and operation

In vehicles with MFD Plus or MFD Premium, the current tyre pressures and the set nominal tyre pressures can be displayed in the instrument cluster menu under Vehicle status. The values displayed "in the vehicle" are the nominal pressure values for the axle in question. In vehicles without a display in the instrument cluster, the tyre pressures are stored using the buttons on the instrument cluster.

MFD Plus

S565_031

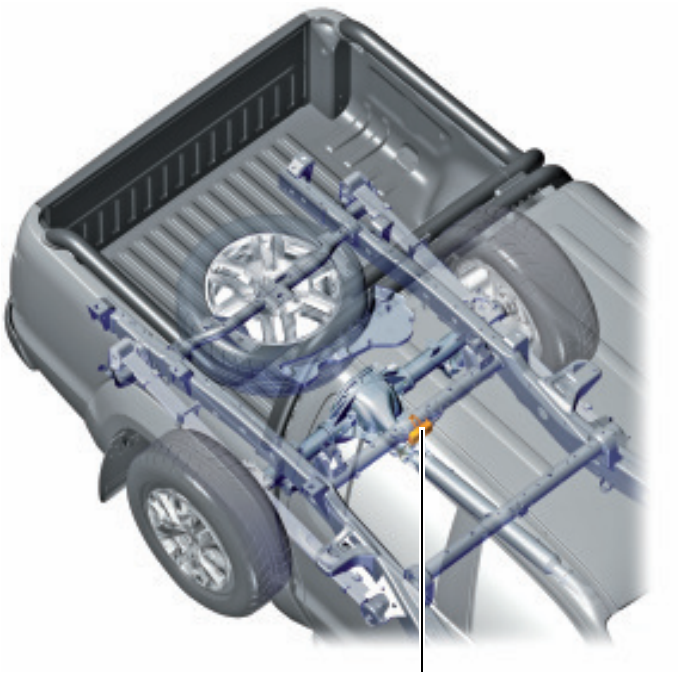
MFD Premium

S565_032

For information about display and calibration of the tyre pressures, please refer to the Owner's Manual of the vehicle.

Tyre Pressure Monitoring System control unit J502

The Tyre Pressure Monitoring System control unit J502 is located on the underbody in the area of the rear axle on a crossways tube of the ladder frame. The aerial for the tyre pressure monitoring is integrated in the control unit.



Tyre Pressure Monitoring System control unit J502

S565_034

Tyre pressure sensors G222 – G225

The tyre pressure sensors G222 – G225 are screwed onto the tyre valves. The measured tyre pressures are sent to the TPMS control unit in HF datagrams.

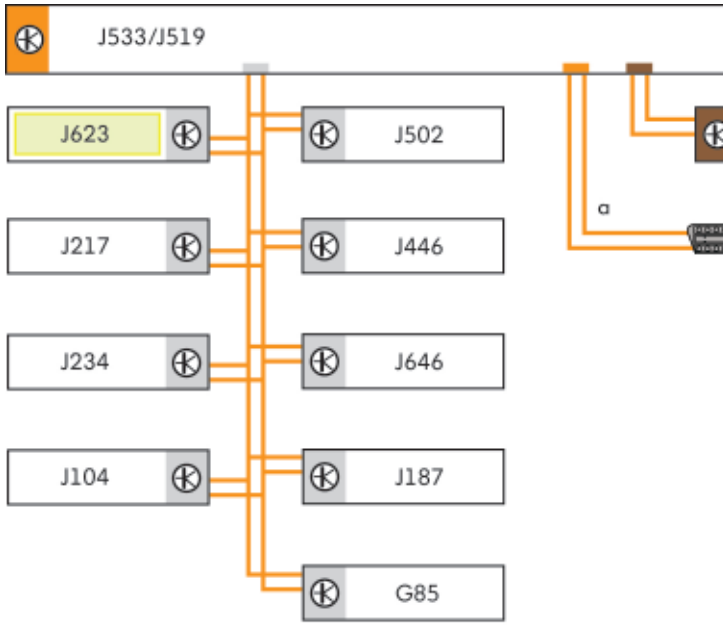
S565_035

For more information about the Tyre Pressure Monitoring System, please refer to Self-Study Programme no. 541, "Tyre Pressure Monitoring Systems 2014".

Networking concept

The networking concept of the Amarok 2017 is based on that of the Amarok 2010.

The overview shows all control units that can be connected to the bus systems. Some of the control units shown here are optional or vehicle-specific equipment.

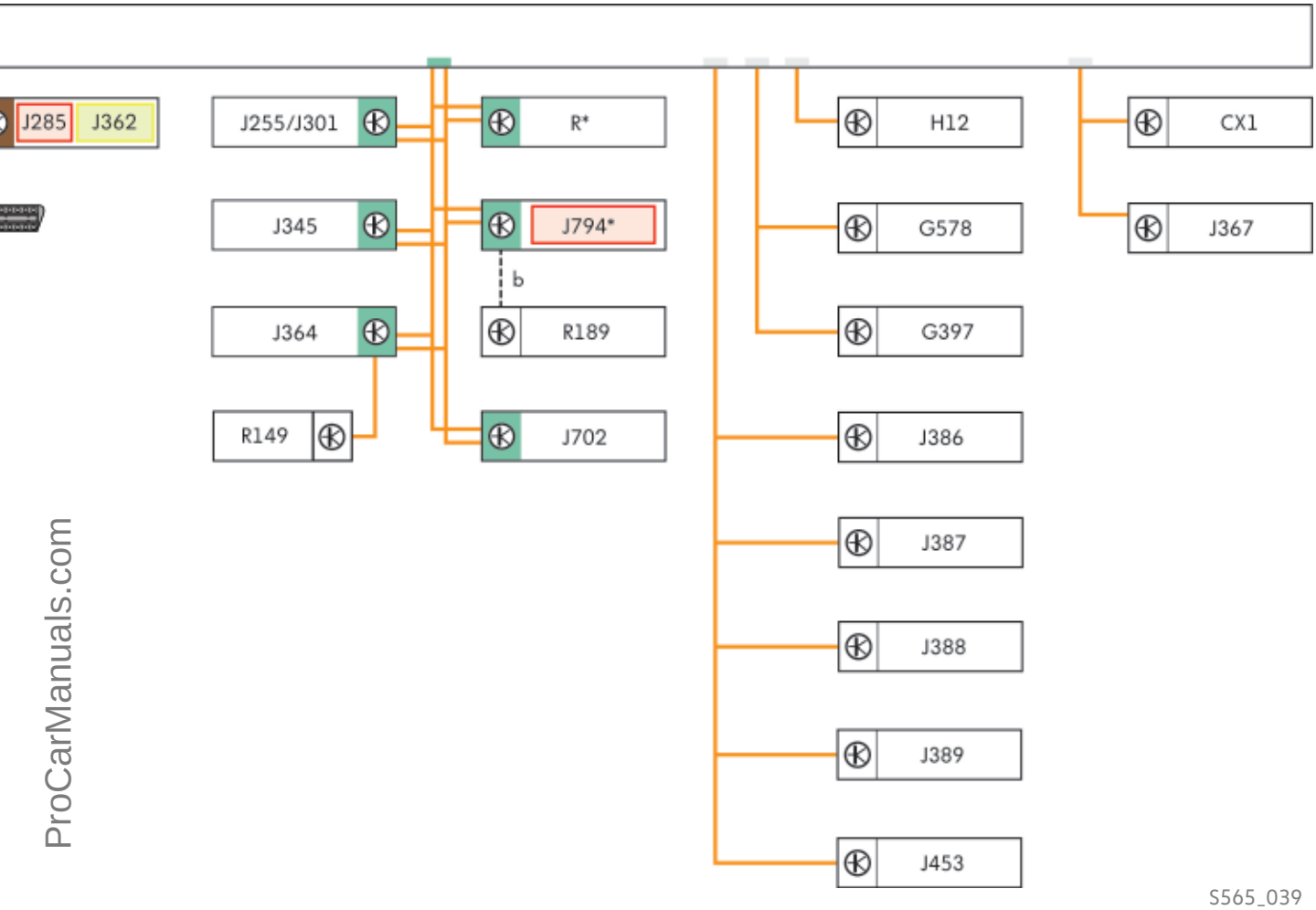


- Powertrain CAN bus
- CAN bus convenience/infotainment
- LIN bus
- Dash panel insert CAN bus
- CAN bus line
- LIN bus wire
- Immobiliser participant
- Component protection participant

a CAN bus diagnosis
b FBAS (colour image muting signal)
* Depending on equipment R or J794 fitted.

Key

CX1	Alternator with voltage regulator
G85	Steering angle sender
G397	Rain and light sensor
G578	Anti-theft alarm sensor
H12	Alarm horn
J104	ABS control unit
J187	Control unit for differential lock
J234	Airbag control unit
J217	Automatic gearbox control unit
J255	Climatronic control unit
J285	Control unit in dash panel insert



J301	Air conditioning control unit (Climatic)
J345	Trailer detector control unit
J362	Immobiliser control unit
J364	Auxiliary heater control unit
J367	Battery monitor control unit
J386	Driver door control unit
J387	Front passenger door control unit
J388	Rear left door control unit
J389	Rear right door control unit
J446	Parking aid control unit
J453	Multifunction steering wheel control unit
J502	Tyre Pressure Monitoring System control unit
J519	Vehicle electrical system control unit
J533	Data bus diagnostic interface
J623	Engine control unit
J646	Differential control unit
J702	Display unit for roof
J794	Control unit 1 for information electronics
R	Radio
R149	Radio receiver for auxiliary water heater
R189	Reversing camera

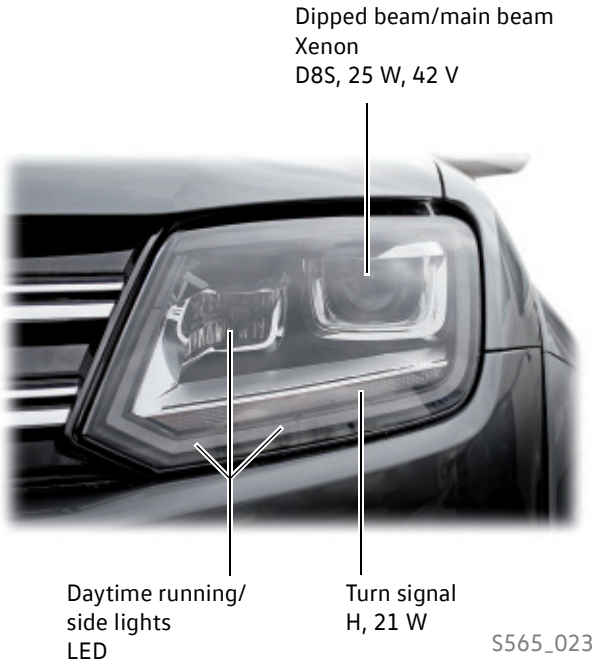
Lighting system

Headlights

As already in the Amarok 2010, 2 different halogen headlights are fitted depending on the market and equipment.

- H15 - headlights with headlight range control and H15 bulb for main beam and daytime running light
- H1 - headlights without beam adjustment and H1 bulb for high beam

In the course of the model uprating, it also became possible to equip the Amarok with xenon headlights. The headlight range control is adjusted manually using a headline range control regulator in the dash panel.



Fog lights/cornering light

The fog lights are each equipped with an H11-55 W bulb.

If a static cornering light is fitted, the fog light on the inside of the corner is switched on depending on the speed, up to 40 km/h, and if the lighting system is switched on and the steering wheel is turned or a turn signal is activated. This provides better illumination of the edge of the road on the inside of the corner.

Tail light clusters

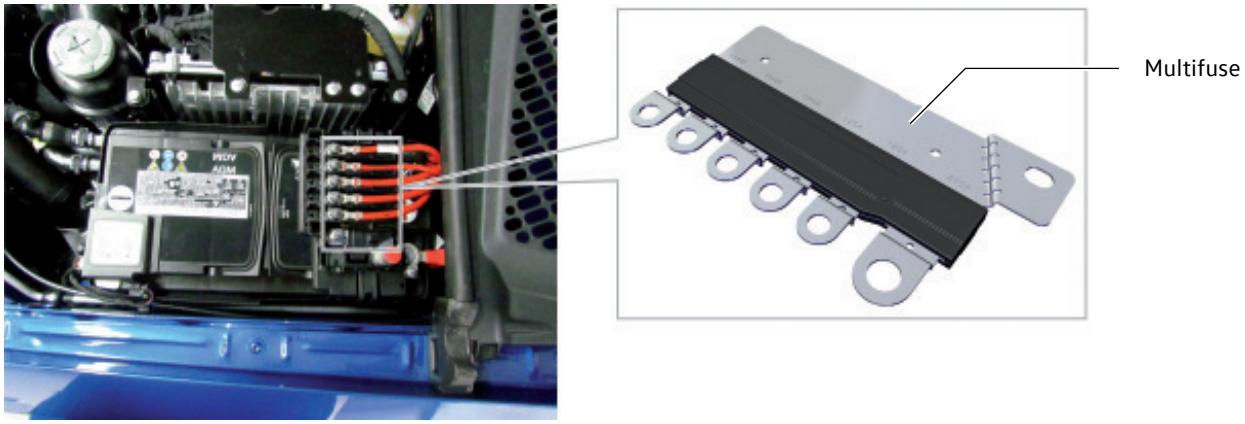
The rear lights of the Amarok 2017 are unchanged compared to the previous models.

The installation locations of the fuses

Fuse holder in engine compartment

The main fuses (SA) are located under a cover where they are connected to the positive terminal of the battery.

All SA fuses are grouped together in one component, the multifuse.



S565_059

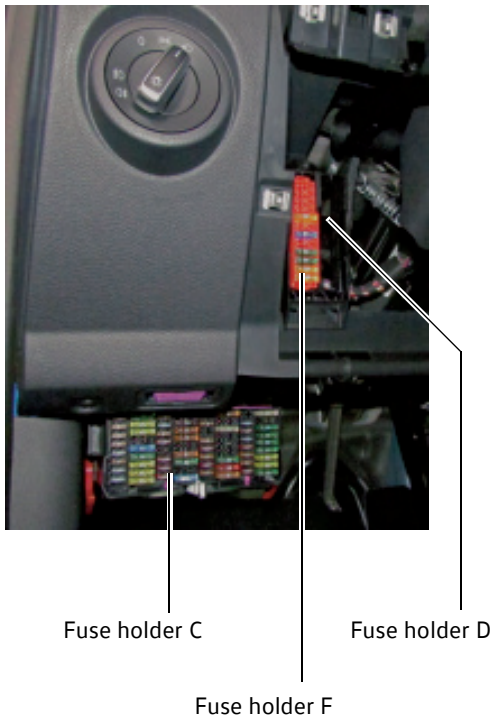
Fuse holder in the interior

The fuses (SC) are located on the fuse holder C, below the dash panel on the driver side. To make it possible to reach the fuse holder, it can be unlocked and swivelled downwards.

The relay holder 1 is located above the fuse holder C. There are additional fuses on the relay holder for loads which draw a high current.

The fuse holders F and D are located next to the relay holder 1. At the moment, the fuse holder D is not assigned.

The relay holder 2 is located on the right above the pedal cluster. The fuses for the seat adjustment are located here, depending on the equipment.



S565_060

The 3rd brake light

As standard, the Amarok 2017 is equipped with a 3rd brake light in LED technology.

The previous 3rd brake light with integrated loadspace lighting can be ordered as an option. The loadspace lighting can be activated for 15 minutes using a button when the ignition is switched off.

3rd brake light

S565_061

Loadspace lighting button

S565_063

3rd brake light with loadspace lighting

S565_062

The component protection

The control unit in the dash panel insert J285 is the master for component protection. The component protection is intended to prevent components being exchanged without authorisation. The participants in the component protection are checked when terminal 15 is switched on.

S565_054

For more information about component protection, refer to Self-Study Programme no. 517 "The Golf 2013 electric".

The dash panel insert

A new generation of instrument clusters is being introduced in the Amarok 2017. The instrument clusters contain the immobiliser control unit J362. There are 3 different variants depending on equipment:

- Dash panel insert with multifunction display (MFD)
- Instrument cluster with multifunction display MFD Plus
- Instrument cluster with MFD Premium

With MFD

This variant has a black/white segment display with a maximum of 480 display segments.
The time can be set or the trip recorder reset using adjustment buttons. Furthermore, sub-menus can be called up using the, such as the AdBlue range.

S565_030

More information about the controls can be found in the vehicle wallet.

With MFD Plus

This variant has a black/white TFT display as MFD with a dot matrix of 110 x 166 pixels.
Compared to the instrument cluster with MFD, it has an advanced display possibility as a precondition for fitting various equipment items such as driver assist systems.

S565_029

With MFD Premium

This variant has a colour TFT display with a dot matrix of 320 x 240 pixels.
It can display 16.7 million colours. The MFD Premium can also display elaborately animated picture transitions in comparison to MFD Plus, such as are required for the lane recommendations of the navigation system.

S565_028

The reversing camera R189

Fitting location

In the Amarok 2017, the reversing camera R189 is used and improves visibility to the rear when reversing. It is attached under the tailboard, and supplies a real video image of the area behind the vehicle. The reversing camera can be combined with the following radio navigation systems: Composition Colour, Composition Media and Discover Media.

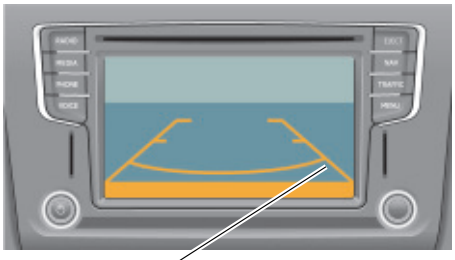
Reversing camera R189

S565_056

Radio display

When terminal 15 is on and reverse gear engaged, the video signal from the camera is shown on the screen.
The screen shows the real video image. The static help lines that overlay the surrounding picture in the colour display are applied by the screen and are used for gauging distances better. The reversing camera R189 does not require calibration.

Discover Media display example



S565_055

Static lines

The equipment variants

The following equipment variants can be fitted in the vehicle:

- Manual heating and ventilation system
- Semi-automatic Climatic
- Fully-automatic Climatronic

Climatronic

The Climatronic features a new control unit in the Amarok 2017. The control elements have been modified and the range of functions adapted.

S565_051

Seat heating

The buttons for operating the seat heaters are located in the button panels on the left and right of the selector lever. It is possible to select between 2 heating levels by pressing the buttons several times.

S565_053

Auxiliary heater

The "Thermo Top Vlies" model made by "Webasto" is installed as the auxiliary heater. The control panel is located in the roof console.

S565_052

For more information about the auxiliary heater, refer to Self-Study Programme no. 502 "Thermo Top V and Thermo Top Vlies" auxiliary heaters".

The radios and navigation systems

As already in the T6 2016 and the Caddy 2016, the Amarok 2017 will feature the new generation of radios and navigation systems. All devices can be combined with a provision for mobile telephone.

The following devices are available:

- Composition Audio radio
- Composition Colour radio
- Composition Media radio
- Discover Media radio/navigation system

S565_040

The Discover Media radio navigation system

The following functions have been optimised or added:

- Optimised configuration wizard
- Optimised voice control
- WLAN connection via WPS quick connection
- Simultaneous use of hotspot and client function
- Display of the voice amplification level within the volume display
- Linking information for Volkswagen apps and services via a QR code
- New media control applications*

S565_057

* Will be introduced at a later date.

External media interface

The Composition Colour radio has an external USB connection fitted. The Composition Media radio and Discover Media radio navigation system have an external USB and AUX-IN connection. All variants have Apple support. The installation location is the storage compartment in the centre console.

S565_058

Car-Net

The following services are currently available in the Amarok 2017:

- **Guide & Inform** (improved navigation and infotainment)
- **App Connect** (smartphone connections and apps)

S565_041

For more information about the radios and navigation systems as well as Car-Net, refer to Self-Study Programme no. 562 "Infotainment and Car-Net in T6 2016 and Caddy 2016".

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