Maintenance
Rapid NH 2013 ➤
Rapid NH 2014 ➤

Edition 06.2018

Maintenance

Heading

1. General points
2. Inspections
3. Engines
4. Gearbox
5. Chassis
6. Electrical System
7. Body
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9. Miscellaneous

Technical information should always be available to the foremen and mechanics, because their careful and constant adherence to the instructions is essential to ensure vehicle road-worthiness and safety. In addition, the normal basic safety precautions for working on motor vehicles must, as a matter of course, be observed.

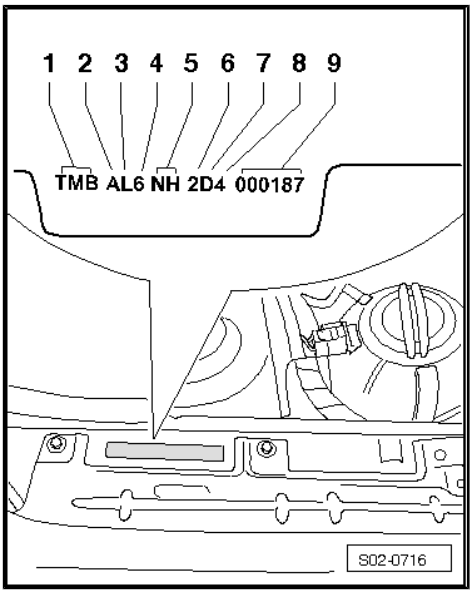
Contents

1 General points

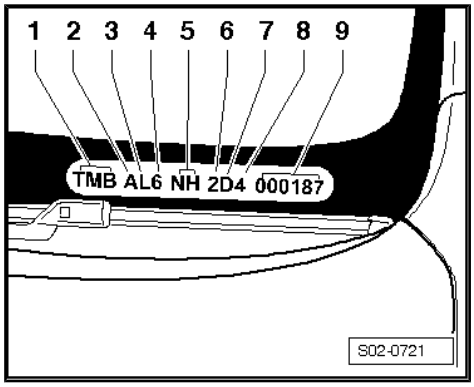
(SIGG000213; Edition 06.2018)

1.1 Vehicle identification number

The vehicle identification number (chassis number) is located on the extension of the top right trailing arm (next to the coolant expansion reservoir).



The vehicle identification number can also be found at the bottom left of the front window corner.



1 - Manufacturer's world code

XW8 - Manufacturing plant in Russia

XWW - Manufacturing plant in Kazakhstan

TMB - other Škoda manufacturing plants

2 - Body type:

A - Sedan, left-hand drive, 4x2

B- Sedan, left-hand drive, 4x2

E - Spaceback, left-hand drive, 4x2

F - Spaceback, right-hand drive, 4x2

N - multi-purpose vehicle, left-hand drive, 4x2

P - multi-purpose vehicle, right-hand drive, 4x2

1 - vehicle category N1, left-hand drive, 4x2

2 - vehicle category N1, right-hand drive, 4x2

3 - Engine type:

A - 1.2 ltr./66 kW/petrol engine

B - 1.2 ltr./81 kW/petrol engine

C - 1.6 ltr./81 kW/petrol engine

D - 1.6 l/77 kW/petrol engine

E - 1.6 l TDI/85 kW/diesel engine

F - 1.4 l TDI/66 kW/diesel engine

G - 1.6 l/66 kW/petrol engine

H - 1.2 ltr./55 kW/petrol engine

J - 1.6 l TDI/66 kW/diesel engine

L - 1.6 l TDI/77kW/diesel engine

M - 1.2 l/63 kW/petrol engine

N - 1.2 l/77 kW/petrol engine

P - 1.0 l/70 kW/petrol engine

R - 1.0 l/81 kW/petrol engine

T - 1.4 l/90/92 kW/petrol engine

4 - Airbag System:

1 - 1 Front airbag

2 - 2 Front airbags

4 - 2 Front + 2 side airbags

6 - 2 front + 2 side + 2 head airbags

B - total weight 1360 kg to 1814 kg

C - total weight 1814 kg to 2268 kg

5 - Vehicle type:

NH - RAPID NH

6 - Internal code

7 - Model year:

C - 2012

D - 2013

E - 2014

F - 2015

G - 2016

H - 2017

J - 2018

K - 2019

8 - Manufacturing plant:

4 - Mladá Boleslav

B - Solomonovo

D - Ust-Kamenogorsk

K - Kaluga, Grabcevo

L - Relizane, (Algeria)

9 - Chassis number

Note

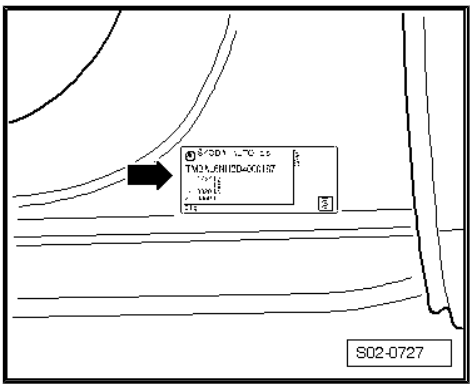
*The body manufactured as spare part is identified by the sign # before and after the vehicle identification number instead of the standard * sign before and after the vehicle identification number.*

1.2 Type plate

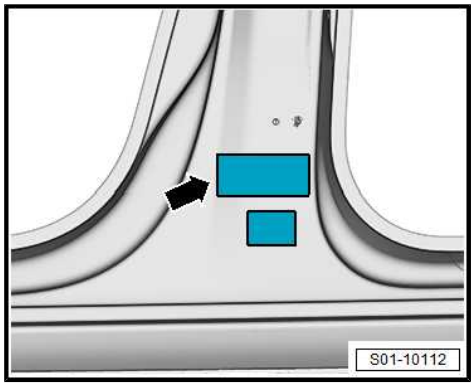
Identification plate up to MY 2015

The identification plate up to MY 2015 is located on the bottom of the right B pillar -arrow-.

Identification plate starting from MY 2016



The identification plate starting from MY 2016 is located on the bottom of the right B pillar -arrow-.



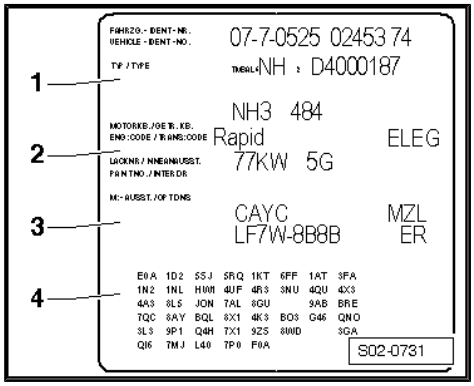
1.3 Vehicle data sticker

WARNING

Only valid for vehicles manufactured up to CW 45/2017

The vehicle data carrier is not available for cars manufactured after CW 45/2017.

The vehicle data sticker is located in the luggage compartment on the left near the spare wheel
⇒ “7.10 Affix vehicle data sticker”, page 175 .



1.4 Storage of ŠKODA new vehicles

Notes for the storage of new vehicles ⇒ B2B portal/technical information/instructions/care programme for new and used vehicles - implementation rule / system .

Service for exhibited and stored vehicles ⇒ Maintenance tables .

1.5 Vehicle handover from stock

– Before starting a stock vehicle, carry out a “Delivery Inspection”.

– Check battery no-load voltage, if the no-load voltage is less than 12.5 V fully charge the battery.

1.6 Additional customer information regarding inspection and maintenance

Information regarding the use of vehicles under “severe conditions”:

– It must be pointed out to the customer that the inspection intervals are based on normal operating conditions.

– Under “severe conditions” the inspection intervals must be shortened.

"Severe conditions" exist, for instance, if the vehicle is operated continuously under one or several of the conditions stated below:

- ♦ Towing a trailer or when fitted with a roof rack.
- ♦ Operated on dusty, poor, muddy roads or roads treated with road salt.
- ♦ Driven for short distances and at ambient temperatures below freezing point.
- ♦ High cold start proportion
- ♦ Frequent extended operation in idle (e.g. taxies).
- ♦ Operation with diesel fuel with increased sulphur content.

– If one or several of these "severe conditions" applies, please advise your customer whether it is necessary to have work carried out between the normal service intervals, such as:

- ♦ Changing the engine oil before the normal specified interval.
- ♦ Cleaning or replacing the air filter element in the air filter housing.

General information:

– Notify the customer so that he has each inspection carried out at the right time and none are forgotten. This is necessary to ensure the operational and functional safety of the vehicle and to maintain claims to warranty.

– Draw the attention of your customer to the sticker affixed to the side of the dash panel (including the service event next due) - up to MY 2013 only.

– Insert a comment into the service schedule/in the DSP (Digital Service Schedule).

– An oil change service should be undertaken at the prescribed interval ⇒ "2.7 service intervals", page 37 .

– Notify the customer so that he has each inspection carried out at the right time and none are forgotten. This is necessary to ensure the operational and functional safety of the vehicle and to maintain claims to warranty.

Service interval display

QI1 - Service display 5,000 km or 1 year (fixed)

QI2 - Service display 7,500 km or 1 year (fixed)

QI3 - Service display 10,000 km or 1 year (fixed)

QI4 - Service indicator 15,000 km or 1 year (fixed)

QI6 - Service indicator maximum 30,000 km or 2 years (flexible)

WARNING

The service display in the dash panel insert will be controlled worldwide with these numbers.

The QG1/QG0 numbers now only control the hardware for maintenance interval extension (including the oil level and oil temperature sender and whether this is/is not present at the oil sump).

Specifically, this can mean that a vehicle with PR number QI4 – service display of 15,000 km or 1 year (fixed) – can also have the PR number QG1 – service interval extension.

Changing the code of the service intervals

Note

Conditions for recoding of service intervals
⇒ *"6.11 Changing the code of the service intervals", page 157* .

1.7 Determine the age of the vehicle

The age of the vehicle can be determined according to the sticker affixed to the window.

-Arrow 1- Production date

-Arrow 2- Calendar week

1.8 Checking the vehicle log book

The vehicle log book can be checked for completeness on the B2B portal (Czech Republic and importers):

Czech Republic - ⇒ Information / ŠKODA AUTO ČR / Customer service / service workshop technology / forms, manuals

Export (importers) - ⇒ Information / ŠKODA AUTO / After sales / Workshop support / Board Literature

Export (dealers) - The information can be obtained from the importer in the relevant country.

2 Inspections

2.1 Pre-Delivery Inspection -PDI- (Export)

- Immediately check the newly delivered vehicles for completeness and damage (liquidate the transport damage at the expense of the insurance). For this purpose, compare as-delivered condition of vehicle with order form.
- Incorrect or missing parts must be handled according to the instruction in the ⇒ Warranty manual, chap. 7.2.9 (B2B Portal) .
- If the vehicles are not transported onwards within two weeks or delivered to the customer, the “care programme for new and used vehicles” must be carried out ⇒ (B2B portal - technical information - instructions) .

Check transport damage (bodywork, paintwork, upholstery, interior trim, carpeting, footmats, tyres, wheels)	⇒ “7.4 Checking body paintwork and underbody protection for damage (before sale)”, page 170

2.2 Pre-sales Inspection - domestic (Czech Republic)

- Immediately check the newly delivered vehicles for completeness and damage (liquidate the transport damage at the expense of the insurance). For this purpose, compare as-delivered condition of vehicle with order form.
- Incorrect or missing parts must be handled according to the instruction in the ⇒ Warranty manual, chap.7.5.1 (portal B2B) .
- If the vehicles are not transported onwards within two weeks or delivered to the customer, the “care programme for new and used vehicles” must be carried out ⇒ (B2B portal - technical information - instructions) .

Compare as-delivered condition of vehicle with order form	Chapter
♦ Engine fitted	⇒ “3.2 Engine fitted”, page 52
♦ Type plate ♦ Vehicle data carrier (comparison with a driven in identification number) - only applies to vehicles manufactured to CW 45/2017	⇒ “1.2 Type plate”, page 3 , ⇒ “1.3 Vehicle data sticker”, page 4
♦ Colour of paintwork, badges, inscriptions	
♦ Seats (cover, colour) interior trim (colour)	
♦ Radio, speakers, aerial	
♦ Central locking system, anti-theft alarm system	
♦ Wheels, tyres	
♦ Other equipment (all equipment fitted in proper condition)	
Inspections or work to be carried out and noted in the form	
Vehicle (exterior)	
– Plastic and rubber parts - cleanliness and damage	
– Inspect bodywork and paintwork for damage	⇒ “7.4 Checking body paintwork and underbody protection for damage (before sale)”, page 170
– Check ignition key for cleanliness and completeness	
– Operation of door handles, child safety locks, door contact switches and all locks and keys (including spare keys), doors, boot lid/tailgate, fuel filler cap, front flap lock	⇒ “7.8 Door locks, locking buttons and child lock: check functioning correctly”, page 174
– Function of the anti-theft warning system	
– Tighten the wheel bolts tor the specified torque (steel and light alloy wheels 120 Nm), install wheel trim caps	⇒ “5.8 Tightening wheel bolts to specific torque”, page 138

– Check the tyre pressure (including spare wheel or emergency wheel [1]), if necessary correct the tyre pressure to partial load, fit valve caps	⇒ “5.7 Tyres: check”, page 127
– For vehicles in stock for more than 12 months: change the brake fluid	⇒ “5.4 Change brake fluid”, page 119
Engine compartment (from above)	
– Checking battery	⇒ “6.4 Checking battery”, page 142
– Check tight connection of electric cables and plug connections (in particular battery cables)	
– Leak-tightness of engine, gearbox, cooling system, braking system and fuel system	⇒ “3.3 Visual inspection of engine and parts in the engine compartment for leaks and damage”, page 54 , ⇒ “5.3 Inspecting brake system for leaks and damage”, page 118
– Engine oil level (in-between markings on dipstick)	⇒ “3.9 Inspecting engine oil level”, page 62
– Brake fluid level (at “MAX” marking)	⇒ “5.5 Brake fluid level: check.”, page 126
– Coolant level	⇒ “3.11.2 Inspecting coolant level (volume)”, page 81
– Fill up liquid in washer fluid reservoir and ensure that there is antifreeze additive if there is any risk of frost	
– Check the function of all spray nozzles (windscreen, headlights) and adjust if necessary	⇒ “7.7 Windscreen wash/wipe system: check”, page 170
Vehicle interior	
– Proper operation of seat belts, seat belt height adjuster, power windows	
– Inspect upholstery, interior trim, carpeting/footmats for cleanliness and damage	
– Key switch for front passenger airbag deactivation: check “ON/OFF” is working and switch to “ON”	⇒ “7.2 Front passenger airbag: check ON/OFF is working and switch to ON ”, page 168
– Switch off battery transport mode	⇒ “6.16 Switch off battery transport mode”, page 161
– Adapt language variants to driver's instructions	⇒ “6.8 Adapt language variants to driver's instructions”, page 146
– Set the temperature to 22 °C (Climatronic)	⇒ “6.9 Climatronic: set the temperature to 22 °C”, page 147
– Inspect all switches, all electrical components, gauges/indicators and controls	⇒ “6.1 Electric consumers: check they are functioning”, page 141
– Checking proper operation of infotainment radio/navigation	⇒ “6.5 Checking proper operation of infotainment radio/navigation”, page 142
– Set clock	⇒ “6.6 Setting clock”, page 144
– Reset service interval display	⇒ “6.10 Resetting service interval display (SID) ”, page 148
– Install net in luggage compartment (if available)	
– Install the footmats and aerial supplied in the vehicle	
– Stick the sticker Škoda Assistance	⇒ “7.11 Stick the sticker Škoda Assistance”, page 176

– Check vehicle log book for completion, correct language - all in the vehicle log book pouch	⇒ “1.8 Checking the vehicle log book”, page 6
– Attach the “ŠKODA CONNECT” mirror tag to the interior mirror (only for vehicles with PR numbers EL2, EL3, EL5)	⇒ “7.14 Attaching the ŠKODA CONNECT mirror tag”, page 177
Underside of vehicle (on lift platform)	
– Inspect underbody (underbody protection for damage)	⇒ “7.4 Checking body paintwork and underbody protection for damage (before sale)”, page 170
– Check engine, gearbox, final drive, steering, brake systems, axles and boots of steering joints for leaks and damage. Correct installation of brake hoses and cables, fuel lines including ventilation of fuel system	⇒ “3.3 Visual inspection of engine and parts in the engine compartment for leaks and damage”, page 54 ,
– Inspect tyres and wheels for damage	⇒ “5.7.1 Inspecting tyres (including spare wheel)”, page 127
– Remove front axle blocking components (vehicles with basic chassis)	⇒ “5.9 Transport lock: remove the front axle locking components”, page 138
Concluding operations	
– Perform a test drive.	
– Query the event memory for all systems; clear if necessary	⇒ “6.7 Connect diagnostic unit”, page 145
– Remove protective seat covers and protective film	
– Complete Service Schedule, attach vehicle data sticker in the Service Schedule and on the luggage compartment floor next to the spare wheel. (Valid for vehicles up to MY 2016) – Fill out the Owner's Manual, stick a part of the vehicle data sticker without a legend in the Owner's Manual and a part of the vehicle data sticker with the legend on the luggage compartment floor in the vehicle next to the spare wheel. (Valid for vehicles from MY 2017 up to CW 45/2017) – Complete operating instructions - applies to vehicles manufactured from CW 45/2017 (vehicle data carrier not required)	⇒ “7.10 Affix vehicle data sticker”, page 175
– Create an entry in the DSP (digital service schedule)	
– Final inspection to ensure proper condition for handover to customer	

1) If present

2.3 Delivery Inspection (Export)

- If the vehicles are not transported onwards within two weeks or delivered to the customer, the “care programme for new and used vehicles” must be carried out ⇒ (B2B portal - technical information - instructions) .

Inspections or work to be carried out and noted in the form	Chapter
Vehicle (exterior)	
– Plastic and rubber parts: cleanliness and damage	
– Inspect bodywork and paintwork for damage	⇒ “7.4 Checking body paintwork and underbody protection for damage (before sale)”, page 170
– Check ignition key for cleanliness and completeness	
– Operation of the tailgate lock and the fuel tank cap, door contact switches, operation of the door handles, door locks and safety knob, central locking from outside as well as inside, child safety locks, ability to close all locks on the vehicle using all keys (including the spare key)	⇒ “7.8 Door locks, locking buttons and child lock: check functioning correctly”, page 174
– Function of the anti-theft warning system	
– Tighten the wheel bolts tor the specified torque (steel and light alloy wheels 120 Nm), install wheel trim caps	⇒ “5.8 Tightening wheel bolts to specific torque”, page 138
– Check the tyre pressure (including spare wheel or emergency wheel [2)]), if necessary correct the tyre pressure to partial load, fit valve caps	⇒ “5.7 Tyres: check”, page 127
– For vehicles in stock for more than 12 months: change the brake fluid	⇒ “5.4 Change brake fluid”, page 119
Engine compartment (from above)	
– Checking battery	⇒ “6.4 Checking battery”, page 142
– Check tight connection of electric cables and plug connections (in particular battery cables)	
– Brake fluid level (at “MAX” marking)	⇒ “5.5 Brake fluid level: check.”, page 126
– Engine oil level (in-between markings)	⇒ “3.9 Inspecting engine oil level”, page 62
– Coolant level, special equipment antifreeze down to - 35 °C	⇒ “3.11.2 Inspecting coolant level (volume)”, page 81
– Fill up liquid in washer fluid reservoir and ensure that there is antifreeze additive if there is any risk of frost	
– Check windscreen wiper and washer system, the spray nozzle adjustment and the resting position of the windscreen wiper arms	⇒ “7.7 Windscreen wash/wipe system: check”, page 170
Vehicle interior	
– Inspect upholstery, interior trim, carpeting and footmats for cleanliness and damage	
– Inspect all switches, all electrical components, all gauges/indicators and controls	⇒ “6.1 Electric consumers: check they are functioning”, page 141

– Set the temperature to 22 °C (Climatronic)	⇒ “6.9 Climatronic: set the temperature to 22 °C”, page 147
– Key switch for front passenger airbag deactivation: check “ON/OFF” is working and switch to “ON”	⇒ “7.2 Front passenger airbag: check ON/OFF is working and switch to ON ”, page 168
– Switch off battery transport mode	⇒ “6.16 Switch off battery transport mode”, page 161
– ERA Glonass: check that the emergency call system is ready (only for vehicles with PR number NZ3)	⇒ “6.19 ERA Glonass: check that the emergency call system is ready”, page 163
– ERA Glonass: run system test (only for vehicles with PR number NZ3)	⇒ “6.20 ERA Glonass: run system test”, page 165
– Time-delayed locking mechanism after closure of tailgate - activate/deactivate (only valid for some countries)	⇒ “6.17 Time-delayed locking mechanism after closing the tailgate - activate/de-activate”, page 162
– Checking proper operation of infotainment radio/navigation	⇒ “6.5 Checking proper operation of infotainment radio/navigation”, page 142
– Set clock	⇒ “6.6 Setting clock”, page 144
– Install net in luggage compartment (if available)	
– Check vehicle log book for completion, correct language - all in the vehicle log book pouch	⇒ “1.8 Checking the vehicle log book”, page 6
– Attach the “ŠKODA CONNECT” mirror tag to the interior mirror (only for vehicles with PR numbers EL2, EL3, EL5)	⇒ “7.14 Attaching the ŠKODA CONNECT mirror tag”, page 177
– Reset service interval display	⇒ “6.10 Resetting service interval display (SID) ”, page 148
– Adapt language variants to driver's instructions	⇒ “6.8 Adapt language variants to driver's instructions”, page 146
Underside of vehicle (on lift platform)	
– Inspect underbody (underbody protection for damage)	⇒ “7.4 Checking body paintwork and underbody protection for damage (before sale)”, page 170
– Check engine, gearbox, final drive, steering, brake systems, axles and boots of steering joints for leaks and damage. Correct installation of brake hoses and cables, fuel lines including ventilation of fuel system	⇒ “3.3 Visual inspection of engine and parts in the engine compartment for leaks and damage”, page 54 ,
– Inspect tyres and wheels for damage	⇒ “5.7.1 Inspecting tyres (including spare wheel)”, page 127
– Remove front axle blocking components (vehicles with basic chassis)	⇒ “5.9 Transport lock: remove the front axle locking components”, page 138
Concluding operations	
– Perform a test drive.	⇒ “9.2 Road test”, page 188
– Query the event memory for all systems; clear if necessary	⇒ “6.7 Connect diagnostic unit”, page 145
– Complete Service Schedule, attach vehicle data sticker in the Service Schedule and on the luggage compartment floor next to the spare wheel. (Valid for vehicles up to MY 2016)	⇒ “7.10 Affix vehicle data sticker”, page 175

– Fill out the Owner's Manual, stick a part of the vehicle data sticker without a legend in the Owner's Manual and a part of the vehicle data sticker with the legend on the luggage compartment floor in the vehicle next to the spare wheel. (Valid for vehicles from MY 2017 up to CW 45/2017) – Complete operating instructions - applies to vehicles manufactured from CW 45/2017 (vehicle data carrier not required)	
– Create an entry in the DSP (digital service schedule)	
– Remove protective seat covers and protective film	
– Install the footmats and aerial supplied in the vehicle	
– Final inspection to ensure proper condition for handover to customer	

2) If present

2.4 Inspection

2.4.1 Inspection

With each inspection:

- Check the use by date of the first aid kit.
- Ask the customer if he wishes a wiper blade change.
- Ask the customer if he wishes a topping up of the washer fluid (cleaning and antifreeze agent).
- Inform the customer about any defects which were found during the inspection.

Deadline for completion ⇒ “2.7 service intervals”, page 37

Work involved	Chapter
– Check that Škoda Connect services work, enable workshop mode - vehicles with PR number EL2 and EL5	⇒ “6.21 Škoda Connect services”, page 167
– Check that Škoda Connect services work - vehicles with PR number EL2 and EL3	⇒ “6.21 Škoda Connect services”, page 167
– Windscreen: check for damage	
– Front and rear exterior lighting: check	⇒ “6.2 Front and rear exterior lighting: check”, page 142
– Horn: check	
– Windscreen wiper blades: check for damage	
– Breakdown kit: check	⇒ “5.10 Breakdown kit: check”, page 138
– Battery: check	⇒ “6.4 Checking battery”, page 142
– Engine oil level: check (if engine oil is not changed)	⇒ “3.9 Inspecting engine oil level”, page 62
– Brake fluid level: check.	⇒ “5.5 Brake fluid level: check.”, page 126
– Brake system: check	⇒ “5.3 Inspecting brake system for leaks and damage”, page 118
– Check the brake lining thickness	⇒ “5.1 Inspecting thickness of front and rear brake pads/linings”, page 116
– Wires from the ABS speed sensors: check seating and for damage	
– Tyres: check	⇒ “5.7 Tyres: check”, page 127
– Complete the next service date sticker and affix the sticker to the side of the dash panel (on the driver's side)	Valid for vehicles in MY 2013
– Road test	⇒ “9.2 Road test”, page 188
– Reset service interval display for inspection (only valid for vehicles as of MY 2014)	⇒ “6.10 Resetting service interval display (SID) ”, page 148
– Insert a comment into the service schedule/in the DSP (Digital Service Schedule).	
– “Complete and attach service mirror tag” to the interior rear-view mirror (certain countries only)	
– Disable workshop mode, check that Škoda Connect services work, vehicles with PR number EL2 and EL5	⇒ “6.21 Škoda Connect services”, page 167
– Check that Škoda Connect services work - vehicles with PR number EL2 and EL3	⇒ “6.21 Škoda Connect services”, page 167
– Hand customer the completed and signed form	
– Give the customer the printed DSP record - vehicles with active DSP (Digital Service Schedule)	

2.4.2 Extended scope of inspection

Deadline for completion ⇒ “2.7 service intervals”, page 37

Work involved	Chapter
– Interior lights: check	⇒ “6.3 Interior lights: check”, page 142
– Check for corrosion	⇒ “7.5 Check for corrosion”, page 170
– Windscreen wash/wipe system: check	⇒ “7.7 Windscreen wash/wipe system: check”, page 170
– Inspect plenum chamber for dirt, clean if necessary	⇒ “7.6 Inspecting plenum chamber and water drain openings for dirt, cleaning if necessary”, page 170
– Front flap lock: lubricate	⇒ “7.13 Front flap lock: lubricate”, page 177
– Headlights: check adjustment	⇒ “6.12 Inspecting the headlight beam setting”, page 157
– V-ribbed belt: check condition	⇒ “3.12 V-ribbed belt: check condition”, page 81
– Cooling system: check	⇒ “3.11.1 Inspecting antifreeze protection, replenishing coolant additive if necessary”, page 76
– Engine compartment (from above): check	⇒ “3.3 Visual inspection of engine and parts in the engine compartment for leaks and damage”, page 54
– Engine compartment (from below): check	⇒ “3.3 Visual inspection of engine and parts in the engine compartment for leaks and damage”, page 54
– Front and rear axles: check	⇒ “5.6 Front and rear axles: check”, page 126
– Exhaust system: check	
– Underbody protection: exhaust system	⇒ “7.3 Inspecting underbody protection for damage”, page 169

2.4.3 Additional work up to MY 2016

According to the time and kilometre schedule	Chapter
After service interval display ⇒ “2.7 service intervals”, page 37	
– Engine oil and filter: change engine oil and replace filter	⇒ “3.10 Drain off engine oil and top up”, page 63
– Reset service interval display for oil change	⇒ “6.10 Resetting service interval display (SID) ”, page 148
Every 2 years	
– Clean rear drum brake	⇒ “5.2 Clean rear drum brake (noises, glue brake pad)”, page 118
Every 2 years or 30,000 km	
– Dust and pollen filter for passenger compartment: replace	⇒ “7.9 Replacing the dust and odour filter element ”, page 175
After 3 years, then every 2 years	
– Change brake fluid	⇒ “5.4 Change brake fluid”, page 119
After 3 years or 60,000 km, then every 2 years/60,000 km	
– Original trailer coupling device: check	⇒ “7.12 Inspect original trailer coupling device”, page 176
Every 4 years or 60,000 km	
– Replace spark plugs	⇒ “3.14 Replace spark plugs”, page 85
Every 5 years	
– Replacing the own power supply of the alarm system	⇒ “6.15 Replacing the own power supply of the alarm system”, page 161
Every 30 000 km	
– Fuel filter: replace (diesel engines with fuel operation that does not meet the DIN EN 590 standard)	⇒ “3.16 Replacing the fuel filter (diesel engines)”, page 102
Every 60 000 km	
– Fuel filter: replace (diesel engines with fuel operation that meets the DIN EN 590 standard)	⇒ “3.16 Replacing the fuel filter (diesel engines)”, page 102
– Automatic gearbox 09G: check ATF level as well as ATF quality, if necessary top up or change	⇒ “4.2 6-speed automatic gearbox 09G: check ATF level and quality, refill or replace ATF”, page 111
Every 90,000 km or 6 years	
– Clean air filter housing and change air filter element	⇒ “3.15 Replace air filter element”, page 93
Every 120,000 km	
– Replacing toothed belt for camshaft drive and tensioning pulley - Common Rail diesel engines operated in dust-rich countries ⇒ “2.6.3 Dust-rich countries”, page 32	⇒ “3.5 Replacing toothed belt for camshaft drive and tensioning pulley”, page 59
– Replace the toothed belt for camshaft drive - petrol engines with toothed belt in high-dust countries ⇒ “2.6.3 Dust-rich countries”, page 32	⇒ “3.5 Replacing toothed belt for camshaft drive and tensioning pulley”, page 59
– Replace the toothed belt for coolant pump drive in petrol engines in high-dust countries ⇒ “2.6.3 Dust-rich countries”, page 32	⇒ “3.5 Replacing toothed belt for camshaft drive and tensioning pulley”, page 59

According to the time and kilometre schedule	Chapter
At 180,000 km, then every 30,000 km – Check diesel particle filter - common rail diesel engines with diesel particle filter installed as standard: CAYC, CAYB	⇒ “3.18 Checking particle filter”, page 105
Every 210,000 km – Replacing the toothed belt for camshaft drive and tensioning pulley - common rail diesel engines - low-dust countries	⇒ “3.5 Replacing toothed belt for camshaft drive and tensioning pulley”, page 59
At 210,000 km, then every 30,000 km: – Check particle filter - common rail diesel engines with diesel particle filter installed as standard: CUSB, CXMA	⇒ “3.18 Checking particle filter”, page 105

2.4.4 Additional work from MY 2017

Work involved	Maturity according to time or kilometer date		Chapter
– Change brake fluid	After 3 years, then every 2 years Europe	Every 2 years except for Europe	⇒ “5.4 Change brake fluid”, page 119
– Engine oil and filter: change engine oil and replace filter – Reset service interval display for oil change	After service interval display ⇒ “2.7 service intervals”, page 37		⇒ “3.10 Drain off engine oil and top up”, page 63 ⇒ “6.10 Resetting service interval display (SID) ”, page 148
– Original trailer coupling device: check	After 3 years or 60,000 km, then every 2 years/60,000 km		⇒ “7.12 Inspect original trailer coupling device”, page 176
– Replacing the own power supply of the alarm system	Every 5 years		⇒ “6.15 Replacing the own power supply of the alarm system”, page 161
– Clean rear drum brake	Every 2 years		⇒ “5.2 Clean rear drum brake (noises, glue brake pad)”, page 118
– Replace OCU control unit (control unit for emergency call module and communication unit - J949-)	Every 14 years		⇒ “6.18 Replace OCU control unit (control unit for emergency call module and communication unit J949)”, page 163
– Check particle filter - common rail diesel engines with diesel particle filter installed as standard: CUSB, CXMA – Check particle filter - petrol engines from MY 2019 with standard petrol filter	At 210,000 km, then every 30 000 km		⇒ “3.18 Checking particle filter”, page 105
– Adding multiple-purpose additive for petrol engines - only applies to some countries	For every service event		⇒ “3.19 Multipurpose additive for petrol engines”, page 107
– Adding multiple-purpose additive for diesel engines - only applies to some countries	For every service event		⇒ “3.20 Multi-purpose additive for diesel engines”, page 109

Additional work - different intervals in dusty / low-dust countries

Work involved	Maturity according to time or kilometer date		Chapter
	Operation in normal weather and traffic conditions (low-dust countries)	**Dust-rich countries ⇒ “2.6.3 Dust-rich countries”, page 32**	
– Clean air filter housing and change air filter element	Every 90,000 km or 6 years	Every 30,000 km or 2 years	⇒ “3.15 Replace air filter element”, page 93
– Dust and pollen filter for passenger compartment: replace	Every 2 years or 30,000 km	Every 30 000 km or 1 year	⇒ “7.9 Replacing the dust and odour filter element ”, page 175

Work involved	Maturity according to time or kilometer date		Chapter
	Operation in normal weather and traffic conditions (low-dust countries)	**Dust-rich countries ⇒ “2.6.3 Dust-rich countries”, page 32**	
– Replace toothed belt for camshaft drive and tensioning pulley for common rail diesel engines	Every 210,000 km	Every 120,000 km	⇒ “3.5 Replacing toothed belt for camshaft drive and tensioning pulley”, page 59
– Replace the toothed belt for camshaft drive - petrol engines with toothed belt	-	Every 120,000 km	⇒ “3.5 Replacing toothed belt for camshaft drive and tensioning pulley”, page 59
– Replacing the toothed belt for the coolant pump drive on petrol engines	-	Every 120,000 km	⇒ “3.7 Replacing toothed belt for coolant pump”, page 59
– V-ribbed belt: replace	-	Every 60 000 km	⇒ “3.6 Replacing the V-ribbed belt”, page 59

Additional work - different intervals in countries with reduced fuel quality, »not according to« standard EN 228 or EN 590

Work involved	Maturity according to time or kilometer date		Chapter
	Operation with fuels according to standard EN 228 or EN 590 in normal weather and traffic conditions	**Operation with fuels »not according to« standard EN 228 or EN 590**	
– Fuel filter diesel engines: replace	Every 60 000 km	Every 30 000 km diesel engines with fuel operation not according to standard DIN EN 590 ⇒ “2.6.2 Country overview for diesel fuels which do not comply with the EN 590 standard”, page 31	⇒ “3.16 Replacing the fuel filter (diesel engines)”, page 102
– Replacing the spark plugs - petrol engines	Every 4 years or 60,000 km	Every 30 000/20 000 km or 2 years All 15 000/10 000 km or 1 year - Gasoline engines with fuel operation not according to standard DIN EN 228 ⇒ “2.6.5 Countries with shortened spark plug intervals”, page 34	⇒ “3.14 Replace spark plugs”, page 85

Additional work - different intervals in tropical/other countries

Work involved	Maturity according to time or kilometer date		Chapter
	Tropical countries ⇒ “2.6.4 Tropical countries”, page 33	**Other countries**	
– Automatic gearbox 09G: check ATF level as well as ATF quality, if necessary top up or change	-	Every 60 000 km	⇒ “4.2 6-speed automatic gearbox 09G: check ATF level and quality, refill or replace ATF”, page 111
– Automatic gearbox 09G: change ATF	Every 60 000 km	-	

2.5 Oil change service

Deadline for completing the service internal for engine oil change (including engine oil and oil filter)
⇒ “2.7 service intervals”, page 37

For each oil change service:

- Check the use by date of the first aid kit.
- Ask the customer if he wishes a wiper blade change.
- Ask the customer if he wishes a topping up of the washer fluid (cleaning and antifreeze agent).
- Inform the customer about any defects which were found during the inspection.

Work involved	Chapter
– Change the engine oil and oil filter	⇒ “3.10 Drain off engine oil and top up”, page 63
– Adding multiple-purpose additive for diesel engines - only applies to some countries	⇒ “3.20 Multi-purpose additive for diesel engines”, page 109
– Adding multiple-purpose additive for petrol engines - only applies to some countries	⇒ “3.19 Multipurpose additive for petrol engines”, page 107
– Check that Škoda Connect services work - vehicles with PR number EL2 and EL3	⇒ “6.21 Škoda Connect services”, page 167
– Check that Škoda Connect services work, enable workshop mode - vehicles with PR number EL2 and EL5	⇒ “6.21 Škoda Connect services”, page 167
– Check the brake pads and brake discs	⇒ “5.1 Inspecting thickness of front and rear brake pads/linings”, page 116
– Reset service interval display for oil change	⇒ “6.10 Resetting service interval display (SID) ”, page 148
– Create an entry in the DSP (digital service schedule)	
– Complete the next service date sticker and affix the sticker to the side of the dash panel (on the driver's side)	
– Disable workshop mode, check that Škoda Connect services work, vehicles with PR number EL2 and EL5	⇒ “6.21 Škoda Connect services”, page 167
– Check that Škoda Connect services work - vehicles with PR number EL2 and EL3	⇒ “6.21 Škoda Connect services”, page 167
– Complete and attach service mirror tag to the interior rear-view mirror (certain countries only)	Valid for vehicles in MY 2013
– Hand customer the completed and signed form	
– Give the customer the printed DSP record - vehicles with active DSP (Digital Service Schedule)	

2.6 Country allocation due to fuel quality, dust content and temperature

⇒ “2.6.1 Country overview for petrol fuels which do not comply with the EN 228 standard”, page 30

⇒ “2.6.2 Country overview for diesel fuels which do not comply with the EN 590 standard”, page 31

⇒ “2.6.3 Dust-rich countries”, page 32

⇒ “2.6.4 Tropical countries”, page 33

⇒ “2.6.5 Countries with shortened spark plug intervals”, page 34

2.6.1 Country overview for petrol fuels which do not comply with the EN 228 standard

Examples of fuel shortages which lead to a shortening of maintenance / change intervals:

- Diesel impurities in petrol fuel
- High sulphur values
- Poor boiling / evaporation values
- Metallic components / octane booster additives
- Contamination in petrol

Abu Dhabi	Gambia	Mali	Zimbabwe
Afghanistan	Georgia	Morocco	Sudan
Egypt	Ghana	Mauretania	Suriname
Algeria	Guatemala	Mauritius	Syria
Angola	Guinea	Mexico	Swaziland
Equatorial Guinea	Guinea-Bissau	Mongolia	Tajikistan
Argentina	Haiti	Mozambique	Taiwan
Armenia	Honduras	Myanmar (Burma)	Tanzania
Azerbaijan	India	Namibia	Thailand
Ethiopia	Indonesia	Nepal (Indian subcontinent)	Togo
Australia	Iraq	New Caledonia	Trinidad and Tobago
Bahamas	Iran	Nicaragua	Chad
Bahrain	Jamaica	Dutch overseas territories	Tunisia
Bangladesh	Yemen	Niger	Turkey
Belize	Jordan	Nigeria	Turkmenistan
Benin (Dahome)	Canary Islands	North Korea	Uganda
Bermuda	Cambodia	Oman	Ukraine
Bhutan	Cameroon	Pakistan	Uruguay
Bolivia	Cape Verde	Panama	Uzbek
Botswana	Caribbean, left-hand drive	Papua New Guinea	Venezuela
Brunei	Kazakhstan	Paraguay	United Arab Emirates
Burkina Faso (Upper Volta)	Qatar	Peru	Vietnam
Burundi	Kenya	Philippines	Belarus
Chile	Kirgizia	Republic of Congo	Western Sahara
China	Colombia	Rwanda	Central African Republic
Costa Rica	Cuba	Russian Federation	

Democratic Republic of Congo	Kuwait	Zambia	
Djibouti	Laos	Saudi Arabia	
Dominican Republic	Lesotho	Senegal	
Dubai	Lebanon	Seychelles	
Ecuador	Liberia	Sierra Leone	
El Salvador	Libya	Singapore	
Ivory Coast	Madagascar	Somalia	
Eritrea	Malawi	Sri Lanka	
Fiji	Macau	South Africa	
Gabon	Malaysia	South Sudan	

2.6.2 Country overview for diesel fuels which do not comply with the EN 590 standard

Examples of fuel shortages which lead to a shortening of maintenance / change intervals:

- High sulphur values
- Increased biodiesel content
- Impurities in diesel fuel
- Increased water content in diesel fuel

Abu Dhabi	Gambia	Malawi	Sierra Leone
Afghanistan	Georgia	Malaysia	Singapore
Egypt	Ghana	Mali	Zimbabwe
Algeria	Guatemala	Morocco	Somalia
Angola	Guinea	Mauretania	Sri Lanka and Maldives
Equatorial Guinea	Guinea-Bissau	Mauritius	South Africa
Argentina	Guyana	Macedonia	Sudan
Armenia	Haiti	Mexico	South Sudan
Azerbaijan	Honduras	Moldova	Suriname
Ethiopia	India	Mongolia	Swaziland
Bahamas	Indonesia	Mozambique	Syria
Bahrain	Iraq	Myanmar	Tajikistan
Bangladesh	Iran	Namibia	Tanzania
Belize	Jamaica	Nepal	Thailand
Benin	Yemen	New Caledonia	Togo
Bermuda	Jordan	Nicaragua	Trinidad and Tobago
Bhutan	Cambodia	Dutch overseas territories	Chad
Bolivia	Cameroon	Niger	Tunisia
Botswana	Canada	Nigeria	Turkey
Brazil	Cape Verde	North Korea	Turkmenistan
Brunei	Caribbean, left-hand drive	Oman	Uganda
Burkina Faso	Kazakhstan	Pakistan	Ukraine
Burundi	Qatar	Panama	Uruguay
Canary Islands	Kenya	Papua New Guinea	USA
China	Kirgizia	Paraguay	Uzbek
Costa Rica	Colombia	Peru	Venezuela

Democratic Republic of Congo	Cuba	Philippines	United Arab Emirates
Djibouti	Kuwait	Puerto Rico	Vietnam
Dominican Republic	Laos	Republic of Congo	Western Sahara
Dubai	Lesotho	Rwanda	Central African Republic
Ecuador	Lebanon	Russia	Ivory Coast
El Salvador	Liberia	Zambia	
Eritrea	Libya	Saudi Arabia	
Fiji	Macau	Senegal	
Gabon	Madagascar	Seychelles	

2.6.3 Dust-rich countries

- High proportion of dust particles in the air due to the road condition and ambient conditions.
- The dust is distinguished by particle size or type of dust (organic and inorganic material), such as pollen, bacteria, mould spores or rock dust, mineral fibres.

Abu Dhabi	Guinea	Nepal (Indian subcontinent)	Western Sahara
Afghanistan	Guinea-Bissau	Nicaragua	Zambia
Algeria	Guyana	Niger	Zimbabwe
Angola	Honduras	Nigeria	
Argentina	Hong Kong	Oman	
Armenia	India	Pakistan	
Azerbaijan	Indonesia	Palestine	
Australia	Iraq	Panama	
Bahrain	Israel	Papua New Guinea	
Bangladesh	Yemen	Paraguay	
Belize	South Africa	Peru	
Benin (Dahome)	South Sudan	Puerto Rico	
Belarus	Jordan	Rwanda	
Bhutan	Cambodia	Equatorial Guinea	
Bolivia	Cameroon	Russian Federation	
Botswana	Cape Verde	Saudi Arabia	
Brazil	Kazakhstan	Senegal	
Brunei	Qatar	Seychelles	
Burkina Faso (Upper Volta)	Kenya	North Korea	
Burundi	Kirgizia	Sierra Leone	
Chile	Costa Rica	Central African Republic	
Chad	Colombia	Somalia	
China	Cuba	United Arab Emirates	
Democratic Republic of Congo	Kuwait	Sri Lanka and Maldives	
Dominican Republic	Laos	Sudan	
Dubai	Lesotho	Suriname	
Djibouti	Lebanon	Swaziland	
Ethiopia	Libya	Syria	

Egypt	Liberia	Tajikistan	
Ecuador	Macau	Tanzania	
El Salvador	Madagascar	Thailand	
Ivory Coast	Malawi	Togo	
Eritrea	Mali	Tunisia	
Fren. Guyana	Morocco	Turkey	
Fiji	Mauretania	Turkmenistan	
Philippines	Mauritius	Uganda	
Gabon	Mexico	Uruguay	
Gambia	Mongolia	Ukraine	
Georgia	Mozambique	Uzbek	
Ghana	Myanmar (Burma)	Venezuela	
Guatemala	Namibia	Vietnam	

2.6.4 Tropical countries

- Countries with a tropical and super-tropical climate have higher maximum temperatures (50 ° C) than the European average (25 ° C).
- Outside temperatures that are locally high affect the service life of the units, the transmission and the coolant circuit, such as hill driving and high speed and start-stop operation.

Australia	Lebanon	Tunisia
Abu Dhabi	Libya	Togo
Algeria	Lesotho	Tanzania
Egypt	Liberia	Chad
Afghanistan	Mexico	Uganda
Angola	Malaysia	USA
Equatorial Guinea	Mauritius	United Arab Emirates
Ethiopia	Morocco	Western Sahara
Bahrain	Madagascar	Zimbabwe
Brunei	Mali	Central African Republic
Benin	Mozambique	
Burkina Faso	Malawi	
Botswana	Mauretania	
Burundi	Nigeria	
China	Namibia	
Dubai	Niger	
Democratic Republic of Congo	Oman	
Djibouti	Puerto Rico	
Ivory Coast	Palestine	
Eritrea	Pakistan	
Gabon	Qatar	
Gambia	Republic of Congo	
Ghana	Rwanda	
Guinea	South Africa	
Guinea-Bissau	Saudi Arabia	
Iran	Singapore	

India	Senegal	
Indonesia	Sudan	
Iraq	Zambia	
Israel	South Sudan	
Yemen	Sierra Leone	
Jordan	Somalia	
Kuwait	Swaziland	
Cameroon	Syria	
Kenya	Thailand	

2.6.5 Countries with shortened spark plug intervals

Shortened spark plug change intervals are necessary for operation with fuels which do not comply with DIN EN 228.

Examples of fuel shortages which lead to a shortening of maintenance / change intervals:

- Diesel impurities in petrol fuel
- High sulphur values
- Poor boiling / evaporation values
- Metallic components / octane booster additives
- Contamination in petrol

Country				
	30 000 km/2 years	20 000 km/2 years	15 000 km/year	10 000 km/year
Abu Dhabi	X			
Afghanistan	X			
Egypt	X			
Algeria				X
Angola				X
Equatorial Guinea				X
Armenia	X			
Azerbaijan	X			
Ethiopia				X
Bahamas	X			
Bahrain	X			
Bangladesh	X			
Belize			X	
Benin (Dahome)				X
Bermuda	X			
Bhutan	X			
Bolivia	X			
Botswana	X			
Brunei	X			
Burkina Faso (Upper Volta)				X
Burundi				X
Chile	X			

Country	30 000 km/2 years	20 000 km/2 years	15 000 km/year	10 000 km/year
China		X		
Costa Rica	X			
Democratic Republic of Congo				X
Djibouti				X
Dominican Republic	X			
Dubai	X			
Ecuador	X			
El Salvador	X			
Ivory Coast				X
Eritrea				X
Fiji	X			
Gabon				X
Gambia				X
Georgia	X			
Ghana				X
Guatemala	X			
Guinea				X
Guinea-Bissau				X
Haiti	X			
Honduras	X			
India	X			
Indonesia	X			
Iraq	X			
Iran			X	
Jamaica	X			
Yemen	X			
Jordan	X			
Canary Islands	X			
Cambodia	X			
Cameroon				X
Cape Verde				X
Caribbean, left-hand drive	X			
Kazakhstan	X			
Qatar	X			
Kenya				X
Kirgizia			X	
Colombia	X			
Cuba	X			
Kuwait	X			
Laos	X			
Lesotho	X			
Lebanon	X			
Liberia				X
Libya		X		

Country				
	30 000 km/2 years	20 000 km/2 years	15 000 km/year	10 000 km/year
Macau				X
Madagascar				X
Malawi				X
Malaysia	X			
Mali				X
Morocco		X		
Mauretania				X
Mauritius				X
Mexico	X			
Mongolia	X			
Mozambique				X
Myanmar (Burma)	X			
Namibia	X			
Nepal (Indian sub-continent)	X			
New Caledonia	X			
Nicaragua	X			
Dutch overseas territories Aruba, Curaçao, Sint Maarten (Netherlands).	X			
Niger				X
Nigeria				X
North Korea			X	
Oman	X			
Pakistan			X	
Panama	X			
Papua New Guinea	X			
Paraguay	X			
Peru	X			
Philippines	X			
Republic of Congo				X
Rwanda				X
Russian Federation	X			
Zambia				X
Saudi Arabia	X			
Senegal				X
Seychelles				X
Sierra Leone				X
Singapore	X			
Somalia				X
Sri Lanka	X			
South Africa	X			
South Sudan				X
Sudan				X
Suriname				X
Syria			X	

Country	30 000 km/2 years	20 000 km/2 years	15 000 km/year	10 000 km/year
Swaziland	X			
Tajikistan	X			
Taiwan	X			
Tanzania				X
Thailand	X			
Togo				X
Trinidad and Tobago			X	
Chad				X
Tunisia		X		
Turkey	X			
Turkmenistan	X			
Uganda				X
Ukraine	X			
Uruguay	X			
Uzbek	X			
Venezuela	X			
United Arab Emirates	X			
Vietnam	X			
Belarus	X			
Western Sahara				X
Central African Republic				X
Zimbabwe				X

2.7 service intervals

⇒ “2.7.1 Service intervals up to MY 2016”, page 37

⇒ “2.7.2 Service intervals from MY 2017”, page 39

2.7.1 Service intervals up to MY 2016

Service intervals - events:	
Service-event	**Deadline for completion**
Inspection	According to the display- after 2 years or 30,000 km and then every 1 year/30,000 km
Extended scope of inspection - only in conjunction with inspection	First one after 3 years or 60,000 km, then every 2 years/60,000 km
Oil change service (fixed) - QI1	As per the display (every 5,000 km or 1 year)
Oil change service (fixed) - QI2	As per the display (every 7,500 km or 1 year)
Oil change service (fixed) - QI3	As per the display (every 10,000 km or 1 year)
Oil change service (fixed) - QI4	As per the display (every 15,000 km or 1 year)
Oil change service (flexible) - QI6	As per the display (max. 30,000 km/2 years)

2.7.2 Service intervals from MY 2017

Inspection

Service-event	Maturity during operation with fuels according to standard EN 228 or EN 590 in normal weather and traffic conditions	Maturity during operation with fuels »not according to« of the EN 228 standard ⇒ “2.6.1 Country overview for petrol fuels which do not comply with the EN 228 standard”, page 30 or EN 590 ⇒ “2.6.2 Country overview for diesel fuels which do not comply with the EN 590 standard”, page 31
Inspection		QI1 As per the display (every 10 000 km or 1 year)
		QI2 As per the display (every 15 000 km or 1 year)
		QI3 As per the display (every 10 000 km or 1 year)
	QI4 According to the display- after 2 years or 30,000 km and then every 1 year/30 000 km	QI4 As per the display (every 15 000 km or 1 year)
	QI6 According to the display- after 2 years or 30,000 km and then every 1 year/30 000 km	
Extended scope of inspection - only in conjunction with inspection	After 3 years or 60 000 km, then every 2 years/60 000 km	After 20 000 km or 2 years - vehicles with QI1 and QI3 After 30 000 km or 2 years - vehicles with QI2 and QI4

Oil change service

Service-event	Maturity during operation with fuels according to standard EN 228 or EN 590 in normal weather and traffic conditions	Maturity during operation with fuels »not according to« of the EN 228 standard ⇒ “2.6.1 Country overview for petrol fuels which do not comply with the EN 228 standard”, page 30 or EN 590 ⇒ “2.6.2 Country overview for diesel fuels which do not comply with the EN 590 standard”, page 31
Oil change service (fixed) - QI1	-	As per the display (every 5,000 km or 1 year)
Oil change service (fixed) - QI2	-	As per the display (every 7,500 km or 1 year)
Oil change service (fixed) - QI3	-	As per the display (every 10,000 km or 1 year)
Oil change service (fixed) - QI4	As per the display (every 15,000 km or 1 year)	

Service-event	Maturity during operation with fuels according to standard EN 228 or EN 590 in normal weather and traffic conditions	Maturity during operation with fuels »not according to« of the EN 228 standard ⇒ “2.6.1 Country overview for petrol fuels which do not comply with the EN 228 standard”, page 30 or EN 590 ⇒ “2.6.2 Country overview for diesel fuels which do not comply with the EN 590 standard”, page 31
Oil change service (flexible) - QI6	As per the display (max. 30,000 km/2 years)	-

2.8 Service tables with variations for the individual markets up to MY 2016

⇒ “2.8.1 Market area - Russia”, page 42

⇒ “2.8.2 Market region - Australia”, page 44

2.8.1 Market area - Russia

Note

The tables include only deviating intervals.

service intervals		
Of-to	**Service-event**	**Interval**
Since operation	Inspection with engine oil change	Every 15,000 km or 1 year[3)]
	Extended scope of inspection	Every 30,000 km or 2 years[3)]

3) Depending on what occurs first.

Work involved	Interval	Description of work
Dust and pollen filter	Every 15,000 km or 1 year[4)]	⇒ “7.9 Replacing the dust and odour filter element ”, page 175
Air filter	Every 30,000 km or 2 years[4)]	⇒ “3.15 Replace air filter element”, page 93
Fuel filter: replace (diesel engines with fuel operation that does not meet the DIN EN 590 standard)	Every 30,000 km or 2 years[4)]	⇒ “3.16 Replacing the fuel filter (diesel engines)”, page 102
Fuel filter (petrol engine): replace	Every 60 000 km or 4 years[4)]	⇒ “3.17 Replace fuel filter - petrol engines”, page 105
Original trailer coupling device: check	Every 30,000 km or 2 years[4)]	⇒ “7.12 Inspect original trailer coupling device”, page 176
Add multiple-purpose additive for petrol engines	For every service event	⇒ “3.19 Multipurpose additive for petrol engines”, page 107

4) Depending on what occurs first.

2.8.2 Market region - Australia

Note

- *Valid up to MY 2015.*
- *The tables include only deviating intervals.*

Work involved	Interval	Description of work
Air filter: replace	Every 45 000 km	⇒ “3.15 Replace air filter element”, page 93

5) Depending on what occurs first.

3 Engines

3.1 Engine overview

Petrol engines

Engine codes	CBZA	CBZB	CAXA	CGPC
Emission standard	EU5	EU5	EU-5	EU-5
Manufacturing (from...through)	09.12…05.15	07.12…05.15	10.12 ...05.15	10.12 ...05.15
Displacement in litres	1.2	1.2	1.4	1.2
Output (kW at rpm)	63/4800	77/5000	90/5000	55/5400
Max. torque (Nm at rpm)	63/1500 - 3500	63/1550 - 4100	200/1500 - 4000	112/3750
Bore (∅ mm)	71	71	76.5	76.5
Stroke (mm)	75.6	75.6	75.6	86.9
Compression ratio	10	10	10.0	10.5
Hydraulic valve clearance compensation	X	X	X	X
Fuel RON (minimum)	95/91[6)]	95/91[6)]	At least 95	95/91[6)]
Firing order	1-3-4-2	1-3-4-2	1-3-4-2	1-2-3
Exhaust gas recirculation	-	-	-	-
Self-diagnosis	X	X	X	X
Catalytic converter	X	X	X	X
Turbocharging	X	X	X	-
Charge air cooler	X	X	X	-
Lambda probe	X	X	X	X
Number of cylinders / valves per cylinder	4/2	4/2	4/4	3/4

6) Unleaded petrol 91 RON may also be used for engines for which unleaded petrol 95 RON is specified, although engine power output will be slightly reduced.

Petrol engines

Engine codes	CFNA	CJZC	CJZD	CWVA
Emission standard	EU4, E2 DDK	EU6	EU6	EU-3 EU-5
Manufacturing (from...through)	02.13…05.15	05.15…	05.15…	05.15…
Displacement in litres	1.6	1.2	1.2	1.6
Output (kW at rpm)	77/5600	66/4400	81/4600	81/5800
Max. torque (Nm at rpm)	153/3800	160/1400…3500	175/1400…4000	155/3800

Engine codes	CFNA	CJZC	CJZD	CWVA
Bore (∅ mm)	76.5	71	71	76.5
Stroke (mm)	86.9	75.6	75.6	86.9
Compression ratio	10.5	10.5	10.5	10.5
Hydraulic valve clearance compensation	X	X	X	X
Fuel RON (minimum)	95/91[7)]	95	95	95/91[7)]
Firing order	1-3-4-2	1-3-4-2	1-3-4-2	1-3-4-2
Exhaust gas recirculation	-	-	-	X
Self-diagnosis	X	X	X	X
Catalytic converter	X	X	X	X
Turbocharging	-	X	X	-
Charge air cooler	-	X	X	-
Lambda probe	X	X	X	X
Number of cylinders / valves per cylinder	4/4	4/4	4/4	4/4

7) Unleaded petrol 91 RON may also be used for engines for which unleaded petrol 95 RON is specified, although engine power output will be slightly reduced.

Petrol engines

Engine codes	CWVB	CZCA	CHZB	CHZC
Emission standard	EU-5	EU6	EU6	EU6
Manufacturing (from...through)	05.15…	05.15…	05/17-	05/17-
Displacement in litres	1.6	1.4	1.0	1.0
Output (kW at rpm)	66/4250	92/5000	70/5000-5500	81/5000-5500
Max. torque (Nm at rpm)	155/3800	200/1400 … 4000	160/1500-3500	200/2000-3500
Bore (∅ mm)	76.5	74.5	74.5	74.5
Stroke (mm)	86.9	80	76.4	76.4
Compression ratio	10.5	10.5	10.5	10.5
Hydraulic valve clearance compensation	X	X	X	X
Fuel RON (minimum)	95/91[8)]	95	95	95
Firing order	1-3-4-2	1-3-4-2	1-2-3	1-2-3
Self-diagnosis	X	X	X	X

Engine codes	CWVB	CZCA	CHZB	CHZC
Catalytic converter	X	X	X	X
Turbocharging	-	X	X	X
Charge air cooler	-	X	X	X
Lambda probe	X	X	X	X
Number of cylinders / valves per cylinder	4/4	4/4	3/4	3/4

8) Unleaded petrol 91 RON may also be used for engines for which unleaded petrol 95 RON is specified, although engine power output will be slightly reduced.

Petrol engines

Engine codes	DKLD	DKRC
Emission standard	EU6	EU6
Manufacturing (from...through)	07.18…	07.18…
Displacement in litres	1.0	1.0
Output (kW at rpm)	70/5000-5500	81/5000-5500
Max. torque (Nm at rpm)	160/1800-3500	200/2000-3500
Bore (∅ mm)	74.5	74.5
Stroke (mm)	76.4	76.4
Compression ratio	10.5	10.5
Hydraulic valve clearance compensation	X	X
Fuel RON (minimum)	95	95
Firing order	1-2-3	1-2-3
Self-diagnosis	X	X
Catalytic converter	X	X
Particle filter[9)]	X	X
Turbocharging	X	X
Charge air cooler	X	X
Lambda probe	X	X
Number of cylinders / valves per cylinder	3/4	3/4

9) Fitted in the series, PR number 7CP, 7CS

Diesel engines

Engine codes	CAYC	CLNA	CAYB
Emission standard	EU5	EU4	EU5
Manufacturing (from...through)	07.12…05.15	02.13…05.15	08.13…05.15
Displacement in litres	1.6	1.6	1.6
Output (kW at rpm)	77/4400	77/4400	66/4200
Max. torque (Nm at rpm)	250/1500 - 2500	250/1500 - 2500	230/1500 - 2500
Bore (∅ mm)	79.5	79.5	79.5
Stroke (mm)	80.5	80.5	80.5
Compression ratio	16.5	16.5	16.5
Hydraulic valve clearance compensation	X	X	X
Firing order	1-3-4-2	1-3-4-2	1-3-4-2
Exhaust gas recirculation	X	X	X
Self-diagnosis	X	X	X
Catalytic converter	X	X	X
Turbocharging	X	X	X
Charge air cooler	X	X	X
Lambda probe	X	-	X
Particle filter[10)]	X	-	X
Camshaft adjustment	-	-	-
Number of cylinders / valves per cylinder	4/4	4/4	4/4

10) Fitted in the series, PR number 7MJ

Diesel engines

Engine codes	CUSB	CXMA
Emission standard	EU6	EU6
Manufacturing (from...through)	05.15…	05.15…
Displacement in litres	1.4	1.6

Engine codes	CUSB	CXMA
Output (kW at rpm)	66/3500	85/3500
Max. torque (Nm at rpm)	230/1750 - 2500	250/1500 - 3000
Bore (∅ mm)	79.5	79.5
Stroke (mm)	95.5	80.5
Compression ratio	16.2	16.2
Hydraulic valve clearance compensation	X	X
Firing order	1-3-2	1-3-4-2
Exhaust gas recirculation	X	X
Self-diagnosis	X	X
Catalytic converter	X	X
Turbocharging	X	X
Charge air cooler	X	X
Lambda probe	X	X
Particle filter[11)]	X	X
Number of cylinders / valves per cylinder	3/4	4/4

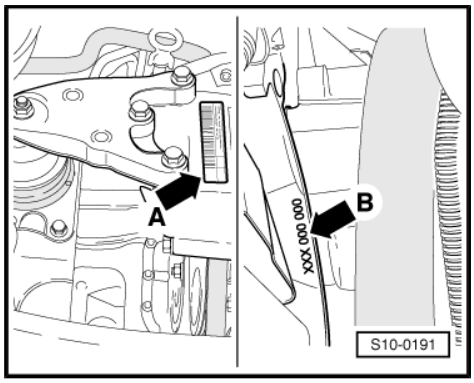
11) Fitted in the series, PR number 7MM

3.2 Engine fitted

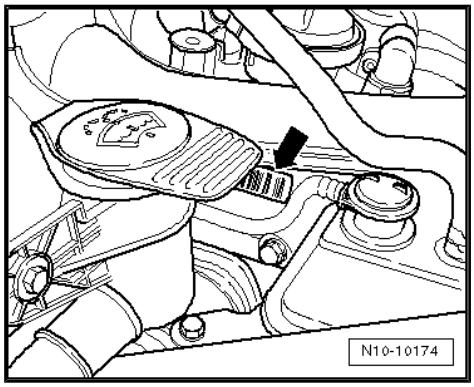
The Engine codes and serial number are located in the front at the engine/gearbox joint.

In addition, a sticker with the Engine codes and serial number is affixed to the timing belt guard.

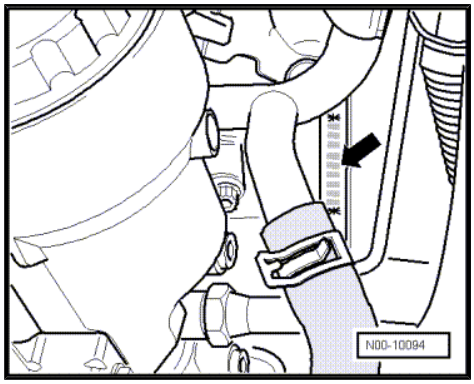
Engine with identification characters CGPC



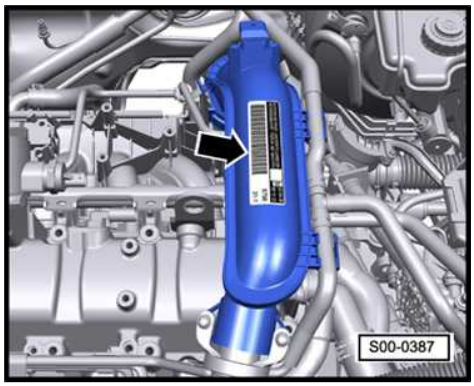
Engine with identification characters CAXA. The engine identification character and the engine number can be found on the sticker -arrow- at the timing case.



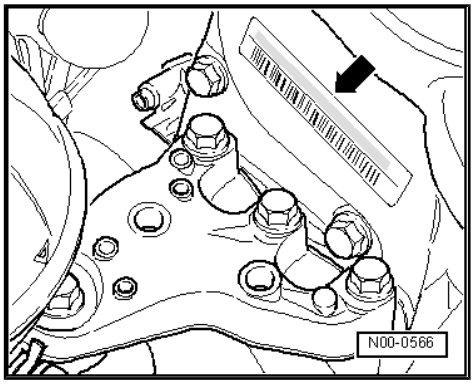
Engine with identification characters CAYC, CAYB



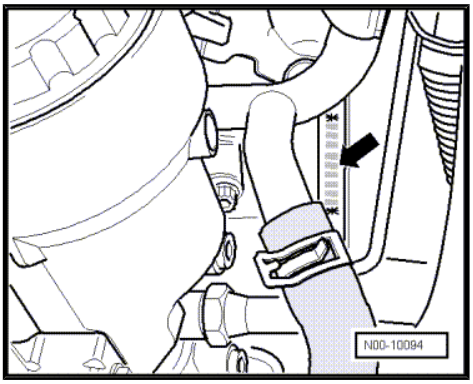
Engine with identification characters CBZA, CBZB. The Engine codes and serial number are located on the top of the intake manifold.



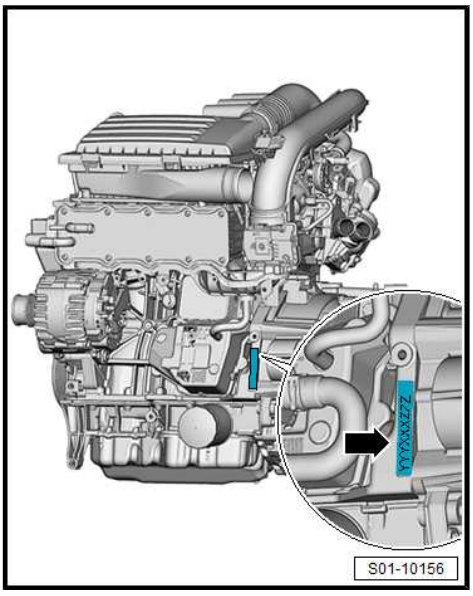
Engine with identification characters CFNA



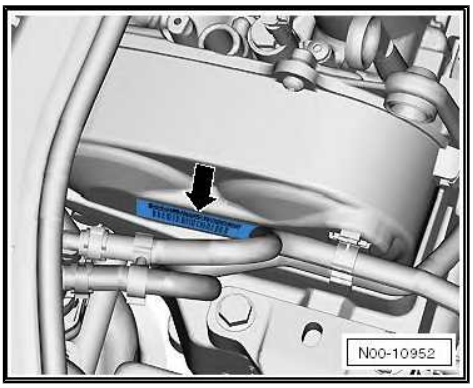
Engine with identification characters CLSA



Engine with identification characters CJZC, CJZD, CZCA, CWVA, CWVB, CHZB, CHZC. The engine identification characters are on the crankcase next to the gearbox -arrow-.

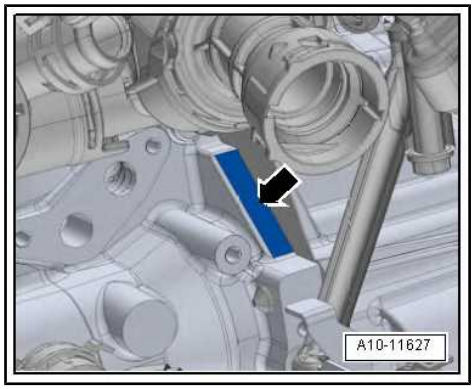


The engine identification characters and the engine number can also be found on the sticker -arrow- at the top of the toothed belt guard as well as on the vehicle data sticker - only applies to cars manufactured up to CW 45/2017).



Engine with identification characters CUSB, CXMA. The engine code and engine number are located on the separating layer between the engine and the transmission.

In addition, a sticker with the “engine identification characters” and “serial number” is affixed to the top toothed belt guard.



3.3 Visual inspection of engine and parts in the engine compartment for leaks and damage

Note

- *Carry out the corresponding repair procedure on all the defects which are found (repair measure).*
- *In the event of a loss of fluid, which was not caused by the current consumption, determine the cause and eliminate it (repair measure).*

Engine compartment and components in the engine compartment from above:

– Inspect engine and parts in the engine compartment for leaks and damage.

– Inspect all lines, hoses and connections of the following systems and circuits for leaks, chafing points, porous and brittle joints:

- for fuel system,
- for cooling and heating system
- for oil system
- for air conditioning system
- for suction and air system
- for exhaust system
- for brake system
  ⇒ “5.3 Inspecting brake system for leaks and damage”, page 118

– Inspect gearbox or final drive for leaks (e.g. inspection and drain plug, shift linkage, drive shafts)
⇒ “4.1 Check final drive and joint boots for leaks and damage”, page 111 .

Engine compartment and components in the engine compartment from below:

– Remove the noise insulation.

– Inspect engine and parts in the engine compartment for leaks and damage.

– Inspect all lines, hoses and connections of the following systems and circuits for leaks, chafing points, porous and brittle joints:

- for fuel system,
- for cooling and heating system
- for oil system
- for air conditioning system
- for suction and air system
- for exhaust system
- for brake system
  ⇒ “5.3 Inspecting brake system for leaks and damage”, page 118

– Inspect gearbox or final drive for leaks (e.g. inspection and drain plug, shift linkage, drive shafts)
  ⇒ “4.1 Check final drive and joint boots for leaks and damage”, page 111 .

3.4 Replace engine oil filter

⇒ “3.4.1 Replacing engine oil filter for petrol engines up to MY 2015”, page 55

⇒ “3.4.2 Replacing engine oil filter for petrol engines starting from MY 2016”, page 57

⇒ “3.4.3 Replacing engine oil filter for diesel engines up to MY 2015”, page 57

⇒ “3.4.4 Replacing engine oil filter for diesel engines starting from MY 2016”, page 58

3.4.1 Replacing engine oil filter for petrol engines up to MY 2015

Special tools and workshop equipment required

- Oil filter wrench e.g. 3417 , or wrench 32 or 36

– Remove engine cover.

Vehicles with replacement oil filter

– Loosen oil filter and unscrew.

Install new replacement oil filter

– Clean sealing surface at engine.
– Lightly moisten the rubber seal of the oil filter with oil.
– Screw in the new oil filter.
– Tighten the oil filter as follows:

  Motors with identification letters CBZA, CBZB: 20 Nm.

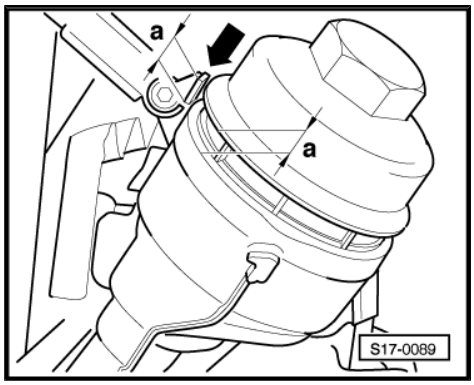
  All other engines: tighten by hand.

– After filling with oil, run engine until it is at operating temperature and inspect for tightness.

Vehicles with replacement oil filter element

Remove replacement oil filter element

– Unscrew the screw cap for the oil filter into the height of the lug -a- -arrow- (or by around 3 revolutions if the lug is no longer present) and allow it to remain in this position for a few minutes so that the oil can flow out of the oil filter element.



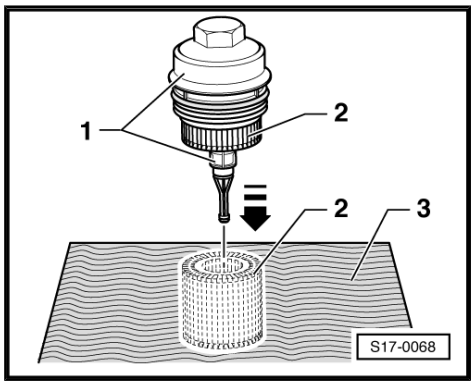
Note

- *When the screw cap is fully removed for the oil filter without a wait time, the oil will flow into the AC generator.*
- *Cover the AC generator with a cloth before removing the screw cap for the oil filter.*
- *Make sure none of the engine oil drops onto the poly V-belt.*

– Completely unscrew the screw cap for the oil filter, remove.

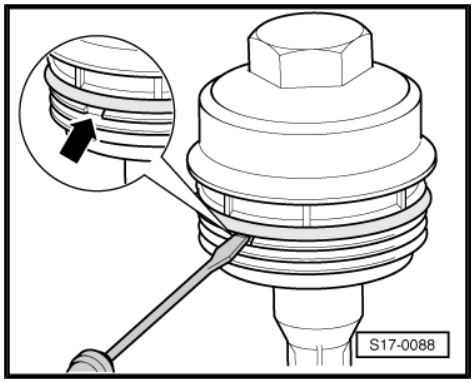
– Light knock the screw cap for the oil filter with the oil filter element holder -1- on a fixed base -3- (e.g. a wooden plate) -arrow-.

This loosens the oil filter insert -2-.

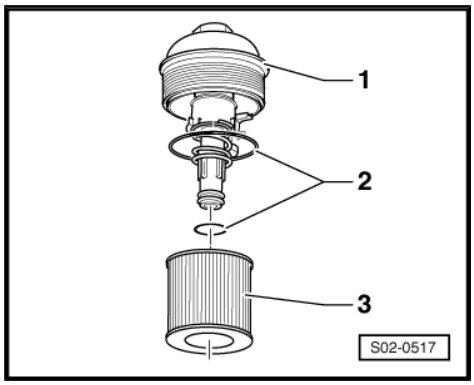


– Place the screwdriver carefully in the groove -arrow- of the screw cap for the oil filter and plug off the O-ring.

Install new replacement oil filter element



– Replace O-rings -2-.
– Insert new oil filter element -3-.
– Screw in the screw cap for oil filter -1- and tighten to 25 Nm.
– After filling with oil, run engine until it is at operating temperature and inspect for tightness.
– Install engine cover at top .



3.4.2 Replacing engine oil filter for petrol engines starting from MY 2016

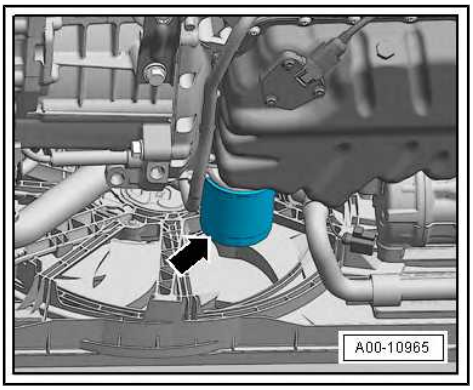
Special tools and workshop equipment required

- ♦ Old oil collection and suction device, e.g. - VAS 6622-
- ♦ Oil filter wrench e.g. 3417 , or wrench 32 or 36
- • Noise insulation removed

Remove replacement oil filter

– Loosen oil filter -arrow- with oil filter wrench - 3417- .

– Unscrew oil filter.



Install new replacement oil filter

– Clean sealing surface at engine.

– Lightly moisten the rubber seal of the new filter with oil.

– Screw in the new oil filter.

– Tighten the oil filter -arrow- with an oil filter wrench - 3417- to the required torque.

Tightening torque	Nm
Oil filter	20

– Drain and fill with engine oil
⇒ “3.10.2 Vehicles with a petrol engine; draining and topping up with engine oil, starting from MY 2016”, page 66 .

– After filling with oil, run engine until it is at operating temperature and inspect for tightness.

3.4.3 Replacing engine oil filter for diesel engines up to MY 2015

Special tools and workshop equipment required

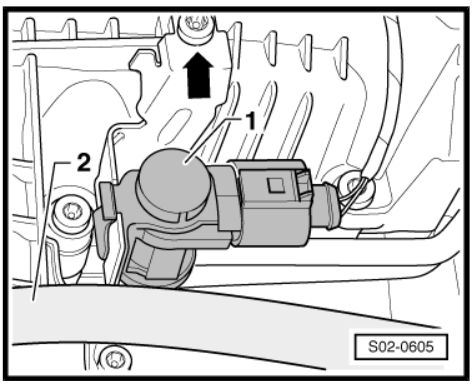
- ♦ Oil filter wrench e.g. 3417 , or wrench 32 or 36

– Unscrew the plug -arrow-.

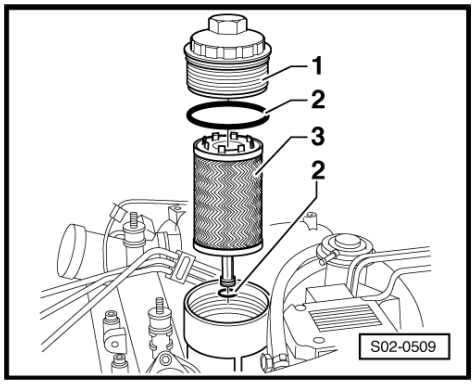
– Slacken solenoid valve -N345- -1- with holder and place to the side.

– Slacken cable -2- and place to the side.

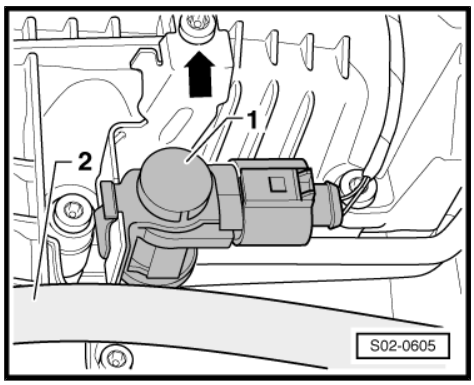
– Loosen the screw cap for the oil filter -1- and keep in this position for a few minutes to allow the engine oil to flow out of the filter element and filter housing.



– Unscrew the screw cap for the oil filter -1-.
– Remove oil filter element -3-.
– Clean the sealing surface on the screw cap for the oil filter and on the oil filter housing.
– Replace O-rings -2- as well as the oil filter element -3-.
– Tighten the screw cap for oil filter -1- 25 Nm.



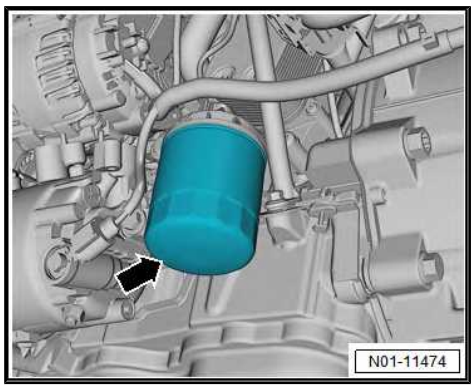
– Screw on holder -arrow- with solenoid valve -N345- -1-.
– Attach the cable -2- again.
– After filling with oil, run engine until it is at operating temperature and inspect for tightness.



3.4.4 Replacing engine oil filter for diesel engines starting from MY 2016

Special tools and workshop equipment required

♦ Old oil collection and suction device, e.g. - VAS 6622-
♦ Oil filter wrench e.g. 3417 , or wrench 32 or 36
• Noise insulation removed
– Loosen oil filter -arrow- with oil filter wrench - 3417- .
– Clean sealing surface at engine.
– Lightly moisten the rubber seal of the new filter with oil.
– Screw in the new oil filter.
– Tighten the oil filter -arrow- with an oil filter wrench - 3417- to the required torque.



Tightening torque	Nm
Oil filter	20

– Drain and fill with engine oil
⇒ “3.10.4 Vehicles with a diesel engine; draining and topping up with engine oil, starting from MY 2016”, page 70 .
– After filling with oil, run engine until it is at operating temperature and inspect for tightness.
– Install the noise insulation.

3.5 Replacing toothed belt for camshaft drive and tensioning pulley

– Removing and Installing toothed belt Engine ⇒ Engine; Rep. gr. 15 .

3.6 Replacing the V-ribbed belt

Removing and installing V-ribbed belt ⇒ Engine; Rep. gr. 13 .

3.7 Replacing toothed belt for coolant pump

Removing and installing V-ribbed belt ⇒ Engine; Rep. gr. 19 .

3.8 Inspect toothed belt for camshaft drive and coolant pump drive for wear and condition

⇒ "3.8.1 Inspecting timing belt for camshaft drive for wear and running", page 59

⇒ "3.8.2 Inspecting toothed belt for coolant pump drive for wear and running", page 60

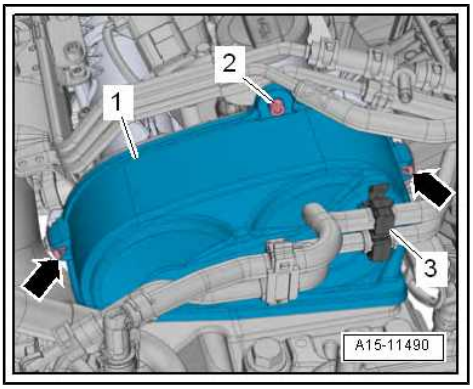
3.8.1 Inspecting timing belt for camshaft drive for wear and running

Work procedure

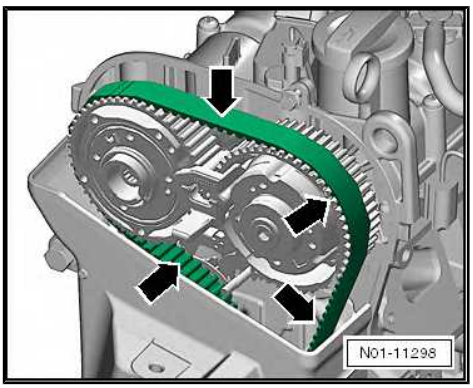
– Expose vacuum hose on the holder -3-.

– Unscrew bolt -2-.

– Loosen clips -arrows-, remove toothed belt guard -1- upwards.

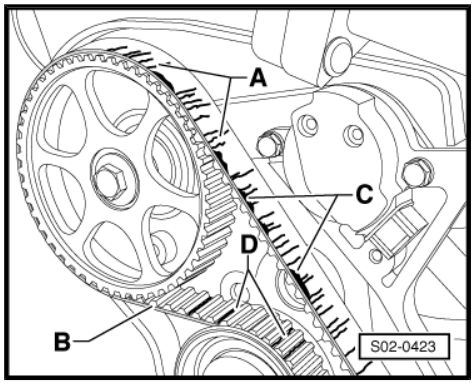


– Turn the crankshaft on the fixing screw of the belt pulley crankshaft in direction of running of the engine and check the complete toothed belt for the following conditions -arrows-:



Check timing belt for:

- Tears or splits -A-, cross-sectional fractures
- Lateral catches -B-
- Fraying or chunking -C-
- Crack in the base tooth -D-
- Separation of layers (timing belt housing, cords)
- Traces of oil and grease



WARNING

If any of the above mentioned defects or shortcomings are found, the timing belt must most definitely be replaced! Major engine damage can thus be avoided.

Replacing the timing belt is a repair measure.

The re-installation of the toothed belt guard occurs in reverse order.

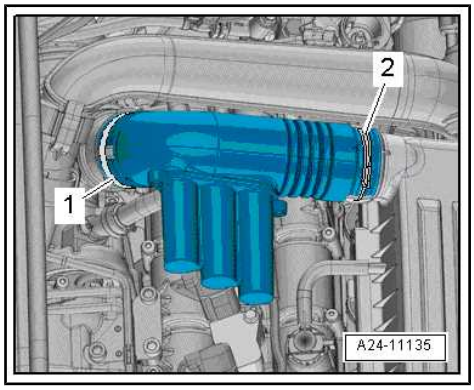
Tightening torque	Nm
Screw for toothed belt guard	8

3.8.2 Inspecting toothed belt for coolant pump drive for wear and running

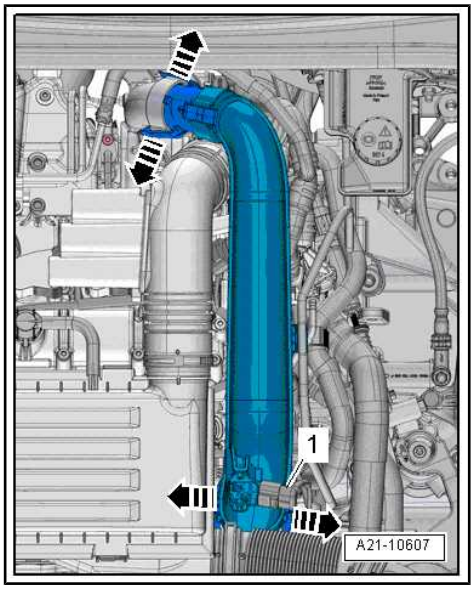
Work procedure

– Loosen hose clamps -1, 2- and remove air guide pipe.

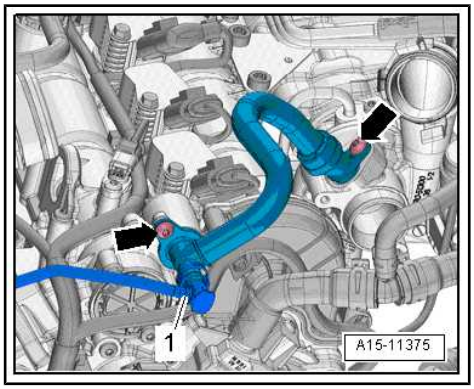
– Expose air guide hoses on the air guide pipe.



– Disconnect plug connection -1-.
– Unlock catches -arrows-, remove air guide pipe.



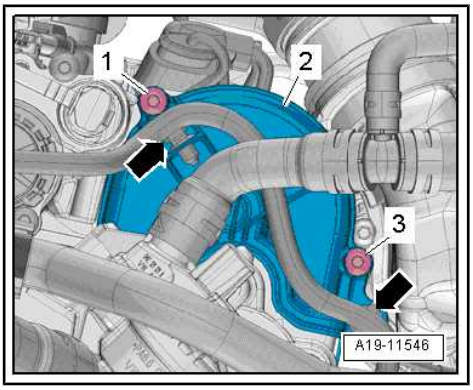
– Press release buttons on the hose -1- to remove the activated charcoal filter.
– Unscrew screws -arrows- and pull out, pull off hose for crankcase ventilation.



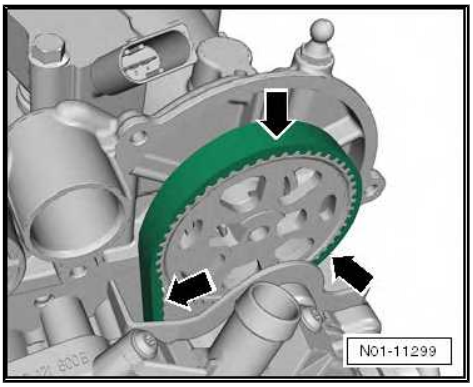
Note

- *If one or more O-rings are damaged, replace the hose for the crankcase ventilation.*
- *Wet new O-rings with engine oil prior to installation!*

– Unclip the electric wiring harness -arrows-.
– Unscrew screws -1, 3- and remove toothed belt guard -2- for coolant pump toothed belt.

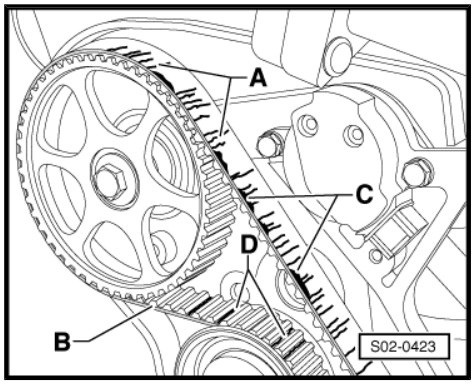


– Turn the crankshaft on the fixing screw of the belt pulley crankshaft in direction of running of the engine and check the complete toothed belt for the following conditions -arrows-:



Check timing belt for:

- Tears or splits -A-, cross-sectional fractures
- Lateral catches -B-
- Fraying or chunking -C-
- Crack in the base tooth -D-
- Separation of layers (timing belt housing, cords)
- Traces of oil and grease



WARNING

If any of the above mentioned defects or shortcomings are found, the timing belt must most definitely be replaced! Major engine damage can thus be avoided.

Replacing the timing belt is a repair measure.

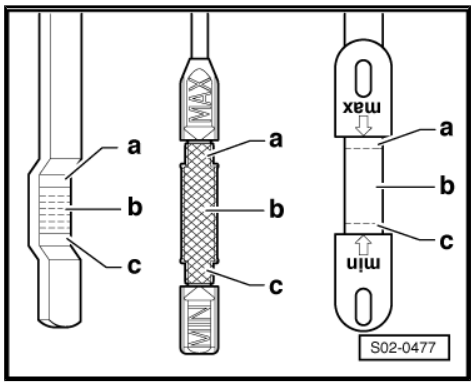
The re-installation of the toothed belt guard occurs in reverse order.

Tightening torque	Nm
Screw for toothed belt guard	8
Screw for crankcase ventilation	9

3.9 Inspecting engine oil level

Note

- *The oil level must not, under any circumstances, be above the -A- range – risk of damage to the catalytic converter.*
- *The vehicle must be standing on level ground when measuring the oil level.*
- *Wait at least 3 minutes after switching off the engine to allow the oil to flow back into the oil pan.*
- *During the pre-sales inspection, the oil inspection can also be performed on a cold engine.*



– Withdraw dipstick, wipe off with a clean cloth and re-insert dipstick fully.
– Withdraw dipstick once again and read off oil level.

Dipstick up to MY 2015

The oil level in area -a-

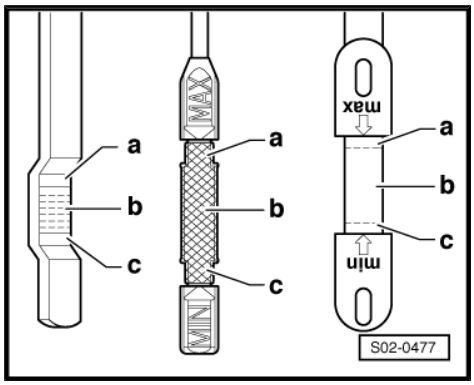
– The oil must not be topped up.

The oil level in area -b-

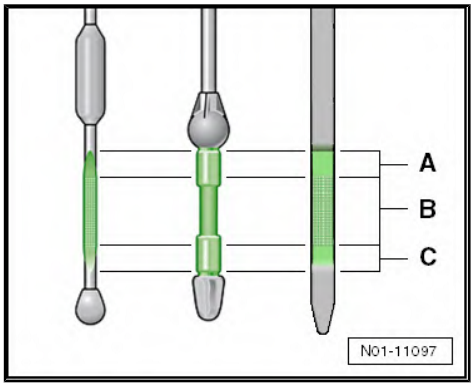
– The oil can be topped up. It is possible that the oil level will rise to the area -a-.

The oil level in area -c-

– The oil must be topped up. It is sufficient when the oil level rises to the area -b-.



Dipstick starting from MY 2016



A - The oil must not be topped up.

B - Oil can be topped up to the -A- range.

C - Oil must be topped up. The oil level must then at least be in the upper part of measuring field -B-.

Note

- *During pre-sales inspection, the oil level must always be in the -A- range. This achieves greatest possible customer satisfaction.*
- *The engine oil volume from the service tables is sufficient for the engine's technical function in all operating conditions. In the case of all other service events, oil may have to be refilled as requested by the customer. This enables additional refilling of the specified oil change volume up to the maximum limit on the oil dip stick. Different quantities can be topped up, not only due to tolerances, but also due to the oil temperature and the drip time.*

3.10 Drain off engine oil and top up

⇒ “3.10.1 Vehicles with a petrol engine; draining and topping up with engine oil, up to MY 2015”, page 63

⇒ “3.10.2 Vehicles with a petrol engine; draining and topping up with engine oil, starting from MY 2016”, page 66

⇒ “3.10.3 Vehicles with a diesel engine; draining and topping up with engine oil, up to MY 2015”, page 69

⇒ “3.10.4 Vehicles with a diesel engine; draining and topping up with engine oil, starting from MY 2016”, page 70

⇒ “3.10.5 Oil level, Volkswagen engine oil standards”, page 72

⇒ “3.10.6 Overview of countries in which VW 508 00/509 00 must not be used”, page 75

3.10.1 Vehicles with a petrol engine; draining and topping up with engine oil, up to MY 2015

Special tools and workshop equipment required

- Old oil collection and suction device, e.g. - VAS 6622-

WARNING

The engine oil should always be changed, if possible, when the engine is at normal operating temperature.

It is absolutely necessary to observe the oil disposal instructions!

It is not permitted to clean and re-use the oil filter!

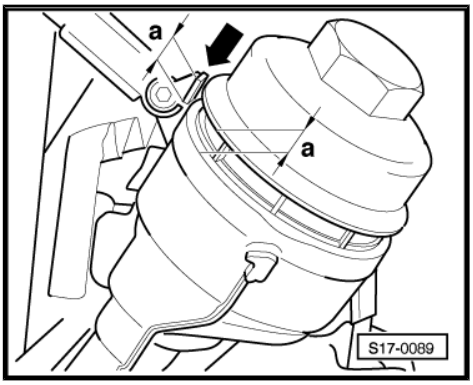
– Take off cap.

Vehicles with petrol engines with replacement oil filters

– Loosen oil filter and unscrew
⇒ “3.4.1 Replacing engine oil filter for petrol engines up to MY 2015”, page 55 .

Vehicles with petrol engines with replacement oil filter element

– Unscrew the screw cap for the oil filter into the height of the lug -a- -arrow- (or by around 3 revolutions if the lug is no longer present) and allow it to remain in this position for a few minutes so that the engine oil can flow out of the filter element and filter housing.



Note

- *When the screw cap is fully removed for the oil filter without a wait time, the oil will flow into the AC generator.*
- *Cover the AC generator with a cloth before removing the screw cap for the oil filter.*
- *Make sure none of the engine oil drops onto the poly V-belt.*

– Completely unscrew the screw cap for oil filters with oil filter element holder, remove filter element
⇒ “3.4.1 Replacing engine oil filter for petrol engines up to MY 2015”, page 55 .

– Suction off the engine oil with the old oil collection and suction device

or

– Remove the noise insulation.

– Screw out the oil drain plug and collect the oil in a suitable vessel.

Note

Always replace oil drain plug.

– Screw in drain plug using a new sealing ring and tighten to 30 Nm.

– Install new oil filter/oil filter element
⇒ “3.4.1 Replacing engine oil filter for petrol engines up to MY 2015”, page 55 .

– Pour in oil as stated in the specifications
⇒ “3.10.5 Oil level, Volkswagen engine oil standards”, page 72 .

– Close the oil filler opening again.

– Start engine and check for leaks.

DANGER!

Instructions for engines with exhaust gas turbocharger:

After the first engine start, change the engine oil and the oil filter and comply with the following:

- *The engine must only run in idle when the oil pressure warning light is lit in the dash panel insert.*
- *Do not accelerate!*
- *Once the oil pressure warning light goes out in the dash panel insert, the full oil pressure is reached and accelerating is possible.*

In case of sudden gas shocks, the turbocharger can be damaged or totally destroyed!

The turbocharger runs at very high speeds and can therefore be severely damaged or totally destroyed within a few seconds due to insufficient bearing lubrication!

Switch off the engine immediately in the event of an oil leakage, vibrations or unusual noise from the turbocharger.

– Check the engine oil level again and top up with oil if necessary.
– Wait at least 3 minutes after topping up the oil again before inspecting the oil level again.
– Install the noise insulation.

Note

The oil level must not be above the -Max- marking to avoid damage to the catalytic converter. See Inspecting engine oil level ⇒ *"3.9 Inspecting engine oil level", page 62* .

3.10.2 Vehicles with a petrol engine; draining and topping up with engine oil, starting from MY 2016

– Take off cap.
– Remove the noise insulation.
– Loosen oil filter and unscrew ⇒ "3.4.2 Replacing engine oil filter for petrol engines starting from MY 2016", page 57 .

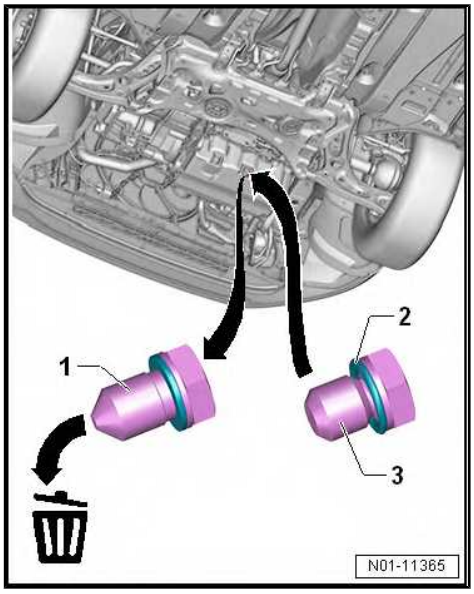
Drain engine oil at 1st. oil change ⇒ page 66

Draining engine oil after 2nd and any further oil change ⇒ page 67

Drain engine oil at 1st. oil change

– Unscrew and dispose of oil drain plug with captive gasket ring -1-.

– Allow the engine oil to drain, catch the oil in a suitable container.



Note

Observe the disposal instructions!

– Locate a new oil seal -2- on a new oil drain plug -3-.
– Screw in the oil drain plug hand-tight and then tighten to the required tightening torque.
– Screw in the new oil filter
⇒ “3.4.2 Replacing engine oil filter for petrol engines starting from MY 2016”, page 57 .

Tightening torque	Nm
Oil drain plug	30

– Top up with engine oil, specification
⇒ “3.10.5 Oil level, Volkswagen engine oil standards”, page 72 .

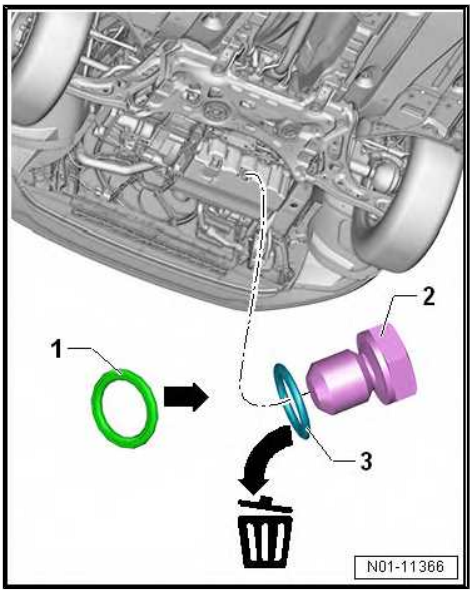
Draining engine oil after 2nd and any further oil change

– Unscrew oil drain plug -2- and dispose of sealing ring -3-.

Note

The oil drain plug is continued to be used after the 1st oil change.

– Allow the engine oil to drain, catch the oil in a suitable container.



Note

Observe the disposal instructions!

– Screw in the previous oil drain plug -2- with a new oil seal -1-, and tighten to the required tightening torque.
– Screw in the new oil filter
⇒ “3.4.2 Replacing engine oil filter for petrol engines starting from MY 2016”, page 57 .

Tightening torque	Nm
Oil drain plug	30

– Top up with engine oil, specification
⇒ “3.10.5 Oil level, Volkswagen engine oil standards”, page 72 .
– Reinsert the screw cap.
– Start engine and check for leaks.

DANGER!

Instructions for engines with exhaust gas turbocharger:

After the first engine start, change the engine oil and the oil filter and comply with the following:

- *The engine must only run in idle when the oil pressure warning light is lit in the dash panel insert.*
- *Do not accelerate!*
- *Once the oil pressure warning light goes out in the dash panel insert, the full oil pressure is reached and accelerating is possible.*

In case of sudden gas shocks, the turbocharger can be damaged or totally destroyed!

The turbocharger runs at very high speeds and can therefore be severely damaged or totally destroyed within a few seconds due to insufficient bearing lubrication!

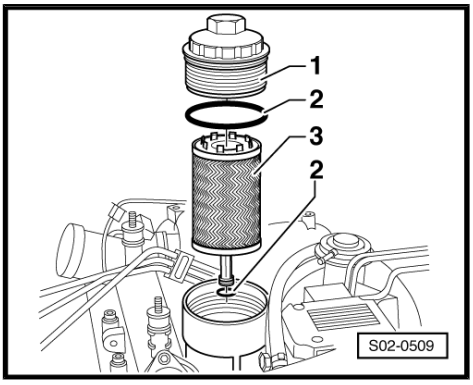
Switch off the engine immediately in the event of an oil leakage, vibrations or unusual noise from the turbocharger.

– Install the noise insulation.
– Check the engine oil level again and top up with oil if necessary.
– Wait at least 3 minutes after topping up the oil again before inspecting the oil level again.

Note

The oil level must not be above the -A- mark (max) to avoid damage to the catalytic converter
⇒ “3.9 Inspecting engine oil level”, page 62 .

3.10.3 Vehicles with a diesel engine; draining and topping up with engine oil, up to MY 2015



– Undo the screw cap for the oil filter -1- and keep in this position for a few minutes to allow the engine oil to flow out of the filter element and filter housing
⇒ “3.4.3 Replacing engine oil filter for diesel engines up to MY 2015”, page 57 .

– Unscrew the screw cap for oil filter -1- and remove the oil filter element -3-.

– Suction off the engine oil with the old oil collection and suction device

or

– Remove the noise insulation.

– Screw out the oil drain plug and collect the oil in a suitable vessel.

Note

Always replace oil drain plug.

– Screw in drain plug using a new sealing ring and tighten to 30 Nm.

– Install new oil filter/oil filter element
⇒ “3.4.3 Replacing engine oil filter for diesel engines up to MY 2015”, page 57 .

– Pour in oil as stated in the specifications
⇒ “3.10.5 Oil level, Volkswagen engine oil standards”, page 72 .

– Close the oil filler opening again.

– Start engine and check for leaks.

DANGER!

Instructions for engines with exhaust gas turbocharger:

After the first engine start, change the engine oil and the oil filter and comply with the following:

- ***The engine must only run in idle when the oil pressure warning light is lit in the dash panel insert.***
- ***Do not accelerate!***
- ***Once the oil pressure warning light goes out in the dash panel insert, the full oil pressure is reached and accelerating is possible.***

In case of sudden gas shocks, the turbocharger can be damaged or totally destroyed!

The turbocharger runs at very high speeds and can therefore be severely damaged or totally destroyed within a few seconds due to insufficient bearing lubrication!

Switch off the engine immediately in the event of an oil leakage, vibrations or unusual noise from the turbocharger.

– Check the engine oil level again and top up with oil if necessary.
– Wait at least 3 minutes after topping up the oil again before inspecting the oil level again.
– Install the noise insulation.

Note

The oil level must not be above the -Max- marking to avoid damage to the catalytic converter. See Inspecting engine oil level ⇒ *"3.9 Inspecting engine oil level", page 62* .

3.10.4 Vehicles with a diesel engine; draining and topping up with engine oil, starting from MY 2016

– Take off cap.
– Remove the noise insulation.
– Replace engine oil filter ⇒ "3.4.4 Replacing engine oil filter for diesel engines starting from MY 2016", page 58 .

Caution

No oil must enter the area between the oil sump and the oil sump noise insulation sleeve during the oil change.

The oil sump noise insulation sleeve can be fully taken in with the engine oil in this case.

Carefully release the oil sump noise insulation sleeve from the oil sump.

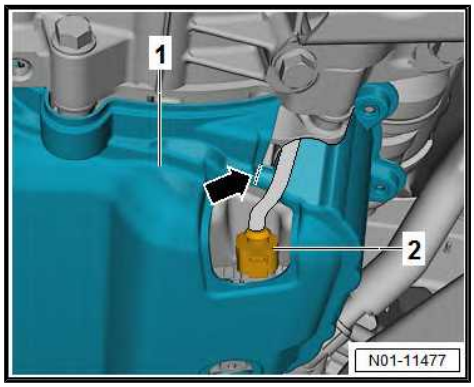
– Release the oil sump noise insulation sleeve from the oil sump as follows:

Cutting the noise insulation sleeve to release it.

– Using a suitable tool, cut the oil sump noise insulation sleeve -1- at the narrowest point -arrow- of the connection for the oil level and oil temperature sender - G266- -2-.
– Carefully route the pipe for the oil level and oil temperature sender - G266- behind the oil sump noise insulation sleeve.

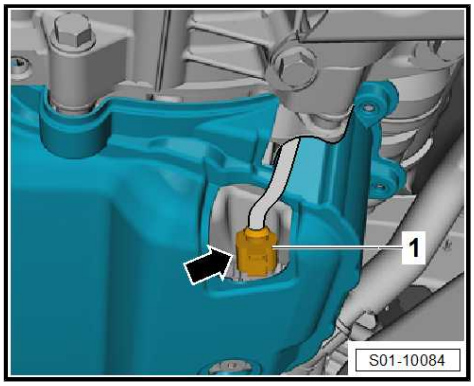
There is no need to disconnect the connector -2-.

Releasing the noise insulation sleeve without cutting



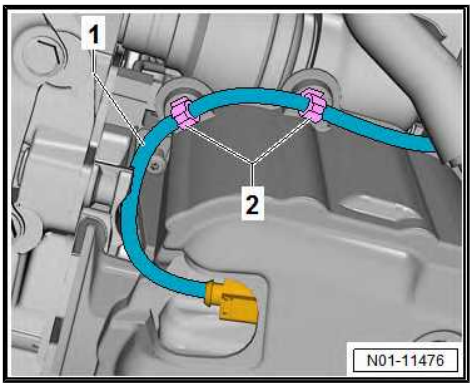
– Disconnect the connector -arrow- for the oil level and oil temperature sender - G266- -1-.

– Deposit the connector -arrow- for the oil level and oil temperature sender - G266- -1- on one side.



Further steps for releasing the noise insulation sleeve

– Open the clips -2-, unthread the pipe for the oil level and oil temperature sender - G266- -1-, and deposit on one side.



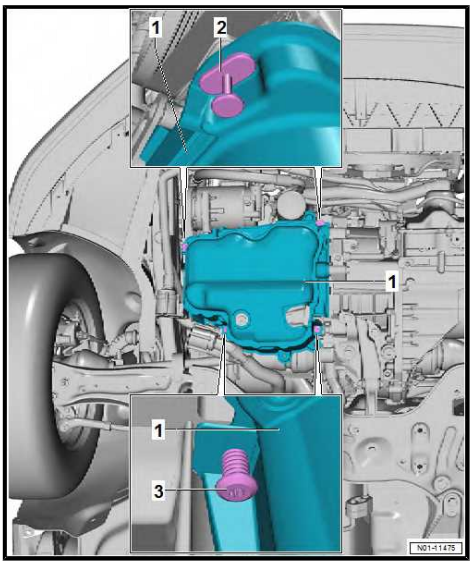
– Release the fastening parts -2- and unscrew the plastic screws -3-; carefully tilt the oil sump noise insulation sleeve -1- to the side.

Caution

The fastening parts -2- are bonded to the oil sump noise insulation sleeve.

Some damage to the oil sump noise insulation sleeve is possible during removal.

Handle the oil sump noise insulation sleeve carefully.

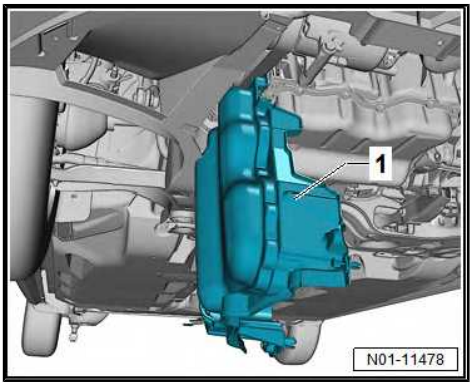


– Leave the oil sump noise insulation sleeve -1- attached to the mounts at the side.

– Screw out oil drain plug.

Note

- *Observe the disposal instructions!*
- *Always replace oil drain plug.*



– Allow the engine oil to drain, catch the oil in a suitable container.

– Screw in a new oil drain plug with oil seal hand-tight, and tighten to the tightening torque.

Tightening torque	Nm
Oil drain plug	30

– Install a new oil filter
⇒ “3.4.4 Replacing engine oil filter for diesel engines starting from MY 2016”, page 58 .
– Pour in oil as stated in the specifications
⇒ “3.10.5 Oil level, Volkswagen engine oil standards”, page 72 .
– Insert the screw cap.
– Locate and fasten the oil sump noise insulation sleeve.

Install the oil sump noise insulation sleeve in reverse order.

– Start engine and check for leaks.
– Install the noise insulation.

DANGER!

Instructions for engines with exhaust gas turbocharger:

After the first engine start, change the engine oil and the oil filter and comply with the following:

- *The engine must only run in idle when the oil pressure warning light is lit in the dash panel insert.*
- *Do not accelerate!*
- *Once the oil pressure warning light goes out in the dash panel insert, the full oil pressure is reached and accelerating is possible.*

In case of sudden gas shocks, the turbocharger can be damaged or totally destroyed!

The turbocharger runs at very high speeds and can therefore be severely damaged or totally destroyed within a few seconds due to insufficient bearing lubrication!

Switch off the engine immediately in the event of an oil leakage, vibrations or unusual noise from the turbocharger.

– Check the engine oil level again and top up with oil if necessary.
– Wait at least 3 minutes after topping up the oil again before inspecting the oil level again.

Note

The oil level must not be above the -A- mark (max) to avoid damage to the catalytic converter
⇒ “3.9 Inspecting engine oil level”, page 62 .

3.10.5 Oil level, Volkswagen engine oil standards

Engine oil capacities

Petrol engines		Approximative oil capacity with oil filter change	Max. oil capacity after engine repair[12)]	VW-engine oil standards	
				QI6	QI1, QI2, QI3, QI4
1.0 l/70 kW TSI	CHZB	4.0 l	4.3 l	VW 508 00 VW 504 00 ⇒ page 75	VW 502 00
	DKLD	4.0 l	4.3 l	VW 508 00 VW 504 00 ⇒ page 75	VW 508 00 VW 504 00 ⇒ page 75
1.0 l/81 kW TSI	CHZC	4.0 l	4.3 l	VW 508 00 VW 504 00 ⇒ page 75	VW 502 00
	DKRC	4.0 l	4.3 l	VW 508 00 VW 504 00 ⇒ page 75	VW 508 00 VW 504 00 ⇒ page 75
1.2 l/55 kW MPI	CGPC	2.8 l	3.4 l	VW 504 00 VW 503 00	VW 502 00 VW 501 01
1.4 l/90 kW MPI	CAXA	3.6 ltr.	4 l	VW 503 00 VW 504 00	VW 502 00 VW 501 01
1.2 l/63 kW TSI	CBZA	3.9 l	4.3 l	VW 504 00	VW 502 00
1.2 l/77 kW TSI	CBZB	3.9 l	4.3 l	VW 504 00	VW 502 00
1.6 l/77 kW	CFNA	3.6 ltr.	4 l		VW 502 00 VW 501 01
1.2 l/66 kW TSI	CJZC	4.0 l	4.5 l	VW 508 00 VW 504 00 ⇒ page 75	VW 502 00
1.2 l/81 kW TSI	CJZD	4.0 l	4.5 l	VW 508 00 VW 504 00 ⇒ page 75	VW 502 00
1.4 l/92 kW TSI	CZCA	4.0 l	4.5 l	VW 508 00 VW 504 00 ⇒ page 75	VW 502 00
1.6 l/81 kW MPI	CWVA	4.0 l	4.3 l		VW 502 00
1.6 l/66 kW MPI	CWVB	4.0 l	4.3 l		VW 502 00

12) If the engine oil has been drained so that a part of the cylinder block or the crankshaft drive can be repaired or replaced, the recommended quantity of oil for filling is greater than the value for an ordinary oil change. The quantity for topping up depends on the scope of the engine repair that has been completed.

Note Volkswagen Technical Site: http://vwts.ru http://vwts.info

The given specifications must be indicated on the can individually or together with other specifications.

Diesel engines		Approximative oil capacity with oil filter change	Max. oil capacity after engine repair[13)]	VW-engine oil standards	
				QI6	**QI1, QI2, QI3, QI4**
1.6 l/77 kW TDI CR	CAYC	4.3 l	5.2 ltr.	VW 507 00	VW 507 00
1.6 l/77 kW TDI CR	CLNA	4.3 l	5.2 ltr.	VW 507 00	VW 507 00
1.6 l/66 kW TDI CR	CAYB	4.3 l	5.2 ltr.	VW 507 00	VW 507 00
1.4 l/66 kW TDI CR	CUSB	4.1 l	4.8 l	VW 507 00	VW 507 00
1.6 l/85 kW TDI CR	CXMA	4.9 l	5.3 l	VW 507 00	VW 507 00

13) If the engine oil has been drained so that a part of the cylinder block or the crankshaft drive can be repaired or replaced, the recommended quantity of oil for filling is greater than the value for an ordinary oil change. The quantity for topping up depends on the scope of the engine repair that has been completed.

Note

The given specifications must be indicated on the can individually or together with other specifications.

WARNING

On Škoda vehicles, the VW standard for engine oils VW 508 00/509 00 has been introduced for some engines.

An engine oil according to VW engine oil standard 508 00/509 00 reduces the CO_2 emissions and can reduce fuel consumption. Furthermore, this oil is prescribed for gasoline engines with Otto particle filter.

- *An engine oil under VW engine oil standard 508 00/509 00 must not be filled into older generations of engine. If the oil compliant with VW engine oil standard 508 00/509 00 is used in engines for which it is not intended, the engine may be damaged.*
- *Engines factory-filled with oil under VW engine oil standard 508 00 can also be filled with oil under VW engine oil standard 504 00 in case of service. However, this does not apply to engines with the prescribed VW engine oil standard VW 508 00!*
- *Using oil VW 504 00 instead of VW 508 00 may result in slightly worse exhaust gas values.*
- *On some markets, the oil under VW engine oil standard 508 00 must not be used – see the following table for these markets*
  ⇒ "3.10.6 Overview of countries in which VW 508 00/509 00 must not be used", page 75 .

3.10.6 Overview of countries in which VW 508 00/509 00 must not be used

Note

- *Fuels with metal additives are used in the countries listed below.*
- *These fuels does not comply with standard EN288 or EN590.*

Abu Dhabi	Fiji	Mauritius	Suriname
Afghanistan	Gabon	Mexico	Swaziland
Egypt	Gambia	Mongolia	Syria
Algeria	Georgia	Mozambique	Tajikistan
Angola	Ghana	Myanmar	Taiwan
Equatorial Guinea	Guatemala	Namibia	Tanzania
Argentina	Guinea	Nepal	Thailand
Armenia	Guinea-Bissau	New Caledonia	Togo
Azerbaijan	Guyana	Nicaragua	Trinidad and Tobago
Ethiopia	Haiti	Dutch overseas territories Aruba, Curacao, Sint Maarten (Netherlands).	Chad
Australia	Honduras	Niger	Tunisia
Bahamas	India	Nigeria	Turkey
Bahrain	Indonesia	North Korea	Turkmenistan
Bangladesh	Jamaica	Oman	Uganda
Belize	Yemen	Pakistan	Ukraine
Benin	Jordan	Panama	Uruguay

Bermuda	Cambodia	Papua New Guinea	Uzbek
Bhutan	Cameroon	Paraguay	Venezuela
Bolivia	Caribbean, left-hand drive	Peru	United Arab Emirates
Botswana	Kazakhstan	Philippines	Vietnam
Brunei	Kenya	Qatar	Belarus
Burkina Faso	Kirgizstan	Republic of Congo	Western Sahara
Burundi	Colombia	Rwanda	Central African Republic
Canary Islands	Cuba	Russia	Zimbabwe
Chile	Kuwait	Zambia	
China	Laos	Saudi Arabia	
Costa Rica	Lesotho	Senegal	
Democratic Republic of Congo	Lebanon	Seychelles	
Djibouti	Liberia	Sierra Leone	
Dominican Republic	Libya	Singapore	
Dubai	Madagascar	Somalia	
Ecuador	Malawi	Sri Lanka and Maldives	
El Salvador	Mali	South Africa	
Ivory Coast	Morocco	Sudan	
Eritrea	Mauretania	South Sudan	

3.11 Cooling system: check

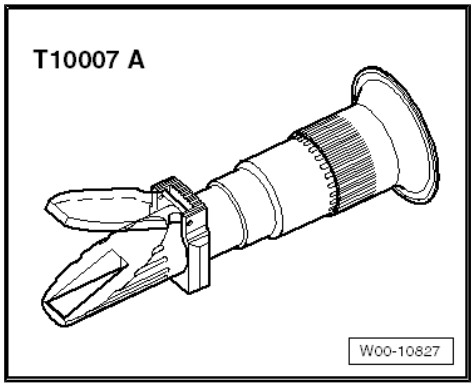
⇒ “3.11.1 Inspecting antifreeze protection, replenishing coolant additive if necessary”, page 76

⇒ “3.11.2 Inspecting coolant level (volume)”, page 81

3.11.1 Inspecting antifreeze protection, replenishing coolant additive if necessary

Special tools and workshop equipment required

- Refractometer - T10007 A-



WARNING

- *Coolant additives are toxic!*
- *Do not inhale coolant vapours, do not swallow coolant, avoid contact with skin and eyes; hazardous if consumed!*
- *Observe the disposal instructions for the drained coolant.*

Note

- *When inspecting the antifreeze, read off the exact value on the light/dark boundary shown on the corresponding scale of the refractometer.*
- *Before starting the test, let a drop of water drip onto the measuring glass using a pipette for improved visibility of the light/dark boundary. Now the light/dark limit is clearly visible at the "WATERLINE".*

– Clean the measuring glass of the refractometer before inspecting the antifreeze, so that the test result will not be incorrect.

– Let a drop of coolant drip onto the measuring glass ⇒ Owner's Manual of refractometer .

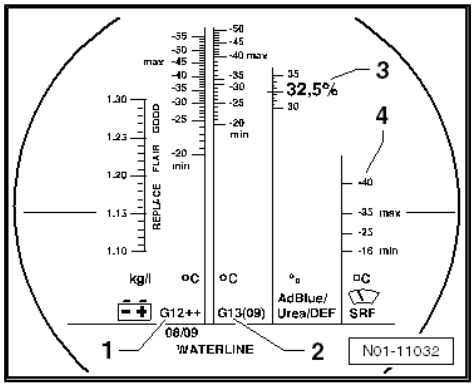
– Hold refractometer against a light source and read off the temperature down to which antifreeze protection exists on the corresponding scale:

WARNING

The vehicles are filled in the factory with coolant additive G13 - which has a lilac colour and conforms with the standard TL VW 774 J.

The scale -2- of the refractometer - T10007 A- is valid for the coolant additives G13.

– Clean the measuring glass of the refractometer after inspecting the antifreeze.



Antifreeze protection of the coolant

WARNING

Antifreeze protection of the coolant must be ensured down to -25 °C.

In countries with an arctic climate, the antifreeze protection of the coolant must be guaranteed to -35 °C.

If a greater antifreeze concentration is required for climatic reasons, the concentration may be increased up to 60% (i.e. antifreeze protection down to approx -40°C). Any further increase in concentration increase would reduce the antifreeze protection and impair cooling efficiency.

Coolant mixture ratio

Antifreeze protection down to	Coolant additive	Distilled water
-25°C	approx. 40 %	approx. 60%
-35°C	approx. 50 %	approx. 50 %
-40°C	approx. 60%	approx. 40 %

Replenishing coolant additive

WARNING

The cooling system is filled all year round with a mixture of distilled water and coolant additive with anti-corrosion agent. Coolant additives prevent damage from frost and corrosion and the accumulation of lime scale while also raising the boiling point of the coolant. For this reason, it is imperative that the cooling system remains filled with coolant additive with corrosion protection which has these properties the whole year round.

The water used for mixing is an important influencing factor on the effectiveness of a coolant. The water quality was defined based on the ingredients that can vary by country or region. Distilled water meets all requirements. For this reason, the coolant must be mixed with distilled water for topping off and new fillings.

All coolant additives, approved by ŠKODA AUTO a.s., prevent frost and corrosion damage as well as the formation of scale and also increase the boiling point.

For these reasons you must use coolant additives all year round.

The higher boiling temperature of the coolant contributes to the engine's reliability when the engine is stressed, especially in countries with a tropical climate.

Other coolant additives may specifically impair the provided corrosion protection.

The resulting corrosion damage may lead to a loss of coolant and subsequently cause major engine damage.

DANGER!

Do not use coolant additives that have not been recommended by ŠKODA AUTO a.s.

Current offer on coolant additives ⇒ electronic catalogue of original parts .

WARNING

The vehicles are filled in the factory with coolant additive G13 - which has a lilac colour and conforms with the standard TL VW 774 J.

It is also possible that a specific vehicle was filled with the coolant additive G12++ - which has a lilac colour and conforms with the standard TL VW 774 G ⇒ Electronic catalogue of original parts .

When refilling, coolant additives G13 and G12++ - which have a lilac colour can be mixed with each other.

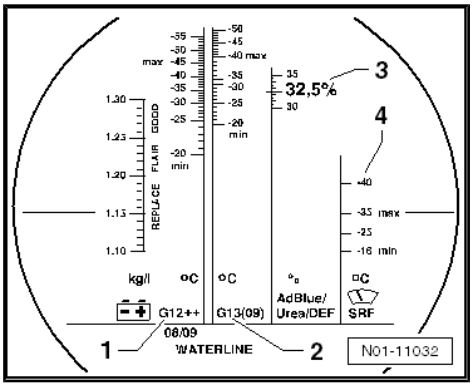
When topping up with coolant additive, use coolant additive for all vehicles depending on the current offer ⇒ Electronic catalogue of original parts .

WARNING

In case of doubt or uncertainty, which coolant additive was filled in the vehicle, use the scale of the refractometer -2- for coolant additive G13 after topping up with coolant additive and subsequently inspecting the antifreeze.

The scale -2- of the refractometer - T10007 A- is valid for the coolant additives G13.

If the vehicle is filled with the coolant and the antifreeze protection is not adequate, drain part of the coolant from the cooling system.



Note

- *Collect drained coolant for proper disposal.*
- *Observe the disposal instructions for the drained coolant.*

– After this, fill the cooling system with concentrated coolant additive depending on the current offer ⇒ Electronic catalogue of original parts .

Note

The cooling system must be bled with the actuator diagnosis (coolant shut-off valve of heating system -N279- on vehicles with auxiliary heating and with coolant shut-off valve of heating system -N279-) ⇒ Vehicle diagnostic tester.

– Perform a test drive and again check the coolant antifreeze protection.

Miscibility of coolant additives

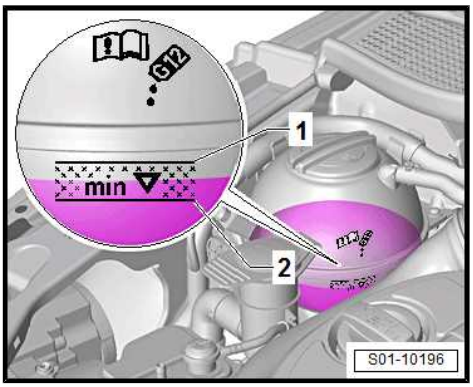
WARNING

Coolant additives G13 which conform with the standard TL VW 774 J and coolant additives G12++, which conform with the standard TL VW 774 G, can be mixed with each other.

3.11.2 Inspecting coolant level (volume)

Inspecting coolant level (volume), up to MY 2015

The coolant expansion reservoir is located on the right of the engine compartment.



– Check coolant level when the engine is cold.

- Delivery inspection and pre-sales inspection: coolant level at the max marking -1- as a minimum.
- During the pre-sales inspection, the permissible coolant level must be above mark -1-. A higher coolant level must not be suctioned off as the level may fall during operation of the vehicle.
- Check: above the -Min- marking (-2-).

– When the coolant level is low, top up the missing amount of coolant according to the mixing ratio ⇒ page 78 .

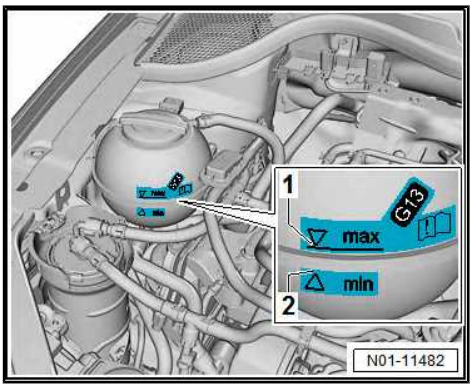
WARNING

- *Coolant additives are toxic!*
- *Do not inhale coolant vapours, do not swallow coolant, avoid contact with skin and eyes; hazardous if consumed!*
- *In the event of a loss of coolant, which was not caused by the current consumption, determine the cause of the leakage and eliminate it (repair measure).*

Inspecting coolant level (volume), starting from MY 2016

The coolant expansion reservoir is located on the right of the engine compartment.

– Check coolant level when the engine is cold.



- Delivery inspection and pre-sales inspection: coolant level at the “max” marking -1- as a minimum.
- During the pre-sales inspection, the permissible coolant level is above mark the “max” marking -1-. A higher coolant level must not be suctioned off as the level may fall during operation of the vehicle.
- Inspection: coolant level above “Min” marking -2-

– When the coolant level is low, top up the missing amount of coolant according to the mixing ratio ⇒ page 78 .

WARNING

- *Coolant additives are toxic!*
- *Do not inhale coolant vapours, do not swallow coolant, avoid contact with skin and eyes; hazardous if consumed!*
- *In the event of a loss of coolant, which was not caused by the current consumption, determine the cause of the leakage and eliminate it (repair measure).*

3.12 V-ribbed belt: check condition

Special tools and workshop equipment required

- Socket

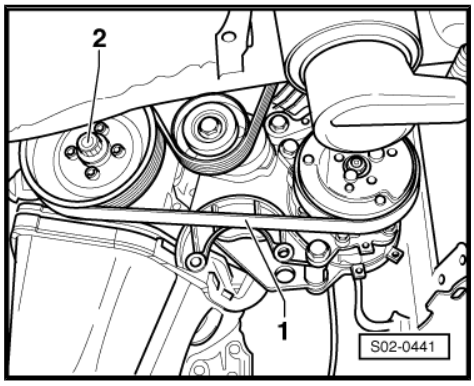
Observe the following procedure:

– Raise vehicle.

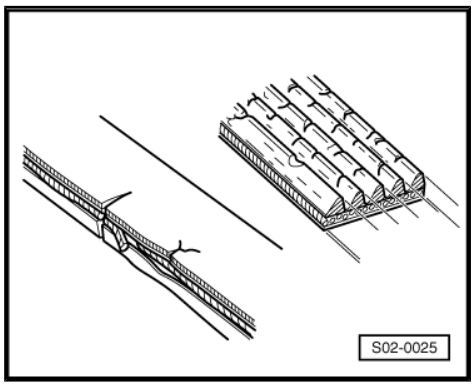
– Remove the noise insulation.

– Use a socket wrench to crank the engine at vibration damper/ belt pulley -2-.

– Inspect V-ribbed belt from below for:



- Splits in the carcass (initial splits, splits in core, splits across carcass).
- Separation of layers (top layer, cords).
- Sections of carcass broken out.
- Fraying of cords.
- Wear to sides (abrasion of material, frayed sides, hardening of sides, glazed and hardened surfaces).
- Traces of oil and grease.
- Correct tension (vehicles without tensioning pulley).



Note

It is essential to replace the V-ribbed belt if defects are found. This will help avoid any failures or operational problems. Replacing the ribbed V-belt is a repair measure.

3.13 Routing of V-ribbed belt

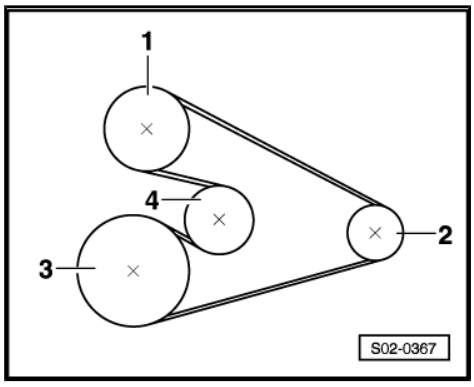
Engine: 1.2 l/55 kW (CGPC) without air-conditioning system

1 - Coolant pump

2 - Alternator

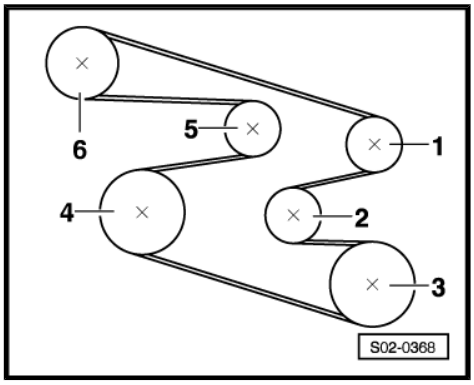
3 - Crankshaft

4 - Tensioning pulley

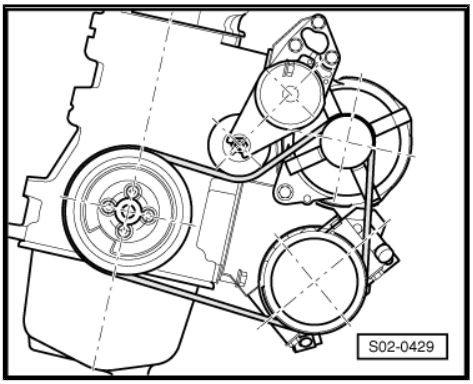


Engine: 1.2 l/55 kW (CGPC) with air-conditioning system

1 - Alternator
2 - Guide pulley
3 - AC compressor
4 - Crankshaft
5 - Tensioning pulley
6 - Coolant pump

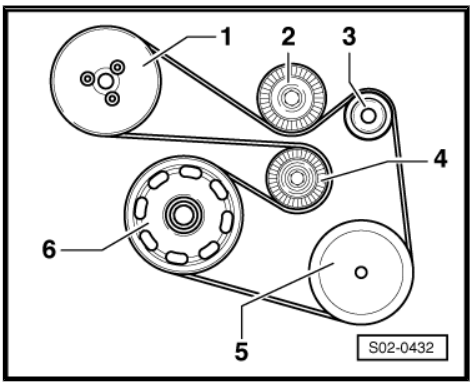


Engine: 1.4/90 kW (CAXA) with air conditioning unit



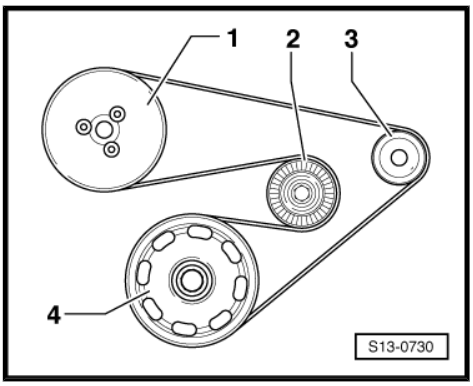
Engines: 1.2 l/63 kW (CBZA), 1.2 l/77 kW (CBZB) with air conditioning unit

1 - Coolant pump
2 - Guide pulley
3 - Alternator
4 - Tensioning pulley
5 - AC compressor
6 - Crankshaft



Engines: 1.2 l/63 kW (CBZA), 1.2 l/77 kW (CBZB) without air conditioning unit

1 - Coolant pump
2 - Tensioning pulley
3 - Alternator
4 - Crankshaft



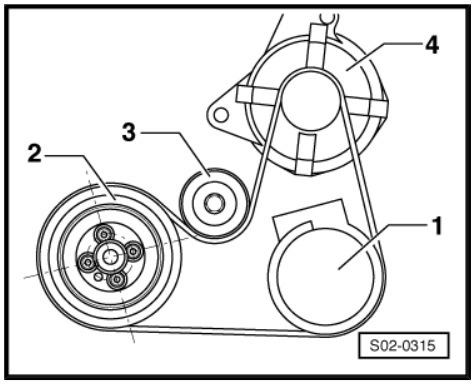
Engine: 1.6 l/66 kW TDI CR (CAYB), 1.6 l/77 kW TDI CR (CAYC, CLNA) with air conditioning unit

1 - AC compressor

2 - Crankshaft

3 - Tensioning or guide pulley

4 - Alternator

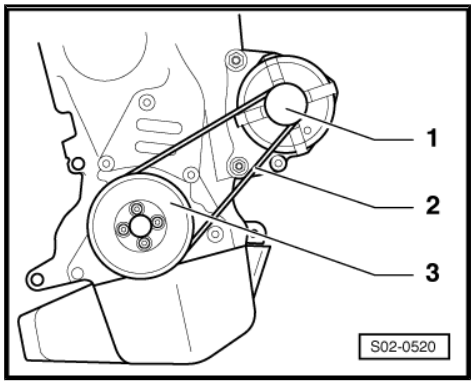


Engine: 1.6 l/77 kW TDI CR (CAYC, CLNA) without air conditioning system

1 - Alternator

2 - V-ribbed belt

3 - Crankshaft



1.6 l/77 kW (CFNA) without air-conditioning system

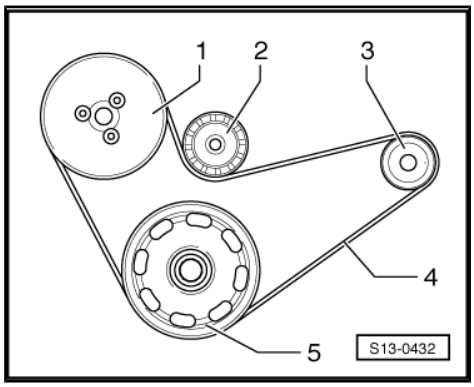
1 - Coolant pump

2 - Tensioning pulley

3 - Alternator

4 - V-ribbed belt

5 - Crankshaft



1.6 l/77 kW (CFNA) with air-conditioning system

1 - Coolant pump

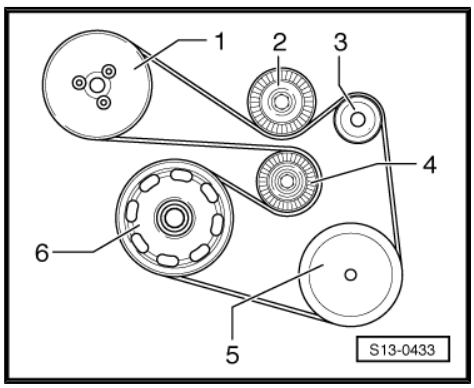
2 - Guide pulley

3 - Alternator

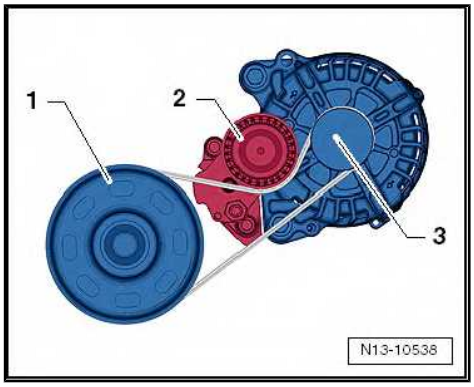
4 - Tensioning pulley

5 - AC compressor

6 - Crankshaft



Engine 1.0 l/70 kW TSI (CHZB), 1.0 l/81 kW TSI (CHZC), 1.2 l/66 kW TSI (CJZC), 1.2 l/81 kW TSI (CJZD), 1.4 l/92 kW TSI (CZCA), 1.4 l/66 kW TDI CR (CUSB), 1.6 l/85 kW TDI CR (CXMA), 1.6l/81 kW MPI (CWVA), 1.6l/66 kW MPI (CWVB) without air conditioning

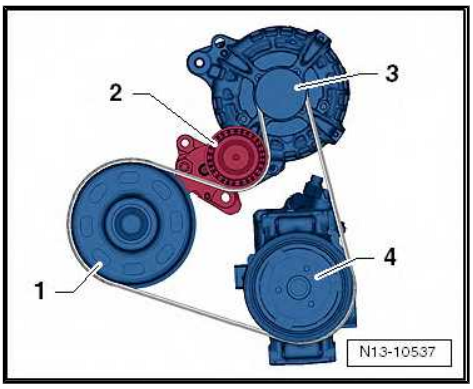


1 - Crankshaft/vibration damper

2 - Tensioning pulley

3 - Alternator

Engine 1.0 l/70 kW TSI (CHZB), 1.0 l/81 kW TSI (CHZC), 1.2 l/66 kW TSI (CJZC), 1.2 l/81 kW TSI (CJZD), 1.4 l/92 kW TSI (CZCA), 1.4 l/66 kW TDI CR (CUSB), 1.6 l/85 kW TDI CR (CXMA), 1.6l/81 kW MPI (CWVA), 1.6l/66 kW MPI (CWVB) with air conditioning



1 - Crankshaft

2 - Tensioning device for V-ribbed belt

3 - Alternator

4 - AC compressor

3.14 Replace spark plugs

⇒ “3.14.1 Replacing spark plugs up to MY 2015”, page 87

⇒ “3.14.2 Replace spark plugs - 1.0 l TSI engines”, page 87

⇒ “3.14.3 Replace spark plugs, 1.2 l TSI and 1.4 l TSI engines starting from MY 2016”, page 88

⇒ “3.14.4 Replace spark plugs - 1.6 l MPI engines, starting from MY 2016”, page 90

Note

- *To replace the spark plugs use a special spark plug wrench, e.g -3122 B- .*
- *Observe the disposal instructions for the spark plugs.*
- *Current assignment of the spark plugs ⇒ Electronic Catalogue of Original Parts.*

Engine fitted		Change interval	Tool for removing the ignition units/plugs
1.2 l/55 kW	CGPC	Change interval ⇒ “2.4.3 Additional work up to MY 2016”, page 21 or ⇒ “2.4.4 Additional work from MY 2017”, page 24	-T10118- and -T10094 A-
1.4 l/90 kW	CAXA		-T10094 A- -T10118-
1.2 l/63 kW	CBZA		-T10112 A-
1.2 l/77 kW	CBZB		-T10112 A-
1.6 l/77 kW	CFNA		-T10118- and -T10094 A-
1.0 l/70 kW TSI	CHZB DKLD		-T10530-
1.0 l/81 kW TSI	CHZC DKRC		
1.2 l/66 kW TSI	CJZC		
1.2 l/81 kW TSI	CJZD		
1.4 l/92 kW TSI	CZCA		
1.6 l/86 kW MPI	CWVB		
1.6 l/81 kW MPI	CWVA		

3.14.1 Replacing spark plugs up to MY 2015

Removing and Installing spark plugs ⇒ Engine; Rep. gr. 28 .

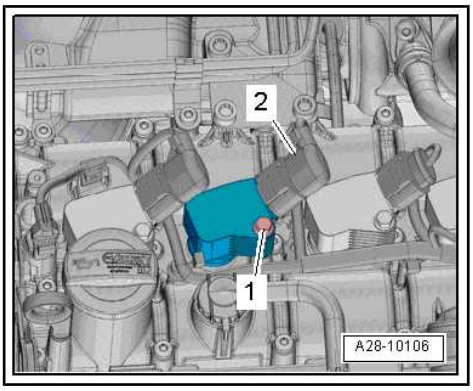
3.14.2 Replace spark plugs - 1.0 l TSI engines

– Remove air filter housing
⇒ “3.15.2 Remove and install air filter element, 1.0 l TSI engines”, page 94 .

– Remove air guide pipe ⇒ Rep. gr. 21 ; Charge-air system .

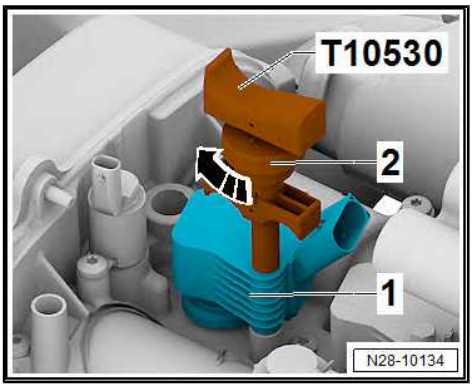
– Disconnect connectors -2- from ignition coils.

– Unscrew screws -1- of ignition coils.



– Press extractor -T10530- into the bore of the ignition coil -1- as far as it can go.

– Tighten the nut -2- in -direction of arrow- so that the extractor -T10530- stays firm in the bore of the ignition coil.

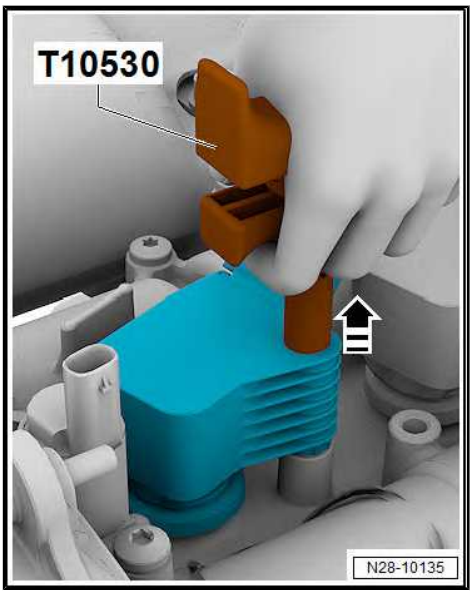


– Remove ignition coil with extractor -T10530- in -direction of arrow- out of the camshaft housing.

– Undo nuts from the extractor -T10530- and remove from the bore of the ignition coil.

– Using the extractor -T10530- remove the other ignition coils out of the camshaft housing in sequence.

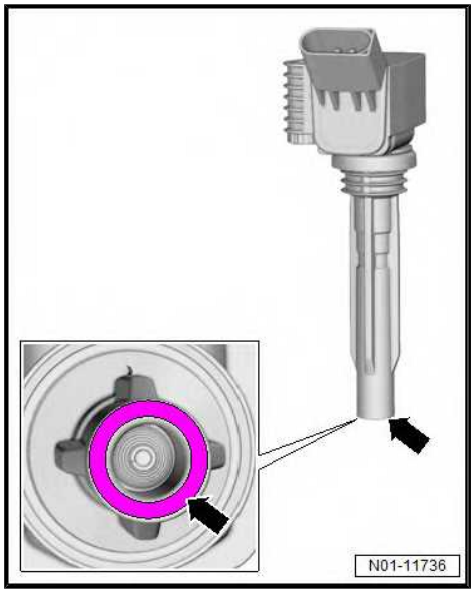
– Unscrew spark plugs with spark plug wrench e. g. -3122 B- and remove.



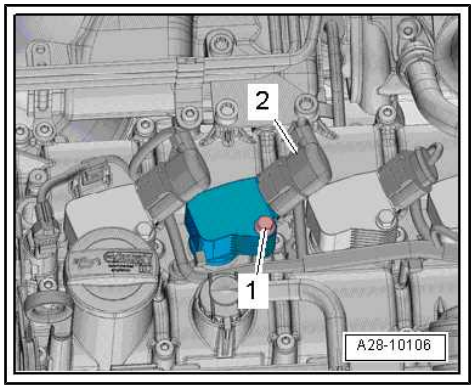
Note

Observe the disposal instructions!

– Coat the ignition coil sealing hoses -arrow- with silicone paste for ignition coil sealing hoses from the ⇒ Electronic Catalogue of Original Parts .
– Place all ignition coils loosely into the spark plug shaft.
– Align the ignition coils so that the fixing screws can be screwed in.
– Screw in new spark plugs with spark plug wrench e. g. -3122 B- and tighten to tightening torque ⇒ page 88 .
– Align the ignition coils so that the fixing screws can be screwed in.
– Press ignition coils onto the spark plugs evenly by hand (do not use an impact tool).



– Screw in the ignition coils screws -1- and tighten to required tightening torque ⇒ page 88 .
– Connect the connectors -2- to the ignition coils.
– Install air guide pipe ⇒ Rep. gr. 21 ; Charge-air system .
– Install air filter housing ⇒ “3.15.2 Remove and install air filter element, 1.0 l TSI engines”, page 94 .



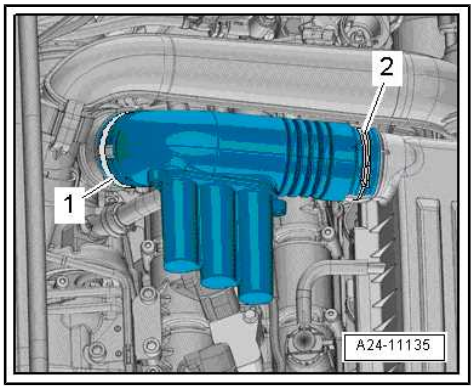
Tightening torque	Nm
Spark plugs in the cylinder head	⇒ Rep. gr. 28 ; Ignition system; Summary of components - ignition system
Screw for ignition coil with output stage	8

3.14.3 Replace spark plugs, 1.2 l TSI and 1.4 l TSI engines starting from MY 2016

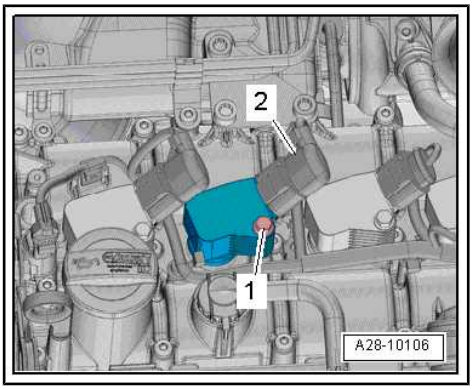
Special tools and workshop equipment required

- Spark plug wrench, e.g. -3122 B-
- Tool for removing the ignition units -T10530-
- Silicone paste for ignition coil sealing hoses ⇒ Electronic Catalogue of Original Parts

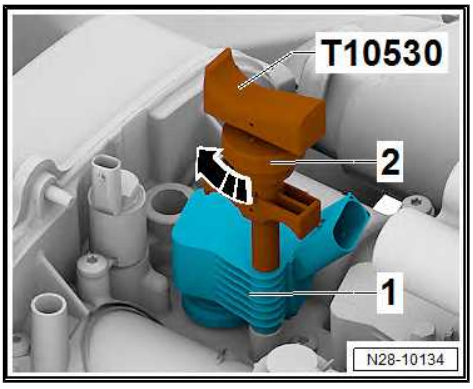
– Loosen the hose clamps -1- and -2- and remove the air pipe.



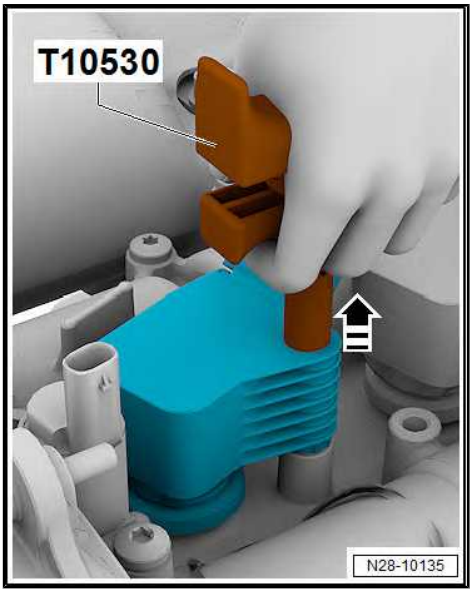
– Disconnect plug connections -2-.
– Remove screws -1-.



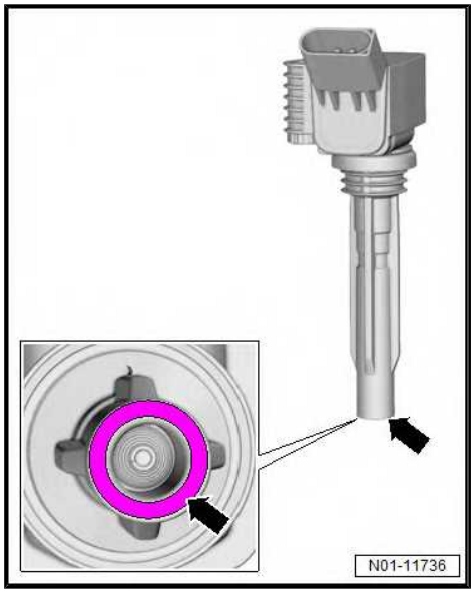
– Press extractor -T10530- into the bore of the ignition coil -1- as far as it can go.
– Tighten the nut -2- in -direction of arrow- so that the extractor -T10530- stays firm in the bore of the ignition coil.



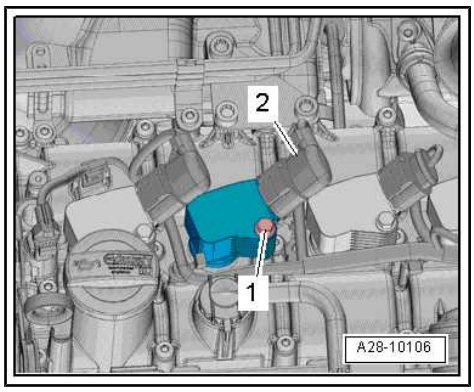
– Remove ignition coil with extractor -T10530- in -direction of arrow- out of the camshaft housing.
– Undo nuts from the extractor -T10530- and remove from the bore of the ignition coil.
– Using the extractor -T10530- remove the other ignition coils out of the camshaft housing in sequence.
– Unscrew spark plugs with spark plug wrench e. g. -3122 B- and remove.
– Screw in new spark plugs with spark plug wrench e. g. -3122 B- and tighten to tightening torque ⇒ page 90 .



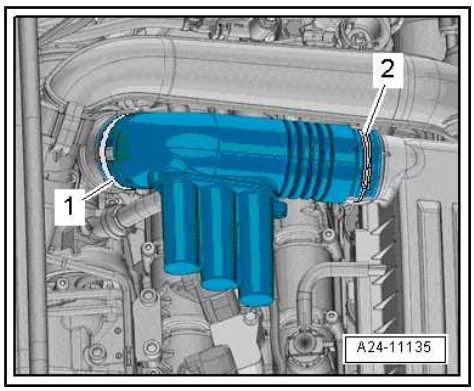
– Coat the ignition coil sealing hoses -arrow- with silicone paste for ignition coil sealing hoses from the ⇒ Electronic Catalogue of Original Parts .
– Place all ignition coils loosely into the spark plug shaft.
– Align the ignition coils so that the fixing screws can be screwed in.
– Press ignition coils onto the spark plugs evenly by hand (do not use an impact tool).



– Screw in the ignition coils screws -1- and tighten to required tightening torque ⇒ page 90 .
– Connect connector -2-.
– Locate the air pipe.



– Fit on hose clamps -1- and -2-.



Tightening torque	Nm
Spark plugs in the cylinder head	⇒ Rep. gr. 28 ; Ignition system; Summary of components - ignition system
Screw for ignition coil with output stage	8

3.14.4 Replace spark plugs - 1.6 l MPI engines, starting from MY 2016

Special tools and workshop equipment required

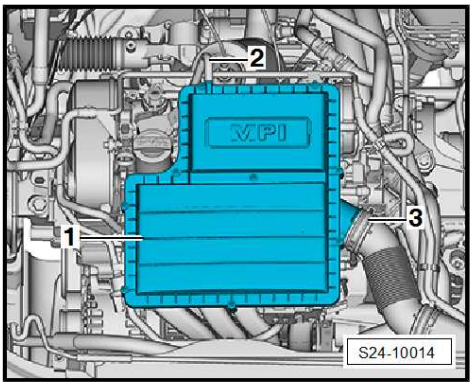
♦ Spark plug wrench, e.g. -3122 B-
♦ Tool for removing the ignition units -T10530-

♦ Silicone paste for ignition coil sealing hoses ⇒ Electronic Catalogue of Original Parts

– Detach hose -2- from air filter housing -1-.

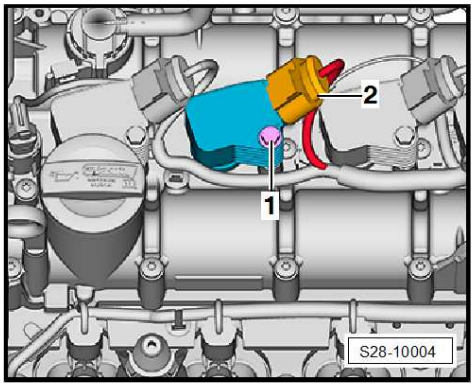
– Loosen hose clamp -3- and remove air deflector.

– Pull off -1- air filter housing upwards from the ball pin.



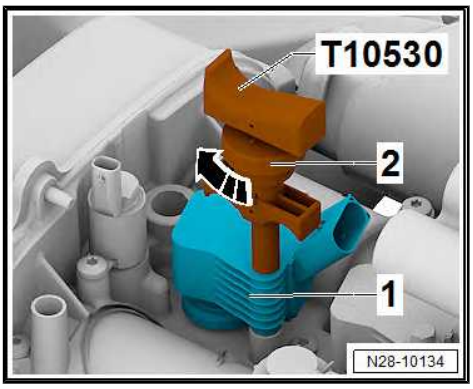
– Disconnect plug connections -2-.

– Remove screws -1-.

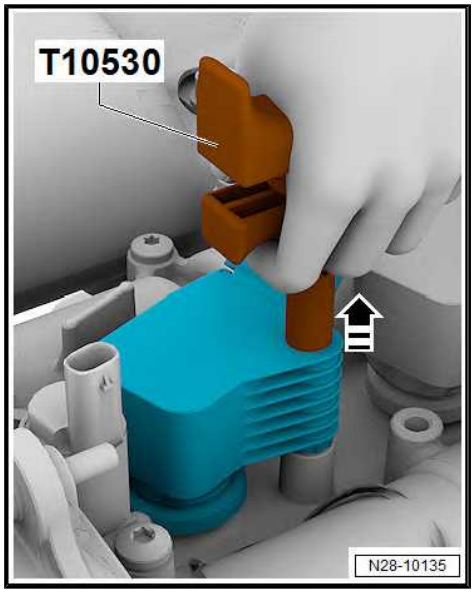


– Press extractor -T10530- into the bore of the ignition coil -1- as far as it can go.

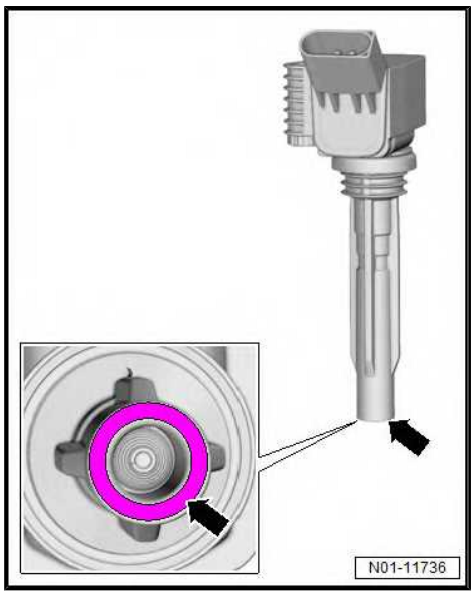
– Tighten the nut -2- in -direction of arrow- so that the extractor -T10530- stays firm in the bore of the ignition coil.



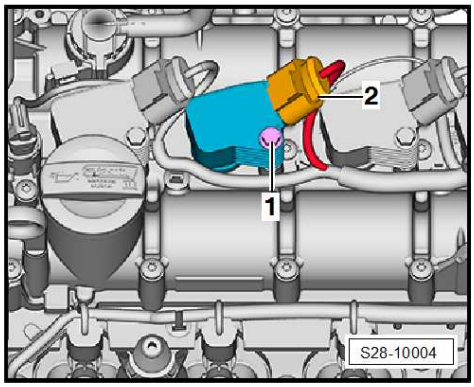
– Remove ignition coil with extractor -T10530- in -direction of arrow- out of the camshaft housing.
– Undo nuts from the extractor -T10530- and remove from the bore of the ignition coil.
– Using the extractor -T10530- remove the other ignition coils out of the camshaft housing in sequence.
– Unscrew spark plugs with spark plug wrench e. g. -3122 B- and remove.
– Screw in new spark plugs with spark plug wrench e. g. -3122 B- and tighten to tightening torque ⇒ page 93 .



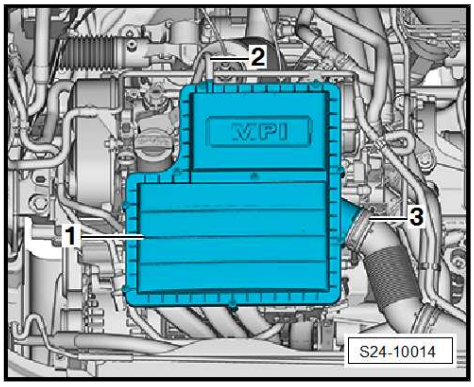
– Coat the ignition coil sealing hoses -arrow- with silicone paste for ignition coil sealing hoses from the ⇒ Electronic Catalogue of Original Parts .
– Place all ignition coils loosely into the spark plug shaft.
– Align the ignition coils so that the fixing screws can be screwed in.
– Press ignition coils onto the spark plugs evenly by hand (do not use an impact tool).



– Screw in the ignition coils screws -1- and tighten to required tightening torque ⇒ page 93 .
– Connect connector -2-.



– Place air filter housing -1- into the ball pins.
– Position hose -2- on the air filter housing -1-.
– Position air deflector and secure hose clamp -3-.



Tightening torque	Nm
Spark plugs in the cylinder head	⇒ Rep. gr. 28 ; Ignition system; Summary of components - ignition system
Screw for ignition coil with output stage	8

3.15 Replace air filter element

⇒ “3.15.1 Replacing air filter element for petrol engines up to MY 2015”, page 93

⇒ “3.15.2 Remove and install air filter element, 1.0 l TSI engines”, page 94

⇒ “3.15.3 Replacing air filter element for 1.2 l TSI and 1.4 l TSI petrol engines starting from MY 2016”, page 96

⇒ “3.15.4 Replacing air filter element for 1.6 l MPI petrol engines starting from MY 2016”, page 98

⇒ “3.15.5 Replacing air filter element, 1,6 l TDI CR diesel engine”, page 98

⇒ “3.15.6 Replacing air filter element, 1,4 l TDI CR diesel engine”, page 99

⇒ “3.15.7 Cleaning air filter housing”, page 101

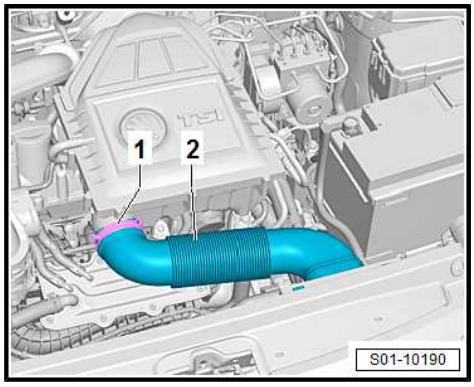
3.15.1 Replacing air filter element for petrol engines up to MY 2015

Removing and installing air filter ⇒ Relevant Engine; Rep. gr. 24 .

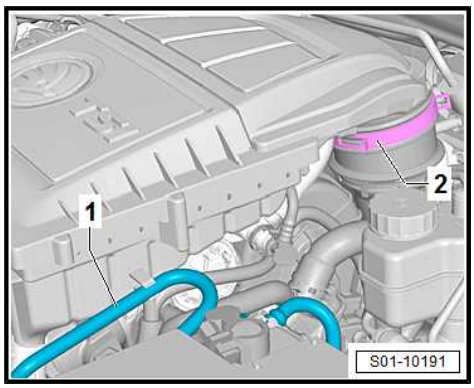
– Open air filter housing.
– Replace air filter element and clean air filter housing ⇒ “3.15.7 Cleaning air filter housing”, page 101 .
– Close air filter housing and check for correct fit.

3.15.2 Remove and install air filter element, 1.0 l TSI engines

Removing



– Release the spring clip -1- and pull air guide hose -2- off.
– Unclip vacuum line -1- from the air filter housing and loosen spring clip -2-.

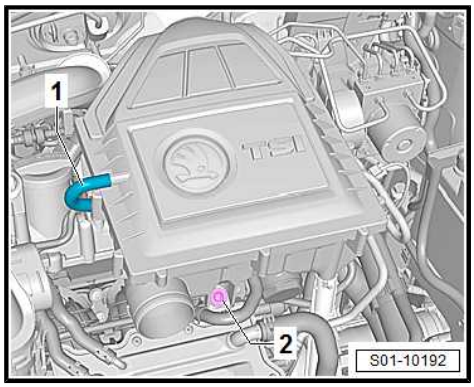


– Carefully pull off the air filter housing from the inlet connection of the turbocharger.
– Detach hose for crankcase ventilation -1-.
– Unscrew screws -2- and raise air filter housing slightly.

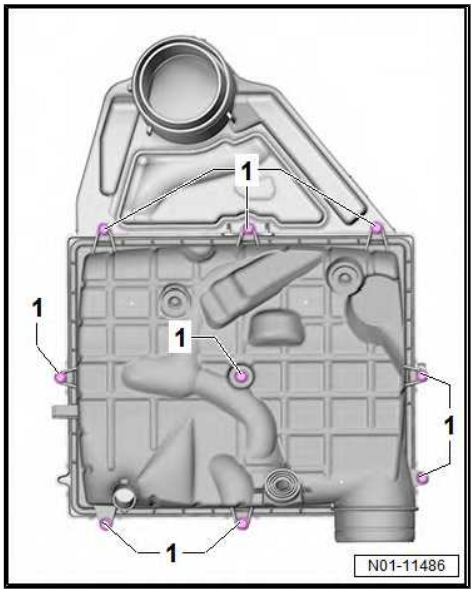
Note

Vacuum lines are attached to the bottom part of the air filter!

– Detach the vacuum lines from the bottom part of the air filter.

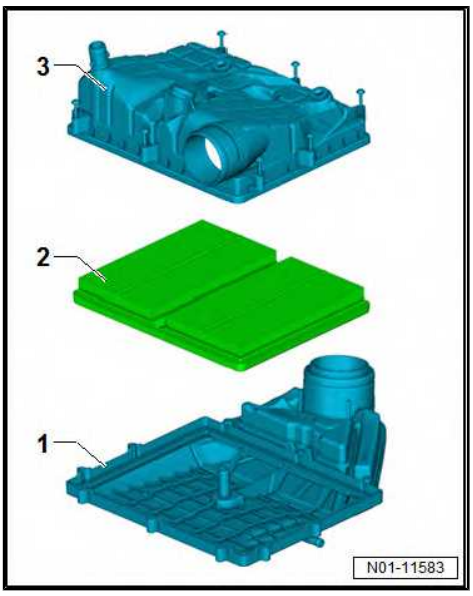


– Remove air filter housing upwards.
– Unscrew the screws -1- from the air filter lower part.
– Remove bottom part of the air filter and take out air filter element.

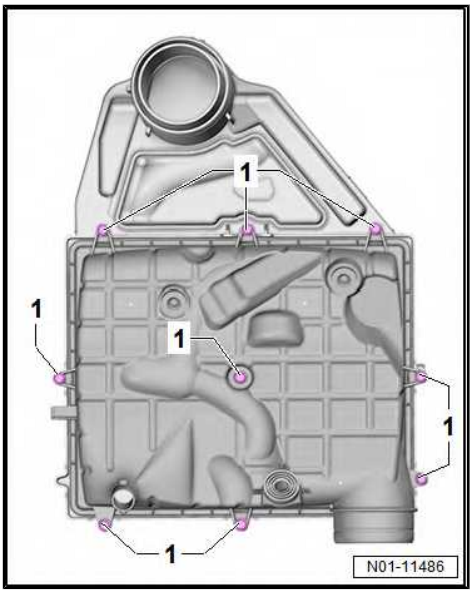


Installing

– Check housing and water drainage for contamination and clean as required
⇒ “3.15.2 Remove and install air filter element, 1.0 l TSI engines”, page 94 .
– Insert the centred air filter element -2- into mount on the upper part of the air filter -1-.



– Locate the air filter lower part -3- on the air filter upper part -1-.
– Bolt together the lower and upper part of the air filter with screws -1-, and tighten to the specified tightening torque.



Replace the fastening elements

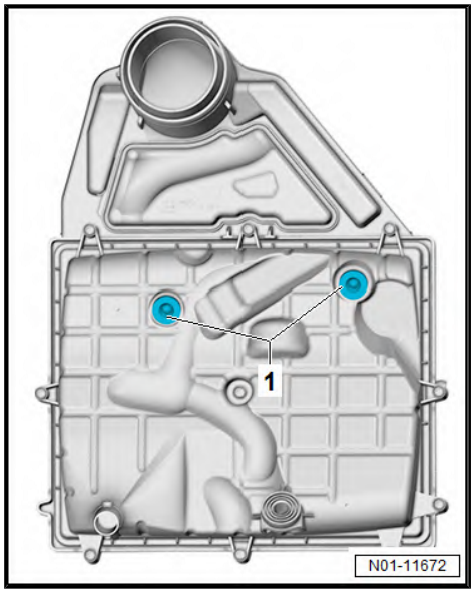
– Remove the fastening elements -1- upwards.

– Press the new fastening elements back into the appropriate guides.

Note

The fastening elements -1- must not be greased or otherwise lubricated before installation.

– The remaining steps for installing the air filter housing are as above in reverse order.



Tightening torque	Nm
Fixing screws for upper and lower part of the air filter -1-	1.5
Fixing screw for air filter housing -2-	5

3.15.3 Replacing air filter element for 1.2 l TSI and 1.4 l TSI petrol engines starting from MY 2016

Removing

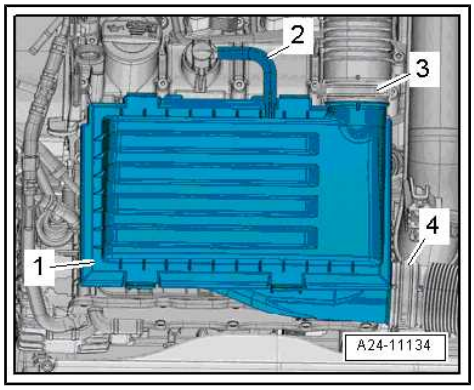
– Detach air guide hose -2- from air filter top part -1-.

– Loosen hose clamps -3- and -4-.

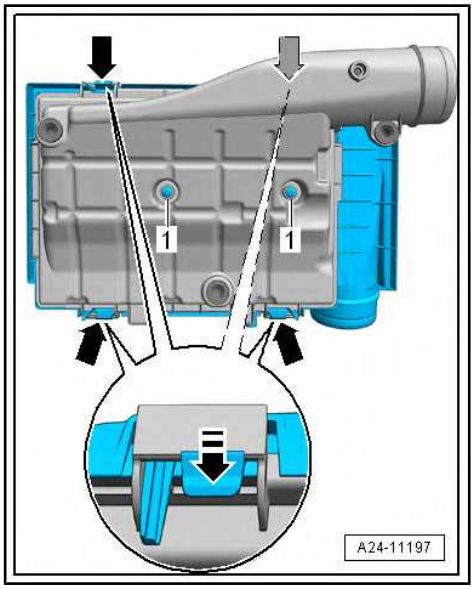
– Pull off -1- air filter housing upwards from the ball pin.

– Pull the air ducts off the air filter housing -1-.

– Remove air filter housing -1- and lay aside turned by 180°.



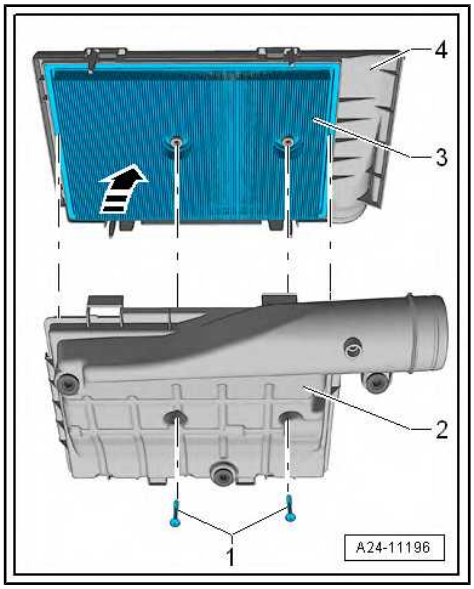
– Unscrew the screws -1- from the air filter bottom part.
– Carefully release the locking tabs -arrows- on the air filter upper part (risk of breakage).
– Remove air filter top part and take out air filter element.



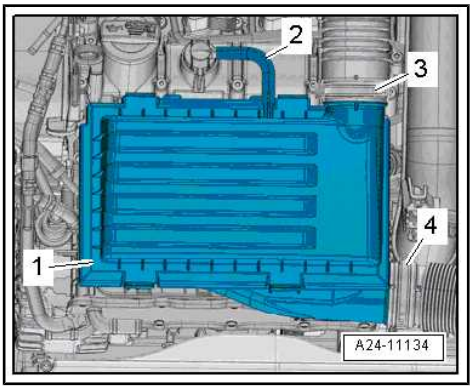
Installing

– Make sure that the housing, air mass meter, and water drains are not soiled; clean if needed
⇒ “3.15.7 Cleaning air filter housing”, page 101 .

– Insert the air filter element -3- into mount on the air filter upper part -4-.
– Position air filter bottom part -2- on air filter top part -4- and screw on with screws -1-.



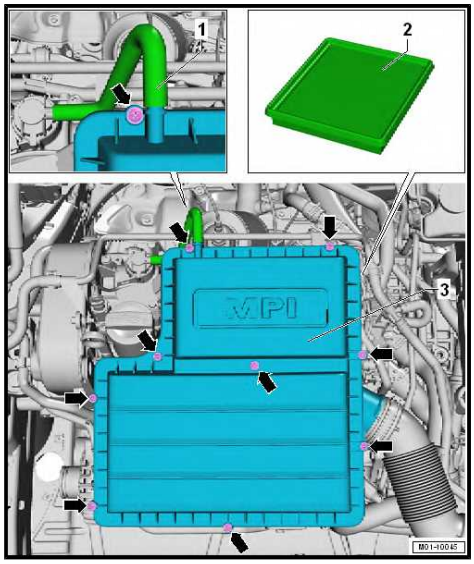
– Locate the air ducts on the air filter housing -1-.
– Fit on hose clamps -3- and -4-.
– Locate the air filter housing -1- on the ball pins and press on.
– Locate the air intake hose -2- on the air filter upper part -1-.



Tightening torque	Nm
Fixing screws	1.5

3.15.4 Replacing air filter element for 1.6 l MPI petrol engines starting from MY 2016

Removing



- Detach air guide hose -1- from air filter top part.
- Remove fixing screws -arrows- from upper part of the air filter.
- Place the upper part of the air filter -3- with complete air guide to one side.
- Remove air filter insert -2-.

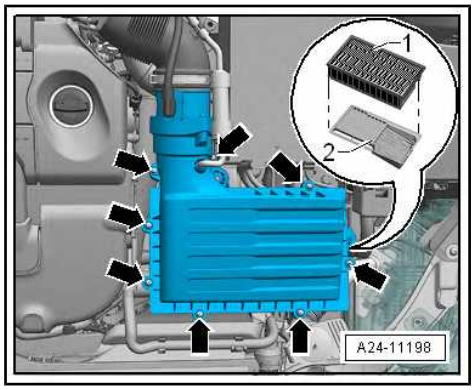
Installing

- Check housing and water drainage for contamination and clean as required.
- Insert the air filter element -2- in the centre of the air filter bottom part.
- Carefully place the upper part of the air filter -3- onto the lower part of the air filter carefully and without applying too much force and screw with fixing screws to the tightening torque.
- Fit the air guide hose -1- back onto the upper part of the air filter.

Tightening torque	Nm
Fixing screws	2

3.15.5 Replacing air filter element, 1,6 l TDI CR diesel engine

Removing



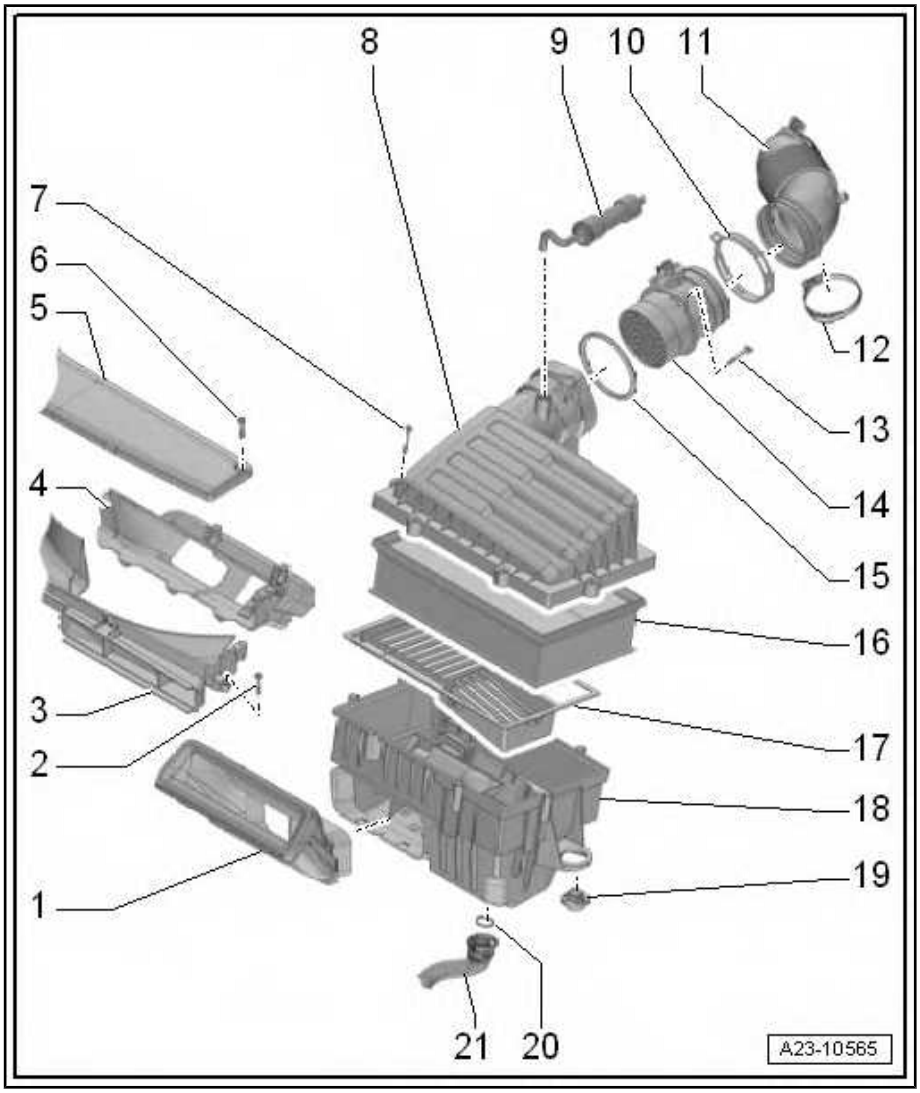
- Unscrew fixing screws -arrows- from the air filter top part and lay the air filter top part together with the complete air guide to one side.
- Remove air filter element -1- and snow strainer -2-.

Note

The snow strainer is not installed in all vehicles.

Installing

- Check air filter housing and water drainage for contamination and clean as required
⇒ “3.15.7 Cleaning air filter housing”, page 101 .
- Insert the snow strainer -17- in the air filter bottom part -18-.



– Insert the air filter element -16- in the centre of the air filter bottom part -18-.
– Position the air filter top part -8- on the air filter bottom part -18- carefully and without using increased force.
– Screw together air filter bottom part and air filter top part with fixing screws -7- and tighten to tightening torque.

Note

Do not pay attention to the remaining positions!

Tightening torque	Nm
Fixing screws	1.5

3.15.6 Replacing air filter element, 1,4 l TDI CR diesel engine

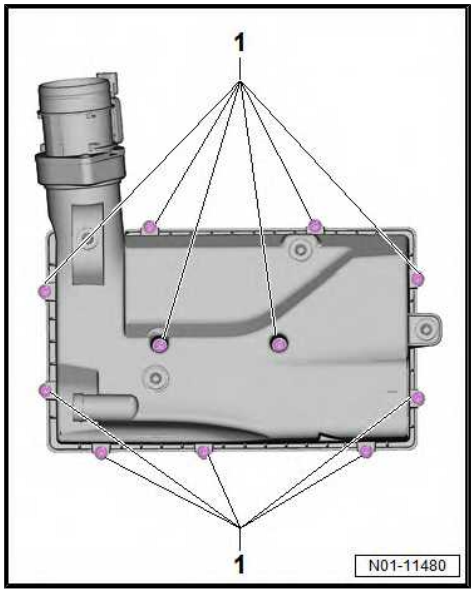
Removing

– Remove engine cover.
– Pull the intake manifold -1- off the intake connecting pipe.

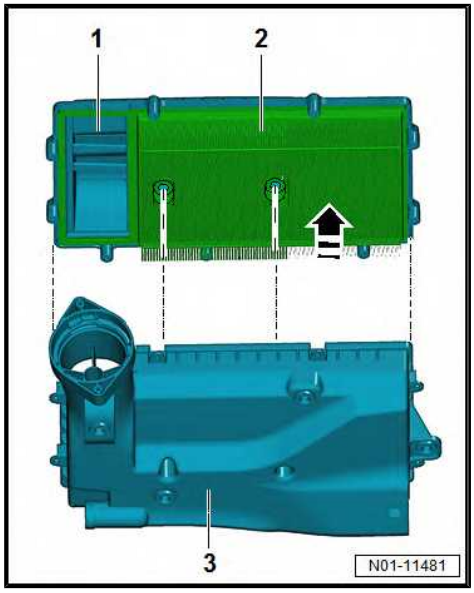
– Push the coolant pipe out of the air filter housing -5- and deposit on the side.
– Disconnect the connector -3- on the air mass meter - G70- .
– Release the spring clip -4- and pull the air hose off the air mass meter - G70- .
– Pull off -2- air filter housing upwards from the ball pin.
– Remove air filter housing -2- and lay aside turned by 180°.
– Disconnect the intake manifold from the air filter housing.

– Unscrew the screws -1- from the air filter lower part.
– Remove air filter top part and take out air filter element.

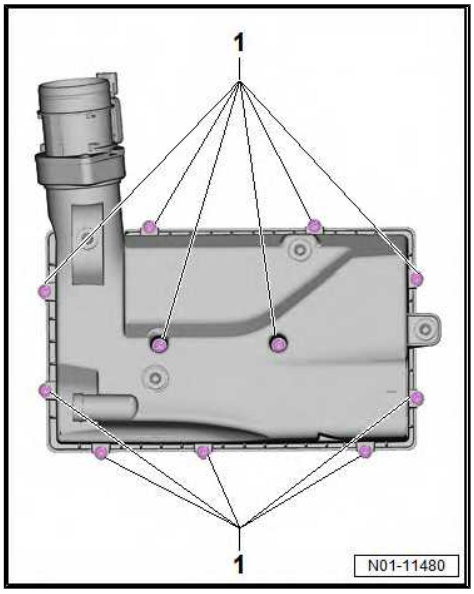
Installing



– Make sure that the housing, air mass meter, and water drains are not soiled; clean if needed
⇒ “3.15.7 Cleaning air filter housing”, page 101 .
– Insert the air filter element -2- into mount on the air filter upper part -1-.



– Locate the air filter lower part -3- on the air filter upper part -1-.
– Bolt together the air filter lower part air and air filter upper part with screws -1-, and tighten to the required tightening torque.



Note

- *Self-cutting screws are used as standard equipment for fastening the air filter upper part on the air filter lower part. Loosening or tightening these screws with a power driving tool can cause damage to the intake manifold or the thread in the air filter lower part.*
- *For this reason, use of a power driving tool is only permissible if the maximum power driving tool rotational speed is 200 rpm and a max. tightening torque of 1.6 Nm is set.*
- *When installing the air filter housing, take care to route the water drain pipe correctly.*

– The remaining steps for installing the air filter housing are as above in reverse order.

Tightening torque	Nm
Fixing screws	1.5

3.15.7 Cleaning air filter housing

Note

Cleaning is charged separately.

– Check the water drain hose in the air filter lower part for soiling and blockage; clean if required.
– Remove salt residues, dirt and leaves from the air filter housing.

Note

When blowing out the air filter housing using compressed air, cover critical air-carrying components with clean cloths.

3.16 Replacing the fuel filter (diesel engines)

⇒ “3.16.1 Replacing the fuel filter (diesel engines), up to MY 2015”, page 102

⇒ “3.16.2 Replacing the fuel filter (diesel engines), starting from MY 2016”, page 104

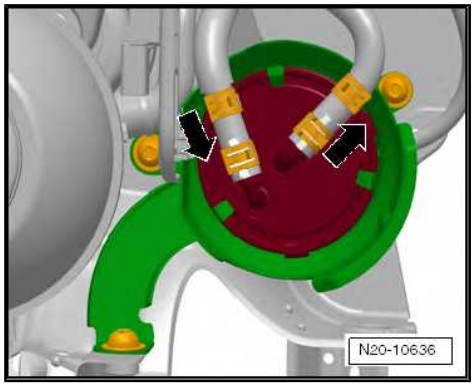
3.16.1 Replacing the fuel filter (diesel engines), up to MY 2015

Note

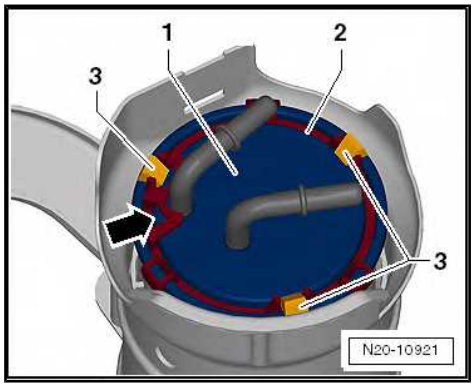
- *Make sure no diesel fuel runs onto the coolant hoses. If necessary, clean the hoses immediately!*
- *It is absolutely necessary to observe the oil disposal instructions!*
- *Observe the disposal instructions!*

Removing

– Release spring strap clips and disconnect fuel hoses from fuel filter.



– Press the retaining lugs -3- outwards, and remove the fuel filter -1- by lifting it upwards.

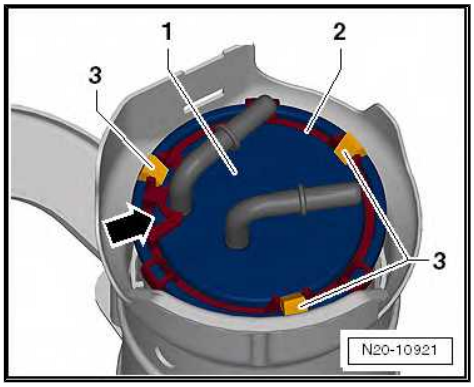


Installing

Installation is carried out in the reverse order. Pay attention to the following:

- Be mindful of the fuel filter’s installation position: the arrows engraved on the filter identify the fuel inlet and the fuel outlet.
- Lay the fuel hoses avoiding any kinks.
- Make sure the fuel hoses fit tightly.
- Do not mix-up the feed line and the return-flow line (the return-flow line is blue or has a blue marking, the feed line is white or has a white marking).

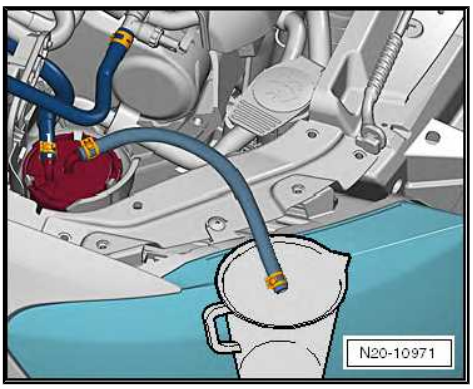
– Correctly fit locating lug -2- with the guide -arrow- in the area of the retaining lugs -3- at the fuel filter -1-.
– Clip retaining ring -2- onto the fuel filter -1-.
– Press the fuel filter -1- into the bracket as far as it goes.



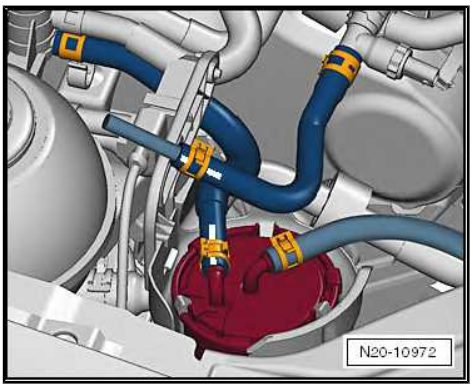
WARNING

When pressing in the fuel filter -1- into the mounting bracket ensure that the retaining lugs -3- lock into place in the provided recesses of the retainer ring -2-.

– Vent the fuel system as follows:
– Connect fuel feed line at fuel filter inlet. Do not connect fuel line from the fuel filter output to the high pressure pump.
– Connect a suitable auxiliary hose at the fuel filter and guide it into a catch pan.



– Plug entry to the fuel line to the high pressure pump with a plug (e.g. using round material).
• Vehicle must be refuelled.
– Connect the diagnosis device VAS , switch on the ignition and fill and vent the high pressure pump/fuel system as follows:
– Select on the diagnosis device: “Guided functions” And then → “Control fuel pump” ⇒ Vehicle diagnostic tester,
– Follow the instructions on the diagnostic device display to continue.



Note

♦ *Exercise special care.*
♦ *The fuel pump is controlled, the catch pan is filled with fuel.*

After venting:

– Remove suitable fuel hoses from the fuel filter.
– Remove the plug from the entry point on the fuel line to the high pressure pump.
– Connect the fuel line to the high pressure pump at the fuel filter outlet.
– Check the fuel system for leak-tightness (visual inspection).

3.16.2 Replacing the fuel filter (diesel engines), starting from MY 2016

Special tools and workshop equipment required

- Protective gloves
- Protective goggles

Note

- *Make sure no diesel fuel runs onto the coolant hoses. If necessary, clean the hoses immediately!*
- *It is absolutely necessary to observe the oil disposal instructions!*
- *Observe the disposal instructions!*

WARNING

Risk of burning due to hot fuel.

- *The temperature of the fuel lines or of the fuel can be up to 100°C in an extreme case. Let the fuel cool down before opening the lines, as otherwise there is a high risk of burning.*
- *Wear protective gloves.*
- *Wear safety goggles.*

Risk of injury caused by fuel which is under high pressure.

- *Lay a clean cloth on the connection point and carefully disconnect the connection point in order to relieve the pressure in the fuel system.*

Note

Observe the disposal instructions!

Removing

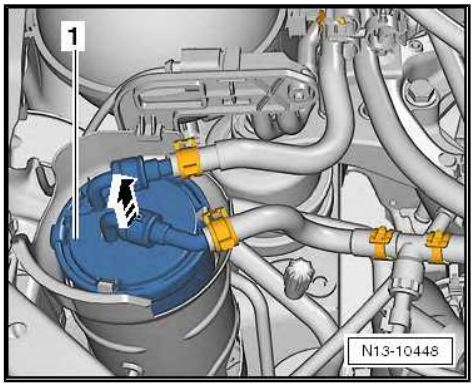
Caution

- *Ensure that no diesel fuel gets onto other components in the engine compartment. If this happens, clean immediately!*

– Push the socket boxes against the fuel filter.
– Press and hold the detents for the socket boxes.
– Pull the socket boxes off the fuel filter.

– Push the fuel filter -1- out of the holder.

– Remove the fuel filter -1- from the fuel filter holder in upward direction.



Installing

– Insert a new filter into the fuel filter holder.

– Attach the socket boxes to the filter connection until the detents audibly latch.

♦ Make sure the fuel hoses fit tightly.

♦ Do not kink the fuel hoses when routing.

♦ If necessary, push the fuel hoses back into the holders.

WARNING

To avoid the high-pressure pump (very low tolerances) running dry, and ensure fast starting of the engine after replacing the filter, the fuel system must be filled/bled before starting the engine for the first time!

– Fill/bleed the fuel system ⇒ Rep. gr. 23 ; injection system; Fill/bleed the fuel system .

3.17 Replace fuel filter - petrol engines

Replace fuel filter ⇒ Rep. gr. 20 ; Fuel filter; Removing and installing fuel filter .

3.18 Checking particle filter

⇒ “3.18.1 Checking diesel particulate filter - diesel engines”, page 105

⇒ “3.18.2 Checking the Otto particulate filter - petrol engines”, page 106

3.18.1 Checking diesel particulate filter - diesel engines

– Check that all lines and encoders for the particle filter are connected and secure.

– Check particle filter for leaks, damage and secure fit.

Note

As part of checking the particle filter, the fill level of the particle filter volume is queried.

– Select “Targeted functions” and further “engine” and then start “check volumetric efficiency of the particle filter volume” ⇒ Vehicle diagnostic tester.

– If the ash mass limit is reached or exceeded (negative test result), the particle filter must be replaced ⇒ Relevant Engine; Rep. gr. 26 .

Replacing the particle filter is a repair measure.

Note

After replacing the particle filter, carry out“adaption of the engine control unit after replacing particle filter”, i.e. set the limit value for the ash mass to -0-.

3.18.2 Checking the Otto particulate filter - petrol engines

– Check that all lines and encoders for the particle filter are connected and secure.

– Check particle filter for leaks, damage and secure fit.

Note

As part of checking the particle filter, the fill level of the particle filter volume is queried.

– Select “Targeted functions” and further “engine” and then start “check volumetric efficiency of the particle filter volume” ⇒ Vehicle diagnostic tester.

– If the ash mass limit is reached or exceeded (negative test result), the particle filter must be replaced ⇒ Relevant Engine; Rep. gr. 26 .

Replacing the particle filter is a repair measure.

Note

After replacing the particle filter, carry out“adaption of the engine control unit after replacing particle filter”, i.e. set the limit value for the ash mass to -0-.

3.19 Multipurpose additive for petrol engines

⇒ “3.19.1 Markets in which the multi-purpose additive for petrol engines must be used”, page 107

⇒ “3.19.2 Recommendation for use of multi-purpose additive for petrol engines”, page 107

3.19.1 Markets in which the multi-purpose additive for petrol engines must be used

Note

- *In the markets below, the fuel quality leads to a very high risk of deposits on injectors and intake valves.*
- *To counteract these deposits, the multi-purpose additive for petrol engines must be added.*
- *Only additives according to standard VW 507 53 B (multi-purpose additive G 001 780 M3) may be used!*
- *Always observe the dosing instructions on the additive tank!*
- *After adding the additive, the vehicle must be fully filled to achieve the optimum effect of the additive.*
- *If the multi-additive for petrol engines is poured into a fuel tank which is not completely full, the customer is advised to fill up to a full tank as soon as possible.*

– Add multi-purpose additive -G 001 770 A2 (90 ml)- or -G 001 780 M3 (200 ml)- for petrol engines in the fuel tank at each service event.

Country		
China	India	Russia

3.19.2 Recommendation for use of multi-purpose additive for petrol engines

Note

- *In the following markets with a high risk of coking and deposition, adding the multi-purpose additive is recommended because of the increased olefin content or aromatics content in the petrol fuel.*
- *Only additives according to standard VW 507 53 B (multi-purpose additive G 001 780 M3) may be used!*
- *Always observe the dosing instructions on the additive tank!*
- *After adding the additive, the vehicle must be fully filled to achieve the optimum effect of the additive.*
- *If the multi-additive for petrol engines is poured into a fuel tank which is not completely full, the customer is advised to fill up to a full tank as soon as possible.*
- *The multi-purpose additive can also be used in all other markets not listed in the table.*

– Add multi-purpose additive -G 001 770 A2 (90 ml)- or -G 001 780 M3 (200 ml)- for petrol engines in the fuel tank at each service event.

Country
Algeria
Bahrain
Bolivia
Brazil
Ghana
Indonesia
Iraq
Iran
Japan
Yemen
Jordan
Cambodia
Qatar
Colombia
Kuwait
Lebanon
Malaysia
Mauritius
Niger
Nigeria
Oman
Pakistan
Peru
Philippines
Saudi Arabia
Senegal
Singapore
Suriname
Syria
Chad
Uzbek
United Arab Emirates
Vietnam

3.20 Multi-purpose additive for diesel engines

⇒ “3.20.1 Markets in which the multi-purpose additive for diesel engines must be used”, page 109

⇒ “3.20.2 Recommendation for use of multi-purpose additive for diesel fuel”, page 109

3.20.1 Markets in which the multi-purpose additive for diesel engines must be used

Note

- *In the three markets below, the fuel quality leads to a very high risk of deposits on injectors and intake valves.*
- *To counteract these deposits, the multi-purpose additive for diesel fuel must be added.*
- *Only additives according to standard VW 505 26 (multi-purpose additive G 001 790 M3) may be used!*
- *After adding the additive, the vehicle must be fully filled to achieve the optimum effect of the additive.*
- *If this multi-purpose additive for diesel engines is poured into a fuel tank which is not completely full, the customer is advised to fill up to a full tank as soon as possible.*

– Add a complete bottle of diesel multipurpose additive to the regular fuel tank at each service event.

Country		
China	India	Russia

3.20.2 Recommendation for use of multi-purpose additive for diesel fuel

Note

- *In the following markets with a high risk of coking and deposition, adding the multi-purpose additive is recommended because of the decreased additivation in the diesel fuel.*
- *Only additives according to standard VW 505 26 (multi-purpose additive G 001 790 M3) may be used!*
- *After adding the additive, the vehicle must be fully filled to achieve the optimum effect of the additive.*
- *If this multi-purpose additive for diesel engines is poured into a fuel tank which is not completely full, the customer is advised to fill up to a full tank as soon as possible.*
- *The multi-purpose additive can also be used in all other markets not listed in the table.*

– Add a complete bottle of diesel multipurpose additive to the regular fuel tank at each service event.

Country	
Afghanistan	Mali

Country	
Egypt	Morocco
Albania	Mauretania
Equatorial Guinea	Macedonia
Argentina	Moldova
Azerbaijan	Myanmar
Belize	Dutch overseas territories
Benin	Nigeria
Bhutan	Pakistan
Brazil	Panama
Brunei	Paraguay
Burkina Faso	Saudi Arabia
Canary Islands	Senegal
Democratic Republic of Congo	Sierra Leone
Dominican Republic	Zimbabwe
El Salvador	Sri Lanka and Maldives
Ivory Coast	South Africa
Fiji	Sudan
Gambia	South Sudan
Georgia	Suriname
Ghana	Syria
Guatemala	Thailand
Guinea	Togo
Guinea-Bissau	Trinidad and Tobago
Guyana	Chad
Haiti	Turkmenistan
Honduras	Ukraine
Indonesia	USA
Iraq	Central African Republic
Jamaica	Venezuela
Jordan	Zimbabwe
Cambodia	
Cameroon	
Canada	
Cape Verde	
Caribbean, left-hand drive	
Colombia	
Laos	
Lebanon	
Liberia	

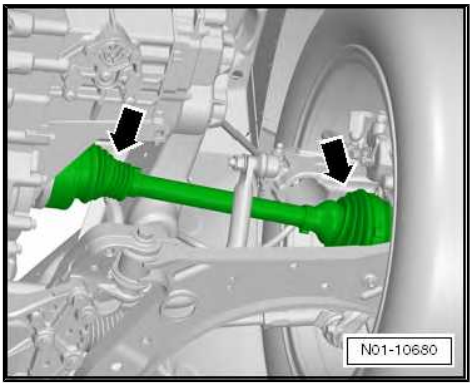
4 Gearbox

⇒ “4.1 Check final drive and joint boots for leaks and damage”, page 111

⇒ “4.2 6-speed automatic gearbox 09G: check ATF level and quality, refill or replace ATF”, page 111

4.1 Check final drive and joint boots for leaks and damage

– Check joint boots -arrows- of final drive for leaks and damage.



4.2 6-speed automatic gearbox 09G: check ATF level and quality, refill or replace ATF

⇒ “4.2.1 Check ATF level and quality”, page 111

⇒ “4.2.2 Drain ATF”, page 114

⇒ “4.2.3 Fill with ATF”, page 114

Special tools and workshop equipment required

- Adapter for oil filling - VAS 6262- or -VAS 6262A-
- Quick coupler - VAS 6262/2-
- Catch pan - VAS 6208-
- Protective goggles
- Protective gloves

4.2.1 Check ATF level and quality

Conditions for checking and/or replacing

- Gearbox must not be in the emergency running mode.
- Vehicle on level ground.
- With selector lever in “P” position, let the engine idle.
- Air conditioning and heating switched off.
- connected, function “vehicle self-diagnosis” and “vehicle system” “02 - gearbox electronics” selected.
- The ATF temperature must not be higher than 30 °C for beginning the test, if necessary first the gearbox must be cooled down.

Note

- *The ATF temperature is read off at the ⇒ Vehicle diagnostic tester.*
- *The ATF level changes with ATF temperature.*
- *Checking ATF level when ATF temperature is too low may result in over-filling.*
- *Checking ATF level when ATF temperature is too high may result in under-filling.*
- *Both over-filling as well as under-filling affect gearbox operation.*
- *If contamination or a dark colour of the oil or water in the oil is noticed during a quality inspection, the oil must be changed ⇒ Gearbox 09G; Rep. gr. 37 . The oil must be clean and must not contain any additives.*
- *Only ATF available as spare part should be used in the automatic gearbox 09G. Other oils can lead to functional problems or to failure of the gearbox, part number ⇒ Electronic catalogue of original parts .*
- *When topping up with ATF, shake the oil reservoir thoroughly before opening.*
- *The ATF level is checked at the ATF inspection plug.*
- *The ATF level is correct, if a small amount of fluid flows out at the ATF inspection plug when the ATF temperature is between 35° and 45 °C (in hot countries 50 °C) (caused by the increase of the fluid level due to the heat).*

– Run the vehicle on a four-column lift platform or over a workshop pit, so that it will be kept absolutely horizontal.

– Remove the noise insulation.

– Position drip tray, e.g. -VAS 6208- under the gearbox.

WARNING

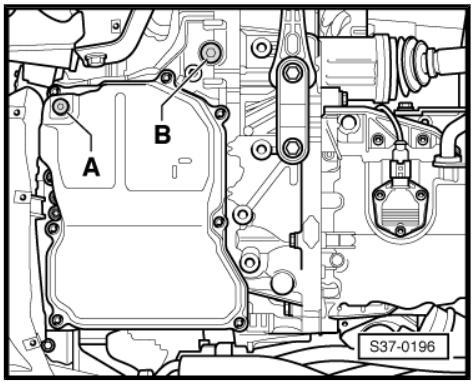
- ***When working close to the radiator, always keep an adequate distance from the radiator fan - risk of injury!***
- ***The radiator fan can switch on automatically.***

– Start engine and run in idle.

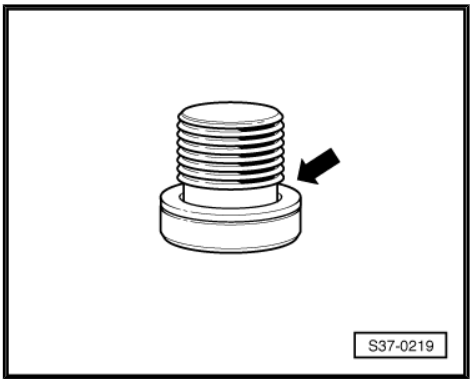
WARNING

Wear safety goggles.

– if an ATF temperature of 35 °C is reached, unscrew the ATF inspection plug -A-.



– Always replace gasket ring -arrows- for ATF inspection plug ⇒ Electronic Catalogue of Original Parts .

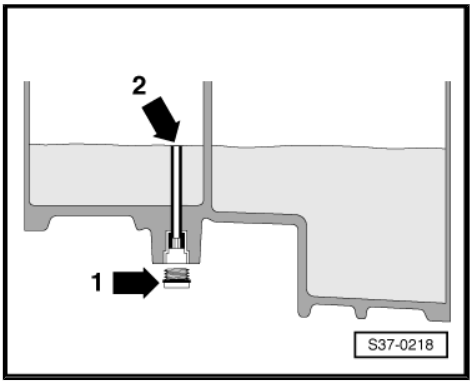


First of all the ATF in the overflow tube -arrow 2- drains off.

If more ATF drips out of the ATF inspection opening (approx. 1 drop per second) via the overflow tube before the ATF has reached 40°C, the ATF level is correct.

– Fit ATF inspection plug -arrow 1- with a new gasket ring and tighten to 27 Nm.

This completes the ATF level inspection.



Note

At the latest at 45 °C (in hot climate countries 50 °C) the ATF inspection plug must be closed again.

If no ATF flows out at the ATF inspection opening up to 45 °C, the ATF must be topped up **⇒ "4.2.3 Fill with ATF", page 114** **.**

– End function "08 - read measured value block".

– Tip "06 - End output".

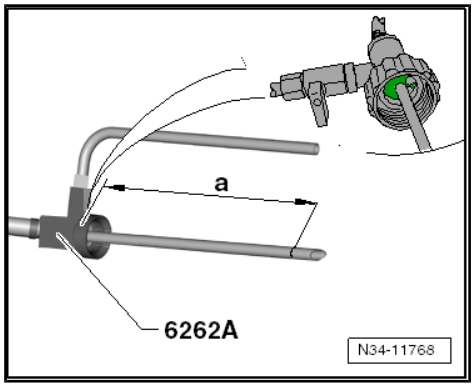
– Switch off ignition and unplug diagnostic connector.

– Install the noise insulation ⇒ Body Work; Rep. gr. 50 .

Shortening the vent pipe of the adapter for oil filling - VAS 6262A-

– Shorten the vent pipe to the dimension -a-, so that it does not touch the bottom of certain ATF bottles.

  Cut dimension to length -a-: 210 mm.



Note

The dimension -a- is measured on the shaft (starting with the green area in the detail) of the adapter for oil filling - VAS 6262A- .

Caution

- ***The filling hose and the adapter - VAS 6262- or - VAS 6262A- must be clean and the ATF must not be mixed with other oils!***

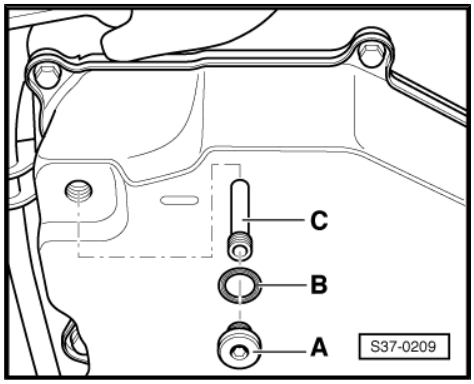
4.2.2 Drain ATF

– Position drip tray, e.g. -VAS 6208- under the gearbox.

WARNING

Wear safety goggles.

– Unscrew the ATF inspection plug -A-.
– Release the overflow tube -C- (5 mm Allen key) and drain remaining ATF.
– Drain the ATF.
– Install overflow tube -C- with 5mm Allen key and tighten to 2 Nm.

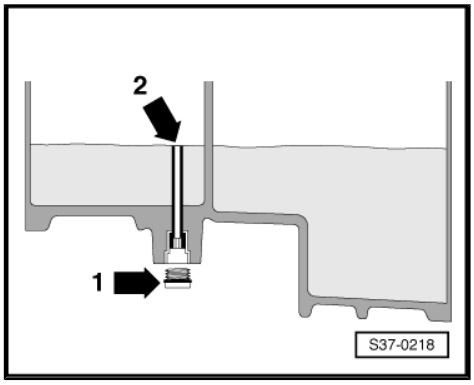


4.2.3 Fill with ATF

Note

Follow all the instructions and conditions for changes
⇒ page 111 .

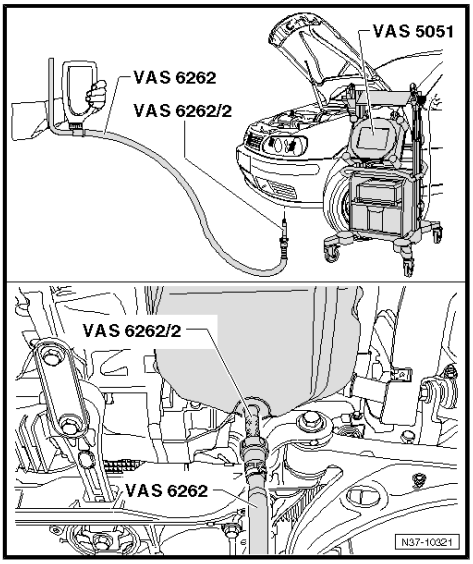
– Screw in the adapter for ATF oil filling - VAS 6262/2- by hand in the location of the gearbox inspection plug -arrow 1- and connect adapter for oil filling - VAS 6262- or -VAS 6262A- .
– Shake the ATF reservoir before opening.



Note

- *Before screwing in the adapter for oil filling at the ATF reservoir, check the length of the vent pipe and shorten if necessary ⇒ page 113 .*
- *The adapter for the oil filling - VAS 6262- must be clean and the ATF for automatic gearbox 09G must not be mixed with other ATF oils!*

– Screw ATF container to the adapter for oil filling - VAS 6262- .
– Fill with 3 litres of ATF (when changing).
– Fill with 1 litre of ATF (if topping up).
– Remove adapter for oil filling - VAS 6262- from adapter for ATF oil filling - VAS 6262/2- .
– Observe whether ATF flows out of the opening of the adapter for ATF oil filling - VAS 6262/2- .

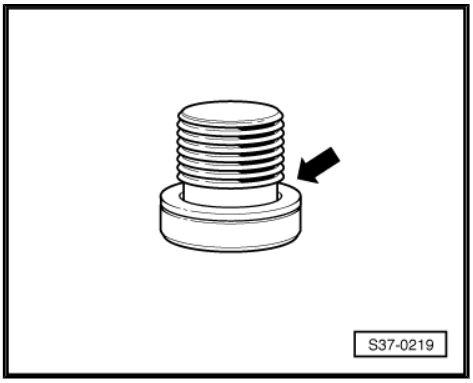


If ATF flows out of the opening of the adapter for ATF oil filling - VAS 6262/2- , the ATF level is correct.

– Allow all excess ATF to drip out until it starts to drain off.

If no ATF flows out of the opening of the adapter for ATF oil filling - VAS 6262/2- but only drips, the ATF level is not O.K. and more ATF must be filled up
⇒ “4.2.1 Check ATF level and quality”, page 111 .

– Unscrew adapter for ATF oil filling - VAS 6262/2- .
– Fit ATF inspection plug -arrow- with a new gasket ring and tighten to 27 Nm.
– Install the noise insulation.
– Switch off ignition and unplug diagnostic connector.



5 Chassis

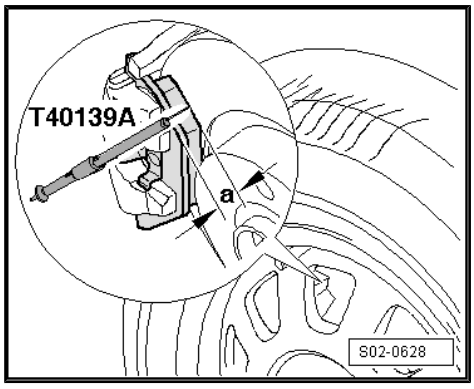
5.1 Inspecting thickness of front and rear brake pads/linings

Special tools and workshop equipment required

- Inspection pin - T40139A-

Front disc brake pads

The brake pad thickness (including backing plate) -a- can be checked by visual inspection (if necessary with a torch and a mirror) or with the inspection pin - T40139A- from the outside of the wheel.



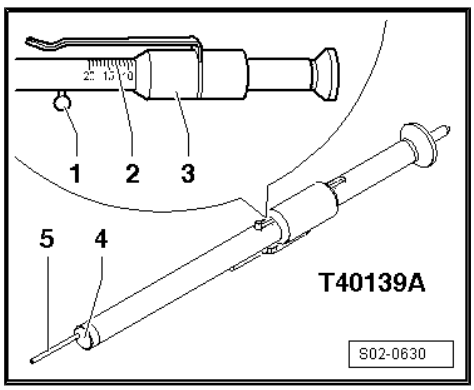
Procedure when checking with the inspection pin - T40139A-

– Slide the grinder -3- of the inspection pin fully onto the pin -1-.

– Push the inspection pin - T40139A- through the wheel rim, so that the measuring tip -5- rests against the brake disc.

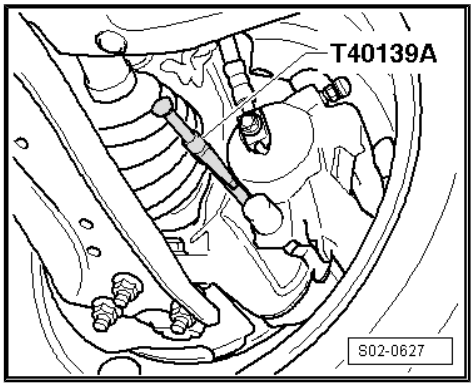
– Carefully move the inspection pin - T40139A- on the bead so that the end face -4- of the inspection pin rests against the backing plate of the brake pad.

– Remove the inspection pin - T40139A- and read off the brake pad thickness (in mm) on the scale -2-.



Note

- *When removing the inspection pin, ensure that the grinder does not move otherwise this can result in an incorrect measurement.*
- *On certain vehicles (e.g. with steel rims), where the inspection pin - T40139A- does not reach/rests against the brake disc/ backing plate, check the brake pad thickness with the inspection pin - T40139A- from the inside of the wheel.*



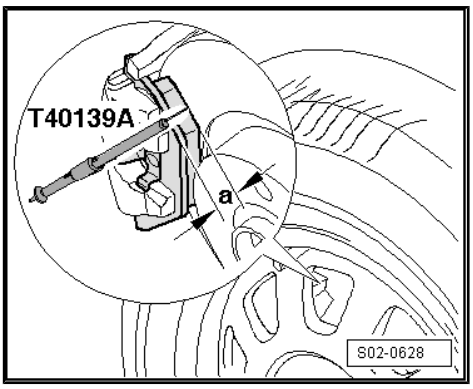
Wear limit of front disc brake pads

The wear limit -a- is reached at a pad thickness of 7 mm, including backing plate.

If the thickness of the pad is less than 7 mm including backing plate, always replace the brake pads on both sides (repair measure)

– Inspect also the brake discs for damage (scores, tears) and wear (minimum thickness) ⇒ Brake systems; Rep. gr. 00 .

The brake disc change is a repair measure.



Note

After replacing the brake pads depress brake pedal firmly several times when the vehicle is stationary to ensure the brake pads are properly seated in their normal operating position.

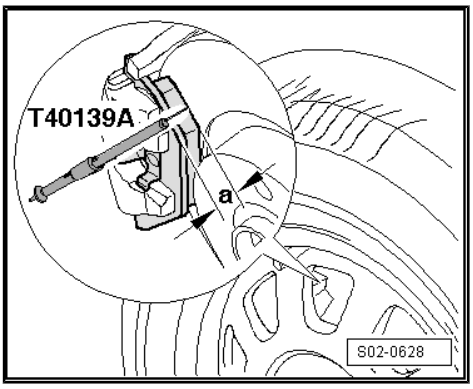
Rear disc brake pads

The wear limit -a- is reached at a pad thickness of 7.6 mm, including backing plate.

If the thickness of the pad is less than 7.6 mm including backing plate, always replace the brake pads on both sides (repair measure)

– Inspect also the brake discs for damage (scores, tears) and wear (minimum thickness) ⇒ Brake systems; Rep. gr. 00 .

The brake disc change is a repair measure.



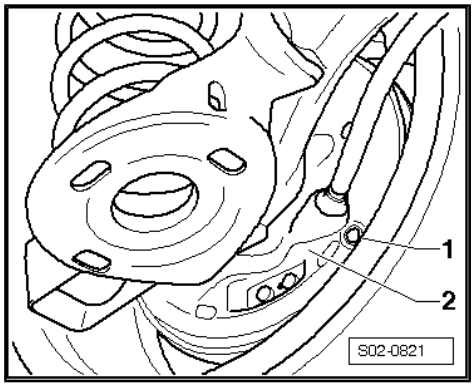
Note

After replacing the brake pads depress brake pedal firmly several times when the vehicle is stationary to ensure the brake pads are properly seated in their normal operating position.

Rear drum brake linings

– Remove the rubber plugs -1- from the brake carrier plates -2-.

– Inspect the thickness of the brake linings through the inspection holes in the brake carrier plates.



The brake pad thickness can also be checked when the drum brake is being cleaned
⇒ “5.2 Clean rear drum brake (noises, glue brake pad)”, page 118 .

– The wear limit is reached at a lining thickness of 1 mm, without supporting shoe. If a wear case exists, always replace the brake linings on both sides (repair measure).

– At the same time the brake drums for damage (scores, tears) and wear (max. ∅) ⇒ Brake systems; Rep. gr. 00 .

The brake drum change is a repair measure.

Note

- *Avoid soiling from brake fluid or grease flowing out.*
- *After replacing the brake pads depress brake pedal firmly several times when the vehicle is stationary to ensure the brake pads are properly seated in their normal operating position.*

5.2 Clean rear drum brake (noises, glue brake pad)

Special tools and workshop equipment required

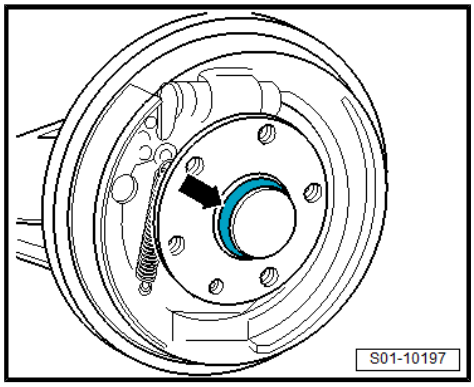
- Brake cleaner e.g. Würth 8901087 or -Retech R34217-
- Preservative. Tectyl D322100M2

– Release the wheel bolts and remove wheel. Do not mix up wheels (mark).

– Remove brake drum ⇒ Chassis; Rep. gr. 46 .

– Clean all the parts of the drum brake including the brake drum with brake cleaner.

– Clean the wheel hub centre thoroughly (e.g. with a wire brush) the on entire circumference -arrow-.



– Apply Tectyl D322100M2 preservative on the wheel hub centre (on the whole circumference) with a brush -arrow-.

– Reinstall the brake drum.

– Fit on wheels in the marked position and tighten the wheel bolts to 120 Nm.

5.3 Inspecting brake system for leaks and damage

– Check master brake cylinder, brake servo (for ABS: hydraulic unit), braking force regulator, brake callipers for leak-tightness and damage.

– Inspect brake hoses for twisting.

– Ensure that the brake hoses do not touch any parts of the vehicle when the steering is turned to full left or full right lock.
– Inspect the brake hoses for porous and brittle points. Inspect the brake hoses and brake lines for chafing points.
– Inspect the brake connections and attachment to ensure they are correctly fitted, free of leaks and corrosion.
– Check that the electrical cables of the ABS speed sensors are secured in the wheel arches.

WARNING

Any defects found must be rectified (repair measure).

5.4 Change brake fluid

Special tools and workshop equipment required

- Brake filling and bleeding device , e. g. -VAS 5234-
- Tool set for brake bleeding - VAS 6564-

Only use new original brake fluid N.052.766.Z0 as per US standard FMVSS 571.116, DOT 4 and VW standard 501 14 .

WARNING

- *Brake fluid must never come into contact with fluids containing mineral oils (oil, petrol, cleaning agent). Mineral oils damage the gaskets and boots of the brake system.*
- *Brake fluid is poisonous. Also due to its corrosive effect brake fluid must not come into contact with paintwork.*
- *Brake fluid is hygroscopic, i.e. it absorbs moisture from the surrounding air. Therefore it should always be stored in airtight containers.*
- *Wash any parts stained with brake fluid with large volumes of water.*
- *Observe the disposal instructions!*

Extract brake fluid from the brake fluid reservoir.

– Switch on the extraction function of the brake filling and bleeding device , e.g. -VAS 5234- .

1 - Catch pan

2 - Connecting hose

3 - Pneumatic support

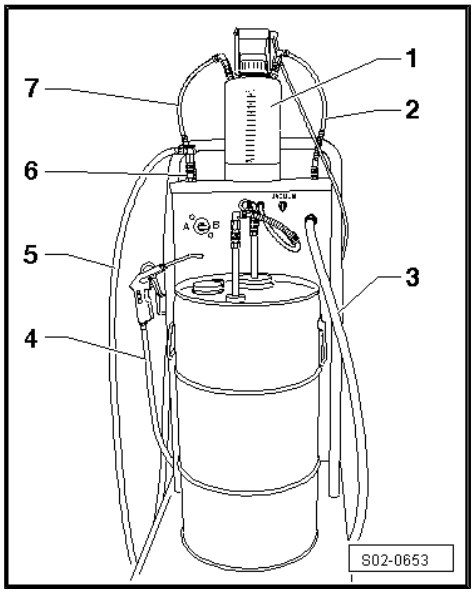
4 - Extraction hose with end part

5 - Filler hose with quick-release coupling

6 - Unit connecting point

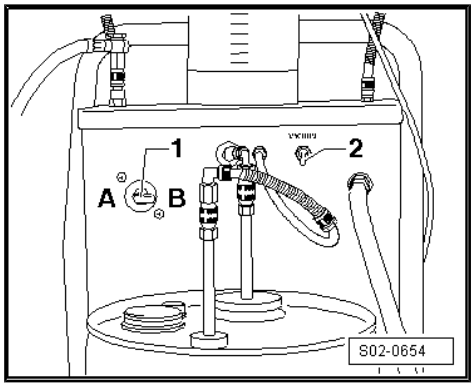
7 - Connecting hose

– Connect brake filling and bleeding device , e. g. -VAS 5234- , to the compressed air distribution.



– Position cock -1- on -B-.

– Set switch -2- upwards on -vacuum-.

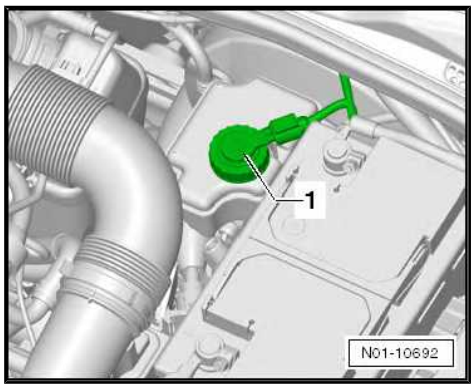


– Unscrew cap -1- from the brake fluid reservoir.

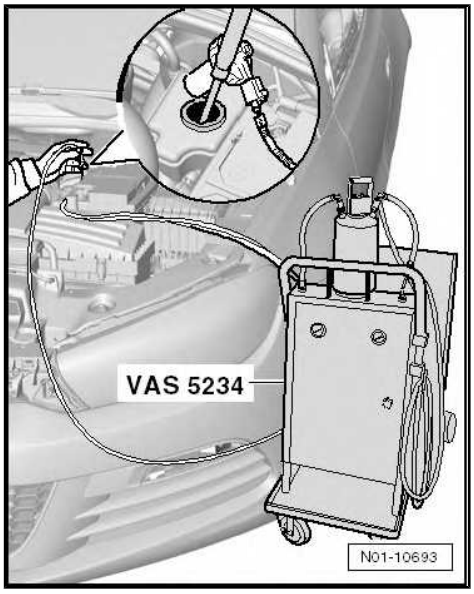
Note

Do not remove the strainer from the brake fluid reservoir.

– Switch on the compressed air distribution, herewith the brake filling and bleeding device , e.g. -VAS 5234- , is operative.



– Use an extraction hose with end part to extract as much brake fluid as possible from the brake fluid reservoir.

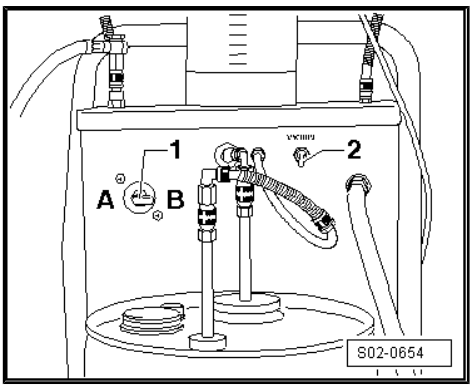


WARNING

Drained (used) brake fluid must never be used again.

– Set back switch -2- from -vacuum- down.

– Switch off the compressed air distribution, herewith the brake filling and bleeding device , e.g. -VAS 5234- , is no longer operative.



WARNING

Drained (used) brake fluid must never be used again.

Change brake fluid in slave cylinder - vehicles with manual gearbox

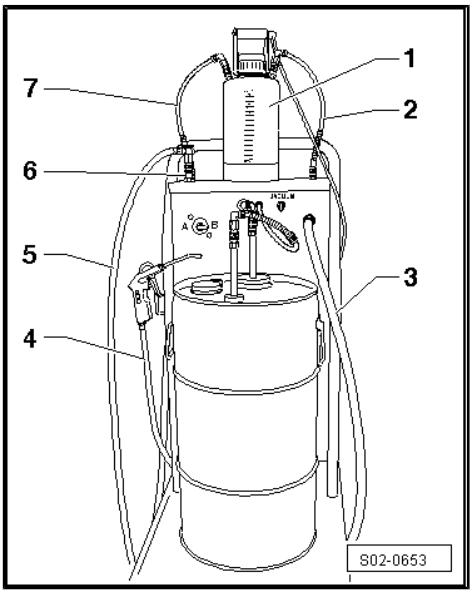
– Remove engine cover.

– Remove air filter ⇒ Relevant Engine; Rep. gr. 23 or ⇒ Relevant Engine; Rep. gr. 24 .

– Activate the filling function of the brake filling and bleeding device , e.g. -VAS 5234- , as follows:

– Detach connecting hoses -2- and -7- from catch pan -1-.

– Detach the filler hose with quick-action coupling -5- from the device connection point -6-.

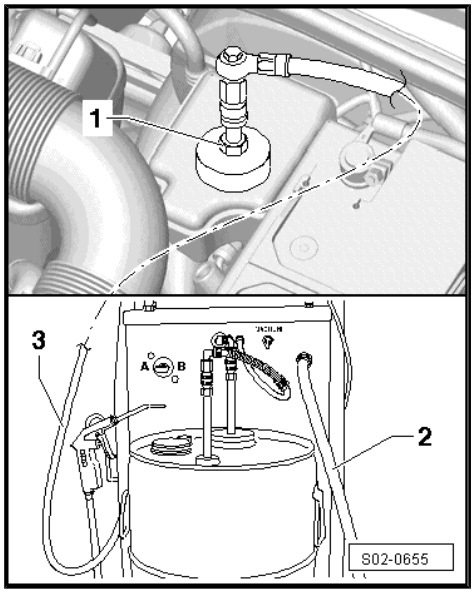


– Screw the thread plug -1- of the brake filling and bleeding device , e.g. -VAS 5234- , onto the brake fluid reservoir.

1 - Thread plug

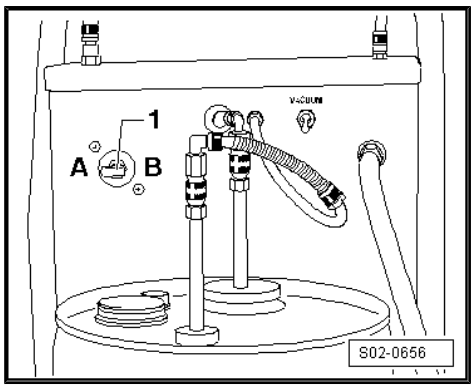
2 - Compressed air distribution

3 - Filler hose with quick-release coupling



– Position cock -1- on -A-.

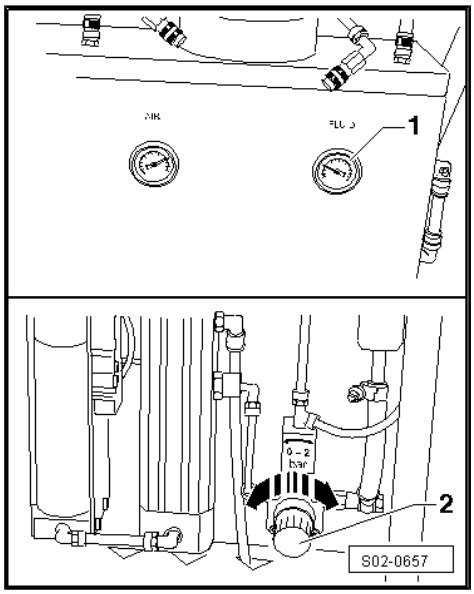
– Switch on the compressed air distribution, herewith the brake filling and bleeding device , e.g. -VAS 5234- , is operative.



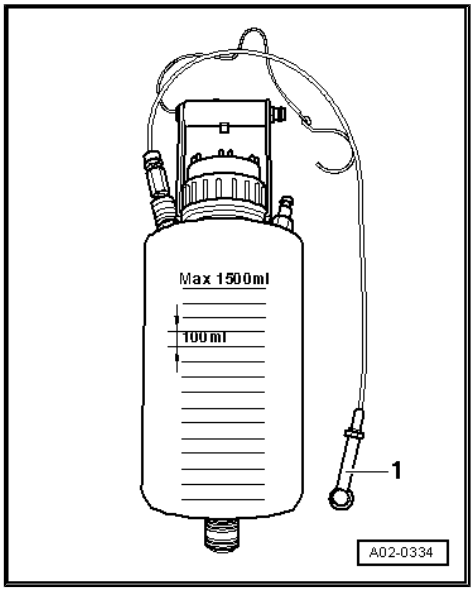
– Check brake fluid pressure using the pressure manometer -1-.

  Brake fluid pressure = 0.2 Mpa.

– Set the filling pressure e.g. by turning the regulating valve -2-.



– Provide a catch pan for used brake fluid.



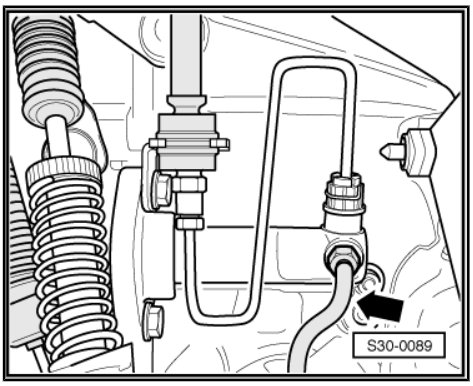
Note

- *Use the tool set for brake bleeding - VAS 6564- to loosen and tighten. While doing so, pull the bleeder hose through the socket insert with a corresponding hollow adapter piece from this set.*
- *Fit a torque wrench on the socket insert with a corresponding hollow adapter piece for tightening the vent valve.*
- *In view of the different versions and the fitting locations of the slave cylinder with the vent valve, tightening the vent valve using the set of tools for brake bleeding - VAS 6564- (with the torque wrench inserted) cannot always be performed due to lack of space.*
- *In this case, if necessary remove the battery and the battery tray ⇒ Electrical System; Rep. gr. 27 . Pay attention to the work sequence when disconnecting and reconnecting the battery ⇒ Electrical System; Rep. gr. 27 .*

– If necessary remove cap from bleeder valve of slave cylinder.

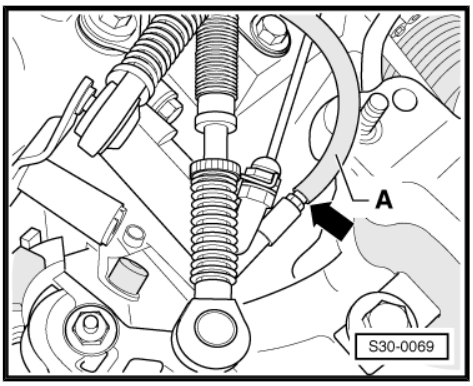
Vehicles fitted with a manual gearbox 02T, 02U

– Fit the bleeder hose on the vent valve of the slave cylinder -arrow- and open the valve.



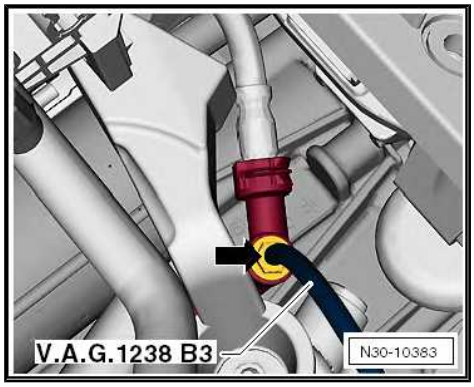
Vehicles fitted with gearbox 02R

– Fit the bleeder hose -A- on the slave cylinder -arrow- and open the bleeder valve.



Vehicles fitted with gearbox 0A4

– Fit the bleeder hose -A- on the slave cylinder -arrow- and open the bleeder valve.



Continued for all vehicles

– Open vent valve and allow approx. 0.15 litres of brake fluid to flow out.

– Tighten the vent valve with corresponding tightening torque ⇒ Relevant gearbox; Rep. gr. 30 .

– Detach bleeder hose of catch pan.

– If necessary fit the cap onto the vent valve of the slave cylinder.

– Install air filter ⇒ Relevant Engine; Rep. gr. 23 or ⇒ Relevant Engine; Rep. gr. 24 .

– After completing the bleeding procedure press the clutch pedal repeatedly.

Change the brake fluid in the brake system

Note

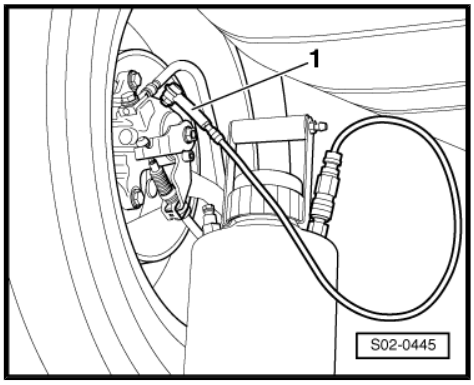
- *Carry out the brake fluid change in the brake system, without removing the wheels from the vehicle.*
- *In view of the different versions of the wheels and the brake calipers, tightening the bleeder valves using the set of tools for brake bleeding - VAS 6564- (with the torque wrench inserted) cannot always be performed due to lack of space.*
- *In this case, the corresponding wheels must be removed from the vehicle. Do not exchange the wheels and mark their position opposite the brake disc.*
- *Tightening torque of the wheel screws = 120 Nm.*

– Raise vehicle.

– Hook in the catch pan on the vehicle.

– Remove the rubber cap from the bleeder valve on the rear right wheel.

– Fit bleeder hose -1- of catch pan onto the bleeder valve of the rear right wheel.



Note

- *Slacken the bleeder valves using the set of tools for brake bleeding - VAS 6564- and tighten. While doing so, pull the bleeder hose through the socket insert with a corresponding hollow adapter piece from this set.*
- *Fit a torque wrench on the socket insert with a corresponding hollow adapter piece for tightening the vent valve.*

– Loosen the bleeder valve and allow approx. 0.3 litres of brake fluid to flow out.

– Tighten bleeder valve to corresponding tightening torque ⇒ Brake systems; Rep. gr. 47 .

– Detach hose of catch pan.

– Fit the rubber cap onto the bleeder valve and remove the catch pan from the vehicle.

– Repeat this procedure for all brake calipers/wheel-brake cylinders.

Sequence for bleeder valves:	Volume of brake fluid which must flow out of the vent valves:
Slave cylinder (manual gearbox only)	0.15 l
Wheel brake cylinder/brake calliper	
Rear right	0.30 l
Rear left	0.30 l
Brake caliper	
Front right	0.20 l
Front left	0.20 l
Total volume, automatic gearbox	approx. 1.00 l
Total volume, manual gearbox:	approx. 1.15 l

– Switch off and disconnect the brake filling and bleeding device .

– Check brake fluid level ⇒ “5.5 Brake fluid level: check.”, page 126 and screw the cap onto the brake fluid reservoir.

– Activate the brake pedal repeatedly.

– Check that the pedal “does not fall through” when it is pressed down repeatedly with force.

– Check the brake pedal-idle travel on the brake pedal. Idle travel: max. 1/3 of pedal travel.

– Perform a test drive.

Note

During a test drive, at least one ABS adjustment must be carried out on vehicles with ABS.

5.5 Brake fluid level: check.

Only use new original brake fluid N.052.766.Z0 as per US standard FMVSS 571.116, DOT 4 and VW standard 501 14 .

WARNING

- *Brake fluid is poisonous. Also due to its corrosive effect brake fluid must not come into contact with paintwork.*
- *Brake fluid is hygroscopic, i.e. it absorbs moisture from the surrounding air. Therefore it should always be stored in airtight containers.*

Note

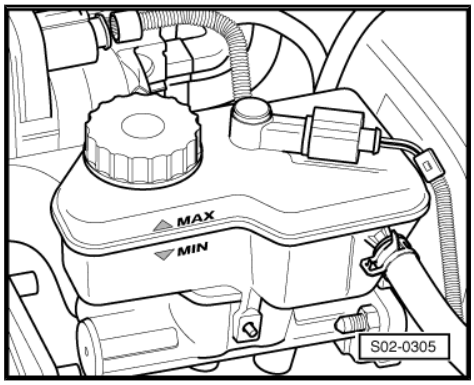
The fluid must not be above the "MAX" marking to prevent fluid flowing out of the reservoir.

Delivery Inspection

During the delivery inspection, the brake fluid level should be at the "MAX" marking.

Inspection:

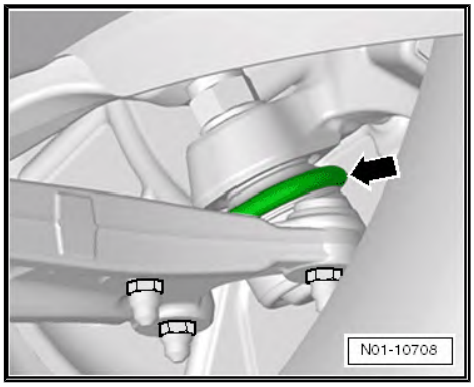
- The brake fluid level (volume) must always be assessed on the basis of the brake pad wear. When driving a slight drop in the brake fluid level occurs as a result of wear-and-tear and the automatic slack adjustment of the brake pads.
- If the fluid brake level is at the "MIN" marking or slightly above, it is not necessary to top up the brake fluid if the brake pads have almost reached their wear limit.
- If the brake pads are new or far off the brake wear limit, the brake fluid level must be between the "MIN" and "MAX" markings.
- If the brake fluid level has dropped below the "MIN" marking, it is necessary to inspect the brake system before topping up the brake fluid
⇒ "5.3 Inspecting brake system for leaks and damage", page 118 and to carry out repair if necessary.



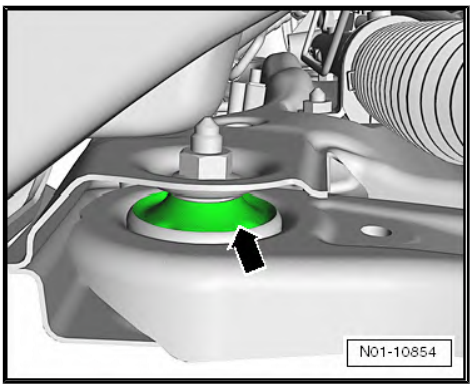
5.6 Front and rear axles: check

- Check the fixing parts, axle body and their moving parts for damage, corrosion and play in the attachment.

– Check sealing boots -arrow- of steering joints for leaks, damage and correct position.



– Check the rubber-metal bearings -arrow- of the axles for the following damage:



- ♦ there must not be any play present on the rubber metal bearings
- ♦ there must not be any tears, porous points and distortions on the rubber metal bearings

– Track rod ends: check play, fastening and sealing flanges

- ♦ Check play by moving track rods and wheels with the vehicle raised (wheels hanging free). Play: no play
- ♦ Inspect attachment.
- ♦ Inspect sealing boots for damage and correct installation.

5.7 Tyres: check

⇒ “5.7.1 Inspecting tyres (including spare wheel)”, page 127

⇒ “5.7.2 Inspecting tyre tread depth (including spare wheel) and entering”, page 128

⇒ “5.7.3 Check the tyre pressure (including spare wheel) and if necessary correct pressure, up to MY 2015”, page 129

⇒ “5.7.4 Check the tyre pressure (including spare wheel) and if necessary correct pressure, up to MY 2016”, page 133

5.7.1 Inspecting tyres (including spare wheel)

Note

Only tyres of the same type may be fitted to the vehicle. Tyres of the same brand and tread pattern must always be fitted to wheels on the same axle!

WARNING

When using tyres, observe the local legal regulations.

Delivery Inspection:

– Inspect the tyre tread and side wall for damage, if necessary remove any foreign bodies from the tyres, such as nails or glass splinters.

Inspection:

– Inspect the tyre tread and side wall for damage, if necessary remove any foreign bodies from the tyres, such as nails or glass splinters.

– Inspect tyres for scrubbing, tread worn down on one side, porous side walls, cuts and punctures. Any defects found must be advised to the customer and the customer's attention must be drawn to any necessary repair measures!

Inspecting tyre wear

– The wear pattern on the front tyres makes it possible to assess whether it is necessary to inspect the wheel toe and camber:

♦ The formation of ridges on the tyre tread is an indication of wheel toe errors.

♦ Tread worn on one side is usually attributable to camber errors.

– If such signs of wear are found, determine the cause by checking the chassis alignment (repair measure).

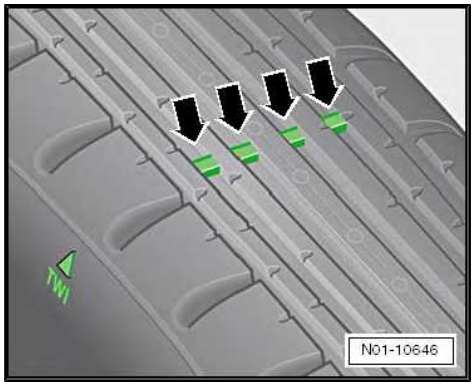
5.7.2 Inspecting tyre tread depth (including spare wheel) and entering

Special tools and workshop equipment required

♦ Inspection pin - T40139A-

Minimum tyre tread depth

• The minimum tread depth is specified by applicable national legislation (may be different in different countries).



Tread wear indicators

The tread wear indicators (1.6 mm ridges) are located at multiple points around the tyre circumference -arrows-. The position of the tread wear indicator is shown on the tyre side wall by the TWI lettering, an arrow (triangle) or the manufacturer’s logo.

A “numerical tread wear indicator” is used by some manufacturers instead of ridges.

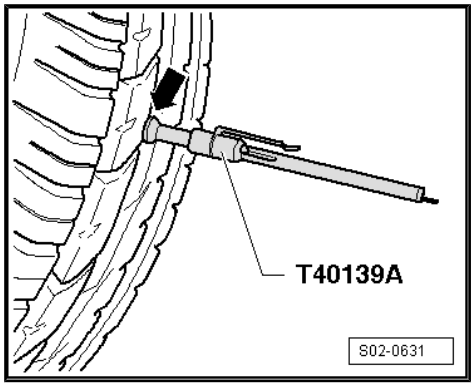
If the tyre tread depth is close to the legal minimum, the customer should be informed of the necessary tyre change.

Check tread depth

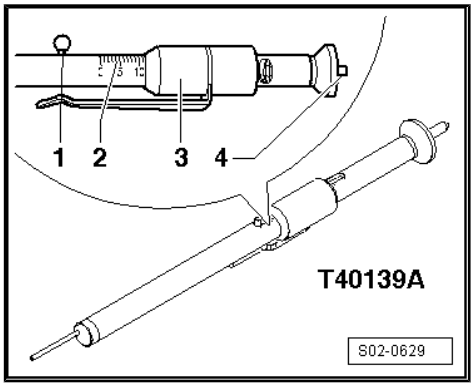
The tyre tread depth is check with the inspection pin - T40139A- .

– Position the inspection pin - T40139A- with the bead onto the outer tread of the tyre -arrow-.

– Slide the grinder -3- of the inspection pin fully onto the pin -1-.



– Move the pin -1- with the grinder of the inspection pin -3- in such a way that the measurement pin of the inspection pin -4- rests fully against the inner tread of the tyre.
– Remove the inspection pin and read off the tyre tread depth (in mm) on the scale -2- (with tyre symbol) of the inspection pin .



Note

- *Check the tread depth at several points on the total tyre circumference.*
- *The tread depth should be the same on the total tyre circumference.*
- *If the tread depth on the total tyre circumference significantly varies, this is probably due to a wheel imbalance. The customer should be informed of the necessary repair measures.*

5.7.3 Check the tyre pressure (including spare wheel) and if necessary correct pressure, up to MY 2015

Special tools and workshop equipment required

- Tyre pressure tester e.g. VAS 5216

Caution

- *During pre-sales inspection, the tyres on the front and real axles must be inflated to the "partial load" pressure vale.*
- *On Green Line vehicles, the value "Partial load/Comfort applies."*

The pressure values are also indicated on a sticker, which is attached to the inside of the fuel filler flap.

The tyre pressure values apply only to the tyres when cold.

Do not reduce the higher tyre pressure of warm tyres.

After each tyre pressure correction the calibration of the "tyre inspection display" must be performed *⇒ "5.11 Tyre pressure monitoring indicator: calibration", page 139* *.*

Tyre pressure values in the spare wheel

Caution

The full-size spare tire should have the highest possible tire pressure, which is intended for the particular vehicle type.

The temporary spare wheel (emergency wheel) must have the required tire pressure of 420 kPa / 4.2 bar).

Tyre pressure values Rapid NH

Engine	Tyres	Tyre pressure (kPa/bar)			
		half load		full load	
		Front axle	Rear axle	Front axle	Rear axle
1.2 l/55 kW MPI	175/70 R14	210/2.1	220/2.2	240/2.4	310/3.1
1.2 l/63 kW TSI		210/2.1	220/2.2	240/2.4	310/3.1
1.2 l/55 kW MPI	185/60 R15	210/2.1	230/2.3	230/2.3	310/3.1
1.2 l/63 kW TSI		210/2.1	230/2.3	230/2.3	310/3.1
1.2 l/77 kW TSI		210/2.1	230/2.3	230/2.3	310/3.1
1.6 l/77 kW MPI		210/2.1	230/2.3	230/2.3	310/3.1
1.4 l/90 kW MPI		230/2.3	230/2.3	250/2.5	320/3.2
1.6 l/66, 77 kW TDI CR		230/2.3	230/2.3	250/2.5	320/3.2
1.2 l/77 kW TSI	195/55 R15	220/2.2	230/2.3	220/2.2	320/3.2
1.6 l/77 kW MPI		220/2.2	230/2.3	220/2.2	320/3.2
1.4 l/90 kW MPI		230/2.3	230/2.3	250/2.5	320/3.2
1.6 l/66, 77 kW TDI CR		230/2.3	230/2.3	250/2.5	320/3.2
1.2 l/55 kW MPI	215/45 R16	200/2.0	210/2.1	230/2.3	320/3.2
1.2 l/63 kW TSI		200/2.0	210/2.1	230/2.3	320/3.2
1.2 l/77 kW TSI		200/2.0	210/2.1	230/2.3	320/3.2
1.6 l/77 kW MPI		200/2.0	210/2.1	230/2.3	320/3.2
1.4 l/90 kW MPI		220/2.2	220/2.2	240/2.4	310/3.1
1.6 l/66, 77 kW TDI CR		220/2.2	220/2.2	240/2.4	310/3.1
1.2 l/55 kW MPI	215/40 R17	220/2.2	220/2.2	240/2.4	320/3.2
1.2 l/63 kW TSI		220/2.2	220/2.2	240/2.4	320/3.2
1.2 l/77 kW TSI		220/2.2	220/2.2	240/2.4	320/3.2
1.6 l/77 kW MPI		220/2.2	220/2.2	240/2.4	320/3.2
1.4 l/90 kW MPI		240/2.4	240/2.4	260/2.6	310/3.1
1.6 l/66, 77 kW TDI CR		240/2.4	240/2.4	260/2.6	310/3.1

Tyre pressure values Rapid NH Green Line

Engine	Tyres	Tyre pressure (kPa/bar)					
		half load Normal		half load Comfort		full load	
		Front axle	Rear axle	Front axle	Rear axle	Front axle	Rear axle
1.6 l/66 kW TDI CR	185/60 R15	260/2.6	270/2.7	230/2.3	240/2.4	260/2.6	320/3.2

Tyre pressure values Rapid NH Spaceback

Engine	Tyres	Tyre pressure (kPa/bar)			
		half load		full load	
		Front axle	Rear axle	Front axle	Rear axle
1.2 l/55 kW MPI	175/70 R14	210/2.1	220/2.2	240/2.4	310/3.1
1.2 l/63 kW TSI		210/2.1	220/2.2	240/2.4	310/3.1
1.2 l/55 kW MPI	185/60 R15	210/2.1	230/2.3	230/2.3	310/3.1
1.2 l/63 kW TSI		210/2.1	230/2.3	230/2.3	310/3.1
1.2 l/77 kW TSI		210/2.1	230/2.3	230/2.3	310/3.1
1.6 l/77 kW MPI		210/2.1	230/2.3	230/2.3	310/3.1
1.4 l/90 kW MPI		230/2.3	230/2.3	250/2.5	320/3.2
1.6 l/66 kW TDI CR		230/2.3	230/2.3	250/2.5	320/3.2
1.6 l/77 kW TDI CR		230/2.3	230/2.3	250/2.5	320/3.2
1.2 l/77 kW TSI	195/55 R15	210/2.1	230/2.3	220/2.2	320/3.2
1.6 l/77 kW MPI		210/2.1	230/2.3	220/2.2	320/3.2
1.4 l/90 kW MPI		230/2.3	230/2.3	250/2.5	320/3.2
1.6 l/66 kW TDI CR		230/2.3	230/2.3	250/2.5	320/3.2
1.6 l/77 kW TDI CR		230/2.3	230/2.3	250/2.5	320/3.2
1.2 l/55 kW MPI	215/45 R16	200/2.0	220/2.2	230/2.3	320/3.2
1.2 l/63 kW TSI		200/2.0	220/2.2	230/2.3	320/3.2
1.2 l/77 kW TSI		200/2.0	220/2.2	230/2.3	320/3.2
1.6 l/77 kW MPI		200/2.0	220/2.2	230/2.3	320/3.2
1.4 l/90 kW MPI		220/2.2	220/2.2	240/2.4	310/3.1

Engine	Tyres	Tyre pressure (kPa/bar)			
		half load		full load	
		Front axle	Rear axle	Front axle	Rear axle
1.6 l/66 kW TDI CR		220/2.2	220/2.2	240/2.4	310/3.1
1.6 l/77 kW TDI CR		220/2.2	220/2.2	240/2.4	310/3.1
1.2 l/55 kW MPI	215/40 R17	220/2.2	220/2.2	240/2.4	320/3.2
1.2 l/63 kW TSI		220/2.2	220/2.2	240/2.4	320/3.2
1.2 l/77 kW TSI		220/2.2	220/2.2	240/2.4	320/3.2
1.6 l/77 kW MPI		220/2.2	220/2.2	240/2.4	320/3.2
1.4 l/90 kW MPI		240/2.4	240/2.4	260/2.6	310/3.1
1.6 l/66 kW TDI CR		240/2.4	240/2.4	260/2.6	310/3.1
1.6 l/77 kW TDI CR		220/2.2	220/2.2	260/2.6	310/3.1

Tyre pressure values Rapid NH Spaceback Green Line

Engine	Tyres	Tyre pressure (kPa/bar)					
		half load Normal		half load Comfort		full load	
		Front axle	Rear axle	Front axle	Rear axle	Front axle	Rear axle
1.6 l/66 kW TDI CR	185/60 R15	260/2.6	260/2.6	230/2.3	230/2.3	260/2.6	320/3.2

5.7.4 Check the tyre pressure (including spare wheel) and if necessary correct pressure, up to MY 2016

Special tools and workshop equipment required

- Tyre pressure tester e.g. VAS 5216

Caution

- *During pre-sales inspection, the tyres on the front and rear axles must be inflated to the "partial load" value in columns -A- of the tyre pressure tables* *⇒ page 134* *.*

The pressure values are also indicated on a sticker, which is attached to the inside of the fuel filler flap.

The tyre pressure values apply only to the tyres when cold.

Do not reduce the higher tyre pressure of warm tyres.

After each tyre pressure correction the calibration of the "tyre inspection display" must be performed *⇒ "5.11 Tyre pressure monitoring indicator: calibration", page 139* *.*

Tyre pressure values in the spare wheel

Caution

The full-size spare tire should have the highest possible tire pressure, which is intended for the particular vehicle type.

The temporary spare wheel (emergency wheel) must have the required tire pressure of 420 kPa / 4.2 bar).

Tyre pressure values Rapid NH

Engine	Tyres	Tyre pressure (kPa/bar)					
		A		B		C	
		half load		half payload - eco-mode Eco		full load	
		Front axle	**Rear axle**	**Front axle**	**Rear axle**	**Front axle**	**Rear axle**
1.2/66 kW TSI	175/70 R14	210/2.1	220/2.2	240/2.4	260/2.6	230/2.3	310/3.1
1.0/70 kW TSI	185/60 R15	210/2.1	230/2.3	240/2.4	260/2.6	230/2.3	310/3.1
1.0/81 kW TSI		210/2.1	230/2.3	240/2.4	260/2.6	230/2.3	310/3.1
1.2/66 kW TSI		210/2.1	230/2.3	240/2.4	260/2.6	230/2.3	310/3.1
1.2/81 kW TSI		210/2.1	230/2.3	240/2.4	260/2.6	230/2.3	310/3.1
1.6 l/81 kW MPI		210/2.1	230/2.3	240/2.4	260/2.6	230/2.3	310/3.1
1.4/92 kW TSI		230/2.3	230/2.3	260/2.6	260/2.6	250/2.5	320/3.2
1,4/66 kW TDI CR		230/2.3	230/2.3	260/2.6	260/2.6	250/2.5	320/3.2
1,6/85 kW TDI CR		230/2.3	230/2.3	260/2.6	260/2.6	250/2.5	320/3.2
1.2/81 kW TSI	195/55 R15	220/2.2	230/2.3	250/2.5	260/2.6	220/2.2	320/3.2
1.6 l/81 kW MPI		220/2.2	230/2.3	250/2.5	260/2.6	220/2.2	320/3.2
1.4/92 kW TSI		230/2.3	230/2.3	260/2.6	260/2.6	250/2.5	320/3.2
1,4/66 kW TDI CR		230/2.3	230/2.3	260/2.6	260/2.6	250/2.5	320/3.2
1,6/85 kW TDI CR		230/2.3	230/2.3	260/2.6	260/2.6	250/2.5	320/3.2
1.0/70 kW TSI	245/45 R16	200/2.0	210/2.1	230/2.3	240/2.4	230/2.3	320/3.2
1.0/81 kW TSI		200/2.0	210/2.1	230/2.3	240/2.4	230/2.3	320/3.2
1.2/66 kW TSI		200/2.0	210/2.1	230/2.3	240/2.4	230/2.3	320/3.2
1.2/81 kW TSI		200/2.0	210/2.1	230/2.3	240/2.4	230/2.3	320/3.2
1.6 l/81 kW MPI		200/2.0	210/2.1	230/2.3	240/2.4	230/2.3	320/3.2
1.4/92 kW TSI		220/2.2	220/2.2	250/2.5	250/2.5	240/2.4	310/3.1
1,4/66 kW TDI CR		220/2.2	220/2.2	250/2.5	250/2.5	240/2.4	310/3.1
1,6/85 kW TDI CR		220/2.2	220/2.2	250/2.5	250/2.5	240/2.4	310/3.1
1.0/70 kW TSI	215/40 R17	220/2.2	220/2.2	250/2.5	250/2.5	240/2.4	320/3.2
1.0/81 kW TSI		220/2.2	220/2.2	250/2.5	250/2.5	240/2.4	320/3.2
1.2/66 kW TSI		220/2.2	220/2.2	250/2.5	250/2.5	240/2.4	320/3.2

Engine	Tyres	Tyre pressure (kPa/bar)					
		A		B		C	
		half load		half payload - eco-mode Eco		full load	
		Front axle	Rear axle	Front axle	Rear axle	Front axle	Rear axle
1.2/81 kW TSI		220/2.2	220/2.2	250/2.5	250/2.5	240/2.4	320/3.2
1.6 l/81 kW MPI		220/2.2	220/2.2	250/2.5	250/2.5	240/2.4	320/3.2
1.4/92 kW TSI		240/2.4	240/2.4	270/2.7	270/2.7	260/2.6	310/3.1
1,4/66 kW TDI CR		240/2.4	240/2.4	270/2.7	270/2.7	260/2.6	310/3.1
1,6/85 kW TDI CR		240/2.4	240/2.4	270/2.7	270/2.7	260/2.6	310/3.1

Tyre pressure values Rapid NH Green Line

Engine	Tyres	Tyre pressure (kPa/bar)					
		A		B		C	
		half load		half payload - eco-mode Eco		full load	
		Front axle	Rear axle	Front axle	Rear axle	Front axle	Rear axle
1.4 l/66 kW TDI CR	185/60 R15	230/2.3	240/2.4	260/2.6	270/2.7	260/2.6	320/3.2

Tyre pressure values Rapid NH Spaceback

Engine	Tyres	Tyre pressure (kPa/bar)					
		A		B		C	
		half load		half payload - eco-mode Eco		full load	
		Front axle	Rear axle	Front axle	Rear axle	Front axle	Rear axle
1.2 l/55 kW MPI	175/70 R14	210/2.1	220/2.2	240/2.4	250/2.5	240/2.4	310/3.1
1.2/66 kW TSI		210/2.1	220/2.2	240/2.4	250/2.5	240/2.4	310/3.1
1.0/70 kW TSI	185/60 R15	210/2.1	230/2.3	240/2.4	260/2.6	230/2.3	310/3.1
1.0/81 kW TSI		210/2.1	230/2.3	240/2.4	260/2.6	230/2.3	310/3.1

Engine	Tyres	Tyre pressure (kPa/bar)					
		A		B		C	
		half load		half payload - eco-mode Eco		full load	
		Front axle	Rear axle	Front axle	Rear axle	Front axle	Rear axle
1.2 l/55 kW MPI		210/2.1	230/2.3	240/2.4	260/2.6	230/2.3	310/3.1
1.2/66 kW TSI		210/2.1	230/2.3	240/2.4	260/2.6	230/2.3	310/3.1
1.2/81 kW TSI		210/2.1	230/2.3	240/2.4	260/2.6	230/2.3	310/3.1
1.6 l/81 kW MPI		210/2.1	230/2.3	240/2.4	260/2.6	230/2.3	310/3.1
1.4/92 kW TSI		230/2.3	230/2.3	260/2.6	260/2.6	250/2.5	320/3.2
1,4/66 kW TDI CR		230/2.3	230/2.3	260/2.6	260/2.6	250/2.5	320/3.2
1,6/85 kW TDI CR		230/2.3	230/2.3	260/2.6	260/2.6	250/2.5	320/3.2
1.2/81 kW TSI	195/55 R15	210/2.1	230/2.3	240/2.4	260/2.6	220/2.2	320/3.2
1.6 l/81 kW MPI		210/2.1	230/2.3	240/2.4	260/2.6	220/2.2	320/3.2
1.4/92 kW TSI		230/2.3	230/2.3	260/2.6	260/2.6	250/2.5	320/3.2
1,4/66 kW TDI CR		230/2.3	230/2.3	260/2.6	260/2.6	250/2.5	320/3.2
1,6/85 kW TDI CR		230/2.3	230/2.3	260/2.6	260/2.6	250/2.5	320/3.2
1.0/70 kW TSI	245/45 R16	200/2.0	220/2.2	230/2.3	250/2.5	230/2.3	320/3.2
1.0/81 kW TSI		200/2.0	220/2.2	230/2.3	250/2.5	230/2.3	320/3.2
1.2 l/55 kW MPI		200/2.0	220/2.2	230/2.3	250/2.5	230/2.3	320/3.2
1.2/66 kW TSI		200/2.0	220/2.2	230/2.3	250/2.5	230/2.3	320/3.2
1.2/81 kW TSI		200/2.0	220/2.2	230/2.3	250/2.5	230/2.3	320/3.2
1.6 l/81 kW MPI		200/2.0	220/2.2	230/2.3	250/2.5	230/2.3	320/3.2
1.4/92 kW TSI		220/2.2	220/2.2	250/2.5	250/2.5	240/2.4	310/3.1
1,4/66 kW TDI CR		220/2.2	220/2.2	250/2.5	250/2.5	240/2.4	310/3.1
1,6/85 kW TDI CR		220/2.2	220/2.2	250/2.5	250/2.5	240/2.4	310/3.1
1.0/70 kW TSI	215/40 R17	220/2.2	220/2.2	250/2.5	250/2.5	240/2.4	320/3.2
1.0/81 kW TSI		220/2.2	220/2.2	250/2.5	250/2.5	240/2.4	320/3.2
1.2 l/55 kW MPI		220/2.2	220/2.2	250/2.5	250/2.5	240/2.4	320/3.2
1.2/66 kW TSI		220/2.2	220/2.2	250/2.5	250/2.5	240/2.4	320/3.2
1.2/81 kW TSI		220/2.2	220/2.2	250/2.5	250/2.5	240/2.4	320/3.2

Engine	Tyres	Tyre pressure (kPa/bar)					
		A		B		C	
		half load		half payload - eco-mode Eco		full load	
		Front axle	Rear axle	Front axle	Rear axle	Front axle	Rear axle
1.6 l/81 kW MPI		220/2.2	220/2.2	250/2.5	250/2.5	240/2.4	320/3.2
1.4/92 kW TSI		240/2.4	240/2.4	270/2.7	270/2.7	260/2.6	310/3.1
1,4/66 kW TDI CR		240/2.4	240/2.4	270/2.7	270/2.7	260/2.6	310/3.1
1,6/85 kW TDI CR		240/2.4	240/2.4	270/2.7	270/2.7	260/2.6	310/3.1

Tyre pressure values Rapid NH Spaceback Green Line

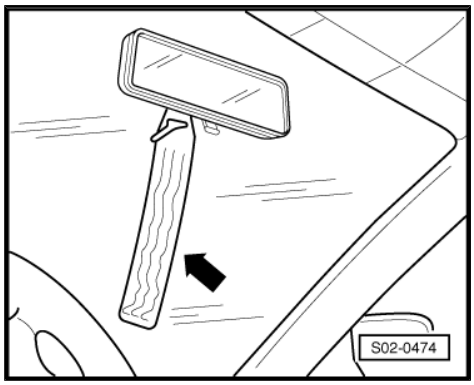
Engine	Tyres	Tyre pressure (kPa/bar)					
		A		B		C	
		half load		half payload - eco-mode Eco		full load	
		Front axle	Rear axle	Front axle	Rear axle	Front axle	Rear axle
1.4 l/66 kW TDI CR	185/60 R15	230/2.3	240/2.4	260/2.6	270/2.7	260/2.6	320/3.2

5.8 Tightening wheel bolts to specific torque

Tightening torque for steel and light alloy wheel rims: 120 Nm.

5.9 Transport lock: remove the front axle locking components

On vehicles with a basic chassis, blocking components are attached to the front axle dampers. These vehicles are identified by a trailer label -arrow- on the interior mirror.



Note

These anti-lock components should protect the vehicle from backswing and through this also from damage when driving into the transport vehicle or onto the train wagon.

WARNING

The locking components must always be removed before the vehicle handover! The trailer label on the interior mirror clearly informs you about this.

Proceed as follows:

Note

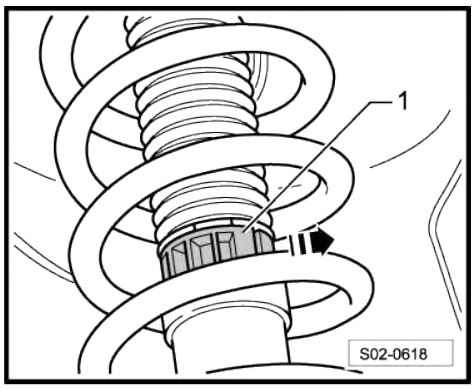
- *It is not necessary to remove the wheel.*
- *Ensure that the surface of the springs is not damaged.*

– Relieve helical springs by raising the vehicle onto the lift platform.

– Push the protective cover of the suspension strut upwards.

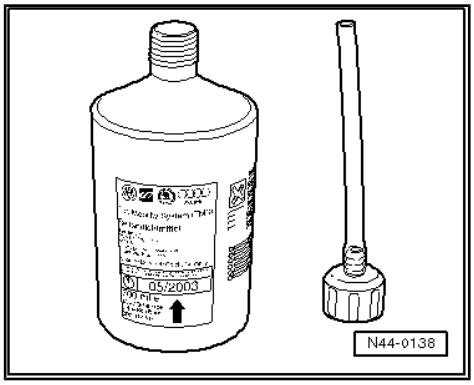
– Apply pressure -arrow- to remove anti-lock components -1- from the shock absorbers.

– Push the protective cover of the suspension strut downwards.



5.10 Breakdown kit: check

The breakdown set contains a tyre inflation bottle with sealant in addition to the compressor.



Note

- *The tyre sealant in the bottle is perishable.*
- *Therefore, the best before date is given on the bottle -arrow-.*

– Check the best before date and enter it in the maintenance tables.

– Replace the tyre sealant if the use by date has been reached -arrow-.

WARNING

The tyre sealant must not be older than 4 years.

If the bottle was opened, e.g. when having a flat tyre, it must also be replaced.

Note

- *Residues of tyre sealant or bottles which are still filled must be disposed of according to applicable regulations if the best before date has expired.*
- *Old tyre sealant or residues of this should not be mixed with other fluids and must be disposed of.*

5.11 Tyre pressure monitoring indicator: calibration

Note

- *Calibration of the "tyre inspection display" must be performed after each tyre pressure correction, while paying attention to the correct tyre pressure values*
  ⇒ "5.7.3 Check the tyre pressure (including spare wheel) and if necessary correct pressure, up to MY 2015", page 129 *or*
  ⇒ "5.7.4 Check the tyre pressure (including spare wheel) and if necessary correct pressure, up to MY 2016", page 133 .
- *If no pressure loss and no tyre damage is discovered after a tyre pressure warning, this erroneous warning can be eliminated by a calibration.*
- *If the warning light comes on, a pressure lost was detected. In this case, the pressure in all the tyres has to be inspected and a calibration is performed.*
- *If the warning light comes on even after the calibration has been performed (or no pressure loss or tyre damage was detected), a system failure exists ⇒ Vehicle diagnostic tester.*

The tyre inspection display operates via the ABS speed sensors, which compare the wheel rotations and through this also the wheel circumferences. In case of a change in the wheel circumference, the warning light in the dash panel insert lights up.

The tyre circumference can change, if

- the tyre pressure is too low

- the tyre structure is damaged
- the vehicle is loaded on one side
- the wheels on an axle are heavily loaded (e.g when operating a trailer, on steep gradients).
- Snow chains are installed
- an emergency wheel is installed
- a wheel is changed on an axle.

A calibration is required at each pressure change, at each tyre change (also change from front to rear) and after working on the chassis in the workshop, which has an influence on the tyre inspection display.

The tyre inspection display has a warning light in the dash panel insert.

Calibration for vehicles with the button in the centre console

– Switch on ignition.

– Press and hold down the tyre pressure loss indicator button.

The warning light for the tyre inflation display in the dash panel insert lights up as long as the button is pressed.

Performing the calibration is confirmed by an informative tone and when the warning light in the dash panel insert goes out.

Calibration for vehicles with infotainment radio/navigation

Perform the calibration of the tyre inspection display according to the vehicle specification.

The vehicles are equipped with different infotainment radio/navigation. For operation refer to the ⇒ operating instructions infotainment radio/navigation .

– Switch on ignition.

– In Infotainment radio / navigation, select the CAR button, and then the “vehicle status” button, and then the Check tire button.

– Further select the button SET (with tyre symbol)).

The calibration starts herewith.

– Continue by referring to the read-out on the display.

6 Electrical System

6.1 Electric consumers: check they are functioning

– Inspect headlights, headlight beam control, fog lights, turn signal lights, hazard warning light system, tail lights, rear fog lights, reversing lights, brake lights, parking light and daylight driving lights (if present) for brightness, colour and proper operation.

– Check operation of fog lights with “Corner” function (if present) ⇒ “6.13 Checking the operation of the fog lights with the Corner function (static cornering light)”, page 160 .

– Inspect interior lights, illuminated storage compartment, illuminated ashtray for proper operation.

– Airbag warning light: check for proper operation ⇒ “7.1 Airbag: check for proper operation”, page 168 .

– Warning buzzer, on-board computer, all switches in the central console and on the dash panel and check the signal horn for function.

– Check electric windows, electrically-adjustable exterior mirrors (heated, adjustable), central locking and comfort locking.
– Inspect heating of front seats.
– Check heated windows.
– Inspect radio, navigation system for proper reception and absence of interference, also inspect speakers
⇒ “6.5 Checking proper operation of infotainment radio/navigation”, page 142 .

6.2 Front and rear exterior lighting: check

– Lighting,
♦ Headlights, headlight beam control
♦ Fog lights
♦ Turn signals
♦ Hazard warning light system
♦ Tail light
♦ Rear fog lights
♦ Reversing lights
♦ Brake lights
♦ Check parking light and daylight driving lights (if present) for brightness, colour and proper operation
– Check operation of fog lights with “Corner” function (if present)
⇒ “6.13 Checking the operation of the fog lights with the Corner function (static cornering light)”, page 160 .

6.3 Interior lights: check

– Inspect interior lights, illuminated storage compartment, illuminated ashtray for proper operation.

6.4 Checking battery

Work sequence during the battery test ⇒ Electrical System - General notes; Rep. gr. 27 .

6.5 Checking proper operation of infotainment radio/navigation

⇒ “6.5.1 Inspecting proper operation of radio and navigation system, up to MY 2015”, page 142

⇒ “6.5.2 Checking proper operation of infotainment radio/navigation, starting from MY 2016”, page 143

6.5.1 Inspecting proper operation of radio and navigation system, up to MY 2015

Precise information on how to operate the radio and the navigation system should be obtained from the Owner's Manual before inspecting proper operation of the radio and the navigation system.

– Read radio/radio navigation system (RNS) PIN online ⇒ Vehicle diagnostic tester.
– Enter PIN into radio/navigation system (RNS) ⇒ Owner's Manual of radio/radio navigation system .
– Switch unit on and off.

– Operate the volume control.
– Carry out station programming [14].
– Inspect station search [14].
– Check CD/DVD or SD player (insert CD/DVD or SD and play) [14].

Use the latest version of the cartographic data (data) approved by Škoda Auto for the radio navigation system (RNS) [14].

– Check activation of the anti-theft coding on the radio [14].

14) These functions are model specific and are not present on all types of sets. For operation refer to the Owner's Manual for the radio/radio navigation system (RNS).

6.5.2 Checking proper operation of infotainment radio/navigation, starting from MY 2016

Precise information on how to operate the radio should be obtained from the operating instructions before inspecting proper operation of the infotainment radio/navigation.

WARNING

Transport mode must be disabled to be able to switch on the radio/navigation system ⇒ "6.16 Switch off battery transport mode", page 161 .

– Switch system on and off.

WARNING

If only the following is activated after switching on the radio/navigation:

- *Traffic news TP or phone [15]*

The "component protection" is activated. This function must be deactivated ⇒ Vehicle diagnostic tester.

"Component protection" is also an anti-theft alarm system.

The radio "Blues" has a component protection feature and an anti-theft alarm system is not installed.

Carry out the functional test according to the ⇒ Operating instructions of the infotainment radio/navigation .

– Carry out station programming.
– Operate the volume control.
– Check the SD or USB player for function (insert an SD or USB and play) [15].

Use the latest version of the cartographic data approved by Škoda Auto for the navigation system [15].

15) These functions are model specific and are not present on all types of sets. For operation refer to the operating instructions infotainment radio/navigation.

6.6 Setting clock

⇒ “6.6.1 Setting clock, up to MY 2015”, page 144

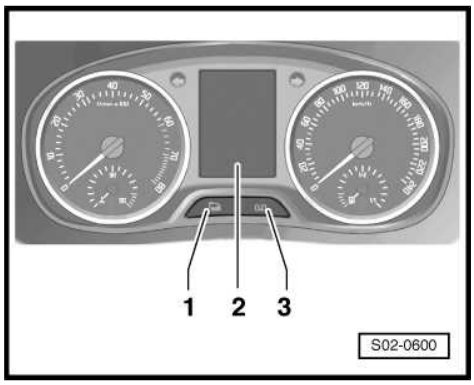
⇒ “6.6.2 Setting clock, starting from MY 2016”, page 145

6.6.1 Setting clock, up to MY 2015

Vehicles without an information display

The clock is set using the operating buttons -1- and -3-. The button -1- is used for selecting the information to be set, i. e minutes or hours.

The selected information is set with the button -3-.



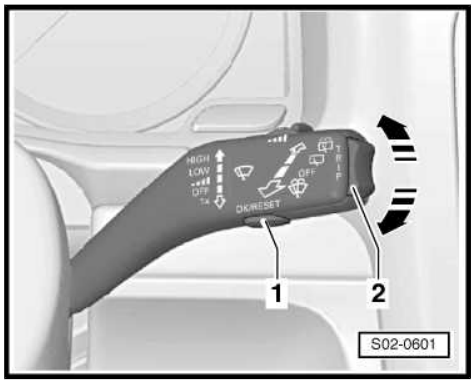
Vehicles with an information display

On vehicles with an information display the clock is set in the menu “Time”:

– Switch on ignition.

– Hold the button -2- on the windscreen wiper lever pressed for longer than 1 second. This will show the information display of the »MAIN MENU«. Observe the instructions ⇒ page 144 .

– Select option »Setup« with the button -1-, briefly press this button and further select the option »Time«.



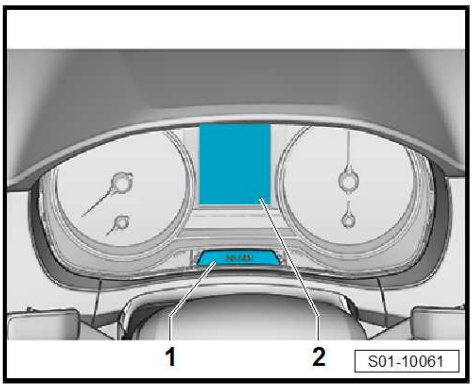
Here the time can be set and switched over between a 24 h or 12 h display as well as between summer and winter time.

Note

- *After the ignition is switched on, the information display shows the function which was last selected before switching off the ignition. Use the button -2- in order to return to the main menu.*
- *If the menu in the information display cannot be called up by pressing the button -2-, proceed as follows:*
- *Messages of the Škoda information system appear in the information display. For example a symbol can appear here for the door warning, a too low fuel or engine oil level etc.*
- *In this case the button -1- must be pressed.*
- *If several messages appear, the button must be pressed again for each individual message until no further message is displayed.*
- *The function which was last selected before switching off the ignition is shown in the information display. Use the button -2- in order to return to the main menu.*

6.6.2 Setting clock, starting from MY 2016

Set the clock with the buttons on the instrument cluster



Control button -1- 0.0/SET is used to set the clock.

– Switch on ignition.

– Press the button -1- 0.0/SET, and hold for approx. 5 s.

The lettering -time- lights up in the display -2- of the dash panel insert.

An hour display is shown in the display -2- at the same time as the lettering -time-.

– Release the button -1- 0.0/SET, and set the hours appropriately by repeatedly pressing the button -1- 0.0/SET.

After setting the hour, wait for approx. 2 s until the minute display is shown.

– Release the button -1- 0.0/SET, and set the minutes appropriately by repeatedly pressing the button -1- 0.0/SET.

After performing the setting, wait a short period of time until the display switches back to the normal display.

Set clock for vehicles with infotainment radio/navigation

Set the clock and the date according to the vehicle specification.

The vehicles are equipped with different infotainment radio/navigation. For operation refer to the ⇒ operating instructions infotainment radio/navigation .

– Switch on ignition.

– Select the following in the infotainment radio/navigation:

“Device settings” (button MENU) and in addition button SETUP

or

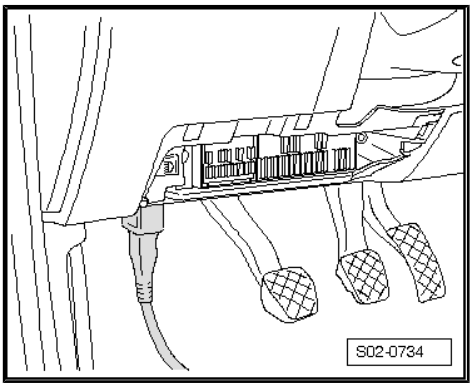
“Vehicle settings”.

– Further select the button time and date.

– Then proceed by referring to the read-out on the display.

Here you can also set the date, daylight saving time, time zone, time and date format.

6.7 Connect diagnostic unit



Connect the diagnostic unit to the diagnostic connector.

Note

- *The event memory is queried and further diagnostic procedures and functions are performed using the vehicle diagnosis, measurement and information system -VAS- together with the corresponding diagnostic cable ⇒ Vehicle diagnostic tester.*
- *Follow the instructions on the diagnostic device display to continue.*

6.8 Adapt language variants to driver's instructions

⇒ “6.8.1 Selecting language in the dash panel insert, up to MY 2015”, page 146

⇒ “6.8.2 Adapting language variants to driver's instructions, starting from MY 2016”, page 146

6.8.1 Selecting language in the dash panel insert, up to MY 2015

For all vehicles

The language in the dash panel insert is selected with the vehicle diagnosis, measurement and information system -VAS- .

– Connect the vehicle diagnosis, measurement and information system -VAS- with corresponding diagnostic cable. Connect the diagnostic unit to the diagnostic connector ⇒ “6.7 Connect diagnostic unit”, page 145 .

– Select the following on the diagnostics device: “Targeted functions” → “Škoda” → “Rapid NH (EU) 2013➢” → “Engine type” and then → “Dash panel insert” and then → “Code language variants for driver information system”.

– Set the desired language taking account of the diagnostic unit display.

For vehicles with information display

The language in the dash panel insert can also be selected using the operating levers on the steering wheel.

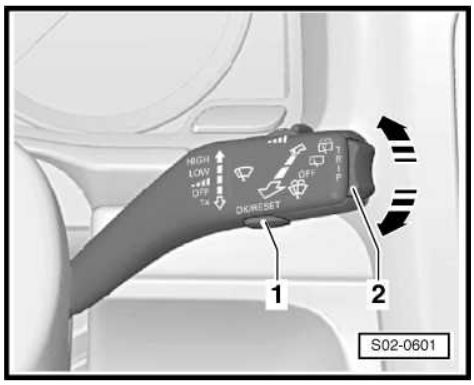
– Switch on ignition.

– Hold the button -2- on the windscreen wiper lever pressed for longer than 1 second. This will show the information display of the »MAIN MENU«. Observe the instructions ⇒ page 144 .

– Select option »Setup« with the button -1-, briefly press this button and further select the option »Language«.

Here, the desired language can be set.

– Switch off ignition.



6.8.2 Adapting language variants to driver's instructions, starting from MY 2016

Adjust the language variant for vehicles without infotainment radio/navigation

The language variants of the vehicle messages are adjusted using the vehicle diagnosis, measurement and information system -VAS-

– Connect the vehicle diagnosis, measurement and information system -VAS- with corresponding diagnostic cable. Connect the diagnostic unit to the diagnostic connector ⇒ “6.7 Connect diagnostic unit”, page 145 .

– Select the following on the diagnostics device: “Targeted functions” → “Škoda” → “Rapid NH (EU) 2016➢” → “Engine type” and then → “Dash panel insert” and then → “Code language variants for driver information system”.

– Set the desired language taking account of the diagnostic unit display.

Adjust the language variant for vehicles with infotainment radio/ navigation

The adjustment of the language variants for driver's instructions takes place by changing the language in the infotainment radio/ navigation

Note

- *Carry out the adjustment of the language variants of the driver's instructions as per the vehicle specification.*
- *For vehicles with radio preparation, and some infotainment, radio/navigation system equipment levels, the language variant for the vehicles cannot be performed using this approach.*
- *The vehicles are equipped with different infotainment radio/ navigation. For operation refer to the ⇒ operating instructions infotainment radio/navigation .*

– Switch on ignition.

– Select the following in the infotainment radio/navigation:

"Device settings" (button MENU) and in addition button SETUP

or

"Vehicle settings".

– Further select the button language.

– Then proceed by referring to the read-out on the display.

6.9 Climatronic: set the temperature to 22 ° C

Note

- *The fastest way to obtain a comfortable climate (temperature) in the vehicle, is by adjusting the temperature to 22°C.*
- *Hence if personal health conditions demand, only a regulation in the adjustment is necessary.*

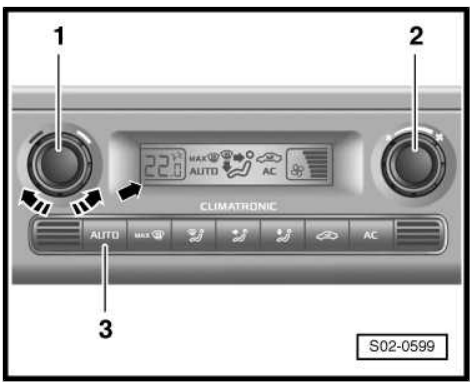
– Switch on ignition.

– Select the desired temperature by turning the rotary switch -1-.

– Check if the display -arrow- indicates 22 °C.

– Press the button -3- for automatic operation.

– Switch off ignition.



6.10 Resetting service interval display (SID)

⇒ “6.10.1 Display the remaining kilometres and days until the next inspection service.”, page 148

⇒ “6.10.2 Reset service interval display in MY 2013”, page 150

⇒ “6.10.3 Resetting service interval display from MY 2014 to MY 2015”, page 151

⇒ “6.10.4 Reset service interval display from MY 2016”, page 155

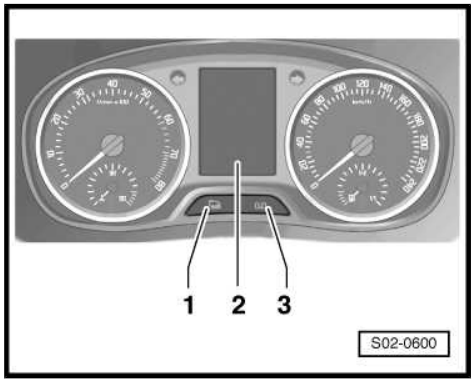
6.10.1 Display the remaining kilometres and days until the next inspection service.

– Switch on ignition.

Vehicles without Information display in MY 2013

– Press the button -1- 4 times.

The remaining kilometres and days until the next inspection service appear in the display -2-.

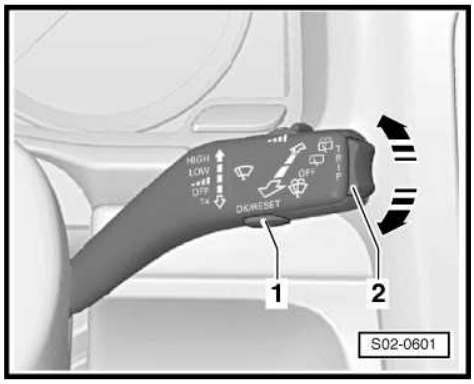


For vehicles with Information display in MY 2013

– Hold the button -2- on the windscreen wiper lever pressed for longer than 1 second. This will show the information display of the »MAIN MENU«. Observe the instructions ⇒ page 144 .

– Select the »Setup« option with the -B- button, briefly press this button and then select the »service interval option (Service. info).«

– Display information about the remaining kilometres and days until the next inspection service.



The dash panel insert shows the following: service in ... km or ... days. (Service in ... km or ... days)

Vehicles without Information display as of MY 2014

WARNING

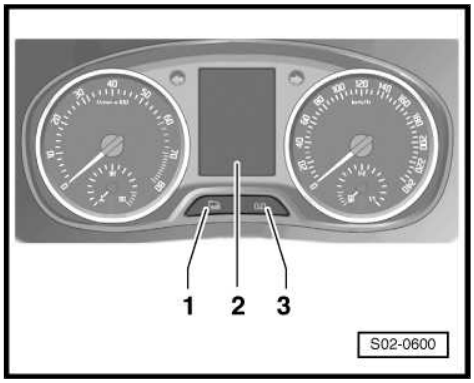
Vehicles from MY 2014 are equipped with a two-channel service interval display with a different service message.

– Press the button -1- 4 times.

The remaining kilometres and days until the next inspection service appear in the display -2-.

The “Wrench” symbol appears in the display for approx. 10 s and the number of remaining days and number of kilometres until the next inspection service is displayed.

First of all, the number of remaining days and the number of kilometres until the next oil change service is shown, after pressing the button -1- again, the number of the remaining days and number of kilometres is displayed until the next inspection service.



If the “Wrench symbol” -D- appears in the display for approx. 10 s in position -A- No. -1-, this means an oil change service is needed.

A - Difference between the service interval display

B - “Clock” symbol and the number of remaining days until the next inspection service is displayed.

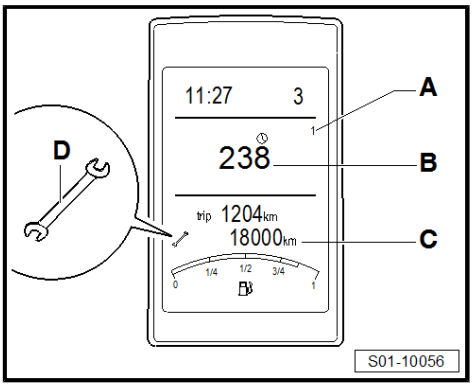
C - Remaining kilometres and days until the next inspection service.

D - “Wrench” indicates inspection service

At the same time, the number of remaining days and the number of kilometres is displayed until the next inspection service is displayed.

Once the oil change service is reached, after the ignition is switched on, the flashing “Wrench” symbol -D- will appear for approx. 20 s in the display with the following message:

♦ “OIL CHANGE”

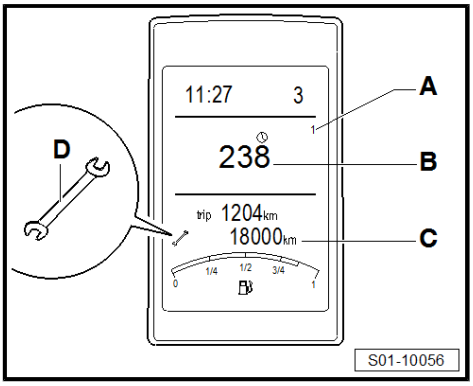


If the “Wrench symbol” -D- appears in the display for approx. 10 s in position -A- No. -2-, this means a service is needed.

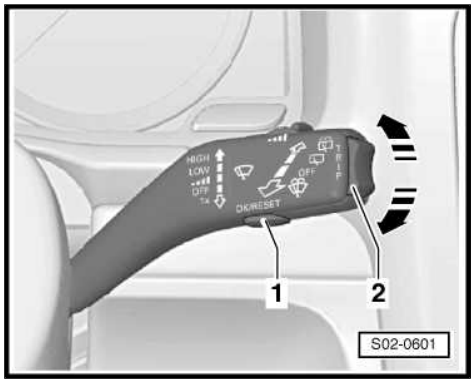
Once the inspection is reached, after the ignition is switched on, the flashing “Wrench” symbol -D- will appear for approx. 20 s in the display with the following message:

♦ “INSPECTION”

For vehicles with Information display from MY 2014



– Hold the button -2- on the windscreen wiper lever pressed for longer than 1 second. This will show the information display of the »MAIN MENU«. Observe the instructions ⇒ page 144 .
– Select the »Setup« option with the -B- button, briefly press this button and then select the »service interval option (Service. info).«
– Display information about the remaining kilometres and days until the next inspection service.



The following is shown for 10 s in the information display:

Oil change ... km / ... days

Inspection ... km / ... days

Is switched on after switching on the ignition in the information display “Oil change in ... km or ... days.” Then an oil service is due.

As soon as the oil change service has been reached, the following message is displayed after turning on the ignition:

♦ “Oil change now”

Is switched on after switching on the ignition in the information display “Inspection in ... km or ... days” Then an inspection is due.

As soon as the inspection has been reached, the following message is displayed after turning on the ignition:

♦ “Inspection now!”

6.10.2 Reset service interval display in MY 2013

The service interval display is reset with the vehicle diagnosis, measuring and information system -VAS- together with the corresponding diagnostic cable ⇒ Vehicle diagnostic tester.

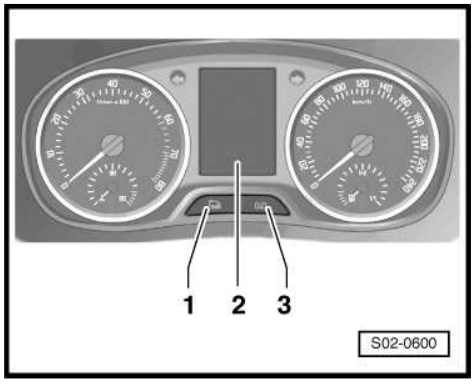
The service interval display can also be reset with the buttons in the dash panel insert/on the windscreen wiper lever ⇒ page 150 .

Reset the service interval display with the buttons on the dash panel insert or windscreen wiper lever

WARNING

♦ ***This work sequence cannot be carried out on vehicles, for which no service message or only a pre-warning is displayed on the display of the dash panel insert.***

– Switch off ignition.
– Hold the button -3- pressed and simultaneously switch on the ignition.
– Release button -3- and within 20 seconds, press button -1- once briefly.

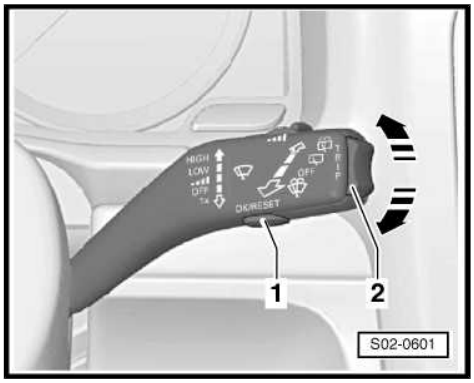


After a short period of time the display switches back to a normal illustration.

For vehicles with information display

– Switch on ignition.

– Hold the button -2- on the windscreen wiper lever pressed for longer than 1 second. This will show the information display of the »MAIN MENU«. Observe the instructions ⇒ page 144 .
– Select the »Setup« option with the -1- button, briefly press this button and then select the »service interval option (Service. Info.)« and the option »Reset«.



WARNING

This work sequence cannot be carried out on vehicles, for which no service message or only a pre-warning was displayed on the display of the dash panel insert.

- *Vehicles with variable service intervals (QI6) by default are automatically recoded to fixed service intervals as a result of this procedure.*
- *The coding can only be reset to variable service intervals (QI6) with the -VAS- if the following conditions are met ⇒ "6.11 Changing the code of the service intervals", page 157 .*

6.10.3 Resetting service interval display from MY 2014 to MY 2015

WARNING

Vehicles from MY 2014 are equipped with a two-channel service interval display with a different service message.

This two-channel service interval display must be reset in 2 steps.

Reset service interval display with the vehicle diagnosis, measurement and information system -VAS- ⇒ page 151 .

The service interval display can also be reset with the buttons in the dash panel insert ⇒ page 152 .

Reset service interval display with the vehicle diagnosis, measurement and information system -VAS-

When resetting the service interval display with vehicle diagnosis, measurement and information system -VAS- , note the following instructions:

WARNING

When resetting the service interval display with vehicle diagnosis, measurement and information system -VAS- , note the following:

Remove the checkmark at the "work with targeted fault finding" function for the vehicle identification on the display of the vehicle diagnostic tester.

The display of the vehicle diagnosis tester displays the following "Now targeted fault finding has been cancelled, only targeted functions and self-diagnosis are available. Would you like to perform a diagnosis without targeted fault finding?"

Confirm function with "Yes".

- *When changing the engine oil, the service interval display must be reset for the engine oil change.*

On the diagnostic unit, then select: "Dash panel insert - J285" → "Functions of the dash panel insert" → "17- Service events" and next "Oil change service (variable)" → or "Oil change service".

Continue to follow the instructions on the diagnostic unit.

- *During the inspection, the service interval display must be reset for the inspection.*

On the diagnostic unit, then select: "Dash panel insert - J285" → "Functions of the dash panel insert" → "17- Service events" and next "Examination" or "Inspection".

Continue to follow the instructions on the diagnostic unit.

- *During the inspection associated with the engine oil change, both service interval displays must be reset.*

Reset the service interval display with the buttons on the dash panel insert

When resetting the service interval display using the buttons in the dash panel insert, observe the following information:

WARNING

This work sequence cannot be carried out on vehicles, for which no service message or only a pre-warning was displayed on the display of the dash panel insert.

Reset "oil change service" display

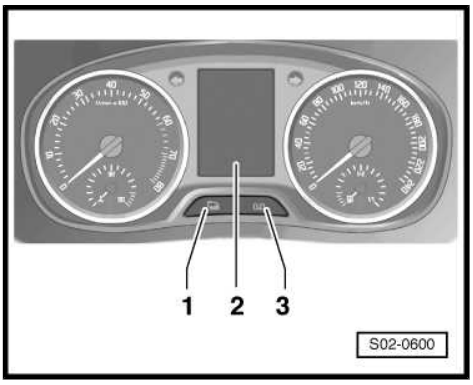
WARNING

- *Vehicles with variable service intervals (QI6) by default are automatically recoded to fixed service intervals as a result of this procedure.*
- *The coding can only be reset to variable service intervals (QI6) with the -VAS- if the following conditions are met* *⇒ "6.11 Changing the code of the service intervals", page 157 .*

Vehicles without an information display

– Switch off ignition.

– Hold button -3- pressed and at the same time turn on the ignition until a “wrench” symbol is displayed on the dash panel insert display:

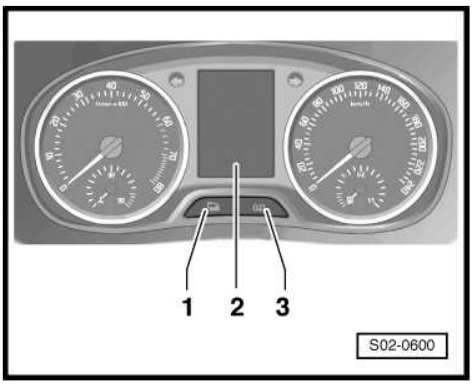


– Press button -1-.

The “Oil change service” display is now reset.

Vehicles with an information display

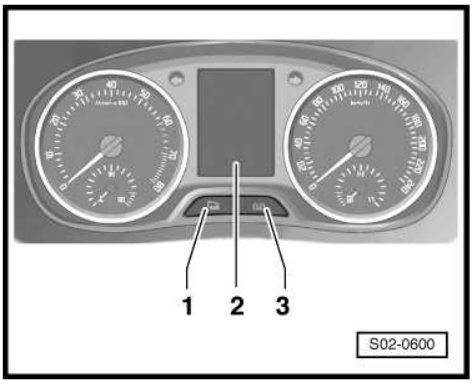
– Switch off ignition.



– Hold button -3- pressed and simultaneous switch on the ignition until the following message is displayed on the dash panel insert display:

  Really reset oil change service?

– Press the option “OK” in the information display to confirm the reset.



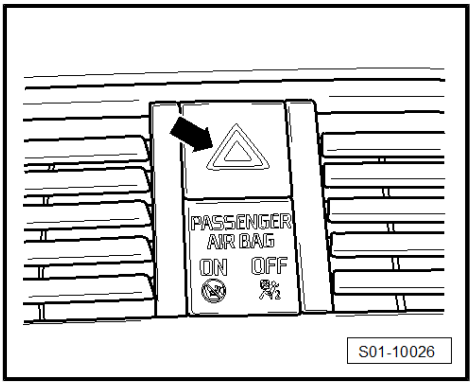
The “Oil change service” display is now reset.

Reset “inspection” display

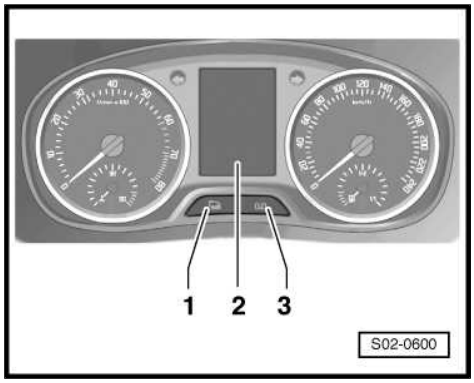
Vehicles without an information display

– Switch off ignition.

– Switch on the hazard lights by pressing the button -arrow- in the central console of the dash panel.



– Hold button -3- pressed and at the same time turn on the ignition until a “wrench” symbol is displayed on the dash panel insert display:

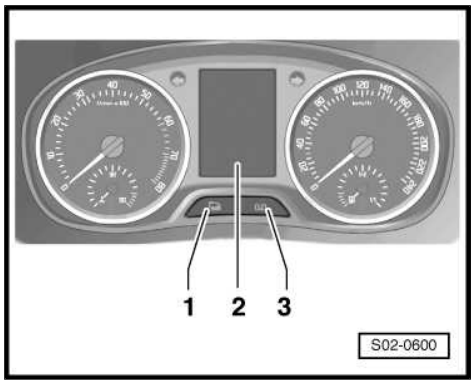


– Press button -1-.

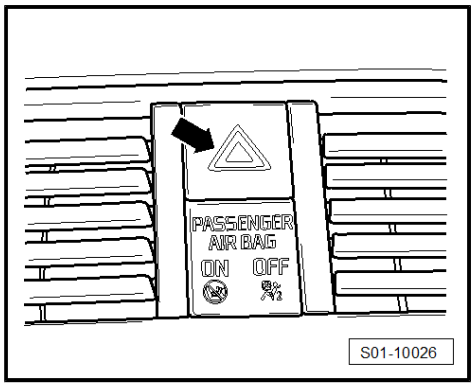
The “Inspection” display is now reset.

Vehicles with an information display

– Switch off ignition.



– Switch on the hazard lights by pressing the button -arrow- in the central console of the dash panel.

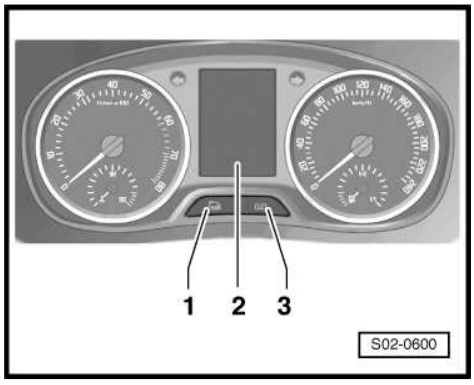


– Hold button -3- pressed and simultaneous switch on the ignition until the following message is displayed on the dash panel insert display:

  Really reset inspection service?

– Press the option “OK” in the information display to confirm the reset.

The “Inspection” display is now reset.



6.10.4 Reset service interval display from MY 2016

WARNING

The vehicles are equipped with a two-channel service interval display with a different service message.

This two-channel service interval display must be reset in 2 steps.

Reset service interval display with the vehicle diagnosis, measurement and information system -VAS- ⇒ page 155 .

The service interval display can also be reset with the buttons in the instrument cluster ⇒ page 155 .

Reset service interval display with the vehicle diagnosis, measurement and information system -VAS-

When resetting the service interval display with vehicle diagnosis, measurement and information system -VAS- , note the following instructions:

WARNING

When resetting the service interval display with vehicle diagnosis, measurement and information system -VAS- , note the following:

Remove the checkmark at the "work with targeted fault finding" function for the vehicle identification on the display of the vehicle diagnostic tester.

The display of the vehicle diagnosis tester displays the following "Now targeted fault finding has been cancelled, only targeted functions and self-diagnosis are available. Would you like to perform a diagnosis without targeted fault finding?"

Confirm function with "Yes".

- *When changing the engine oil, the service interval display must be reset for the engine oil change.*

On the diagnostic unit, then select: "Dash panel insert - J285" → "Functions of the dash panel insert" → "17- Service events" and next "Oil change service (variable)" → or "Oil change service".

Continue to follow the instructions on the diagnostic unit.

- *During the inspection, the service interval display must be reset for the inspection.*

On the diagnostic unit, then select: "Dash panel insert - J285" → "Functions of the dash panel insert" → "17- Service events" and next "Examination" or "Inspection".

Continue to follow the instructions on the diagnostic unit.

- *During the inspection associated with the engine oil change, both service interval displays must be reset.*

Reset the service interval display with the button in the instrument cluster

When resetting the service interval display using the button in the instrument cluster, observe the following information:

WARNING

- *Vehicles with variable service intervals (QI6) by default are automatically recoded to fixed service intervals as a result of this procedure.*
- *The coding can only be reset to variable service intervals (QI6) with the -VAS- if the following conditions are met ⇒ "6.11 Changing the code of the service intervals", page 157 .*
- *The service interval display for an oil change service must be reset on changing the oil ⇒ page 156 .*
- *During the inspection, the service interval display must be reset for the inspection ⇒ page 156 .*
- *During the oil change associated with the inspection, both service interval displays must be reset.*

For vehicles equipped with the KESSY system:

- *Close all vehicle doors.*
- *Close tailgate and front flap.*

Resetting the "oil service" indicator

– Press and hold the -1- 0.0/SET button.

– Switch on ignition.

– Hold down the button -1- 0.0/SET until the following message is displayed in the instrument cluster:

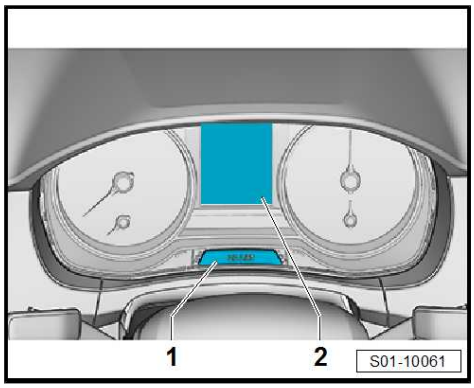
Reset oil service?

– Release button -1- 0.0/SET, press again and hold.

The following message is displayed in the instrument cluster:

Service reset

The "Oil service" display is reset.



Reset "inspection" display

Note

- *Messages "Reset oil service" and "Reset inspection" immediately follow each other .*
- *Select the correct display for resetting.*
- *If the procedure for selecting the correct display needs to be repeated, wait around 60 s after switching off the ignition until the information in the display -2- goes away. Afterwards, press the 0.0/SET button again.*

– Press and hold the -1- 0.0/SET button.

– Switch on ignition.
– Hold down the button -1- 0.0/SET until the following message is displayed in the instrument cluster:

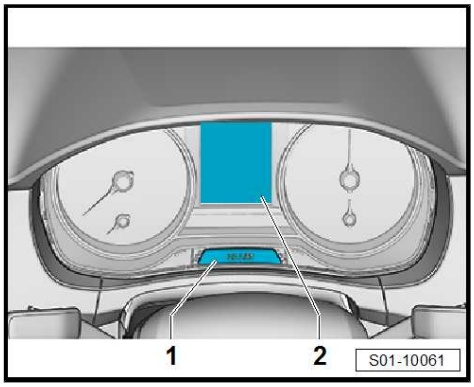
  Delete inspection?

– Release button -1- 0.0/SET, press again and hold.

The following message is displayed in the instrument cluster:

  Service reset

The “Inspection” display is now reset.



6.11 Changing the code of the service intervals

These tasks are performed with the vehicle diagnosis, measurement and information system -VAS- with corresponding diagnostic cable ⇒ Vehicle diagnostic tester.

– On the diagnostic unit, select: “Test plan” → “Bodyshell” → “Electrical system” → “01 Self-diagnosable systems” → “Dash panel insert - J285” → “Functions of the dash panel insert” → “17- Service events” and next “Change fixed/variable intervals”.
– Continue to follow the instructions on the diagnostic unit.

WARNING

Note the following conditions when coding the service intervals:

Vehicles with QI6 (variable service intervals) by default can be recoded under the following conditions to fixed service intervals:

- Complete for “oil change service” or “inspection” with engine oil change.
- Carry out the recoding using the diagnosis device.

Back-coding to variable service intervals is possible if the conditions are observed:

- Complete for “oil change service” or “inspection” with engine oil change.
- Carry out the recoding using the diagnosis device.
- Use prescribed engine oil.
- Vehicle meets prescribed specifications (original battery...).

WARNING

Vehicles with fixed service intervals (QI1 - QI4) by default cannot be recoded to QI6 (variable service intervals)!

6.12 Inspecting the headlight beam setting

Special tools and workshop equipment required

♦ Headlight beam setting device

In principle the following inspection and setting description applies for all countries. However, comply with national guidelines

and legislation of the relevant country ⇒ Owner's Manual for the headlight beam setting device .

Test and setting conditions

- Tyre pressure o.k.
- Lenses must neither be damaged nor soiled.
- Reflectors and bulbs o.k.
- The headlight beam setting is carried out by turning the control for headlamp range control to the basic setting “–”.
- Vehicle load must be achieved: with one person or 75 kg on the driver's seat in an otherwise unladen vehicle (unladen weight).

The unladen weight is the weight of the vehicle with full fuel tank (at least 90%) including the weight of all the operational equipment elements (e.g. spare wheel, tool kit, jack etc.).

If the fuel tank is not filled up to at least 90%, the load must be set as follows:

– Determine the fuel volume in the fuel tank on the fuel gauge display.

– Load vehicle with corresponding weight via the fuel tank according to the following table:

Fuel gauge	Weight (kg)
Reserve	27
1/4	24
1/2	15
3/4	6
Fuel tank full	0

Note

- *Use as weight e.g. plastic tanks filled with water or petrol canisters. 1 litre of water = 1 kg.*
- *When fitting the weight onto the rear seat pay special attention so that the seat upholsteries are not dirty or damaged.*

The vehicle must have rolled a few metres or have been depressed a few times at the front and rear to allow the springs to settle.

- The vehicle and the headlight beam setting device must be on a level surface.
- Align the vehicle and the headlight beam setting device in accordance with the instructions of the device manufacturer.
- For vehicles with headlight beam control in the dash panel or in infotainment, check the system is functioning. Then set the range to basic position with the knurled wheel or via the infotainment.
- For vehicles equipped with Xenon headlights and automatic headlight beam control perform first of all the basic setting ⇒ Vehicle diagnostic tester.
- Set the inclination value.

Inclination value:

- Basic setting for the inclination value adjustment: -1%

Caution

The inclination value is marked on the top of the headlight housing. The headlights must be set to this value.

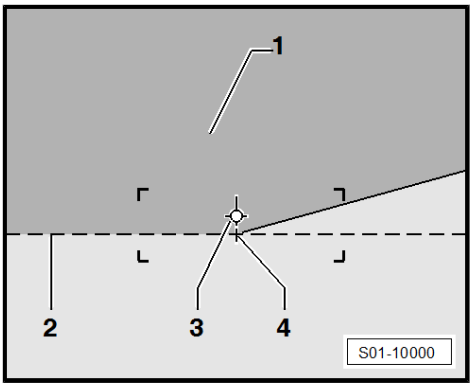
The inclination value in "%" does not have a minus symbol.

Inspecting the headlight beam setting

Halogen headlights:

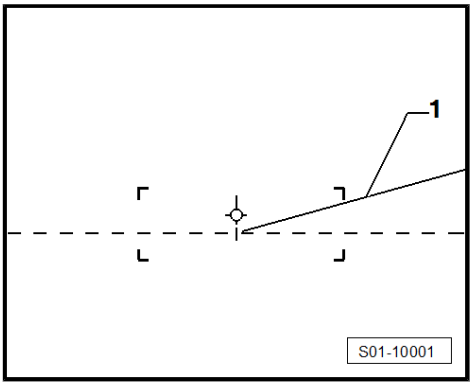
– Check whether the light beam -1- generates the light-dark limit on the dividing line -2- of the control surface when the low beam is switched on.

– Check whether the inflection point -4- runs between the left horizontal part and the right rising part of the light/dark limit and through the central mark -3- on the vertical. The light core of the light beam must be located to the right of the vertical line.



Note

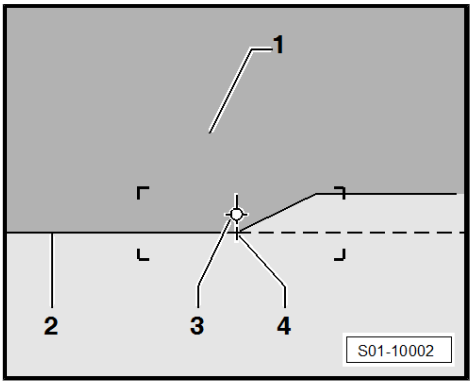
- *To make it easier to determine the kink -4-, alternately cover and release the left half of the headlight (in the direction of motion) Afterwards, check the low beam again.*
- *Once the low beam light has been correctly set, the centre of the light beam of the main beam must be positioned on the central mark -3-.*
- *The headlight setting on the control screen with adjusting line 15° -1- is analogous to the headlight setting on the control screen without this adjusting line.*
- *To prevent an incorrect headlight adjustment, the adjusting line 15° -1- must not be observed however.*



Xenon headlights:

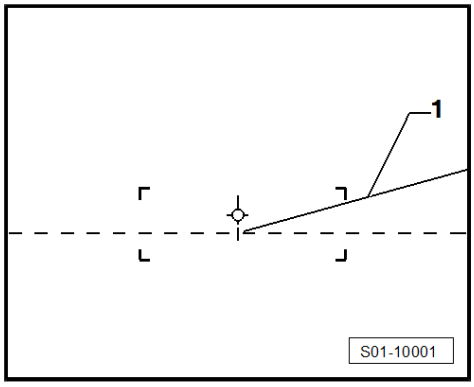
– Check whether the deepest part of the light beam -1- generates the light-dark limit on the dividing line -2- of the control surface when the low beam is switched on.

– Check whether the inflection point -4- runs between the left horizontal part and the right rising part of the light/dark limit and through the central mark -3- on the vertical.



Note

- *To make it easier to determine the kink -4-, alternately cover and release the left half of the headlight (in the direction of motion) Afterwards, check the low beam again.*
- *The headlight setting on the control screen with adjusting line 15° -1- is analogous to the headlight setting on the control screen without this adjusting line.*
- *To prevent an incorrect headlight adjustment, the adjusting line 15° -1- must not be observed however.*



Fog lights ⇒ “6.14 Checking the fog lights”, page 161

Other additional headlights:

Additionally fitted headlights must be inspected or set in compliance with the relevant applicable directives.

Setting the headlight beam

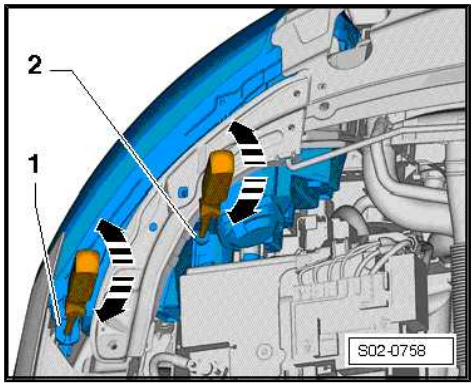
Note

- *The headlight setting change is a repair measure.*
- *Headlight adjustment is charged.*
- *Use a headlight beam setting device for setting the headlight beam. Nominal values* ⇒ “6.12 Inspecting the headlight beam setting”, page 157 .

– Adjust the light with a screwdriver with socket extension or with a socket wrench SW 6 by turning the screws -1- and -2-.

1 - Lateral adjustment

2 - Height adjustment



6.13 Checking the operation of the fog lights with the “Corner” function (static cornering light)

– Switch on ignition and low beam light.

– Turn the steering wheel from the middle position one turn to the right.

The right fog light must light up.

– Turn the steering wheel from the middle position one turn to the left.

The left fog light must light up.

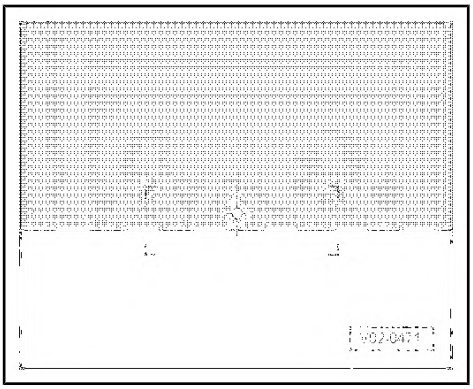
6.14 Checking the fog lights

Note

- *The headlight setting change is a repair measure.*
- *Headlight adjustment is charged separately.*

Inspecting the headlight beam setting

– Check whether the light/dark limit touches the adjusting line and runs horizontally over the total width of the control screen.



Inclination value:

The inclination is -2.1 %. The fog lights must be set to this value.

Setting the headlight beam

Note

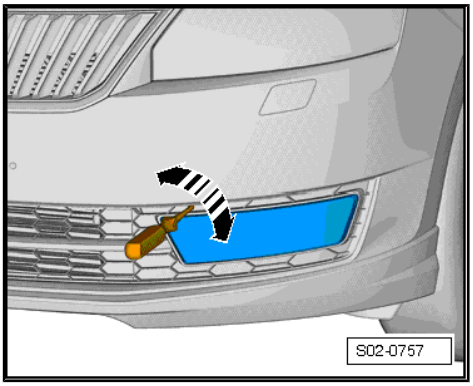
- *The headlight setting change is a repair measure.*
- *Headlight adjustment is charged separately.*

– Fit a screwdriver with socket extension or socket wrench SW 6 through the slot in the grid above the fog light.

Note

Pay attention to the correct sinking of the socket wrench in the adjusting screw. It is guided into the adjusting screw with the cone point of this screw.

– Adjust fog light with a screwdriver with socket extension or with a socket wrench SW 6 by turning -arrows- the adjusting screw.



6.15 Replacing the own power supply of the alarm system

– Replace alarm horn for warning system ⇒ Electrical system; Rep. gr. 96 ; Anti-theft alarm system; Removing and installing alarm horn - H12- .

6.16 Switch off battery transport mode

The active transport mode is displayed with the lettering “TrA” in the lower display area of the dash panel insert.

Additionally the voltage value is displayed behind the lettering “TrA”.

– Connect the vehicle diagnosis, measurement and information system -VAS- with corresponding diagnostic cable. Connect the diagnostic unit to the diagnostic connector ⇒ “6.7 Connect diagnostic unit”, page 145 .

– Switch on ignition.

– Deactivate transport mode as per the instructions on the “Test plan” ⇒ Vehicle diagnostic tester.

Caution

If there is no “Test plan” available in the diagnostic device:

- *Select the following on the diagnostics device: “Targeted functions” → “01 - Self-diagnosable systems” system “Data Bus On Board Diagnostic Interface” → “Data Bus On Board Diagnostic Interface functions” and next “J533 - Transport mode”.*
- *Deactivate the transport mode by following the indication on the diagnostic unit.*

– Exit diagnosis and disconnect the vehicle diagnosis, measurement and information system -VAS- with corresponding diagnostic cable correctly.

– Switch off ignition and pull out ignition key (for at least 5 seconds). On vehicles with interface for entry and start system, open the driver's door (for at least 5 seconds).

WARNING

On vehicles with the ERA Glonass system, the OCU control unit (control unit for emergency call module and communication unit - J949-) is activated for sending at the same time *⇒ “6.19 ERA Glonass: check that the emergency call system is ready”, page 163* *.*

Switching off the transport mode is indicated by erasing the lettering “TrA” in the lower display area of the dash panel insert.

6.17 Time-delayed locking mechanism after closing the tailgate - activate/deactivate

These tasks are performed with the vehicle diagnosis, measurement and information system -VAS- with corresponding diagnostic cable.

– Connect the vehicle diagnosis, measurement and information system -VAS- with corresponding diagnostic cable. Connect the diagnostic unit to the diagnostic connector ⇒ “6.7 Connect diagnostic unit”, page 145 .

– Select the following on the diagnostics device: →“Bodyshell” → “Electrical system” → “01 Self-diagnosable systems” → “Electronic central electrical system” → “Function” and next “J519 - Time-delayed tailgate locking mechanism”.

– “Activate/deactivate time-delayed locking after closing of tailgate” according to the instructions on the diagnosis device.

– Switch off ignition.

– Switch off the vehicle diagnosis, measurement and information system -VAS- with corresponding diagnostic cable.

6.18 Replace OCU control unit (control unit for emergency call module and communication unit - J949-)

– Remove OCU control unit (control unit for emergency call module and communication unit - J949-) ⇒ Electrical System; Rep. gr. 91 ; Mobile online services .

– Install new OCU control unit (control unit for emergency call module and communication unit - J949-) ⇒ Electrical System; Rep. gr. 91 ; Mobile online services .

6.19 ERA Glonass: check that the emergency call system is ready

The ERA Glonass system control is located in the front roof trim near the interior lights.

WARNING

To check the ERA Glonass emergency call system is ready for operation, you must first deactivate transport mode ⇒ "6.16 Switch off battery transport mode", page 161 .

The OCU control unit (control unit for emergency call module and communication unit - J949-) is activated for sending at the same time as transport mode is switched off.

– Switch on ignition.

WARNING

- *To check that the emergency call system is ready for operation, you must switch on the ignition continuously for at least approx. 15 minutes.*

– Check colour of ERA Glonass system status LED.

The status LED -2- of the ERA Glonass system is lit read for approx. 4 seconds after ignition is switched on.

- The status LED -2- of the ERA Glonass system is then lit green at the latest within approx. 2 minutes after ignition is switched on.

If the status LED -2- of the ERA Glonass system is green, the system is ready.

If the status LED -2- of the ERA Glonass system is read even after approx. 2 minutes since the ignition was switched on (the system is no ready):

> **WARNING**
>
> ***If the ERA Glonass system is not ready after approx. 2 minutes since ignition was switched on, repair is necessary.***

– Query GSM network status with the vehicle diagnosis, measurement and information system -VAS-
⇒ “6.7 Connect diagnostic unit”, page 145 .

– To do this, select the following on the diagnostics device: →“Body” → “Electrical System” → “01- Self-diagnosable systems” → “0075 Emergency call module and communication unit” → “Emergency call module functions” → “0075 - Read measured values” and next “Network_Connectivity”.

– Query event memory with the vehicle diagnosis, measurement and information system -VAS-
⇒ “6.7 Connect diagnostic unit”, page 145 .

In the event of an error:

– Perform repair and if necessary replace the OCU control unit (control unit for emergency call module and communication unit - J949-) ⇒ Electrical System; Rep. gr. 91 ; Mobile online services .

If reception is too weak or there is no reception:

– Change vehicle location (e.g. go to open area with better reception).

After changing the vehicle location (or after repair is complete):

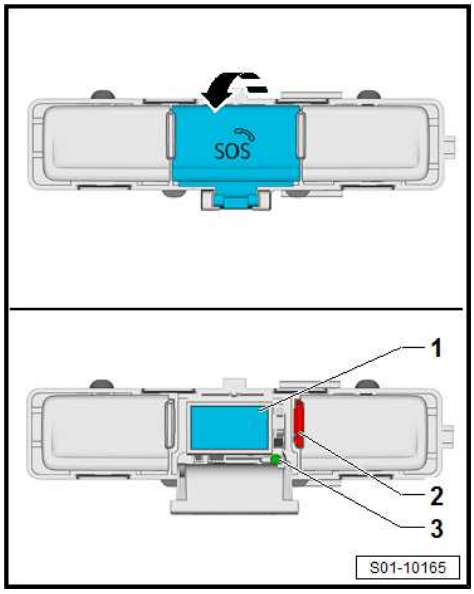
– Switch off ignition, wait approx. 2 minutes and then switch on ignition again.

– Check colour the status LED -2- of ERA Glonass system again.

- The status LED of the ERA Glonass system must be green at the latest within approx. 15 minutes after ignition is switched on.

If the status LED of the ERA Glonass system is still read even after approx. 15 minutes since the ignition was switched on: the system is not ready.

– Create a DISS ticket (i.e. a technical repair request, DISS message) and send it to the Technical Service Centre (TSC).



6.20 ERA Glonass: run system test

WARNING

To run the ERA Glonass system test, the ERA Glonass system must be active
⇒ "6.19 ERA Glonass: check that the emergency call system is ready", page 163 .

– Switch on ignition.

– Open “SOS” cap in -direction of arrow-.

1 - Emergency call button

2 - Status LED

3 - Button for test emergency call

– Press the button for test emergency call -3- for 3 seconds (e.g. with pin).

Pressing the button for test emergency call -3- activates the voice prompts for the test sequence.

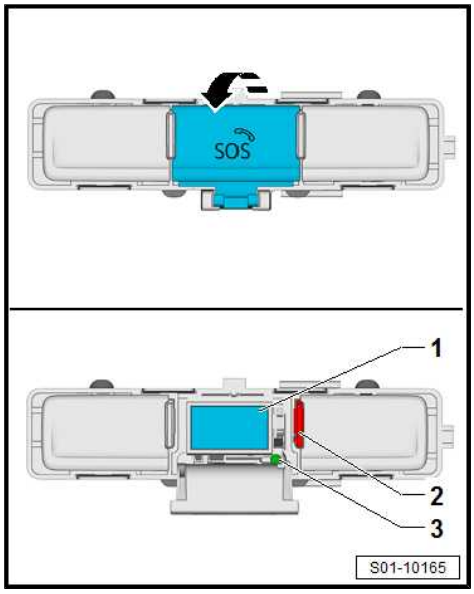
The following component are check by the system test:

- OCU unit, SW integrity and realtime
- GNSS (GPS) aerial
- GSM aerial
- Microphone
- Loudspeaker
- Connection of the unit with other components (BUS communication, airbag)
- Connection of HMI components
- Button -1- in the control element
- Condition of the emergency battery

– Follow the voice prompts.

Confirm each step of the test by pressing the button -1-.

A voice prompt and flashing green status LED -2- confirms that the test sequence has been completed successfully.



WARNING

- *A voice prompt and flashing status LED -2- indicate if the test sequence has failed.*
- *Evaluation of the failed test sequence (flashing status LED -2-) ⇒ Electrical System; Rep. gr. 91 ; Mobile online services .*

The next step after the test sequence fails is to perform a repair.

Work procedure after failed test sequence:

– Query event memory with the vehicle diagnosis, measurement and information system -VAS-
⇒ “6.7 Connect diagnostic unit”, page 145 .

Once the event memory has been queried and you have completed any repair ⇒ Electrical System; Rep. gr. 91 ; Mobile online services :

– Repeat the test by pressing the button -3- for 3 seconds.

– Also follow the voice prompts (to complete the test sequence correctly).

6.21 Škoda Connect services

⇒ “6.21.1 Check that Škoda Connect services work, enable workshop mode - before beginning service and repair work on the vehicle”, page 167

⇒ “6.21.2 Disable workshop mode, check that Škoda Connect services work - after service and repair work on the vehicle”, page 167

6.21.1 Check that Škoda Connect services work, enable workshop mode - before beginning service and repair work on the vehicle

– Check that services work, and maturity in ⇒ Service Portlet .

– Enabled workshop mode (with Škoda Connect services enabled, only for vehicles with PR number EL2 and EL5) ⇒ Service Portlet .

6.21.2 Disable workshop mode, check that Škoda Connect services work - after service and repair work on the vehicle

– Disable workshop mode in ⇒ Service Portlet .

– Check that services work, and maturity in ⇒ Service Portlet .

On reaching the date of maturity (information in ⇒ Service Portlet):

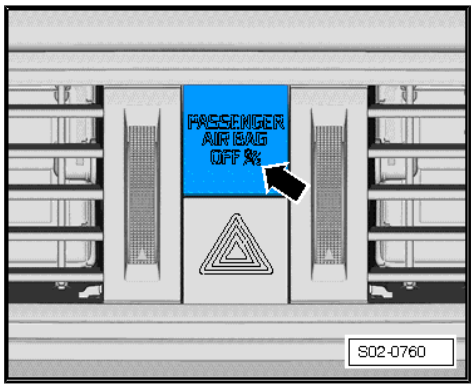
– Provide an extension of services to the customer.

7 Body

7.1 Airbag: check for proper operation

When the ignition is switched on the airbag warning light lights up for approximately 4 seconds. Should the warning light flash again for a further 12 seconds this is an indication that the airbag unit on the front passenger side, or the side airbag unit on the front passenger side, is electronically locked (for vehicles that do not have an airbag switch-off function).

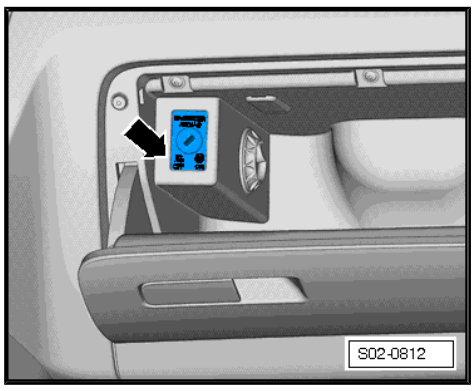
The warning light will go out after 4 seconds for vehicles which are fitted with a key switch for airbag switch-off function and switching off of the front passenger airbag will be signalled by the warning light “PASSENGER AIRBAG OFF” in the middle of the dash panel -arrow-.



- There is a fault if the warning light does no go out after 4 seconds, is lit up permanently or flashes while driving.

If the warning light indicates a fault, the fault must be rectified (repair measure) ⇒ Vehicle diagnostic tester.

7.2 Front passenger airbag: check “ON/OFF” is working and switch to “ON”



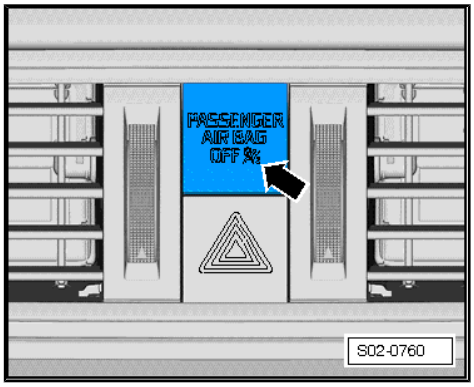
– Switch off ignition.

– Open the glove compartment on the front seat passenger side.

– Turn the key switch for the front passenger airbag with the ignition key into the position “OFF”.

After the ignition is switched on the airbag warning light “PASSENGER AIRBAG OFF” -arrow- must light up in the centre of the dash panel for a few seconds. Then the warning light goes out for approx. one second and afterwards lights up again.

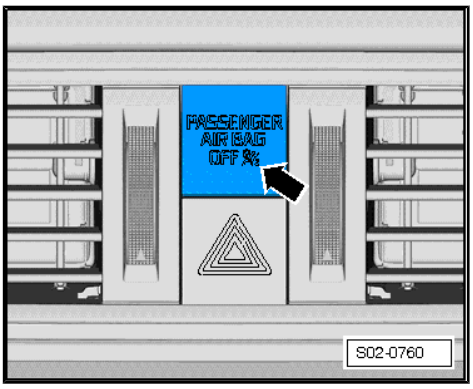
At the same time, the warning light in the dash panel insert comes on for about 4 seconds after the ignition is switched on.



– Switch off ignition.
– Turn the key switch for the front passenger airbag with the ignition key into the position “ON”.

After the ignition is switched on the warning light “PASSENGER AIRBAG ON” -arrow- must not light up in the centre of the dash panel.

At the same time, the warning light in the dash panel insert comes on for about 4 s after the ignition is switched on and then must go out.



WARNING

The key switch for the front passenger airbag must only be operated when the ignition is switched off. Non compliance may result in a fault at the airbag system (risk from the following airbag deployment).

If the warning light “PASSENGER AIRBAG OFF” flashes in the centre console, there is a fault in the system of the airbag switch-off function ⇒ Vehicle diagnostic tester.

If the warning light in the dash panel insert does not go out or flashes while driving, a system fault is present ⇒ Vehicle diagnostic tester.

7.3 Inspecting underbody protection for damage

Scope of testing applies to:

Inspection

The inspection of the underbody sealant and paintwork should cover the following points:

– undamaged layer of PVC Plastisol
– undamaged paintwork

WARNING

All mechanical damage of unproductive character found on the corrosion protection of the chassis as well as on the vehicle paintwork must be repaired immediately in agreement with the owner at his own expense!

This will prevent future damage caused by deep corrosion.

Always make a special note in the Service Schedule.

7.4 Checking body paintwork and underbody protection for damage (before sale)

Scope of testing applies to:

Pre-Delivery Inspection -PDI- (Export)

Pre-sales Inspection - domestic (Czech Republic)

Delivery Inspection (Export)

The inspection of the underbody sealant and paintwork should cover the following points:

– undamaged layer of PVC Plastisol

– undamaged paintwork

7.5 Check for corrosion

Carry out a visual inspection for corrosion when the doors, front flap and tailgate are opened.

Checkpoints:

- Inner and outer door frame
- Area around the decorative strips
- Roof edge, windscreen
- Outer and inner A-pillar
- Front flap
- Wheelhousings
- Outer and inner tailgate

7.6 Inspecting plenum chamber and water drain openings for dirt, cleaning if necessary

Carry out the visual inspection for soiling through the cover of the plenum chamber. Remove the cover if it is necessary to clean the plenum chamber (repair measure) ⇒ Body Work; Rep. gr. 66 .

Note

The water drain openings must not be blocked with wax or underbody sealant.

7.7 Windscreen wash/wipe system: check

Liquid in the washer fluid reservoir

The washer fluid reservoir must be filled up to the brim.

Note

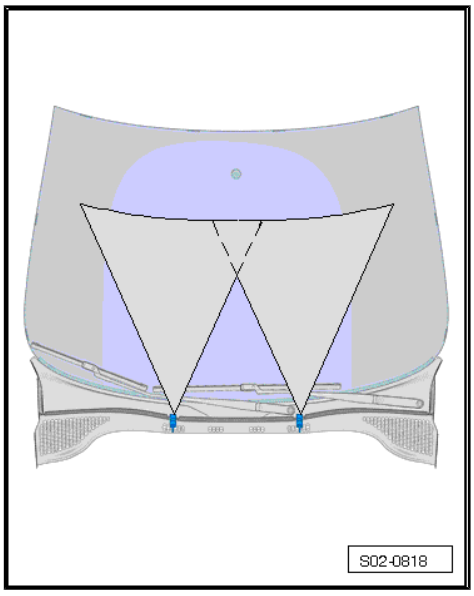
- *If fluid is filled into the washer fluid reservoir, add windscreen washer fluid (in summer) or an antifreeze (if there is a risk of frost).*
- *If the vehicle is fitted with a headlight washing system and the headlights have plastic cover lenses with optics (made of polycarbonate), use only liquids that do not damage the polycarbonate for filling the washer fluid reservoir.*

Spray nozzles of the windscreen washer system

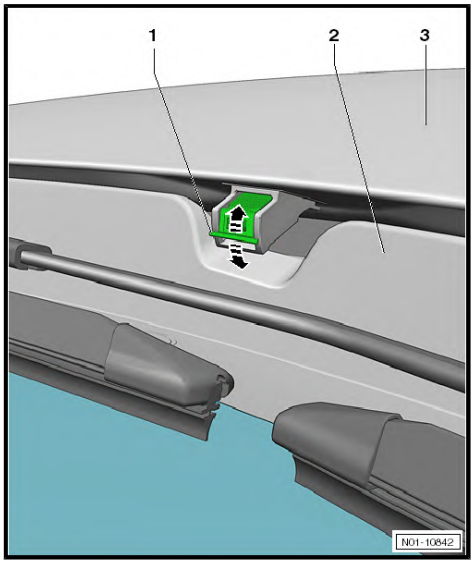
The spray nozzles of the windscreen washer system are set to the required setting by the manufacturer.

The water spray should strike the windscreen in a cone-shaped pattern.

If the nozzle setting does not comply with the manufacturing setting, or if it has been replaced:



– Move the adjuster -1- upwards or downwards -arrows- and while doing so adjust the spray nozzles of the windscreen washer system in such a way that the correct injection jet is reached.



Note

If the spray flows out unevenly or insufficiently, replace the spray nozzle (repair measure).

Windscreen wiper arms: check home position, adjust if necessary

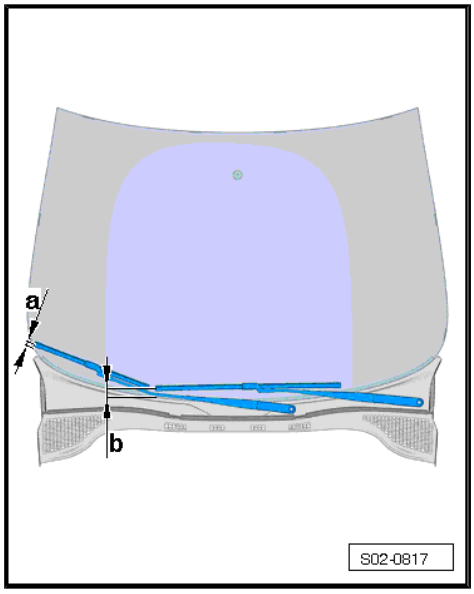
Set the end position of the windscreen wiper arms ⇒ Electrical System; Rep. gr. 92 .

– Set the position of the windscreen wiper arms in such a way that the window edge maintains the dimension -a- and -b-.

a - 27 +2/-2 mm

b - 28 +1/-3 mm

The specified tightening torque for the windscreen wiper nut is 20 Nm.



Replacing the windscreen wiper blades

– Set the service position of the windscreen wiper arms ⇒ Operating instructions .

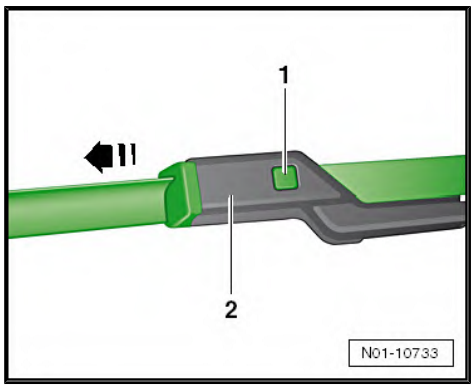
– Loosen the wiper blade by pressing the lock -1- in the wiper arm -2- and pull out the wiper blade in -direction of arrow-.

– Push the standard wiper blade into the wiper arm -2- and make sure that it locks audibly into place in the lock -1-.

– Push the new wiper blade onto the windscreen wiper arm up to the stop until it clicks audibly into place.

– Check whether the wiper blade is correctly attached.

– Fold back the windscreen wiper arms onto the windscreen.



Note

There is a risk of damage to the windscreen by the windscreen wiper arm, if the windscreen wiper is improperly handled.

– Adjust windscreen wiper arms to their original position ⇒ Operating instructions .

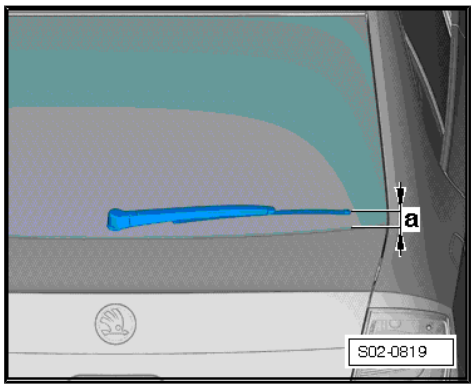
Rear window wiper arm: check and adjust home position

The specified tightening torque for the windscreen wiper nut is 12 Nm.

– Set the position of the windscreen wiper arm in such a way that the window edge maintains the dimension -a-.

For Sedan vehicles

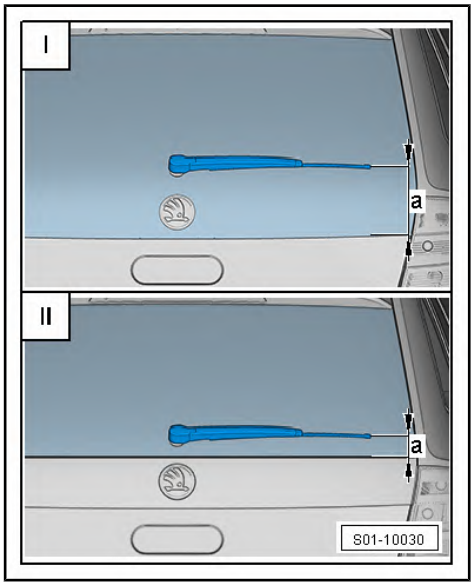
a = 42 ± 2 mm



For Spaceback vehicles

Version -I- a = 183 ± 2 mm

Version -II- a = 52 ± 2 mm



Inspect rear window spray nozzle

For Sedan vehicles

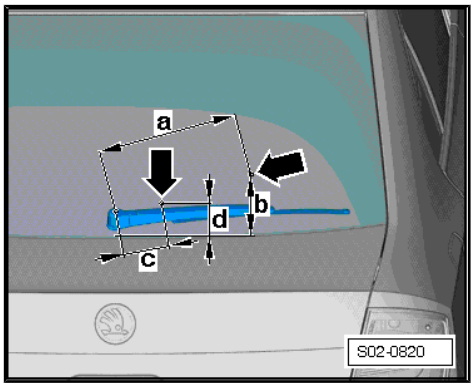
The spray should strike the rear window in the points -arrows- when the vehicle is stationary.

a = 310 mm

b = 142mm

c = 71 mm

d = 70 mm



– Check nozzle setting, adjust nozzle heads if necessary using a tool (e.g. a needle).

Note

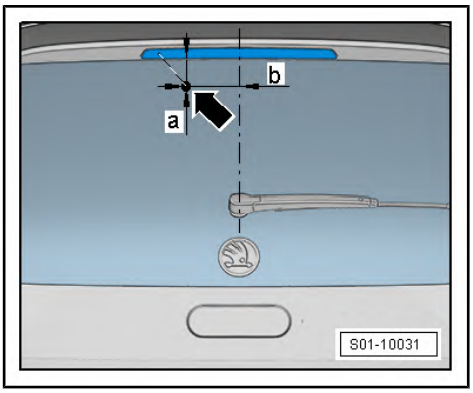
If the spray flows out unevenly or insufficiently, replace the spray nozzle (repair measure).

For Spaceback vehicles

The jet spray should strike the rear window in the point -arrow- when the vehicle is stationary.

a = 60 ± 40 mm

b = 115 ± 40 mm



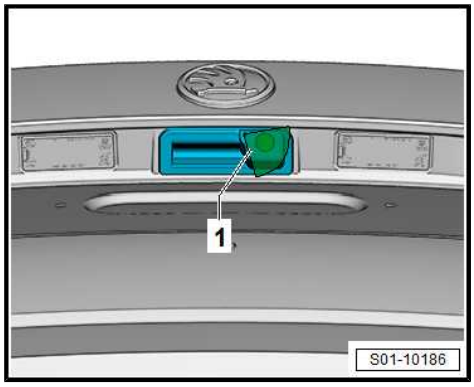
– Check nozzle setting, adjust nozzle head if necessary using a tool (e.g. a needle).

Note

If the spray flows out unevenly or insufficiently, replace the spray nozzle (repair measure).

Checking the reverse camera cleaning system

On vehicles with reverse camera cleaning system, the spray should be applied to the area -1-.



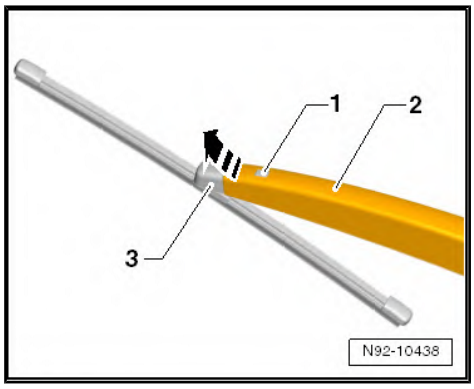
Note

If the spray flows out unevenly or insufficiently, replace the handle (repair measure).

Replacing the rear window wiper blade

– Fold away the windscreen wiper arm from the windscreen.

– Loosen the wiper blade -3- by pressing the lock -1- in the wiper arm -2- and pull out the wiper blade in -direction of arrow-.



– Push the new wiper blade -3- into the wiper arm -2- and make sure that it locks audibly into place in the lock -1-.

– Check whether the wiper blade is correctly attached.

Note

There is a risk of damage to the rear window by the windscreen wiper arm, if the windscreen wiper is improperly handled.

7.8 Door locks, locking buttons and child lock: check functioning correctly

Driver door lock

– Unlock and lock the driver door with the key. All the doors must remain locked.

The driver door must not be locked as long as the door is opened.

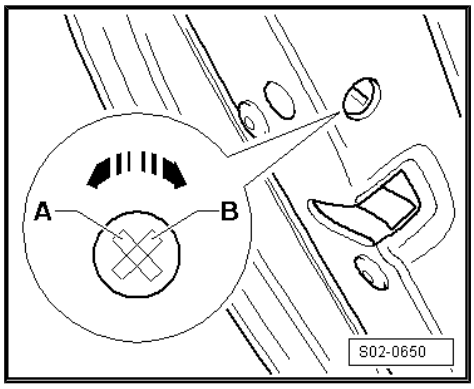
Child safety locks (rear doors):

The rear doors are additionally equipped with a child safety lock.

– Insert the key in the slot of the child safety lock in the door.

Rear left door

– Turn the slot of the child safety lock into position -B-, the child safety lock is activated.



The inside door lock is now blocked. The door can only be opened from the outside.

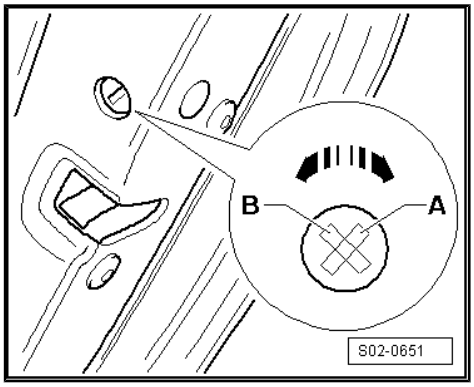
– Turn the slot of the child safety lock into position -A-, the child safety lock is not activated.

Rear right door

– Turn the slot of the child safety lock into position -B-, the child safety lock is activated.

The inside door lock is now blocked. The door can only be opened from the outside.

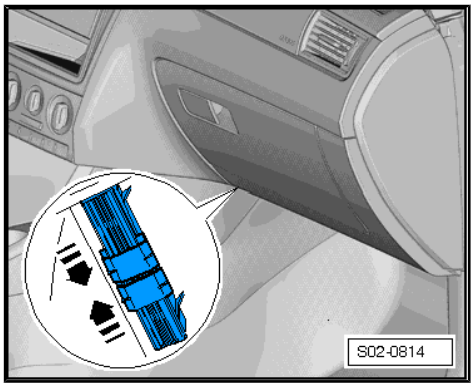
– Turn the slot of the child safety lock into position -A-, the child safety lock is not activated.



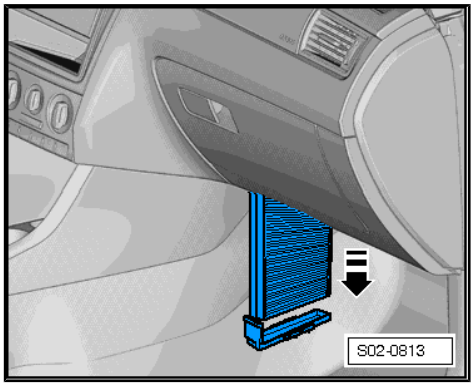
7.9 Replacing the dust and odour filter element

Removing:

– Press back the dust and odour filter -arrows-.



– Take dust and odour filter out of the heater body -arrow-.



Installing:

Installation is carried out in the reverse order.

7.10 Affix vehicle data sticker

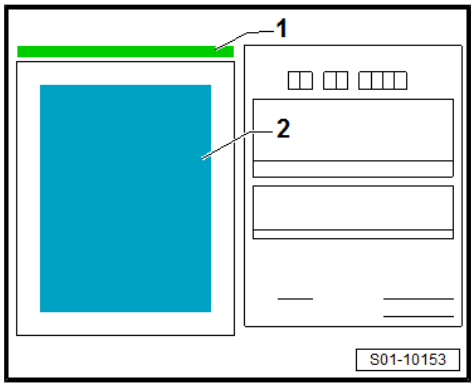
WARNING

Only valid for vehicles manufactured up to CW 45/2017

The vehicle data carrier is not available for cars manufactured after CW 45/2017.

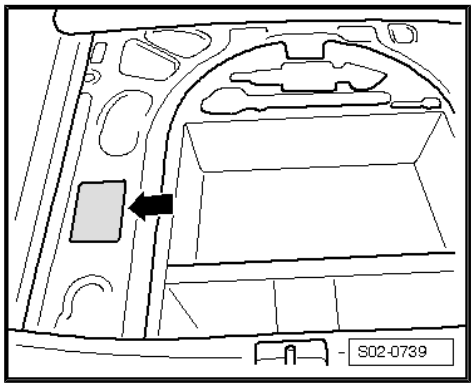
Sticking the vehicle data sticker into the Owner's Manual

– Stick the vehicle data sticker -2- onto the second inside back page of the Owner's Manual (left half) under “Documentation of vehicle delivery” -1-.



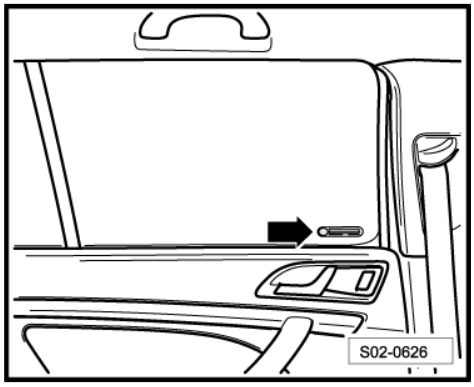
Sticking the vehicle data sticker to the luggage compartment

– Affix the vehicle data sticker to the left side next to the spare wheel -arrow-.



7.11 Stick the sticker Škoda Assistance

– Stick the sticker on the cleaned side window of the rear left door from the inside -arrow-.



Note

The sticker can only be stuck on the specified point according to the illustration!

7.12 Inspect original trailer coupling device

Lubricant for trailer coupling device ⇒ Electronic Catalogue of Original Parts

Inspecting condition of the support for the trailer coupling device

– Inspecting condition of the support shaft (contamination, grease).

Clean the non-treated and contaminated support shaft from mechanical contaminations and corrosion and treat it with lubricant for trailer coupling device from the ⇒ Electronic Catalogue of Original Parts .

– Check proper operation of the cap for the support shaft.

Replace the defective or damaged cap for the support shaft.

Inspect the condition of the trailer arm

– Perform a visual inspection of the trailer arm for completeness.

– Check cleanliness of the support wedge surfaces, if necessary clean these surfaces from mechanical contaminations and corrosion.
– Check the turning of the key in the lock.

If the latch lock in the operating rosette is difficult to move or does not move at all, it can be caused by the following:

- Lock broken: send it for repair to the manufacturer or replace it with a new trailer arm
- Lock seizing up: clean and treat with lubricant for trailer coupling device from the ⇒ Electronic Catalogue of Original Parts . If this does not help, replace the lock or send it for repair to the manufacturer or replace it with a new trailer arm.

Note

When applying the lubricant for trailer coupling device from the ⇒ Electronic Catalogue of Original Parts , ensure that it penetrates into the lock.

Check proper function of the trailer coupling device

– Insert trailer arm into the support shaft (the actuating collar must clearly lock automatically in the operating position).
– Close lock and withdraw key.
– Inspect proper closing of the operating rosette - the operating rosette cannot be turned.
– Check correct seating of the trailer arm though strong shaking.
– Remove trailer arm.

7.13 Front flap lock: lubricate

– Treat the lock hook of the front lid with universal oil spray around the moving parts.
– Operate the moving parts several times so that the universal oil is spread out.
– Remove excess lubricant with a lint-free cloth.

7.14 Attaching the “ŠKODA CONNECT” mirror tag

– Take the “ŠKODA CONNECT” mirror tag from the vehicle log book set.

Note

The “ŠKODA CONNECT” mirror tag is either with the vehicle log book pouch or one of the brochures.

– Attach the “ŠKODA CONNECT” mirror tag -arrow- to the interior mirror.

8 Exhaust-emission analysis

⇒ “8.1 Exhaust-Emission Analysis on Models with Petrol Engines”, page 179

⇒ “8.2 Exhaust-Emission Analysis on Models with Diesel Engines”, page 182

8.1 Exhaust-Emission Analysis on Models with Petrol Engines

Note

- *The exhaust-emission analysis must be carried out according to the valid national legislation of the particular country.*
- *The work station for the exhaust emission analysis must satisfy the applicable national and regulations in the country concerned.*
- *When possible the exhaust emission analysis should be carried out immediately after the road test.*
- *Perform the following visual inspections as well as comply with the test conditions below before performing the exhaust-emission analysis:*

Visual inspection

- Lambda probes are connected
- All vacuum hoses are connected
- All hoses to the activated charcoal filter are connected
- All the electrical wires of the ignition and injection system are connected
- Fully-functional crankcase ventilation
- The exhaust system must be undamaged, leak-tight and complete
- Catalytic converter is fitted, leak-tight and undamaged

Test conditions for vehicles with EOBD

- Faultless function of the engine without extraordinary inequalities in the engine running behaviour.
- Oil temperature at least 80 °C
- Perfect operation of the ignition system
- Intake system tight
- The readiness code is generated for all exhaust gas systems and components according to homologation. The exhaust emissions warning lamp in the dashpanel insert does not display an error.
- If the readiness code was not generated, it will need to be generated. The best way to do this is via a test drive or using the vehicle diagnosis tester. If necessary, check why the system or components has not yet been tested while the vehicle is moving.
- No fault from the exhaust-related systems is stored in event memory (the exhaust emissions warning lamp in the dash panel insert does not indicate a fault) – query the event memory ⇒ “6.7 Connect diagnostic unit”, page 145 .

Caution

- *A lit exhaust emissions warning lamp in the dash panel insert indicates an error in the exhaust-related systems. These faults (including sporadic ones) are stored in event memory.*
- *The idling speed, CO content and lambda value are only measured and they cannot be adjusted.*
- *The CO content is influenced by the lambda control. Faults in the Lambda control are indicated by an exhaust emissions warning lamp in the dash panel insert; faults are stored in event memory.*

Resolve all identified exhaust-related faults, including sporadic faults, when reading the event memory, before the exhaust emissions test (repair procedure) *⇒ "6.7 Connect diagnostic unit", page 145* *.*

After deleting the event memory, the readiness code must be re-generated. The best way to do this is via a test drive or using the vehicle diagnosis tester.

Test conditions for vehicles without EOBD

- Faultless function of the engine without extraordinary inequalities in the engine running behaviour.
- Oil temperature at least 80 °C
- Perfect operation of the ignition system
- Intake system tight
- Event memory (01- Engine electronics) is not read

Connect the test equipment to the vehicle

DANGER!

To prevent industrial accidents or avoid causing damage to the ignition system, pay attention to the following:

- *Disconnect and connect wires of the ignition system (including high-voltage wires) when the ignition is switched off.*

– Connect the tester in compliance with the Owner's Manual. Connect the diagnostic unit to the diagnostic connector ⇒ "6.7 Connect diagnostic unit", page 145 .

Note

The exhaust gas probe must be fully inserted into the exhaust tailpipe (do not insert into the suction tube)!

– Start engine and run in idle.

– Perform the exhaust-emission analysis.

Test values for exhaust emission analysis on models with petrol engines

The values are valid for the date of issuing of this workshop manual.

Engine identification characters	CBZB	CBZA	CAXA	CGPC
Engine temperature	min. 80 °C	min. 80 °C	min. 80 °C	min. 80 °C
Catalyst warming-up time	2 min. at 2500 rpm	2 min. at 2500 rpm	2 min. at 2500 rpm	2 min. at 2500 rpm
Recommended idling speed (rpm)	550 - 750	550 - 750	600 - 800	740 - 940
CO content at idle speed (measured after catalyst)	max. 0.3 %	max. 0.3 %	max. 0.3 %	max. 0.3 %
Recommended increased idling speed (rpm)	2300 - 4500	2300 - 4500	2300 - 4500	2300 - 4500
Lambda value when engine is running at fast idling	0.97 - 1.03	0.97 - 1.03	0.97 - 1.03	0.97 - 1.03
CO content when engine is running at fast idling	max. 0.2 %	max. 0.2 %	max. 0.2 %	max. 0.2 %
Lambda probe version	Broadband probe	Broadband probe	Jump probe	Broadband probe

Engine identification characters	CFNA	CJZC	CJZD	CZCA
Engine temperature	min. 80 °C	min. 80 °C	min. 80 °C	min. 80 °C
Catalyst warming-up time	2 min. at 2500 rpm	2 min. at 2500 rpm	2 min. at 2500 rpm	2 min. at 2500 rpm
Recommended idling speed (rpm)	580 - 780	600 - 800	600 - 800	600 - 800
CO content at idle speed (measured after catalyst)	max. 0.5 %	max. 0.3 %	max. 0.3 %	max. 0.3 %
Recommended increased idling speed (rpm)	2300 - 4500	2300 - 4500	2300 - 4500	2300 - 4500
Lambda value when engine is running at fast idling	0.97 - 1.03	0.97 - 1.03	0.97 - 1.03	0.97 - 1.03
CO content when engine is running at fast idling	max. 0.3 %	max. 0.2 %	max. 0.2 %	max. 0.2 %
Lambda probe version	Jump probe	Jump probe	Jump probe	Jump probe

Engine identification characters	CWVA	CWVB	CHZB	CHZC
Engine temperature	min. 80 °C	min. 80 °C	min. 80 °C	min. 80 °C
Catalyst warming-up time	2 min. at 2500 rpm	2 min. at 2500 rpm	2 min. at 2500 rpm	2 min. at 2500 rpm
Recommended idling speed (rpm)	600 - 800	600 - 800	750 - 950	850 - 1050
CO content at idle speed (measured after catalyst)	max. 0.3 %	max. 0.3 %	max. 0.3 %	max. 0.3 %
Recommended increased idling speed (rpm)	2300 - 4500	2300 - 4500	2300 - 4500	2300 - 4500
Lambda value when engine is running at fast idling	0.97 - 1.03	0.97 - 1.03	0.97 - 1.03	0.97 - 1.03
CO content when engine is running at fast idling	max. 0.2 %	max. 0.2 %	max. 0.2 %	max. 0.2 %
Lambda probe version	Broadband probe	Broadband probe	Jump probe	Jump probe

Engine identification characters
Engine temperature
Catalyst warming-up time
Recommended idling speed (rpm)
CO content at idle speed (measured after catalyst)
Recommended increased idling speed (rpm)
Lambda value when engine is running at fast idling
CO content when engine is running at fast idling
Lambda probe version

Note

All tubes and plug connections, which had been removed or disconnected for the test and adjustment, must be correctly reinserted or connected.

8.2 Exhaust-Emission Analysis on Models with Diesel Engines

Note

- *The exhaust-emission analysis must be carried out according to the valid national legislation of the particular country.*
- *The work station for the exhaust emission analysis must satisfy the applicable national and regulations in the country concerned.*
- *When possible the exhaust emission analysis should be carried out immediately after the road test.*
- *To reduce noise, the front flap must be closed during the measurement up to the first latching.*
- *Perform the following visual inspections as well as comply with the test conditions below before performing the exhaust-emission analysis:*

Visual inspection

- Fully-functional crankcase ventilation
- Fuel system and injectors must be leak-sealed
- The exhaust system must be undamaged, leak-tight and complete
- All vacuum hoses are connected

Vehicles with catalytic converter

- Catalytic converter is fitted, leak-tight and undamaged

Vehicles with particle filter

- Particle filter is fitted, leak-tight and undamaged
- Sensors for particle filter and their lines are firmly attached and are connected to the particle filter

Test conditions for vehicles with EOBD

- Faultless function of the engine without extraordinary inequalities in the engine running behaviour.
- Oil temperature at least 80 °C
- Air conditioning switched off
- The readiness code is generated for all exhaust gas systems and components according to homologation. The exhaust emissions warning lamp in the dashpanel insert does not display an error.
- If the readiness code was not generated, it will need to be generated. The best way to do this is via a test drive or using the vehicle diagnosis tester. If necessary, check why the system or components has not yet been tested while the vehicle is moving.
- No fault from the exhaust-related systems is stored in event memory (the exhaust emissions warning lamp in the dash panel insert does not indicate a fault) – query the event memory ⇒ “6.7 Connect diagnostic unit”, page 145 .

Caution

- *A lit exhaust emissions warning lamp in the dash panel insert indicates an error in the exhaust-related systems. These faults (including sporadic ones) are stored in event memory.*

Resolve all identified exhaust-related faults, including sporadic faults, when reading the event memory, before the exhaust emissions test (repair procedure) ⇒ “6.7 Connect diagnostic unit”, page 145 .

After deleting the event memory, the readiness code must be re-generated. The best way to do this is via a test drive or using the vehicle diagnosis tester.

Test conditions for vehicles without EOBD

- Faultless function of the engine without extraordinary inequalities in the engine running behaviour.
- Oil temperature at least 80 °C
- Air conditioning switched off
- Event memory (01- Engine electronics) is not read

Connect the test equipment

– Connect the tester in compliance with the Owner's Manual. Connecting the diagnostic unit to the diagnostic connector ⇒ “6.7 Connect diagnostic unit”, page 145

– Start the engine, allow it to warm up to the operating temperature (the best way is to drive it) and allow it to run in idle.

– Perform the exhaust-emission analysis.

Note

- *All tubes and plug connections, which had been removed or disconnected for the test and adjustment, must be correctly re-inserted or connected.*
- *The exhaust gas probe must be fully inserted into the exhaust tailpipe (do not insert into the suction tube)!*

Test Values for Exhaust-Emission Analysis on Diesel Engines

The values are valid for the date of issuing of this workshop manual.

Note

- *Engine temperature: above an engine temperature of min. 60 °C, heat the engine to min. 80 °C by accelerating 2 to 10 times freely up to governed speed.*
- *Soot emission max. opacity value: determined in accordance with regulation ECE R24.*

Engine identification characters	CAYC	CAYB	CLNA
Particle filter PR number[16)]	x 7MJ	x 7MJ	-
Engine temperature	min. 80 °C	min. 80 °C	min. 80 °C
Recommended idling speed (rpm)	730 - 880	730 - 880	730 - 930
Governed speed (rpm)	2300 - 2700	2300 - 2700	2300 - 2700
Soot emission max. opacity value (1/m) - homologation value[17)]	0.6	0.6	1.2
Probe no.	1	1	1
Measurement mode	B	B	B
Measurement time slice	0.5 s	0.5 s	0.5 s

16) The PR number on the vehicle data sticker (valid only for cars manufactured up to CW 45/2017) and in the electronic information system ⇒ Elsa/erWin .

17) The homologation value of soot emission/opacity indicated on the type plate on the B-pillar (also indicated in the vehicle homologation documentation).

Note

- *Engine temperature: above an engine oil temperature of min. 60 °C, heat the engine to min. 80 °C by accelerating 2 to 10 times freely up to maximum speed.*
- *Soot emission max. opacity value: determined in accordance with regulation ECE R24.*

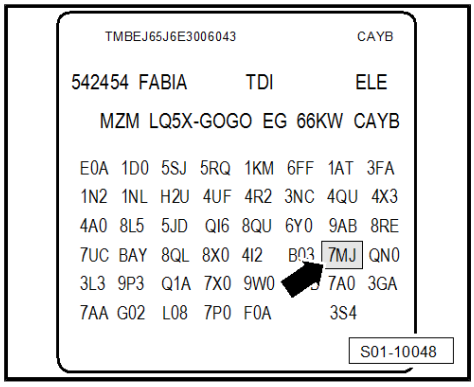
Engine identification characters	CUSB	CXMA
Particle filter PR number[18)]	x 7MM	x 7MM
Engine temperature	min. 80 °C	min. 80 °C
Recommended idling speed (rpm)	730 - 930	730 - 930
Governed speed (rpm)	2300 - 2700	2300 - 2700

Engine identification characters	CUSB	CXMA
Soot emission max. opacity value (1/m) - homologation value[19)]	0.5	0.5
Probe no.	1	1
Measurement mode	B	B
Measurement time slice	0.5 s	0.5 s

18) The PR number on the vehicle data sticker (valid only for cars manufactured up to CW 45/2017) and in the electronic information system ⇒ Elsa/erWin .

19) The homologation value of soot emission/opacity indicated on the type plate on the B-pillar (also indicated in the vehicle homologation documentation).

An example arrangement of PR numbers on the vehicle data sticker -arrow-.



Note

- *The standard position of the PR number on the vehicle data sticker is in the area -arrow-.*
- *The arrangement on the vehicle data sticker can however vary with some model years and versions.*

9 Miscellaneous

9.1 Tow starting/Towing

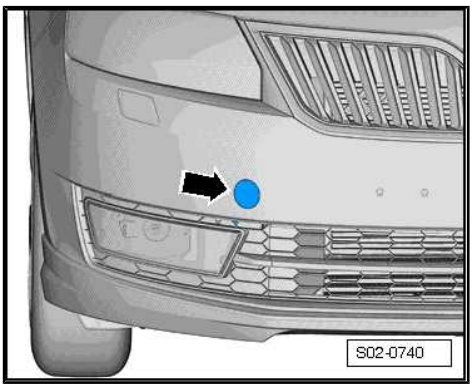
Note

- *A towing rope or towing bar must only be fitted to the appropriate towing lugs.*
- *The towing rope must be elastic to protect the vehicle. Therefore only use synthetic ropes or ropes manufactured in an equally elastic material. However, it is safer to use a towing bar!*
- *Make sure no unauthorised traction forces or no jolting loads are exerted. During towing manoeuvres away from hardened road surfaces there is a risk of overloading and damaging of the fastening parts.*
- *Before starting the engine by towing, first use the battery of another vehicle as a start aid.*

Front:

– Lever off the cap in the front bumper by pressing the left area of the cap -arrow-.

– Pull the cap out of the front bumper.



– Screw in the towing lug by turning to the left -arrow- with the hand up to the stop.

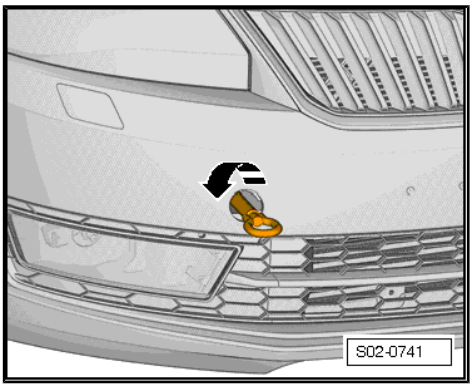
After unscrewing the towing lug, insert the cap in the swivel bearing and then press the right area of the cap.

The cap must securely lock into place.

– Tighten the towing lug with the wheel bolt key (push the key through the lug).

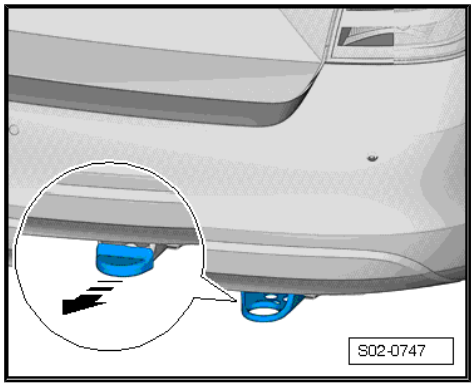
Rear:

The towing lug is located below the rear right part of the bumper.



– Remove cap for towing lug -in direction of arrow- and store cap.

When installing, position the cap again on the towing lug.



Note

- *Comply with the legal regulations on towing.*
- *Both drivers must be familiar with the specificities of the towing process.*
- *When using a towing rope the driver of the towing vehicle must press the clutch very smoothly when driving off and changing gear.*
- *The driver of the towed vehicle must make sure that the rope is kept taut.*
- *The ignition must be switched on to ensure the steering wheel does not lock and that the turn signals, horn, windscreen wipers and windscreen washer system can be activated.*
- *As the brake servo unit only operates with the engine running, the brake pedal must be pressed much harder when the engine is switched off!*
- *On vehicles with power steering the steering is much harder when the engine is switched off.*
- *If there is no lubricant in the gearbox or automatic gearbox the vehicle must only be towed with the drive wheels raised.*

When towing vehicles with a manual gearbox pay attention to the following:

– Before towing engage 2nd or 3rd gear.

– Switch on ignition.

– As soon as the engine starts, press clutch and move out gear to avoid driving into the towing vehicle.

Note

On vehicles with a catalytic converter, the engine must not be pushed-started over a longer period of time, otherwise unburned fuel may get into the catalytic converter from where it can be burnt. This may result in overheating and hence in the destruction of the catalyst.

9.2 Road test

The following must be assessed within the scope of a test drive according to the vehicle equipment and the available possibilities (city/country, weather)

– Inspect engine for performance, misfiring, idling behaviour, acceleration and starting behaviour.

– Foot and hand brake: check function, (rubbing, squealing, pulling to one side) check ABS function. Brake pedal idle travel: max. $^1/_3$ of the pedal travel.

– Inspect the lever position and smooth operation of the gearshifts.

– Inspect the driving behaviour of the clutch as well as the pedal force and smell.

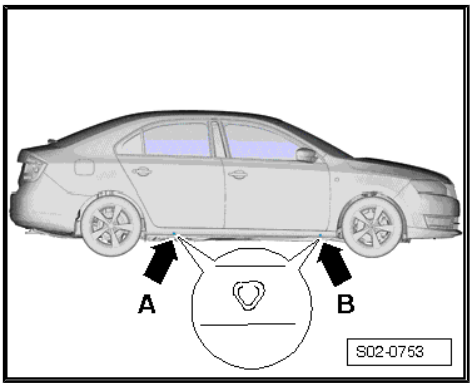
- Check automatic gearbox: selector lever setting, selector lever lock, switching response, display in the dash panel insert.
- Inspect steering clearance of the vehicle standing on its wheels, with engine running by turning the steering wheel one way and then the other (wheels straight ahead). There must be no play on the steering.
- Pay attention to pulling and to the straight ahead position of the steering wheel during driving.
- Inspect the imbalance of the wheels, drive shafts and propshafts.
- Check functions: heating, air conditioning system, ventilation, instruments and indicator lights, mirror adjustment.
- Inspect engine, gearbox, axles, steering, brakes, clutch, bodywork for abnormal noises.

9.3 Raise vehicle

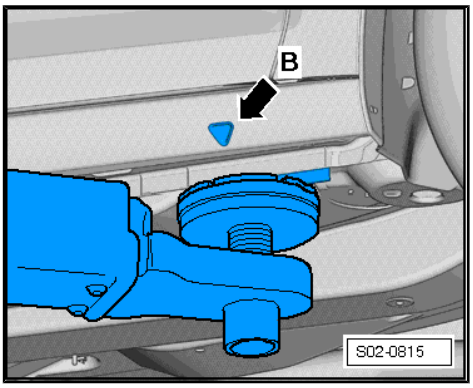
Raise vehicle with a lift platform or a workshop jack

The vehicle must only be raised with a workshop jack in the indicated jacking points -arrow A- and -arrow B-.

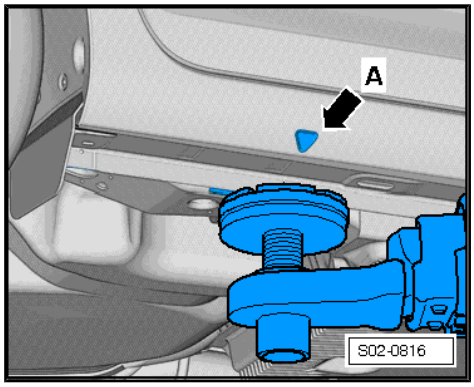
The jacking points are located at the stiff joint of the bottom side rail in the area of the markings -arrow A- and -arrow B-, on the bottom surface of the bottom side rail.



Front fixation point -arrow B-



Rear fixation point -arrow A-



WARNING

- *To avoid damage use a suitable rubber or wood insert.*
- *Under no circumstances must the vehicle be placed on the engine, gearbox, front or rear axle.*
- *Never start the engine or engage a gear when the vehicle is raised, while even one driving wheel is still in contact with the ground.*
- *Secure the vehicle on the lift platform before its centre of gravity shifts considerably because of successive disassembly operations.*