Maintenance
Slavia 2022 ➤
Edition 11.2021

Maintenance

Heading

1. General points
2. Inspections
3. Engines
4. Gearbox
5. Chassis
6. Electrical System
7. Body
8. Exhaust-emission analysis
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.

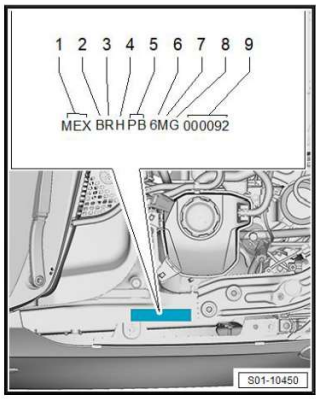
Contents

1 General points

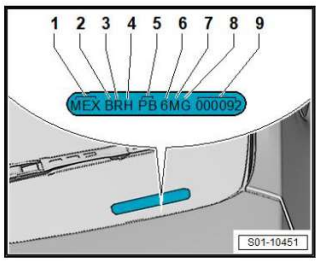
(SIGG000292; Edition 11.2021)

1.1 Vehicle identification number

The vehicle identification number (chassis number) is located on the extension of the top right trailing arm at the front (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

MEX - vehicles destined for India

2 - Body type:

A - Left-hand drive, 4x2

B - Right-hand drive, 4x2

3 - Engine type:

P - 1.0 l/85 kW/petrol engine

R - 1.5 l/110 kW/petrol engine

4 - Manufacturing month

A - January

B - February

C - March

D - April

E - May

F - June

G - July

H - August

J - September

K - October

L - November

M - December

5 - Vehicle type:

PB - Slavia

6 - Internal code

7 - Construction year:

M - 2021

N - 2022

P - 2023

R - 2024

8 - Manufacturing plant:

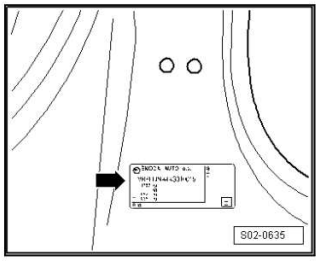
G - Pune

9 - Chassis number

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

The type plate is located on the bottom of the left B pillar -arrow-.



1.3 Storage of ŠKODA new vehicles

Instructions for the storage of new vehicles ⇒ ⇒ Elsa/Service Technology Manual /Instructions/Service Instructions/Vehicle Service/Service Instructions: Maintenance programme for new and used vehicles,

Service for exhibited and stored vehicles ⇒ Maintenance table.

1.4 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.

1.5 Additional customer information regarding inspection and maintenance

- 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).

- 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.

– Create an entry in the DSP (digital service schedule).
– An oil change service should be undertaken at the prescribed interval ⇒ i2.3 ntervals", page 13 .

QI4 - Service display 15000 km or 1 year

1.6 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

2 Inspections

2.1 Pre-sales inspection

- Immediately check the newly delivered vehicles for completeness and damage. 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 (B2B Portal).
- In the case the vehicles are not transported within two weeks or delivered to the customer, the “care programme for new and used vehicles” must be carried out ⇒ (technical information - instructions).

Inspections or work to be carried out and noted in the form	Chapter
Introductory works	
– Carry out the following diagnostics step: delivery inspection, overall delivery inspection	⇒ o6.13 ut diagnostic step: delivery inspection, overall delivery inspection”, page 83
Vehicle (exterior)	
– Plastic and rubber parts - cleanliness and damage	
– Change brake fluid - on vehicles in stock for more than 12 months	⇒ b5.4 rake fluid”, page 56
– Inspect bodywork and paintwork for damage	⇒ b7.3 ody paintwork and underbody protection for damage (before sale)”, page 87
– Function door handles, door locks, child locks, door contact switch and locking function of all locks and keys (including spare keys), doors, rear lid, fuel tank flap, front flap locking mechanism	⇒ d7.6 oor locks and child safety locks”, page 90
– Tighten the wheel bolts tor the specified torque (steel and light alloy wheels 140 Nm), install wheel trim caps	⇒ w5.8 heel bolts to specific torque”, page 71
– Check the tyre pressure (including spare wheel or emergency wheel), if necessary correct the tyre pressure to partial load, fit valve caps	⇒ t5.7.3 he tyre pressure (including spare wheel), if necessary correcting pressure”, page 68
Engine compartment (from above)	
– Checking battery	⇒ b6.5 attery”, page 74
– 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	⇒ i3.3 nspection of engine and parts in the engine compartment for leaks and damage”, page 17 , ⇒ b5.3 rake system for leaks and damage”, page 55
– Engine oil level (in-between markings on dipstick)	⇒ e3.6.1 ngine oil level”, page 18
– Brake fluid level (at “MAX” marking)	⇒ t5.5 he brake fluid level”, page 64
– Coolant level	⇒ c3.8 oolant level (volume)”, page 27
– Top up the fluid in the washer fluid reservoir; add antifreeze in winter	
– Check the function of all spray nozzles of the windscreen washer system, adjust if necessary	⇒ w7.5 iper and washer system: check functioning properly”, page 87
Vehicle interior	
– Inspect upholstery, interior trim, carpeting/footmats for cleanliness and damage	

Inspections or work to be carried out and noted in the form	Chapter
– Install roof aerial	
– Set the temperature to 22 °C (Climatronic)	⇒ s6.8 et the temperature to 22 °C", page 76
– Inspect all switches, all electrical components, gauges/indicators and controls	⇒ c6.2 onsumers: check they are functioning", page 74
– Checking proper operation of infotainment radio/navigation	⇒ p6.6 roper operation of infotainment radio/navigation", page 75
– Check language version of driver's instructions	⇒ l6.1 anguage version of driver's instructions", page 73
– Install net in luggage compartment (if available)	
– Set clock	⇒ c6.7 lock", page 75
– Fit supplied carpets in the vehicle	
Underside of vehicle (on lift platform)	
– Inspect underbody (underbody protection for damage)	⇒ b7.3 ody paintwork and underbody protection for damage (before sale)", page 87
– 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	⇒ i3.3 nspection of engine and parts in the engine compartment for leaks and damage", page 17 , ⇒ b5.3 rake system for leaks and damage", page 55
– Inspect tyres and wheels for damage	⇒ 5.7 , page 66
Concluding operations	
– Perform a test drive.	
– Remove protective seat covers and protective film	
– Create an entry in the DSP (digital service schedule)	
– Final inspection to ensure proper condition for handover to customer	

2.2 Inspection with engine oil change

⇒ w2.2.1 ith engine oil change", page 8

⇒ o2.2.2 perations", page 11

2.2.1 Inspection with engine oil change

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 ⇒ i2.3 ntervals", page 13

Work involved	Chapter
– Engine oil and filter: change engine oil and replace filter	⇒ e3.6 ngine oil, oil level, change oil", page 18
– Windscreen: check for damage	
– Horn: check	
– Front and rear exterior lighting: check	⇒ a6.3 nd rear exterior lighting: check", page 74
– Breakdown kit: check	⇒ s5.9 et", page 71
– Battery: check	⇒ b6.5 attery", page 74
– Brake fluid level: check.	⇒ t5.5 he brake fluid level", page 64
– Brake system: check	⇒ b5.3 rake system for leaks and damage", page 55
– Check the thickness of the brake pads on all wheels	⇒ t5.1 hickness of front and rear brake pads/linings", page 49
– Tyres: check	⇒ 5.7 , page 66
– Interior lights: check	⇒ l6.4 ights: check", page 74
– Check for corrosion	⇒ f7.9 or corrosion", page 91
– Windscreen wash/wipe system: check	⇒ w7.5 iper and washer system: check functioning properly", page 87
– Inspect plenum chamber for dirt, clean if necessary	⇒ p7.4 lenum chamber and water drain openings for dirt, cleaning if necessary", page 87
– Front flap lock: lubricate	⇒ f7.10 lap lock: lubricate", page 91
– Headlights: check adjustment	⇒ h6.11 eadlight beam setting and adjusting if necessary", page 77
– V-ribbed belt: check condition	⇒ b3.9 elt: check condition", page 27
– Cooling system: check	⇒ a3.7 ntifreeze protection, replenishing coolant additive if necessary", page 24
– Engine compartment (from above): check	⇒ i3.3 nspection of engine and parts in the engine compartment for leaks and damage", page 17
– Engine compartment (from below): check	⇒ i3.3 nspection of engine and parts in the engine compartment for leaks and damage", page 17
– Front and rear axles: check	⇒ a5.10 nd rear axles: check", page 72

Work involved	Chapter
– Exhaust system: check	
– Underbody protection: check	⇒ u7.2 nderbody protection and body paintwork for damage ", page 86
– Road test	⇒ t9.2 est", page 101
– Reset service interval display for inspection with engine oil change	⇒ s6.10 ervice interval display (SID) ", page 77
– Create an entry in the DSP (digital service schedule)	
– Hand customer the completed and signed form	
– Give the customer the printed DSP record - vehicles with active DSP (Digital Service Schedule)	

2.2.2 Additional operations

Work involved	Maturity according to time or kilometre date	Chapter
– Change brake fluid	Every 2 years	⇒ b5.4 rake fluid", page 56
– Clean rear drum brake	Every 2 years	⇒ r5.2 ear drum brake (noises, glue brake pad)", page 55
– Dust and pollen filter for passenger compartment: replace	Every 30,000 km or every 1 year.	⇒ t7.7 he dust and odour filter ", page 90
– Replace the air filter insert and clean the housing	Every 30,000 km or 2 years	⇒ a3.13 ir filter element", page 36
– Replacing the spark plugs - petrol engines	Every 60,000 km or 4 years	⇒ s3.12 park plugs", page 29
– V-ribbed belt: replace	Every 60 000 km	⇒ t3.10 he V-ribbed belt", page 28
– Automatic gearbox 09G: change ATF	Every 60 000 km	⇒ g4.1 earbox 09G: change ATF", page 42
– Replace toothed belt for camshaft drive (petrol engines)	Every 120 000 km	⇒ t3.4 oothed belt and tensioning pulley", page 18
– Replace toothed belt for coolant pump drive - petrol engines	Every 120 000 km	⇒ t3.5 oothed belt for coolant pump drive", page 18
– Panoramic tilting/sliding sunroof: check for noise, check function	Every 15,000 km or 1 year	⇒ r7.11 oof", page 92
– Panoramic tilting/sliding sunroof: clean and lubricate guide rails	Every 15,000 km or 1 year	⇒ r7.11 oof", page 92
– Sliding / tilting roof: check water drainage	Every 15,000 km or 1 year	⇒ r7.12 oof drains: check flow, clean if necessary", page 93

2.3 service intervals

Service-event	Deadline for completion
Inspection	QI4 As per the display (every 15 000 km or 1 year)
Oil change service - QI4	As per the display (every 15,000 km or 1 year)

3 Engines

3.1 Engine overview

Petrol engines

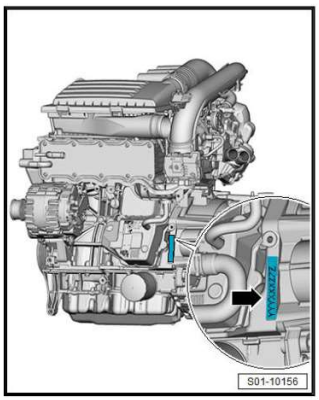
Engine identification characters	DTBA	DUMA
Emission standard	BSVI-A	BSVI-A
Manufacturing (from...through)	12:21 ...	12:21 ...
Displacement in litres	1.0	1.5
Output (kW at rpm)	85/5000 … 5500	110/5000 - 6000
Max. torque (Nm at rpm)	175/1750 … 4500	250/1500 - 4000
Bore (∅ mm)	74.5	74.5
Stroke (mm)	76.4	85.9
Compression ratio	10.5	10.5
Hydraulic valve clearance compensation	X	X
Fuel RON (minimum)	95	95
Firing order	1-2-3	1-3-4-2
Catalytic converter	X	X
Turbocharging	X	X
Charge air cooler	X	X
Lambda probe	X	X
Number of cylinders / valves per cylinder	3/4	4/4

3.2 Engine fitted

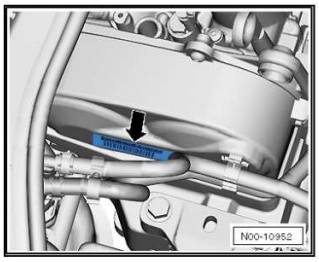
The Engine codes and serial number are located in the front at the engine/gearbox joint.

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

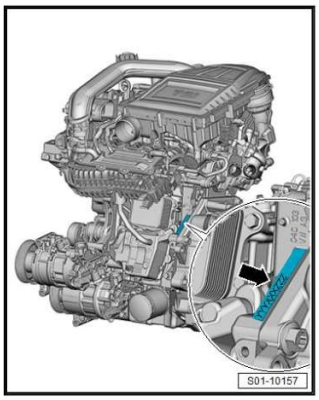
4-cylinder petrol engine TSI, MPI The engine identification characters are on the crankcase next to the gearbox -arrow-.



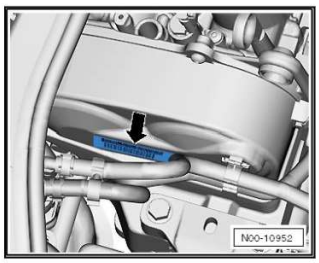
The engine identification characters and the engine number can also be found on the sticker -arrow- on the top toothed belt guard and on the vehicle data sticker.



3-cylinder petrol engine TSI. The engine identification characters are on the crankcase next to the gearbox -arrow-.



The engine identification characters and the engine number can still be found on the sticker -arrow- on the 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
- Inspect gearbox or final drive for leaks (e.g. inspection and drain plug, shift linkage, drive shafts) ⇒ f4.2 inal drive and joint boots for leaks and damage", page 47 .

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

– Inspect gearbox or final drive for leaks (e.g. inspection and drain plug, shift linkage, drive shafts) ⇒ f4.2 inal drive and joint boots for leaks and damage", page 47 .

3.4 Changing toothed belt and tensioning pulley

– Removing and installing the toothed belt and tension roller ⇒ Rep. gr. 15; Removing and installing the toothed belt drive; removing and installing the toothed belt.

3.5 Replacing toothed belt for coolant pump drive

– Removing and installing toothed belt ⇒ Rep. gr. 19; Coolant pump/coolant regulator; Removing and installing toothed belt for coolant pump.

3.6 Check engine oil, oil level, change oil

⇒ e3.6.1 ngine oil level", page 18

⇒ o3.6.2 il filter with replacement oil filter for petrol engines", page 19

⇒ o3.6.3 ff and fill engine oil, vehicles with petrol engine ", page 20

⇒ o3.6.4 il standards", page 22

3.6.1 Inspecting engine oil level

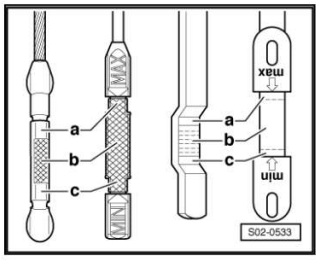
Note

- *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



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-.

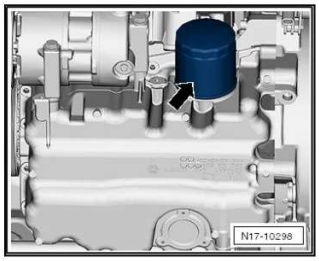
3.6.2 Replace oil filter with replacement oil filter for petrol engines

Oil filter tool -3417-

Remove replacement oil filter

– Remove the noise insulation.

– 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 filter and tighten it with the oil filter wrench -3417-.

Tightening torque	Nm
Oil filter	20

– Drain engine oil ⇒ o3.6.3 ff and fill engine oil, vehicles with petrol engine ", page 20 .

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

– Install the noise insulation.

3.6.3 Drain off and fill engine oil, vehicles with petrol engine

Special tools and workshop equipment required

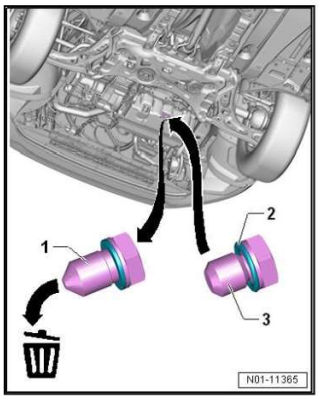
♦ Used oil collection and suction device, e.g. -VAS 6622- or -VAS 6622A-

Drain engine oil at 1st. oil change ⇒ page 20

Draining engine oil after 2nd and any further oil change ⇒ page 20

Drain engine oil at 1st. oil change

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



– Collect the flowing out oil in a suitable vessel.

Note

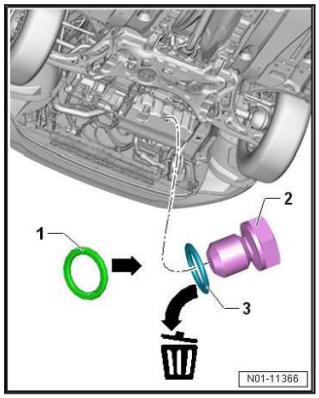
Observe the disposal instructions!

– Screw in new oil drain plug -3- using a new sealing ring -2- and tighten to tightening torque.

Tightening torque	Nm
Oil drain plug	30

Draining engine oil after 2nd and any further oil change

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



Caution

The oil drain plug -2- is used again after the 2nd and any further oil change.

The sealing ring -3- must always be replaced with a new ring -1-.

– Collect the flowing out oil in a suitable vessel.

Note

Observe the disposal instructions!

– Screw in the previous oil drain plug -2- using a new sealing ring -1- and tighten to specific tightening torque.

Tightening torque	Nm
Oil drain plug	30

WARNING

- *The torque instructions must not be exceeded.*
- *A too high torque could lead to leaks or damage in the area of the oil drain plug.*
- *Always drain off the engine oil. Extraction is not permitted.*

Topping up with engine oil

– Replace engine oil filter ⇒ o3.6.2 il filter with replacement oil filter for petrol engines", page 19 .
– Top up with engine oil, specification and filling capacity ⇒ o3.6.4 il standards", page 22 .
– Close the oil filler opening again.
– Start engine and check for leaks.

– Check the engine oil level again and top up with oil if necessary ⇒ e3.6.1 ngine oil level", page 18 .
– Wait at least 3 minutes after topping up the oil again before inspecting the oil level again ⇒ e3.6.1 ngine oil level", page 18 .

WARNING

- *Over-filling of the engine with engine oil may result in damage to the catalytic converter.*
- *The oil level must not be above the -max- marking to avoid damage to the catalytic converter ⇒ e3.6.1 ngine oil level", page 18 .*

3.6.4 VW-engine oil standards

Petrol engines		Approximative oil capacity with oil filter change	Max. oil capacity after engine repair[1)]	QI4	
				VW standard	SAE class
1.5 l/110 kW TSI	DUMA	4.7 l	5.2 l	VW 508 00 ⇒ page 24	0W-20
1.0 l/85 kW TSI	DTBA	4.0 l	4.3 l	VW 508 00	0W-20

1) 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, a new VW standard for engine oils VW 508 00/509 00 is currently being introduced.

An engine oil according to VW engine oil standard 508 00/509 00 reduces the CO_2 emissions and can reduce fuel consumption.

- *VW 508 00/509 00 is a combined product. VW 508 00 denotes the specification for petrol engines and VW 509 00 the specification for diesel engines.*
- *Škoda recommends not using new specifications in older generations of engines.*
- *An engine oil under VW standard 508 00/509 00 cannot be filled into older generations of engine. Use of oils with the VW standard 508 00/509 00 is used in engines for which it is not intended may damage the engine. Recommended specifications are always assigned to the engines in the tables "VW engine oil standards, oil filling quantity".*
- *An overview of the approved engine oils can be found on the B2B portal.*

3.7 Inspecting antifreeze protection, replenishing coolant additive if necessary

Inspecting coolant level (volume) ⇒ c3.8 oolant level (volume)", page 27

Special tools and workshop equipment required

- Refractometer -T10007A- or -T10007B- or -VAS 531 005-

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.*

Inspecting antifreeze protection of the coolant

Note

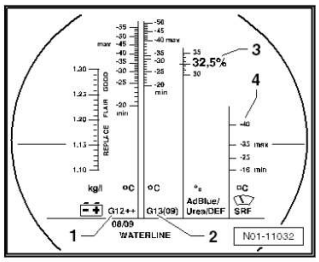
- *When inspecting the antifreeze, read off the exact value on the light/dark boundary shown on the corresponding scale of the refractometer.*
- *Before starting the test, let a drop of water drip onto the measuring glass using a pipette for improved visibility of the light/dark boundary. Now the light/dark 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 scale for ethylene glycol:

> ⚠ WARNING
>
> *The vehicles are filled in the factory with coolant additive G13 or G12Evo - which has a lilac colour and conforms with the standard TL VW 774 J.*
>
> *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 when measuring the antifreeze.*

The scale -2- of the refractometer -T10007A- 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

Note

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.

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.

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

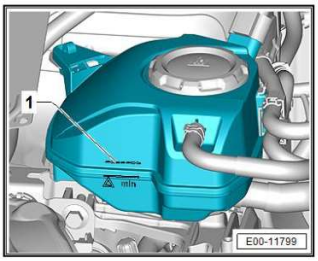
> WARNING
>
> *When refilling, the coolant additive G12Evo - purple can be mixed with the coolant additive G13.*

3.8 Inspecting coolant level (volume)

– Check coolant level when the engine is cold.

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

- Pre-sales inspection: Coolant level at least at mark -1-
- 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.



- Inspection: coolant above the “min. marking”

– When the coolant level is low, top up the missing amount of coolant according to the mixing ratio ⇒ page 25 .

> 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).*

3.9 V-ribbed belt: check condition

Special tools and workshop equipment required

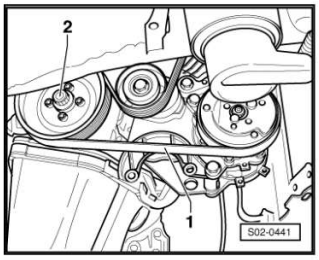
- Socket

Observe the following procedure:

– Raise vehicle

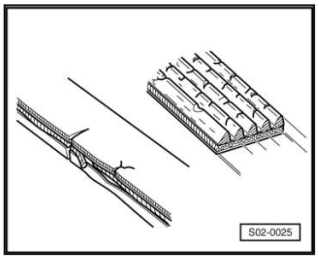
– Remove the noise insulation.

– 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

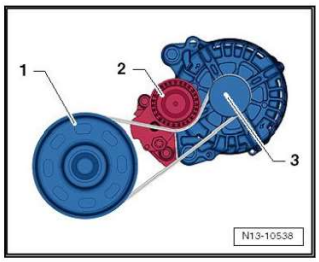
It is essential to replace the V-ribbed belt if defects are found. This will help avoid any failures or operational problems. Replacing the ribbed V-belt is a repair measure.

3.10 Replacing the V-ribbed belt

– Removing and installing V-ribbed belt ⇒ Rep. gr. 13; Cylinder block on pulley side; Removing and installing V-ribbed belt.

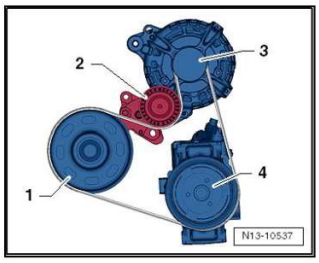
3.11 Routing of V-ribbed belt

Petrol engines without air conditioning



1 - Crankshaft/vibration damper
2 - Tensioning pulley
3 - Alternator

Petrol engines with air conditioning



1 - Crankshaft/vibration damper
2 - Tensioning pulley
3 - Alternator
4 - AC compressor

3.12 Replace spark plugs

Special tools and workshop equipment required

- Extractor-T10530-
- Spark plug wrench, e.g. -3122B-
- Silicone paste from the ⇒ Electronic Catalogue of Original Parts

⇒ s3.12.1 park plugs - 1.0 l TSI engines", page 31
⇒ s3.12.2 park plugs - 1.5 l TSI engines", page 33

Note

Observe the disposal instructions for the spark plugs.

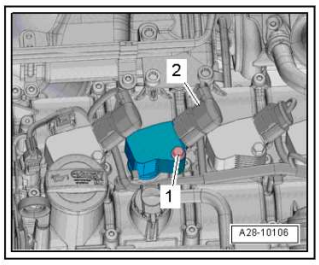
Engine fitted	Change interval	Tool for removing the ignition units/plugs
All engines	⇒ o2.2.2 perations", page 11	-T10530-

3.12.1 Replace spark plugs - 1.0 l TSI engines

– Remove air filter ⇒ a3.13.1 ir filter element, 1.0 l TSI petrol engine", page 36 .

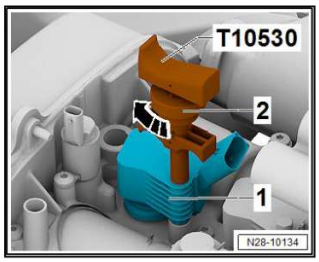
– Remove air guide pipe.

– Unlock and remove connectors from ignition coils -2-.



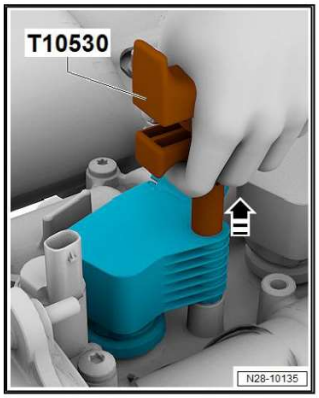
– Unscrew the fastening screws of ignition coils -1-.

– 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.

Note

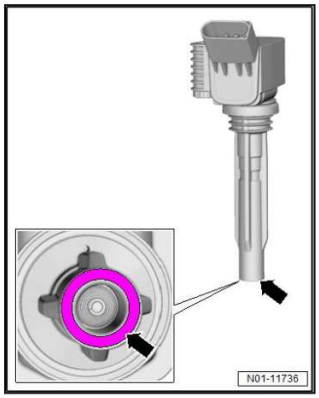
Observe the disposal instructions!

Installing

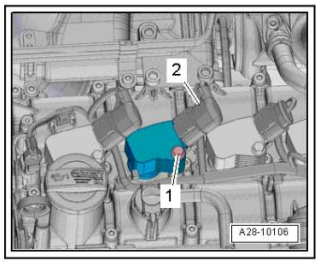
Note

- *When installing new spark plugs, grease the ignition coils with power output stages with silicone paste ⇒ ETKA.*
- *The correct silicone paste can be found under ignition coils and/or spark plugs in the ETKA.*

– Unscrew spark plugs with spark plug wrench e. g. -3122B- and remove.
– Screw in new spark plugs with spark plug wrench e. g. -3122B- and tighten to tightening torque ⇒ page 33 .
– Apply a thin adhesive bead -arrow- of silicone paste (from the ⇒ Electronic Catalogue of Original Parts) all around the sealing hose of the ignition coil.



- Place all ignition coils loosely into the spark plug shafts.
- Align the ignition coils so that the fastening 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 33 .



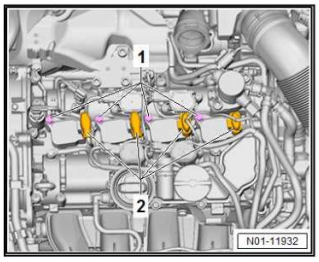
- Attach plug connector for ignition coils -2-.
- Further assembly occurs in reverse order.

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

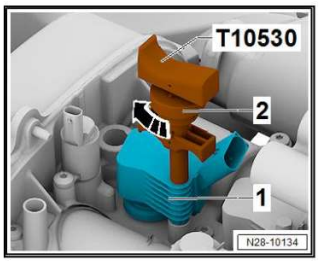
3.12.2 Replace spark plugs - 1.5 l TSI engines

- Remove engine cover.
- Remove air duct ⇒ Rep. gr. 21; Charge air system; removing and installing air duct pipe
- Remove air duct ⇒ Rep. gr. 17; Crankcase ventilation; a summary of components - crankcase ventilation

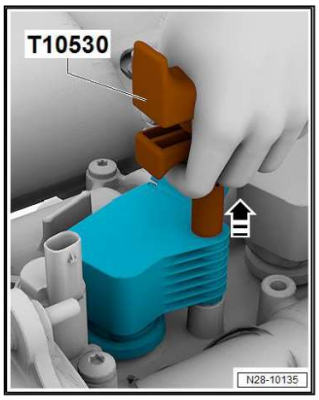
– Unlock and disconnect connectors -2- from ignition coils.



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

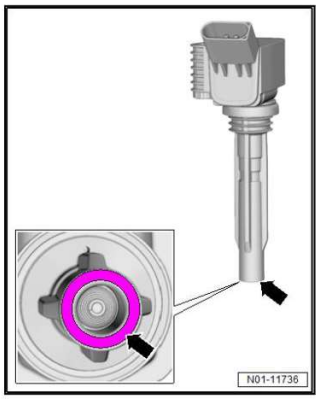


– Tighten the nut -2- in -direction of arrow- so that the extractor -T10530- stays firm in the bore of the ignition coil.
– Remove ignition coil with extractor -T10530- in -direction of arrow- out of the camshaft housing.

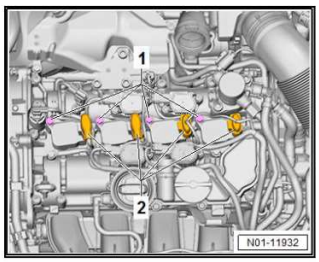


– Undo nuts from the extractor -T10530- and remove from the bore of the ignition coil.
– Using the extractor -T10530- remove the other ignition coils out of the camshaft housing in sequence.

- Unscrew spark plugs with spark plug wrench e. g. -3122B- and remove.
- Screw in new spark plugs with spark plug wrench e. g. -3122B- and tighten to tightening torque ⇒ page 35 .
- Apply a thin adhesive bead -arrow- of silicone paste (from the ⇒ Electronic Catalogue of Original Parts) all around the sealing hose of the ignition coil.



- Place all ignition coils loosely into the spark plug shafts.
- Align the ignition coils so that the fastening 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 35 .



- Attach plug connector for ignition coils -2-.
- Install air duct ⇒ Rep. gr. 17; Crankcase ventilation; a summary of components - crankcase ventilation
- Install air duct ⇒ Rep. gr. 21; Charge air system; removing and installing air duct pipe
- Install engine cover at top .

	Nm
Spark plugs in the cylinder head	⇒ Rep. gr. 28; Ignition system; Summary of components - ignition system

	Nm
Screw for ignition coil with output stage	8

3.13 Replace air filter element

⇒ a3.13.1 ir filter element, 1.0 l TSI petrol engine", page 36

⇒ a3.13.2 ir filter element, 1.5 l TSI petrol engine", page 39

Special tools and workshop equipment required

- Pliers for spring-type clips

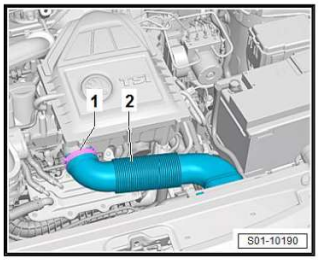
Note

- *Always use an original air filter insert: ⇒ Original parts electric catalogue.*
- *When installing the intake hose, use a lubricant (free of silicone).*
- *When installing the air filter element, make sure that it is seated in the centre of the air filter bottom part.*
- *Hose connections and hoses for charge air system must be free of oil and grease before being installed. Do not use any lubricant which contains silicone when installing.*
- *Secure all hose connections with hose clamps which comply with the series design ⇒ Electronic Catalogue of Original Parts.*

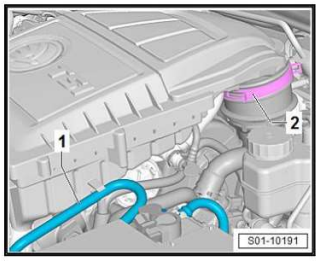
3.13.1 Replacing air filter element, 1.0 l TSI petrol engine

Removing

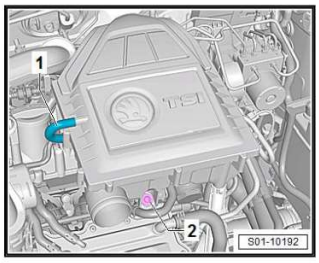
– Release the spring clip -1- and pull air guide hose -2- off.



– 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-.

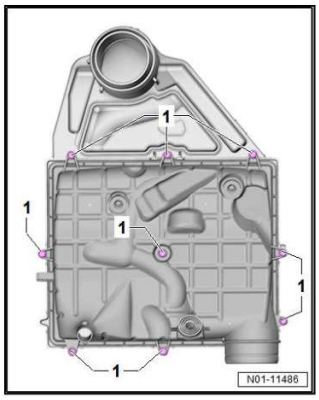


– Unscrew screw -2- and slightly lift the air filter housing.

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.

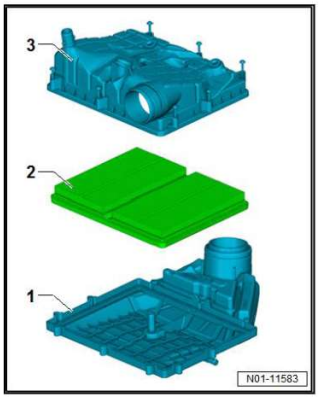


– Remove bottom part of the air filter and take out air filter element.

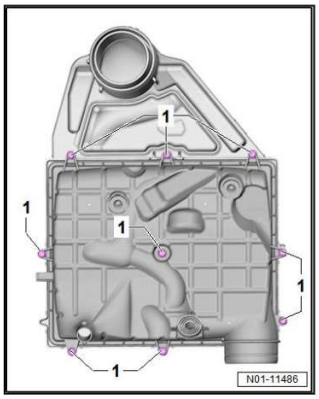
Installing

– Check air filter housing and water drainage for contamination and clean as required ⇒ a3.13.3 ir filter housing", page 40 .

– Carefully insert the air filter insert -2- into the upper part of the air filter -1- so that it sits fully in the recess.

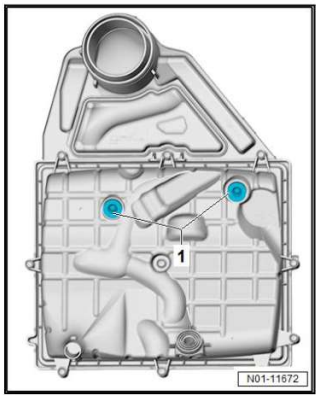


– Locate the air filter lower part -3- on the air filter upper part -1-.



– 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.

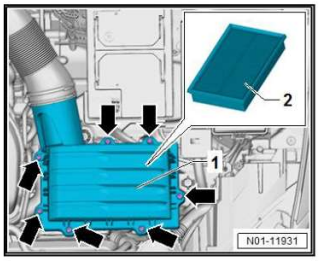
– The remaining steps for installing the air filter housing are as above in reverse order.

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

3.13.2 Replacing air filter element, 1.5 l TSI petrol engine

Removing

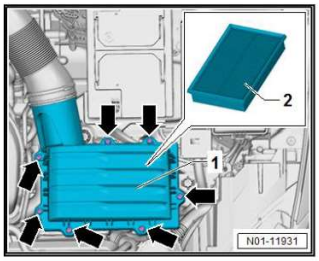
– Unscrew fixing screws -arrows- from the air filter top part -1- and lay the air filter top part together with the complete air guide to one side.



– Remove air filter insert -2-.

Installing

– Check air filter housing and water drainage for contamination and clean as required ⇒ a3.13.3 ir filter housing", page 40 .
– Insert the air filter element -2- in the centre of the air filter bottom part.



– Position the air filter top part -1- on the air filter bottom part carefully and without using increased force.
– Screw together air filter bottom part and air filter top part with fixing screws -arrows- and tighten to tightening torque.

Tightening torque	Nm
Fixing screws	1.5

3.13.3 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 ventilating the air filter housing with compressed air, the following notes must be observed: Cover critical components that carry air with a clean cleaning rag so as to avoid malfunctions.

4 Gearbox

⇒ g4.1 earbox 09G: change ATF", page 42

⇒ f4.2 inal drive and joint boots for leaks and damage", page 47

4.1 Automatic gearbox 09G: change ATF

⇒ A4.1.1 TF level", page 42

⇒ A4.1.2 TF", page 45

⇒ w4.1.3 ith ATF", page 46

Special tools and workshop equipment required

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

4.1.1 Inspecting ATF level

Test conditions

- 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 -VAS-, 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.*
- *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

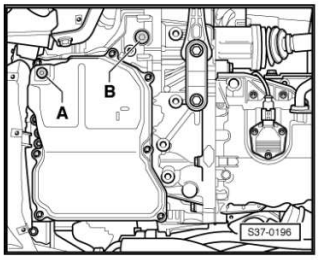
- *When working close to the radiator, always keep an adequate distance from the radiator fan - risk of injury!*
- *The radiator fan can switch on automatically.*

– Start engine and run in idle.

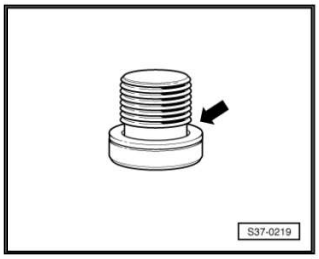
WARNING

Wear safety goggles!

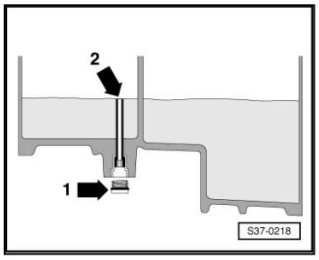
– if an ATF temperature of 35 °C is reached, unscrew the ATF inspection plug -A-.



– 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.

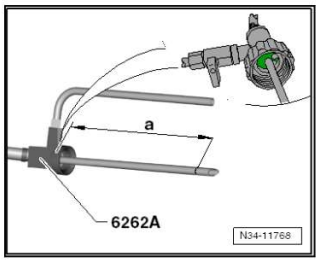
If no ATF flows out at the ATF inspection opening up to 45 °C, the ATF must be topped up ⇒ w4.1.3 ith ATF", page 46 .

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

– Tip “06 - End output”.
– Switch off ignition and unplug diagnostic connector.
– Install the noise insulation.

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.



Dimension -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 6262A- must be clean and the ATF must not be mixed with other oils!*

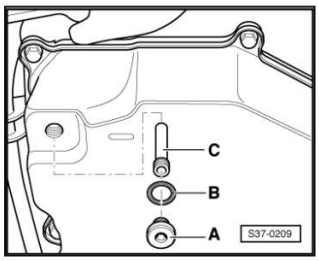
4.1.2 Drain ATF

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

WARNING

Wear safety goggles!

– Unscrew the ATF inspection plug -A-.



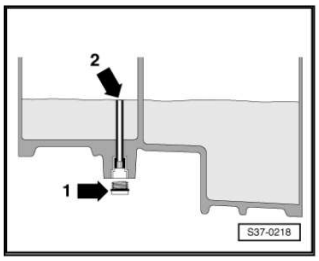
– Release the overflow tube -C- (5 mm Allen key) and drain remaining ATF.
– Drain the ATF.
– Install overflow tube -C- with 5mm Allen key and tighten to 2 Nm.

4.1.3 Fill with ATF

Note

Follow all the instructions and conditions for changes ⇒ page 42 .

– Screw in the quick coupler -VAS 6262/2- by hand in place of the gearbox inspection plug -Arrow 1- and connect the adapter for oil filling -VAS 6262A-.

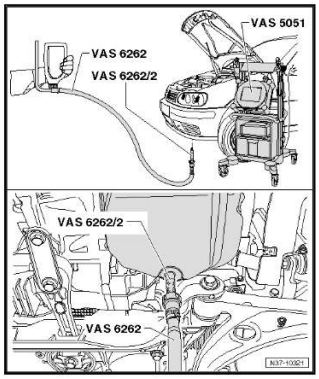


– Shake the ATF reservoir before opening.

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 45 .*
- *The adapter for the oil filling -VAS 6262A- 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 6262A-.



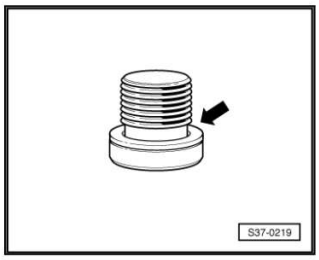
- Fill with 3 litres of ATF (when changing).
- Fill with 1 litre of ATF (if topping up).
- Remove adapter for oil filling -VAS 6262A- from adapter for ATF oil filling -VAS 6262/2-.
- Observe whether ATF flows out of the opening of the adapter for ATF oil filling -VAS 6262/2-.

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 ⇒ A4.1.1 TF level", page 42 .

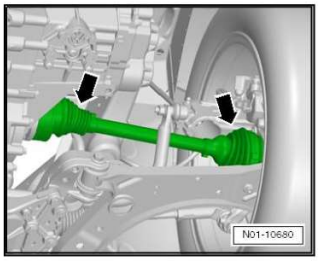
- Unscrew adapter for ATF oil filling -VAS 6262/2-.
- Fit ATF inspection plug -arrow- with a new gasket ring and tighten to 27 Nm.



- Install the noise insulation.
- Switch off ignition and unplug diagnostic connector.

4.2 Check final drive and joint boots for leaks and damage

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


N01-10680

5 Chassis

5.1 Inspecting thickness of front and rear brake pads/linings

5.1.1 Check brake lining thickness with test pin -T40139A-

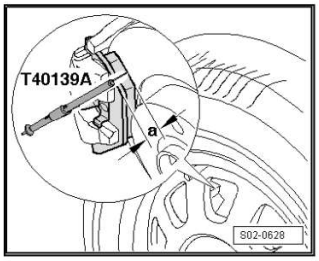
Special tools and workshop equipment required

- Inspection pin -T40139A-

> ⚠ Caution
>
> *In some cases checking the brake pad thickness check is difficult to impracticable with the test pin -T40139A-. In this case, check the brake lining thickness with a visual inspection ⇒ b5.1.2 rake lining thickness: visual inspection", page 52 .*

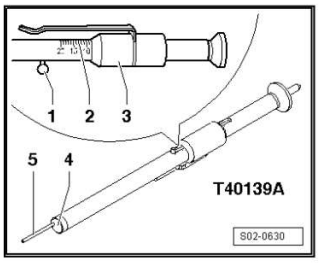
Front disc brake pads

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-

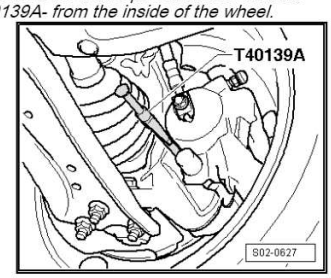
– Slide the grinder -3- of the inspection pin fully onto the pin -1-.



– 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-.

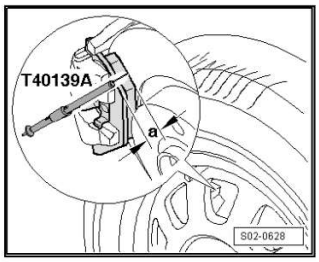
Note

- *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 (2 mm without backing plate).



If the thickness of the pad lies beneath the wear limit, always replace the brake pads axle by axle (repair measure)

– At the same time, also check the brake discs for damage (grooves, fractures) and wear (minimum thickness) ⇒ Braking systems; Rep. gr. 00; Technical data; technical data for brake.

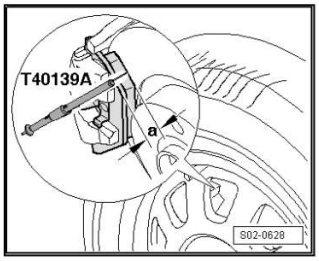
The brake disc change is a repair measure.

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 (2 mm without backing plate).



If the thickness of the pad lies beneath the wear limit, always replace the brake pads axle by axle (repair measure)

– At the same time, also check the brake discs for damage (grooves, fractures) and wear (minimum thickness) ⇒ Braking systems; Rep. gr. 00; Technical data; technical data for brake.

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.*
- *Avoid soiling from brake fluid or grease flowing out.*

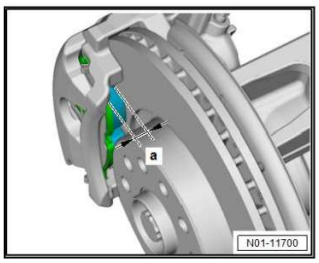
5.1.2 Check brake lining thickness: visual inspection

Special tools and workshop equipment required

- Battery lamp
- Mirror

Check the outer brake lining thickness

– Determine the outer brake lining thickness -a- by means of a visual inspection without back plate through the opening in the rim with battery lamp without removing the wheel.



Caution

On some vehicles, measuring the remaining lining thickness can be difficult. If this is the case, remove the wheel on the side on which the brake pad wear indicator is installed in order to better assess or measure the remaining lining thickness.

After removing the wheel, measure the lining thickness on the inside without the back plate.

In the case of some vehicles, it can be difficult to measure the remaining inner lining thickness at the rear, even after the wheel has been removed. In such cases, visually check the brake lining thickness with the battery lamp and mirror.

- Mark the position of the wheel in relation to the brake disc.
- Release the wheel bolts and remove wheel.

After checking the brake lining thickness:

- Fit the wheel and tighten the wheel fastening screws crosswise with torque ⇒ w5.8 heel bolts to specific torque", page 71 .

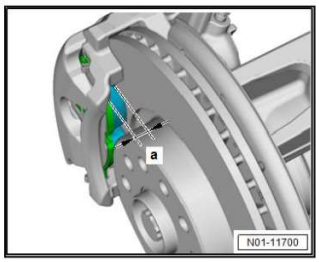
Check the inner brake lining thickness

- Determine the inner brake lining thickness by means of a visual inspection without removing the wheel with a battery lamp and mirror.

Caution

On some vehicles, measuring the remaining inner lining thickness at the rear can be significantly more difficult. Removing the wheel is not useful for better access to the surface!

Brake lining wear limit



a - Lining thickness

Wear limit: 2 mm.

WARNING

If the lining thickness (without back plate) is 2 mm, the brake linings have reached their wear limit and must be replaced.

Replacing the brake linings is a repair measure.

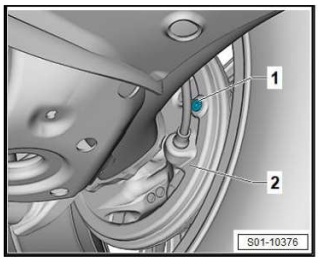
If the brake linings are replaced, then also check condition of the brake discs for damage (grooves, fractures) and wear (minimum thickness) ⇒ Braking systems; Rep. gr. 00; Technical data; technical data for brakes.

Checking and possibly replacing the brake discs is a repair measure.

5.1.3 Check rear drum brake linings

– Raise vehicle

– 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 (e.g. with lamp).

The thickness of the brake pads can also be checked when cleaning the drum brake ⇒ r5.2 ear drum brake (noises, glue brake pad)", page 55 .

– Avoid soiling of the brake pads from brake fluid or grease flowing out.

Note

Eliminate the cause of soiling of the brake pads from brake fluid or grease flowing out (repair measure).

Wear limit of rear drum brake linings

– The wear limit is reached at a lining thickness of 2.5 mm, without supporting shoe. If a wear case exists, always replace the brake linings on both sides (repair measure).

– At the same time, also check the brake drums for damage (grooves, fractures) and wear (max. ∅) ⇒ Brake systems; Rep. gr. 00; Technical data; technical data for brake.

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

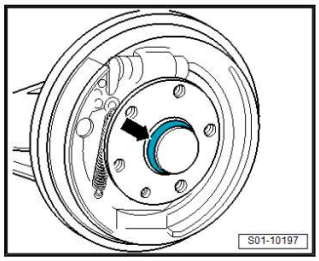
- Brake cleaner, e.g. -Würth 8901087- or -Retech R34217-
- Preservative -Tectyl D322100M2-

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

– Remove the brake drum ⇒ Brake system; Rep. gr. 46; Rear wheel brake; Installation overview – rear wheel brake.

– 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 the preservative -Tectyl D322100M2- -Arrow- to the centre of the wheel hub (all around) with a brush.

– Reinstall the brake drum.

– Fit on wheels in the marked position and tighten the wheel bolts to 140 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- or -VAS 761 003- or -VAS 6860-
- Tool set for brake bleeding -VAS 6564- and -VAS 6564/9-

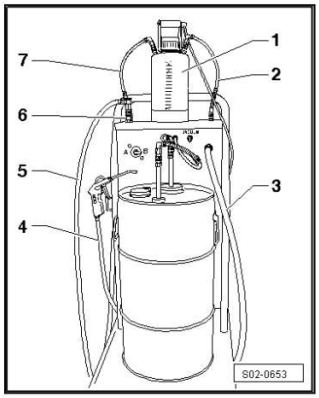
Only use the new original brake fluid ⇒ Electronic Catalogue of Original Parts.

WARNING

- *Brake fluid must never come into contact with fluids containing crude oils (oil, petrol, cleaning agent). Crude 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 ⇒ Operating instructions for the brake filling and bleeding device.



1 - Catch pan

2 - Connecting hose

3 - Pneumatic support

4 - Extraction hose with end part

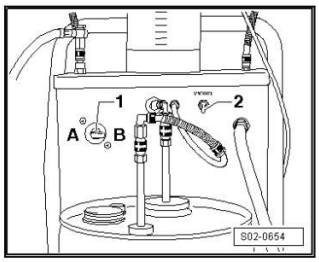
5 - Filler hose with quick-release coupling

6 - Unit connecting point

7 - Connecting hose

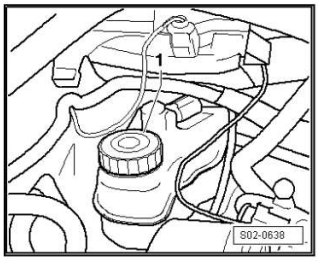
– Connect brake filling and bleeding device to the compressed air distribution.

– Position cock -1- on -B-.



– Set switch -2- upwards on -vacuum-.

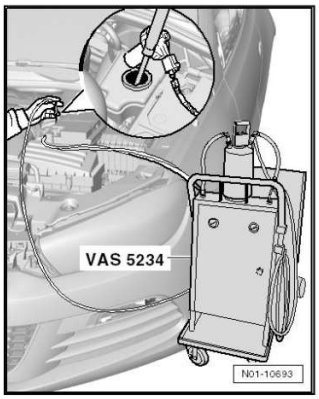
– Unscrew cap -1- from the brake fluid reservoir.



Note

Do not remove the strainer from the brake fluid reservoir.

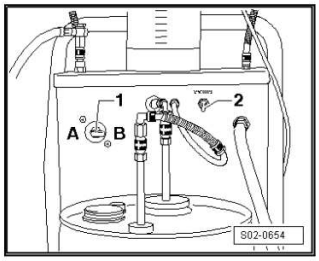
- Switch on the compressed air distribution, herewith the brake filling and bleeding device is operative.
- Use an extraction hose with end part to extract as much brake fluid as possible from the brake fluid reservoir.



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 is no longer operative.

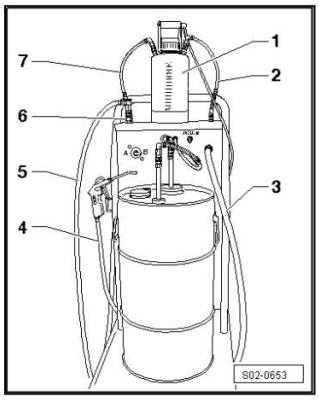
> ⚠ WARNING
>
> *Drained (used) brake fluid must never be used again.*

Change brake fluid in slave cylinder - vehicles with manual gearbox

– Remove engine cover.

– Remove engine cover and air filter ⇒ Rep. gr. 23; Air filter; Removing and installing air filter housing.

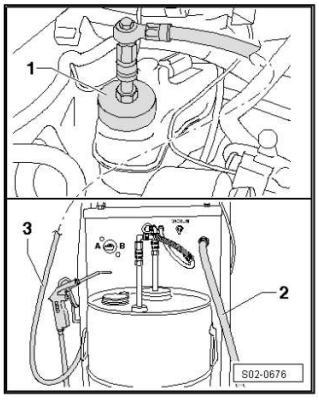
– Activate the filling function of the brake filling and bleeding device as follows:



– 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 onto the brake fluid reservoir.

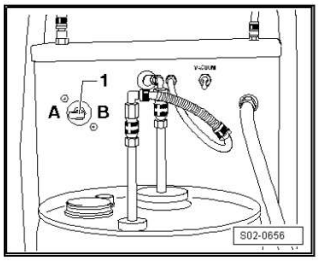


1 - Thread plug

2 - Compressed air distribution

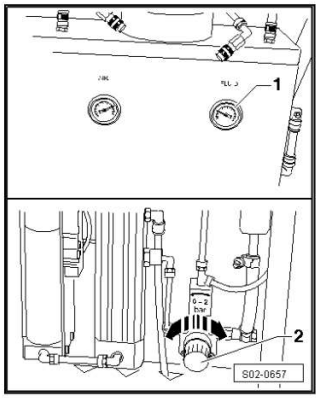
3 - Filler hose with quick-release coupling

– Position cock -1- on -A-.



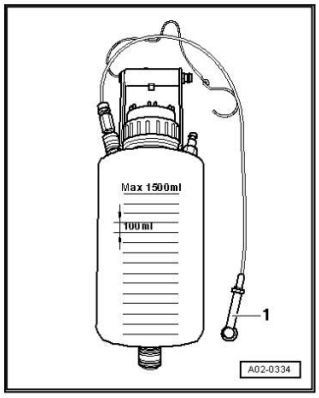
– Switch on the compressed air distribution, herewith the brake filling and bleeding device is operative.

– 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.*
- *As a result of the different versions and fitting locations of the slave cylinder with the vent valve, tightening the vent valve using the set of tools for brake bleeding -VAS 6564- and -VAS 6564/9- (with the torque wrench inserted) is not always possible due to lack of space.*
- *In this case, you may need to remove the battery and battery tray ⇒ Electrical system; Rep. gr. 27; Battery; remove and install battery. In doing so, observe the work sequence for disconnecting and connecting the battery ⇒ Electrical system; Rep. gr. 27; Battery; disconnect and connect battery.*

– If necessary remove cap from bleeder valve of slave cylinder.
– Fit the bleeder hose on the vent valve of the slave cylinder -arrow- and open the valve.
– Open vent valve and allow approx. 0.1 litres of brake fluid to flow out.
– Tighten the bleeder valve to the required tightening torque ⇒ Brake systems; Rep. gr. 47; Hydraulic system; normal bleeding of the hydraulic system.
– Detach bleeder hose of catch pan.
– If necessary fit the cap onto the vent valve of the slave cylinder.
– Install air filter ⇒ Rep. gr. 23; Air filter; Removing and installing air filter housing.
– After completing the bleeding procedure press the clutch pedal repeatedly.

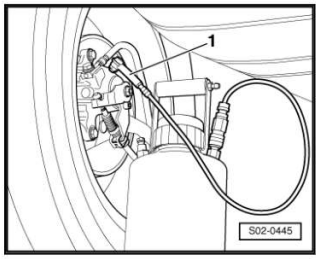
WARNING

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

Change the brake fluid in the brake system

> **WARNING**
>
> *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 callipers, tightening the bleeder valves using the set of tools for brake bleeding -VAS 6564- and -VAS 6564/9- (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.*
>
> *The wheels must also be removed on vehicles with multi-control rear arm axles.*
>
> *Tightening torque of the wheel screws = 140 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.



> **WARNING**
>
> *Slacken the bleeder valves using the set of tools for brake bleeding -VAS 6564- and -VAS 6564/9- 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 the bleeder valve to the required tightening torque ⇒ Brake systems; Rep. gr. 47; Hydraulic system; normal bleeding of the hydraulic system.
- 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 callipers/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	
Front right	0.20 l
Front left	0.20 l
Wheel brake cylinder/brake calliper	
Rear right	0.30 l
Rear left	0.30 l
Total volume, automatic gearbox	approx. 1.00 l
Total volume, manual gearbox:	approx. 1.15 l

Total quantity of brake fluid that flows out: approx. 1.15 litres, including amount drained from the brake fluid reservoir.

– Switch off and disconnect the brake filling and bleeding device.
– Check brake fluid level ⇒ t5.5 he brake fluid level", page 64 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 Inspecting the brake fluid level

Only use the new original brake fluid ⇒ Electronic Catalogue of Original Parts.

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

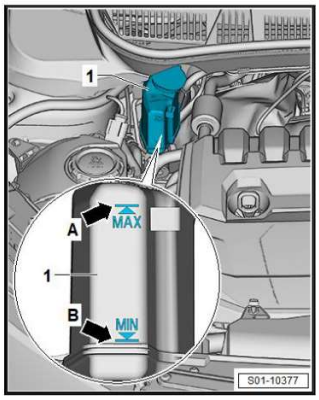
The fluid must not be above the "MAX" marking -A- to prevent fluid flowing out of the reservoir.

Pre-sales inspection:

During the delivery inspection, the brake fluid level should be at the “MAX” -A- marking.

Inspection with engine oil change:

- 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 -2- 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 “MAX” -B- and “MAX” -A- markings.



- If the brake fluid level has dropped below the “MIN” marking -B-, it is necessary to inspect the brake system before topping up the brake fluid ⇒ b5.3 rake system for leaks and damage”, page 55 and to carry out repairs if necessary.

5.6 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

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

• Minimum tyre tread depth: 1.6 mm.

This value may differ as a result of differing statutory requirements.

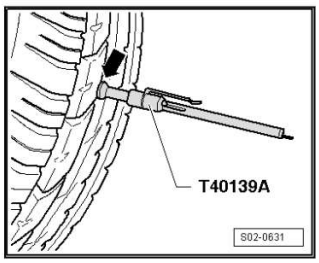
The minimum tyre tread depth is reached as soon as no further tread exists at several points around the circumference of the tyre at which the wear indicators (1.6 mm high) are positioned -arrow-.

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

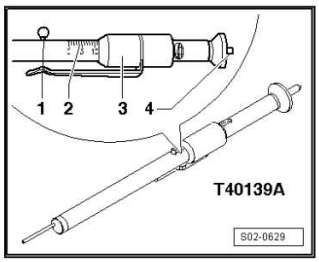
Check tread depth

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

– Position the test pen -T40139A- on the bead of 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 Inspecting the tyre pressure (including spare wheel), if necessary correcting pressure

Special tools and workshop equipment required

- Tyre pressure tester e.g. VAS 5216

Tyre pressure values

Caution

- *During delivery inspection, the tyres on the front and rear axles must be inflated to the "partial load" value in the tyre pressure table ⇒ page 69 .*

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 ⇒ p5.7.4 ressure monitoring indicator: calibration", page 70 .

Tyre pressures Slavia

Engine	Tyres	Tyre pressure (kPa/bar)			
		half load		full load	
		Front axle	Rear axle	Front axle	Rear axle
1.0/85kW TSI	195/65 R15	230.2.3	230.2.3	260.2.6	320.3.2
1.0/85kW TSI	205/55 R16	230.2.3	230.2.3	260.2.6	320.3.2
1.5/110kW TSI		230.2.3	230.2.3	260.2.6	320.3.2
1.0/85kW TSI	205/50 R17	230.2.3	230.2.3	260.2.6	320.3.2
1.5/110kW TSI		230.2.3	230.2.3	260.2.6	320.3.2
1.0/85kW TSI	Spare wheel 195/65 R15	230.2.3	230.2.3	260.2.6	320.3.2
1.5/110kW TSI		230.2.3	230.2.3	260.2.6	320.3.2
1.0/85kW TSI	Spare wheel 205/55 R16	230.2.3	230.2.3	260.2.6	320.3.2
1.5/110kW TSI		230.2.3	230.2.3	260.2.6	320.3.2

5.7.4 Tyre pressure monitoring indicator: calibration

Note

- *The calibration of the "tyre inspection display" must be performed after each tyre pressure correction, while paying attention to the correct tyre pressure values ⇒ t5.7.3 he tyre pressure (including spare wheel), if necessary correcting pressure", page 68 .*
- *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 with the `SET button (with tyre symbol)`

– Inflate tyres to the prescribed pressure.
– Switch on ignition.
– Save the pressure values by pressing the `SET button (with tyre symbol)`.
– The indicator lamp in the dashboard panel insert lights up.
– After the current tyre pressure values have been saved, the indicator lamp goes out and an audio signal sounds.
– After the audio signal, the tyre pressure values are saved and the `SET button (with tire symbol)` can be released.

Calibration in infotainment radio/navigation, 10" Infotainment

The vehicles are equipped with different infotainment radio/navigation. For operation, see ⇒ Owner's Manual.

– Switch on ignition.
– In Infotainment radio / navigation, select the CAR button, and then the Check tyre button, and then the SET button.

The calibration starts herewith.

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

5.8 Tightening wheel bolts to specific torque

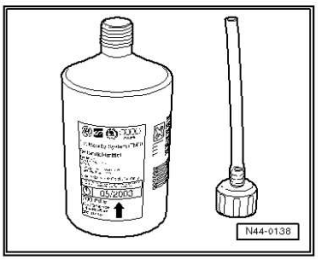
Tightening torque for steel and light alloy wheel rims: 140 Nm.

5.9 Breakdown set

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-.*



In this example, the best-before date 05/2003 has expired and the bottle must then be replaced.

– Check the best before date and enter it in the maintenance tables.
– Replace the tyre sealant if the use by date has been reached.

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.

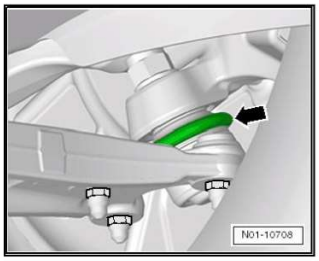
Note

- *Residues of tyre sealant or bottles which are still filled must be disposed of 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.*

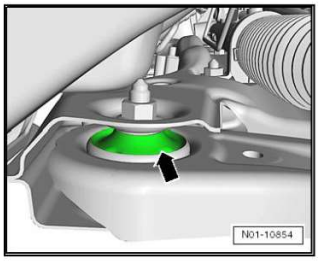
5.10 Front and rear axles: check

– 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.

6 Electrical System

6.1 Check language version of driver's instructions

– Check language variant of driver's instructions (country-specific) as follows:

– Switch on the ignition or the vehicles Infotainment system.

– Check the language in the vehicle's Infotainment screen.

To change the language version of the driver's instructions, proceed as follows:

Change these language version of the driver's instructions

The language version of the driver's instructions is changed by changing the language in the vehicle's Infotainment system.

Infotainment 7

– Tap `System (icon with gearwheel)`, then `General` and then `Language`.

Infotainment 10"

– Tap `System (icon with gearwheel)`, then `System` and then `Language selection`.

The language variant of the vehicle messages can also be changed using the vehicle diagnostics, measurement and information system -VAS-.

– Connect vehicle diagnosis, measurement and information system -VAS-. Connect the diagnostic unit to the diagnostic connector ⇒ d6.9 iagnostic unit and query event memory", page 76 .

– On diagnostic unit select: "01 - Self-diagnosable systems" → "0017 Dash panel insert - J285" → "0017 Dash panel insert

functions" → "0017 adjustment" and next → "0017 Adjust language variants for driver information system".

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

6.2 Electric consumers: check they are functioning

– Check brightness, colour and function of headlights, headlamp range control, fog lights, indicator lights, hazard lights, tail light, fog tail light, reverse lights, brake light, parking light.

– Check for proper operation of automatic light (where present) ⇒ f6.15 or proper operation of automatic light", page 84 .

– Check operation of fog lights with "Corner" function (if present) ⇒ t6.14 he operation of the fog lights with the Corner function (static cornering light)", page 84 .

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

– Airbag warning light: check for proper operation ⇒ c7.1 heck for proper operation", page 86 .

– 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 for proper reception and absence of interference, also inspect speakers ⇒ p6.6 roper operation of infotainment radio/navigation", page 75 .

6.3 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

6.4 Interior lights: check

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

6.5 Checking battery

Procedure for checking the battery ⇒ Electrical system; Rep. gr. 27; Battery; check battery.

6.6 Checking proper operation of infotainment radio/navigation

Precise information on how to operate the device should be obtained from the enclosed Owner's Manual before inspecting proper operation of the device.

> ⚠ WARNING
>
> *Transport mode must be disabled to be able to switch on the radio/navigation system ⇒ o6.13 ut diagnostic step: delivery inspection, overall delivery inspection", page 83 .*

– Switch system on and off.

> ⚠ WARNING
>
> *If only the following is activated after switching on the radio/navigation:*
>
> ◆ *Traffic news TP or phone* [2]
>
> *The "component protection" is activated. This function must be deactivated ⇒ Vehicle diagnostic tester.*
>
> *"Component protection" is also an anti-theft alarm system.*

Carry out the functional test according to the ⇒ Owner's Manual.

– Carry out station programming.
– Operate the volume control.
– Check the SD or USB player for function (insert an SD or USB and play) [2].

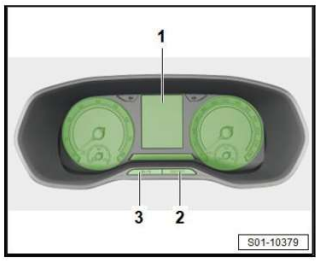
Use the latest version of the cartographic data approved by Škoda Auto for the navigation system [2].

2) These functions are model specific and are not present on all types of sets. For operation, see Owner's Manual.

6.7 Setting clock

Set the clock with the button on the instrument cluster

To set the time, use the button -1- 0.0/SET in the dash panel insert.



– Press button -3-.

– Press button -2- 0.0/SET until the hour setting is shown in display -1-.
– Set the hour by repeatedly pressing the -2- 0.0/SET button.
– Press button -3- and switch to the minute setting.
– Set the minutes by repeatedly pressing the -2- 0.0/SET button.

Setting the time clock in infotainment radio / navigation, infotainment 10 ″

– Tap System (icon with gearwheel), then System and then Time and Date.
– Then proceed by referring to the read-out on the Infotainment screen.

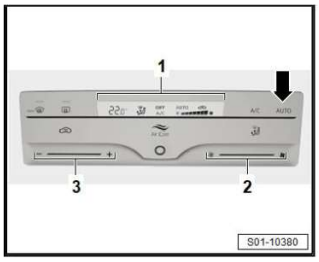
Here you can also set the date, daylight saving time, time zone, time and date format.

6.8 Climatology: 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 with the controller -3-.

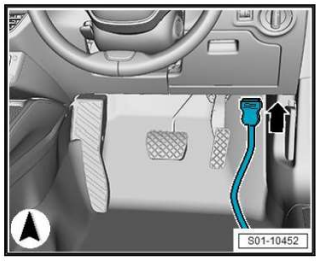


– Check whether the display -1- shows 22 °C.
– Press button for automatic mode -arrow-.
– Switch off ignition.

6.9 Connect diagnostic unit and query event memory

These tasks are performed with the vehicle diagnosis, measurement and information system -VAS- with corresponding diagnostic cable ⇒ Vehicle diagnostic tester.

– Connect diagnosis device to diagnostic connector -arrow-.



6.10 Resetting service interval display (SID)

The service interval display is reset with the vehicle diagnosis, measuring and information system -VAS- together with the corresponding diagnostic cable ⇒ Vehicle diagnostic tester.

⚠ WARNING

When resetting the service interval display with vehicle diagnosis, measurement and information system -VAS-, note the following:

Remove the check mark 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.*

6.11 Inspecting headlight beam setting and adjusting if necessary

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 of 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.
- Basic setting of the headlight performed by switching on the ignition key and subsequent lighting up of the headlight.
- 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 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.
- On vehicles with headlamp range control, press the thumbwheel several times in the dash panel to check the system. Then turn the thumbwheel to basic position.
- Set the inclination value.

Inclination value:

- Basic setting for adjusting the inclination value of a halogen headlamp: -1%
- Basic setting for adjusting the inclination value of an LED headlamp: -1%

- Basic setting for adjusting the inclination value of a fog light: -1%

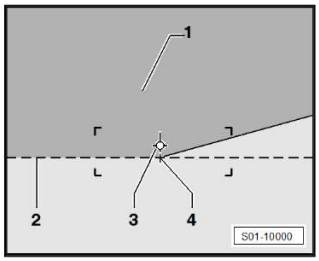
> **Caution**
>
> *The inclination value is marked on the top of the headlight housing. The headlights must be set to this value.*
>
> *The inclination value in "%" does not have a minus symbol.*

Inspecting the headlight beam setting

Halogen headlights

> **WARNING**
>
> - *The headlight beam setting is carried out by turning the control for headlamp range control to the basic setting.*

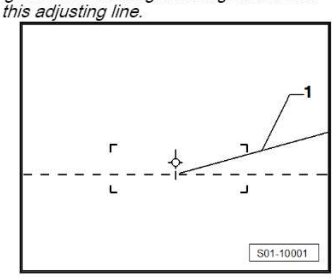
– Check whether the light beam -1- generates the light-dark limit on the dividing line -2- of the control surface when the low beam is switched on.



– 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.

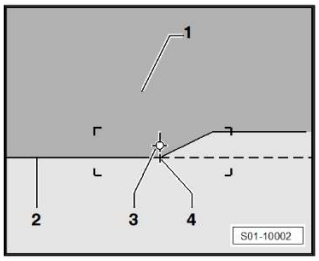
– Where necessary, adjust the headlights mechanically ⇒ page 81 .

LED headlights:

WARNING

- *The headlight beam setting is carried out by turning the control for headlamp range control to the basic setting.*

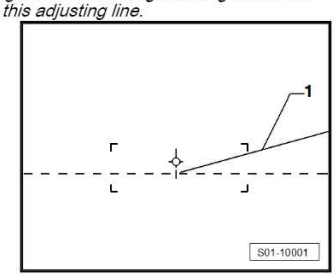
– Check whether the deepest part of the light beam -1- generates the light-dark limit on the dividing line -2- of the control surface when the low beam is switched on.



– 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.

– Where necessary, adjust the headlights mechanically ⇒ page 81 .

Fog lights ⇒ t6.12 he fog light", page 82

Other additional headlights:

Additionally fitted headlights must be inspected or set in compliance with the relevant applicable directives.

Adjust the headlights mechanically

Note

- *The headlight setting change is a repair measure.*
- *Headlight adjustment is charged separately.*

WARNING

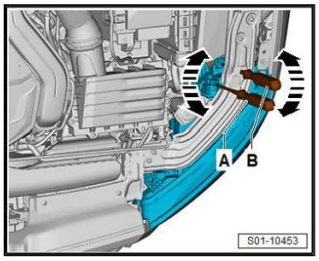
Use a headlight beam setting device for setting the headlight beam.

Follow the test and setting conditions for a correct headlight beam adjustment ⇒ page 78 !

Before mechanical adjustment, the headlights must be put into the home position as indicated by the individual headlight types!

Adjust the headlamp range of the halogen headlamp (BASE)

– Adjust headlight position with a screwdriver with socket extension or with a socket wrench SW 6 by turning the screws -A- and -B-.



A - Height adjustment

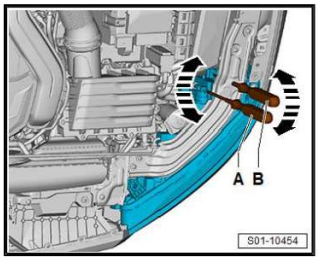
B - Lateral adjustment

Note

Pay attention to the correct positioning of the socket wrench in the adjusting screw. It is guided into the adjusting screw with the cone point of this screw.

Adjust the headlight range of the LED headlamp (HIGH)

– Adjust headlight position with a screwdriver with socket extension or with a socket wrench SW 6 by turning the screws -A- and -B-.



A - Lateral adjustment

B - Height adjustment

Note

Pay attention to the correct positioning of the socket wrench in the adjusting screw. It is guided into the adjusting screw with the cone point of this screw.

6.12 Adjusting the fog light

Inspecting the headlight beam setting

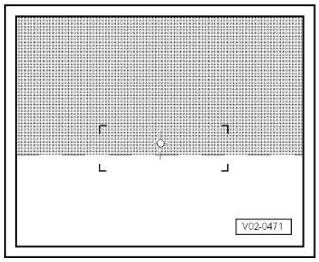
Note

Observe setting conditions ⇒ page 78 .

Inclination value:

The inclination is -2.2 %. The fog lights must be set to this value.

– Check whether the light/dark limit touches the adjusting line and runs horizontally over the total width of the control screen.

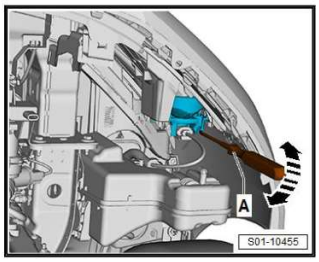


Setting the headlight beam

Note

- *The headlight setting change is a repair measure.*
- *Headlight adjustment is charged separately.*

– Adjust the light with a screwdriver with an Allen key or with an Allen key SW 6 by turning screw -A- from the underside of the vehicle.



A - Height adjustment

Note

Pay attention to the correct positioning of the socket wrench in the adjusting screw. It is guided into the adjusting screw with the cone point of this screw.

6.13 Carrying out diagnostic step: delivery inspection, overall delivery inspection

By carrying out the following diagnostics step: delivery inspection, overall delivery inspection, the following is started automatically:

- ♦ Switch off battery transport mode (on vehicles with the emergency call system, the control unit for emergency call module and communication unit -J949- is activated for transmitting)
- ♦ Query the event memory for all systems; clear entries if required
- ♦ Reset service interval display

– Connect vehicle diagnosis, measurement and information system -VAS-. Connect the diagnostic unit to the diagnostic connector ⇒ Vehicle diagnostic tester.

> ⚠ WARNING
>
> *The ignition must be switched on during the entire handover inspection.*

– Select on the diagnostic device: → “Delivery inspection” → “Overall delivery inspection”.

Follow the instructions on the diagnostics unit.

6.14 Checking the operation of the fog lights with the Corner function (static cornering light)

Conditions for activating static cornering light “Corner” function

- The vehicle has started and is moving at a maximum speed of 40 km/h
- The vehicle has switched on the dipped beam lights
- The fog lights are not switched on

Corner lights up when:

- ♦ Steering wheel angle is greater than the activation angle ⇒ page 84
- ♦ Switch on the indicator light on the side required
- ♦ Put the vehicle into reverse gear (both corners light up at the same time)

– 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 switch on.

– Turn the steering wheel from the middle position one turn to the left.

The left fog light must switch on.

6.15 Check for proper operation of automatic light

- This test must be performed in daylight.

– Turn the turning handle of the light switch to position -auto-.

The headlights must not light up during daylight.

– Cover sensor for rain and light detection (in the foot of the interior mirror) from outside by hand or with a suitable object.

The headlights must light up (the luminous intensity of the daylight is reduced).

– Uncover sensor for rain and light detection (in the foot of the interior mirror).

The headlights must go off.

Note

The headlights go off approx. 4 -5 seconds after uncovering the sensor for rain and light detection.

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.

If subsequently the warning lamp flashes for a further 12 seconds, this indicates that the front passenger airbag unit is blocked.

> ⚠ DANGER!
>
> *If the passenger airbag is electronically locked, observe the safety measures in the ⇒ operating instructions.*

Airbag warning sign

- 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 Check underbody protection and body paintwork for damage

Work involved when checking the underbody protection for:

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 add a corresponding note to the DSP (digital service schedule).*

7.3 Checking body paintwork and underbody protection for damage (before sale)

Work involved when checking the underbody protection for:

Pre-sales inspection

The inspection of the underbody sealant and paintwork should cover the following points:

- undamaged layer of PVC Plastisol
- undamaged paintwork

> **WARNING**
>
> *Pay particular attention to the mechanical damage resulting from the transportation of the vehicle.*

7.4 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. The cover must be removed for cleaning (repair procedure) ⇒ External body repairs; Rep. gr. 50; Bulkhead; Remove and install plenum chamber partition panel.

Note

The water drain openings must not be blocked with wax or underbody sealant.

7.5 Windscreen wiper and washer system: check functioning properly

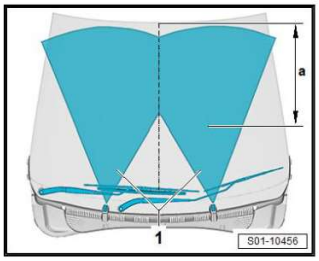
Liquid in the washer fluid reservoir

Note

If fluid is filled into the washer fluid reservoir, add windscreen washer fluid (in summer) or an antifreeze (in winter).

Spray nozzles of the windscreen washer system

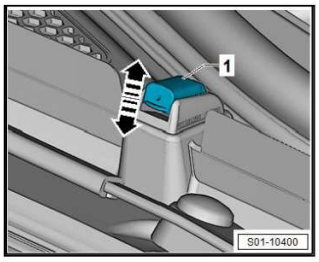
The water spray should strike the windscreen in a cone-shaped pattern -1-.



a - 405 mm ± 30 mm

The spray nozzles are preset. However, minor differences in the height of spray jets can be balanced out to strike at the same height.

– 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.



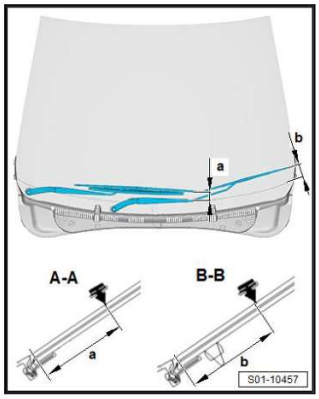
Note

If the spray flows out unevenly or insufficiently, replace the spray nozzle -Arrow- (repair measure).

Windscreen wiper arms: check home position, adjust if necessary

Adjust the end position of the wiper arms⇒ Electrical system; Rep. gr. 92; Windscreen wiper system; adjust wiper arms.

– Set the position of the windscreen wiper arms in such a way that the window edge maintains the dimensions -a- and -b-.



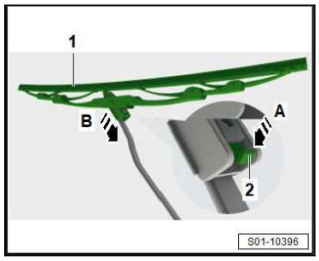
a - 43mm ± 10mm

b - 66.2mm ± 10mm

	Nm
Wiper blade nuts	20

Replacing the windscreen wiper blades

– Fold away the windscreen wiper arm -1- from the windscreen.



– Press locking tab -A-, unlock wiper blade.
– Pull the wiper blade -B- off the wiper arm.
– 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.

7.6 Check door locks and child safety locks

Driver door lock

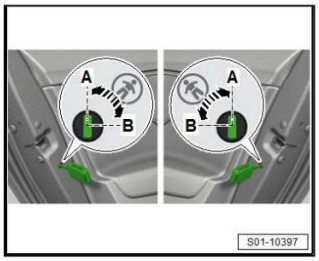
– Unlock and lock the driver door with the key. All the doors must remain locked.

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.



– 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.

7.7 Replacing the dust and odour filter

Special tools and workshop equipment required

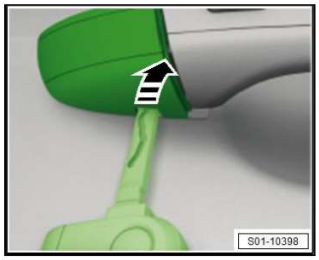
♦ Cover plate -T10532-

Install the air duct element in the centre console ⇒ Heating system, air conditioning system; Rep. gr. 87; Overview of installation locations - heating system; Overview of installation locations - components in the passenger compartment front.

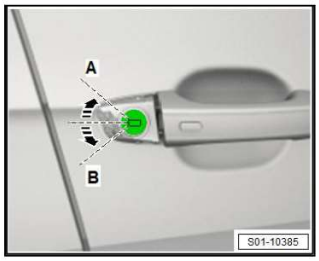
7.8 Lock cylinder: check proper operation

Carry out the test on the door lock of the driver door.

– Carefully remove the cover cap for the lock cylinder with the key, arrow.



– Insert key into the lack and turn at least 3 times in each direction to the stop to -A- and -B-.



– Grease the interior lock mechanism, e.g. with lubricant -Auto Grease- from the company RETECH.
– Make a visual inspection and if necessary wipe off stained surfaces with a clean cloth.
– Withdraw key and wipe off.
– Replace the cover cap for the lock cylinder.

7.9 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
- Wheel housings
- Outer and inner tailgate

7.10 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.

7.11 Sun roof

⇒ f7.11.1 or panoramic sliding / sliding glass roof", page 92

⇒ a7.11.2 nd functional test", page 92

⇒ a7.11.3 nd lubricating the guide rails and cleaning the draft deflector", page 92

⇒ r7.12 oof drains: check flow, clean if necessary", page 93

7.11.1 Lubricant for panoramic sliding / sliding glass roof

> ⚠ WARNING
>
> - *Lubricate the sliding sunroof with special lubricant -G 060 567 A2- (colourless spray). If this agent is not available, the lubricant -N 052 567 G- (white) can be used as a substitute.*
> - *Applying the lubricant with a spray can and a long capillary tube is more advantageous than using a brush.*

7.11.2 Noise and functional test

– Check the roof system for damage.

– Check the function of the roof system, i.e. fully open and close the glass cover and shading system (sliding roof or roller blind).

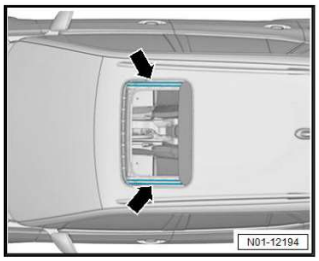
There must be no deviations from normal running noises, such as rattling, squeaking, cracking and no vibrations.

7.11.3 Cleaning and lubricating the guide rails and cleaning the draft deflector

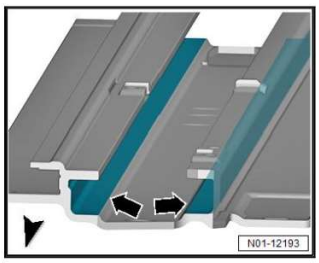
Special tools and workshop equipment required

- Lint-free cloth
- Wet/dry vacuum cleaner
- Commercially available brush: approx. 15 mm wide and angled with workshop tools approx. 40°
- Special lubricant -N 052 567 G- or spray -G 060 567 A2-

– Open the roof system completely and remove loose dirt residues in the guide rails -arrows- with the wet and dry vacuum cleaner beforehand.



– Remove any residues of lubricant or dirt in the guide rails -Arrows- with a lint-free cloth.



– Lubricate the inside and outside of the entire guide rail -arrows-.

WARNING

- *Observe the notes on the lubricant used and the associated test, cleaning and lubrication procedures ⇒ f7.11.1 or panoramic sliding / sliding glass roof", page 92 .*

– Repeat the work sequence on the opposite side of the vehicle.

– After lubricating, open and close the roof system completely once and then remove excess grease.

Note

Any defects found must be rectified (repair measure).

7.12 Sliding roof drains: check flow, clean if necessary

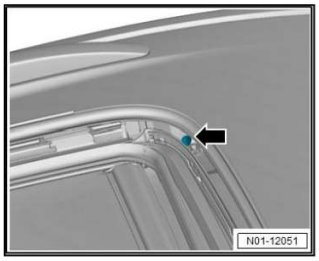
⇒ s7.12.1 liding roof drains: check flow, clean if necessary", page 93

⇒ s7.12.2 liding roof drains: check flow, clean if necessary", page 94

7.12.1 Front sliding roof drains: check flow, clean if necessary

- Sunroof fully opened.

– Check the front water drain -arrow- for dirt and remove the dirt if necessary.



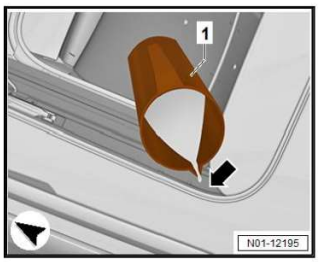
– Use a measuring cup to allow approx. 0.5 litres of tap water to flow into the front water drain. Care should be taken so that the water does not run into the interior!
– Check the bottom of the vehicle to see if the water escapes in the area of the front wheel housing.
– Repeat the work sequence on the opposite side of the vehicle.
– If no water leaks in the appropriate places:
– Clean the water passages ⇒ Bodywork - external assembly; Rep. gr. 60; Water drain hoses; Clean water drain hoses.

Note

Cleaning the water outlets is a repair measure, which is carried out separately.

7.12.2 Rear sliding roof drains: check flow, clean if necessary

• Sunroof fully opened.
– Use a measuring beaker -1- to let tap water flow into the rear outer area of the guide rail -arrow-. Care should be taken so that the water does not run into the interior!



– Check the bottom of the vehicle to see if the water is leaking from the rear wheel arches.
– Repeat the work sequence on the opposite side of the vehicle.
– If no water leaks in the appropriate places:
– Clean the water passages ⇒ Bodywork - external assembly; Rep. gr. 60; Water drain hoses; Clean water drain hoses.

Note

Cleaning the water outlets is a repair measure, which is carried out separately.

8 Exhaust-emission analysis

⇒ A8.1 nalysis on Models with Petrol Engines", page 96

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 not fitted, leak-tight, undamaged and fully-functional

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
- Readiness test for test, readiness code has been generated (i.e. is in state 0000000 - all of the systems supported by on-board diagnostics are tested at least once). Warning light for exhaust system in the dash panel insert does not indicate a fault.
- If the readiness code was not generated it will need to be re-generated (the best way to do this is via a test drive or using the diagnosis device).
- No faults from the exhaust-related systems are stored in event memory (the warning light for the exhaust system in the instrument cluster does not indicate a fault) – query the event memory ⇒ d6.9 iagnostic unit and query event memory", page 76

Caution

- *The lit warning light for exhaust system in the dash panel insert indicates exhaust-relevant faults in the 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 indicating by warning light for exhaust system lighting in the instrument cluster; faults are stored in event memory.

Resolve all identified faults, including sporadic faults, when reading the event memory before the exhaust emissions test (repair procedure) *⇒ d6.9 Iagnostic unit and query event memory", page 76* .

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

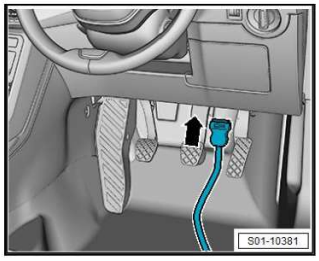
DANGER!

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 diagnosis device to diagnostic connector -arrow-.



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 Petrol Engines

The values had not been determined at this manual's date of issue.

Note

All tubes and plug connections, which had been removed or disconnected for the test and adjustment, must be correctly re-inserted or connected.

9 Miscellaneous

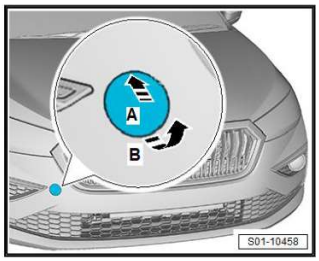
9.1 Tow starting/Towing

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.*

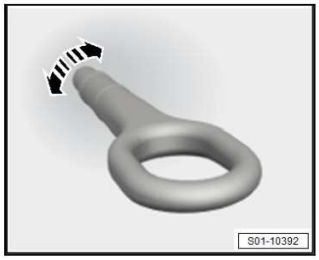
Front:

– Open the cover cap in the bumper in the direction of -arrows A and B-.



– 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.



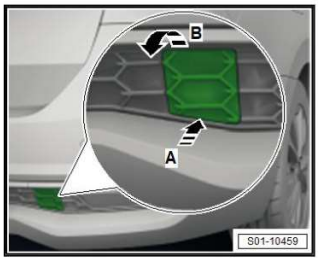
– Tighten the towing lug with the wheel bolt key (push the key through the lug).

When reinstalling the cover cap, it must reliably snap into place after the eyelet has been unscrewed.

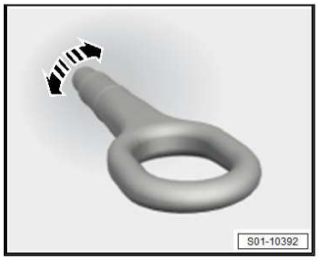
Rear:

The opening for the towing lug is located below the rear right part of the bumper.

– Open the cover cap in the bumper in the direction of -arrows A and B-.



– Screw in the towing lug by turning to the left -arrow- with the hand up to the stop.



– Tighten the towing lug with the wheel bolt key (push the key through the lug).

When reinstalling the cover cap, it must reliably snap into place after the eyelet has been unscrewed.

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 gear shifts.
- 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.

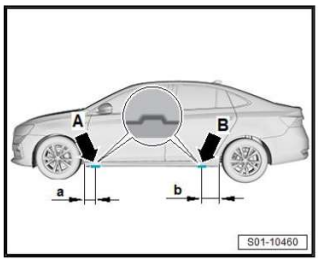
- Inspect steering clearance of the vehicle standing on its wheels, with engine running by turning the steering wheel one way and then the other (wheels straight ahead). There must be no play on the steering.
- Inspecting the sun roof operation.
- Pay attention to pulling and to the straight ahead position 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-.

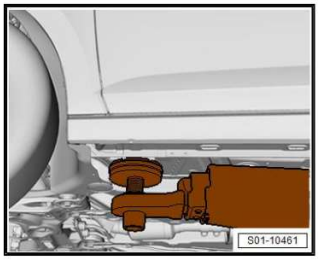
The jacking points are located at the stiff joint of the bottom side rail in the area of the marking -arrow A- and -arrow B-, on the bottom surface of the bottom side rail.



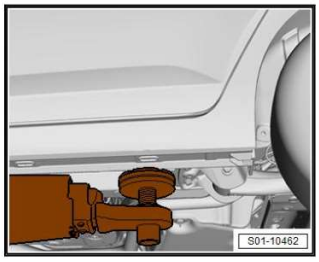
a - 160 mm

b - 260 mm

Jacking point at the front -arrow A-



Jacking point at the rear -arrow B-



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.*