

Maintenance

Audi A1 2011 ➤

Edition 06.2018



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Maintenance

Heading

1. General information
2. Preparations
3. Maintenance
4. Exhaust emissions test



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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.

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1 General information

(AIGG000928; Edition 06.2018)

Change history ⇒ [page 1](#)

Engine number ⇒ [page 1](#)

Vehicle identification number ⇒ [page 5](#)

Vehicle data sticker ⇒ [page 5](#)

1.1 --- Change history ---

N o.	Date	Chapter	Changes made
9	03.05.2018	Diagnostic work: performing ⇒ page 21	New chapter
8	06.11.2017	Various chapters on stock vehicle management	Chapter modified
		Poly V-belt for ancillaries: renewing ⇒ page 127	New chapter
7	01.05.2017	Data sheet for Radio Equipment Directive: printing and placing in glove compartment ⇒ page 31	New chapter
		Connecting vehicle diagnostic tester and sending diagnostic log ⇒ page 23	New chapter
		Door hinges with separate door arrester: cleaning and lubricating ⇒ page 57	Procedure modified to include: Lubricating door arrester
		Battery: checking that battery and battery cables are securely fitted	Chapter deleted
		Fuel tank: adding fuel additive ⇒ page 122	Chapter updated
		Service wallet: affixing vehicle data sticker ⇒ page 65	Chapter modified
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Note

For greater clarity, only the last three updates to the document are listed.

1.2 Engine number

Note

The engine number consists of the engine code letters (3 or 4 characters) and the serial number.

3-cyl. petrol engine 1.0 TFSI ⇒ [page 2](#)

4-cyl. petrol engine 1.2 TFSI ⇒ [page 2](#)

4-cyl. petrol engine 1.4 TFSI ⇒ [page 3](#)

4-cyl. petrol engine 1.8 TFSI/2.0 TFSI (version 1) ⇒ [page 3](#)

4-cyl. petrol engine 2.0 TFSI (version 2) ⇒ [page 4](#)

3-cyl. diesel engine 1.4 TDI ⇒ [page 4](#)

4-cyl. diesel engine 1.6 TDI (version 1) ⇒ [page 4](#)

4-cyl. diesel engine 1.6 TDI/2.0 TDI (version 2) ⇒ [page 5](#)

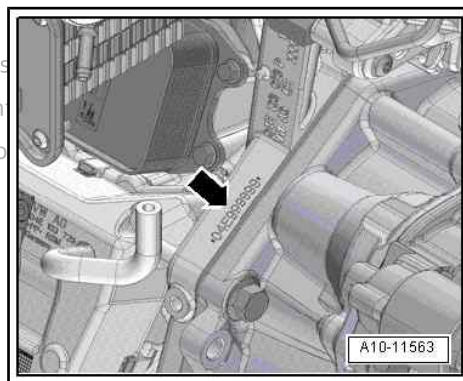
1.2.1 3-cyl. petrol engine 1.0 TFSI

The engine number is stamped on the left side at the joint between the engine and the gearbox -arrow-.

The engine number is also given on the sticker on the toothed belt cover (top).

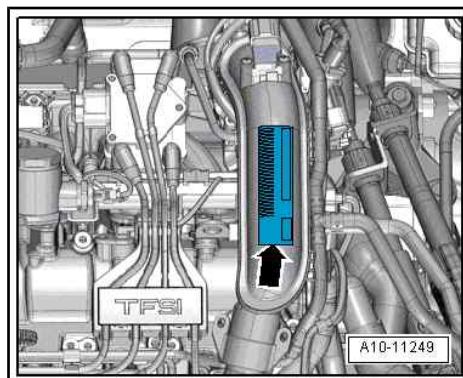
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In addition, the engine code letters are listed on the vehicle data sticker ⇒ [page 5](#).



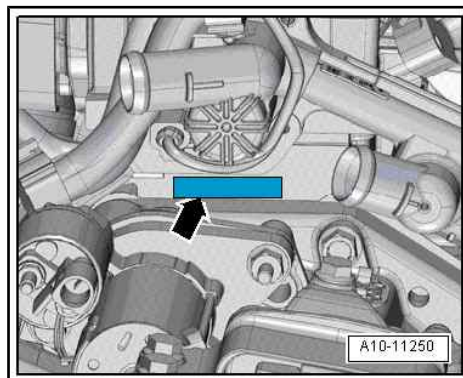
1.2.2 4-cyl. petrol engine 1.2 TFSI

The engine number is stamped on the left side at the joint between the engine and the gearbox -arrow-.



The engine number is also listed on the sticker on the toothed belt cover (top) -arrow-.

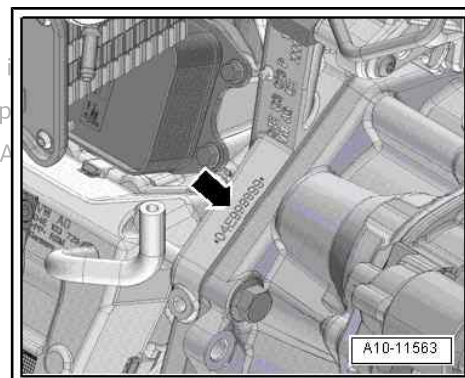
In addition, the engine code letters are listed on the vehicle data sticker ⇒ [page 5](#).



1.2.3 4-cyl. petrol engine 1.4 TFSI

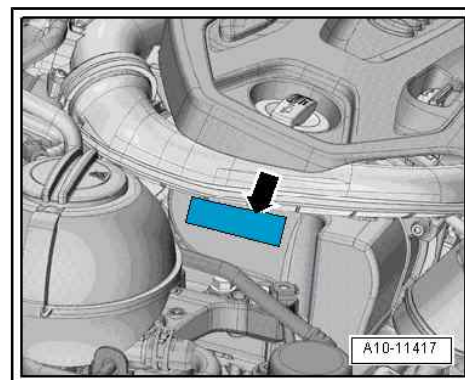
The engine number is stamped on the left side at the joint between the engine and the gearbox -arrow-.

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The engine number is also listed on the sticker on the toothed belt cover (top) -arrow-.

In addition, the engine code letters are listed on the vehicle data sticker [⇒ page 5](#).



1.2.4 4-cyl. petrol engine 1.8 TFSI/2.0 TFSI (version 1)

The engine number is stamped on the left side at the joint between the engine and the gearbox -arrow-.

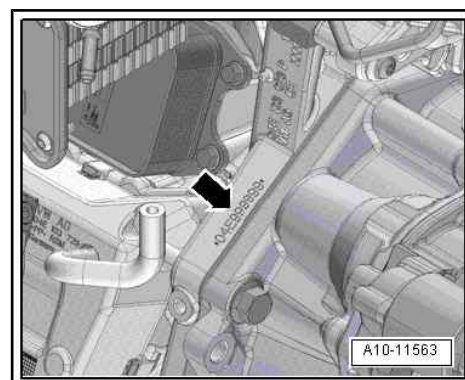
The engine number is also given on the sticker on the timing chain cover (top).

In addition, the engine code letters are listed on the vehicle data sticker [⇒ page 5](#).



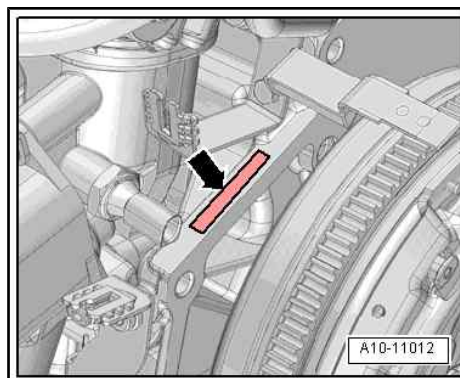
Note

There is more than one version of the engine code for the 4-cylinder petrol engine 2.0 TFSI [⇒ page 4](#).

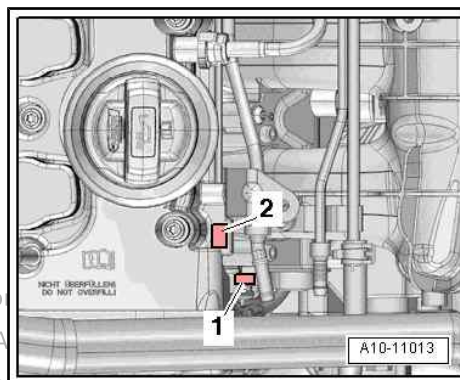


1.2.5 4-cyl. petrol engine 2.0 TFSI (version 2)

The engine number is stamped on the left side at the joint between the engine and the gearbox -arrow-.



The engine number is also listed on the sticker on the toothed belt cover (top) -arrow-.



In addition, the engine code letters are listed on the vehicle data sticker ⇒ [page 5](#).



Note

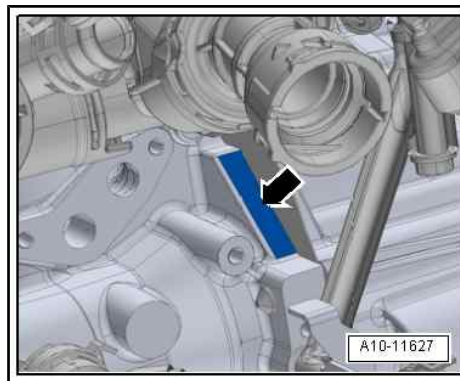
There is more than one version of the engine code for the 4-cylinder petrol engine 2.0 TFSI ⇒ [page 3](#).

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1.2.6 3-cyl. diesel engine 1.4 TDI

The engine number is stamped on the left side at the joint between the engine and the gearbox -arrow-.

The engine number is also given on the sticker on the toothed belt cover (top).

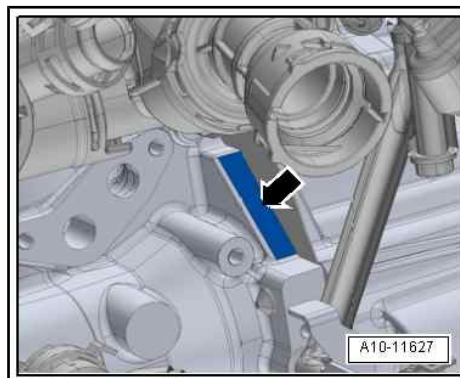


In addition, the engine code letters are listed on the vehicle data sticker ⇒ [page 5](#).

1.2.7 4-cyl. diesel engine 1.6 TDI (version 1)

The engine number is stamped on the left side at the joint between the engine and the gearbox -arrow-.

The engine number is also given on the sticker on the toothed belt cover (top).



In addition, the engine code letters are listed on the vehicle data sticker ⇒ [page 5](#).



Note

There are different versions of the 4-cylinder 1.6 TDI diesel engine with different engine codes ⇒ [page 5](#).

1.2.8 4-cyl. diesel engine 1.6 TDI/2.0 TDI (version 2)

The engine number is stamped on the left side at the joint between the engine and the gearbox -arrow-.

The engine number is also listed on the sticker on the toothed belt cover (top) -arrow-.

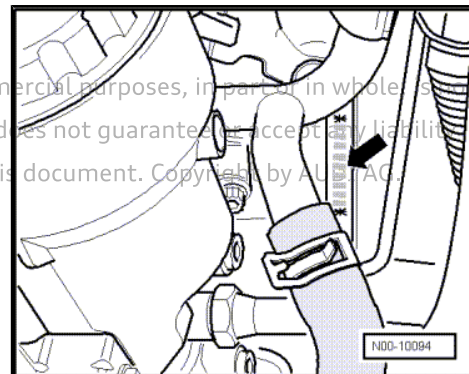
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In addition, the engine code letters are listed on the vehicle data sticker [⇒ page 5](#).



Note

There are different versions of the 4-cylinder 1.6 TDI diesel engine with different engine codes [⇒ page 4](#).

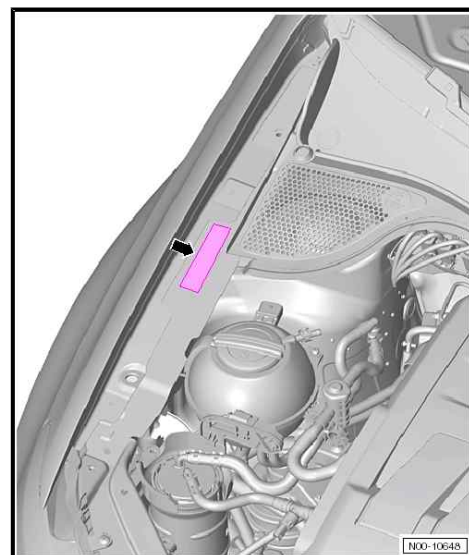


1.3 Vehicle identification number

Depending on the equipment and country-specific version, the vehicle identification number is located:

- ◆ Optional: In the MMI under »Car systems«
- ◆ On the longitudinal member (top right)
- ◆ On the vehicle data sticker [⇒ page 5](#)

The vehicle identification number consists of the following:



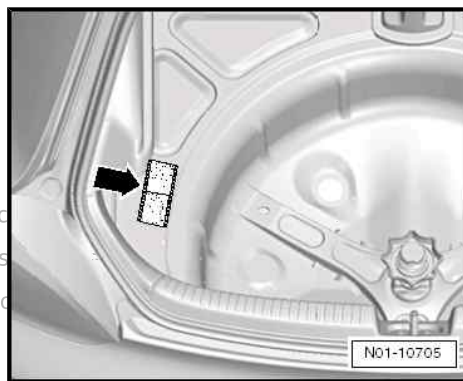
W A U	Z Z Z	8 X	Z	B	A / N	0 0 0 2 3 4
Manufacturer code	Filler characters	Type	Filler characters	Model year	Production location	Serial number

1.4 Vehicle data sticker

The vehicle data sticker is located:

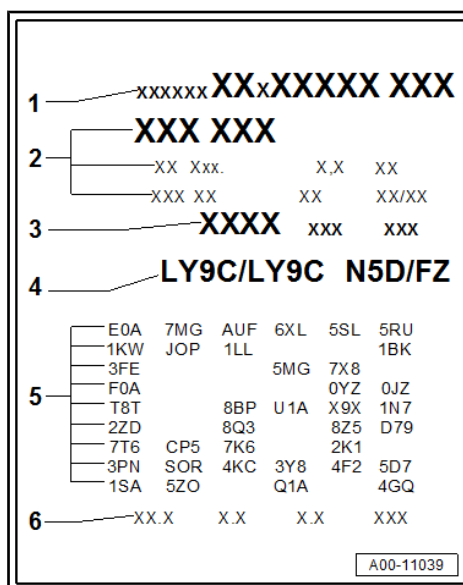
- ◆ In the Service Schedule or service wallet
- ◆ In the area of the spare wheel well under the floor covering
-arrow-

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The vehicle data sticker contains the following vehicle data:

- 1 - Vehicle identification number
- 2 - Vehicle model, manufacturer's code, engine type and power output, production month and year
- 3 - Engine and gearbox code letters (not specified on some export models)
- 4 - Paint number, interior equipment number
- 5 - Numbers for optional extras
- 6 - Fuel consumption: urban, extra urban, combined, CO2 (not specified on some export models)



2 Preparations

Vehicle: raising ⇒ [page 7](#)

Engine cover panel: removing and installing ⇒ [page 9](#)

Noise insulation: removing and installing ⇒ [page 12](#)

Window regulators: activating automatic open/close function
⇒ [page 13](#)

Vehicle diagnostic tester: connecting ⇒ [page 14](#)

2.1 Vehicle: raising

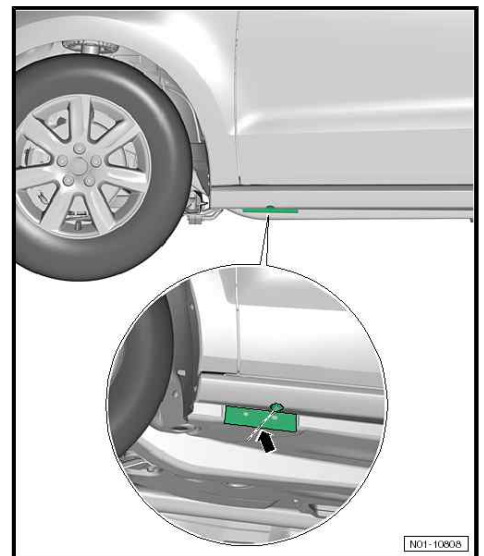
CAUTION

Risk of damage to vehicle due to incorrect use of lifting platform.

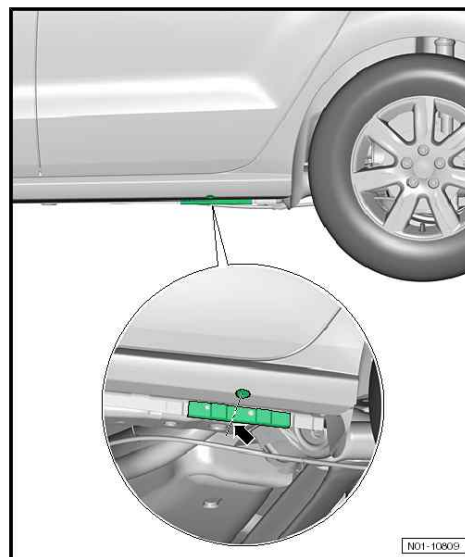
- ◆ Do not exceed the permissible lifting capacity of the lifting platform.
- ◆ The vehicle should be lifted only at the points shown in the illustration.
- ◆ Position support plates so that they are aligned centrally below the lifting points.
- ◆ Ensure sufficient clearance between low-mounted vehicle components and the lifting platform.

Procedure:

- Front: Position support plates of lifting platform under lifting point on side member -arrow-.

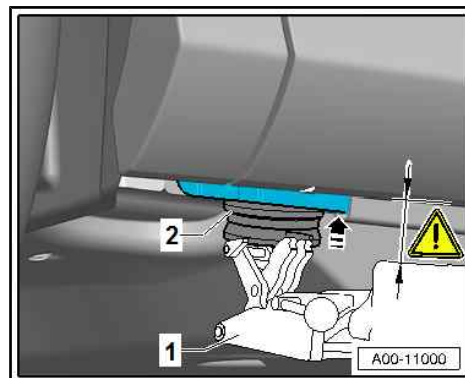


- Rear: Position support plates of lifting platform under lifting point on side member -arrow-.



Note

- ◆ The location of the lifting points is indicated by markings stamped on the side member trim.
- ◆ Applies to A1 quattro: Extend all support plates -2- far enough so that the lifting arm of the lifting platform does not touch the vehicle trim.



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2.2 Engine cover panel: removing and installing

4-cyl. petrol engine 1.4 TFSI (version 1) ⇒ [page 9](#)

4-cyl. petrol engine 1.4 TFSI (version 2) ⇒ [page 9](#)

4-cyl. petrol engine 1.4 TFSI (version 3) ⇒ [page 10](#)

4-cyl. petrol engine 1.8 TFSI ⇒ [page 10](#)

4-cyl. petrol engine 2.0 TFSI (version 1) ⇒ [page 11](#)

4-cyl. petrol engine 2.0 TFSI (version 2) ⇒ [page 11](#)

3-cyl. diesel engine 1.4 TDI ⇒ [page 11](#)

4-cyl. diesel engine 1.6 TDI (version 1) ⇒ [page 12](#)

4-cyl. diesel engine 1.6 TDI/2.0 TDI (version 2) ⇒ [page 12](#)

2.2.1 4-cyl. petrol engine 1.4 TFSI (version 1)

Procedure for removing:

- Carefully pull engine cover panel off retaining pins one after another -arrows-.

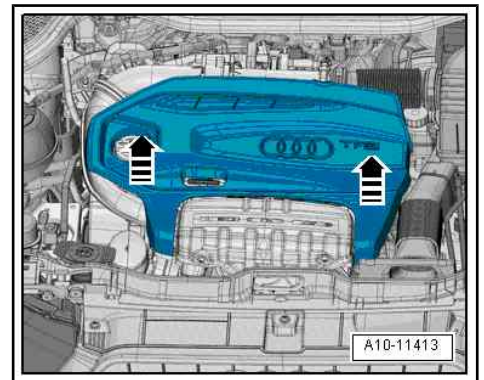
Procedure for installing:

- Position engine cover panel on retaining pins and then use your hands to press it onto retaining pins, one after the other.



Note

There is more than one version of the engine cover panel for the 4-cylinder 1.4 TFSI petrol engine ⇒ [page 9](#).



2.2.2 4-cyl. petrol engine 1.4 TFSI (version 2)

Special tools and workshop equipment required

- ◆ Torque wrench - V.A.G 1783- , measuring range 2 to 10 Nm
- ◆ Or: torque wrench - V.A.G 1410- , measuring range 4 to 20 Nm
- ◆ Or: torque wrench - VAS 6854- , measuring range 5 to 13 Nm

Table of tightening torques for installation:

Component	Tightening torque [Nm]
Bolt	10

Procedure for removing:

- Disengage coolant hose -1- at engine cover panel.

- Unscrew bolts -arrows- from engine cover panel and remove engine cover panel.

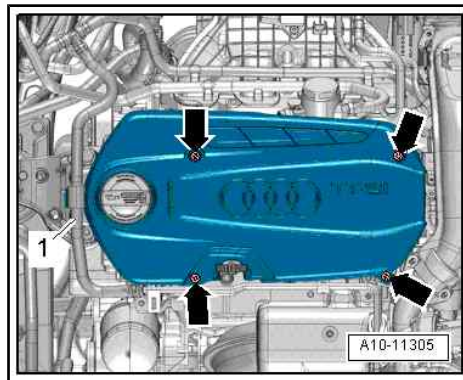
Procedure for installing:

- Install in reverse sequence. Note tightening torques (see table of tightening torques for installation ⇒ [page 9](#)).



Note

There is more than one version of the engine cover panel for the 4-cylinder 1.4 TFSI petrol engine ⇒ [page 10](#) .



2.2.3 4-cyl. petrol engine 1.4 TFSI (version 3)

Procedure for removing:

- Lift right side of engine cover panel -arrow A- and detach towards right -arrows B-.

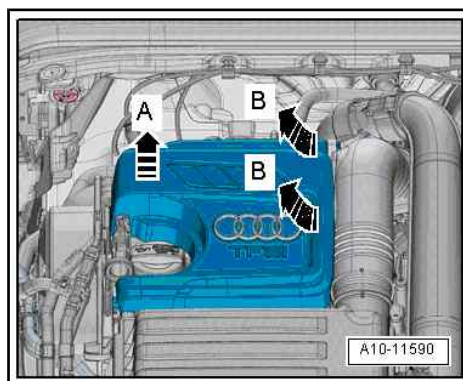
Procedure for installing:

- Press engine cover panel onto retaining pins first on left side -arrows B- and then engage at front right.



Note

There is more than one version of the engine cover panel for the 4-cylinder 1.4 TFSI petrol engine ⇒ [page 9](#) .



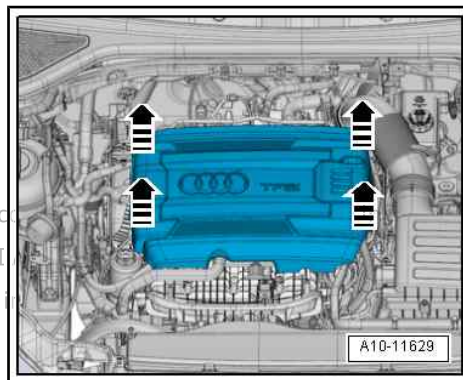
2.2.4 4-cyl. petrol engine 1.8 TFSI

Procedure for removing:

- Carefully pull engine cover panel off retaining pins one after another -arrows-.

Procedure for installing:

- Position engine cover panel on retaining pins and then use your hands to press it onto retaining pins, one after the other.



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2.2.5 4-cyl. petrol engine 2.0 TFSI (version 1)

Procedure for removing:

- Carefully pull engine cover panel off retaining pins one after another -arrows-.

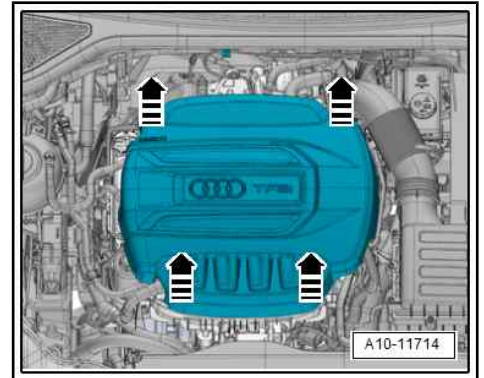
Procedure for installing:

- Position engine cover panel on retaining pins and then use your hands to press it onto retaining pins, one after the other.



Note

There is more than one version of the engine cover panel for the 4-cylinder 2.0 TFSI petrol engine ⇒ [page 11](#).



2.2.6 4-cyl. petrol engine 2.0 TFSI (version 2)

Procedure for removing:

- Carefully pull engine cover panel off retaining pins one after another -arrows-.

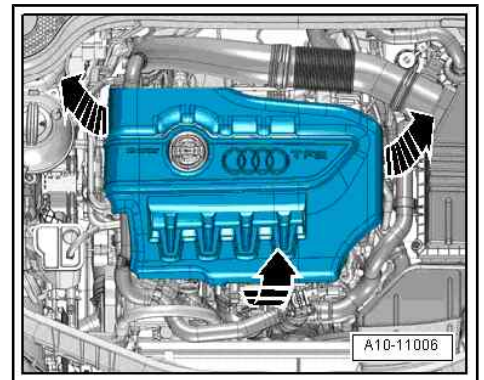
Procedure for installing:

- Position engine cover panel on retaining pins and then use your hands to press it onto retaining pins, one after the other.



Note

There is more than one version of the engine cover panel for the 4-cylinder 2.0 TFSI petrol engine ⇒ [page 11](#).



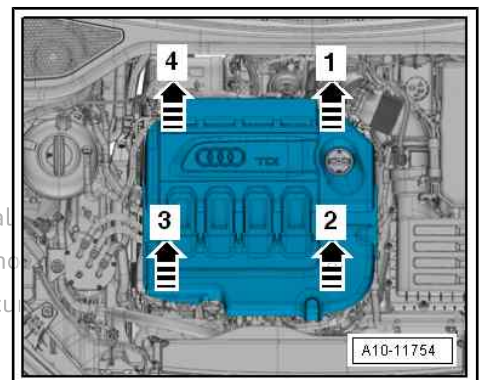
2.2.7 3-cyl. diesel engine 1.4 TDI

- Carefully pull engine cover panel off retaining pins -1-, -2-, -3- and -4- one after another.

Procedure for installing:

- Position engine cover panel on retaining pins and then use your hands to press it onto retaining pins, one after the other.

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2.2.8 4-cyl. diesel engine 1.6 TDI (version 1)

- Carefully pull engine cover panel off retaining pins -1-, -2-, -3- and -4- one after another.

Procedure for installing:

- Position engine cover panel on retaining pins and then use your hands to press it onto retaining pins, one after the other.

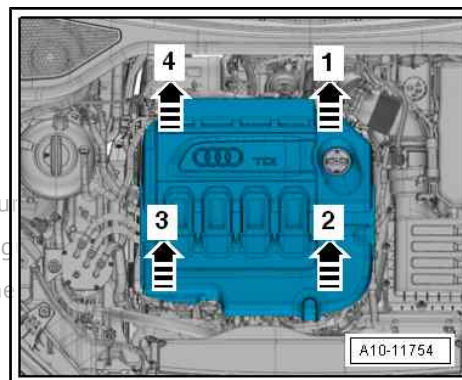


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There is more than one version of the engine cover panel for the 4-cylinder 1.6 TDI diesel engine ⇒ [page 12](#).



2.2.9 4-cyl. diesel engine 1.6 TDI/2.0 TDI (version 2)

Procedure for removing:

- Carefully pull engine cover panel off retaining pins one after another -arrows-.

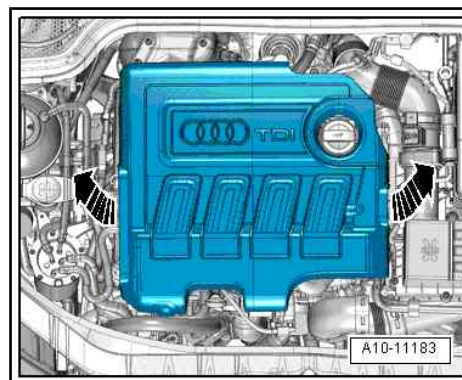
Procedure for installing:

- Position engine cover panel on retaining pins and then use your hands to press it onto retaining pins, one after the other.



Note

There is more than one version of the engine cover panel for the 4-cylinder 1.6 TDI diesel engine ⇒ [page 12](#).



2.3 Noise insulation: removing and installing

Special tools and workshop equipment required

- ◆ Torque screwdriver - V.A.G 1624- , measuring range 1 to 5 Nm
- ◆ Or: torque screwdriver - VAS 6494- , measuring range 1.5 to 3 Nm
- ◆ Or: torque wrench - V.A.G 1783- , measuring range 2 to 10 Nm

Table of tightening torques for installation:

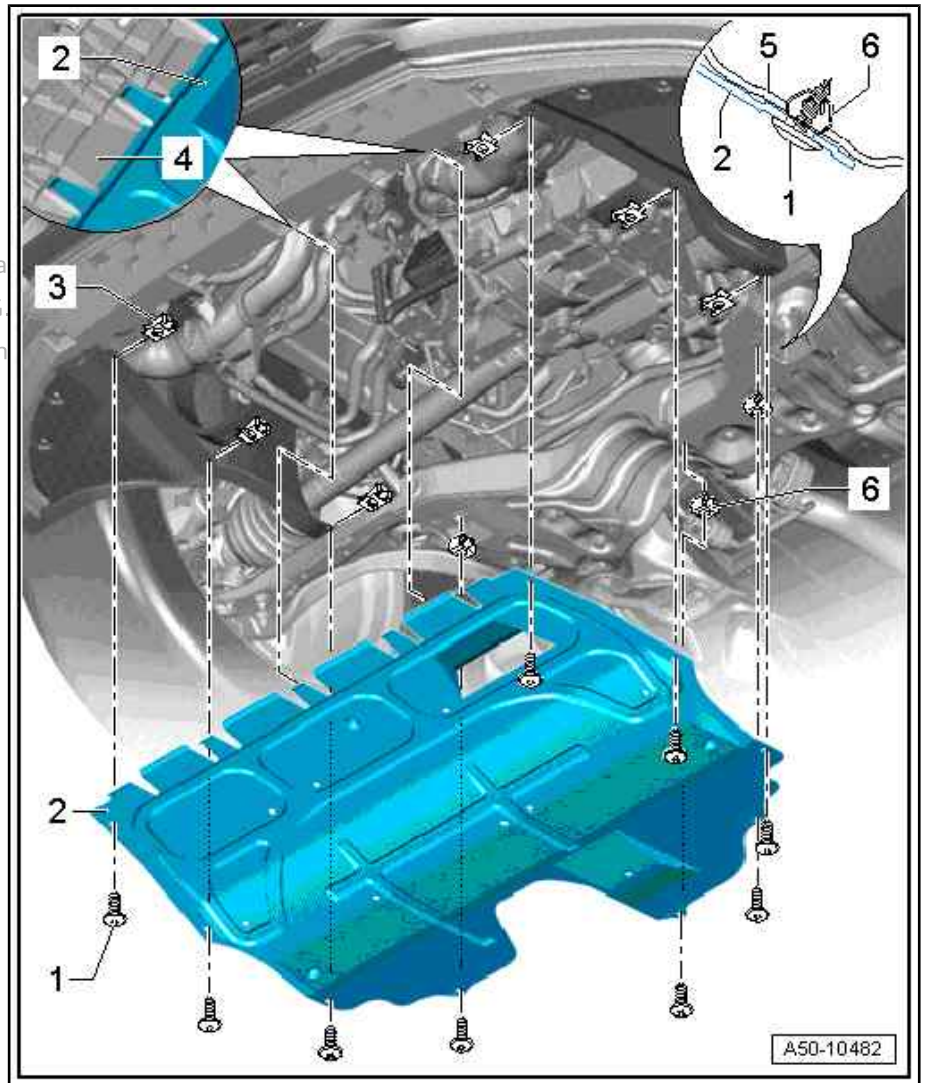
Component/fastener	[Nm]
Bolts	2

Procedure for removing:

- Remove bolts -1- for noise insulation.



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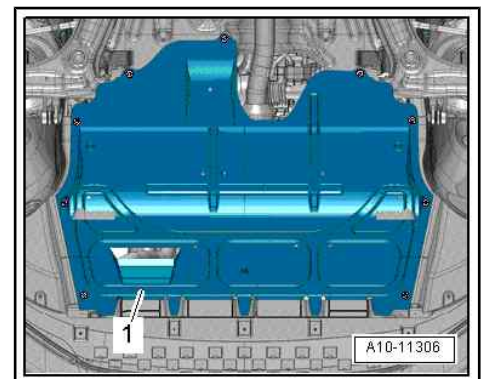


- Pull noise insulation -2- towards rear out of bottom section of bumper cover and detach.

Procedure for installing:

- Insert noise insulation into bottom section of bumper cover so that narrow tabs are positioned below edge -illustration-.

Continue installation in reverse sequence. Note tightening torques (see table of tightening torques for installation [=> page 12](#)).



2.4 Window regulators: activating automatic open/close function

If the vehicle battery was disconnected, the automatic open/close function for the electric windows must be reactivated.

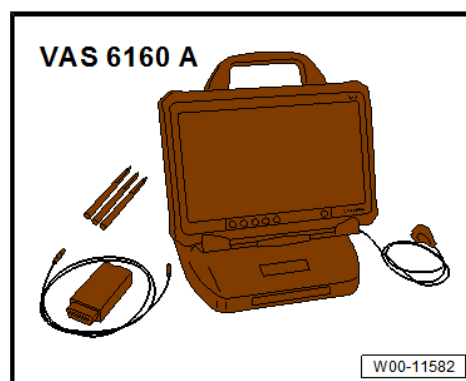
Procedure:

- Pull up on window regulator switch until windows are completely closed.
- Release switch and pull on it again for at least one second.
- Repeat procedure with all window regulators.

2.5 Vehicle diagnostic tester: connecting

Special tools and workshop equipment required

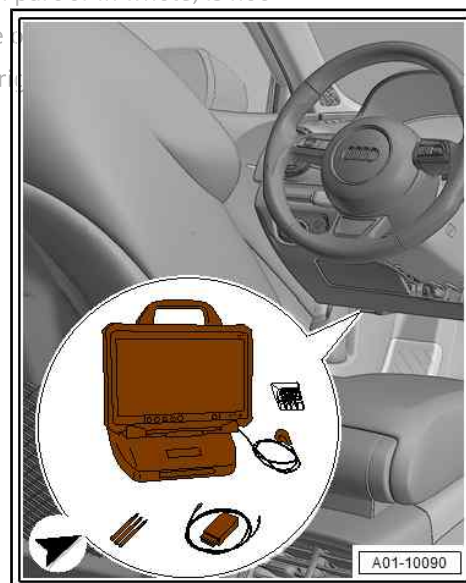
- ◆ Diagnosis system - VAS 6160 A-



- ◆ Remote diagnosis head - VAS 5054A-
- ◆ Or: diagnosis interface - VAS 5055-

Procedure:

- Plug connector for remote diagnosis head - VAS 5054A- into diagnostic connection in vehicle.
- Switch on diagnostic system - VAS 6160 A- .
- Switch on ignition.
- Follow the menu on the screen to start the desired functions.





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3 Maintenance

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⇒ [page 25](#)

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Axles (front and rear): checking components for play, secure attachment and damage, and checking protective boots
⇒ [page 47](#)

Passenger airbag: checking key switch on/off and setting to "on"
⇒ [page 65](#)

Tyres (except spare wheel): checking tyre pressures and adjusting to 3.5 bar if necessary ⇒ [page 42](#)

Tyres: checking tyre pressures and adjusting if necessary
⇒ [page 41](#)

Tyres: checking condition and wear pattern, and checking and recording tread depth ⇒ [page 40](#)

Service wallet: affixing vehicle data sticker ⇒ [page 65](#)

Owner's literature: checking that all documents are present
⇒ [page 65](#)

Brake system: checking condition of brake hoses, and checking that caps are fitted on bleeder screws ⇒ [page 37](#)

Brake pads: checking thickness ⇒ [page 38](#)

Brake fluid (vehicles older than 12 months): changing
⇒ [page 37](#)

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Brake fluid: changing ⇒ [page 32](#)

Brake discs: checking for surface rust and operating brakes to clean if necessary ⇒ [page 39](#)

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⇒ [page 52](#)

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⇒ [page 19](#)

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Vehicle interior and exterior: checking for and documenting any damage ⇒ [page 67](#)

Vehicle interior: checking that it is clean and cleaning if necessary
⇒ [page 66](#)

Vehicle interior: removing any objects other than those protecting interior surfaces ⇒ [page 66](#)

Vehicle interior: removing protective covers for seats and carpet
⇒ [page 66](#)

Vehicle (from below): checking for damage ⇒ [page 51](#)

Connecting vehicle diagnostic tester and sending diagnostic log
⇒ [page 23](#)

Mirror hanger indicating defective battery: renewing battery on affected vehicles ⇒ [page 31](#)

Headlights and reversing lights, side lights, number plate lights, turn signals, hazard warning lights: checking operation
⇒ [page 63](#)

Vehicle key(s), wheel covers and owner's literature: checking availability and recording number present ⇒ [page 68](#)

Vehicle key: removing from ignition lock ⇒ [page 68](#)

Vehicle key(s): checking operation and recording number of keys given to customer ⇒ [page 67](#)

Vehicle doors: removing edge protection ⇒ [page 123](#)

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Luggage compartment cover and sun blind: checking that they are rolled up and rolling up if necessary ⇒ [page 68](#)

Four-wheel drive coupling: changing oil ⇒ [page 126](#)

Glove box light, interior lighting and reading light: checking operation ⇒ [page 64](#)

Hydraulic system: checking fluid level ⇒ [page 100](#)

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⇒ [page 64](#)

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Wheel bolts: tightening to specified torque ⇒ [page 44](#)

Tyre Pressure Loss Indicator: storing changed tyre pressures ⇒ [page 43](#)

Tyre repair kit: checking that set is complete, and checking and recording expiry date ⇒ [page 43](#)

Manual gearbox/automatic gearbox: selecting 1st gear/park ⇒ [page 126](#)

Windscreen washer system: checking spray pattern and adjusting if necessary ⇒ [page 59](#)

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Service Schedule: entering Delivery Inspection ⇒ [page 65](#)

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Seat belts: checking that retaining rivets are fitted, and checking locking action of automatic belt retractor ⇒ [page 66](#)

Horn: checking operation ⇒ [page 64](#)

Sun visors: checking that they are folded up and folding up if necessary ⇒ [page 68](#)

Stock vehicles: observing measures specified in Maintenance table for stock vehicles (see "Before handing vehicle over to customer") ⇒ [page 125](#)

Dust and pollen filter: renewing ⇒ [page 120](#)

Stock vehicle care management: deciding and recording date of next check ⇒ [page 126](#)

Transport mode: checking activation and activating if necessary ⇒ [page 22](#)

Transport mode: deactivating ⇒ [page 21](#)

Door hinges with separate door arrester: cleaning and lubricating ⇒ [page 57](#)

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Underbody: checking trim, wheel housing liners, side members and pipes/wiring for damage, and checking that they are properly secured ⇒ [page 51](#)

First-aid kit: checking and recording expiry date ⇒ [page 67](#)

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Toothed belt for coolant pump drive: checking ⇒ [page 127](#)

Toothed belt for camshaft drive and tensioning roller: renewing ⇒ [page 127](#)

Toothed belt for camshaft drive: renewing ⇒ [page 127](#)

Accessories: installing ⇒ [page 125](#)

Spark plugs: renewing ⇒ [page 88](#)

3.1 Diesel particulate filter: reading out ash deposit volume

Table of test values and procedure guidelines:

Engine	Engine code	Measured value designation for diagnostic tester	Maximum value for ash deposit
3-cyl. diesel engine 1.4 TDI	All	Particulate filter, oil ash deposit mass	Oil ash deposit mass: 80g
4-cyl. diesel engine 1.6 TDI	CXMA	Particulate filter, oil ash deposit mass	Oil ash deposit mass: 80g
4-cyl. diesel engine 1.6 TDI	All engine codes except CXMA	Particulate filter, oil ash deposit mass	Oil ash deposit mass: 70 g
4-cyl. diesel engine 2.0 TDI	All	Particulate filter, oil ash deposit volume	Oil ash deposit volume: 175 ml

Procedure:

- Connect vehicle diagnostic tester ⇒ [page 14](#) .
- Select **Diagnosis** mode and begin diagnosis.
- Perform vehicle identification.
- De-select “Working with Guided Fault Finding” by removing  and press **Apply**.
- Continue to follow instructions on screen.
- Switch to “Control units” tab.
- Select control unit “01 — Engine electronics” and carry out following functions via right mouse button:
 - ◆ Identify control unit
 - ◆ Guided Functions
 - ◆ 01 - Read measured values
- Select desired measured value (see table of test values and procedure guidelines ⇒ [page 19](#)) by entering  and confirming with **OK**.
- Evaluate measured value and follow further instructions on screen.
- Perform the following measures according to the measured value:

Result:	Measure:
Measured value < critical value	Vehicle can be driven for a further 30,000 km (19,000 miles).
Measured value ≥ critical value	Renew diesel particulate filter and reset measured value to zero ⇒ Engine; Rep. gr. 26 ; Emission control system; Removing and installing particulate filter .

3.2 Event memory: reading out

Procedure:

- Connect vehicle diagnostic tester.
- Select **Diagnosis** mode and begin diagnosis.
- Perform vehicle identification.
- Select “Working with Guided Fault Finding” by entering **V** and press **Apply**.

The control unit is then identified, and the event memory is interrogated. Observe notes and test conditions.

- Switch to “Control units” tab and call up “Event memory list” for an overview of all entries stored in event memory.
- Select “Test plan” tab and carry out test plans according to instructions.

3.3 MMI navigation system: unloading hard disk

Procedure:

- Unload hard disk according to manufacturer's specifications.

3.4 MMI navigation system: checking correct position on navigation map and setting if necessary

Procedure:

- Switch on ignition and activate MMI.
- Press function selector button **NAV**.
- Call up navigation map.
- Check that arrow on navigation map is in correct position.



Note

- ◆ *If any errors occur while the navigation system is initialising up to 11%, refer to TPI 2030168.*
- ◆ *If any errors occur while the navigation system is initialising up to 33%, refer to TPI 2031897.*

3.5 Service interval display: resetting service event

Procedure:

- Connect vehicle diagnostic tester ⇒ [page 14](#) .
- Select **Diagnosis** mode and begin diagnosis.
- Perform vehicle identification.

- De-select “Working with Guided Fault Finding” by removing  and press **Apply**.
- Switch to “Special functions” tab.
- Reset service event via ODIS (select corresponding service event).
- Start program by selecting **Carry out check**.
- Continue to follow instructions on screen.

 Note

The distance until the next oil service is calculated on the basis of the customer's driving profile. When the service interval display is reset, the distance until the next oil service is recalculated on the basis of this driving profile. Frequent cold starts or short journeys make high demands on the engine oil. This can cause the information about the distance until the next oil service to vary, depending on the driving profile.

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3.6 Diagnostic work: performing

Procedure:

- Connect vehicle diagnostic tester.
- Select **Diagnosis** mode and begin diagnosis.
- Perform vehicle identification.
- Select “Working with Guided Fault Finding”.
- Switch to “Special functions” tab and select following program:
- ◆ Predelivery inspection total
- Start program by selecting **Carry out check**.
- Continue to follow instructions on screen.
- Read out event memory again and switch to “Test plan” tab.
- Carry out test programs as listed.

3.7 Transport mode: deactivating

Procedure:

- Connect vehicle diagnostic tester ⇒ [page 14](#) .
- Select **Diagnosis** mode and begin diagnosis.
- Perform vehicle identification.
- De-select “Working with Guided Fault Finding” by removing  and press **Apply**.
- Switch to “Special functions” tab and select following program:
- ◆ 19 - Activating / deactivating transport mode
- Start program by selecting **Carry out check**.
- Continue to follow instructions on screen.

**Note**

- ♦ *The transport mode serves to maintain the vehicle's ability to start.*
- ♦ *When the vehicle is in transport mode, many functions, e.g. radio, are restricted or unavailable.*

3.8 Transport mode: checking activation and activating if necessary

Checking transport mode ⇒ [page 22](#)

Activating transport mode ⇒ [page 22](#)

3.8.1 Checking transport mode

Procedure:

- Switch on ignition.
- Check whether »Transport mode on« is shown in instrument cluster.
- If necessary, activate transport mode ⇒ [page 22](#) .

3.8.2 Activating transport mode

Procedure:

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- Connect vehicle diagnostic tester ⇒ [page 14](#)
- Select **Diagnosis** mode and begin diagnosis
- Perform vehicle identification.
- De-select "Working with Guided Fault Finding" by removing **√** and press **Apply**.
- Switch to "Special functions" tab and select following program:
 - ♦ 19 - Activating / deactivating transport mode
- Start program by selecting **Carry out check**.
- Continue to follow instructions on screen.

**Note**

- ♦ *The transport mode serves to maintain the vehicle's ability to start.*
- ♦ *When the vehicle is in transport mode, many functions, e.g. radio, are restricted or unavailable.*

3.9 Battery: reading out status

This maintenance item only applies to certain model years: Note specification in Maintenance table.

Procedure:

- Connect vehicle diagnostic tester ⇒ [page 14](#) .
- Select **Diagnosis** mode and begin diagnosis.
- Perform vehicle identification.
- Select "Working with Guided Fault Finding" by entering **√** and press **Apply**.

- Switch to “Special functions” tab and select following program:
- ◆ A - Battery, Testing
- Start program by selecting Carry out check.
- Continue to follow instructions on screen.
- Use results of test to determine following measures:

Result on vehicle diagnostic test- Measure:
er:

“Battery OK”	No further measures necessary.
“Charge battery”	Charge battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Charging battery .
“Battery is no longer of the same quality as when shipped”	Renew battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Removing and installing battery .

 Note

A working network connection is necessary to send the diagnostic log file online.

3.10 Connecting vehicle diagnostic tester and sending diagnostic log

- Carry out test programs according to test plan.
- Switch to Control units tab.
- Press X Diagnosis button and close diagnosis program.
- Send off diagnostic log online.

 Note

- ◆ *The event memory is erased automatically when you exit Guided Fault Finding.*
- ◆ *The diagnostic log is sent automatically when you exit Guided Fault Finding.*
- ◆ *If no network connection is available, the diagnostic log will be cached for a few days. Complete the online data transfer as soon as possible.*

3.11 Battery: checking electrolyte level

 Note

Batteries must not be opened.

Battery without magic eye ⇒ [page 23](#)

Battery with magic eye ⇒ [page 24](#)

3.11.1 Battery without magic eye

The battery is located either in the luggage compartment or in the engine compartment.

Removal steps:

Applies to vehicles with battery in luggage compartment: Lift luggage compartment floor and secure in position.

Procedure:

- Check battery housing for the following:
 - ◆ Battery terminals are not corroded or damaged
 - ◆ Mechanical damage to battery housing and cover, indicated by electrolyte leakage or crystals at the damaged area
- Damaged batteries must be renewed.
- Check electrolyte level of all battery cells using markings on housing.
- If electrolyte level of one or more battery cells is below MIN marking: Renew battery.

Install in reverse sequence.

**Note**

- ◆ *A bright hand-held light helps to better see the MIN and MAX markings on the housing.*
- ◆ *If battery is difficult to see: Use a small mirror to check the electrolyte level (shine a bright hand-held light at a right angle onto the battery cells).*

3.11.2 Battery with magic eye

**WARNING**

Risk of explosion if magic eye is colourless or light yellow!

- ◆ Do not attempt to jump-start vehicle.
- ◆ Do not check or charge battery.
- ◆ Renew battery.

The battery is located either in the luggage compartment or in the engine compartment.

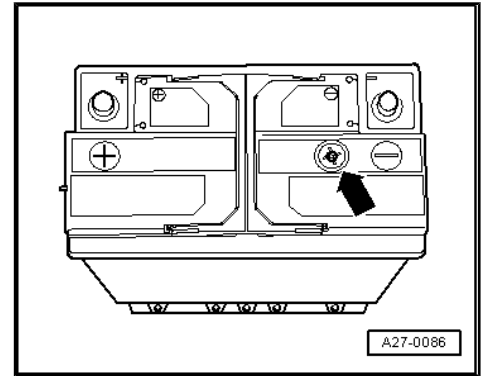
Removal steps:

Applies to vehicles with battery in luggage compartment: Lift luggage compartment floor and secure in position.

Procedure:

- Check battery housing for the following:
 - ◆ Battery terminals are not corroded or damaged
 - ◆ Mechanical damage to battery housing and cover, indicated by electrolyte leakage or crystals at the damaged area
- Damaged batteries must be renewed.

- Before checking electrolyte level: Tap magic eye -arrow- carefully with handle of a screwdriver.
- Read off battery electrolyte level according to colour display. Two different results are possible:



Colour of magic eye:	Measure:
Black or green	Electrolyte level OK: No further measures necessary
Colourless or light yellow	Electrolyte level too low: Battery must be renewed

Install in reverse sequence.

Note

- ◆ The magic eye is also referred to as an ALI (acid level indicator).
- ◆ The magic eye is only for use in determining the electrolyte level.
- ◆ During battery charging or vehicle operation, air bubbles can form underneath the magic eye which could falsify the colour display. Tap magic eye lightly to release any bubbles.

3.12 Battery: connecting stationary battery charging unit (min. 30A, charging voltage max. 14.8 V on IV characteristic curve)

WARNING

Risk of injury if battery terminal clamps are connected incorrectly.

- ◆ Connect positive battery terminal clamp first, then connect negative battery terminal clamp.

Only applies to vehicles intended for display.

Battery in engine compartment ⇒ [page 25](#)

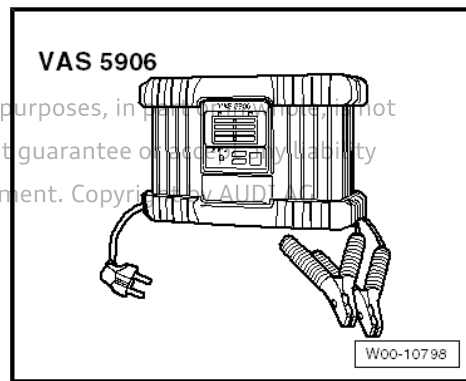
Battery in luggage compartment ⇒ [page 27](#)

3.12.1 Battery in engine compartment

Special tools and workshop equipment required

◆ Battery charger - VAS 5906-

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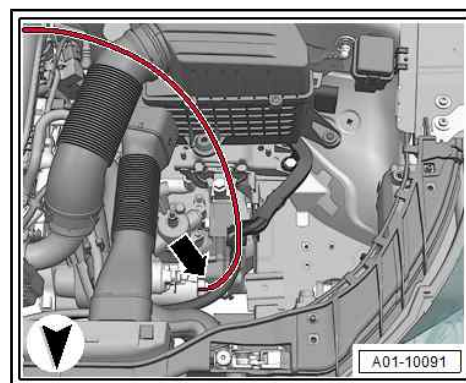
◆ Wire

Requirements:

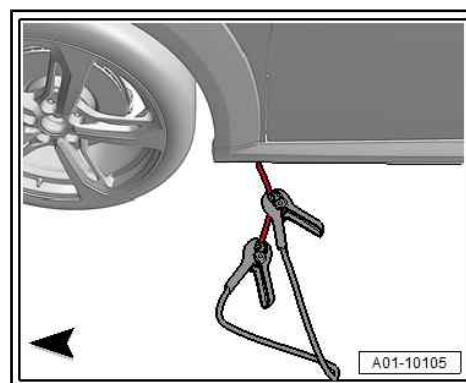
- Ignition switched off.

Procedure for connecting battery charger:

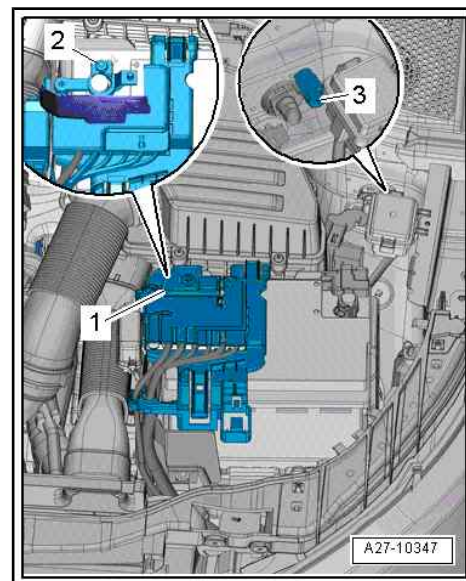
- Guide wire from above through engine compartment in area in front of air cleaner -arrow- and out from underside of vehicle.



- Attach both charger clamps to wire (see -illustration-) and guide upwards into engine compartment.



- Open battery terminal cover -1-.
- First connect charger clamp (+) to battery terminal (+) -2-, and ensure that charger clamp does not make contact with bonnet when it is closed.
- Then connect charger clamp (-) to earth point (-) -3- on body, and ensure that charger clamp does not make contact with bonnet when it is closed.
- Arrange wiring of battery charger - VAS 5906- neatly in engine compartment.
- Switch on battery charger - VAS 5906- and adjust settings as needed.
- Position battery charger - VAS 5906- under vehicle so that it is hidden from view as well as possible, ensuring that ventilation grille of charger is unobstructed.



Procedure for disconnecting battery charger:

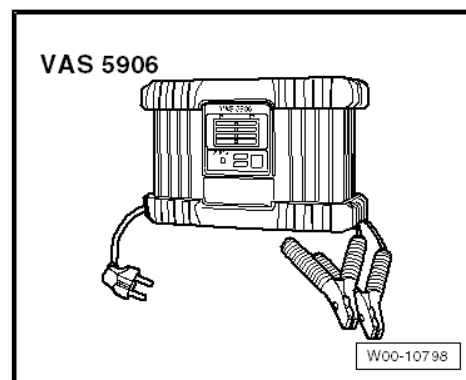
Remove in reverse sequence.

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3.12.2 Battery in luggage compartment

Special tools and workshop equipment required

- ◆ Battery charger - VAS 5906-



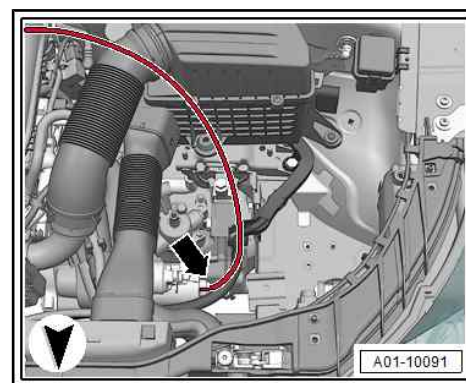
- ◆ Wire

Requirements:

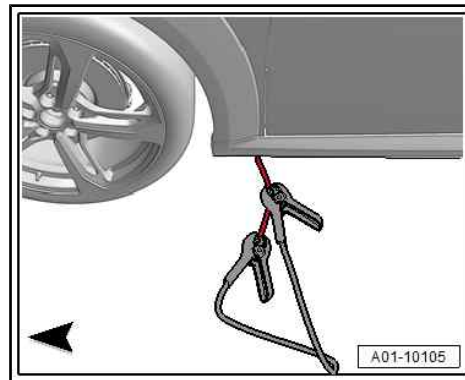
- Ignition switched off.

Procedure for connecting battery charger:

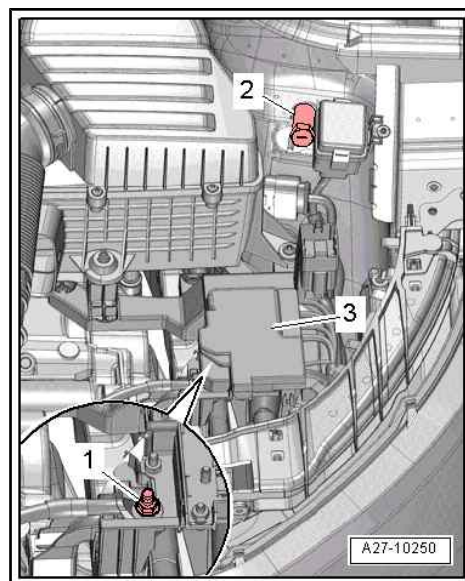
- Guide wire from above through engine compartment in area in front of air cleaner -arrow- and out from underside of vehicle.



- Attach both charger clamps to wire (see -illustration-) and guide upwards into engine compartment.



- Open cover of electronics box -3-.
- First connect charger clamp (+) to jump start connection (+) -1-, and ensure that charger clamp does not make contact with bonnet when it is closed.
- Then connect charger clamp (-) to earth point (-) -2- on body, and ensure that charger clamp does not make contact with bonnet when it is closed.
- Arrange wiring of battery charger - VAS 5906- neatly in engine compartment.
- Switch on battery charger - VAS 5906- and adjust settings as needed.
- Position battery charger - VAS 5906- under vehicle so that it is hidden from view as well as possible, ensuring that ventilation grille of charger is unobstructed.



Procedure for disconnecting battery charger:

Remove in reverse sequence.



Note

Depending on the equipment version, the vehicle may only have a jump start connection (+) rather than an electronics box.

3.13 Battery: determining and recording state of charge (SOC)

Vehicles with transport mode ON ⇒ [page 28](#)

Vehicles with transport mode OFF: battery in engine compartment ⇒ [page 29](#)

Vehicles with transport mode OFF: battery in luggage compartment ⇒ [page 29](#)

3.13.1 Vehicles with transport mode ON

Procedure:

- Read off battery charge level on instrument cluster.
- Use results of test to determine following measures:

State of charge (SOC): **Measure:**

“≥ 80% (12.5 V)” No further measures necessary.

State of charge (SOC): **Measure:**

“SOC < 80% (12.5 V) and SOC ≥ 10% gr. 27 ; Battery; Charging battery . (11.6 V)”

“< 10% (11.6 V)” Charge battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Charging battery , and attach mirror hanger for “Battery defective”.

- Record charge level in maintenance table.



Note

If it is not possible to read off the state of charge in the instrument cluster, measure the battery's no load voltage ⇒ [page 30](#) .

3.13.2 Vehicles with transport mode OFF: battery in engine compartment

Special tools and workshop equipment required

◆ **Battery tester - VAS 6161-**

The battery is located in the engine compartment.

Procedure:

- Switch on battery tester - VAS 6161- and select “QC check, new vehicles”.
- Use battery tester - VAS 6161- to measure voltage between battery clamps.
- Use results of test to determine following measures:

Battery tester shows: **Measure:**

“Battery Good” No further measures necessary.

“Charge fully now” Charge battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Charging battery .

“Battery Faulty” Charge battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Charging battery , and attach mirror hanger for “Battery defective”.

- Record charge level in maintenance table.



Note

- ◆ *When using battery tester - VAS 6161- , ensure that the software is up to date.*
- ◆ *If it is not possible to measure the state of charge with battery tester - VAS 6161- , measure the battery's no load voltage ⇒ [page 30](#) .*

3.13.3 Vehicles with transport mode OFF: battery in luggage compartment

Special tools and workshop equipment required

◆ **Battery tester - VAS 6161-**

The battery is located in the luggage compartment.

Removal steps:

- Lift luggage compartment floor and secure in position.
- Take out tool kit.

Procedure:

- Switch on battery tester - VAS 6161- and select “QC check, new vehicles”.
- Use battery tester - VAS 6161- to measure voltage between battery clamps.
- Use results of test to determine following measures:

Battery tester shows:	Measure:
“Battery Good”	No further measures necessary.
“Charge fully now”	Charge battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Charging battery .
“Battery Faulty”	Charge battery ⇒ Electrical system; Rep. gr. 27 ; Battery; Charging battery , and attach mirror hanger for “Battery defective”.

- Record charge level in maintenance table.



Note

- ◆ *When using battery tester - VAS 6161- , ensure that the software is up to date.*
- ◆ *If it is not possible to measure the state of charge with battery tester - VAS 6161- , measure the battery's no load voltage ⇒ [page 30](#) .*

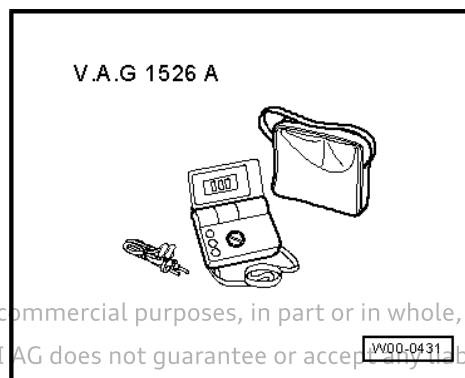
3.13.4 Measuring no load voltage of battery

Special tools and workshop equipment required

- ◆ Hand-held multimeter - V.A.G. 1526 C-



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- ◆ Or: digital multimeter - V.A.G. 1715-

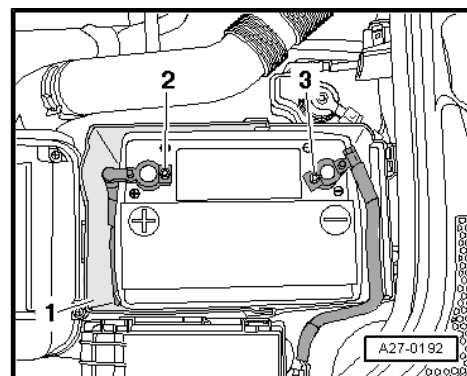
Requirements:

- Battery must not be placed under load from connected electrical equipment for at least 12 hours before test.
- Battery must not have been charged for at least 12 hours before test.
- Engine must remain off for at least 2 hours before test.

- Ignition switched off during test.

Procedure:

- Use hand-held multimeter - V.A.G. 1526 C- to measure voltage between battery clamps -2- and -3-.
- Use results of test to determine following measures:



State of charge (SOC):	Measure:
" ≥ 12.5 V"	No further measures necessary.
"SOC < 12.5 V and SOC ≥ 11.6 V"	Charge battery $\Rightarrow$ Electrical system; Rep. gr. 27 ; Battery; Charging battery .
"< 11.6 V"	Charge battery $\Rightarrow$ Electrical system; Rep. gr. 27 ; Battery; Charging battery , and attach mirror hanger for "Battery defective".

- Record charge level in maintenance table.

Install in reverse sequence.

3.14 Mirror hanger indicating defective battery: renewing battery on affected vehicles

Only for vehicles with mirror hanger for "Battery defective".

Procedure:

- Wait until shortly before vehicle delivery, then renew battery according to instructions in workshop manual $\Rightarrow$ Rep. gr. 27 ; Battery; Removing and installing battery.

3.15 Data sheet for Radio Equipment Directive: printing and placing in glove compartment

As part of the European Union's Radio Equipment Directive (RED 2014/53/EU), legislation requires that a data sheet be provided containing information regarding which radio frequencies are used.

The Radio Equipment Directive data sheet can be downloaded at www.audi.com/generalinfo.

- Print out data sheet (same language as owner's literature) and fold it.
- Place data sheet in glove compartment.

**Note**

- ◆ Only markets within the EU.
- ◆ The data sheet applies to all vehicles across Europe; it can therefore be printed out in advance and kept at hand.

3.16 Brake fluid: changing

**WARNING**

Risk of accident if the brake pedal has too much free play.

- ◆ Make sure that the brakes work properly before the vehicle is driven on the road.

**WARNING**

Risk of injury due to caustic brake fluid.

- ◆ Avoid contact with skin.

**CAUTION**

Risk of damage due to improper handling of brake fluid.

- ◆ Avoid contact with vehicle paint.
- ◆ Avoid contact with liquids containing mineral oils (oil, petrol, cleaning agents).

Special tools and workshop equipment required

- ◆ Brake filling and bleeding equipment - VAS 5234-



- ◆ Tool set for brake bleeding - VAS 6564-



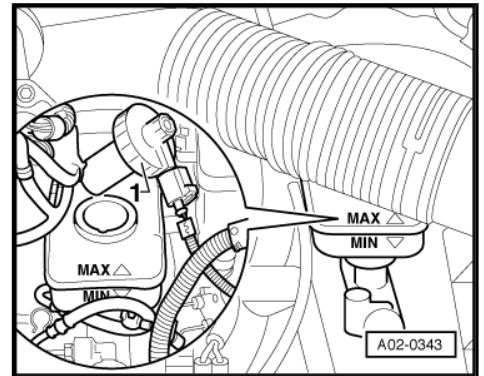
Table of test values and procedure guidelines:

The value given in the table is for one brake caliper, i.e. if there are two bleeder screws on one caliper, the sum of the quantities discharged from both bleeder screws must equal the value given in the table.

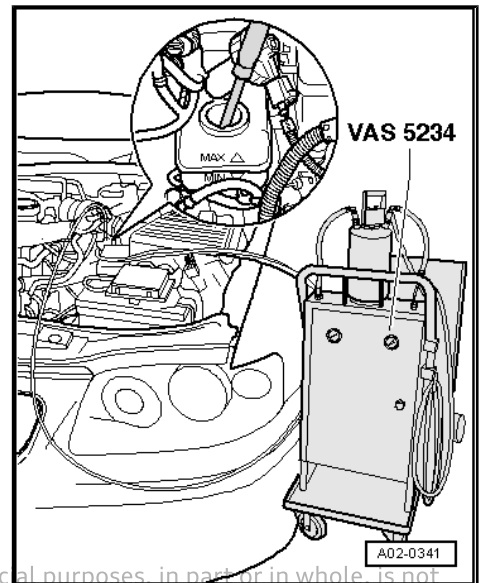
Sequence of opening bleeder screws:		Quantity of brake fluid to discharge:
Brake calipers		
Front axle on driver's side	1.	0.20 ltr.
Front axle on passenger's side	2.	0.20 ltr.
Rear axle on driver's side	3.	0.30 ltr.
Rear axle on passenger's side	4.	0.30 ltr.
Clutch slave cylinder	5.	0.15 ltr.
⇒ Total quantity, automatic gearbox		1.00 ltr.
⇒ Total quantity, manual gearbox		1.15 ltr.

Step 1 - connecting brake filling and bleeding equipment:

- Unscrew filler cap -1- from brake fluid reservoir.



- Use extraction hose included in brake filling and bleeding equipment - VAS 5234- to extract brake fluid from reservoir (with strainer installed) until fluid is level with bottom edge of strainer. Make sure that no more fluid flows back into reservoir from strainer after extracting fluid.



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- Screw adapter -1- onto brake fluid reservoir.
- Connect filling hose -2- included with brake filling and bleeding equipment - VAS 5234- to adapter.
- Set pressure on brake filling and bleeding equipment - VAS 5234- (see operating instructions).

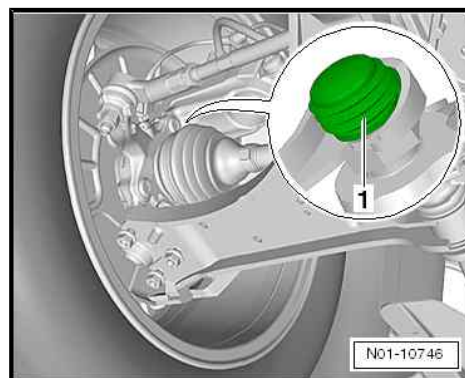
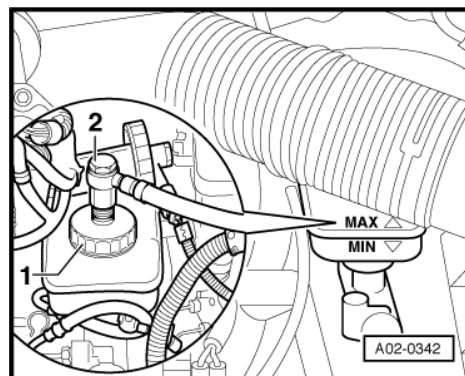
Step 2 - bleeding and filling brake system:

If there are two bleeder screws on each brake caliper, first bleed the inner, then the outer bleeder screw.

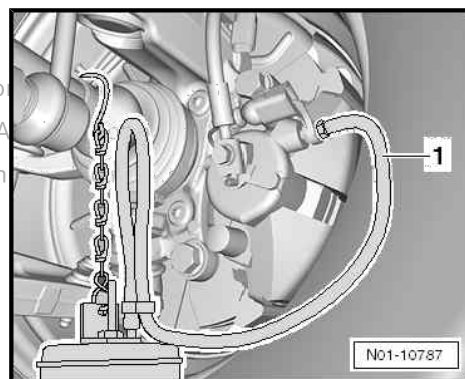
- Raise vehicle ⇒ [page 7](#) .

Front axle:

- Brake caliper (driver's side): Remove cap(s) -1- from bleeder screw(s).

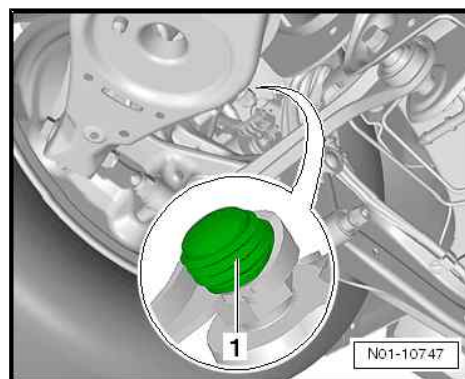


- Fit bleeder hose -1- attached to collector container onto bleeder screw from inside of rim.
- Open bleeder screw and allow brake fluid to discharge. Refer to table for correct quantity of brake fluid to discharge ⇒ [page 33](#) .
- Close bleeder screw.
- If there are two bleeder screws on each brake caliper: Repeat procedure with second bleeder screw.
- Refit cap on bleeder screw(s).
- Repeat procedure on passenger's side.

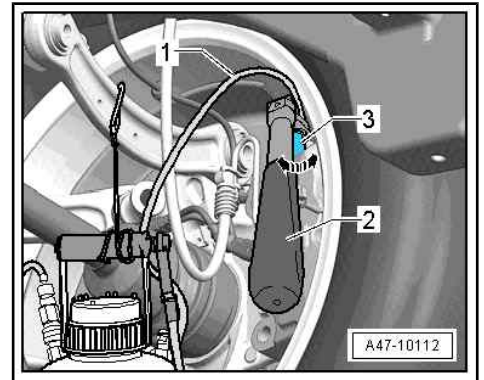


Rear axle:

- Brake caliper (driver's side): Remove cap(s) -1- from bleeder screw(s).
- Take reversible ratchet and appropriate socket from tool set for brake bleeding - VAS 6564- and fit together.



- Run bleeder hose -1- from inside of rim through reversible ratchet -2- and socket -3- and fit onto bleeder screw.
- Open bleeder screw with ratchet -2- and allow brake fluid to discharge. Refer to table for correct quantity of brake fluid to discharge ⇒ [page 33](#) .
- Close bleeder screw.



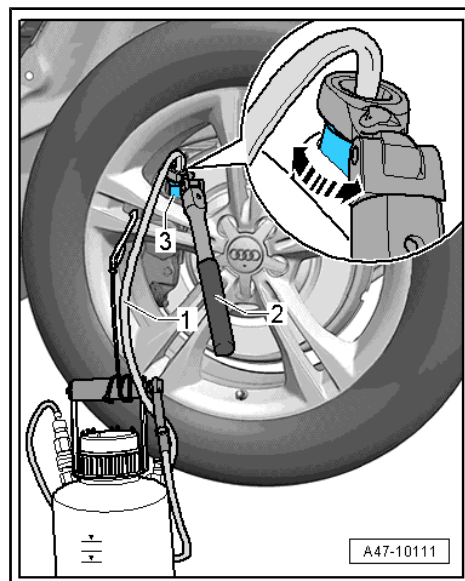
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- If there are two bleeder screws on each brake caliper: Working from outside of rim, apply reversible ratchet -2- and socket -3- and repeat procedure.
- Refit cap on bleeder screw(s) on brake caliper.
- Repeat procedure on passenger's side.

Step 3 - bleeding clutch slave cylinder

Only for vehicles with manual gearbox

- Remove components necessary for access; refer to ⇒ Manual gearbox; Rep. gr. 30 ; Clutch mechanism; Bleeding clutch mechanism .
- Fit bleeder hose attached to collector container -1- onto bleeder screw of clutch slave cylinder.
- Open bleeder screw and allow correct amount of brake fluid to flow out (see table of test values and procedure guidelines ⇒ [page 33](#)).
- Close bleeder screw and fit cap.



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Step 4 - final steps:

- Close filling lever of brake filling and bleeding equipment - VAS 5234- .
- Detach filling hose from adapter.
- Unscrew adapter from brake fluid reservoir.
- Check brake fluid level and adjust if necessary (depending on brake pad wear) ⇒ [page 37](#) .
- Screw cap onto brake fluid reservoir.
- Operate clutch pedal several times.
- Check pedal pressure and free travel: No more than $\frac{1}{3}$ of total pedal travel.
- Make sure that the brakes work properly before the vehicle is driven on the road.
- If free travel of brake pedal is greater than specified, or if brake function is impaired: Check brake system for leaks and renew brake fluid again.



Note

- ◆ The bleeder hose must fit tightly on the bleeder screw to prevent air from entering the brake system.
- ◆ In the case of certain wheel combinations, the wheels may have to be removed.
- ◆ With the aid of the tool set for brake bleeding - VAS 6564- , the rear brakes or, depending on version, the front and rear brakes can be bled without having to remove the wheels.
- ◆ Use genuine Audi brake fluid; see Electronic parts catalogue (ETKA).
- ◆ Do not reuse brake fluid.
- ◆ Always observe the relevant environmental regulations for disposal of brake fluid.

3.17 Brake fluid (vehicles older than 12 months): changing

Only applies to vehicles older than 12 months (from date of manufacture).

Procedure:

- Change brake fluid ⇒ [page 32](#) .

3.18 Brake fluid: checking fluid level

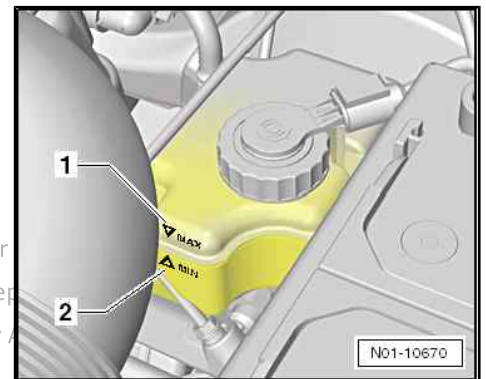
Table of test values and procedure guidelines:

Type of service:	Fluid level specification:
Delivery Inspection	Fluid level must be at MAX marking.
Brake fluid change	Fluid level must be between MAX marking and MIN marking according to wear level of brake pads.

Checking the brake system for leaks is a repair measure and should be charged separately.

Procedure:

- Evaluate brake fluid level according to markings -arrows- on brake fluid reservoir.
- Perform the following measures according to the results of the check:



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Fluid level:	Evaluation/measure:
Above MAX marking	Extract brake fluid.
Below specified level	Carry out brake system leak test ⇒ Brake system; Rep. gr. 47 ; Hydraulic system; Leak test .



When the vehicle is in use, the fluid level drops due to wear and automatic adjustment of the brake pads.

3.19 Brake system: checking condition of brake hoses, and checking that caps are fitted on bleeder screws

Requirements:

- Brake hoses must not touch any components when steering is on full lock.
- Brake hoses must not be twisted.

Procedure:

- Check that all brake hoses are secured properly; when doing so, ensure that the conditions listed are met:
- Check all brake hoses for abrasion, porosity, blistering and cracking.
- Check that brake connections are seated correctly, and check for corrosion and leaks.
- If faults are found on brake hoses: Repair/renew relevant component.
- Check that caps are fitted and secured on bleeder screws of all brake calipers.
- Renew any missing caps.

3.20 Brake pads: checking thickness

Special tools and workshop equipment required

- ◆ Test pin - T40139 bzw. T40139A- : Use the side with the thin probe (brake symbol) to measure brake pad thickness.

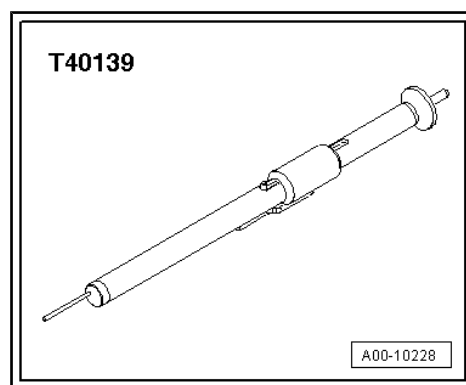


Table of test values and procedure guidelines:

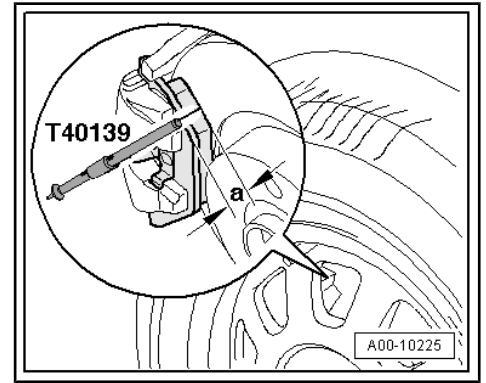
Axle	Brake pad wear limit including backplate and damper plate [mm]
Front axle:	9
Rear axle:	9

Check only the thickness of the outer brake pads.

Procedure:

- Before you begin: Push sliding ring towards tip of test pin as far as it will go.
- Bring tip of test pin into contact with brake disc.
- Slide test pin towards brake pad until test pin makes contact with backplate of brake pad.

- Remove test pin and read off brake pad wear value -a- from scale on tool.
- Repeat procedure for all wheels.
- If brake pad thickness has reached wear limit (see table of test values and procedure guidelines ⇒ [page 38](#)): Renew brake pads ⇒ Brake system; Rep. gr. 46; Removing and installing brake pads.



 Note

- ◆ *When removing the test gauge, take care not to move the sliding ring. This would give an incorrect measurement.*
- ◆ *Note where the test gauge makes contact on the rear of the brake pad and include the thickness of the damper plate in the calculation if necessary.*
- ◆ *In the case of certain wheel combinations, the wheels must be removed.*

3.21 Brake discs: checking for surface rust and operating brakes to clean if necessary

Checking brake discs ⇒ [page 39](#)

Operating brakes to clean brake discs ⇒ [page 39](#)

3.21.1 Checking brake discs

Procedure:

- Check outside of all brake discs for surface rust.
- If necessary, operate brakes to clean brake discs ⇒ [page 39](#).

 Note

The brake discs can be damaged irreparably if surface rust is not removed at the specified intervals.

3.21.2 Operating brakes to clean brake discs

Procedure:

- Accelerate vehicle to 40 km/h, then brake gently to 10 km/h (do this five times).
- Accelerate vehicle to 40 km/h, then brake sharply to a stand-still (do this five times).

 Note

The wheels should not spin or lock during acceleration and braking.



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3.22 Parking brake: releasing

Mechanical parking brake ⇒ [page 40](#)

Electromechanical parking brake ⇒ [page 40](#)

3.22.1 Mechanical parking brake

Procedure:

- Release parking brake.

3.22.2 Electromechanical parking brake

Procedure:

- Press brake pedal, then press switch for electromechanical parking brake.

3.23 Tyres: checking condition and wear pattern, and checking and recording tread depth

Special tools and workshop equipment required

- ♦ Test pin - T40139- : Use the side with the thick probe and shoulder (scale marked with tyre symbol) to measure tread depth.

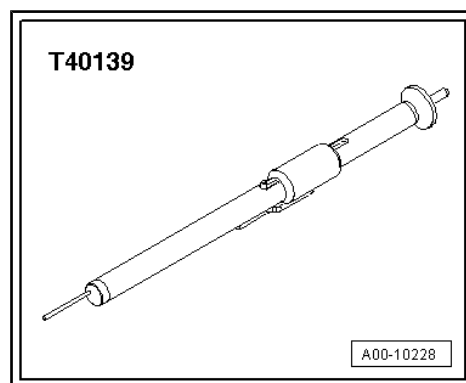


Table of test values and procedure guidelines:

Country-specific regulations for minimum tread depth apply; for countries not listed, evaluate values according to the country's specifications.

Country	Minimum tread depth [mm]
EU countries	1.6 ¹⁾
Brazil	1.6
China	1.6
India	1.6
Japan	1.6
Norway	1.6 ¹⁾
Russia	1.6
Switzerland	1.6
Turkey	1.6
Ukraine	1.6 ¹⁾
USA	1.6

1) Larger values for winter tyres where these are mandatory

Performing wheel alignment is a repair measure and should be charged separately.

Step 1 - checking condition:

- Check for and remove any foreign bodies in tyre tread.
- Check all tyres for following types of damages:
 - ◆ Cuts, cracks, tears
 - ◆ Scuffing or flattened areas on tyre tread
 - ◆ Porous sidewalls
 - ◆ Blisters on sidewalls
- If damage is found: Renew tyres.

Step 2 - checking tyre wear pattern:

- Check tyre wear pattern of front wheels; check for the following:
 - ◆ Feathering on tread indicating possible incorrect toe setting
 - ◆ One-sided tread wear indicating possible incorrect camber
- If the above types of wear are found: Check wheel alignment to determine the cause.

Step 3 - checking tread depth:

- Measure tread depth on all tyres (including spare tyre) at several points using test pin - T40139- . Uneven tread depth indicates damage.
- Record average measurement for each tyre in Maintenance table.
- If minimum tread depth has been reached (as specified for your country; see table of test values and procedure guidelines => [page 40](#)): Renew tyre.



Note

Vehicles with four-wheel drive must be fitted with tyres with the same tread pattern. Otherwise the centre differential may be damaged.

3.24 Tyres: checking tyre pressures and adjusting if necessary



Note

The tyre valves must be sealed with valve caps. Otherwise, dirt could enter the valve, which will then become blocked and will no longer seal properly.

Front and rear axles ⇒ [page 42](#)

Spare wheel and temporary spare wheel ⇒ [page 42](#)

3.24.1 Front and rear axle

The tyre pressure specifications are listed on the sticker on the inside of the driver's door.

Tyre sizes not listed: See Wheel/tyre guide for tyre pressure specification ⇒ Wheel/Tyre Guide; Rep. gr. 44 ; Wheels, tyres, vehicle geometry; Tyre pressures .

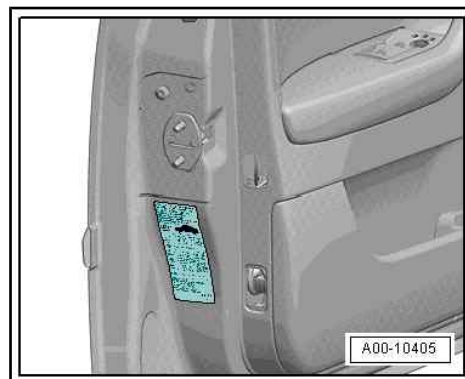
Procedure:

- Check tyre pressure of all tyres.
- If necessary, adjust to correct tyre pressures.



Note

- ♦ *The tyre pressures listed only apply to cold tyres. When the tyres are warm, the actual pressures will be higher, but must not be reduced.*
- ♦ *Tyre pressures which significantly differ from the specification may be the result of a defect. If this occurs, check the tyres and inform the customer if necessary.*



3.24.2 Spare wheel and temporary spare wheel

The following parameters apply to the tyre pressure specifications:

- Spare wheel with standard-size tyre: Inflate to maximum tyre pressure indicated on tyre pressure sticker.
- Temporary spare wheel: The correct tyre pressure is indicated on the sidewall.

Procedure:

- Check tyre pressure of spare wheel/temporary spare wheel.
- If necessary, adjust to correct tyre pressures.

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Note

Depending on equipment version, there may only be a tyre repair kit supplied; see Maintenance table.

3.25 Tyres (except spare wheel): checking tyre pressures and adjusting to 3.5 bar if necessary



Note

The tyre valves must be sealed with valve caps. Otherwise, dirt could enter the valve, which will then become blocked and will no longer seal properly.

Procedure:

- Check tyre pressure of all tyres.
- If necessary, adjust tyre pressure to 3.5 bar and record pressure in maintenance table.

3.26 Tyre Pressure Loss Indicator: storing changed tyre pressures

The Tyre Pressure Loss Indicator must be initialised after every time the tyre pressures are changed or the tyres are renewed.

Applies to S1: The button for the Tyre Pressure Loss Indicator is located the glove box.

Applies to all vehicles except S1: The button the for Tyre Pressure Loss Indicator is located in the dash panel.

Requirements:

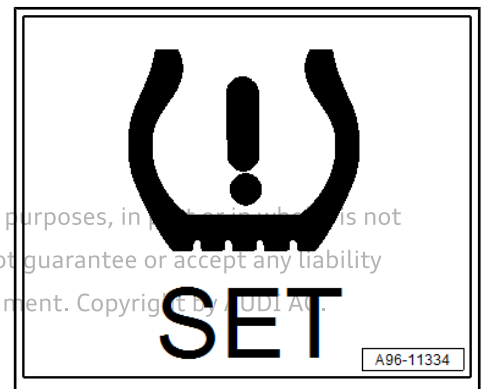
- The inflation pressures of all tyres must be adjusted to the correct values before the pressures are stored.

Procedure:

- Switch on ignition.
- Press and hold button -illustration- for Tyre Pressure Loss Indicator until an acoustic signal is heard.



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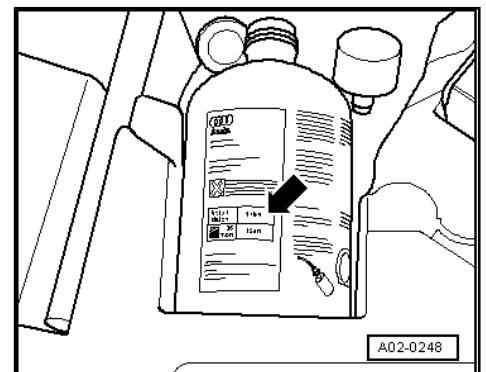


3.27 Tyre repair kit: checking that set is complete, and checking and recording expiry date

The tyre repair kit is located in the spare wheel well.

Procedure:

- Check that the following components of the tyre repair kit are present:
 - ◆ Compressor
 - ◆ Tyre filler bottle incl. filler hose
- Take out the bottle and check the expiry date (printed on bottle -arrow-).
- Record expiry date in Maintenance table.
- If expiry date has been exceeded or if bottle has already been used: Renew tyre filler bottle.



3.28 Wheel bolts: tightening to specified torque

Special tools and workshop equipment required

- ◆ Torque wrench - V.A.G 1332- , measuring range 40 to 200 Nm
- ◆ Or: torque wrench - V.A.G 1576- , measuring range 80 to 400 Nm
- ◆ Tool to secure wheel nut caps 8Z0.012.287

Table of test values and procedure guidelines:

Fastener	Tightening torque [Nm]
Wheel bolts	120

The adapter for loosening and tightening anti-theft wheel bolts is included in the vehicle tool kit.

Procedure:

- Remove wheel bolt caps.
- Tighten wheel bolts in a diagonal sequence to specified torque (see table of test values and procedure guidelines [⇒ page 44](#)).
- Press wheel bolt caps on using tool 8Z0.012.287 so that they are correctly seated.
- If adapter for anti-theft wheel bolts was used from tool kit: Put adapter back in tool kit.

3.29 Suspension struts on front and rear axle: removing locking elements and correctly fitting bump stops



Note

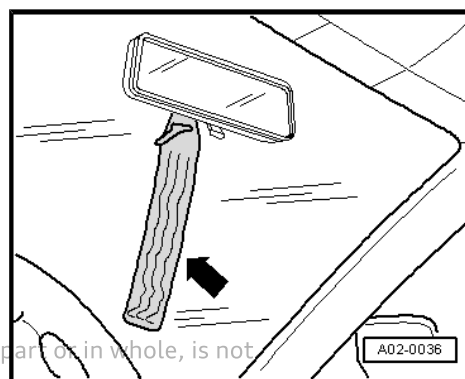
- ◆ These vehicles are identified by a coloured tag fixed to the mirror -arrow-.
- ◆ It is not necessary to remove the wheels to perform this operation.

Suspension struts on front axle: locking elements [⇒ page 44](#)

Suspension struts on front axle: spring inserts [⇒ page 45](#)

Suspension struts on rear axle [⇒ page 45](#)

Pressing in bump stop [⇒ page 46](#)



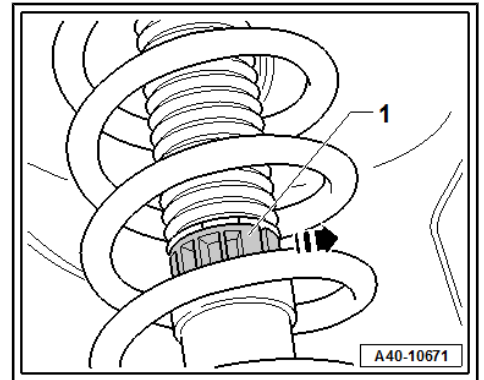
3.29.1 Suspension struts on front axle: locking elements

Requirements:

- Vehicle suspension extended

Procedure:

- Push locking element -1- off piston rod in direction of -arrow-.
- Then check boot all around and press out any dents.
- Finally, check that boot is securely fastened in axial bearing and is positioned correctly: The boot must turn freely around the rotating axis of the axial bearing. If this is not the case, pull boot all around out of axial bearing to the next stop.
- When all locking elements have been removed from vehicle: Remove tag on interior mirror.



Note

- ◆ *Do not use any tools to remove the locking elements, as the boots will otherwise be damaged.*
- ◆ *There are several versions of the locking elements for the front axle ⇒ [page 45](#).*

3.29.2 Suspension struts on front axle: spring inserts

Requirements:

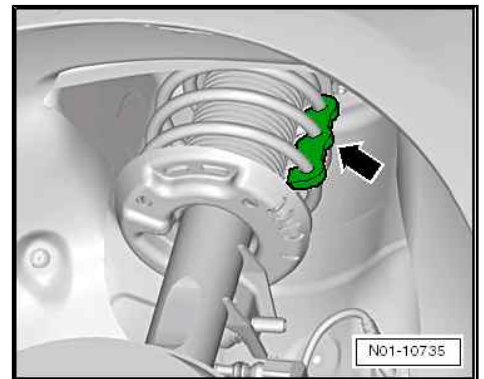
- Vehicle suspension extended

Procedure:

- Press spring inserts -arrow- off coil spring.
- When all locking elements have been removed from vehicle: Remove tag on interior mirror.

Note

- ◆ *There are several versions of the locking elements for the front axle ⇒ [page 44](#).*
- ◆ *With vehicle suspension extended, check that all bump stops are firmly seated in shock absorber mountings.*
- If necessary, use a suitable tool to press any loose bump stops into shock absorber mountings ⇒ [page 46](#).



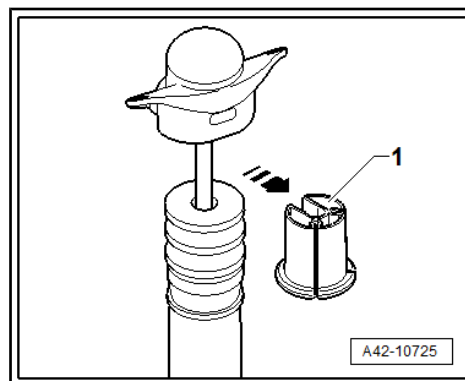
3.29.3 Suspension struts on rear axle

Requirements:

- Vehicle suspension extended

Procedure:

- Push locking element -1- off piston rod in direction of -arrow-.
- When all locking elements have been removed from vehicle: Remove tag on interior mirror.



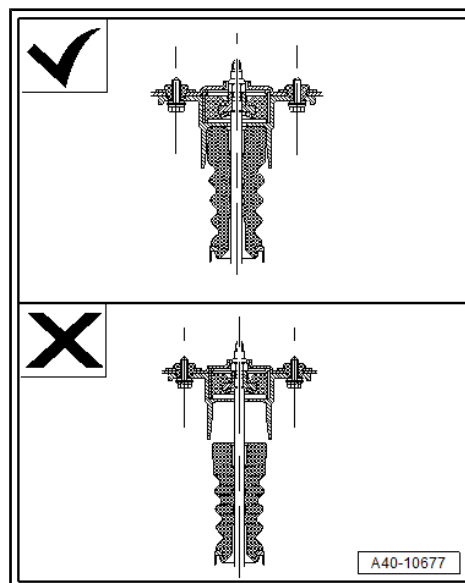
- After road test: Check that all bump stops are firmly seated in shock absorber mountings.
- If necessary, press any loose bump stops into shock absorber mountings ⇒ [page 46](#) .



Note

With vehicle suspension extended, check that all bump stops are firmly seated in shock absorber mountings.

- If necessary, use a suitable tool to press any loose bump stops into shock absorber mountings ⇒ [page 46](#) .
- When all locking elements have been removed from vehicle: Remove tag on interior mirror.



3.29.4 Pressing in bump stop

Special tools and workshop equipment required

- ◆ T40401 Lever for mounting bump stops
- ◆ Soap-based lubricant, e.g. tyre assembly paste



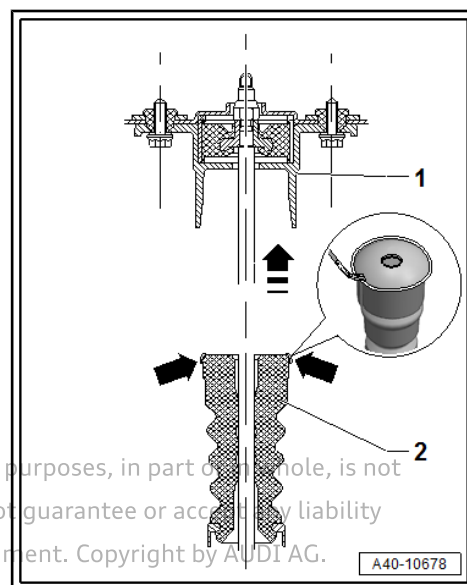
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Procedure:

- Remove coarse dirt from top edge of loose bump stop and coat with tyre assembly paste.
- Press bump stop firmly into shock absorber mounting by hand or using lever - T40401- .



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3.30 Axles (front and rear): checking components for play, secure attachment and damage, and checking protective boots

The following applies to all components shown below:

- There must be no noticeable or visual play.
- As a rule you can identify damage to the boots/drive shaft boots by emerging grease.
- Check that retaining rings and spring-type clips are seated correctly.

Front axle ⇒ [page 47](#)

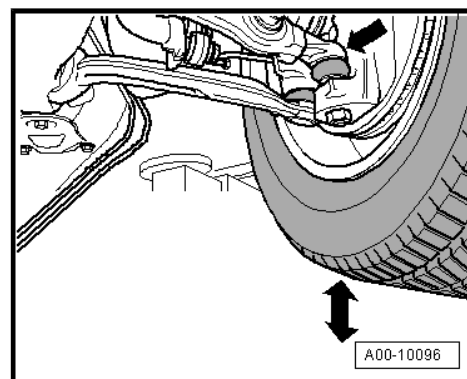
Rear axle: multi-link suspension ⇒ [page 49](#)

Rear axle: torsion beam axle ⇒ [page 50](#)

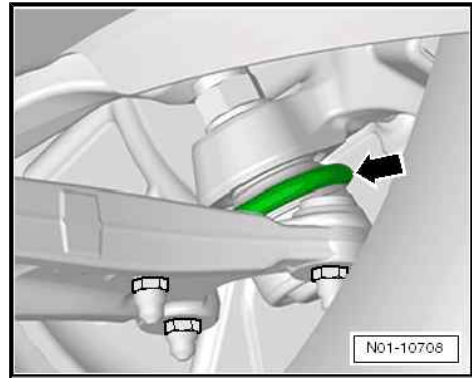
3.30.1 Front axle

Lower link:

- Check relative movement between wheel bearing housing and lower links.

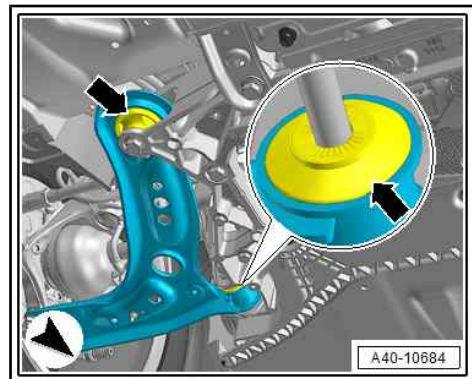


- Lower link: Check boot -arrow- of swivel joint all around for damage and make sure it is seated correctly.
- Check swivel joint for play.



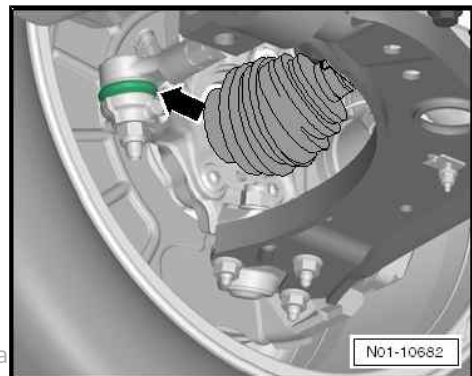
- Check both bonded rubber bushes of lower link -arrows- for play.

Track rod ball joint:



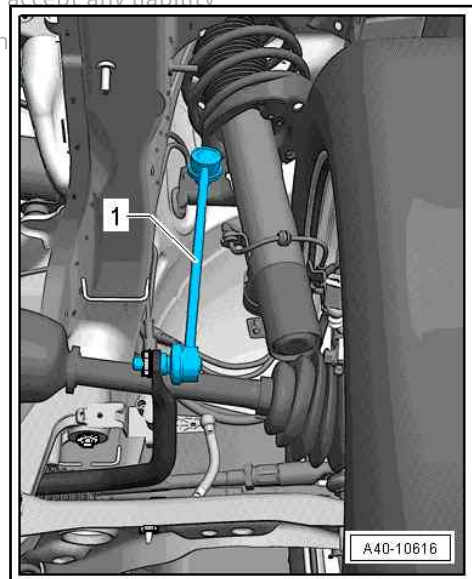
- Check boot -arrow- for track rod joint all around for damage and make sure it is seated correctly.
- Check play at track rod ball joint.

Coupling rod and anti-roll bar:



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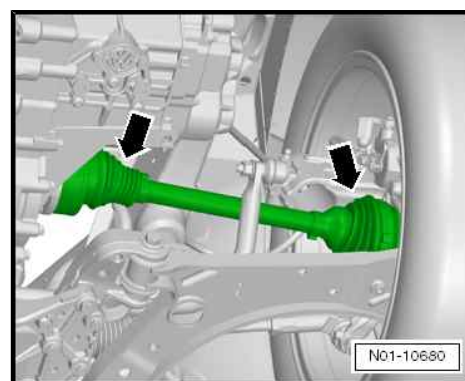
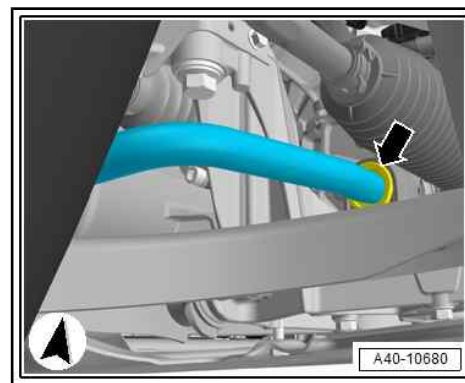
- Check play at coupling rod -1-.



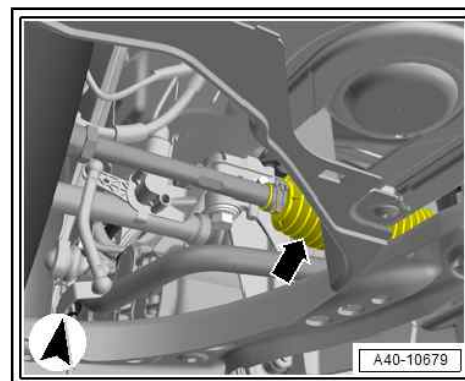
- Check anti-roll bar bush -arrow- for damage.

Drive shaft and steering rack:

- With steering turned: Check drive shaft boots -arrows- all around for damage and make sure they are seated correctly.



- Check boot -arrow- of steering rack all around for damage and correct seating.
- Repeat checks for components on opposite side of vehicle.
- If faults are found on any of the above components: Renew relevant component.

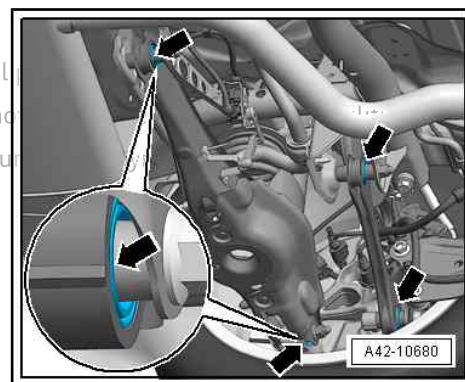


3.30.2 Rear axle: multi-link suspension

Lower transverse link and track rod:

- Check relative movement between wheel bearing housing and transverse links.
- Check bonded rubber bushes of lower transverse link and track rod -arrows- for play.

Upper transverse link:



- Check bonded rubber bushes of upper transverse link -arrows- for play.

Coupling rod and anti-roll bar:

- Check play at coupling rod -1-.
- Check anti-roll bar bush -arrow- for damage.

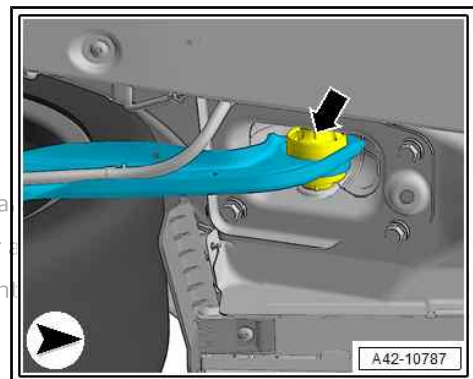
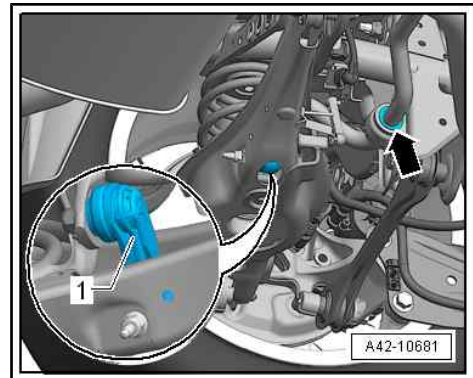
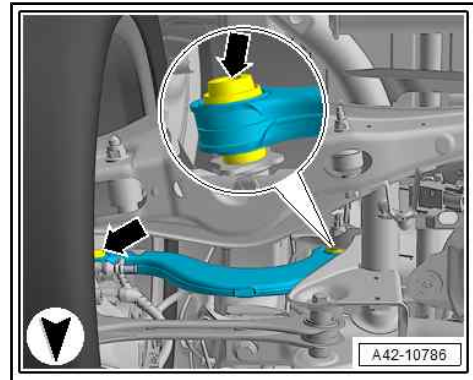
Trailing arm:

- Check play at bonded rubber bush of trailing arm -arrow-.

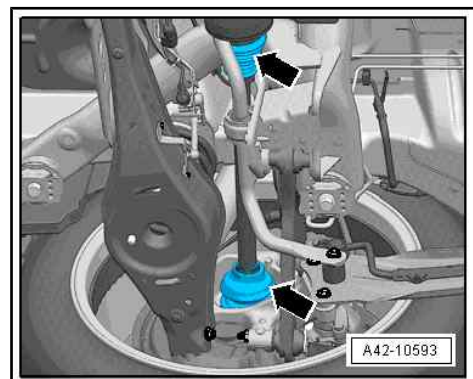
Drive shaft:

Only applies to vehicles with four-wheel drive.

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- Check drive shaft boots -arrow- all around for damage and make sure they are seated correctly.
- Repeat checks for components on opposite side of vehicle.
- If faults are found on any of the above components: Renew relevant component.



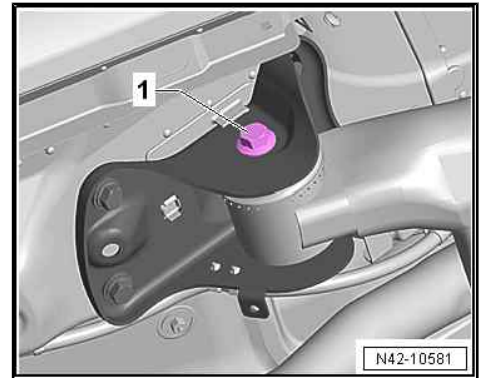
3.30.3 Rear axle: torsion beam axle

Wheel bearing unit:

- Check relative movement between wheel bearing unit and wheel.

Axle beam:

- Check play at bonded rubber bushes of axle beam -1-.
- Repeat checks for components on opposite side of vehicle.
- If faults are found on any of the above components: Renew relevant component.



3.31 Engine, gearbox, final drive and steering: checking for leaks and damage

Applies to vehicles up to and including model year 2014: For inspection every 60,000 km (38,000 miles)/4 years, remove noise insulation.

Applies to vehicles from model year 2015 onwards: Remove noise insulation for every inspection.

Removal steps:

- If necessary, remove noise insulation ⇒ [page 12](#) .

Procedure:

- Check engine and engine ancillaries from below for leaks and damage.
- Check radiator and cooling circuit for leaks and damage.
- Check refrigerant circuit for damage (check air conditioner compressor, condenser and refrigerant lines including connections).
- Check gearbox, final drive and steering for leaks and damage.
- If faults are found: repair or renew relevant component.

3.32 Vehicle (from below): checking for damage

Procedure:

- Check underbody carefully and thoroughly for damage and loose fasteners.
- If faults are found: Renew missing fastener or damaged component.

3.33 Underbody: checking trim, wheel housing liners, side members and pipes/wiring for damage, and checking that they are properly secured

Procedure:

- Check all underbody trim panels and wheel housing liners for tears and cracks.
- Use your hands to check that all underbody trim panels and wheel housing liners are secured correctly and check for missing fasteners.

- Inspect side members for deformations.
- Check visible area of pipes/wiring and connections for damage and ensure they are secured correctly.
- If faults are found: Renew missing fastener or damaged component.

3.34 Roof insert - panorama sunroof: checking, cleaning and lubricating

CAUTION

Risk of damage to roof insert if locking element of guide piece is disengaged.

◆ Guide piece must not be cleaned or lubricated.

CAUTION

Risk of damage to roof insert if locking element of guide piece is disengaged.

◆ Guide piece must not be cleaned or lubricated.

Special tools and workshop equipment required

- ◆ Lubricating paste - G 060 751 A2-
- ◆ Krytox lubricating paste - G 052 141 A2-
- ◆ Cleaning solution - D 009 401 04-
- ◆ Industrial vacuum cleaner, e.g. wet/dry vacuum cleaner - VAS 5128-
- ◆ Commercially available paintbrush: approx. 15 mm wide and bent by approx. 40° using workshop equipment
- ◆ Fine-pored sponge (e.g. a piece of household sponge without a scouring surface)



Note

First carry out a visual check to determine which type of sunroof is fitted on the vehicle.

- Open glass panel completely.
- Carry out a visual check to determine which type of grease has been used in area of guide rails.
- ◆ White/grey grease G 060 751 A2: Clean and lubricate according to method used to date (description below)
- ◆ No white/grey grease: Open and close sunroof completely; this must not produce any vibrations or noises (rattling, squeaking, clicking) other than those of normal operation.



Note

Please refer to TPI if normal operating sounds are accompanied by other noises or vibrations on a sunroof version with new spray-on grease.

Cleaning and lubricating the roof insert is a repair measure and should be charged separately.

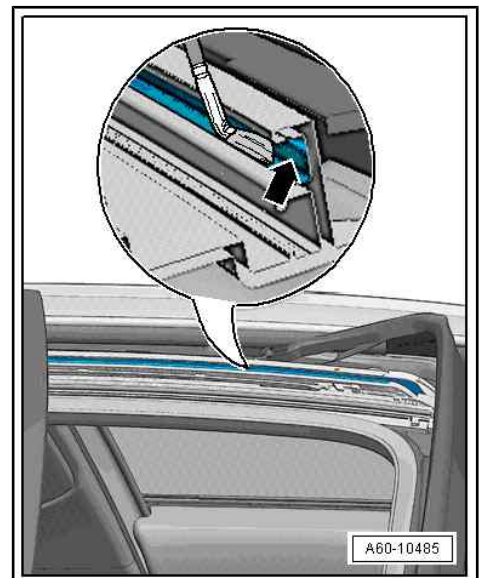
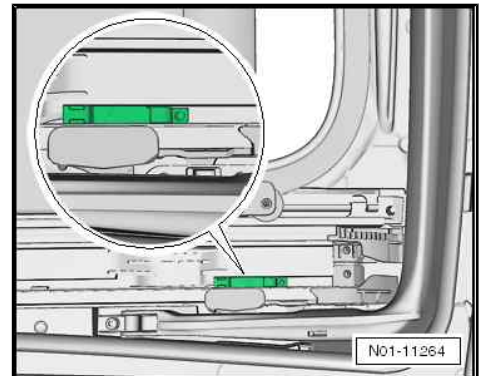
Protect vehicle interior from becoming dirty.

If locking element of guide piece -illustration- becomes unintentionally unlocked during cleaning or lubricating: Do not operate panorama sunroof. Lock guide piece => [page 57](#) .

Only applies to sunroof version with white/grey grease G 060 751 A2:

Step 1 - cleaning and lubricating guide rail:

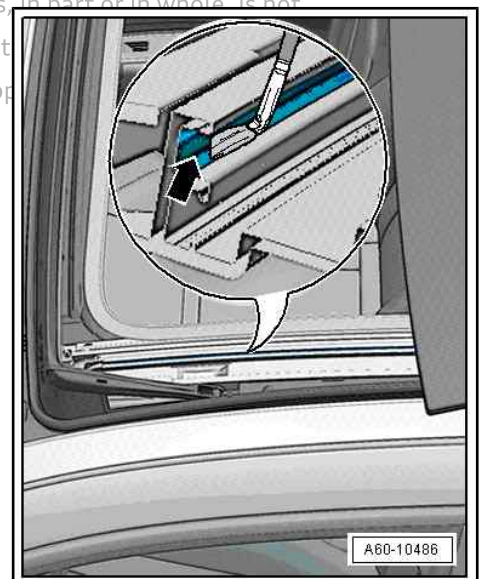
- Open sunroof sun blind completely.
- Open glass panel completely.
- First use an industrial vacuum cleaner to remove any loose residue from guide rail.
- Remove grease and dirt from guide rail with a lint-free cloth.
- Use a paintbrush to lubricate outer guide rail -arrow- with lubricating paste - G 060 751 A2- .



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- Use a paintbrush to lubricate inner guide rail -arrow- with lubricating paste - G 060 751 A2- .
 - Remove surplus lubricant on guide rails with a lint-free cloth.
 - Repeat procedure on opposite side of vehicle.

Step 2 - cleaning and lubricating slider from inside:

- Close glass panel just far enough so that wind deflector is still completely extended.
- Remove grease and dirt from slider with a lint-free cloth.

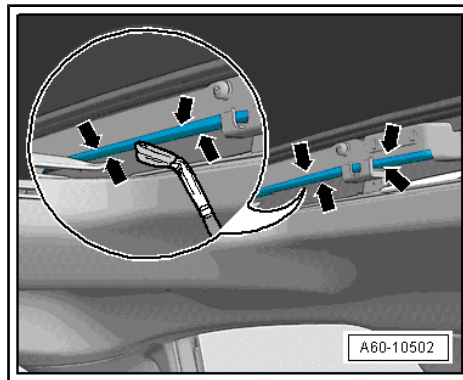


- Use a paintbrush to lubricate slider from inside -arrows- with lubricating paste - G 060 751 A2- .
- Remove surplus lubricant from slider with a lint-free cloth.
- Repeat procedure on opposite side of vehicle.

Step 3 - cleaning and lubricating slotted guide for glass panel from inside:

Glass panel should be closed just far enough so that wind deflector is still completely extended.

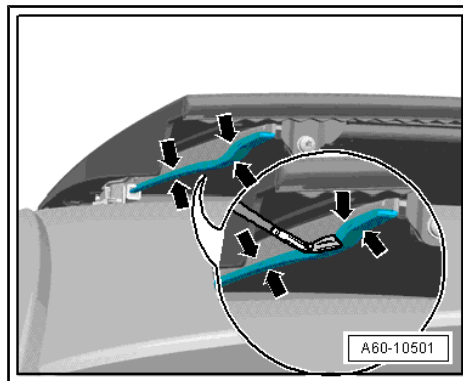
- Remove grease and dirt from slotted guide for glass panel with a lint-free cloth.
- Use a paintbrush to lubricate slotted guide for glass panel from inside -arrows- with lubricating paste - G 060 751 A2- .
- Remove surplus lubricant from slotted guide with a lint-free cloth.
- Repeat procedure on opposite side of vehicle.



Step 4 - cleaning and lubricating slider from outside:

- Open glass panel completely.
- Remove grease and dirt from slider with a lint-free cloth.

- Use a paintbrush to lubricate slider from outside -arrows- with lubricating paste - G 060 751 A2- .
- Remove surplus lubricant from slider with a lint-free cloth.
- Repeat procedure on opposite side of vehicle.



Step 5 - cleaning and lubricating glass panel mechanism:

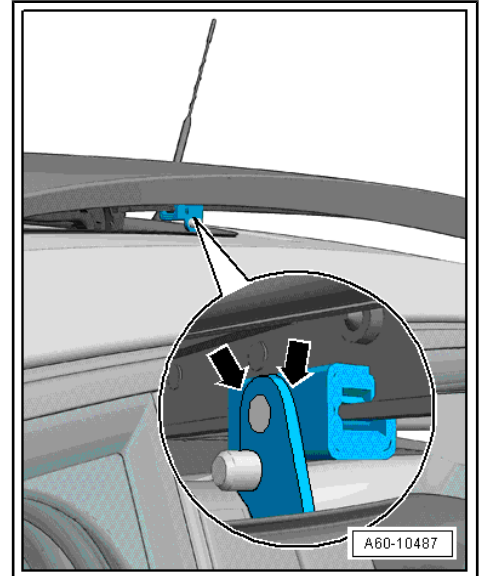
Glass panel opened completely.

- Remove grease and dirt from glass panel mechanism with a lint-free cloth.



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- Use a paintbrush to apply lubricating paste - G 060 751 A2- to friction surfaces -arrows- of mounting for glass panel mechanism.



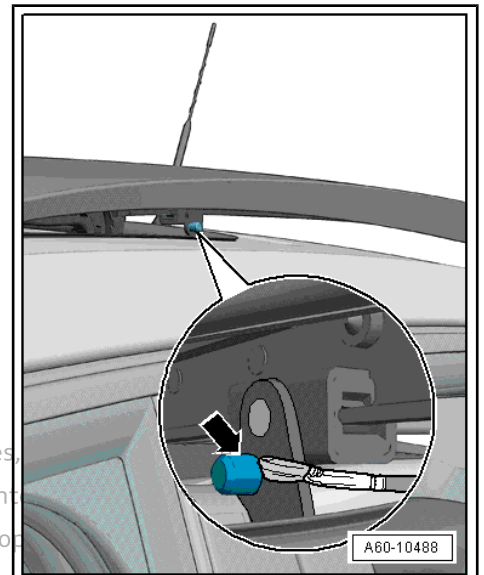
- Use a paintbrush to lubricate tilt lever -arrow- for glass panel mechanism with lubricating paste - G 060 751 A2- .
- Remove excess lubricant from mounting and tilt lever for glass panel mechanism with a lint-free cloth.
- Repeat procedure on opposite side of vehicle.

Step 6 - cleaning and lubricating outside of slotted guide for glass panel:

Glass panel opened completely.

- Remove grease and dirt from slotted guide for glass panel with a lint-free cloth.

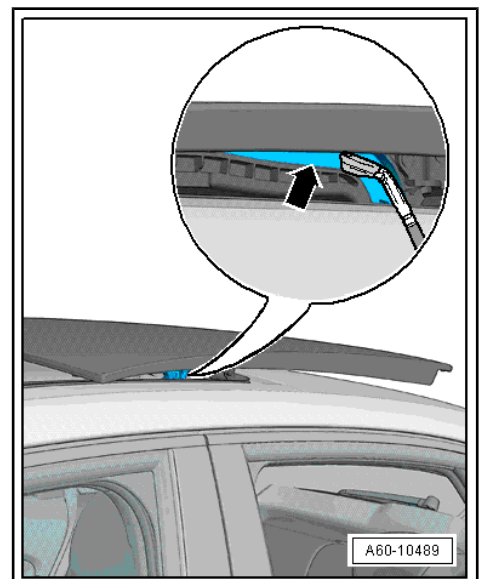
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- Use a paintbrush to lubricate slotted guide for glass panel from outside -arrow- with lubricating paste - G 060 751 A2- .
- Remove surplus lubricant from slotted guide for glass panel with a lint-free cloth.
- Repeat procedure on opposite side of vehicle.
- Open and close roof system completely and check again for surplus lubricant at all lubricating locations.

Step 7 - cleaning and lubricating glass panel:

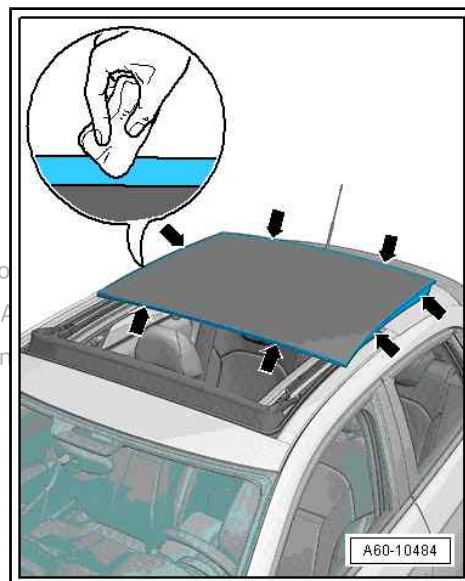
Glass panel opened completely.



- Remove grease and dirt from edges of glass panel -arrows- using cleaning solution - D 009 401 04- and a lint-free cloth.



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- Use a fine-pored sponge to lubricate rear edge of glass panel seal -arrows- with Krytox lubricating paste - G 052 141 A2- . Make sure that no coarse residue remains visible.

Step 8 - cleaning and lubricating roof frame seal:

Glass panel opened completely.

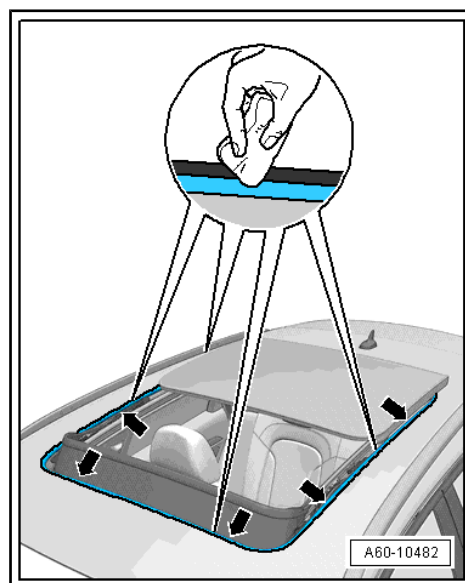
- Remove grease and dirt from seal for roof frame using cleaning solution - D 009 401 04- and a lint-free cloth.



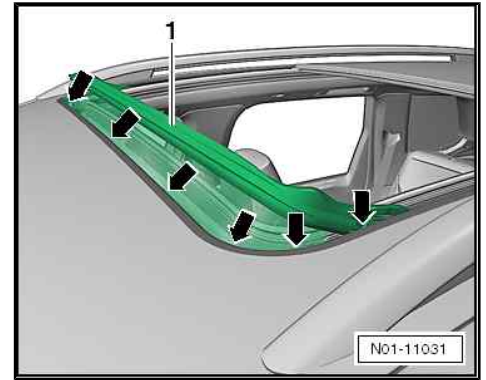
- Use a fine-pored sponge to lubricate roof frame seal -arrows- with Krytox lubricating paste - G 052 141 A2- . Make sure that no coarse residue remains visible.

Step 9 - cleaning wind deflector:

Glass panel opened completely.



- Clean screen and frame of wind deflector -1- using a sponge and soap solution.
- Use an industrial vacuum cleaner to remove any loose residue from wind deflector slot -arrows-.
- Close glass panel completely.

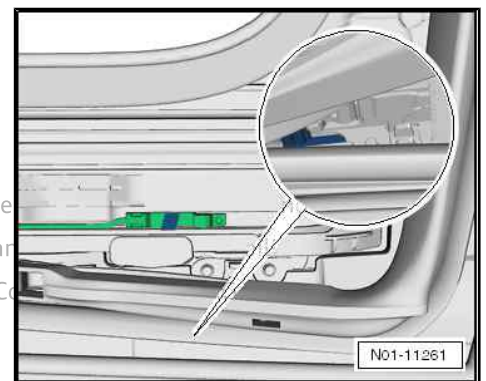


3.34.1 Locking guide piece

Procedure:

- Carefully press down lever of guide piece (shown in -green-).
- Use a screwdriver to slide locking element -blue- from side over lever -green-.

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3.35 Door hinges with separate door arrester: cleaning and lubricating

Special tools and workshop equipment required

- ◆ Universal spray oil - G 000 115 A2- for door arresters and hinges

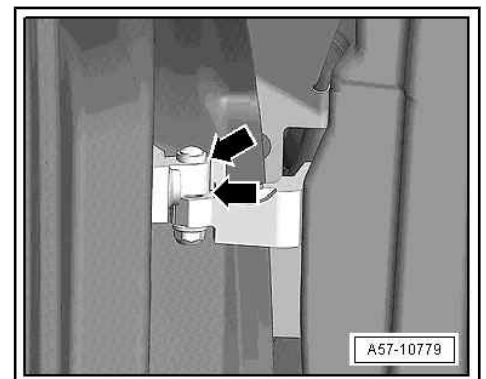
Requirements:

- The vehicle must be at least at room temperature.

Procedure:

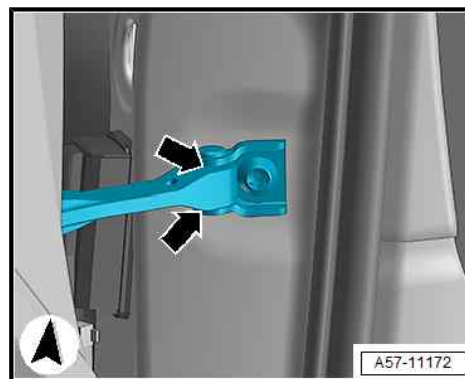
- First clean all lubricating points with a lint-free cloth.
- Lubricate door hinge (top and bottom) at points marked -arrows- as well as separate door arrester -arrows- with universal oil spray - G 000 115 A2- .

Door hinge:



Door arrester:

- Move door several times so that the universal spray oil is able to penetrate.
- Use cloth to remove surplus lubricant from all door hinges.
- Repeat cleaning and lubricating procedure on all remaining doors of vehicle.



3.36 Bonnet arrester hook: lubricating

Special tools and workshop equipment required

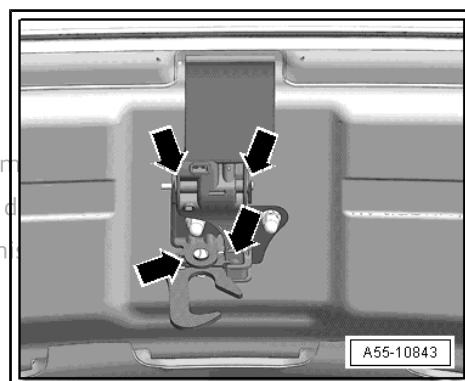
- ◆ Universal spray oil - G 000 115 A2-

Requirements:

- The vehicle must be at least at room temperature.

Procedure:

- First clean all lubricating points with a lint-free cloth.
- Lubricate arrester hook with universal spray oil - G 000 115 A2- at points marked -arrows-.
- Operate moving parts several times so that the lubricant is able to penetrate.
- Remove surplus lubricant with cloth.



3.37 Windscreen/rear window washer system: checking spray pattern and adjusting if necessary

Checking windscreen spray pattern: triple washer jets
⇒ [page 59](#)

Checking windscreen spray pattern: hybrid jets ⇒ [page 59](#)

Checking spray pattern on rear window ⇒ [page 60](#)

Setting windscreen spray pattern, triple washer jets ⇒ [page 60](#)

Setting windscreen spray pattern: hybrid jets ⇒ [page 60](#)

Adjusting rear window washer jets ⇒ [page 60](#)

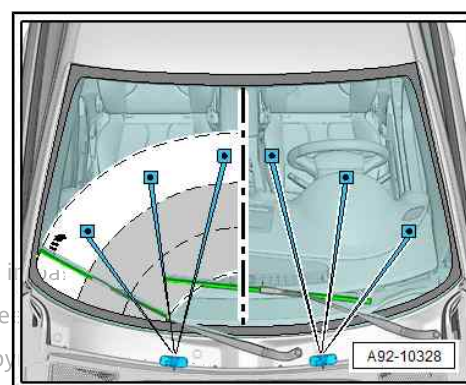
3.37.1 Checking spray pattern on windscreen

The spray pattern must meet the following specifications:

- Evenly distributed, symmetrical spray pattern
- Uniform, precise jets of water
- Jet unit (passenger's side): Water from all washer jets makes contact within upper third of wiper area -illustration-
- Jet unit (driver's side): Spray pattern symmetrically opposite that of jet unit on passenger's side

Procedure:

- Operate windscreen washer system and check spray pattern.
- If spray pattern is not as specified, adjust windscreen washer jets ⇒ [page 60](#).



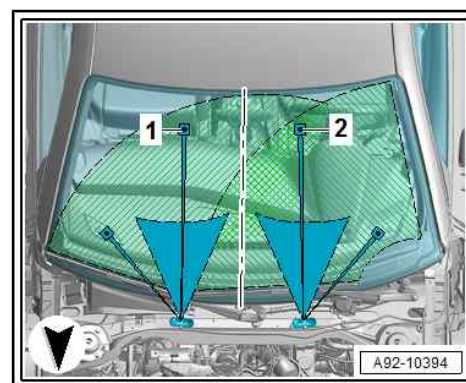
3.37.2 Checking windscreen spray pattern: hybrid jets

The spray pattern must meet the following specifications:

- Evenly distributed, symmetrical spray pattern
- Uniform, precise jets of water
- Jet unit (passenger's side): Upper concentrated jet should make contact near upper edge of wiper area -1-.
- Jet unit (driver's side): Upper concentrated jet should make contact -2- at same level as jet unit (passenger's side).

Procedure:

- Operate windscreen washer system and check spray pattern.
- If spray pattern is not as specified, adjust windscreen washer jets ⇒ [page 60](#).



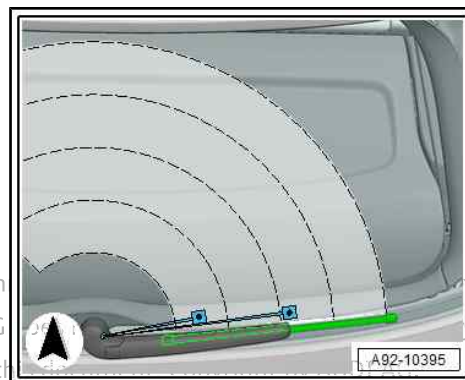
3.37.3 Checking spray pattern on rear window

The spray pattern must meet the following specifications:

- Water from both spray jets makes contact just above wiper blade
- Uniform, precise jets of water
- Water from inner spray jet makes contact within approx. first quarter of wiper blade length -illustration-
- Water from outer spray jet makes contact approx. at or just beyond centre of wiper blade length -illustration- (third quarter)

Procedure:

- Operate rear window washer system and check spray pattern.
- If spray pattern is not as specified, adjust windscreen washer jets ⇒ [page 60](#) .



3.37.4 Setting windscreen spray pattern: triple washer jets

Special tools and workshop equipment required

- ◆ Commercially available adjusting tool (e.g. adjusting tool - T10127-) or suitable needle

Procedure:

- Use adjusting tool to align washer jets as required according to specification.
- If the spray pattern still does not correspond to the specification, clean washer jets ⇒ Vehicle electrics; Rep. gr. 92 ; Windscreen wash/wipe system; Adjusting and cleaning washer jets .

3.37.5 Setting windscreen spray pattern: hybrid jets

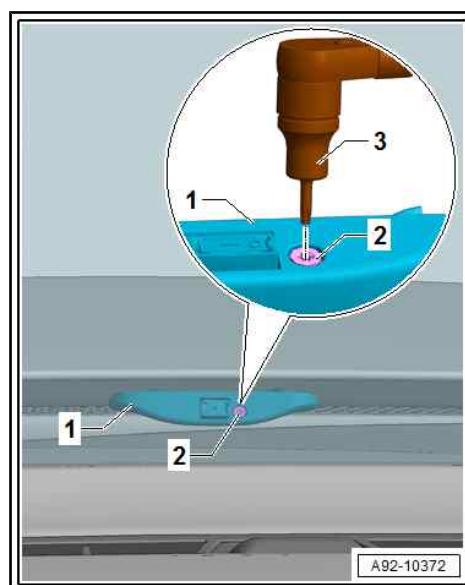
Procedure:

- Using adjuster screw -2-, set jet unit being adjusted according to specified pattern (use a tool with size 9 external Torx -3-).
- If the spray pattern still does not correspond to the specification, clean appropriate washer jets ⇒ Electrical system; Rep. gr. 92 ; Windscreen wiper system; Adjusting washer jets .



Note

Only the height of the jets of water of each jet unit can be adjusted, and all jets must be adjusted together via an adjuster screw. The jets cannot be adjusted individually or laterally.



3.37.6 Adjusting rear window washer jets

Special tools and workshop equipment required

- ◆ Commercially available adjusting tool (e.g. adjusting tool - T10127-) or suitable needle

Procedure:

- Use adjusting tool to align washer jets as required according to specification.
- If the spray pattern still does not correspond to the specification, clean washer jets ⇒ Electrical system; Rep. gr. 92 ; Rear window wiper system; Adjusting washer jets .

3.38 Wiper blades: checking for damage

Step 1 - service position:

- Switch off ignition.
- Press windscreen wiper lever downwards briefly.

Step 2 - checking:

- Lift windscreen wipers and check each wiper blade for tears, cuts, abraded areas or other damage.
- Repeat check on rear window.
- If you find damage: Renew relevant wiper blade. Windscreen wiper system ⇒ Electrical system; Rep. gr. 92 ; Windscreen wiper system; Removing and installing wiper blade ; rear window wiper system ⇒ Electrical system; Rep. gr. 92 ; Rear window wiper system; Removing and installing wiper blade

3.39 Headlight washer system: checking operation

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Not all vehicles are equipped with a headlight washer system (depending on equipment version).

Procedure:

- Operate headlight washer system and check function.
- If water jet does not contact headlight: Renew relevant washer jets ⇒ Electrical system; Rep. gr. 92 ; Headlight washer system; Removing and installing washer jets .



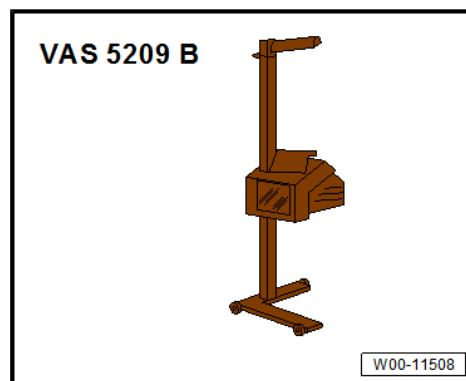
Note

The headlight washer jets are set by the manufacturer and therefore cannot be adjusted.

3.40 Headlights: checking for correct adjustment

Special tools and workshop equipment required

◆ Headlight adjustment unit - VAS 5209B-



◆ Or: headlight adjustment unit - VAS 621 001-

Performed as part of an inspection, this check is merely an abbreviated form of the headlight adjustment check required, for example, after a repair, and does not take the place of a full headlight adjustment check.

Do not adjust the vehicle load or the tyre pressures for this procedure.

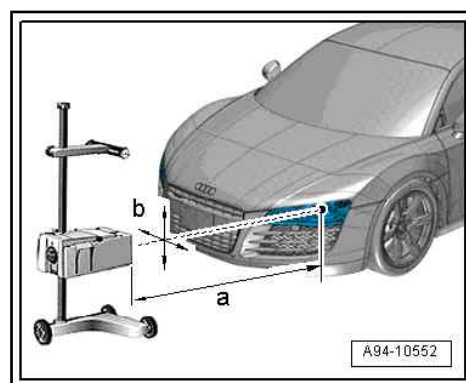
Do not adjust the headlights to their basic setting using the vehicle diagnostic tester.

Checking and adjusting the headlights according to the instructions in the Workshop Manual is a repair measure and must be charged separately.

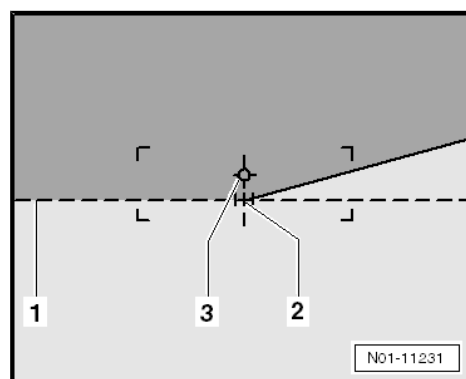
Procedure:

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- For vehicles with manually adjustable headlight range control: Use manual adjuster to set to basic setting.
- Activate dipped headlights.
- Align headlight adjustment unit parallel to vehicle and position it centrally in front of headlight at a distance of 30 to 70 cm -distance a-; deviation from centre of light emission surface must not exceed 3 cm -distance b-.



- Adjust dip setting of headlight adjustment unit so that beam of headlight falls on test screen according to following parameter: Horizontal light-dark border should coincide with setting line -1-.
- Read off dip setting of headlight adjuster.
- Repeat procedure on opposite side.
- Compare dip setting on left and right sides.
- If they deviate 2.0% or more from one another: Check and adjust headlight setting according to procedure specified in Workshop Manual ⇒ Electrical system; Rep. gr. 94 ; Headlights; Adjusting headlights .



3.41 Headlights and reversing lights, side lights, number plate lights, turn signals, hazard warning lights: checking operation

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Procedure:

- Activate side lights and check that the following exterior lights function properly:
 - ◆ Side lights (front)
 - ◆ Side lights (rear)
 - ◆ If applicable: additional tail light under open rear lid
- Switch on ignition.
- Check operation of daytime running lights (front).
- Operate right turn signal, left turn signal and hazard warning lights, and check that corresponding turn signal lamps at front, rear and side function properly.
- Activate dipped headlights and check that the following exterior lights function properly:
 - ◆ Dipped headlights
 - ◆ Tail lights
 - ◆ Number plate lights
- Use appropriate switch to activate fog lights and check that they function properly.
- Check that main beam headlights function properly.
- Operate brakes and check function of all brake lights.
- Engage reverse gear and check that all reversing lights function properly. This model is fitted with two reversing lights.
- Use appropriate switch to activate rear fog lights and check that they function properly. This model is fitted with two rear fog lights.
- Renew any defective bulbs.



Note

It is possible to deactivate the daytime running lights intentionally via the appropriate MMI setup menu.

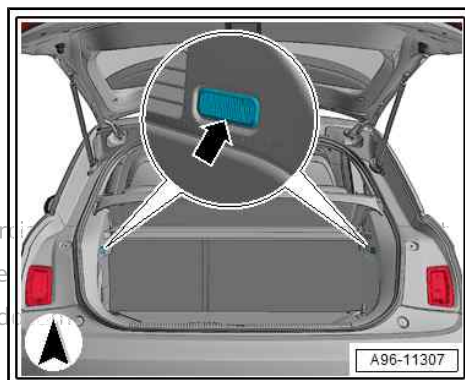
3.42 Luggage compartment lighting: checking operation

Procedure:

- Check that luggage compartment lights shown -arrows- function properly.



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3.43 Luggage compartment: removing protective film and felt pieces

Procedure:

- Remove protective film and felt pieces carefully and completely from luggage compartment.

3.44 Glove box light, interior lighting and reading light: checking operation

Procedure:

- Open glove box and check that glove box light functions properly (if fitted).
- Use the appropriate switches to activate the following interior lights and check that the lights function properly:
 - ◆ Interior lights in headliner at front
 - ◆ If fitted: interior lights in headliner at rear



Note

Checking the ambient lighting is NOT part of the inspection.

3.45 Horn: checking operation

Procedure:

- Switch on ignition.
- Operate horn and check proper function of treble horn and bass horn.



Note

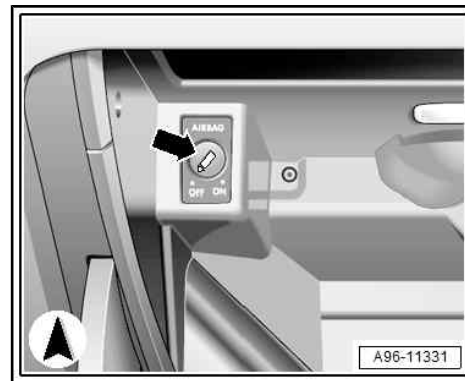
Perform this check outdoors, e.g. when driving the vehicle to the workshop or during a road test.

3.46 Passenger airbag: checking key switch on/off and setting to "on"

Switch for "Airbag ON/OFF" is located in glove box -arrow-.

Procedure:

- Turn switch to "AIRBAG OFF" position.
- Switch ignition on and wait for vehicle to complete initial system check.
- Check that "PASSENGER AIRBAG OFF" display lights up in instrument cluster.
- Switch off ignition.
- Turn switch to "AIRBAG ON" position.
- Switch ignition on and wait for vehicle to complete initial system check.
- Check that "PASSENGER AIRBAG OFF" disappears.
- Switch off ignition.



Note

The amount of time needed for the vehicle system check varies depending on the model and equipment.

3.47 Owner's literature: checking that all documents are present

Procedure:

- Check that all parts of owner's literature are present, and prepare them for handover to customer.

3.48 Service wallet: affixing vehicle data sticker

The vehicle data sticker can be found in the supplied pack.

Procedure:

- Remove vehicle data sticker from supplied pack.
 - Affix vehicle data sticker in service wallet under "Warranty entitlement record".
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Note

Does not apply to vehicles for USA and China.

3.49 Service Schedule: entering Delivery Inspection

The field for documenting the Delivery Inspection can be found on page 2 of the Service Schedule.

Procedure:

- Apply stamp of Audi Workshop.
- Enter date of work carried out.
- Mark relevant field(s).

**Note**

Only for markets not using the Digital Service Schedule.

3.50 Seat belts: checking that retaining rivets are fitted, and checking locking action of automatic belt retractor

Procedure:

For all seat belts installed:

- Check that retaining rivets/clips are fitted.
- Check locking action of automatic belt retractors when belt is unrolled abruptly.

**Note**

If the seat belt is securing an object (e.g. child seat), do not release the seat belt. Only check the locking action when the belt is buckled; it is not necessary to check the retaining rivet/clip in this case.

3.51 Vehicle interior: removing protective covers for seats and carpet

Procedure:

- Remove protective covers for seats and carpet carefully and completely from vehicle interior.

3.52 Vehicle interior: checking that it is clean and cleaning if necessary

Procedure:

Check that the following items are clean (clean them if necessary):

- ◆ Front seats
- ◆ Rear seat bench
- ◆ Interior trim
- ◆ Carpets
- ◆ Floor mats
- ◆ Windows/windscreen

3.53 Vehicle interior: removing any objects other than those protecting interior surfaces

Procedure:

- Remove any objects from vehicle other than those which are protecting interior surfaces.

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3.54 Vehicle interior and exterior: checking for and documenting any damage

Procedure:

- Check interior of vehicle for damage and document any damage found.
- Check exterior of vehicle for damage and document any damage found.

3.55 Instrument cluster: checking warning lamps

Reading out the event memory is a repair measure and should be charged separately.

Procedure:

- Start engine and wait for vehicle to complete initial system check.
- Check whether warning lamps light up in instrument cluster.
- Switch off engine.
- If relevant warning lamps light up: Read out event memory
⇒ [page 20](#).



Note

The amount of time needed for the vehicle system check varies depending on the model and equipment.

3.56 Warning triangle: checking availability

Procedure:

- Check that warning triangle(s) is/are present.

3.57 First-aid kit: checking and recording expiry date

The first-aid kit is located under the luggage compartment floor.

Procedure:

- Take out first-aid kit and check expiry date printed on kit.
- Record expiry date in Maintenance table.
- If expiry date has passed: Renew first-aid kit.

3.58 Vehicle keys: checking operation and recording number of keys given to customer

Procedure:

- Open key ring to check each key individually.
- Start engine with each key individually.
- Record number of keys which have been matched and handed over in Maintenance table.
- If a vehicle key has not been matched: Re-match all keys to vehicle using Guided Function of vehicle diagnostic tester via online tool GeKo.

- If there is reason to suspect improper use (e.g. missing key): See current notices from AUDI AG under “Technical information ► Anti-theft protection” on ServiceNet.

**Note**

- ◆ *Only the key being checked may be inside the vehicle. Place all other keys out of transmission range.*
- ◆ *If the key has not been matched, the engine will turn off after a few seconds. In addition, the warning lamp for the immobiliser or the display “SAFE” will appear in the instrument cluster, depending on the vehicle equipment.*

3.59 Vehicle key: removing from ignition lock

Only applies to vehicles with ignition lock.

Procedure:

- Remove vehicle key from ignition lock.

3.60 Vehicle key(s), wheel covers and owner's literature: checking availability and recording number present

Procedure:

- Check whether there are keys for the vehicle and record number of keys in maintenance table.
- Check whether there are wheel covers for the vehicle and record number of wheel covers in maintenance table.
- Check whether owner's literature is in place and record number of copies in maintenance table.
- Wait until shortly before vehicle delivery to renew any missing components.

3.61 Sun visors: checking that they are folded up and folding up if necessary

Procedure:

- Check that sun visors are folded up, and fold them up if necessary.

3.62 Luggage compartment cover and sun blind: checking that they are rolled up and rolling up if necessary

Procedure:

- If a luggage compartment cover is fitted, check that it is rolled up (roll it up if necessary).
- Check that sun blinds are folded up (fold them up if necessary).

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3.63 Engine oil: draining



Note

- ◆ Oil should always be changed when engine is warm.
- ◆ Always observe the relevant environmental regulations for disposal.
- ◆ Keep components clean.

3-cyl. petrol engine 1.0 TFSI ⇒ [page 69](#)

4-cyl. petrol engine 1.2 TFSI ⇒ [page 70](#)

4-cyl. petrol engine 1.4 TFSI ⇒ [page 71](#)

4-cyl. petrol engine 2.0 TFSI ⇒ [page 72](#)

3-cyl. diesel engine 1.4 TDI ⇒ [page 73](#)

4-cyl. diesel engine 1.6 TDI (version 1) ⇒ [page 74](#)

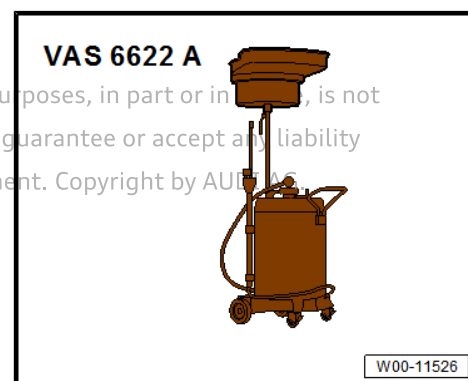
4-cyl. diesel engine 1.6 TDI/2.0 TDI (version 2) ⇒ [page 76](#)

3.63.1 3-cyl. petrol engine 1.0 TFSI

Special tools and workshop equipment required

- ◆ Used oil collection and extraction unit - V.A.S 6622 A-

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- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm
- ◆ Or: torque wrench - VAS 5820- , measuring range 20 to 100 Nm

Table of tightening torques for installation:

Component/fastener	[Nm]
Oil drain plug on sump	30

Removal steps:

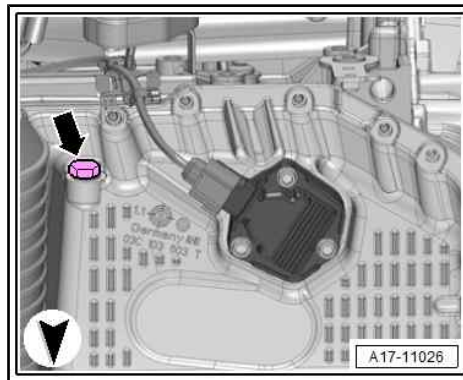
- Remove noise insulation ⇒ [page 12](#) .

Procedure:

- Place oil drip tray under engine sump.

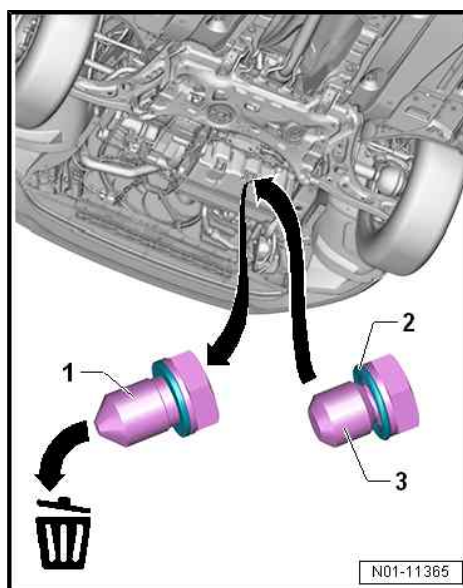
- Unscrew oil drain plug of sump -arrow-.
- Drain engine oil from sump.
- Renew seal for oil drain plug.
- Screw oil drain plug into sump and tighten to specified torque (see table of tightening torques for installation ⇒ [page 69](#)).

Continue installation in reverse sequence.



Note

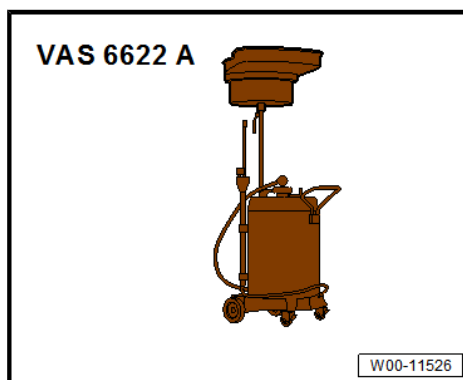
Applies to oil drain plug with captive seal -1-: After first oil change, replace with an oil drain plug -3- with exchangeable seal -2-.



3.63.2 4-cyl. petrol engine 1.2 TFSI

Special tools and workshop equipment required

- ◆ Used oil collection and extraction unit - V.A.S 6622 A-



- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm
- ◆ Or: torque wrench - VAS 5820- , measuring range 20 to 100 Nm



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Table of tightening torques for installation:

Component/fastener	[Nm]
Oil drain plug on sump	30

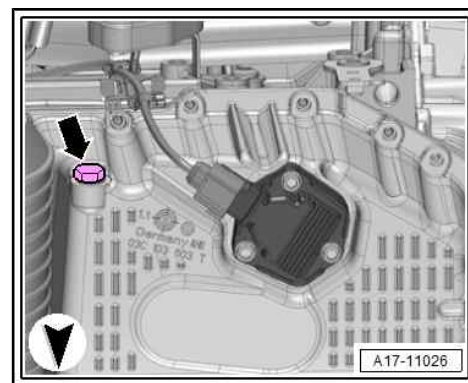
Removal steps:

- Remove noise insulation ⇒ [page 12](#) .

Procedure:

- Place oil drip tray under engine sump.
- Unscrew oil drain plug of sump -arrow-.
- Drain engine oil from sump.
- Renew seal for oil drain plug.
- Screw oil drain plug into sump and tighten to specified torque (see table of tightening torques for installation ⇒ [page 70](#)).

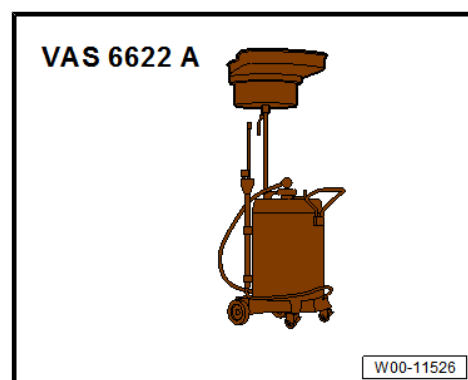
Continue installation in reverse sequence.



3.63.3 4-cyl. petrol engine 1.4 TFSI

Special tools and workshop equipment required

- ◆ Used oil collection and extraction unit - V.A.S 6622 A-



- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm
- ◆ Or: torque wrench - VAS 5820- , measuring range 20 to 100 Nm

Table of tightening torques for installation:

Component/fastener	[Nm]
Oil drain plug on sump	30

Removal steps:

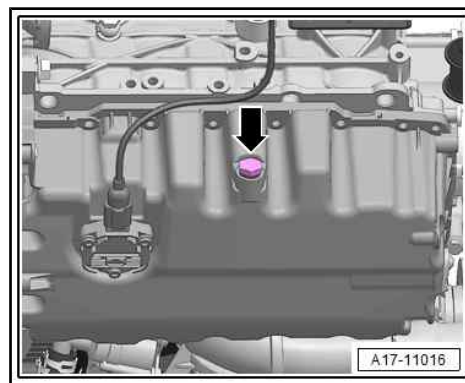
- Remove noise insulation ⇒ [page 12](#) .

Procedure:

- Place oil drip tray under engine sump.

- Unscrew oil drain plug of sump -arrow-.
- Drain engine oil from sump.
- Renew seal for oil drain plug.
- Screw oil drain plug into sump and tighten to specified torque (see table of tightening torques for installation ⇒ [page 71](#)).

Continue installation in reverse sequence.



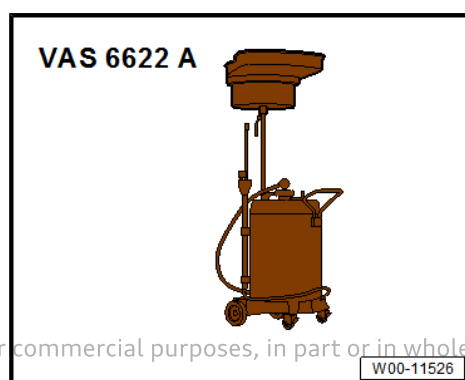
3.63.4 4-cyl. petrol engine 2.0 TFSI

Special tools and workshop equipment required

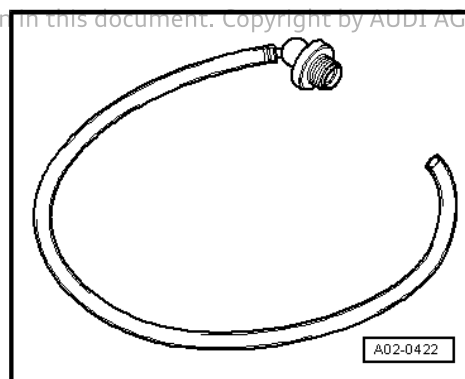
- ◆ Used oil collection and extraction unit - V.A.S 6622 A-



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- ◆ Oil drain adapter - T 40057-



- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm
- ◆ Or: torque wrench - VAS 5820- , measuring range 20 to 100 Nm

Table of tightening torques for installation:

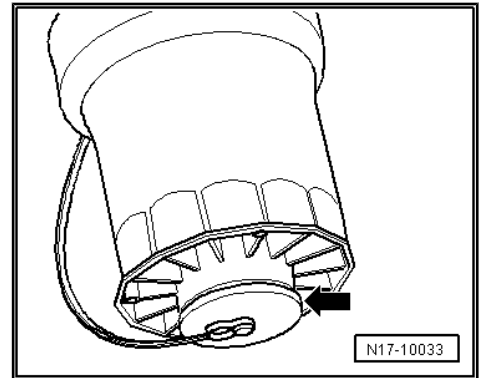
Component/fastener	[Nm]
Oil drain plug on sump	30

Removal steps:

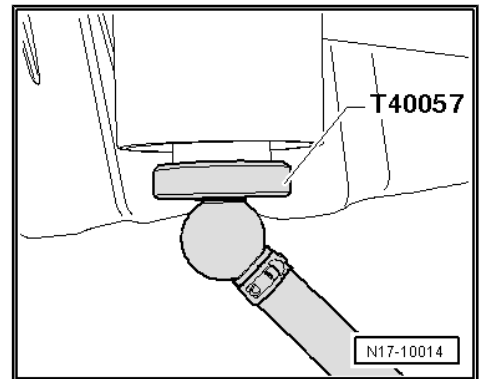
- Remove noise insulation ⇒ [page 12](#) .

Procedure:

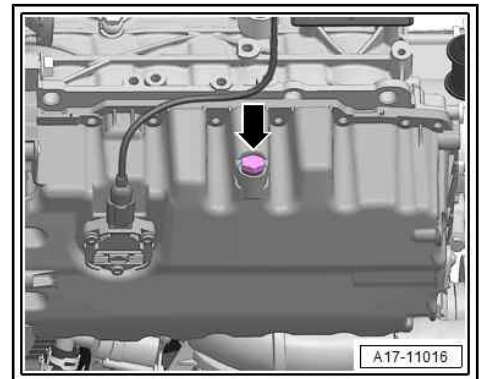
- Unscrew protective cap -arrow- from oil filter housing.
- Place oil drip tray under engine sump.
- Hold hose of oil drain adapter -T40057- in used oil collection and extraction unit .



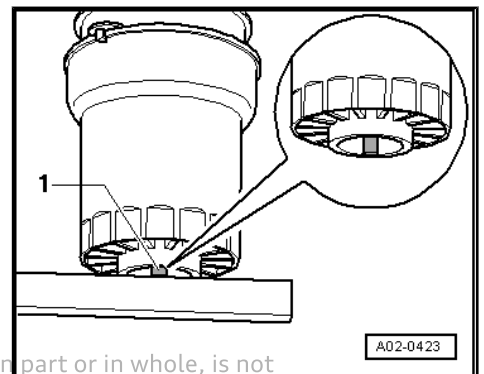
- Screw oil drain adapter - T40057- into oil filter housing. This opens a valve in oil filter housing, and oil will then be drained.
- Drain engine oil from oil filter housing.



- Remove oil drain plug -arrow- from sump and drain engine oil.



- Unscrew oil drain adapter - T 40057- from oil filter housing and check that base valve -1- is flush and level.
- Screw protective cap back onto oil filter housing.
- Renew seal for oil drain plug for sump.
- Screw oil drain plug into sump and tighten to specified torque (see table of tightening torques for installation ⇒ [page 72](#)).

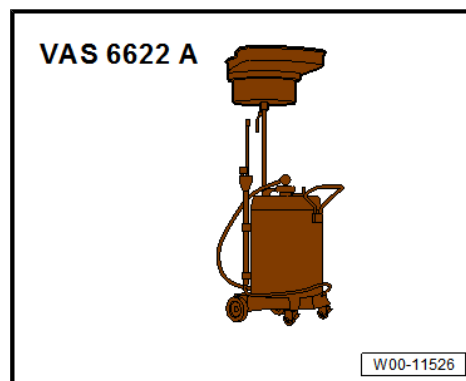


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3.63.5 3-cyl. diesel engine 1.4 TDI

Special tools and workshop equipment required

- ◆ Used oil collection and extraction unit - V.A.S 6622 A-



- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm
- ◆ Or: torque wrench - VAS 5820- , measuring range 20 to 100 Nm

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Table of tightening torques for installation:

Component/fastener	[Nm]
Oil drain plug on sump	30

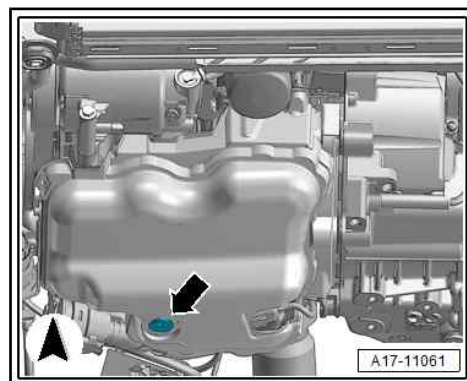
Removal steps:

- Remove noise insulation ⇒ [page 12](#) .

Procedure:

- Place oil drip tray under engine sump.
- Unscrew oil drain plug of sump -arrow-.
- Drain engine oil from sump.
- Renew seal for oil drain plug.
- Screw oil drain plug into sump and tighten to specified torque (see table of tightening torques for installation ⇒ [page 74](#)).

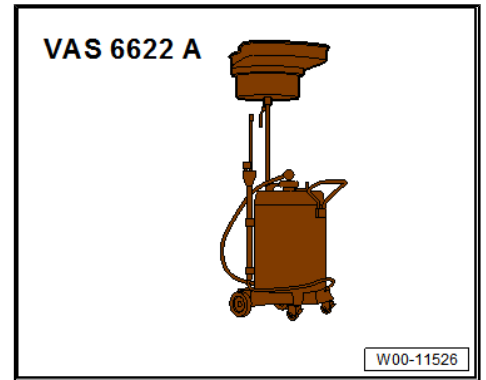
Continue installation in reverse sequence.



3.63.6 4-cyl. diesel engine 1.6 TDI (version 1)

Special tools and workshop equipment required

- ◆ Used oil collection and extraction unit - V.A.S 6622 A-



- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm
- ◆ Or: torque wrench - VAS 5820- , measuring range 20 to 100 Nm

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Table of tightening torques for installation:

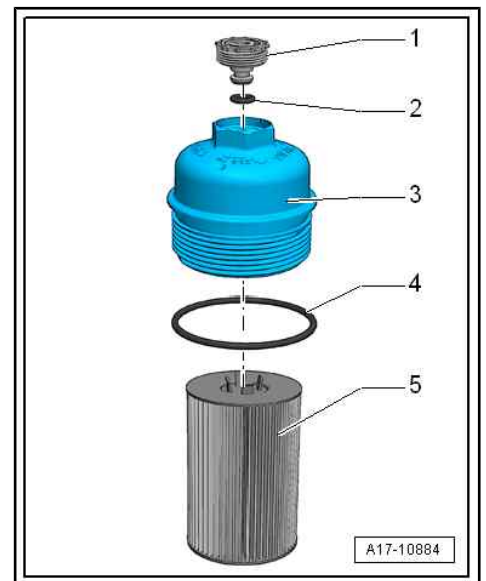
Component/fastener	[Nm]
Oil drain plug on sump	30
Oil drain plug on sealing cap	5

Removal steps:

- Remove noise insulation ⇒ [page 12](#) .

Procedure:

- Place oil drip tray under engine sump.
- Unscrew oil drain plug -1- on sealing cap -3- and drain off engine oil from oil filter housing.

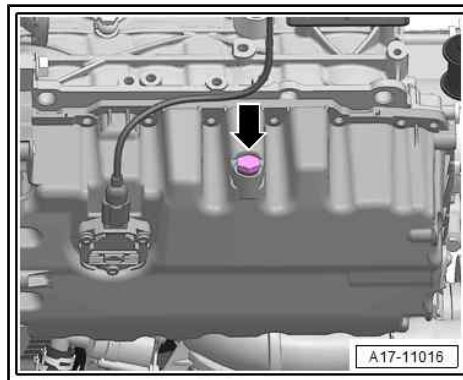


- Unscrew oil drain plug of sump -arrow-.
- Drain engine oil from sump.
- Renew O-rings for oil drain plugs of sump and sealing cap.
- Re-install both oil drain plugs and tighten to specified torque (see table of tightening torques for installation ⇒ [page 75](#)).



Note

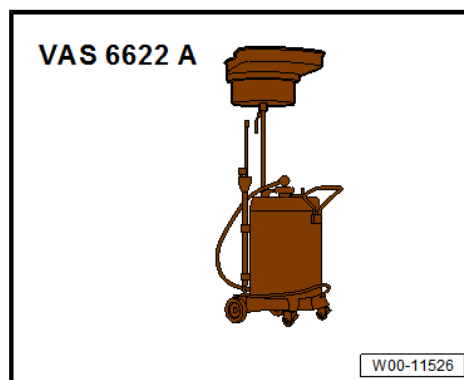
There is more than one version of the oil drain plug for the 4-cylinder 1.6 TDI diesel engine ⇒ [page 76](#).



3.63.7 4-cyl. diesel engine 1.6 TDI/2.0 TDI (version 2)

Special tools and workshop equipment required

- ◆ Used oil collection and extraction unit - V.A.S 6622 A-



- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm

Table of tightening torques for installation:

Component/fastener	[Nm]
Oil drain plug on sump	30

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Removal steps:

- Remove noise insulation ⇒ [page 12](#).

Procedure:

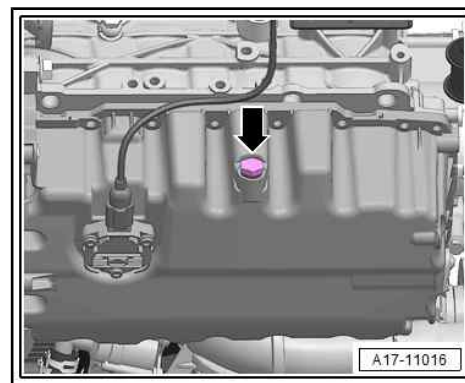
- Place oil drip tray under engine sump.

- Unscrew oil drain plug of sump -arrow-.
- Drain engine oil from sump.
- Renew seal for oil drain plug.
- Screw oil drain plug into sump and tighten to specified torque (see table of tightening torques for installation ⇒ [page 76](#)).

Continue installation in reverse sequence.

 Note

There is more than one version of the oil drain plug for the 4-cylinder 1.6 TDI diesel engine ⇒ [page 74](#) .

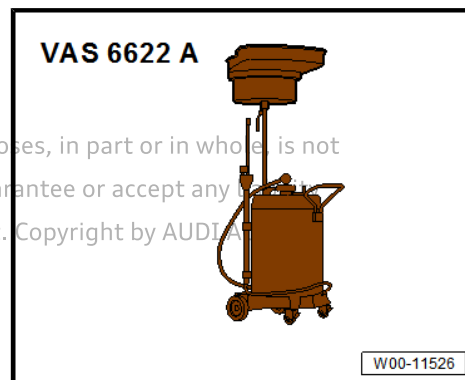


3.64 Engine oil: extracting

Special tools and workshop equipment required

- ◆ Used oil collection and extraction unit - V.A.S 6622 A-

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Procedure:

- Pull oil dipstick/sealing plug out of guide tube.
- Insert extraction probe of oil extraction unit into guide tube. Use flexible extraction probe with largest possible diameter and insert without using any significant force. Otherwise the tip can become diverted on the bottom of the sump and a large amount of used oil will remain in the engine.
- Extract engine oil completely. Observe operating instructions for extraction unit.
- Finally, install oil dipstick/sealing plug.

 Note

- ◆ *Oil should always be changed when engine is warm.*
- ◆ *Always observe the relevant environmental regulations for disposal.*
- ◆ *Keep components clean.*

3.65 Engine oil: renewing oil filter

3-cyl. petrol engine 1.0 TFSI ⇒ [page 78](#)

4-cyl. petrol engine 1.2 TFSI/1.4 TFSI (version 1) ⇒ [page 79](#)

4-cyl. petrol engine 1.4 TFSI (version 2) ⇒ [page 80](#)

4-cyl. petrol engine 1.8 TFSI/2.0 TFSI (version 1) ⇒ [page 81](#)

4-cyl. petrol engine 2.0 TFSI (version 2) ⇒ [page 82](#)

3-cyl. diesel engine 1.4 TDI ⇒ [page 83](#)

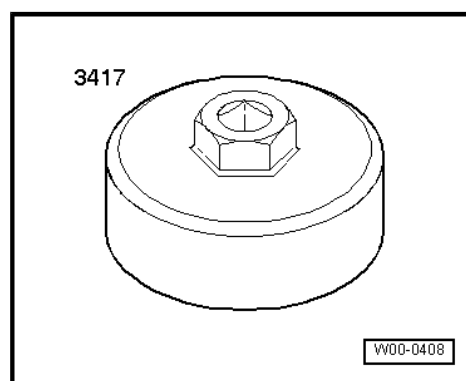
4-cyl. diesel engine 1.6 TDI (version 1) ⇒ [page 84](#)

4-cyl. diesel engine 1.6 TDI/2.0 TDI (version 2) ⇒ [page 85](#)

3.65.1 3-cyl. petrol engine 1.0 TFSI

Special tools and workshop equipment required

- ◆ Oil filter tool - 3417-



- ◆ Hazet strap wrench - 2171-1-
- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - V.A.G 1410- , measuring range 4 to 20 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm
- ◆ Or: torque wrench - VAS 5820- , measuring range 20 to 100 Nm

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Table of tightening torques for installation:

Component/fastener	[Nm]
Oil filter cartridge	20

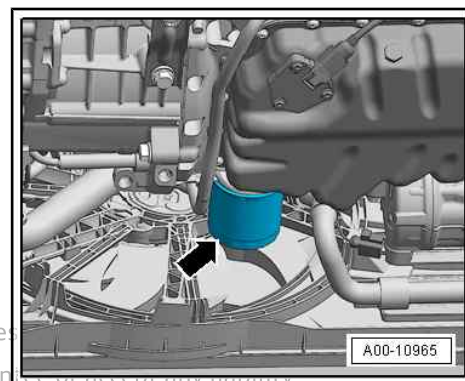
Requirements:

- Engine oil drained.

Procedure:

- Use Hazet strap wrench - 2171-1- or oil filter tool - 3417- to slacken oil filter -arrow- and then remove it.
- Clean sealing surface for oil filter at engine.
- Lubricate rubber seal on new oil filter cartridge with engine oil.
- Fit new oil filter cartridge and tighten to specified torque (see table of tightening torques for installation ⇒ [page 78](#)).

Continue installation in reverse sequence.

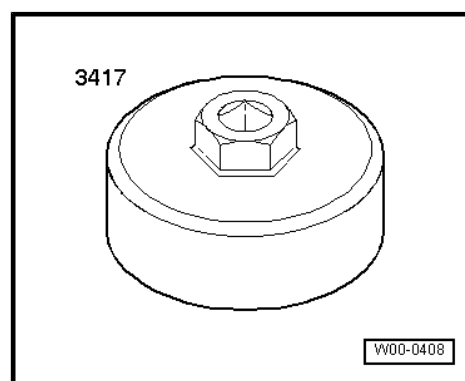


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3.65.2 4-cyl. petrol engine 1.2 TFSI/1.4 TFSI (version 1)

Special tools and workshop equipment required

- ◆ Oil filter tool - 3417-



- ◆ Hazet strap wrench - 2171-1-
- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - V.A.G 1410- , measuring range 4 to 20 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm
- ◆ Or: torque wrench - VAS 5820- , measuring range 20 to 100 Nm

Table of tightening torques for installation:

Component/fastener	[Nm]
Oil filter cartridge	20

Removal steps:

- Remove engine cover panel ⇒ [page 9](#) .

Procedure:

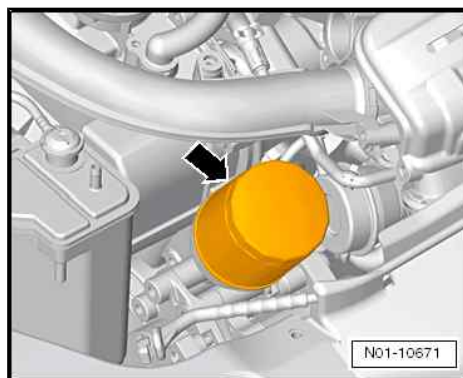
- Use Hazet strap wrench - 2171-1- or oil filter tool - 3417- to slacken oil filter cartridge -arrow- and then remove it.
- Clean sealing surface for oil filter cartridge at engine.
- Lubricate rubber seal on new oil filter cartridge with engine oil.
- Fit new oil filter cartridge and tighten to specified torque (see table of tightening torques for installation ⇒ [page 79](#)).

Continue installation in reverse sequence.



Note

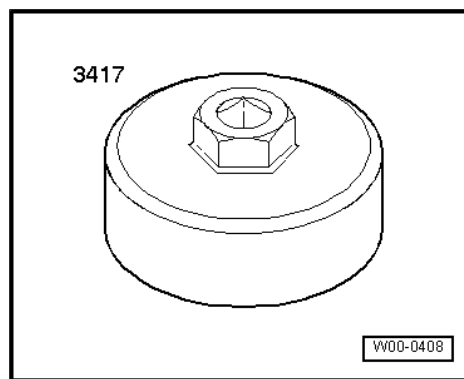
There is more than one version of the oil filter for the 4-cylinder 1.4 TFSI petrol engine ⇒ [page 80](#) .



3.65.3 4-cyl. petrol engine 1.4 TFSI (version 2)

Special tools and workshop equipment required

- ◆ Oil filter tool - 3417-



- ◆ Hazet strap wrench - 2171-1-
- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - V.A.G 1410- , measuring range 4 to 20 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm
- ◆ Or: torque wrench - VAS 5820- , measuring range 20 to 100 Nm

Table of tightening torques for installation:

Component/fastener	[Nm]
Oil filter cartridge	20

Requirements:

- Engine oil drained.

Procedure:

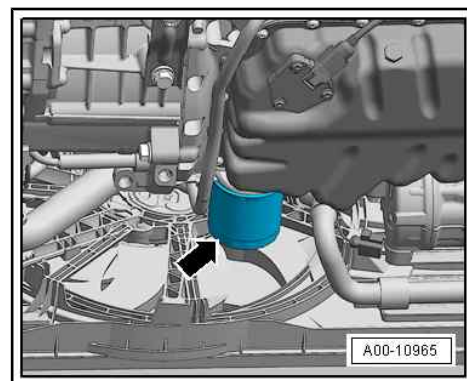
- Use Hazet strap wrench - 2171-1- or oil filter tool - 3417- to slacken oil filter -arrow- and then remove it.
- Clean sealing surface for oil filter at engine.
- Lubricate rubber seal on new oil filter cartridge with engine oil.
- Fit new oil filter cartridge and tighten to specified torque (see table of tightening torques for installation ⇒ [page 80](#)).

Continue installation in reverse sequence.



Note

There is more than one version of the oil filter for the 4-cylinder 1.4 TFSI petrol engine ⇒ [page 79](#) .



3.65.4 4-cyl. petrol engine 1.8 TFSI/2.0 TFSI (version 1)

Special tools and workshop equipment required

- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - VAS 5820- , measuring range 20 to 100 Nm

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Table of tightening torques for installation:

Component/fastener	[Nm]
Sealing cap on oil filter	25

Removal steps:

- Remove engine cover panel ⇒ [page 9](#) .

Procedure:

- Loosen sealing cap of oil filter using socket (32 mm) . This causes a valve to open.
- Wait a few minutes to allow engine oil to drain from filter housing into crankcase.
- Completely remove sealing cap. Make sure that no engine oil drips onto engine.

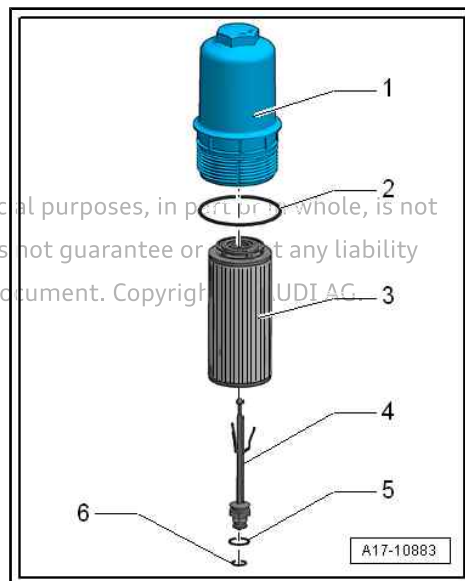
- Pull oil filter element -3- and O-ring -8- out of sealing cap -7-.
- Clean sealing surfaces of sealing cap -1-.
- Lightly lubricate new O-ring -2- with engine oil and insert O-ring.
- Fit new oil filter element -3- in sealing cap.
- Screw sealing cap -1- into oil filter housing -2- and tighten it to specified torque using socket (32 mm) (see table of tightening torques for installation [⇒ page 81](#)).

Continue installation in reverse sequence.



Note

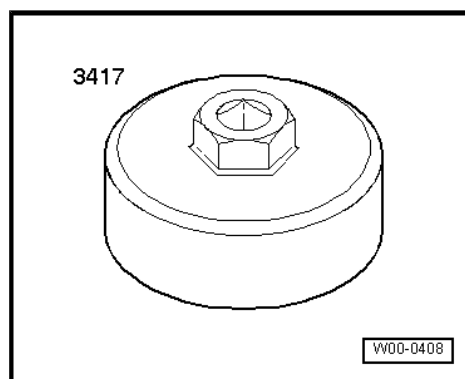
There is more than one version of the oil filter for the 4-cylinder 2.0 TFSI petrol engine [⇒ page 82](#).



3.65.5 4-cyl. petrol engine 2.0 TFSI (version 2)

Special tools and workshop equipment required

- ◆ Oil filter tool - 3417-



- ◆ Hazet strap wrench - 2171-1-
- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm
- ◆ Or: torque wrench - VAS 5820- , measuring range 20 to 100 Nm

Table of tightening torques for installation:

Component/fastener	[Nm]
Sealing cap	25

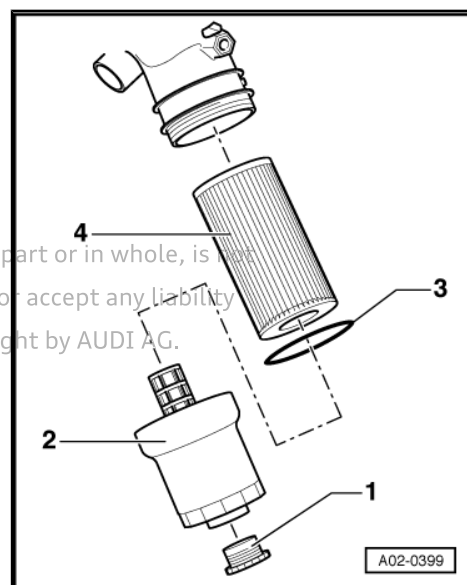
Requirements:

- Engine oil drained.

Procedure:

- Use oil filter tool - 3417- or Hazet strap wrench - 2171-1- to loosen sealing cap -2- of oil filter housing and then remove it.
- Remove oil filter element -4- and seal -3-.
- Clean sealing surface on oil filter housing.

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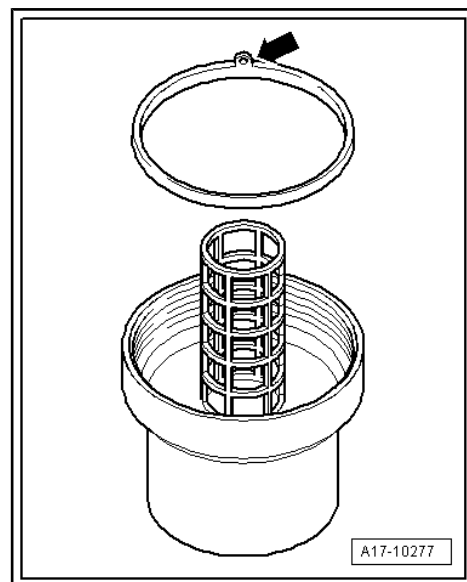


- Lightly lubricate new seal with engine oil and insert into oil filter housing. Note position of service tab on seal -arrow-. Flat side of seal profile must face outwards.
- Fit new filter element in oil filter housing.
- Screw sealing cap of oil filter housing into mounting on crank-case and tighten to specified torque using oil filter tool - 3417- (see table of tightening torques for installation ⇒ [page 82](#)).

Continue installation in reverse sequence.

Note

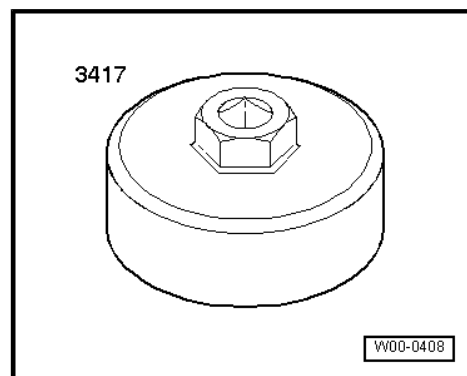
There is more than one version of the oil filter for the 4-cylinder 2.0 TFSI petrol engine ⇒ [page 81](#).



3.65.6 3-cyl. diesel engine 1.4 TDI

Special tools and workshop equipment required

- ◆ Oil filter tool - 3417-



- ◆ Hazet strap wrench - 2171-1-
- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm

- ◆ Or: torque wrench - V.A.G 1410- , measuring range 4 to 20 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm
- ◆ Or: torque wrench - VAS 5820- , measuring range 20 to 100 Nm

Table of tightening torques for installation:

Component/fastener	[Nm]
Oil filter cartridge	20

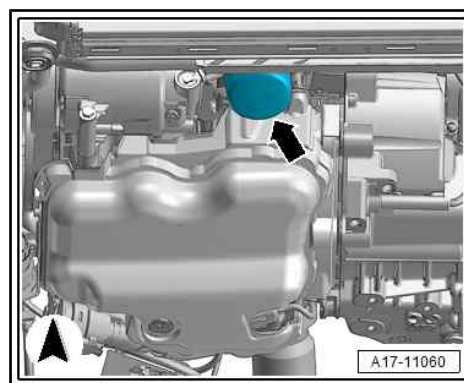
Requirements:

- Engine oil drained.

Procedure:

- Use Hazet strap wrench - 2171-1- or oil filter tool - 3417- to slacken oil filter -arrow- and then remove it.
- Clean sealing surface for oil filter at engine.
- Lubricate rubber seal on new oil filter cartridge with engine oil.
- Fit new oil filter cartridge and tighten to specified torque (see table of tightening torques for installation ⇒ [page 84](#)).

Continue installation in reverse sequence.



3.65.7 4-cyl. diesel engine 1.6 TDI (version 1)

Special tools and workshop equipment required

- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm
- ◆ Or: torque wrench - VAS 5820- , measuring range 20 to 100 Nm



Table of tightening torques for installation:

Component/fastener	[Nm]
Sealing cap on oil filter	25

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Requirements:

- Engine oil drained.

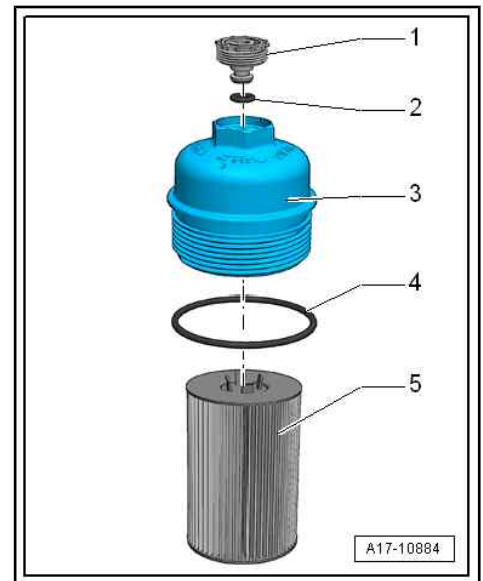
Procedure:

- Loosen and remove sealing cap -3- using socket (32 mm) .
- Pull oil filter element -5- and O-ring -4- out of sealing cap -3-.
- Clean sealing surfaces of sealing cap -3-.
- Lightly lubricate new O-ring -4- with engine oil and insert O-ring.
- Fit new oil filter element -5- in sealing cap -3-.
- Screw sealing cap -3- into oil filter housing and tighten it to specified torque using socket (32 mm) (see table of tightening torques for installation ⇒ [page 84](#)).

Continue installation in reverse sequence.



There is more than one version of the oil filter for the 4-cylinder 1.6 TDI diesel engine ⇒ [page 85](#) .



3.65.8 4-cyl. diesel engine 1.6 TDI/2.0 TDI (version 2)

Special tools and workshop equipment required

- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm
- ◆ Or: torque wrench - VAS 5820- , measuring range 20 to 100 Nm

Table of tightening torques for installation:

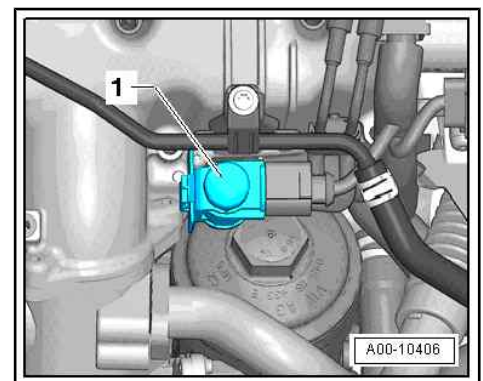
Component/fastener	[Nm]
Sealing cap	25

Removal steps:

- Remove engine cover panel ⇒ [page 9](#) .

Procedure:

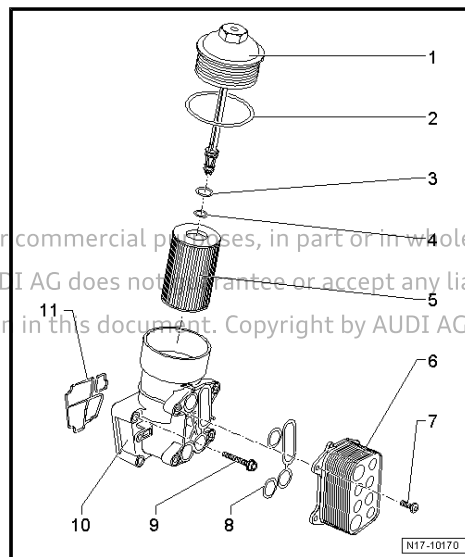
- Unclip vacuum control valve -1- from bracket and move clear to one side.



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- Loosen sealing cap -1- of oil filter using socket (32 mm) . This causes a valve to open.
- Wait a few minutes to allow engine oil to drain from filter housing into crankcase.
- Completely remove sealing cap. Make sure that no engine oil drips onto engine.
- Pull oil filter element -5- and O-ring -2- out of sealing cap.
- Clean sealing surfaces of sealing cap -1-.
- Lightly lubricate new O-ring -2- with engine oil and insert O-ring.
- Fit new oil filter element -5- in sealing cap.
- Use socket (32 mm) to tighten sealing cap to specified torque (see table of tightening torques for installation ⇒ [page 85](#)).

Continue installation in reverse sequence.



Note

There is more than one version of the oil filter for the 4-cylinder 1.6 TDI diesel engine ⇒ [page 84](#) .

3.66 Engine oil: filling up



CAUTION

Risk of engine damage if the engine is revved too soon after changing the oil!

- ◆ The engine must only run at idling speed as long as the oil pressure warning lamp in the instrument cluster is on.
- ◆ Increase the engine speed only after the warning lamp has gone out.

Special tools and workshop equipment required

- ◆ Oil filler funnel - VAS 6842-



Refer to ELSA maintenance table for engine-specific oil capacities and oil grades.

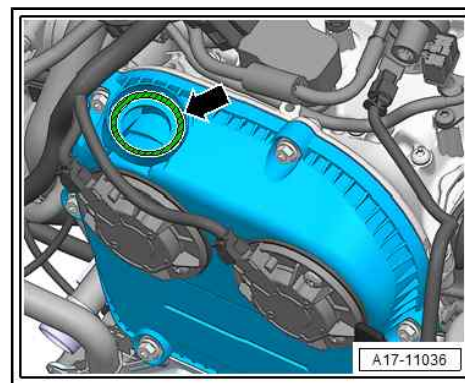
Procedure:

- Fill up engine oil using oil filler funnel - VAS 6842- .
- Then check oil level and adjust if necessary ⇒ [page 87](#) .

- For all 4-cylinder petrol engines 1.8/2.0 TFSI with oil filler neck on timing chain cover: Clean sealing surface -arrow- on inside of oil filler neck with a lint-free cloth before screwing on filler cap.



The quantity of oil specified in the maintenance table refers to the oil change; it is not identical to the quantity required for the initial filling.



3.67 Engine oil: checking oil level and correcting if necessary

CAUTION

Risk of damage to catalytic converter if engine oil level is too high!

◆ Drain engine oil until level meets specification.

Required conditions for all engines:

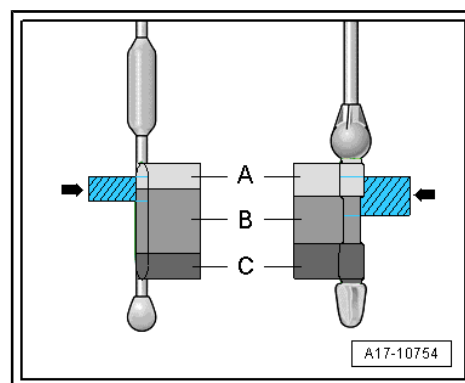
- Engine oil temperature at least 60 °C
- Wait a few minutes after switching off the engine to allow the oil to flow back into the sump.
- Vehicle must be level (horizontal).

Checking oil level with dipstick ⇒ [page 87](#)

3.67.1 Checking oil level with dipstick

Procedure:

- Pull out dipstick and wipe it off with a clean cloth.
- Re-insert dipstick into guide tube as far as it will go.
- Pull oil dipstick out again and read off oil level on marked area.
- Evaluate oil level and determine any necessary measures accordingly:



Fluid level:	Evaluation/measure:
Marked area -arrow-	Optimum oil level.
Area A	Oil must not be topped up.
Area B	Oil can be topped up.
Area C	Oil must be topped up.

3.68 Spark plugs: renewing

3-cyl. petrol engine 1.0 TFSI ⇒ [page 88](#)

4-cyl. petrol engine 1.2 TFSI ⇒ [page 90](#)

4-cyl. petrol engine 1.4 TFSI (version 1) ⇒ [page 91](#)

4-cyl. petrol engine 1.4 TFSI (version 2) ⇒ [page 93](#)

4-cyl. petrol engine 1.8 TFSI/2.0 TFSI (version 1) ⇒ [page 96](#)

4-cyl. petrol engine 2.0 TFSI (version 2) ⇒ [page 98](#)

Lubricating ignition coils ⇒ [page 100](#)

3.68.1 3-cyl. petrol engine 1.0 TFSI

Special tools and workshop equipment required

- ◆ Spark plug spanner - 3122B-



- ◆ Puller - T10530-



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- ◆ Release tool - T 10527-



- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm

Table of tightening torques for installation:

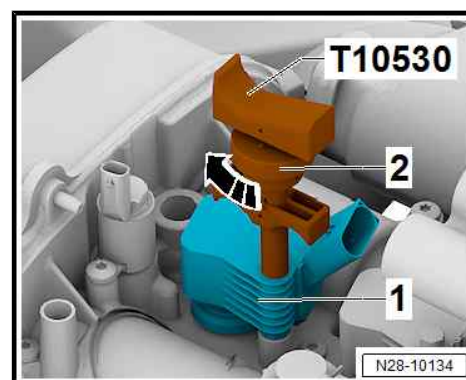
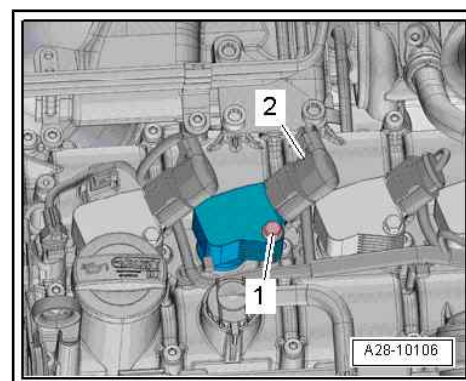
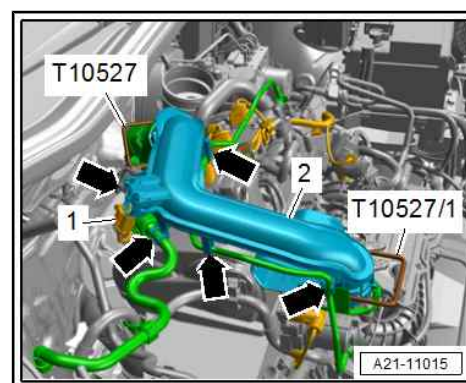
Component/fastener	[Nm]
Spark plugs with M12 thread	20+5
Spark plugs with M14 thread	30+5
Securing bolts for connector rail	8

Removal steps:

- Remove air cleaner housing ⇒ Rep. gr. 24 ; Air cleaner; Removing and installing air cleaner housing .

Step 1 - removing spark plugs:

- Unplug electrical connector -1- at air pipe -2-.
- Move hoses -arrows- clear at air pipe -2-.
- Release catch using release tool - T 10527- and remove air pipe.
- Push ignition coil connector -2- towards ignition coil, release retainer and detach connector from ignition coil.
- Move connector -2- slightly to one side. Make sure that wiring is not kinked or damaged.
- Unscrew bolts -1- for ignition coils.
- Insert puller - T10530- into hole -1- of ignition coil and turn knurled nut -2- clockwise until puller is secured in place.



- Carefully pull ignition coil out upwards using puller - T10530- .
- Repeat removal procedure with all other ignition coils.
- Unscrew spark plugs using spark plug socket and extension - VAS 3122B- .

Step 2 - installing spark plugs:

- Install new spark plugs using spark plug socket and extension - VAS 3122B- and tighten to specified torque (see table of tightening torques for installation ⇒ [page 89](#)).
- Lubricate ignition coils ⇒ [page 100](#) .
- Fit all ignition coils loosely into spark plug apertures and align with connectors of connector rail.
- Push ignition coils evenly onto spark plugs by hand (do not attempt to knock in coils with any kind of tool).
- Tighten bolts -1- for ignition coils to specified torque (see table of tightening torques for installation ⇒ [page 89](#)).
- Plug in connector -2- on each ignition coil until it engages.

Continue installation in reverse sequence.



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3.68.2 4-cyl. petrol engine 1.2 TFSI

Special tools and workshop equipment required

- ◆ Spark plug spanner - 3122 B-

- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm
- ◆ Or: torque wrench - VAS 5820- , measuring range 20 to 100 Nm

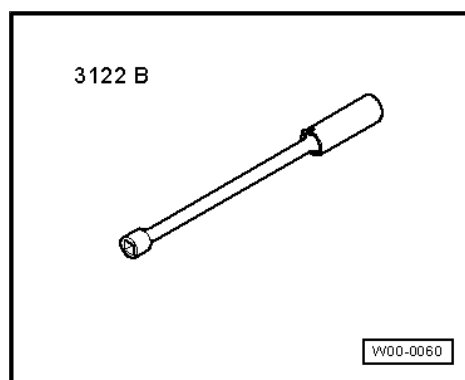
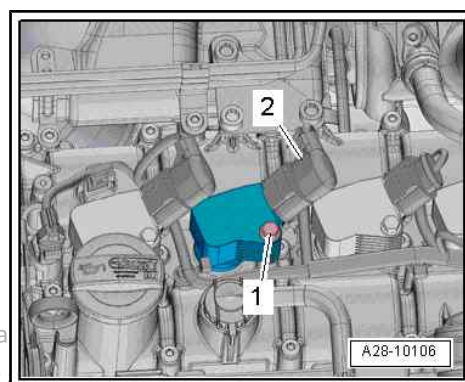
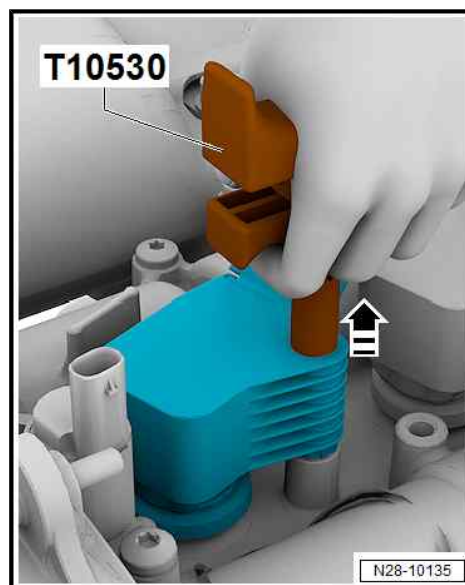
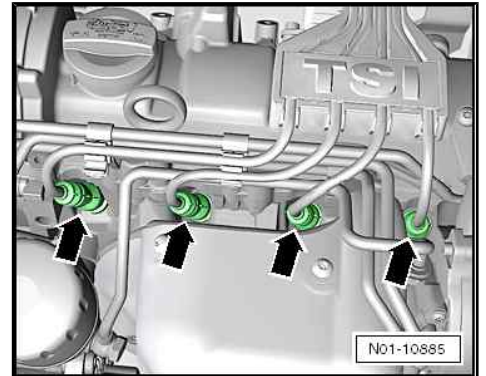


Table of tightening torques for installation:

Component/fastener	[Nm]
Spark plugs with M12 thread	20+5
Spark plugs with M14 thread	30+5

Step 1 - removing spark plugs:

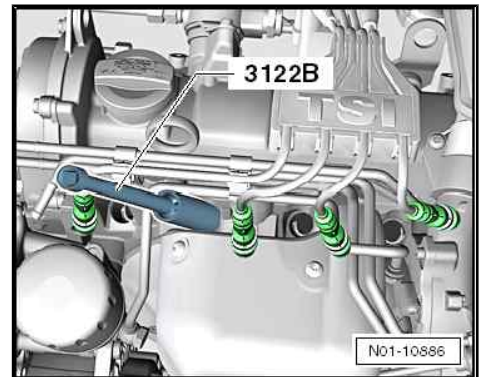
- Disconnect spark plug connectors -arrows- one after another.
- Place spark plug connectors slightly to one side. Make sure that wiring is not kinked or damaged.



- Unscrew spark plugs using spark plug socket and extension - VAS 3122B- .

Step 2 - installing spark plugs:

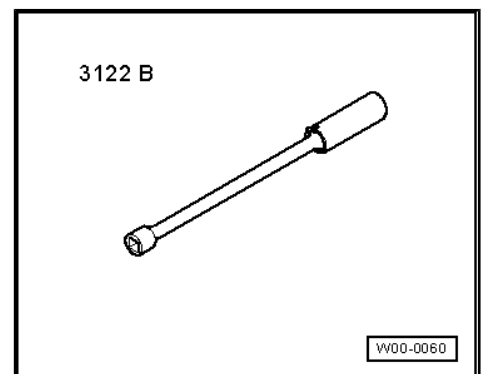
- Install new spark plugs using spark plug socket and extension - VAS 3122B- and tighten to specified torque (see table of tightening torques for installation ⇒ [page 91](#)).
- Align spark plug connectors and push them evenly onto spark plugs by hand (do not attempt to knock them in with any kind of tool).



3.68.3 4-cyl. petrol engine 1.4 TFSI (version 1)

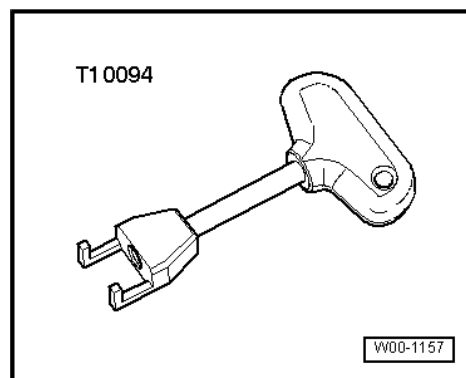
Special tools and workshop equipment required

- ◆ Spark plug spanner - 3122B-



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◆ Puller - T10094-



- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm

Table of tightening torques for installation:

Component/fastener	[Nm]
Spark plugs with M12 thread	20+5
Spark plugs with M14 thread	30+5
Securing bolts for connector rail	8

Removal steps:

- Remove engine cover panel ⇒ [page 9](#) .

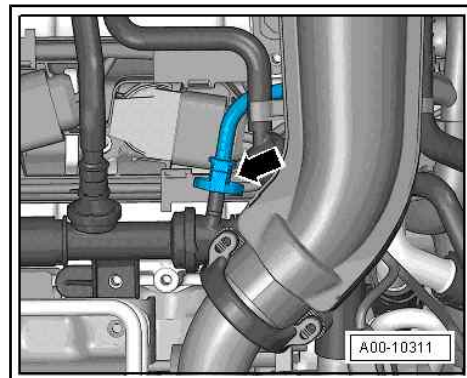
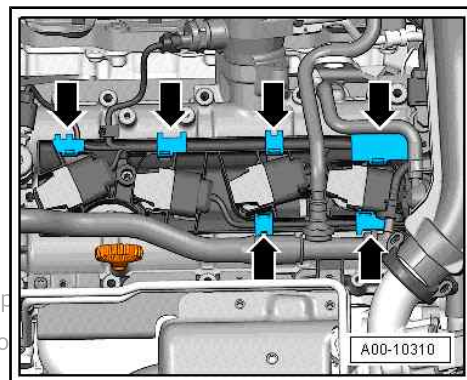
Step 1 - removing spark plugs:

- Disengage clips on wiring guide -arrows-.

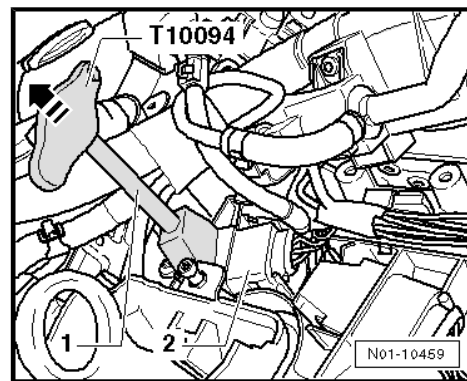


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- Detach vacuum line -arrow-.



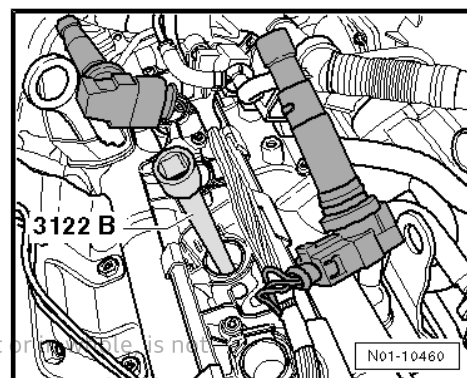
- Pull all ignition coils approx. 30 mm out of cylinder head in direction of -arrow- using puller - T10094- .
- Move ignition coils to one side with connectors -2- attached. Make sure that wiring is not kinked or damaged.



- Unscrew spark plugs from cylinder head using spark plug socket - VAS 3122B- .

Step 2 - installing spark plugs:

- Install new spark plugs using spark plug socket and extension - VAS 3122B- and tighten to specified torque (see table of tightening torques for installation => [page 92](#)).
- Lubricate ignition coils => [page 100](#) .



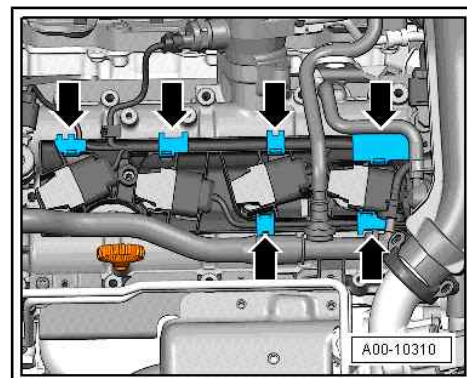
- Align all ignition coils one after another and fit loosely into spark plug apertures.

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- Push ignition coils evenly onto spark plugs by hand (do not attempt to knock in coils with any kind of tool).

- Route wiring for ignition coils correctly in wiring guide.

- Secure clips on wiring guide -arrows-.



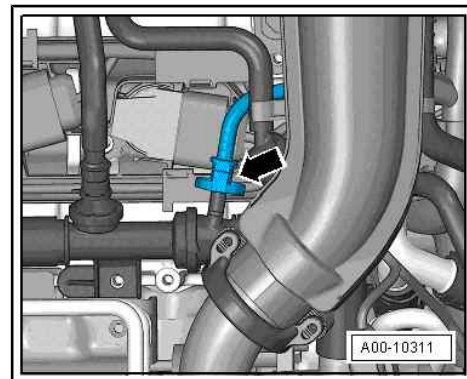
- Secure vacuum line -arrow-.

Continue installation in reverse sequence.



Note

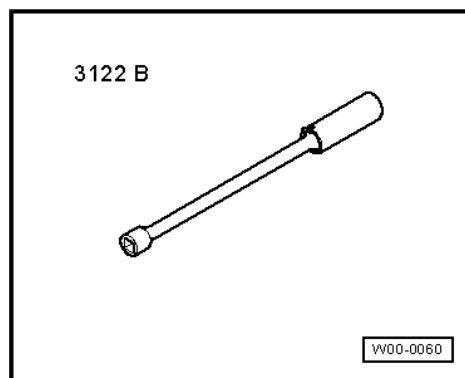
There are additional spark plug versions for the 4-cylinder petrol engine 1.4 TFSI => [page 93](#) .



3.68.4 4-cyl. petrol engine 1.4 TFSI (version 2)

Special tools and workshop equipment required

- ◆ Spark plug spanner - 3122B-



- ◆ Puller - T10530
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- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm

Table of tightening torques for installation:

Component/fastener	[Nm]
Spark plugs with M12 thread	20+5
Spark plugs with M14 thread	30+5
Securing bolts for connector rail	8

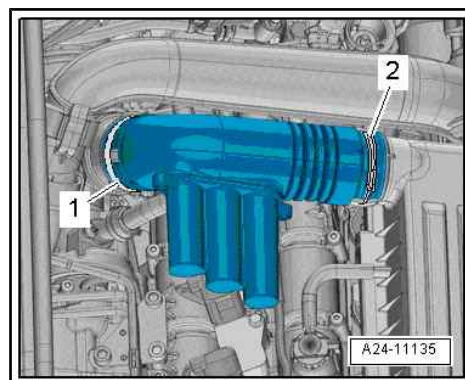
Removal steps:

- Remove engine cover panel ⇒ [page 9](#) .

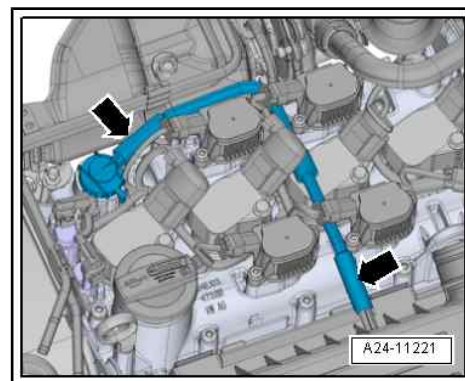
Step 1 - removing spark plugs:

- Loosen hose clips -1- and -2- and remove air pipe.

e



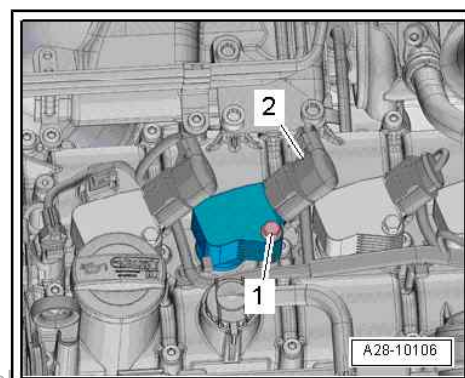
- Detach crankcase breather hose -arrows-.



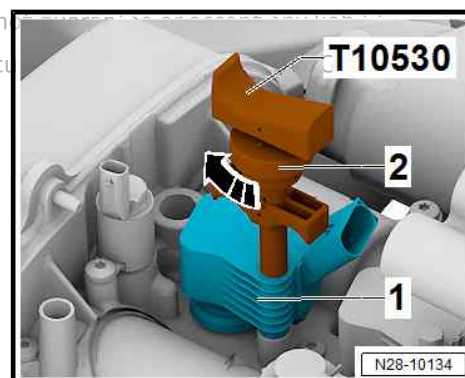
- Push ignition coil connector -2- towards ignition coil, release retainer and detach connector from ignition coil.
- Move connector -2- slightly to one side. Make sure that wiring is not kinked or damaged.
- Unscrew bolts -1- for ignition coils.



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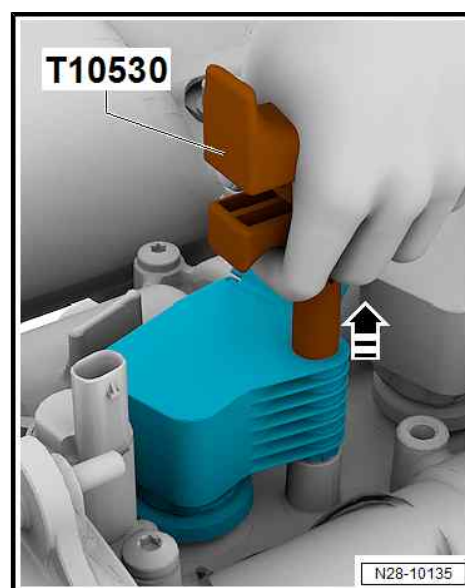
- Insert puller -T10530- into hole -1- of ignition coil and turn knurled nut -2- clockwise until puller is secured in place.



- Carefully pull ignition coil out upwards using puller - T10530- .
- Repeat removal procedure with all other ignition coils.
- Unscrew spark plugs using spark plug socket and extension - VAS 3122B- .

Step 2 - installing spark plugs:

- Install new spark plugs using spark plug socket and extension - VAS 3122B- and tighten to specified torque (see table of tightening torques for installation => [page 94](#)).
- Lubricate ignition coils => [page 100](#) .
- Fit all ignition coils loosely into spark plug apertures and align with connectors of connector rail.
- Push ignition coils evenly onto spark plugs by hand (do not attempt to knock in coils with any kind of tool).

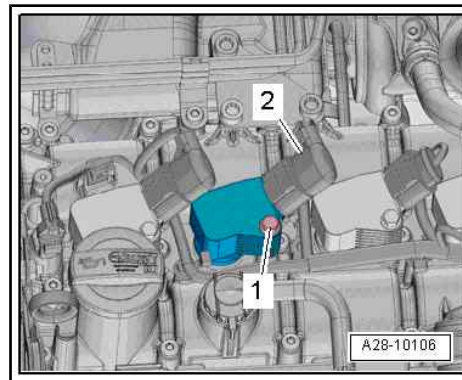


- Tighten bolts -1- for ignition coils to specified torque (see table of tightening torques for installation ⇒ [page 94](#)).
 - Plug in connector -2- on each ignition coil until it engages.
- Continue installation in reverse sequence.



Note

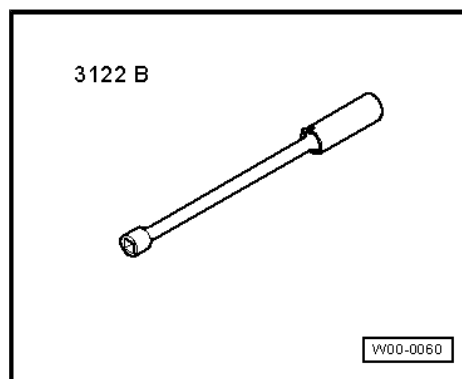
There are additional spark plug versions for the 4-cylinder petrol engine 1.4 TFSI ⇒ [page 91](#) .



3.68.5 4-cyl. petrol engine 1.8 TFSI/2.0 TFSI (version 1)

Special tools and workshop equipment required

- ◆ Spark plug spanner - 3122B-



- ◆ Puller - T10530-



- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm

Table of tightening torques for installation:

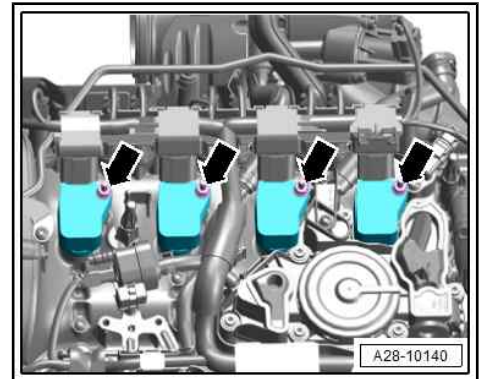
Component/fastener	[Nm]
Spark plugs with M12 thread	20+5
Spark plugs with M14 thread	30+5
Securing bolts for connector rail	10

Removal steps:

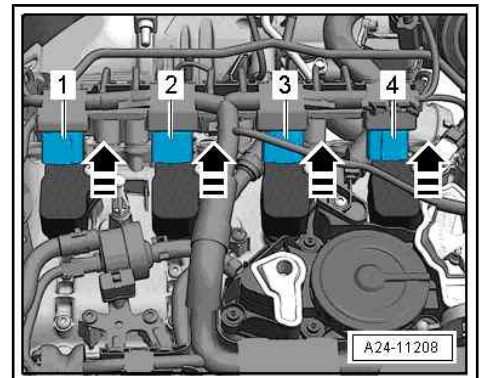
- Remove engine cover panel ⇒ [page 9](#) .

Step 1 - removing spark plugs:

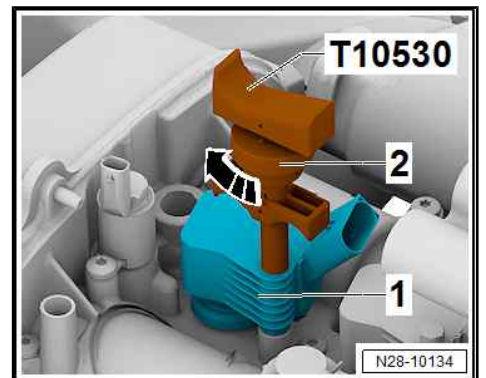
- Unscrew nuts -arrows- and move earth wire clear.



- Push ignition coil connectors -1-, -2-, -3- and -4- towards ignition coils, release retainers and detach connectors from ignition coils.
- Place electrical connectors slightly to one side. Make sure that wiring is not kinked or damaged.
- Unscrew centre hex studs for ignition coils.



- Insert puller - T10530- into hole -1- of ignition coil and turn knurled nut -2- clockwise until puller is secured in place.



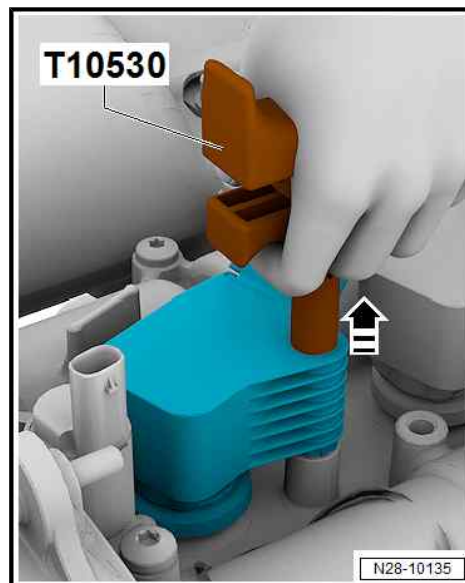
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- Carefully pull ignition coil out upwards using puller - T10530- .
- Repeat removal procedure with all other ignition coils.
- Unscrew spark plugs using spark plug socket and extension - VAS 3122B- .

Step 2 - installing spark plugs:

- Install new spark plugs using spark plug socket and extension - VAS 3122B- and tighten to specified torque (see table of tightening torques for installation ⇒ [page 96](#)).
- Lubricate ignition coils ⇒ [page 100](#) .
- Fit all ignition coils loosely into spark plug apertures and align with connectors of connector rail.
- Push ignition coils evenly onto spark plugs by hand (do not attempt to knock in coils with any kind of tool).
- Tighten centre hex studs for ignition coils to specified torque (see table of tightening torques for installation ⇒ [page 96](#)).
- Plug in connector on each ignition coil until it engages.

Continue installation in reverse sequence.



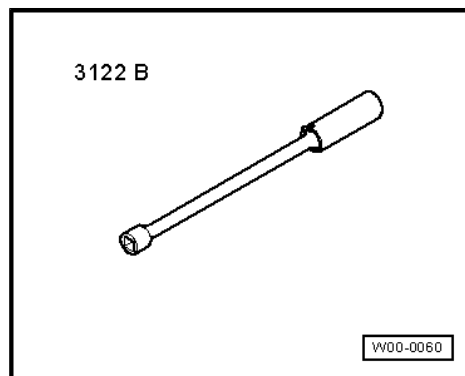
Note

There are additional spark plug versions for the 4-cylinder petrol engine 2.0 TFSI ⇒ [page 98](#) .

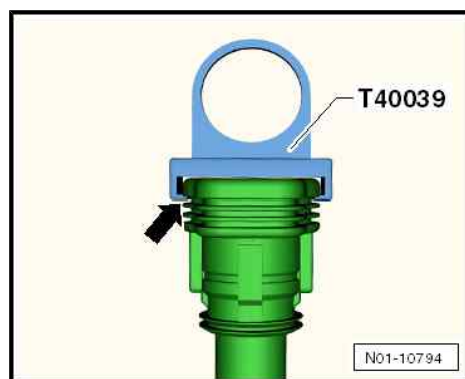
3.68.6 4-cyl. petrol engine 2.0 TFSI (version 2)

Special tools and workshop equipment required

- ◆ Spark plug spanner - 3122B-



- ◆ Puller - T40039-



- ◆ Torque wrench - V.A.G 1331- , measuring range 6 to 50 Nm
- ◆ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm
- ◆ Or: torque wrench - VAS 5820- , measuring range 20 to 100 Nm

Table of tightening torques for installation:

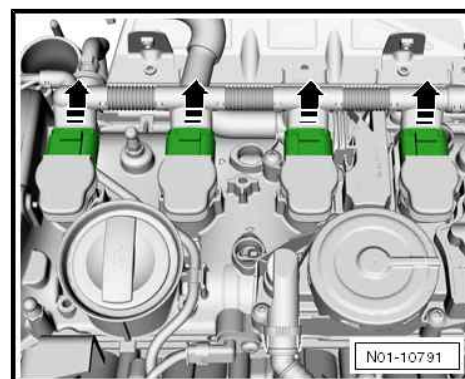
Component/fastener	[Nm]
Spark plugs with M12 thread	20+5
Spark plugs with M14 thread	30+5

Removal steps:

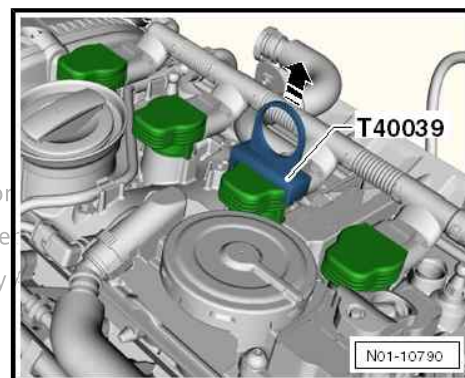
- Remove engine cover panel ⇒ [page 9](#) .

Step 1 - removing spark plugs:

- Release connectors for ignition coils -arrows- and unplug all connectors from ignition coils at the same time.
- Place connector rail slightly to one side. Make sure that wiring is not kinked or damaged.



- Position puller - T40039- on thick rib at top of ignition coils and detach all ignition coils from spark plugs one after the other in direction of -arrow-.



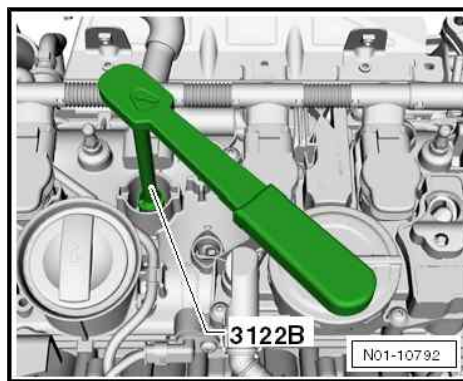
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- Unscrew spark plugs from cylinder head using spark plug socket - VAS 3122B- .

Step 2 - installing spark plugs:

- Install new spark plugs using spark plug socket and extension - VAS 3122B- and tighten to specified torque (see table of tightening torques for installation ⇒ [page 99](#)).
- Lubricate ignition coils ⇒ [page 100](#) .
- Fit all ignition coils loosely into spark plug apertures and align with connectors of connector rail.
- Push ignition coils evenly onto spark plugs by hand (do not attempt to knock in coils with any kind of tool).
- Align connector rail and push all connectors onto ignition coils so that they engage.

Continue installation in reverse sequence.



Note

There are additional spark plug versions for the 4-cylinder petrol engine 2.0 TFSI ⇒ [page 96](#) .

3.68.7 Lubricating pencil-type ignition coils

Special tools and workshop equipment required

- ♦ Spark plug connector grease - G 052 141 A2-

Procedure:

- Grease all around sealing hose -arrow- of ignition coils with silicone paste. The bead of grease should be 1-2 mm thick.



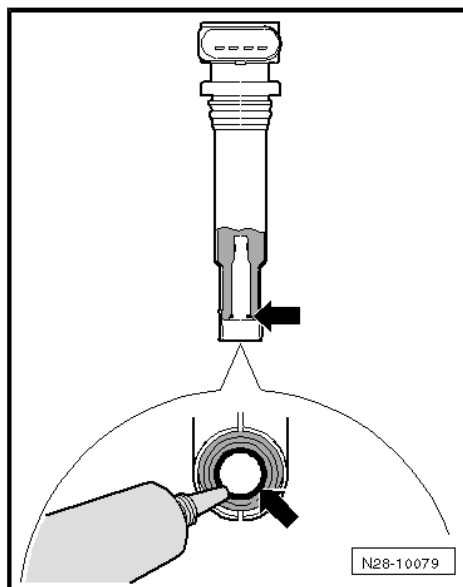
Note

- ♦ For the silicone paste to be used, refer to Electronic parts catalogue (ETKA).
- ♦ New ignition coils are already lubricated when they are delivered; it is not necessary to lubricate them again when installing.

CAUTION

Ignition coils can be damaged irreparably if the wrong lubricant is used.

- Use only the approved silicone paste.



3.69 Hydraulic system: checking fluid level

Table of test values and procedure guidelines:

Hydraulic fluid temperature:	Fluid level specification:
Ambient temperature (approx. 20 °C)	Oil level approx. 25 mm below top edge -arrow- of reservoir -b-.
Hydraulic fluid at operating temperature (approx. 80 °C)	Fluid level between 15 mm and 25 mm below top edge -arrow- of reservoir (-a- and -b-).

The hydraulic fluid reservoir is located in the left wheel housing liner.

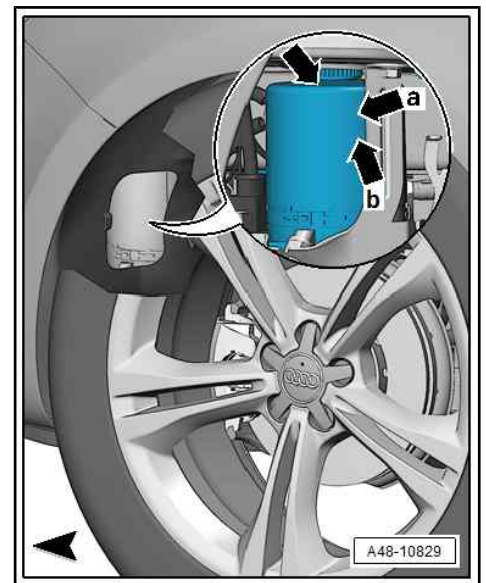
Checking the hydraulic system for leaks is a repair measure and should be charged separately.

Requirements:

- Engine switched off
- Front wheels turned to the right as far as they will go

Procedure:

- Open service flap in left wheel housing liner and check fluid level (visible through transparent reservoir housing).
- If fluid level does not meet specification: Perform following measures as appropriate:



Fluid level:

Measure:

Above specified level Extract hydraulic fluid.

Below specified level Check hydraulic power steering system for leaks ⇒ Running gear, front-wheel drive and four-wheel drive; Rep. gr. 48 ; Hydraulic power steering; Checking steering system for leaks .

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3.70 Coolant level: checking (coolant level must reach at least top marking on coolant expansion tank)

⚠ WARNING

Coolant expansion tank under pressure - risk of injuries!

- ◆ Only open coolant expansion tank when engine is cold.

⚠ CAUTION

Incorrect coolant additives can cause serious damage to vehicle components.



Note

- ◆ *Specification for coolant level is top marking on coolant expansion tank.*
- ◆ *Coolant additives may only be mixed with distilled water, as the effectiveness of the coolant and the corrosion protection it provides are greatly influenced by the quality of the water with which the coolant is mixed. To ensure an adequate water quality, the coolant additive should be mixed with distilled water.*
- ◆ *Only use approved coolant additives; refer to Electronic parts catalogue (ETKA).*
- ◆ *Coolant additives G12EVO, G13 and G12++ may be mixed together.*
- ◆ *G12EVO, G13 and G12++ may be mixed with coolant additives G11, G12 and G12+.*
- ◆ *G12 and G11 must NOT be mixed together.*
- ◆ *Do not reuse coolant.*
- ◆ *Only use water/coolant additive as a lubricant for coolant hoses.*
- ◆ *It is permissible to operate the vehicle if the coolant level is above the MAX marking on the coolant expansion tank (this is by technical design). Do NOT extract coolant.*
- ◆ *The vehicle must not be driven if the coolant level is below the top marking.*

Checking coolant level and anti-freeze ⇒ [page 102](#)

Filling up coolant ⇒ [page 104](#)

3.70.1 Checking coolant level and anti-freeze

Special tools and workshop equipment required

- ◆ Refractometer - T10007 A-

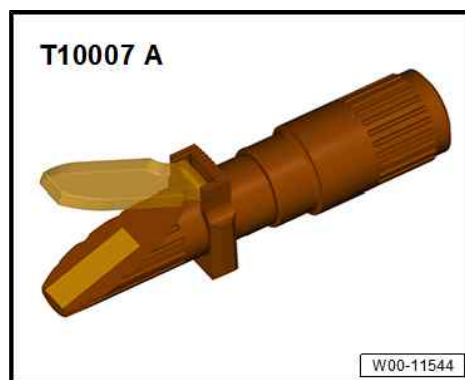


Table of test values and procedure guidelines:

Type of service:	Coolant level specification:
Delivery Inspection	Coolant at least at level of MAX marking.
Inspection	Coolant at level of MAX marking.

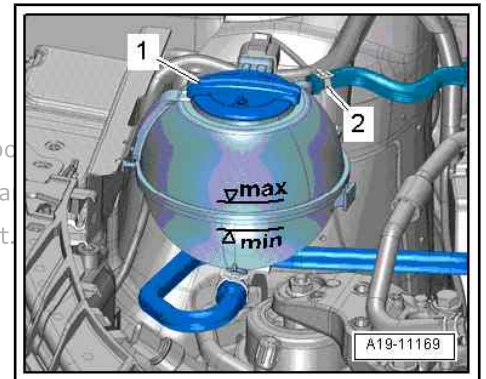
Checking the cooling system for leaks is a repair measure and should be charged separately.

Requirements:

- Anti-freeze protection must be guaranteed to -25°C (in countries with an arctic climate to -36°C); note specification in Maintenance table.
- The proportion of coolant additive must not exceed 55 % (gives anti-freeze protection down to -48°C); beyond this concentration the frost protection and the cooling efficiency are reduced again.
- The vehicle must be parked on a level surface.

Step 1 - checking coolant level:

- Check coolant level (according to marking -illustration-) in coolant expansion tank with engine cold.
- If coolant level is too low: Add required amount (using correct mixture ratio) $\Rightarrow$ [page 104](#).
- If fluid losses are greater than can be reasonably expected: First use a leak test to determine the cause $\Rightarrow$ Engine; Rep gr. 19 ; Cooling system/coolant; Checking cooling system for leaks.



Step 2 - checking anti-freeze:

- Use a pipette to place a drop of coolant on glass of refractometer - T10007 A- . Light-dark border will now be clearly visible through refractometer.
- Check level of anti-freeze protection using corresponding scale on refractometer; to do so, read off value on light-dark border.
- If anti-freeze protection level does not meet specification in Maintenance table: Perform following measures:

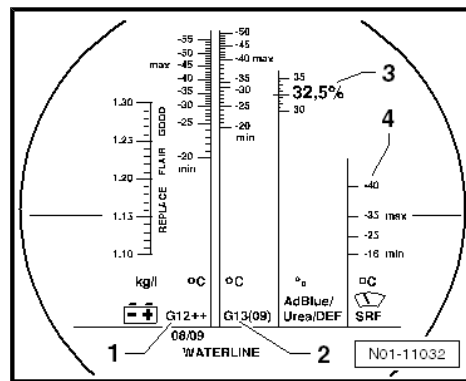
Anti-freeze protection level: Evaluation/measure:

- | | |
|-----------------|---|
| > Specification | Depending on deviation from specification, remove a small amount of coolant and replace it with distilled water. Repeat procedure until coolant mixture meets correct specification. |
| < Specification | Depending on deviation from specification, remove a small amount of coolant and replace it with coolant additive. Repeat procedure until coolant mixture meets correct specification. |
- Check coolant additive concentration once more following road test.



Note

- ◆ The refractometer - T10007 A- must be used to determine the current anti-freeze concentration.
- ◆ Scale -1- on the refractometer applies to coolant additives G11, G12, G12+ and G12++.
- ◆ Scale -2- refers only to coolant additive G13.
- ◆ If more than one type of coolant additive has been used: Always use the scale for G13 to determine the anti-freeze protection.
- ◆ The temperature indicated on the refractometer - T10007 A- corresponds to the temperature at which the first ice crystals can form in the coolant.
- ◆ It is essential that anti-freeze be used in the cooling system all year round. In the correct concentration, coolant additives prevent scaling and frost and corrosion damage, and also raise the boiling point of the coolant.
- ◆ Because of its high boiling point, the coolant improves engine reliability under heavy loads in countries with tropical climates.



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3.70.2 Filling cooling system

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Table of test values and procedure guidelines:

Frost protection to:	Coolant additive:	Water:
-25 °C	approx. 40 %	approx. 60 %
-36 °C	approx. 50 %	approx. 50 %

Procedure:

- Add required amount (using mixture ratio according to anti-freeze protection specification in Maintenance table). Use the table as a reference for the coolant mixture ratio.



Note

Small quantities of coolant can simply be topped up. Use the cooling system charge unit - VAS 6096- to add larger quantities of coolant.

3.71 Air cleaner: renewing filter element and cleaning housing



Note

- ◆ Use only silicone-free lubricants when installing intake hoses.
- ◆ Secure all hose connections with hose clips (same as original equipment); see Electronic parts catalogue (ETKA).

Air cleaner housing: cleaning ⇒ [page 119](#)

3-cyl. petrol engine 1.0 TFSI ⇒ [page 105](#)

4-cyl. petrol engine 1.2 TFSI/1.4 TFSI (version 1) ⇒ [page 106](#)

4-cyl. petrol engine 1.4 TFSI (version 2) ⇒ [page 108](#)

4-cyl. petrol engine 1.4 TFSI (version 3) ⇒ [page 109](#)

4-cyl. petrol engine 1.8 TFSI/2.0 TFSI (version 1) ⇒ [page 111](#)

4-cyl. petrol engine 2.0 TFSI (version 2) ⇒ [page 112](#)

3-cyl. diesel engine 1.4 TDI ⇒ [page 113](#)

4-cyl. diesel engine 1.6 TDI (version 1) ⇒ [page 115](#)

4-cyl. diesel engine 1.6 TDI (version 2) ⇒ [page 116](#)

4-cyl. diesel engine 2.0 TDI ⇒ [page 117](#)

3.71.1 3-cyl. petrol engine 1.0 TFSI

Special tools and workshop equipment required

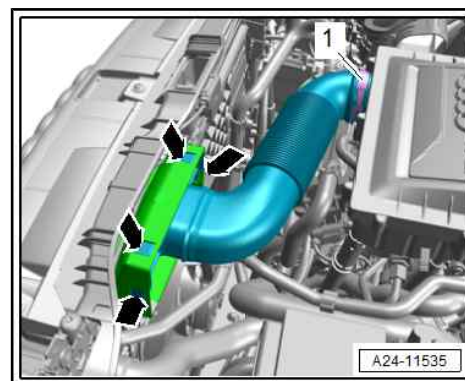
- ◆ Torque screwdriver - VAS 6494- , measuring range 1.5 to 3 Nm
- ◆ Or: torque screwdriver - VAG 1624- , measuring range 1 to 5 Nm
- ◆ Torque wrench - V.A.G 1783- , measuring range 2 to 10 Nm

Table of tightening torques for installation:

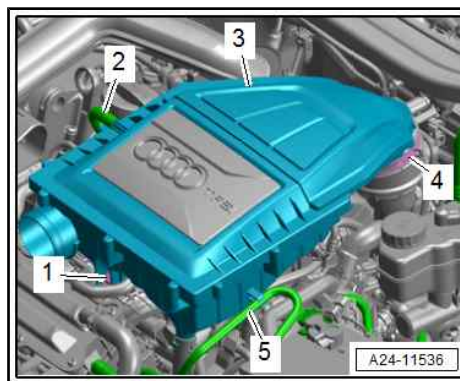
Component/fastener:	[Nm]
Securing bolt for air cleaner (top section)	1.5
Securing bolt for air filter element	2
Bolt for air cleaner (bottom section)	9

Step 1 - removing air filter element:

- Release hose clip -1- and detach air pipe.



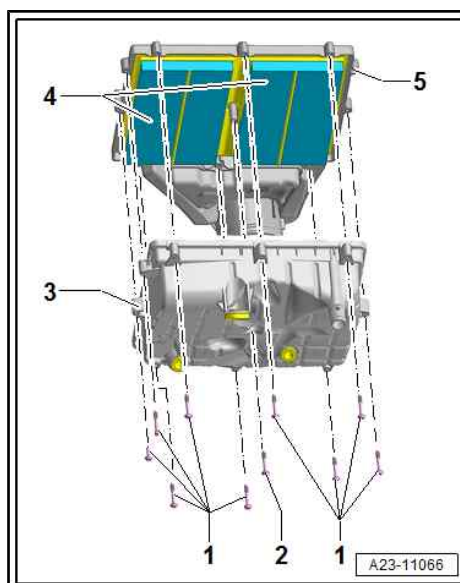
- Disconnect vacuum hose -2- from air cleaner housing.
- Unclip vacuum hose -5- from air cleaner housing.
- Release hose clip -4- and detach air pipe.
- Remove bolt -1- from air cleaner (bottom section).
- Lift air cleaner housing -3- all the way off retaining pins.
- Turn air cleaner housing 180° and set down in this position.



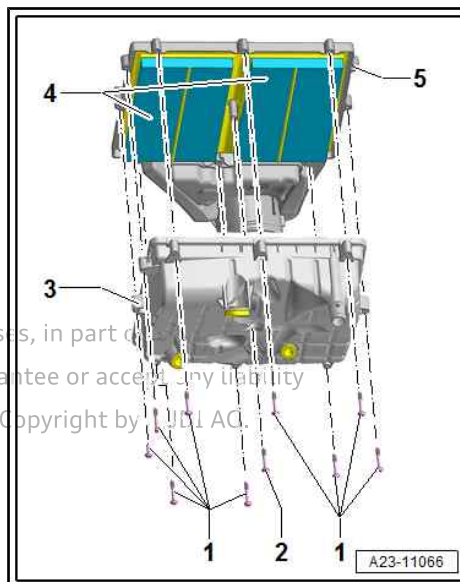
- Remove securing bolts -1- and -2- from air cleaner (bottom section) -3-.
- Detach air cleaner (top section) -5- and take out air filter element -4-.

Step 2 - installing air filter element:

- Check for dirt in housing and water drains and clean if necessary ⇒ [page 119](#) .



- Insert new air filter element -4- centrally in mounting in air cleaner (top section) -5-.
- Fit air cleaner (top section) -5- onto air cleaner (bottom section) -3- without applying any significant force. Ensure that top and bottom sections of air cleaner are flush.
- Fit securing bolts -1- and -2- and tighten to specified torque (see table of tightening torques for installation ⇒ [page 105](#)).
- Fit air cleaner housing centrally onto retaining pins and press it on.
- Attach air pipe to air cleaner (top section) and fit hose clip -4-.



Continue installation in reverse sequence. Note tightening torques (see table of tightening torques for installation ⇒ [page 105](#)).

3.71.2 4-cyl. petrol engine 1.2 TFSI/1.4 TFSI (version 1)

Special tools and workshop equipment required

- ◆ Torque screwdriver - VAS 6494- , measuring range 1.5 to 3 Nm

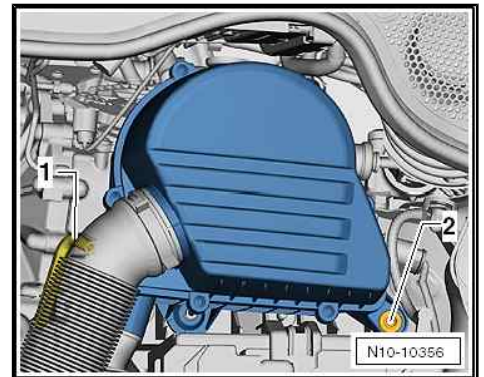
- ◆ Or: torque screwdriver - V.A.G 1624- , measuring range 1 to 5 Nm

Table of tightening torques for installation:

Component/fastener:	[Nm]
Securing bolts for air cleaner (top section)	1.6

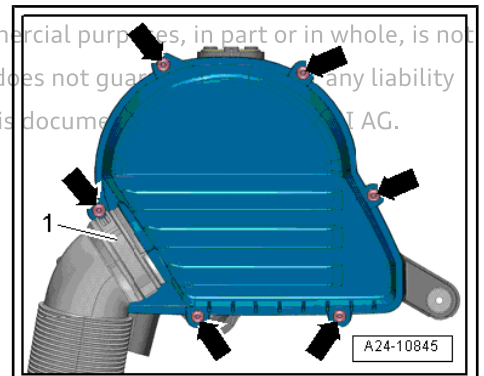
Step 1 - removing air filter element:

- Pull vacuum hose -1- off air pipe.



- Release hose clip -1- and detach air pipe.

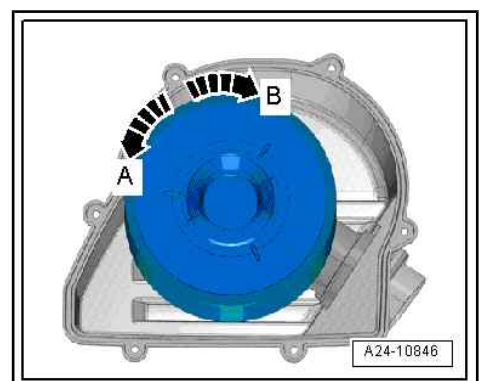
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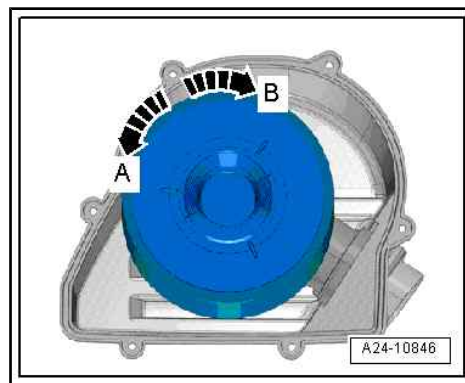
- Remove securing bolts -arrows- and detach air cleaner (top section).
- Turn filter element in anti-clockwise direction -arrow A- and remove it.

Step 2 - installing air filter element:

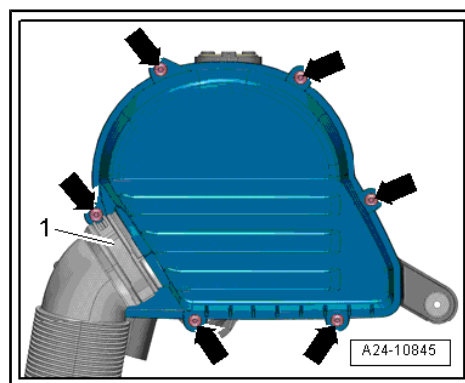
- Check for dirt in housing and water drains and clean if necessary ⇒ [page 119](#) .



- Fit new air filter element in air cleaner (bottom section) and turn it in clockwise direction -arrow B- until it engages.
- Place top section of air cleaner onto bottom section of air cleaner without applying any significant force. Ensure that top and bottom sections of air cleaner are flush.



- Fit securing bolts -arrows- in air cleaner (top section) and tighten to specified torque (see table of tightening torques for installation ➔ [page 107](#)).
- Attach air pipe to air cleaner (top section) and fit hose clip -1-.

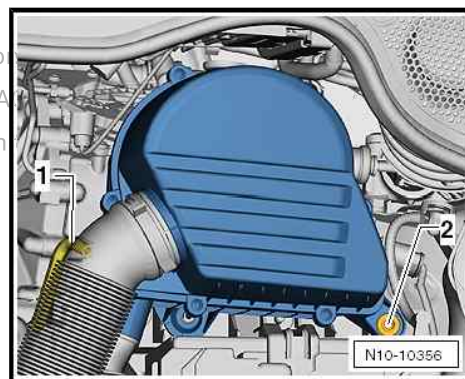


- Attach vacuum hose -1- to air pipe.

Continue installation in reverse sequence.



There is more than one version of the air cleaner for the 4-cylinder 1.4 TFSI petrol engine ➔ [page 108](#) .



3.71.3 4-cyl. petrol engine 1.4 TFSI (version 2)

Special tools and workshop equipment required

- ◆ Torque screwdriver - VAS 6494- , measuring range 1.5 to 3 Nm
- ◆ Or: torque screwdriver - V.A.G 1624- , measuring range 1 to 5 Nm

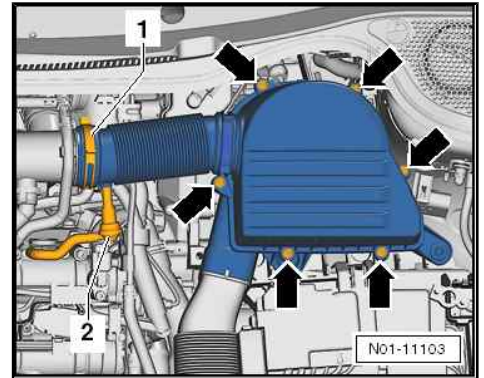
Table of tightening torques for installation:

Component/fastener:	[Nm]
Securing bolts for air cleaner (top section)	1.6

Step 1 - removing air filter element:

- Pull vacuum hose -1- off air pipe.

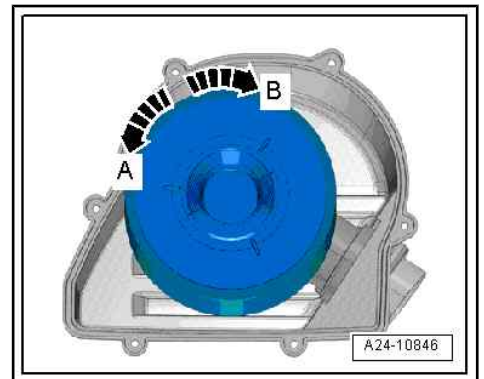
- Release hose clip -1- and detach air pipe.
- Remove securing bolts -arrows- and detach air cleaner (top section).



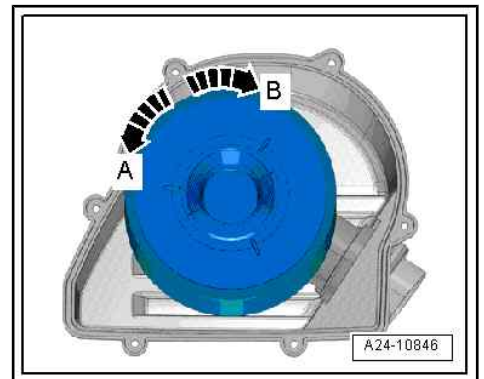
- Turn filter element in anti-clockwise direction -arrow A- and remove it.

Step 2 - installing air filter element:

- Check for dirt in housing and water drains and clean if necessary ⇒ [page 119](#) .



- Fit new air filter element in air cleaner (bottom section) and turn it in clockwise direction -arrow B- until it engages.
- Place top section of air cleaner onto bottom section of air cleaner without applying any significant force. Ensure that top and bottom sections of air cleaner are flush.
- Fit securing bolts in air cleaner (top section) and tighten to specified torque (see table of tightening torques for installation ⇒ [page 108](#)).
- Attach air pipe to air cleaner (top section) and fit hose clip.



Continue installation in reverse sequence.



Note

There is more than one version of the air cleaner for the 4-cylinder 1.4 TFSI petrol engine ⇒ [page 109](#) .

3.71.4 4-cyl. petrol engine 1.4 TFSI (version 3)

Special tools and workshop equipment required

- ◆ Torque screwdriver - VAS 6494- , measuring range 1.5 to 3 Nm
- ◆ Or: torque screwdriver - VAG 1624- , measuring range 1 to 5 Nm

Table of tightening torques for installation:

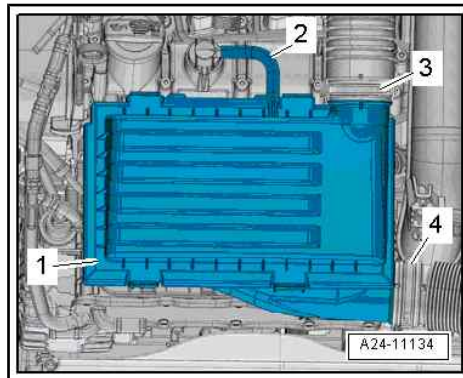
Component/fastener:	[Nm]
Bolts for air cleaner (bottom section)	1.5

Removal steps:

- Remove engine cover panel ⇒ [page 9](#) .

Step 1 - removing air filter element:

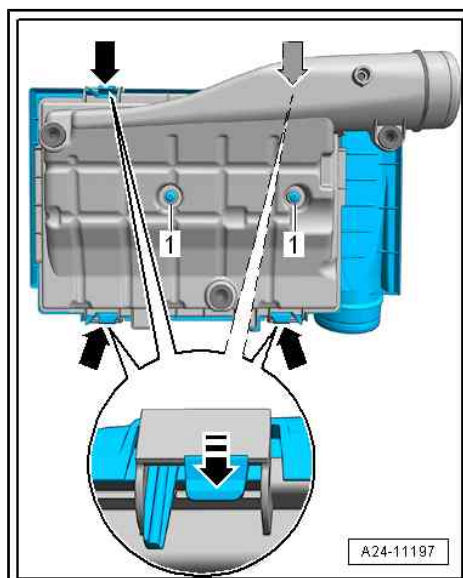
- Disconnect vacuum hose -2- from air cleaner (top section) -1-.
- Release hose clips -3- and -4- and detach air pipe.
- Lift air cleaner housing -1- all the way off retaining pins.
- Turn air cleaner housing -1- 180° and set down in this position.



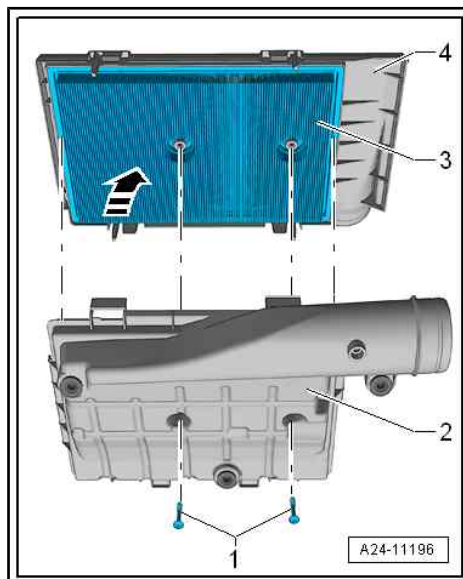
- Remove securing bolts -1- from air cleaner (bottom section).
- Carefully release retainers -arrows- at air cleaner (top section) one after the other (risk of breaking retainers).
- Detach air cleaner (top section) and take out air filter element.

Step 2 - installing air filter element:

- Check for dirt in housing and water drains and clean if necessary ⇒ [page 119](#) .



- Insert new air filter element -3- centrally in mounting in air cleaner (top section) -4-.
- Fit air cleaner (top section) -4- onto air cleaner (bottom section) -2- without applying any significant force. Ensure that top and bottom sections of air cleaner are flush.
- Fit securing bolts -1- and tighten to specified torque (see table of tightening torques for installation ⇒ [page 109](#)).



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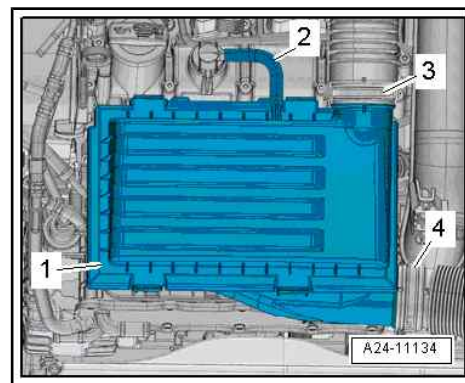
- Attach air pipes -3- and -4- to air cleaner (top section) -1- and fit hose clip.
- Fit air cleaner housing -1- centrally onto retaining pins and press in.

Continue installation in reverse sequence.



Note

There is more than one version of the air cleaner for the 4-cylinder 1.4 TFSI petrol engine ⇒ [page 106](#).



3.71.5 4-cyl. petrol engine 1.8 TFSI/2.0 TFSI (version 1)

Special tools and workshop equipment required

- ◆ Torque screwdriver - V.A.G 1624- , measuring range 1 to 5 Nm
- ◆ Or: torque screwdriver - VAS 6494- , measuring range 1.5 to 3 Nm

Table of tightening torques for installation:

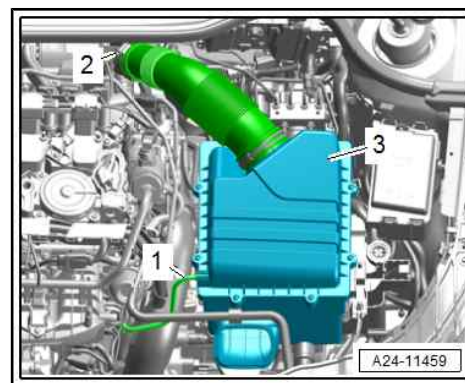
Component/fastener	[Nm]
Securing bolts for air cleaner (top section)	1.5

Step 1 - removing filter element:

- Disconnect vacuum hose -1- from air cleaner (top section) -3-.
- Remove securing bolts and lift air cleaner (top section) together with all air ducts to one side.
- Take out filter element.

Step 2 - installing filter element:

- Check for dirt in housing and water drains and clean if necessary.



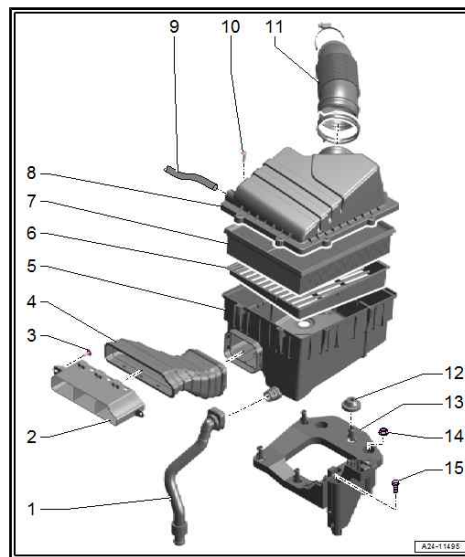
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- Insert new filter element -7- centrally in mounting in air cleaner (bottom section) -6-.
- Fit air cleaner (top section) -8- onto air cleaner (bottom section) -5- without applying any significant force. Ensure that top and bottom sections of air cleaner are flush.
- Fit securing bolts in air cleaner (top section) and tighten to specified torque (see table of tightening torques for installation ⇒ [page 111](#)).
- Attach vacuum hose to air cleaner (top section).



Note

There is more than one version of the air cleaner for the 4-cylinder 2.0 TFSI petrol engine ⇒ [page 112](#) .



3.71.6 4-cyl. petrol engine 2.0 TFSI (version 2)

Special tools and workshop equipment required

- ♦ Torque wrench - V.A.G 1783- , measuring range 2 to 10 Nm
- ♦ Or: torque screwdriver - V.A.G 1624- , measuring range 1 to 5 Nm
- ♦ Or: torque wrench - V.A.G 1410- , measuring range 4 to 20 Nm
- ♦ Or: torque wrench - VAS 6854- , measuring range 5 to 13 Nm
- ♦ Or: torque wrench - VAS 6583- , measuring range 3 to 60 Nm

Table of tightening torques for installation:

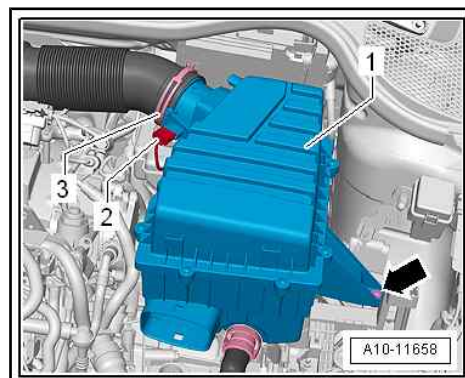
Component/fastener:	[Nm]
Securing bolts for air cleaner (top section)	5

Step 1 - removing air filter element:

- Release hose clip -3- and detach air pipe.
- Unplug electrical connector -2- for air mass meter - G70- .
- Remove securing bolts and lift air cleaner (top section) -1- together with all air ducts to one side.
- Take out filter element and snow screen (if fitted). Snow screen is not installed in all vehicles.

Step 2 - installing air filter element:

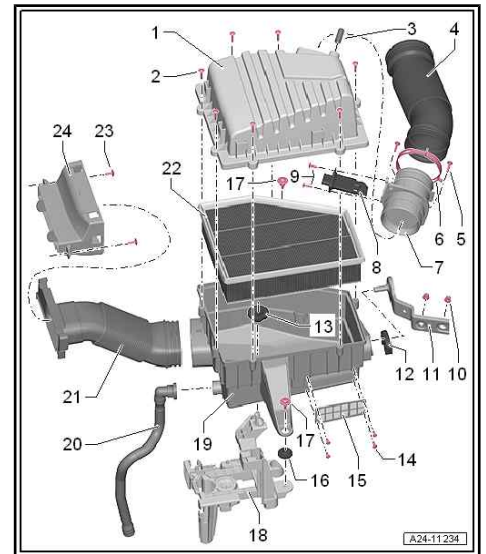
- Check for dirt in housing and water drains and clean if necessary ⇒ [page 119](#) .



- If fitted: clean snow screen -15- and insert into air cleaner (bottom section) -19-.
- Insert new filter element -22- centrally in mounting in air cleaner (bottom section) -19-.
- Fit air cleaner (top section) -1- onto air cleaner (bottom section) -19- without applying any significant force. Ensure that top and bottom sections of air cleaner are flush.
- Fit securing bolts in air cleaner (top section) and tighten to specified torque (see table of tightening torques for installation ⇒ [page 112](#)).
- Attach air pipe to air cleaner (top section) and fit hose clip.
- Plug electrical connector for air mass meter - G70- back in.



There is more than one version of the air cleaner for the 4-cylinder 2.0 TFSI petrol engine ⇒ [page 111](#) .



3.71.7 3-cyl. diesel engine 1.4 TDI

Special tools and workshop equipment required

- ◆ Torque screwdriver - VAG 1624- , measuring range 1 to 5 Nm
- ◆ Or: torque wrench - V.A.G 1783- , measuring range 2 to 10 Nm

Table of tightening torques for installation:

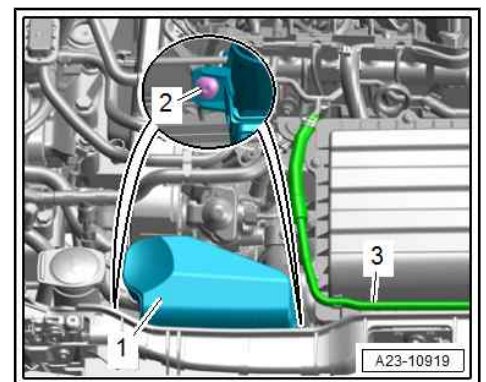
Component/fastener:	[Nm]
Bolts for air cleaner (top section) -1-	5
Bolts for air cleaner (bottom section) -2-	2

Removal steps:

- Remove engine cover panel ⇒ [page 9](#) .

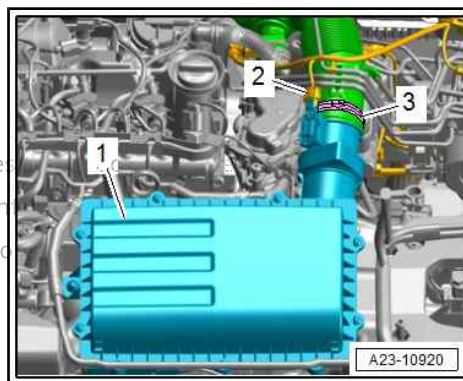
Step 1 - removing air filter element:

- Unclip coolant hose -3- from air cleaner (top section).
- Detach air duct from air cleaner (bottom section).



- Unplug electrical connector -2- for air mass meter - G70- .
- Release hose clip -3- and detach air pipe.
- Lift air cleaner housing -1- all the way off retaining pins.
- Turn air cleaner housing -1- 180° and set down in this position.

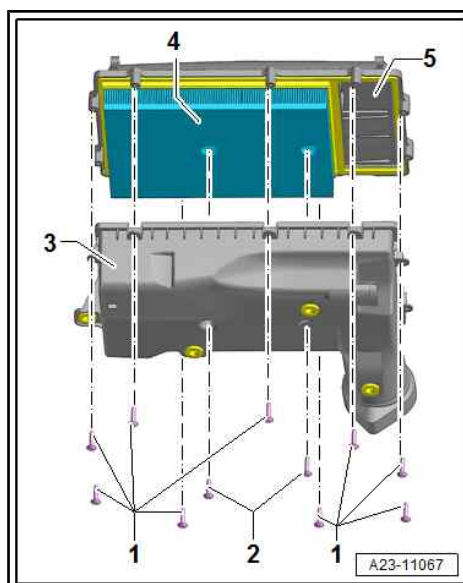
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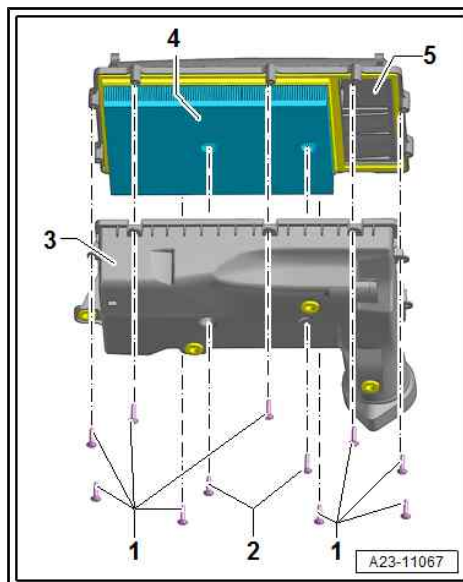
- Remove securing bolts -1- and -2- from air cleaner (bottom section) -3-.
- Detach air cleaner (top section) -5- and take out air filter element -4-.

Step 2 - installing air filter element:

- Check for dirt in housing and water drains and clean if necessary ⇒ [page 119](#) .

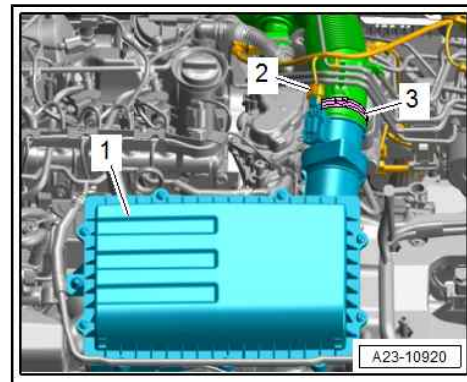


- Insert new air filter element -4- centrally in mounting in air cleaner (top section) -5-.
- Fit air cleaner (top section) -5- onto air cleaner (bottom section) -3- without applying any significant force. Ensure that top and bottom sections of air cleaner are flush.
- Fit securing bolts -1- and -2- and tighten to specified torque (see table of tightening torques for installation ⇒ [page 113](#)).
- Fit air cleaner housing centrally onto retaining pins and press it on.



- Attach air pipes to air cleaner (top section) -1- and fit hose clip -3-.

Continue installation in reverse sequence.



3.71.8 4-cyl. diesel engine 1.6 TDI (version 1)

Special tools and workshop equipment required

- ◆ Torque screwdriver - VAS 6494- , measuring range 1.5 to 3 Nm
- ◆ Or torque screwdriver - VAG 1624- , measuring range 1 to 5 Nm

Table of tightening torques for installation:

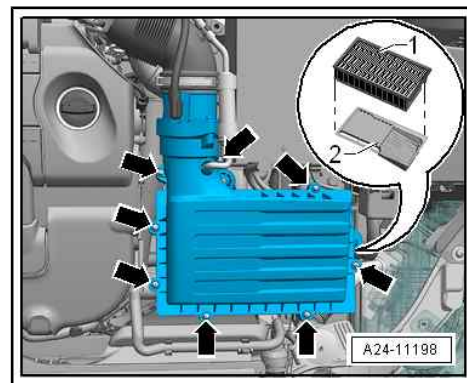
Component/fastener:	[Nm]
Bolts for air cleaner (top section)	1.5

Step 1 - removing air filter element:

- Remove securing bolts -arrows- and lift air cleaner (top section) together with all air ducts to one side.
- Take out filter element -1-.

Step 2 - installing air filter element:

- Check for dirt in housing and water drains and clean if necessary ⇒ [page 119](#) .

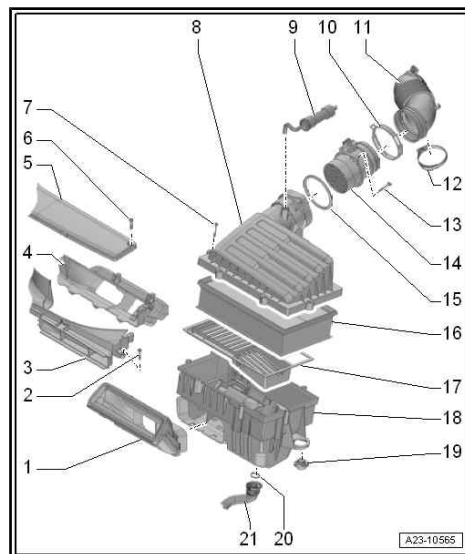


- Insert new filter element -16- centrally in mounting in air cleaner (bottom section) -18-.
- Fit air cleaner (top section) -8- onto air cleaner (bottom section) -18- without applying any significant force. Ensure that top and bottom sections of air cleaner are flush.
- Fit securing bolts in air cleaner (top section) and tighten to specified torque (see table of tightening torques for installation ⇒ [page 115](#)).



Note

There is more than one version of the air cleaner for the 4-cylinder 1.6 TDI diesel engine ⇒ [page 116](#) .



3.71.9 4-cyl. diesel engine 1.6 TDI (version 2)

Special tools and workshop equipment required

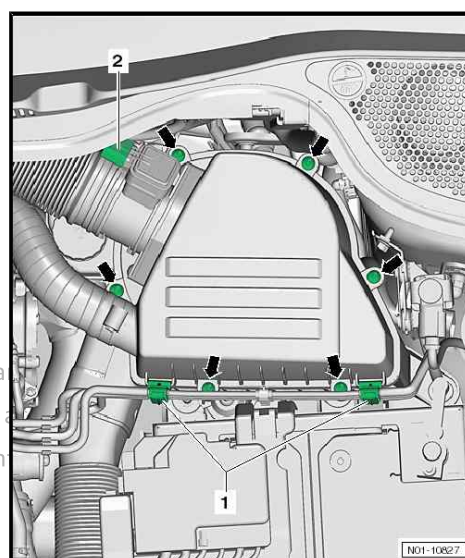
- ◆ Torque screwdriver - VAS 6494- , measuring range 1.5 to 3 Nm
- ◆ Or: torque screwdriver - VAG 1624- , measuring range 1 to 5 Nm

Table of tightening torques for installation:

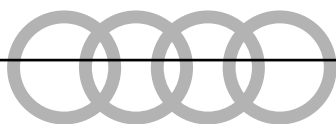
Component/fastener:	[Nm]
Securing bolts for air cleaner (top section)	1.5

Step 1 - removing air filter element:

- Unclip vacuum hoses -1- from air cleaner (top section).
- Unplug electrical connector -2- for air mass meter - G70- .
- Remove securing bolts -arrows- and lift air cleaner (top section) together with all air ducts to one side.



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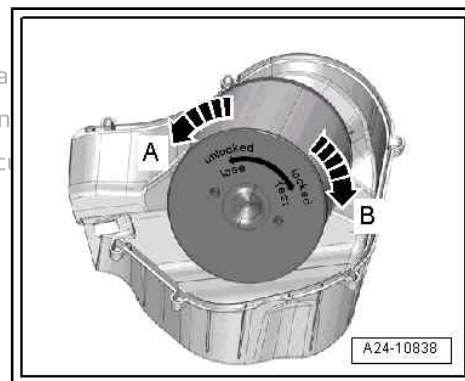
- Turn filter element in anti-clockwise direction -arrow A- and remove it.

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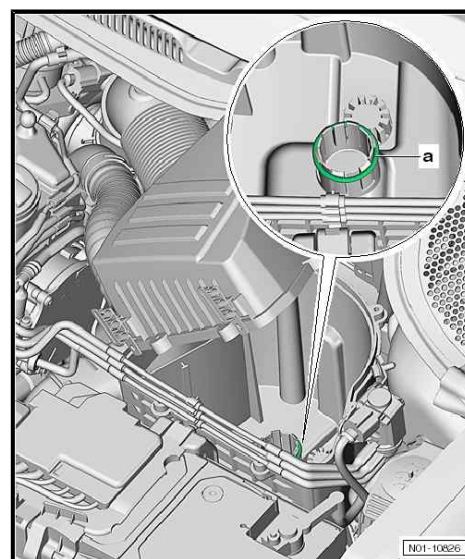
Step 2 - installing air filter element:

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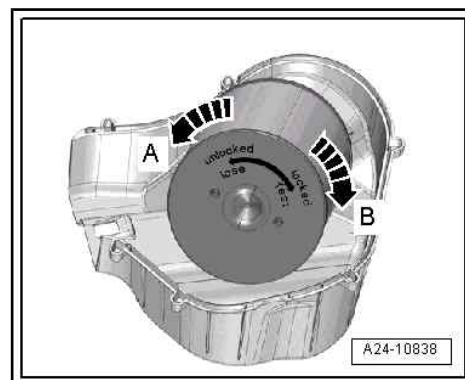
- Check for dirt in housing and water drains and clean if necessary ⇒ [page 119](#) .



- Check that rubber ring -a- is properly secured at centring element on air cleaner (bottom section).



- Fit new filter element in air cleaner (top section) and turn it in clockwise direction -arrow B- until it engages.
- Place top section of air cleaner onto bottom section of air cleaner without applying any significant force. Ensure that top and bottom sections of air cleaner are flush.
- Fit securing bolts in air cleaner (top section) and tighten to specified torque (see table of tightening torques for installation).
- Clip vacuum hoses into place.
- Plug electrical connector for air mass meter - G70- back in.



Note

There is more than one version of the air cleaner for the 4-cylinder 1.6 TDI diesel engine ⇒ [page 115](#) .

3.71.10 4-cyl. diesel engine 2.0 TDI

Special tools and workshop equipment required

- ◆ Torque screwdriver - VAS 6494- , measuring range 1.5 to 3 Nm
- ◆ Or: torque screwdriver - VAG 1624- , measuring range 1 to 5 Nm

Table of tightening torques for installation:

Component/fastener:	[Nm]
Securing bolts for air cleaner (top section)	1.5

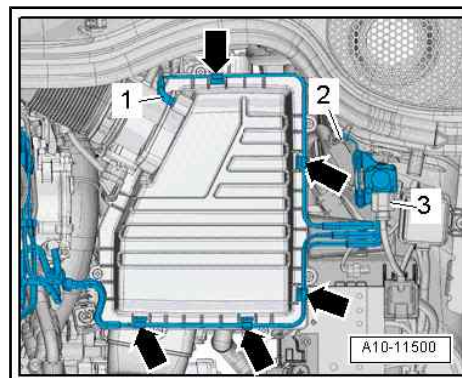
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Removal steps:

- Remove engine cover panel ⇒ [page 9](#).

Step 1 - removing air filter element:

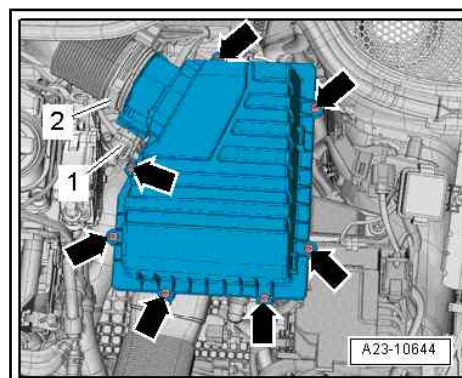
- Pull vacuum hose -1- off air cleaner (top section).
- Unclip vacuum hoses -arrows- from air cleaner (top section).



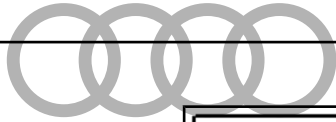
- Unplug electrical connector -1- for air mass meter - G70- .
- Remove securing bolts -arrows- and lift air cleaner (top section) together with all air ducts to one side.
- Take out air filter element.

Step 2 - installing air filter element:

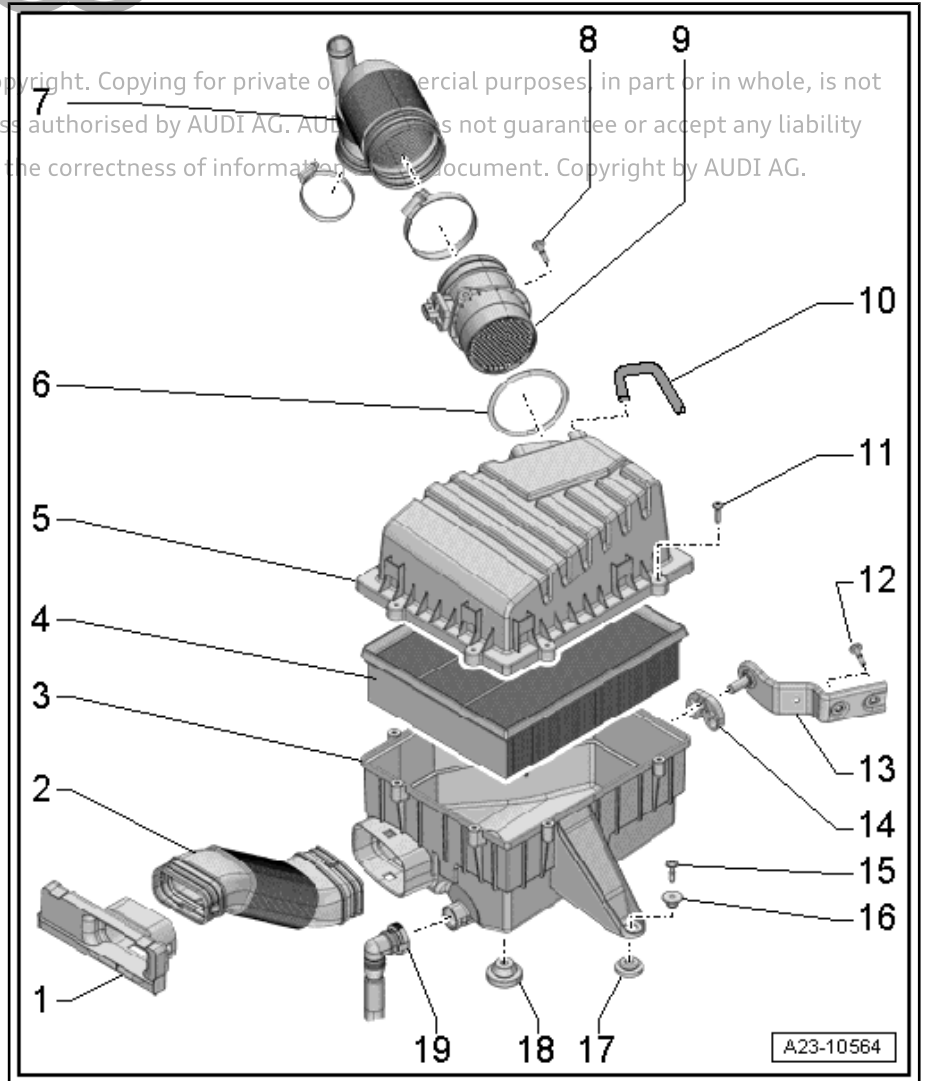
- Check for dirt in housing and water drains and clean if necessary ⇒ [page 119](#) .



- Insert new filter element -4- centrally in mounting in air cleaner (bottom section) -3-.



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- Fit air cleaner (top section) -5- onto air cleaner (bottom section) -3- without applying any significant force. Ensure that top and bottom sections of air cleaner are flush.
- Fit securing bolts -11- in air cleaner (top section) and tighten to specified torque (see table of tightening torques for installation → [page 118](#)).
- Attach vacuum hose to air cleaner (top section).
- Clip vacuum hoses into place.
- Plug electrical connector for air mass meter - G70- back in.

Continue installation in reverse sequence.

3.71.11 Cleaning air cleaner housing

Procedure:

- Remove any loose dirt or leaves out of air cleaner housing (top and bottom sections).
- Check whether water drain hose in air cleaner (bottom section) is dirty or blocked and clean if necessary.



Note

- ◆ When cleaning air cleaner housing with compressed air: Cover air mass meter with a clean cloth.
- ◆ On vehicles for cold countries, the snow screen in the intake section must also be cleaned; see specification in ELSA Maintenance table.

3.72 Dust and pollen filter: renewing

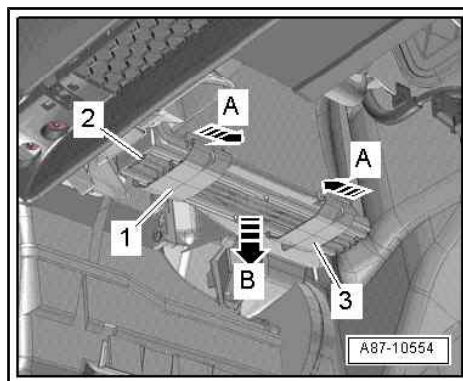
The dust and pollen filter is fitted under the glove box.

Removal steps: unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability

- On vehicles with special equipment used by driving schools: Remove pedal cluster if necessary; see installation instructions for equipment for driving schools.

Step 1 - removing filter element:

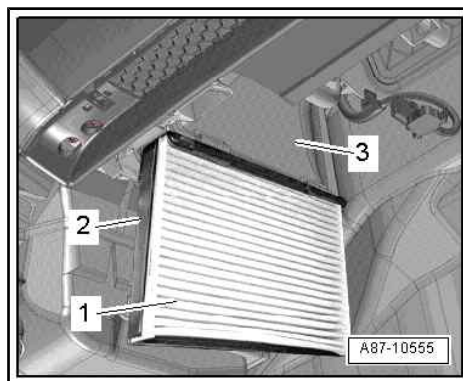
- Push retainers -1- and -3- together towards centre in direction of -arrows A-.
- Detach cover -2- downwards in direction of -arrow B-.



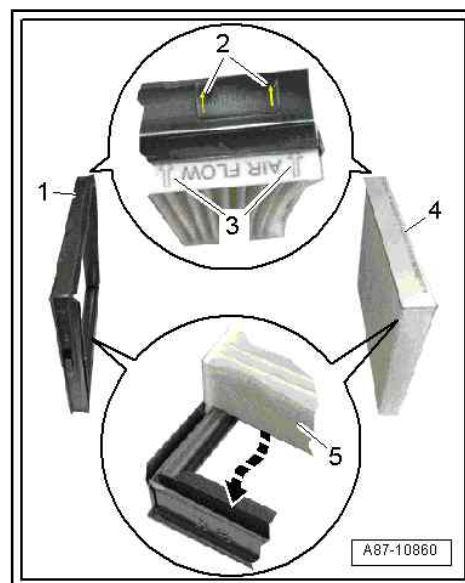
- Pull filter element -1- with filter frame -2- out of slot -3-.
- Detach filter element -1- from filter frame -2-.

Step 2 - installing filter element:

- Clean aperture and filter frame with a vacuum cleaner before fitting new filter element.

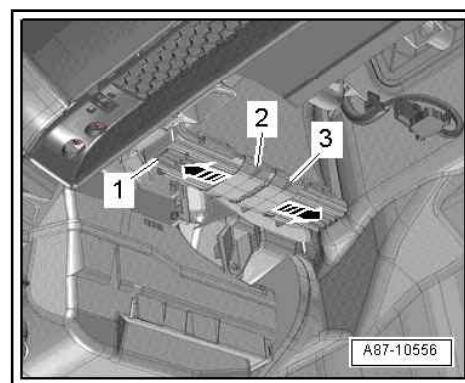


- Fit new filter element -4- correctly in filter frame: Arrows -2- indicating direction of flow must point downwards.



- Fit aperture cover -1- and push retainers -2- and -3- outwards as far as stop in direction of -arrows-.

Continue installation in reverse sequence.



3.73 Fuel filter: renewing

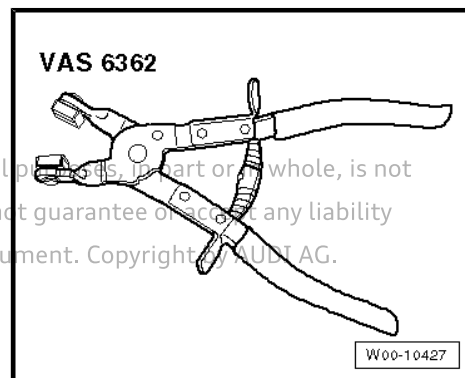
Renewing fuel filter with 2 fuel line connections ⇒ [page 121](#)

Renewing fuel filter with 3 fuel line connections ⇒ [page 122](#)

3.73.1 Renewing fuel filter with 2 fuel line connections

Special tools and workshop equipment required

- ◆ Hose clip pliers - VAS 6362-



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The fuel filter is located in the engine compartment.

Removal steps:

- Remove engine cover panel ⇒ [page 9](#) .

Step 1 - removing:

- Use hose clip pliers - VAS 6362- to disconnect fuel supply hoses -3- and -5-.
- Release catches -2-, -4- and -6- on mounting and take out fuel filter -1-.

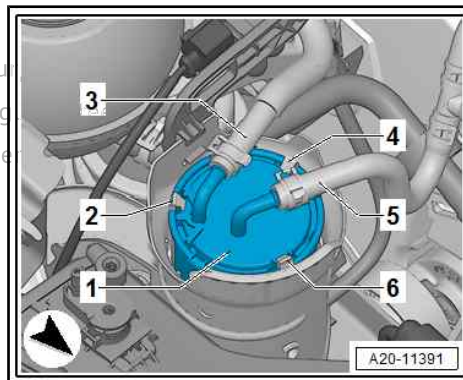
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Step 2 - installing:

Install in reverse sequence.

Flow direction is indicated by arrows on filter housing.

- Then bleed fuel system ⇒ Engine; Rep. gr. 23 ; Injection system; Filling/bleeding fuel system .



3.73.2 Renewing fuel filter with 3 fuel line connections

The fuel filter is located in the engine compartment.

Removal steps:

- Remove engine cover panel ⇒ [page 9](#) .

Step 1 - removing:

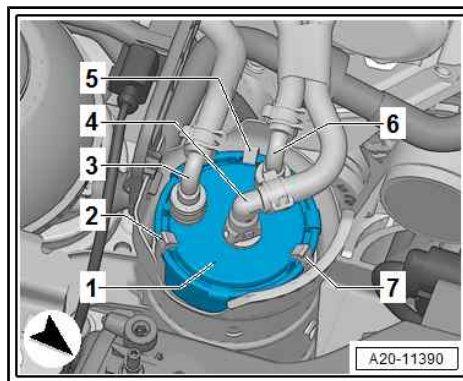
- Press release tabs and disconnect fuel supply hose -4- and fuel return hose -6-.
- Push fuel supply hose -3- towards fuel filter -1-, press release tab and disconnect fuel supply hose.
- Release catches -2-, -5- and -7- on mounting and take out fuel filter -1-.

Step 2 - installing:

Install in reverse sequence.

Flow direction is indicated by arrows on filter housing.

- Then bleed fuel system ⇒ Engine; Rep. gr. 23 ; Injection system; Filling/bleeding fuel system .



3.74 Fuel tank: adding fuel additive

Special tools and workshop equipment required

- ♦ Or: multi-purpose additive for petrol fuels - G 001 780 M3-

Table of test values and procedure guidelines:

China, Middle East	Russia	India
VW 507 53 B: Applies to all petrol engines	VW 507 53 B: Applies to all petrol engines VW 507 53 A: Applies to all petrol engines except g-tron and E85 flexible fuel	VW 507 53 B: Applies to all petrol engines VW 507 53 A: Applies to all petrol engines except g-tron and E85 flexible fuel

China, Middle East	Russia	India
Multi-purpose additive for petrol fuels - G 001 780 M3-	Multi-purpose additive for petrol fuels - G 001 780 M3-	Multi-purpose additive for petrol fuels - G 001 780 M3-

This maintenance item only applies to certain countries: Note specification in Maintenance table.

Procedure:

- Follow measuring guidelines on fuel additive container and add fuel additive to fuel tank according to current fuel tank level.



Note

- ◆ *Use only fuel additives that correspond to the standard VW 507 53 A or VW 507 53 B.*
- ◆ *After adding fuel additive, it is very important to tell the customer to fill up the fuel tank.*

3.75 Vehicle doors: removing edge protection

Procedure:

- Carefully remove edge protection from all vehicle doors.

3.76 Vehicle exterior: checking unprotected areas for dirt, and cleaning if necessary

Procedure:

- Check unprotected areas of vehicle exterior not covered by car cover or protective transport film for dirt/soiling.
- Clean any dirty areas.

3.77 Vehicle exterior: removing protective film

Procedure:

- Remove protective film carefully and completely.

3.78 Vehicle cover: checking position and correcting if necessary

Procedure:

- Check, and if necessary, correct position of vehicle cover on vehicle body.
- Check, and if necessary, correct position of protective transport film.

3.79 Vehicle cover: removing according to manufacturer's instructions

Procedure:

- Vehicle cover: Remove according to manufacturer's instructions.

3.80 Paintwork, trims, side windows and wiper blades: checking cleanliness

Procedure:

- Check that exterior paintwork, trims, side windows and wiper blades are clean.
- Clean any dirty components.

3.81 Body: checking vehicle paintwork for damage and corrosion from below and with bonnet, rear lid and doors open

Procedure:

- Open all vehicle doors, bonnet and rear lid.
- Check vehicle paintwork on inside and outside of body for damage and corrosion.
- Rectify defects of any kind (repair measure).

3.82 Vehicles parked outdoors: locking

Procedure:

- Use vehicle key to lock vehicle if it is parked outdoors.

3.83 Road test

Procedure:

- The following points must be checked during the road test:
 - ♦ Engine: performance, misfiring, idling speed, acceleration, starting behaviour (engine cold and warm), engine noise
 - ♦ Clutch: pulling away, pedal pressure, odours, noise due to load change
 - ♦ Manual gearbox: ease of operation, gear lever position, gearbox noise
 - ♦ Automatic gearbox: selector lever position, shift lock / ignition key lock, gearbox noise, kickdown, shift behaviour, instrument cluster display
 - ♦ Brake pedal and handbrake: operation, travel and effectiveness, pulling to one side, response (delayed braking), juddering, squeal
 - ♦ ABS function: pulsing must be felt at brake pedal when performing ABS-controlled braking.
 - ♦ Steering: operation, steering free play, steering wheel centralised when wheels are in straight-ahead position, moving off line when travelling straight
 - ♦ Imbalance: wheels, drive shafts
 - ♦ Wheel bearings: noises
 - ♦ Roof insert: unusual noise during operation
 - ♦ Horn: checking



Note

To what extent all of these can be checked depends on vehicle equipment and local conditions (urban/country).

3.84 Stock vehicles: observing measures specified in Maintenance table for stock vehicles (see "Before handing vehicle over to customer")

This maintenance item only applies to stock vehicles.

Procedure:

- Before handing vehicle over to customer: Check whether the following three measures for stock vehicles (as specified in the Maintenance table) are due, and carry them out as necessary:
- ◆ For vehicles older than 12 months (from date of manufacture): Renew brake fluid ⇒ [page 32](#) .
- ◆ For vehicles with defective battery: Renew battery ⇒ Rep. gr. 27 ; Battery; Removing and installing battery .
- ◆ Check brake discs for surface rust; if necessary, operate brakes to remove rust according to manufacturer's instructions.
- Record measures performed in maintenance table for stock vehicles.

3.85 Accessories: installing

Procedure:

- Place any accessories included with the vehicle in the vehicle tool kit.
- Place first-aid kit in compartment provided under luggage compartment floor cover.
- Insert SD card for MMI.



Note

- ◆ *The available accessories may vary according to model, equipment and market.*
- ◆ *Depending on the vehicle model, the accessories may be found in the luggage compartment, glove box or supplied pack.*

3.86 Checklist "Documentation of cleaning and care routine": checking that list is present

Procedure:

- Check that checklist "Documentation of cleaning and care routine" is in glove box or front passenger footwell. This checklist is only present in vehicles which remained with the Importer or manufacturer longer than 14 days without being transported further; it documents all cleaning and care work carried out there.
- If missing, place checklist "Documentation of cleaning and care routine" in glove box.

3.87 "Stock vehicle maintenance" checklist: signing and placing in vehicle wallet

Procedure:

- Sign "Stock vehicle maintenance" checklist and place it in vehicle wallet.

3.88 Cleaning and care: checking that required measures have been carried out on time

Procedure:

- Check that all cleaning and care measures due previously were carried out on time.
- Carry out and document any cleaning and care which is due.

3.89 Stock vehicle care management: deciding and recording date of next check

Procedure:

- Decide date of next check with person in charge of stock vehicle care management.
- Record chosen date in maintenance table.

3.90 Display instruments: setting time and date

Procedure:

- Change settings of display instruments: Refer to Operating Manual for radio/sound system/MMI system.

3.91 Manual gearbox/automatic gearbox: selecting 1st gear/park

Procedure:

Vehicles with manual gearbox: Select 1st gear.

Vehicles with automatic gearbox: Select park position.

3.92 Four-wheel drive coupling: changing oil

Procedure:

- Change oil according to Workshop Manual ⇒ ; Rep. gr. 39 .

3.93 Instrument cluster: resetting driver information system

Procedure:

- Reset single journey memory and total journey memory of driver information system; refer to vehicle Owner's Manual.

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3.94 Toothed belt for coolant pump drive: checking

3.94.1 Toothed belt for coolant pump drive: checking

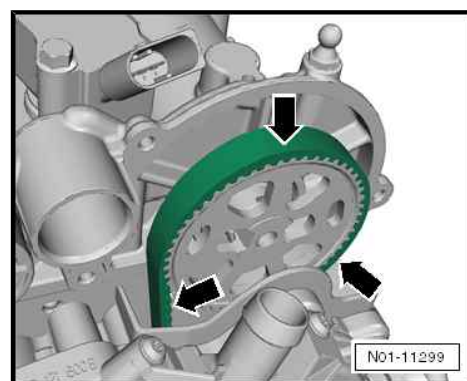
Checking condition of toothed belt - 1.4 TFSI engines:

- Remove toothed belt cover ⇒ 4-cylinder direct injection engine (1.4 ltr. 4-valve TFSI EA211); Rep. gr. 19 ; Coolant pump/ thermostat assembly; Removing and installing coolant pump .
- Turn bolt securing pulley to turn crankshaft in direction of normal engine rotation; check entire length of toothed belt for the following:
 - ◆ Cracks, cross-sectional fractures, tears (on toothed belt cover side) -arrow-
 - ◆ Wear along edges
 - ◆ Fraying of cord strands
 - ◆ Tears (on toothed side) -arrow-
 - ◆ Layer separation (toothed belt body, cord strands)
 - ◆ Surface cracks (synthetic coating)
 - ◆ Traces of oil and grease



Note

It is essential to renew the toothed belt if faults are found. This will prevent failures and malfunctions. Renewing the toothed belt is a repair measure.



3.95 Toothed belt for camshaft drive: renewing

Procedure:

- Renew toothed belt for camshaft drive according to specifications in Workshop Manual ⇒ ; Rep. gr. 15 ; Toothed belt drive; Removing and installing toothed belt .

3.96 Toothed belt for camshaft drive and tensioning roller: renewing

Procedure:

- Renew toothed belt for camshaft drive according to specifications in Workshop Manual ⇒ ; Rep. gr. 15 ; Toothed belt drive; Removing and installing toothed belt .
- Renew tensioning roller according to Workshop Manual ⇒ ; Rep. gr. 15 ; Toothed belt drive; Exploded view - toothed belt .

3.97 Poly V-belt for ancillaries: renewing

Procedure:

- Renew poly V-belt for ancillaries according to specifications in Workshop Manual ⇒ 4-cylinder direct injection engine (1.8, 2.0 ltr. 4-valve TFSI - generation III); Rep. gr. 13 ; Cylinder block (pulley end); Removing and installing poly V-belt .

4 Exhaust emissions test



Note

- ◆ Please observe the statutory regulations applicable to your country.
- ◆ The exhaust emissions test described below conforms to the statutory regulations applicable in Germany.

Petrol engines: performing exhaust emissions test ⇒ [page 128](#)

Diesel engines: performing exhaust emissions test ⇒ [page 135](#)

4.1 Petrol engines: performing exhaust emissions test

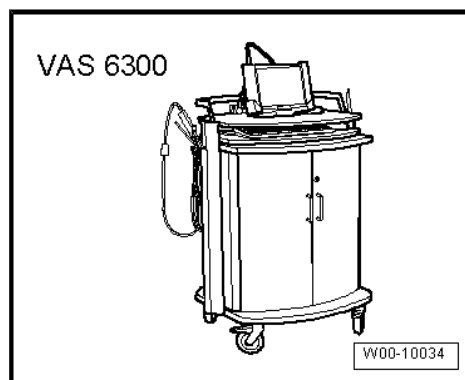


Note

- ◆ The following description refers to vehicles equipped with on-board diagnosis (OBD) with a closed-loop catalytic converter.
- ◆ The OBD monitors all components and (sub)systems which affect the exhaust gas quality.

Special tools and workshop equipment required this document. Copyright by AUDI AG.

- ◆ Emissions test station - VAS 6300-



- ◆ Adapter wire, OBD communication - VAS 5052/16-1-



Note

- ◆ In order for the exhaust emissions test to be carried out, all components of the emissions test station - VAS 6300- must be properly plugged in and connected to one another as specified in the operating instructions.
- ◆ All the required steps are displayed on the emissions test station - VAS 6300-.

Test requirements

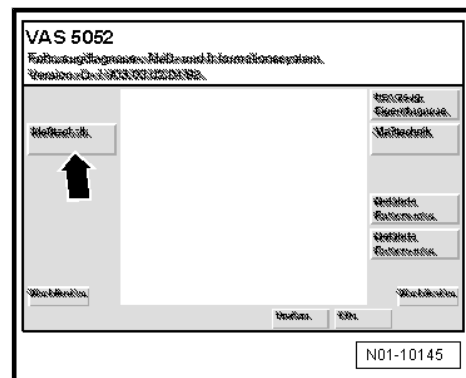
- All test requirements and data for the exhaust emissions test are stated on the exhaust emissions test data sheet for the required engine.
- If the specifications for the exhaust emissions test will be scanned in using a bar code, the data sheet must be available as a printout.

- Automatic gearbox: selector lever in position “P” or “N”
- Manual gearbox: gear lever in neutral
- Handbrake applied
- Follow instructions shown on display.

Start screen

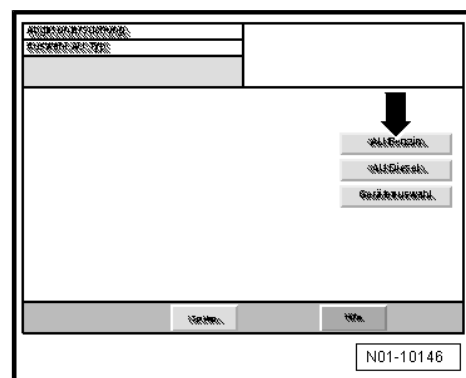
- Select “Emissions test” button -arrow-.

An overview of exhaust emissions test types will appear.

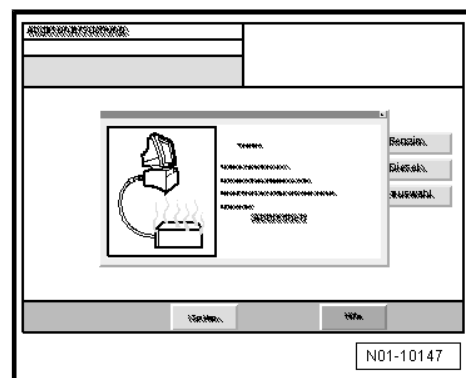


- Select “Emissions test, petrol” -arrow-.

A display for the warm-up period will be shown.



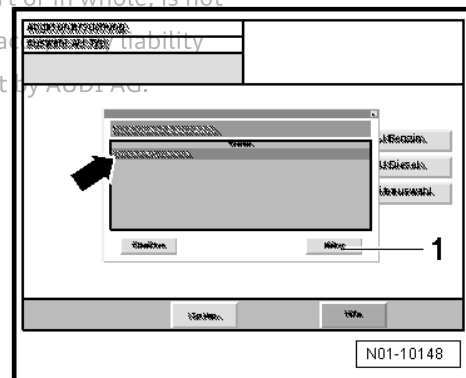
- Continue exhaust emissions test according to the instructions on the display.



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- When the options for the exhaust emissions test specifications are shown, select the option required -arrow-:

- ◆ Either “Standard specifications” (for an initial exhaust emissions test)
- ◆ Or “Last vehicle” (to repeat a previous exhaust emissions test)
- Confirm **Next** -item 1- on display.



Entering vehicle data

The input menu for vehicle data will be shown.

- Enter the following data from the registration document (part 1):
 - ◆ -1- Vehicle manufacturer, e.g. Audi
 - ◆ -2- Vehicle model, e.g. A6 / 4G
 - ◆ -3- Code for 14.1, e.g. 0572
 - ◆ -4- Code for 2.1, e.g. 0588
 - ◆ -5- Code for 2.2, e.g. 846
 - ◆ -6- Engine code: e.g. CHVA
 - ◆ -7- Number plate: e.g. IN-MV 1234
 - ◆ -8- Vehicle identification number, e.g. WAUZZZ4GZAN001234
- Enter mileage (km), e.g. 33350, at -item 9-.



Note

- ◆ Additional functions can be selected using the **Go to** button.
- ◆ The **Go to** button can be used to cancel the test.

- Select “With OBD” -arrow-.

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Entering exhaust emissions test specifications



Note

- ◆ *The specifications must be entered manually if they are not available as a bar code.*
- ◆ *Refer to ► Data sheets for exhaust emissions test (for required engine) for all test requirements and data for the exhaust emissions test.*

Entering exhaust emissions test specifications manually

- Follow instructions on display to enter data manually.
- Enter data listed on emissions test data sheet under “Test values for exhaust emissions test” on display in following order:
 - 1 - Test engine speed (idling speed)
 - 2 - Warm-up period of catalytic converter
 - 3 - Engine temperature
 - 4 - Increased idling speed
 - 5 - CO content at increased idling speed
 - 6 - Lambda at increased idling speed
 - 7 - Idling speed
 - 8 - Select control probe type: either »two-state probe« or »broad-band probe« -item 1-.
 - 9 - Lambda probe value
- Once you have entered all data correctly, confirm your entry with **Next** button -arrow-.

Entering exhaust emissions test specifications with a bar code

- If exhaust emissions test specifications are available as a bar code, use scanner pen to scan bar code on data sheet.

All required data will be shown on display.

- Press  button -arrow- to continue procedure.

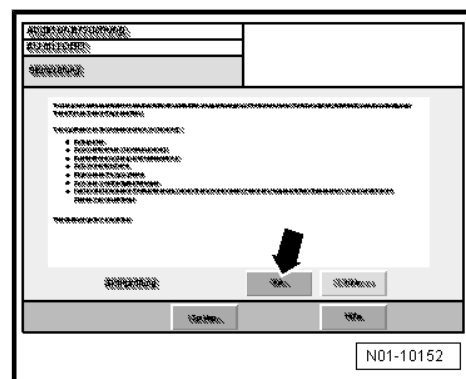
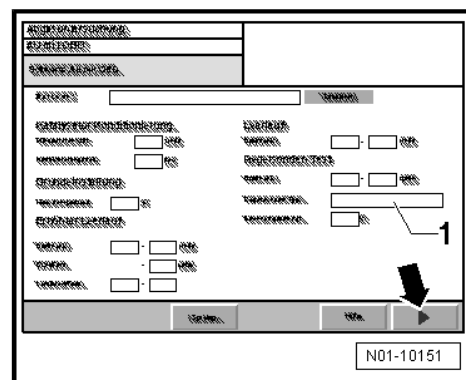
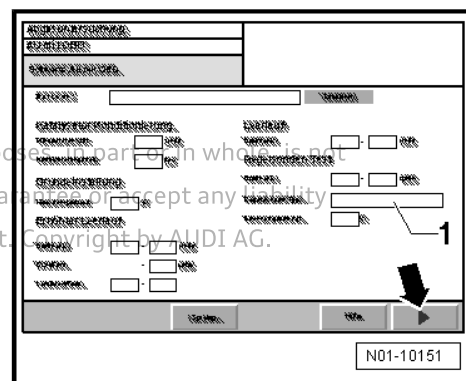
Visual inspection

- Follow instructions shown on display.
- Inspect all components relevant to exhaust emissions.
- Check that all components of exhaust system are fitted, complete and free of leaks and damage.
- If results of inspection are OK, press button for “OK” -arrow-.



Note

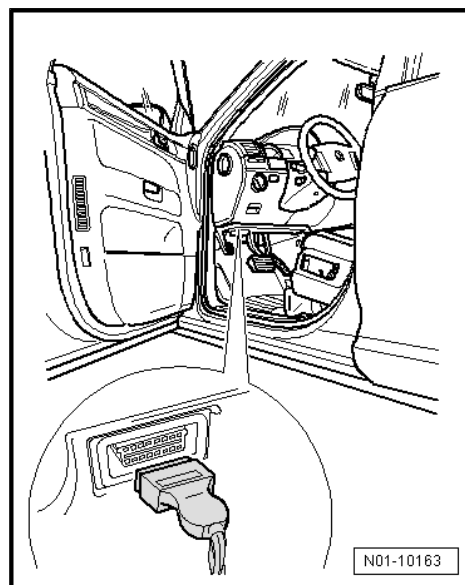
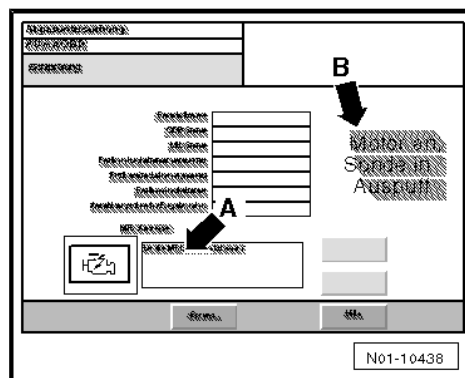
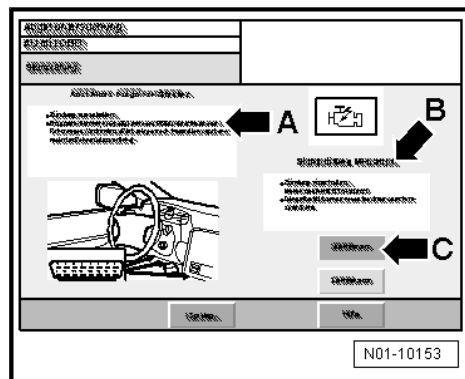
Pressing the button for “Not OK” will start a test.



Plugging in diagnostic connector

The screen for the visual inspection must be shown with prompts to plug in the diagnostic connector -arrow A- and to check exhaust emissions warning lamp -arrow B-.

- Follow instructions shown on display -arrow A- and -arrow B-.
- Switch off ignition.
- Plug connector of diagnosis cable into EOBD connection.



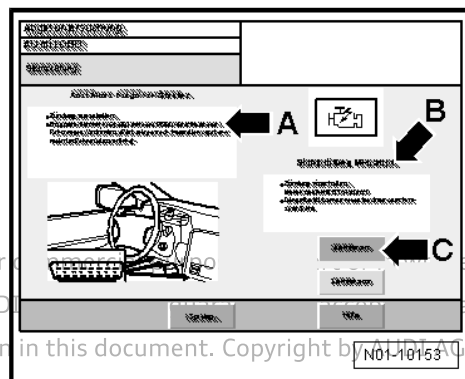
Visual check of exhaust emissions warning lamp with engine off

- Switch on ignition.
- Check exhaust emissions warning lamp.
- If lamp lights up, press button for “Lamp on” -arrow C-.



Note

The exhaust emissions test is failed if the exhaust emissions warning lamp does not light up during the visual check.

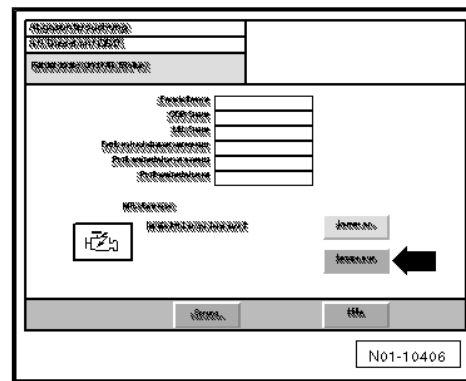


Visual check of exhaust emissions warning lamp with engine on

- Start engine and confirm that it is running by selecting “Yes” on display.
- Check exhaust emissions warning lamp; it must not light up or flash.
- Insert emission probe into exhaust pipe.

Note

Do not continue the exhaust emissions test until the test probe is in the exhaust pipe.



The system will automatically switch over to a test readiness check.

This checks that all test readiness checks supported by the control unit have been carried out.

- Confirm status of exhaust emissions warning lamp -arrow-.

Note

- ◆ If all the display values are set to zero, a control probe test will not be performed.
- ◆ If not all the display values are set to zero, a control probe test will be performed in a later step.

Catalytic converter temperature conditioning

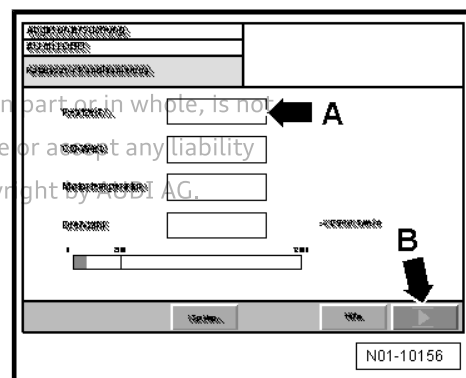
The system will automatically switch over to the warm-up phase of the catalytic converter.

- Follow instructions shown on display.

The measurement starts when the engine has reached the required speed.

- Keep engine speed within required range.

The remaining time for carrying out the warm-up phase will be shown -arrow A-.



Warm-up period

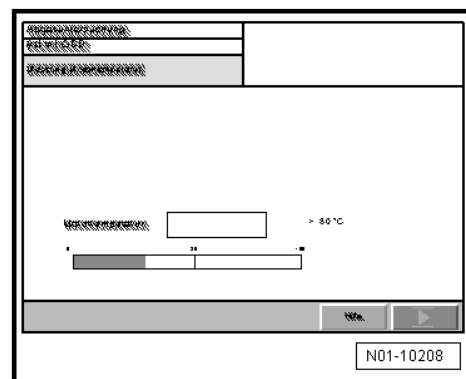
The system will automatically switch over to the screen for measuring the engine temperature.

- Follow instructions shown on display.

Note

This screen is only shown if the engine temperature has not yet reached 80 degrees Celsius.

- Bring engine up to required temperature.



Measurement at increased idling speed

The system will automatically switch over to the screen for measuring at increased idling speed.

- Follow instructions shown on display.

The measurement starts when the engine has reached the required speed.

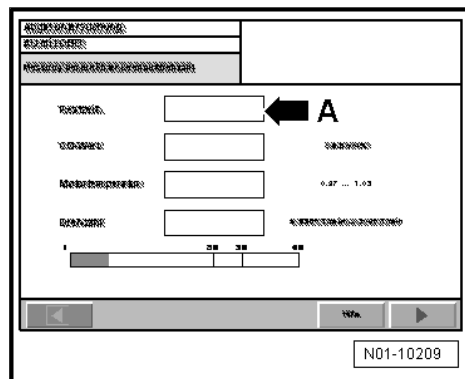


Note

- ◆ You can skip the measurement by pressing the  button (the emissions test will be failed).
- ◆ You can reset the test values with the  button and repeat the test.

- Keep engine speed within required range.

The remaining time for carrying out the measurement will be shown -arrow A-.



Measuring idling speed and CO content

The system will automatically switch over to the screen for idling speed and CO content.

The measurement starts when the engine has reached the required speed.

The remaining time for carrying out the measurement will be shown -arrow A-.



Control probe test



Note

The control probe test cannot be carried out unless all values displayed from the test readiness check are NOT set to zero.

The system will automatically switch over to the screen for the control probe test.



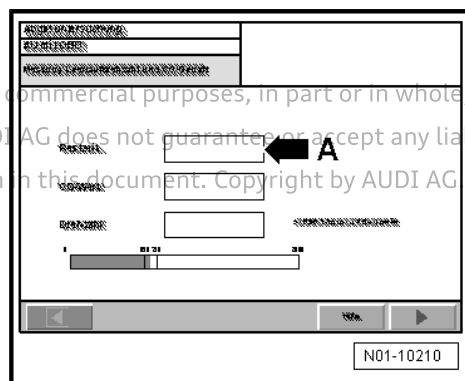
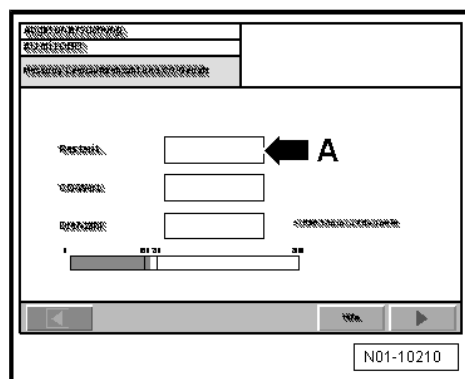
Note

The control probe test is carried out individually for each Lambda probe.

The measurement starts when the engine has reached the required speed.

- Keep engine speed within required range.

The remaining time for carrying out the measurement will be shown -arrow A-.



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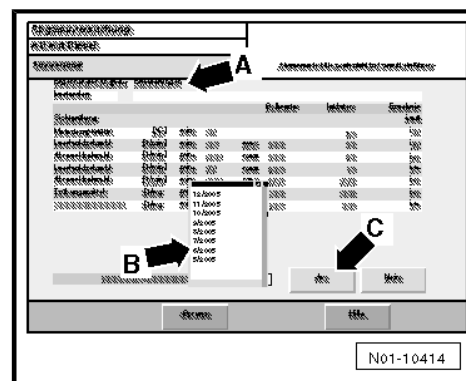
Evaluation

Once the exhaust emissions test is completed, the test log is displayed on the screen.

The result of the test will be shown.

You can enter remarks on the exhaust emissions test here -arrow A-. These will be added to the test log.

- If emissions test is passed, select date and “Emissions test seal granted” from drop-down menu -arrow B-.
- Confirm with “Yes” -arrow C-.

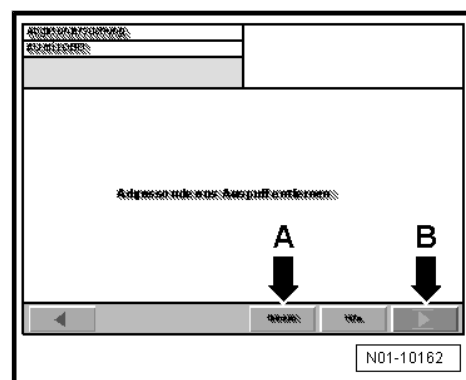


Printing

Following confirmation, two test certificates will be printed automatically.

- If additional certificates are required, press button for “Print” -arrow A-.
- Follow instructions shown on display.
- Remove emission probe from exhaust pipe.
- Then press  button -arrow B-.

The exhaust emissions test is completed; a new test can now be performed.



4.2 Diesel engines: performing exhaust emissions test

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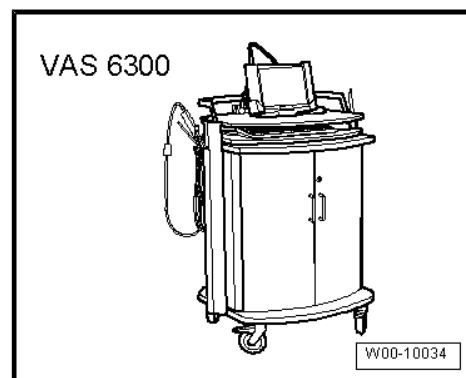


Note

- ◆ The following description refers to vehicles equipped with on-board diagnosis (OBD).
- ◆ The OBD monitors all components and (sub)systems which affect the exhaust gas quality.

Special tools and workshop equipment required

- ◆ Emissions test station - VAS 6300-



- ◆ Adapter wire, OBD communication - VAS 5052/16-1-



- ## Test requirements

- ## Start screen

- Select "Emissions test" button -arrow-.

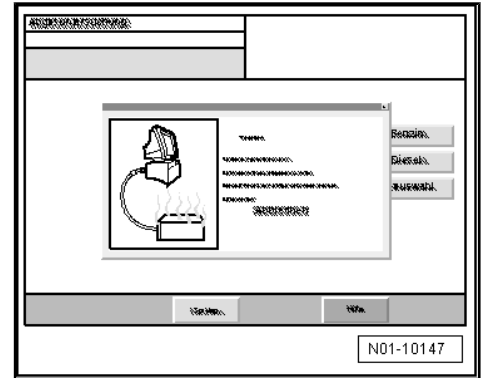
An overview of exhaust emissions test types will appear.



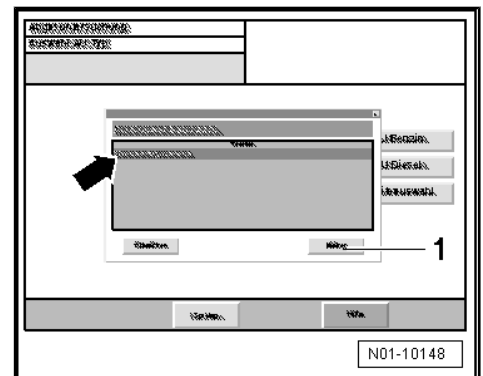
A display for the warm-up period will be shown.



- Continue exhaust emissions test according to the instructions on the display.



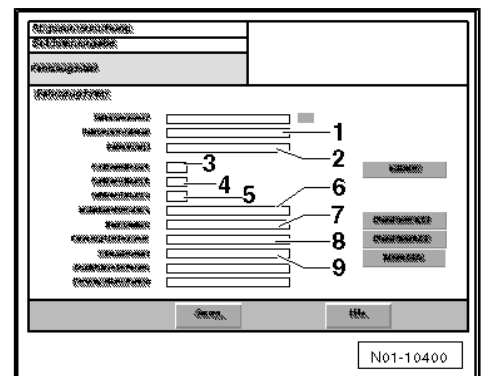
- When the options for the exhaust emissions test specifications are shown, select the option required -arrow-:
- ◆ Either “Standard specifications” (for an initial exhaust emissions test)
- ◆ Or “Last vehicle” (to repeat a previous exhaust emissions test)
- Confirm **Next** -item 1- on display.



Entering vehicle data

The input menu for vehicle data will be shown.

- Enter the following data from the registration document (part 1):
- ◆ -1- Vehicle manufacturer, e.g. Audi
- ◆ -2- Vehicle model, e.g. A6 / 4G
- ◆ -3- Code for 14.1, e.g. 0572
- ◆ -4- Code for 2.1, e.g. 0588
- ◆ -5- Code for 2.2, e.g. 846
- ◆ -6- Engine code: e.g. CHVA
- ◆ -7- Number plate: e.g. IN-MV 1234
- ◆ -8- Vehicle identification number, e.g. WAUZZZ4GZAN001234
- Enter mileage (km), e.g. 33350, at -item 9-.



Note

- ◆ Additional functions can be selected using the **Go to** button.

- ◆ The **Go to** button can be used to cancel the test.

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- Select “Diesel OBD” -arrow-.

Entering exhaust emissions test specifications

There are various ways of entering the specifications:

- ◆ 1. Manually
- ◆ 2. By scanning the bar code from the emissions test data sheet
- ◆ 3. Via the ELSA web service



Note

- ◆ To use the ELSA web service, the vehicle diagnostic tester being used to perform the exhaust emissions test must be integrated in the workshop network.
- ◆ When using the ELSA web service, the vehicle specifications are entered on the corresponding screen automatically via the network.

Entering exhaust emissions test specifications manually



Note

Refer to ⇒ Data sheets for exhaust emissions test (for required engine) for all test requirements and data for the exhaust emissions test.

- Follow instructions on display to enter data manually.
- Enter data listed on emissions test data sheet under “Test values for exhaust emissions test” on display in following order:

- 1 - Engine speed for temperature conditioning
- 2 - Number of times engine revved up for temperature conditioning
- 3 - Engine oil temperature (minimum value)
- 4 - Select method for measuring engine oil temperature
- 5 - Idling speed
- 6 - Governed speed
- 7 - Governed speed measuring time (to nearest second)
- 8 - Turbidity value (arithmetic mean)
- 9 - Select probe type (probe number)
- 10 - Select measurement mode
- 11 - Time required for measurement

- Once you have entered all data correctly, confirm your entry with  button -arrow-.

Entering exhaust emissions test specifications with a bar code

- If exhaust emissions test specifications are available as a bar code, use scanner pen to scan bar code on data sheet.

All required data will be shown on display -1-.

- Press  button -arrow- to continue procedure.

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Visual inspection

- Follow instructions shown on display.
- Inspect all components relevant to exhaust emissions.
- Check that all components of exhaust system are fitted, complete and free of leaks and damage.
- If results of inspection are OK, press button for “OK” -arrow-.



Note

Pressing the button for “Not OK” will start a test.

Plugging in diagnostic connector

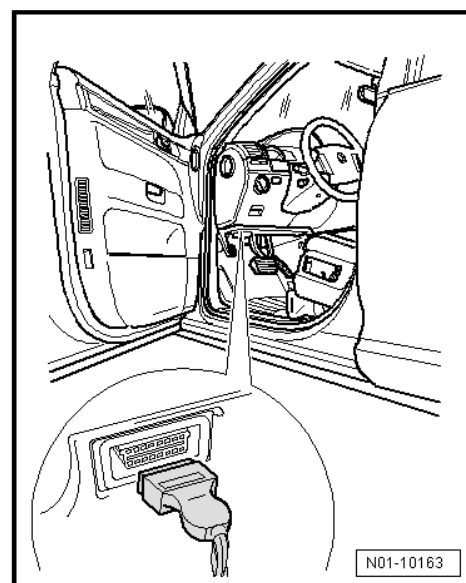
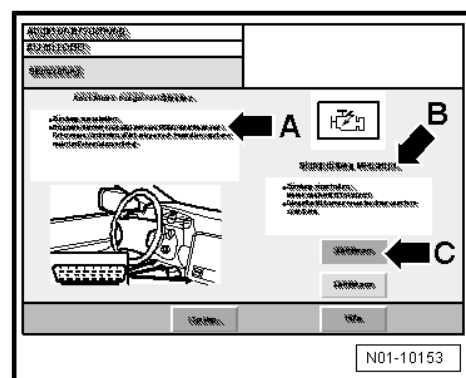
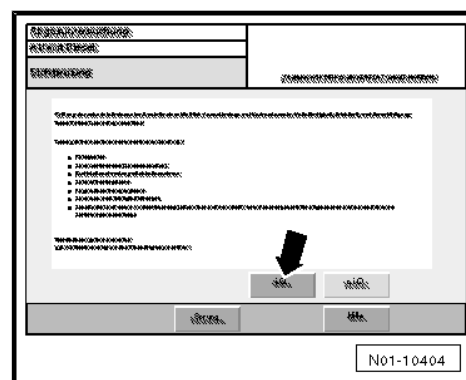
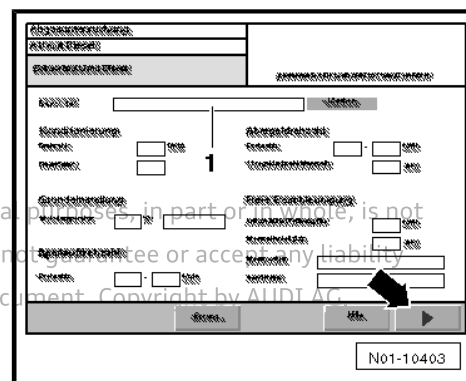
- Ignition is switched off.

The screen for the visual inspection must be shown with prompts to plug in the diagnostic connector -arrow A- and to check exhaust emissions warning lamp -arrow B-.

- Follow instructions shown on display.
- Plug connector of diagnosis cable into EOBD connection.

Visual check of exhaust emissions warning lamp with engine off

- Switch on ignition.
- Check exhaust emissions warning lamp.

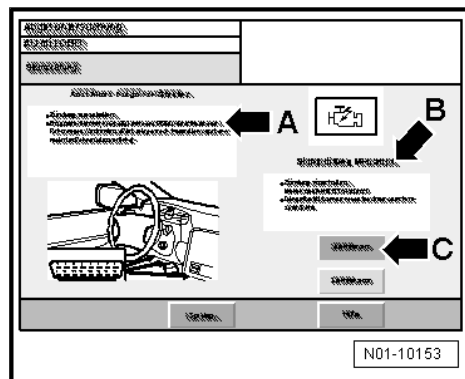


- If lamp lights up, press button for “Lamp on” -arrow C-.



Note

The exhaust emissions test is failed if the exhaust emissions warning lamp does not light up during the visual check.

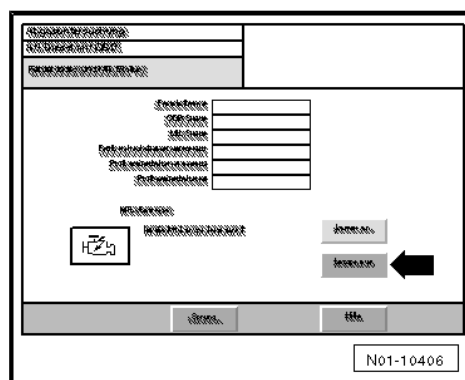


Visual check of exhaust emissions warning lamp with engine on

- Start engine and confirm that it is running by selecting “Yes” on display.
- Check exhaust emissions warning lamp; it must not light up or flash.
- Confirm status of exhaust emissions warning lamp -arrow-.

The system will automatically switch over to a test readiness check.

This checks that all test readiness checks supported by the control unit have been carried out.

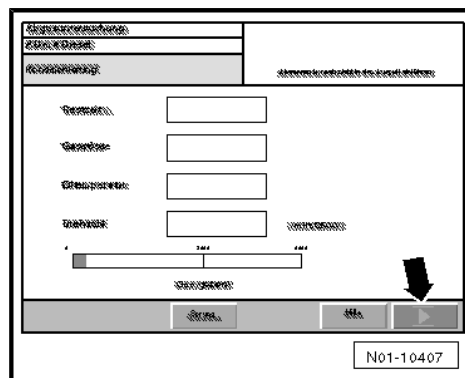


Temperature conditioning

In the temperature conditioning phase, the engine and any emission control systems are brought up to operating temperature by revving up the engine several times; this makes them ready for the exhaust emissions test.

- Follow instructions shown on display.
- Keep engine speed within required range.

If you are certain that no temperature conditioning is necessary, press  button -arrow- to proceed to next measurement.



Reading out the engine temperature

The engine temperature is read out from the engine control unit via the diagnostic connector.

After the required engine temperature has been reached, the system will automatically switch over to the screen for measuring the idling speed.



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Measuring the idling speed

- Follow instructions shown on display.

The measurement starts when the engine has reached the required speed.

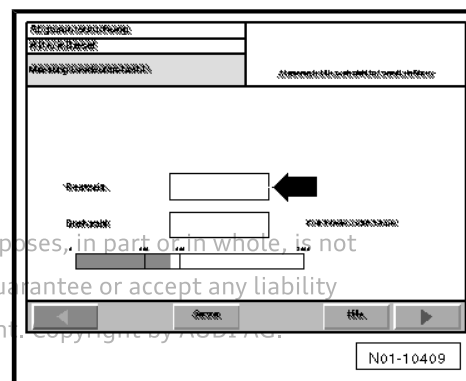


Note

- ◆ *Do not insert emission probe into exhaust pipe yet.*
- ◆ *You can skip the measurement by pressing the  button (the emissions test will be failed).*
- ◆ *The  button can be used to repeat the test.*

- Keep engine speed within required range.

The remaining time for carrying out the measurement will be shown -arrow-.



Measuring the governed speed

The system will automatically switch over to the screen for measuring the governed speed.

The measurement starts when the engine has reached the required speed.

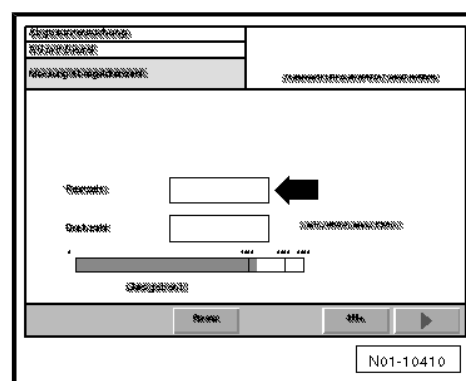
- Press the accelerator pedal down without delay and hold until measurement has been completed.



Note

- ◆ *If the rev limiter is activated, deactivate it before performing the exhaust emissions test.*
- ◆ *Switch on the ignition and then press and hold the  button until the corresponding symbol flashes in the instrument cluster.*

The remaining time for carrying out the measurement will be shown -arrow-.



Note

- ◆ *Do not insert emission probe into exhaust pipe yet.*
- ◆ *You can skip the measurement by pressing the  button (the emissions test will be failed).*

Air quality check

An air quality check is started before the free acceleration procedure is performed. The emission probe must NOT be in the exhaust pipe at this stage. Otherwise, measurement errors or error messages may occur during the subsequent measurement procedures.

- After air quality check is completed, insert emission probe in exhaust pipe.

Free acceleration

The system will automatically switch over to the screen for the free acceleration procedure.

In the free acceleration procedure, the engine is accelerated as quickly as possible (without load) until the governed speed is reached.

The free acceleration test consists of at least four individual accelerations.

Free acceleration - phase 1

- Follow instructions shown on display -arrow A- and -arrow C-.
- Keep idling speed in specified speed range -arrow D-.

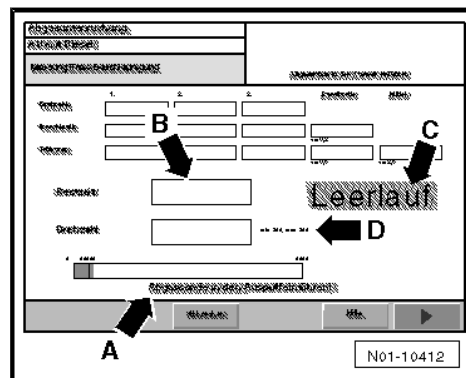
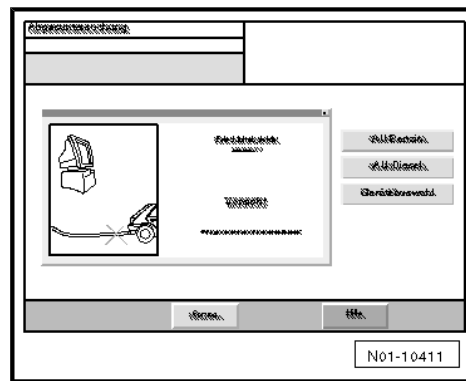
The remaining time for carrying out the measurement will be shown -arrow B-.



Note



- ◆ The emission probe must be in the exhaust pipe.
- ◆ If the engine speed is not within the specified speed range, the measurement procedure is re-started.
- ◆ You can skip the measurement by pressing the button (the emissions test will be failed).



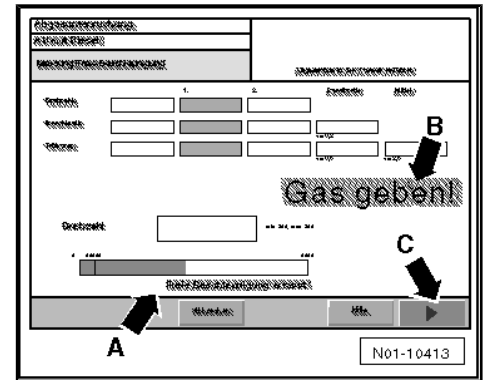
Free acceleration - phase 2

- Follow instructions shown on display -arrow B-.
- Press accelerator pedal down fully when prompted to do so and hold it until display prompts you to let engine idle.

Free acceleration - phase 3

- Take your foot off accelerator pedal as soon as display shows prompt for engine idling speed -arrow B-, and let engine idle.

The result of the measurement procedure and information about the most recently performed free acceleration procedure will appear on the display -arrow A-. If the measured values are not OK, you will be informed at this stage about the reasons why the free acceleration test was failed.



Note

- ◆ If the field is white, the measured value is within the tolerated range.
- ◆ If the field is red, the measured value is outside the tolerated range.
- ◆ If the field is yellow, the measured value is outside the tolerated range but is subject to the judgement of the person performing the test.

Further individual accelerations

The next individual acceleration is now performed, beginning with phase 1 of the free acceleration procedure.

It is possible to perform as many free acceleration procedures as desired until:

- ◆ Three free acceleration procedures in a row have been passed, and the acceleration range is OK.
- ◆ All values are OK with the exception of the acceleration range, and the  button -arrow C- has been pressed to continue the test procedure (in this case, the person performing the test judges whether or not the value is OK).
- ◆ The values are not OK, and the → button -arrow C- has been pressed to end/skip the measurement.

If all measured values are OK after the engine has been revved up three times (i.e. all fields are white), the exhaust emissions test has been passed.

If all measured values are OK after the engine has been revved up three times, the exhaust emissions test has been passed.

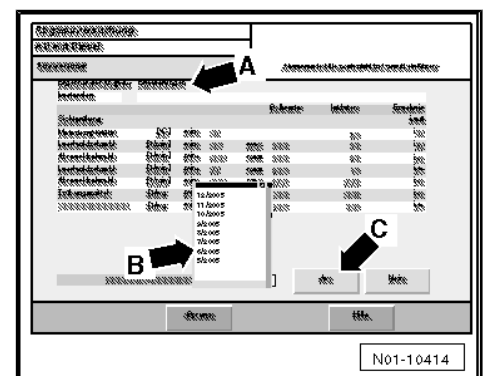
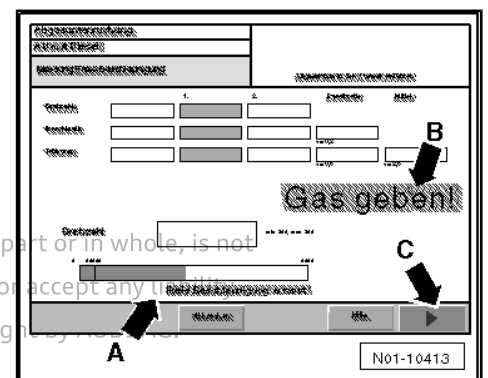
Evaluation

Once the exhaust emissions test is completed, the test log is displayed on the screen.

The result of the test will be shown.

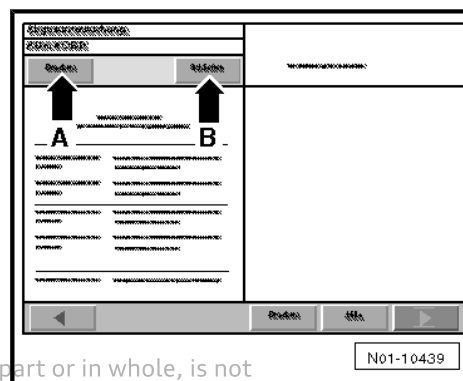
You can enter remarks on the exhaust emissions test here -arrow A-. These will be added to the test log.

- If emissions test has been passed, select date and "Emissions test seal granted" from drop-down menu -arrow B-.
- Confirm with "Yes" -arrow C-.



The emissions test log appears on the screen and can be printed out as often as desired using the “Print” button -arrow A- in the “Print preview” menu.

- You can close the “Print preview” menu by using the “Close” button -arrow B-.
- Follow instructions shown on display.
- Remove emission probe from exhaust pipe.



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The exhaust emissions test is completed; a new test can now be performed.

