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Maintenance
Audi A4 2015 ➤
Edition 10.2019

Service

Maintenance

Heading

- 1. General Information
- 2. Preparation Work
- 3. Maintenance Work
- 4. Emissions Test (NOT FOR NORTH AMERICAN MARKET)



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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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General Information 1

(Edition 10.2019)

- ⇒ "1.1 --- Revision History ---", page 1
- ⇒ "1.2 Engine Number", page 2.
- ⇒ "1.3 Vehicle Identification Number (VIN)", page 3.
- ⇒ "1.4 Vehicle Data Label", page 4

--- Revision History ---1.1

N o.	Date	Chapter	Changes made
1	07/06/20 19	Emergency Call Function: Checking LED Status. Refer to ⇒ "3.3 Emergency Call Function: Checking LED Status (NOT FOR NORTH AMERICAN MARKET)", page 17.	New chapter.
9	08/15/20 18	Service Display for Checking Natural Gas System, Resetting. Refer to ⇒ "3.85 Service Display for Checking Natural Gas System, Resetting (NOT FOR NORTH AMERICAN MARKET)", page 117 otected by copyright. Copying for private or commercial purposes, in part or in whole.	
8	07/05/20 18	Natural Gas System; Checking for Damage and Performing Leak Test. Refer to ⇒ "3.79 Natural Gas System, Checking for Damage and Performing Leak Test (NOT FOR NORTH AMERICAN MARKET)", page 107	New chapter.



Note

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

1.2 Engine Number



Note

The engine number consists of engine codes (three or four digits) and the serial number.

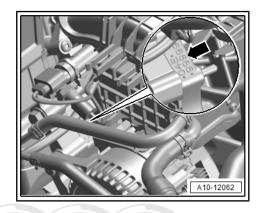
- ⇒ "1.2.2 4-Cylinder Gasoline Engine 2.0L TFSI", page 2.
- ⇒ "1.2.3 6-Cylinder Gasoline Engine 2.9L TFSI", page 2.
- ⇒ "1.2.4 6-Cylinder Gasoline Engine 3.0L TFSI", page 3.
- ⇒ "1.2.5 4-Cylinder Diesel Engine 2.0L TDI", page 3.

1.2.1 4-Cylinder Gasoline Engine 1.4L TFSI

The engine number is stamped on the engine and transmission joint -arrow- on the left.

The engine number is also located on the sticker on the upper toothed belt guard.

The engine codes are also located on the vehicle data label. Refer to \Rightarrow "1.4 Vehicle Data Label", page 4.

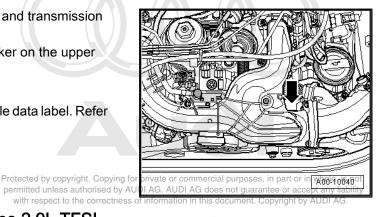


1.2.2 4-Cylinder Gasoline Engine 2.0L TFSI

The engine number is stamped on the engine and transmission joint -arrow- on the left.

The engine number is also located on the sticker on the upper timing chain guard.

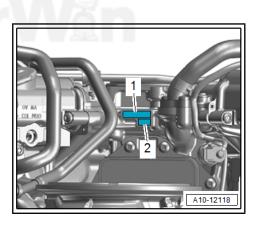
The engine codes are also located on the vehicle data label. Refer to ⇒ "1.4 Vehicle Data Label", page 4.



1.2.3 6-Cylinder Gasoline Engine 2.9L TFSI

Engine Number

- The engine number only becomes visible when the engine cover and heat shield are removed.
- The engine number is located in the rear on the top of the cylinder block.
- 1 Serial number
- 2 Engine codes
- ♦ A sticker with en "engine code" and "serial number" is also applied to the upper timing chain cover.
- The engine codes are additional located on the vehicle data labels.



1.2.4 6-Cylinder Gasoline Engine 3.0L TFSI

The engine number is located in the rear on the top of the cylinder block.

The engine number is also located on the sticker on the upper timing chain guard.

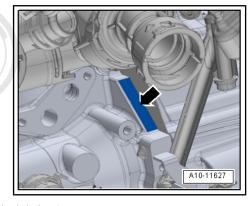
The engine codes are also located on the vehicle data label. Refer to ⇒ "1.4 Vehicle Data Label", page 4.

1.2.5 4-Cylinder Diesel Engine 2.0L TDI

The engine number is stamped on the engine and transmission joint -arrow- on the left.

The engine number is also located on the sticker on the upper toothed belt guard.

The engine codes are also located on the vehicle data label. Refer to ⇒ "1.4 Vehicle Data Label", page 4.

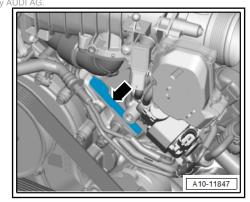


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The engine number is stamped on the left side under the high pressure pump toothed belt -arrow-.

The engine number is also located on the sticker on the intake manifold.

The engine codes are also located on the vehicle data label. Refer to \Rightarrow "1.4 Vehicle Data Label", page 4.



1.3 Vehicle Identification Number (VIN)

The location of the VIN depends on the equipment and market version:

- ◆ On the lower left edge of the windshield
- ◆ On vehicle data label. Refer to ⇒ "1.4 Vehicle Data Label", page 4.
- Optional: in the MMI under »Service&Control«

The VIN is comprised of the following:

WAU	ZZZ	W8	Z	В	A/N	000 234
Manufacturer identification	Filler charac- ter	Туре	Filler charac- ter	Model year	Production fa- cility	Serial number

1.4 Vehicle Data Label

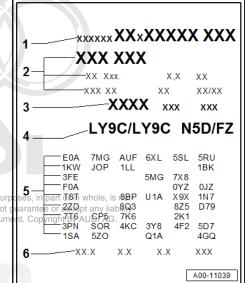
The vehicle data label is located:

- ♦ In the maintenance schedule or Owner's Manual
- ♦ Near the spare tire well under the carpet covering

The vehicle data label contains the following vehicle data:

- 1 Vehicle Identification Number (VIN)
- 2 Vehicle Model, Manufacturer Identification, Engine Version and Output, Production Month/Year
- 3 Engine and Transmission Codes (no information for certain countries)
- 4 Paint Number, Interior Equipment Number
- 5 Optional Equipment Numbers
- 6 Consumption Values: City, Highway, Combined, CO2 (no information for certain countries)

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Preparation Work 2

- ⇒ "2.1 Vehicle, Lifting", page 5.
- ⇒ "2.2 Engine Cover, Removing and Installing", page 6.
- ⇒ "2.3 Noise Insulation, Removing and Installing", page 8.
- ⇒ "2.4 Window Regulator, Activating One-Touch Up/Down Function", page 9
- ⇒ "2.5 Vehicle Diagnostic Tester, Connecting", page 10.

2.1 Vehicle, Lifting

MARNING

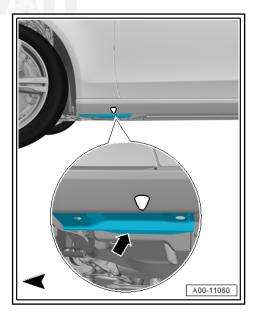
Using the hoist incorrectly can damage the vehicle.

- ♦ Do not exceed the permitted load rating of the hoist.
- Only lift the vehicle at the mounting points shown.
- Position the mounting plate so that it is aligned centrally under the mounting points.
- Maintain distance between the low-lying vehicle components and the hoist.

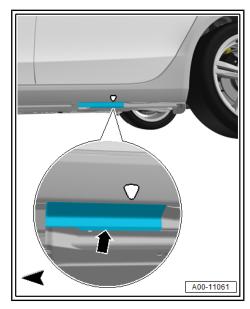
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Procedure:

Front: Position the hoist mounting plate on the side sill mounting point -arrow-.



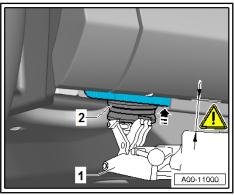
Rear: Position the hoist mounting plate on the side sill mounting point -arrow-.





Note

- ♦ The impressions on the side sill trim panel mark the positions of the mounting points.
- ♦ Remove or position all mounting plates -2- so that the hoist lifting arms do not contact any vehicle trim panels.



2.2 Engine Cover, Removing and Installing

- ⇒ "2.2.1 4-Cylinder Gasoline Engine 2.0L TFSI", page 6.
- ⇒ "2.2.2 6-Cylinder Gasoline Engine 3.0L TFSI", page 7.
- ⇒ "2.2.3 4-Cylinder Diesel Engine 2.0L TDI", page 7

2.2.1 4-Cylinder Gasoline Engine 2.0L TFSI

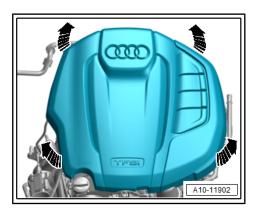
Removal Procedure:

 Carefully pull the engine cover off of the retaining pins -arrows- one after the other.

Installation Procedure:

 Position the engine cover on the retaining pins and press onto the retaining pins by hand one after the other.

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2.2.2 6-Cylinder Gasoline Engine 3.0L TFSI

Procedure:

Engine cover removing and Installing according to the repair manual procedure. Refer to ⇒ Rep. Gr. 10; Engine Cover; Engine Cover, Removing and Installing.



Note

The engine cover removal takes place according to the repair manual.

2.2.3 4-Cylinder Diesel Engine 2.0L TDI

Removal Procedure:

 Carefully pull the engine cover off of the retaining pins -arrows- one after the other.

Installation Procedure:

 Position the engine cover on the retaining pins and press onto the retaining pins by hand one after the other.



2.2.4 6-Cylinder Diesel Engine 3.0L TDI (NOT FOR NORTH AMERICAN MARKET)

NOT FOR NORTH AMERICAN MARKET

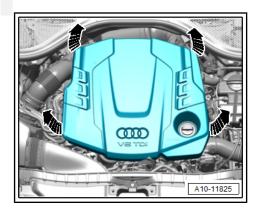
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Removal Procedure:

 Carefully pull the engine cover off of the retaining pins -arrows- one after the other.

Installation Procedure:

 Position the engine cover on the retaining pins and press onto the retaining pins by hand one after the other.



2.2.5 4-Cylinder Gasoline Engine 1.4L TFSI (NOT FOR NORTH AMERICAN MAR-KET)

NOT FOR NORTH AMERICAN MARKET

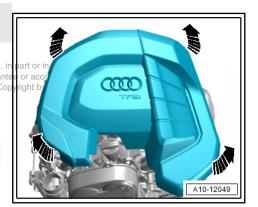
Removal Procedure:

Carefully pull the engine cover off of the retaining pins -arrows- one after the other.

Installation Procedure:

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Position the engine cover on the retaining bins and press onto guarante with respect to the correctness of information in this document. Copy the retaining pins by hand one after the other.



2.3 Noise Insulation, Removing and Installing

⇒ "2.3.1 Front Noise Insulation", page 8.

⇒ "2.3.2 Rear Noise Insulation", page 9

2.3.1 Front Noise Insulation

Special tools and workshop equipment required

- Torque Wrench 1410 VAG1410-, measuring range: 4 through 20 Nm
- Or: Mini Torque Wrench VAS6854-, measuring range: 5 to 13 Nm
- Or: Electronic Torque Wrench 3-60Nm VAS6583-, measuring range 3 to 60 Nm
- Or: Torque Wrench 1331 5-50Nm VAG1331-, measuring range: 6 to 50 Nm

Tightening Specification Table for Installation:

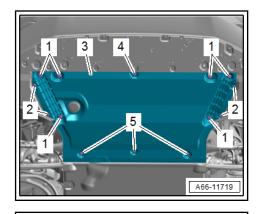
Component / Fastening Element	[Nm]
Bolt -1-	12

Removal Procedure:

- Remove the bolts -1-.
- Remove the quick-release fasteners -2, 4 and 5- from the front noise insulation.
- Remove the noise insulation -3- rearward from the bumper cover lower section.

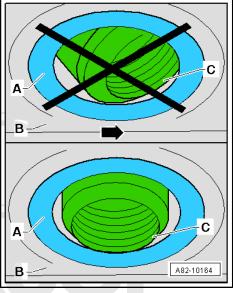
Installation Procedure:

Installation procedures occur in reverse order. While doing so, note the tightening specifications. Refer to ⇒ page 8 for the installation tightening specification table.



Note

- When installing, the quick-release fasteners must noticeably
- For vehicles with an auxiliary heater, the exhaust pipe opening must run vertically through the grommet in the noise insulation.



2.3.2 **Rear Noise Insulation**

Removal Procedure:

- Detach the expanding clips -arrows-.
- Detach the quick-release fasteners -2 and 3-.
- Remove the noise insulation -4- toward the rear.

Installation Procedure:

Installation procedures occur in reverse order.



Note

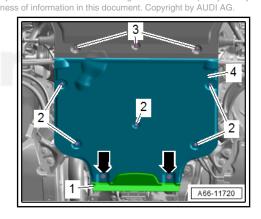
When installing, the quick-release fasteners must noticeably engage!

Window Regulator, Activating One-2.4 Touch Up/Down Function

If the vehicle battery was disconnected, then the one-touch up/ down function for the window regulator must be activated.

Procedure:

Pull the power window switch upward until the windows are completely raised.



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- Release the switch and pull again for at least one second.
- Repeat the procedure for all window regulators.

2.5 Vehicle Diagnostic Tester, Connecting

Special tools and workshop equipment required

♦ Vehicle Diagnostic Tester



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- Remote Diagnosis Head VAS5054A-
- Or: Diagnosis Interface VAS5055-

- Attach the connector for the -VAS5054A- to the diagnostic connection in the vehicle.
- Switch on the -VAS6160 A-.
- Switch the ignition on.
- Follow the screen menu to start the desired function.





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3 Maintenance Work

- ⇒ "3.99 Display Instruments, Setting Time and Date", page 121.
- ⇒ "3.14 Battery, Determining and Entering Charge Level", page 25 .
- ⇒ "3.12 Battery, Checking Electrolyte Level", page 22.
- ⇒ "3.13 Battery, Connecting Stationary Battery Charger (Minimum 30A, Charging Voltage 14.8 Volt IU Characteristic)", page 24.
- ⇒ "3.10 Battery, Reading Out Condition", page 21.
- ⇒ "3.30 Front and Rear Axle Components, Checking Play, Attachment and Ball Joint Boots for Damage", page 43
- ⇒ "3.25 Tire Pressure, Checking and Adjusting if Necessary", page 37
- ⇒ "3.26 Tires, Checking Condition and Wear Pattern; Tread Depth, Checking and Entering", page 38.
- ⇒ "3.48 Owner's Literature, Checking for Completeness", page 63.
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- ⇒ "3.19 Brake Fluid, Checking, on Vehicles older than 12 Months", page 34
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- ⇒ "3.18 Brake Fluid, Changing", page 29.
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- ⇒ "3.17 Connected Gateway, Replacing Emergency Battery", page 28.
- ⇒ "3.36 Panorama Sliding Sunroof Insert, Checking, Cleaning and Lubricating", page 51

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- ⇒ "3.35 Sliding/Tilting Sunroof Insert, Cleaning and Lubricating" of any liability page 49
- ⇒ "3.34 Roof Insert, Checking Function", page 48.
- ⇒ "3.1 Diesel Particulate Filter, Reading Ash Load Value", page 15.
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- ⇒ "3.4 DTC Memories: Checking", page 17
- "3.42 Driving and Back-Up Lamps, Parking Lamps, License Plate Lamps, Turn Signals and Emergency Flashers,: Checking Function", page 60
- ⇒ "3.61 Vehicle Key, Wheel Hub Cover and Owner's Literature, <u>Checking Presence and Entering Number", page 66</u>.
- ⇒ "3.60 Vehicle Key, Removing", page 66.

- ⇒ "3.59 Vehicle Key, Checking Function and Entering Number of Assigned Keys", page 65.
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- ⇒ "3.82 Vehicle Exterior, Checking Unprotected Locations for Debris and Cleaning if Necessary", page 117
- ⇒ "3.83 Vehicle Exterior, Removing Protective Film", page 117.
- ⇒ "3.55 Vehicle Interior and Exterior, Checking for Damage and Documenting the Damage", page 65.
- ⇒ "3.53 Vehicle Interior, Checking for Cleanliness and Cleaning if Necessary", page 64
- ⇒ "3.54 Vehicle Interior, Removing Objects that Do Not Expressly Protect Surfaces", page 64.
- ⇒ "3.52 Vehicle Interior, Removing Seat Covers and Carpet Protection", page 64.
- ⇒ "3.32 Vehicle from Below, Checking for Damage", page 48.
- \Rightarrow "3.97 Maintenance Procedures, Checking if Performed on Time", page 121 .
- \Rightarrow "3.29 Front and Rear Axle Suspension Strut: Removing Transportation Blocks, Installing Stop Buffer Correctly", page 41
- \Rightarrow "3.87 Full Body Cover, Replacing According to Manufacturer Specification", page 118 .
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- ⇒ "3.102 Interior Rearview Mirror, Calibrating Compass", page 121.
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3.1 Diesel Particulate Filter, Reading Ash **Load Value**

Testing Values and Process Specifications Table:

	Diagnostic Tester Measurement Identification	Soot Limit Value
4-Cylinder Diesel Engine 2.0L TDI	Particulate Filter, Ash Load	Oil ash load: 80 g

- Connect the Vehicle Diagnostic Tester . Refer to ⇒ "2.5 Vehicle Diagnostic Tester, Connecting", page 10.
- Select the Diagnostic mode and start the diagnosis.
- Perform the vehicle identification.
- Deselect "Working with Guided Fault Finding" by removing v and pressing Accept.
- Continue the program sequence.
- Switch to the "Control modules" tab.
- Select "01 Engine electronics" control module and right click to perform the following function:
- Identify control module
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- ♦ Guided Functions or OBD control module the correctness of information in this document. Copyright by AUDI AG.
- 01 measured values reading or measured values
- Select the desired measured value (Table for Testing Values and Process Specifications. Refer to ⇒ page 15) by pressing $|\underline{\mathbf{v}}|$ and confirming with $|\underline{\mathbf{o}}\underline{\mathbf{K}}|$.

- Evaluate the measured value and continue the program sequence.
- Depending on the measured value, perform the following actions:

Result: Action:

Measured value less than Vehicle can be driven an additional 30,000 km. limit value

Replace the diesel particulate filter and set the measured value to zero. Refer to Measured value greater than or equal to limit value ⇒ Engine Mechanical; Rep. Gr. 26; Emissions Control System; Particulate Filter, Removing and Installing .

3.2 **ERA-GLONASS: Emergency Call Func**tion, Checking (NOT FOR NORTH AMERICAN MARKET)

Requirements:

- Applies to vehicles with ERA-GLONASS emergency call function (depending on market requirements).
- Services are only possible within the coverage of the mobile
- Test mode can only be started within the first 20 seconds after switching on the ignition.
- Transport mode deactivated.
- It may take up to 15 minutes between the deactivating transport mode and checking the emergency call function, depending on the system.
- Make sure there is a suitable cell phone connection: park the vehicle outdoors, if necessary.

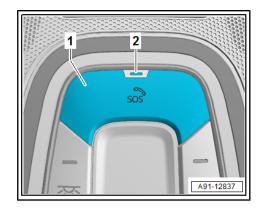
Procedure:

- Switch the ignition on.
- Check if the LED -2- is green.
- Perform ERA-GLONASS test mode:
- Press the emergency call button behind the cover in the roof module -1- ten times consecutively and follow the announcements from the voice prompt for performing the test procedure and test call.



Note

- If the LED is red or the test mode is not possible, then connect the Vehicle Diagnostic Tester (refer to <u>"2.5 Vehicle Diagnostic Tester, Connecting", page 10</u>), and perform Guided Fault Finding "19 — Data Bus on Board Diagnostic Interface, Functions, ERA-GLONASS Operation".
- Due to the country-specific regulations do not deliver the vehicle without successful activation of the ERA-GLONASS: emergency call function (red LED).
- When running the Full pre-delivery inspection program, the test program is automatically loaded into the test plan.



3.3 Emergency Call Function: Checking LED Status (NOT FOR NORTH AMER-ICAN MARKET)

Requirements:

- Applies to vehicles with private and statutorily emergency call functions (Europe).
- Services are only possible within the coverage of the mobile network.
- · Flight and transport mode deactivated.
- Make sure there is a suitable cell phone connection and GPS reception: park the vehicle outdoors, if necessary.

Procedure:

- Switch the ignition on.
- Deactivate the flight and transport mode.
- Check if the LED -2- is green.



Note

- ♦ The period between deactivation of the flight/transport mode and activation of the emergency call system (green LED turns on) can be up to 15 minutes.
- Deliver of the vehicle to the customer must not take place without activation of the emergency call system (green LED turns on)
- Due to country-specific regulations the vehicle must have a functioning emergency call system (green LED turns on) before driving on the streets.
- ♦ If no activation of the emergency call system takes place in the specified time, pay attention to TSB 2055311.

1 2 SOS

3.4 DTC Memories: Checking

Procedure:

- Connect the Vehicle Diagnostic Tester. Refer to
 ⇒ "2.5 Vehicle Diagnostic Tester, Connecting", page 10
- Select the Diagnostic mode and start the diagnosis.
- Perform the vehicle identification.
- Set v and press Accept to select "Work with Guided Fault Finding".

The control module identification and checking the DTC memory occurs next. Observe the instructions and test conditions.

- Switch to the "Control modules" tab and open the "DTC memory list" to view all of the stored DTC memory entries.
- Change to the "test plan" tab and perform the specified test part or in whole, is not programs.
 programs.

 Table and perform the specified test part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.

3.5 Service Interval Display, Resetting Service Event



Note

The Full pre-delivery inspection test program may also be performed as part of the pre-delivery inspection.

Procedure:

- Connect the Vehicle Diagnostic Tester. Refer to
 ⇒ "2.5 Vehicle Diagnostic Tester, Connecting", page 10
- Select Diagnostic mode and start the diagnosis.
- Perform the vehicle identification.
- Switch to the "Special functions" tab.
- Service Interval, Reseting with ODIS (select the corresponding service).
- Start the program using Perform test....
- Continue the program sequence.



Note

The distance up to the current oil change service was determined by the driving profile of the customer. When the service interval display is reset, the distance to the next oil change service is recalculated based on this driving profile. Frequent cold starts or driving short distances use engine oil in significant quantities, causing the displayed distance to the next oil change service to vary based on the driving profile.

3.6 Diagnostic Procedures, Performing

- Connect the Vehicle Diagnostic Tester.
- Select Diagnostic mode and start the diagnosis.
- Perform the vehicle identification by copyright. Copying for private or commercial purposes, in part or in whole, is not
- Remove the checkmark "Procedures with Guided Fault Find his document. Copyright by AUDI AG. ing".
- Switch to the "Special Functions" tab and select the following program:
- ◆ Entire pre-delivery inspection
- Start the program using Perform test...
- Follow and complete the program sequence.
- Switch to the "Control modules" tab and press the "Guided Fault Finding" button and perform the Guided Fault Finding through to the test plan.
- The static entries in the DTC memory must be evaluated and corrected using Guided Fault Finding if necessary.
- Perform diagnostics; a diagnostic log for the pre-delivery inspection will be automatically sent.

3.7 Battery Transport Mode, Deactivating



Note

The Full pre-delivery inspection test program may also be performed as part of the pre-delivery inspection.

Procedure:

- Connect the Vehicle Diagnostic Tester. Refer to
 ⇒ "2.5 Vehicle Diagnostic Tester, Connecting", page 10
- Select Diagnostic mode and start the diagnosis.
- Perform the vehicle identification.
- Deselect "Working with Guided Fault Finding" by removing or private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.
- Switch to the "Special Functions" tab and select the following program:
- ◆ 19 Activate/deactivate battery transport mode
- Start the program using Perform test...
- Continue the program sequence.



Note

- Battery transport mode ensures that the vehicle will be able to start.
- When battery transport mode is on, many functions such as the radio do not work or are limited.

3.8 Flight Mode: Deactivating



WARNING

Risk of injury due to unintended engine start on high-voltage vehicles!

- ◆ Pay attention to the high-voltage system warning messages:
- ♦ For procedures where the ignition must be switched off.



Note

The Full pre-delivery inspection test program may also be performed as part of the pre-delivery inspection.

- Connect the Vehicle Diagnostic Tester.
- Select Diagnostic mode and start the diagnosis.
- Perform the vehicle identification.
- Deselect "Working with Guided Fault Finding" by removing v and pressing Accept.
- Switch to the "Special Functions" tab and select the following program:

- Flight mode: deactivating
- Start the program using Perform test..
- Continue the program sequence.



CAUTION

The fight mode switches off the connection to the mobile network. A vehicle with an active flight more does not have an emergency call function and should not be given to the customer.

3.9 Transport Mode, Checking Activation and Activating if Necessary

⇒ "3.9.1 Transport Mode, Checking", page 20.

⇒ "3.9.2 Transport Mode, Activating", page 20.

Fransport Mode (Checking roll purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability 3.9.1 with respect to the correctness of information in this document. Copyright by AUDI AG.

Procedure:

- Switch the ignition on.
- Check in the instrument cluster if »Active transport mode« is displayed.
- If necessary activate the transport mode. Refer to ⇒ "3.9.2 Transport Mode, Activating", page 20.

3.9.2 Transport Mode, Activating

- Connect the Vehicle Diagnostic Tester . Refer to ⇒ "2.5 Vehicle Diagnostic Tester, Connecting", page 10.
- Select the Diagnostic mode and start the diagnosis.
- Perform the vehicle identification.
- Deselect "Working with Guided Fault Finding" by removing v and pressing Accept.
- Switch to the "Special Functions" tab and select the following program:
- 19 Activate/deactivate battery transport mode
- Start the program using Perform test....
- Continue the program sequence.



- Battery transport mode ensures that the vehicle will be able to start.
- When battery transport mode is on, many functions such as the radio do not work or are limited.

3.10 Battery, Reading Out Condition



Note

The Full pre-delivery inspection test program may also be performed as an alternative.

Procedure:

- Connect the Vehicle Diagnostic Tester. Refer to ⇒ "2.5 Vehicle Diagnostic Tester, Connecting", page 10.
- Select Diagnostic mode and start the diagnosis.
- Perform the vehicle identification.
- Set v and press Accept to select "Work with Guided Fault Finding".
- Switch to the "Special Functions" tab and select the following program:
- A Battery, Checking
- Start the program using Perform test..
- Continue the program sequence.
- The following actions are derived from the test result:

Vehicle Diagnostic Tester result: Action:

"Battery is OK" No further action is necessary. "Charge the battery" Charge the battery. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery, Charging . "Battery no longer meets the de-Replace the battery. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery, Removing and Installing. livery quality"



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A functioning network connection is required for sending the diagnostic log online.

3.11 Vehicle Diagnosis, Closing and Sending the Diagnostic Log

- Perform the test programs according to the test plan.
- Switch to the control modules tab.
- Press the X Diagnosis button and end the diagnosis.
- Send the diagnostic log online.



Note

- Deleting the DTC memory takes place when exiting the Guided Fault Finding,
- Sending the diagnostic log takes place when exiting the Guided Fault Finding,
- If there is no network connection available, the diagnostic log is temporarily saved a few days. The online transfer should then take place as soon as possible.

3.12 Battery, Checking Electrolyte Level



Note

Do not open batteries.

- ⇒ "3.12.1 Battery without Visual Indicator", page 22
- ⇒ "3.12.2 Battery with Visual Indicator", page 23.

3.12.1 **Battery without Visual Indicator**

The battery is in the luggage compartment.

Removal Procedures:

- Raise the luggage compartment floor covering and secure.
- Remove the nut -1- for the vehicle tool kit and remove the cover with the vehicle tool kit -2- or temporary spare tire.

Procedure:

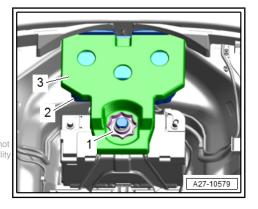
- Check the battery housing for the following:
- Corrosion or damage to the battery terminals
- Mechanical damage to the battery housing por cover parecognole, is not nizable by electrolyte leakage or crystallization on the dam any liability aged location:
- Replace damaged batteries.
- Check the electrolyte level of all battery cells with the markings
- If the electrolyte level of at least one battery cell is under the MIN mark, replace the battery.

Installation procedures occur in reverse order.



Note

- Use a bright flashlight to see the MIN and MAX markings better in the housing.
- If it is difficult to read the battery, use a small mirror to check the electrolyte level while holding a bright flashlight at a right angle behind the battery cells.





3.12.2 Battery with Visual Indicator

WARNING

There is risk of explosion if the visual indicator is colorless or light yellow!

- Do not jump start the vehicle.
- Do not check or charge the battery.
- Replace the battery.

The battery is in the luggage compartment.

Removal Procedures:

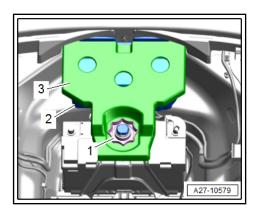
- Raise the luggage compartment floor covering and secure.
- Remove the nut -1- for the vehicle tool kit and remove the cover with the vehicle tool kit -2- or temporary spare tire.

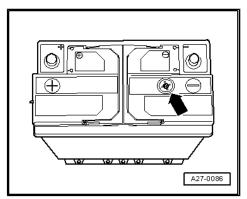
Procedure:

- Check the battery housing for the following:
- ♦ Corrosion or damage to the battery terminals
- Mechanical damage to the battery housing or cover, recognizable by electrolyte leakage or crystallization on the damaged location.
- Replace damaged batteries.
- Before checking the electrolyte level, carefully tap on the visual indicator -arrow- with the handle of a screwdriver.
- Read the battery electrolyte level using the color display. Two different results are possible:

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Color display on visual indicator: Action:

Black or green Battery electrolyte level is OK: no further action necessary. Colorless or light yellow Battery electrolyte level too low: the battery must be replaced.

Installation procedures occur in reverse order.



Note

- The visual indicator is also called the ALI (Acid Level Indica-
- Only use the visual indicator for assessing the electrolyte level!
- Bubbles can build up under the visual indicator when the battery is charging and also while driving, causing the color display to be incorrect. Gently tapping on the visual indicator dissolves these bubbles.
- 3.13 Battery, Connecting Stationary Battery Charger (Minimum 30A, Charging Voltage 14.8 Volt IU Characteristic)



WARNING

Risk of injury due to incorrectly connecting the terminal clamps.

First connect the positive terminal clamp and then connect the negative terminal clamp.

Special tools and workshop equipment required

♦ Battery Charger - VAS5906A-

Applies only to display vehicles.

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Removal Procedures:

Raise the luggage compartment floor covering and secure.

Remove the plastic plugs -C- in the spare tire well and place in the glove compartment.

Battery Charger, Connecting:

- Disconnect the terminal clamps from the -VAS5906-
- Guide the terminal clamp cable with the connector side through the hole from the top in the spare tire well.
- Open the battery terminal cover (+).
- Connect the terminal clamp (+) on the battery positive terminal
- Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not Connect the terminal clamp (a) on the ground connection on or accept any liability the body (-) -Bwith respect to the
- Route the -VAS5906- wiring neatly in the spare tire well.
- Stow the vehicle tool kit in the spare tire well and install the vehicle tool kit cover.
- Insert the luggage compartment floor covering.
- Under the vehicle: connect the terminal clamp cables to the -VAS5906-.
- Switch on the -VAS5906- and adjust the settings.
- If possible, position the -VAS5906- under the vehicle so that it is not visible and make sure that nothing is blocking the charger air grille.

Battery Charger, Disconnecting

The removal procedures occur in reverse order.

3.14 Battery, Determining and Entering Charge Level

⇒ "3.14.1 Vehicle WITH Active Transport Mode", page 25.

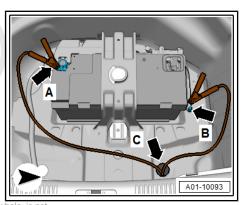
⇒ "3.14.2 Vehicle WITHOUT Active Transport Mode",

⇒ "3.14.3 Battery Voltage, Measuring", page 26

3.14.1 Vehicle WITH Active Transport Mode

- Read out the charge level of the battery.
- The following actions are derived from the test result:

Charge level (SOC):	Action:
"Greater than or equal to 80% (12.5 V)"	No further action is necessary.
"SOC less than 80% (12.5 V) and SOC greater than or equal to 10% (11.6 V)"	Charge the battery. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery, Charging .



Charge level (SOC):	Action:		
"Less than 10% (11.6 V)"	Charge the battery (refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery, Charging) and hang the "faulty battery" mirror hanging tag.		

Enter the charge level on the Maintenance Table.



Note

If reading the charge level (SOC) in the instrument cluster is not possible, measure the battery voltage. Refer to *⇒ "3.14.3 Battery Voltage, Measuring", page 26 .*

3.14.2 Vehicle WITHOUT Active Transport Mode

Special tools and workshop equipment required

◆ Battery Tester - VAS6161-

The battery is in the luggage compartment.

Removal Procedures:

Raise the luggage compartment floor covering and secure.

Procedure:

- Switch on the -VAS6161- and select "new vehicle quality control test".
- Measuring the voltage between the battery terminal clamps with the -VAS6161- .
- The following actions are derived from the test result:

Battery Action: tester display: Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not "Batterermitted units fulltherised by AUDIAC AUDIAC does not guarantee or accept any liability with respect to the correctness of miormation in this accument. Copyright by AUDIAG. good" "Immedi-Charge the battery. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery, Charging . ately fully charge. "Battery de- Charge the battery (refer to ⇒ Electrical Equip-fective" ment; Rep. Gr. 27; Battery; Battery, Charging) and hang the "faulty battery" mirror hanging tag.

Enter the charge level on the Maintenance Table.



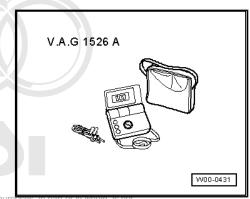
Note

- If using the -VAS6161- it must be determined if the most current software is used.
- If when measuring the charge level (SOC) with the -VAS6161is not possible measure the battery voltage. Refer to ⇒ "3.14.3 Battery Voltage, Measuring", page 26.

3.14.3 Battery Voltage, Measuring

Special tools and workshop equipment required

Analog/Digital Multimeter - FLU83III-



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◆ or: Digital Multimeter - VAG17 ₱52ect to the correctness of information in this document. Copyright by AUDI AG.

The battery is in the luggage compartment.

Requirements:

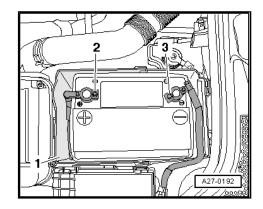
- At least 12 hours before the measurement: battery must not be loaded by connected components.
- At least 12 hours before the measurement: battery must not be charged.
- At least two hours before the measurement; the engine must not run.
- Ignition must be switched off during testing.

Removal Procedures:

Raise the luggage compartment floor covering and secure.

Procedure:

- Check the voltage between battery terminal clamps -2 and 3- using the -FLU83III- .
- The following actions are derived from the test result:



Charge level (SOC): Action:

"Greater than or equal to 12.5 V'

No further action required.

V and SOC greater than or equal 11.6 V"

"SOC less than 12.5 Charge the battery. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery, Charging .

"Less than 11.6 V" Charge the battery (refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery, Charging) and hang the "faulty battery" mirror hanging tag.

Installation procedures occur in reverse order.

3.15 Battery, Replacing, Vehicles with "Faulty Battery" Mirror Hanging Tag

Only applies to vehicles with "faulty battery" mirror hanging tag.

Procedure:

Replace the battery according to the repair manual procedure just before delivering the vehicle. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery, Removing and Installing.

3.16 Data Sheet for Radio Equipment Directive: Printout and Place in the Glove Compartment (NOT FOR NORTH AMERICAN MARKET)

In the European Union Two-Way Radio policy ("Radio Equipment Directive" RED 2014/53/EU) the lawmakers require a data sheet with information with the radio waves used to be provided.

The download of the data sheet for the Radio Equipment Directive is located under the www.audi.com/generalinfo

- Printout the data sheet in the language of the Owner's Literature.
- Place the data sheet in the glove compartment.



Note

- Only applies to markets within the EU.
- The data sheet is for all vehicles Europe wide and can thus can already be installed beforehand.

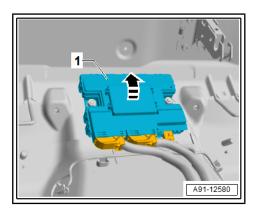
3.17 Connected Gateway, Replacing Emergency Battery

Telematics Emergency Battery - A16- is located in the Data Bus on Board Diagnostic Interface - J533- .

- Switch off the ignition and all electrical equipment and remove the ignition key.
- PRemove the bench seatw Refer to wall Body Interior; Repe, Grot 72 Rear Seats, Bench Seat / Single Seats, Removing and

The Data Bus on Board Diagnostic Interface - J533- must not be removed.

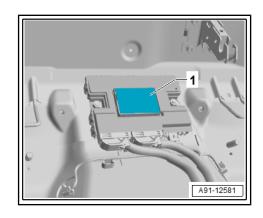
Release the retainers and remove the cover upward from the Data Bus on Board Diagnostic Interface - J533- -1- in the -direction of the arrow-.



- Pivot the Telematics Emergency Battery A16- -1- out of the Data Bus on Board Diagnostic Interface - J533- .
- Release and disconnect the connector.

Installing

Installation procedures occur in reverse order.



3.18 Brake Fluid, Changing



WARNING

Risk of accident due to too much free play in the brake pedal.

Make sure the brakes are working correctly before driving the vehicle for the first time.



WARNING

Risk of injury due to the acidic nature of brake fluid!

♦ Avoid contact with skin.



CAUTION

Risk of damage due to improper handling of the brake fluid.

- ♦ Avoid contact with paintwork.
- Avoid brake fluid contact with fluids containing mineral oils (oil, gas, cleaning solutions).

Special tools and workshop equipment required

Brake Charger/Bleeder Unit - VAS5234-





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Brake Bleeding Tool Set - VAS6564-



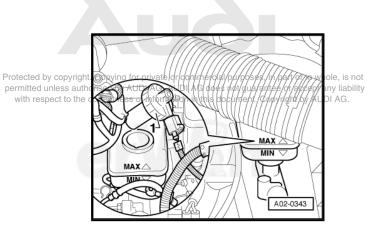
Testing Values and Process Specifications Table:

The table value is based on one brake caliper, that means the extracted fluid amount for both bleed screws per brake caliper must together match the set value from the table.

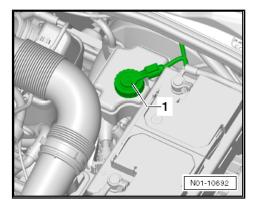
Bleed Screw Sequence:		Extracted Brake Fluid Amount:	
Brake caliper			
Driver side front axle	1.	0.20 liter	
Front passenger side front axle	2.	0.20 liter	
Driver side rear axle	3.	0.30 liter	
Front passenger side rear axle	4.	0.30 liter	
Clutch slave cylinder	5.	0.15 liter	
⇒ Automatic transmission total quantity		1.00 liter	
⇒ Manual transmission total quantity		1.15 liters	

Step 1 - Brake Charger/Bleeder Unit, Connecting:

- Remove the cap -1- from the brake fluid reservoir.



When the screen is installed, extract the brake fluid from the reservoir using the suction hose from the -VAS5234- until the fluid level meets the lower edge of the screen. Make sure that no brake fluid runs through the screen after extracting.



- Attach the adapter -1- to the brake fluid reservoir.
- Connect the hose -2- of the -VAS5234- to the adapter.
- Adjust the pressure on the -VAS5234- . Refer to the brake charger/bleeder unit owner's manual for the pressure value.

Step 2 - Brake System, Bleeding and Filling:

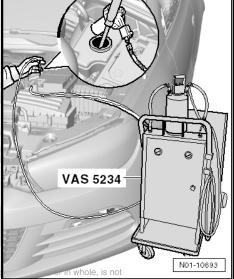
If there are two bleed screws per brake caliper: Bleed the inner bleed screw first and then the outer.

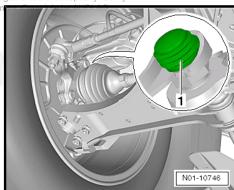
Raise the vehicle. Refer to ⇒ "2.1 Vehicle, Lifting", page 5.

Front Axle:

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Driver side brake caliper: Remove the cap(s) -1- for the bleed document screw(s).



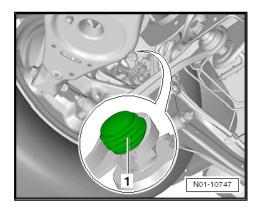


- Install the container bleed hose -1- on the bleed screw from the inside of the rim.
- Open the bleed screw and let the brake fluid flow out. The amount of extracted fluid can be found in the table. Refer to ⇒ page 30 .
- Close the bleeder screw.
- If there are two bleed screws per brake caliper, repeat the procedure for the second bleed screw.
- Reattach the cap for the bleed screw(s).
- Repeat the procedure on the front passenger side.

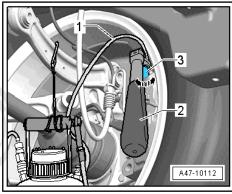
-1 No1-10787

Rear Axle:

- Driver side brake caliper: Remove the cap(s) -1- for the bleed
- Select the reversible ratchet and the corresponding socket from the -VAS6564- and connect them. $\label{eq:constraint}$



- Guide the bleeder hose -1- from the inside of the rim through the reversible ratchet -2- and the socket -3- and attach it to the bleed screw.
- Open the bleed screw with the ratchet -2- and drain the brake fluid. The amount of extracted fluid can be found in the table. Refer to ⇒ page 30.
- Close the bleeder screw.





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- If there are two bleed screws per brake caliper: Working from the outside of the rim, position the reversible ratchet -2- and socket -3- and repeat the procedure.
- Reattach the caps on the brake caliper bleed screw(s).
- Repeat the procedure on the front passenger side.

Step 3 - Clutch Slave Cylinder, Bleeding

Only applies to vehicles with a manual transmission.

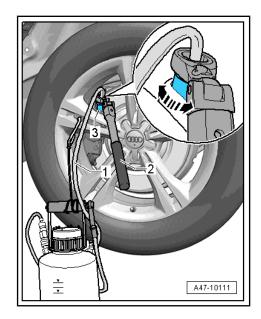
- There are necessary removal procedures to access other components. Refer to ⇒ Manual Transmission; Rep. Gr. 30; Clutch Mechanism; Clutch Mechanism, Bleeding.
- Attach the reservoir bleeder hose -1- to the clutch slave cylinder bleeder screw.
- Open the bleed screw and allow the appropriate amount of brake fluid to flow out. Refer to ⇒ page 30 for the Testing Values and Process Specifications Table.
- Close the bleed screw and install the cap.

Step 4 - Final Procedures:

- Close the filler lever on the -VAS5234- .
- Remove the filler hose from the adapter.
- Remove the adapter from the brake fluid reservoir.
- Check the brake fluid level and correct if necessary, while considering the brake pad wear. Refer to ⇒ "3.20 Brake Fluid Level, Checking", page 34
- Install the brake fluid reservoir cap.
- Press the clutch pedal several times.
- Check the pedal pressure and the free play on the brake pedal. Free play: maximum ¹/₃ of the pedal travel.
- Before driving the vehicle for the first time: Make sure the brakes are working correctly.
- If there is too much brake pedal free play or the brake function is faulty, check the brake system for leaks and change the brake fluid again.

Note

- The bleeder hose must fit tightly over the bleed screw to prevent air from getting into the brake system.
- For certain tire combinations, it may be necessary to remove the wheels.
- Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not **Depending on the vehicle equipment, the rear brakes or front** thorised by AUDI AG. AUDI AG does not guarantee or accept any liability and rear brakes may be bled without removing the tires pusing e correctness of information in this document. Copyright by AUDI AG. the -VAS6564- .
- Use original Audi brake fluid. Refer to the Parts Catalog
- Used brake fluid may not be used again.
- Observe the disposal regulations for brake fluid.



3.19 Brake Fluid, Checking, on Vehicles older than 12 Months

Only applies to vehicles older than 12 months after the production date.

Procedure:

- Changing the brake fluid. Refer to ⇒ "3.18 Brake Fluid, Changing", page 29.

3.20 Brake Fluid Level, Checking

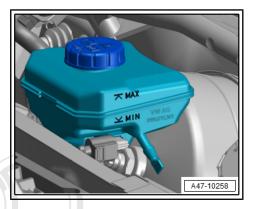
Testing Values and Process Specifications Table:

Service:	Fluid Level Specified Value:
Delivery service	Fluid level at the MAX mark.
Changing the brake fluid	Fluid level between the MAX and MIN mark, consistent with the wear condition of the brake pads.

The leak test for the brake system is a repair procedure and should be charged separately.

Procedure:

- Check the brake fluid level based on the markings -image- in the brake fluid reservoir.
- Perform the following actions depending on the test result:



Fluid level:	Evaluation / Action:
Over the MAX mark	Extract the brake fluid.
Under the specified level	Perform a leak test for the brake system. Refer to ⇒ Brake System; Rep. Gr. 47; Hvdraulics System; Leak Test.



Note

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Due to wear and the automatic adjustment of the brake page while s not guarantee or accept any liability
driving, the brake fluid level lowers.

3.21 Brake System, Checking Brake Hose Condition and Presence of Bleed Screw Protective Caps

Requirements:

- When at the maximum steering angle, the brake hoses must not touch other vehicle components.
- The brake hoses must not be twisted.

Procedure:

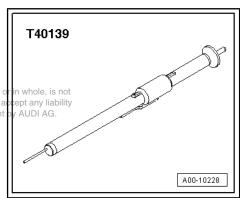
- Make sure all brake hoses are attached properly and observe the specified requirements.
- Check all brake hoses for chafing, porosity, bubbles and cracks.
- Make sure the brake hose connections are seated correctly and check for corrosion and leaks.
- If a defect is located on the brake hoses, repair or replace the affected component.
- Check on all brake calipers if the bleed screw protective caps are present and attached.
- Replace any missing protective caps.

3.22 Brake Pads, Checking Thickness

Special tools and workshop equipment required

Test Pin - T40139- or Test Pin - T40139A- : Use the thin measuring pin side (brake symbol) to measure the brake pad thickness.

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Testing Values and Process Specifications Table:

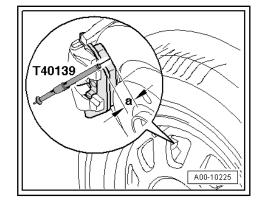
Axle	Brake Pad Wear Limit with Backing Plate and Damping Plate [mm]
Front Axle	10
Rear Axle	10

Only measure the thickness of the outer brake pad.

Procedure:

- First slide the sliding ring of the test pin all the way in the direction of the test probe.
- Move the test probe of the test pin up against the brake rotor.
- Slide the test pin in the direction of the brake pad until the test pin contacts the brake pad backing plate.

- Remove the test pin and read the brake pad wear specification -a- on the tool scale.
- Repeat the procedure on all tires.
- If the pad thickness has reached the wear limit (Refer to page 35 for Testing Values and Process Specifications Table), replace the brake pads. Refer to ⇒ Brake System; Rep. Gr. 46; Brake Pads, Removing and Installing.





Note

- Make sure the sliding ring does not move when removing, otherwise the measurement result will be incorrect.
- Pay attention to where the test pin comes into contact with the brake pad backing and include the thickness of the damping plate accordingly if necessary!
- For certain tire combinations, it is necessary to remove the wheels.
- For S or RS models, based on the design it may be necessary to measure the brake pads from the inside of the wheels.

3.23 Brake Rotors, Checking for Rust Film and if Necessary Applying the Brakes to Remove

⇒ "3.23.1 Brake Rotors, Checking", page 36 pying for private or commercial purposes, in part or in whole, is not ⇒ "3.23.2 Brake Rotors, Applying the Brakes to Clean ation in this document. Copyright by AUDI AG. page 36

3.23.1 Brake Rotors, Checking

Procedure:

- Check all exterior brake rotors for rust film.
- If necessary, apply the brakes to clean. Refer to ⇒ "3.23.2 Brake Rotors, Applying the Brakes to Clean", <u>page 36</u>.



Note

If the brake rotors are not applied to remove the rust film in the intervals specified, this can lead to irreparable damage to the brake rotor.

3.23.2 Brake Rotors, Applying the Brakes to Clean

Procedure:

- Accelerate the vehicle five times to a speed of 40 km/h (24 mph) and lightly brake to 10 km/h (6.2 mph).
- Accelerate the vehicle five times to a speed of 40 km/h (24 mph) and brake strongly to a vehicle stop.



Note

When accelerating and breaking the wheels must not slip or lock.

3.24 Parking Brake, Releasing

- ⇒ "3.24.1 Mechanical Parking Brake", page 37
- ⇒ "3.24.2 Electro-Mechanical Parking Brake", page 37

3.24.1 **Mechanical Parking Brake**

Procedure:

Loosening the parking brake.

3.24.2 Electro-Mechanical Parking Brake

Procedure:

- Press the brake and the button for the electro-mechanical parking brake.

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Note

Tire valves must be sealed with valve caps. Otherwise, dirt can enter at the valve needle and cause it to jam and no longer seal shut.

- ⇒ "3.25.1 Front and Rear Axle", page 38
- ⇒ "3.25.2 Spare Tire and Wheel", page 38.

3.25.1 Front and Rear Axle

The specified tire pressure values are located on the sticker on the inside of the driver door.

For tire dimensions not listed, refer to the specified tire pressure value in the Wheel and Tire Guide. Refer to \Rightarrow Wheel and Tire Guide; Rep. Gr. 44; Wheels, Tires, Wheel Alignment; Air Pressure .

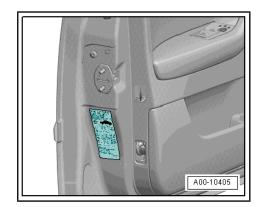
Procedure:

- Check all the tire pressures.
- If necessary, adjust to the correct tire pressure.



Note

- The listed tire pressures only apply to cold tires. Do not reduce the increased tire pressure on warm tires.
- ♦ A fault can occur, if the tire pressure is very different than the specified value. If this is the case, check the tires and if necessary, inform the customer.
- ♦ The specified maximum tire pressure must always be set when stickers with air pressure specifications have a speed range greater than 250 km/h (155 mph). This applies to a vehicle without a cruise control system, for which the maximum pressures are required.



3.25.2 Spare Tire and Wheel

The following guidelines apply to the specified tire pressure values:

- Spare tire with normal tire: comply with the highest tire pressure specified on the sticker.

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- Spare wheel: the specified tire pressure value is founds on the correctness of information in this document. Copyright by AUDI AG. sidewall.

Procedure:

- Check the tire pressure on the spare tire or spare wheel.
- If necessary, adjust to the correct tire pressure.



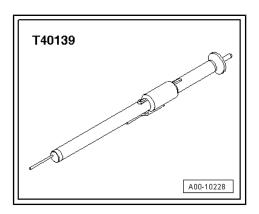
Note

Depending on the vehicle equipment, a tire repair kit may be included: pay attention to the Maintenance Table.

3.26 Tires, Checking Condition and Wear Pattern; Tread Depth, Checking and Entering

Special tools and workshop equipment required

Test Pin - T40139 - or Test Pin - T40139A- : to measure the tread depth, use the side with the thicker measuring pin and collar (scale labeled with the tire symbol).



Testing Values and Process Specifications Table:

The country-specific regulations apply to the minimum tread depth. Countries not listed are to be assessed.

Country	Minimum Tread Depth [mm]
EU states	1.6. Refer to ¹⁾ .
Brazil	1.6
China	1.6
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Norway	1.6. Refer to ¹⁾ .
Russia	1.6
Switzerland	1.6
Turkey	1.6
Ukraine	1.6. Refer to ¹⁾ .
USA	1.6

1) Larger winter tire values for current obligatory use of winter tires.

An axle alignment is a repair procedure and should be charged separately.

Step 1 - Condition, Checking:

- Check the tire treads for any foreign objects penetrating the tire; if necessary, remove any foreign objects.
- Check all tires for the following damage:
- Tears, rips, breaks
- ◆ Flattening or flat areas on the running surface
- Porous sidewalls
- Dents on the sidewalls
- If there are defects, replace the tire.

Step 2 - Tire Wear Pattern, Checking:

- Check the tire wear pattern on the front wheels and pay attention to the following:
- Feathered edges of the tire tread indicate a possible faulty toe adjustment.

- One-sided tread wear is a possible indication of a faulty camber.
- If there are such wear patterns, determine the cause by performing an axle alignment.

Step 3 - Tread Depth, Checking

- Measure the tread depth of all tires (including the spare tire) several times at the circumference using the Test Pin -T40139A- . Tread depth variation indicates damage.
- Enter the average value of every tire in the Maintenance Table.
- If the country-specific minimum tread depth is reached (Refer to ⇒ page 39 for the table for testing values and process specifications.), replace the tire.



Note

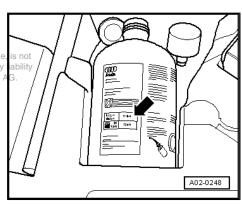
AWD vehicles must be equipped with tires of the same tread design. If not, the center differential may be damaged.

3.27 Tire Repair Kit, Checking for Completeness; Expiration Date, Checking and Entering

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

Procedure:

- Make sure the following components are present in the tire repair kit:
- Compressor
- ◆ Tire inflation bottle including filler hose
- Remove the bottle and check the expiration date -arrow- printed on the bottle.
- If the expiration date/has passed on if the bottle was already in whole
 used, replace the tire inflation bottle. AUDI AG does not guarantee or accept any
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3.28 Wheel Bolts, Tightening to Specification

Special tools and workshop equipment required

- ◆ Torque Wrench 1332 40-200Nm VAG1332- , measuring range: 40 to 200 Nm
- Or: Torque Wrench 80-400Nm VAG1576-, measuring range: 80 to 400 Nm

Testing Values and Process Specifications Table:

Fastening Element	Tightening specification [Nm]
Wheel bolt	120

The adapter to loosen/tighten the anti-theft wheel bolts is located in the vehicle tool kit.

Procedure:

- Tighten the wheel bolts diagonally to the specified tightening specification. Refer to \Rightarrow page 40 for the testing values and process specifications table.
- If the adapter was used for the anti-theft wheel bolts, put the adapter in the vehicle tool kit.

Front and Rear Axle Suspension Strut: 3.29 Removing Transportation Blocks, Installing Stop Buffer Correctly

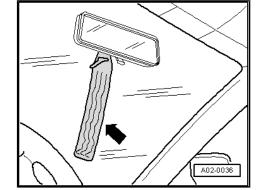


Note

- These vehicles can be identified by a colored tag attached at the mirror -arrow-.
- It is not necessary to remove the wheels for this procedure.

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- ⇒ "3.29 Terrion: Attle Supersion Struts be party the or accept any liability with respect to the conecuses of information in this pacturent. Copyright by AUDI AG.
- ⇒ "3.29.2 Rear Axle Suspension Struts", page 42.
- ⇒ "3.29.3 Stop Buffer, Installing", page 43.



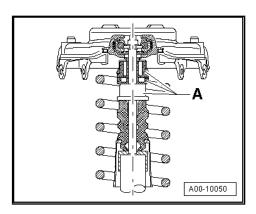
3.29.1 Front Axle Suspension Struts

Requirements:

· Vehicle suspension is decompressed.

Procedure:

Pry out all blocking parts -A- from the piston rod.



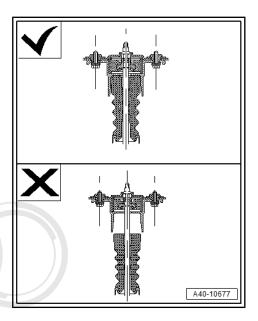
Push the stop buffer straight and completely in the shock absorber mount.



Note

Check all the stop buffers for correct seating when the vehicle is in a rebound state.

- If necessary, push the loose stop buffer into the shock absorber mount using special tools. Refer to ⇒ "3.29.3 Stop Buffer, Installing", page 43.
- When all transportation blocks are removed from the vehicle, remove the tag from the rearview mirror.



3.29.2 **Rear Axle Suspension Struts**

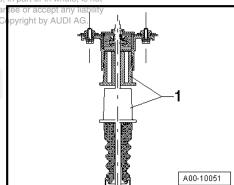
Requirements:

Vehicle suspension is decompressed.

Procedure:

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Pry out all blocking parts it 1d from their piston in the does not guara with respect to the correctness of information in this document. C



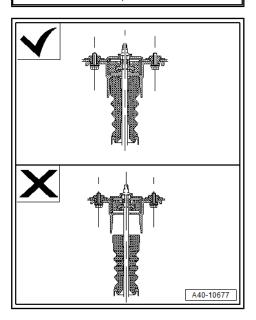
Push the stop buffer straight and completely in the shock absorber mount.



Note

Check all the stop buffers for correct seating when the vehicle is in a rebound state.

- If necessary, push the loose stop buffer into the shock absorber mount using special tools. Refer to ⇒ "3.29.3 Stop Buffer, Installing", page 43
- When all transportation blocks are removed from the vehicle, remove the tag from the rearview mirror.





3.29.3 Stop Buffer, Installing

Special tools and workshop equipment required

- ◆ Lever T40401- for installing the stop buffer
- ◆ Lubricant with soap base, for example, tire mounting paste

Procedure:

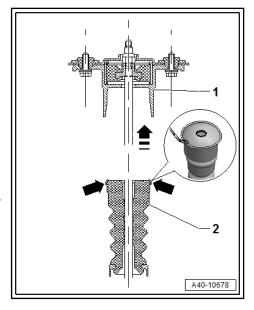
- Clear the loose stop buffers at the upper edge of coarse dirt deposits and coat with tire mounting paste.
- Push the stop buffer by hand or using the Lever T40401securely in the shock absorber mount.



Note

The Lever - T40401- can only be used on the rear axle.

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3.30 Front and Rear Axle Components, Checking Play, Attachment and Ball **Joint Boots for Damage**

The following applies to all components shown below:

- Play should not felt or seen.
- Damage to the ball joint boots or driveshaft boots is usually recognized by leaking lubrication.
- Check that the locking rings and spring clamps are seated correctly.

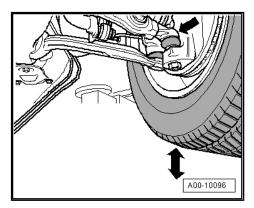
⇒ "3.30.1 Front Axle", page 43

⇒ "3.30.2 Rear Axle", page 45

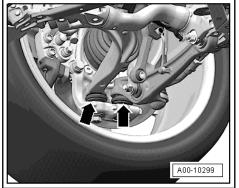
3.30.1 Front Axle

Control Arm and Guide Link, Coupling Rod:

Check the relative movement between the wheel bearing housing and the control arm or guide link.



- Control arm and guide link: check all around the ball joint boots -arrows- of the ball joint for damage and proper seating.
- Check the ball joints for play.



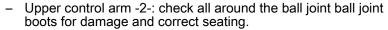
- Check all the control arm and guide link bonded rubber bushings -arrows- for play.
- Check the coupling rod -1- for play.

Tie Rod End:



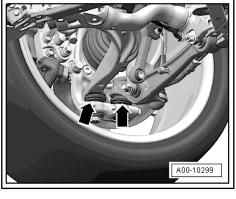
- Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not __peChecklall around the fie rod end ball joint boot 2-for damage and correct seating.
- Check the tie rod end for play.

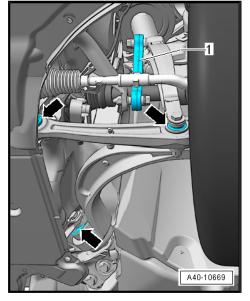
Upper Control Arm:

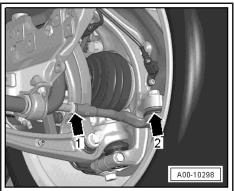


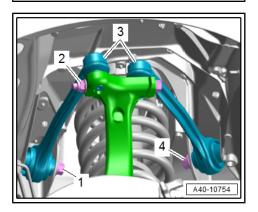
- Check the ball joints for play.
- Check both bonded rubber bushings -1 and 4- on the upper control arm for play.

Stabilizer Bar:



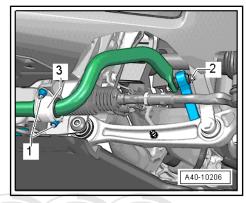




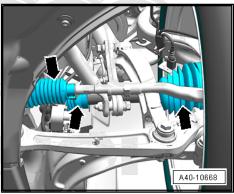


Check the stabilizer bar bearing -3- for damages.

Driveshaft and Steering Gear:



- With the steering locked: check all around the driveshaft ball joint boots -arrows- for damage and proper seating.
- Check all around the ball joint boot -arrow- of the steering gear for damage and proper seating.
- Repeat the component checks on the opposite side of the vehicle.
- If a defect was found when inspecting the specified components, replace the respective component.

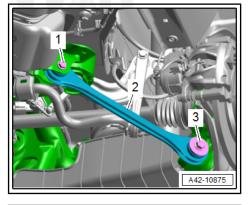


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3.30.2 Rear Axle

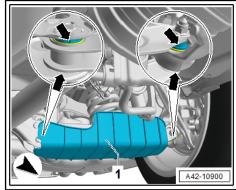
Rear and Front Lower Transverse Link:

- Check the relative movement between the wheel bearing housing and both transverse links.
- Check all front lower transverse link bonded rubber bushings -2- for play.

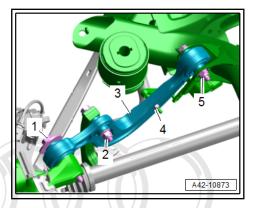


- Check the bonded rubber bushings -arrows- of all transverse links for play.
- Check the stabilizer bar bearing -arrow- for damage.

Rear and Front Upper Transverse Link:



Check all front upper transverse link bonded rubber bushings -3- for play.



Check all rear upper transverse link bonded rubber bushings -2- for play.

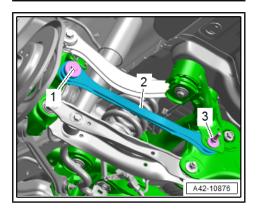
Tie Rod:

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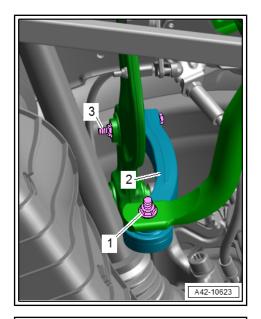
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Check for play on the tie rod -2- bonded rubber bushings.

Coupling Rod and Stabilizer Bar:



Check the coupling rod -2- for play.



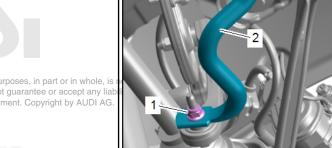
Check the stabilizer bar bearing -arrows- for damages.

Driveshaft:

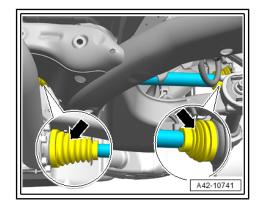
Only applies to vehicles with AWD.



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- Check the driveshaft ball joint boots -arrows- for damage and proper seating.
- Repeat the component checks on the opposite side of the ve-
- If a defect was found when inspecting the specified components, replace the respective component.



3.31 Engine, Transmission, Final Drive and Steering, Checking for Leaks and Damage

Remove the noise insulation at every inspection.

Removal Procedures:

Remove the noise insulation. Refer to
 ⇒ "2.3 Noise Insulation, Removing and Installing", page 8

Procedure:

- Check the engine and its attachments from below for leaks and damage.
- Check the belt drive in the visible area for damage.
- Check the radiator and coolant circuit for leaks and damage.
- Check the refrigerant circuit consisting of the A/C compressor, condenser and refrigerant lines, including the connections, for damage.
- Check the transmission, final drive and steering for leaks and damage.
- If there are defects, repair or replace the respective component.

3.32 Vehicle from Below, Checking for Damage

Procedure:

- Check the underbody carefully and completely for damage and loose connecting elements.
- If there are defects, replace the damaged component or replace any missing fasteners.

3.33 Underbody Trim Panels, Wheel Housing Liners, Side Sills and Lines, Checking for Damage and Proper Attachment

Procedure:

- Check all underbody trim panels and wheel housing liners for breaks and tears.
- Check all underbody trim panels and wheel housing liners for proper attachment by hand, and also check for any missing fasteners.
- Inspect the side sills for any deformations.
- Check the lines and their connections in visible areas for proper attachment and damage.
- Check the stone chip protection on the rear control arm for damage and secure fit.
- If there are defects replace the damaged component or rept any liability place any missing fasteners of information in this document. Copyright by AUDI AG.



Note

Stone chip protection is equipment-dependent and is not installed on every vehicle.

3.34 Roof Insert, Checking Function

Only applies to equipment levels with sliding/tilting sunroof.

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

Procedure:

- Open and close the roof insert completely. While doing so, pay attention to any unusual noises and any difficulty moving.
- If there are any unusual noises or the movement is not smooth, clean and lubricate the roof insert. Refer to ⇒ "3.35 Sliding/Tilting Sunroof Insert, Cleaning and Lubricating", page 49

3.35 Sliding/Tilting Sunroof Insert, Cleaning and Lubricating



CAUTION

Danger of breaking the wind deflector.

Carefully pry up the wind deflector.

Special tools and workshop equipment required

- Grease G 060 751 A2-
- Special Lubricating Paste G 052 141 A2-
- Cleaning Solution D 009 401 04-
- Industrial vacuum cleaner: for example, Wet and Dry Vacuum - VAS5128-
- Commercially available brush: approximately 15 mm wide and angled with workshop tools to approximately 40°
- Fine-pored sponge, for example, a tailored household sponge without a scrubbing pad

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

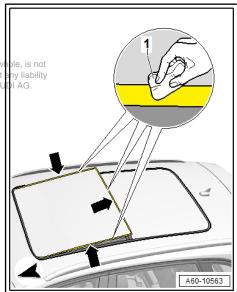
Protect the vehicle interior from dirt.

Procedure Step 1 - Glass Panel Seal, Cleaning and Lubricating

- Move the glass panel to the raised position.
- Remove any accessible grease and dirt residue on the glass panel seal using the Cleaning Solution - D 009 401 04- and a lint-free cloth.
- Grease the side and rear of the glass panel seal -arrows- with Special Lubricating Paste - G 052 141 A2- and a fine-pore sponge -1-. Make sure that there are no rough deposits visible after applying.

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- Open the glass panel all the way.
- Using the Cleaning Solution D 009 401 04- and a lint-free cloth, remove any grease and dirt residue from the front area of the glass panel seal that has not been greased yet.



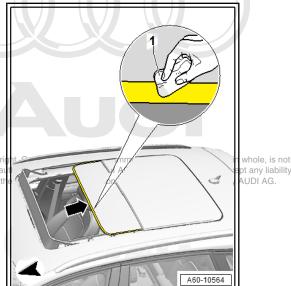
Grease the front of the glass panel seal -arrow- with Special Lubricating Paste - G 052 141 A2- and a fine-pore sponge -1-. Make sure that there are no rough deposits visible after applying.

Procedure Step 2 - Wind Deflector, Cleaning and Lubricating

Glass panel opened all the way.

Do not remove the wind deflector for the following steps, instead carefully lift by hand. Warning: danger of breaking.

Remove grease and dirt residue on the wind deflector seal respect to the using Cleaning Solution - D 009 401 04- and a lint-free cloth.



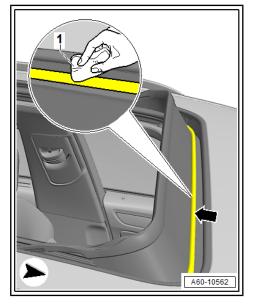
pt any liability

Grease the entire length of the wind deflector rubber lip -arrow- Special Grease - G 052 141 A2- and a fine-pore sponge -1-. Make sure that there are no rough deposits visible after applying.

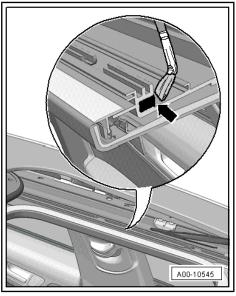
Procedure Step 3 - Guide Rails, Cleaning and Lubricating

Glass panel opened all the way.

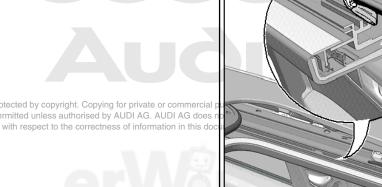
- First remove any loose dirt residue from the guide rails using an industrial vacuum cleaner.
- Remove the grease and dirt residue on the guide rails with a lint-free cloth.



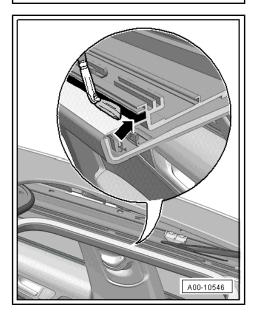
Lubricate the inside of the guide rail -arrow- using Lubricating Paste - G 060 751 A2- and a brush.



Lubricate the outside of the guide rail -arrow- using Lubricating Paste - G 060 751 A2- and a brush.



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- Lubricate the side of the guide rail for the sliding headliner -arrow- using Lubricating Paste - G 060 751 A2- and a brush.
- Remove the excess lubricant from the guide rails with a lintfree cloth.
- Repeat the procedure on the other side of the vehicle.
- Open and close the sunroof completely and check for lubricant residue one more time.

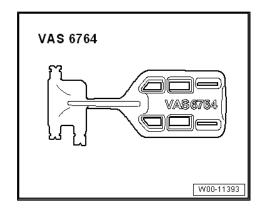


3.36 Panorama Sliding Sunroof Insert, Checking, Cleaning and Lubricating

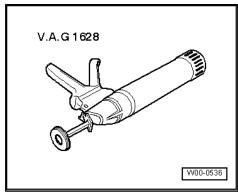
Special tools and workshop equipment required

- ♦ White/Gray Lubricant G 060 751 A2-
- ♦ Special Lubricating Paste G 052 141 A2-
- ♦ Cleaning Solution D 009 401 04-

Cleaning/Lubricating Tool - VAS6764-



Cartridge Gun - VAG1628-



- Industrial vacuum cleaner: for example, Wet and Dry Vacuum - VAS5128-
- Measuring container
- Commercially available brush: approximately 15 mm wide and angled with workshop tools to approximately 40°
- Fine-pored sponge, for example, a tailored household sponge without a scrubbing pad



Note

A visual inspection must first be performed to determine which sunroof version is installed on the vehicle.

- Open the glass panel all the way.
- Based on a visual inspection, identify which lubricant is in the guide rail area.
- White/Gray Lubricant G 060 751 A2- clean and lubricate according to the description below.
- No white/gray lubricant: operate the sliding sunroof and close completely. Noises that are different from the normal running noises must not occur; for example rattling, squeaking, clicking and vibrations.



Note

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If unusual noises or vibrations do occur on sunroof versions with liability the new substitutions of versions with liability the new substitution of version the new spray lubricant, please refer to the Technical Service Bulletin.

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

Protect the vehicle interior from dirt.

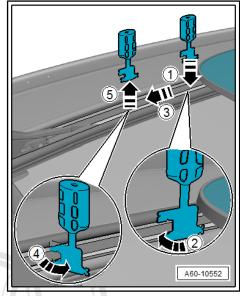
Only applies to sunroof versions with White/Gray Lubricant - G 060 751 A2- :

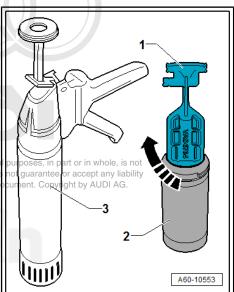
Procedure Step 1 - Cleaning and Lubricating the Guide Rails

- Open the sunroof shade completely.
- Open the glass panel all the way.
- First remove any loose dirt residue from the guide rail using an industrial vacuum cleaner.
- Insert the Cleaning/Lubricating Tool VAS6764- in the rear of the guide rail -1- and turn it 90° into the rail profile -2-.
- Pull until in the center of the guide rail opening -3-, and turn back to 90° -4- and remove the tool -5-.
- At the same time as the previous step clean the front area of the guide rail. To so this insert the grease stone in the front area of the guide rail (near the wind deflector) and pull to the center of the guide rail.
- Perform several times depending on the amount of debris in the opening.
- Remove the collective grease and remaining dirt from the guide rail with a lint-free cloth.
- Repeat the procedure for the opening on the opposite side of the vehicle.









- Install the cartridge gun with the cleaning/lubricating tool on the front end of the guide rail -1- and turn it 90° into the rail profile -2-.
- Pull the cartridge gun evenly toward the rear -3- and apply White/Gray Lubricant - G 060 751 A2- in the guide rail.
- Turn the cartridge gun 90° -4- and remove near the open glass panel -5-.
- Repeat the lubrication process on the opposite side of the vehicle.

Procedure Step 2 - Cleaning and Lubricating the Glass Panel Slotted Glide Rail

Glass panel opened all the way.

- Remove the grease and dirt residue on the glass panel slotted guide rail guide with a lint-free cloth.
- Open and close the sliding sunroof and then completely open the glass panel again. The grease is distributed in the guide rails when opening and closing. The excess lubricant that has accumulated can be used to lubricate the slotted guide rail guide.
- Lubricate the glass panel slotted glide rail -arrow- using White/ Gray Lubricant - G 060 751 A2- and a brush.
- Remove excess lubricant on the slotted guide rail guide and in the guide rail using a lint-free cloth.
- Repeat the procedure on the other side of the vehicle.

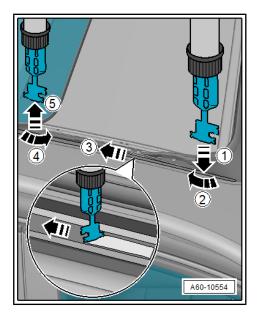
Procedure: Step 3 - Cleaning and Lubricating the Sunroof Mechanism Locking Hook

- Position the glass panel in the first open position.
- From the vehicle interior outward: remove the grease and remaining dirt from the sunroof motor locking hooks with a lint-free cloth.



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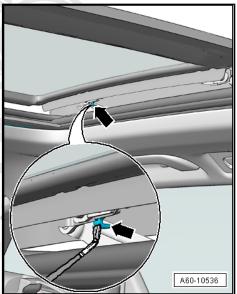




- Lubricate the locking lever -arrow- using White/Gray Lubricant - G 060 751 A2- and a brush.
- Remove excess lubricant from the locking lever with a lint-free
- Repeat the procedure on the other side of the vehicle.
- Open and close the sunroof completely and check again for any residual lubricant on all lubrication points.

Procedure Step 4 - Cleaning the Glass Panel: Protected by copyright. Copying for private or commercial

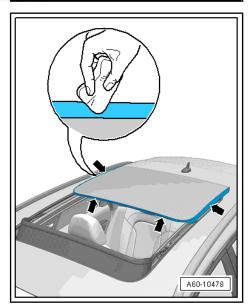
Open the glass panel all the way the respect to the correctness of information in this do



Remove grease and dirt residue on the front and side glass panel wheels -arrows- using Cleaning Solution - D 009 401 04- and a lint-free cloth.

Procedure: Step 5 - Roof Frame Seal, Cleaning and Lubricating Glass panel opened all the way.

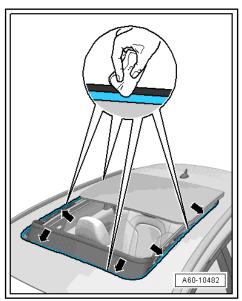
Remove any grease and dirt residue on the roof frame seal using Cleaning Solution - D 009 401 04- and a lint-free cloth.



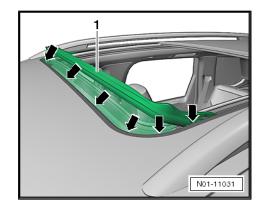
Lubricate the roof frame seal -arrows- using Special Lubricating Paste - G 052 141 A2- and a fine-pore sponge. Make sure that there are no rough deposits visible.

Procedure: Step 6 - Cleaning the Wind Deflector

Glass panel opened all the way.



- Clean the wind deflector net and frame -1- using a sponge and soapy water.
- Remove any loose residual dirt from the wind deflector shaft -arrows- using an industrial vacuum cleaner.



3.37 Door Hinges with Separated Arrester, Cleaning and Lubricating

Special tools and workshop equipment required

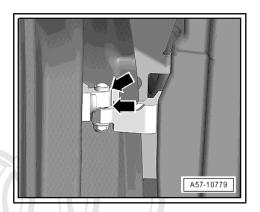
Universal Oil Spray - G 000 115 A2- for door arrester and door hinges

Requirements:

Vehicle must be at least at room temperature.

Procedure:

- First clean the lubricated areas with a lint-free cloth.
- Lubricate the upper and lower door hinge at the marked locations -arrows- and the separate arrester with Universal Oil Spray - G 000 115 A2- .
- Move the door multiple times, to allow the universal oil spray to seep in.
- Remove the excess lubricant from all door hinges with a cloth.
- Repeat the cleaning and lubricating procedure on all vehicle doors.





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3.38 Windshield Washer System, Check Spray Pattern and Adjusting if Necessary

- ⇒ "3.38.1 Windshield Spray Pattern, Checking", page 57
- ⇒ "3.38.2 Rear Window Spray Pattern, Checking", page 57
- ⇒ "3.38.3 Windshield Spray Nozzles, Adjusting", page 58.
- ⇒ "3.38.4 Rear Window Spray Nozzles, Adjusting", page 58.

3.38.1 Windshield Spray Pattern, Checking

The spray pattern must meet the following specifications:

- An evenly distributed, symmetrical spray pattern
- Even, precise spray jets
- Front passenger side spray nozzle unit: the point of impact -1- of the upper spray point is near the upper edge of the wiper
- Driver side spray nozzle unit: the point of impact -2- of the upper stream is at the same height of the front passenger side spray nozzle unit. Protected by copyright. Copying for private or commercial |

Procedure:

permitted unless authorised by AUDI AG. AUDI AG does with respect to the correctness of information in this d Activate the windshield washer system and assess the spray

- pattern.
- If the spray pattern does not meet the specifications, adjust the spray nozzles. Refer to ⇒ "3.38.3 Windshield Spray Nozzles, Adjusting", page 58

3.38.2 Rear Window Spray Pattern, Checking

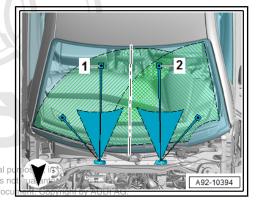
The spray pattern must meet the following specifications:

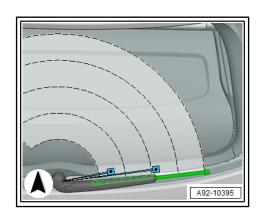
- Both points of impact are just above the wiper blades
- Even, precise spray jets
- Inner spray jet point of impact is approximately in the first quarter of the length of the wiper blade -image-.
- Outer spray jet point of impact is approximately in the middle of the length of the wiper blade or just above -image- (third quarter).

Procedure:

- Activate the rear window washer system and assess the spray pattern.
- If the spray pattern does not meet these specifications, adjust the spray nozzles.

⇒ "3.38.4 Rear Window Spray Nozzles, Adjusting", page 58





3.38.3 Windshield Spray Nozzles, Adjusting

Procedure:

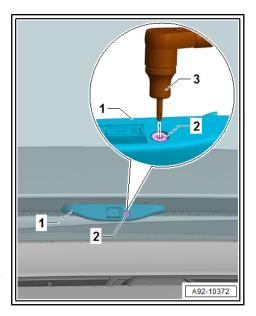
- Align the adjusted nozzles tips over the adjusting screw -2according to the specification using a tool with an external TORX® size 9 -3-.
- If the spray pattern still does not meet the specifications: clean the corresponding spray nozzles. Refer to ⇒ Electrical Equipment; Rep. Gr. 92; Windshield Washer System; Spray Nozzles, Adjusting and Cleaning.



Note

The water jets of a nozzle unit can only be adjusted together and the height is adjusted via an adjusting screw. It is not possible to adjust the water jets individually or to adjust just one side.

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3.38.4 Rear Window Spray Nozzles, Adjusting

Special tools and workshop equipment required

 Commercially available socket wrench (for example Washer Jet Setting Tool - T40187-) or suitable needle.

Procedure:

- Use a socket wrench to align the adjusted nozzle tips according to the procedure.
- If the spray pattern still does not meet the specifications, clean the spray nozzles. Refer to ⇒ Electrical Equipment; Rep. Gr. 92; Rear Window Washer System; Spray Nozzles, Adjusting.

3.39 Wiper Blades, Checking For Damage

Step 1 - Service Position

- Switch off the ignition.
- Press the windshield wiper lever briefly downward.

Step 2 - Testing

- Lift the windshield wiper and check each wiper blade for breaks, cuts, rough areas and other signs of damage.
- Repeat the test for the rear window.
- If damage was detected, replace the respective wiper blade.
 For the windshield wiper system, refer to ⇒ Electrical Equipment; Rep. Gr. 92; Windshield Wiper System; Wiper Blade, Removing and Installing. For the rear window wiper system, refer to ⇒ Electrical Equipment; Rep. Gr. 92; Rear Windshield Wiper System; Wiper Blade, Removing and Installing.

3.40 Headlamp Washer System, Checking Function

Depending on the vehicle equipment, a headlamp washer system may not be installed on every vehicle.

Procedure:

 Operate the windshield washer system and check the headlamp washer system function. If the spray does not contact the headlamp, replace the respective spray nozzles. Refer to ⇒ Electrical Equipment; Rep. Gr. 92; Headlamp Washer System; Spray Nozzles, Removing and Installing.



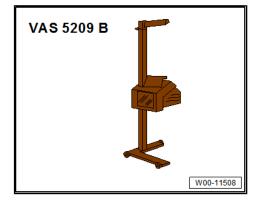
Note

Headlamp washer system spray nozzles are already set at the factory and cannot be readjusted.

3.41 Headlamps: Check Adjustment

Special tools and workshop equipment required

♦ Headlamp Adjusting Unit - VAS5209B-



Or: Headlamp Adjusting Unit - VAS621 001-



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To check the headlamp adjustment (excluding Matrix LED headlamps), the headlamp adjustment units VAS5208A, VAS621 005, VAS5046A and VAS5047A can also be used. Checking Matrix LED headlamps requires the VAS5209B or VAS621 001 adjustment units.

During inspection, the check is merely a shortened version of a headlamp adjustment test, which is due, for example, after repairs and does not replace this one.

Vehicle load and tire pressures do not need to be adjusted.

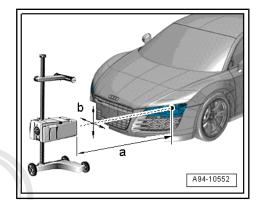
A basic setting for the headlamps does not need to be performed via the Vehicle Diagnostic Tester.

According to the repair manual specification, the checking and adjusting of the headlamps is a repair procedure and should be charged separately.

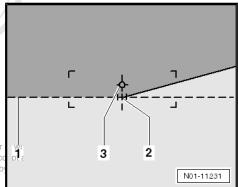
Procedure:

- For vehicles with manual headlamp range control, set the adjusting mechanism to the basic setting.
- Activate the low beam.

 Align the headlamp adjusting unit parallel to the vehicle and place it at a distance of 30 to 70 cm -dimension a- centered in front of the headlamp. The maximum deviation from the center point of the light-emitting surface is 3 cm -dimension b-.



- Adjust the angle of the headlamp adjusting unit so that the headlamp light distribution on the testing surface meets the following specification: horizontal cut-off line on the separating line -1-.
- Read the set angle value of the headlamp adjusting unit.
- Repeat the procedure on the opposite side.
- Compare the left and right angle values.
- If they vary from each other by 2.0% or higher, check and adpart or just the headlamp setting according to the repair manual species or ac ifications. Refer to be Electrical Equipment; Rep. Gricc94ch. Copyright be Headlamp; Headlamp, Adjusting.



3.42 Driving and Back-Up Lamps, Parking Lamps, License Plate Lamps, Turn Signals and Emergency Flashers,: Checking Function

Check the function of the following lighting elements from the outside:

Procedure:

- Activate the position lamp and check the function of the following exterior lighting:
- Front position lamp
- Rear position lamp
- ◆ If equipped, auxiliary tail lamps under the opened rear lid
- Switch the ignition on.
- Check the function of the front daytime running lamps.
- Activate the right and left turn signals, as well as the emergency flashers and check the function of the respective front and rear turn signals as well as the side turn signals.
- Activate the low beams and check the function of the following exterior lighting:
- Front low beams
- ◆ Tail lamps
- License plate illumination
- Activate the fog lamps via the appropriate button and check the function.
- Check the high beam function.
- Press the brake and check the function of all brake lamps.

- Shift into reverse gear and check the function of all back-up lamps. This model has two back-up lamps.
- Activate the rear fog lamps via the appropriate button and check the function. This model has one rear fog lamp.
- Replace any faulty lamps.

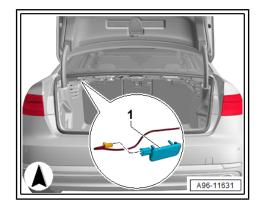
Luggage Compartment Lamp, Checking 3.43 **Function**

- ⇒ "3.43.1 A4 Sedan", page 61.
- ⇒ "3.43.2 A4 Avant", page 61

A4 Sedan 3.43.1

Procedure:

Check the function of the shown lighting element -arrow- in the luggage compartment.



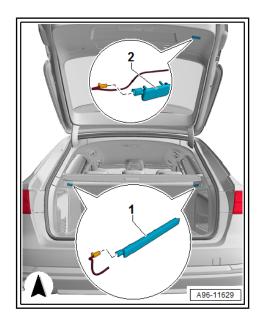
3.43.2 A4 Avant

Procedure:

Check the function of the shown lighting elements -arrow- in the luggage compartment.



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Luggage Compartment, Removing Pro-3.44 tective Film and Protective Felt

Procedure:

Carefully remove the protective films and protective felt completely from the luggage compartment.

3.45 Glove Compartment, Interior Lamps and Reading Lamps, Checking Function

Procedure:

- Open the glove compartment and check the function of the glove compartment lamp.
- Activate the following vehicle interior lighting elements using the appropriate buttons and check the function of the lamps:
- Front interior lighting in headliner
- Rear interior lighting in headliner



Note

Checking the ambient lighting is NOT included in the inspection.

3.46 Horn, Checking Function

Procedure:

- Switch the ignition on.
- Operate the horn and check the function of the high and low tone horn.



Note

Perform the function test outside, for example at the workshop entrance or during a road test.

3.47 Front Passenger Airbag, Checking On/ Off Key-Switch and Switching to On Set-part or in whole, is not ting (NOT) FOR NORTH AMERICAN arantee or accept any liability (with respect to the correctness of information in this accument. Copyright by AUDI AG. MARKET)

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The "Airbag ON/OFF" switch is located inside the glove compartment -arrow-.

Procedure:

- Turn the switch to "AIRBAG OFF".
- Switch on the ignition and wait for the vehicle function test to
- Check if the display "PASSENGER AIRBAG OFF" (front passenger airbag deactivated) lights up in the instrument cluster.
- Switch off the ignition.
- Turn the switch to "AIRBAG ON".
- Switch on the ignition and wait for the vehicle function test to
- Check if the display "PASSENGER AIRBAG OFF" turns off.
- Switch off the ignition.



Note

The duration of the vehicle function test depends on the model and vehicle equipment.

3.48 Owner's Literature, Checking for Completeness

Procedure:

Check the owner's literature for completeness and prepare for customer delivery pyright. Copying for private or commercial purposes, in part or in whole, is not authorised by AUDI AG. AUDI AG does not guarantee or accept any liability

Owner's Manual: Attaching the Vehicle AUDI AG 3.49 Data Label

The vehicle data label is located in the accessories kit bag

Procedure:

- Remove the vehicle data label from the accessories kit bag.
- Apply the vehicle data label in the Owner's Manual under "Warranty Certificate".



Note

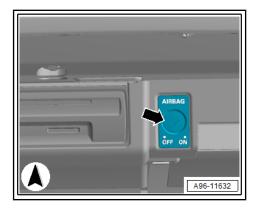
Only applies to the USA and China markets.

3.50 Maintenance Schedule, Entering Service Delivery

The field for service delivery documentation is located on the second page of the maintenance schedule.

Procedure:

- Apply the stamp for the Audi operations performed.
- Enter the date performed.
- Mark the relevant field/relevant fields.





Note

Applies to markets without digital maintenance schedule.

3.51 Seat Belts, Checking Presence of Seat Belt Stop Buttons and Retractor Locking Function

Procedure:

On all existing seat belts:

- Make sure the seat belt stop buttons or the stopper clips are present.
- Check the locking behavior of the retractors by unrolling them with a jerk.



Note

If objects are secured with the seat belt (for example, a child seat), do not loosen the seat belt. Only check the locking behavior with the belt secured. Checking the stop button or stopper clip is not required in this case.

Vehicle Interior, Removing Seat Covers AUDI AG does not guarantee or accept any liability and Carpet Protection

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Procedure:

- Carefully and completely remove the seat covers and carpet protections in the vehicle interior.
- 3.53 Vehicle Interior, Checking for Cleanliness and Cleaning if Necessary

Procedure:

Check the following components carefully for cleanliness and if necessary clean:

- ♦ Front Seats
- ♦ Rear bench seat
- Interior Trim Panels
- ◆ Carpets
- ♦ Floor Mats
- ♦ Washers

3.54 Vehicle Interior, Removing Objects that Do Not Expressly Protect Surfaces

Procedure:

 Remove the objects in the vehicle interior that do not expressly protect the surfaces.

3.55 Vehicle Interior and Exterior, Checking for Damage and Documenting the Damage

Procedure:

- Check the vehicle interior for damage and document the dam-
- Check the vehicle exterior for damage and document the damage.

3.56 Instrument Cluster, Checking Indicator Lamps

Reading out the DTC memory is a repair procedure and should be charged separately.

Procedure:

- Start the engine and wait for the vehicle function test to end.
- Check if the indicator lamps in the instrument cluster turn on.
- Turn off the engine.
- For the relevant indicator lamps, read out the DTC memory. Refer to \Rightarrow "3.4 DTC Memories: Checking", page 17



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The duration of the vehicle function test depends on the model AG. and vehicle equipment.

3.57 Warning Triangle, Checking Presence

Procedure:

Check if the emergency triangle(s) is/are present.

3.58 First Aid Kit, Checking and Entering Expiration Date

The first aid kit is located behind the right cargo net in the luggage compartment.

Procedure:

- Remove the first aid kit and check the printed expiration date or the expiration date of the contents.
- Enter the expiration date in the Maintenance Table.
- If the expiration date has passed, replace the first aid kit.

3.59 Vehicle Key, Checking Function and Entering Number of Assigned Keys

Procedure:

- Separate the set of keys so that the function of each key can be checked individually.
- Start the engine using each key separately.
- Enter the number of vehicle keys adapted and given in the Maintenance Table.

If a vehicle key is not adapted, readapt all existing vehicle keys to the vehicle using the Guided Functions on the Vehicle Diagnostic Tester via the GeKo online connection.



Note

- Only store the key to be checked in the vehicle interior. Move the other keys outside of the operating range.
- The engine switches off again after a few seconds if the key is not adapted. Depending on the vehicle equipment, the antitheft immobilizer system indicator lamp or the display "SAFE" also appears in the instrument cluster.

3.60 Vehicle Key, Removing

Only applies to vehicles with ignition lock.

Procedure:

Remove the vehicle key from the ignition lock.

3.61 Vehicle Key, Wheel Hub Cover and Owner's Literature, Checking Presence and Entering Number

Procedure:

- Check if the vehicle keys are present.
- Check if the wheel hub covers are present.
- Check if the Owner's Literature is present.
- Replace the missing components shortly before the vehicle delivery.

3.62 Static Entries in DTC Memory, Correct-

Vehicle Diagnostics, Accessing via Guided Fault Finding:

- Connect the Vehicle Diagnostic Tester.
- Select Diagnostics mode.
- Perform the vehicle identification procedure and follow the program sequence through to the test plan.
- Perform the test programs for static entries in the DTC memory.

Vehicle Diagnostics, Accessing without Guided Fault Finding: private or commercial purposes, in part or in whole, is not

- AG. AUDI AG does not guarantee or accept any liability Switch to the "Control modules" tab and press the "Guided in Fault Finding" button and perform the Guided Fault Finding nformation in this document. Copyright by AUDI AG. through to the test plan.
- Perform the test programs for static entries in the DTC memory.

Sun Visor, Checking if in Highest Posi-3.63 tion and Moving if Necessary

Procedure:

Check if the sun visor is in the highest position and if necessary move it up.

3.64 Luggage Compartment Cover and Sun Shade, Checking if Retracted and Retracting if Necessary

Procedure:

- Check if the present luggage compartment cover is retracted and if necessary retract.
- Check if the sun shade is retracted and if necessary retract.

3.65 **Engine Oil, Draining**



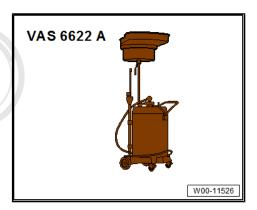
- Perform the oil change at operating temperature.
- Follow all disposal regulations.
- Pay attention to cleanliness.

⇒ "3.65.1 4-Cylinder Diesel Engine 2.0L TDI", page 67.

3.65.1 4-Cylinder Diesel Engine 2.0L TDI

Special tools and workshop equipment required

◆ Used Oil Collection and Extraction Unit - SMN372500-



- Torque Wrench 1331 5-50Nm CoVAG1331 o measuring range part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability 6 to 50 Nm nent. Copyright by AUDI AG.
- ♦ Or: Torque Wrench VAS5820 (20-100 Nm) VAS5820-, measuring range: 20 to 100 Nm
- Or: Electronic Torque Wrench 3-60Nm VAS6583-, measuring range 3 to 60 Nm

Tightening Specification Table for Installation:

Component / Fastening Element	[Nm]
Oil drain plug for oil pan	30

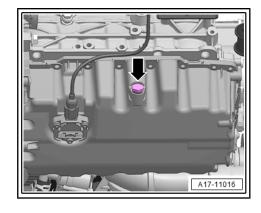
Removal Procedures:

Remove the noise insulation. Refer to ⇒ "2.3 Noise Insulation, Removing and Installing", page 8.

Procedure:

- Place the oil drip tray under the engine oil pan.
- Open the oil drain plug -arrow- for the oil pan.
- Drain the engine oil from the oil pan.
- Replace the oil drain plug seal.
- Install the oil drain plug in the oil pan and tighten to the tightening specification (Tightening Specification Table for Installation. Refer to ⇒ page 67).

Additional installation procedures occur in reverse order.



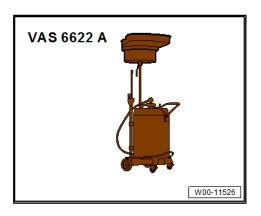
3.65.2 4-Cylinder Gasoline Engine 1.4L TFSI (NOT FOR NORTH AMERICAN MAR-

NOT FOR NORTH AMERICAN MARKET

Special tools and workshop equipment required

◆ Used Oil Collection and Extraction Unit - SMN372500-





Removal Procedures:

Remove the noise insulation. Refer to ⇒ "2.3 Noise Insulation, Removing and Installing", page 8.

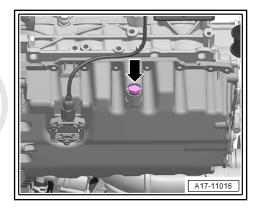
Procedure:

Place the oil drip tray under the engine oil panarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.



- Open the plug -arrow- for the oil pan.
- Drain the engine oil from the oil pan.
- Replace the plug seal.
- Tighten the plug until it stops.

Additional installation procedures occur in reverse order.



Engine Oil, Extracting 3.66

Special tools and workshop equipment required

◆ Used Oil Collection and Extraction Unit AUSMN3₹2500 rantee or accept a company of the collection and Extraction Unit AUSMN3₹2500 rantee or accept a company of the collection and Extraction Unit AUSMN3₹2500 rantee or accept a company of the collection and Extraction Unit AUSMN3₹2500 rantee or accept a company of the collection and Extraction Unit AUSMN3₹2500 rantee or accept a company of the collection and Extraction Unit AUSMN3₹2500 rantee or accept a company of the collection and Extraction Unit AUSMN3₹2500 rantee or accept a company of the collection and Extraction Unit AUSMN3₹2500 rantee or accept a company of the collection and Extraction Unit AUSMN3₹2500 rantee or accept a company of the collection and Extraction Unit AUSMN3₹2500 rantee or accept a company of the collection and Extraction Unit AUSMN3₹2500 rantee or accept a company of the collection and Extraction Unit AUSMN3₹2500 rantee or accept a company of the collection and Extraction Unit AUSMN3₹2500 rantee or accept a company of the collection and Extraction Unit AUSMN3₹2500 rantee or accept a company of the collection and Extraction Unit AUSMN3₹2500 rantee or accept a company of the collection o



Procedure:

- Pull the oil dipstick or plug out of the guide tube.
- Guide the oil extraction device extraction probe into the guide tube. Use a flexible extraction probe with the largest possible diameter and guide it in without using great force. Otherwise, the tip can get deflected at the bottom of the oil pan, causing a large amount of used engine oil to remain in the engine.
- Extract all of the engine oil. Observe the operating instructions for the extraction device.
- Then install the oil dipstick or plug.



Note

- Perform the oil change at operating temperature.
- Follow all disposal regulations.
- Pay attention to cleanliness.

3.67 **Engine Oil Filter, Replacing**

- ⇒ "3.67.1 4-Cylinder Gasoline Engine 2.0L TFSI", page 69.
- ⇒ "3.67.2 6-Cylinder Gasoline Engine 3.0L TFSI", page 70.
- ⇒ "3.67.3 4-Cylinder Diesel Engine 2.0L TDI", page 71.

3.67.1 4-Cylinder Gasoline Engine 2.0L TFSI

Special tools and workshop equipment required

- Torque Wrench 1331 5-50Nm VAG1331-, measuring range: 6 to 50 Nm
- Or: Electronic Torque Wrench 3-60Nm VAS6583- , measuring range 3 to 60 Nm
- ♦ Or: Torque Wrench VAS5820 (20-100 Nm) VAS5820-, measuring range: 20 to 100 Nm

Tightening Specification Table for Installation:

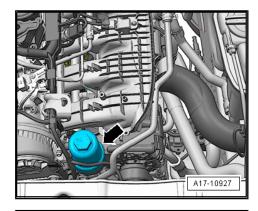
Component / Fastening Element	[Nm]
Сар	25

Removal Procedures:

Remove the engine cover. Refer to
 ⇒ "2.2 Engine Cover, Removing and Installing", page 6

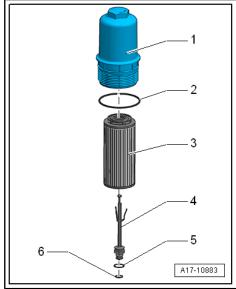
Procedure:

- Loosen the cap -arrow- on the oil filter with the Socket 32 mm-. Doing this opens the valve.
- Wait a short while so that the engine oil can flow out of the filter housing and into the crankcase.
- Remove the cap -arrow- completely. Make sure that no engine oil drips onto the engine.



- Remove the oil filter element -3- and O-ring -2- from the cap -1-.
- Clean the sealing surfaces on the cap.
- Coat the new O-ring -2- with engine oil and insert.
- Insert the new oil filter element -3- into the cap.
- Install the cap in the oil filter housing and tighten with the Socket - 32 mm- to the tightening specification (tightening specification table for installation. Refer to ⇒ page 70).

Additional installation procedures occur in reverse order.



3.67.2 by 0.6-Cylinder Gasoline Engine 3.0L TFSb

with respect to the correctness of information in this document. Copyright by AUD Special tools and workshop equipment required

 Torque Wrench 1331 5-50Nm - VAG1331-, measuring range: 6 to 50 Nm

- Or: Electronic Torque Wrench 3-60Nm VAS6583-, measuring range 3 to 60 Nm
- Or: Torque Wrench VAS5820 (20-100 Nm) VAS5820-, measuring range: 20 to 100 Nm

Tightening Specification Table for Installation:

Component / Fastening Element	[Nm]			
Oil filter	25			

Removal Procedures:

Remove the engine cover. Refer to Remove the engine cover. Refer to

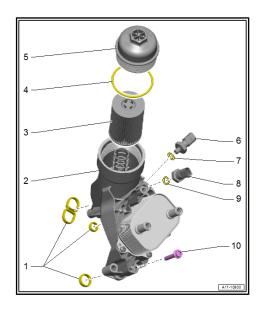
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"2.2 Engine Cover, Removing and Installing", page onlines authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.

Procedure:

- Loosen the cap -10- on the oil filter with the -T10209- . Doing this opens the valve.
- Wait a short while so that the engine oil can flow out of the filter housing and into the crankcase.
- Remove the cap completely. Make sure that no engine oil drips onto the enginė.
- Remove the oil filter element -3- and O-ring -4- from the cap
- Clean the sealing surfaces on the cap -5-.
- Coat the new O-ring -4- with engine oil and insert it.
- Insert the new oil filter element -3- into the cap.
- Install the cap -5- in the oil filter housing -2- and tighten with the -T10209- to the tightening specification. Refer to ⇒ page 72 (tightening specification table for installation).

Additional installation procedures occur in reverse order.



3.67.3 4-Cylinder Diesel Engine 2.0L TDI

Special tools and workshop equipment required

- Torque Wrench 1331 5-50Nm VAG1331-, measuring range: 6 to 50 Nm
- Or: Electronic Torque Wrench 3-60Nm VAS6583-, measuring range 3 to 60 Nm
- Or: Torque Wrench VAS5820 (20-100 Nm) VAS5820-, measuring range: 20 to 100 Nm

Installation Tightening Specification Table:

Component / Fastening Element	[Nm]
Сар	25

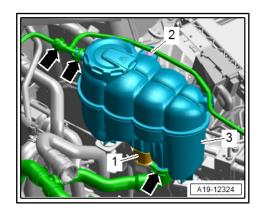
Removal Procedures:

- Remove the engine cover. Refer to ⇒ "2.2 Engine Cover, Removing and Installing", page 6.
- Remove the bolt -2- from the coolant expansion tank.
- Disconnect the connector to the lower Engine Coolant Level Warning Switch - F66- from the coolant expansion tank.
- Move the coolant expansion tank to the side with the coolant hoses still connected.



Note

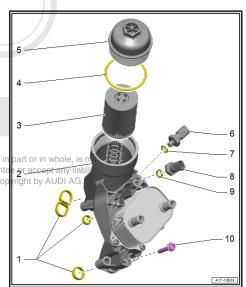
Under certain circumstances, loosening the engine control module may also be necessary in addition to the removal procedure, in order to reach the oil filter.



Procedure:

- Loosen the cap on the oil filter with the Socket SW 32-. Doing this opens the valve.
- Wait a short while so that the engine oil can flow out of the filter housing and into the crankcase.
- Remove the cap -5- completely. Make sure that no engine oil drips onto the engine.
- Remove the oil filter element -3- and O-ring -4- from the cap
- Clean the sealing surfaces on the cap -5-.
- Coat the new O-ring -4- with engine oil and insert it.
- Insert the new oil filter element -3- into the cap.
- Install the cap -5- in the oil filter housing -2- and tighten with the Socket SW 32- to the tightening specification. For the installation tightening specification table, refer to <u>⇒ page 72</u>.

Additional installation procedures occur in reverse order does not guarant

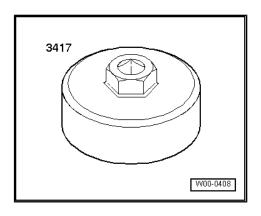


3.67.4 4-Cylinder Gasoline Engine 1.4L TFSI (NOT FOR NORTH AMERICAN MAR-KET)

NOT FOR NORTH AMERICAN MARKET

Special tools and workshop equipment required

♦ Wrench - Oil Filter - 3417-



- ♦ Hazet Tension Band 2171-1-
- Torque Wrench 1331 5-50Nm VAG1331-, measuring range: 6 to 50 Nm
- Or: Electronic Torque Wrench 3-60Nm VAS6583-, measuring range 3 to 60 Nm
- Or: Torque Wrench VAS5820 (20-100 Nm) VAS5820-, measuring range: 20 to 100 Nm

Tightening Specification Table for Installation:

Component / Fastening Element	[Nm]
Oil filter cartridge	20

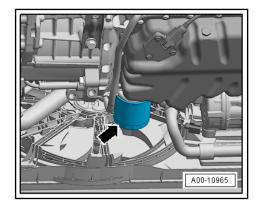
Requirements:

· Engine oil must be drained.

Procedure:

- Protected Loosen the oil filter cartridge arrows using the Hazet Tension permitte Band a 2171-1-1- of the Wrenches Oil Filter 3417- and then with respect to the orrectness of information in this document. Copyright by AUDI AG. remove the oil filter cartridge.
 - Clean oil filter sealing surface on the engine.
 - Coat the rubber seal of the new oil filter cartridge with engine oil.
 - Install the new oil filter cartridge on the engine and tighten to the tightening specification. Refer to <u>⇒ page 73</u> (tightening specification table for installation).

Additional installation procedures occur in reverse order.



3.67.5 6-Cylinder Diesel Engine 3.0L TDI (NOT FOR NORTH AMERICAN MARKET)

NOT FOR NORTH AMERICAN MARKET

Special tools and workshop equipment required

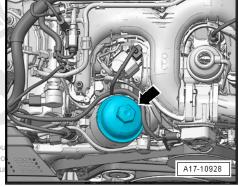
- Torque Wrench 1331 5-50Nm VAG1331-, measuring range: 6 to 50 Nm
- Or: Electronic Torque Wrench 3-60Nm VAS6583-, measuring range 3 to 60 Nm

Tightening Specification Table for Installation:

Component / Fastening Element	[Nm]
Сар	35

Procedure:

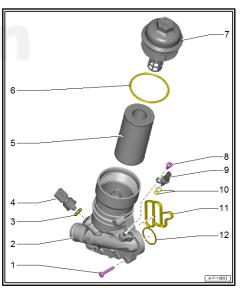
- Loosen the cap -arrow- on the oil filter with the Socket 36 mm-. Doing this opens the valve.
- Wait a short while so that the engine oil can flow out of the filter housing and into the crankcase.
- Remove the cap completely. Make sure that no engine oil drips onto the engine.



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- Remove the oil filter element -5- and seal -6- from the cap -7-.
- Clean the sealing surfaces on the cap -7-.
- Lubricate the new seal -6- with engine oil and insert.
- Insert the new oil filter element -5- into the cap.
- Install the cap -7- in the oil filter housing -2- and tighten with the Socket - 36 mm- to the tightening specification. Refer to ⇒ page 74 (tightening specification table for installation).

Additional installation procedures occur in reverse order.



3.68 **Engine Oil, Filling**



CAUTION

Pressing the accelerator pedal too soon after the oil change damages the engine.

- Run the engine in idle as long as the indicator lamp for engine oil pressure in the instrument cluster is turned on.
- Only increase the RPM when the indicator lamp goes out.

Special tools and workshop equipment required

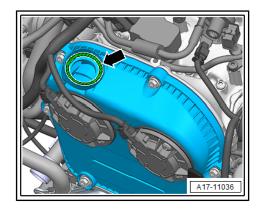
♦ Filling Aid for Engine Oil - VAS6842-



Refer to the ⇒ Fluid Capacity Tables; Rep. Gr. 03 for enginespecific oil capacities and standards.

Procedure:

- Fill the engine oil using the -VAS6842-.
- Then check the oil level and correct if necessary. Refer to ⇒ "3.69 Engine Oil Level, Checking and Correcting if Neces-<u>sary", page 75</u>
- For all 4-cylinder 2.0L TFSI gasoline engines with oil filler tube on the chain guard cover: clean the sealing surface -arrow- on the inside of the oil filler tube with a lint-free cloth, before installing the cap.



W00-11480

3.69 Engine Oil Level, Checking and Correcting if Necessary



CAUTION

Risk of damaging the catalytic converter when the engine oil level is too high!

Drain the engine oil until the specified level is reached.

Test conditions for all engines except for V6 diesel engines:

Engine oil temperature must be at least 60 °C (140 °F).

- After switching off the engine, wait a few minutes so that the oil can flow back into the oil pan.
- Vehicle must be at a level position.

Test conditions for V6 diesel engines:

- Warm engine oil temperature at 90 °C (194 °F).
- After stopping the engine, wait a few minutes to allow oil to flow back into oil pan.
- Vehicle must be at a level position.

⇒ "3.69.1 Oil Level, Checking using Oil Level Display in MMI" <u>page 76</u>.

3.69.1 Oil Level, Checking, using Oil, Level, Disses, in part or in whole, is not play in MM unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability play in the correctness of information in this document. Copyright by AUDI AG.

Procedure:

- If necessary, close the hood.
- Turn on the ignition and activate the MMI.
- Select the MENU function button.
- Select »vehicle«.
- Select the left control button and follow the following menu structure.
- Service & Checking
- Oil Level
- Read and determine the oil level in the display.
- If necessary, adjust the oil level:



Oil Level **Evaluation / Action**

Up to "max" or just before Oil level is optimal.

clearly under "max"

Add engine oil until the optimal oil level is reached. While doing so, close the hood

to update the oil level display.



Note

- If the hood is open, the oil level display will not be updated in the MMI.
- If underfilled, a warning lamp is displayed in the driver information system.

Spark Plugs, Replacing 3.70

⇒ "3.70.2 4-Cylinder Gasoline Engine 2.0L TFSI", page 80 .

⇒ "3.70.3 6-Cylinder Gasoline Engine 2.9L TFSI/3.0L TFSI", page

⇒ "3.70.4 Ignition Coils with Power Output Stage, Lubricating", page 84

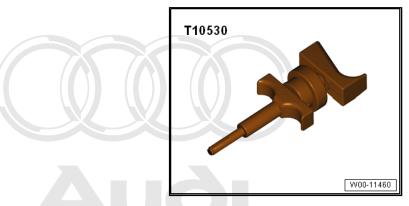
3.70.1 4-Cylinder Gasoline Engine 1.4L TFSI

Special tools and workshop equipment required

♦ Spark Plug Removal Tool - 3122 B-



Puller - T10530-



Electronic Torque Wrench 3-60Nm - VAS6583-, measuring range: 3 to 60 Nm

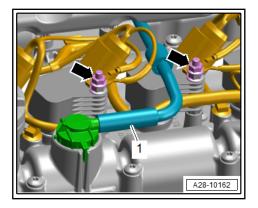
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Installation Tightening Specification Table:

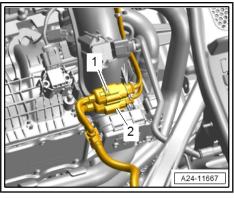
Component / Fastening Element	[Nm]
Spark plugs with M12 thread	20+5
Spark plugs with M14 thread	30+5
Ignition coil bolt	8
Ground wire nut	8
Fuel line bolt	4
Crankcase ventilation bolt	9

Removal Procedures:

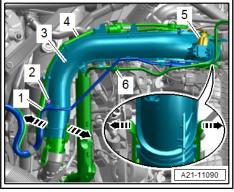
Remove the engine cover. Refer to ⇒ "2.2 Engine Cover, Removing and Installing", page 6. Remove the crankcase ventilation hose -1-.



- Disconnect and free up the connectors -1- and -2-.



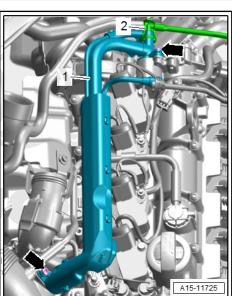
- Remove the bolt -2- and free up the fuel line.
- Free up the EVAP system hose -4- and the coolant line -6-.
- Disconnect the connector -5- from the Charge Air Pressure Sensor - G31-.
- Release the retainers -arrows- and remove the air duct pipe



- Press the release buttons and remove the hose -2-.
- Remove the bolts -arrows- and remove the crankcase ventilation hose -1- toward the rear.

Step 1 - Spark Plugs, Removing:

- Remove the ground wire nuts and free up the ground wires.

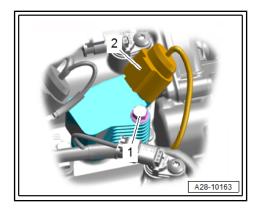


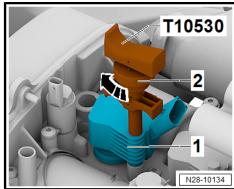
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- Push the ignition coil connector -2- toward the pencil-type ignition coil, open the locking mechanism and remove the connector from the pencil-type ignition coil.
- Move the connector -2- slightly to the side. Make sure to not kink or damage the lines.
- Remove the ignition coil bolts -1-.



Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not pelnsert.the Rullered ity10530s. into the pencil-type gnition coil hole 414 and turn the knurled nut 2-relockwise until the puller tight-



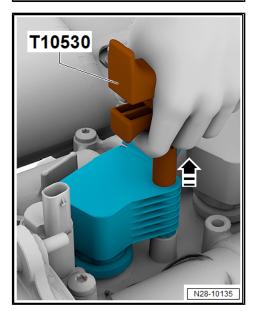


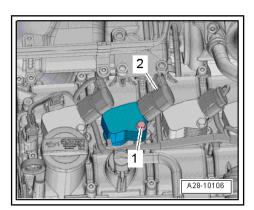
- Carefully remove the ignition coils upward using the Puller -T10530- .
- Repeat the removal procedures for all of the other ignition
- Remove the spark plugs using the Spark Plug Removal Tool - VAS3122B- .

Procedure Step 2 - Spark Plugs, Installing

- Install the new spark plugs using the Spark Plug Removal Tool - VAS3122B- and tighten to specification. For the installation tightening specification table, refer to ⇒ page 77.
- Grease the ignition coils. Refer to ⇒ "3.70.4 Ignition Coils with Power Output Stage, Lubricating", <u>page 84</u> .
- Insert all ignition coils loosely into the spark plug shaft and align them to the connectors on the connector strip.
- Press the ignition coils evenly onto the spark plugs by hand. Do not use any impact tools.
- Install the ignition coil bolts -1- to the tightening specification. For the installation tightening specification table, refer to \Rightarrow page 77.
- Connect the ignition coil connectors -2- one after the other until the locking mechanism engages.

Additional installation procedures occur in reverse order. While doing so, note the tightening specifications. Refer to <u>⇒ page 77</u> for the installation tightening specification table.





4-Cylinder Gasoline Engine 2.0L TFSI 3.70.2

Special tools and workshop equipment required

- ♦ Spark Plug Removal Tool 3122 B-
- Puller T10530-
- Torque Wrench, 6-50Nm VAG1331A-, measuring range: 6 to 50 Nm
- Or: Electronic Torque Wrench 3-60Nm VAS6583-, measuring range 3 to 60 Nm

Installation Tightening Specification Table:

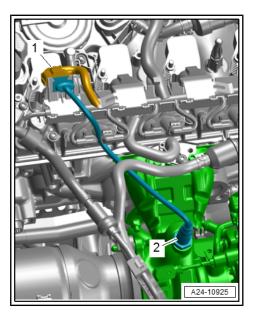
Component / Fastening Element	[Nm]
Spark plugs with M12 thread	20+5
Spark plugs with M14 thread	30+5
Ignition coil bolt	10 Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability
Ground wire nut	9 with respect to the correctness of information in this document. Copyright by AUDI AG.

Removal Procedures:

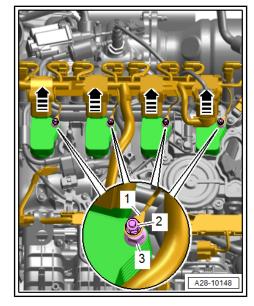
Remove the engine cover. Refer to ⇒ "2.2 Engine Cover, Removing and Installing", page 6.

Step 1 - Spark Plugs, Removing:

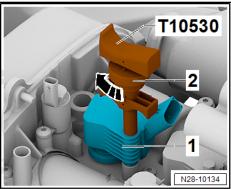
Disconnect the connector -1- for the Heated Oxygen Sensor -G39-.



- Remove the ground wire nut -2- and free up the ground wire
- Push the ignition coil connector toward the pencil-type ignition coil, open the locking mechanism, and remove the connector from the pencil-type ignition coil in the direction of the -arrow-.
- Move the connectors slightly to the side. Make sure to not kink or damage the lines.
- Remove the ignition coil bolts -3-.



Insert the -T10530- into the pencil-type ignition coil hole -1and turn the knurled nut -2- clockwise until the puller tightens.

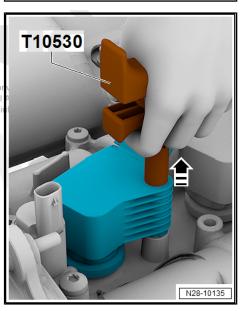


- Carefully remove the ignition coils upward using the -T10530-.
- Repeat the removal procedures for all of the other ignition
- Remove the spark plugs using the Spark Plug Removal Tool - VAS3122B- . permitted unless authorised by AUD with respect to the correctness of

Procedure Step 2 - Spark Plugs, Installing

- Install the new spark plugs using the -VAS3122B- and tighten to specification. For the installation tightening specification table, refer to <u>⇒ page 80</u>.
- Grease the ignition coils. Refer to ⇒ "3.70.4 Ignition Coils with Power Output Stage, Lubricating", page 84.
- Insert all ignition coils loosely into the spark plug shaft and align them to the connectors on the connector strip.
- Press the ignition coils evenly onto the spark plugs by hand. Do not use any impact tools.
- Install the ignition coil bolts -arrows- to the tightening specification. For the installation tightening specification table, refer to \Rightarrow page 80.

Additional installation procedures occur in reverse order. While doing so, note the tightening specifications. Refer to ⇒ page 80 for the installation tightening specification table.



3.70.3 6-Cylinder Gasoline Engine 2.9L TFSI/ 3.0L TFSI

Special tools and workshop equipment required

- ◆ Spark Plug Socket Adapter 3/8" VAS6919-
- Puller T10530-
- Torque Wrench, 6-50Nm VAG1331A-, measuring range: 6 to 50 Nm
- Or: Electronic Torque Wrench 3-60Nm VAS6583-, measuring range 3 to 60 Nm

Installation Tightening Specification Table:

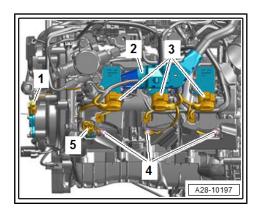
Component / Fastening Element	[Nm]
Spark plugs with M12 thread	20+5
Spark plugs with M14 thread	30+5
Ignition coil bolt	9

Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability Removal Procedures:

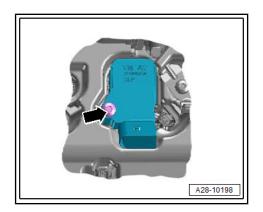
Remove the engine cover. Refer to ⇒ "2.2 Engine Cover, Removing and Installing", page 6.

Procedure: Step 1 - Removing the Spark Plugs, Right Cylinder Bank:

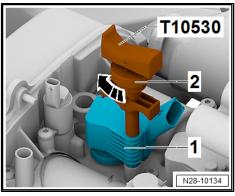
- Remove the air filter housing. Refer to ⇒ Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.
- Disconnect the connectors -1- and -2- for the Heated Oxygen Sensor - G39- and free up the wires
- Release the connector -arrows- and remove from the cam adjustment actuator.
- Remove the ignition coil connector -3-.
- Remove the bolts -4- and free up the ground wire.
- Remove the wiring duct -2- from the ball pin and push to the side.



Remove the ignition coil bolt -arrows-.



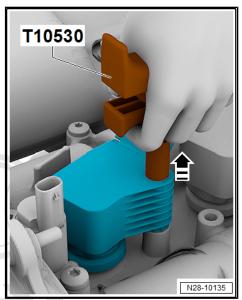
Insert the -T10530- into the pencil-type ignition coil hole -1- and turn the knurled nut -2- clockwise until the puller tightens.



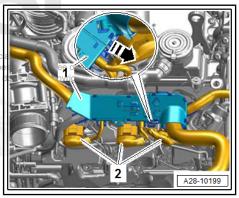
- Carefully remove the ignition coils upward using the -T10530-.
- Repeat the removal procedures for all of the other ignition
- Remove the spark plugs using the -VAS6919- .

Procedure Step 2 - Removing the Spark Plugs Left Cylinder Bank:

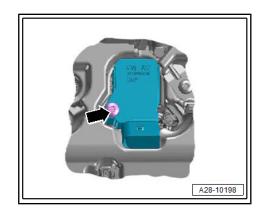
Remove the Engine Control Module - J623- from the bracket and move it to the side. Refer to \Rightarrow Rep. Gr. 24; Engine Control Module .



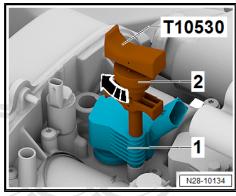
- Release the catch -arrow- and remove the wiring duct -1- from the ball pin and push to the side. Free up the wiring harness if necessary.
- Remove the ignition coil connected by copyright. Copying for private or commercial connected by a unitary control of the connected by AUDI AG. AUDI AG. AUDI AG. with respect to the correctness of information in this



Remove the ignition coil bolt -arrows-.



 Insert the -T10530- into the pencil-type ignition coil hole -1and turn the knurled nut -2- clockwise until the puller tightens.



- Carefully remove the ignition coils upward using the -T10530-.
- Repeat the removal procedures for all of the other ignition coils.
- Remove the spark plugs using the -VAS6919- .

Procedure: Step 3 - Installing the Spark Plugs

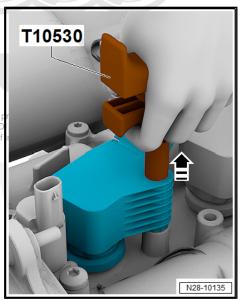
- Install the new spark plugs using the -VAS6919 and tighten ying for to specification. Refer to ⇒ page 82 for the installation tighten by AUI ening specification table.
- Grease the ignition coils. Refer to
 ⇒ "3.70.4 Ignition Coils with Power Output Stage, Lubricating",
 page 84.
- Insert all ignition coils loosely into the spark plug shaft and align them to the connectors on the connector strip.
- Press the ignition coils evenly onto the spark plugs by hand.
 Do not use any impact tools.
- Install and tighten the bolts for the ignition coils to their tightening specification. Refer to ⇒ page 82 for a table of the installation tightening specifications.
- Connect the ignition coil connectors one after the other until the locking mechanism engages.

Additional installation procedures occur in reverse order. Pay attention to the tightening specification while doing so. For the installation tightening specification table, refer to ⇒ page 82.

3.70.4 Ignition Coils with Power Output Stage, Lubricating

Special tools and workshop equipment required

Silicone paste





Procedure:

Grease the seal tube -arrow- of the pencil-type ignition coil all around with silicone paste. The bead must be 1 to 2 mm thick.



Note

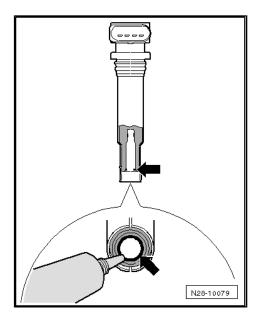
- Refer to the Parts Catalog for silicone paste to be used.
- New ignition coils are delivered already lubricated. It is not necessary to lubricate them again.



CAUTION

Incorrect lubricant increases the risk of destroying the ignition coils.

Only use the silicone paste approved here.



3.71 Coolant Level, Coolant Level at Least to **Upper Mark On Expansion Tank**



WARNING

There is a risk of injury due to the coolant reservoir being under pressure.

Only open the coolant reservoir when the engine is cold.



CAUTION

Incorrect coolant additives may cause significant damage to vehicle components.

The coolant additive G12EVO is not approved for engines with the base EA288 (A4.2.0L TDI) Copying for private or commercial purposes, in part or in whole, is not

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Note

- The specified value is the upper marking on the coolant expansion tank.
- Only distilled water may be used for mixing coolant additives. The water used in the mixture greatly affects the effectiveness of the coolant and the corrosion protection. To meet water quality requirements, only use distilled water when mixing with coolant.
- Only use permitted coolant additive. Refer to Parts Catalog
- G12EVO, G13 and G12++ may be mixed together.
- G12EVO, G13 and G12++ may be mixed with the other coolant additives G11, G12 and G12+.
- G12 and G11 may not be mixed together.
- Coolant cannot be reused.
- Only use water/coolant additive as lubricant for the coolant hoses.
- Driving the vehicle with the coolant level above the MAX mark on the coolant expansion tank is a technical requirement and is permitted. Do not extract the coolant!
- ⇒ "3.71.1 Coolant Level and Freeze Protection, Checking, All Vehicles Except 6-Cylinder Diesel Engine 3.0L TDI", page 86.
- "3.71.2 Coolant Level and receive Provide Convince or private or conversial purposes, in part or in whole, is not converse or conversial purposes, in part or in whole, is not converse or conversion of the converse of the c inder Diesel Engine 3.0L TDI wipage 88 the correctness of information in this document. Copyright by AUDI AG.
- ⇒ "3.71.3 Coolant, Filling", page 89
- 3.71.1 Coolant Level and Freeze Protection, Checking, All Vehicles Except 6-Cylinder Diesel Engine 3.0L TDI

Special tools and workshop equipment required

- Refractometer T10007A-
- Refractometer VAS531 005-

Testing Values and Process Specifications Table:

Service:	Specified Coolant Level:	
Delivery service	Coolant level must be at least up to the MAX mark.	
Inspection	Coolant level at the MAX mark.	

A leak test for the coolant system is a repair procedure and should be charged separately.

Requirements:

- The freeze protection must be guaranteed down to -25 °C (-13 °F), and in cold climate countries down to -36 °C (-32.8 °F).
- The amount of coolant additive must not exceed 55 % (freeze protection value to -48 °C (-54.4 °F)), since the freeze protection will decrease and the cooling effect will worsen.
- The vehicle must be stopped and in a level position.

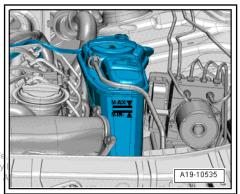
Step 1 - Coolant Level, Checking:

- When the engine is cold, check the coolant level in the coolant expansion tank based on the container markings -image-.
- If the coolant level is too low, fill the missing amount in the required mixture ratio. Refer to ⇒ "3.71.3 Coolant, Filling", page 89.
- If there is a loss of fluid not due to normal use, first determine the cause with a leak test. Refer to ⇒ Engine Mechanical; Rep. Gr. 19; Cooling System/Coolant; Cooling System, Checking for Leaks .

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Step 2 - Freeze Protection, Checking:

- Use the pipette to apply a drop of coolant to the glass on the -T10007 A- . The cut-off line can now be clearly recognized through to the refractometer.
- Use the corresponding scale to determine the coolant freeze protection. Read the value on the cut-off line to do so.
- If the freeze protection value does not match the specification in the Maintenance Table, perform the following actions:



Freeze Protection Value: Evaluation / Action:

Greater than the specified value guideline

Depending on the variance, remove a small amount of coolant and replace with distilled water. Repeat the procedure until the correct coolant mixture is obtained.

ue guideline

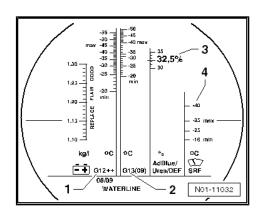
Less than the specified val- Depending on the deviation, remove a small amount of coolant and replace with coolant additive. Repeat the procedure until the correct coolant mixture is obtained.

Check the concentration of the coolant additive again after the road test.



Note

- The -T10007A- must be used to determine the actual freeze protection density.
- The refractometer scale -1- applies to coolant additives G11, G12, G12+ and G12++.
- The scale -2- only applies to coolant additive G13.
- If more than one type of coolant additive has been used, use the scale for G13 to determine the frost protection.
- The temperature on the -T10007B- corresponds to the »crystallization point«. At this temperature, the first flakes of ice begin to form in the coolant.
- The coolant system should always be filled with freeze protection the entire year. A proper mixture ratio of coolant additive will prevent the build-up of calcium, freezing and corrosion damage and will also raise the boiling temperature.
- In countries with tropical climates, the coolant improves the engine reliability due to the increased boiling point when the vehicle is driven under heavy load.



3.71.2 Coolant Level and Freeze Protection, Checking, 6-Cylinder Diesel Engine 3.0L TDI

Special tools and workshop equipment required

Refractometer - T10007A-

Testing Values and Process Specifications Table:

Service:	Specified Coolant Level:
Delivery service	Upper edge of the floater is flush with the coolant expansion tank opening.
Inspection	Upper edge of the floater is between the MIN mark and the coolant expansion tank opening.

A leak test for the coolant system is a repair procedure and should orised by AUDI AG. AUDI AG does not guarantee or accept any liability be charged separately. with respect to the correctness of information in this document. Copyright by AUDI AG.

Requirements:

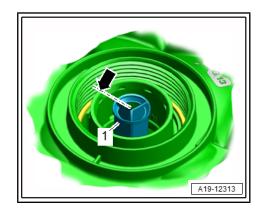
- The freeze protection must be guaranteed down to -25 °C (-13 °F), and in cold climate countries down to -36 °C (-32.8 °F).
- The amount of coolant additive must not exceed 55 % (freeze protection value to -48 °C (-54.4 °F)), since the freeze protection will decrease and the cooling effect will worsen.
- The vehicle must be stopped and in a level position.

Step 1 - Coolant Level, Checking:

- When the engine is cold, check the coolant level in the coolant expansion tank based on the container markings -image-.
- If the coolant level is too low, fill the missing amount in the required mixture ratio. Refer to 3.71.3 Coolant, Filling", page 89.
- If there is a loss of fluid not due to normal use, first determine the cause with a leak test. Refer to ⇒ Engine Mechanical; Rep. Gr. 19; Cooling System/Coolant; Cooling System, Checking for Leaks .

Step 2 - Freeze Protection, Checking:

- Use the pipette to apply a drop of coolant to the glass on the -T10007 A- . The cut-off line can now be clearly recognized through to the refractometer.
- Use the corresponding scale to determine the coolant freeze protection. Read the value on the cut-off line to do so.
- If the freeze protection value does not match the specification in the Maintenance Table, perform the following actions:



Freeze Protection Value: Evaluation / Action:

Greater than the specified value guideline

Depending on the variance, remove a small amount of coolant and replace with distilled water. Repeat the procedure until the correct coolant mixture is obtained.

ue guideline

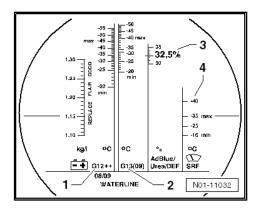
Less than the specified val- Depending on the deviation, remove a small amount of coolant and replace with coolant additive. Repeat the procedure until the correct coolant mixture is obtained.

Check the concentration of the coolant additive again after the road test.



Note

- The -T10007A- must be used to determine the actual freeze protection density.
- The refractometer scale -1- applies to coolant additives G11, G12, G12+ and G12++.
- The scale -2- only applies to coolant additive G13.
- If more than one type of coolant additive has been used, use the scale for G13 to determine the frost protection.
- The temperature on the -T10007B- corresponds to the »crvstallization point«. At this temperature, the first flakes of ice begin to form in the coolant.
- The coolant system should always be filled with freeze protection the entire year. A proper mixture ratio of coolant additive will prevent the build-up of calcium, freezing and corrosion damage and will also raise the boiling temperature.
- In countries with tropical climates, the coolant improves the engine reliability due to the increased boiling point when the vehicle is driven under heavy load.



3.71.3 Coolant, Filling

Testing Values and Process Specifications Table:

Freeze protection down to:	Coolant additive:	Water:
-25 °C (-13 °F)	approximately 40 %	approximately 60 %
-36 °C (-54.4 °F)	approximately 50 %	approximately 50 %

Procedure:

Fill the missing amount in the mixture ratio which corresponds to the freeze protection specification in the Maintenance Table. Observe the coolant mixture according to the table.



Note

Small quantities of coolant can be added When larger quantities or commercial purposes, in part or in whole, is not of coolant are needed, the -VAS6096 mishould betused by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.

3.72 Air Filter Element, Replacing and Cleaning Housing



Note

- Only use silicone-free lubricant for assembling the intake ho-
- Secure all hose connections with hose clamps that match current standard production. Refer to the Parts Catalog.

- ⇒ "3.72.5 Air Filter Housing, Cleaning", page 94.
- ⇒ "3.72.1 4-Cylinder Gasoline Engine, 2.0L TFSI, (Version 1)", page 90
- ⇒ "3.72.2 4-Cylinder Gasoline Engine 2.0L TFSI (Version 2)", page 91
- ⇒ "3.72.3 6-Cylinder Gasoline Engine 3.0L TFSI", page 92
- ⇒ "3.72.4 4-Cylinder Diesel Engine 2.0L TDI", page 93.

3.72.1 4-Cylinder Gasoline Engine, 2.0L TFSI, (Version 1)

Special tools and workshop equipment required

- Torque Screwdriver VAG1624- , measuring range: 1 through 5 Nm
- Or: Torque Wrench 1783 2-10Nm VAG1783-, measuring range: 2 to 10 Nm
- ◆ Or: Electronic Torque Wrench 3-60Nm VAS6583- , measuring range 3 to 60 Nm

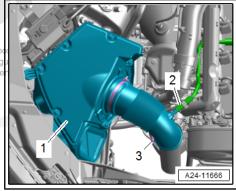
Tightening Specification Table for Installation:

Component / Fastening Element:	[Nm]
Air filter upper section bolts	3.5

Step 1 - Air Filter Element, Removing:

- Loosen the hose clamp and remove the air guide pipe.
- Remove the screws and remove the air filter upper section -1-.

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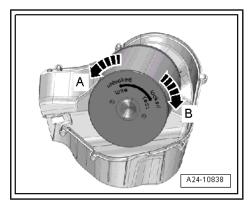


Turn the filter element counter-clockwise -arrow A- and remove it.

Step 2 - Air Filter Element, Installing

 Check the housing and water drains for dirt and clean them if necessary. Refer to

⇒ "3.72.5 Air Filter Housing, Cleaning", page 94



- Insert the new filter element in the air filter upper section and turn it clockwise -arrow B- until it can be felt engage.
- Place the air filter upper section without great force onto the air filter lower section. Make sure that the air filter upper section seals tightly with the air filter lower section.
- Install the screws in the air filter upper section and tighten to the tightening specification (Tightening Specification Table for Installation, refer to <u>⇒ page 90</u>).
- Install the air guide pipe on the air filter upper section and position the hose clamps.

Additional installation procedures occur in reverse order.



For the 4-cylinder gasoline engine 2.0L TFSI, there are additional versions of the air filter. Refer to

⇒ "3.72.2 4-Cylinder Gasoline Engine 2.0L TFSI (Version 2)", *page 91* .



Special tools and workshop equipment required

- Torque Screwdriver VAG1624-, measuring range: 1 through
- Or: Torque Wrench 1783 2-10Nm VAG1783-, measuring range: 2 to 10 Nm
- Or: Electronic Torque Wrench 3-60Nm VAS6583-, measuring range 3 to 60 Nm

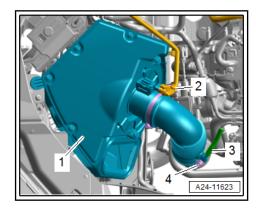
Tightening Specification Table for Installation:

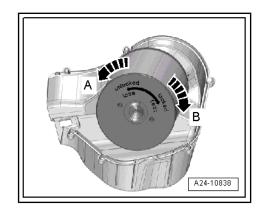
Component / Fastening Element:	[Nm]
Air filter upper section bolts	3.5

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Step 1 - Air Filter Element, Removing:

- Loosen the hose clamp and remove the air guide pipe.
- Disconnect the connector -2- for the Mass Airflow Sensor -
- Remove the screws and remove the air filter upper section -1-.

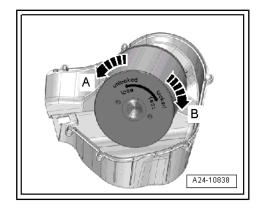




Press the release button, turn the filter element counter-clockwise -arrow A- and remove.

Step 2 - Air Filter Element, Installing

- Check the housing and water drains for dirt and clean them if necessary. Refer to ⇒ "3.72.5 Air Filter Housing, Cleaning", page 94.



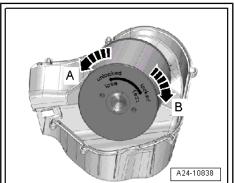
- Insert the new filter element in the air filter upper section and turn it clockwise -arrow B- until it can be felt engage.
- Place the air filter upper section without great force onto the air filter lower section. Make sure that the air filter upper section seals tightly with the air filter lower section.
- Install the screws in the air filter upper section and tighten to the tightening specification (Tightening Specification Table for Installation, refer to <u>⇒ page 91</u>).
- Install the air guide pipe on the air filter upper section and position the hose clamps.

Additional installation procedures occur in reverse order.



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For the 4-cylinder gasoline engine 2.0L TFSI, there are additional versions of the air filter. Refer to ⇒ "3.72.1 4-Cylinder Gasoline Engine, 2.0L TFSI, (Version 1)", page 90 .



3.72.3 6-Cylinder Gasoline Engine 3.0L TFSI

Special tools and workshop equipment required

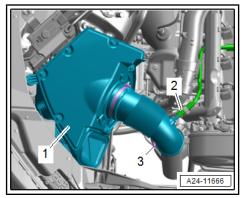
Torque Screwdriver - VAG1624-, measuring range: 1 through

Tightening Specification Table for Installation:

Component / Fastening Element:	[Nm]
Air filter upper section bolts	3.5
Air filter element screw	1.5

Step 1 - Air Filter Element, Removing:

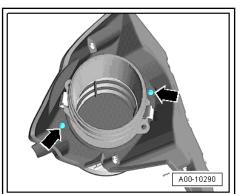
- Loosen the hose clamp -3- and remove the air guide pipe.
- Remove the screws and remove the air filter upper section.



Remove the filter element by removing both bolts -arrowsfrom the air filter upper section.

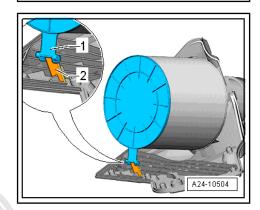
Step 2 - Air Filter Element, Installing

Check the housing and water drains -arrow- for debris and clean if necessary. Refer to ⇒ "3.72.5 Air Filter Housing, Cleaning", page 94.



- Insert the new filter element centered in the mount on the air filter upper section. While doing so the retaining strap for the air filter unit -1- must line up with the retaining strap for the air filter upper section -2-.
- Place the air filter upper section without great force onto the air filter lower section. Make sure that the air filter upper section seals tightly with the air filter lower section.
- Install the screws in the air filter upper section and tighten to the tightening specification (Tightening Specification Table for Installation, refer to ⇒ page 92).
- Install the air guide pipe on the air filter upper section and position the hose clamps.

Additional installation procedures occur in reverse order.



3.72.4 4-Cylinder Diesel Engine 2.0L TDI

Special tools and workshop equipment required

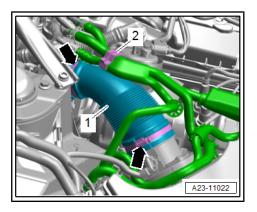
- ◆ Torque Screwdriver VAG1624-, measuring range: 1 through 5 Nm
- Or: Torque Wrench 1783 2-10Nm VAG1783- , measuring range: 2 to 10 Nm
- Or: Electronic Torque Wrench 3-60Nm VAS6583-, measuring range 3 to 60 Mm copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability

Tightening Specification Table for Installation on in this document. Copyright by AUDI AG.

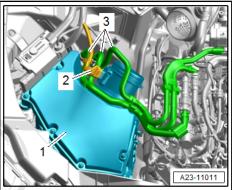
Component / Fastening Element:	[Nm]
Air filter upper section bolts	3.5

Step 1 - Air Filter Element, Removing:

 Loosen the hose clamp -arrows- and remove the air duct pipe -1-.



- Disconnect the connector -2- for the Mass Airflow Sensor -G70- .
- Free up the fuel hoses -3- and push them to the side.
- Remove the screws and remove the air filter upper section



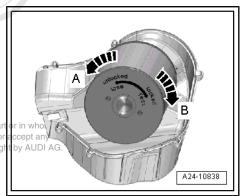
 Press the release button, turn the filter element counter-clockwise -arrow A- and remove.

Step 2 - Air Filter Element, Installing

 Check the housing and water drains for dirt and clean them if necessary. Refer to

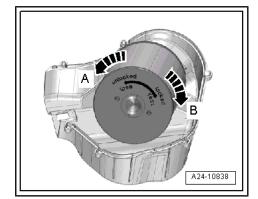
⇒ "3.72.5 Air Filter, Housing, Cleaning" page 94 commercial purposes, in pa

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- Insert the new filter element in the air filter upper section and turn it clockwise -arrow B- until it can be felt engage.
- Place the air filter upper section without great force onto the air filter lower section. Make sure that the air filter upper section seals tightly with the air filter lower section.
- Install the screws in the air filter upper section and tighten to the tightening specification (Tightening Specification Table for Installation, refer to ⇒ page 93).
- Install the air guide pipe on the air filter upper section and position the hose clamps.

Additional installation procedures occur in reverse order.



3.72.5 Air Filter Housing, Cleaning

Procedure:

 Remove any loose dirt residue and leaves from the air filter housing (upper and lower sections). Check the water drain hose in the air filter lower section for dirt and adhesives, and clean if necessary.



Note

- When cleaning the air filter housing with compressed air, observe the following: cover the mass airflow sensor with a clean
- In countries with cold climates, the snow screen must also be cleaned in the intake line. Observe the specification in the ⇒ Maintenance Intervals; Rep. Gr. 03.

6-Cylinder Diesel Engine 3.0L TDI (NOT 3.72.6 FOR NORTH AMERICAN MARKET)

NOT FOR NORTH AMERICAN MARKET

Special tools and workshop equipment required

- ◆ Torque Screwdriver VAG1624-, measuring range: 1 through 5 Nm
- Or: Torque Wrench 1783 2-10Nm VAG1783-, measuring range: 2 to 10 Nm
- Or: Electronic Torque Wrench 3-60Nm VAS6583-, measuring range 3 to 60 Nm

Tightening Specification Table for Installation:

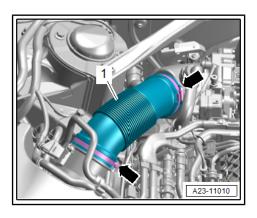
Component / Fastening Element:	[Nm]
Air filter upper section bolts	3.5

Step 1 - Air Filter Element, Removing:

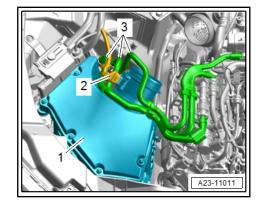
Loosen the hose clamp -arrows- and remove the air duct pipe

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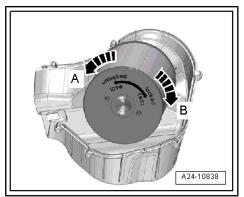
- Disconnect the connector -2- for the Mass Airflow Sensor -G70- .
- Free up the fuel hoses -3- and push them to the side.
- Remove the screws and remove the air filter upper section



Press the release button, turn the filter element counter-clockwise -arrow A- and remove.

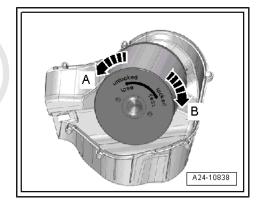
Step 2 - Air Filter Element, Installing

Check the housing and water drains for dirt and clean them if necessary. Refer to ⇒ "3.72.5 Air Filter Housing, Cleaning", page 94



- Insert the new filter element in the air filter upper section and turn it clockwise -arrow B- until it can be felt engage.
- Place the air filter upper section without great force onto the air filter lower section. Make sure that the air filter upper section seals tightly with the air filter lower section.
- Install the screws in the air filter upper section and tighten to the tightening specification (Tightening Specification Table for Installation, refer to ⇒ page 95).
- Install the air guide pipe on the air filter upper section and position the hose clamps.

Additional installation procedures occur in reverse order.



Dust and Pollen Filter, Replacing, ses, in part or in whole, is not 3.73

The dust and pollen filter is located under the glove compartment by AUDI AG.

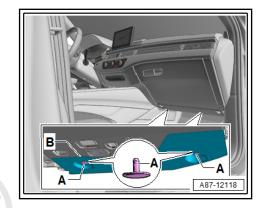
Removal Procedures:

For vehicles with driver training equipment, remove the driver training equipment pedal assembly if necessary. Refer to the installation instructions for driver training equipment.

Step 1 - Filter Element, Removing:

Cover the footwell in the area under the dust and pollen filter with paper.

Remove the screw clips -A- and the insulation -B-.

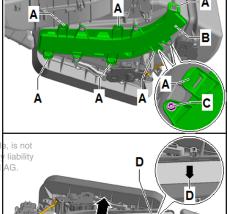


- Open the tabs -A- and remove the cover -B- downward.
- Remove the filter element -E- from the shaft in the direction of the -arrow-.

Step 2 - Filter Element, Installing:

- Clean the shaft with a vacuum cleaner before installing a new filter element.
- Insert the new filter element -E- on the correct side: the arrow -D- faces the fresh air blower.

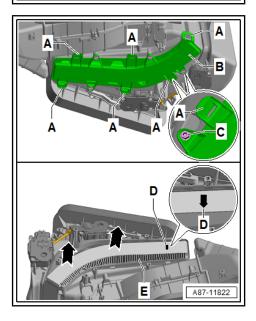
Additional installation procedures occurving reverse orderses, in part or in wh ermitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept a with respect to the correctness of information in this document. Copyright by AUD





Note

If the tabs -A- for the cover -B- on the heater and A/C unit or on the service cover are broken, the service cover -B- can also be fastened to the heater and A/C unit with four metal collar bolts -C- (for example, 3.5 x 16 mm or 4.9 x 16 mm, refer to the Electronic Parts Catalog (ETKA)). To do so, create 4.5 mm holes at the mounting points marked with -C- on the cover -B-.



3.74 Water Separator (Fuel Filter), Draining Water



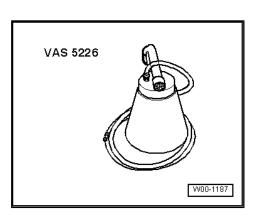
WARNING

Risk of injury due to the fuel being hot and under pressure.

- ♦ Wear safety gloves.
- ♦ Wear protective eyewear.
- ◆ Carefully loosen the banjo bolt.

Special tools and workshop equipment required

♦ Suction Pump - VAS5226-



- ◆ Torque Wrench 1783 2-10Nm VAG1783- , measuring range: 2 to 10 Nm
- Or: Torque Wrench 1410 VAG1410-, measuring range: 4 to 20 Nm
- Or: Electronic Torque Wrench 3-60Nm VAS6583- , measuring range 3 to 60 Nm

Installation Tightening Specification Table:

Fastening Element	Tightening specification [Nm]
Filter housing cover bolts	4

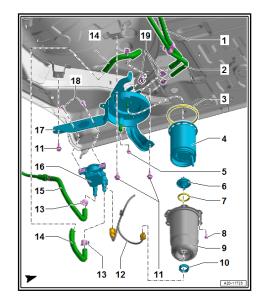
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The water separator filter is located on the engine/motor compartment.

Procedure:

- Place the hose on the filter housing water drain plug -5-. Guide the opposite side of the hose into the container.
- Start the engine. The system pressure is necessary for the fuel filter water discharge.
- Slowly open the water drain plug until water comes out.
- If diesel fuel comes out: Close the water drain plug.
- Turn off the engine and remove the hose from the water drain
- Install the water drain plug -5- to the tightening specification. (Tightening specification table for installation. Refer to ⇒ page 98).

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3.75 Fuel Filter, Replacing

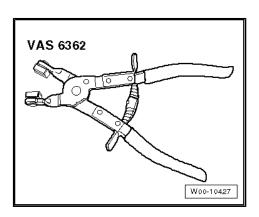
WARNING

Risk of injury due to the fuel being hot and under pressure.

- Wear safety gloves.
- ♦ Wear protective eyewear.
- Let the fuel line connection point cool.
- Place a cloth at the connection point and carefully loosen.

Special tools and workshop equipment required

♦ Hose Clip Pliers - VAS6362-



- Torque Wrench 1783 2-10Nm VAG1783-, measuring range: 2 to 10 Nm
- Or: Torque Wrench 1410 VAG1410-, measuring range: 4 to 20 Nm
- Or: Mini Torque Wrench VAS6854-, measuring range: 5 to 13 Nm
- Container

Installation Tightening Specification Table:

Fastening Element	Tightening specifica- tion [Nm]
Nuts for the bracket	8

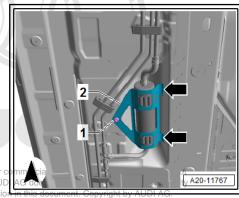
The fuel filter is located on the underbody.

Removal Procedures:

Remove the right underbody trim panels. Refer to ⇒ Body Exterior; Rep. Gr. 66; Underbody Trim Panel; Underbody Trim Panels, Removing and Installing.

Procedure: Step 1 - Removing the Fuel Filter

- Observe the safety precautions when working on the fuel system. Refer to ⇒ Fuel Supply - Diesel Engines; Rep. Gr. 00; Safety Precautions; Safety Precautions when Working on Fuel System.
- Remove the nut -1-.
- Tilt the bracket -2- down -arrows-, disengage it from the mounts and remove it.
- Place a container under the fuel filter cartage.



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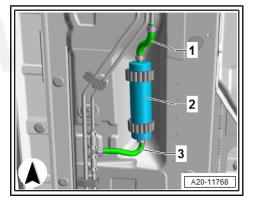
Remove the fuel supply hoses -1- and -3- using the hose clip pliers on the T-connection for aluminum lines and remove the fuel filter -2- including the fuel supply hoses.

Procedure: Step 2 - Installing the Fuel Filter

Installation procedures occur in reverse order. Note the tightening specifications (Tightening Specification Table for Installation ⇒ page 100).

Arrows on the filter housing indicate the direction of fuel filter cartage fuel flow.

Then bleed the fuel system. Refer to ⇒ Engine Mechanical; Rep. Gr. 23; Fuel Injection System; Fuel System, Filling and Bleeding.





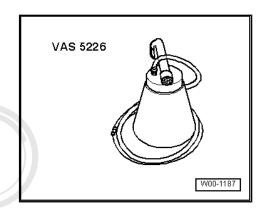
Note

- Do not loosen the spring clamps on the fuel filter.
- The spring clamps for the aluminum line on the T-connection must be replaced.

3.76 Water Separator Filter, Replacing

Special tools and workshop equipment required

Suction Pump - VAS5226-



- Torque Wrench 1783 2-10Nm VAG1783-, measuring range: 2 to 10 Nm
- Or: Torque Wrench 1410 VAG1410-, measuring range: 4 to 20 Nm
- Or: Electronic Torque Wrench 3-60Nm VAS6583-, measuring range 3 to 60 Nml by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability

Installation Tightening Specification Table: information in this document. Copyright by AUDI AG.

Fastening Element	Tightening specification [Nm]
Filter housing cover bolts	4

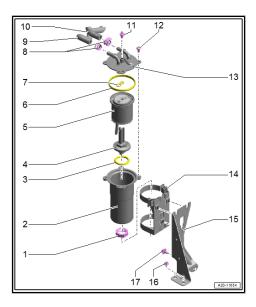
The water separator filter is located in the engine/motor compartment.

Procedure Step 1 - Removing

- Place the hose of the Suction Pump VAS5226- with a suitable adapter on the water drain plug -11-.
- Open the water drain plug -11-.
- Extract using the Suction Pump VAS5226- until there is no more diesel fuel discharge
- Tighten the water drain plug -11- hand-tight.
- Remove the bolts -12- and lift the filter housing cover with the fuel hoses attached to the side.
- Remove the filter element -5- and seals from the filter housing -2-.
- Extract the remaining diesel fuel using the Suction Pump -VAS5226- .
- Clean the filter housing -2-.

Procedure Step 2 - Installing:

- Insert the new filter element centered into the filter housing.
- Install the new seals.
- Install and align the filter housing cover.
- Install the bolts for the filter housing cover and tighten to the tightening specification. For the installation tightening specification table, refer to ⇒ page 101.
- Then bleed the fuel system. Refer to ⇒ Rep. Gr. 23; Fuel Injection System; Fuel System, Filling and Bleeding.



3.77 Fuel Tank, Adding Fuel Additive (NOT FOR NORTH AMERICAN MARKET)

NOT FOR NORTH AMERICAN MARKET

Special tools and workshop equipment required

Or: Multipurpose Additive for Gasoline Engines - G 001 780 M3-

Testing Values and Process Specifications Table:

China, Middle East	Russia	India
engines	engines VW 507 53 A: applies to all gasoline	VW 507 53 B: applies to all gasoline engines VW 507 53 A: applies to all gasoline engines except g-tron and E85 Flexible Fuel
	Multipurpose Additive for Gasoline Engines - G 001 780 M3-	Multipurpose Additive for Gasoline Engines - G 001 780 M3-

Maintenance point only applies to certain countries: Observe the Maintenance Table specification!

Procedure:

Add additive to the gasoline fuel tank according to the current tank level and also according to the dosing instructions on the additive container.



Note

- Only use additives that meet the standard VW 507 53 A or VW 507 53 B.
- Recommend to the customer to completely fill up the fuel tank after adding the additive.

Reducing Agent (AdBlue®), Filling Com-3.78 pletely



WARNING

Risk of injury due to contact with reducing agent!

- Do not kink the lines of the filling device / filling system.
- If there is contact with the fluid, wash it off immediately with water and see a doctor.

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CAUTION

Risk of damaging the trim panel and body components due to contact with the reducing agent.

- Do not kink the lines of the filling device / filling system.
- Clean the affected areas with clean water and a cotton cloth.
- Remove any crystallized reducing agent with warm water and a sponge.



Note

- The use of reducing agent is legally required in vehicles with the selective catalytic reduction system.
- The reducing agent is used in diesel-powered vehicles to treat exhaust gas by reducing the nitrogen oxides.
- The reducing agent is not a diesel additive and must not be Protected by copylight. Copying for private or commercial purposes, in part or in whole, is not
- permitted unwith resp Do not mix any additives with the reducing agent. Also, do not thin the reducing agent with water.
 - Only use reducing agent in designated original bottles.
 - Follow the reducing agent manufacturer instructions for use and storage.
 - Both the -VAS6542- and the -VAS6960- can be used to fill the reducing agent.

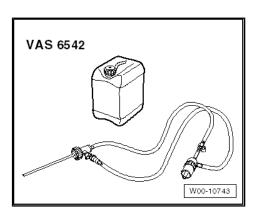
⇒ "3.78.1 Reducing Agent (AdBlue®), Filling using AdBlue Filling Tool VAS6542 ", page 103

⇒ "3.78.2 Reducing Agent (AdBlue®), Filling using AdBlue Filling System VAS6960 ", page 106 .

3.78.1 Reducing Agent (AdBlue®), Filling using AdBlue Filling Tool - VAS6542-

Special tools and workshop equipment required

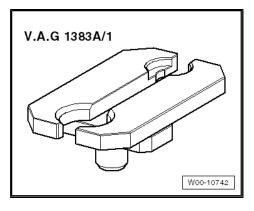
◆ AdBlue Filling Tool - VAS6542-



Engine and Gearbox Jack - VAS6931-



♦ Mounting Plate - VAG1383A/1-

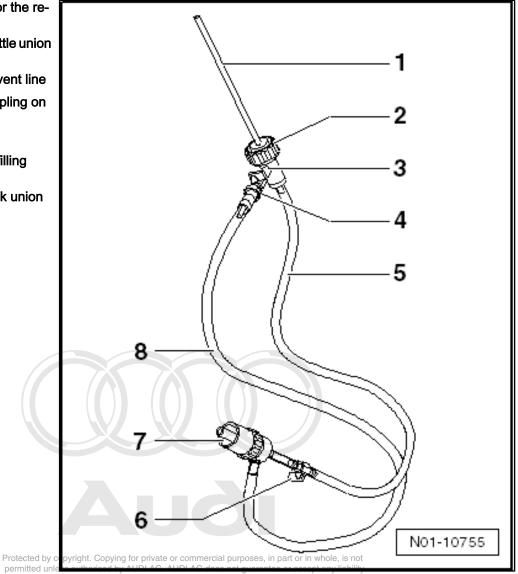


Components for the -VAS6542-





- 1 Vent connection for the reducing agent bottle
- 2 Reducing agent bottle union
- 3 Shut-off valve for vent line
- 4 Quick-release coupling on the vent line
- 5 Filling hose
- 6 Shut-off valve for filling
- 7 Fuel tank filler neck union nut
- 8 Vent line

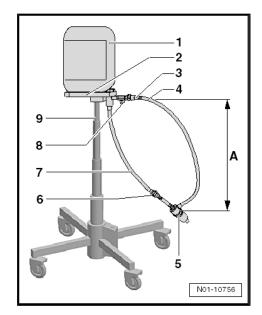


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Procedure:

- Open the fuel filler door and remove the reducing agent tank
- Using a lint-free cotton cloth soaked in water, clean the filler neck for the reducing agent.
- Close the shut-off valves for the vent- and filling hose of the -VAS6542-.
- Place the -VAS6542- on the reducing agent bottle (refer to the Parts Catalog and install it all the way.

Position the reducing agent bottle on the -VAS6931- using the -VAG1383A/1-. The difference in height between the reducing agent bottle and the tank filler neck must somewhere be between 60 - 80 cm -dimension A-.



- Place the -VAS6542- onto the vehicle filler neck and install it all the way.
- Open the vent hose shut-off valve.
- Open the filling hose shut-off valve and fill the reducing agent tank on the vehicle completely. It is completely filled when the bottle shrinks and the vent line fills with fluid.
- Close the filling hose shut-off valve.
- Close the vent hose shut-off valve.
- Disconnect the quick-release coupling from the vent line and allow the extra fluid to flow into a container suitable for that purpose.
- Remove the -VAS6542- from the fuel tank filler neck.
- Use a lint-free cotton cloth soaked in water to clean the reducing agent tank filler neck and cap.
- Attach the cap for the reducing agent tank.
- Take the bottle from the mounting plate and set it on the floor.
- Open the filling hose shut-off valve and drain any fluid still in the bottle.
- Remove the -VAS6542- from the bottle.



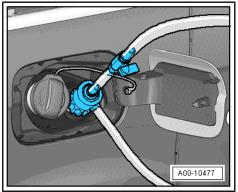
Note

The application of gravity to fill the reducing agent may cause the reducing agent tank to be overfilled. When filling with the -VAS6542- (or other filling devices that apply gravity), these devices must be disconnected immediately from the vehicle after the filling procedure.



Reducing Agent (AdBlue®), Filling using 3.78.2 AdBlue Filling System - VAS6960-

Special tools and workshop equipment required





AdBlue Filling System VAS6960 - VAS6960-



Procedure:

- Open the fuel filler door and remove the cap for the reducing agent tank.
- Using a lint-free cotton cloth soaked in water, clean the filler neck for the reducing agent.
- Guide the nozzle of the -VAS6960- into the reducing agent tank filler neck.
- Operate the nozzle and completely fill the reducing agent.
- Remove the nozzle from the reducing agent tank filler neck.
- Use a lint-free cotton cloth soaked in water to clean the reducing agent tank filler neck and cap.
- Attach the cap for the reducing agent tank private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.



Note

- ♦ Observe the Owner's Manual for the -VAS6960-.
- The nozzle for the -VAS6960- switches off automatically when the maximum fill level is reached.
- 3.79 Natural Gas System, Checking for Damage and Performing Leak Test (NOT FOR NORTH AMERICAN MARKET)

NOT FOR NORTH AMERICAN MARKET

DANGER

There is a risk of explosion due to escaping natural gas!

- Avoid bringing any ignition sources near the natural gas system.
- Follow the immediate actions if a leak is suspected. Refer to ⇒ "3.79.1 Immediate Actions if a Leak is Suspected", page 115
- ♦ Only specially trained technicians may perform service and maintenance on the natural gas system. Refer to ⇒ Natural Gas System General Information; Rep. Gr. 00; Training/ Personnel Qualifications.



WARNING

There is a risk of suffocation due to escaping natural gas!

- ◆ Follow the immediate actions if a leak is suspected. Refer to ⇒ "3.79.1 Immediate Actions if a Leak is Suspected" ses, in part or in whole, is not page 115 permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.
- Only specially trained technicians may perform service and maintenance on the natural gas system.

Special tools and workshop equipment required

◆ Gas Leak Detector - VAS523003-



Hand Wheel - T50026-



Flex Head Socket Wrench -T40333-

◆ Explosion-proof LED Flashlight - VAS6901-



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♦ Engine and Gearbox Jack - VAS6931-

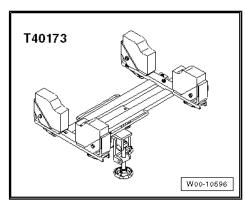




♦ Adapter - T40173/2-



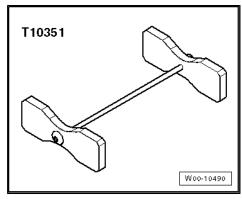
♦ Gearbox Support - T40173-



Supports - T40173/3-



Bracket - T10351-



- Endoscope VAS6785A-, VAS6748A or VAS6748B (probe diameter: maximum 4mm)
- Torque Wrench 1783 2-10Nm VAG1783-, measuring range: 2 to 10 Nm
- Flex Head Socket Wrench T40333-
- Hand mirror



Note

- Work on the natural gas system is only permitted at a work station for natural gas vehicles and is performed by specially trained technicians.
- When performing a natural gas system check, also pay attention to the legal requirements applicable to the respective market regarding the qualifications of the technicians performing the work, as well as the documentation and additionally, whole, is not required test proceeds by copyright. Copyright or private or commercial purposes, in part or in whole, is not required test proceeds. By Occeptual Cest of the correctness of information in this document. Copyright by AUDI AG. When working on natural gas fuel tanks, make sure that the
- fuel tank surface is not damaged. If necessary, protect the fuel tank surface using suitable service equipment.
- For general information on natural gas system procedures, refer to the repair manual under: Engine -> Natural Gas System General Information.

Natural gas under pressure can escape from the natural gas containers.

Natural gas is highly flammable and can ignite when mixed with

Natural gas is NOT odorless because strong-smelling additives were added to it during processing.

Inhaling natural gas can make the technician drowsy and cause lung damage. At high concentrations, there is the danger of suffocating due to the lack of oxygen.

Requirements:

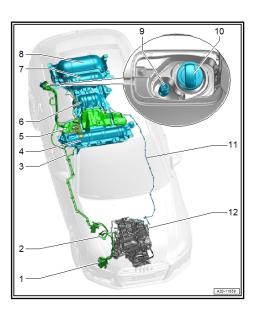
- All locations on the natural gas system to be tested must be accessible.
- Natural gas indicator lamp in the instrument cluster must not light up! Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not
- Natural gas tank milisturbes an least 80% of AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.
- Applies for leak tests using the gas leak detector: make sure the work station is draft free! A draft greater than 1.8 km/h (slow gust) leads to a false measurement result.

Removal Procedures:

- Removing the engine cover.
- Remove the underbody trim panel for the natural gas tank. Refer to ⇒ Body Exterior; Rep. Gr. 66; Underbody Trim Pan-
- Remove the heat shields for the natural gas tank. Refer to ⇒ Body Exterior; Rep. Gr. 66; Heat Shields.

Step 1 - Checking for Damage

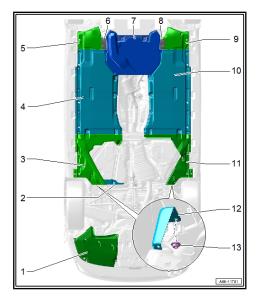
- Check the natural gas system components in the engine compartment for damage.
- Also check if the pressure relief valve rubber plug -arrow- is on the natural gas pressure regulator -A20-12001-.
- Check the condition of the natural gas filler neck -9- and clean if necessary.
- Raise the vehicle.



- Disassemble the left center underbody trim panel -A66-11781, item 4- in order to have a view of the underlying natural gas line -A20–11859, item 11-. Refer to ⇒ Body Exterior; Rep. Gr. 66; Underbody Trim Panel.
- Check the natural gas line for damage.

Natural Gas Tanks, Checking:

- Remove tank 1 -A20–11859, item 8-. Refer to \Rightarrow Fuel Supply System g-tron; Rep. Gr. 20 ; Fuel Tank; Fuel Tank, Removing and Installing.
- Check all around tank 1 for damage. Refer to ⇒ Natural Gas System General Information; Rep. Gr. 20; Fuel Tank.
- Check the expiration date on the natural gas tank type plate.
- If expired, replace the natural gas tank. Refer to ⇒ Rep. Gr. 20; Fuel Tank; Natural Gas Tank, Removing and Installing.
- Check tanks 2, 3 and 4 -A20-11859, items 4, 6 and 7- for damage. Check the top area of the tanks using the Endoscope VAS6785A- or the hand mirror in accessible areas.
- Compare any abnormalities with the images of damage patterns. Refer to ⇒ Natural Gas System General Information; Rep. Gr. 20; Fuel Tank.
- Check the expiration date on the natural gas tank type plate.
- If expired, replace the natural gas tank. Refer to ⇒ Rep. Gr. 20; Fuel Tank; Natural Gas Tank, Removing and Installing.
- Damaged tanks or components must be replaced and afterward must undergo a natural gas system inspection.





Note

- If there are any doubts with regard to any damages when comparing them to the damage assessment catalog during the above inspection procedure, remove the respective tanks and check them thoroughly.
- After removing and installing a tank, a natural gas system inspection must be performed according to the country-specific requirements.

Step 2 - Natural Gas System, Shifting into Operating Status

The natural gas system must be filled with at least 80% natural gas for the leak test.



- Use the Handwheel T50026- and the Flex Head Socket Wrench - T40333- to make sure that all four mechanical shutoff valves (N361, N362, N363 and N429) are completely open.
- Start the engine in order to shift the pressure ratios in the natural gas system into the operating condition.
- Check if the green CNG button turns on in the instrument cluster to make sure the vehicle was started in natural gas mode.
- Turn off the engine again.

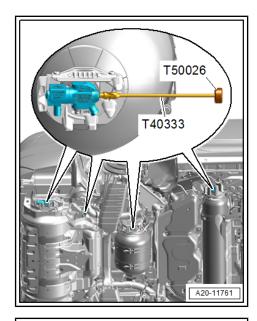
Step 3 - Leak Test

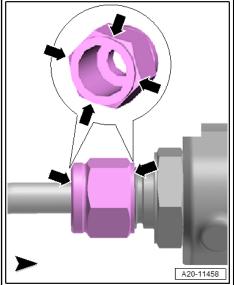
For the leak test using the Natural Gas Leak Detector -VAS6227-, the following always applies:

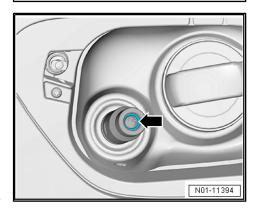
- Check all of the gas system threaded connections around the entire circumference (all 90°) and all connecting seams -arrows- for leaks several times.
- The probe must be a maximum of 5 mm away from the area/ component to be tested! Measurement is no longer possible at distances greater than 5 mm.
- ◆ The gas leak detector can only detect if there is gas in the surrounding air.
- Only the illumination of the green LED for »O. K.« means OK on the natural gas leak detector.
- As soon as a yellow or red LED comes on, a leak detection spray must be used to verify if there actually is a gas leak. When using a leak detection spray, no bubbles must form in the sprayed area within a test time of three minutes.
- With the cap removed, check the natural gas filler neck near the opening -arrow- for leaks.



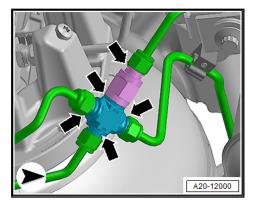




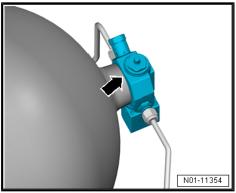




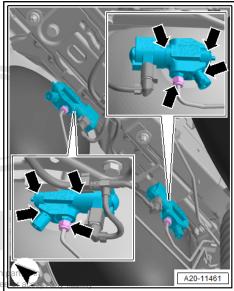
Check the distribution piece at the interface to the check valve -arrow- and at all bolted connection points -arrows- to the natural gas lines for leaks.



Check the threaded connections -arrow- from the Fuel Tank Shut-Off Valve 1 - N361-, Fuel Tank Shut-Off Valve 2 - N362-, Fuel Tank Shut-Off Valve 3 - N363- and Fuel Tank Shut-Off Valve 4 - N429- to their respective natural gas tanks for leaks.

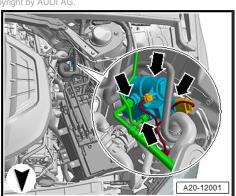


Check all fuel tank shut-off valves at the threaded connection for the mechanical shut-off valve -arrow- and for the thermal fuse -arrow- as well as at the threaded connection for the electro-magnetic valve and at the threaded connection for the natural gas line -arrows- for leaks.



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Check the natural gas pressure regulator (on the left side of the engine compartment on the wheel housing) near the high and low pressure line connections -arrows-, at the threaded connection for the Natural Gas High Pressure Valve - N372--arrow- and at the threaded connection and connector for the Sensor Module -GX23- -arrows- for leaks.



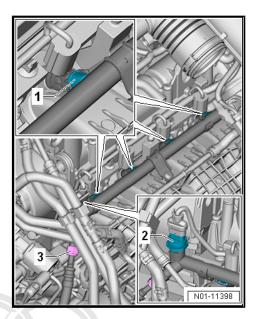
- Check the natural gas fuel rail near the flexible low pressure line connection -3-, at the threaded connection and connector for the Fuel Rail Temperature and Pressure Sensor -GX21--2- and at all four fuel injection valves (N366-N369) -1- for leaks.
- Leaking components must be replaced and then removed by means of a natural gas system inspection.

Installation procedures occur in reverse order.



Note

- When working on the natural gas system, make sure the work area is clean and tidy.
- ♦ Additional information about the natural gas system and the fuel tanks can be found under ⇒ Fuel Supply - Gasoline Engines; Rep. Gr. 20; Fuel Tank



3.79.1 Immediate Actions if a Leak is Suspec-

Special tools and workshop equipment required

♦ Hand Wheel - T50026-

T50026 Protected by copyright. Copying for private or commercial permitted unless authorised by AUDI AG. AUDI AG does rposes, in part ot guarantee or with respect to the correctness of information in this doc ment. Copyriah W00-11853

◆ Flex Head Socket Wrench -T40333-

Procedure:

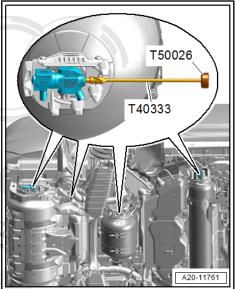
- Manually close all four fuel tank shut-off valves -1- and -2- using the Flex Head Socket Wrench -T40333- and the Handwheel - T50026- .
- Ventilate the work area.
- To determine the next steps, immediately inform the personnel trained for working on gas systems.



Note

If the gas continues to escape after closing the fuel tank shut-off valves (an odor develops), the vehicle must be moved outdoors and marked.

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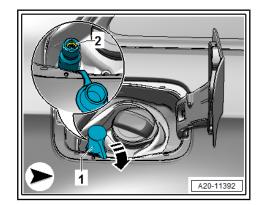


Natural Gas Filler Neck, Checking Con-3.80 dition and Cleaning, if Necessary (NOT FOR NORTH AMERICAN MARKET)

NOT FOR NORTH AMERICAN MARKET

Procedure:

- Open the fuel filler door and check the condition of the cap
- Remove the cap in -direction of arrow-.
- Make sure the seal -2- is present and check its condition.
- If there are defects, replace the seal.
- Check the inside and outside of the natural gas filler neck for dirt and damage.
- If the filler neck is dirty, clean using compressed air and/or a dry towel. This will not damage the filler neck.



3.81 Vehicle Doors, Removing the Edge Protection

Procedure:

Remove the edge protection carefully from all vehicle doors.

3.82 Vehicle Exterior, Checking Unprotected Locations for Debris and Cleaning if Necessary

Procedure:

- Check the vehicle from the outside for unprotected positions that are not covered by the full body cover and the transportation protection film for debris.
- Clean the contaminated areas.
- 3.83 Vehicle Exterior, Removing Protective Film

Procedure:

- Carefully and completely remove the protective films.
- 3.84 Transportation Protection Film and Full Body Cover, Checked for Correct Seating and Adjusting if Necessary

Procedure:

- Check the full body cover for correct seating on the body and if necessary adjust.
- Check the transportation protection films for correct seating and if necessary adjust.
- 3.85 Service Display for Checking Natural Gas System, Resetting (NOT FOR NORTH AMERICAN MARKET)



Note

- Applies to vehicles with a natural gas system from MY 2019.
- ♦ The Full pre-delivery inspection test program may also be performed as part of the pre-delivery inspection.
- Resetting the specific interval display for natural gas vehicles after checking the natural gas system (note the country-specific legal requirements regarding the natural gas system inspection).

Procedure:

- Connect the Vehicle Diagnostic Tester.
- Select Diagnostic mode and start the diagnosis.
- Perform the vehicle identification.
- Deselect "Working with Guided Fault Finding" by removing v and pressing Accept.
- Switch to the "Special functions" tab.
- ""Select "17 Service Display for Checking Natural Gas System, Resetting".
- Continue the program sequence.

3.86 Transportation Protection Film, Replacing According to Manufacturer's Specification

Procedure:

- Register with the following data at "http://www.tesa.com/extranet".
- Login / E-mail: Bodyguard 50530
- Password: PflegeVW
- Order a transportation protections with the following informa-
- For Audi vehicles
- Order number: APS 277 140 (1400 mm)
- Apply the new transportation protection films according to manufacturer's specification.



Note

- On vehicles with the PR number "5K0" no transportation protection films are applied on the windshield, these are knowingly ordered without the transportation protection films.
- On a vehicle with soft top leave the factory-installed transportation protection cover on the convertible top.

3.87 Full Body Cover, Replacing According to Manufacturer Specification

Procedure:

- Remove the full body cover.
- Adjust the new body cover according to manufacturer's specification.

3.88 Paint, Decorative Trim, Windows, and Wiper Blades, Checking for Cleanliness

Procedure:

- Checking exterior paint, decorative trim, windows, and wiper blades for cleanliness.
- If there are defects, clean the contaminated components.

3.89 Body Vehicle Paint, Checking for Damage and Corrosion with Lids and Doors Open and on the Vehicle from Below

Procedure:

- Open all vehicle doors and lids.
- Check the body interior and exterior for paintwork damage and corrosion.

Defects of any type are to be remedied by a repair procedure.

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3.90 Vehicle Parked Outside, Locking

Procedure:

- For vehicles parked outside lock using the vehicle key.
- 3.91 Vehicles Parked Outside without Protective Coating, Installing Transportation Protection and Full Body Cover (Does Not Apply to Vehicles with Control Number 5K0)

Procedure:

- Apply the transportation protection films. Refer to 3.86 Transportation Protection Film, Replacing According to Manufacturer's Specification", page 118
- Apply the full body cover. Refer to 3.87 Full Body Cover, Replacing According to Manufacturer Specification", page 118

Road Test, Performing 3.92

Procedure:

- Evaluate the following during the road test:
- Engine: output, stalling, idling, acceleration, starting behavior (warm and cold), engine noises
- Clutch: starting behavior, pedal force, smell, noises during a change in load
- Manual transmission: ease of movement, gearshift lever position, transmission noises
- Automatic transmission: selector lever position, shift lock/ignition key lock, transmission noises, kickdown, shift behavior, instrument cluster display
- Foot and parking brake: function, free play and effectiveness, pulling to one side, response characteristics (braking delay), rubbing, squeaking
- ABS function: when braking with activated ABS, the brake pedal must pulse noticeably.
- Steering: function, steering play, steering wheel in the center position when driving in a straight line, directional stability (pulling to the side)
- Imbalance: wheels, driveshafts
- Wheel bearing: noises
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Note

All checks depend on the vehicle equipment and the available options (city/rural).

3.93 Vehicles in Storage or Inventory, Fol**lowing Maintenance Table Measures** under "Before Vehicle Delivery to the

Customer" (NOT FOR NORTH AMERI-**CAN MARKET)**

NOT FOR NORTH AMERICAN MARKET

Maintenance point only applies to vehicles in storage or inventory

Procedure:

- Before delivering the vehicle to the customer, check the due dates of the following three measures from the Maintenance Table for vehicles in storage or inventory and if necessary perform:
- For vehicles older than 12 months (according to the production date), replace the brake fluid. Refer to ⇒ "3.18 Brake Fluid, Changing", page 29
- Replace the battery on vehicles with a "faulty battery". Refer to ⇒ Rep. Gr. 27; Battery; Battery, Removing and Installing.
- Check the brake rotors for rust film, and if necessary apply the brakes to clean them according to the manufacturer's specification.

3.94 Accessories, Installing

Procedure: opyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability

Place the respective accessories in the vehicle tool kit. AG.



Note

- The accessories present can vary depending on the model, equipment and market requirements.
- Accessories can depending on the vehicle model be found in the luggage compartment, glove compartment or the accessories kit bag.

3.95 Checklist "Documentation for Performing the Maintenance Program," Checking Presence

Procedure:

- Check in the "Documentation for Performing the Maintenance Program" checklist is located in the glove compartment.
- If necessary place the missing "Documentation for Performing the Maintenance Program" checklist in the glove compartment.

3.96 Checklist "Documentation for Performing the Maintenance Program," Signing and Placing in Vehicle File

Procedure:

Sign the "Documentation for Performing the Maintenance Program" checklist and place it in the vehicle file.

3.97 Maintenance Procedures, Checking if Performed on Time

Procedure:

- Check if all maintenance procedures where performed on time until now.
- Perform the open maintenance procedures and document them.

3.98 Management of Vehicles in Storage, Checking next Inspection Date and Enterina

Procedure:

- Determine the next inspection date with those responsible for the management of vehicles in storage.
- Enter the determined inspection date in the Maintenance Table.

3.99 Display Instruments, Setting Time and Date

Procedure:

To adjust the settings for the display instruments, refer to the radio system or MMI Owner's Manual.

3.100 Manual or Automatic Transmission, Selecting 1st Gear or Park Position

Procedure:

For vehicles with a manual transmission: select 1st gear.

Applies to vehicles with an automatic transmission: select the parking position.

S tronic Transmission, Changing ATF 3.101

Procedure:

Replace the ATF according to the procedure described in the repair manual. Refer to ⇒ 7-Speed Dual Clutch Transmission 0CJ, 0CK, 0CL, 0DN; Rep. Gr. 34; ATF; ATF, Draining and Filling.

3.102 Interior Rearview Mirror, Calibrating Compass

Procedure:

Calibrate the compass according to the repair manual speci- is not fication!teRefer to be is Body Interior Proposition 168 an Interior of any liability Rearview Mirror, Digital Compass, Calibrating Copyright

3.103 Instrument Cluster, Resetting Driver Information System

Procedure:

To reset the short and long-term memories for the driver information system, refer to the vehicle Owner's Manual.

Coolant Pump Drive Toothed Belt, 3.104 Checking

Toothed Belt Condition, Checking, 1.4L TFSI Engine:

- Remove the toothed belt guard. Refer to ⇒ 4-Cylinder Direct Fuel Injection, 1.4L 4V TFSI Engine EA211; Rep. Gr. 19; Coolant Pump/Coolant Thermostat; Coolant Pump, Removing and Installing
- Turn the crankshaft at the belt pulley bolt in the direction of engine rotation and then check the entire toothed belt for the following conditions:
- Cranks, cross-sectional breaks, tears (on side of cover) -arrow-
- Lateral movement
- Fraying of cords
- Tears (in tooth base) -arrow-
- Separation (toothed belt body, belt cords)
- Surface cracks (plastic shroud)
- Oil or grease contamination



It is essential to replace toothed belt if malfunctions are found. This will prevent any belt malfunctions. Replacing the toothed belt is a repair procedure.

Camshaft Drive Toothed Belt, Replacing 3.105

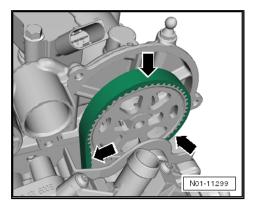
Procedure:

Replace the toothed belt of the camshaft drive according to the repair manual specification. Refer to ⇒ ; Rep. Gr. 15; Toothed Belt Drive; Toothed Belt, Removing and Installing.

3.106 Camshaft Drive Toothed Belt and Tensioning Roller, Replacing

Procedure:

- Replace the toothed belt of the camshaft drive according to in part or in whole, is not the repair manual specifications Refer to App Repai Groot 5 agantee or accept any liability Toothed Belt Drive; Foothed Belt, Removing and Installing Copyright by AUDI AG.
- Replace the tensioning roller according to the repair manual specification. Refer to ⇒ ; Rep. Gr. 15 ; Toothed Belt Drive; Overview - Toothed Belt .



Emissions Test (NOT FOR NORTH 4 **AMERICAN MARKET)**

NOT FOR NORTH AMERICAN MARKET



Note

- Observe the country-specific regulations.
- The emissions test described in the following was created according to legal requirements applicable in Germany.

4.1 Gasoline Engines, Performing Emissions Test (NOT FOR NORTH AMERI-CAN MARKET)

NOT FOR NORTH AMERICAN MARKET



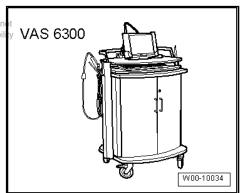
Note

- The following description applies to vehicles that are equipped with a catalytic converter regulated by "On - Board - Diagnostic" OBD.
- OBD monitors all components and partial systems that influence the emissions quality.

Special tools and workshop equipment required

◆ Emissions Testing Station - VAS6300-

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♦ Vehicle Diagnostic Tester - Adapter 16-1 - VAS5052/16-1-



Note

- An emissions test is only possible when all units of the Emissions Testing Station VAS6300- are connected properly according to operating instructions and are connected to each
- All procedures are displayed on the Emissions Testing Station - VAS6300- .

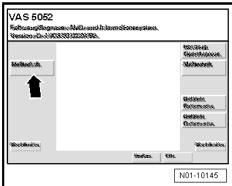
Test Requirements

- All of the test conditions and data required for the emissions test are on the emissions testing data sheet for the corresponding engine.
- If a barcode input of the emissions testing specification data is going to be performed, the emissions testing data sheet must be available as a paper printout.
- Automatic transmission: selector lever in "P" or "N" position.
- Manual transmission: gearshift lever in neutral.
- Parking brake applied
- Follow the instructions in the display.

Start Screen

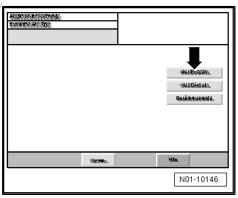
Select the "Emissions test" button -arrow-.

An overview for selecting the respective emissions test type appears.

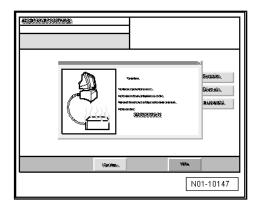


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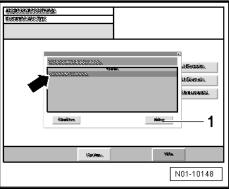
Display for the warm-up time appears.



Continue the emissions test according to the instructions on the display.



- When the selection for the emissions test specified value appears, select the corresponding "Selection for emissions test specified value" -arrow-.
- Either for a first-time emissions test "Standard specification values",
- Or, if an already performed emissions test is to be performed again "last vehicle".
- Select Continue -item 1- on the display.



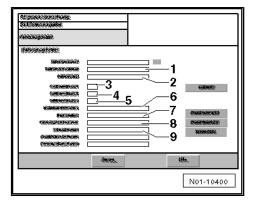
Vehicle Data Input

The vehicle data input menu appears.

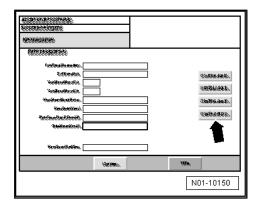
- Enter the following data from part 1 of the certificate of registration.
- ◆ -1- Vehicle manufacturer: "for example, AUDI"
- ◆ -2- Vehicle model: "for example, A6 / 4G"
- -3- Key number for 14.1: "for example, 0572"
- ◆ -4- Key number for 2.1: "for example, 0588"
- ◆ -5- Key number for 2.2: "for example, 846"
- ◆ -6- Engine code "for example, CHVA"
- ◆ -7-License plate: "for example of No-MV cit234" oses, in part or in whole, is not
- ♦ -8- VIN: reforcexample in WAUDIAS AUDIAS does not guarantee or accept any liability Copyright by AUDIAG.
- Enter the odometer reading "for example, 33350" at -item 9-.

Note

- ♦ Use the GO TO button to start other functions.
- ♦ Use the GO TO button to cancel the test.



Select "with OBD" -arrow-.



Emissions Test Specified Data Input



Note

- If the specified values are not available as a bar code, they must be entered manually.
- For all test conditions and data required for the emissions test. Refer to ⇒ Data sheets for exhaust emission test for the corresponding engine.

Manual Emissions Test Specified Data Input

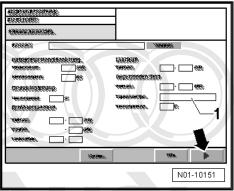
- Follow the instructions on the display for manual data input.
- Enter the values on the emissions testing data sheet under "Test values for the emissions test" on the display in the following order: Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability
- Test RPM (Idle Speed) 1 -
- Warm-Up Time for Catalytic Converter
- **Engine Temperature** 3 -
- Increased Idle Speed
- 5 -CO Content at Increased Idle
- Oxygen in Increased Idle
- 7 -Idle Speed
- Select the control sensor type, either »snap sensor« or »broadband sensor« -item 1-.
- Heated Oxygen Sensor Value
- Press the Continue button -arrow- if all the data was entered correctly.

Emissions Test Specified Data Input as Barcode

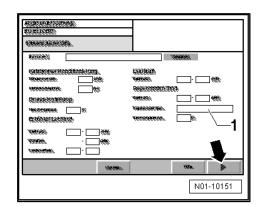
If the emissions test specified data is available as a bar code, scan in the bar code of emissions testing data sheet using bar code reader.

Screen containing all required data appears on the display.

Press the button -arrow- to continue.



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Visual inspection

- Follow the instructions on the display.
- Visually inspect all emissions-related components.
- Check the exhaust system for completeness, leaks and dam-
- If the visual inspection is OK, press the "OK" button -arrow-.



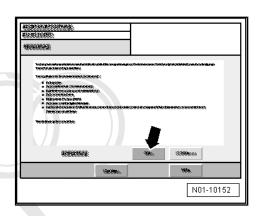
Note

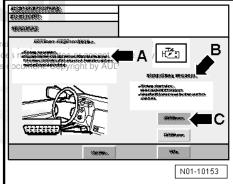
A test starts by pressing the NOT OK button.

Diagnostic Connector, Connecting

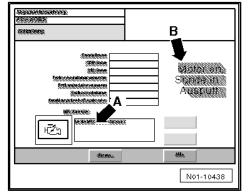
In the visual inspection display, the prompt to connect the diagnostic connector -arrow A- and to check the malfunction indicator common control of the control lamp (MIL) -arrow B- appears. permitted unless authorised by AUDI AG. AUDI AG

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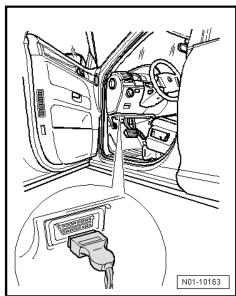




- Follow the instructions on the display -arrow A- and -arrow B-.
- Switch off the ignition.



Connect the diagnostic cable connector to the EOBD connection.



Visual Inspection of the malfunction indicator lamp with engine off

- Switch the ignition on.
- Visually inspect the "Malfunction Indicator Lamp".
- When the lamp turns on, press the "Lamp ON" button -arrow C-.



Note

If the malfunction indicator lamp does not come on during the visual inspection, the result of the emissions test is "failed".

Visual Inspection of Malfunction Indicator Lamp with Engine Running

- Start the engine and confirm the engine is running via "Yes" on the display.
- Visually inspect the "malfunction indicator lamp". The lamp must not come on any more or blink.
- Guide the exhaust probe into the tail pipe.



Note

The emissions test procedure only continues when the test probe is positioned in the tail pipe.

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The program automatically advances to the test-readiness check.

Here it is tested whether all test-readiness checks supported by the control module have been run through.

Confirm the "malfunction indicator lamp" condition -arrow B-.



- If all display values are set to zero, no control sensor test is performed.
- If not all display values are set to zero, a control sensor test will be performed later.

Catalytic Converter Conditioning

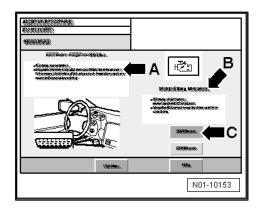
The program automatically advances to the warm-up phase of the catalytic converter.

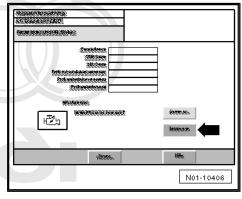
Follow the instructions on the display.

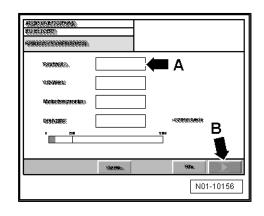
Measurement begins when engine speed has reached the necessary level.

Maintain the engine speed in the required RPM range.

The remaining time for performing the pre-heating phase is displayed -arrow A-.







Warm-Up Time

The program automatically advances to the display for measuring the engine temperature.

Follow the instructions on the display.



Note

This display only appears if the engine temperature has not yet reached 80 °C.

Bring the engine up to the required temperature.

Measurement at Increased Idle Speed

The program automatically advances to the display for the measurement at increased idle speed.

Follow the instructions on the display.

Measurement begins when engine speed has reached the necessary level.



Note

- Using the ▶ button, the measurement can be skipped, that is, the emissions test will not be passed.
- ♦ Using the ☐ button, the measured values are reset and the test can be repeated.
- Maintain the engine speed in the required RPM range.

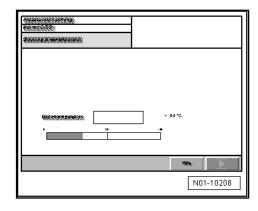
The remaining time for performing the measurement is displayed -arrow A-.

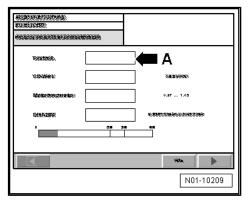
Idle Speed and CO Content Measurement purposes, in part or in whole, is not not guarantee or accept any liability

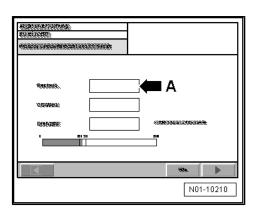
The program automatically advances to the display for idle speed and CO content.

Measurement begins when engine speed has reached the necessary level.

The remaining time for performing the measurement is displayed -arrow A-.







Control Sensor Test



Note

The control sensor test is only performed when "NOT" all display values are set to zero during the test-readiness check.

The program automatically advances to the display for the upstream oxygen sensor test.



Note

The upstream oxygen sensor test is performed separately for each oxygen sensor.

Measurement begins when engine speed has reached the necessary level.

Maintain the engine speed in the required RPM range.

The remaining time for performing the measurement is displayed -arrow A-.

Evaluation

After the emissions test is completed, the log is displayed on the screen.

The test result is displayed.

At this point, explanatory notes regarding the emissions test can be entered -arrow A-. They are then transferred into the test log.

- If the emissions test was passed, select "Emissions test label assigned" in the drop-down menu -arrow B- and the date.
- Then confirm with "Yes" -arrow C-.

Printing

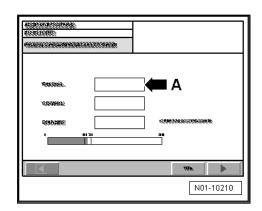
After confirming, the two "TEST CERTIFICATES" are printed out automatically.

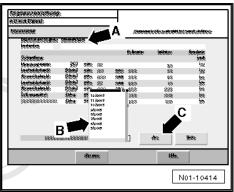
- If another test certificate is required, press the button Protected by copyright. Copying for private or commercial purposes, in permitted unless authorised by AUDI AG. AUDI AG does not guarantee -arrow A- "Print".
- Follow the instructions on the display ctness of information in this document. Cop
- Remove the exhaust probe from the tail pipe.
- Then press the ▶ button -arrow B-.

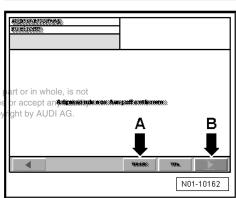
The emissions test is completed. A new emissions test can be performed.

4.2 Diesel Engines, Performing Emissions Test (NOT FOR NORTH AMERICAN MARKET)

NOT FOR NORTH AMERICAN MARKET









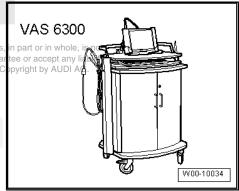
Note

- The following description applies to vehicles that are equipped with "On - Board - Diagnostic" OBD.
- OBD monitors all components and partial systems that influence the emissions quality.

Special tools and workshop equipment required

Emissions Testing Station - VAS6300-

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Vehicle Diagnostic Tester - Adapter 16-1 - VAS5052/16-1-



Note

- An emissions test is only possible when all units of the Emissions Testing Station VAS6300- are connected properly according to operating instructions and are connected to each other.
- All procedures are displayed on the Emissions Testing Station - VAS6300- .

Test Requirements

- All of the test conditions and data required for the emissions test are on the emissions testing data sheet for the corresponding engine.
- If a barcode input of the emissions testing specification data is going to be performed, the emissions testing data sheet must be available as a paper printout.
- Automatic transmission: selector lever in "P" or "N" position.
- Manual transmission: gearshift lever in neutral.
- Parking brake applied
- Follow the instructions in the display.

Start Screen

- Select the "Emissions test" button -arrow-.

An overview for selecting the respective emissions test type appears.

Select "Emissions testing, diesel" -arrow-.

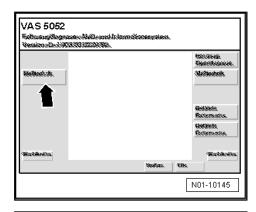
Display for the warm-up time appears.

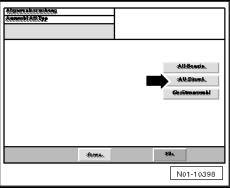


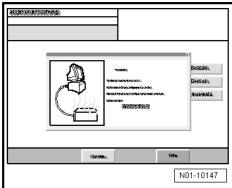
Continue the emissions test according to the instructions on the display.

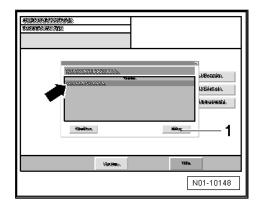


- When the selection for the emissions test specified value appears, select the corresponding "Selection for emissions test specified value" -arrow-.
- Either for a first-time emissions test "Standard specification values",
- Or, if an already performed emissions test is to be performed again "last vehicle".
- Select Continue -item 1- on the display.









Vehicle Data Input

The vehicle data input menu appears.

- Enter the following data from part 1 of the certificate of regis-
- ◆ -1- Vehicle manufacturer: "for example, AUDI"
- ◆ -2- Vehicle model: "for example, A6 / 4G"
- ◆ -3- Key number for 14.1: "for example, 0572"
- ◆ -4- Key number for 2.1: "for example, 0588"
- ◆ -5- Key number for 2.2: "for example, 846"
- -6- Engine code "for example, CHVA"
- ◆ -7- License plate: "for example, IN-MV 1234"
- ◆ -8- VIN: "for example, WAUZZZ4GZAN001234"
- Enter the odometer reading "for example, 33350" at -item 9-.



Note

- Use the GO TO button to start other functions.
- Use the GO TO button to cancel the test.
- Select "Diesel OBD" -arrow-.

Emissions Test Specified Data Input

The specified data can be entered in different ways.

- 1. Manually
- 2. Via barcode input from emissions testing data sheet
- 3. Via ELSA web service



Note

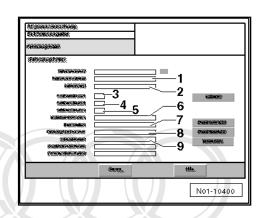
- In order to be able to use the ELSA web service, the Vehicle Diagnostic Tester that is used to perform the emissions test must be integrated in the workshop network.
- When using ELSA Web service, the vehicle specification data is automatically transferred via the network into the appropriate form.

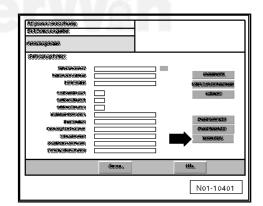
Manual Emissions Test Specified Data Input



Note

All test conditions and data (refer to ⇒ Data sheets for exhaust emission test) required for the emissions test for the corresponding engine.





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- Follow the instructions on the display for manual data input.
- Enter the values under "Test values for the emissions test" on the emissions testing data sheet on the display in the following sequence:
- 1 -Speed for Conditioning
- 2 -Number of Throttle Bursts for Conditioning
- 3 -Engine Oil Temperature (Minimum Value)
- Select method for measuring engine oil temperature
- Idle Speed 5 -
- Speed Regulation 6 -
- Speed Regulation Measured Time (1 second) 7 -
- Turbidity Value (Arithmetic Mean)
- Select the sensor type (number of sensors)
- 10 Select the measuring mode.
- 11 Measurement Time Amount
- Press the button -arrow- once all the data has been entered correctly.

Emissions Test Specified Data Input as Barcode

If the emissions test specified data is available as a bar code, scan in the bar code of emissions testing data sheet using bar code reader.

The display -1- with all the required data appears on the screen.

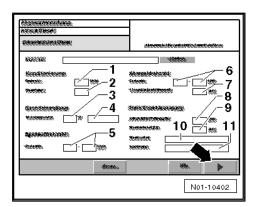
Press the \square button -arrow- to continue.

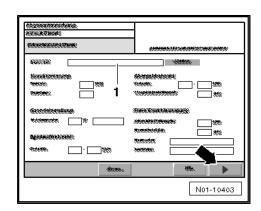
Visual inspection

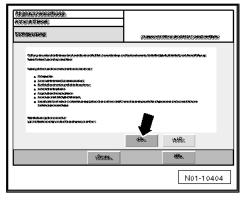
- Follow the instructions on the display.
- Visually inspect all emissions-related components.
- Check the exhaust system for completeness, leaks and damage.
- If the visual inspection is OK, press the "OK" button -arrow-.



A test starts by pressing the NOT OK button.







Diagnostic Connector, Connecting

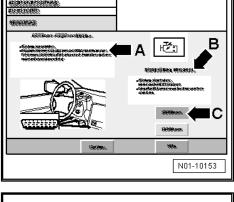
Ignition is switched off.

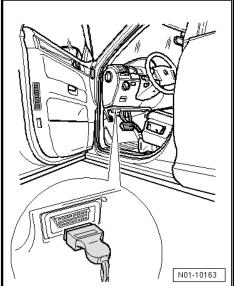
In the visual inspection display, the prompt to connect the diagnostic connector -arrow A- and to check the "malfunction indicator lamp" (MIL) -arrow B- appears.

- Follow the instructions on the display.
- Connect the diagnostic cable connector to the EOBD connection.

Visual Inspection of the malfunction indicator lamp with engine off

- Turn on the ignition.
- Visually inspect the "malfunction indicator lamp".



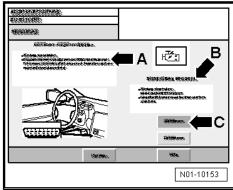


When the lamp turns on, press the button "Lamp ON" -arrow C-.



Note

If the malfunction indicator lamp does not come on during the visual inspection, the result of the emissions is "failed".



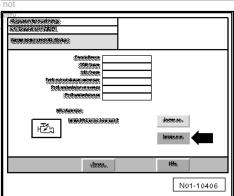
Visual Inspection of Malfunction Indicator Lamp with Engine Runet any line with respect to the correctness of information in this document. Sopyright by AUDI AG ning

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- Start the engine and confirm the engine is running via "Yes" on the display.
- Visually inspect the "malfunction indicator lamp". The lamp must no longer turns on or blink.
- Confirm the "malfunction indicator lamp" condition -arrow B-.

The program automatically advances to the test-readiness check.

Here it is tested whether all test-readiness checks supported by the control module have been run through.



Conditioning

During the conditioning phase, the engine and any emissions control system are brought to operating temperature via throttle bursts and are thus prepared for the emissions test.

- Follow the instructions on the display.
- Maintain the engine speed in the required RPM range.

If it is certain that no further conditioning is required, press the button -arrow- to advance to the next measurement.

Engine Temperature, Reading Out

The engine temperature is read out from the engine control module via the diagnostic connector.

After reaching the required engine temperature, the program automatically advances to the display for measuring the idle speed.

Idle Speed Measurement

Follow the instructions on the display.

Measurement begins when engine speed has reached the necessary level.

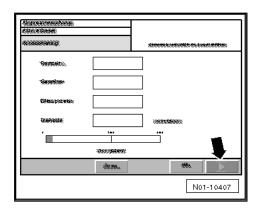


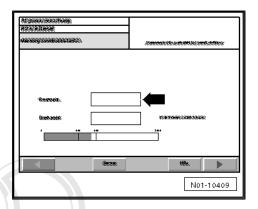
Note

- Do not insert the exhaust probe into the tail pipe yet.
- Using the

 ☐ button, the measurement can be skipped, that is, the emissions test will not be passed.
- Press the L button to repeat the test.
- Maintain the engine speed in the required RPM range.

The remaining time for performing the measurement is displayed -arrow-.





Speed Regulation Measurement

The program automatically advances to the display for measuring the speed regulation.

Measurement begins when engine speed has reached the necessary level.

Press the accelerator pedal until the measurement is completed. To do so, press the accelerator pedal downward immediately.

Note

- If the engine speed limitation is set, then deactivate it for the emissions test:
- Turn on the ignition and then press the ESP button until the corresponding symbol in the instrument cluster blinks.

The remaining time for performing the measurement is displayed -arrow-.



Note

- ♦ Do not insert the exhaust probe into the tail pipe yet.
- Using the ☐ button, the measurement can be skipped, that is, the emissions test will not be passed.

Fresh Air Comparison

A fresh air comparison is started before free acceleration. The exhaust probe must never be in the tail pipe for this. Otherwise, measurement errors or error messages may result during the following measurements.

After completing the fresh air comparison, insert the exhaust probe into the tail pipe.

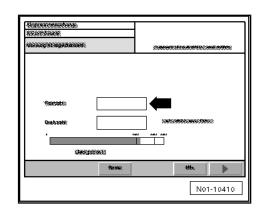
Free Acceleration

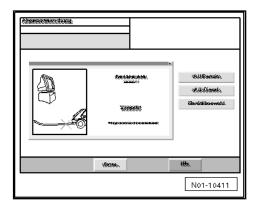
The program automatically advances to the display for "Free acceleration".

During "free acceleration", the engine is accelerated without load as quickly as possible to the speed regulation.

The "free acceleration" test consists of a minimum of four individual accelerations.







Free Acceleration - Phase 1

- Follow the instructions on the display -arrow A- and -arrow C-.
- Maintain the idle speed in the specified speed range -arrow D-.

The remaining time for completing the measurement is displayed -arrow B-.



Note

- The exhaust probe must be in the tail pipe.
- If the speed deviates from the speed range entered, the measurement begins again.
- Using the button, the measurement can be skipped, that is, the emissions test will not be passed.

Free Acceleration - Phase 2

- Follow the instructions on the display -arrow B-.
- When prompted to accelerate, press the accelerator pedal all the way down and hold until the prompt to idle appears on the display.

Free Acceleration - Phase 3

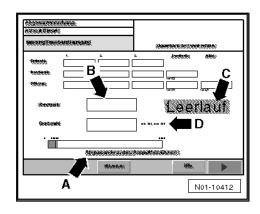
Take the foot off the accelerator pedal as soon as the prompt for idle is shown on the display -arrow B- and let engine run at idle.

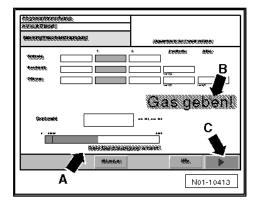
The measurement result as well as information about the previously performed "free acceleration" appears on the display -arrow A-. If the tested values are not OK, information on what caused the "Free Acceleration" to fail can be obtained here.



Note

- A white field colored field indicates that the measured value is within the tolerance range.
- A red field colored field indicates that the measured value is outside the tolerance.
- A yellow field indicates that the measured value is outside the tolerance range, however this can be evaluated by the operator.





Additional Individual Accelerations

The next individual acceleration begins again with phase 1 of "Free Acceleration".

So many "free accelerations" can be performed until:

- three "free accelerations" have passed one after another and the acceleration range is OK during this.
- all the values are OK except the acceleration range; press the button -arrow C- to continue the test sequence. (The decision of whether the value is OK is made in this case by the operator.)
- the values are not OK; press the \(\square\$ button -arrow C- to end/ bypass the measurement.

If all measured values are OK after three consecutive accelerations - that is, all fields are white - the emissions test has been passed.

If all measured values are OK after three consecutive accelerations - the emissions test has been passed.

N01-10413

Evaluation

After the emissions test is completed, the log is displayed on the cross screen.

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The test result is displayed.

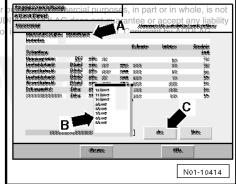
At this point, explanations regarding the emissions test can be entered -arrow A-. They are then transferred into the test log.

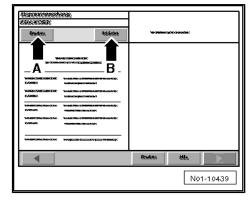
- If the emissions test was passed, select Emissions test label assigned in the drop-down menu -arrow B- and the date.
- Then confirm with "Yes" -arrow C-.

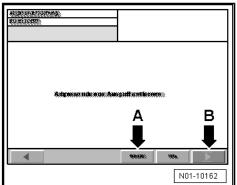
The emissions test log is shown in the display and can be printed as many times as desired in the "print preview" menu via the "Print" button -arrow A-.

- Using "Close" button -arrow B-, the "Print Preview" menu is closed.
- Follow the instructions on the display.
- Remove the exhaust probe from the tail pipe.
- Press the □ button -arrow B-

The emissions test is complete. A new emissions test can be started.







Cautions & Warnings

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

If you lack the skills, tools and equipment, or a suitable workshop for any procedure described in this manual, we suggest you leave such repairs to an authorized Audi retailer or other qualified shop. We especially urge you to consult an authorized Audi retailer before beginning repairs on any vehicle that may still be covered wholly or in part by any of the extensive warranties issued by Audi.

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

Cautions & Warnings

- Do not re-use any fasteners that are worn or deformed in normal use. Some fasteners are
 designed to be used only once and are unreliable and may fail if used a second time. This
 includes, but is not limited to, nuts, bolts, washers, circlips and cotter pins. Always follow the
 recommendations in this manual replace these fasteners with new parts where indicated,
 and any other time it is deemed necessary by inspection.
- Illuminate the work area adequately but safely. Use a portable safety light for working inside or under the vehicle. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.
- Friction materials such as brake pads and clutch discs may contain asbestos fibers. Do not create dust by grinding, sanding, or by cleaning with compressed air. Avoid breathing asbestos fibers and asbestos dust. Breathing asbestos can cause serious diseases such as asbestosis or cancer, and may result in death.
- Finger rings should be removed so that they cannot cause electrical shorts, get caught in running machinery, or be crushed by heavy parts.
- Before starting a job, make certain that you have all the necessary tools and parts on hand.
 Read all the instructions thoroughly, do not attempt shortcuts. Use tools that are appropriate to the work and use only replacement parts meeting Audi specifications. Makeshift tools, parts and procedures will not make good repairs.
- Catch draining fuel, oil or brake fluid in suitable containers. Do not use empty food or beverage containers that might mislead someone into drinking from them. Store flammable fluids away from fire hazards. Wipe up spills at once, but do not store the oily rags, which can ignite and burn spontaneously.
- Use pneumatic and electric tools only to loosen threaded parts and fasteners. Never use these
 tools to tighten fasteners, especially on light alloy parts. Always use a torque wrench to tighten
 fasteners to the tightening torque listed.
- Keep sparks, lighted matches, and open flame away from the top of the battery. If escaping
 hydrogen gas is ignited, it will ignite gas trapped in the cells and cause the battery to explode.
- Be mindful of the environment and ecology. Before you drain the crankcase, find out the proper way to dispose of the oil. Do not pour oil onto the ground, down a drain, or into a stream, pond, or lake. Consult local ordinances that govern the disposal of wastes.
- The air-conditioning (A/C) system is filled with a chemical refrigerant that is hazardous. The
 A/C system should be serviced only by trained automotive service technicians using approved
 refrigerant recovery/recycling equipment, trained in related safety precautions, and familiar
 with regulations governing the discharging and disposal of automotive chemical refrigerants.
- Before doing any electrical welding on vehicles equipped with anti-lock brakes (ABS), disconnect the battery negative terminal (ground strap) and the ABS control module connector.
- Do not expose any part of the A/C system to high temperatures such as open flame.
 Excessive heat will increase system pressure and may cause the system to burst.

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Cautions & Warnings

- When boost-charging the battery, first remove the fuses for the Engine Control Module (ECM), the Transmission Control Module (TCM), the ABS control module, and the trip computer. In cases where one or more of these components is not separately fused, disconnect the control module connector(s).
- Some of the vehicles covered by this manual are equipped with a supplemental restraint system (SRS), that automatically deploys an airbag in the event of a frontal impact. The airbag is operated by an explosive device. Handled improperly or without adequate safeguards, it can be accidentally activated and cause serious personal injury. To guard against personal injury or airbag system failure, only trained Audi Service technicians should test, disassemble or service the airbag system.
- Do not quick-charge the battery (for boost starting) for longer than one minute, and do not
 exceed 16.5 volts at the battery with the boosting cables attached. Wait at least one minute
 before boosting the battery a second time.
- Never use a test light to conduct electrical tests of the airbag system. The system must only
 be tested by trained Audi Service technicians using the Audi Factory Approved Scan Tool (ST)
 or an approved equivalent. The airbag unit must never be electrically tested while it is not
 installed in the vehicle.
- Some aerosol tire inflators are highly flammable. Be extremely cautious when repairing a tire
 that may have been inflated using an aerosol tire inflator. Keep sparks, open flame or other
 sources of ignition away from the tire repair area. Inflate and deflate the tire at least four times
 before breaking the bead from the rim. Completely remove the tire from the rim before
 attempting any repair.
- When driving or riding in an airbag-equipped vehicle, never hold test equipment in your hands or lap while the vehicle is in motion. Objects between you and the airbag can increase the risk of injury in an accident.

I have read and I understand these Cautions and Warnings.

