



Workshop Manual

Audi A3 2013 ➤ ,

Audi A3 Limousine 2014 ➤ ,

Audi A3 Limousine China 2014 ➤ ,

Audi A3 Sportback 2013 ➤ ,

Audi A3 Sportback China 2014 ➤ ,

Audi Q2 2016 ➤ , Audi Q3 2019 ➤

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 with respect to the correctness of information in this document. Copyright by AUDI AG.

Auxiliary/supplementary heater

Edition 12.2018



List of Workshop Manual Repair Groups

Repair Group

00 - Technical data

82 - Auxiliary heating



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 with respect to the correctness of information in this document. Copyright by AUDI AG.

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



Contents

00 - Technical data	1
1 General notes	1
1.1 Type plates	1
1.2 Notes on operation of auxiliary/supplementary heater on vehicles with diesel engine	2
1.3 Notes on operation of auxiliary/supplementary heater with biofuel	2
1.4 Starting conditions for auxiliary/supplementary heater	3
1.5 Notes on auxiliary heater operation - vehicles with high-voltage system	5
2 Safety precautions	8
2.1 Safety precautions when working on high-voltage vehicles	8
2.2 Safety precautions when working in the vicinity of high-voltage components	9
2.3 Safety precautions when working on the fuel system	9
2.4 Safety precautions when working on vehicles with start/stop system	10
2.5 Safety precautions when using testers and measuring instruments during a road test	10
2.6 Safety precautions when working on the cooling system	10
2.7 Safety precautions when working on vehicles with auxiliary/supplementary heater	10
3 Repair instructions	13
3.1 Rules for cleanliness	13
3.2 General notes	13
3.3 Contact corrosion	15
3.4 Checking heating output	15
3.5 Notes on general repairs	15
3.6 Routing and attaching lines and wiring	16
82 - Auxiliary heating	17
1 Overview of fitting locations - auxiliary/supplementary heater	17
2 Auxiliary/supplementary heater	23
2.1 Overview of fitting locations - auxiliary/supplementary heater	23
2.2 Removing and installing auxiliary/supplementary heater	25
2.3 Bleeding coolant circuit of auxiliary heater	30
2.4 Exploded view - attachments	31
2.5 Removing and installing air intake silencer	32
2.6 Removing and installing circulation pump V55	33
2.7 Removing and installing exhaust system	34
2.8 Removing and installing bracket for auxiliary/supplementary heater	35
2.9 Removing and installing covers for auxiliary heater control unit J364	36
2.10 Dismantling and assembling heater unit	37
2.11 Exploded view - components inside auxiliary/supplementary heater	37
2.12 Dismantling and assembling burner unit	39
2.13 Removing and installing glow plug with flame monitor Q8	40
2.14 Removing and installing temperature sensor G18 and overheating sensor G189	40
2.15 Pin assignment for auxiliary/supplementary heater	41
3 Coolant circuit with auxiliary/supplementary heater	44
3.1 Connection diagram for coolant hoses (vehicles with auxiliary/supplementary heating)	44
4 Fuel supply system	52
4.1 Overview of fitting locations - fuel supply system	52
4.2 Checking CO ₂ content in exhaust gas of auxiliary/supplementary heater	62
4.3 Checking fuel delivery rate of metering pump V54	65
4.4 Removing and installing metering pump V54	66
4.5 Checking metering pump V54 with end sealing valve	71
5 Auxiliary/supplementary heater control	72
5.1 Functional description	72
5.2 Switching auxiliary/supplementary heater on and off	74



6	Further control components	79
6.1	Removing and installing ambient temperature sensor G17	79
6.2	Remote control receiver for auxiliary/supplementary heater	80
6.3	Functional description of remote control for auxiliary/supplementary heater	86
6.4	Renewing battery in remote control for auxiliary/supplementary heater	94

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 with respect to the correctness of information in this document. Copyright by AUDI AG.



00 – Technical data

1 General notes

(ARL006209; Edition 12.2018)

⇒ [“1.1 Type plates”, page 1](#)

⇒ [“1.2 Notes on operation of auxiliary/supplementary heater on vehicles with diesel engine”, page 2](#)

⇒ [“1.3 Notes on operation of auxiliary/supplementary heater with biofuel”, page 2](#)

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

⇒ [“1.4 Starting conditions for auxiliary/supplementary heater”, page 3](#)

with respect to the correctness of information in this document. Copyright by AUDI AG.

⇒ [“1.5 Notes on auxiliary heater operation - vehicles with high-voltage system”, page 5](#)

1.1 Type plates

Type plate on auxiliary heater

Webasto Feel the drive		E1	
Made in Germany CE			
Model Type	Thermo Top Evo		
Operating Voltage			
Rated Output			
Fuel Type			
Working Pressure			
Part No.	Serial-No.		
Year of Manufacture			
A00-10915			

Factory label duplicate for auxiliary heater



Note

- ◆ The most important technical data are entered in the top section of the factory label.
- ◆ There are different types of factory labels and type plates; the above illustrations show the type plate and factory label that were valid at the start of production.
- ◆ If the auxiliary heater is renewed, the factory label duplicate must be checked and renewed if necessary.
- ◆ The year of initial commissioning is entered below the technical data.
- ◆ The “Genuine replacement part” type plate must indicate the year of initial commissioning.
- ◆ It is not necessary to renew the heat exchanger on auxiliary heaters after 10 years. German legislation only requires the heat exchanger to be renewed on air heaters; it is therefore not necessary to renew the heat exchanger on this auxiliary heater.
- ◆ A second type plate (duplicate) is attached to the bonnet on the right side of the engine compartment (as seen in direction of travel). If there is any doubt about the type of auxiliary heater installed, always observe the type plate attached to the auxiliary heater itself.

Factory label duplicate valid only with the original			
Webasto Feel the drive		E1	
Made in Germany CE			
Model Type	Thermo Top Evo		
Operating Voltage / Rated Output			
Fuel Type			
Working Pressure			
Part No.			
A00-10916			



1.2 Notes on operation of auxiliary/supplementary heater on vehicles with diesel engine



Note

- ◆ *Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine, the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .*
- ◆ *An electric supplementary heater is currently only available for vehicles with TDI engine ⇒ Heating, air conditioning; Rep. gr. 87; Front heater and air conditioning unit; Exploded view - heater and air conditioning unit .*
- ◆ *Currently a supplementary heater is not planned for vehicles with petrol engine.*
- ◆ *On vehicles with TDI engine, the electric supplementary heater (auxiliary air heater element - Z35-) is activated via the engine control unit. The control units exchange the relevant information via the data bus ⇒ Vehicle diagnostic tester in the "Guided Fault Finding" function and ⇒ Current flow diagrams, electrical fault-finding and fitting locations .*
- ◆ *On vehicles with supplementary heater function, the auxiliary heater is currently not activated. On these vehicles, an auxiliary air heater element - Z35- is fitted in the heater and air conditioning unit ⇒ Heating, air conditioning; Rep. gr. 87; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .*
- ◆ *If an auxiliary heater is operated with the wrong type of fuel at low outside temperatures (e.g. with "summer diesel" at temperatures below 0 °C), malfunctions may occur in the operation of the auxiliary heater (no flame or flame interruption) due to the physical properties of the fuel (reduced fluidity at outside temperatures below 0 °C).*

1.3 Notes on operation of auxiliary/supplementary heater with biofuel



Note

Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine, the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .

If a fuel type (diesel or petrol) with a percentage of biofuel (bio-diesel or ethanol) that is too high is used, there may be problems with the operation of the auxiliary heater.

Reason:

- ◆ *If the auxiliary heater is operated with ethanol (bioethanol), the fuel supply system or the auxiliary heater might be damaged due to the properties of this fuel type.*

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 for errors or omissions in this document. Copyright by AUDI AG.



- ◆ If the auxiliary heater is operated with biofuel (biodiesel) in low outside temperatures, malfunctions may occur in the operation of the auxiliary/supplementary heater (no flame or flame interruption) due to the physical properties of the fuel type (reduced fluidity).
- ◆ If the auxiliary heater is operated with biofuel (biodiesel), deposits may form in the combustion chamber of the auxiliary heater (in burner element) due to the properties of this fuel type. These deposits can cause combustion problems if the vehicle is run with biofuel for lengthy periods (no flame and deflagration in combustion chamber).



Note

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 with respect to the correctness of information in this document. Copyright by AUDI AG.

- ◆ *The percentage of biofuel in commercial fuel does not have any effect on the operation of the auxiliary heater (currently, in the territory of the Federal Republic of Germany, diesel has up to 5% biodiesel, and petrol has up to 10% ethanol).*
- ◆ *Biofuel (biodiesel) is produced by transforming (esterifying) various types of vegetable oil (soy oil, palm oil, rapeseed oil etc.).*
- ◆ *Usually, vegetable oil methyl ester consists of a mixture of various base oils transformed to biofuel (biodiesel) by esterification. Mostly only rapeseed oil is used as the base oil used for rapeseed oil methyl ester.*

1.4 Starting conditions for auxiliary/supplementary heater



Note

- ◆ *Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine (without high-voltage system), the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87 ; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .*
- ◆ *A high-voltage heater (PTC) - Z115- is fitted on vehicles with high-voltage system (Audi A3 e-tron). -Z115- is activated by the air conditioner operating unit -J255- if additional heat output is required to attain the specified temperature in the passenger compartment ⇒ Heating, air conditioning; Rep. gr. 00 ; Repair instructions , ⇒ Owner's Manual and ⇒ Infotainment/ MMI Operating Manual .*
- ◆ *On vehicles with high-voltage system which feature an auxiliary heater as an optional extra, the auxiliary heater or high-voltage heater (PTC) - Z115- is activated (possibly also as a supplementary heater) in coordination between the air conditioner operating unit -J255- , the battery regulation control unit - J840- and the control unit for high-voltage battery charging unit - J1050- (fitted in the power and control electronics for electric drive - JX1-). For further information, refer to ⇒ page 5 .*
- ◆ Engine type OK (diesel/petrol)
- ◆ Specified/actual comparison OK
- ◆ Battery condition OK: no deactivation due to low voltage



- ◆ Sufficient fuel in fuel tank
- ◆ No crash deactivation
- ◆ No event memory entries blocking start procedure
- ◆ Transport mode not activated



Note

- ◆ *The settings on the air conditioner control unit -J255- influence the operation of the auxiliary heater (auxiliary heating or auxiliary ventilation mode, time required for auxiliary heating mode etc.) ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*
- ◆ *If the "Final control diagnosis" function is performed in the airbag system, the airbag control unit - J234- transmits a crash deactivation signal via the data bus. As soon as the auxiliary heater control unit - J364- detects this signal, the auxiliary heater is switched off and remains disabled until the shut-off criterion has been deleted in -J364- (read out event memory of -J364- , ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode).*



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 with respect to the correctness of information in this document. Copyright by AUDI AG.



1.5 Notes on auxiliary heater operation - vehicles with high-voltage system



Note

- ◆ On vehicles with high-voltage system, you will find the function "Auxiliary air conditioner" on the Multi Media Interface (MMI), where you can display and select the various functions of the auxiliary heater (via the high-voltage heater (PTC) - Z115- or the auxiliary heater fitted as an optional extra), the auxiliary ventilation and the cooling for the passenger compartment (via the air conditioner)
⇒ "1 Overview of fitting locations - auxiliary/supplementary heater", page 17, ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual.
- ◆ On vehicles with high-voltage system (Audi A3 e-tron) which feature an auxiliary heater as an optional extra, the air conditioner operating unit -J255- determines whether any heat output is required to attain the temperature specified for the passenger compartment (similarly to vehicles without high-voltage system). -J255- receives the request to switch the auxiliary heater or the auxiliary ventilation on or off via the data bus for the Multi Media Interface (MMI, control unit for front display and information control panel - J523-) or from control unit 1 for information electronics - J794- (e.g. via a mobile phone on vehicles with "Audi connect services") ⇒ Current flow diagrams, Electrical fault finding and Fitting locations, ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual.
- ◆ On vehicles with high-voltage system which feature an auxiliary heater as an optional extra, the passenger compartment can be ventilated, heated with the high-voltage heater (PTC) - Z115- or the auxiliary heater or cooled with the air conditioner when ambient temperatures are high via the "Auxiliary air conditioner" function. For further information on operating the air conditioner (if the passenger compartment needs to be cooled), refer to ⇒ Heating, air conditioning; Rep. gr. 00 ; General information ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual.
- ◆ On vehicles with high-voltage system which do not feature an auxiliary heater as an optional extra, the passenger compartment can be ventilated, heated with the high-voltage heater (PTC) - Z115- or cooled with the air conditioner when ambient temperatures are high via the "Auxiliary air conditioner" function. For further information, refer to ⇒ Heating, air conditioning; Rep. gr. 00 ; General information ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual.
- ◆ If the "Auxiliary air conditioner" function is activated and the air conditioner control unit -J255- determines that heat output mode is necessary, various control units are interrogated by -J255- via the data bus, e.g. the battery regulation control unit - J840- (fitted in the hybrid battery unit - AX1-) and the control unit for high-voltage battery charging unit - J1050- (fitted in the power and control electronics for electric drive - JX1-). If -J255- is informed that the hybrid battery unit - AX1- is charged sufficiently, that enough energy is available to operate the high-voltage heater (PTC) - Z115- and that there is enough fuel in the fuel tank, -J255- activates -Z115- or the auxiliary heater, depending on the ambient temperature. As a general rule, the auxiliary heater is only activated at ambient temperatures below -10 °C. If the ambient temperature is above -10 °C, the heat output provided by -Z115- is generally sufficient to warm the passenger compartment.



- ◆ *To ensure that the vehicle always operates reliably after the passenger compartment has been heated, ventilated or cooled via the "Auxiliary air conditioner" function, the hybrid battery unit - AX1- must be sufficiently charged and there must be enough fuel in the fuel tank so that the "Auxiliary air conditioner" function for heating, ventilating or cooling the passenger compartment is activated by the air conditioner control unit -J255-. Reason: Energy is drawn from the hybrid battery unit - AX1- via the "Auxiliary air conditioner" function. It must then be possible to start the engine so that the vehicle can be moved reliably even after the charge level of -AX1- has been reduced ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual.*
- ◆ *On vehicles with high-voltage system, auxiliary heating mode is not possible when the ignition is switched on (or the engine is running) as the auxiliary heater is incorporated in the coolant circuit. On these vehicles, the high-voltage heater (PTC) - Z115- is activated instead of the auxiliary heater.*
- ◆ *So that the passenger compartment can be heated or ventilated via the "Auxiliary air conditioner" function or cooled via the air conditioner if ambient temperatures are high, the air conditioner operating unit -J255- starts up and activates further components (e.g. the fresh air blower - V2- , various air conditioner control motors, the high-voltage heater (PTC) - Z115- or the auxiliary heater (if fitted) for heating the passenger compartment and the electrical air conditioner compressor - V470- for cooling the passenger compartment).*
- ◆ *It is not possible to operate the auxiliary heater while the hybrid battery unit - AX1- is being charged via the control unit for high-voltage battery charging unit - J1050- (fitted in the power and control electronics for electric drive - JX1-). If the auxiliary heater is required for the "Auxiliary air conditioner" function, the air conditioner control unit -J255- activates the high-voltage heater (PTC) - Z115- (the auxiliary heater is not activated).*
- ◆ *So that the coolant heated up by -Z115- is conveyed through the air conditioner heat exchanger, the coolant pump for high-temperature circuit - V467- , the coolant changeover valve 2 - N633- and the coolant valve for gearbox - N488- must also be activated (by the corresponding engine control unit). To ensure that the coolant flows in the right direction, the non-return valves fitted in the coolant circuit must also be installed correctly and they must operate correctly. For further information, refer to ⇒ Heating, air conditioning; Rep. gr. 87 ; Coolant circuit , ⇒ Rep. gr. 19 ; Cooling system/coolant; Connection diagram - coolant hoses , ⇒ Vehicle diagnostic tester ("Guided Fault Finding") and ⇒ Current flow diagrams, Electrical fault finding and Fitting locations.*
- ◆ *So that the coolant heated up by the auxiliary heater is conveyed through the air conditioner heat exchanger, the circulation pump - V55- must also be activated (by the auxiliary heater control unit - J364-). To ensure that the coolant flows in the right direction, the non-return valves fitted in the coolant circuit must also be installed correctly and they must operate correctly. For further information, refer to ⇒ "3.1 Connection diagram for coolant hoses (vehicles with auxiliary/supplementary heating)", page 44 , ⇒ Rep. gr. 19 ; Cooling system/coolant; Connection diagram - coolant hoses , ⇒ Vehicle diagnostic tester ("Guided Fault Finding") and ⇒ Current flow diagrams, Electrical fault finding and Fitting locations.*



- ◆ *If -J255- is informed that the hybrid battery unit - AX1- is not sufficiently charged and therefore that not enough energy is available to heat, ventilate or cool the passenger compartment via the "Auxiliary air conditioner" function, or that there is not enough fuel in the fuel tank, -J255- does not activate the "Auxiliary air conditioner" function (this means that -Z115- and the "Auxiliary heater" function are also not activated) ⇒ Vehicle diagnostic tester ("Guided Fault Finding"), ⇒ Current flow diagrams, Electrical fault finding and Fitting locations, ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*
- ◆ *Vehicles with high-voltage system are currently not available with a remote control for the auxiliary heater. On vehicles with high-voltage system, the auxiliary heater / auxiliary ventilation (or the air conditioner) can be switched on and off via the "Auxiliary air conditioner" function using a mobile phone and the optional "Audi connect services" (and control unit 1 for information electronics - J794-) rather than a remote control ⇒ Communication; Rep. gr. 91 ; Telephone system; Layout - telephone , ⇒ Current flow diagrams, Electrical fault finding and Fitting locations, ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*



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 with respect to the correctness of information in this document. Copyright by AUDI AG.



2 Safety precautions

⇒ [“2.1 Safety precautions when working on high-voltage vehicles”, page 8](#)

⇒ [“2.2 Safety precautions when working in the vicinity of high-voltage components”, page 9](#)

⇒ [“2.3 Safety precautions when working on the fuel system”, page 9](#)

⇒ [“2.4 Safety precautions when working on vehicles with start/stop system”, page 10](#)

⇒ [“2.5 Safety precautions when using testers and measuring instruments during a road test”, page 10](#)

⇒ [“2.6 Safety precautions when working on the cooling system”, page 10](#)

⇒ [“2.7 Safety precautions when working on vehicles with auxiliary/supplementary heater”, page 10](#)

2.1 Safety precautions when working on high-voltage vehicles

High voltage! Danger to life!

The voltage levels in the high-voltage system constitute a safety hazard. Danger of severe or fatal injuries from electric shock.

- Persons with life-sustaining or other electronic medical devices in or on their body must not perform any work on the high-voltage system. Such medical devices include internal analgesic pumps, implanted defibrillators, pacemakers, insulin pumps and hearing aids.
- The high-voltage system must be de-energised by a suitably qualified person.

Risk of injury - engine may start unexpectedly

It is difficult to determine whether the drive system of an electric vehicle or hybrid vehicle is active. Moving parts can trap or draw in parts of the body.

- Switch off ignition.
- Place ignition key outside vehicle.

Risk of damage to high-voltage wiring

Incorrect handling may result in damage to the insulation of high-voltage wires or high-voltage connectors.

- Never use high-voltage wiring or high-voltage connectors as a support.
- Never prop tools against high-voltage wiring or high-voltage connectors.
- Never bend or kink high-voltage wiring.
- Pay attention to coding when connecting high-voltage connections.



Risk of injury if auxiliary air conditioner is activated

On electric and hybrid vehicles, the auxiliary air conditioner can switch itself on if it has been activated. The radiator fans can start up automatically and trap or draw in parts of the body.

- Deactivate auxiliary air conditioner.

2.2 Safety precautions when working in the vicinity of high-voltage components

High voltage! Danger to life!

The voltage levels in the high-voltage system constitute a safety hazard. Danger of severe or fatal injuries from electric shock if high-voltage components or high-voltage wiring are damaged.

- Carry out visual check of high-voltage components and high-voltage wiring.
- Never use cutting/forming tools or other sharp-edged implements.
- Never perform work using welding, brazing, thermal bonding or hot air.

2.3 Safety precautions when working on the fuel system

Risk of injury - fuel system operates under high pressure.

The fuel system is pressurised. There is a risk of injury as fuel may spray out.

Before opening the fuel system:

- Put on safety goggles.
- Put on protective gloves.
- Release pressure (wrap a clean cloth around connection and open connection carefully).

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 with respect to the correctness of information in this document. Copyright by AUDI AG.

Risk of fire due to escaping fuel

If the battery is connected, the door contact switch activates the fuel pump when the driver's door is opened. Escaping fuel may ignite, causing a fire.

- Before opening the fuel system, disconnect power supply to fuel pump.



2.4 Safety precautions when working on vehicles with start/stop system

Risk of injury - engine may start unexpectedly

The engine can start unexpectedly if the vehicle's start/stop system is activated. A message in the instrument cluster indicates whether the start/stop system is activated.

- To deactivate the start/stop system, switch off the ignition.

2.5 Safety precautions when using testers and measuring instruments during a road test

Risk of injury if test equipment is not secured

If an accident occurs and the front passenger's airbag is triggered, test equipment which is not secured adequately may be catapulted through the vehicle with potentially serious consequences.

- Secure test equipment on the rear seat with a strap.

Or

- Have a second mechanic operate test equipment on the rear seat.

2.6 Safety precautions when working on the cooling system

Risk of scalding as hot coolant can escape

The cooling system is under pressure when the power unit is hot. Risk of scalding due to hot steam and hot coolant.

- Put on protective gloves.
- Put on safety goggles.
- Cover filler cap on expansion tank with a cloth and open carefully to release pressure.

2.7 Safety precautions when working on vehicles with auxiliary/supplementary heater

Danger of accident and injury if the timer for the auxiliary/supplementary heater is activated

If the timer for the auxiliary/supplementary heater is activated, the auxiliary/supplementary heater may switch itself on. This may result in poisoning from exhaust gases and burn injuries from hot auxiliary/supplementary heater components; there is a risk of fire and explosion due to high temperatures.

- Deactivate timer for auxiliary/supplementary heater.





Risk of fire and explosion from auxiliary/supplementary heater

In areas where there is a danger of fire and explosion, a fire or explosion may be caused by a spark or high temperatures in the auxiliary/supplementary heater. Risk of burn injuries.

- Switch off auxiliary/supplementary heater in areas where there is a danger of fire/explosion.

Danger from toxic exhaust gases

Auxiliary/supplementary heater produces toxic exhaust gases. There is a risk of poisoning and of damage to the respiratory tract.

- In enclosed spaces, only switch on the auxiliary/supplementary heater if there is an exhaust extraction system.
- In enclosed spaces without an exhaust extraction system, switch off the auxiliary/supplementary heater.

Vehicles with high-voltage system (hybrid vehicles)

Working with ignition switched on or high-voltage system active

- To minimise the number of automatic engine starts when the vehicle's drive system is active during test and measurement work, charge the vehicle batteries e.g. with the battery charger 60A - VAS 5904- in battery standby mode ⇒ Electrical system; General information; Rep. gr. 27 ; Battery; Charging battery and ⇒ 4-cylinder direct injection engine (1.2, 1.4 ltr. 4-valve TFSI EA 211); Rep. gr. 00 ; Safety precautions; Safety precautions when working on high-voltage vehicles .
- For test and measurement work that requires the vehicle's drive system to be active (READY) or the ignition to be switched on, move the selector lever to position "P", activate the parking brake and take care to keep well clear of the engine when it is running. Set up any tools needed so that they cannot come into contact with moving parts.



Note

- ◆ *Also move the selector lever to position "P" and activate the parking brake before performing test and measurement work for which the ignition must be switched on but where the vehicle's drive system does not need to be active (READY).*

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 accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.

- ◆ *The status of the drive system (READY) is shown by the control unit in dash panel insert - J285- via the "power meter" ⇒ Owner's Manual.*
- ◆ *Activating and deactivating drive system ⇒ Owner's Manual (note display of control unit in dash panel insert - J285-).*

All vehicles

- ◆ Before starting repair work on auxiliary heater:
- Interrupt power and fuel supply for auxiliary/supplementary heater (e.g. by removing fuse for auxiliary/supplementary heater) ⇒ Current flow diagrams, Electrical fault finding and Fitting locations.



- ◆ After completing the repair work on the auxiliary heater or fuel system, check the operation of the auxiliary heater.
- ◆ After completing the repair work on the auxiliary heater, read out the event memory ⇒ Vehicle diagnostic tester ("Guided Fault Finding").



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 with respect to the correctness of information in this document. Copyright by AUDI AG.



3 Repair instructions

⇒ [“3.1 Rules for cleanliness”, page 13](#)

⇒ [“3.2 General notes”, page 13](#)

⇒ [“3.3 Contact corrosion”, page 15](#)

⇒ [“3.4 Checking heating output”, page 15](#)

⇒ [“3.5 Notes on general repairs”, page 15](#)

⇒ [“3.6 Routing and attaching lines and wiring”, page 16](#)

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 with respect to the correctness of information in this document. Copyright by AUDI AG.

3.1 Rules for cleanliness

- ◆ Thoroughly clean all joints and connections and the surrounding areas before disconnecting.
- ◆ Place parts that have been removed on a clean surface (use sheeting or paper, not fluffy cloths) and cover them over.
- ◆ Carefully cover or seal open components if repairs cannot be carried out immediately.
- ◆ Only install clean components:
 - Replacement parts should only be unpacked immediately prior to installation.
 - Do not use parts that have been stored without their packaging (e.g. in toolboxes).
- ◆ When fuel system is open:
 - Do not work with compressed air.
 - Do not move vehicle.
 - Do not start engine.
 - Do not switch on auxiliary heater (also applies to switching on via “Basic setting” function of Guided Fault Finding) ⇒ Vehicle diagnostic tester (“Guided Fault Finding”).
 - For further safety precautions, refer to ⇒ Fuel supply system; Rep. gr. 00 ; Safety precautions; Safety precautions when working on the fuel supply system (Fuel supply system, Safety precautions; Safety precautions when working on the fuel supply system).

3.2 General notes

- Disconnect negative and positive terminals of battery - A- before starting electric welding work on the vehicle ⇒ Electrical system; Rep. gr. 27 ; Battery; Disconnecting and connecting battery .
- If coolant has been drained, bleed auxiliary heater after filling cooling system ⇒ Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Draining and filling cooling system and ⇒ [“2.3 Bleeding coolant circuit of auxiliary heater”, page 30](#) .
- If parts of the fuel system have been removed or renewed, make sure that all components used for the fuel take-off to the auxiliary heater are properly installed. The auxiliary heater must then be switched on and operated at full load for at least 10 minutes to make sure that the fuel line is bled completely; the auxiliary heater must be checked for correct operation.
- After performing repairs in the vicinity of the fuel line to the auxiliary heater, check that:
- ◆ There is no air in the fuel line to the auxiliary heater.



- ◆ The fuel lines are flush with the underbody and protected against mechanical damage.
- ◆ The fuel line to the auxiliary heater is protected against heat which could affect its operation.
- ◆ The fuel line does not make contact with components which can become hot.



Note

Air in the fuel supply to the auxiliary heater can lead to problems in auxiliary heater operation. To stop air from being drawn in by the metering pump - V54- and conveyed to the auxiliary heater when the auxiliary heater is first switched on after performing repairs on the fuel tank or the fuel delivery unit, the fuel take-off pipe must be filled with fuel (bled) after performing repairs in this area ⇒ ["4.1.6 Bleeding fuel line to metering pump V54 \(filling with fuel\)", page 61](#) .

- When performing repair work in the area of the fuel delivery unit, make sure that the fuel take-off pipe for the auxiliary heater is routed correctly in the fuel tank. If the take-off pipe is not routed correctly, the metering pump - V54- may only supply fuel if the fuel tank is completely full; if this is not the case, no fuel is supplied and the auxiliary heater is deactivated due to a fault
⇒ ["4.1.5 Installing riser in fuel delivery unit", page 59](#) .
- After components of the fuel system have been removed and installed, the auxiliary heater must be switched on and operated at full load for at least 10 minutes to make sure that the fuel line is bled completely.
- If there is not enough fuel in the fuel tank (fuel gauge in control unit in dash panel insert - J285- in "red zone"), the auxiliary heater control unit - J364- does not switch on the auxiliary heater (activation prohibited via the data bus due to a lack of fuel) ⇒ Owner's Manual and ⇒ Vehicle diagnostic tester ("Guided Fault Finding").
- Before the auxiliary heater is switched on and while it is being operated, the auxiliary heater control unit - J364- interrogates the data bus diagnostic interface - J533- and onboard supply control unit - J519- via the data bus. As soon as the onboard supply control unit - J519- transmits a request for energy saving because the battery is no longer sufficiently charged or because the voltage of the electrical system is insufficient, the auxiliary heater control unit - J364- switches off the auxiliary heater ⇒ Vehicle diagnostic tester ("Guided Fault Finding").



Note

- ◆ *Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater.*
- ◆ *On vehicles with a diesel engine, the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87 ; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .*
- ◆ *On vehicles with high-voltage system, the supplementary heating function is provided by the high-voltage heater (PTC) - Z115- ⇒ Heating, air conditioning; Rep. gr. 87 ; Overview of fitting locations - air conditioner; Overview of fitting locations - components not located in passenger compartment .*



3.3 Contact corrosion

- ◆ Contact corrosion can occur if unsuitable fasteners are used (e.g. bolts, nuts, washers, etc.).
- ◆ For this reason, only fasteners with a special surface coating are fitted.
- ◆ In addition, all rubber and plastic parts and all adhesives are made of non-conductive materials.
- ◆ Always fit new components if you are not sure that the old components are suitable ⇒ Electronic parts catalogue .

Please note:

- ◆ We recommend using only genuine replacement parts; these have been tested and are compatible with aluminium.
- ◆ We recommend using Audi Genuine Accessories.
- ◆ Damage caused by contact corrosion is not covered by the warranty.

3.4 Checking heating output

- ◆ Checking operation and heating output of auxiliary heater ⇒ Vehicle diagnostic tester ("Guided Fault Finding")
- ◆ Checking heat output of air conditioner ⇒ Heating, air conditioning; Rep. gr. 00 ; Repair notes; Checking heating output (Heating, air conditioning, Repair notes, checking heating output).

3.5 Notes on general repairs

Vehicles with high-voltage system (hybrid vehicles)

Working with ignition switched on or high-voltage system active

- To minimise the number of automatic engine starts when the vehicle's drive system is active during test and measurement work, charge vehicle batteries e.g. with the battery charger 60A - VAS 5904- in battery standby mode ⇒ Electrical system; General information; Rep. gr. 27 ; Battery; Charging battery .
- For test and measurement work that requires the vehicle's drive system to be active (READY) or the ignition to be switched on, move the selector lever to position "P", activate the parking brake and take care to keep well clear of the engine when it is running. Set up any tools needed so that they cannot come into contact with moving parts.



Note

- ◆ *Also move the selector lever to position "P" and activate the parking brake before performing test and measurement work for which the ignition must be switched on but where the vehicle's drive system does not need to be active (READY).*
- ◆ *The status of the drive system (READY) is shown by the control unit in dash panel insert - J285- via the "power meter" ⇒ Owner's Manual .*
- ◆ *Activating and deactivating drive system ⇒ Owner's Manual (note display of control unit in dash panel insert - J285-).*

All vehicles

- ◆ Self-diagnosis for auxiliary heater ⇒ Vehicle diagnostic tester ("Guided Fault Finding")



- ◆ After installing a new auxiliary heater, always check coding and adaption → Vehicle diagnostic tester ("Guided Fault Finding").
- ◆ If parts of the fuel system have been removed or renewed, make sure that all components used for the fuel take-off to the auxiliary heater are properly installed.
- ◆ Before removing the coolant hoses, mark them to avoid interchanging them.

3.6 Routing and attaching lines and wiring

- ◆ To avoid interchanging components and to make sure the components are re-installed in the original positions, mark e.g. fuel lines, hydraulic fluid lines, vacuum lines, activated charcoal filter system lines and electrical wiring before removing them. Make sketches or take photographs if necessary.
- ◆ To avoid damaging pipes, hoses and wiring, ensure sufficient clearance from all moving or hot components in engine compartment (limited space in engine compartment).
- ◆ After attaching, check the routing of the fuel lines and refrigerant lines. They must be inserted in the retainers provided and should not make contact with other components.



82 – Auxiliary heating

1 Overview of fitting locations - auxiliary/supplementary heater



Note

- ◆ *Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater.*
- ◆ *On vehicles with a diesel engine (without high-voltage system), the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87 ; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .*
- ◆ *On vehicles with high-voltage system, the supplementary heating function is provided by the high-voltage heater (PTC) - Z115- ⇒ Heating, air conditioning; Rep. gr. 87 ; Overview of fitting locations - air conditioner; Overview of fitting locations - components not located in passenger compartment .*
- ◆ *The following illustration shows the components of the auxiliary heater for an Audi A3. With slight differences, this layout also applies to the other versions in this model line (Audi A3 Sportback, Audi A3 Saloon etc.).*
- ◆ *On vehicles with high-voltage system (Audi A3 e-tron), the high-voltage heater (PTC) - Z115- can be activated instead of the auxiliary heater to heat up the passenger compartment. For further information, refer to ⇒ [page 5](#) .*
- ◆ *On vehicles with high-voltage system, there are further components in the coolant circuit which influence the operation of the auxiliary heater ⇒ [page 44](#) .*



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 with respect to the correctness of information in this document. Copyright by AUDI AG.



1 - Metering pump - V54-

- ❑ Fitting location: on fuel tank ⇒ [page 66](#)
- ❑ Checking fuel supply for auxiliary heater ⇒ [page 52](#)
- ❑ In some cases the metering pump - V54- will tick audibly without delivering any fuel because there is air in the suction hose. The control unit will then switch off permanently. Interrogate event memory ⇒ Vehicle diagnostic tester ("Guided Fault Finding") ⇒ , self-diagnosis for auxiliary heater. Erase event memory and perform final control diagnosis for auxiliary heater.
- ❑ Removing and installing ⇒ [page 66](#)
- ❑ Checking fuel delivery rate ⇒ Vehicle diagnostic tester ("Guided Fault Finding")



Note

-V54- is fitted in different locations on vehicles with or without high-voltage system ⇒ [page 66](#)

2 - Remote control receiver for auxiliary heater - R64-

- ❑ Fitting location ⇒ [page 80](#)



Note

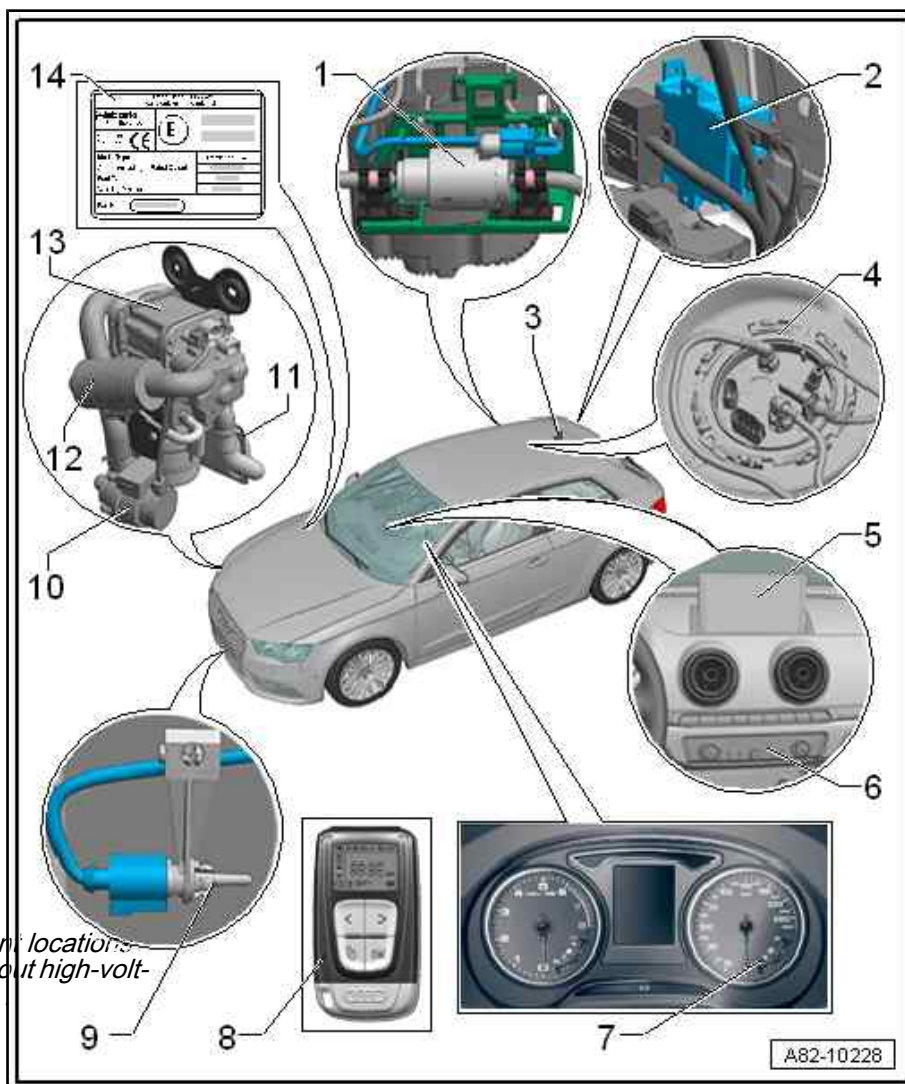
- ◆ For removing, remove luggage compartment trim (right-side) ⇒ General body repairs, interior; Rep. gr. 70 ; Luggage compartment trim panels; Removing and installing luggage compartment side trim .
- ◆ Different versions; pay attention to correct version
⇒ ["6.2.2 Allocation of hand-held transmitter and remote control receiver for auxiliary/supplementary heater", page 82](#) and ⇒ [Electronic parts catalogue](#) .

- ❑ Not on vehicles with high-voltage system



Note

- ◆ Vehicles with high-voltage system are currently not available with a remote control for the auxiliary heater.





- ◆ *On vehicles with high-voltage system which feature "Audi connect services" as an optional extra, the "Auxiliary heater / auxiliary ventilation" function can be switched on and off using a mobile phone and control unit 1 for information electronics - J794-)*
⇒ *Communication; Rep. gr. 91; Telephone system; Layout - telephone , ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*

Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not

3 - Roof aerial - R216-

- ☐ For vehicles with remote control
- ☐ Not on vehicles with high-voltage system



Note

- ◆ *Removing and installing ⇒ Radio, telephone, navigation; Rep. gr. 91 ; Aerial systems; Overview of fitting locations - aerial systems*
- ◆ *Different versions; pay attention to correct version ⇒ Electronic parts catalogue .*
- ◆ *On vehicles with high-voltage system which feature "Audi connect services" as an optional extra, the "Auxiliary heating / auxiliary ventilation" (or auxiliary air conditioner) function can be switched on and off using a mobile phone. Depending on the equipment fitted on these vehicles, the relevant information is exchanged via various aerials (e.g. GSM aerial - R205- or GSM aerial 2 - R267-) and control unit 1 for information electronics - J794- ⇒ Communication; Rep. gr. 91 ; Telephone system; Layout - telephone and ⇒ Radio, telephone, navigation; Rep. gr. 91 ; Aerial systems; Overview of fitting locations - aerial systems .*

4 - Fuel delivery unit with connection for fuel take-off for auxiliary heater/ fuel gauge sender - G-

- ☐ Fitting location: under rear seat bench ⇒ Fuel supply system; Rep. gr. 20 ; Fuel delivery unit/fuel gauge sender (Removing and installing fuel delivery unit/fuel gauge sender)
- ☐ Removing and installing ⇒ Fuel supply system; Rep. gr. 20 ; Fuel delivery unit/fuel gauge sender (Removing and installing fuel delivery unit/fuel gauge sender)
- ☐ Checking fuel supply for auxiliary heater ⇒ [page 52](#)
- ☐ Different fuel tanks and fuel delivery units depending on vehicle model ⇒ Fuel supply system; Rep. gr. 20 ; Fuel delivery unit/fuel gauge sender

5 - Multi Media Interface (MMI, control unit for front display and information control panel - J523-)

- ☐ The various functions for activating the auxiliary heater and auxiliary ventilation are entered via the Multi Media Interface (MMI, control unit for front display and information control panel - J523-) and indicated in the corresponding display ⇒ [page 74](#) .



Note

- ◆ *Various functions of the auxiliary heater are adjusted on the Multi Media Interface (MMI). In the event of problems with the auxiliary heater control function or heat output, you should therefore check these settings in the MMI ⇒ Owner's Manual and ⇒ Infotainment / MMI Operating Instructions*
 - ◆ *On vehicles with high-voltage system, you will find the "Auxiliary air conditioner" function (instead of the "Auxiliary heating / auxiliary ventilation" function) on the Multi Media Interface (MMI); here you can display and select various functions of the auxiliary heater, auxiliary ventilation and air conditioner. For further information, refer to ⇒ [page 5](#) , ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*
- ☐ Operation of auxiliary heater (in "Car" menu of Multi Media Interface (MMI), control unit for front display and information control panel - J523-) and corresponding displays are described in the corresponding manual ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .
 - ☐ If there is not enough fuel in the fuel tank (fuel gauge in red zone), the auxiliary heater cannot be switched on (tick in Multi Media Interface (MMI) (control unit for front display and information control panel - J523-) for "Immediate auxiliary heater activation" function and symbol for auxiliary heating mode cannot be activated or disappear again) ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .
 - ☐ If there is not enough fuel in the fuel tank on vehicles with high-voltage system (fuel gauge in red zone) or if the hybrid battery unit - AX1- is not sufficiently charged, the auxiliary heater cannot be switched on or the "Auxiliary air conditioner" function cannot be activated (tick in Multi Media Interface (MMI) (control unit for front display and information control panel - J523-) for "Immediate auxiliary heater activation" function and symbol for auxiliary heating mode cannot be activated or disappear again) ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .

6 - Air conditioner operating unit (Climatronic control unit - J255-)

- ☐ Activated via the data bus
- ☐ When the auxiliary heater is operated via the "Timer" function or the remote control (or "Audi connect services"), this determines the start-up mode (auxiliary ventilation or auxiliary heating) ⇒ Heating, air conditioning; Rep. gr. 87 ; Operating and display unit; Overview of fitting locations - operating and display unit and ⇒ Vehicle diagnostic tester ("Guided Fault Finding").
- ☐ Different versions depending on vehicle model ⇒ Electronic parts catalogue .



Note

- ◆ *Currently the auxiliary heater is only offered in conjunction with an automatic air conditioner ⇒ Audi sales literature .*

Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted without the prior written permission of Audi AG. AUDI AG does not guarantee or accept any liability with respect to the accuracy of the information in this document. Copyright by AUDI AG.



- ◆ *On vehicles with high-voltage system, if the Climatronic control unit - J255- has determined that auxiliary heating mode is required to attain the desired temperature in the passenger compartment, either the auxiliary heater or the high-voltage heater (PTC) - Z115- is activated (various other factors determine which of the two is activated). For further information, refer to [⇒ page 5](#).*

7 - Instrument cluster display

- ❑ If there is not enough fuel in the fuel tank (fuel gauge in red zone), the auxiliary heater cannot be switched on (tick in Multi Media Interface (MMI) (control unit for front display and information control panel - J523-) for "Immediate auxiliary heater activation" function and symbol for auxiliary heating mode in display of air conditioner control unit -J255- cannot be activated or disappear again) ⇒ Vehicle diagnostic tester ("Guided Fault Finding"), ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .

8 - Remote control for auxiliary heater

- ❑ Not on vehicles with high-voltage system
- ❑ For switching the "auxiliary heating" or "auxiliary ventilation" function of the auxiliary heater on and off [⇒ page 86](#)
- ❑ Renewing battery in remote control [⇒ page 94](#)
- ❑ Different versions; pay attention to correct version [⇒ "6.2.2 Allocation of hand-held transmitter and remote control receiver for auxiliary/supplementary heater", page 82](#) and ⇒ Electronic parts catalogue .
- ❑ Adapting remote control [⇒ page 84](#) and ⇒ Vehicle diagnostic tester ("Guided Fault Finding")
- ❑ Indication of fault status (e.g. "heating not possible") on display of remote control [⇒ page 93](#)



Note

On vehicles with high-voltage system which feature "Audi connect services" as an optional extra, the "Auxiliary heating / auxiliary ventilation" (or "Auxiliary air conditioner") function can be switched on and off using a mobile phone. Depending on the equipment fitted on these vehicles, the relevant information is exchanged via various aerials (e.g. GSM aerial - R205- or GSM aerial 2 - R267-) and control unit 1 for information electronics - J794- ⇒ Communication; Rep. gr. 91; Telephone system; Layout - telephone and ⇒ Radio, telephone, navigation; Rep. gr. 91 ; Aerial systems; Overview of fitting locations - aerial systems .

Protected by copyright. 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 with respect to the information in this document. Copyright by AUDI AG.

9 - Ambient temperature sensor - G17-

- ❑ Checking: vehicle diagnostic, testing and information system - VAS 5051B-
- ❑ Removing and installing ⇒ Heating, air conditioning; Rep. gr. 87 ; Overview of fitting locations - air conditioner; Overview of fitting locations - components not located in passenger compartment

10 - Circulation pump - V55-

- ❑ Fitting location: at auxiliary heater [⇒ page 23](#)
- ❑ Removing and installing [⇒ page 33](#)

11 - Exhaust silencer of auxiliary heater

- ❑ Removing and installing [⇒ page 34](#)



12 - Intake air noise insulation

- ❑ Removing and installing ⇒ [page 32](#)

13 - Auxiliary heater

- ❑ With auxiliary heater control unit - J364-
- ❑ Fitting location: on longitudinal member (front right)
- ❑ Different versions (for petrol/diesel versions and for vehicles with/without high-voltage system) ⇒ Electronic parts catalogue
- ❑ Exploded view of auxiliary heater ⇒ [page 23](#)
- ❑ Removing and installing ⇒ [page 25](#)
- ❑ Other components on auxiliary heater
⇒ [“2.1 Overview of fitting locations - auxiliary/supplementary heater”, page 23](#) and
⇒ [“2.11 Exploded view - components inside auxiliary/supplementary heater”, page 37](#)



Note

After installing a new auxiliary heater, always check coding and adaption ⇒ Vehicle diagnostic tester (“Guided Fault Finding”).

14 - Factory label duplicate for auxiliary heater

- ❑ Indicates both technical data and auxiliary heater version ⇒ [“1.1 Type plates”, page 1](#)
- ❑ Bonded onto inside of bonnet



2 Auxiliary/supplementary heater

⇒ [“2.1 Overview of fitting locations - auxiliary/supplementary heater”, page 23](#)

⇒ [“2.2 Removing and installing auxiliary/supplementary heater”, page 25](#)

⇒ [“2.3 Bleeding coolant circuit of auxiliary heater”, page 30](#)

⇒ [“2.4 Exploded view - attachments”, page 31](#)

⇒ [“2.5 Removing and installing air intake silencer”, page 32](#)

⇒ [“2.6 Removing and installing circulation pump V55 ”, page 33](#)

⇒ [“2.7 Removing and installing exhaust system”, page 34](#)

⇒ [“2.8 Removing and installing bracket for auxiliary/supplementary heater”, page 35](#)

⇒ [“2.9 Removing and installing covers for auxiliary heater control unit J364 ”, page 36](#)

⇒ [“2.10 Dismantling and assembling heater unit”, page 37](#)

⇒ [“2.11 Exploded view - components inside auxiliary/supplementary heater”, page 37](#)

⇒ [“2.12 Dismantling and assembling burner unit”, page 39](#)

⇒ [“2.13 Removing and installing glow plug with flame monitor Q8 ”, page 40](#)

⇒ [“2.14 Removing and installing temperature sensor G18 and overheating sensor G189 ”, page 40](#)

⇒ [“2.15 Pin assignment for auxiliary/supplementary heater”, page 41](#)

⇒ [“4.2 Checking CO2 content in exhaust gas of auxiliary/supplementary heater”, page 62](#)

2.1 Overview of fitting locations - auxiliary/supplementary heater



Note

Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine, the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87 ; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .



1 - Auxiliary heater

- ☐ With auxiliary heater control unit - J364-
- ☐ Different versions (for petrol/diesel versions and for vehicles with/without high-voltage system) ⇒ Electronic parts catalogue
- ☐ Removing and installing ⇒ [page 25](#)
- ☐ Other components of auxiliary heater ⇒ [“2.11 Exploded view - components inside auxiliary/supplementary heater”, page 37](#)

2 - Nut

- ☐ 2x
- ☐ 20 Nm

3 - Electrical connectors

4 - Nut

- ☐ 20 Nm

5 - Exhaust system

- ☐ Removing and installing ⇒ [page 34](#)

6 - Circulation pump - V55-

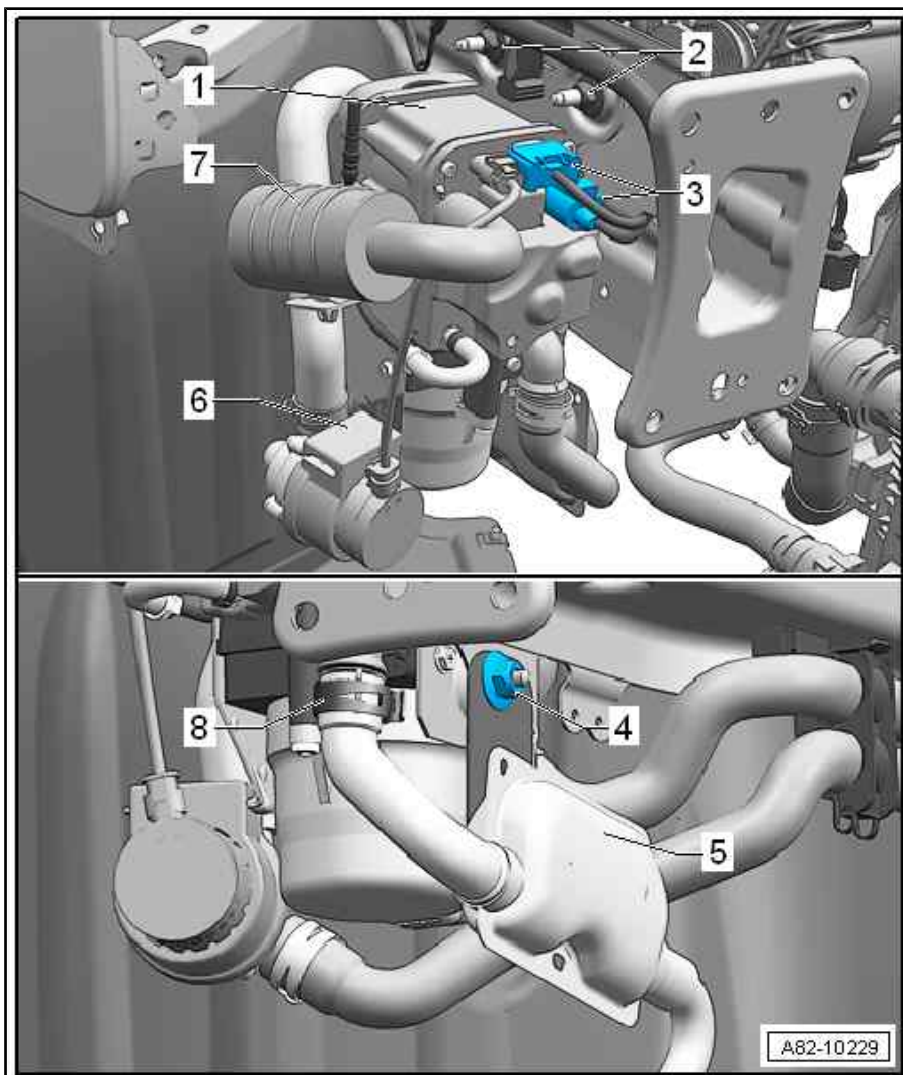
- ☐ Removing and installing ⇒ [page 33](#)

7 - Air intake silencer

- ☐ Removing and installing ⇒ [page 32](#)

8 - Exhaust clamp

- ☐ Depending on version



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 with respect to the correctness of information in this document. Copyright by AUDI AG.



2.2 Removing and installing auxiliary/supplementary heater



Note

- ◆ *Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine, the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87 ; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .*
- ◆ *Different versions (for petrol/diesel versions and for vehicles with/without high-voltage system) ⇒ Electronic parts catalogue*
- ◆ *If the coolant circuit is opened, it must be bled ⇒ Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Draining and filling cooling system .*
- ◆ *If the engine is warm, the cooling system is pressurised. Before performing repair work, release the pressure if necessary ⇒ Engine, mechanics; Rep. gr. 00 ; Safety precautions; Safety precautions when working on the cooling system (Engine, mechanics, Safety precautions; Safety precautions when working on the cooling system).*
- ◆ *After the auxiliary heater has been detached, it must be secured to the vehicle body with welding wire to prevent damage to the coolant hoses.*
- ◆ *If the auxiliary heater is renewed, the factory label duplicate must be checked and renewed if necessary
⇒ ["1.1 Type plates", page 1](#) .*

Removing

Before starting repair work, perform the following steps:

- Connect ⇒ Vehicle diagnostic tester, select **Diagnosis** and then **Select own test**, and start function "18 - Replace control unit".



Note

If possible, certain settings and adaption values for the auxiliary heater that is to be renewed can be read out and stored via this function. These values can then be stored and imported again for the new auxiliary heater ⇒ Vehicle diagnostic tester.

- Switch off electrical equipment.
- On vehicles with high-voltage system, switch off (deactivate) auxiliary air conditioner function ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .
- Switch off auxiliary heating and ignition.



Note

All cable ties and other wiring harness fasteners detached or cut open during the removal of the auxiliary heater must be re-attached in the same positions during installation.



- Remove noise insulation ⇒ General body repairs, exterior;
Rep. gr. 66 ; Noise insulation .
- Remove front wheel housing liner (right-side) ⇒ General body
repairs, exterior; Rep. gr. 66 ; Wheel housing liners .



WARNING

The exhaust system can become extremely hot. This can cause injuries.

Danger of burns to hands and other parts of the body.

- *Allow exhaust system to cool down.*

- Detach exhaust silencer of auxiliary heater
⇒ [“2.7 Removing and installing exhaust system”, page 34](#) .
- Place drip tray underneath.



WARNING

The cooling system is under pressure when the power unit is hot. Risk of scalding due to hot steam and hot coolant.

Danger of scalding skin and other parts of the body.

- *Put on protective gloves.*
- *Put on safety goggles.*
- *Cover filler cap on expansion tank with a cloth and open carefully to release pressure.*

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 with respect to the correctness of information in this document. Copyright by AUDI AG.



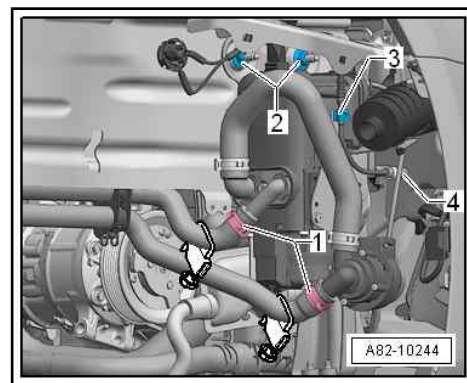
- Clamp off coolant hoses with hose clamps up to 25 mm - 3094- , release O-type clips -1- and pull coolant hoses off coolant pipes.
- Unfasten fuel line at clip -3-.



Note

Observe the safety precautions for working on the fuel supply system

⇒ "2.3 Safety precautions when working on the fuel system", page 9 and ⇒ Fuel supply system; Rep. gr. 00 ; Safety precautions; Safety precautions when working on the fuel supply system (Fuel supply system, Safety precautions; Safety precautions when working on the fuel supply system).



- If the securing nuts -2- are not readily accessible on account of the headlight design, the headlights must be removed ⇒ Electrical system; Rep. gr. 94 ; Headlights .
- If fitted, move electrical wire clear at nuts -2-.
- Unscrew securing nuts -2-, detach auxiliary heater from longitudinal member and hold in position.



WARNING

The fuel system is pressurised.

Risk of injury as fuel may spray out.

- ***Put on safety goggles.***
- ***Put on protective gloves.***
- ***Release pressure (wrap a clean cloth around connection and open connection carefully).***

- Unfasten O-type clip, pull fuel line -4- off auxiliary heater and seal connection with a suitable plug.



Caution

Auxiliary heater control unit - J364- could be damaged.

Risk of overvoltage at connectors

Unplug 6-pin connector first.



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 with respect to the correctness of information in this document. Copyright by AUDI AG.



- Carefully swivel auxiliary heater towards rear and release and detach connector -1- first and then connector -2-.
- Detach auxiliary heater and set down carefully.

Installing



Caution

Always observe the following when performing assembly work, particularly in the engine compartment (confined space):

- ◆ ***Route lines of all types (e.g. fuel, coolant and refrigerant lines) and electrical wires in the same way as they were routed originally.***
- ◆ ***Make sure there is enough clearance from all moving or hot components.***



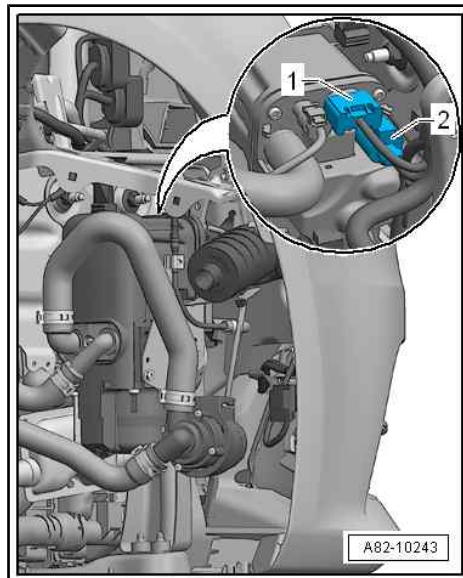
Note

- ◆ ***If the auxiliary heater has been renewed, connect a ⇒ Vehicle diagnostic tester and adjust various settings (e.g. "Pipe filling") in "Guided Fault Finding" mode before starting the auxiliary heater for the first time.***
- ◆ ***Different versions (for petrol/diesel versions and for vehicles with/without high-voltage system) ⇒ Electronic parts catalogue***

Install in reverse order of removal; note the following:

Tightening torques ⇒ [page 23](#)

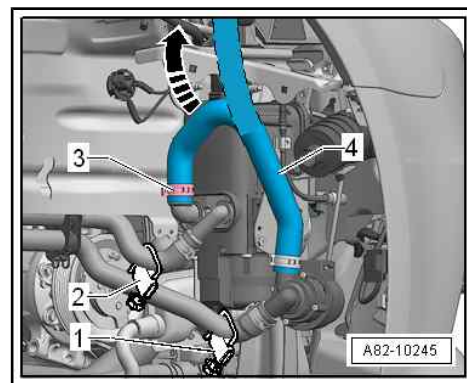
- Install auxiliary heater and fit and secure coolant hoses (do not open hose clamps up to 25 mm - 3094-).



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 with respect to the correctness of information in this document. Copyright by AUDI AG.



- Release hose clip -3- and hold hose -4- so it points vertically upwards.
- Open hose clamp -2- until coolant emerges from auxiliary heater.
- Close hose clamp -2-.
- Open hose clamp -1- until coolant emerges from hose -4-.
- Close hose clamp -1-.
- Fit hose -4- and detach hose clamps up to 25 mm - 3094- .
- Use ⇒ Vehicle diagnostic tester to complete function "18 - Replace control unit".
- Bleed coolant circuit of auxiliary heater
⇒ ["2.3 Bleeding coolant circuit of auxiliary heater", page 30](#) .



Note

If a large amount of air has entered the cooling system during installation, the complete system should be bled ⇒ Rep. gr. 19; Cooling system/coolant; Draining and filling cooling system .

- Interrogate and erase event memory ⇒ Vehicle diagnostic tester.
- Start auxiliary heater and run at full load for at least 10 minutes so that fuel line is bled completely and you can check operation of auxiliary heater.



Note

On vehicles with high-voltage system, it may not be possible to switch on the auxiliary heater via the Multi Media Interface (MMI); this depends on the charge level of the hybrid battery unit - AX1- and the ambient temperature. If -J255- is informed that the hybrid battery unit - AX1- is charged sufficiently and that enough energy is available to operate the high-voltage heater (PTC) - Z115- and if the ambient temperature is above approx. -10°C, -J255- activates -Z115- (the auxiliary heater is not activated). In this case, the auxiliary heater can be activated via the "Basic setting" function, for example. For further information, refer to ⇒ [page 5](#) and ⇒ Vehicle diagnostic tester ("Guided Fault Finding").



2.3 Bleeding coolant circuit of auxiliary heater



Note

Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not

- ◆ *The removal and installation procedures for the auxiliary heater and the circulation pump - V55- described in this Workshop Manual ensure that only a small quantity of air enters or remains in the coolant circuit. Therefore it is not necessary to bleed the coolant circuit completely after removing and installing the auxiliary heater or the circulation pump - V55- .*
- ◆ *However, if a large quantity of coolant has escaped due to another problem, e.g. a leaking hose, or after coolant pipes have been renewed, the coolant circuit must be bled completely using the cooling system charge unit - VAS 6096- ⇒ Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Draining and filling cooling system .*
- ◆ *After bleeding and filling the coolant circuit with the cooling system charge unit - VAS 6096- , the auxiliary heater and the circulation pump - V55- must be bled additionally as described below.*

Bleeding coolant circuit of auxiliary heater



Caution

The circulation pump - V55- must be filled with coolant to prevent the pump from being damaged irreparably when it is run dry.

- Fill coolant expansion tank with coolant as far as upper mark.
- Activate circulation pump - V55- via final control diagnosis function ⇒ Vehicle diagnostic tester in “18 - Additional/auxiliary heater, functions”. This will bleed coolant return from heat exchanger in air conditioning unit to circulation pump - V55- additionally.
- Set temperature on air conditioner operating unit (Climatronic control unit - J255-) to “HI” (for driver's and passenger's side).
- Switch on the “auxiliary heater” via the “AC” function in the “Car” menu of the Multi Media Interface (MMI, control unit for front display and information control panel - J523-) ⇒ Infotainment/MMI Operating Manual or e.g. via ⇒ Vehicle diagnostic tester in “18 - Additional/auxiliary heater, functions” via “Basic setting”.
- Run auxiliary heater at full load for at least 2 minutes (circulation pump - V55- will start up).



Note

On vehicles with high-voltage system, it may not be possible to switch on the auxiliary heater via the Multi Media Interface (MMI); this depends on the charge level of the hybrid battery unit - AX1- and the ambient temperature. If the Climatronic control unit - J255- is informed that the hybrid battery unit - AX1- is charged sufficiently and that enough energy is available to operate the high-voltage heater (PTC) - Z115- and if the ambient temperature is above approx. -10°C, the Climatronic control unit - J255- activates the high-voltage heater (PTC) - Z115- (the auxiliary heater is not activated). In this case, the auxiliary heater can be activated via the "Basic setting" function, for example. For further information, refer to ➔ [page 5](#) and ➔ Vehicle diagnostic tester in "18 - Supplementary/auxiliary heating functions".

- Start engine and set temperature on the air conditioner operating unit (Climatronic control unit - J255-) to "HI" (for driver's and passenger's side).
- Run engine at high idling speed (approx. 2000 to 2500 rpm) for at least 2 minutes.
- Switch off engine and auxiliary heater.



WARNING

The cooling system is under pressure when the power unit is hot. Risk of scalding due to hot steam and hot coolant.
Danger of scalding skin and other parts of the body.

- ***Put on protective gloves.***
- ***Put on safety goggles.***
- ***Cover filler cap on expansion tank with a cloth and open carefully to release pressure.***

- Check coolant level in coolant expansion tank and top up coolant if necessary ➔ Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Draining and filling cooling system .

2.4 Exploded view - attachments



1 - Bolt

- 8 Nm

2 - Bracket for auxiliary heater

- Removing and installing
⇒ [page 35](#)

3 - Auxiliary heater

4 - Hose clip

5 - Coolant hose

6 - Air intake silencer

- Removing and installing
⇒ [page 32](#)

7 - Circulation pump - V55-

- Removing and installing
⇒ [page 33](#)

8 - Bracket for circulation pump - V55- and air intake silencer

9 - Bolt

- For bracket for circulation pump - V55- and air intake silencer
- 8 Nm

10 - Exhaust silencer

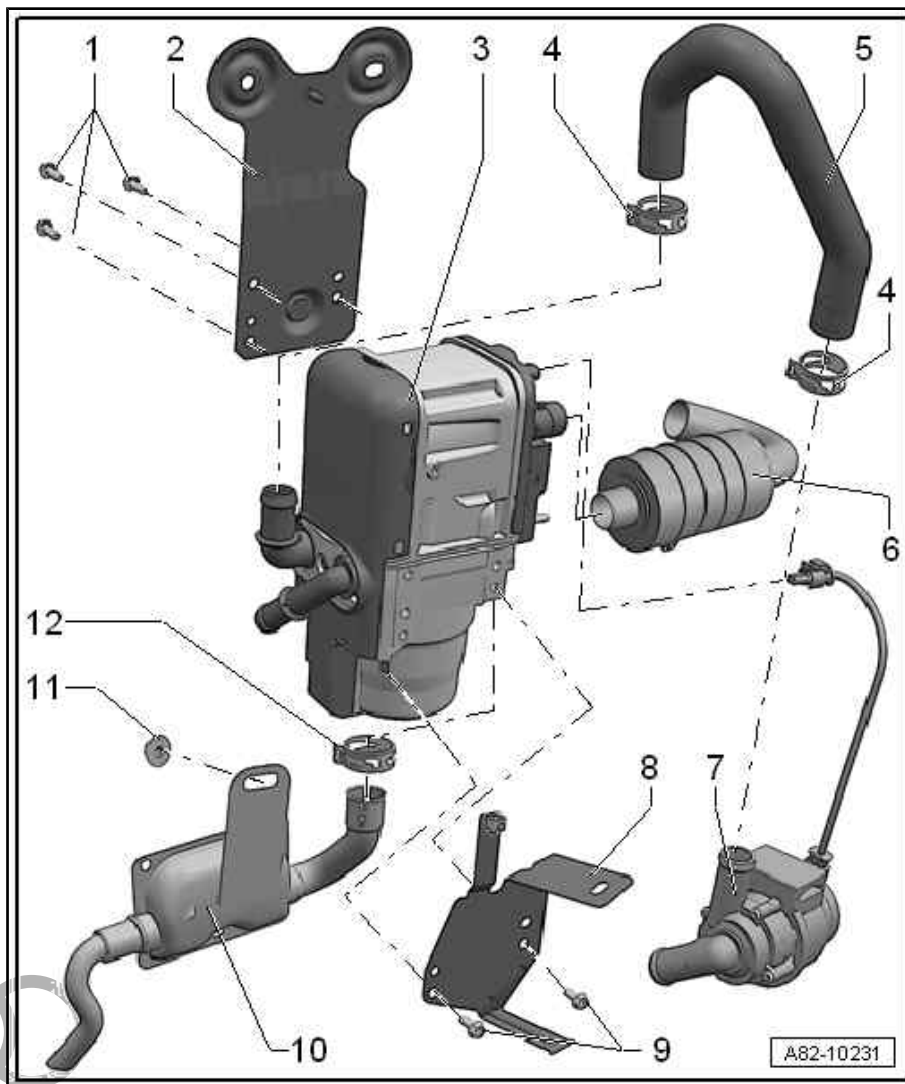
- Removing and installing
⇒ [page 34](#)

11 - Nut

- For exhaust silencer
- 20 Nm

12 - Exhaust clamp

- Depending on version
- Different versions
- Screw-type clip; 9 Nm



Copyright © Audi AG. All rights reserved. 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 with respect to the correctness of information in this document. Copyright by AUDI AG.

2.5 Removing and installing air intake silencer

Removing

- On vehicles with high-voltage system, switch off (deactivate) auxiliary air conditioner function ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .
- Switch off auxiliary heating and ignition.
- Remove front wheel housing liner (right-side) ⇒ General body repairs, exterior; Rep. gr. 66 ; Wheel housing liner (Removing and installing wheel housing liner).



- Squeeze fastener -1- and pull air intake silencer with hose -2- off connection on auxiliary heater.

Installing

- Slide hose with air intake silencer -2- onto intake connection of auxiliary heater and insert clip -1- of air intake silencer in bracket until it engages.

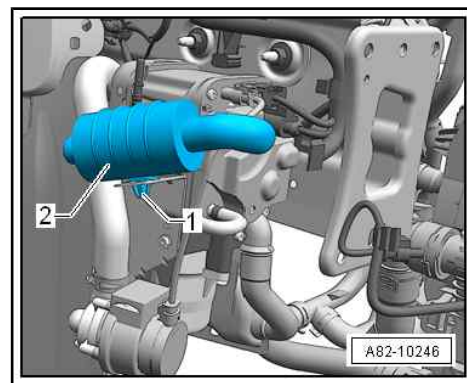


Note

Air intake silencer must not make contact with auxiliary heater housing.

- Secure air intake silencer to bracket with spreader rivet.

Remaining installation steps are performed in reverse order of removal.



2.6 Removing and installing circulation pump - V55-

Removing

- On vehicles with high-voltage system, switch off (deactivate) auxiliary air conditioner function ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .
- Switch off auxiliary heating and ignition.
- Remove front wheel housing liner (right-side) ⇒ General body repairs, exterior; Rep. gr. 66 ; Wheel housing liner (Removing and installing wheel housing liner).
- Clamp off coolant hoses using hose clamps up to 25 mm - 3094- .

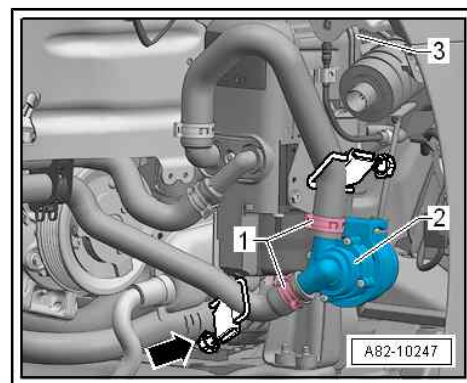


WARNING

The cooling system is under pressure when the power unit is hot. Risk of scalding due to hot steam and hot coolant.

Danger of scalding skin and other parts of the body.

- *Put on protective gloves.*
- *Put on safety goggles.*
- *Cover filler cap on expansion tank with a cloth and open carefully to release pressure.*



- Unfasten hose clips -1- and pull coolant hoses off circulation pump - V55- -2-.
- Unplug connector of circulation pump - V55- -3- at auxiliary heater or at circulation pump - V55- (depending on version).
- Pull circulation pump - V55- -2- off bracket.

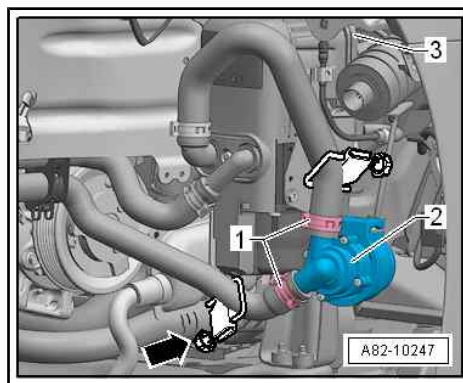
Installing



- Slide circulation pump - V55- -2- onto bracket.
- Plug connector of circulation pump - V55- -3- in at auxiliary heater (or at -V55-); make sure it engages correctly.
- Fit bottom coolant hose.
- Open bottom hose clamps up to 25 mm - 3094- -arrow- until coolant is up to top edge of circulation pump - V55- .
- Fit top coolant hose.

Remaining installation steps are performed in reverse order of removal.

- If a lot of air entered cooling system during assembly, coolant circuit must be bled
⇒ [“2.3 Bleeding coolant circuit of auxiliary heater”, page 30](#) .
- Interrogate and erase event memory ⇒ Vehicle diagnostic tester.



Note

*The counter for the operating time of the circulation pump - V55- (depending on the version of the auxiliary heater control unit - J364-) must be reset after the circulation pump - V55- is renewed
⇒ Vehicle diagnostic tester in “18 - Additional/auxiliary heater, functions”.*

- Start auxiliary heater and run at full load for at least 10 minutes so that fuel line is bled completely and you can check operation of auxiliary heater.



Note

On vehicles with high-voltage system, it may not be possible to switch on the auxiliary heater via the Multi Media Interface (MMI); this depends on the charge level of the hybrid battery unit - AX1- and the ambient temperature. If the Climatronic control unit - J255- is informed that the hybrid battery unit - AX1- is charged sufficiently and that enough energy is available to operate the high-voltage heater (PTC) - Z115- and if the ambient temperature is above approx. -10°C, the Climatronic control unit - J255- activates the high-voltage heater (PTC) - Z115- (the auxiliary heater is not activated). In this case, the auxiliary heater can be activated via the “Basic setting” function, for example. For further information, refer to

⇒ [“1.5 Notes on auxiliary heater operation - vehicles with high-voltage system”, page 5](#) and ⇒ Vehicle diagnostic tester (“Guided Fault Finding”).

2.7 Removing and installing exhaust system

Removing

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 with respect to the correctness of information in this document. Copyright by AUDI AG.



WARNING

The exhaust system can become extremely hot. This can cause injuries.

Danger of burns to hands and other parts of the body.

- Allow exhaust system to cool down.



- Switch off electrical equipment.
- On vehicles with high-voltage system, switch off (deactivate) auxiliary air conditioner function ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .
- Switch off auxiliary heating and ignition.
- Remove noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation (Removing and installing noise insulation).
- Remove charge air hose (depending on engine version) ⇒ Engine, mechanics; Rep. gr. 21 ; Charge air system; Exploded view - charge air system .
- Remove front wheel housing liner (right-side) ⇒ General body repairs, exterior; Rep. gr. 66 ; Wheel housing liner (Removing and installing wheel housing liner).
- If fitted, release exhaust clamp -3-.
- Unscrew securing nut -1- from exhaust silencer.
- Turn exhaust silencer -2- anti-clockwise and pull it off heating unit.

Installing

Protected by copyright. Copying for private or commercial purposes, in part or in full, is prohibited without the written permission of Audi AG. Audi AG does not guarantee or accept any liability for the correctness of information in this document. Copyright © 2018 Audi AG.

Install in reverse order of removal; note the following.

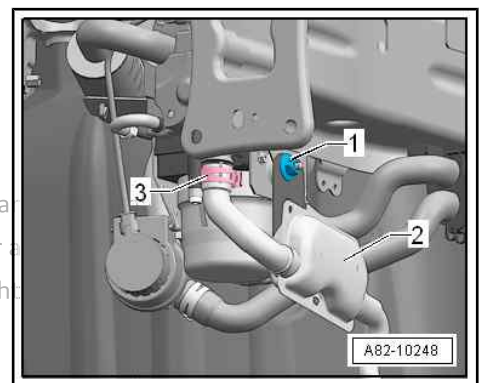


Caution

Risk of short circuit in electrical wiring.

Exhaust system becomes very hot in heating mode - make sure there is sufficient distance to other components.

Route exhaust system so that it cannot come into contact with electrical wiring.



Tightening torques ⇒ [page 31](#)

2.8 Removing and installing bracket for auxiliary/supplementary heater



Note

Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine, the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87 ; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .

Removing

- Remove auxiliary heater ⇒ [page 25](#) .



- Remove bolts -2- and detach bracket -1-.

Installing

- Installation is carried out in reverse sequence.



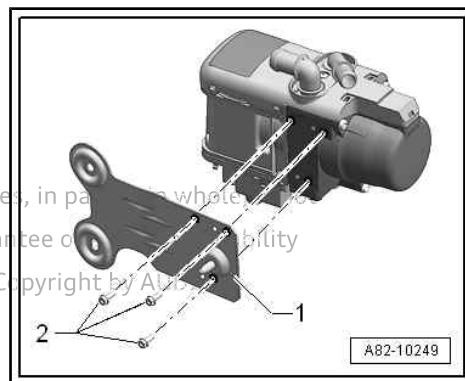
Note

ected by copyright. Copying for private or commercial purposes, in part or whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee the accuracy or reliability

When installing bracket -1-, pay attention to centring tabs.

with respect to the correctness of information in this document. Copyright by Audi AG

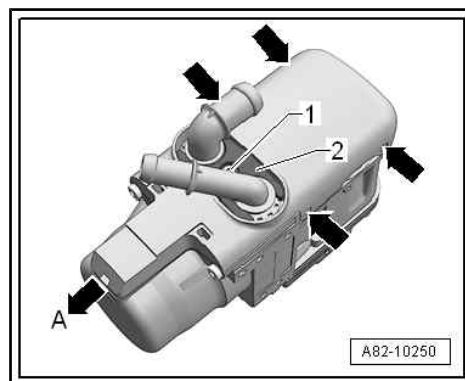
Tightening torques ➔ [page 31](#)



2.9 Removing and installing covers for auxiliary heater control unit - J364-

Removing

- Remove auxiliary heater ➔ [page 25](#) .
- Mark installation position of coolant connecting pipes.
- Loosen bolt -1- and detach retaining plate -2- with coolant connecting pipes.
- Unclip cover at locations marked with -arrows- and detach cover over retaining tab -arrow A-.



- Detach cable cover -1- from blower housing.
- Unclip connector cover -2- -arrows- and detach.

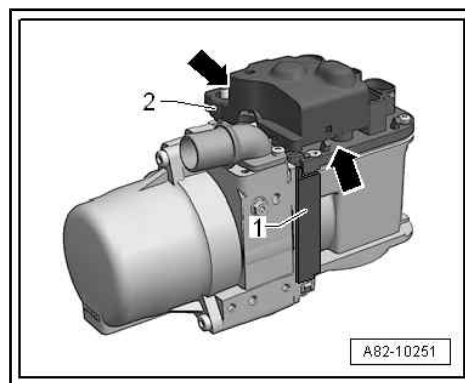
Dismantling heater unit ➔ [page 37](#)

Removing and installing glow plug with flame monitor - Q8- ➔ [page 40](#)

Removing and installing temperature sensor - G18- and over-heating sensor - G189- ➔ [page 40](#)

Installing

- Renew seals.

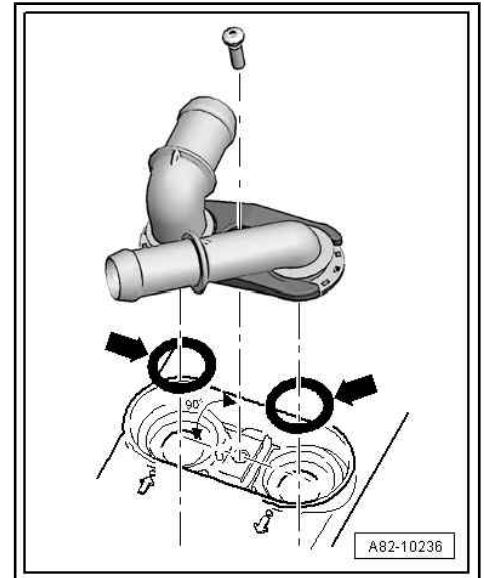




- Check that seals -arrows- are not damaged and are seated correctly.
- Check sealing surfaces for dirt and damage.
- Before installing cover, lightly coat seals with coolant.
- Remaining installation steps are performed in reverse order of removal.

Tightening torques

⇒ **"2.11 Exploded view - components inside auxiliary/supplementary heater", page 37**



2.10 Dismantling and assembling heater unit

Dismantling

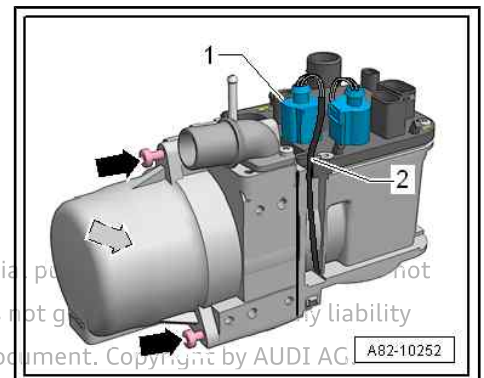
- Remove auxiliary heater ⇒ **page 25** .
- Remove covers ⇒ **page 36** .
- Release catch and unplug connector -1-.
- Release wire from clamp -2-.
- Loosen bolts -arrows- and pull heat exchanger from blower housing in axial direction of bolted connection.
- Clean inside and outside of heat exchanger.

Dismantling and assembling burner unit ⇒ **page 39**

Assembling

- Installation is carried out in reverse sequence.

Tightening torques ⇒ **page 37**



2.11 Exploded view - components inside auxiliary/supplementary heater



Note

Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine, the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87 ; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .



1 - Bolt

- ☐ 7 Nm
- ☐ 3x

2 - Heat exchanger

- ☐ Removing and installing
⇒ [page 37](#)

3 - Seal

- ☐ Must be renewed each time system is opened
- ☐ Note installation position

4 - Combustion tube

- ☐ Removing and installing
⇒ [page 39](#)

5 - Glow plug with flame monitor - Q8-

- ☐ Ensure that component is seated correctly
- ☐ Removing and installing
⇒ [page 40](#)

6 - Cover for auxiliary heater control unit - J364-

- ☐ Removing and installing
⇒ [page 36](#)

7 - Cover

8 - Auxiliary heater control unit - J364- with combustion air blower - V6-

- ☐ Removing and installing
⇒ [page 37](#)
- ☐ Checking operation
⇒ Vehicle diagnostic tester
- ☐ Starting up after installation ⇒ Vehicle diagnostic tester



Note

Auxiliary heater control unit - J364- and combustion air blower - V6- with housing cannot be dismantled. Reason: Packing between auxiliary heater control unit - J364- and housing.

9 - Noise insulation

- ☐ Bonded into cover ⇒ [Item 10 \(page 38\)](#)

10 - Cover

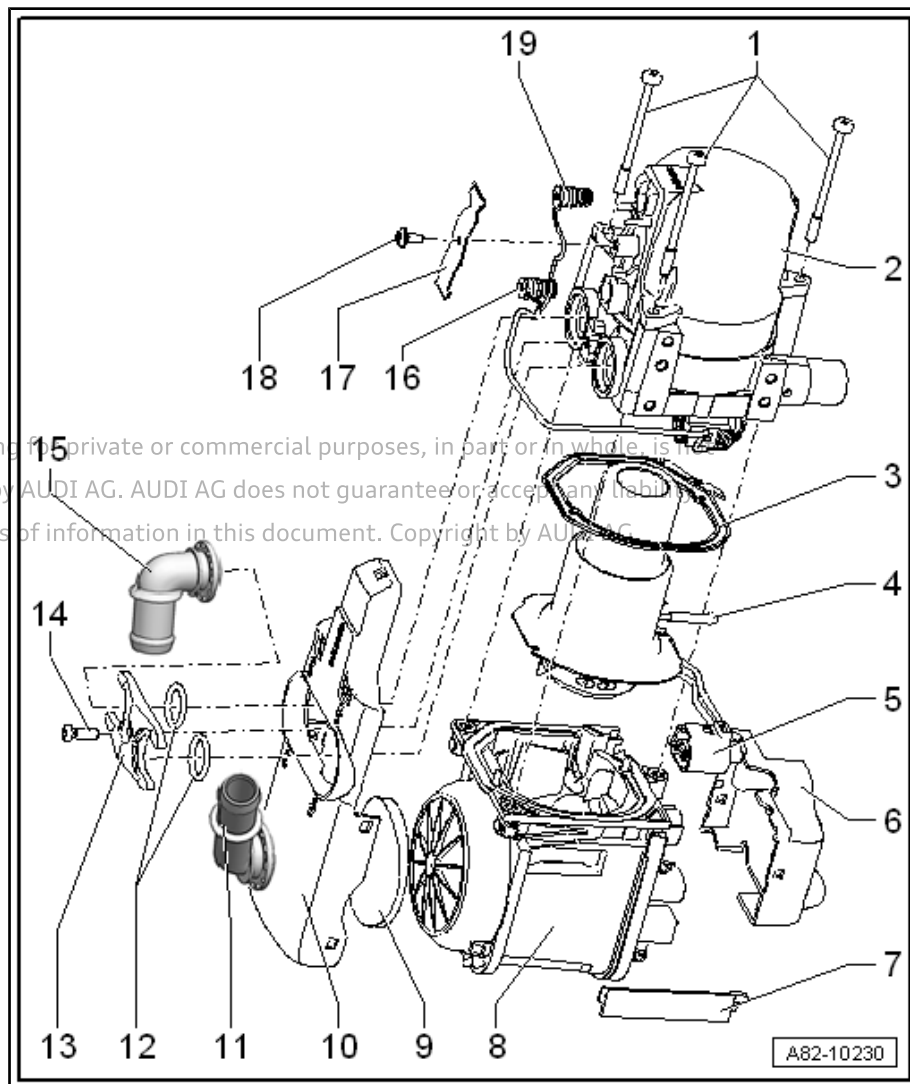
- ☐ Removing and installing ⇒ [page 36](#)

11 - Coolant connecting pipe

- ☐ Mark installation position before detaching

12 - Seal

- ☐ Renew
- ☐ 2x





13 - Retaining plate

14 - Bolt

- ☐ 4 Nm

15 - Coolant connecting pipe

- ☐ Mark installation position before detaching

16 - Temperature sensor - G18-

- ☐ Removing and installing ⇒ [page 40](#)
- ☐ Checking ⇒ Vehicle diagnostic tester

17 - Retaining spring

18 - Bolt

- ☐ 4 Nm

19 - Overheating sensor - G189-

- ☐ Removing and installing ⇒ [page 40](#)
- ☐ Checking ⇒ Vehicle diagnostic tester

2.12 Dismantling and assembling burner unit

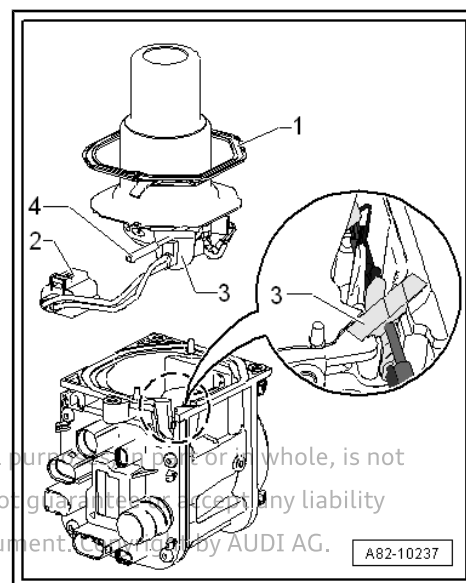
Dismantling

- Remove auxiliary heater ⇒ [page 25](#) .
- Dismantle heater unit ⇒ [page 37](#) .
- Detach gasket -1- from blower housing.
- Release and detach connector -2-.
- Pull grommet -3- out of blower housing onto combustion pipe -4-, using only a little force, and at the same time lift burner unit off vertically.

Assembling



Protected by copyright. Copying for private or commercial purposes, in whole or in part, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee the accuracy of the information with respect to the correctness of information in this document.





Renew gasket -1- and grommet -3-.

- Check sealing surfaces and clean if necessary.

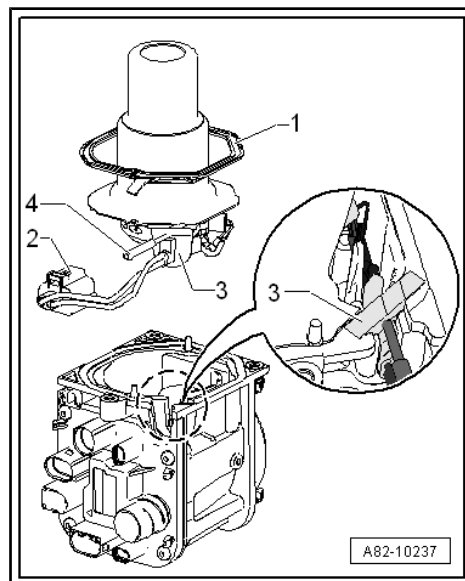
Installation is carried out in reverse sequence.

- Make sure gasket -1- is positioned correctly and connector -2- is engaged securely.



Caution

Risk of short circuit in connecting wires to glow plug with flame monitor - Q8-.



2.13 Removing and installing glow plug with flame monitor - Q8-

Removing

- Remove auxiliary heater ⇒ [page 25](#) .
- Dismantle burner unit ⇒ [page 39](#) .
- Release retaining spring -1- in direction of -arrow-.
- Detach retaining plate -2-.
- Pull out glow plug with flame monitor - Q8- -3-.

Installing

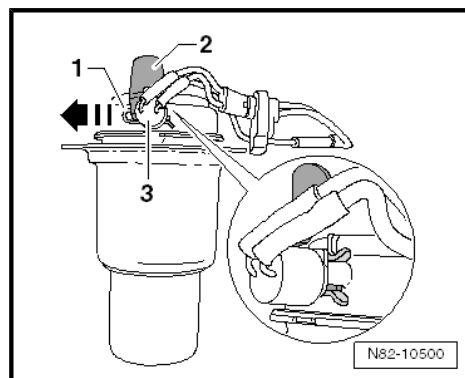
Installation is carried out in reverse sequence.

- Observe installation position of retaining spring -1- and retaining plate -2-.



Caution

Risk of short circuit in connecting wires to glow plug with flame monitor - Q8-.



2.14 Removing and installing temperature sensor - G18- and overheating sensor - G189-

Removing

- Remove auxiliary heater ⇒ [page 25](#) .

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 with respect to the correctness of information in this document. Copyright by AUDI AG.

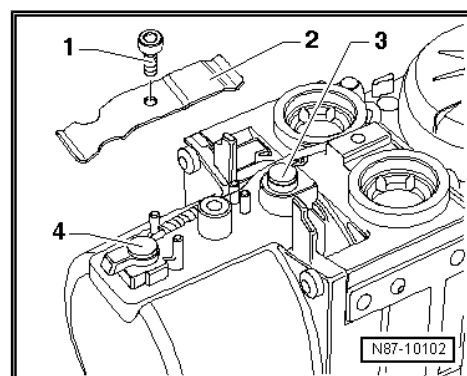
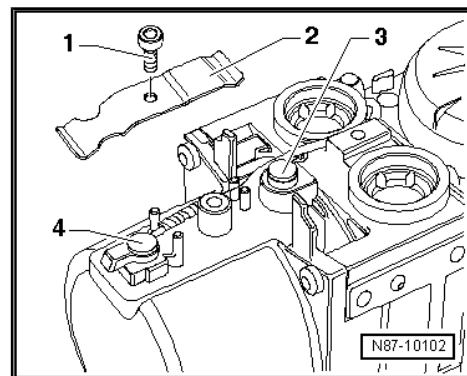


- Remove covers ➔ [page 36](#) .
- Remove bolt -1- (4 Nm) and detach retaining spring -2-.
- Pull out temperature sensor - G18- -3- and overheating sensor - G189- -4- using long-nose pliers.

Installing

Installation is carried out in reverse sequence.

- Renew seals.
- Check sealing surfaces and clean if necessary.
- Before inserting sensors, coat seals with coolant.
- When assembling, make sure that retaining spring -2- is positioned correctly.



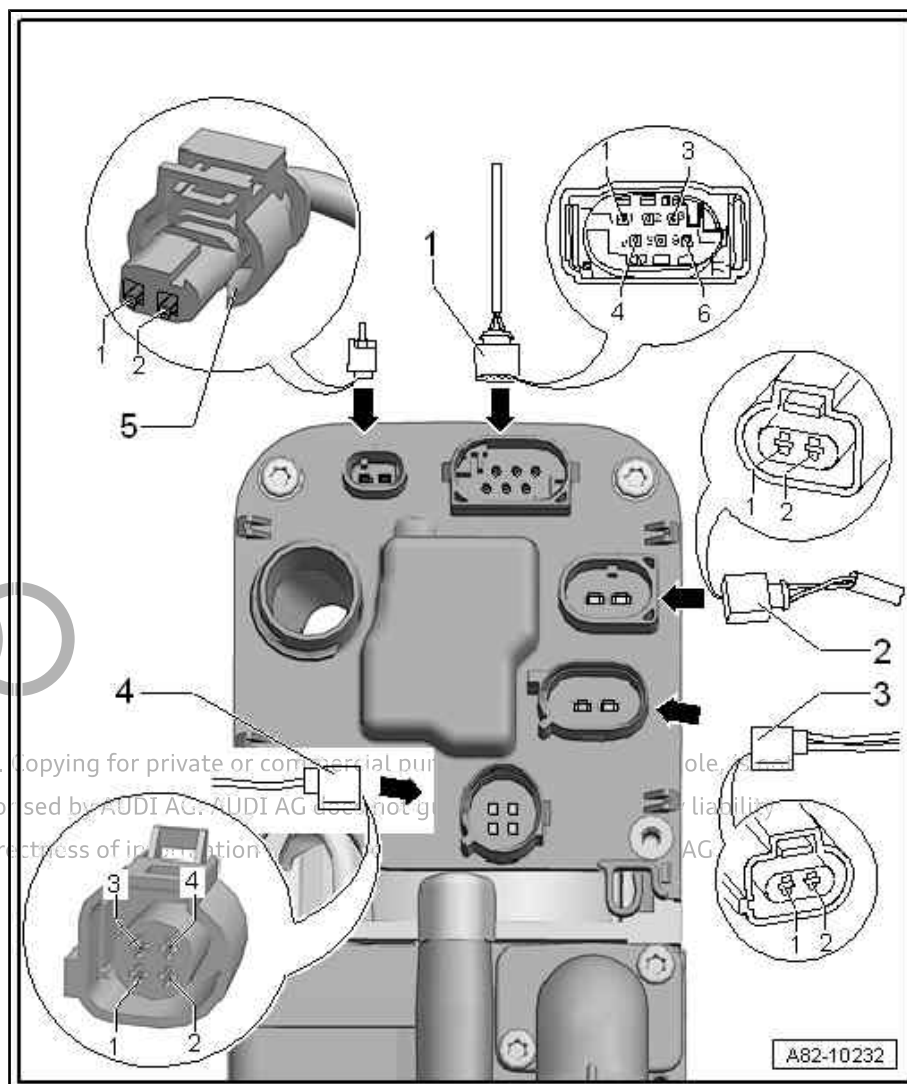
Note

Sensors cannot be renewed separately.

2.15 Pin assignment for auxiliary/supplementary heater

Note

Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine, the supplementary heating function is provided by the auxiliary air heater element - Z35- ➔ Heating, air conditioning; Rep. gr. 87; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .



Connector	Pin no.	Pin designation
1	1	not used
	2	Remove control receiver for auxiliary heater - R64- (on vehicles without high-voltage system ⇒ page 5)
	3	CAN bus (low)
	4	not used
	5	CAN bus (high)
	6	Metering pump - V54-
2	1	Battery + (terminal 30)
	2	Battery - (terminal 31)
3	1	Glow plug with flame monitor - Q8- +
	2	Glow plug with flame monitor - Q8- -
4	1 + 3	Overheating sensor - G189-
	2 + 4	Temperature sensor - G18-
5	1	Circulation pump - V55- +



Connector	Pin no.	Pin designation
	2	Circulation pump - V55- -



Note

*Incorporation of auxiliary heater into vehicle electrical system
⇒ Current flow diagrams, Electrical fault finding and Fitting locations*



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 with respect to the correctness of information in this document. Copyright by AUDI AG.



3 Coolant circuit with auxiliary/supplementary heater

⇒ [“3.1 Connection diagram for coolant hoses \(vehicles with auxiliary/supplementary heating\)”, page 44](#)

3.1 Connection diagram for coolant hoses (vehicles with auxiliary/supplementary heating)

⇒ [“3.1.1 Connection diagram - vehicles without high-voltage system”, page 44](#)

⇒ [“3.1.2 Connection diagram - vehicles with high-voltage system”, page 46](#)

3.1.1 Connection diagram - vehicles without high-voltage system



Note

- ◆ *Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine, the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87 ; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .*
- ◆ *Topping up coolant and bleeding coolant circuit ⇒ Rep. gr. 19 ; Cooling system/coolant; Draining and filling cooling system and ⇒ [page 30](#)*
- ◆ *For incorporation of heat exchanger for air conditioner and auxiliary heater into engine coolant circuit refer to ⇒ Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Connection diagram - coolant hoses*

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



Note

with respect to the correctness of information in this document. Copyright by AUDI AG.

The -arrows- indicate the direction of coolant flow.



1 - Heat exchanger for heater in air conditioning unit

- ❑ Incorporation of heat exchanger into engine coolant circuit ⇒ Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Connection diagram - coolant hoses

2 - Auxiliary heater

- ❑ Removing and installing ⇒ [page 25](#)

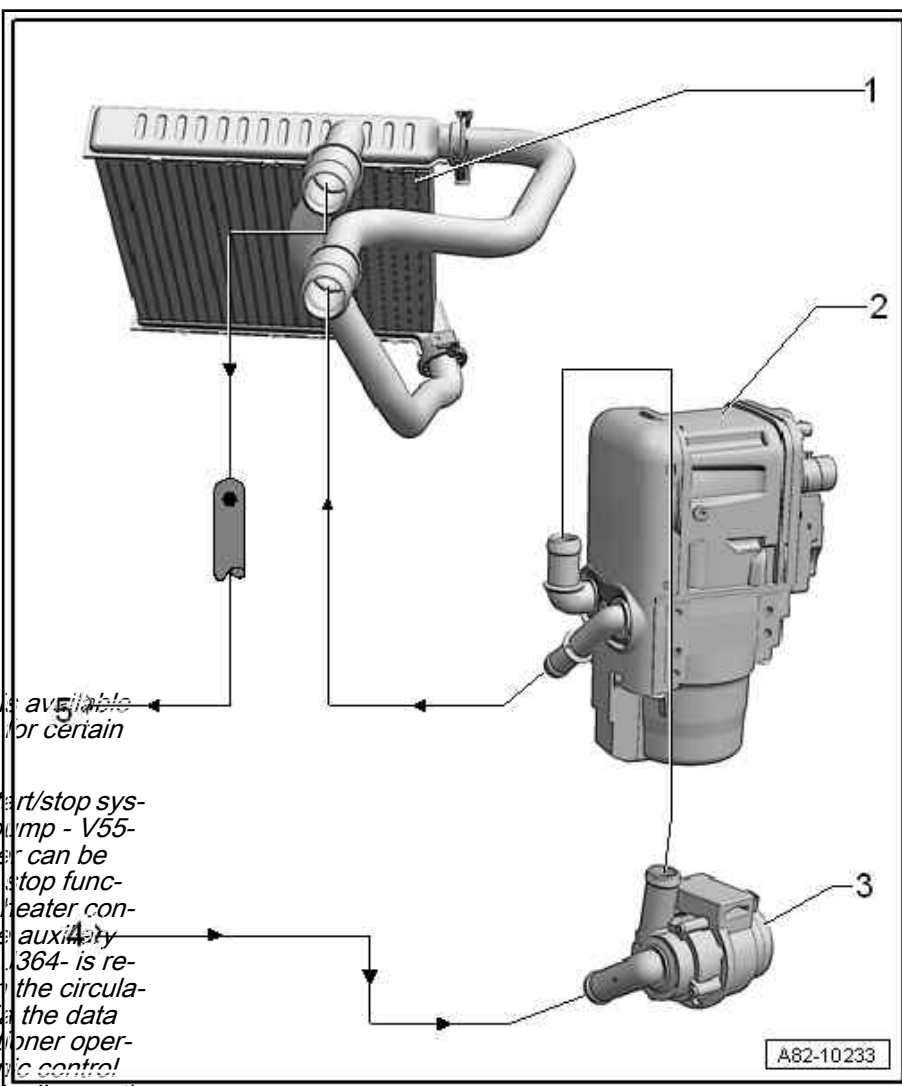
3 - Circulation pump - V55-

- ❑ The circulation pump - V55- is incorporated into the auxiliary heater hoses.
- ❑ Removing and installing ⇒ [page 33](#)



Note

- ◆ A start/stop system is available as an optional extra for certain engines.
- ◆ On vehicles with a start/stop system the circulation pump - V55- of the auxiliary heater can be activated during the stop function by the auxiliary heater control unit - J364- . The auxiliary heater control unit - J364- is requested to switch on the circulation pump - J255- via the data bus by the air conditioner operating unit (Climatronic control unit - V55-) ⇒ Vehicle diagnostic tester ("Guided Fault Finding").



4 - Coolant supply from engine

- ❑ Incorporation of auxiliary heater into engine coolant circuit ⇒ Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Connection diagram - coolant hoses

5 - Coolant return to engine

- ❑ Incorporation of auxiliary heater into engine coolant circuit ⇒ Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Connection diagram - coolant hoses



3.1.2 Connection diagram - vehicles with high-voltage system



Note

- ◆ *Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with high-voltage system, the supplementary heating function is provided by the high-voltage heater (PTC) - Z115- ⇒ Heating, air conditioning; Rep. gr. 87 ; Overview of fitting locations - air conditioner; Overview of fitting locations - components not located in passenger compartment .*
- ◆ *On vehicles with high-voltage system (Audi A3 e-tron), the high-voltage heater (PTC) - Z115- can be activated instead of the auxiliary heater to heat up the passenger compartment. For further information, refer to ⇒ [page 5](#) .*
- ◆ *Topping up coolant and bleeding coolant circuit ⇒ Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Draining and filling cooling system and ⇒ [page 30](#)*
- ◆ *For incorporation of heat exchanger for air conditioner and auxiliary heater into engine coolant circuit refer to ⇒ Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Connection diagram - coolant hoses .*



Note

The -arrows- indicate the direction of coolant flow.

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 with respect to the correctness of information in this document. Copyright by AUDI AG.



1 - Heat exchanger for heater in air conditioning unit

- ❑ Incorporation of heat exchanger into engine coolant circuit ⇒ Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Connection diagram - coolant hoses

2 - Non-return valve

- ❑ Fitted in coolant line between high-voltage heater (PTC) - Z115- and air conditioner heat exchanger
- ❑ Ensure correct installation position and operation
- ❑ Removing and installing ⇒ Engine, mechanics; Rep. gr. 19 ; Coolant pump/thermostat assembly

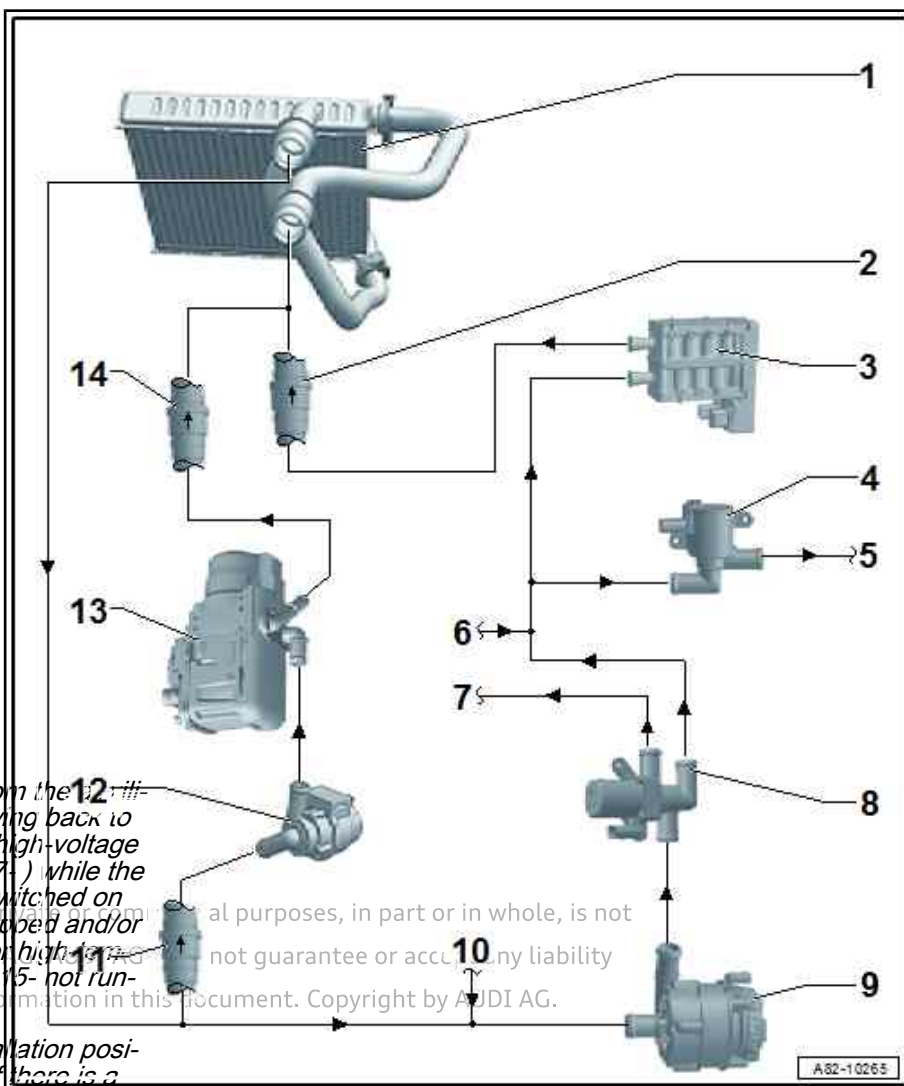


Note

◆ Prevents coolant from the auxiliary heater from flowing back to the engine (via the high-voltage heater (PTC) - V4671) while the auxiliary heater is switched on (with the engine stopped and/or the coolant pump for high temperature circuit - Z115- not running).

◆ Ensure correct installation position and operation if there is a problem with poor heat output from the air conditioner in auxiliary heating mode.

◆ Ensure correct installation position and operation if there is a problem with poor heat output from the air conditioner while the auxiliary heater is switched on (if the auxiliary heater rather than - Z115- is activated to heat up the coolant) ⇒ [page 5](#).



3 - High-voltage heater (PTC) - Z115- (with high-voltage heater (PTC) control unit - J848-)

- ❑ Checking ⇒ Vehicle diagnostic tester ("Guided Fault Finding" for air conditioner) and ⇒ Current flow diagrams, Electrical fault finding and Fitting locations
- ❑ Removing and installing ⇒ Heating, air conditioning; Rep. gr. 87 ; Overview of fitting locations - air conditioner; Overview of fitting locations - components not located in passenger compartment
- ❑ Further information ⇒ Heating, air conditioning; Rep. gr. 00 ; Repair instructions (information on high-voltage heater (PTC) - Z115- and high-voltage heater (PTC) control unit - J848-)

4 - Coolant valve for gearbox - N488-

- ❑ Removing and installing ⇒ Engine, mechanics; Rep. gr. 19 ; Coolant pump/thermostat assembly
- ❑ Checking ⇒ Vehicle diagnostic tester ("Guided Fault Finding" for engine) and ⇒ Current flow diagrams, Electrical fault finding and Fitting locations



5 - Coolant supply to gearbox

- ☐ Incorporated into engine (and gearbox) coolant circuit ⇒ Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Connection diagram - coolant hoses

6 - Coolant supply from engine

- ☐ Incorporated into engine coolant circuit ⇒ Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Connection diagram - coolant hoses

7 - Coolant return to engine

- ☐ Incorporated into engine coolant circuit ⇒ Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Connection diagram - coolant hoses

8 - Coolant changeover valve 2 - N633-

- ☐ Incorporated into engine coolant circuit ⇒ Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Connection diagram - coolant hoses
- ☐ Removing and installing ⇒ Engine, mechanics; Rep. gr. 19 ; Coolant pump/thermostat assembly



Note

◆ *-N633- is activated by the corresponding engine control unit (e.g. by engine control unit - J623-) if heat output is requested from the air conditioner and the "Auxiliary heating mode" function is active but the high-voltage heater -Z115- is activated instead of the auxiliary heater, or the vehicle is in electric mode ⇒ Current flow diagrams, Electrical fault finding and Fitting locations and ⇒ Vehicle diagnostic tester ("Guided Fault Finding").*

◆ *Check correct installation position and operation if there is a problem with insufficient heat output from the air conditioner with the auxiliary heater switched off (with engine stopped and/or running, regardless of whether -Z115- is activated ⇒ Current flow diagrams, Electrical fault finding and Fitting locations and ⇒ Vehicle diagnostic tester ("Guided Fault Finding").*

Prohibited from being copied, reproduced, disseminated or used for private or commercial purposes, in part or in whole, is not permitted without the written consent of AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of the information in this document. Copyright by AUDI AG.



- ◆ *So that the coolant heated up by -Z115- is conveyed through the air conditioner heat exchanger, the coolant pump for high-temperature circuit - V467- and the coolant valve for gearbox - N488- must also be activated (by the corresponding engine control unit). To ensure that the coolant flows in the right direction, the non-return valves fitted in the coolant circuit must also be installed correctly and they must operate correctly. For further information, refer to ⇒ Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Connection diagram - coolant hoses , ⇒ Vehicle diagnostic tester ("Guided Fault Finding") and ⇒ Current flow diagrams, Electrical fault finding and Fitting locations.*

9 - Coolant pump for high-temperature circuit - V467-

- ❑ Incorporated into engine coolant circuit ⇒ Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Connection diagram - coolant hoses
- ❑ Removing and installing ⇒ Engine, mechanics; Rep. gr. 19 ; Coolant pump/thermostat assembly



Note

- ◆ *-V467- is activated by the corresponding engine control unit (e.g. by engine control unit - J623-) if heat output is being requested by the air conditioner ⇒ Current flow diagrams, Electrical fault finding and Fitting locations and ⇒ Vehicle diagnostic tester ("Guided Fault Finding").*
- ◆ *Check correct installation position and operation if there is a problem with insufficient heat output from the air conditioner with the auxiliary heater switched off (with engine stopped and/or running, regardless of whether -Z115- is activated ⇒ Current flow diagrams, Electrical fault finding and Fitting locations and ⇒ Vehicle diagnostic tester ("Guided Fault Finding").*





- ◆ *So that the coolant heated up by -Z115- is conveyed through the air conditioner heat exchanger, the coolant changeover valve 2 - N633- and the coolant valve for gearbox - N488- must also be activated (by the corresponding engine control unit). To ensure that the coolant flows in the right direction, the non-return valves (⇒ [Item 2 \(page 47\)](#) and ⇒ [Item 11 \(page 50\)](#)) fitted in the coolant circuit must be installed correctly and must operate correctly. For further information, refer to ⇒ *Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Connection diagram - coolant hoses* , ⇒ *Vehicle diagnostic tester ("Guided Fault Finding")* and ⇒ *Current flow diagrams, Electrical fault finding and Fitting locations*.*

10 - Coolant return from gearbox

- Incorporated into engine (and gearbox) coolant circuit ⇒ *Engine, mechanics; Rep. gr. 19 ; Cooling system/coolant; Connection diagram - coolant hoses*

11 - Non-return valve

- Depending on vehicle model, fitted in coolant line between air conditioner heat exchanger and circulation pump - V55- (as illustrated) or in coolant line between auxiliary heater and air conditioner heat exchanger ⇒ [Item 14 \(page 51\)](#) .
- Ensure correct installation position and operation
- Removing and installing ⇒ *Engine, mechanics; Rep. gr. 19 ; Coolant pump/thermostat assembly*



Note

- ◆ *Prevents coolant from the auxiliary heater from flowing back to the engine while the auxiliary heater is switched off (with the engine running and/or the coolant pump for high-temperature circuit - V467- running).*

Protected by copyright. No reproduction, in part or in whole, is not permitted without the written consent of 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.

- ◆ *Check correct installation position and operation if there is a problem with poor heat output from the air conditioner with the auxiliary heater switched off (with engine stopped and/or running, regardless of whether - Z115- and coolant pump for high-temperature circuit - V467- are activated).*
- ◆ *Ensure correct installation position and operation if there is a problem with poor heat output from the air conditioner while the auxiliary heater is switched on (if -Z115- rather than the auxiliary heater itself is activated to heat up the coolant) ⇒ [page 5](#) .*

12 - Circulation pump - V55-

- -V55- is incorporated into the auxiliary heater hoses.



- ❑ Removing and installing ⇒ [page 33](#)



Note

In electric mode, the circulation pump - V55- of the auxiliary heater can be activated by the auxiliary heater control unit - J364- while the engine is not running. The auxiliary heater control unit - J364- is requested to switch on the circulation pump - J255- via the data bus by the air conditioner operating unit (Climatronic control unit - V55-) ⇒ Vehicle diagnostic tester ("Guided Fault Finding").

13 - Auxiliary heater

- ❑ Removing and installing ⇒ [page 25](#)



Note

On vehicles with high-voltage system, if -J255- has determined that auxiliary heating mode is required to attain the desired temperature in the passenger compartment, either the auxiliary heater or the high-voltage heater (PTC) - Z115- is activated (various other factors determine which of the two is activated). For further information, refer to [⇒ page 5](#).

14 - Non-return valve

- ❑ Alternative fitting location if not fitted in ⇒ [Item 11 \(page 50\)](#)
- ❑ Further notes ⇒ [Item 11 \(page 50\)](#)



Note

Only fitted if non-return valve [⇒ Item 11 \(page 50\)](#) is not fitted.



4 Fuel supply system

⇒ [“4.1 Overview of fitting locations - fuel supply system”, page 52](#)

⇒ [“4.2 Checking CO2 content in exhaust gas of auxiliary/supplementary heater”, page 62](#)

⇒ [“4.3 Checking fuel delivery rate of metering pump V54 ”, page 65](#)

⇒ [“4.4 Removing and installing metering pump V54 ”, page 66](#)

⇒ [“4.5 Checking metering pump V54 with end sealing valve”, page 71](#)

4.1 Overview of fitting locations - fuel supply system

⇒ [“4.1.1 Components for fuel supply of auxiliary/supplementary heater”, page 52](#)

⇒ [“4.1.2 Repairs to fuel supply system of auxiliary/supplementary heater”, page 54](#)

⇒ [“4.1.3 Exploded view - fuel delivery unit”, page 55](#)

⇒ [“4.1.4 Fuel intake from fuel delivery unit”, page 57](#)

⇒ [“4.1.5 Installing riser in fuel delivery unit”, page 59](#)

⇒ [“4.1.6 Bleeding fuel line to metering pump V54 \(filling with fuel\)”, page 61](#)

4.1.1 Components for fuel supply of auxiliary/supplementary heater



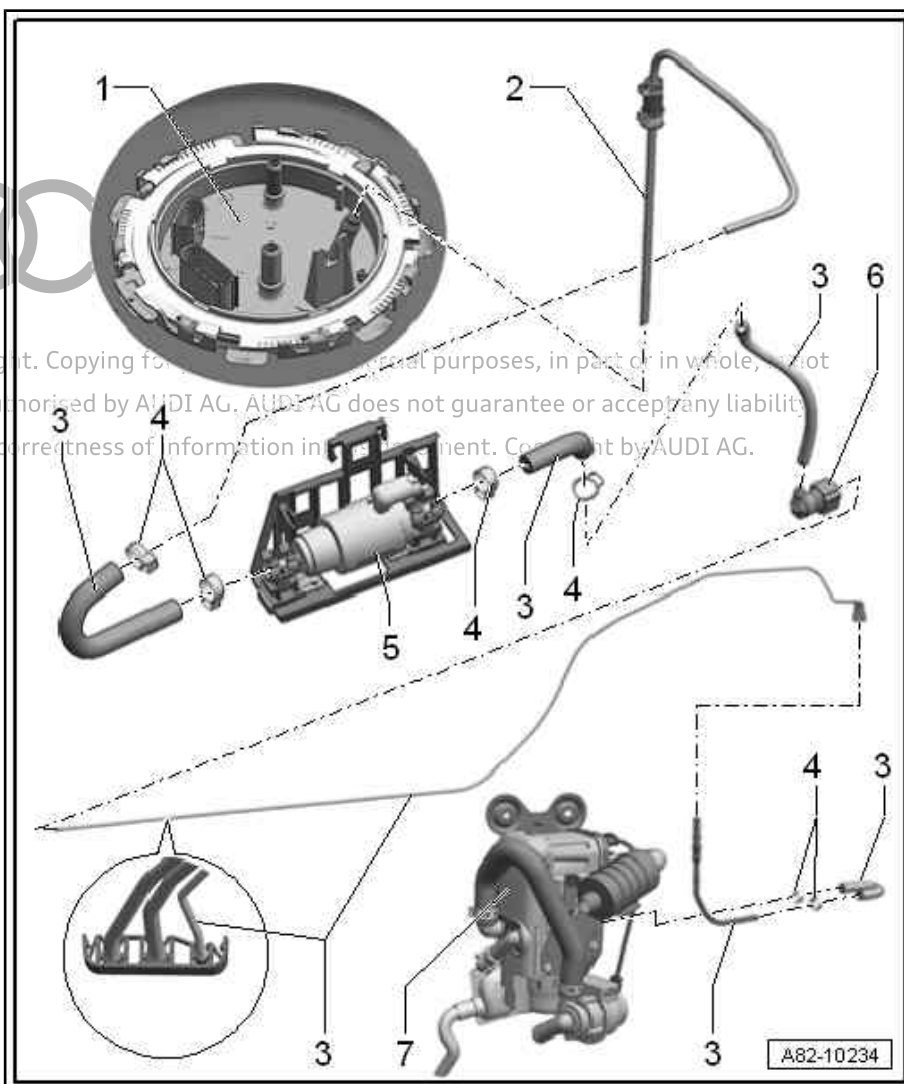
Note

The metering pump - V54- cannot be accessed on vehicles with high-voltage system (Audi A3 e-tron) if the fuel tank is installed ⇒ [page 66](#) . If necessary, the fuel line (and the corresponding riser) to the metering pump - V54- must therefore be bled before the fuel tank is installed (e.g. after working on the fuel delivery unit) ⇒ [page 61](#) .



1 - Fuel delivery unit with connection for fuel take-off for auxiliary heater

- ☐ Removing and installing
⇒ Fuel supply system;
Rep. gr. 20 ; Fuel delivery unit/fuel gauge sender (Exploded view - fuel delivery unit/fuel gauge sender)
- ☐ Fuel take-off from fuel tank ⇒ [page 59](#) and ⇒ Fuel supply system;
Rep. gr. 20 ; Fuel delivery unit/fuel gauge sender (Exploded view - fuel delivery unit/fuel gauge sender)
- ☐ Filling fuel line to metering pump - V54- with fuel (bleeding)
⇒ ["4.1.6 Bleeding fuel line to metering pump V54 \(filling with fuel\)", page 61](#)
- ☐ Different fuel delivery units depending on vehicle model (petrol or diesel engine) ⇒ Fuel supply system; Rep. gr. 20 ; Fuel delivery unit/fuel gauge sender (Exploded view - fuel delivery unit/fuel gauge sender)



2 - Riser

- ☐ With grommet and clamps
- ☐ Removing and installing ⇒ [page 59](#)

3 - Fuel line/fuel hose

- ☐ The sections of the fuel line must be butt-jointed to stop vapour bubbles from accumulating at the connections.
- ☐ Filling fuel line to metering pump - V54- with fuel (bleeding)
⇒ ["4.1.6 Bleeding fuel line to metering pump V54 \(filling with fuel\)", page 61](#)
- ☐ Different fuel lines depending on version of vehicle (petrol or diesel engine, front-wheel drive or four-wheel drive) ⇒ Electronic parts catalogue



Caution

If fuel lines make contact with body, they can transfer sound.

- After installation, check that fuel lines are correctly seated and routed; fuel lines must not make contact with body (risk of transferring sound).

4 - Hose clip

- ☐ Renew

5 - Metering pump - V54-

- ☐ Removing and installing ⇒ [page 66](#)
- ☐ Checking fuel delivery rate ⇒ Vehicle diagnostic tester ("Guided Fault Finding")



- ❑ Checking activation ⇒ Vehicle diagnostic tester in “Guided Fault Finding” mode



Note

This illustration shows the installation position of the metering pump - V54- on vehicles without high-voltage system. On vehicles with high-voltage system it is installed in the same position but rotated by 180° ⇒ [page 66](#) .

6 - Angle piece

7 - Auxiliary heater

- ❑ Removing and installing ⇒ [page 25](#)

4.1.2 Repairs to fuel supply system of auxiliary/supplementary heater

Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not



Note

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.

- ◆ *Observe the relevant safety precautions when working on the fuel system ⇒ Fuel supply system; Rep. gr. 00 ; Safety precautions; Safety precautions when working on the fuel supply system (Fuel supply system, Safety precautions; Safety precautions when working on the fuel supply system).*
- ◆ *The engine must not be started if fuel system components (e.g. metering pump, fuel line, fuel gauge sender) have been removed or opened ⇒ Fuel supply system; Rep. gr. 00 ; Safety precautions; Safety precautions when working on the fuel supply system (Fuel supply system, Safety precautions; Safety precautions when working on the fuel supply system).*

Before starting repair work, perform the following steps:

- Switch off auxiliary heater.
- On vehicles with high-voltage system, switch off (deactivate) auxiliary air conditioner function ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .
- Switch off ignition.
- Observe rules for cleanliness ⇒ [page 13](#) .



Note

- ◆ *Fuel lines are secured with spring-type clips; if necessary, replace these clips with screw-type clips ⇒ Electronic parts catalogue .*
 - ◆ *If fuel tank was empty, engine must be started after filling in fuel and before switching on auxiliary heater for the first time ⇒ [page 57](#) . Then start auxiliary heater and run at full load for several minutes.*
 - ◆ *On vehicles with high-voltage system, it may not be possible to switch on the auxiliary heater via the Multi Media Interface (MMI); this depends on the charge level of the hybrid battery unit - AX1- and the ambient temperature. If -J255- is informed that the hybrid battery unit - AX1- is charged sufficiently and that enough energy is available to operate the high-voltage heater (PTC) - Z115- and if the ambient temperature is above approx. -10°C, -J255- activates -Z115- (the auxiliary heater is not activated). In this case, the auxiliary heater can be activated via the "Basic setting" function, for example. For further information, refer to ⇒ [page 5](#) and ⇒ Vehicle diagnostic tester ("Guided Fault Finding").*
 - ◆ *Always observe the rules for cleanliness when working on the fuel supply system ⇒ ["3.1 Rules for cleanliness", page 13](#) and ⇒ Fuel supply system; Rep. gr. 00; Safety precautions; Safety precautions when working on the fuel supply system (Fuel supply system, Safety precautions; Safety precautions when working on the fuel supply system).*
- Fill fuel line to auxiliary heater with fuel ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode

4.1.3 Exploded view - fuel delivery unit



Note

- ◆ *Observe the relevant safety precautions when working on the fuel system ⇒ Fuel supply system; Rep. gr. 00 ; Safety precautions; Safety precautions when working on the fuel supply system (Fuel supply system, Safety precautions; Safety precautions when working on the fuel supply system).*
- ◆ *The engine must not be started if fuel system components (e.g. metering pump, fuel line, fuel gauge sender) have been removed or opened ⇒ Fuel supply system; Rep. gr. 00; Safety precautions; Safety precautions when working on the fuel supply system (Fuel supply system, Safety precautions; Safety precautions when working on the fuel supply system).*

Before starting repair work, perform the following steps:

- Switch off auxiliary heater.
- On vehicles with high-voltage system, switch off (deactivate) auxiliary air conditioner function ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .
- Switch off ignition.
- Observe rules for cleanliness ⇒ [page 13](#) .



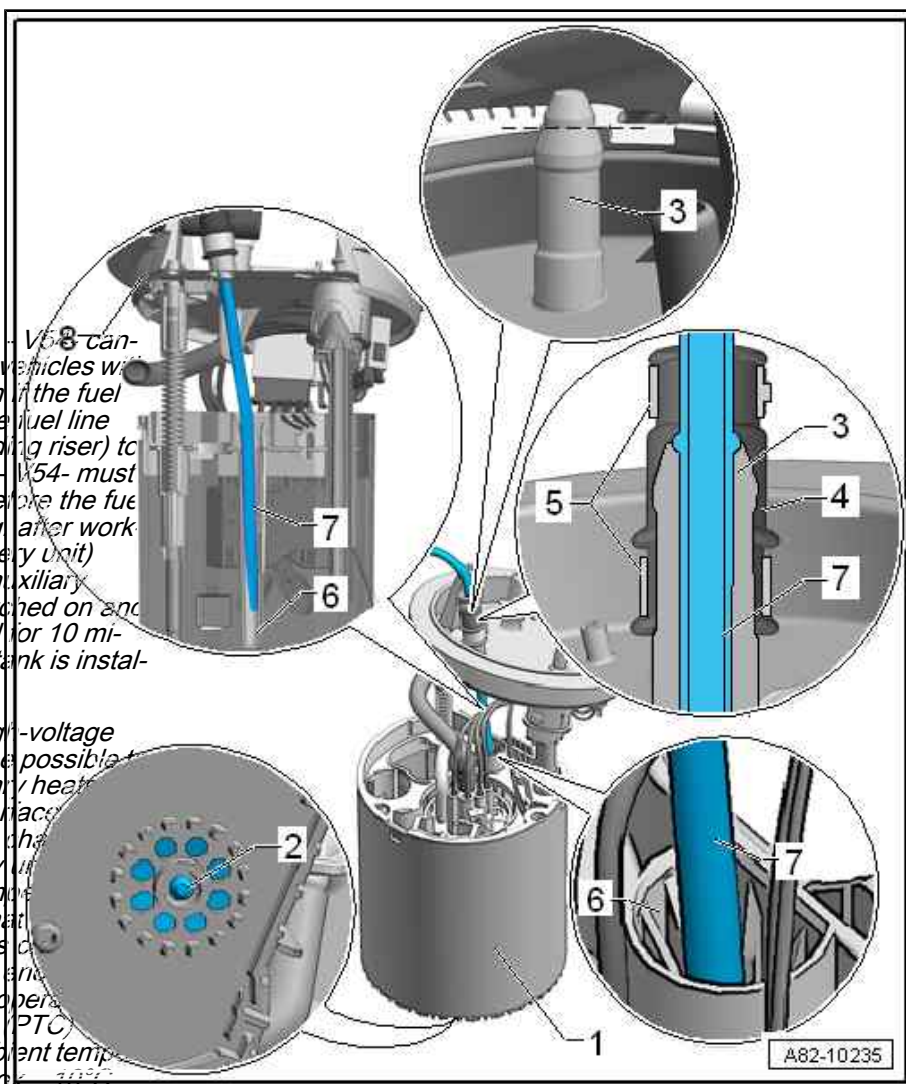
1 - Fuel delivery unit

- ❑ Removing and installing
⇒ Fuel supply system;
Rep. gr. 20 ; Fuel delivery unit/fuel gauge sender (Exploded view - fuel delivery unit/fuel gauge sender)



Note

- ◆ *The metering pump - V58- can not be accessed on vehicles with high-voltage system if the fuel tank is installed. The fuel line (and the corresponding riser) to the metering pump - V54- must therefore be bled before the fuel tank is installed (e.g. after working on the fuel delivery unit) ⇒ [page 61](#) , or the auxiliary heater must be switched on and operated at full load for 10 minutes after the fuel tank is installed.*
- ◆ *On vehicles with high-voltage system, it may not be possible to switch on the auxiliary heater via the Multi Media Interface; this depends on the charge of the hybrid battery unit and the ambient temperature. J255- is informed that the battery unit - AX1- is charged sufficiently and that enough energy is available to operate the high-voltage heater (PTC) Z115- and if the ambient temperature is above approx. +10°C, J255- activates -Z115- (the auxiliary heater is not activated). In this case, the auxiliary heater can be activated via the "Basic setting" function, for example. For further information, refer to ⇒ [page 5](#) and ⇒ Vehicle diagnostic tester ("Guided Fault Finding").*



2 - Bottom valve

- ❑ If there is a leak at bottom valve, there may be problems with the operation of the auxiliary heater when fuel tank is less than half full ⇒ [page 57](#) .
- ❑ Checking ⇒ Fuel supply system; Rep. gr. 20 ; Fuel delivery unit/fuel gauge sender (Exploded view - fuel delivery unit/fuel gauge sender).

3 - Intake connection

- ❑ Cut off cap before fitting new component

4 - Grommet

- ❑ For securing riser in intake connection

5 - Hose clip

- ❑ 2x
- ❑ Renew



6 - Stable zone

- ☐ Fuel take-off for auxiliary heater

7 - Riser

- ☐ Installing ⇒ [page 59](#)

8 - Flange

4.1.4 Fuel intake from fuel delivery unit



Note

- ◆ *Observe the relevant safety precautions when working on the fuel system ⇒ Fuel supply system; Rep. gr. 00; Safety precautions; Safety precautions when working on the fuel supply system (Fuel supply system, Safety precautions; Safety precautions when working on the fuel supply system).*
- ◆ *The engine must not be started if fuel system components (e.g. metering pump, fuel line, fuel gauge sender) have been removed or opened ⇒ Fuel supply system; Rep. gr. 00; Safety precautions; Safety precautions when working on the fuel supply system (Fuel supply system, Safety precautions; Safety precautions when working on the fuel supply system).*

Before starting repair work, perform the following steps:

- Switch off auxiliary heater.
- On vehicles with high-voltage system, switch off (deactivate) auxiliary air conditioner function ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .
- Switch off ignition.
- Observe rules for cleanliness ⇒ [page 13](#) .

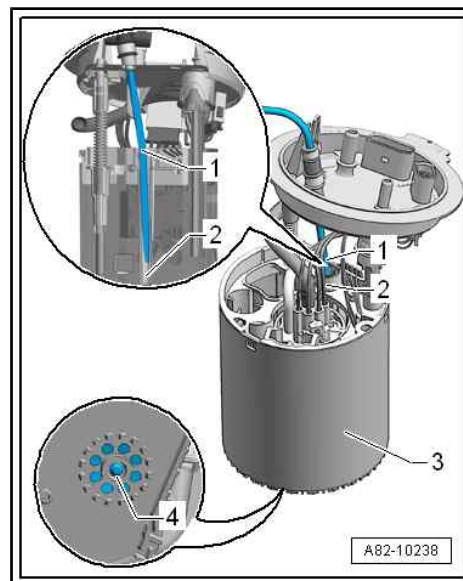


Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.



Note

- ◆ The riser -1- is secured in a stable zone -2- in the baffle housing of the fuel delivery unit. This ensures that the auxiliary/supplementary heater can still be operated even if the fuel tank is almost empty.
- ◆ To prevent an excessive drop in the fuel level in the baffle housing of the fuel delivery unit -3- in auxiliary heating mode, the fuel system pressurisation pump - G6- is activated briefly at the start (depending on quantity of fuel in fuel tank and period for which vehicle has been standing), during and at the end of auxiliary heating mode. The test routine for checking activation of fuel system pressurisation pump - G6- can be found under "Drive system" in the "Electrical components" of the engine ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode.
- ◆ If the fuel tank is less than 1/4 full, vapour bubbles may form in the baffle housing of the fuel delivery unit -3- while the engine is running, particularly on vehicles with diesel engine. To prevent the metering pump - V54- from drawing in air bubbles while the engine is running, the riser -1- must be fitted in the stable zone -2-.
- ◆ To prevent the fuel tank from becoming completely drained in auxiliary heating mode, the auxiliary heater is no longer switched on if the fuel gauge in the instrument cluster is in the "red zone" ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .
- ◆ If the auxiliary heater functions properly when the fuel tank is completely full or when the engine is running and problems are encountered if the fuel tank is only partially full after the engine has been stopped for a certain period (fault message "No flaming" or "Repeated flame abort"), this is an indication that the suction line is routed incorrectly or that the bottom valve -4- of the fuel delivery unit is leaking. In the event of a leak at the bottom valve in the reservoir housing of the fuel delivery unit, the fuel level will drop if the fuel tank is nearly empty and no further fuel can flow into the stable zone -2-. The fuel in the stable zone -2- is soon used up and this results in failure of the auxiliary heater (e.g. on account of flame interruption during operation). As the fuel system pressurisation pump - G6- currently is not always activated (in order to fill the baffle housing) even if the fuel tank is less than 1/2 full, it might be advisable to shorten the time for which the engine must have been stopped so that -G6- is activated briefly when auxiliary heating mode is started ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode.
- ◆ After removing and installing components of the fuel system, the fuel line to the metering pump - V54- must be filled with fuel
⇒ "4.1.6 Bleeding fuel line to metering pump V54 (filling with fuel)", page 61 . The auxiliary heater must then be switched on and operated at full load for at least 10 minutes to make sure the fuel line is bled completely.





- ◆ On vehicles with high-voltage system, it may not be possible to switch on the auxiliary heater via the Multi Media Interface (MMI); this depends on the charge level of the hybrid battery unit - AX1- and the ambient temperature. If -J255- is informed that the hybrid battery unit - AX1- is charged sufficiently and that enough energy is available to operate the high-voltage heater (PTC) - Z115- and if the ambient temperature is above approx. -10°C, -J255- activates -Z115- (the auxiliary heater is not activated). In this case, the auxiliary heater can be activated via the "Basic setting" function, for example. For further information, refer to ➤ [page 5](#) and ➤ Vehicle diagnostic tester ("Guided Fault Finding").



Caution

Problems occur with operation of auxiliary heater if riser -1- is not installed correctly.

- ◆ If the riser -1- is not installed exactly in the specified stable zone -2- of the fuel delivery unit when the fuel delivery unit is installed, the metering pump - V54- can no longer draw in liquid fuel if, for example, the fuel tank is not completely full; this will lead to problems with the operation of the auxiliary heater.
- ◆ When installing the fuel delivery unit, make particularly sure that the riser -1- is installed correctly ➤ [page 59](#) .

4.1.5 Installing riser in fuel delivery unit



Note

- ◆ Observe the relevant safety precautions when working on the fuel system ➤ Fuel supply system; Rep. gr. 00 ; Safety precautions; Safety precautions when working on the fuel supply system (Fuel supply system, Safety precautions; Safety precautions when working on the fuel supply system). AG does not guarantee or accept any liability
- ◆ The engine must not be started if fuel system components (e.g. metering pump, fuel line, fuel gauge sender) have been removed or opened ➤ Fuel supply system; Rep. gr. 00 ; Safety precautions; Safety precautions when working on the fuel supply system (Fuel supply system, Safety precautions; Safety precautions when working on the fuel supply system). Copyright by AUDI AG.

Before starting repair work, perform the following steps:

- Switch off auxiliary heater.
- On vehicles with high-voltage system, switch off (deactivate) auxiliary air conditioner function ➤ Owner's Manual and ➤ Infotainment/MMI Operating Manual .
- Switch off ignition.
- Observe rules for cleanliness ➤ [page 13](#) .



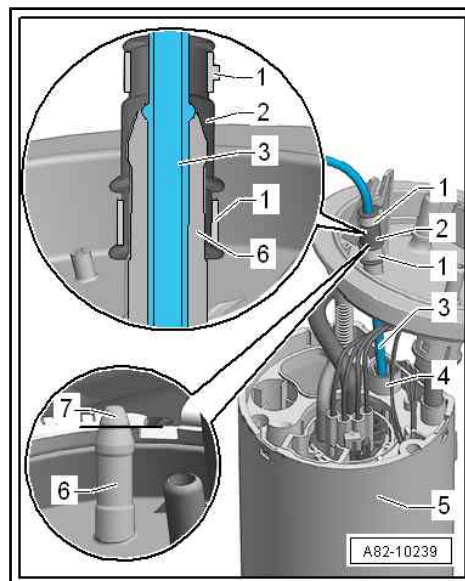
The fuel for the auxiliary heater is drawn in via the connection -6- through the riser -3- from the stable zone -4- in the baffle housing of the fuel delivery unit -5-.



Note

The design of the fuel delivery unit and the location of the riser -3- differ depending on the vehicle model ⇒ Fuel supply system; Rep. gr. 20 ; Fuel delivery unit/fuel gauge sender (Exploded view - fuel delivery unit/fuel gauge sender).

- On a new component, cut off cap -7- on take-off connection -6- at marked cutting line.
- Insert riser -3- through take-off connection -6- into stable zone -4- until ridge makes contact with extraction connection -6-.
- Fold over grommet -2- and secure with clamps -1-.
- After installing, fill fuel line to metering pump - V54- with fuel ⇒ **“4.1.6 Bleeding fuel line to metering pump V54 (filling with fuel)”**, **page 61** .
- The auxiliary heater must then be switched on and operated at full load for at least 10 minutes to make sure the fuel line is bled completely.



Note

*On vehicles with high-voltage system, it may not be possible to switch on the auxiliary heater via the Multi Media Interface (MMI); this depends on the charge level of the hybrid battery unit - AX1- and the ambient temperature. If -J255- is informed that the hybrid battery unit - AX1- is charged sufficiently and that enough energy is available to operate the high-voltage heater (PTC) - Z115- and if the ambient temperature is above approx. -10°C, -J255- activates -Z115- (the auxiliary heater is not activated). In this case, the auxiliary heater can be activated via the “Basic setting” function, for example. For further information, refer to ⇒ **page 5** and ⇒ **Vehicle diagnostic tester (“Guided Fault Finding”)**.*

with respect to the correctness of information in this document. Copyright by AUDI AG.



4.1.6 Bleeding fuel line to metering pump - V54- (filling with fuel)

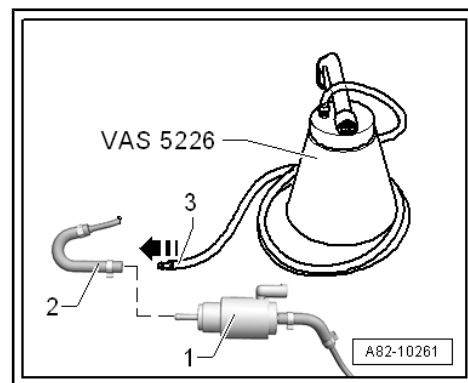


Note

- ◆ *Air/fuel vapour in the fuel supply to the auxiliary heater can lead to problems in auxiliary heater operation. To stop air/fuel vapour being drawn in by the metering pump - V54- and conveyed to the auxiliary heater when the auxiliary heater is first switched on after working on the fuel tank or fuel delivery unit, the fuel take-off pipe must be filled with fuel (bled) after working in this area.*
- ◆ *The fuel line must be bled, for example if the fuel line was removed and the entire fuel line is filled with air. For example, if only the fuel delivery unit was removed and there is only a small amount of air in the fuel line, it is sufficient to switch on the auxiliary heater and let it run for some time at full load (at least 10 minutes) to check its operation after completing work on the fuel system.*
- ◆ *After working on the fuel system, switch on the auxiliary heater and let it run for at least 10 minutes at full load to check operation.*
- ◆ *On vehicles with high-voltage system, it may not be possible to switch on the auxiliary heater via the Multi Media Interface (MMI); this depends on the charge level of the hybrid battery unit - AX1- and the ambient temperature. If -J255- is informed that the hybrid battery unit -AX1- is charged sufficiently, and that enough energy is available to operate the high-voltage heater (PTC) -Z115- and if the ambient temperature is above approx. -10°C, -J255- activates -Z115- (the auxiliary heater is not activated). In this case, the auxiliary heater can be activated via the "Basic setting" function, for example. For further information, refer to ➔ [page 5](#) and ➔ Vehicle diagnostic tester ("Guided Fault Finding").*

Vehicles without high-voltage system

- Auxiliary heater is switched off (metering pump - V54- is not activated).
- Switch off electrical equipment.
- Switch off ignition.
- Remove metering pump - V54- ➔ [page 66](#) .
- Unfasten O-type clip and detach fuel hose -2- from pump -1-.
- Connect fuel hose -2- to hose -3- of diesel extractor - VAS 5226- .
- Connect diesel extractor - VAS 5226- to workshop's compressed-air system.
- Completely fill fuel line with fuel by briefly extracting air.
- Connect fuel line -2- to metering pump - V54- -1- with new O-type clip.
- After re-installing all the components removed previously, switch on the auxiliary heater and let it run at full load for approx. 10 minutes.



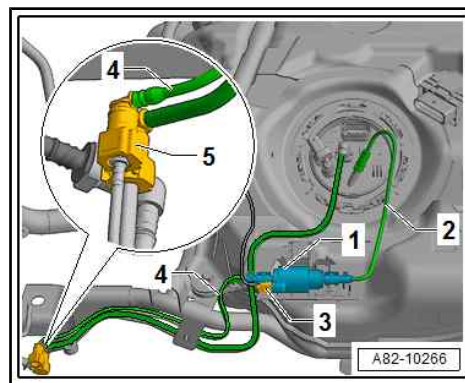
Vehicles with high-voltage system



Note

The metering pump - V54- -1- cannot be accessed on vehicles with high-voltage system if the fuel tank is installed. The fuel line -2- (and the corresponding riser) to the metering pump - V54- must therefore be bled after working on the fuel system (e.g. after working on the fuel delivery unit or -V54- -1-).

- Disconnect fuel line -4- (from -V54- -1- to auxiliary heater) at connection -5- ⇒ Fuel supply system, petrol engines; Rep. gr. 20 ; Plug-in connectors; Disconnecting plug-in connectors .



Note

Observe safety precautions when working on the fuel supply system ⇒ Fuel supply system; Rep. gr. 00 ; Safety precautions; Safety precautions when working on the fuel supply system .

- Hold a container under the open connection (e.g. container for diesel extractor - VAS 5226-).
- Activate -V54- -1- for 30 seconds, e.g. via the “Pipe filling” function under “Basic setting” ⇒ Vehicle diagnostic tester in “Guided Fault Finding” mode.
- Observe fuel coming out at connection -5-.



Note

If there is a continuous flow of fuel coming out at the connection -5- after 30 seconds, the fuel line is completely filled with fuel.

- Assemble fuel line at connection -5-.
- After re-installing all the components removed previously, switch on the auxiliary heater and let it run at full load for approx. 10 minutes.



Note

On vehicles with high-voltage system, it may not be possible to switch on the auxiliary heater via the Multi Media Interface (MMI); this depends on the charge level of the hybrid battery unit - AX1- and the ambient temperature. If -J255- is informed that the hybrid battery unit - AX1- is charged sufficiently and that enough energy is available to operate the high-voltage heater (PTC) - Z115- and if the ambient temperature is above approx. -10°C, -J255- activates -Z115- (the auxiliary heater is not activated). In this case, the auxiliary heater can be activated via the “Basic setting” function, for example. For further information, refer to ⇒ [page 5](#) and ⇒ Vehicle diagnostic tester (“Guided Fault Finding”).

4.2 Checking CO₂ content in exhaust gas of auxiliary/supplementary heater

CO₂ content = carbon dioxide content



Note

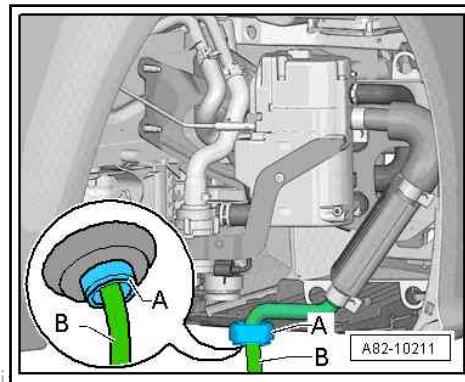
- ◆ *Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine (without high-voltage system), the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87 ; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .*
- ◆ *A high-voltage heater (PTC) - Z115- is fitted on vehicles with high-voltage system (Audi A3 e-tron). -Z115- is activated by the air conditioner operating unit -J255- if additional heat output is required to attain the specified temperature in the passenger compartment ⇒ Heating, air conditioning; Rep. gr. 00 ; Repair instructions , ⇒ Owner's Manual and ⇒ Infotainment/ MMI Operating Manual .*
- ◆ *On vehicles with high-voltage system, it may not be possible to switch on the auxiliary heater via the Multi Media Interface (MMI); this depends on the charge level of the hybrid battery unit - AX1- and the ambient temperature. If -J255- is informed that the hybrid battery unit - AX1- is charged sufficiently and that enough energy is available to operate the high-voltage heater (PTC) - Z115- and if the ambient temperature is above approx. -10°C, -J255- activates -Z115- (the auxiliary heater is not activated). In this case, the auxiliary heater can be activated via the "Basic setting" function, for example. For further information, refer to ⇒ [page 5](#) and ⇒ Vehicle diagnostic tester ("Guided Fault Finding").*
- ◆ *Check CO₂ content in exhaust gas of auxiliary heater as described in "Guided Fault Finding" function ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode.*
- ◆ *For this check, the auxiliary heater can be switched on using the rotary pushbutton of the Multi Media Interface (MMI) or using the remote control. For activation with the remote control, the temperature setting on the air conditioner operating unit (Climatronic control unit - J255-) must be "Hi"; otherwise (depending on the ambient temperature) the "auxiliary ventilation" function will be activated and the auxiliary heater will not start up.*
- ◆ *With the "Basic setting" function, the auxiliary heater can be operated up to a coolant temperature of 110 °C and starting from the control interval is possible. The operating time is then restricted to a maximum of 10 minutes ⇒ Vehicle diagnostic tester ("Guided Fault Finding").*
- ◆ *For notes on switching on the auxiliary heater via the "Basic setting" function, refer to e.g. the section "Checking CO₂ content in exhaust gas" of Guided Fault Finding; please also note the display of the activation signals for the auxiliary heater (e.g. in "General function check" in Guided Fault Finding) ⇒ Vehicle diagnostic tester ("Guided Fault Finding").*

Protected by copyright. This document, its content or in whole, is not permitted to be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system. Audi AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.

Conditions for checking CO₂ content in exhaust gas of auxiliary heater (in short):



- ◆ Coolant temperature below 30 °C at start of check
- ◆ Ambient temperature below 25 °C
- ◆ Sufficient fuel in tank (fuel gauge in instrument cluster not in red zone)
- ◆ Fuel line (from fuel tank to auxiliary heater) installed as specified and filled completely with fuel
- ◆ Auxiliary heater installed completely and connected to vehicle electrical system
- ◆ All auxiliary heater fuses OK (according to current flow diagram) ⇒ Current flow diagrams, Electrical fault finding and Fitting locations
- ◆ Battery - A- (vehicle battery) fully charged
- ◆ Auxiliary heater operating at full load for at least 3 minutes ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode
- ◆ Event memory of all systems with self-diagnosis capability read out, cause of any faults displayed in vehicle systems eliminated and displayed event memory entries erased ⇒ Vehicle diagnostic tester ("Guided Fault Finding")
- ◆ Hose -B- of exhaust probe must not prevent exhaust gas from leaving exhaust pipe -A- during check.



WARNING

When pulling out the exhaust probe, take care not to touch the exhaust probe or the exhaust pipe as these become very hot.



Note

- ◆ If hose -B- of exhaust probe prevents exhaust gas from emerging from exhaust pipe -A-, measurement will be incorrect. The same also applies if external air is drawn in via hose -B- during check.
 - ◆ For a complete description of the conditions for checking the CO₂ content in the exhaust gas of the auxiliary heater, refer to "Guided Fault Finding" mode of ⇒ Vehicle diagnostic tester.
 - ◆ If CO₂ content of exhaust gas is not OK, check fuel delivery rate of metering pump - V54- ⇒ [page 65](#) and ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode.
 - ◆ If CO₂ content of exhaust gas of auxiliary heater and amount of fuel delivered by -V54- is in lower tolerance range, check fuel lines to auxiliary heater
⇒ ["4.1 Overview of fitting locations - fuel supply system", page 52](#) . If no fault is found, renew metering pump - V54-
⇒ [page 66](#) .
 - ◆ If the CO₂ content in the exhaust gas of the auxiliary heater is OK according to this check, but there are problems when operating the auxiliary heater, for example when the engine is switched off and the fuel tank is less than half full, refer to
⇒ [page 57](#) .
- Check CO₂ content of exhaust gas of auxiliary heater ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode.



4.3 Checking fuel delivery rate of metering pump - V54-



Note

Check fuel delivery rate as described in "Guided Fault Finding" function ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode.

Conditions for checking fuel delivery rate (in short):

- ◆ Coolant temperature below 30 °C
- ◆ Ambient temperature below 25 °C
- ◆ Sufficient fuel in tank (fuel gauge in instrument cluster not in red zone)
- ◆ Battery - A- (vehicle battery) fully charged
- ◆ Fuel line (from fuel tank to auxiliary heater) installed as specified and filled completely with fuel
- ◆ Auxiliary heater installed completely and connected to vehicle electrical system
- ◆ All auxiliary heater fuses OK (according to current flow diagram) ⇒ Current flow diagrams, Electrical fault finding and Fitting locations
- ◆ Auxiliary heater switched off
- ◆ Event memory of all systems with self-diagnosis capability read out, cause of any faults displayed in vehicle systems eliminated and displayed event memory entries erased ⇒ "Guided Fault Finding" function of vehicle diagnostic tester



Note

- ◆ *A higher ambient or coolant temperature can lead to incorrect measurements of the fuel quantity delivered due to fuel evaporation.*
- ◆ *Complete description of conditions for checking fuel delivery rate ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode*
- ◆ *If the fuel delivery rate is OK, but there are problems with the operation of the auxiliary heater, for example when the engine is switched off and the fuel tank is less than half full, refer to ⇒ [page 57](#).*
- ◆ *If the quantity of fuel delivered is in the lower tolerance range and there are starting difficulties with the auxiliary heater, check the fuel lines to the auxiliary heater ⇒ ["4.1 Overview of fitting locations - fuel supply system", page 52](#). If no fault is found, renew metering pump - V54- ⇒ [page 66](#).*
- ◆ *If the quantity of fuel delivered is OK, but there are problems with the operation of the auxiliary heater, refer to ⇒ ["4.2 Checking CO2 content in exhaust gas of auxiliary/supplementary heater", page 62](#).*

Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not

- Checking fuel delivery rate of metering pump - V54- ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode

with respect to the correctness of information in this document. Copyright by AUDI AG.



4.4 Removing and installing metering pump - V54-

⇒ [“4.4.1 Removing and installing metering pump V54 - all vehicles except A3 g-tron”, page 66](#)

⇒ [“4.4.2 Removing and installing metering pump V54 - A3 g-tron”, page 69](#)

4.4.1 Removing and installing metering pump - V54- - all vehicles except A3 g-tron



Note

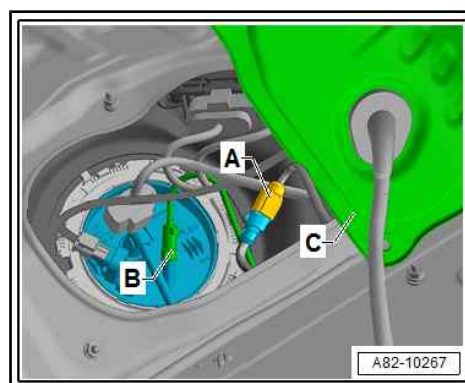
Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not

- ◆ *Depending on the version of the fuel tank (different versions e.g. on vehicles with torsion beam axle or multi-link suspension on the rear axle); the installation position of the metering pump - V54- differs slightly ⇒ Running gear, axles, steering; Rep. gr. 42; Rear axle; Overview - rear axle and ⇒ Fuel supply system; Rep. gr. 20; Fuel tank; Exploded view - fuel tank .*
- ◆ *On vehicles with high-voltage system (Audi A3 e-tron) the metering pump - V54- is fitted between the fuel tank and the luggage compartment floor ⇒ Fuel supply system; Rep. gr. 20; Fuel tank; Exploded view - fuel tank .*

Removing

- Switch off electrical equipment.
- On vehicles with high-voltage system, switch off (deactivate) auxiliary air conditioner function ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .
- Switch off auxiliary heating and ignition.

Vehicles with high-voltage system





Note

- ◆ If there is a problem with the operation of the auxiliary heater which is caused by the fuel supply to the auxiliary heater (on vehicles with high-voltage system): Before removing the fuel tank, detach cover for flange -C- from the vehicle (⇒ Fuel supply system; Rep. gr. 20 ; Fuel delivery unit/fuel gauge senders) and check that electrical connector -A- and fuel line -B- to metering pump - V54- are installed correctly and have not been damaged.

- ◆ The metering pump - V54- -1- cannot be accessed on vehicles with high-voltage system if the fuel tank is installed ⇒ Fuel supply system; Rep. gr. 20 ; Fuel delivery unit/fuel gauge senders; Exploded view - fuel delivery unit/fuel gauge senders . If necessary, the fuel line -2- (and the corresponding riser) to the metering pump - V54- -1- must therefore be bled after the fuel tank is installed (e.g. after working on the fuel delivery unit if the fuel line -2- to -V54- -1- is empty
⇒ "4.1.6 Bleeding fuel line to metering pump V54 (filling with fuel)", page 61).

- Remove fuel tank ⇒ Fuel supply system, petrol engines; Rep. gr. 20 ; Fuel tank; Removing and installing fuel tank .

Vehicles without high-voltage system

- Open fuel tank flap.
- Remove underbody trim ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody trim; Exploded view - underbody trim .
- Release retaining tab and detach metering pump with bracket -2-.
- Unplug electrical connector -3-.

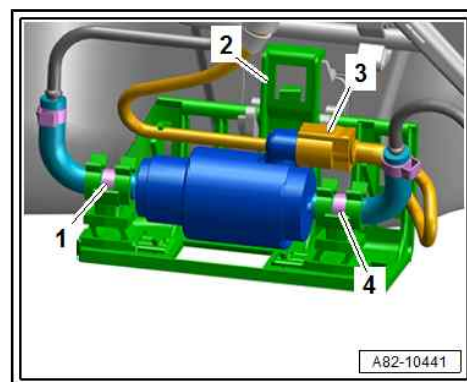
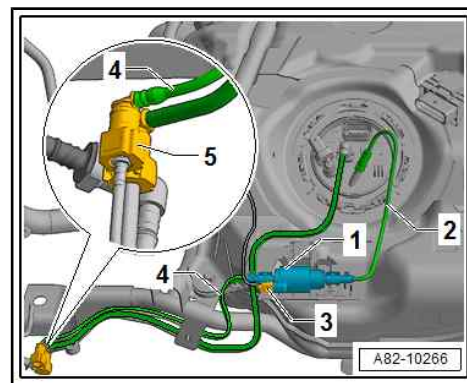


WARNING

The fuel system is pressurised.

Risk of injury as fuel may spray out.

- Put on safety goggles.
- Put on protective gloves.
- Release pressure (wrap a clean cloth around connection and open connection carefully).



- Release hose clips and detach fuel lines -1, 4-.

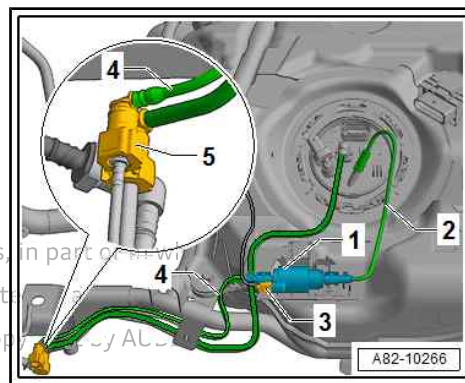
- Seal fuel lines.

Installing

Install in reverse order of removal; note the following.

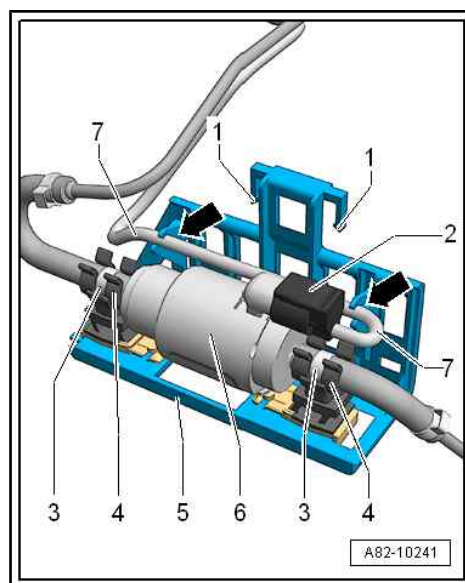


Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee the accuracy of the information with respect to the correctness of information in this document. Copyright © 2018 Audi AG



Note

- ◆ Install metering pump - V54- -1- in the correct position; the fuel line is connected to the auxiliary heater -3- at the connection on the side with the connector -4-. The fuel line -2- leads via the fuel delivery unit to the fuel tank (this illustration shows the layout on vehicles with high-voltage system).
- ◆ Install metering pump - V54- -6- in the correct position; the fuel line to the auxiliary heater is connected at the connection on the side with the connector -2- (this illustration shows the layout on vehicles without high-voltage system).
- Renew bracket -5- if securing lugs -1- are broken or damaged.
- Renew O-type clips -3-.
- Insert metering pump - V54- -6- in bracket -5- so that O-type clips -3- are located in guides -4- and connector -2- does not make contact with bracket -5-.
- Engage electrical wire -7- in guides -arrows-.
- Install bracket -5- with metering pump - V54- -6-; make sure that securing lugs -1- engage properly.



Vehicles with high-voltage system

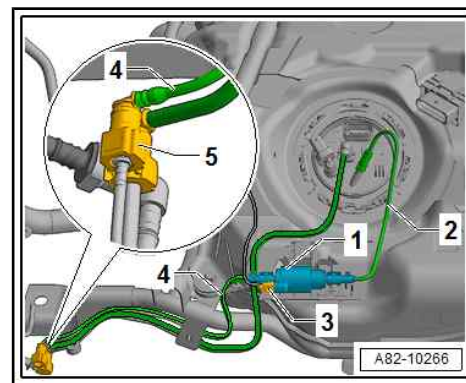
Before installing the fuel tank:



- ◆ Check routing of electrical wires and fuel lines (e.g. fuel lines -2- and -4- leading to auxiliary heater) and ensure that they are secured in the retainers provided.
- ◆ Check that the electrical connector at the metering pump - V54- is secured properly in its retainer.
- ◆ Check coupling -5- on fuel line -4- for dirt and damage.
- Install fuel tank ⇒ Fuel supply system, petrol engines; Rep. gr. 20 ; Fuel tank; Removing and installing fuel tank .

All vehicles

- Check that fuel lines are correctly secured in retainers.
- Check that fuel lines are correctly seated and routed; fuel lines must not make contact with body (risk of transferring sound).
- After re-installing all the components removed previously, switch on the auxiliary heater and let it run at full load for approx. 10 minutes.



Note



On vehicles with high-voltage system, it may not be possible to switch on the auxiliary heater via the Multi Media Interface (MMI); this depends on the charge level of the hybrid battery unit - AX1- and the ambient temperature. If -J255- is informed that the hybrid battery unit - AX1- is charged sufficiently and that enough energy is available to operate the high-voltage heater (PTC) - Z115- and if the ambient temperature is above approx. -10°C, -J255- activates -Z115- (the auxiliary heater is not activated). In this case, the auxiliary heater can be activated via the "Basic setting" function, for example. For further information, refer to ⇒ [page 5](#) and ⇒ Vehicle diagnostic tester ("Guided Fault Finding").

4.4.2 Removing and installing metering pump - V54- - A3 g-tron

Removing

- Switch off electrical equipment.
- Switch off auxiliary heating and ignition.



- Open fuel tank flap.
- Remove underbody trim ⇒ General body repairs, exterior; Rep. gr. 66 ; Underbody trim; Exploded view - underbody trim .
- Release retaining tab and detach metering pump with bracket -2-.
- Unplug electrical connector -3-.

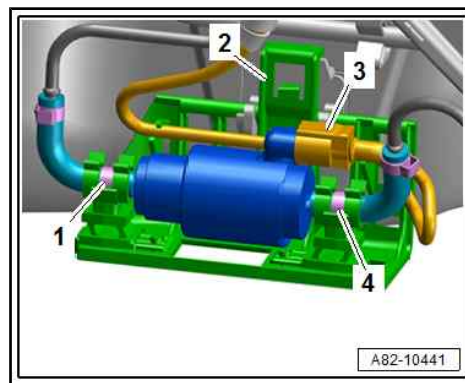


WARNING

The fuel system is pressurised.

Risk of injury as fuel may spray out.

- *Put on safety goggles.*
- *Put on protective gloves.*
- *Release pressure (wrap a clean cloth around connection and open connection carefully).*



- Release hose clips and detach fuel lines -1, 4-.
- Seal fuel lines.

Installing

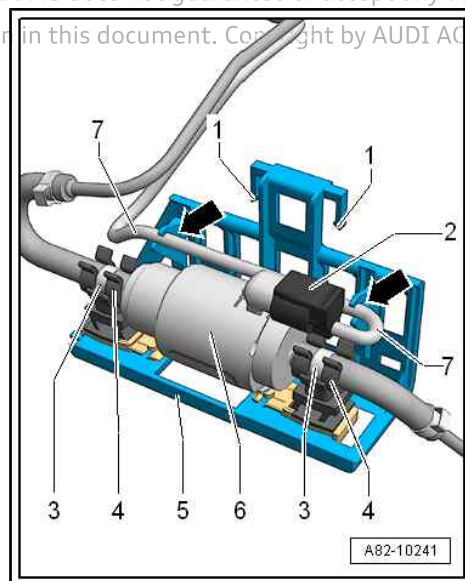
Install in reverse order of removal; note the following.



Note

Install metering pump - V54- -6- in the correct position; the fuel line is connected to the auxiliary heater at the connection on the side with the connector -2-.

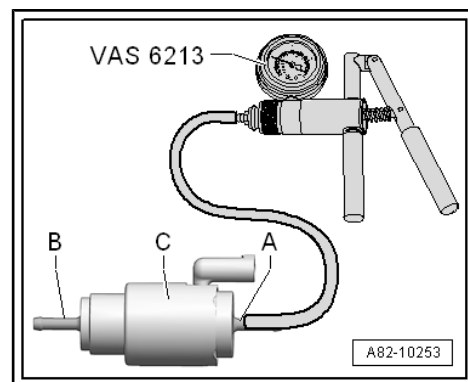
- Renew bracket -5- if securing lugs -1- are broken or damaged.
- Renew O-type clips -3-.
- Insert metering pump - V54- -6- in bracket -5- so that O-type clips -3- are located in guides -4- and connector -2- does not make contact with bracket -5-.
- Engage electrical wire -7- in guides -arrows-.
- Install bracket -5- with metering pump - V54- -6-; make sure that securing lugs -1- engage properly.
- Check that fuel lines are correctly secured in retainers.
- Check that fuel lines are correctly seated and routed; fuel lines must not make contact with body (risk of transferring sound).
- After re-installing all the components removed previously, switch on the auxiliary heater and let it run at full load for approx. 10 minutes.





4.5 Checking metering pump - V54- with end sealing valve

- If you are uncertain as to whether the metering pump - V54- -C- has an end sealing valve or not, connect e.g. hand-operated vacuum pump - VAS 6213- connection -A-.
- Use hand-operated vacuum pump to a generate a vacuum of approx. 0.8 bar.
- Connection -B- should be open.
- Vacuum is maintained on metering pumps - V54- with end sealing valve.



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 with respect to the correctness of information in this document. Copyright by AUDI AG.



5 Auxiliary/supplementary heater control

⇒ ["1.4 Starting conditions for auxiliary/supplementary heater", page 3](#)

⇒ ["5.1 Functional description", page 72](#)

⇒ ["5.2 Switching auxiliary/supplementary heater on and off", page 74](#)

5.1 Functional description



Note

- ◆ *Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine (without high-voltage system), the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87 ; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .*
 - ◆ *A high-voltage heater (PTC) - Z115- is fitted on vehicles with high-voltage system (Audi A3 e-tron). -Z115- is activated by the air conditioner operating unit -J255- if additional heat output is required to attain the specified temperature in the passenger compartment ⇒ Heating, air conditioning; Rep. gr. 00 ; Repair instructions , ⇒ Owner's Manual and ⇒ Infotainment/ MMI Operating Manual .*
 - ◆ *On vehicles with high-voltage system which feature an auxiliary heater as an optional extra, the auxiliary heater or high-voltage heater (PTC) - Z115- is activated in coordination between the air conditioner operating unit -J255- , the battery regulation control unit - J840- and the control unit for high-voltage battery charging unit - J1050- (fitted in the power and control electronics for electric drive - JX1-). For further information, refer to ⇒ [page 5](#) .*
 - ◆ *The auxiliary heater (and the high-voltage heater (PTC) - Z115- on vehicles with high-voltage system) is intended to heat the passenger compartment via the engine coolant circuit.*
 - ◆ *Depending on the heat energy generated and emitted, there are various operating states of the auxiliary heater (full load, partial load, control interval).*
 - ◆ *Switching auxiliary heating / auxiliary ventilation on and off via Multi Media Interface (MMI, control unit for front display and information control panel - J523-) ⇒ [page 74](#)*
- Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted. Audi AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.

To start the auxiliary heater, either use the remote control (via a mobile phone and "Audi connect services" on vehicles with high-voltage system) or select the corresponding function on the Multi Media Interface (MMI, control unit for front display and information control panel - J523-) ⇒ Owner's Manual and ⇒ Infotainment/ MMI Operating Manual .

Before the auxiliary heater is activated, the air conditioner operating unit (-J255-) is interrogated to determine whether auxiliary heating mode is required to attain the selected temperature. If J255 calculates that auxiliary heating mode is not required to attain the desired temperature based on the measured and the selected temperatures, the auxiliary heater (or the high-voltage



heater (PTC) - Z115- on vehicles with high-voltage system) is not switched on (-J255- goes into auxiliary ventilation mode).



Note

- ◆ *On vehicles with high-voltage system, the high-voltage heater (PTC) - Z115- can be activated instead of the auxiliary heater to warm up the passenger compartment using the "Auxiliary heating" function. For further information, refer to ⇒ [page 5](#) .*
- ◆ *On vehicles with high-voltage system, it may not be possible to switch on the auxiliary heater via the Multi Media Interface (MMI); this depends on the charge level of the hybrid battery unit - AX1- and the ambient temperature. If -J255- is informed that the hybrid battery unit - AX1- is charged sufficiently and that enough energy is available to operate the high-voltage heater (PTC) - Z115- and if the ambient temperature is above approx. -10°C, -J255- activates -Z115- (the auxiliary heater is not activated). In this case, the auxiliary heater can be activated via the "Basic setting" function, for example. For further information, refer to ⇒ [page 5](#) and ⇒ Vehicle diagnostic tester ("Guided Fault Finding").*

The procedure is continued as follows if the auxiliary heater is activated:

The event memories of the auxiliary heater control unit - J364- and Climatronic control unit - J255- are interrogated.

The onboard supply control unit - J519- is interrogated to determine the electrical system voltage and the battery charge level.

Initially, the function of the combustion air blower - V6- and the glow plug with flame monitor - Q8- is checked. The glow plug with flame monitor - Q8- then goes through a preheating phase.

The subsequent starting sequence depends, amongst other things, on the coolant temperature; therefore the time required for the starting sequence varies. In addition, fuel is supplied at this point. After a flame has been detected in the auxiliary heater, the glow plug with flame monitor - Q8- is switched off gradually and then activated as a flame monitor.

After the starting sequence has been completed, the auxiliary heater operates at full load; the further load control (heating mode: full load, partial load or control interval) is performed according to the following coolant temperature thresholds.

- Switch from full load to partial load: at approx. 82 °C
- Switch from partial load to control interval: at approx. 88 °C

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 with respect to the correctness of information in this document. Copyright by AUDI AG.



Note

The auxiliary heating temperatures and the operating mode of the auxiliary heater are displayed under "Reading measured values" ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode.

The reference resistance for the glow plug with flame monitor - Q8- is re-determined automatically at regular intervals during the start phase and the run-on phase (depending on the device), in order to compensate for age-related changes.

As a result of this calibration process, other affected procedures may also take longer.

After the maximum possible operating time of 60 min. or when the auxiliary heater is deactivated manually with the remote control or via the Multi Media Interface (MMI, control unit for front display



and information control panel - J523-), the auxiliary heater is switched off.

After the auxiliary heater has been switched off, the metering pump - V54- is deactivated immediately.

The operation of the combustion air blower - V6- and the glow plug with flame monitor - Q8- continues for a limited time in order to burn the remaining fuel in the system completely and to cool off the burner components.

The duration of the run-on phase of the auxiliary heater can vary depending on the software version and the load when it was switched off.

5.2 Switching auxiliary/supplementary heater on and off



Note

- ◆ *Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine (without high-voltage system), the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87 ; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .*
- ◆ *A high-voltage heater (PTC) - Z115- is fitted on vehicles with high-voltage system (Audi A3 e-tron). -Z115- is activated by the air conditioner operating unit -J255- if additional heat output is required to attain the specified temperature in the passenger compartment ⇒ Heating, air conditioning; Rep. gr. 00 ; Repair instructions , ⇒ Owner's Manual and ⇒ Infotainment/ MMI Operating Manual .*
- ◆ *On vehicles with high-voltage system which feature an auxiliary heater as an optional extra, the auxiliary heater or high-voltage heater (PTC) - Z115- is activated in coordination between the air conditioner operating unit -J255- , the battery regulation control unit - J840- (fitted in the hybrid battery unit - AX1-) and the control unit for high-voltage battery charging unit - J1050- (fitted in the power and control electronics for electric drive - JX1-). For further information, refer to [⇒ page 5](#) .*
- ◆ *If the "Final control diagnosis" function is performed in the airbag system, the airbag control unit - J234- transmits a crash deactivation signal via the data bus. As soon as the auxiliary heater control unit - J364- detects this signal, the auxiliary heater is switched off and remains disabled until the shut-off criterion has been deleted in -J364- (read out event memory of -J364- , ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode).*

Switching auxiliary heating/auxiliary ventilation on and off via Multi Media Interface (MMI), control unit for front display and information control panel - J523-) ⇒ Owner's Manual and ⇒ Infotainment/ MMI Operating Manual



Note

- ◆ The functions "Immediate on" and "Timer" can be called up via the Multi Media Interface (MMI). The auxiliary heating or auxiliary ventilation is switched on depending on the ambient temperature and the temperature selected on the air conditioner operating unit (Climatronic control unit - J255-).
- ◆ Switching auxiliary heating / auxiliary ventilation on and off using hand-held remote control transmitter (on vehicles without high-voltage system)
⇒ ["6.3 Functional description of remote control for auxiliary/supplementary heater", page 86](#)
- ◆ Switching auxiliary heating / auxiliary ventilation on and off using a mobile phone ("Audi connect services" on vehicles with high-voltage system) ⇒ Communication; Rep. gr. 91 ; Telephone system; Layout - telephone , ⇒ Current flow diagrams, Electrical fault finding and Fitting locations, ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual)
- ◆ Depending on vehicle version, equipment, production period and the setting in the Multi Media Interface (MMI), certain auxiliary heater functions can also be switched on and off via the programmable steering wheel button ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .

Requirements



Note

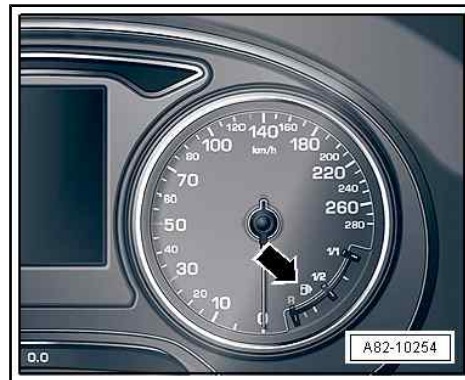
The following procedure is applicable to vehicles without high-voltage system; it only applies to a limited extent for vehicles with high-voltage system and then only if the control units involved determine that the auxiliary heater and not the high-voltage heater - Z115- should be activated in order to attain the specified temperature for the passenger compartment. For further information, refer to [⇒ page 5](#) .



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 with respect to the correctness of information in this document. Copyright by AUDI AG.



- The auxiliary heater must have been adapted in the air conditioner operating and display unit (Climatronic control unit - J255-) (check and perform coding if necessary) ⇒ Vehicle diagnostic tester.
- The auxiliary heating / auxiliary ventilation can only be switched on by the auxiliary heater control unit - J364- if there is enough fuel in the fuel tank. When the ignition is on, the fuel gauge in the instrument cluster -arrow- must not be in the "red zone" ⇒ Owner's Manual , ⇒ Infotainment/MMI Operating Manual and ⇒ Vehicle diagnostic tester.
- There must not be any event memory entries in the auxiliary heater control unit - J364- ⇒ Vehicle diagnostic tester.
- The battery - A- (vehicle battery) must be charged sufficiently.
- There must not be any faults in the vehicle data bus ⇒ Vehicle diagnostic tester.
- The auxiliary heater transport mode must not be activated ⇒ Vehicle diagnostic tester.
- The coolant temperature in the auxiliary heater must not exceed a certain value.
- The control unit -J255- has determined that auxiliary heating mode is required for the specified temperature to be attained in the passenger compartment.



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 with regard to the correctness of information in this document. Copyright by AUDI AG.

Switching on auxiliary heating/auxiliary ventilation via "Immediate on" function

- Switch on ignition.
- Using the controls on the Multi Media Interface (MMI, control unit for front display and information control panel - J523-) select: function selector button **CAR** > "Car systems" > "Auxiliary heating" > "Activate auxiliary heating", and then set the required operating time ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .

Switching off auxiliary heating / auxiliary ventilation via "Immediate on" function

- Using the controls on the Multi Media Interface (MMI, control unit for front display and information control panel - J523-) select: function selector button **CAR** > "Car systems" > "Auxiliary heating" > "Deactivate auxiliary heating" ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .

Switching on auxiliary heating / auxiliary ventilation via "Timer" function

- Switch on ignition.
- De-icing vehicle windows only: Using the controls of the Multi Media Interface (MMI, control unit for front display and information control panel - J523-) select: function selector button **CAR** > "Car systems" > "Auxiliary heating" > "Heating effect" > "defrost" ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .
- De-icing vehicle windows and heating up passenger compartment: Using the controls of the Multi Media Interface (MMI, control unit for front display and information control panel - J523-) select: function selector button **CAR** > "Car systems" > "Auxiliary heating" > "Heating effect" > "warm" ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .



- Using the controls on the Multi Media Interface (MMI, control unit for front display and information control panel - J523-) select: Function selector button **CAR** > "Car systems" > "Auxiliary heating" > "Program timers", e.g. "Timer 1: target time" ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .
- Set the time and date.
- To activate the timer, confirm your entry by pressing the rotary pushbutton ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .



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 with respect to the correctness of information in this document. Copyright by AUDI AG.



Note

- ◆ *When the auxiliary heater (auxiliary heater control unit - J364-) is switched on via the remote control (via a mobile phone on vehicles with high-voltage system) or the "Timer" or "Immediate start" functions, the air conditioner operating unit (Climatronic control unit - J255-) determines whether auxiliary heating mode is required to attain the selected temperature or whether auxiliary ventilation mode is sufficient. For further information, refer to [⇒ page 5](#) .*
- ◆ *If the timer function is active, the control unit in dash panel insert - J285- activates the air conditioner operating unit (Climatronic control unit - J255-) and the onboard supply control unit - J519- via the data bus approx. 50 minutes before the selected time. -J255- determines the current temperatures, and -J519- determines the charge status of the battery - A- . These data are used to calculate the permissible or necessary auxiliary heating/auxiliary ventilation operating time and then transmits the value to -J285- . If the battery - A- is not charged sufficiently, for example, the auxiliary heating (auxiliary ventilation) is not switched on or the operating time for the auxiliary heating (auxiliary ventilation) is shortened such that the battery - A- is not excessively discharged (this may mean that the temperature specified for the passenger compartment is no longer attained). On the basis of the prevailing conditions (e.g. ambient temperature and passenger compartment temperature), -J255- determines whether auxiliary heating mode is required to attain the specified temperature or whether auxiliary ventilation mode is sufficient. If auxiliary heating mode is required, -J255- calculates the auxiliary heating time needed to attain the desired passenger compartment temperature at the specified time and transmits this value to -J285- via the data bus. Depending on the ambient conditions, the auxiliary heater is then activated immediately (at very low temperatures for a maximum of 50 min. prior to the selected departure time), or the data bus is deactivated again by -J285- for the period prior to the calculated activation time. At the calculated cut-in point, the data bus is activated again by -J285- and -J255- is switched on. -J255- starts up (no obvious outward signs) and activates the auxiliary heater. -J255- start operating visibly (integrated display is switched on) and the fresh air blower - V2- is activated only once a certain coolant temperature has been reached in the auxiliary heater. The data bus is likewise deactivated if -J255- determines that auxiliary ventilation mode is sufficient to attain the specified temperature. Only approx. 15 minutes before the selected departure time, -J255- is activated for auxiliary ventilation mode by -J285- via the data bus and -J255- starts up in "Auxiliary ventilation" mode (integrated display is switched on and fresh air blower - V2- is activated).*
- ◆ *In the "Timer" function, auxiliary heating mode and auxiliary ventilation mode are switched off approx. 10 minutes after the specified time. As the operating time is limited to a maximum of 60 minutes, the auxiliary heater is activated no sooner than 50 minutes before the specified time even at very low ambient temperatures.*
- ◆ *On vehicles with high-voltage system, the procedure is similar to the one described for vehicles without high-voltage system, with the difference that -J255- checks the charge level of the hybrid battery unit - AX1- via the data bus before activating the auxiliary heater. If -J255- is informed that the hybrid battery unit - AX1- is charged sufficiently and that enough energy is available to operate the high-voltage heater (PTC) - Z115- , -J255- activates -Z115- (the auxiliary heater is not activated).*



6 Further control components

⇒ [“6.1 Removing and installing ambient temperature sensor G17”, page 79](#)

⇒ [“6.2 Remote control receiver for auxiliary/supplementary heater”, page 80](#)

⇒ [“6.3 Functional description of remote control for auxiliary/supplementary heater”, page 86](#)

⇒ [“6.4 Renewing battery in remote control for auxiliary/supplementary heater”, page 94](#)

6.1 Removing and installing ambient temperature sensor - G17-

The ambient temperature sensor - G17- is required for the calculation of the ambient temperature so that the auxiliary heater can be regulated.

- Removing and installing ambient temperature sensor - G17-
⇒ Heating, air conditioning; Rep. gr. 87 ; Overview of fitting locations - air conditioner; Overview of fitting locations - components not located in passenger compartment
- Checking ambient temperature sensor - G17- ⇒ Vehicle diagnostic tester (“Guided Fault Finding”)



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 with respect to the correctness of information in this document. Copyright by AUDI AG.



6.2 Remote control receiver for auxiliary/supplementary heater

⇒ [“6.2.1 Removing and installing remote control receiver for auxiliary/supplementary heater”, page 80](#)

⇒ [“6.2.2 Allocation of hand-held transmitter and remote control receiver for auxiliary/supplementary heater”, page 82](#)

⇒ [“6.2.3 Adapting remote control for auxiliary/supplementary heater”, page 84](#)

6.2.1 Removing and installing remote control receiver for auxiliary/supplementary heater



Note

- ◆ *A remote control for the auxiliary heater is currently only available for vehicles without high-voltage system, and not for vehicles with high-voltage system (Audi A3 e-tron). As an optional extra on vehicles with high-voltage system, the auxiliary heater / auxiliary ventilation can be switched on and off using “Audi connect services” (via a mobile phone and control unit 1 for information electronics - J794-) rather than a remote control ⇒ Communication; Rep. gr. 91 ; Telephone system; Layout - telephone , ⇒ Current flow diagrams, Electrical fault finding and Fitting locations, ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*
- ◆ *Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine (without high-voltage system), the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87 ; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .*
- ◆ *A high-voltage heater (PTC) - Z115- is fitted on vehicles with high-voltage system. -Z115- is activated by the air conditioner operating unit -J255- if additional heat output is required to attain the specified temperature in the passenger compartment ⇒ Heating, air conditioning; Rep. gr. 00 ; Repair instructions , ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*



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 with respect to the correctness of information in this document. Copyright by AUDI AG.

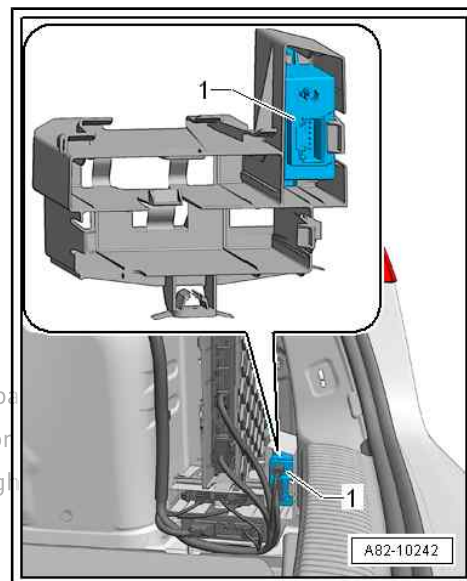


Version 1:

The remote control receiver -1- is installed in the control unit mounting in the luggage compartment (right-side as seen in direction of travel) beneath the trim in the area behind the wheel housing liner.

For access to remote control receiver for auxiliary heater - R64- , remove luggage compartment trim ⇒ General body repairs, interior; Rep. gr. 70 ; Luggage compartment trim panels; Removing and installing luggage compartment side trim .

Protected by copyright. Copying for private or commercial purposes, in part or in full, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or assume any liability with respect to the correctness of information in this document. Copyright



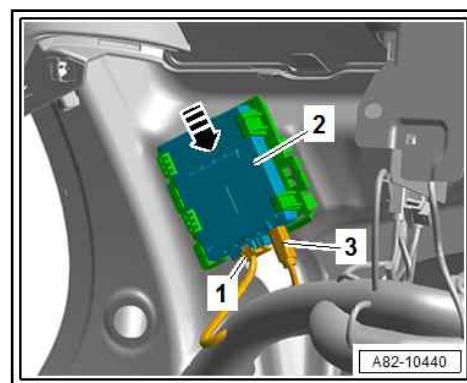
Version 2:

The remote control receiver is installed behind the luggage compartment side trim (right-side) above the wheel housing.

- Remove luggage compartment side trim (right-side) ⇒ General body repairs, interior; Rep. gr. 70 ; Luggage compartment trim panels; Removing and installing luggage compartment side trim .
- Unplug electrical connectors -1 and 3-.
- Slide remote control receiver -2- at an angle downwards and out of bracket.

All vehicles:

- The hand-held remote control transmitters are adapted in the remote control receiver for auxiliary heater - R64- . If this is renewed, all remote controls must be re-adapted ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode.



Note

*There are different versions of the hand-held remote control transmitter and the remote control receiver for auxiliary heater - R64- . Therefore you must make sure that the remote control is correctly assigned and that the auxiliary heater is coded correctly ⇒ Electronic parts catalogue ,
 ⇒ "6.2.2 Allocation of hand-held transmitter and remote control receiver for auxiliary/supplementary heater", page 82 and ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode (the auxiliary heater will not function if the assignment is not correct).*



6.2.2 Allocation of hand-held transmitter and remote control receiver for auxiliary/supplementary heater



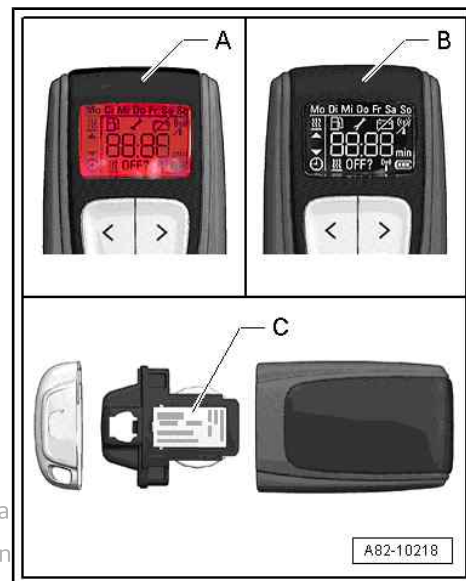
Note

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 with respect to the correctness of information in this document. Copyright by AUDI AG.

- ◆ *A remote control for the auxiliary heater is currently only available for vehicles without high-voltage system, and not for vehicles with high-voltage system (Audi A3 e-tron). As an optional extra on vehicles with high-voltage system, the auxiliary heater / auxiliary ventilation can be switched on and off using "Audi connect services" (via a mobile phone and control unit 1 for information electronics - J794-) rather than a remote control ⇒ Communication; Rep. gr. 91 ; Telephone system; Layout - telephone , ⇒ Current flow diagrams, Electrical fault finding and Fitting locations, ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*
- ◆ *Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine (without high-voltage system), the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87 ; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .*
- ◆ *A high-voltage heater (PTC) - Z115- is fitted on vehicles with high-voltage system. -Z115- is activated by the air conditioner operating unit -J255- if additional heat output is required to attain the specified temperature in the passenger compartment ⇒ Heating, air conditioning; Rep. gr. 00 ; Repair instructions , ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*



- ◆ There are different versions of the hand-held remote control transmitter and the remote control receiver for auxiliary heater - R64- ; therefore it is important to pay attention to the correct version and allocation ⇒ Electronic parts catalogue .
- ◆ For this vehicle, only hand-held remote control transmitters with white lettering on a dark background -B- and with part number 4H0 963 511 from index "B" onwards are planned ⇒ Electronic parts catalogue .
- ◆ The function of the hand-held remote control transmitter with white lettering on a dark background -B- with part number 4H0 963 511 from index "B" onwards differs from that of other hand-held transmitters (with dark lettering and red illuminated display -A- and white lettering on a dark background -B- with part number 4H0 963 511 and index "A").
- ◆ The two versions of the hand-held transmitter with white lettering on a dark background -B- have different functions. They can be partly distinguished as follows: On transmitters with part number with index "A" the lines underneath the day display appear immediately after the ON button is pressed; on transmitters with part number from index "B" onwards this depends on which version of the remote control receiver for auxiliary heater - R64- is installed in the vehicle. If the radio signal identifies an -R64- with part number 4H0 963 271 from index "D" onwards (-R64- up to and including "C" is not fitted in the vehicle), the lines underneath the day display do not appear on the display until approx. 2 seconds after the ON button has been pressed. If the radio signal identifies an -R64- with part number 4H0 963 271 up to and including index "C" (-R64- up to and including "C" is not fitted in the vehicle), the lines underneath the day display appear immediately after the ON button of the remote control has been pressed.
- ◆ The part number of the hand-held remote control transmitter is given on a sticker on the battery carrier -C-.
- ◆ Hand-held remote control transmitters with part number from index "B" onwards can only exchange all data correctly with a remote control receiver for auxiliary heater - R64- with part number 4H0 963 271 from index "D" onwards. Certain data cannot be exchanged correctly or completely with a -R64- up to index "C"; therefore this version must not be installed on this vehicle.
- ◆ Make sure the hand-held transmitters for remote control and the remote control receiver for auxiliary heater - R64- are correctly assigned. Hand-held remote control transmitters with part number without index or with index "A" can exchange data correctly with a -R64- with part number 4H0 963 271 up to index "C". Certain data cannot be exchanged with a -R64- with part number 4H0 963 271 from index "D" onwards. As certain functions are not intended for these hand-held transmitters, they must not be used on this vehicle.





6.2.3 Adapting remote control for auxiliary/ supplementary heater



Note

- ◆ *A remote control for the auxiliary heater is currently only available for vehicles without high-voltage system, and not for vehicles with high-voltage system (Audi A3 e-tron). As an optional extra on vehicles with high-voltage system, the auxiliary heater / auxiliary ventilation can be switched on and off using "Audi connect services" (via a mobile phone and control unit 1 for information electronics - J794-) rather than a remote control ⇒ Communication; Rep. gr. 91 ; Telephone system; Layout - telephone , ⇒ Current flow diagrams, Electrical fault finding and Fitting locations, ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*
- ◆ *To use the various functions of the auxiliary heater / auxiliary ventilation via a mobile phone on vehicles with high-voltage system (Audi A3 e-tron) and the optional extra "Audi connect services", these functions must be activated ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*
- ◆ *Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine (without high-voltage system), the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87 ; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .*
- ◆ *A high-voltage heater (PTC) - Z115- is fitted on vehicles with high-voltage system. -Z115- is activated by the air conditioner operating unit -J255- if additional heat output is required to attain the specified temperature in the passenger compartment ⇒ Heating, air conditioning; Rep. gr. 00 ; Repair instructions , ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*
- ◆ *The remote control for auxiliary heater should be held upright (transmission aerial upwards) while pressing the buttons.*
- ◆ *Currently up to four remote controls can be adapted in the remote control receiver for auxiliary heater - R64- (via auxiliary heater control unit - J364-). If a fifth remote control is adapted, the first remote control to be adapted is deleted ⇒ Vehicle diagnostic tester ("Guided Fault Finding").*
- ◆ *The remote control for auxiliary heater is adapted in the remote control receiver for auxiliary heater - R64- . If this is renewed, all remote controls must be re-adapted ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode.*
- ◆ *There are different versions of the hand-held remote control transmitter and the remote control receiver for auxiliary heater - R64- . Therefore you must make sure that the remote control is correctly assigned and that the auxiliary heater is coded correctly ⇒ [page 82](#) , ⇒ Electronic parts catalogue and ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode (the auxiliary heater will not function if the assignment is not correct).*



- ◆ *As the battery of the remote control for auxiliary heater becomes weaker, the transmission power of the remote control deteriorates as does the reception quality indicated by the auxiliary heater control unit - J364-. The current battery capacity is indicated in the display of the remote control ⇒ [page 93](#) . Depending on the version, the reception quality of the transmission signal can be displayed in the "Reading measured values" function of the auxiliary heater control unit - J364- ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode.*
- ◆ *The code of each hand-held remote control transmitter for auxiliary heater is stored in the remote control receiver for auxiliary heater - R64- .*
- ◆ *If there are problems with the link between the hand-held remote control transmitter and the remote control receiver for auxiliary heater - R64- , check the aerial and its connection to the remote control receiver for auxiliary heater - R64- ⇒ Current flow diagrams, Electrical fault finding and Fitting locations and ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode.*
- ◆ *Should it not be possible to switch on the auxiliary heater using the remote control for auxiliary heater, check the starting conditions ⇒ [page 3](#) . If shut-off criteria were active, it may be necessary to briefly interrupt the power supply to the auxiliary heater and the remote control receiver for auxiliary heater - R64- to restore the normal function (auxiliary heater "reset").*

Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not

permitted. Not 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.

- The remote control to be used must be coded in the auxiliary heater control unit - J364- .
- The remote control receiver for auxiliary heater - R64- and the hand-held transmitter for remote control must be matched correctly.
- The battery of the remote control must be OK
⇒ ["6.4 Renewing battery in remote control for auxiliary/supplementary heater", page 94](#) .
- If necessary, check coding of auxiliary heater control unit - J364- and of remote control receiver for auxiliary heater - R64- and code auxiliary heater control unit - J364- accordingly (different versions) ⇒ Electronic parts catalogue and ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode.

Adapting remote control for auxiliary heater

- Connect battery charger.
- Switch on ignition and switch off all electrical equipment.
- On vehicle diagnostic tester, select "Supplementary/auxiliary heater" ⇒ Vehicle diagnostic tester ("Guided Fault Finding").
- Select "Adapt radio remote control" function and follow program sequence indicated on display ⇒ Vehicle diagnostic tester ("Guided Fault Finding").



6.3 Functional description of remote control for auxiliary/supplementary heater

⇒ [“6.2 Remote control receiver for auxiliary/supplementary heater”, page 80](#)

⇒ [“6.2.3 Adapting remote control for auxiliary/supplementary heater”, page 84](#)

⇒ [“6.3.1 Switching auxiliary/supplementary heater on and off using remote control”, page 86](#)

⇒ [“6.3.2 Display of fault conditions on remote control for auxiliary/supplementary heater”, page 93](#)

⇒ [“6.4 Renewing battery in remote control for auxiliary/supplementary heater”, page 94](#)

6.3.1 Switching auxiliary/supplementary heater on and off using remote control

Switching on auxiliary heating / auxiliary ventilation with “Immediate on” function ⇒ [page 88](#)

Switching off auxiliary heating / auxiliary ventilation with “Immediate on” function ⇒ [page 89](#)

Switching on auxiliary heating / auxiliary ventilation with “Timer” function ⇒ [page 90](#)

Switching off auxiliary heating / auxiliary ventilation with “Timer” function ⇒ [page 92](#)



Note

- ◆ *A remote control for the auxiliary heater is currently only available for vehicles without high-voltage system, and not for vehicles with high-voltage system (Audi A3 e-tron). As an optional extra on vehicles with high-voltage system, the auxiliary heater / auxiliary ventilation can be switched on and off using “Audi connect services” (via a mobile phone and control unit 1 for information electronics - J794-) rather than a remote control ⇒ Communication; Rep. gr. 91 ; Telephone system; Layout - telephone , ⇒ Current flow diagrams, Electrical fault finding and Fitting locations, ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*
- ◆ *To use the various functions of the auxiliary heater / auxiliary ventilation via a mobile phone on vehicles with high-voltage system (Audi A3 e-tron) and the optional extra “Audi connect services”, these functions must be activated ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*
- ◆ *Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine (without high-voltage system), the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87 ; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .*
- ◆ *A high-voltage heater (PTC) - Z115- is fitted on vehicles with high-voltage system. -Z115- is activated by the air conditioner operating unit -J255- if additional heat output is required to attain the specified temperature in the passenger compartment ⇒ Heating, air conditioning; Rep. gr. 00 ; Repair instructions , ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*



- ◆ *A brief description of the operation of the remote control is given below. For a detailed description refer to the owner's literature for your vehicle ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*
- ◆ *The functions "Immediate on" and "Timer" can be called up using the remote control for auxiliary heater. The auxiliary heating or auxiliary ventilation is switched on depending on the ambient temperature and the temperature selected on the air conditioner operating unit (Climatronic control unit - J255-).*
- ◆ *If the auxiliary heater (auxiliary heater control unit - J364-) is activated by a cut-in signal from the remote control for auxiliary heater, the remote control receiver for auxiliary heater - R64- initially activates J364- J364- then transmits the information "Activate or deactivate auxiliary heating/auxiliary ventilation" via the data bus to the air conditioner operating unit (Climatronic control unit - J255-). J255- then determines whether auxiliary heating mode is required to attain the specified temperature or whether auxiliary ventilation mode is sufficient.*
- ◆ *If the "Final control diagnosis" function is performed in the air-bag system, the airbag control unit - J234- transmits a crash deactivation signal via the data bus. As soon as the auxiliary heater control unit - J364- detects this signal, the auxiliary heater is switched off and remains disabled until the shut-off criterion has been deleted in J364- (read out event memory of J364- , ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode).*
- ◆ *There are different versions of the remote control for auxiliary heater and the remote control receiver for auxiliary heater - R64- . Therefore you must make sure that the components are correctly assigned and that the auxiliary heater is coded correctly ⇒ [page 82](#) , ⇒ Electronic parts catalogue and ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode (the auxiliary heater will not function if the assignment is not correct).*
- ◆ *The main functions of the remote control are listed in the following. For a detailed functional description of this remote control, refer to the ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*



- A- Activation of remote control and selection of menus ("Immediate on" and "Timer")
- B- Down button
- C- "Timer" display
- D- "Immediate on" display
- E- LCD
- F- Up button
- G- Activation/deactivation of auxiliary heater with required operating time and timer programming



Note

- ◆ The LCD of the remote control is activated by pressing button -A-.
- ◆ The LCD of the remote control for auxiliary heater is automatically switched off 8 seconds after the last button has been pressed.

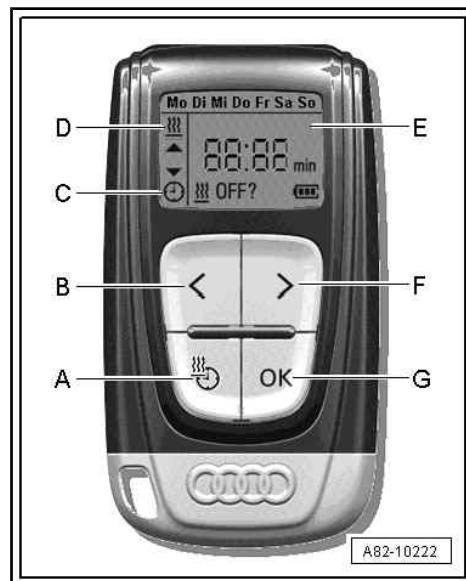


Note

- ◆ The remote control for auxiliary heater has a range of approx. 700 - 1000 metres. This may be considerably reduced by obstacles (e.g. buildings) between the remote control and the vehicle.
- ◆ The remote control should be held upright when pressing the buttons (the radio signals can then be received optimally by the vehicle aerial and the greatest transmission range is achieved).
- ◆ If the remote control or the remote control receiver for auxiliary heater - R64- is renewed, the remote control must be checked and re-adapted ⇒ Vehicle diagnostic tester in "Guided Fault Finding" mode.

Switching on auxiliary heating/auxiliary ventilation via "Immediate on" function

- The auxiliary heater starting conditions must be met
⇒ [page 3](#)



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 with respect to the correctness of information in this document. Copyright by AUDI AG.

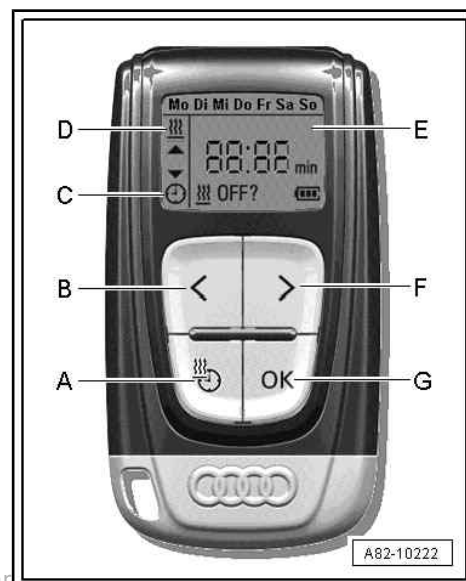


- The remote control is activated by pressing button -A-.
- The “Immediate on” function is selected with button -A- (the arrow points to -D- in the remote control display).
- The required operating time is set with buttons -B- and -F- (in 10-minute increments).
- The auxiliary heater/auxiliary ventilation is activated by pressing button -G-.



Note

- ◆ The request for activation is transmitted after button -G- is pressed. The data transfer symbol (aerial) appears on the remote control display.
- ◆ If the cut-in signal has been received correctly by the auxiliary heater control unit - J364- in the vehicle, a feedback signal is sent to the remote control, and the auxiliary heating / auxiliary ventilation is switched on. The operating time or remaining running time appears on the remote control display.
- ◆ If the starting conditions are not met (➔ [page 3](#)), a feedback signal is sent to the remote control and the cause of the problem is indicated on the display ➔ [page 93](#) .
- ◆ If the vehicle is outside the range of the remote control, “No radio link with vehicle” is displayed as feedback ➔ [page 93](#) .
- ◆ Press button -A- to activate the remote control for auxiliary heater and display the remaining running time ➔ Owner's Manual and ➔ Infotainment/MMI Operating Manual .
- ◆ If the auxiliary heater is switched on via the “Immediate on” function, any starting time set with the “Timer” function remains stored if the operating times for the auxiliary heating / auxiliary ventilation via the “Immediate on” and “Timer” functions do not overlap. If the operating times do not overlap, the auxiliary heater is then switched off after the operating time for the “Immediate on” function has elapsed (max. 60 min.) and re-activated later via the “Timer” function so that the selected temperature in the passenger compartment is reached at the selected departure time.



Switching off auxiliary heating / auxiliary ventilation via “Immediate on” function



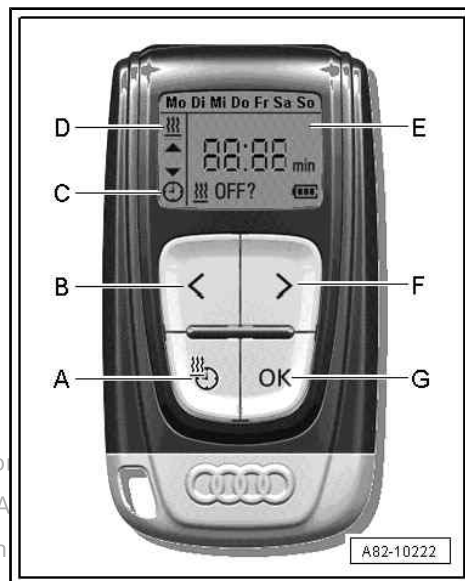
- The remote control for auxiliary heater is activated by pressing button -A-.
- The auxiliary heater can be switched off by pressing button -G-, irrespective of the operating time.

Switching on auxiliary heating / auxiliary ventilation via "Timer" function

- The auxiliary heater starting conditions must be met
⇒ [page 3](#) .

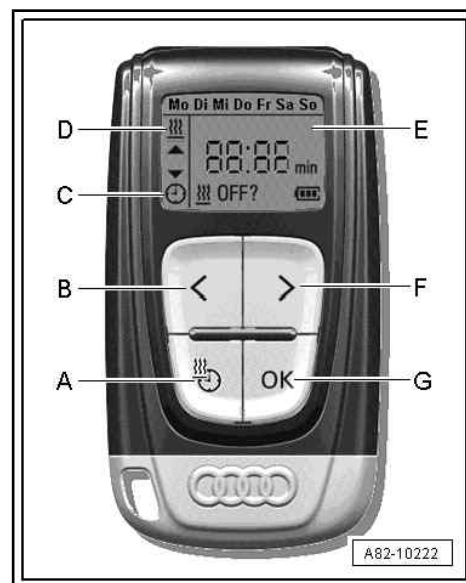


Protected by copyright. Copying for private or commercial use is not permitted unless authorised by AUDI AG. AUDI AG is not responsible with respect to the correctness of information in this document.





- The remote control is activated by pressing button -A-.
- The "Timer" function is selected with button -A- (the arrow points to -C- in the remote control display).
- The required "hour" setting is selected with buttons -B- and -F-.
- Switch to the "minute" setting by pressing button -G-.
- The required "minute" setting is selected with buttons -B- and -F-.
- Switch to the "day" setting by pressing button -G-.
- The required "day" setting is selected with buttons -B- and -F-.
- Confirm the programming by pressing button -G-.



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 with respect to the correctness of information in this document. Copyright by AUDI AG.



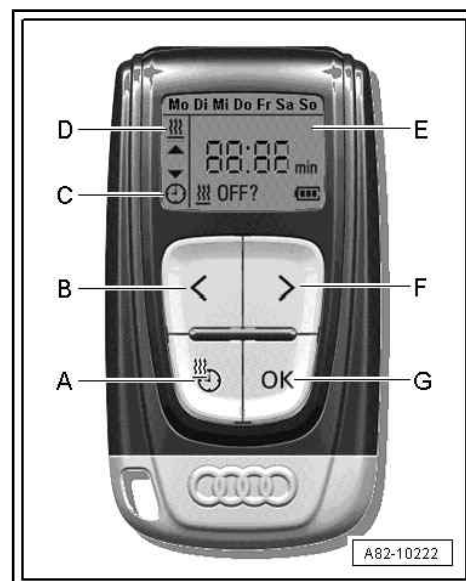
Note

- ◆ *The time at which the desired temperature is to be attained (departure time) can be selected via the remote control and the "Timer" function. The time at which the auxiliary heater is switched on is calculated by -J255- .*
- ◆ *The entry is transmitted after button -G- is pressed. The data transfer symbol (aerial) appears on the remote control display.*
- ◆ *If the cut-in signal is received correctly by the auxiliary heater control unit - J364- and there are no faults in the auxiliary heater, a feedback signal is sent to the remote control for auxiliary heater. The departure time set is shown on the display of the remote control.*
- ◆ *If the starting conditions are not met (⇒ [page 3](#)), a feedback signal is sent to the remote control and the cause of the problem is indicated on the display ⇒ [page 93](#) .*
- ◆ *If the vehicle is outside the range of the remote control, "No radio link with vehicle" is displayed as feedback ⇒ [page 93](#) . The auxiliary heater can then neither be switched on nor off.*
- ◆ *The timer programmed with the remote control for auxiliary heater is always displayed in the Multi Media Interface (MMI, control unit for front display and information control panel - J523- , "Auxiliary heating" function) as "Timer 1". If "Timer 1", "Timer 2" or "Timer 3" has already been activated via the Multi Media Interface (MMI, control unit for front display and information control panel - J523- , "Auxiliary heating" function) the new programming using the remote control overwrites the timer activated previously; this is then displayed in the Multi Media Interface (MMI, control unit for front display and information control panel - J523- , "Auxiliary heating" function as "Timer 1") ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*
- ◆ *Pressing button -A- reactivates the remote control for auxiliary heater and the timer programming or - if the auxiliary heater has already been activated - the remaining running time is displayed.*
- ◆ *If the auxiliary heater is switched on via the "Immediate on" function, any starting time set with the "Timer" function remains stored if the operating times for the auxiliary heating / auxiliary ventilation via the "Immediate on" and "Timer" functions do not overlap. If the operating times do not overlap, the auxiliary heater is then switched off after the operating time for the "Immediate on" function has elapsed (max. 60 min.) and re-activated later via the "Timer" function so that the selected temperature in the passenger compartment is reached at the selected departure time.*

Switching off auxiliary heating / auxiliary ventilation with "Timer" function



- The remote control is activated by pressing button -A-.
- The auxiliary heater can be deactivated by pressing button -G- again irrespective of the timer programming selected → Owner's Manual and → Infotainment/MMI Operating Manual .



Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted.

6.3.2 Display of fault conditions on remote control for auxiliary/supplementary heater



Note

- ◆ A remote control for the auxiliary heater is currently only available for vehicles without high-voltage system, and not for vehicles with high-voltage system. As an optional extra on vehicles with high-voltage system, the auxiliary heater / auxiliary ventilation can be switched on and off using "Audi connect services" (via a mobile phone and control unit 1 for information electronics - J794-) rather than a remote control → Communication; Rep. gr. 91 ; Telephone system; Layout - telephone , → Current flow diagrams, Electrical fault finding and Fitting locations, → Owner's Manual and → Infotainment/MMI Operating Manual .
- ◆ To use the various functions of the auxiliary heater / auxiliary ventilation via a mobile phone on vehicles with high-voltage system (Audi A3 e-tron) and the optional extra "Audi connect services", these functions must be activated → Owner's Manual and → Infotainment/MMI Operating Manual .
- ◆ Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine (without high-voltage system), the supplementary heating function is provided by the auxiliary air heater element - Z35- → Heating, air conditioning; Rep. gr. 87 ; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .
- ◆ A high-voltage heater (PTC) - Z115- is fitted on vehicles with high-voltage system. -Z115- is activated by the air conditioner operating unit -J255- if additional heat output is required to attain the specified temperature in the passenger compartment → Heating, air conditioning; Rep. gr. 00 ; Repair instructions , → Owner's Manual and → Infotainment/MMI Operating Manual .



Heating not possible:

-A- Not enough fuel in the tank



Note

When the ignition is switched on, the fuel gauge in the instrument cluster must not be in the "red zone".

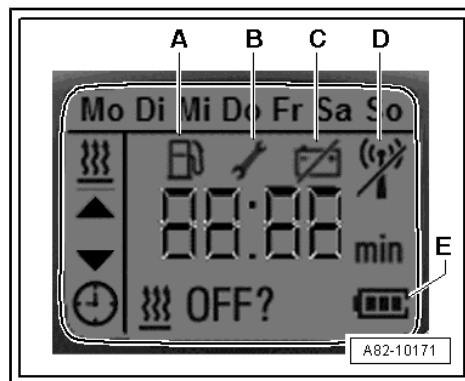
-B- Event memory entry in auxiliary heater control unit - J364-

-C- Vehicle battery charge level too low

-D- No radio link with vehicle (outside range)

Battery capacity:

-E- Battery capacity of remote control



6.4 Renewing battery in remote control for auxiliary/supplementary heater



Note

- ◆ *A remote control for the auxiliary heater is currently only available for vehicles without high-voltage system, and not for vehicles with high-voltage system. As an optional extra on vehicles with high-voltage system, the auxiliary heater / auxiliary ventilation can be switched on and off using "Audi connect services" (via a mobile phone and control unit 1 for information electronics - J794-) rather than a remote control ⇒ Communication; Rep. gr. 91; Telephone system; Layout - telephone, ⇒ Current flow diagrams, Electrical fault finding and Fitting locations, ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*
- ◆ *To use the various functions of the auxiliary heater / auxiliary ventilation via a mobile phone on vehicles with high-voltage system (Audi A3 e-tron) and the optional extra "Audi connect services", these functions must be activated ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*
- ◆ *Currently only the version as an auxiliary heater is available. At the moment the auxiliary heater is not intended to be operated as a supplementary heater. On vehicles with a diesel engine (without high-voltage system), the supplementary heating function is provided by the auxiliary air heater element - Z35- ⇒ Heating, air conditioning; Rep. gr. 87; Heater and air conditioning unit (front); Exploded view - heater and air conditioning unit .*
- ◆ *A high-voltage heater (PTC) - Z115- is fitted on vehicles with high-voltage system. -Z115- is activated by the air conditioner operating unit -J255- if additional heat output is required to attain the specified temperature in the passenger compartment ⇒ Heating, air conditioning; Rep. gr. 00; Repair instructions , ⇒ Owner's Manual and ⇒ Infotainment/MMI Operating Manual .*

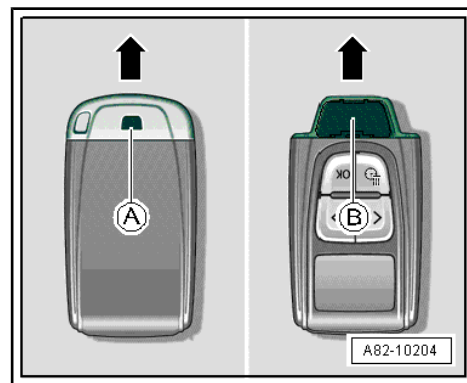


- Press release tab -A- and detach cover in direction of -arrow-.
- Press release tab -B- on battery carrier and pull out battery carrier in direction of -arrow-.
- Fit new battery with “positive terminal” facing downwards.



Note

- ◆ *Only fit batteries with specifications corresponding to the original battery (e.g. CR2430 3V 280mAh). You can obtain these batteries e.g. from specialised dealers or via the replacement parts programme ⇒ Electronic parts catalogue .*
- ◆ *Pressing any button on the remote control for auxiliary heater activates the LCD. Repeated unintentional activation of the LCD (e.g. while in your pocket) will shorten battery service life.*



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 with respect to the correctness of information in this document. Copyright by AUDI AG.