Water Heater

Thermo Top Evo Parking Heater

E1
00 0258

Installation Documentation
Audi A4 / A5

Validity

Manufacturer	Model	Type	Model year	EG BE No. / ABE
Audi	A4	B9	From model year 2016	e1 * 2001 / 116 * 0430 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.4 TFSI	Petrol	S tronic	110	1395	CVNA
2.0 TFSI ultra	Petrol	S tronic	140	1984	CVKB
2.0 TFSI ultra	Petrol	S tronic	185	1984	CYRB
2.0 TDI	Diesel	SG	110	1968	DEUA
2.0 TDI	Diesel	S tronic	140	1968	DETA

Manufacturer	Model	Type	Model year	EG BE No. / ABE
Audi	A5	B8	From model year 2017	e1 * 2001 / 116 * 0430 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
2.0 TFSI ultra	Petrol	S tronic	185	1984	CYRB

SG = manual transmission
S tronic = dual clutch transmission

Left-hand drive vehicle

Verified equipment variants: 3 zone automatic air-conditioning
LED main headlights
LED daytime running lights
LED front fog lights (Audi A5 only)
Automatic Start - Stop system
Start button
Quattro (only 2.0 TFSi with 185kW)
Euro 6
Headlight washer system (2.0 TFSI only)

Not verified: Headlight washer system (except 2.0 TFSI)
Xenon headlights

Total installation time: approx. 8 hours

Table of Contents

Necessary Components

- Basic delivery scope of Thermo Top Evo based on price list
- Installation kit for Audi A4 / A5 2016 Petrol and diesel: **1324603C**
- In case of Telestart, heater control as well as indicator lamp in accordance with price list and in consultation with end customer

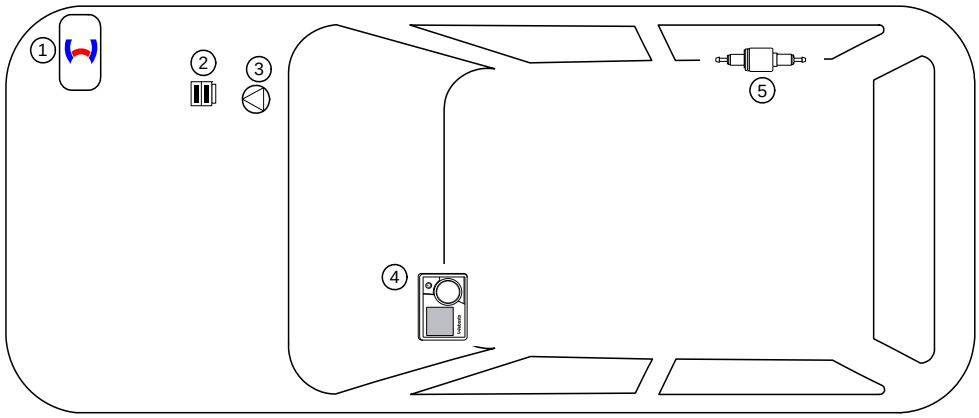
Installation instructions:

- Arrange for the vehicle to be delivered with the tank only about ¼ full.
- The installation location of the push button in case of Telestart or ThermoCall should be confirmed with the end customer.
- Depending on the space required and the vehicle manufacturer's instructions, we recommend the use of a vehicle battery with a higher electrical capacity.

Installation Overview

Legend:

1. Heater
2. Engine compartment fuse holder
3. Circulating pump
4. MultiControl CAR
5. Metering pump



Information on Total Installation Time

The total installation time includes the time needed for mounting and demounting the vehicle-specific components, the heater specific installation time and all other times required for the system integration and initial start-up of the heater.
The total installation time may vary for vehicle equipment other than provided.

Information on Operating and Installation Instructions

1 Important information (not complete)

1.1 Installation and repair

The improper installation or repair of Webasto heating and cooling systems can cause fire or the leakage of deadly carbon monoxide, leading to serious injury or death.

To install and repair Webasto heating and cooling systems you need to have completed a special company training course and have the appropriate technical documentation, special tools and special equipment.

Installation and repair may ONLY be carried out by persons trained and certified in a Webasto training course. NEVER try to install or repair Webasto heating or cooling systems if you have not completed a Webasto training course, you do not have the necessary technical skills and you do not have the technical documentation, tools and equipment available to ensure that you can complete the installation and repair work properly.

Only use genuine Webasto parts. See the Webasto air and water heaters accessories catalogue for this purpose.

1.2 Operation

To ensure safe operation, we recommend having the heater checked every two years by an authorised Webasto dealer, especially when used over a long period and/or under extreme environmental conditions.

Do not operate the heater in closed rooms due to the danger of poisoning and suffocation.

Always switch off the heater before refuelling.

The heater may only be used with the prescribed fuel diesel (DIN EN 590) or petrol (DIN EN 228).

The heater may not be cleaned with a high-pressure cleaner.

1.3 Please note

ALWAYS follow all Webasto installation and operating instructions and observe all warnings.

To become familiar with and understand all functions and properties of the heater, the operating instructions must be read carefully and observed at all times.

For proper, safe installation and repair work, the installation instructions with all warnings and safety information must be carefully read and observed at all times. Please always contact a workshop authorised by Webasto for all installation and repair work.

Important

Webasto shall assume no liability for defects, damage and injuries resulting from a failure to observe the installation, repair and operating instructions of the information contained in them.

This liability exclusion particularly applies to improper installations and repairs, installations and repairs by untrained persons or in the case of a failure to use genuine spare parts.

The liability due to culpable disregard to life, limb or health and due to damage or injuries caused by a wilful or reckless breach of duty remain unaffected, as does the obligatory product liability.

Installation should be carried out according to the general, standard rules of technology. Unless specified otherwise, fasten hoses, lines and wiring harnesses to original vehicle lines and wiring harnesses using cable ties. Insulate loose wire ends and tie back. Connectors on electronic components must audibly click into place during installation.

Sharp edges should be fitted with rub protection. Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K).

Observe the instructions and guidelines of the respective vehicle manufacturer for demounting and mounting vehicle specific components!

The initial startup is to be executed with the Webasto Thermo Test Diagnosis.

When installing a programmable control module (e.g. a PWM Gateway), the corresponding settings must be checked or adjusted.

2 Statutory regulations governing installation

Guidelines	Thermo Top Evo
Heating Directive ECE R122	E1 00 0258
EMC Directive ECE R10	E1 04 5627

Note

The regulations of these guidelines are binding in the scope of the Directive 70/156/EEC and/or 2007/46/EC (for new vehicle models from 29/04/2009) and should also be observed in countries in which there are no special regulations.

Important

Failure to follow the installation instructions will result in the invalidation of the type approval for the heater and therefore invalidation of the general **homologation of the vehicle**.

Note

The heater is licensed in accordance with paragraph 19, section 3, No. 2b of the StVZO (German Road Traffic Licensing Authority).

2.1 Excerpt from ECE regulation 122 (heating system) paragraph 5 for the installation of the heater

Beginning of excerpt.

ANNEX VII

REQUIREMENTS FOR COMBUSTION HEATERS AND THEIR INSTALLATION

1. GENERAL REQUIREMENTS

1.7.1. A clearly visible tell-tale in the operator's field of view shall inform when the combustion heater is switched on or off.

2. VEHICLE INSTALLATION REQUIREMENTS

2.1. Scope

2.1.1. Subject to paragraph 2.1.2. combustion heaters shall be installed according to the requirements of this Annex.

2.1.2. Vehicles of category O having liquid fuel heaters are deemed to comply with the requirements of this Annex.

2.2. Positioning of heater

2.2.1. Body sections and any other components in the vicinity of the heater must be protected from excessive heat and the possibility of fuel or oil contamination.

2.2.2. The combustion heater shall not constitute a risk of fire, even in the case of overheating. This requirement shall be deemed to be fulfilled if the installation ensures an adequate distance to all parts and suitable ventilation, by the use of fire resistant materials or by the use of heat shields.

2.2.3. In the case of M2 and M3 vehicles, the heater must not be positioned in the passenger compartment. However, an installation in an effectively sealed envelope which also complies with the conditions in paragraph 2.2.2 may be used.

2.2.4. The label referred to in paragraph 1.4 or a duplicate, must be positioned so that it can be easily read when the heater is installed in the vehicle.

2.2.5. Every reasonable precaution should be taken in positioning the heater to minimise the risk of injury and damage to personal property.

2.3. Fuel supply

2.3.1. The fuel filler must not be situated in the passenger compartment and must be provided with an effective cap to prevent fuel spillage.

2.3.2. In the case of liquid fuel heaters, where a supply separate to that of the vehicle is provided, the type of fuel and its filler point must be clearly labelled.

2.3.3. A notice, indicating that the heater must be shut down before refuelling, must be affixed to the fuelling point. In addition a suitable instruction must be included in the manufacturer's operating manual.

2.4. Exhaust system

2.4.1. The exhaust outlet must be located so as to prevent emissions from entering the vehicle through ventilators, heated air inlets or opening windows.

2.5. Combustion air inlet

2.5.1. The air for the combustion chamber of the heater must not be drawn from the passenger compartment of the vehicle.

2.5.2. The air inlet must be so positioned or guarded that blocking by rubbish or luggage is unlikely.

2.6. Heating air inlet

2.6.1. The heating air supply may be fresh or recirculated air and must be drawn from a clean area not likely to be contaminated by exhaust fumes emitted either by the propulsion engine, the combustion heater or any other vehicle source.

2.6.2. The inlet duct must be protected by mesh or other suitable means.

2.7. Heating air outlet

2.7.1. Any ducting used to route the hot air through the vehicle must be so positioned or protected that no injury or damage could be caused if it were to be touched.

2.7.2. The air outlet must be so positioned or guarded that blocking by rubbish or luggage is unlikely.

End of excerpt.

In multilingual versions the German language is binding.

Information on Validity

This installation documentation applies to Audi A4 Petrol and diesel vehicles - for validity, see page 1 - from model year 2016 and later as well as to Audi A5 petrol vehicles - for validity, see page 1 - from model year 2017 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to this installation documentation.

Vehicle and engine types, equipment variants and other specifications not listed in this installation documentation have not been tested. However, installation according to this installation documentation may be possible.

Technical Information

Special Tools
- Hose clamp pliers for auto-tightening hose clamps
- Hose clamp pliers for Clic hose clamps of type W
- Automatic wire stripper 0.2 - 6mm²
- Crimping pliers for cable lug / tab connector 0.5 - 6mm²
- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers
- Metric thread-setter kit
- Deep-hole marker
- Webasto Thermo Test diagnosis with current software

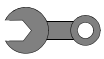
Dimensions
- All dimensions are in mm.

Tightening torque values
- Tightening torque values of 5x13 heater bolts and 5x11 heater stud bolts = 8Nm.
- Tightening torque value of 5x15 water connection piece retaining plate bolt = 7Nm.
- Tighten other bolt connections in accordance with manufacturer's instructions or in accordance with state-of-the-art-technology.

Explanatory Notes on Document

You will find an identification mark on the outside top right corner of the page in question to provide you with a quick overview of the individual working steps.

Mechanical System



Electrical System

Coolant Circuit

Combustion Air

Fuel

Exhaust Gas

Software

Special features are highlighted using the following symbols:

Specific risk of damage to components.

Specific risk due to electrical voltage.

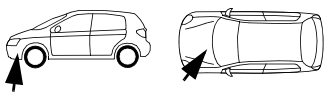
Specific risk of injury or fatal accidents.

Specific risk of fire or explosion.

Reference to the manufacturer's vehicle-specific documents or to the general installation instructions of Webasto components.

Reference to a special technical feature.

The arrow in the vehicle icon indicates the position on the vehicle and the viewing angle.



Tightening torque according to the manufacturer's vehicle-specific documents.

Preliminary Work

Vehicle

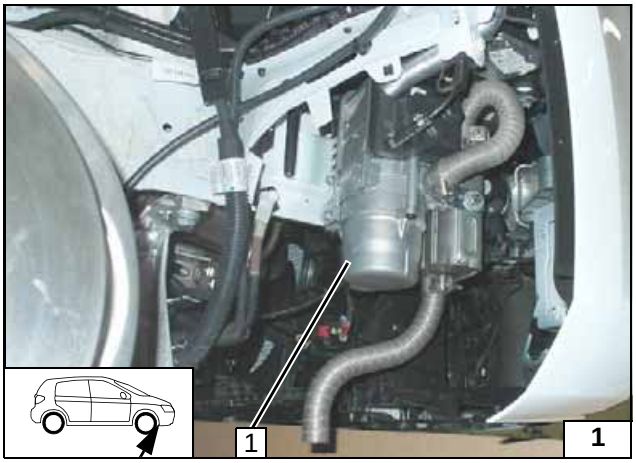
- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect the battery (located under the spare wheel in the boot).
- Remove the cover between the bumper and the radiator carrier.
- Remove the air filter completely, together with the intake hose.
- Remove the windscreen wipers.
- Remove the coolant reservoir cap.
- Remove the strut brace on the right.
- Remove the right front wheel.
- Remove the wheel well trim on the right.
- Remove the underride protection on the right (3x).
- Remove the lower engine cover (3x).
- Remove the rear bench seat (clipped on).
- Open the right-hand tank-fitting service lid.
- Remove the lateral instrument panel trim on the left.
- Remove the lower instrument panel trim on the left.
- Remove the A/C control panel.

The following work should only be performed during the corresponding installation sequence:

- Remove the fuel tank sending unit cover in accordance with the manufacturer's instructions.

Heater

- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) visibly in the appropriate place in the engine compartment.



Heater Installation Location

The figures below show a diesel 2.0 TDI vehicle.

1 Heater

Installation location

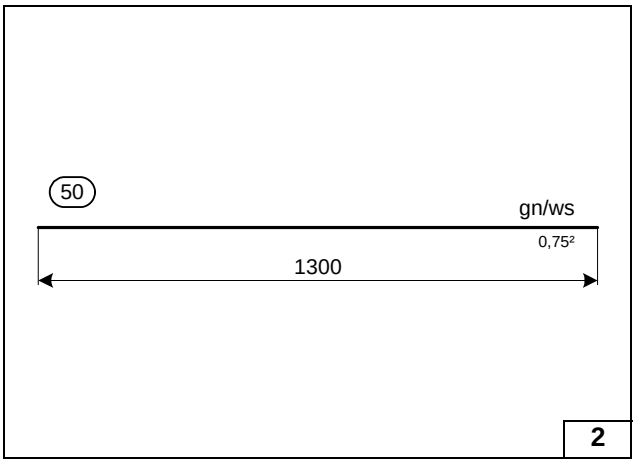
Preparing Electrical System

Wire sections retain their numbering in the entire document.

Produce all following electrical connections as shown in the wiring diagram.

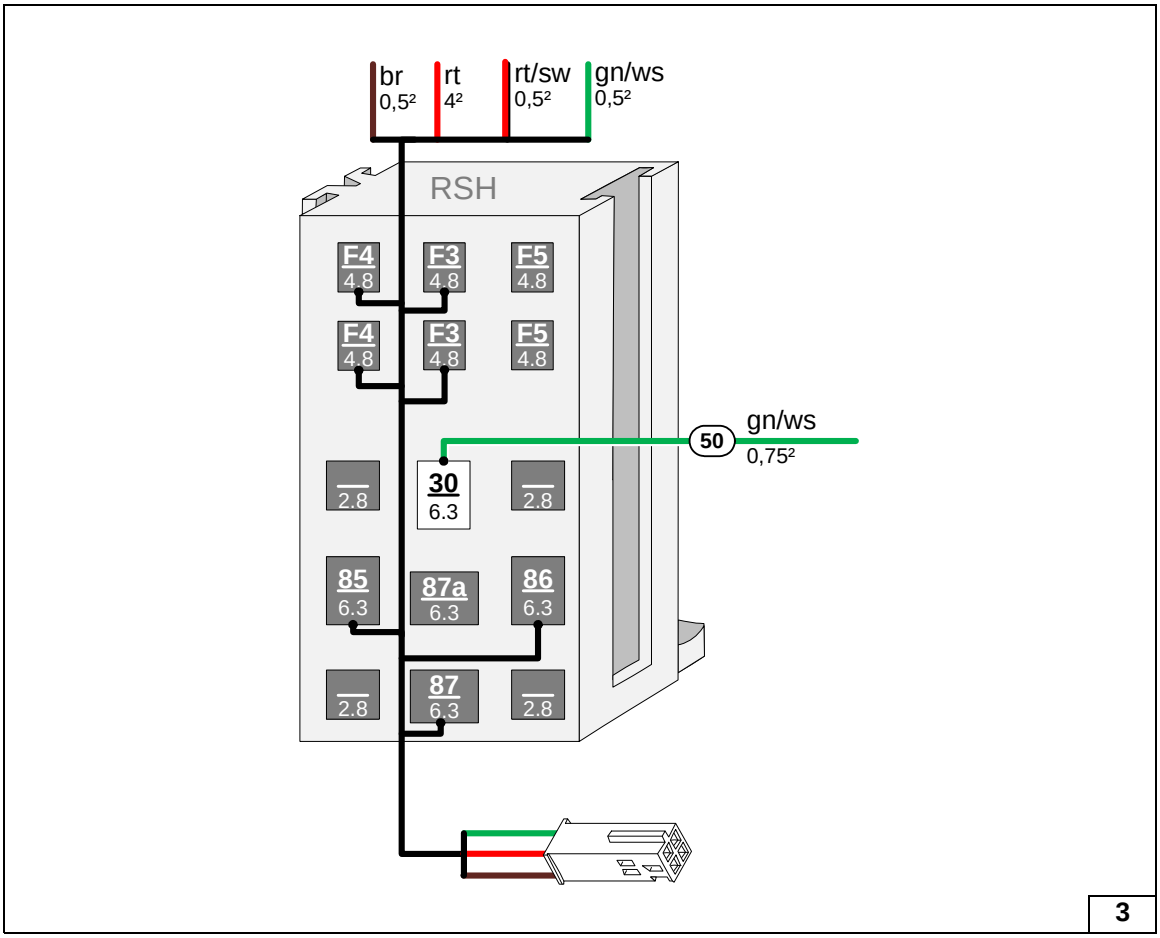
Draw additional wire (50) into provided protective sleeving.

Assigning wire



2

Connecting wire to passenger compartment relay and fuse holder



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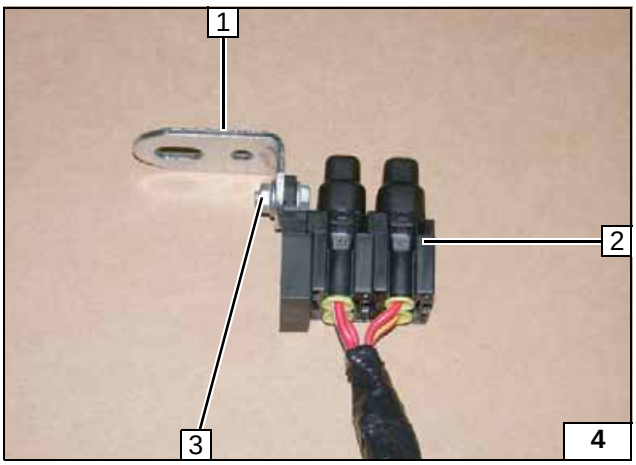


4

1 Angle bracket
2 Fuses F1-F2 inserted
3 M5x16 bolt, large diameter washer [2x], retaining plate of fuse holder, nut

Preparing engine compartment fuse holder

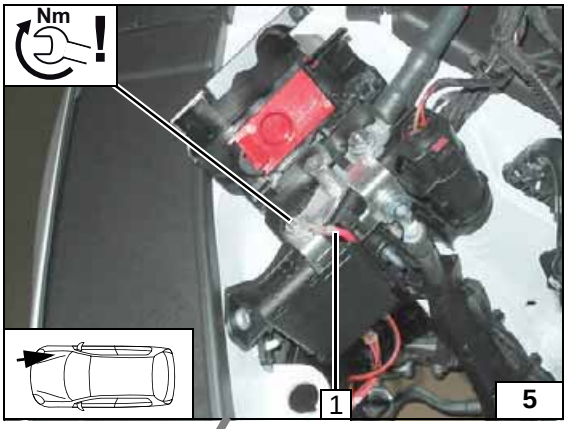
Electrical System

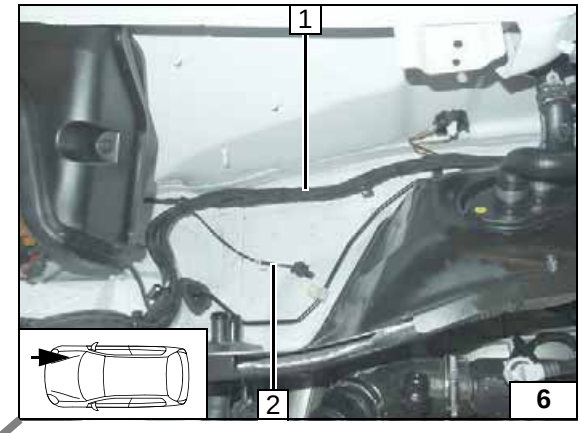
Positive wire

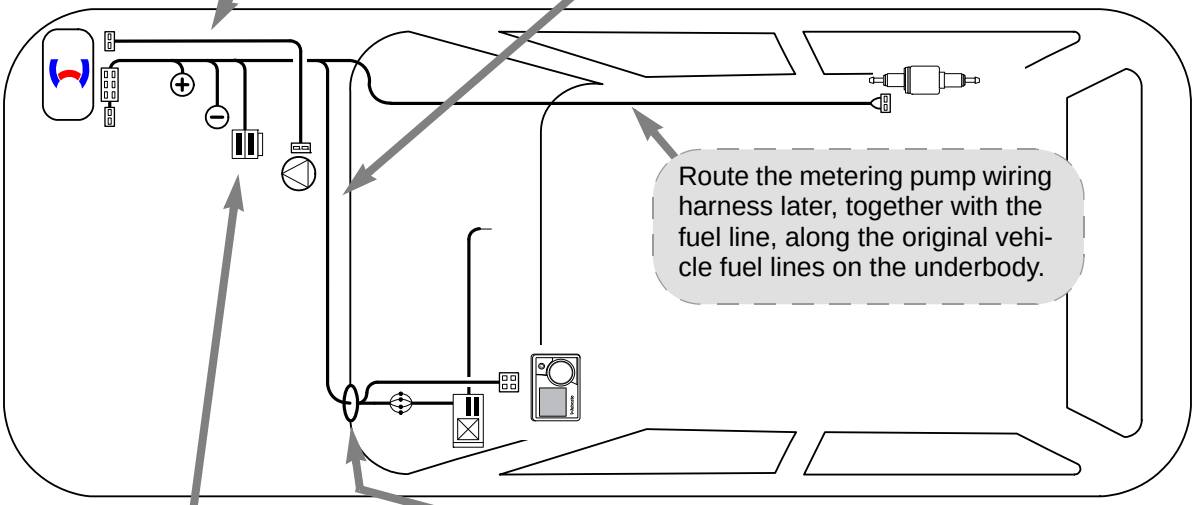
1 Positive wire on positive support point

Wiring Harness Routing

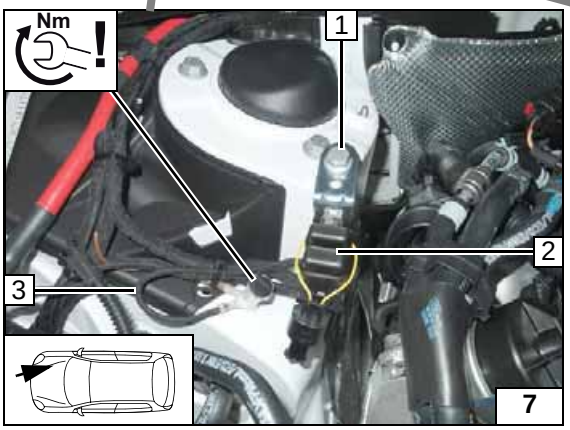
1 Heater wiring harnesses, heater control on original vehicle wiring harness
2 Route circulating pump wiring harness to installation location of heater

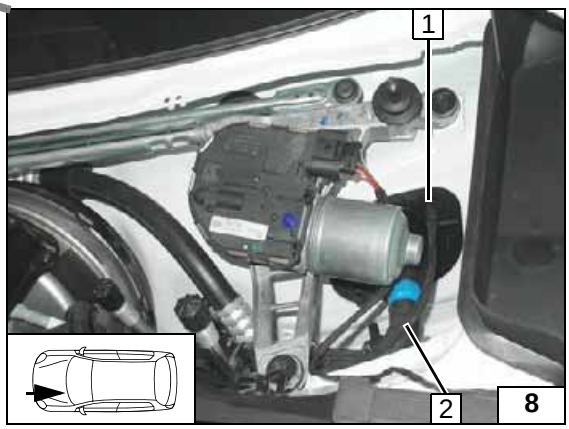






Wiring harness routing diagram





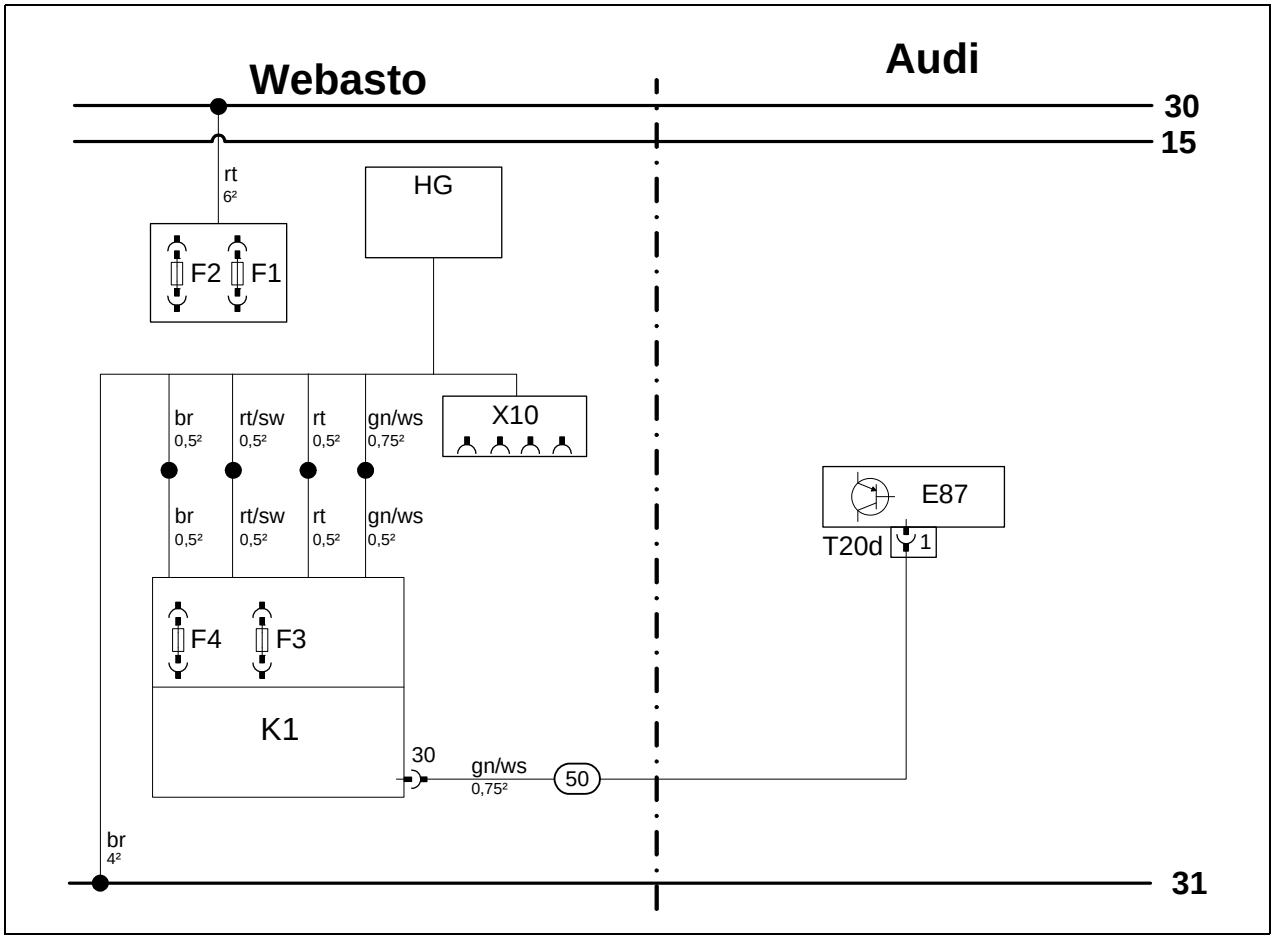
Engine compartment fuse holder / earth wire

1 Install original vehicle bolt hand-tight
2 Fuses F1-2
3 Earth wire on original vehicle earth support point

Wiring harness pass through

1 Protective rubber plug
2 Wiring harnesses of heater, heater control

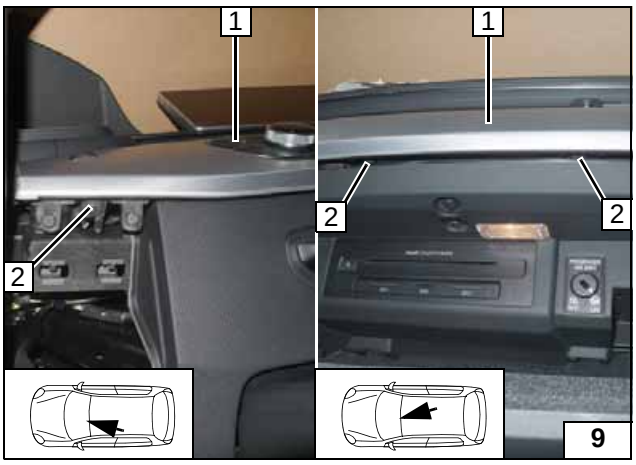
Fan Controller



System wiring diagram

Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	E87	A/C control panel	rt	red
F1	20A fuse	T20d	20-pin connector J255	gn	green
F2	30A fuse			sw	black
X10	4-pin heater control socket			br	brown
				ws	white
F3	1A fuse				
F4	1A fuse				
K1	Fan relay				
				Wiring colours may vary.	

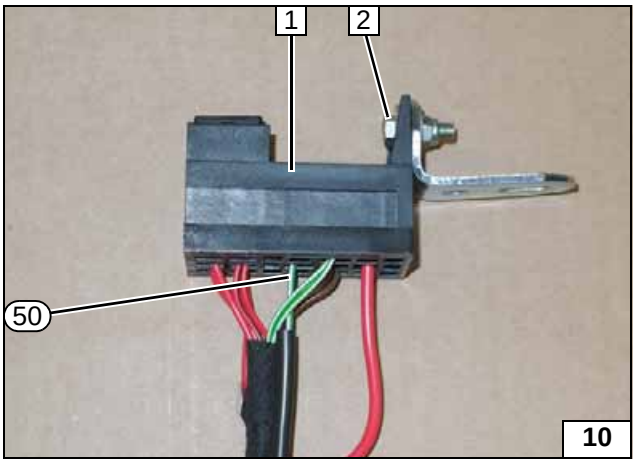
Legend



A/C Control Panel Dismantling Instructions

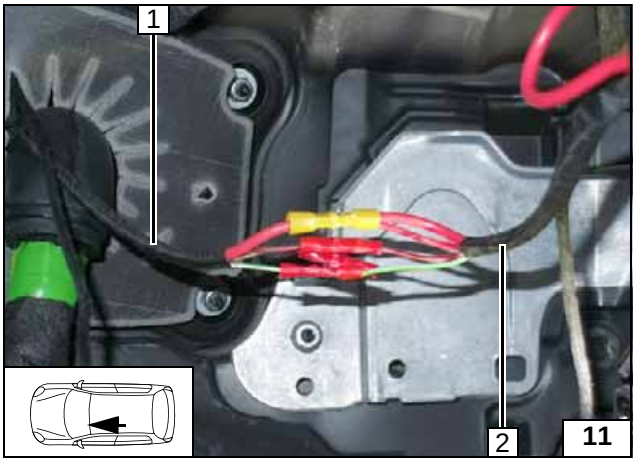
Remove original vehicle bolt **2** [3x], unclip trim piece **1** together with the A/C control panel.

Dismantling A/C control panel



1 Passenger compartment relay and fuse holder
2 M5x16 bolt, large diameter washer, passenger compartment relay and fuse holder, angle bracket, large diameter washer, nut
(50) Green/white (gn/ws) wire of K1/30, additional wire in protective sleeving

Premounting angle bracket



1 Wiring harness of heater
2 Wiring harness of passenger compartment relay and fuse holder

Connecting same colour wires of wiring harnesses

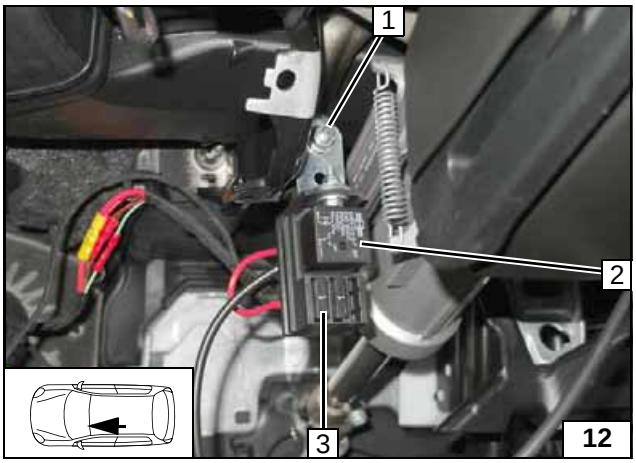
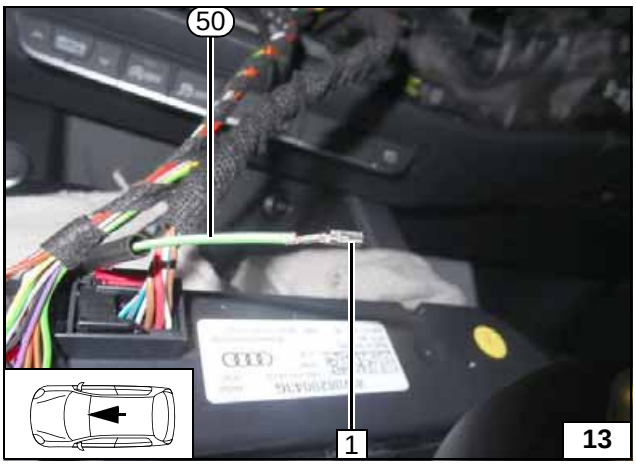


Figure shows Audi A5.

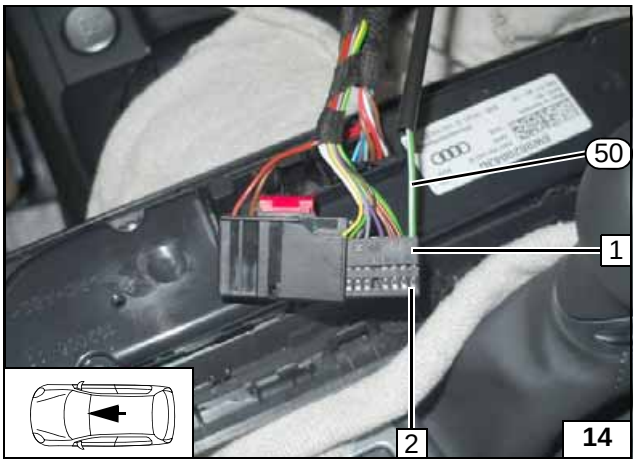
1 M5x16 bolt, large diameter washer, original vehicle hole, angle bracket, flanged nut
2 Relay K1
3 1A fuse F4

Installing passenger compartment relay and fuse holder



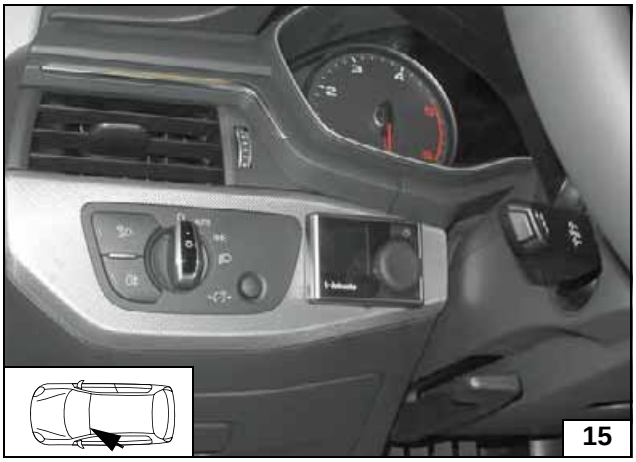
1 Blade receptacle
(50) Green/white (gn/ws) wire of K1/30, additional wire

Preparing green/white (gn/ws) wire (50)



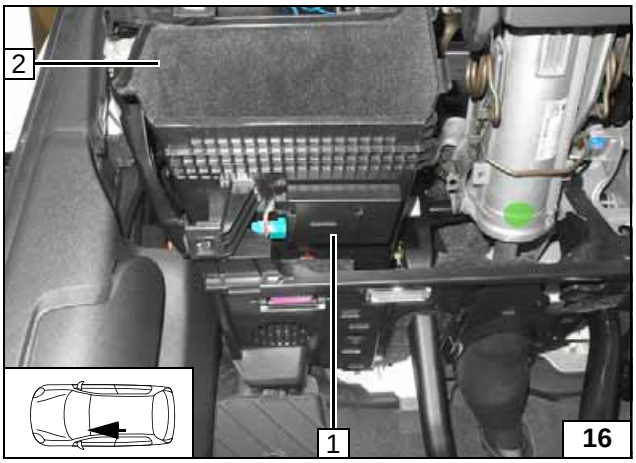
1 20-pin connector T20d from A/C control panel
2 Socket 1, connector T20d
(50) Green/white (gn/ws) wire of K1/30, additional wire

Connecting A/C control unit



MultiControl CAR Option

Installing MultiControl CAR



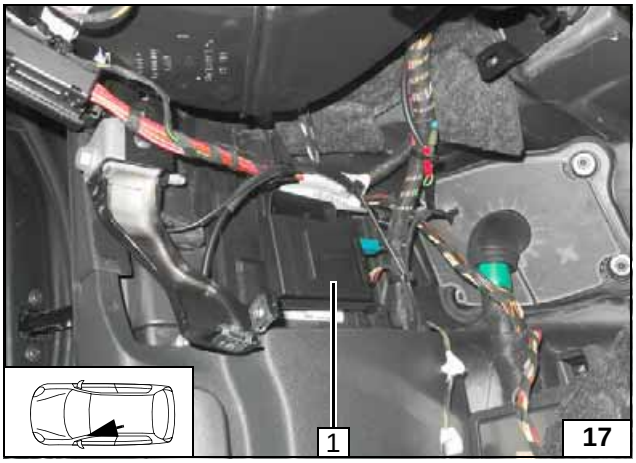
Remote Option (Telestart)

Version with storage compartment

Fasten receiver **1** with double-sided adhesive tape.

2 Storage compartment

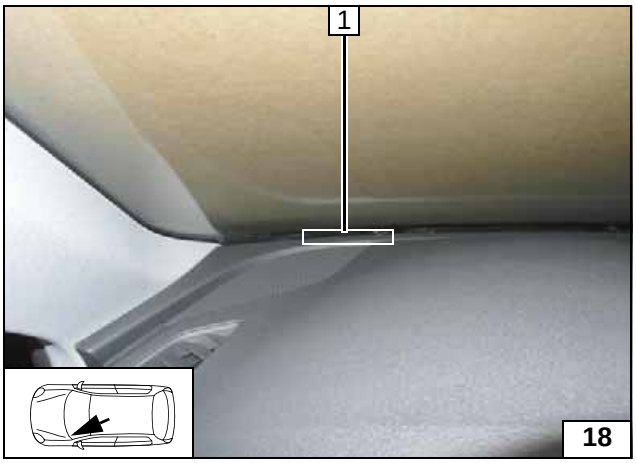
Installing receiver



Version without storage compartment

Fasten receiver **1** with double-sided adhesive tape.

Installing receiver



All vehicles

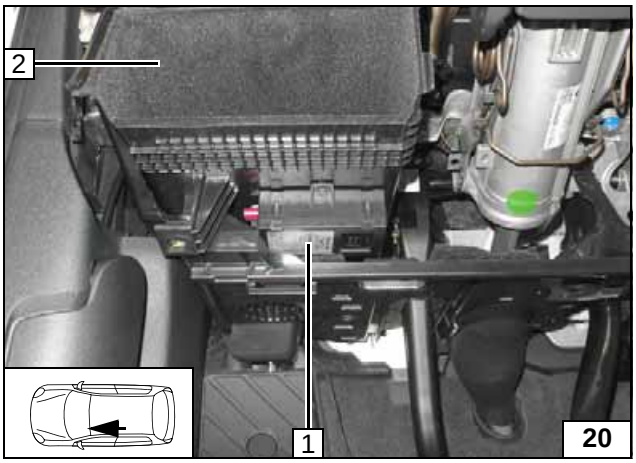
1 Aerial

Installing aerial

Temperature sensor T100 HTM

Fasten temperature sensor **1** with double-sided adhesive tape.

Installing temperature sensor



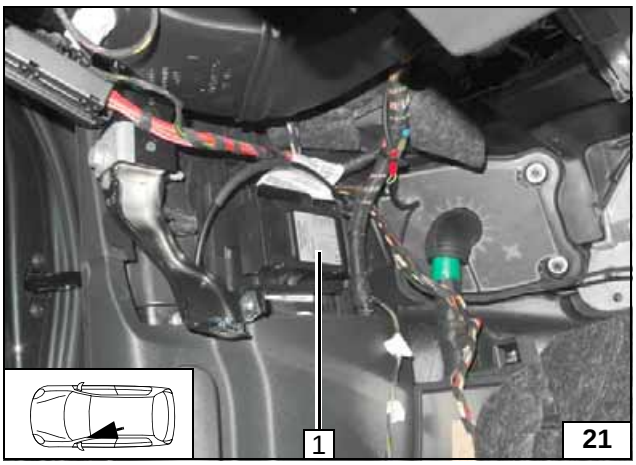
ThermoCall Option

Version with storage compartment

Fasten receiver **1** with double-sided adhesive tape.

2 Storage compartment

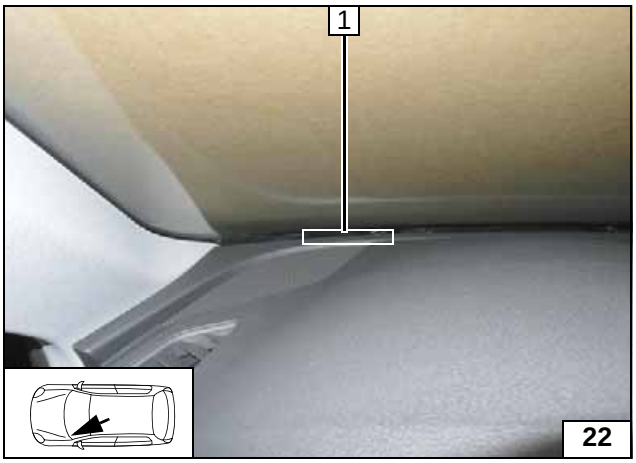
Installing receiver



Version without storage compartment

Fasten receiver **1** with double-sided adhesive tape.

Installing receiver



All vehicles

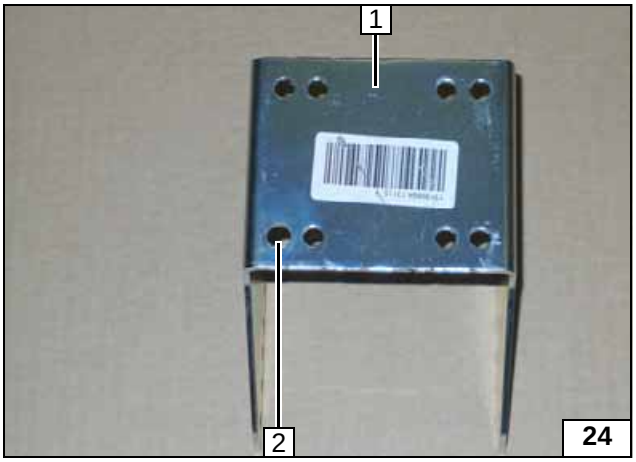
1 Aerial (optional)

Installing aerial

Preparing Installation Location

1 M8 rivet nut, original vehicle hole

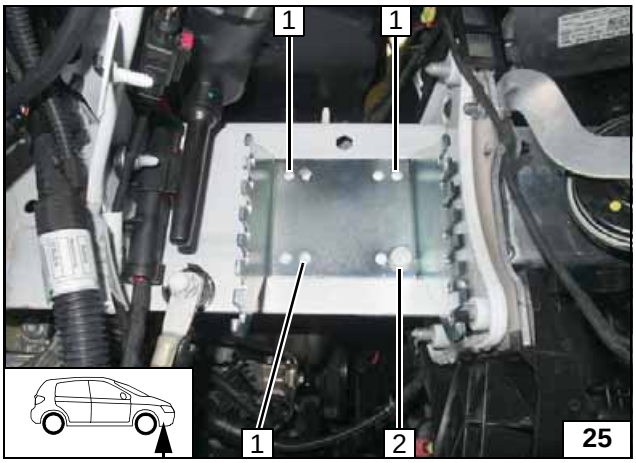
Installing rivet nut



1 Bracket
2 Drill out hole to 8.5 mm dia.

Preparing bracket

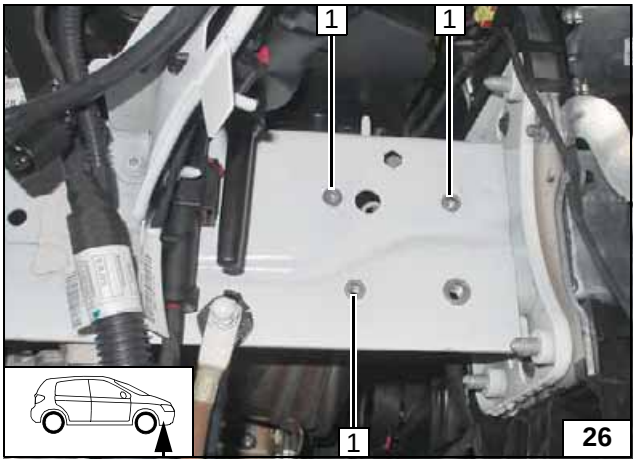
Install bracket and align horizontally.



1 Copy hole pattern [3x]
2 M8x20 bolt

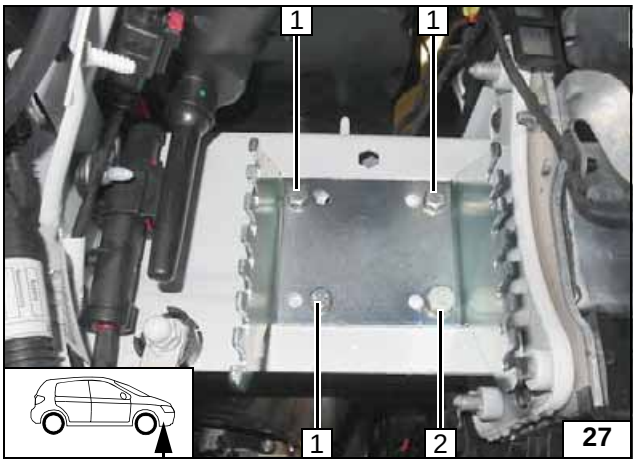
Copying hole pattern

Remove bracket.



1 9mm dia. hole, rivet nut [3x each]

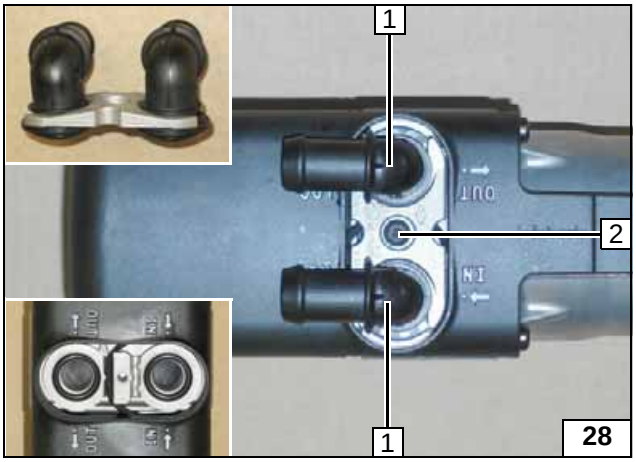
Installing rivet nut



1 M6x20 bolt, spring lockwasher [3x each]
2 M8x20 bolt, spring lockwasher

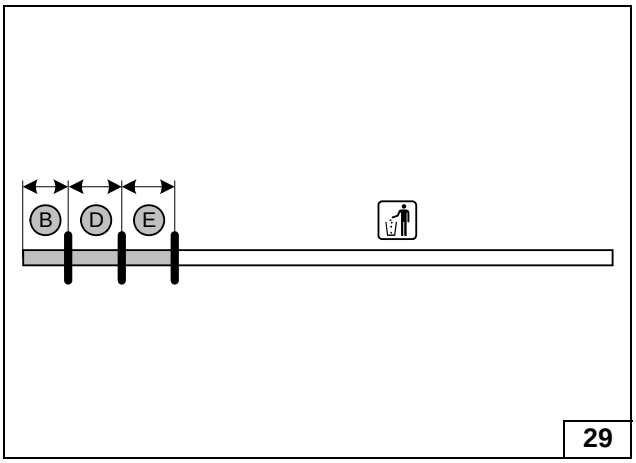
Installing bracket

Preparing Heater



1 Water connection piece, sealing ring [2x each]
2 5x15 self-tapping bolt, retaining plate of water connection piece

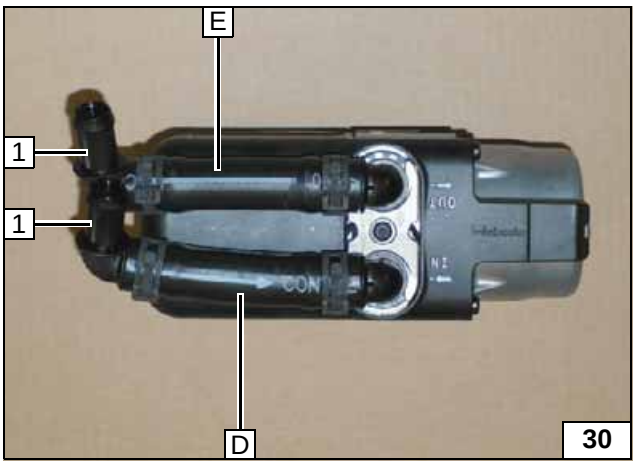
Installing water connection piece



1.4 TFSI

B = 90
D = 110
E = 110

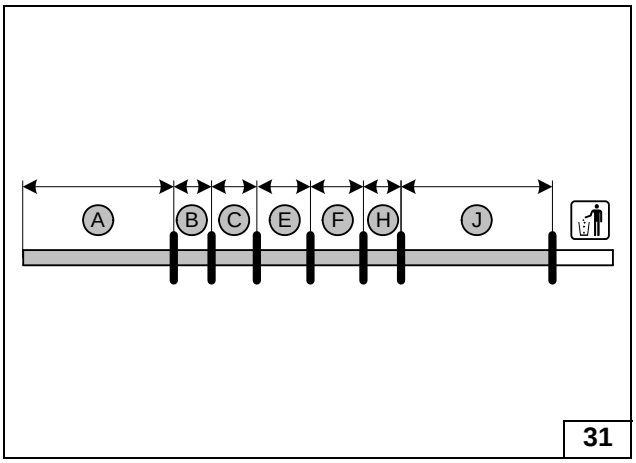
Cutting 18mm dia. hose to length



All spring clips = 25mm dia.

1 18x18mm, 90° connecting pipe [2x]

Premounting hoses

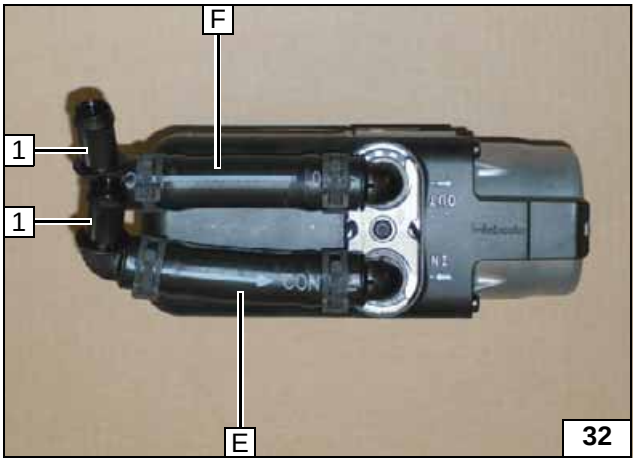


31

2.0 TDI / 2.0 TFSI

A = 380
B = 60
C = 90
E = 110
F = 110
H = 60
J = 350

Cutting 18mm dia. hose to length

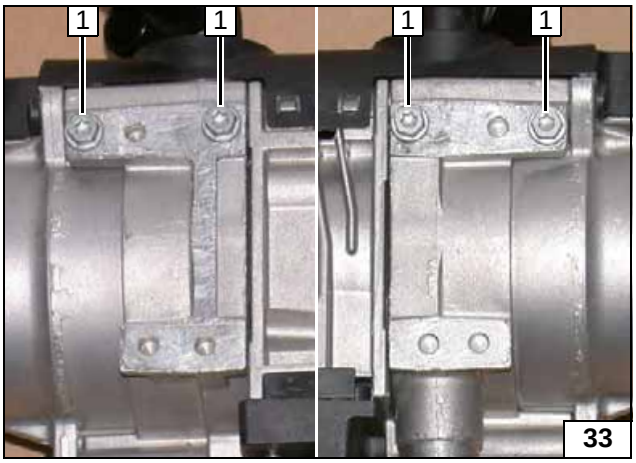


32

All spring clips = 25mm dia.

1 18x18mm, 90° connecting pipe [2x]

Premounting hoses

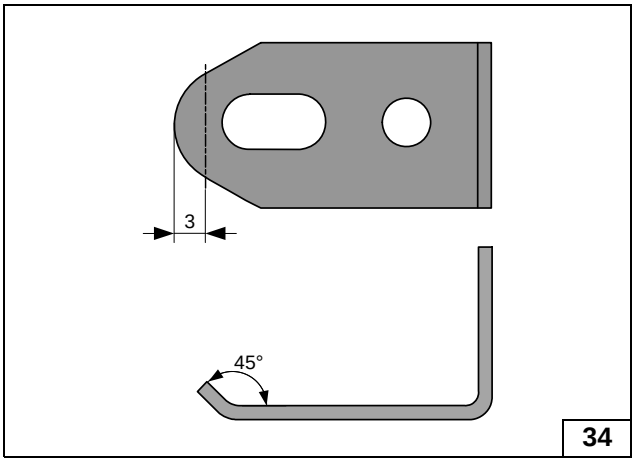


33

All vehicles

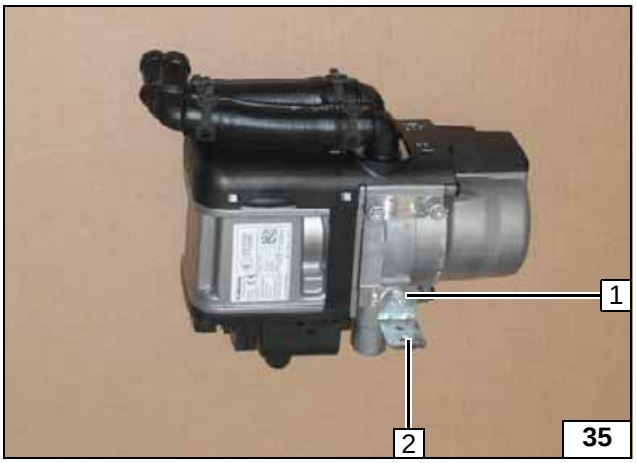
Screw 5x13 self-tapping bolts **1** [4x] into existing holes by a maximum of 3 thread turns.

Premounting bolts loosely



34

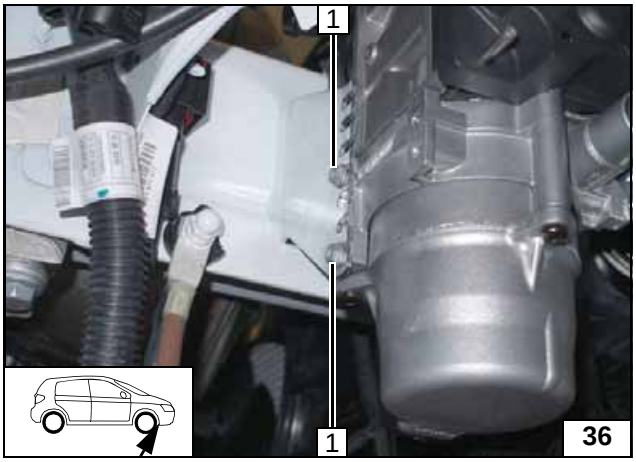
Angling down angle bracket



1 5x13 self-tapping bolt
2 Angle bracket

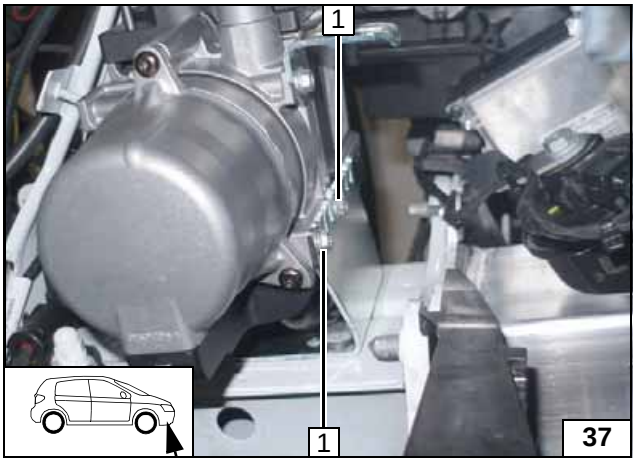
Installing angle bracket

Installing Heater



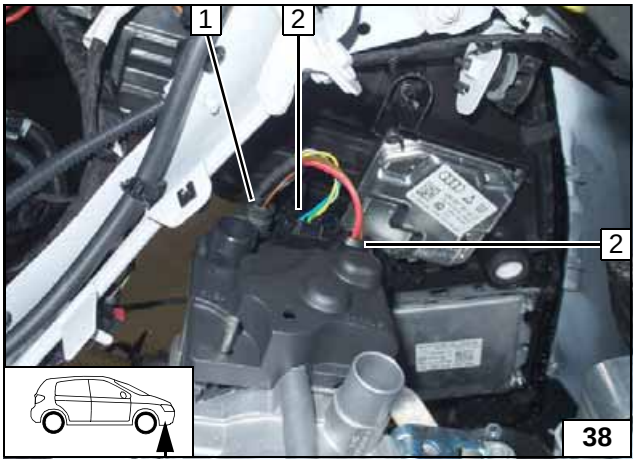
1 Tighten 5x13 self-tapping bolt [2x]

Installing heater



1 Tighten 5x13 self-tapping bolt [2x]

Installing heater



1 Circulating pump wiring harness connector
2 Heater wiring harness connector [2x]

Installing wiring harness

Fuel

Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

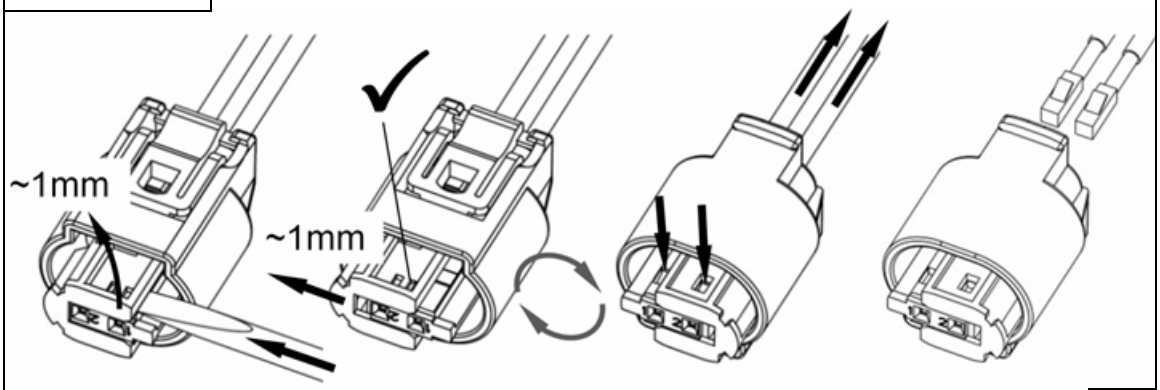
Catch any fuel running off in an appropriate container.

Route fuel line and metering pump wiring harness so that they are protected against stone impact.
Unless specified otherwise, always fasten using cable ties.
Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.

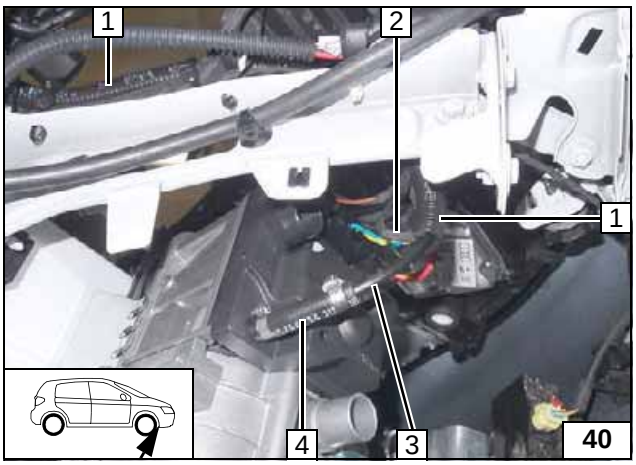
Dismantling metering pump connector

Connector X7



39

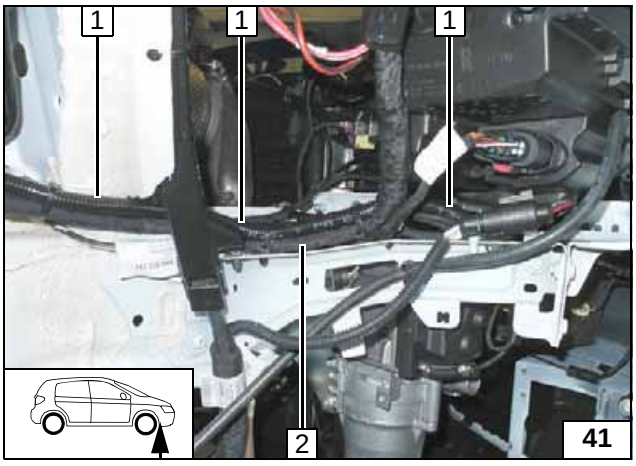
Connecting heater



40

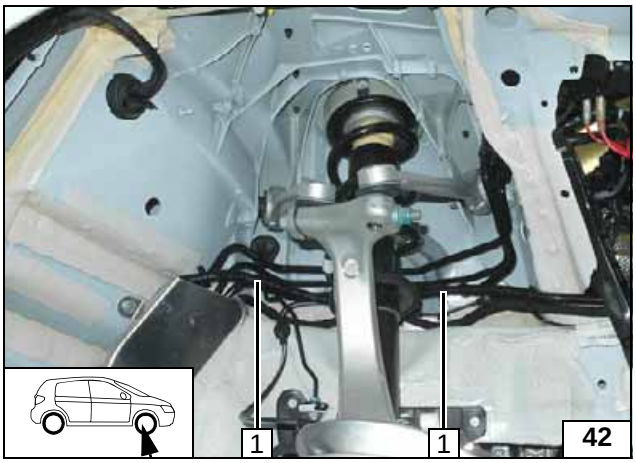
1 1130mm long corrugated tube
2 Wiring harness of metering pump
3 Fuel line
4 Hose section, 10mm dia. clamp [2x]

Routing lines



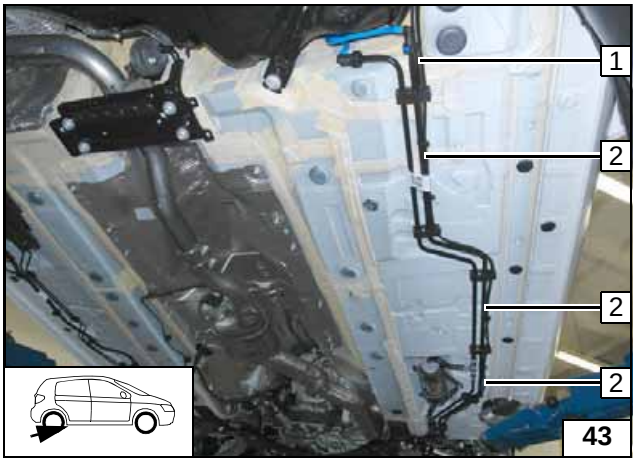
41

1 Corrugated tube with fuel line and metering pump wiring harness
2 Original vehicle wiring harness



Route corrugated tube with fuel line and metering pump wiring harness **1** along original vehicle fuel line to the underbody.

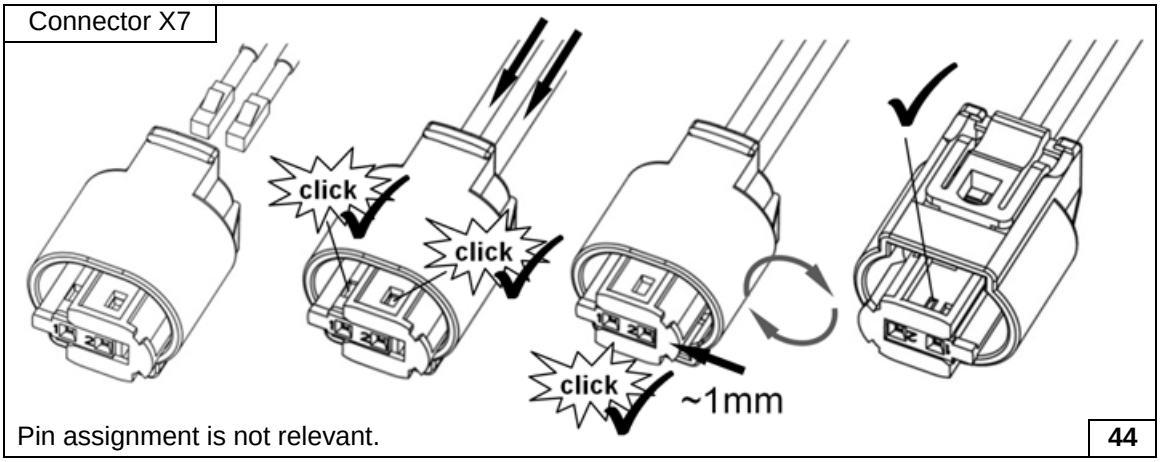
Routing lines



1 500mm long corrugated tube
2 Fuel line, metering pump wiring harness, original vehicle fuel line

Routing lines

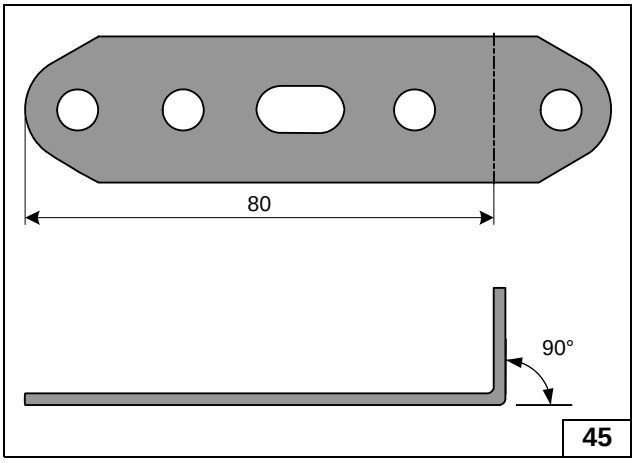
Connector X7



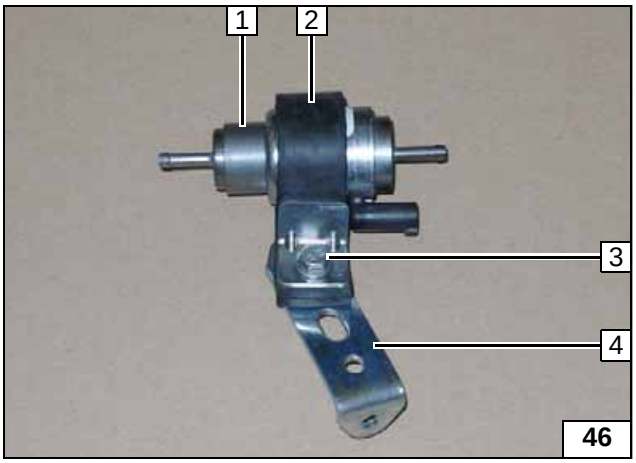
Pin assignment is not relevant.

44

Completing metering pump connector

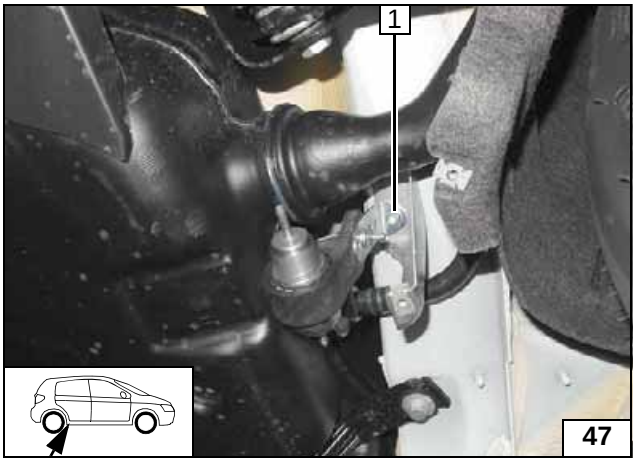


Angling down perforated bracket



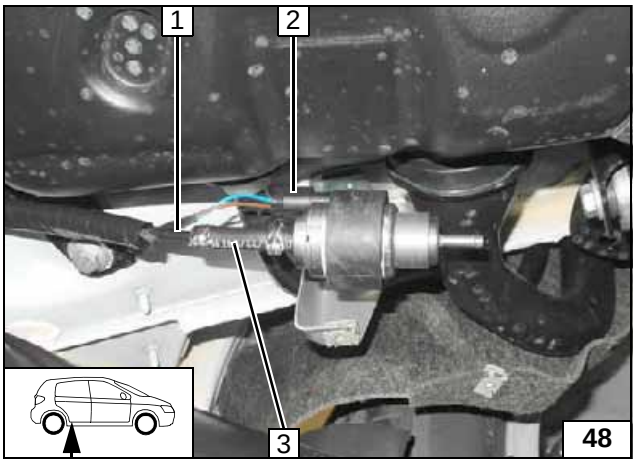
1 Metering pump
2 Metering pump mount
3 M6x25 bolt, support angle bracket, flanged nut
4 Perforated bracket

Premounting metering pump



1 Original vehicle stud bolt with flanged nut

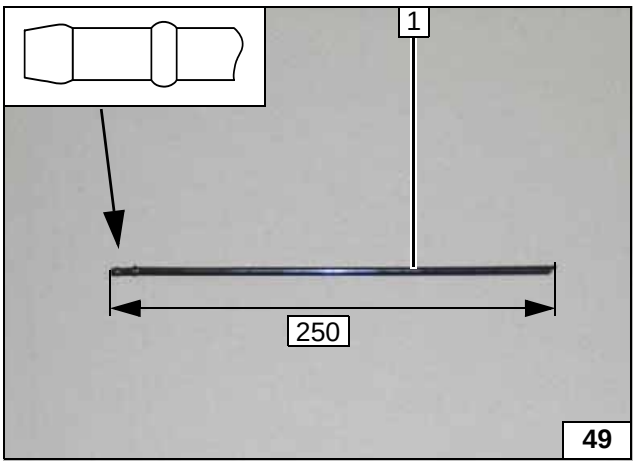
Installing metering pump



Ensure sufficient distance from neighbouring components, correct if necessary.

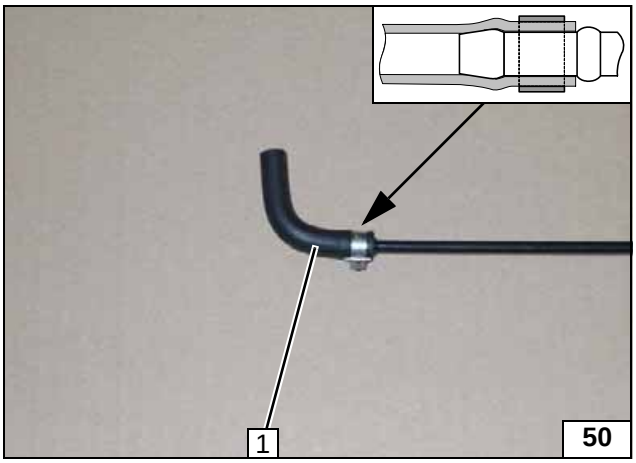
1 Fuel line of heater
2 Metering pump wiring harness, connector X7 mounted
3 Hose section, 10mm dia. clamp [2x]

Connecting metering pump



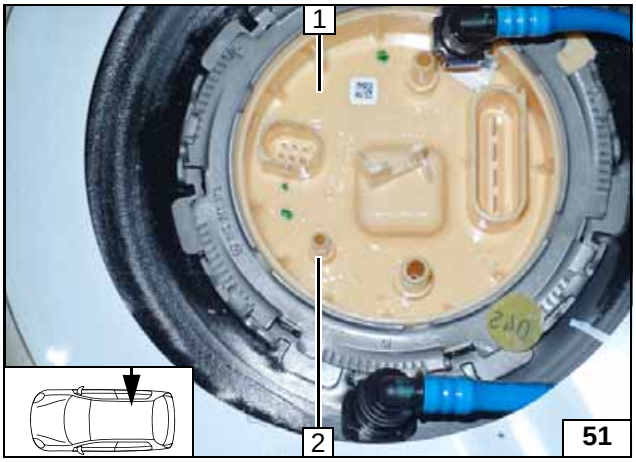
1 Fuel standpipe

Cutting fuel standpipe to length



1 90° moulded hose, 10mm dia. clamp

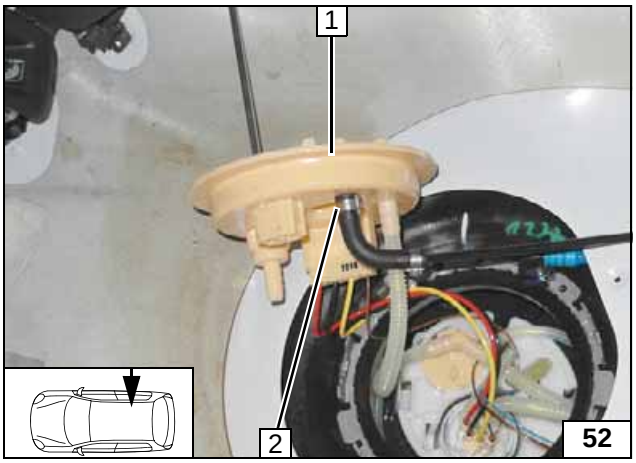
Premounting fuel standpipe



The figures below show a diesel 2.0 TDI vehicle.

Drill out connection piece **2** of fuel tank sending unit **1** to 2.5mm dia.

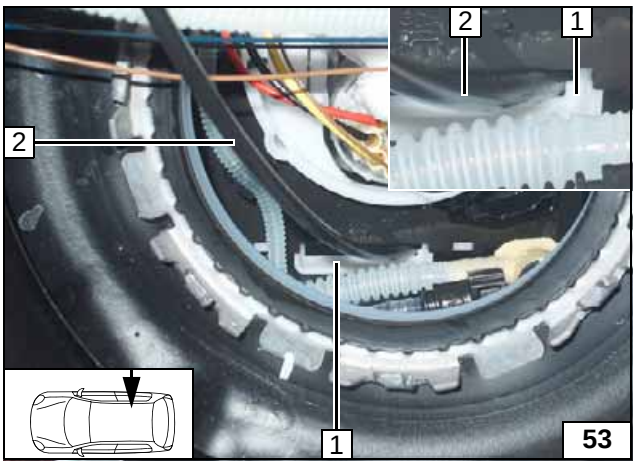
Preparing fuel standpipe



Remove fuel tank sending unit cover **1** in accordance with the manufacturer's instructions.

2 10 mm dia. clamp

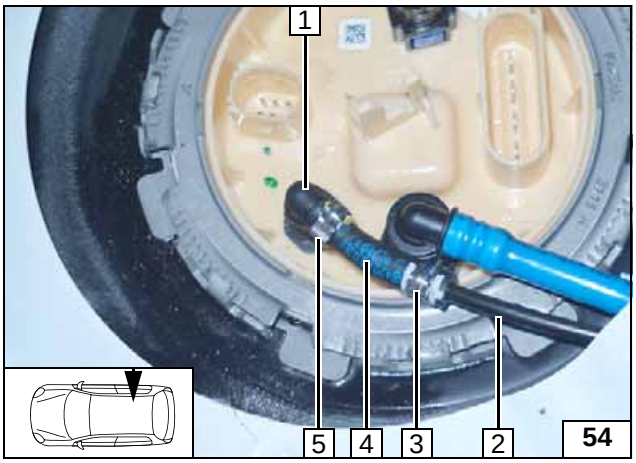
Installing fuel standpipe



Insert fuel standpipe **2** in the tank as shown.

1 Plastic tab

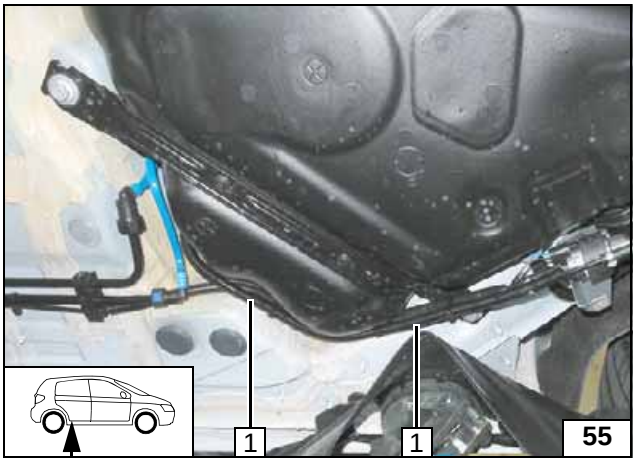
Inserting fuel standpipe



Install the fuel tank sending unit cover in accordance with the manufacturer's instructions.

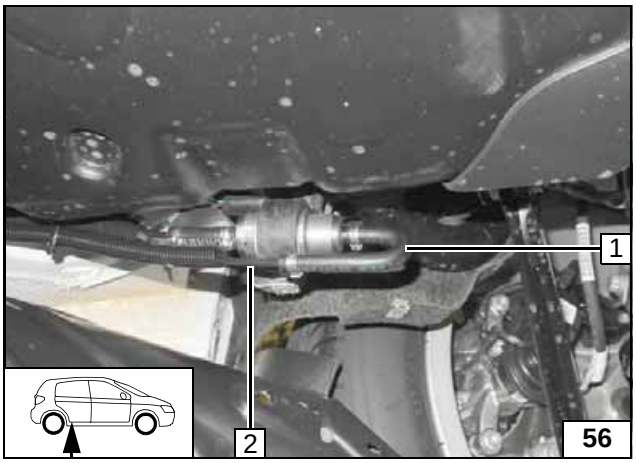
1 Coupling piece
2 Fuel standpipe fuel line
3 10 mm dia. clamp
4 3.5x4.5mm dia. moulded hose
5 8mm dia. clamp

Connecting fuel line



1 Fuel line of fuel standpipe in corrugated tube

Routing lines



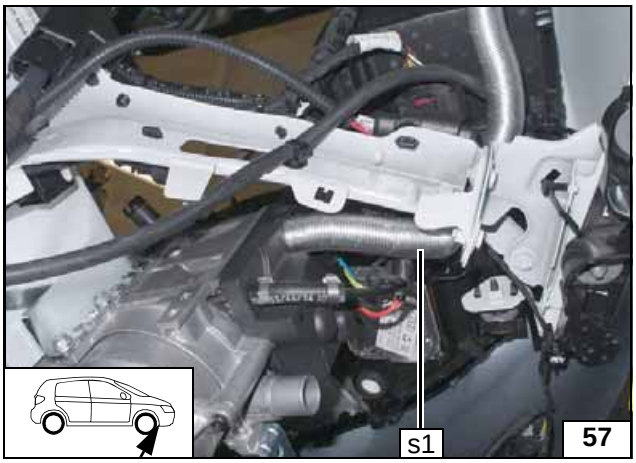
Ensure sufficient distance from neighbouring components, correct if necessary.

1 180° moulded hose, 10mm dia. clamp [2x]
2 Fuel line of fuel standpipe

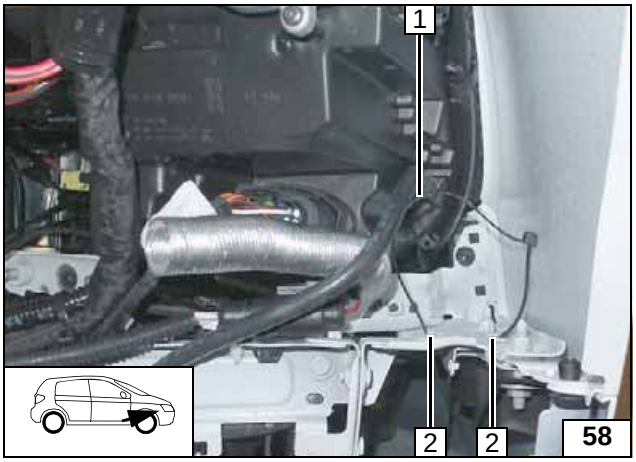
Connecting metering pump

Combustion Air

Audi A4

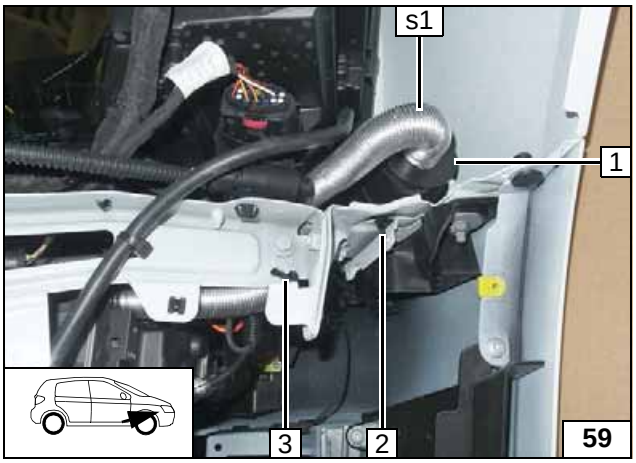


Installing combustion air pipe s1



1 Cable tie [2x]
2 Original vehicle hole [2x]

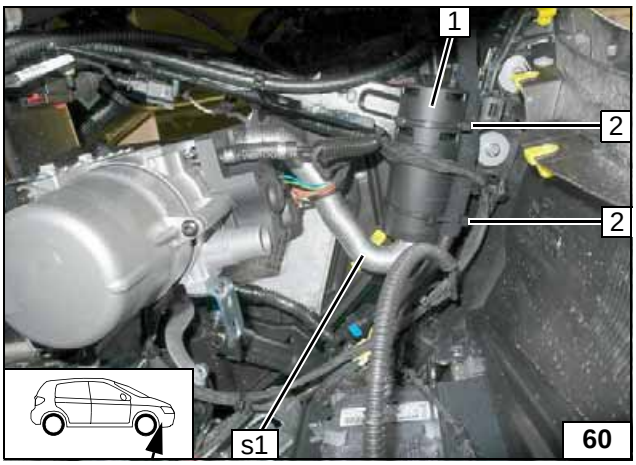
Premounting cable tie



1 Silencer
2 Tighten cable tie
3 Attach combustion air pipe **s1** with cable tie

Installing silencer

Audi A5



Attach silencer **1** using cable tie **2** [2x each] to original vehicle wiring harness.

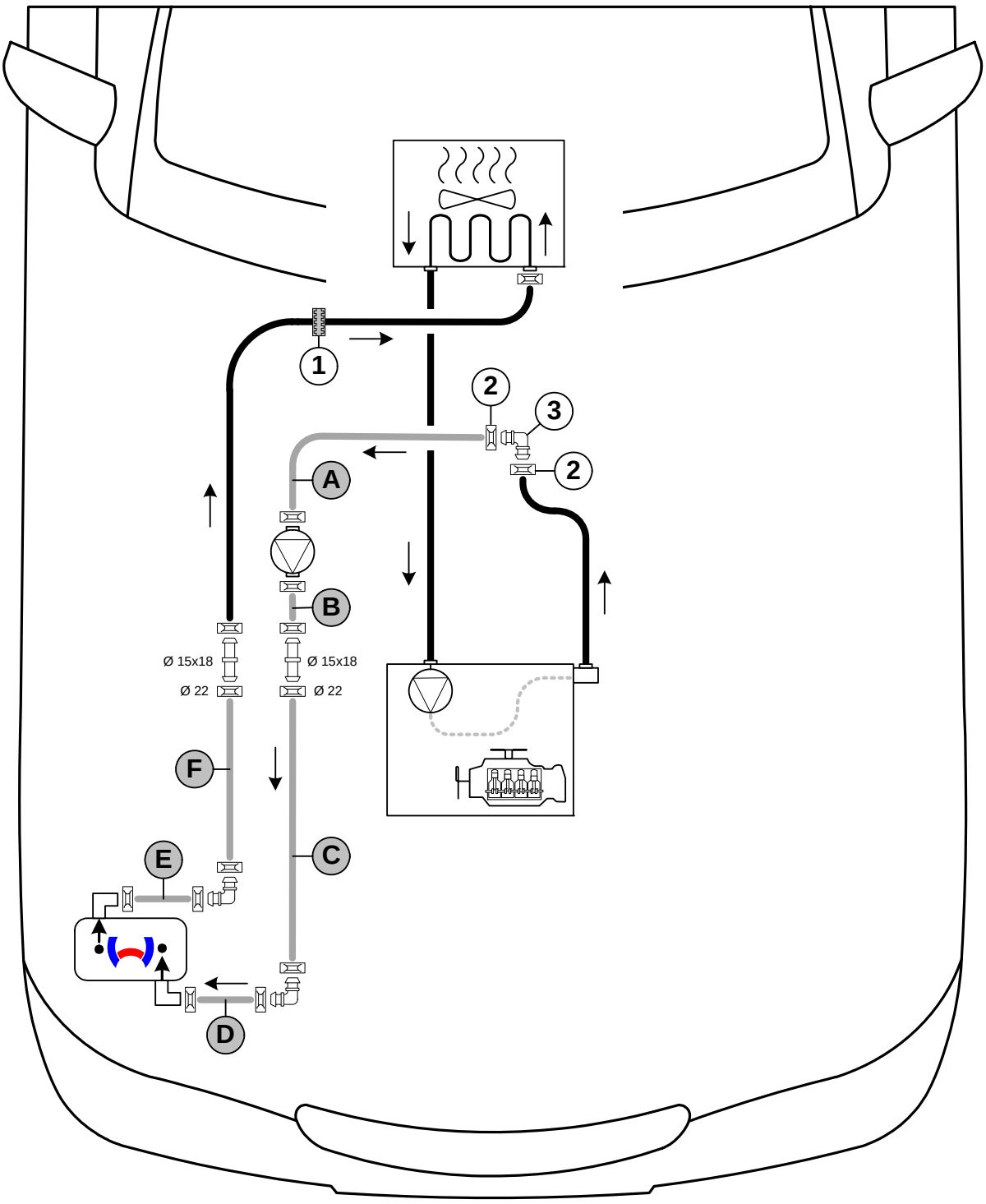
Installing combustion air pipe s1 / silencer

Coolant Circuit for 1.4 TFSI

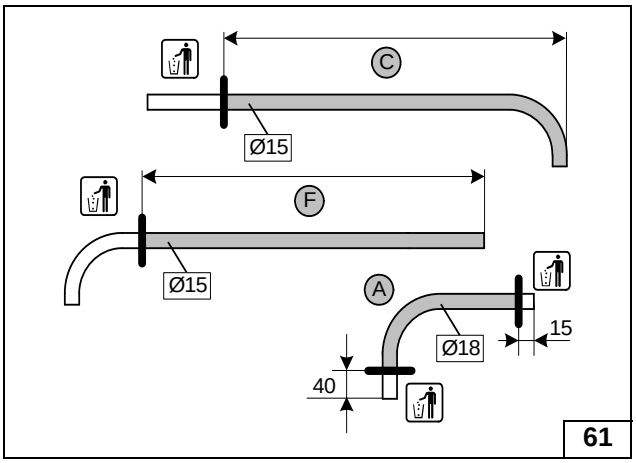
Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

The connection should be modelled on an ‘inline’ circuit and based on the following diagram:

Hose routing diagram



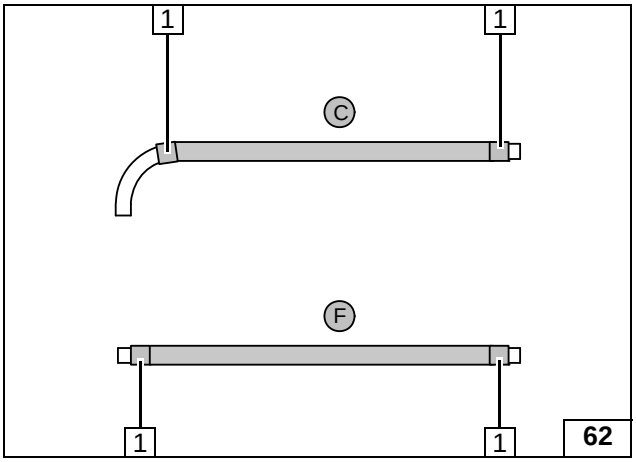
All spring clips without a specific designation = 25 mm dia.
All connecting pipes without a specific designation = 18x18mm dia.
1 = Original vehicle black (sw) rubber isolator. **2** – Original vehicle spring clip.
3 = Original vehicle connecting pipe.



A, **C** and **F** = 90° moulded hose.

C = 690
F = 680

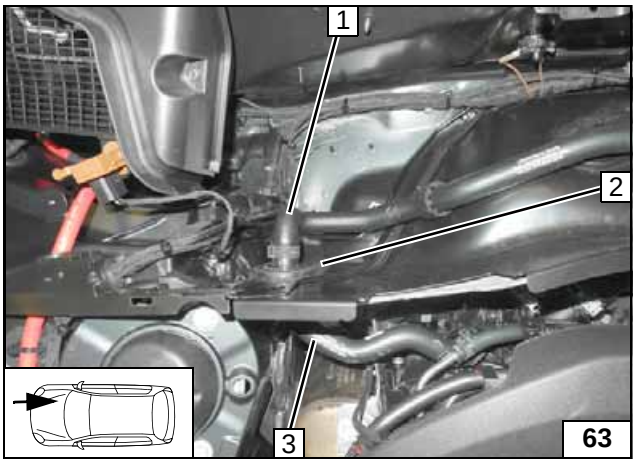
Cutting hoses to length



Slide on braided protection hoses and cut to length.

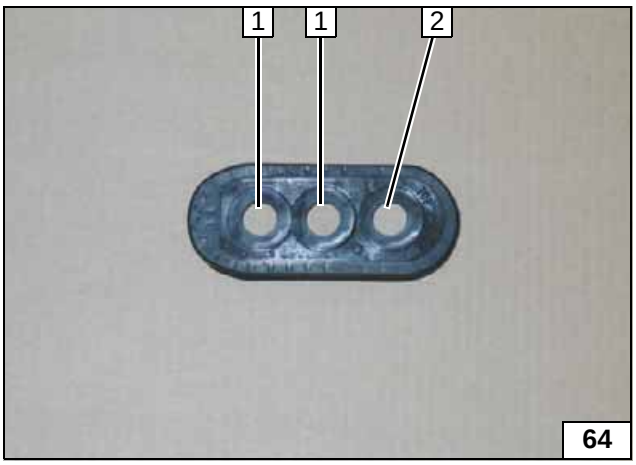
1 Cut heat shrink plastic tubing to size, 50mm long [4x]

Installing braided protection hoses



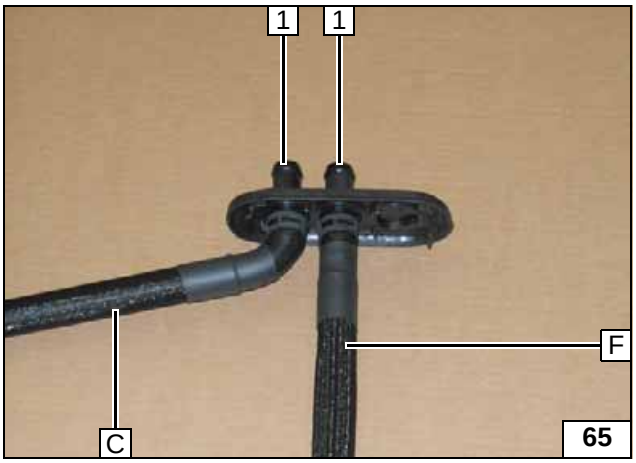
Disconnect original vehicle heat exchanger inlet hose section **1** as well as original vehicle engine outlet hose section **3** from the connecting pipe of the original vehicle pass through **2**.
Remove pass through **2**.
Original vehicle hoses, spring clips and connecting pipe will be reinstalled.

Removing pass through



1 18mm dia. hole [2x]
2 Original vehicle hole

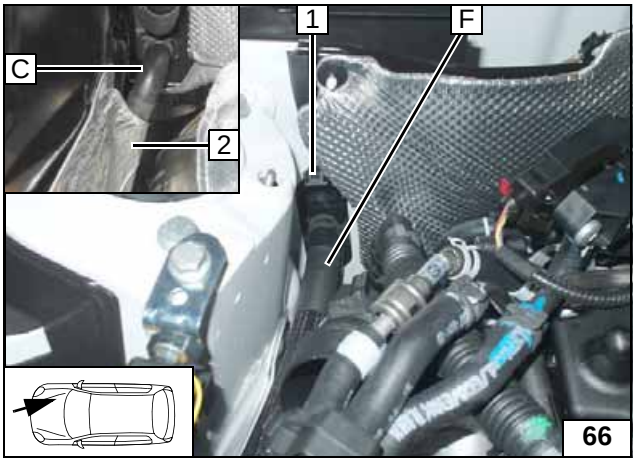
Drilling pass through



All spring clips = 22mm dia.

1 15x18 connecting pipe [2x]

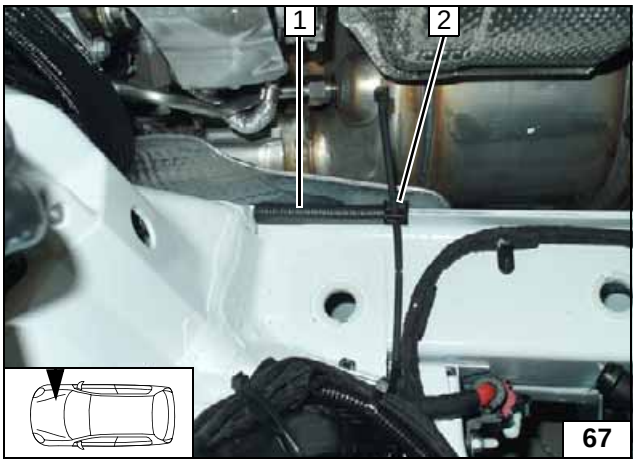
Premounting hose C and F



Route hose **C** behind heat guard plate **2** to heater.

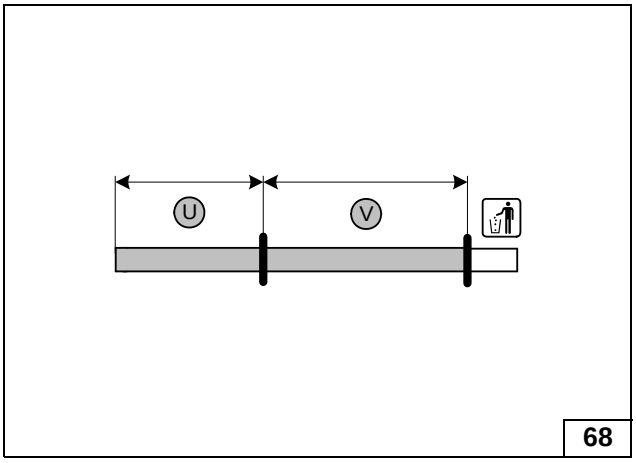
1 Pass through

Installing pass through



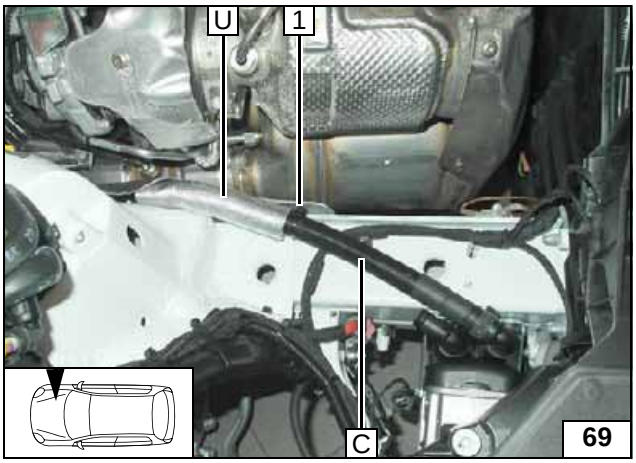
1 80mm edge protection
2 Edge clip cable tie

Installing edge protection



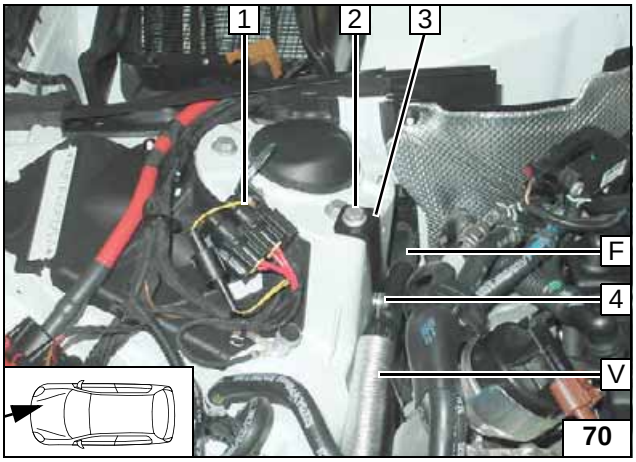
U = 150
V = 250

Cutting heat protection hose to length



1 Tighten edge clip cable tie

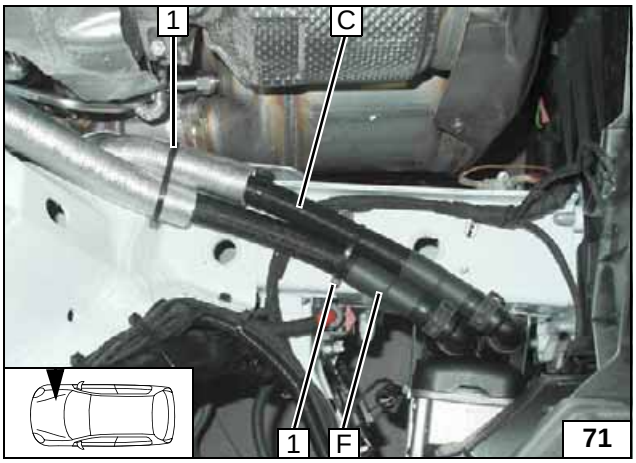
Routing and connection of hose C



Detach engine compartment fuse holder **1**, will be reinstalled later together with strut brace.

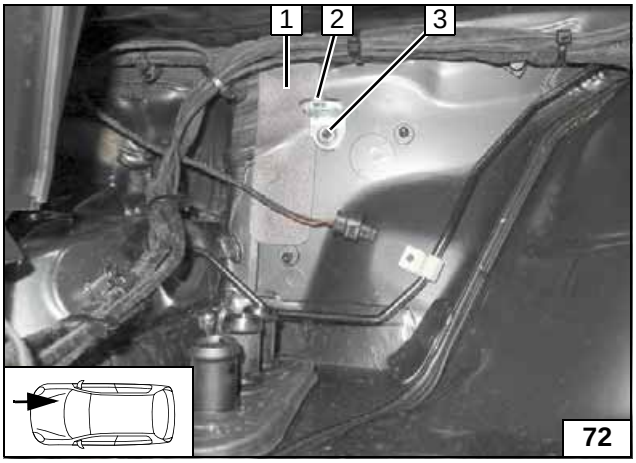
2 Install original vehicle bolt hand-tight
3 Bracket
4 M6x12 bolt, 25mm dia. rubber-coated p-clamp

Routing hose F



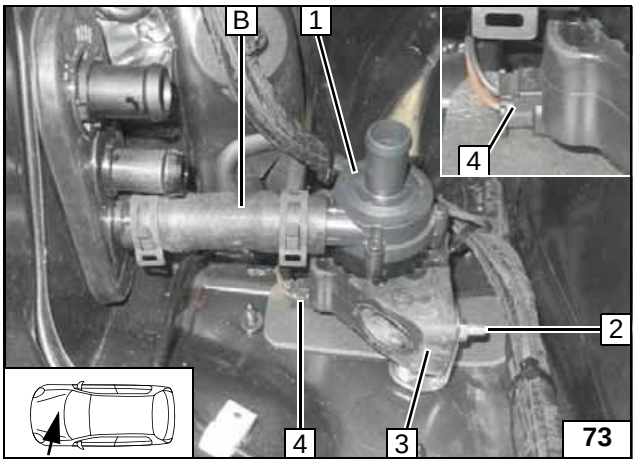
1 Cable tie [2x]

Routing and connection of hose F



1 Self-adhesive foam
2 Angle bracket
3 Original vehicle stud bolt, flanged nut

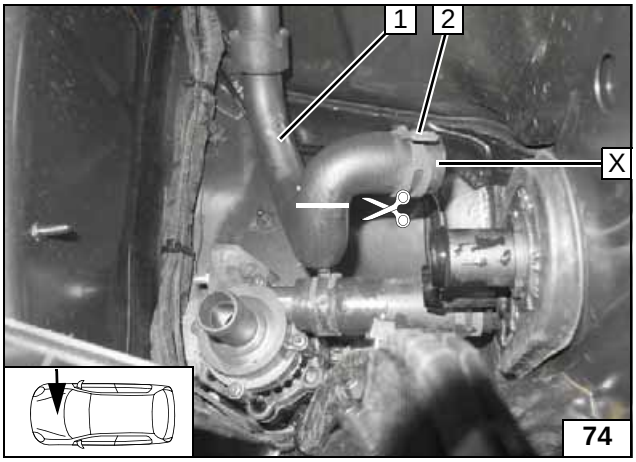
Installing angle bracket



Connect hose section **B** to pass through connecting pipe.

1 Circulating pump
2 M6x25 bolt, flanged nut
3 Circulating pump mount
4 Circulating pump wiring harness connector

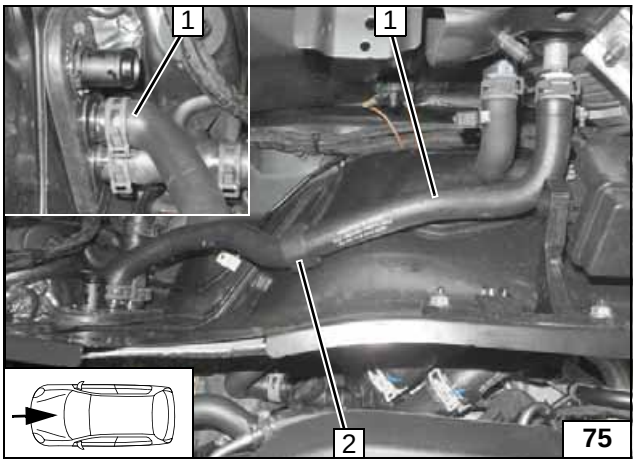
Installing circulating pump



Cut off heat exchanger inlet hose section **1** at the marking. Spring clip **2** will be reused.

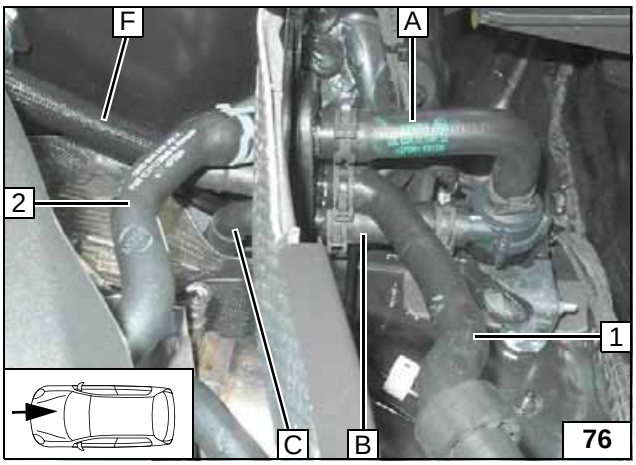
X=

Cutting point



1 Heat exchanger inlet hose section on pass through connecting pipe.
2 Original vehicle rubber isolator, repositioned

Connecting heat exchanger inlet



Connect hose section **A** and engine outlet hose section **2** to original vehicle pass through connecting pipe.
Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.

1 Heat exchanger inlet hose section

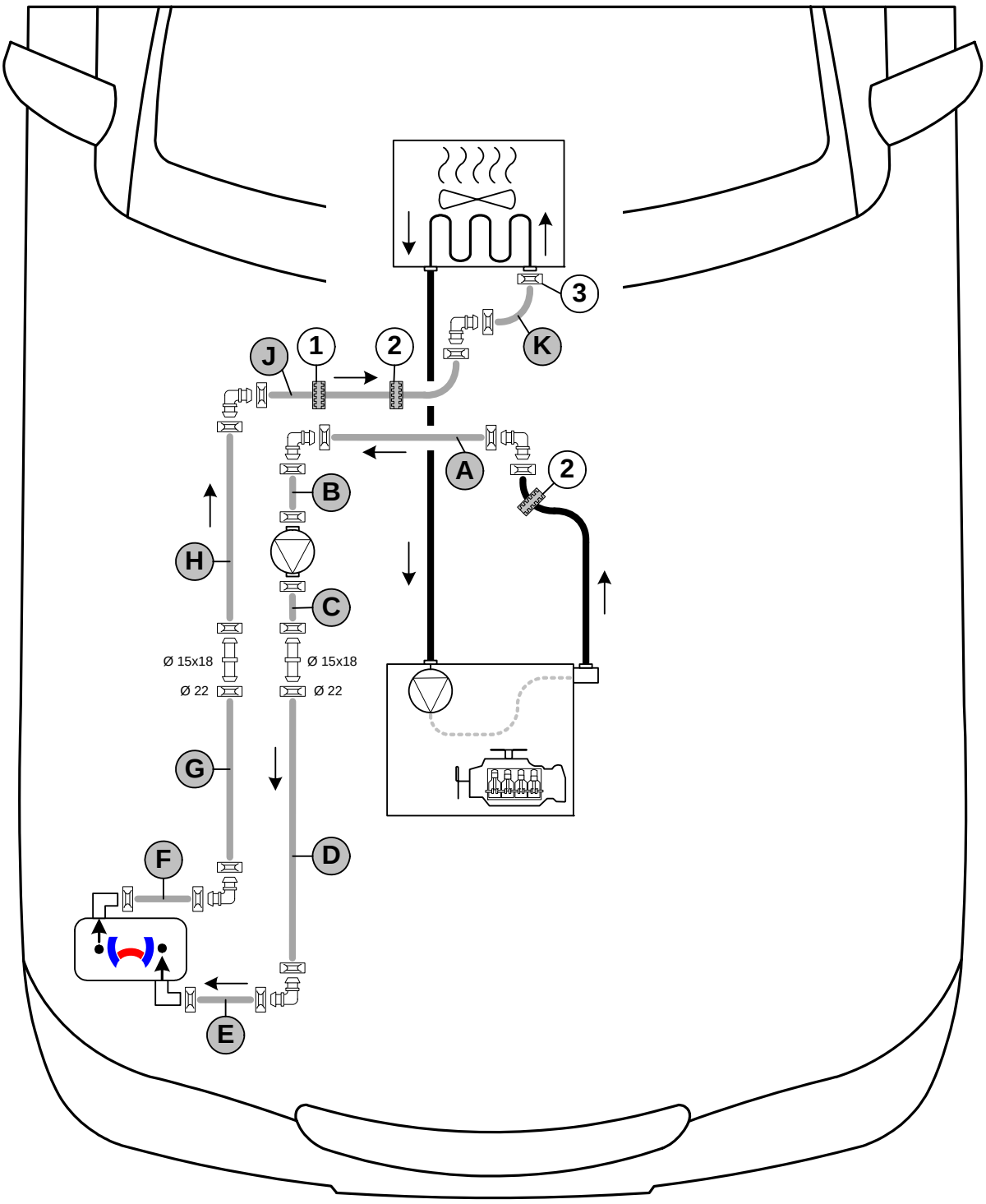
Connecting engine outlet

Coolant Circuit for 2.0 TDI / 2.0 TFSI

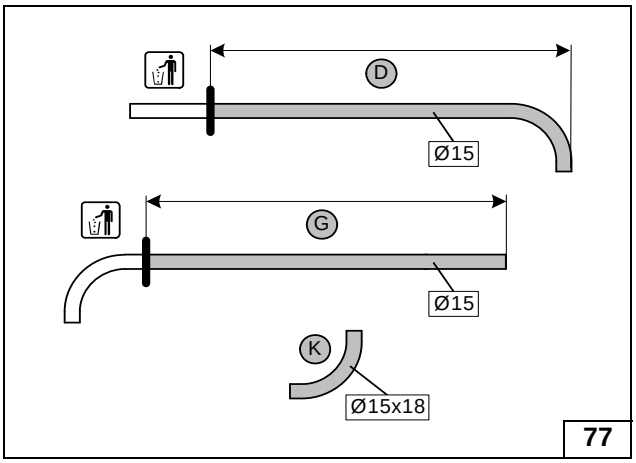
Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

The connection should be modelled on an ‘inline’ circuit and based on the following diagram:

Hose routing diagram



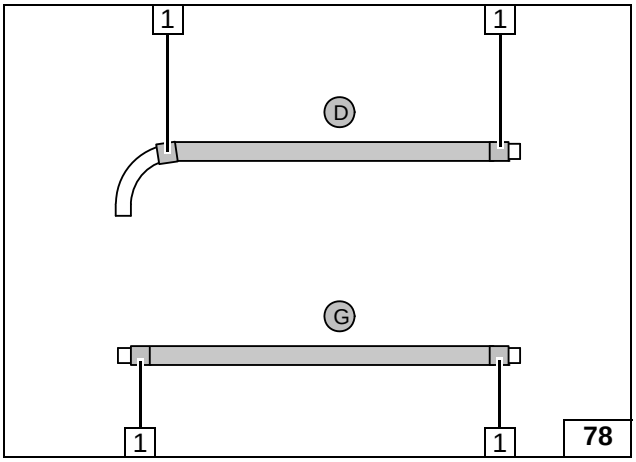
All spring clips without a specific designation = 25 mm dia. All connecting pipes = 18x18 mm dia.
1 = Black (sw) rubber isolator of all vehicles.
2 = Black (sw) rubber isolator of petrol vehicles only.
3 = Original vehicle spring clip.



D, **G** and **K** = 90° moulded hose.

D = 690
G = 680

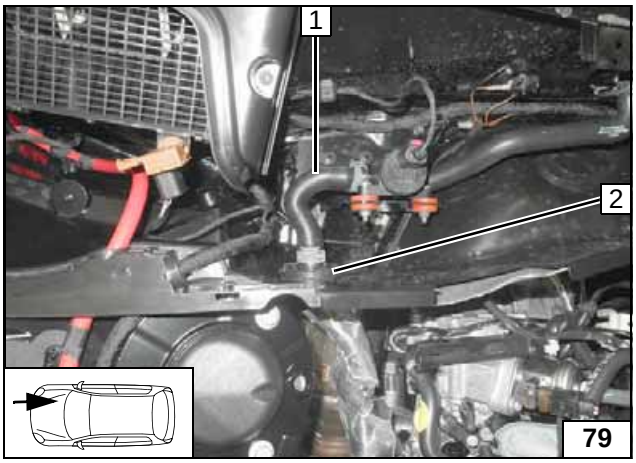
Cutting hoses to length



Slide on braided protection hoses and cut to length.

1 Cut heat shrink plastic tubing to size, 50mm long [4x]

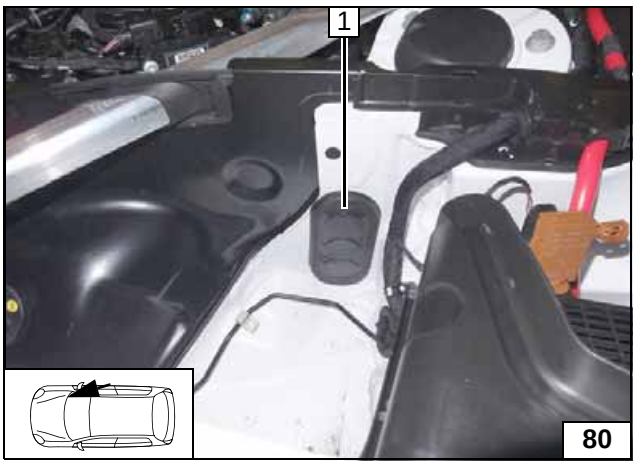
Installing braided protection hoses



2.0 TFSI petrol vehicle

Remove original vehicle hose **1** and original vehicle pass through **2**.
Hose and clamps will be reinstalled.

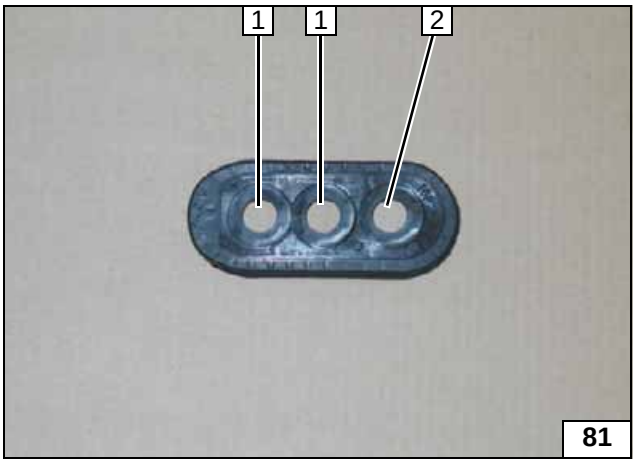
Removing pass through



Diesel

Remove original vehicle pass through **1**.

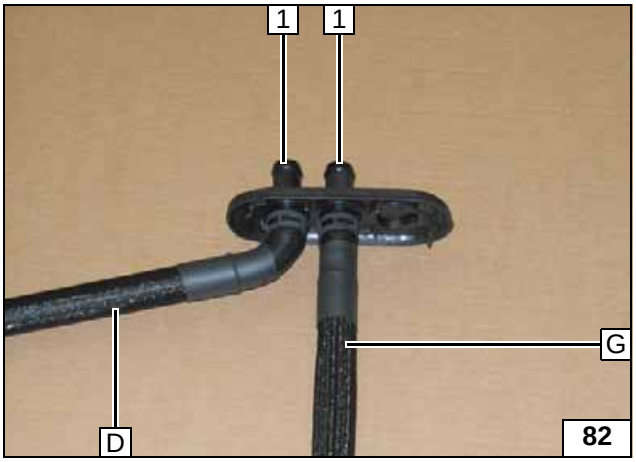
Removing pass through



All vehicles

1 18mm dia. hole [2x]
2 Original vehicle hole, if present

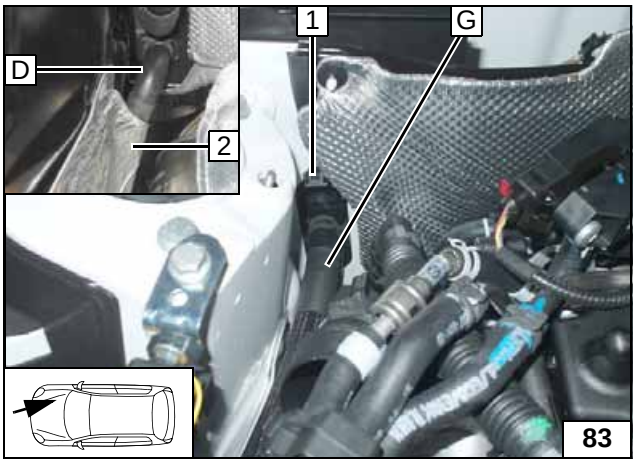
Drilling pass through



All spring clips = 22mm dia.

1 15x18 connecting pipe [2x]

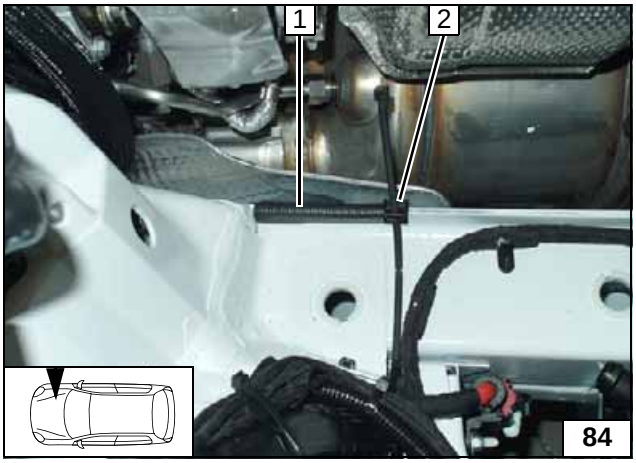
Premounting hoses D and G



Route hose **D** behind heat guard plate **2** to heater.

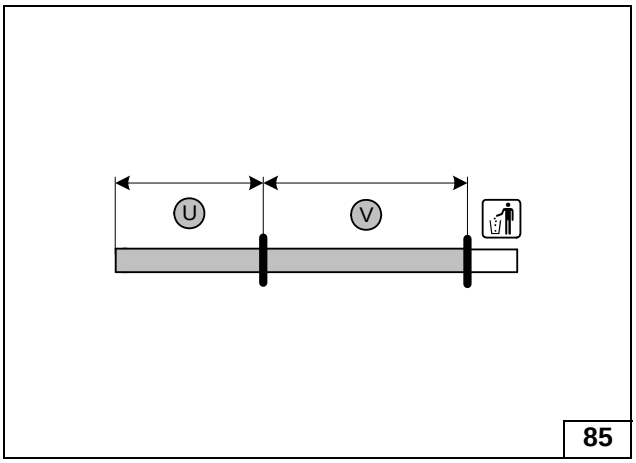
1 Pass through

Installing pass through



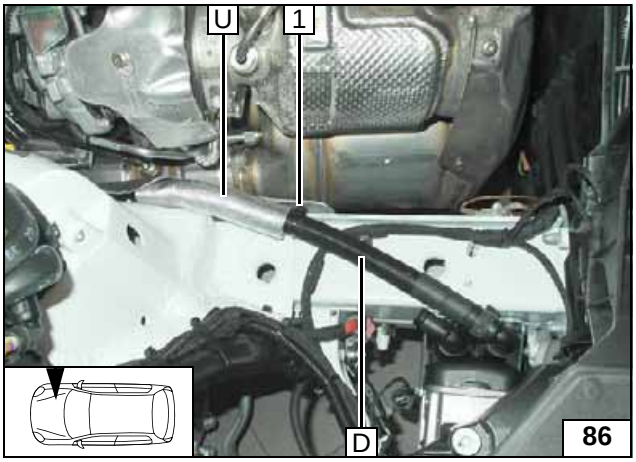
1 80mm edge protection
2 Edge clip cable tie

Installing edge protection



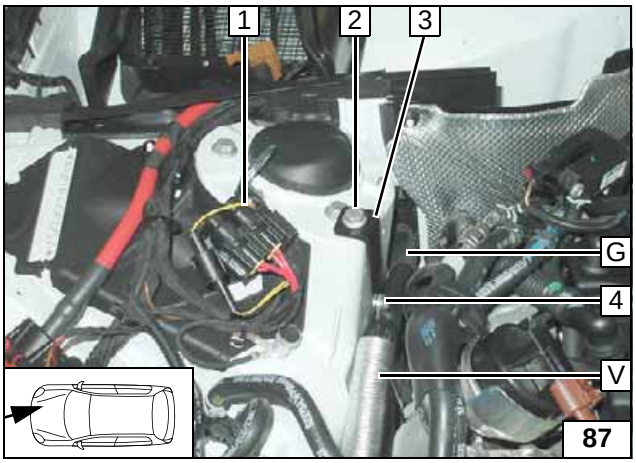
U = 150
V = 250

Cutting heat protection hose to length



1 Tighten edge clip cable tie

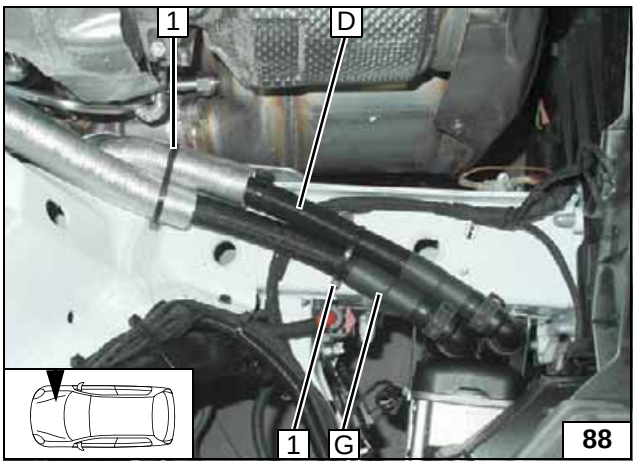
Routing and connection of hose D



Detach fuse holder **1**, will be reinstalled later together with strut brace.

2 Install original vehicle bolt hand-tight
3 Bracket
4 M6x12 bolt, 25mm dia. rubber-coated p-clamp

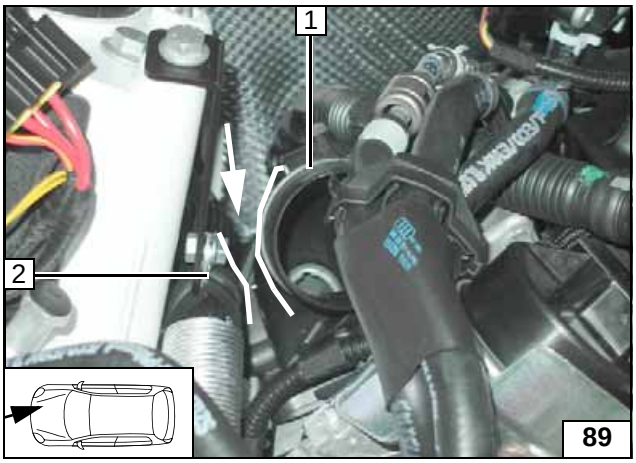
Routing hose G



1 Cable tie [2x]

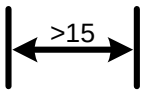
Routing and connection of hose G

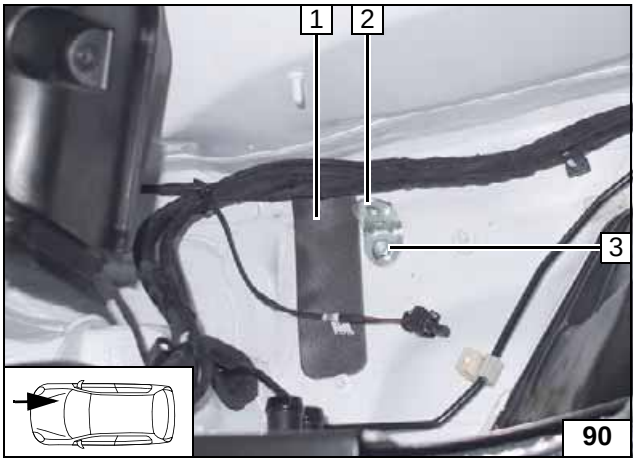
Diesel



1 Engine intake hose
2 25mm dia. rubber-coated p-clamp

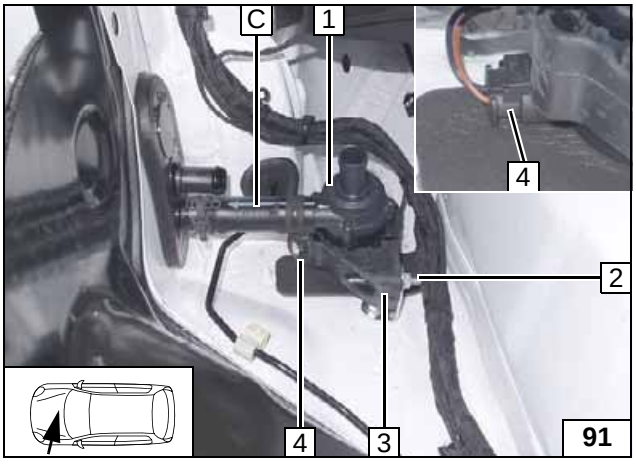
Checking / correcting distance





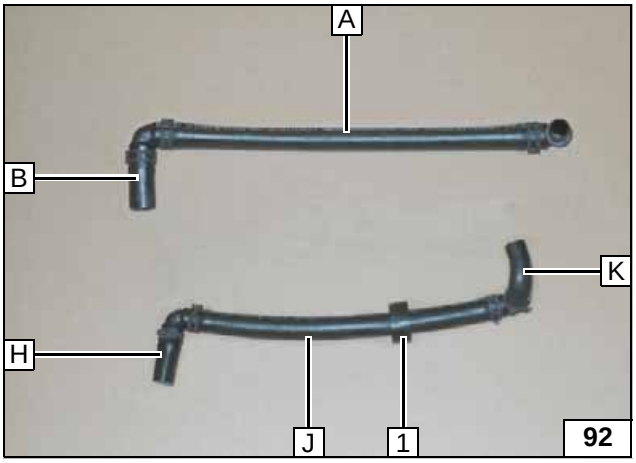
1 Self-adhesive foam
2 Angle bracket
3 Original vehicle stud bolt, flanged nut

Installing angle bracket



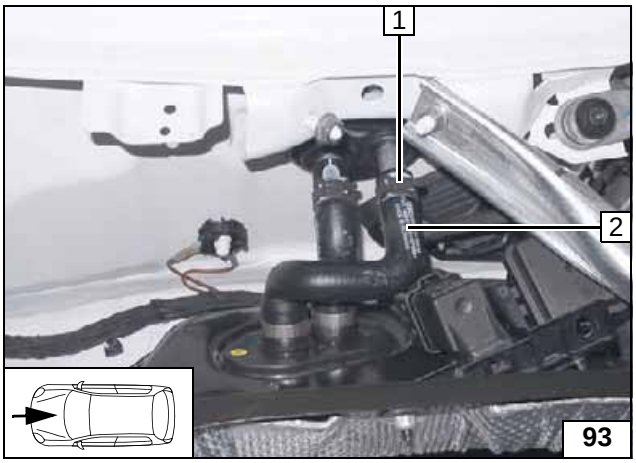
1 Circulating pump
2 M6x25 bolt, flanged nut
3 Circulating pump mount
4 Circulating pump wiring harness connector

Installing circulating pump



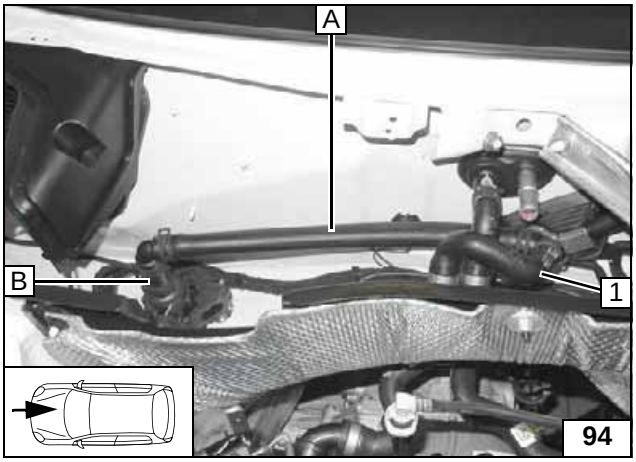
1 Black (sw) rubber isolator

Premounting hoses



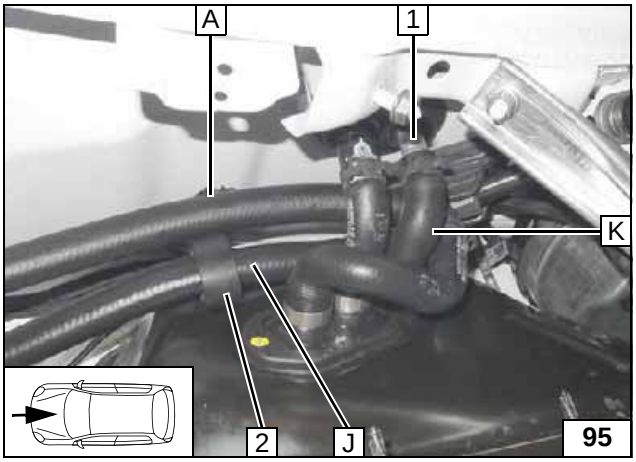
Remove hose of engine outlet/heat exchanger inlet **2**. Spring clip **1** will be reused.

Cutting point



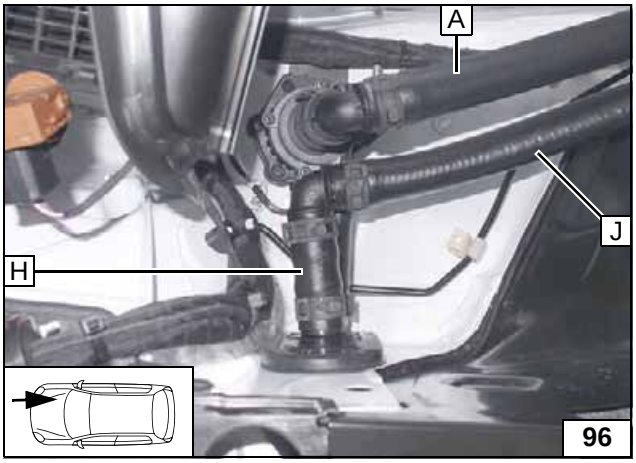
1 Hose of engine outlet

Connecting engine outlet

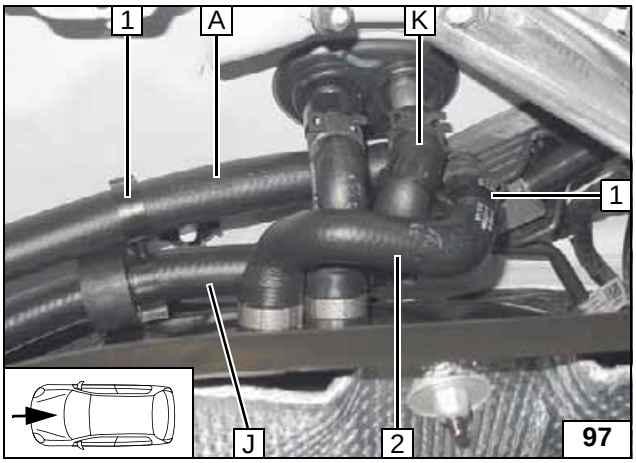


1 Connection piece of heat exchanger inlet
2 Position black (sw) rubber isolator

Connecting heat exchanger inlet



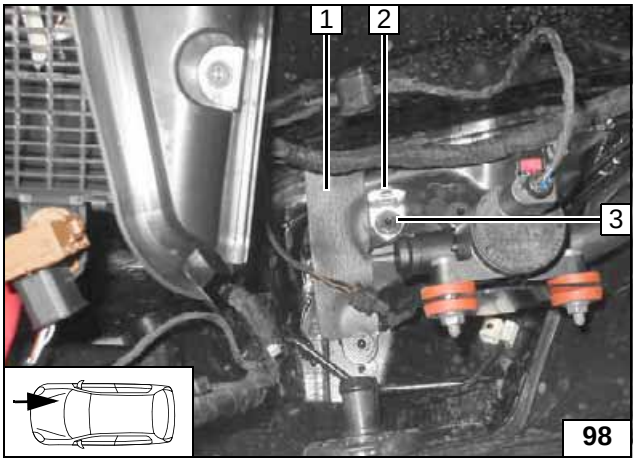
Connecting hose H



Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.

1 Hose bracket [2x]
2 Hose of engine outlet

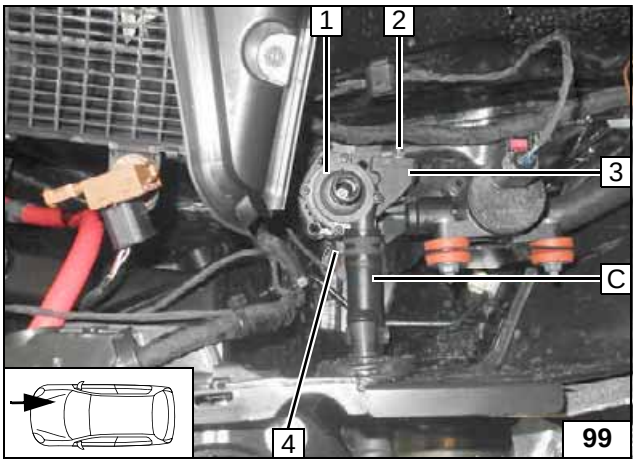
Routing in engine compartment



2.0 TFSI petrol vehicle

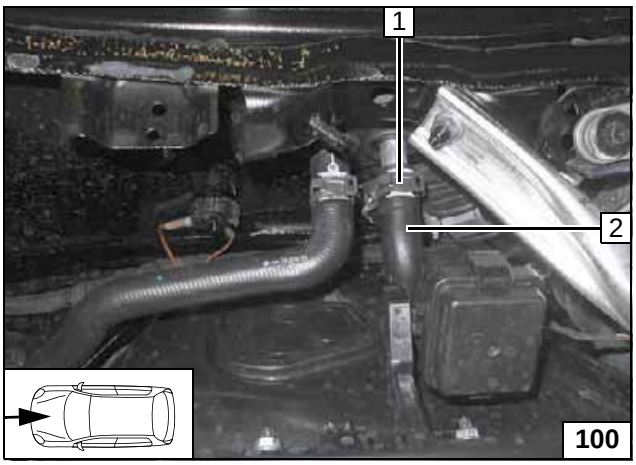
1 Self-adhesive foam
2 Angle bracket
3 Original vehicle stud bolt, original vehicle nut

Installing angle bracket



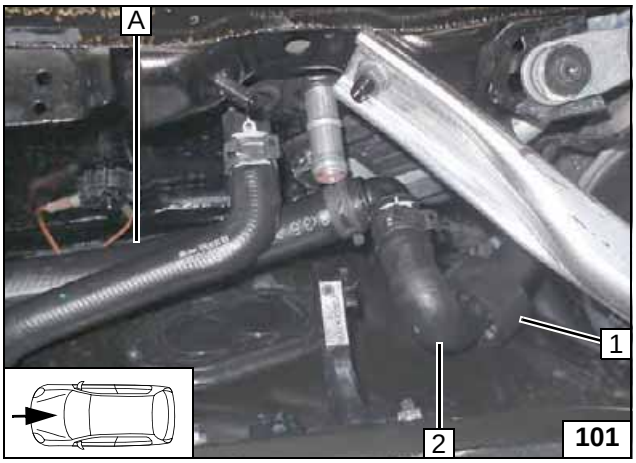
1 Circulating pump
2 M6x25 bolt, flanged nut
3 Circulating pump mount
4 Circulating pump wiring harness connector

Installing circulating pump



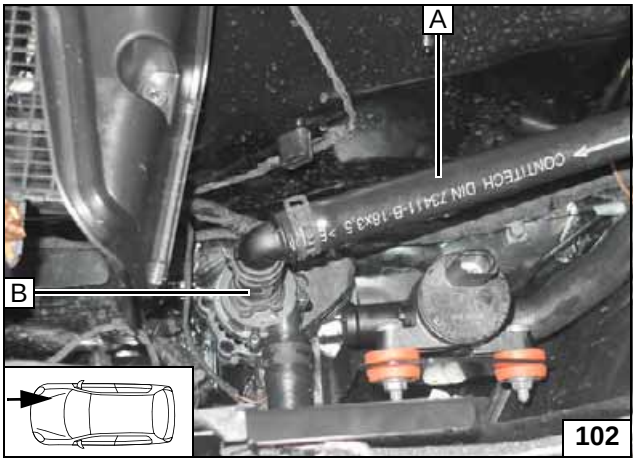
Remove hose of engine outlet/heat exchanger inlet **2**. Spring clip **1** will be reused.

Cutting point

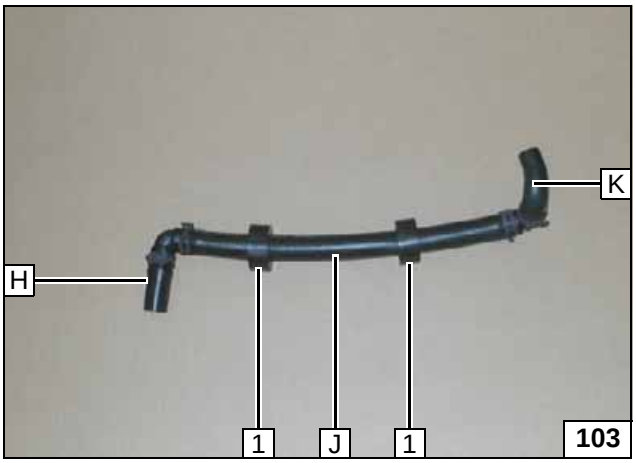


1 Black (sw) rubber isolator
2 Hose of engine outlet

Connecting engine outlet

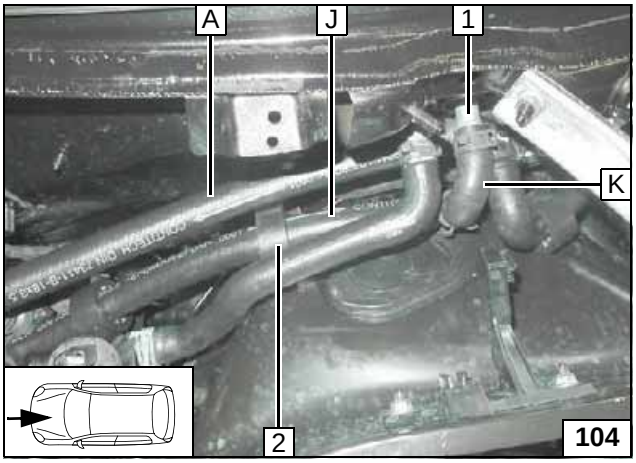


Connecting circulating pump



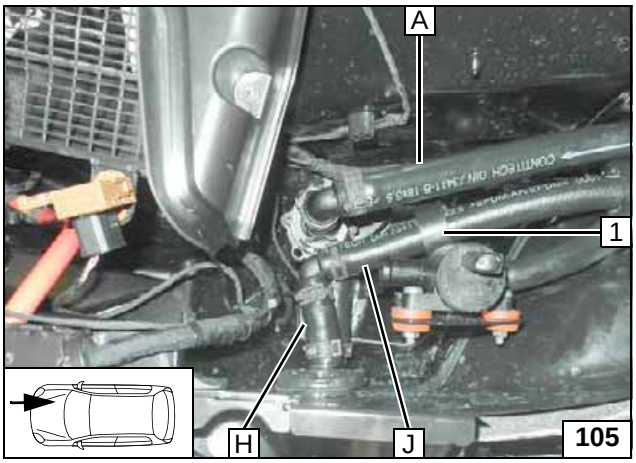
1 Black (sw) rubber isolator

Premounting hose



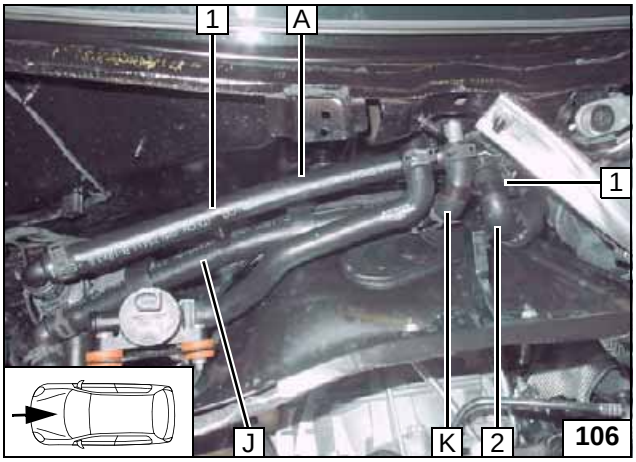
1 Connection piece of heat exchanger inlet
2 Position black (sw) rubber isolator

Connecting heat exchanger inlet



1 Position black (sw) rubber isolator

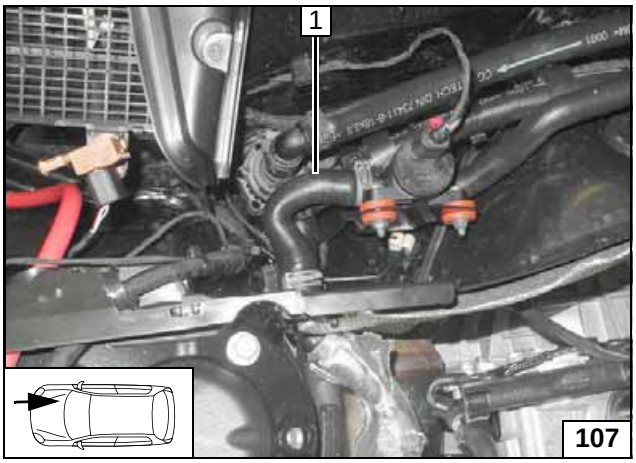
Connecting hose H



Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.

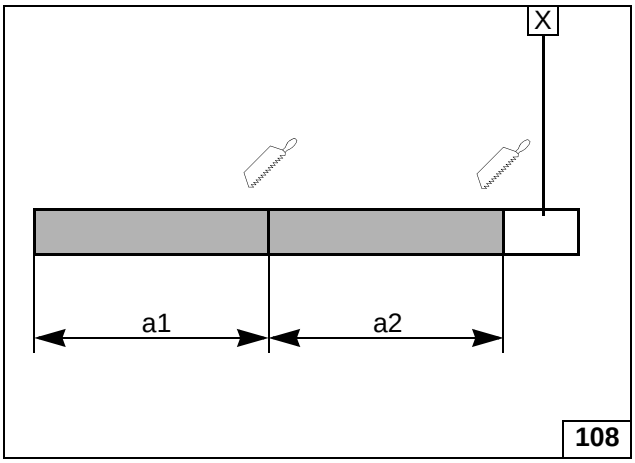
1 Hose bracket [2x]
2 Hose of engine outlet

Routing in engine compartment



Install original vehicle hose **1**.

Installing pass through

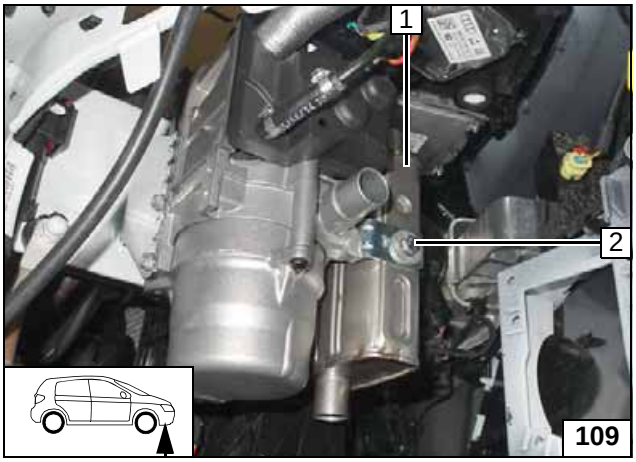


Exhaust Gas

a1 = 270
a2 = 250

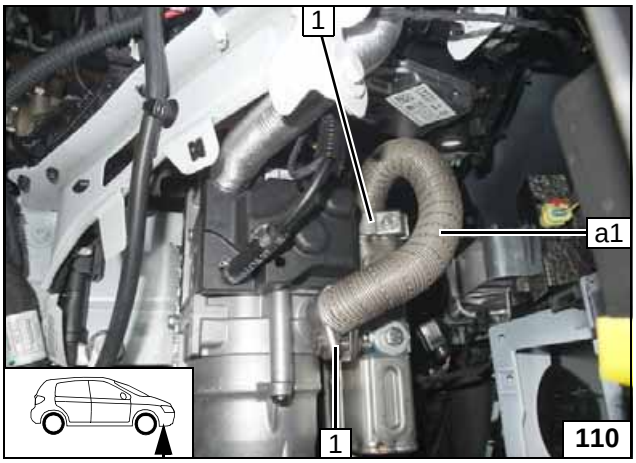
X = 

Preparing exhaust pipe



1 Silencer
2 M6x16 bolt, spring lockwasher, large diameter washer

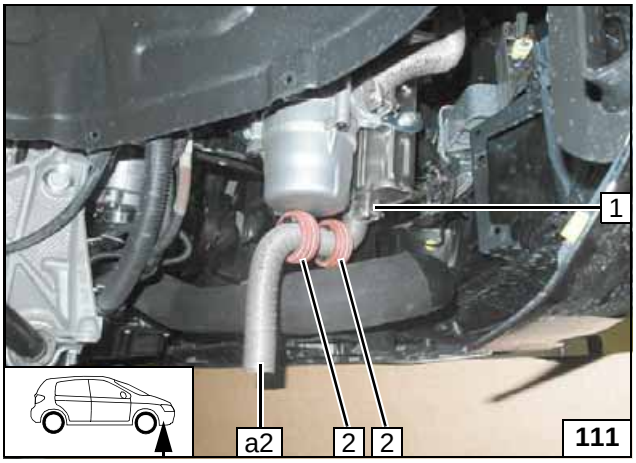
Installing silencer



1 Hose clamp [2x]

Installing exhaust pipe a1

Shown on a 2.0 TFSI petrol vehicle

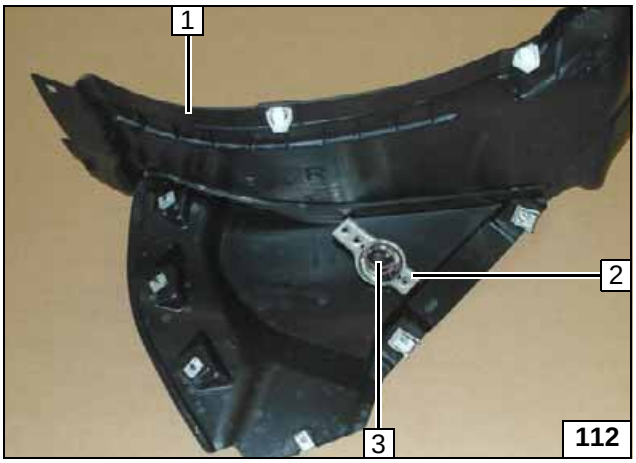


1 Hose clamp
2 Spacer bracket [2x]

Installing exhaust pipe a2

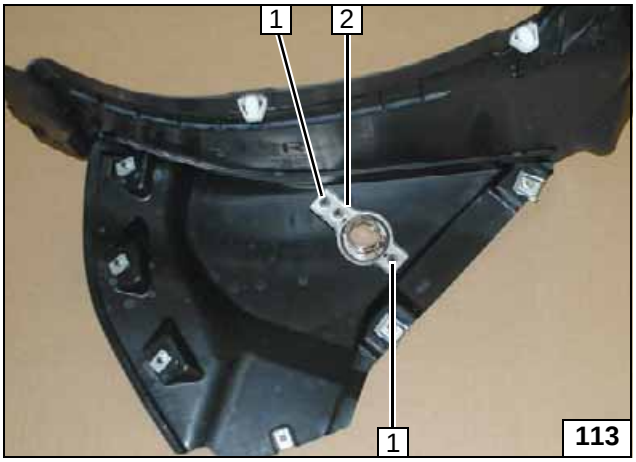
Installing Exhaust End Fastener

All vehicles



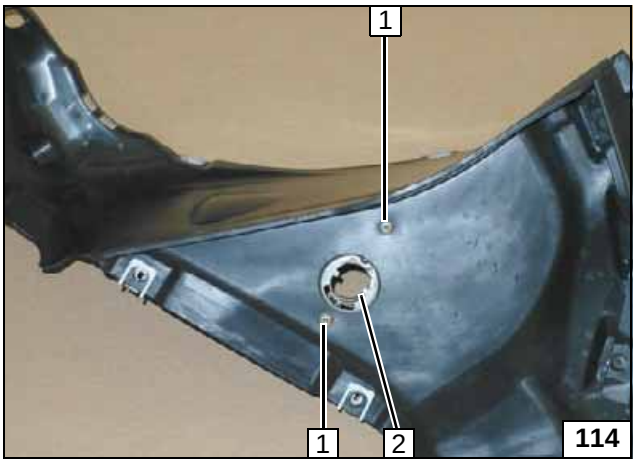
1 Wheel well trim
2 Exhaust end fastener
3 Hole in the centre (as per work step 1 of the installation instructions)

Hole in underride protection



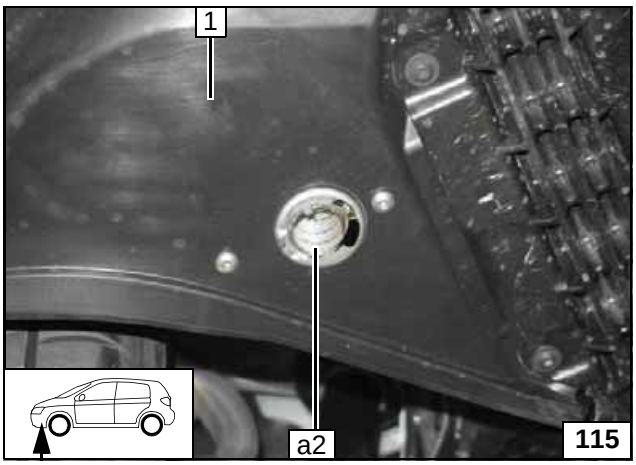
Position exhaust end fastener **2** as per work step 3 of the installation instructions and copy hole pattern **1** [2x].
Hole **1** [2x] as per work step 4 of the installation instructions.

Copying hole pattern, holes in underride protection



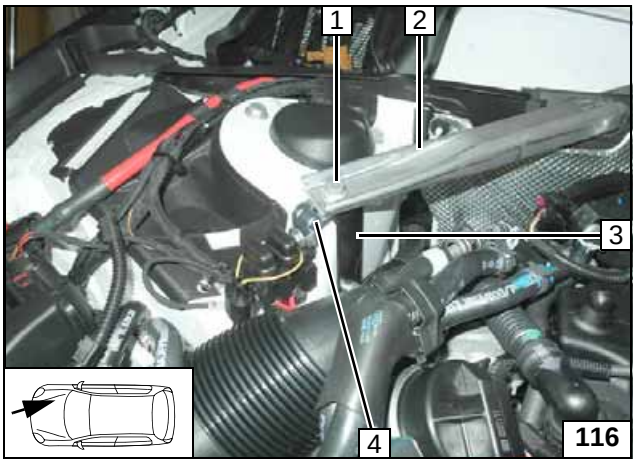
1 5x13 self-tapping screw [2x] as per work step 5 of the installation instructions
2 Exhaust end fastener

Installing exhaust end fastener



Install wheel well trim **1**.
Install exhaust pipe **a2** as per work steps 6 - 8 of the installation instructions.

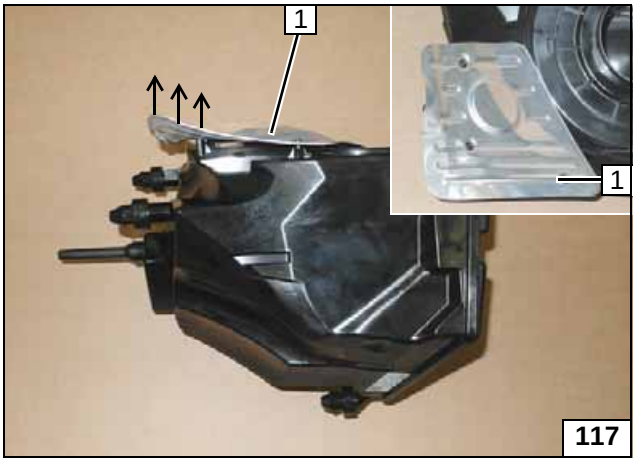
Installing exhaust pipe a2



Final Work

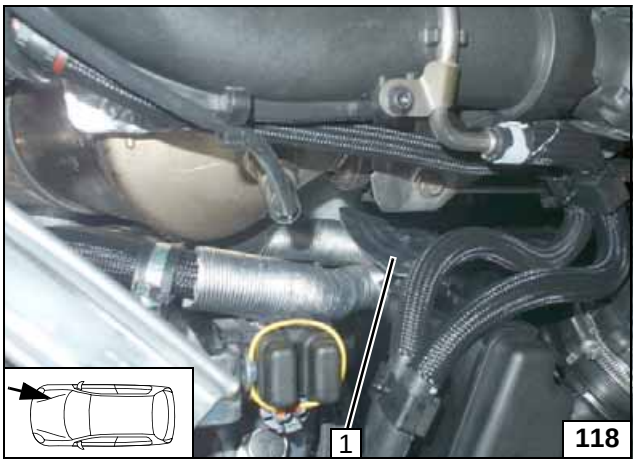
1 Original vehicle bolt
2 Strut brace
3 Bracket of hose **G** (2.0 TFSI / 2.0 TDI) of bracket of hose **F** (1.4 TFSI)
4 Angle bracket for fuse holder in engine compartment

Installing strut brace



Bend sheet of air filter housing **1** as shown, if present.

Preparing air filter housing



Ensure sufficient distance from neighbouring components, correct if necessary.

1 Sheet of air filter housing

Installing air filter housing / checking distance

Reassemble the components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate and tie back loose lines.
Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K).

- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.**
- **Program MultiControl CAR, teach Telestart transmitter.**
- **For initial startup and function check, please see installation instructions.**
- **Make settings on the A/C control panel according to the 'Operating Instructions'.**
- **Place the 'Switch off parking heater before refuelling' caution label near the filler neck.**

Vehicle Specific Work

- **Adaptation of Climatronic J255 control unit with VAS/VCDS in 'function' mode:**

  Control unit selection - 08 AC-heater electronics - Adaptation > activate retrofit parking heater without CAN - save

Webasto Thermo & Comfort SE
Postfach 1410
82199 Gilching
Germany
Internet: www.webasto.com
Technical Extranet:
http://dealers.webasto.com

Operating Instructions

Please remove page and add to the vehicle operating instructions.

Note:
We recommend matching the heating time to the driving time.
Heating time = driving time
Example:
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

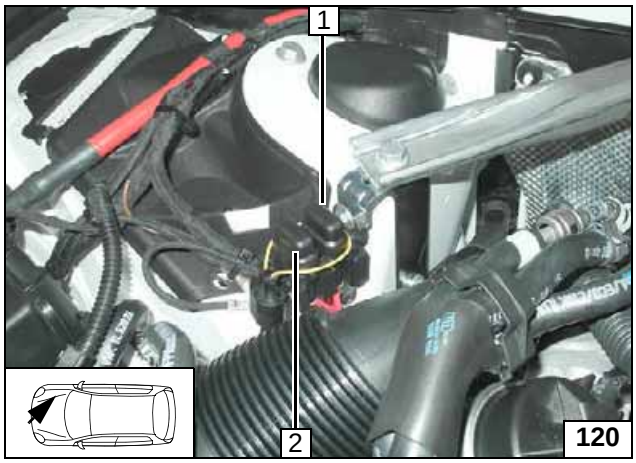
Warning:
All comfort systems of the battery management will be disabled if the vehicle voltage is below 11.5V. This includes the A/C control panel! The parking heater continues to heat but the heat will not reach the passenger compartment.

Before parking the vehicle, make the following settings:

The fan speed need not be preset, the fan level will be adjusted between 1 and 3 depending on the temperature.

1 Set temperature on both sides to ‘HI’

A/C control panel



1 30A heater control fuse F2
2 20A heater fuse F1

Engine compartment fuses