Water Heater

***Thermo Top E* Parking Heater** e1 00 0003

***Thermo Top C* Parking Heater** e1 00 0002

***Thermo Top P* Parking Heater** e1 00 0104

Installation documentation

Skoda Superb II

1.4 and 1.8 TSI

from Model Year 2008

Left-hand drive vehicle

Limousine and sedan

Adjustment of the sensitivity of passenger compartment monitoring was not checked from model year 2010!



WARNING!

Hazard warning:

Incorrect installation or repair of Webasto heating systems may cause a fire or result in the emission of carbon monoxide, which can be fatal. Serious or fatal injuries can be caused as a result.



Specialist company training, technical documentation, specialised tools and equipment are required to install and repair Webasto heating and cooling systems.
Only original Webasto parts must be used. For this, also see the catalog of air and water heater accessories from Webasto.

NEVER attempt to install or repair Webasto heating or cooling systems if you have not successfully completed the company training and thereby acquired the required technical skills, or if you do not have access to the required technical documentation, tools and equipment needed to carry out correct installation and repairs.

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

Webasto does not accept any liability for defects and damage that are attributable to installation by untrained staff.

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Validity

Manufacturer	Model	Type	EG-BE No./ABE
Skoda	Superb II	3T	e11 * 2001/116 * 0326 * ...

Engine type	Engine model	Output in kW	Displacement in cm³
CAXC	Gasoline	92	1390
CDAA	Gasoline / DSG	118	1798
CDAA	Gasoline	118	1798

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

The installation location of a digital timer and summer/winter switch should be confirmed with the end customer before installation.

Heater / Installation Kit

Quantity	Description	Order No.:
1	Retail accessories with desired heater control	See price list
1	Installation kit for Skoda Superb II 1.4 and 1.8 TSI	1314011A

To be ordered extra:

Quantity	Description	Skoda Order No.:
1	Additional Bracket	1Z0 810 679
2	Bolt	N90 749 003

Also required for Climatronic:

Quantity	Description	Order No.:
1	IPCU Kit for Climatronic	9,013,645A

Heater recommended for the respective vehicle class:

Vehicle	Heater
Compact car	Thermo Top E
Mid-size car, station wagon	Thermo Top C
Full-size car, van, Offroader	Thermo Top P

The selection of the heater is based on the passenger compartment size of the vehicle and the level of comfort required by the customer!

Foreword

This installation documentation applies to vehicles Skoda Superb II 1.4 and 1.8 TSI - for validity, see page 2 - from model year 2008 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.

However, the stipulations in this "installation documentation" and the "operating and maintenance instructions" for the *Thermo Top C/P/E* must always be observed.
The corresponding rules of technology and any information from the vehicle manufacturer should be observed during the installation work.

General Instructions

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.
Sharp edges should be fitted with edge protectors (split-open plastic hose).
Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).

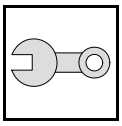
Special Tools

- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers

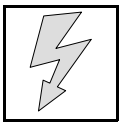
Explanatory Notes on Document

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

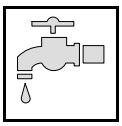
Mechanical system



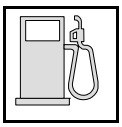
Electrical system



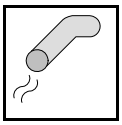
Coolant circuit



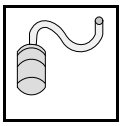
Fuel



Exhaust gas



Combustion air



Software



Special features are highlighted using the following symbols:



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



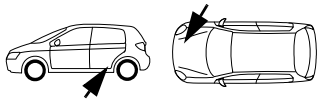
Specific risk of fire or explosion.



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



Reference to a special technical feature.



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

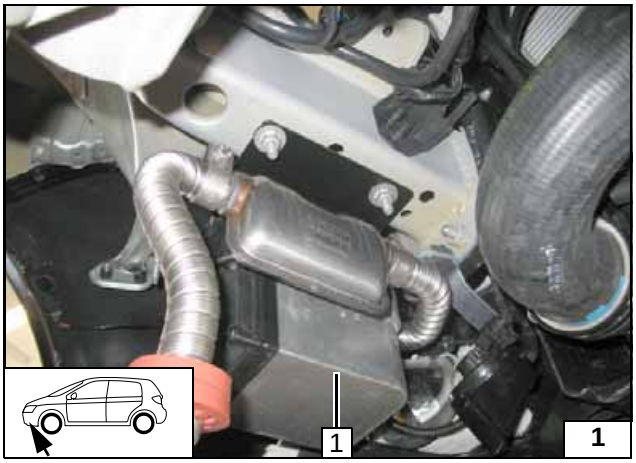
All dimensions are in mm!
Tightening torque of hose clamps = 2.0 + 0.5 Nm!
Tightening torque of Ejot screws, Ejot studs = 10 Nm!

Preliminary Work

WARNING!

- Open the fuel tank cap, ventilate the tank.
- Close the tank cap again.
- Disconnect the battery "earth" or "ground" connection.
- Depressurize the cooling system!
- Copy the factory number from the original type label to the duplicate type label.
- Remove years that do not apply from the duplicate label.
- Attach the duplicate label (type label) in the appropriate place.
- Remove the engine cover.
- Remove the charge-air hose.
- Remove the air filter together with the intake hose
- Completely remove the battery together with the carrier.
- Remove the cover of the fuse and relay box in the engine compartment.
- Remove the front left wheel.
- Remove the left-hand wheel well trim.
- Remove the underride protection
- Remove the right-hand underbody trim.
- Remove the rear bench seat
- Open the right-hand fuel sender service lid
- Remove the left-hand instrument panel trim.
- Remove the lower instrument panel trim on the front passenger side (only with Climatronic).
- Remove the lower instrument panel trim from the center console (only with Climatronic).

Remove page 34 "Operating Instructions for End Customer" and add to the vehicle operating instructions.



Heater installation location

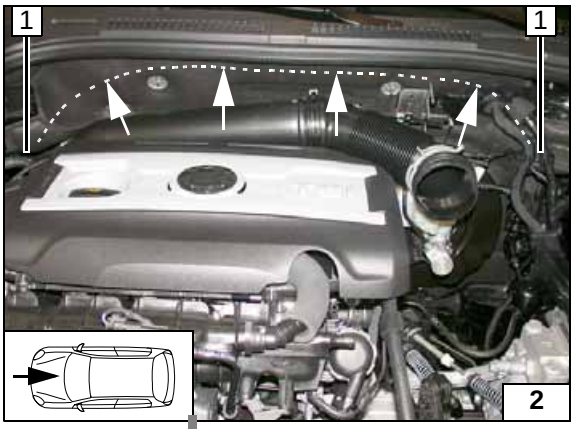
1 Heater

Installation location

Electrical system

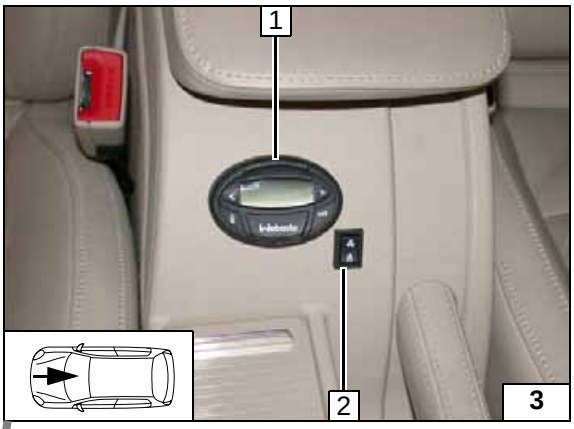
Wiring routing

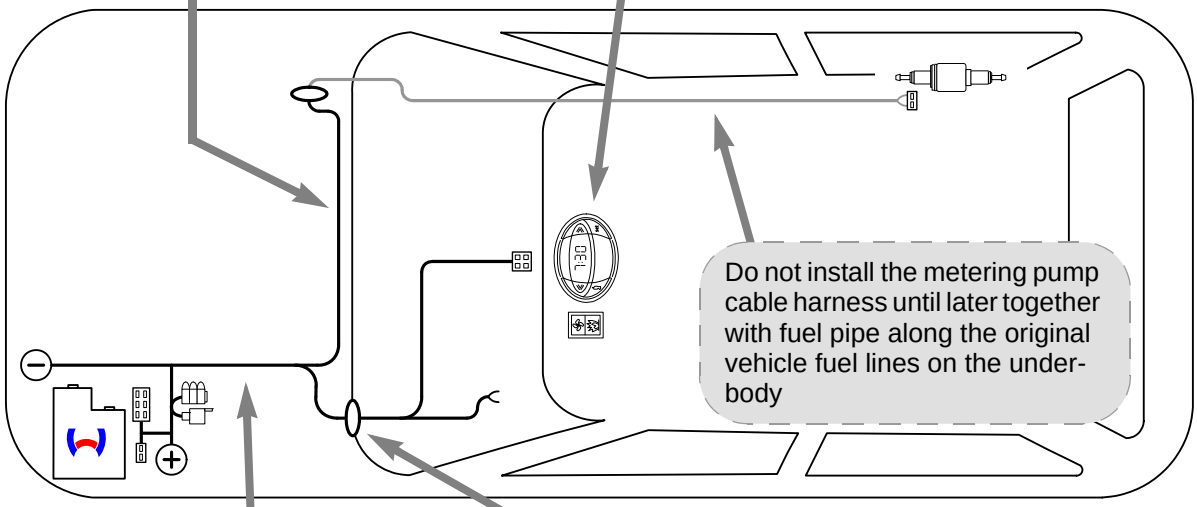
Route wiring harness of metering pump and fuel line **1** behind insulation mat to right-hand vehicle side



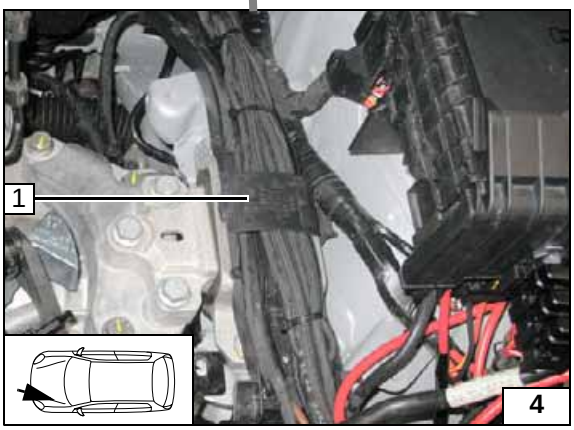
Digital timer and summer/winter switch option

1 Digital timer
2 Summer/winter switch, drilled hole 12 mm dia.



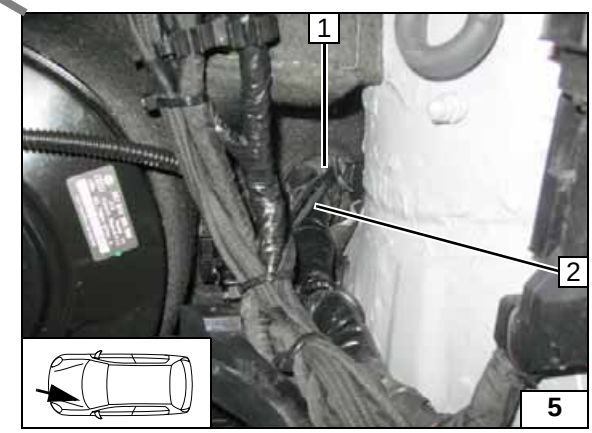


Wiring harness installation diagram



Wiring harness routing

Route wiring harnesses in original vehicle cable duct.



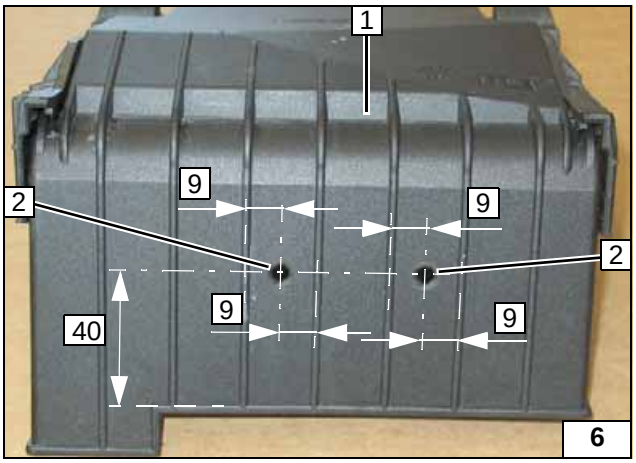
Wiring harness pass through

1 Protective rubber plug
2 Wiring harnesses of fan controller and heater control

Preparing fuse holder and K3 relay

Countersink 5.5 mm dia. hole [2x] **2** from behind.

1 Cover of fuse and relay carrier



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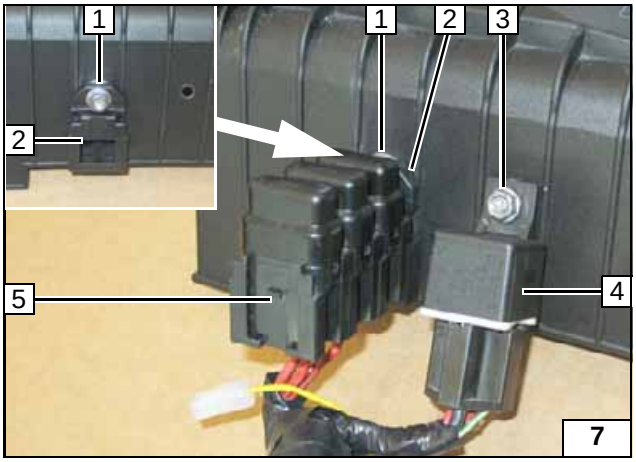
Holes in fuse carrier

Insulate wiring harness under the fuses with PVC tape. Insert large diameter washer between cover and retaining plate **2**.

1 M5x12 countersunk head screw, large diameter washer, flanged nut
3 M5x12 countersunk head screw, flanged nut
4 K3 relay
5 Fuses pushed on



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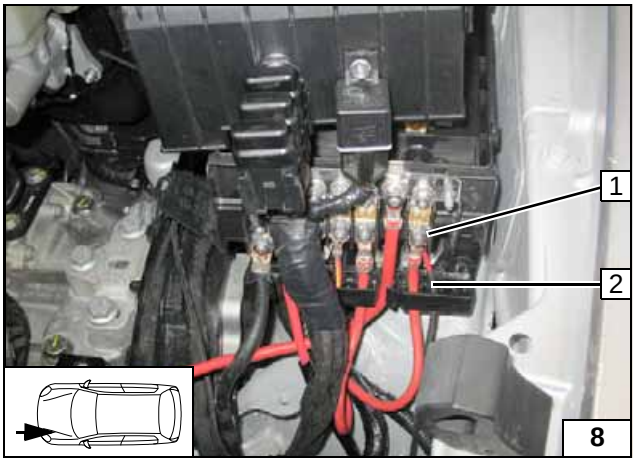
Installing fuse holder and K3 relay

1 Original vehicle positive support point
2 Positive wire



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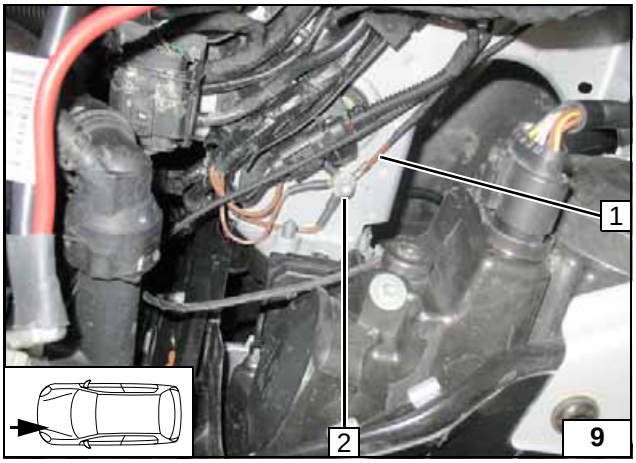
Positive connection

1 Ground wire
2 Original vehicle ground support point



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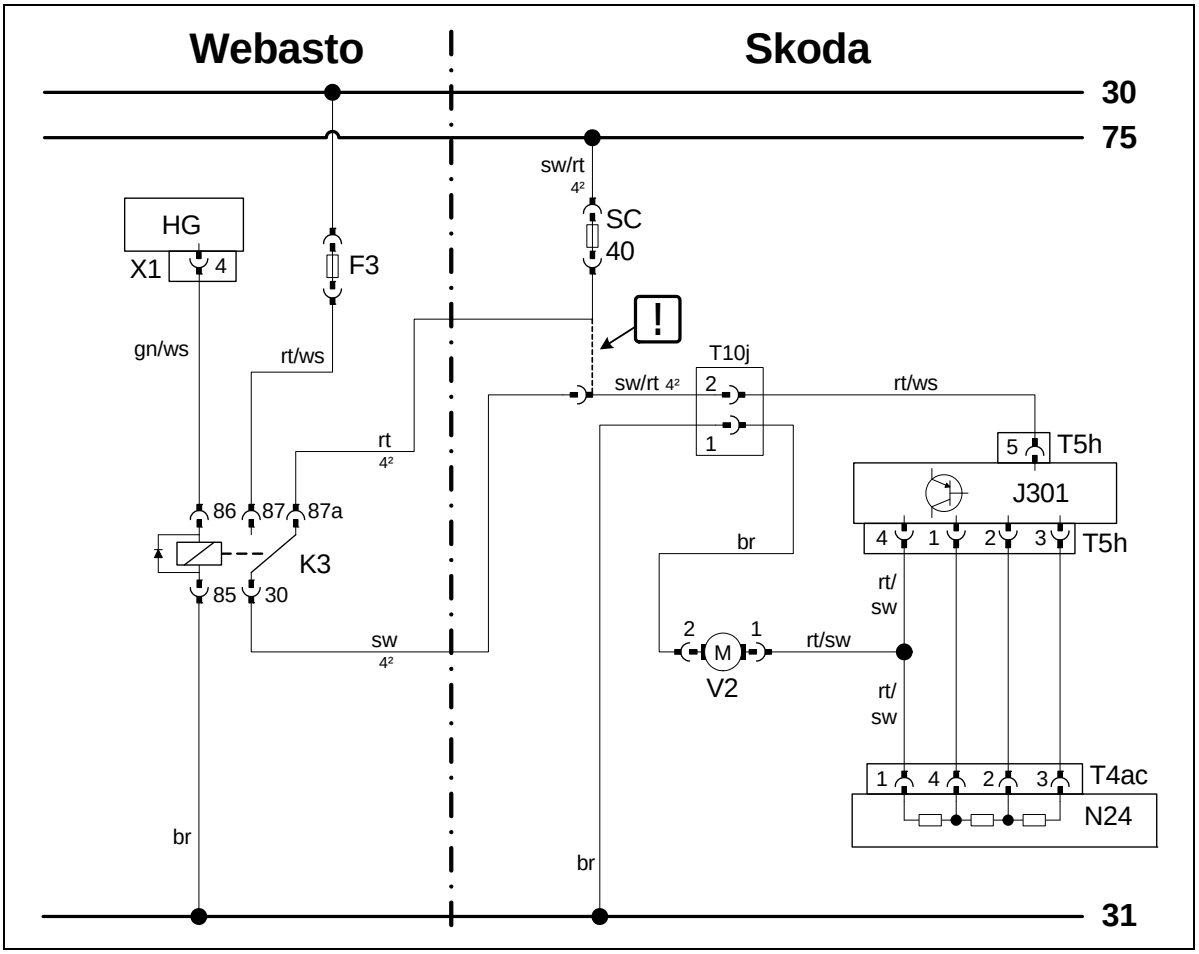
Ground connection

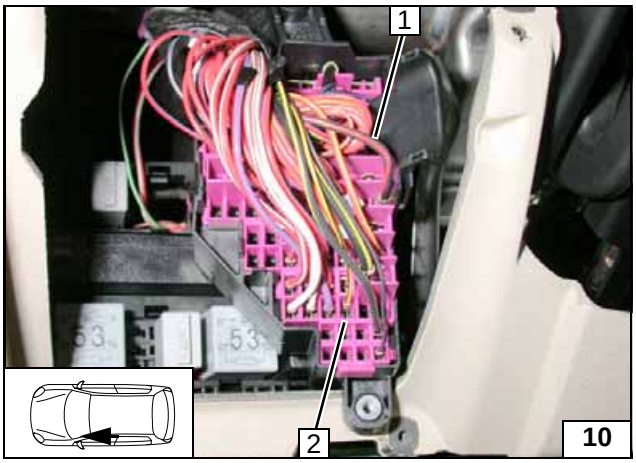
Climatic fan controller



Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-C/E/P	V2	Fan motor	rt	red
X1	6-pin heater connector	N24	Resistor group	ws	white
F3	Fuse, 25 A	J301	A/C control panel	sw	black
K3	Fan relay	T...	Plug connections	br	brown
		SC40	Fuse, 40A	gn	green
				!	Detach wire end from SC40
				X	Cutting point
				Wiring colours may vary.	

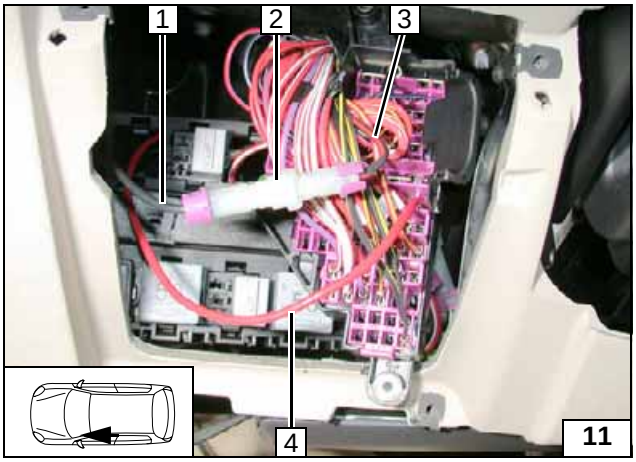
Wiring diagram

Legends



Detach fuse carrier **2** and unlock contact lock.
Detach black/red (sw/rt) 4 mm² wire **1** on fuse output SC40.

Connecting central electrical box



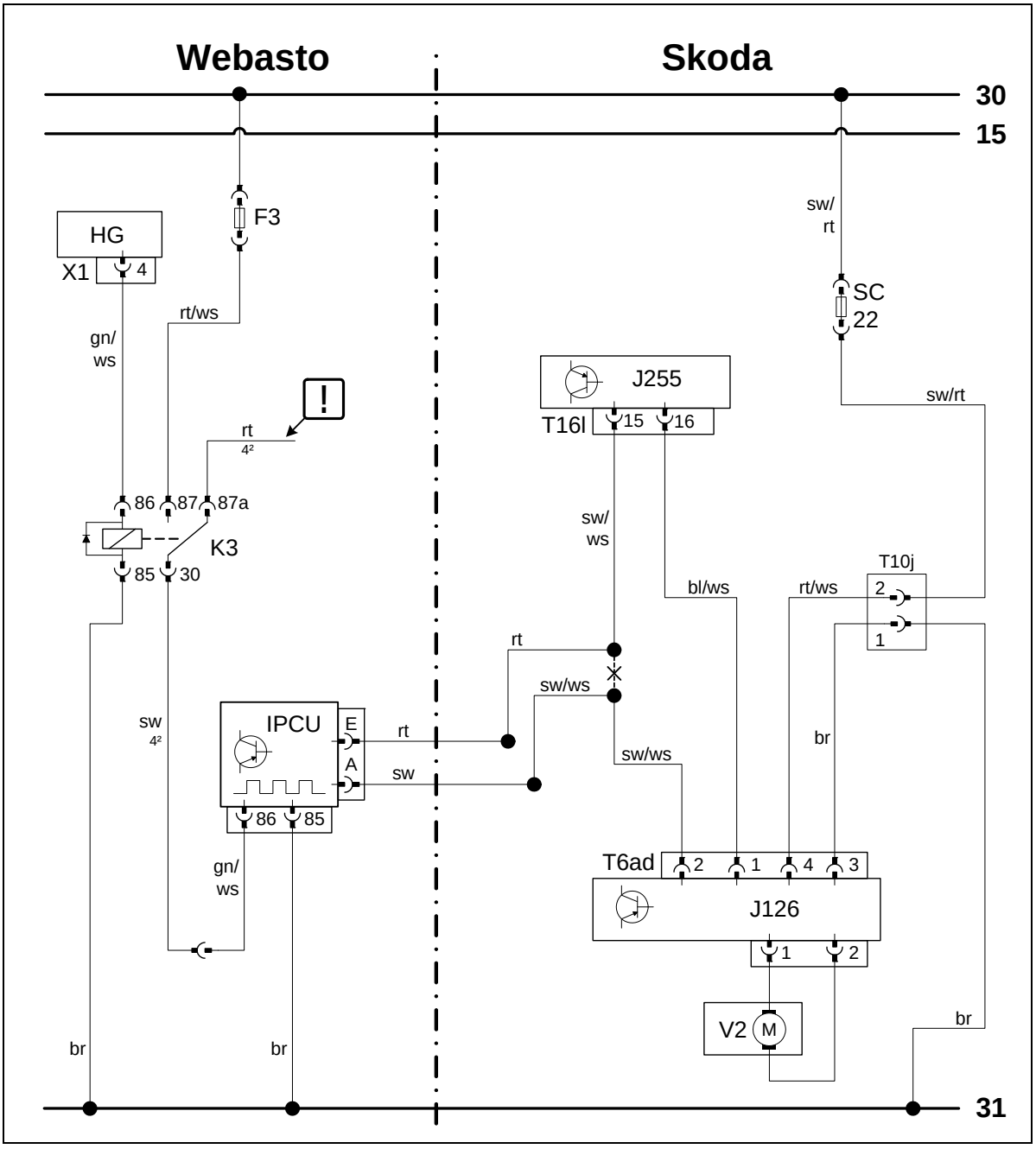
Mount red (rt) wire **4** K3/87a in fuse output SC40.
Produce connections as shown in wiring diagram.

1 Black (sw) wire from K3/30
2 AMP housing
3 Black/red (sw/rt) wire of fuse SC40

Connecting central electrical box

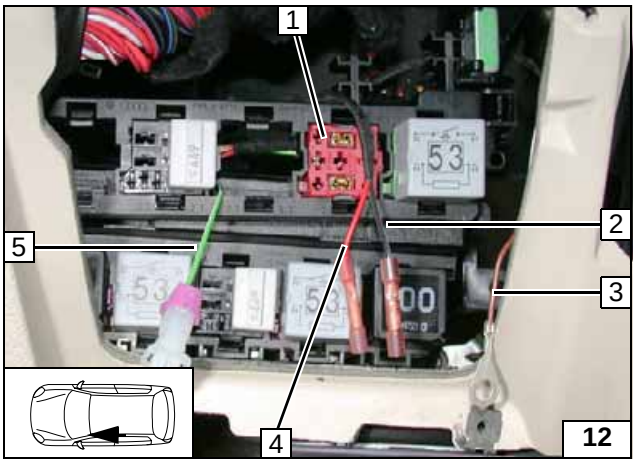
Climatronic fan controller

Wiring diagram



Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-C/E	SC22	40 A fan fuse	rt	red
X1	6-pin heater connector	T...	Plug connections	ws	white
F3	Replace 25A with 3A fuse.	J126	Fan controller	sw	black
		J255	A/C control panel	br	brown
K3	Fan relay	V2	Fan motor	gn	green
IPCU	Pulse width modulator			bl	blue
IPCU adjustment values:					
Duty cycle: 30%				!	Insulate wire end and tie back
Frequency: 400Hz					
Voltage: 8V				**X**	Cutting point
Function: High-side active				Wiring colours may vary.	

Legends



Insert IPCU socket **1** in free slot.

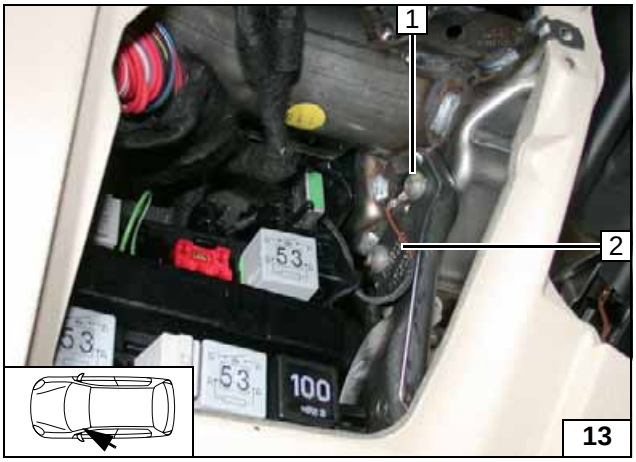
Note:

If the shape of the fuse carrier is new, fasten IPCU socket **1** with cable ties

Produce connections as shown in wiring diagram.

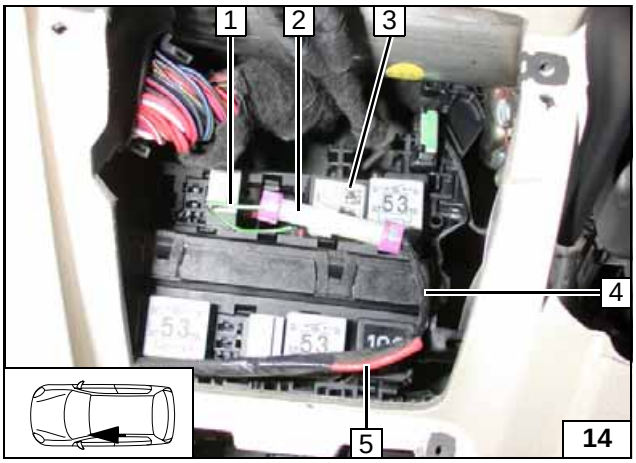
Installing IPCU

2 Black (sw) wire of IPCU/A
3 Brown (br) wire of IPCU/85, cable lug
4 Red (rt) wire of IPCU/E
5 Green/white (gn/ws) wire of IPCU/86, AMP connector



1 Original vehicle bolt
2 Brown (br) wire of IPCU/85

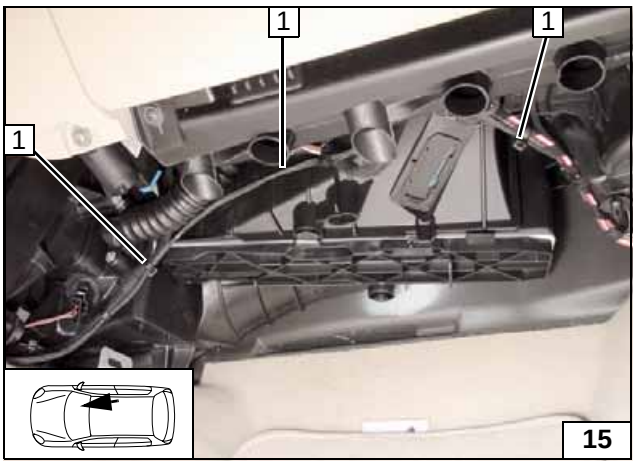
Ground connection of IPCU



Insulate red (rt) wire of K3/87a **5** and tie back.
Replace 25 A fuse F3 with 3 A fuse.
Produce connections as shown in wiring diagram.

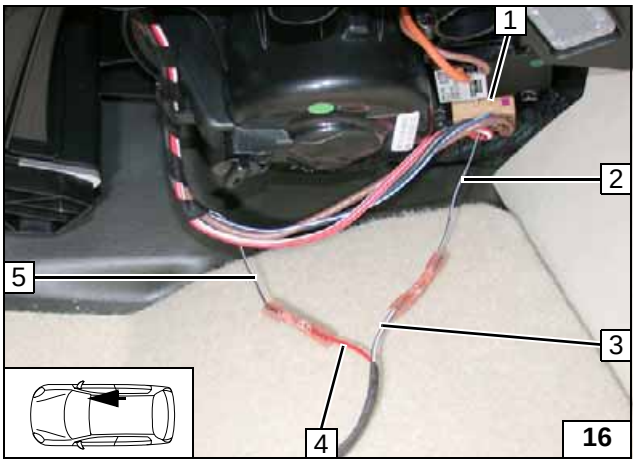
Connecting IPCU

1 Green/white (gn/ws) IPCU/86
2 AMP connector
3 Connect IPCU
4 Black (sw) wire from K3/30



1 Wiring harness of fan controller

Wiring routing

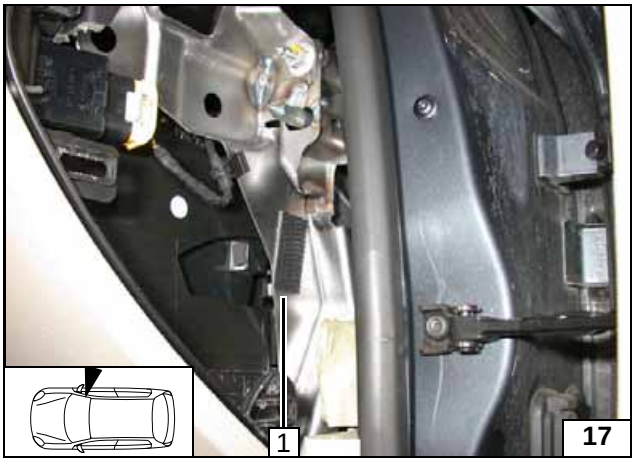


Connection on green (gn) 6-pin connector **1** T6ad, Pin 2 from fan controller.
Produce connections as shown in wiring diagram.

2 Black/white (sw/ws) wire of 6-pin connector T6ad, Pin 2
3 Black/white (sw/ws) wire from IPCU/A
4 Red (rt) wire of IPCU/E
5 Black/white (sw/ws) wire of A/C control panel

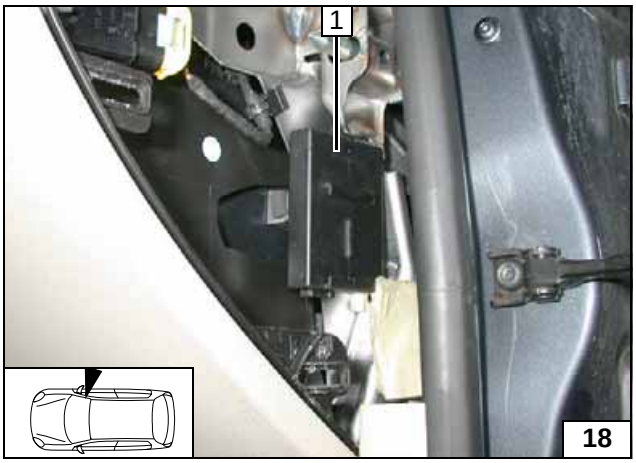
Connecting fan controller

Remote option Telestart



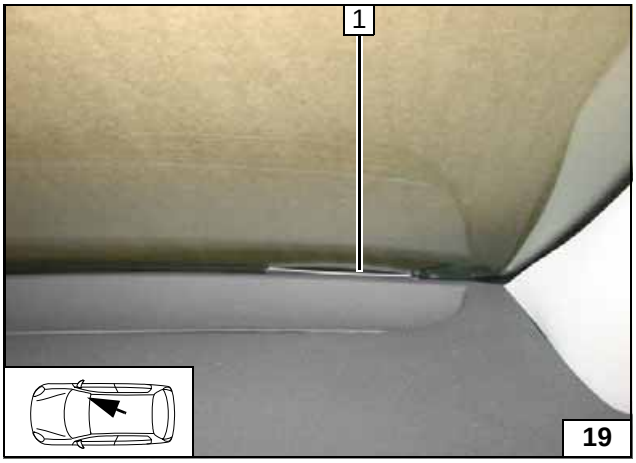
1 Apply double-sided adhesive tape

Fastening receiver



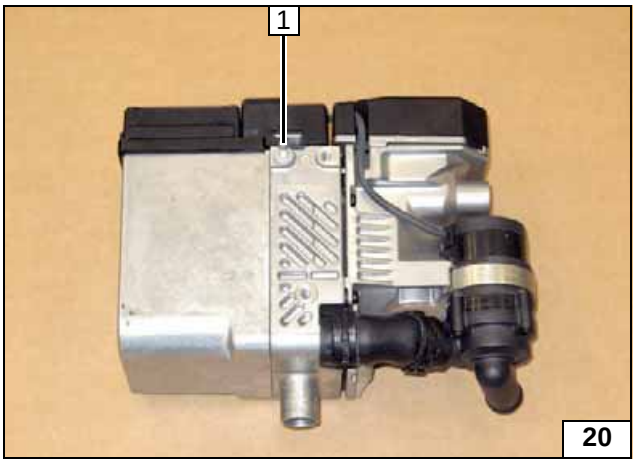
Fasten receiver **1** with double-sided adhesive tape.

Installing receiver



1 Antenna

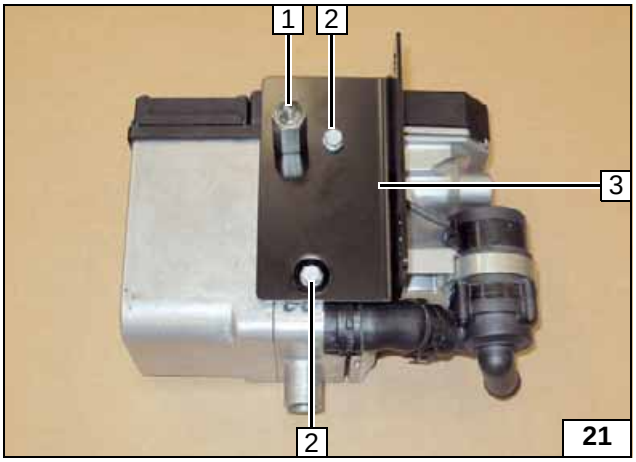
Installing antenna



Preassembling heater

1 Ejot stud

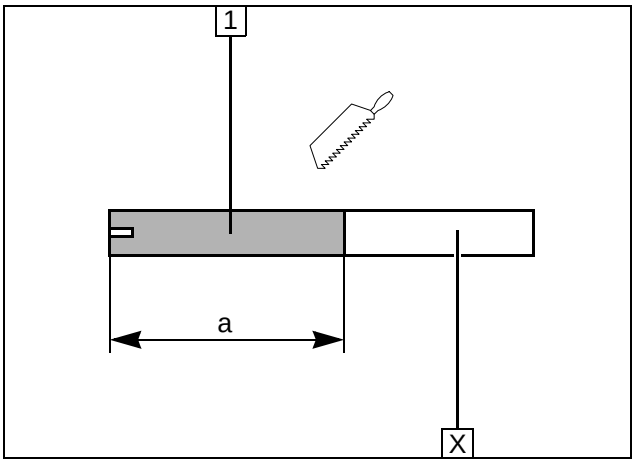
Preassembling heater



Insert one washer each between heater and bracket **3** at position **2**.

1 M6x30 spacer nut
2 Ejot screw, washer [2x each]

Preassembling bracket on heater

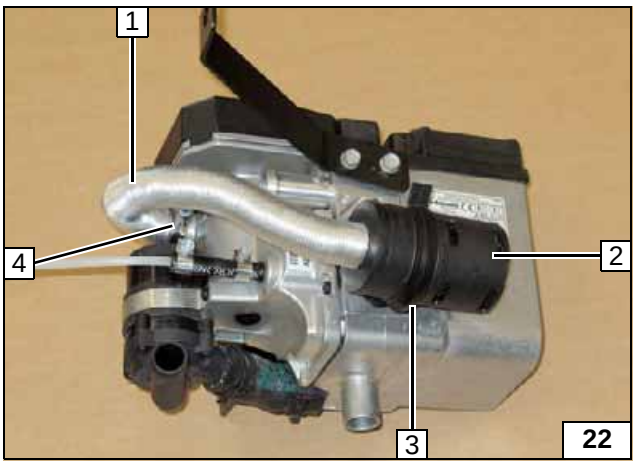


Premounting combustion air pipe

1 Combustion air pipe
a = 250

Discard section **X**

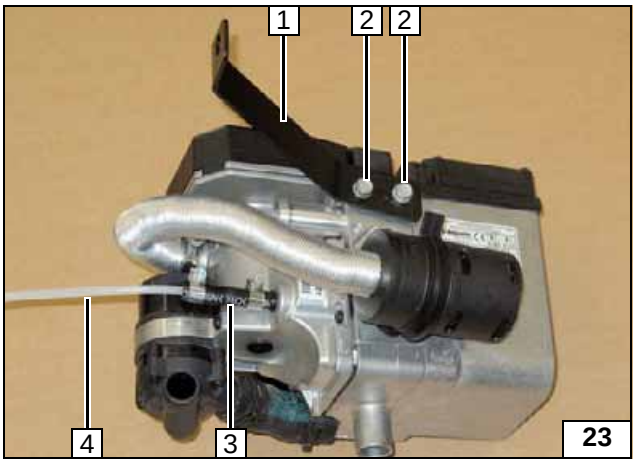
Cutting combustion air pipe to length



Insert retaining clip **3** in existing hole of heater.

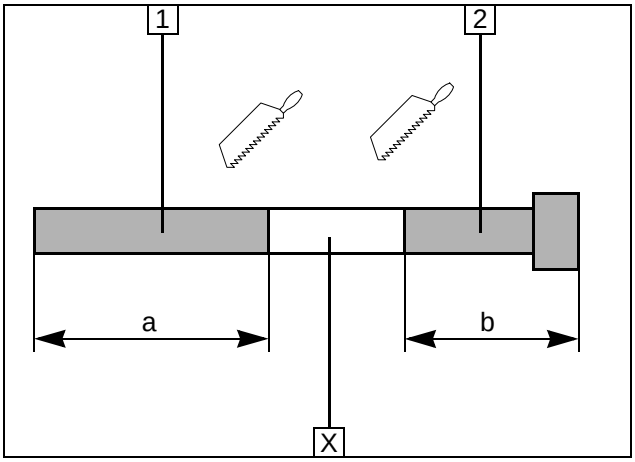
1 Combustion air pipe
2 Muffler
4 27 mm dia. clamp

Premounting combustion air pipe



1 Strut
2 Ejot screw [2x]
3 Hose section, 10 mm dia. clamp [2x]
4 Fuel line

Preassembling heater

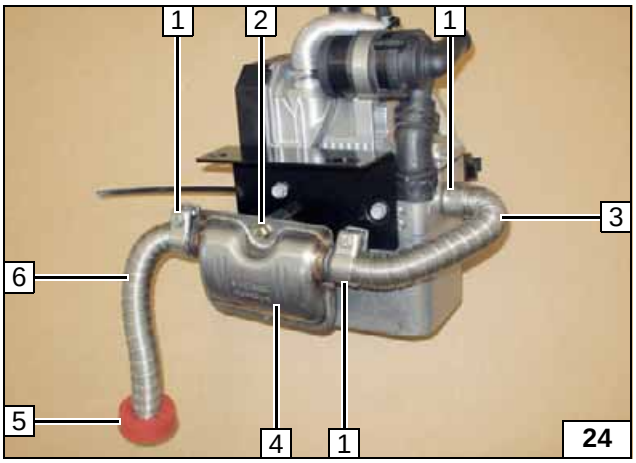


Preassembling exhaust pipe

1 Exhaust pipe
a = 180
2 Exhaust end section
b = 225

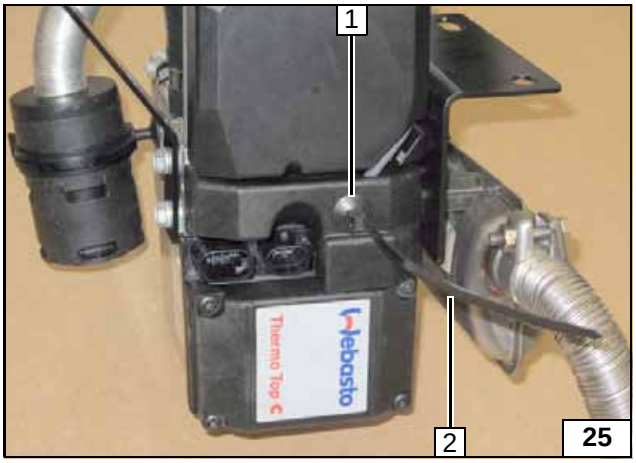
Discard section **X**

Preparing exhaust pipe



1 Hose clamp [3x]
2 M6x12 bolt, spring lockwasher, spacer nut
3 Exhaust pipe
4 Exhaust muffler
5 Red (rt) rubber isolator with groove
6 Exhaust end section

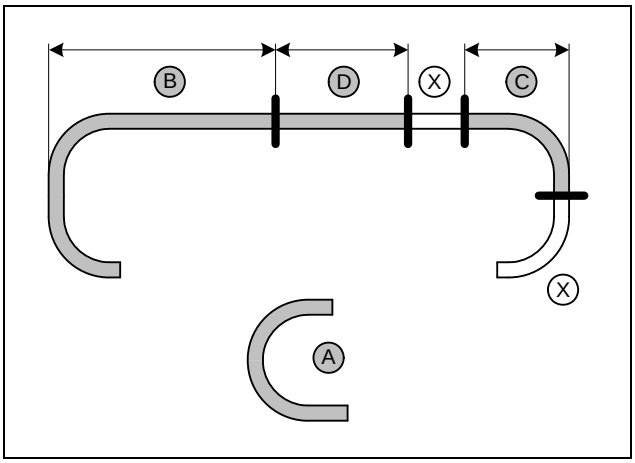
Preassembling exhaust system



Punch through perforation at position **1**.

2 Clip-type cable tie

Installing clip-type cable tie

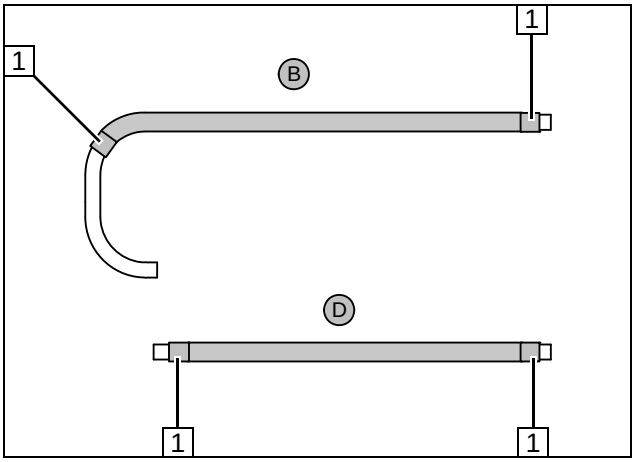


Premounting houses

Hose **A** =180° moulded hose
Discard section **X**

1.4 TSI		1.8 TSI	
B =	820	**B** =	710
C =	170	**C** =	170
D =	850	**D** =	560

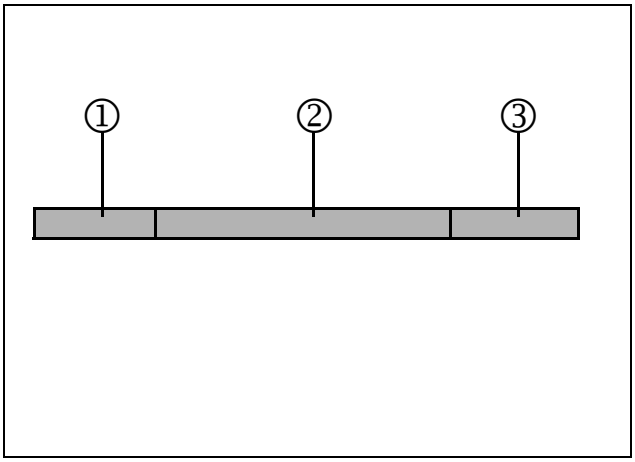
Cutting coolant hoses to length



Push braided protection hoses onto hose **B** and **D** and cut to length.
Cut heat shrink plastic tubing to length.

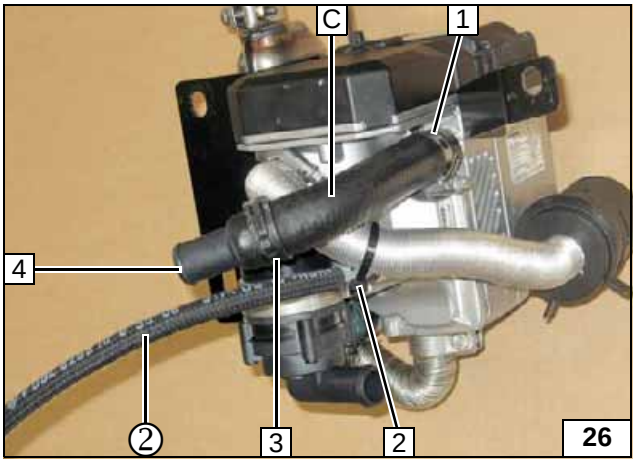
1 50 mm long heat shrink plastic tubing [4x]

Preparing coolant hoses



①= 400
②= 1800
③= 600

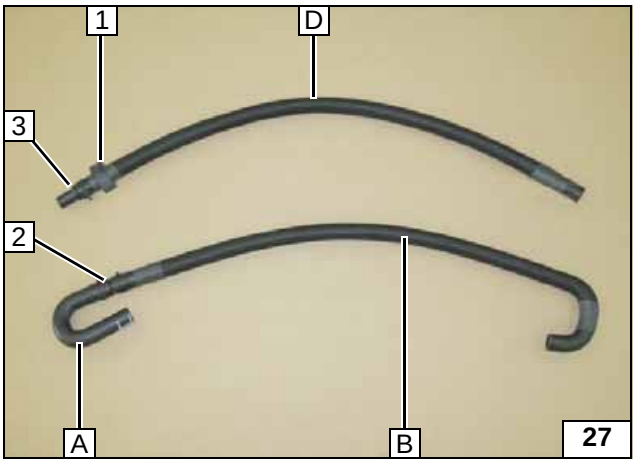
Cutting fabric protective hose to length



Slide fabric protective hose ② onto fuel line.

1 27 mm dia. clamp
2 Cable tie
3 27 mm dia. spring clip
4 20x20 connecting pipe

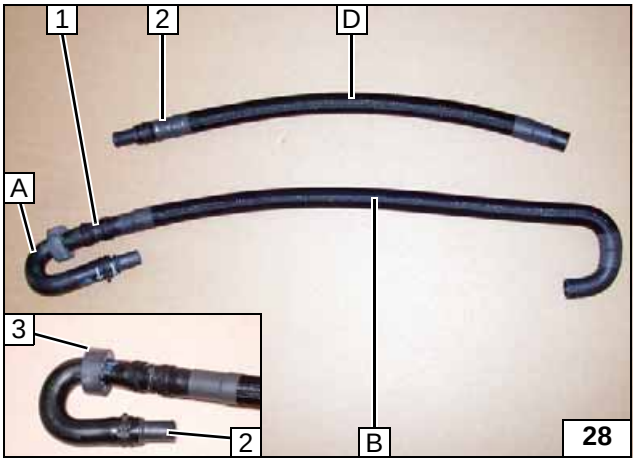
Preassembling heater



1.4 TSI

1 Black (sw) rubber isolator
2 20x20 mm connecting pipe, 27 mm dia. spring clip [2x]
3 20x20 connecting pipe, 27 mm dia. spring clip

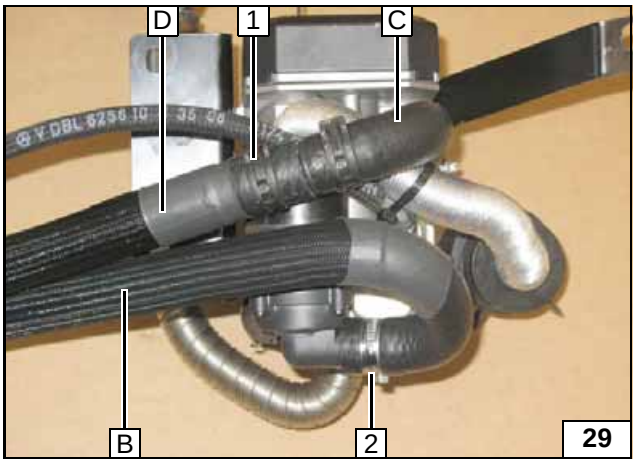
Premounting coolant hoses



1.8 TSI

1 20x20 mm connecting pipe, 27 mm dia. spring clip [2x]
2 20x20 mm connecting pipe, 27 mm dia. spring clip [2x each]
3 Black (sw) rubber isolator

Premounting coolant hoses



All vehicles

1 27 mm dia. spring clip
2 27 mm dia. clamp

Premounting coolant hoses

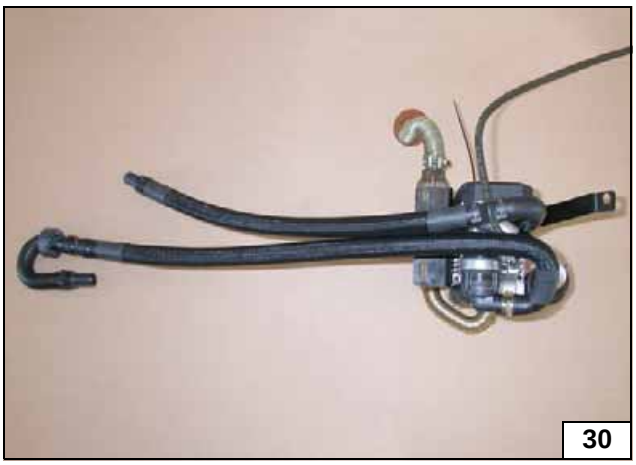
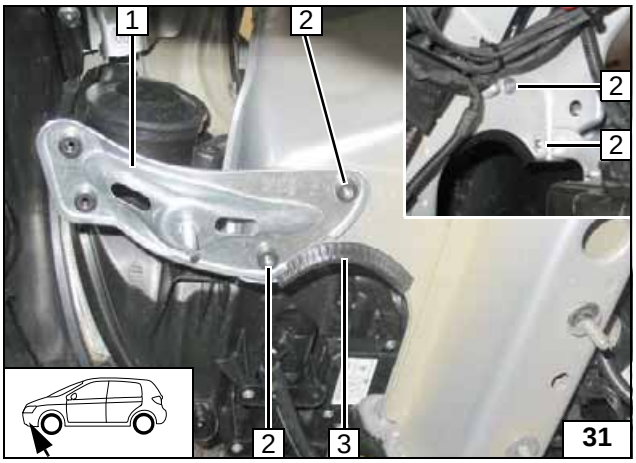


Figure shows 1.8 TSI.

General overview of assembly

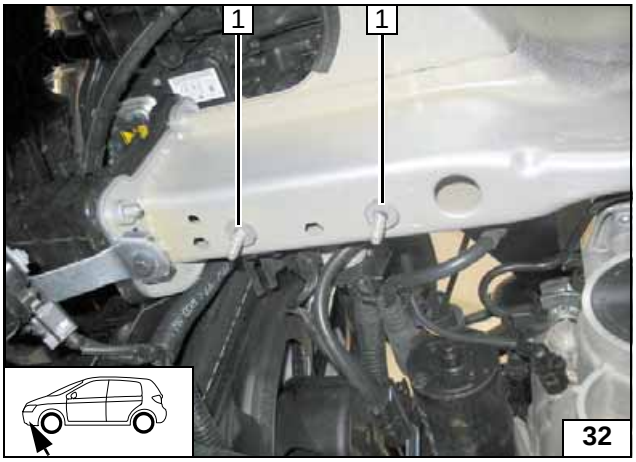


Preparing installation location

Install additional bracket **1** (Skoda Order No.: 1Z0 810 679) at existing holes from above with two bolts **2** (Skoda Order No.: N90 749 003) and large diameter washers.

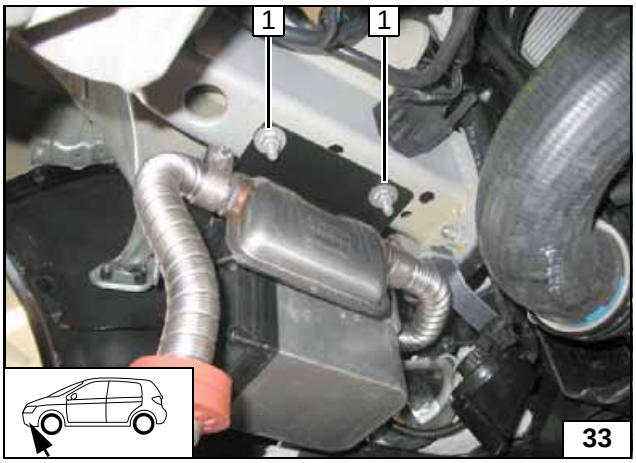
3 100 mm edge protection

Installing additional bracket



Mount large diameter washer **1** [2x] on original vehicle stud bolt (secure with body putty)

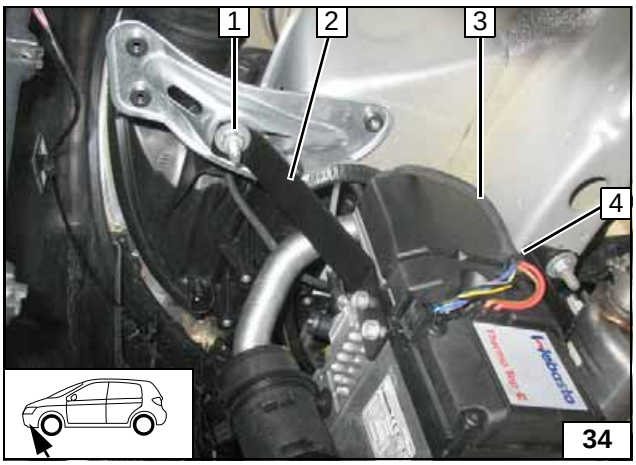
Mounting washers



Installing heater

1 Original vehicle stud bolt, large diameter washer, M8 flanged nut [2x each]

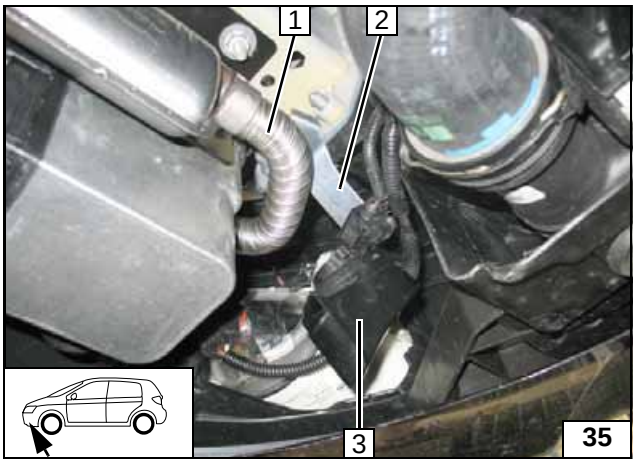
Installing heater



Mount wiring harness of heater **3**; tighten clip-type cable tie **4**.

1 Large diameter washer, M6 flanged nut
2 Strut

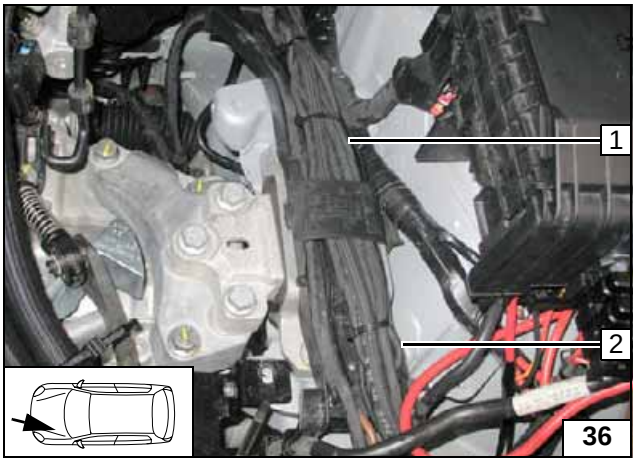
Installing heater



Ensure freedom of movement of exhaust system relative to original vehicle components and lines and correct if necessary.

1 Exhaust pipe
2 Horn bracket
3 Horn

Aligning exhaust system



Route excess lengths of wiring harness of heater **2** in cable duct **1** and secure with cable ties.

Routing wiring harness

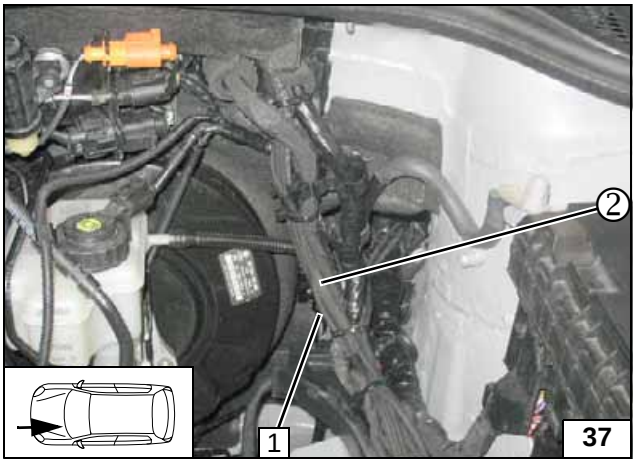
Fuel

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

Catch any fuel running off with an appropriate container.

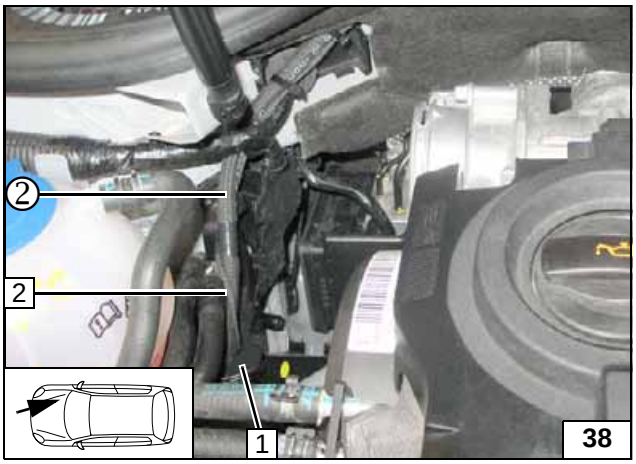
Install fuel line and metering-pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.
Mount the fuel line and wiring harness with rub protection on sharp edges.

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



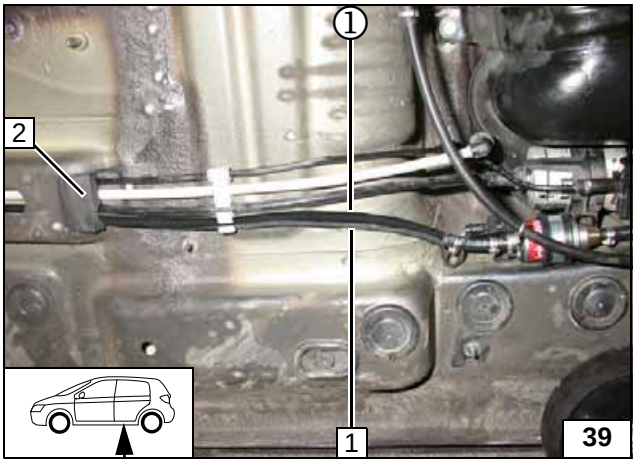
Route wiring harness of metering pump **1** and fuel line in fabric protective hose ② behind insulation mat to right-hand side of vehicle.

Installing lines



Route wiring harness of metering pump **2** and fuel line in fabric protective hose ② in original vehicle line duct **1** to underbody.

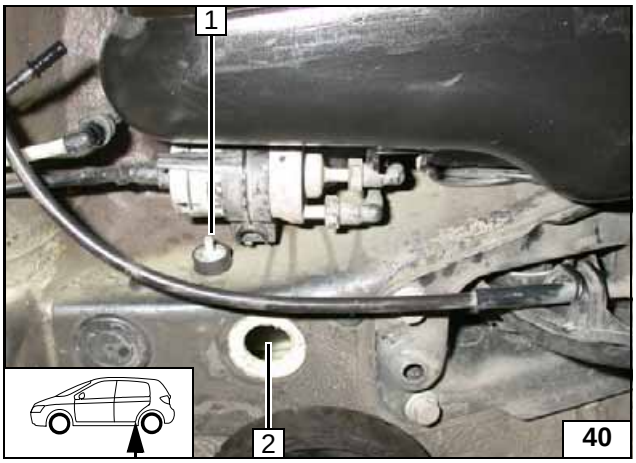
Installing lines



Guide fuel line out of original vehicle line duct **2** and slide on fabric protective hose ①.

1 Metering pump wiring harness

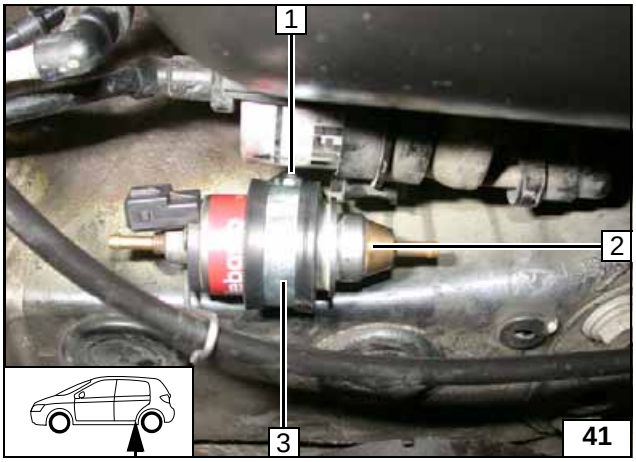
Installing lines



Remove to install blind plug at position **2**.

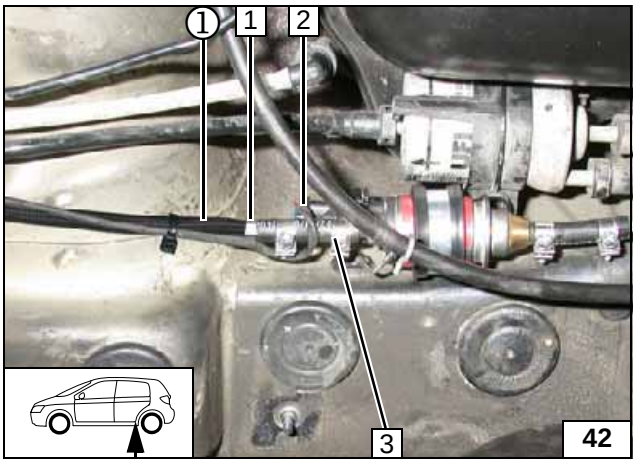
1 Existing hole, silent block, large diameter washer, flanged nut

Installing silent block



1 Flanged nut
2 Metering pump
3 Rubber-coated pipe clamp

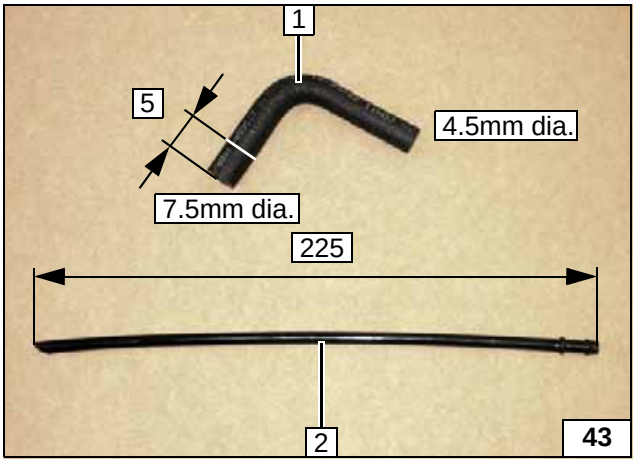
Installing metering pump



Secure fabric protective hose ① with cable tie.

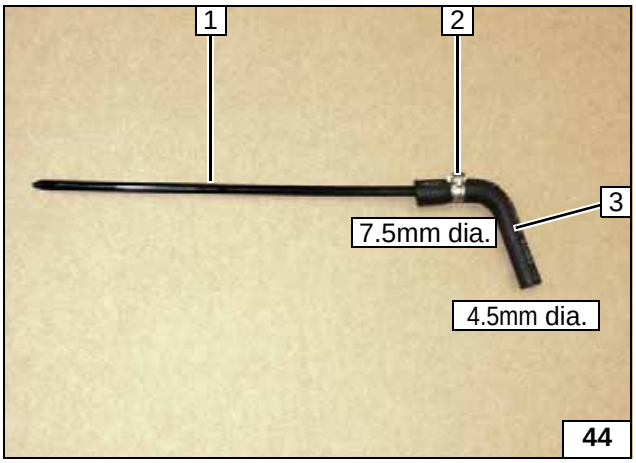
1 Fuel line
2 Wiring harness of metering pump, connector mounted
3 Hose section, 10 mm dia. clamp [2x]

Connecting metering pump



1 90° moulded hose
2 Standpipe

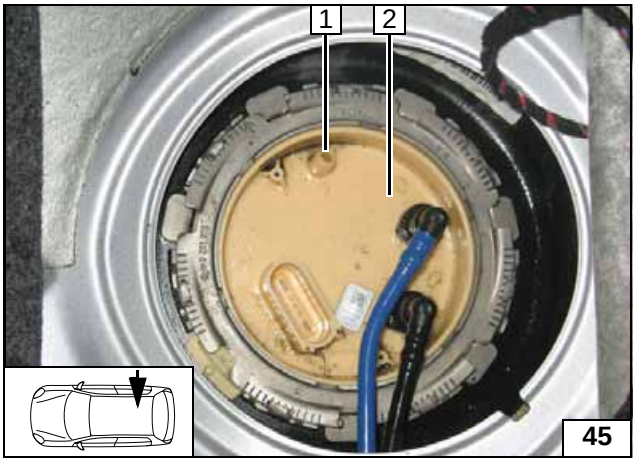
Cutting standpipe and moulded hose to length



10 mm dia. Caillau clamp **2** in centre between beads on end of standpipe.

1 Standpipe
3 90° moulded hose

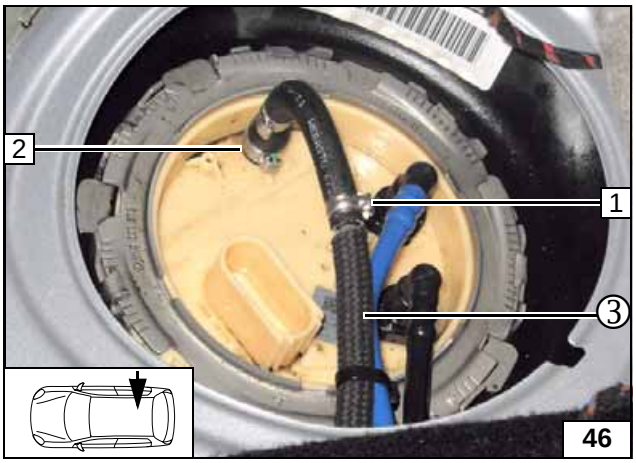
Premounting fuel standpipe



Cut 3 mm off blind plug **1**.

2 Fuel sender

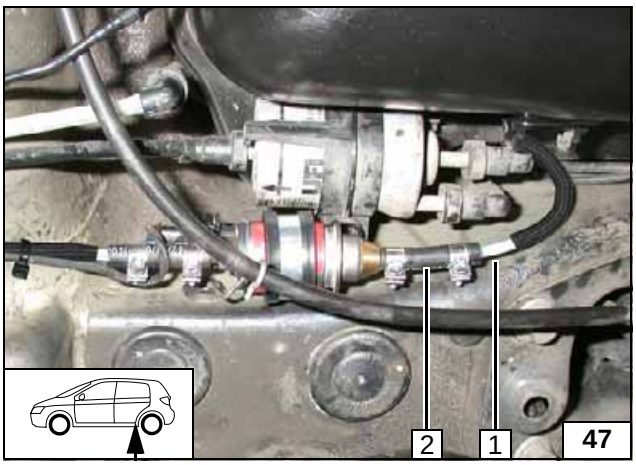
Cutting off blind plug



Slide fabric protective hose ③ onto fuel line.

1 10 mm dia. Caillau clamp
2 13.5 mm dia. Caillau clamp

Installing fuel standpipe



Check the position of the components; adjust if necessary. Check that they have free clearance.

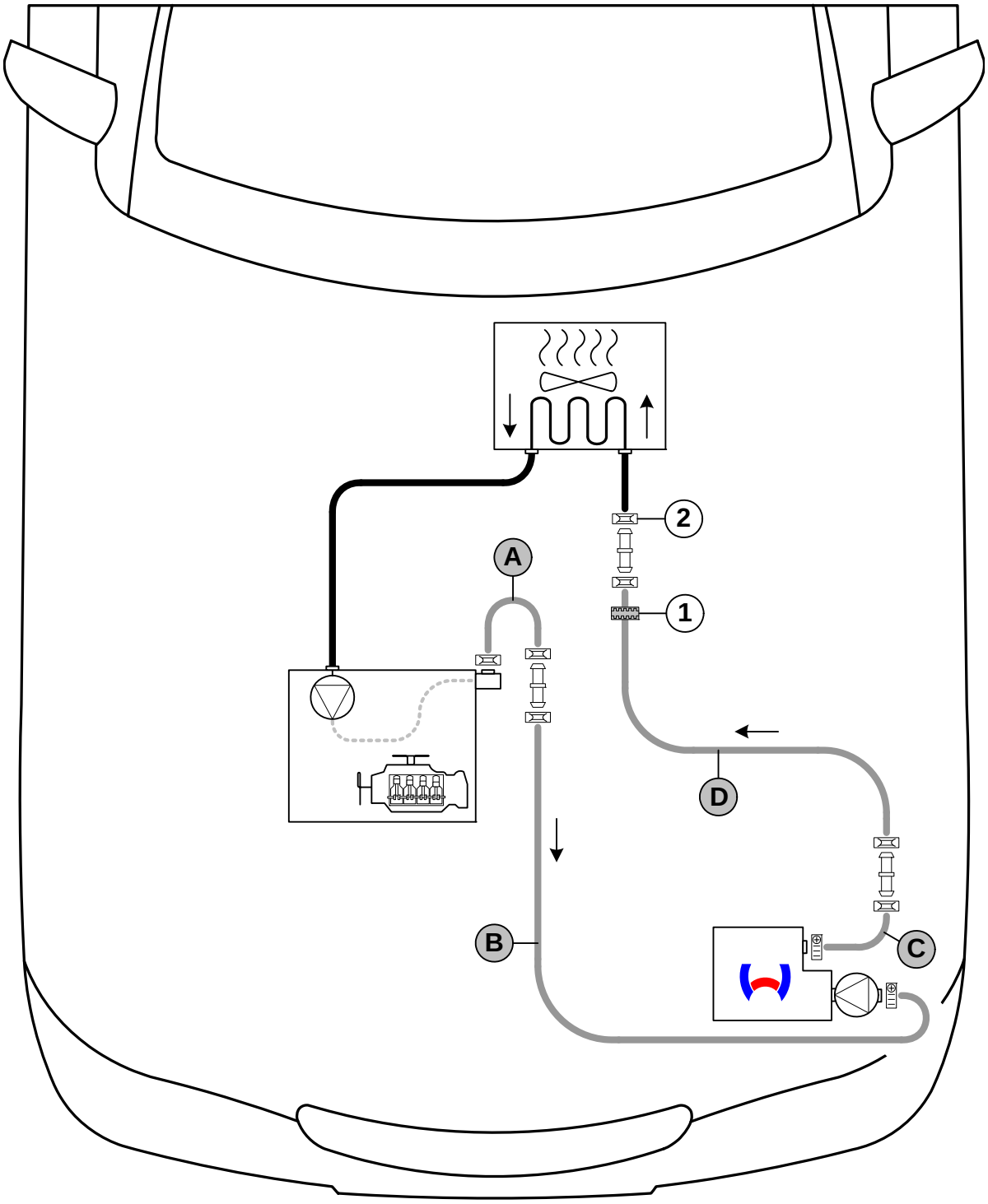
1 Fuel line
2 Hose section, 10 mm dia. clamp [2x]

Connecting fuel line

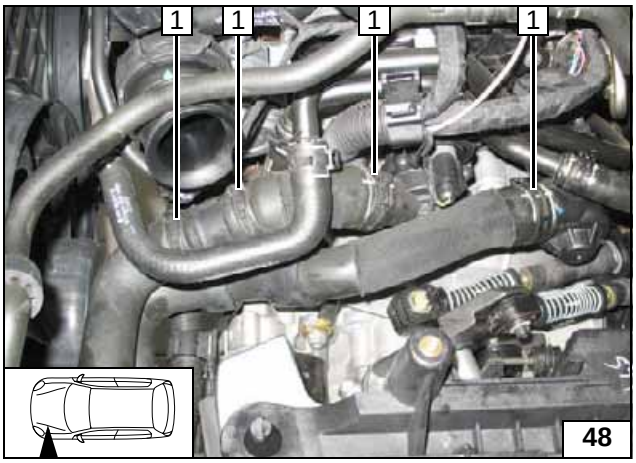
1.4 TSI coolant circuit

WARNING!
Any coolant running off should be collected using an appropriate container. Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hose can be damaged! When installing the hoses, the heater must be filled with coolant.
The connection should be "inline" based on the following diagram:

Hose routing diagram

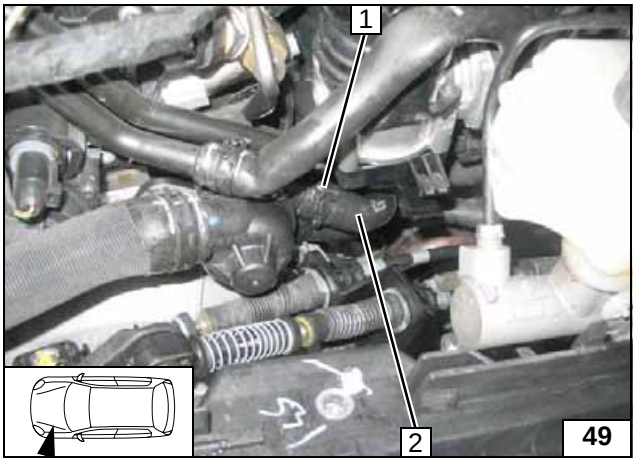


All spring clips without a specific designation = 27 mm dia. **1** = Black (sw) rubber isolator .
All hose clamps = 20-27 mm dia.! All connecting pipes = 20x20 mm dia.
2 = Original vehicle spring clip .



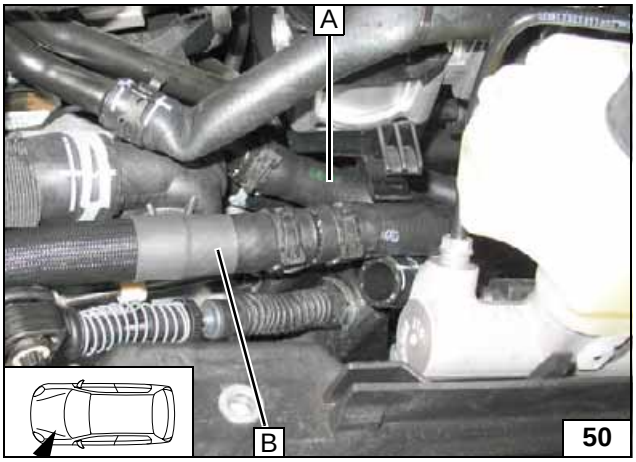
Turn clamps **1** [4x] to the right.

Turning clamps

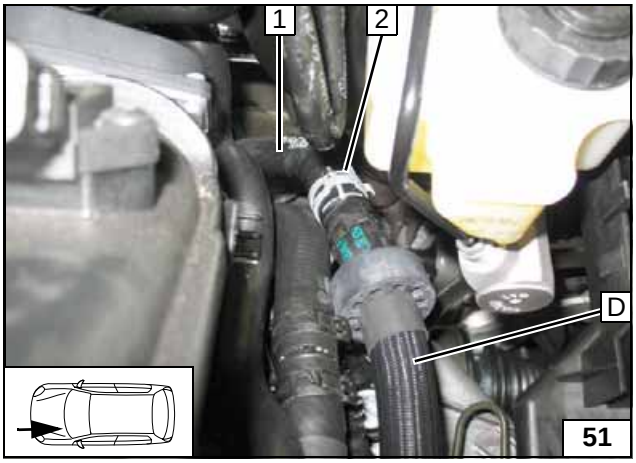


Pull off hose on engine outlet / heat exchanger inlet **2** on connection piece of engine outlet. Spring clip **1** will be reused.

Cutting point

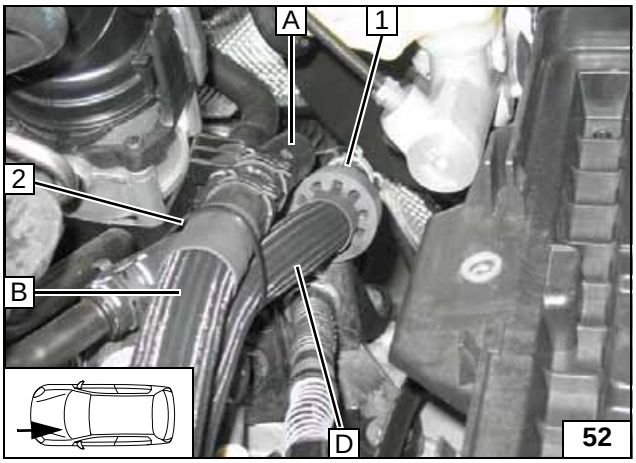


Connecting engine outlet



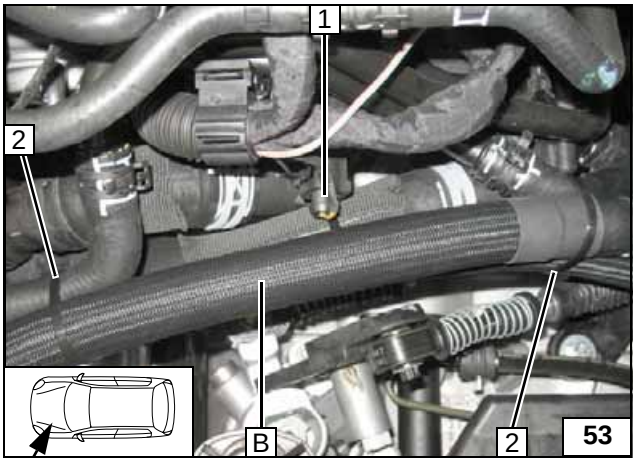
1 Hose on heat exchanger inlet
2 Original vehicle spring clip

Connecting heat exchanger inlet



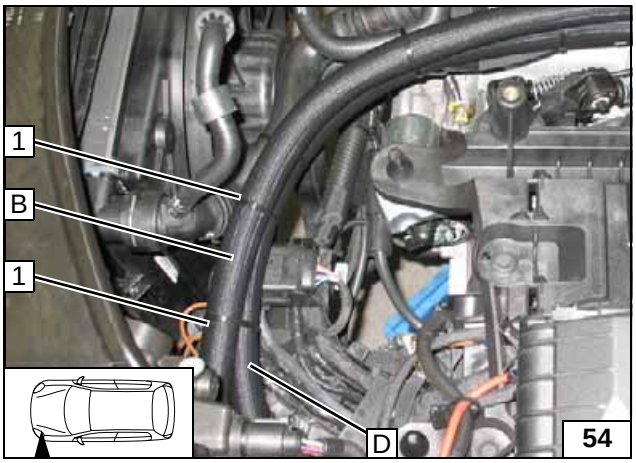
Align black (sw) rubber isolator **1** to bracket of gear stick. Fasten hose **B** and **D** with cable tie **2** to original vehicle hose!

Routing in engine compartment



Align hoses and fasten with cable tie **2** to original vehicle hose. Ensure sufficient distance to connector **1** , correct if necessary.

Fastening hoses



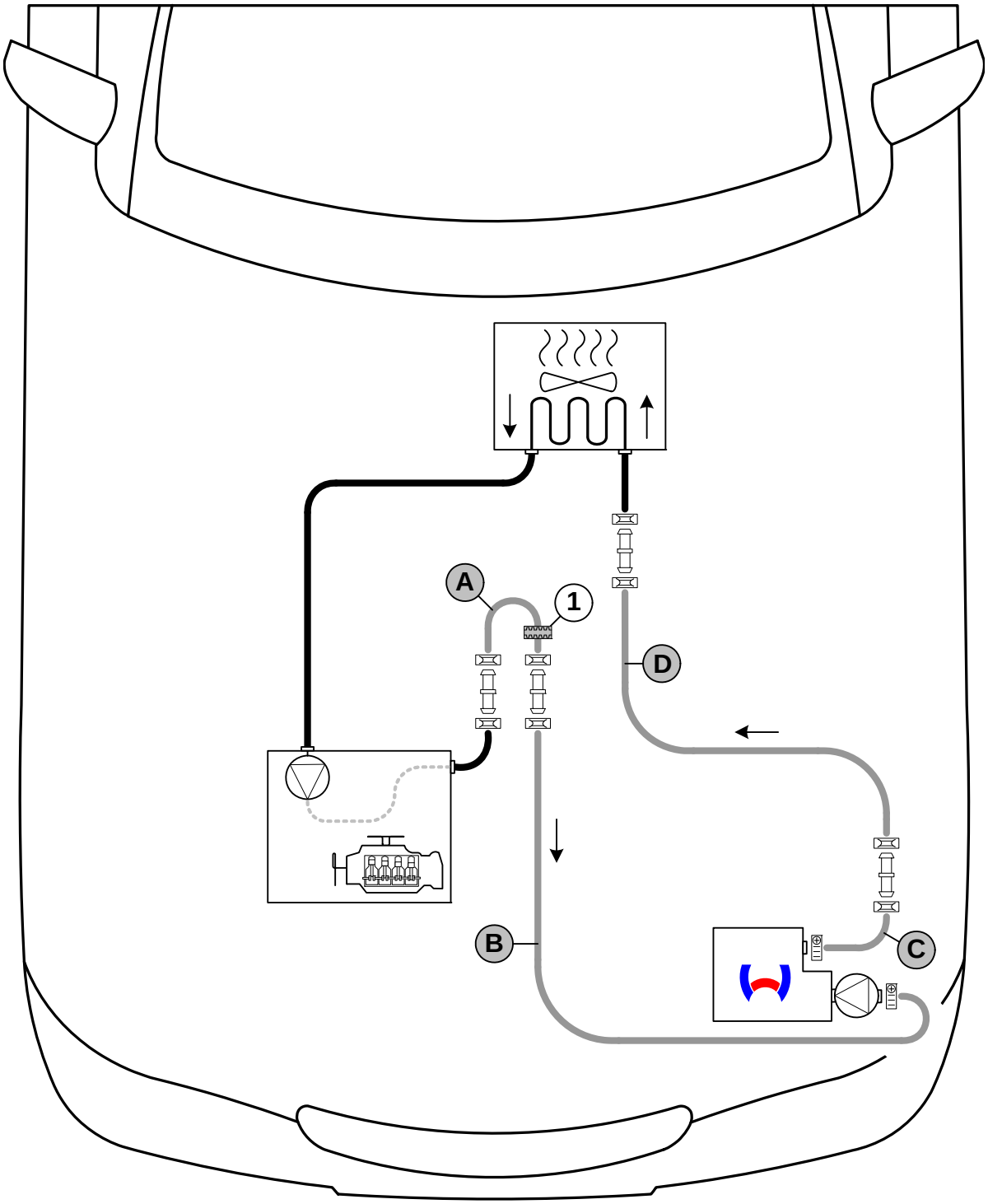
1 Cable tie [2x]

Fastening hoses

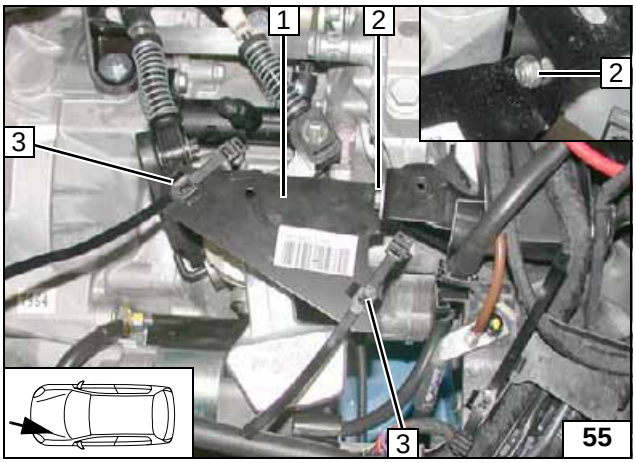
1.8 TSI coolant circuit

WARNING!
Any coolant running off should be collected using an appropriate container. Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hose can be damaged! When installing the hoses, the heater must be filled with coolant.
The connection should be "inline" based on the following diagram:

Hose routing diagram



All spring clips without a specific designation = 27 mm dia. **1** = Black (sw) rubber isolator. All hose clamps = 20-27 mm dia.! All connecting pipes = 20x20 mm dia.

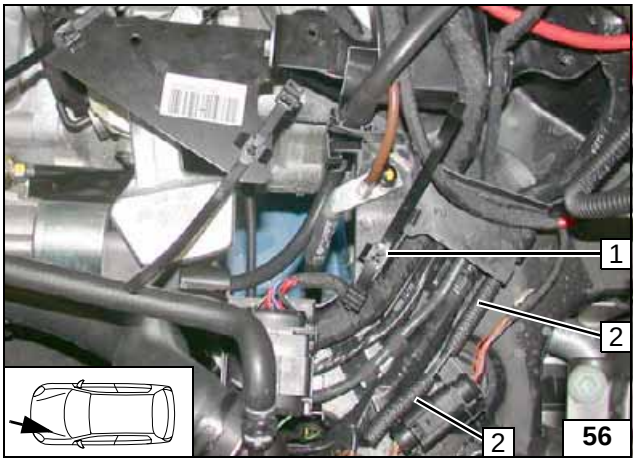


1.8 TSI SG

Insert clip-type cable tie **3** [2x] in existing holes of bracket for coolant hoses **1**.

2 Original vehicle hole, M6x20 bolt, flanged nut

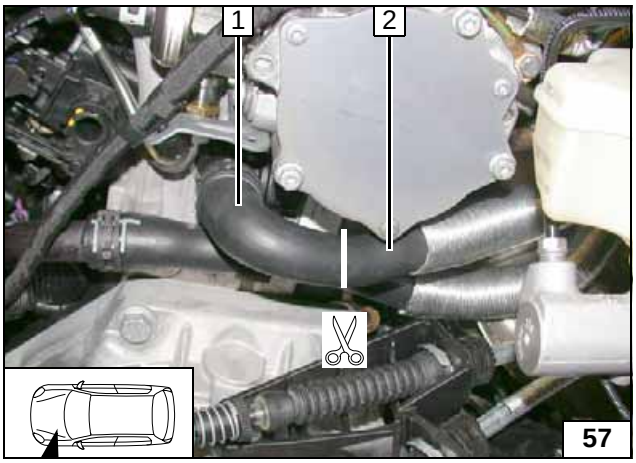
Installing bracket for hoses



Cut edge protection in middle. When drilling, watch components located behind!

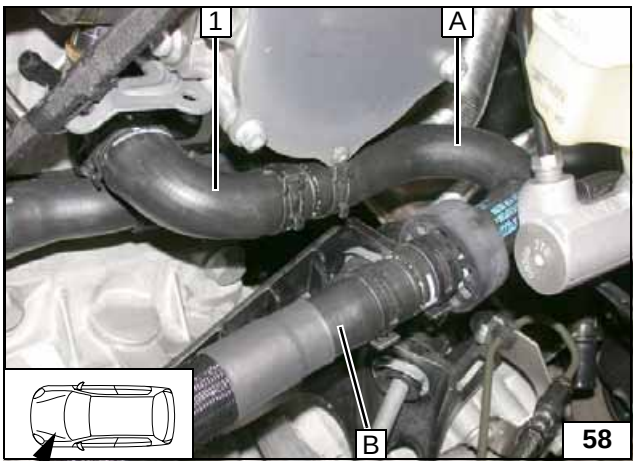
1 6 mm dia. hole, clip-type cable tie
2 50 mm edge protection [2x]

Installing clip-type cable tie



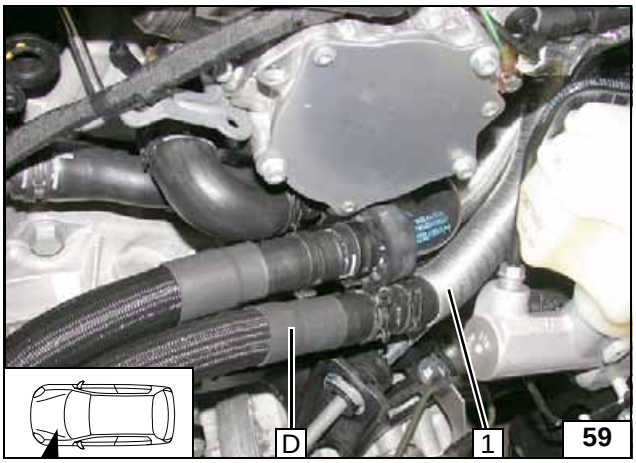
1 Engine outlet hose section
2 Hose section of heat exchanger inlet

Cutting point



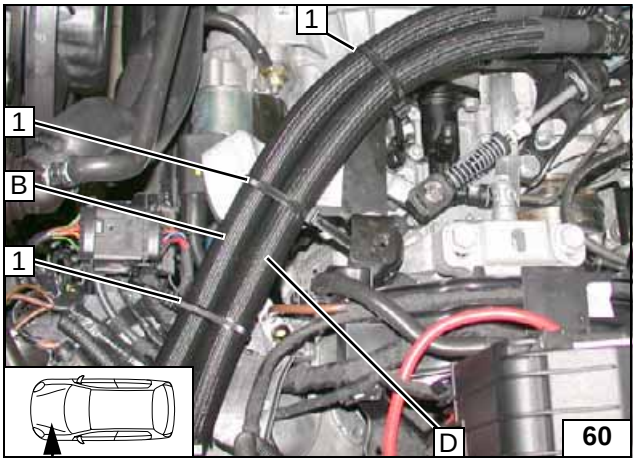
1 Engine outlet hose section

Connecting engine outlet



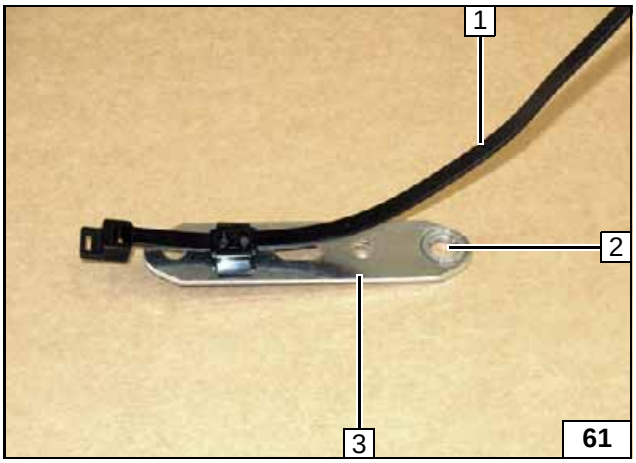
1 Hose on heat exchanger inlet

Connecting heat exchanger inlet



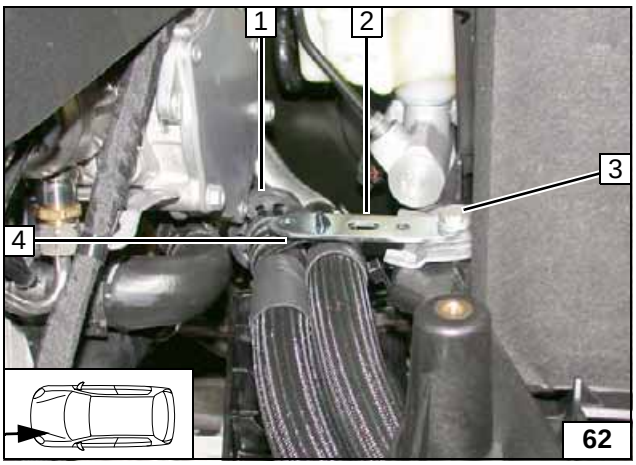
1 Close clip-type cable tie [3x]

Routing in engine compartment



Drill out hole at position **2** to 8.5 mm dia. Insert clip-type cable tie **1** in existing hole of perforated bracket **3**.

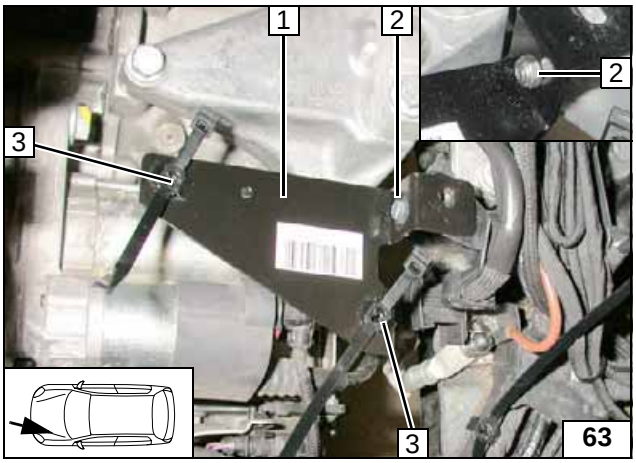
Preparing perforated bracket



Ensure sufficient spacing to neighbouring components, and especially freedom of movement of shifting actuation; correct if necessary.

1 Position black (sw) rubber isolator
2 Perforated bracket
3 Original vehicle bolt
4 Clip-type cable tie

Fastening in engine compartment

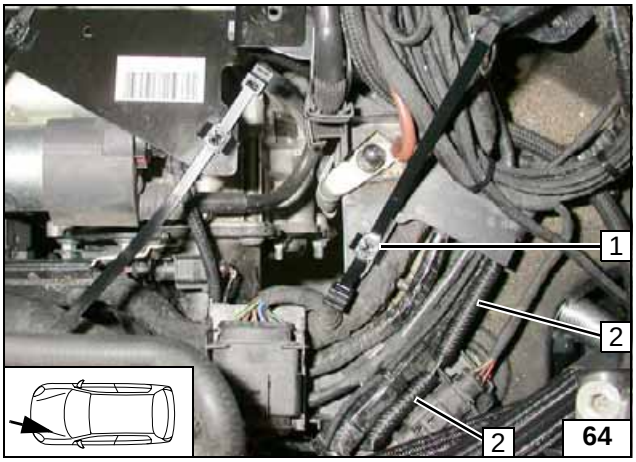


1.8 TSI DSG

Insert clip-type cable tie **3** [2x] in existing holes of bracket for coolant hoses **1**.

2 Original vehicle hole, M6x20 bolt, flanged nut

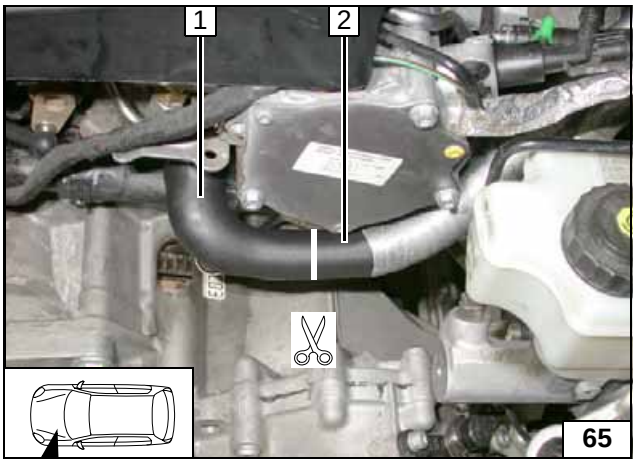
Installing bracket for hoses



Cut edge protection in middle. When drilling, watch components located behind!

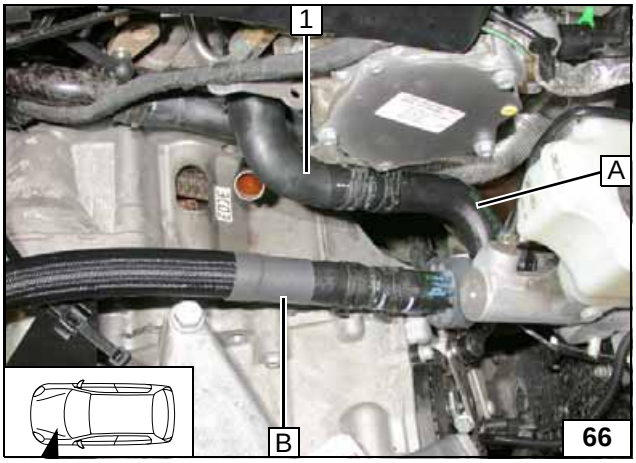
1 6 mm dia. hole, clip-type cable tie
2 50 mm edge protection [2x]

Installing clip-type cable tie



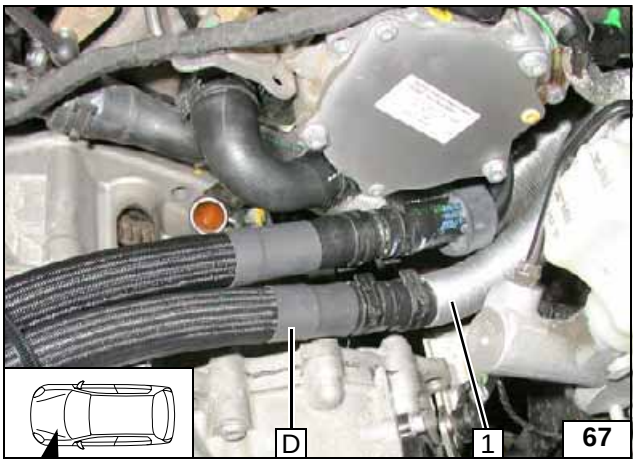
1 Engine outlet hose section
2 Hose section of heat exchanger inlet

Cutting point



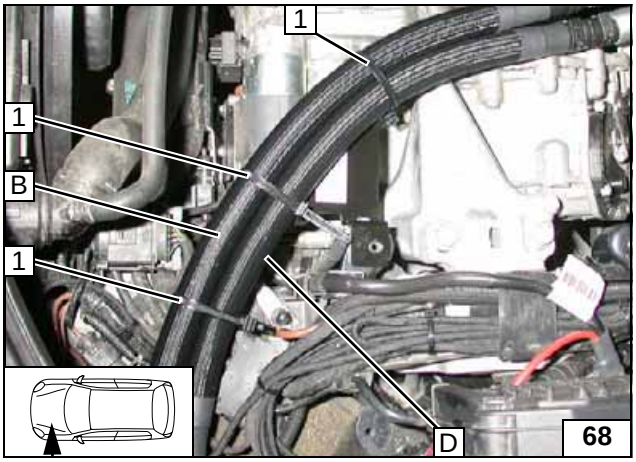
1 Engine outlet hose section

Connecting engine outlet



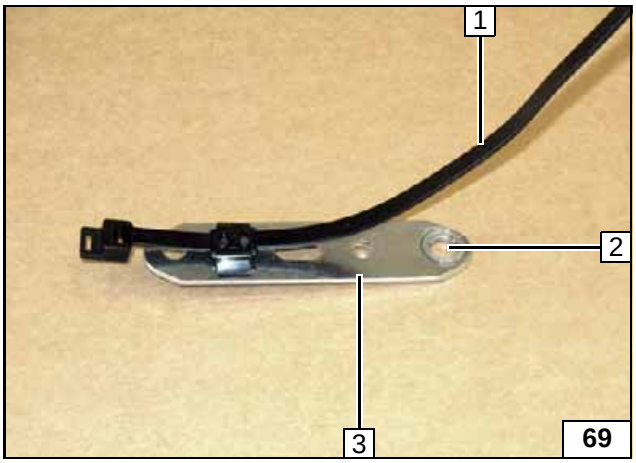
1 Hose on heat exchanger inlet

Connecting heat exchanger inlet



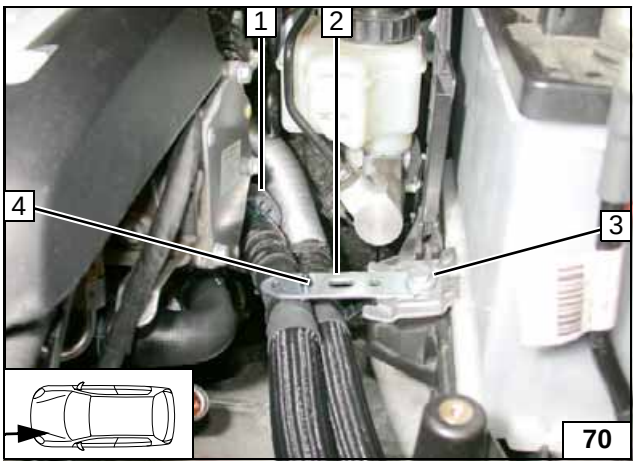
1 Close clip-type cable tie [3x]

Routing in engine compartment



Drill out hole at position **2** to 8.5 mm dia. Insert clip-type cable tie **1** in existing hole of perforated bracket **3**.

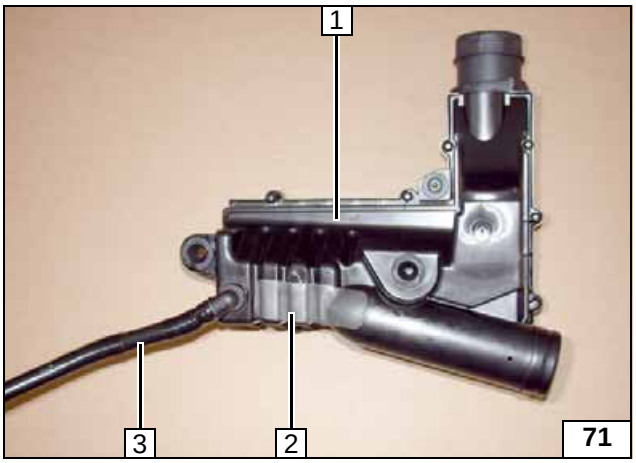
Preparing perforated bracket



Ensure sufficient spacing to neighbouring components, and especially freedom of movement of shifting actuation; correct if necessary.

1 Position black (sw) rubber isolator
2 Perforated bracket
3 Original vehicle bolt
4 Clip-type cable tie

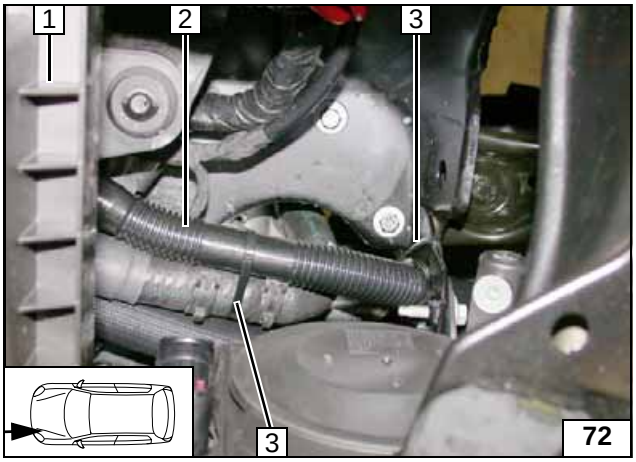
Fastening in engine compartment



All 1.8 TSI

1 Air filter box
2 Glue on rub protection
3 Drain pipe

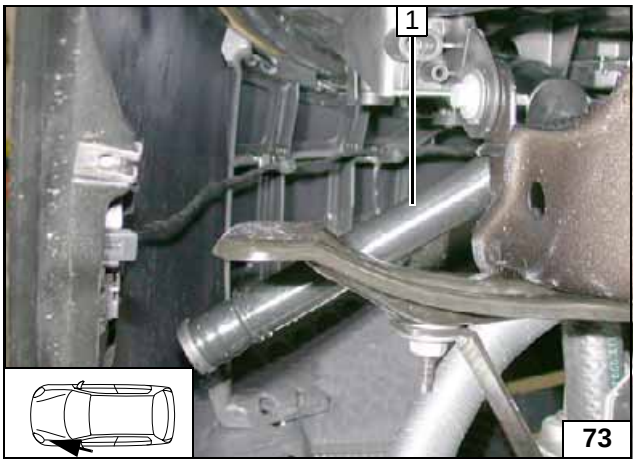
Preparing air filter box



Install air filter box **1**.

2 Align drain pipe
3 Cable tie [2x]

Fastening drain pipe



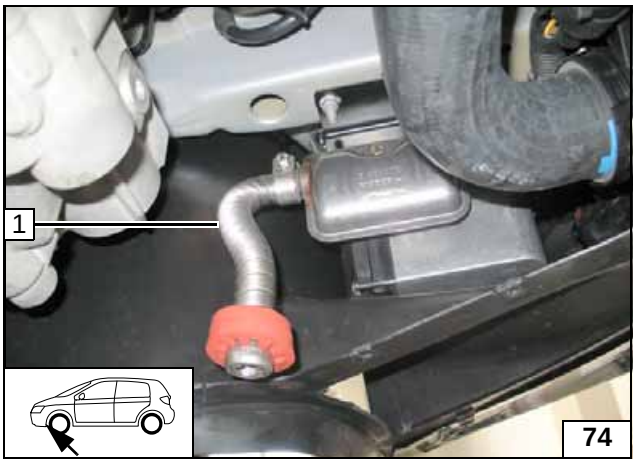
1 Align drain pipe

Routing drain pipe

Exhaust gas

Exhaust connection is dependent on respective vehicle equipment!

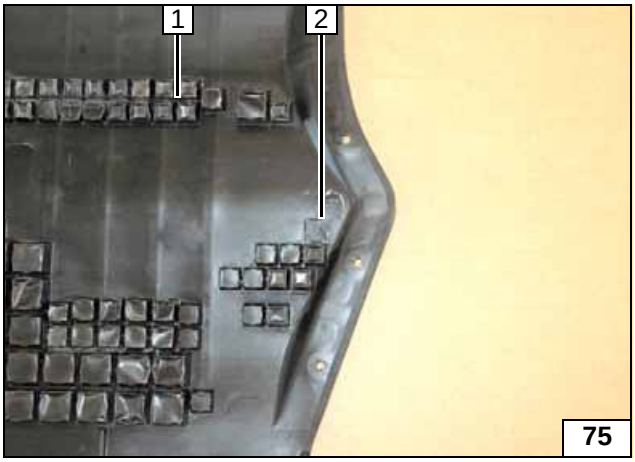
Version 1:



1 Exhaust end section

Aligning exhaust end section

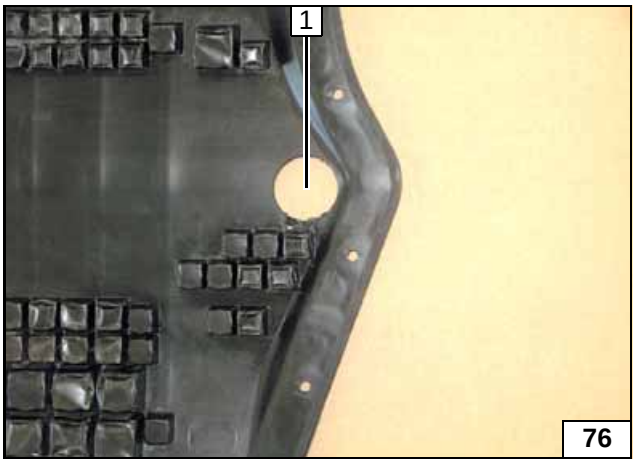
Cut away insulation (if available) in area of hole **2**.



1 Underride protection

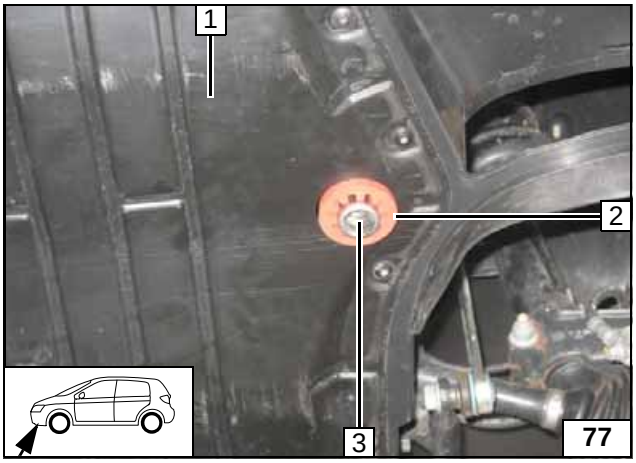
Cutting away insulation

1 42 mm dia. hole



Cutting out underride protection

Align exhaust end section **3** flush on red rubber isolator **2**.



1 Underride protection

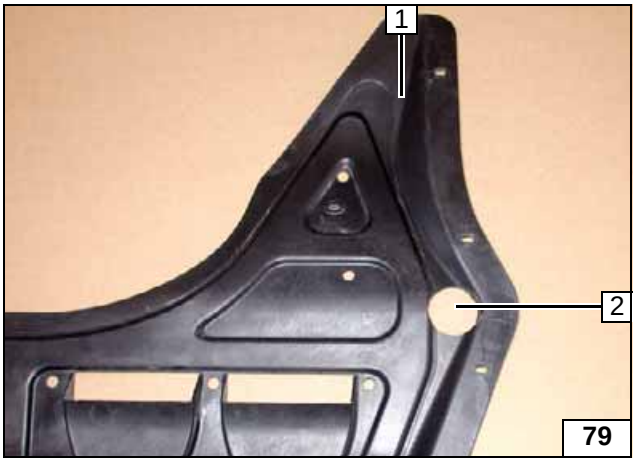
Mounting rubber isolator



Version 2:

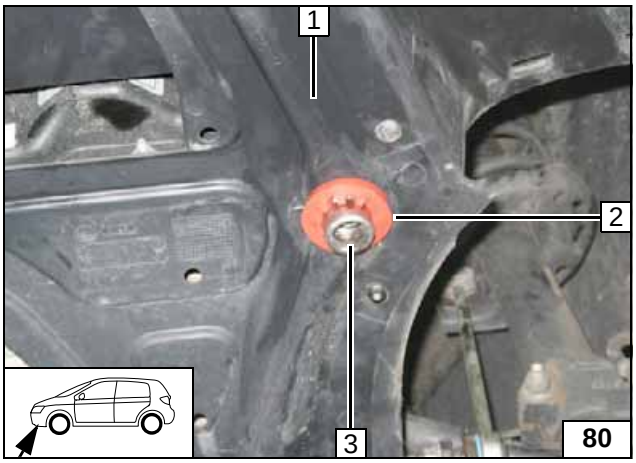
1 Exhaust end section

Aligning exhaust end section



1 Underride protection
2 42 mm dia. hole

Cutting out underride protection



Align exhaust end section **3** flush on red rubber isolator **2**.

1 Underride protection

Mounting rubber isolator

Final Work

WARNING!
Reassemble the disassembled components in reverse order.
Check all hoses, clamps and all electrical connections for firm seating.
Secure all loose cables using cable ties.
Only use manufacturer-approved coolant.
Spray the heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- Connect the battery
- Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.
- Adjust digital timer, learn Telestart
- Make settings on A/C control panel according to the "Operating Instructions for End Customer".
- Place instruction signboard "Switch off parking heater before refuelling" in the area of the filling connection pieces
- Check the proper operation of the parking heater, see the operating instructions/installation instructions.

Adjust the sensitivity of the passenger compartment monitoring

WARNING!
Observe the applicable repair manual of the respective vehicle.
The adjustment of the sensitivity of the passenger compartment monitoring from model year 2010 was not checked!

- Connect the VAS tester.
- Open Item 45 (Central Module of Comfort System)
- Go to Item 12 (Adjustment)
- Select adjustment duct 15
- Reduce the sensitivity of the passenger compartment monitoring to 50 %
- Save this setting

Webasto
Feel the drive

Webasto AG
Postfach 80
D-82131 Stockdorf / Germany
National Hotline: 01805 93 22 78
(14 Cent aus dem deutschen Festnetz)
Hotfax: 0395 5592 353

Operating Instructions for End Customer

Please remove page and add to the vehicle operating instructions.

To ensure proper operation of the parking heater, the fuel level in the tank must be above the "Reserve" level.

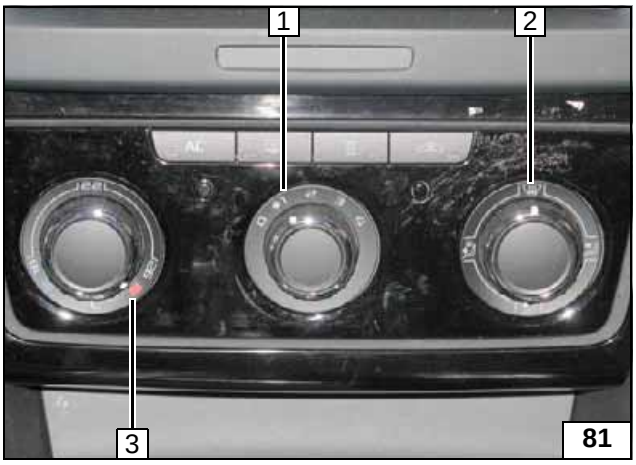
Note:
We recommend matching the heating time to the driving time.
Heating time = driving time
Example:
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

The sensitivity of the passenger compartment monitoring has been reduced up to model year 2009. For vehicles with passenger compartment monitoring , this is to be deactivated in addition to the vehicle settings of the heating operation from model year 2010.
For information on deactivation, please see the vehicle owner's manual.

If the summer/winter switch option has been installed, this must be switched in accordance with the time of year. The heater will then only switch on the vehicle fan to ventilate the vehicle interior in the position Winter heat and in the position Summer .

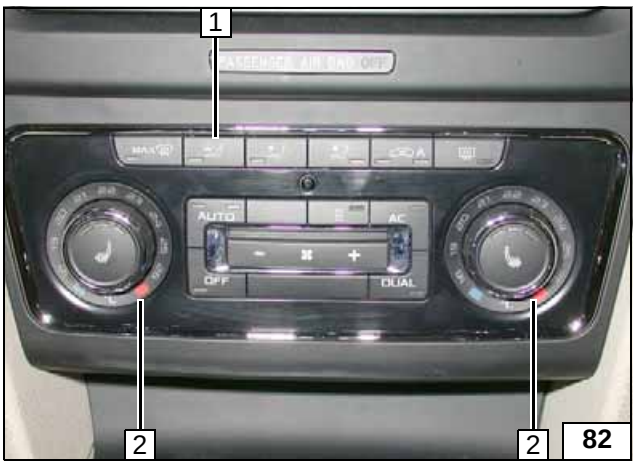
Before parking the vehicle, make the following settings:

Climatic



1 Set fan to level "1", or possibly "2"
2 Direct air outlet toward windshield
3 Set temperature to "max."

Climatron-ic



1 Direct air outlet toward windshield
2 Set temperature on both sides to "max.".