Water Heater

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

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

Installation documentation

Audi A3

1.2 and 1.4 TFSI
from model year 2008
Left-hand drive vehicle
1.2 TFSI automatic transmission not checked!

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.

The initial startup is to be executed with the Webasto Thermo Test Diagnosis. See section "Final Work".

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

Table of Contents

Validity

Manufacturer	Model	Type	EG-BE No./ABE
Audi	A3	8P	e1 * 2001/116 * 0217 * ...

Engine type	Engine model	Output in kW	Displacement in cm³
CBZB	Petrol TFSI	77	1197
CAXC	Petrol TFSI	92	1390

Vehicle and engine types, equipment variants and national specifications not listed in this installation documentation 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 for *Thermo Top E / C*	See price list
1	Installation kit for Audi A3 1.2 and 1.4 TFSI	1313621B
1	Heater control	See price list

Heater recommended for the respective vehicle class:

Vehicle	Heater
Compact car	Thermo Top E
Mid-size car, estate car	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 Audi A3 1.2 and 1.4 TFSI vehicles - 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 the "installation documentation", the "operating instructions" and "installation instructions" for the *Thermo Top C/E* must always be observed.
The corresponding rules of technology and any information from the vehicle manufacturer should be observed during the installation work.
When installing an IPCU, the appropriate settings must be checked and set prior to the installation.

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 rub protection (split-open fuel hose).
Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).

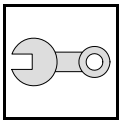
Special Tools

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

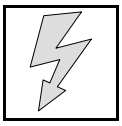
Explanatory Notes on Document

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

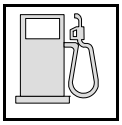


Electrical system



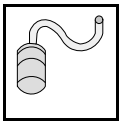
Coolant circuit

Fuel



Exhaust gas

Combustion air



Special features are highlighted using the following symbols:

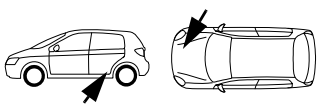
Specific risk of injury or fatal accidents.

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.

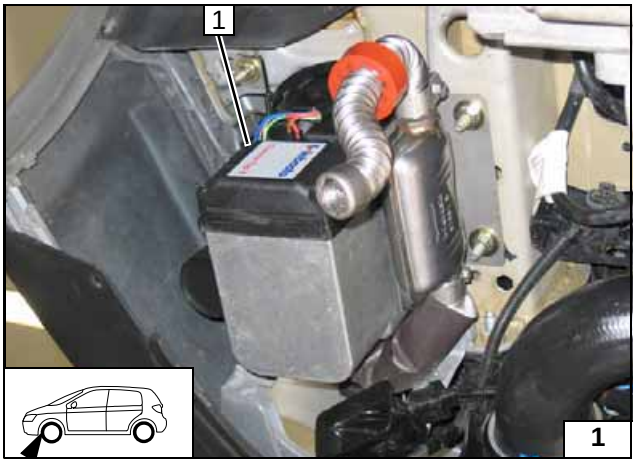
All dimensions are in mm!
Tightening torque of hose clamps = 2.0 + 0.5 Nm!
Tightening torque of Ejot screws, Ejot studs = 10 Nm!

Preliminary Work

Warning!

- Open the fuel tank cap, ventilate the tank.
- Close the fuel tank cap again.
- Depressurise 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.
- Disconnect the battery "earth" or "ground" connection.
- Remove the air filter box
- Remove the battery
- Remove the battery carrier.
- Remove the left front wheel
- Remove the front section of the left front wheel well trim
- Remove the underride protection.
- Remove the right-hand underbody trim
- Remove the rear bench seat
- Open the right-hand tank-fitting service lid.
- Remove the footwell trim on the driver's side
- Remove the lower instrument panel trim on the driver's side
- Only with Climatronic: remove the A/C control panel.

Remove page 31 "Operating Instructions for End Customer" and add to the vehicle operating instructions.



Heater installation location

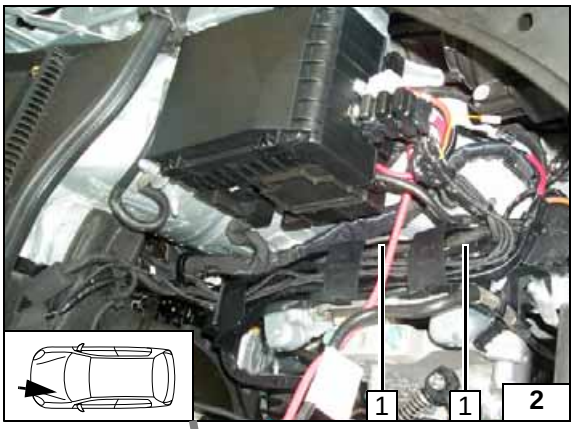
1 Heater

Installation location

Electrical system

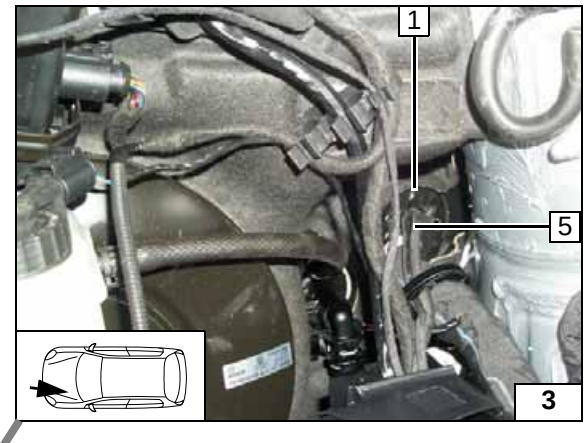
Wiring harness routing

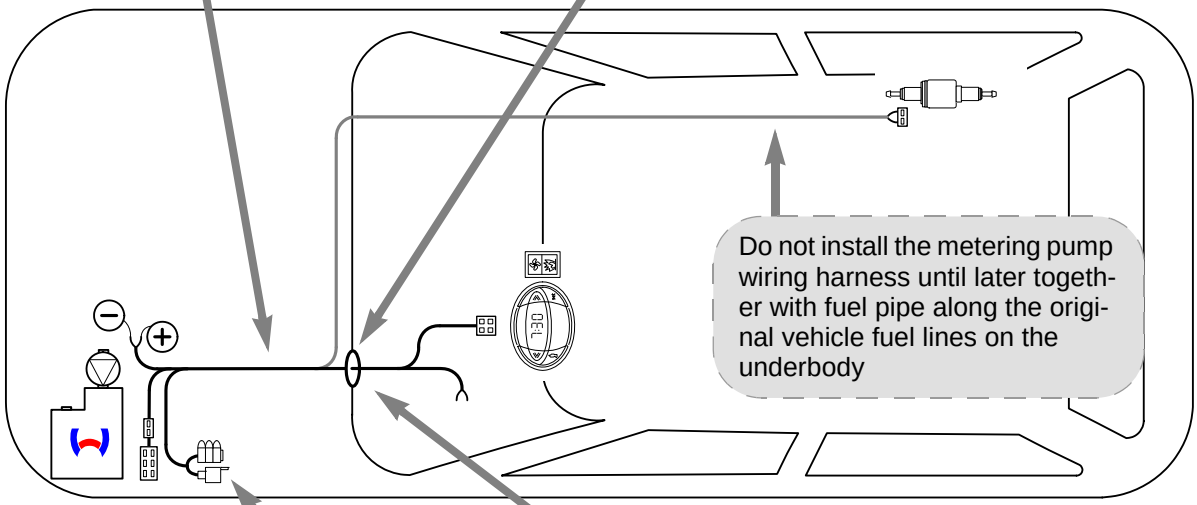
Route excess lengths from wiring harness of heater **1** in cable duct below battery and secure with cable ties.



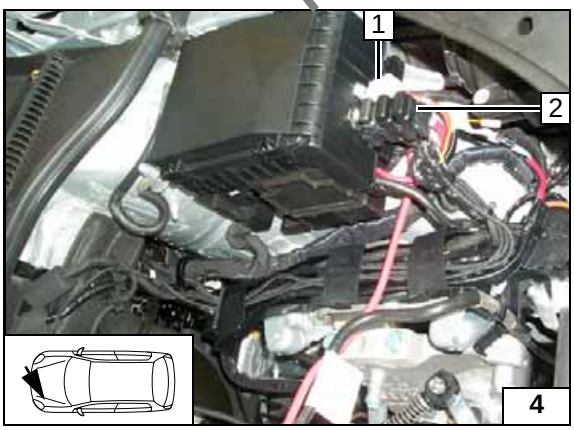
Wiring harness pass through in engine compartment

1 Original vehicle wiring harness pass through



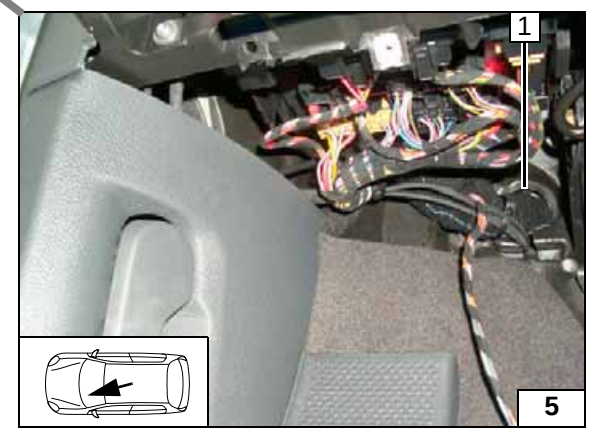


Wiring harness routing diagram



Fuse holder, K3 relay

Description of installation for K3 relay **1** and fuse carrier **2** on Page 7

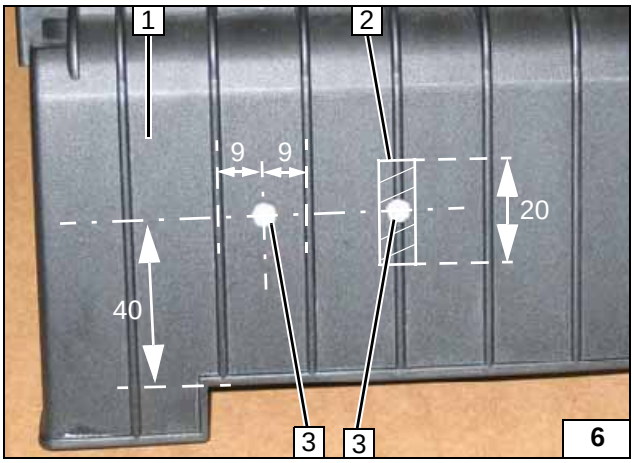


Wiring harness pass through of passenger compartment

1 Original vehicle wiring harness pass through

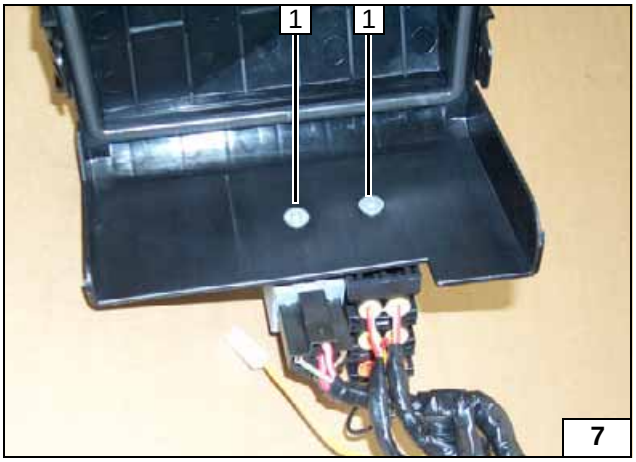
Fuse holder and K3 relay

Countersink holes **3** from behind for M5 countersunk head screws.



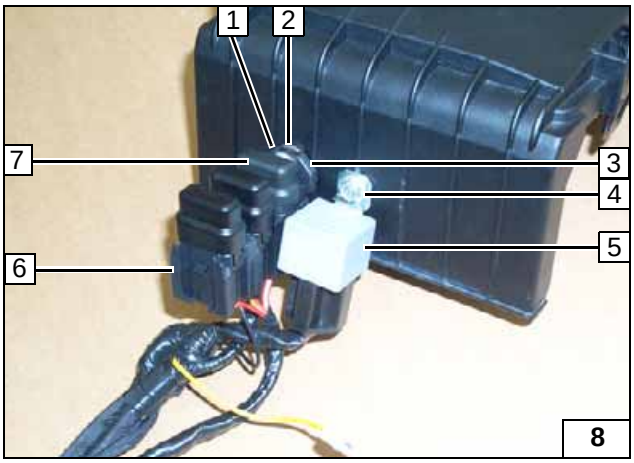
1 Cover of fuse/relay carrier in engine compartment
2 Cut away bar in shaded area
3 5.0 mm dia. hole [2x]

Holes for fuse holder and K3 relay



1 M5x12 countersunk head screw [2x]

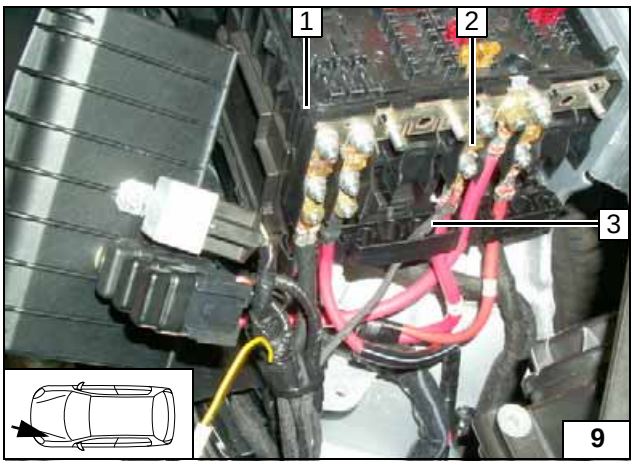
Installing fuse holder and K3 relay



On vehicles with Climatronic, replace 25 A fuse F3 **7** with 5 A fuse provided.

1 M5 flanged nut
2 Large diameter washer (between cover and retaining plate)
3 Retaining plate
4 M5 flanged nut
5 Relay K3
6 Fuse holder

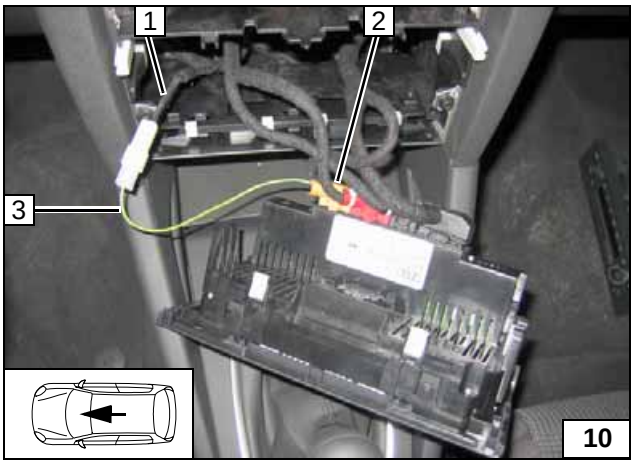
Installing fuse holder and K3 relay



Route brown (br) earth wire to original vehicle earth support point below headlight and connect.

1 Fuse/relay carrier
2 Original main vehicle fuse
3 Red (rt) positive wire

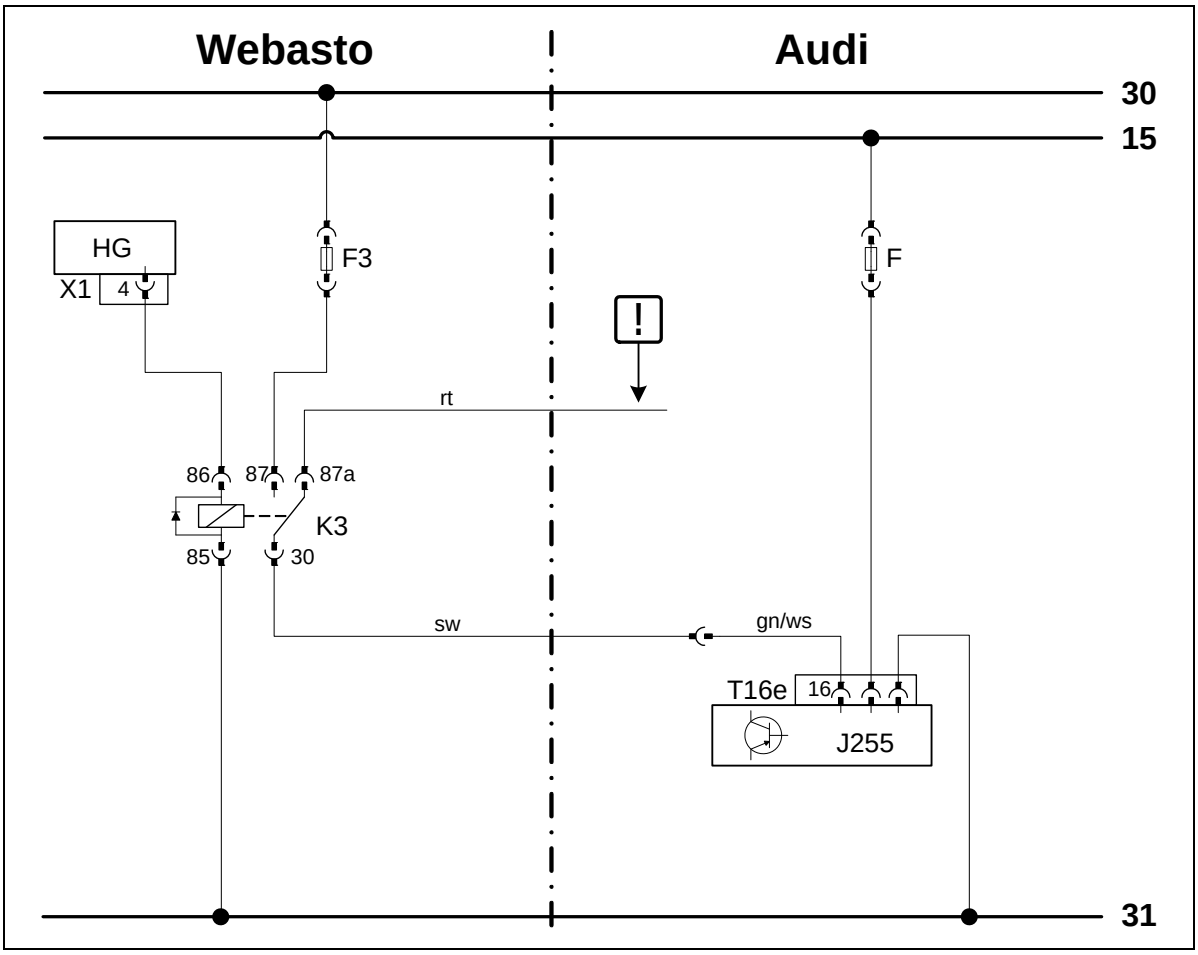
Connecting positive and earth wire



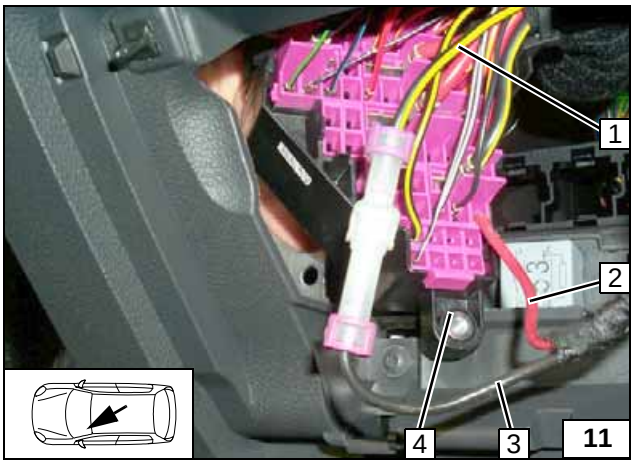
Climatronic fan control

Produce connection as shown in wiring diagram.

1 Black (sw) wire from K3/30
2 Beige connector T16e
3 Green/white (gn/ws) wire



Webasto components		Components of Audi A3		Colours and symbols	
HG	Heater TT-C/E	J255	Control unit of A/C control panel	rt	red
X1	6-pin connector	T16e	Connector, beige	ws	white
F3	Replace 25 A fuse F3 with 5 A fuse.			sw	black
				br	brown
K3	Fan relay			gn	green
				!	Insulate wire ends and tie back
				Wiring colours may vary.	



Climatic fan control

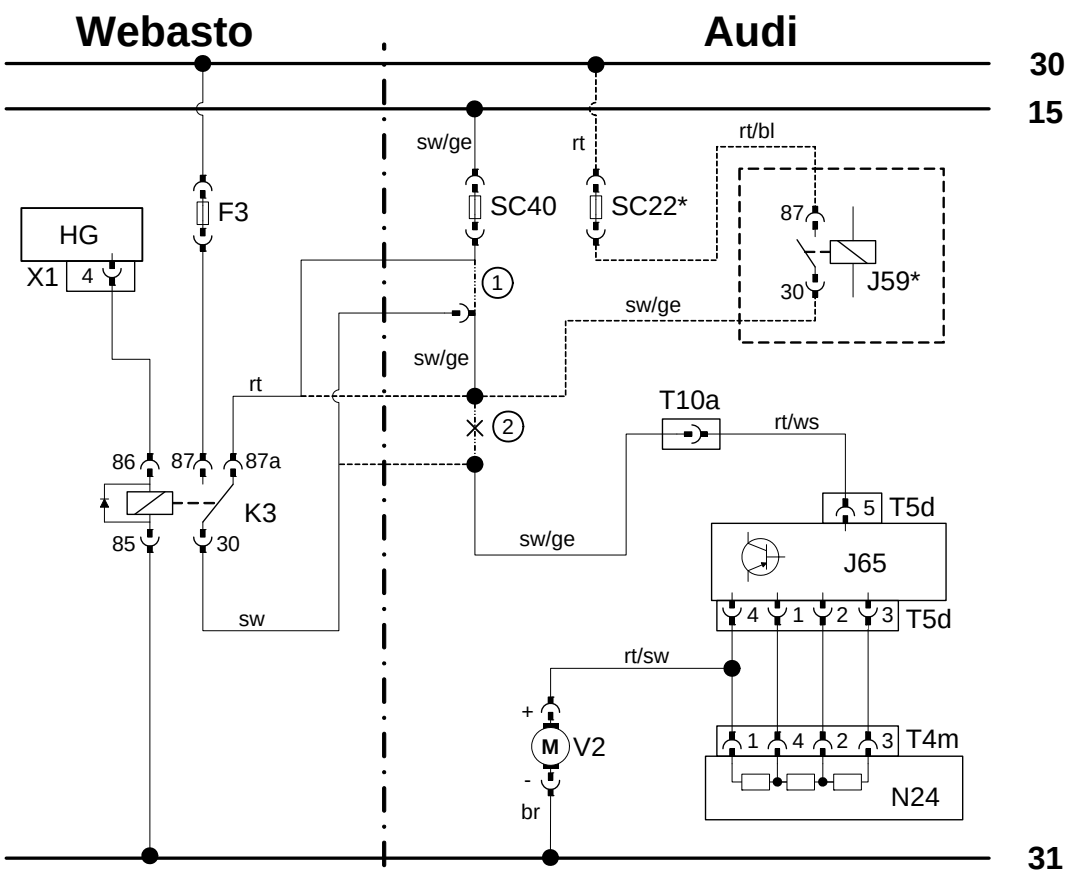
Detach vehicle fuse carrier **4** and unlock contact lock. Unlock and remove black/yellow (sw/ge) 4² wire **1** on fuse carrier. Produce connection as shown in wiring diagram - cutting point ①.

2 Red (rt) wire from K3/87a
3 Black (sw) wire from K3/30

For vehicles from model year 2008, cut black/yellow (sw/ge) 4² wire from relay J59 of connector T10a and connect red (rt) 4² K3/87a wire and black (sw) K3/30 wire (see Wiring Diagram dashed - cutting point ②). Alternative cutting point on connector T5d.

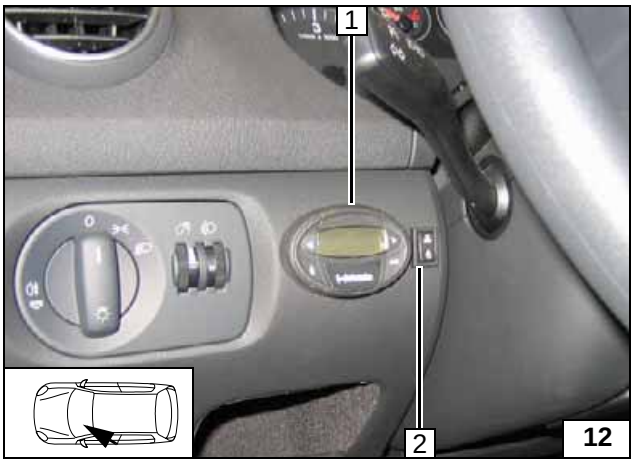
Fan motor connection

Climatic Wiring Diagram



Webasto components		Components of Audi A3		Colours and symbols	
HG	Heater TT-C/E	J65	Control unit of A/C control panel	rt	red
X1	6-pin connector	N24	Resistor group	ws	white
F3	25 A fuse F3	SC40	Fuse 40A	sw	black
K3	Fan relay	SC22*	40A fuse from Model Year 2008	br	brown
		J59*	Release relay	gn	green
		T....	Connector	ge	yellow
				*	from Model Year 2008
		T10a	10-pin connector behind glove compartment		
				Wiring colours may vary.	

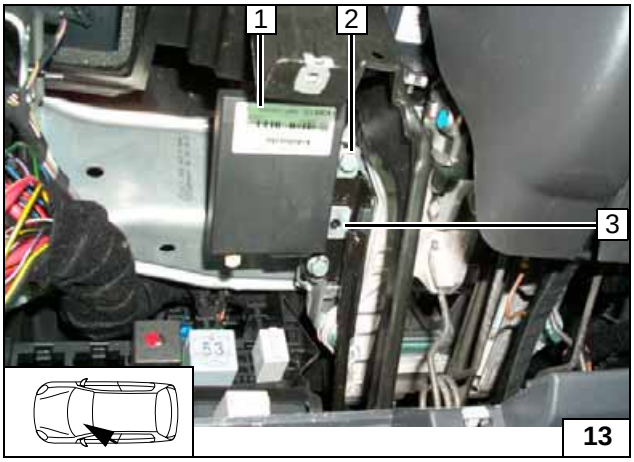
Legend



Digital timer
Summer/winter switch option

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

Installing digital timer

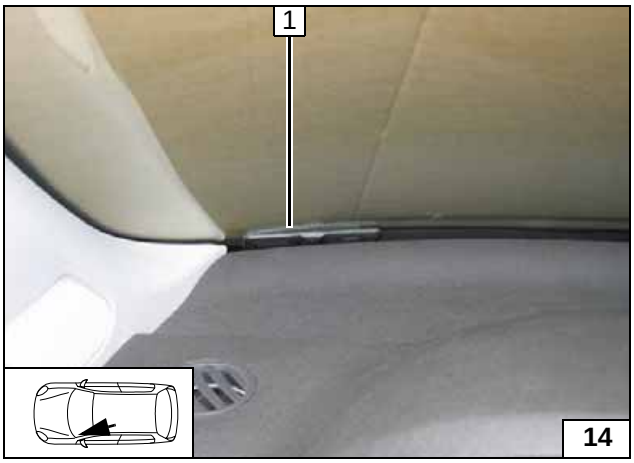


Remote option (Telestart)

If M6 bolt **2** is not present, then use suitable M6 bolt with spring lockwasher.
Drill out upper hole of bracket to 6.5 mm dia.

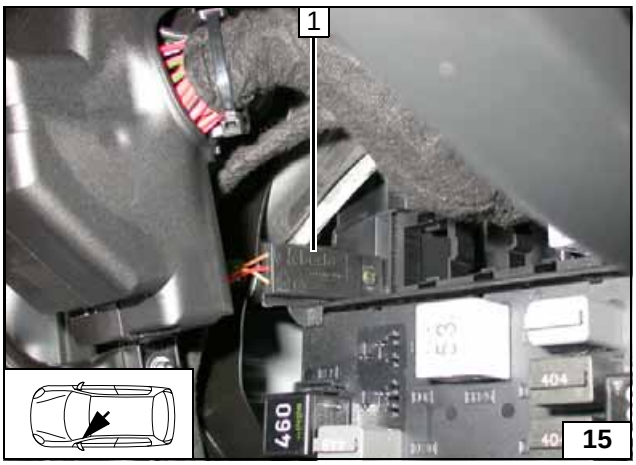
1 Receiver
2 M6 bolt in existing threaded hole
3 Bracket

Installing receiver



1 Antenna

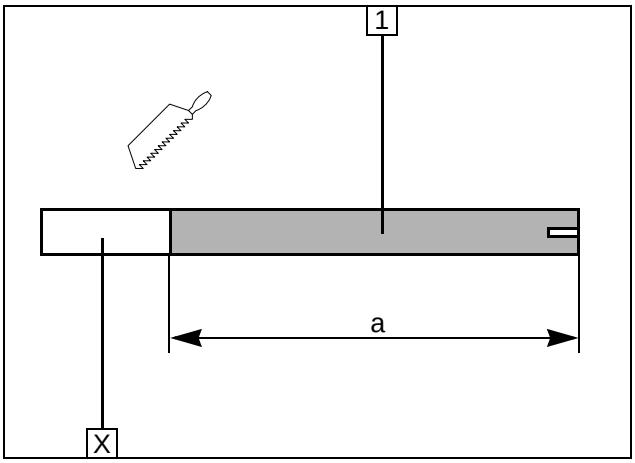
Installing antenna



Temperature sensor HTM100

1 Fasten temperature sensor with adhesive tape

Installing temperature sensor

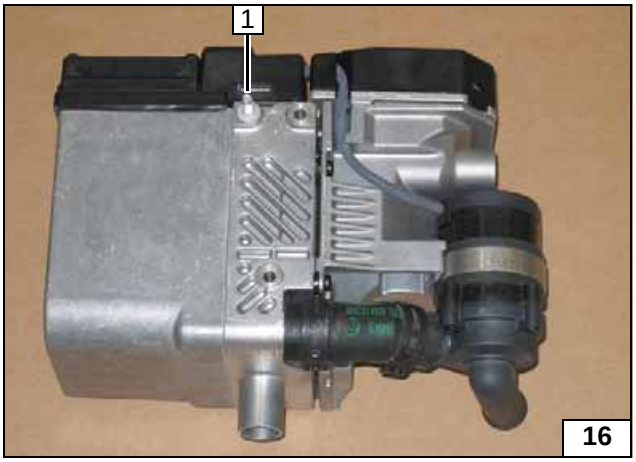


Premounting heater

1 Combustion air pipe
a = 250

Discard section **X**

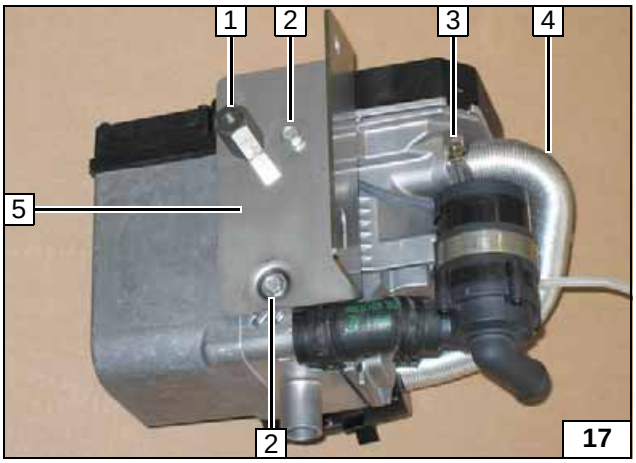
Cutting combustion air pipe to length



Ejot stud, tightening torque 10 Nm.

1 Ejot stud

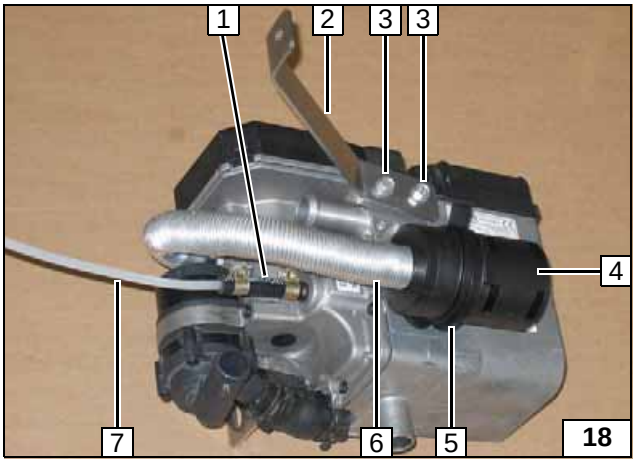
Premounting heater



Insert one washer each between heater and bracket at positions **2**

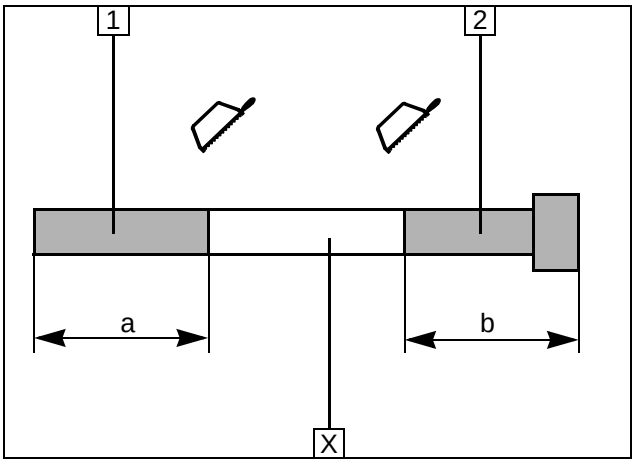
1 M6x30 spacer nut
2 Washer, Ejot screw [2x]
3 27 mm dia. clamp
4 Prepared combustion air pipe (slotted side on heater)
5 Bracket

Premounting heater



1 Hose section, 10 mm dia. clamp [2x]
2 Strut
3 Ejot screw [2x]
4 Combustion-air intake silencer
5 Retaining clip in hole of heater
6 Combustion air pipe
7 Fuel line

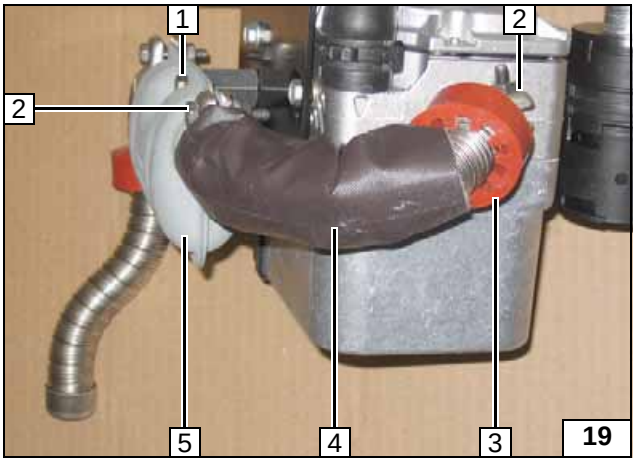
Premounting heater



1 Exhaust pipe
a = 190
2 Exhaust end section
b = 240

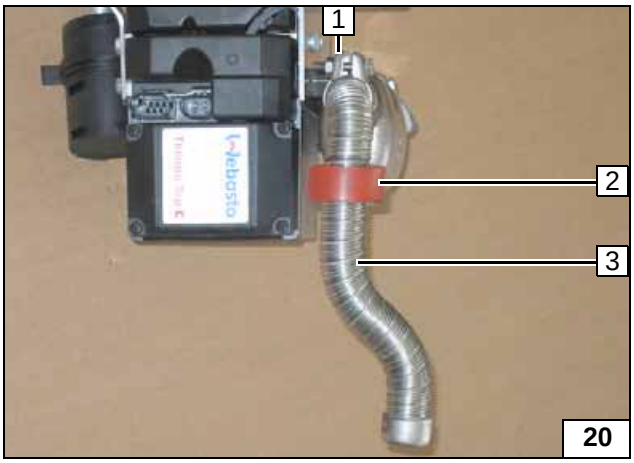
Discard section **X**

Cutting exhaust pipe to length



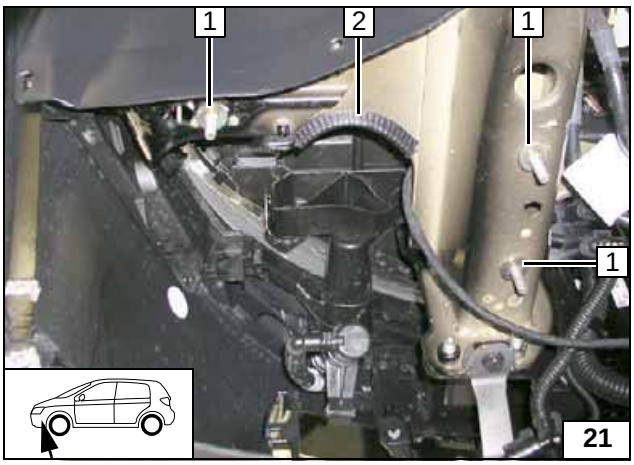
1 M6x16 bolt, spring lockwasher
2 Hose clamp [2x]
3 Red (rt) rubber isolator, without groove
4 Exhaust pipe with insulation
5 Silencer

Premounting exhaust system



1 Hose clamp
2 Red rubber isolator, without groove
3 Exhaust end section

Premounting exhaust system

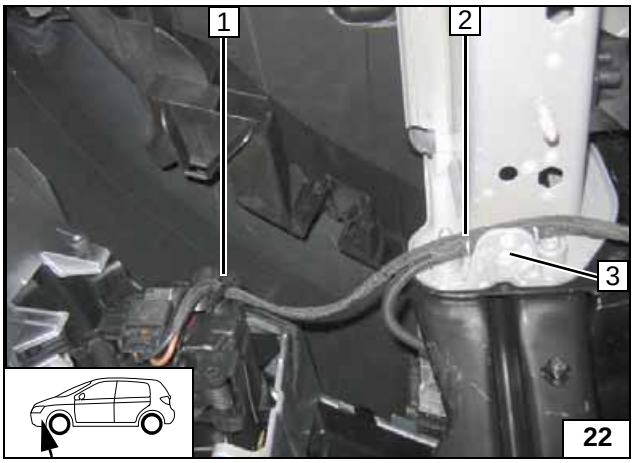


Preparing installation location

Secure large diameter washer against falling with putty etc.

1 Large diameter washer on original vehicle stud bolt [3x]
2 Edge protection section

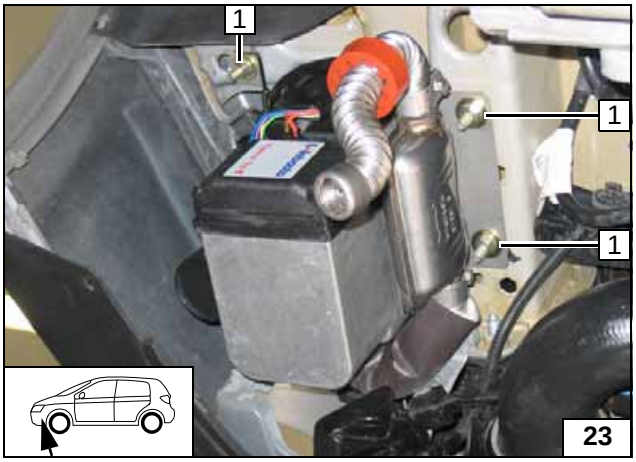
Preparing installation location



In vehicles as shown, remove the retaining clip from original vehicle wiring harness **2** on position **3** and reinsert from the top.

1 Cable tie

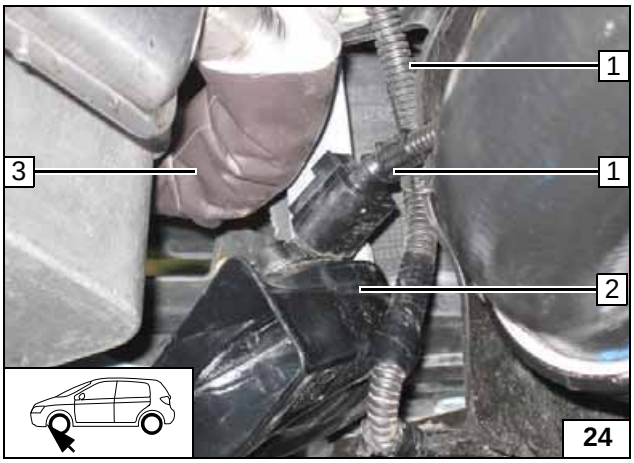
Routing wiring harness



Installing heater

1 Large diameter washer, flanged nut M8 [3x]

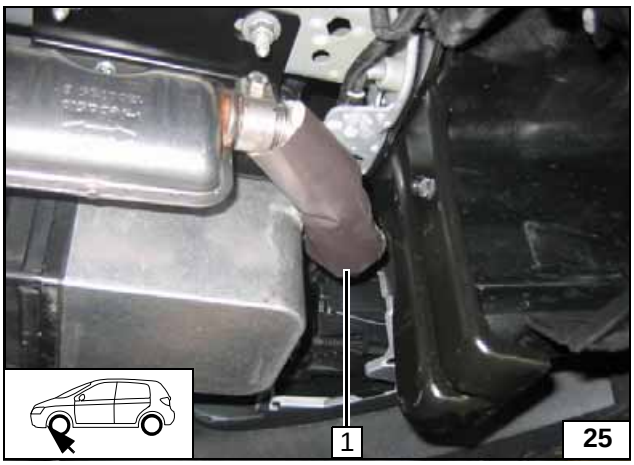
Installing heater



The wiring harnesses **1** in vehicles must be attached with cable ties as shown.
Ensure freedom of movement of exhaust pipe **3** relative to original vehicle components and lines.

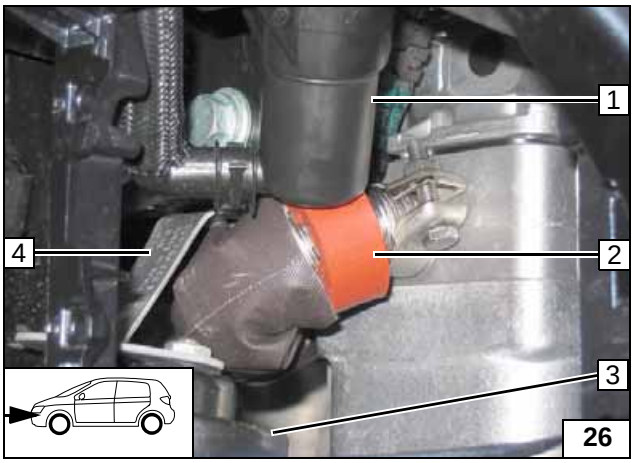
2 Horn

Aligning exhaust system



Align the exhaust pipe **1** in vehicles as shown.
Ensure freedom of movement of original vehicle component and lines.

Aligning exhaust system

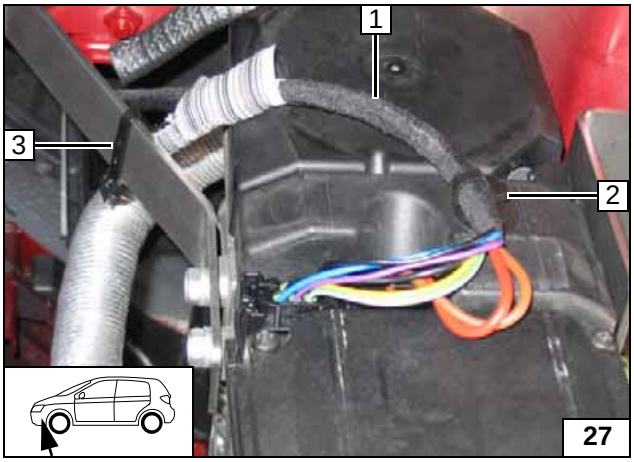


All vehicles

Ensure freedom of movement of exhaust system relative to original vehicle component and lines.
Position rubber isolator **2**.

1 Headlight washer system
3 Horn
4 Horn bracket

Aligning exhaust system



Punch through the perforation in the centre heater cover at position **2**.

1 Wiring harness of heater
2 Insert clip-type cable tie
3 Cable tie

Mounting and routing wiring harness

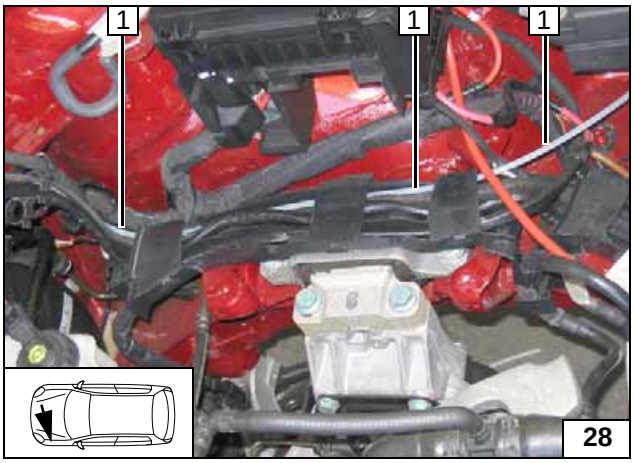
Fuel Connection

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.

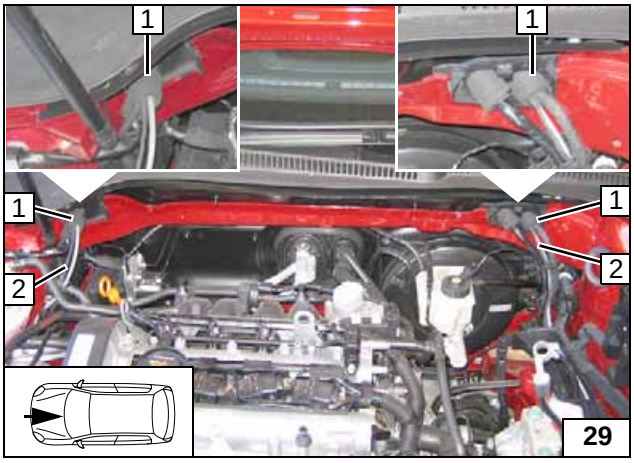
Install fuel line and metering pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.
Mount the fuel line and wiring harness with rub protection on sharp edges.

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



1 Fuel line

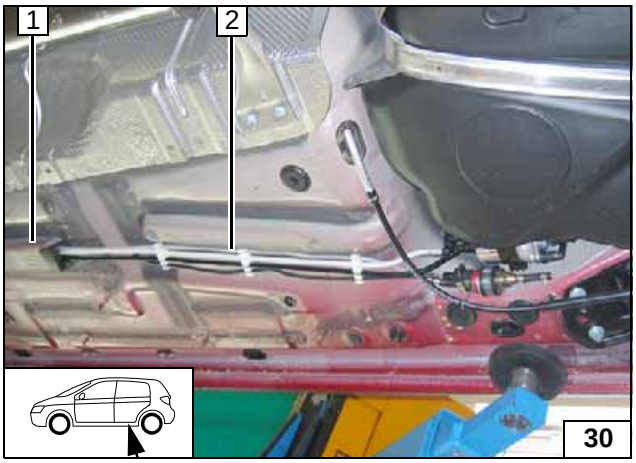
Routing to firewall



Route Mecanyl line and wiring harness of metering pump **2** in coolant reservoir to right and fasten on original vehicle lines with cable ties. Pay particular attention to freedom of movement of wiper linkage.
Route Mecanyl line and wiring harness of metering pump to underbody in wiring duct.

2 Existing pass through [2x]

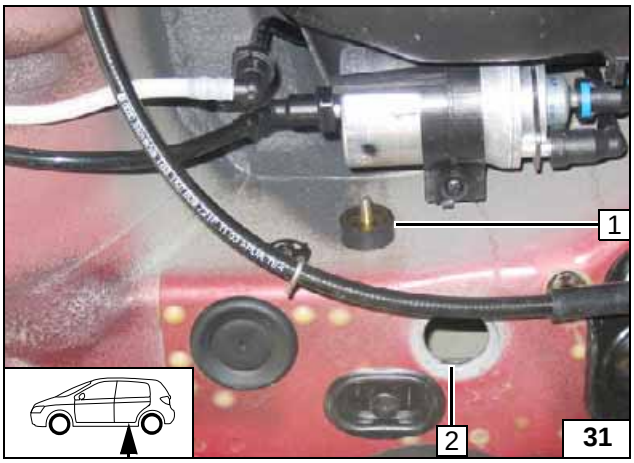
Routing in coolant reservoir



Route fuel line and wiring harness of metering pump along original vehicle fuel lines **2** to fuel tank.

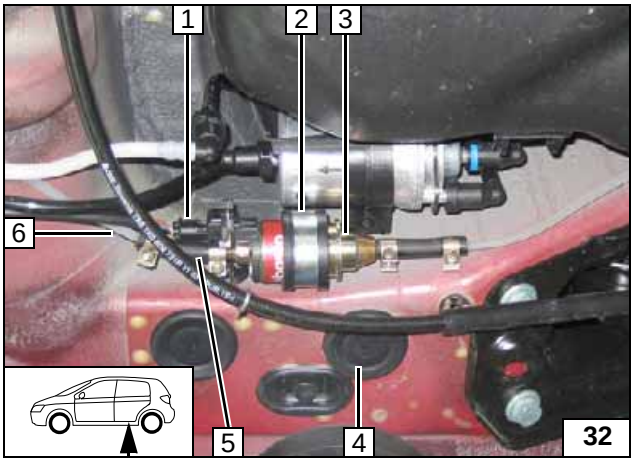
1 Line duct

Routing fuel line and wiring harness of metering pump



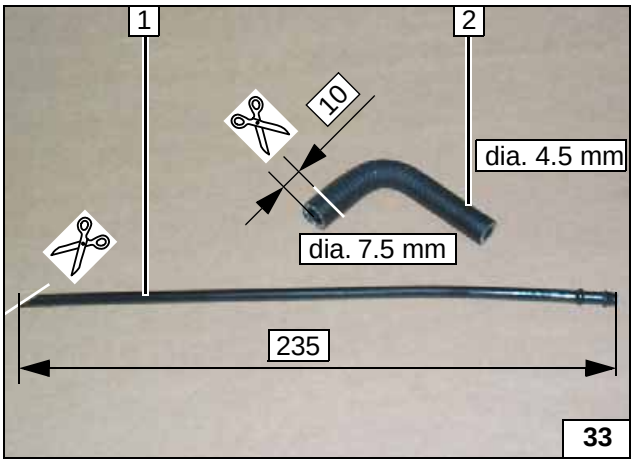
1 Silent block, large diameter washer, M6 flanged nut
2 Remove sealing plug

Installing silent block



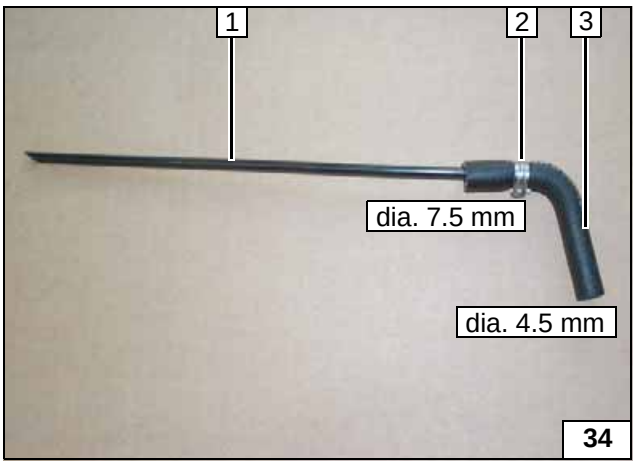
1 Wiring harness of metering pump, connector mounted
2 Secure rubber-coated p-clamp on silent block with flanged nut
3 Metering pump
4 Plug remounted
5 Hose section, 10 mm dia. clamp [2x]
6 Fuel line

Mounting metering pump and connecting pressure side



1 Standpipe
2 Moulded hose

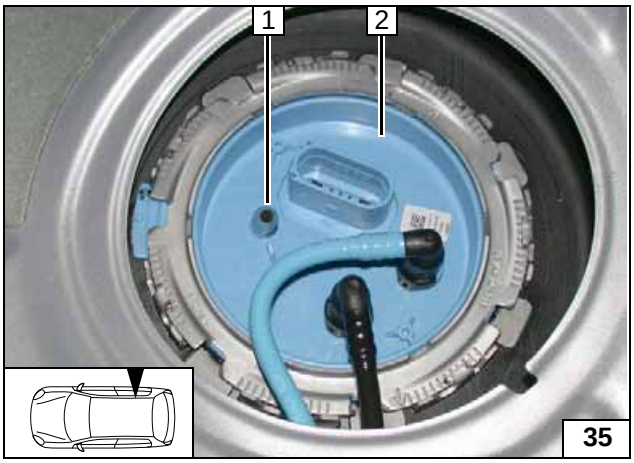
Cutting standpipe and moulded hose to length



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

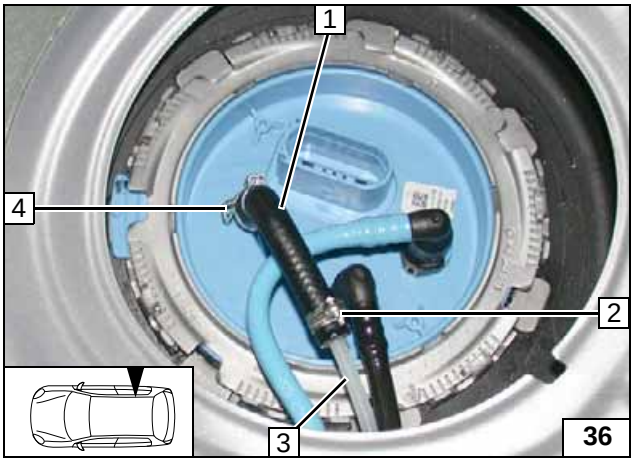
1 Standpipe
3 Moulded hose

Premounting standpipe and moulded hose



1 Tip of blind plug shortened by 3 mm
2 Fuel-tank sending unit

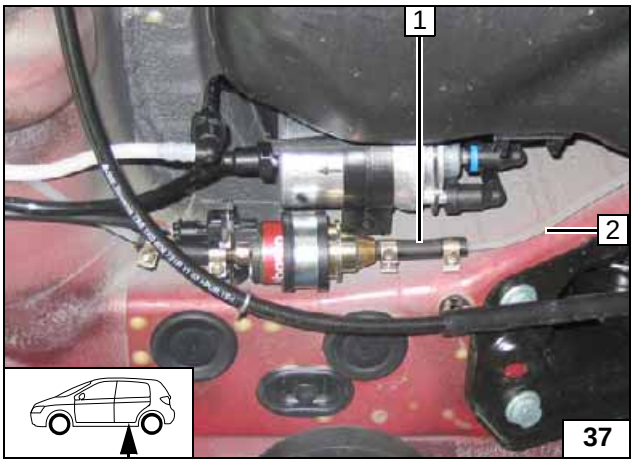
Cutting off blind plug



Should the standpipe be slightly curved on delivery, then it must be aligned so that the end points toward the rear right.
Otherwise there is a danger of the fuel gauge being impaired.

1 Premounted moulded hose with standpipe
2 10 mm dia. clamp
3 Fuel line
4 13.5 mm dia. clamp

Connection to fuel-tank sending unit



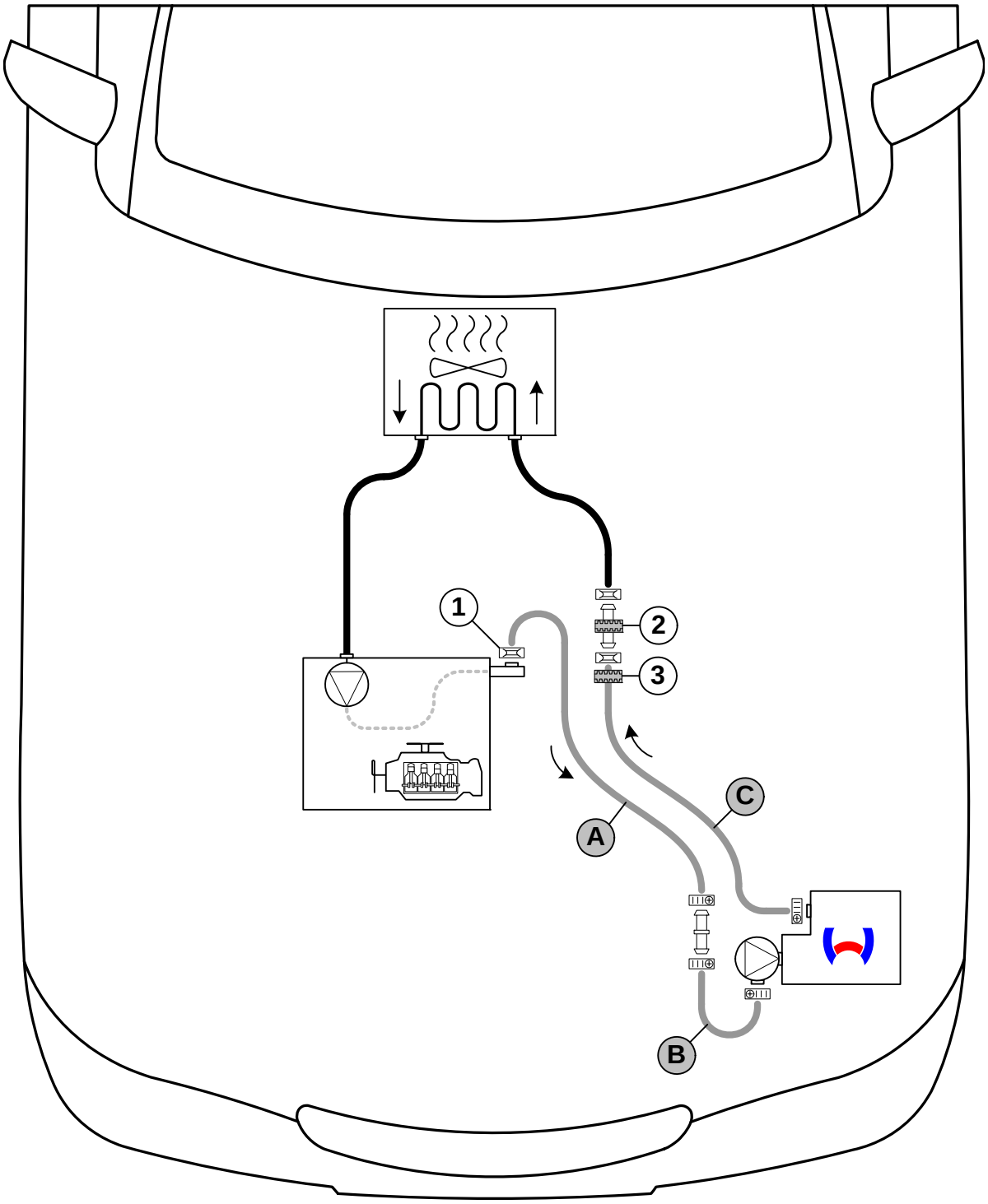
1 Hose section, 10 mm dia. clamp [2x]
2 Fuel line from fuel-tank sending unit

Connecting intake side of metering pump

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 other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.
The connection should be "inline" based on the following diagram:

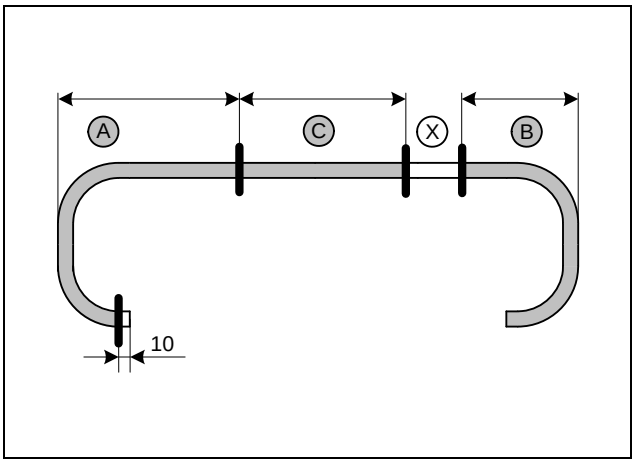
Hose installation diagram



All spring clips without a specific designation = 27 mm dia. **1** = Original vehicle spring clip . All hose clamps = 20-27 mm dia. All connecting pipes = 20x20 mm dia.
2 = Black (sw) rubber isolator (only for 1.2 manual transmission and 1.4 automatic transmission).
3 = Black (sw) rubber isolator (only for 1.4 manual transmission).

1.2 manual transmission

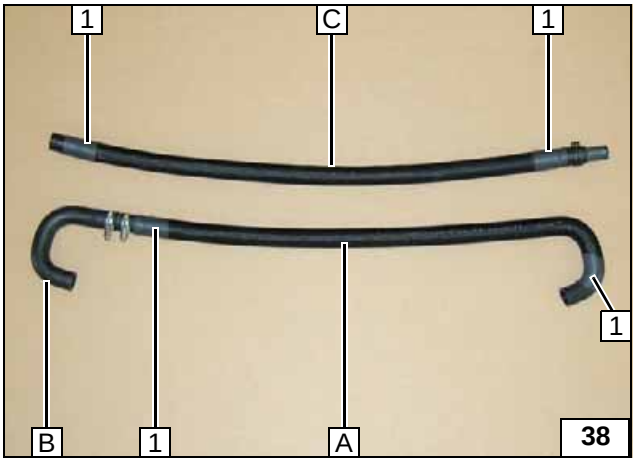
Cutting hoses to length



Discard section **X**.

A = 750
B = 120
C = 900

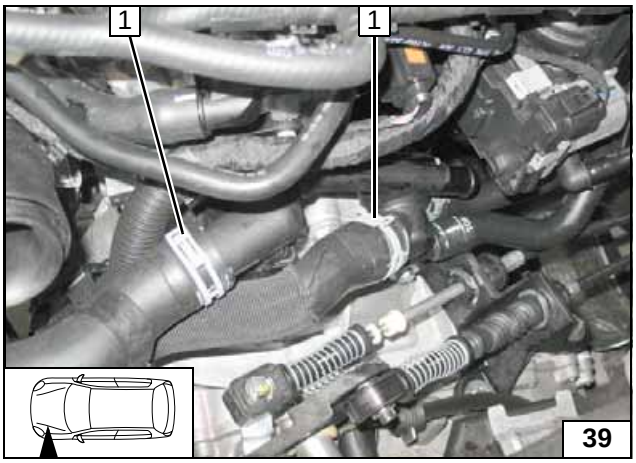
Premounting hoses



Push braided protection hoses onto hose **A** and **C**, cut to length and shrink.

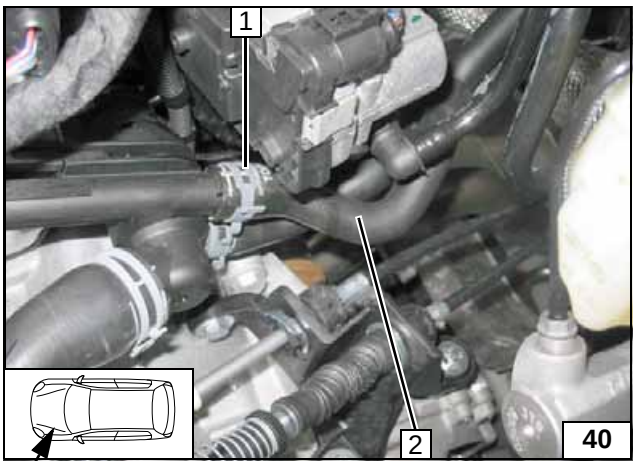
1 Heat shrink plastic tubing [4x]

Turning clamps

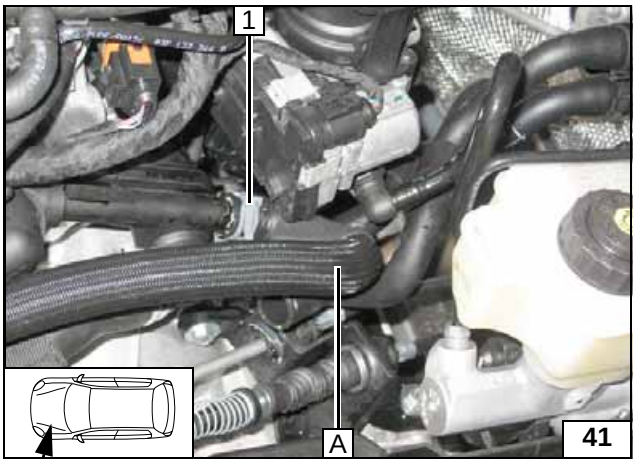


Turn clamp lock **1** toward engine [2x].

Cutting point



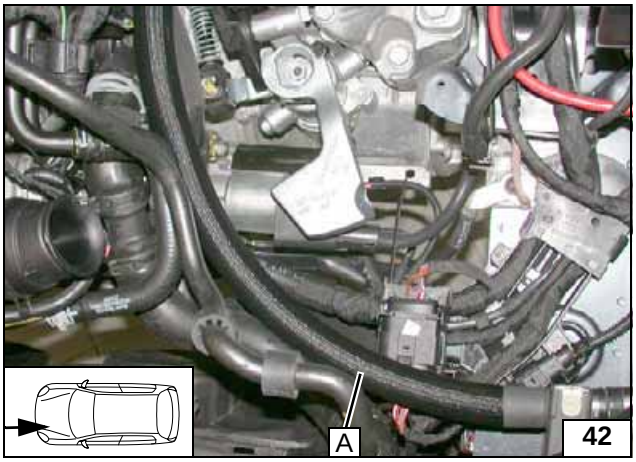
Disconnect hose to engine outlet/heat exchanger inlet **2** at connection piece of engine outlet. Spring clip **1** will be reused.



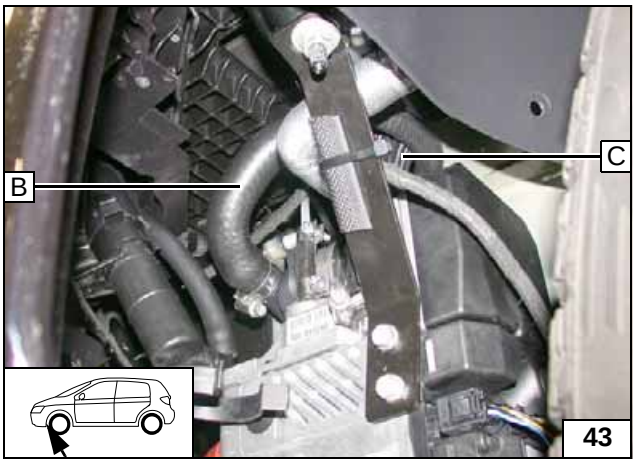
Install hose **A** on engine outlet connection piece with a 180° elbow.

1 Original vehicle spring clip

Connecting engine outlet

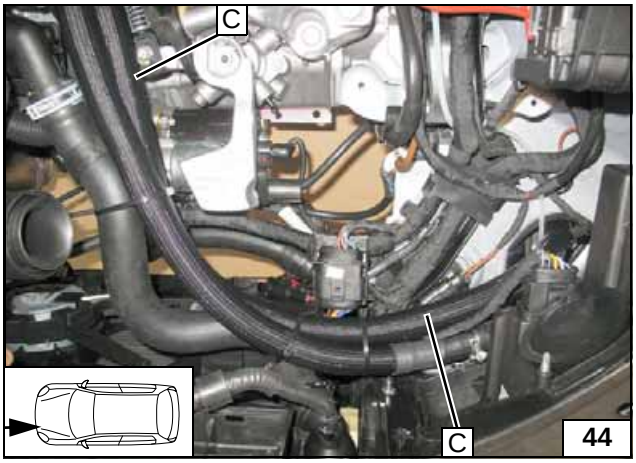


Routing in engine compartment

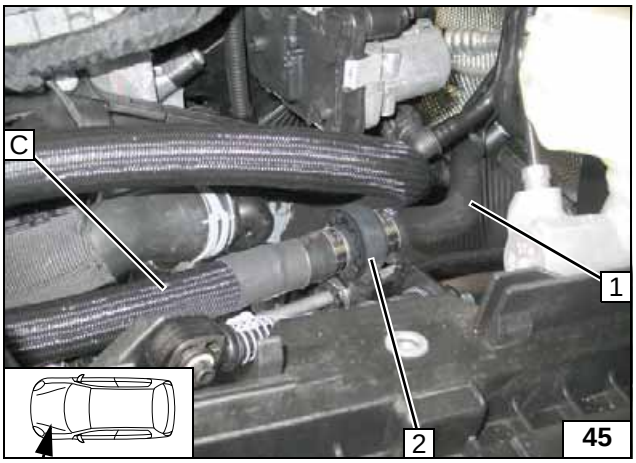


Combustion air silencer tied off for demonstration purposes.

Connecting heater



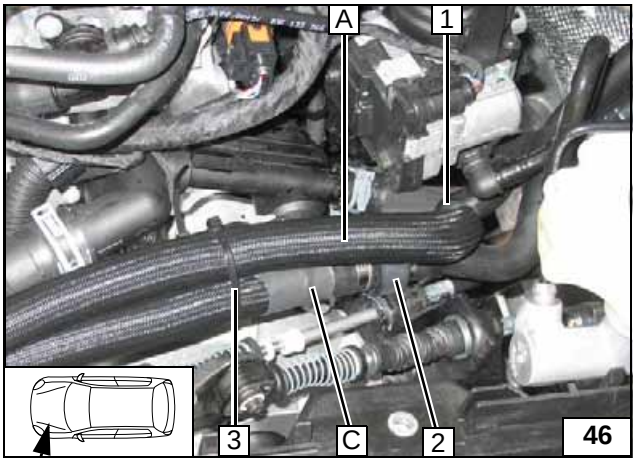
Routing in engine compartment



Install black (sw) rubber isolator **2** in the connecting point.

1 Hose on heat exchanger inlet

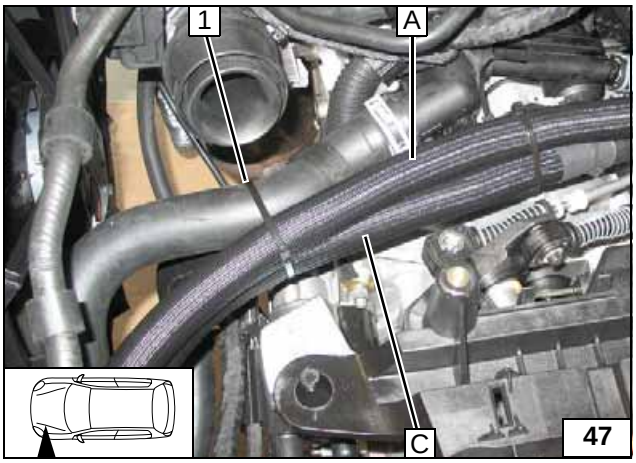
Connecting heat exchanger inlet



Align black (sw) rubber isolator **2** on the gear change bracket. Align hoses and attach to the original vehicle hose with cable tie **3**. Observe a sufficient distance to the adjacent components, especially to the gear change. Adjust, if necessary.

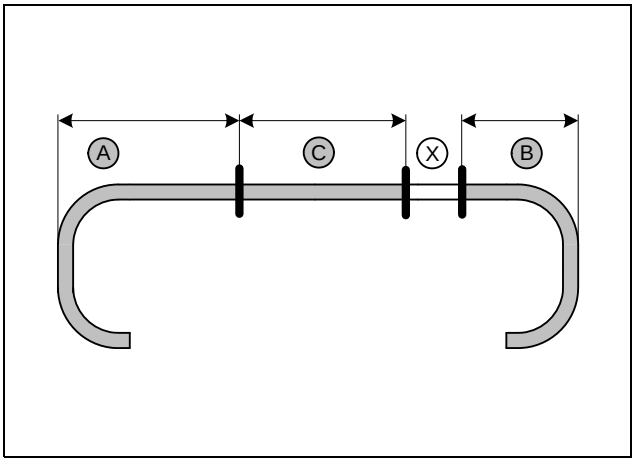
1 Cable tie

Fastening hoses



Align hoses and attach to the original vehicle hose with cable tie **1**.

Fastening hoses

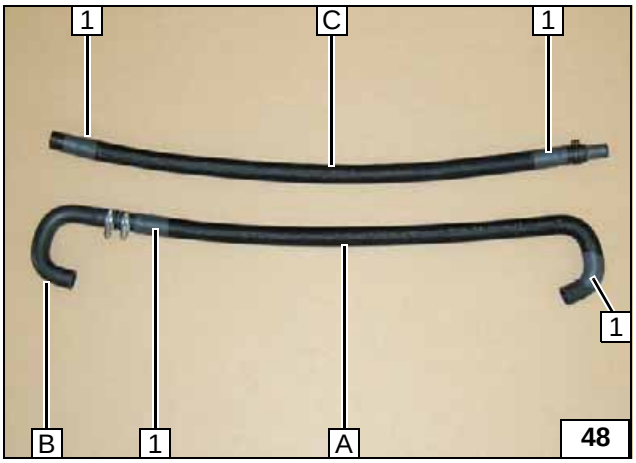


1.4 manual transmission

Discard section **X**.

A = 780
B = 120
C = 1000

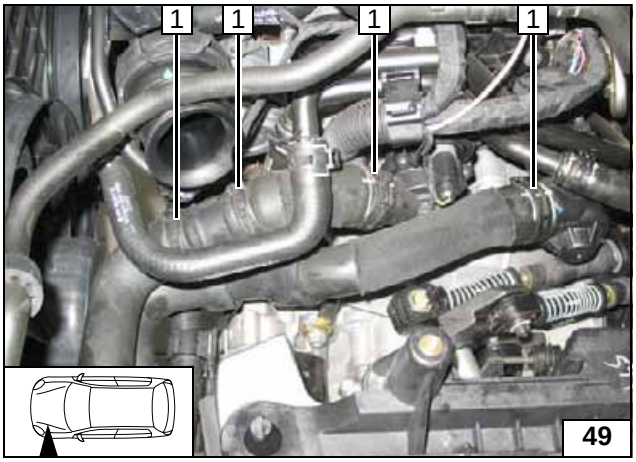
Cutting hoses to length



Push braided protection hoses onto hose **A** and **C**, cut to length and shrink.

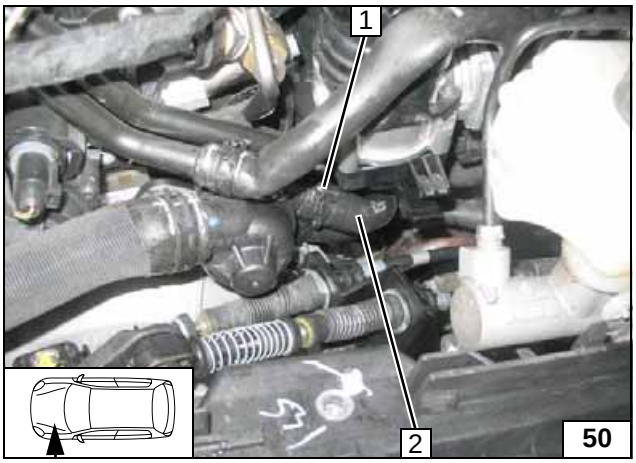
1 Heat shrink plastic tubing [4x]

Premounting hoses



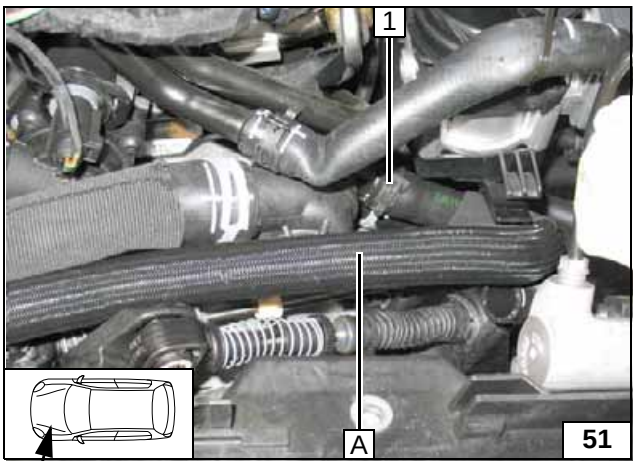
Turn clamp lock **1** toward engine [4x].

Turning clamps



Disconnect hose to engine outlet/heat exchanger inlet **2** at connection piece of engine outlet. Spring clip **1** will be reused.

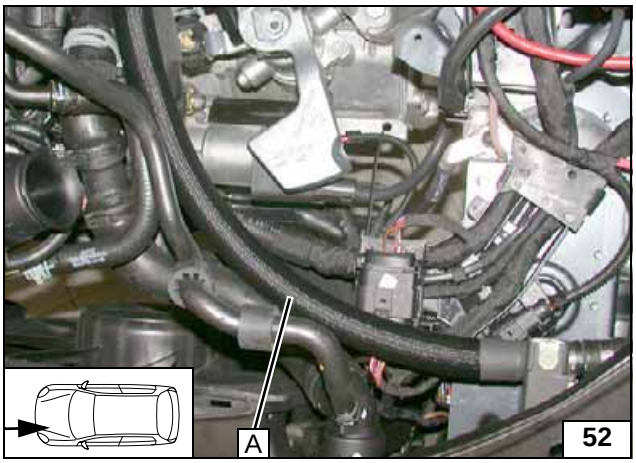
Cutting point



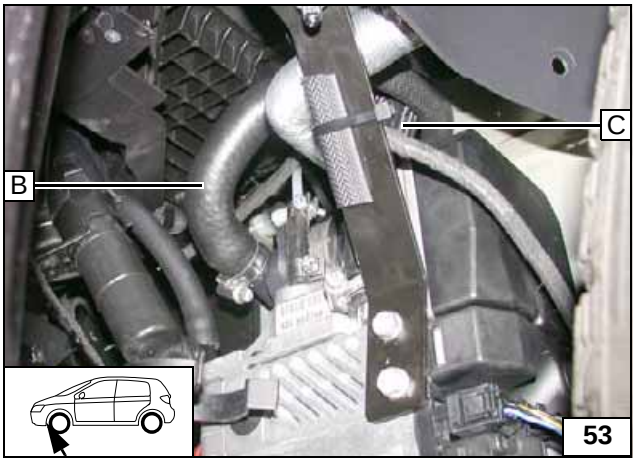
Install hose **A** on engine outlet connection piece with a 180° elbow.

1 Original vehicle spring clip

Connecting engine outlet

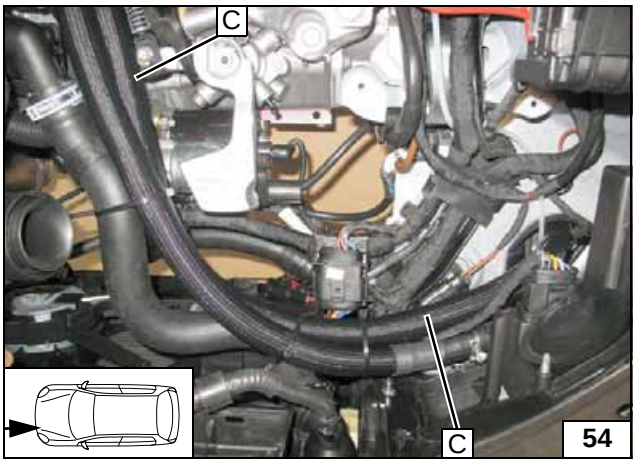


Routing in engine compartment

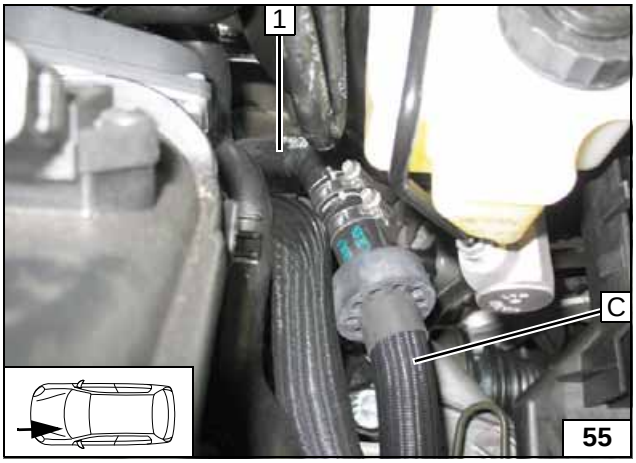


Combustion air silencer tied off for demonstration purposes.

Connecting heater

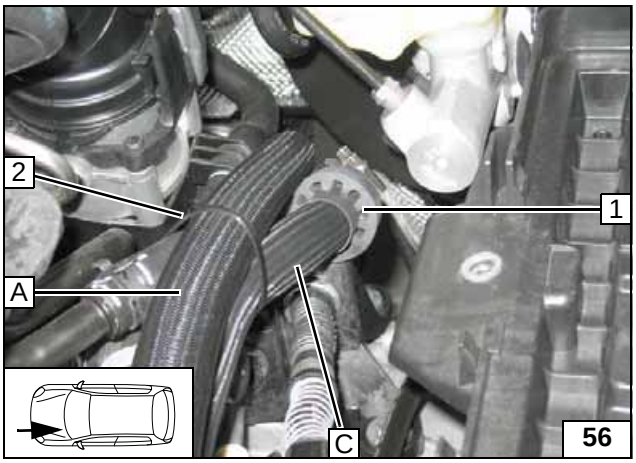


Routing in engine compartment



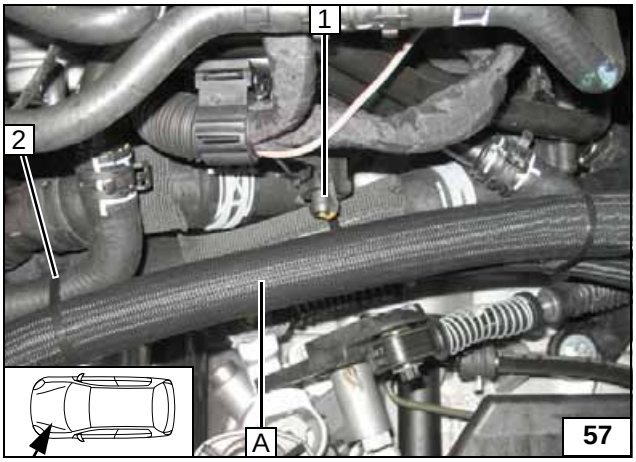
1 Hose on heat exchanger inlet
2 Original vehicle spring clip

Connecting heat exchanger inlet



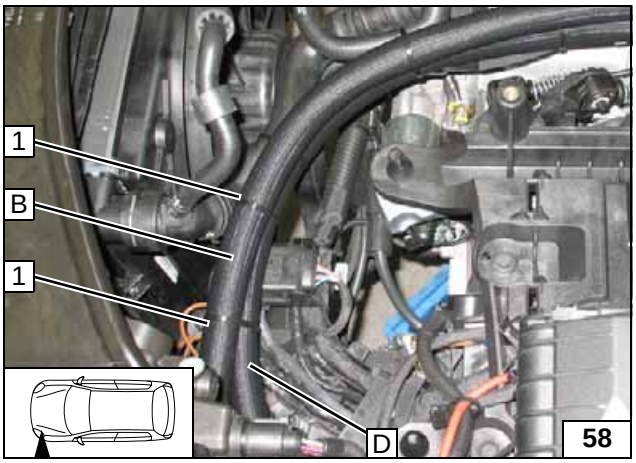
Align black (sw) rubber isolator **1** on the gear change bracket. Attach hose **A** and **C** to the original vehicle hose with cable tie **2**.

Routing in engine compartment



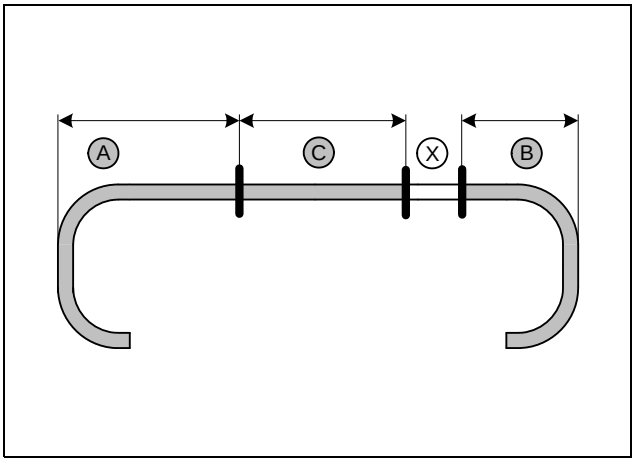
Align hoses and attach to the original vehicle hose with cable tie **2**. Observe sufficient distance to connector **1** , adjust if necessary.

Fastening hoses



1 Cable tie [2x]

Fastening hoses

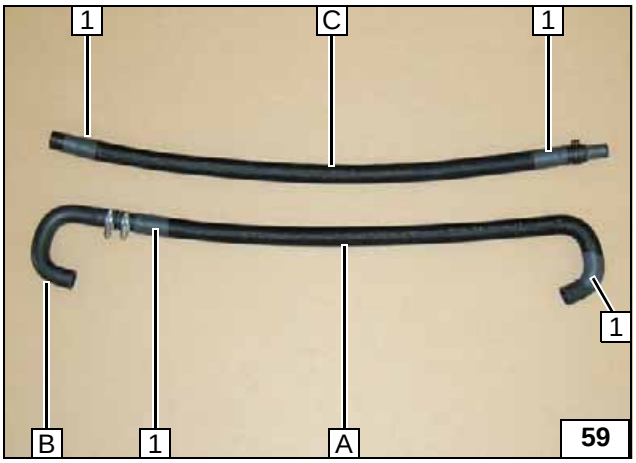


1.4 Automatic transmission

Discard section **X**.

A = 670
B = 120
C = 700

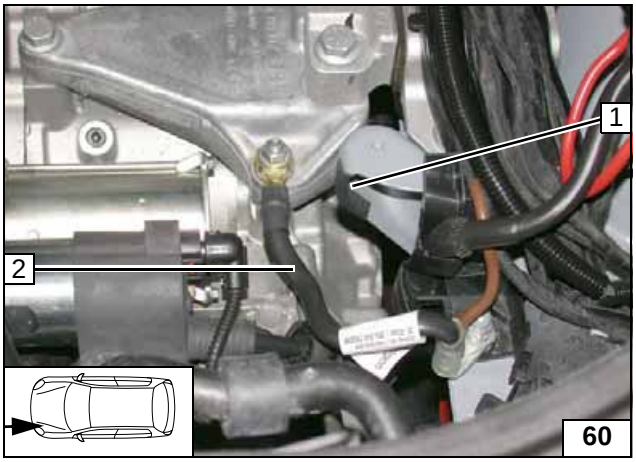
Cutting hoses to length



Push braided protection hoses onto hose **A** and **C**, cut to length and shrink.

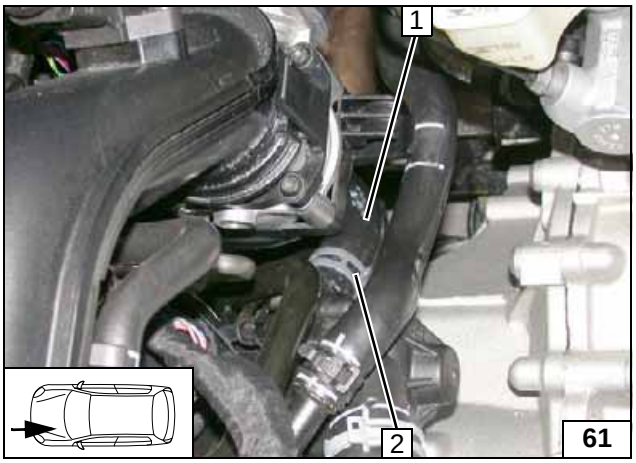
1 Heat shrink plastic tubing [4x]

Premounting hoses



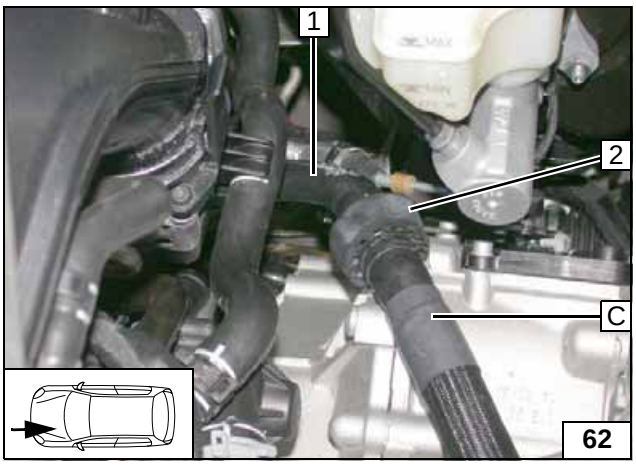
1 50 mm narrow edge protection
2 Straighten earth cable

Installing edge protection



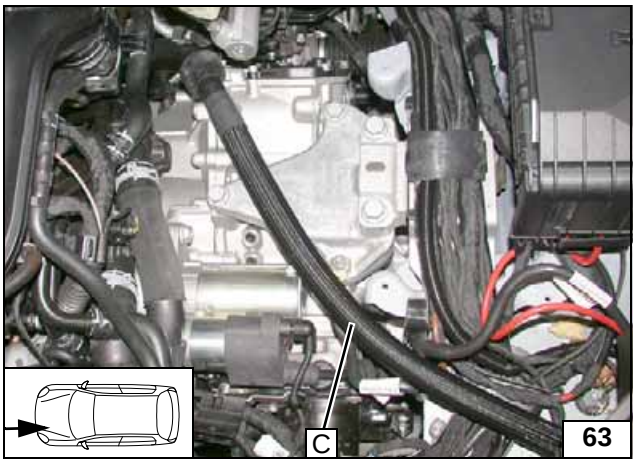
Disconnect hose to engine outlet/heat exchanger inlet **1** at connection piece of engine outlet. Spring clip **2** will be reused.

Cutting point

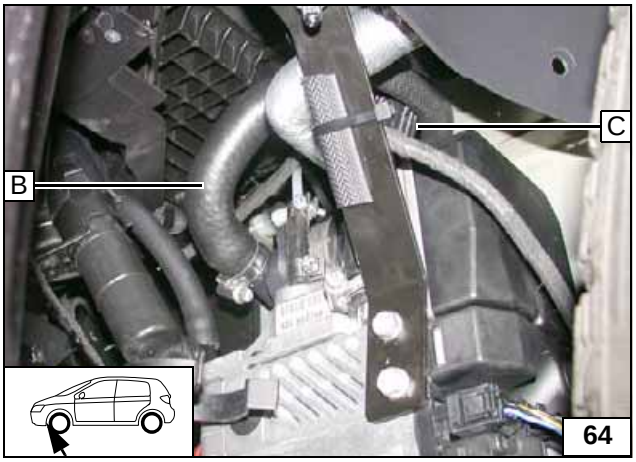


1 Hose on heat exchanger inlet
2 Black (sw) rubber isolator

Connecting heat exchanger inlet

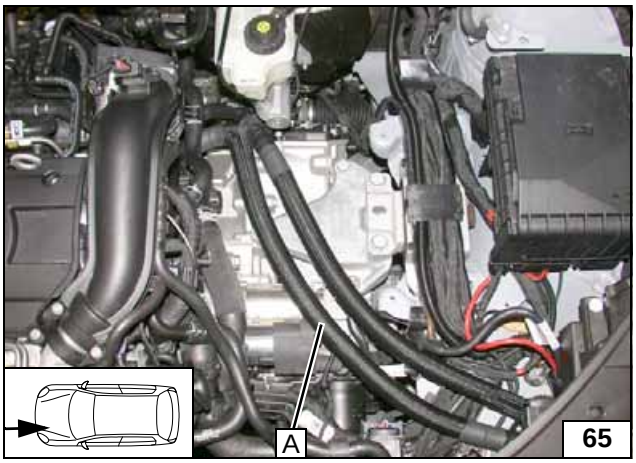


Routing in engine compartment

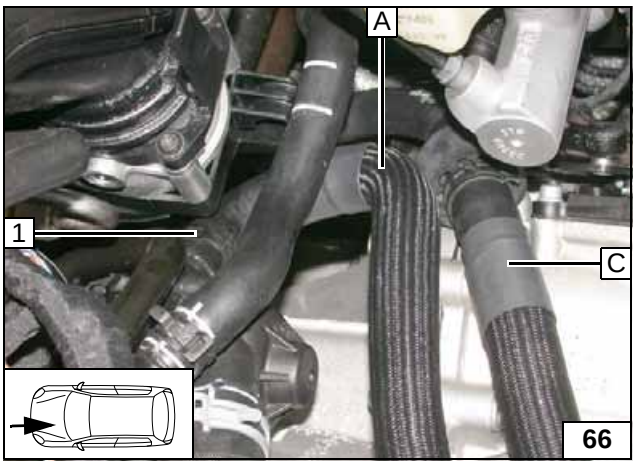


Combustion air silencer tied off for demonstration purposes.

Connecting heater



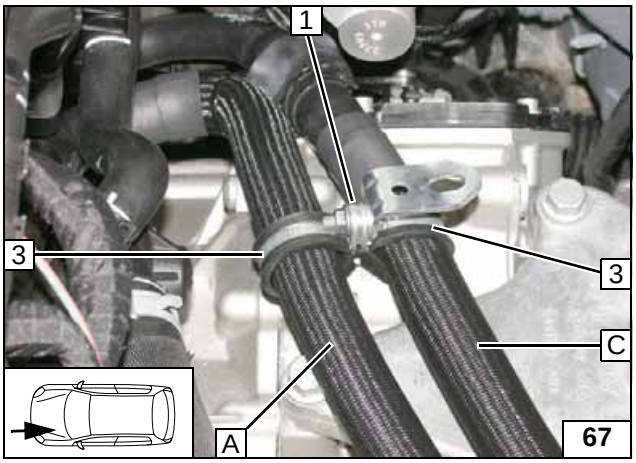
Routing in engine compartment



Install hose **A** on engine outlet connection piece with a 180° elbow.

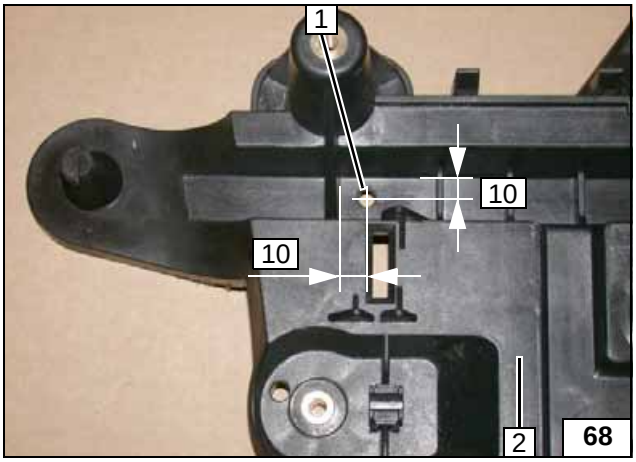
1 Original vehicle spring clip

Connecting engine outlet



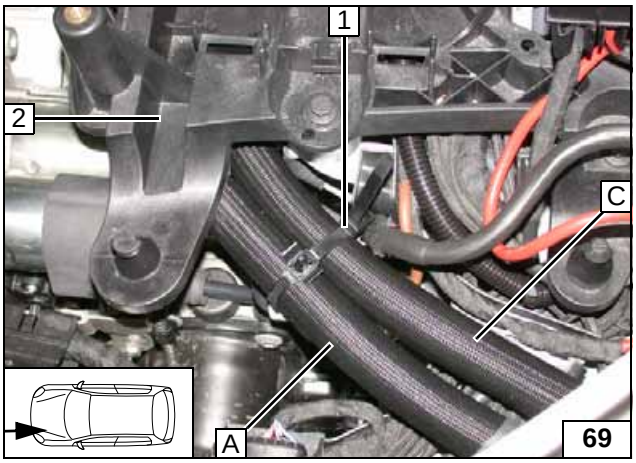
1 M6x20 bolt, flanged nut
2 Angle bracket
3 29 mm dia. rubber-coated p-clamp [2x]

Fastening hoses



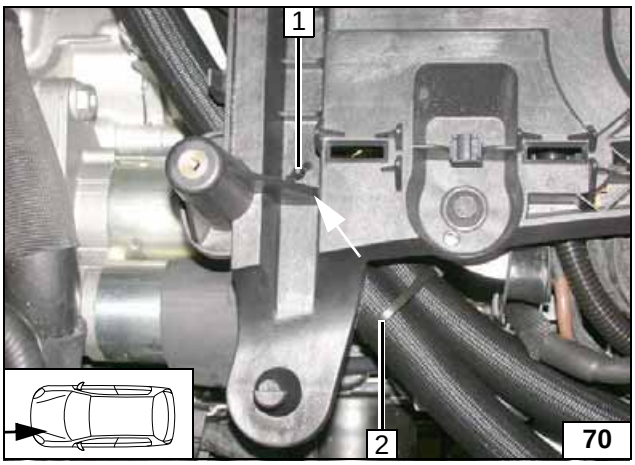
1 6 mm dia. hole
2 Battery carrier

Preparing battery carrier



Install battery carrier **2**. Loosely install clip-type cable tie **1** around hose **A** and **C**.

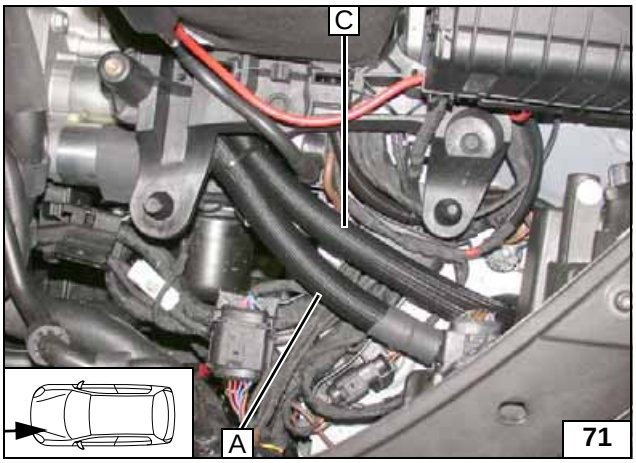
Fastening hoses



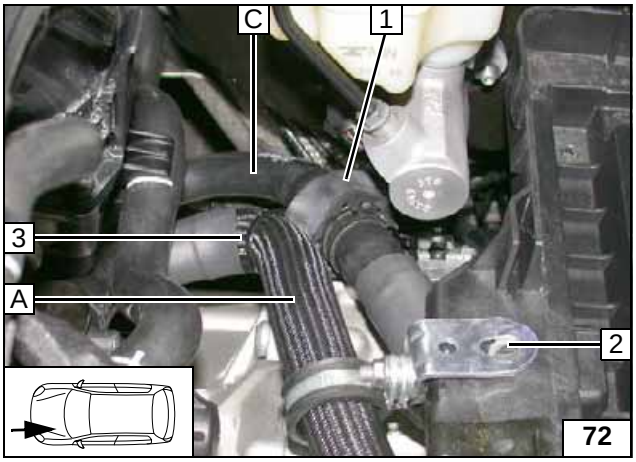
Shift clip-type cable tie under the battery carrier, insert in hole on position **1** and tighten.

2 Cable tie

Fastening hoses

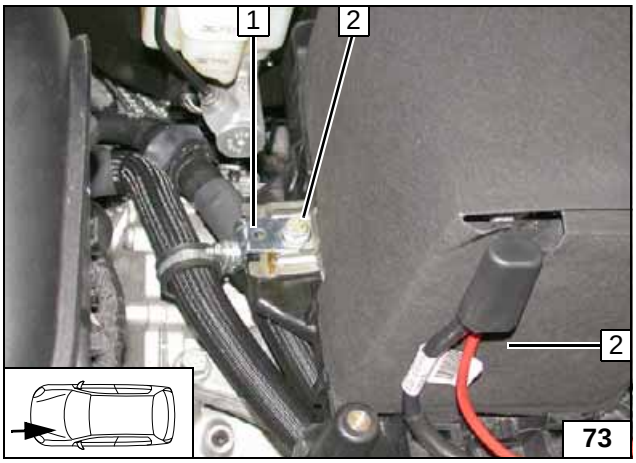


Aligning hoses



Attach black (sw) rubber isolator **1** with cable tie **3** to hose **A**. Align angle bracket at position **2** on original vehicle hole.

Fastening hoses



Install battery. Ensure sufficient distance to neighbouring components.

1 Angle bracket
2 Original vehicle bolt

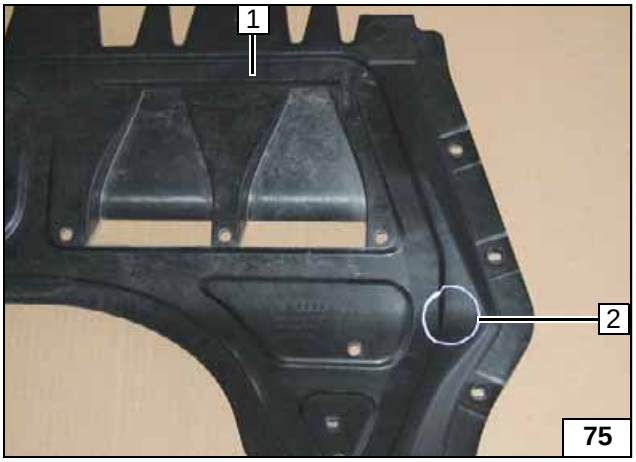
Fastening hoses

Exhaust gas

Align exhaust end section and rubber isolator. Ensure sufficient spacing of exhaust end section to transmission and to wheel well trim. (The figure shows the vehicle with automatic transmission)

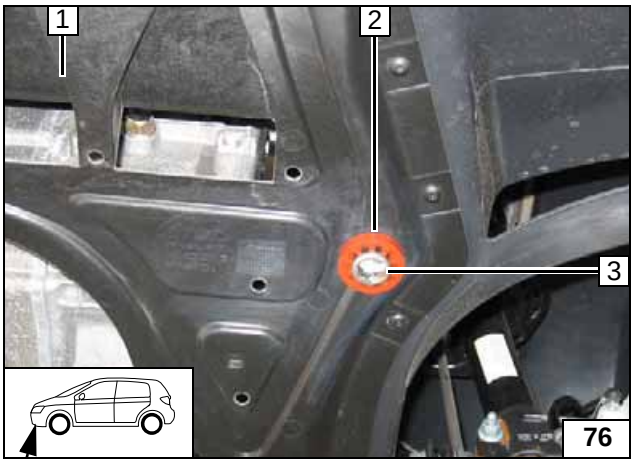
1 Wheel well trim

Installing wheel well trim



1 Underride protection
2 42 mm dia. hole

Hole in 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 lines 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.**
- **Set the digital timer.**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Place the "Switch off parking heater before refueling" signboard in the area of the filler neck**
- **Check the proper function of the parking heater, see the operating instructions/installation instructions.**
- **Proceed with the Webasto Thermo Test Diagnostics as follows at the initial start-up:**
  - Pump up fuel for heater under the pipeline filling button
  - CO_2- Check setting, adjustment values are listed in the General Installation Instructions
  - During the test run, check all water and fuel connections for leaks and firm seating
  - Conduct troubleshooting in case of any malfunctions

Adjust the sensitivity of the passenger compartment monitoring

WARNING!
Pass through can only be carried out at an authorized workshop. Observe the applicable repair manual of the respective vehicle.

- Connect the VAS tester.
- Open Item 46 (Central Module of Comfort System)
- Go to Item 10 (Adjustment)
- Follow the request for the code entry and enter the code 15
- Reduce the sensitivity of the passenger compartment monitoring to 50 %
- Save this setting
- The adjustment of the sensitivity of the passenger compartment monitoring is completed.

Webasto
Feel the drive

Webasto AG
Postfach 80
D-82132 Stockdorf / Germany
National Hotline: 01805 93 22 78
(14 Cent aus dem deutschen Festnetz)
Hotfax: 0395 5592 353
Hotmail: technikcenter@webasto.com
http://www.webasto.com

Operating Instructions for End Customer

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.

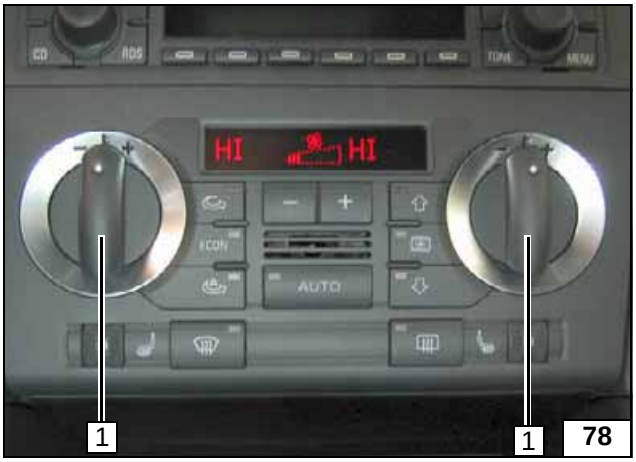
If the summer/winter switch option has been installed, it must be switched in accordance with the time of year. The heater will then heat in the position Winter and in the position Summer it will only switch on the vehicle fan to ventilate the vehicle interior.

Before parking the vehicle, make the following settings:

Climatic

1 Set temperature to "max."
2 Air outlet to windscreen
3 Set fan to level "1", or possibly "2"

Climatron-ic



1 Set temperature on both sides to "HI".