Water Heater

Webasto
Feel the drive

Thermo Top C Parking Heater

e1
00 0002

Installation documentation

VW Golf V / Golf Plus / Eos / Caddy

Installation parts set
Petrol 1.4 MPI / 1.6 FSI / 2.0 TFSI

from Model Year 2004

For left-hand drive vehicles only

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.

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

Ident. No.: 9012096F_EN Fee Euro 10.00

Table of Contents

Validity

Manufacturer	Model	Type	EG-BE No./ABE
Volkswagen	Golf V	1K	e1 * 2001/116 * 0242 * ...
Volkswagen	Golf V Plus	1KP	e1 * 2001/116 * 0304 * ...
Volkswagen	Eos	1F	e1 * 2001 / 116 * 0349 * ...
Volkswagen	Caddy	1K	e1 * 2001/116 * 0242 * ...

Engine type	Engine model	Output in kW	Displacement in cm³
BCA	Petrol MPI	55	1390
BUD	Petrol MPI	59	1390
BAG	Petrol FSI	85	1598
BLF	Petrol FSI	85	1598
BWA	Petrol TFSI	147	1984

Vehicle models, engine types, equipment variants as well as national specifications, which are 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 *Thermo Top C*	See price list
1	Installation Kit for Golf V / Golf Plus / Eos / Caddy / / Petrol	9012093E
1	Heater control	See Price list

Also required with Climatronic:

Quantity	Description	Order No.:
1	IPCU Kit for Climatronic	9013645A

Foreword

This installation documentation applies to the VW Golf V, Golf V Plus, Eos and Caddy vehicles with a petrol engine - for validity, see page 2 - from model year 2004 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 the "installation instructions" for the *Thermo Top C* 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 rub protection (split-open plastic hose).
Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).
When installing an IPCU, check or adjust the corresponding settings before installation.

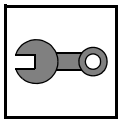
Special tools

- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers
- Centre bit up to 42 mm dia.
- VAS tester (adjustment of passenger compartment monitoring)

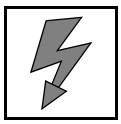
Explanatory Notes on Document

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

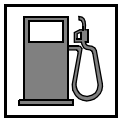


Electrical system

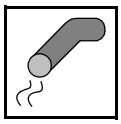


Coolant circuit

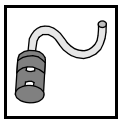
Fuel



Exhaust gas



Combustion air



Special features are highlighted using the following symbols:

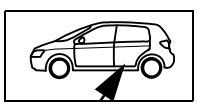
Specific risk of injury or fatal accidents.

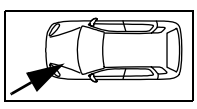
Specific risk of damage to components.

Specific risk of fire or explosion.

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

Reference to a special technical feature.



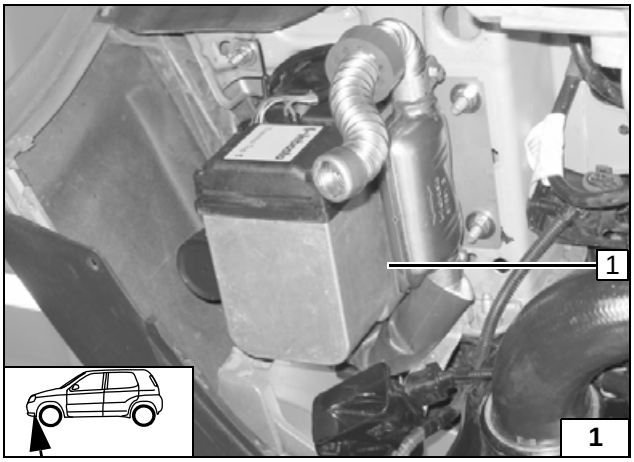


The arrow in the vehicle icon indicates the position on the vehicle and the viewing angle.

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 battery.
- Remove the battery carrier.
- Remove the engine cover.
- Remove the left front wheel.
- Remove the front section of the left front wheel well trim.
- Remove the left-hand front fog light or, on vehicles without front fog lights, the left-hand cover.
- Remove the underride protection
- Remove the right-hand underbody trim.
- Golf only: Remove the rear bench seat.
- Golf Plus only: Remove the right rear seat
- Caddy only: Remove the fuel tank.
- Golf, Golf Plus and Eos only: Open the right-hand tank-fitting service lid.
- 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 vehicles with Climatronic: Remove the footwell trim on the front passenger side



Heater installation location

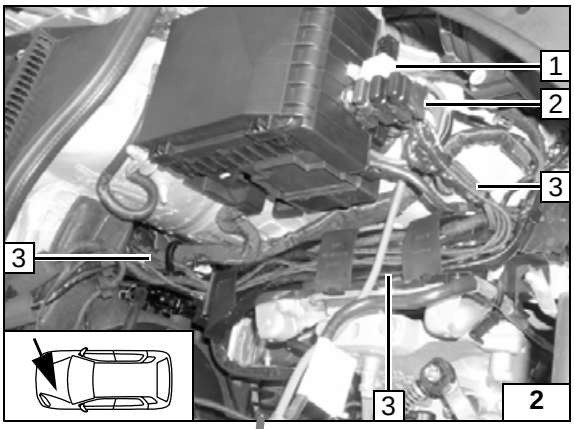
Installation location is in front of left front wheel

1 Heater

Electrical system

Fuse holder

1 Relay K3 (for installation instructions, see page 7)
2 Fuse holder (for installation instructions, see page 7)
3 Route wiring harness of heater control, fan control and metering pump in cable duct to firewall



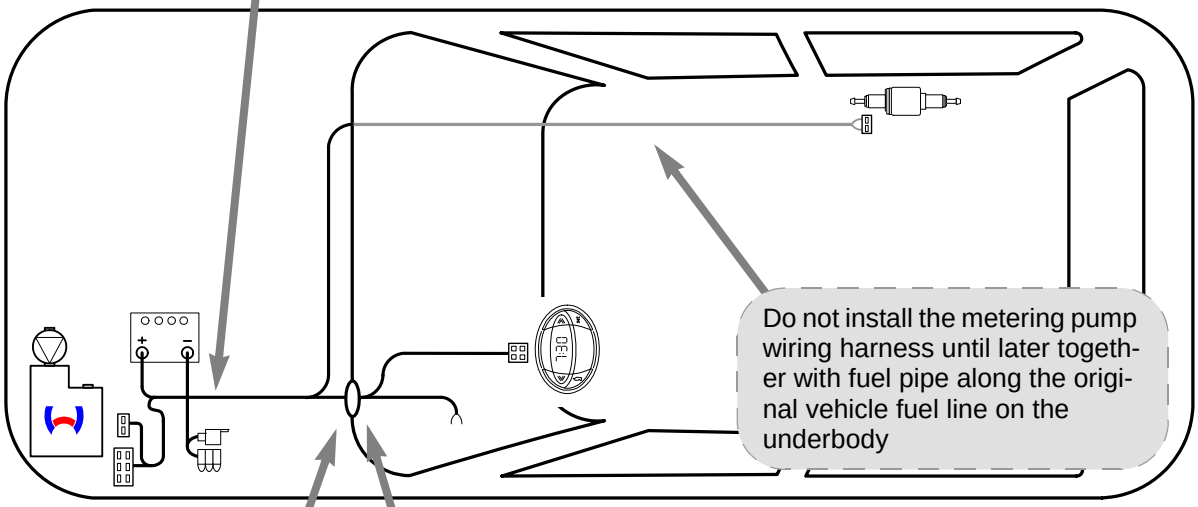
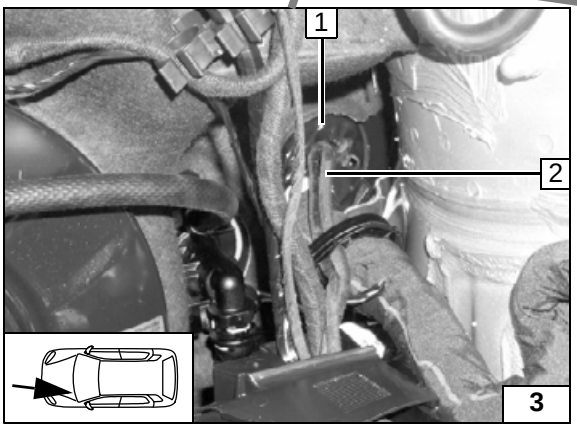
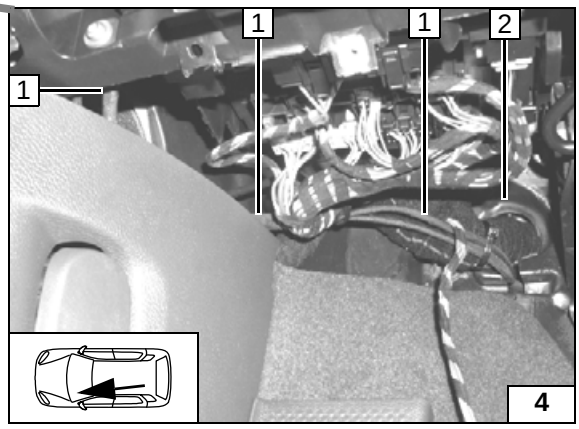


Diagram of wiring harness routing for all equipment





Wiring harness pass through

1 Original vehicle wiring harness pass through
2 Wiring harnesses of fan control and heater control (for instructions on connecting fan, see pages 8 - 14; on connecting heater control, pages 15 - 16

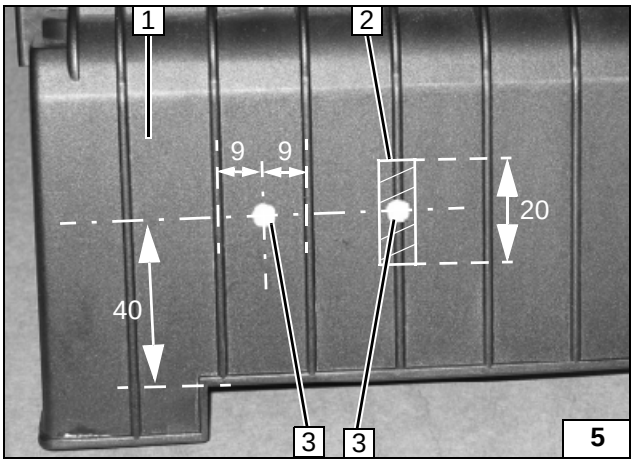
Wiring harness pass through

2 Original vehicle wiring harness pass through
1 Wiring harnesses for fan control and heater control

Fuse holder and K3 relay

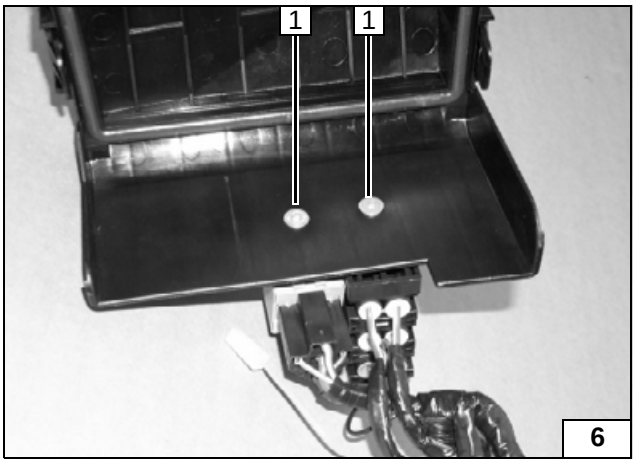
Countersink holes **3** from behind for M5 countersunk head screws.

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



Holes for fuse holder and K3 relay

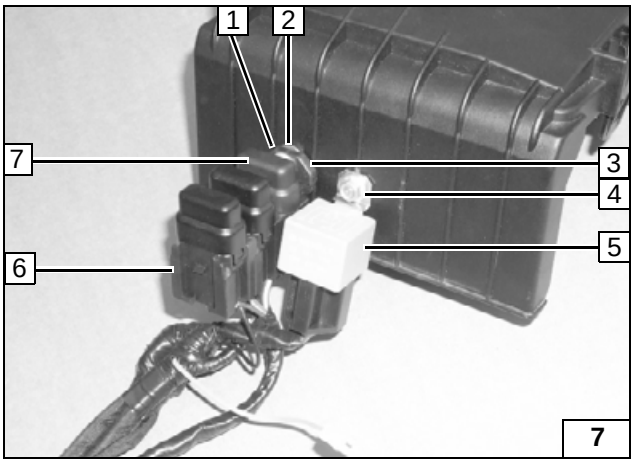
1 M5x12 countersunk head screw [2x]



Installing fuse holder and relay K3

On vehicles with Climatronic, replace 25 A fuse F3 **7** with 3 A fuse provided.

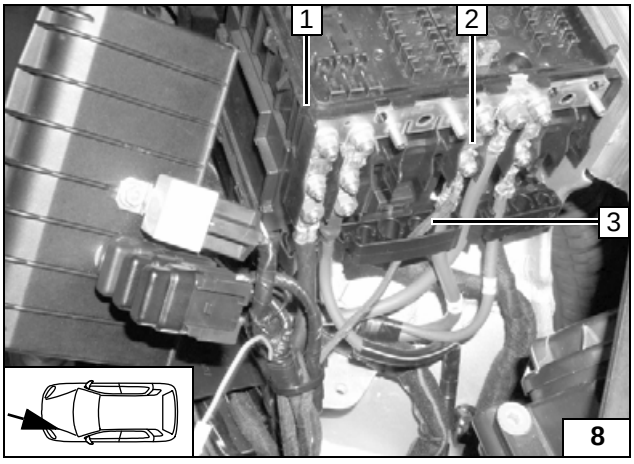
2 Large diameter washer (between cover and retaining plate)
3 Retaining plate
1 M5 flanged nut
6 Fuse holder
5 Relay K3
4 M5 flanged nut



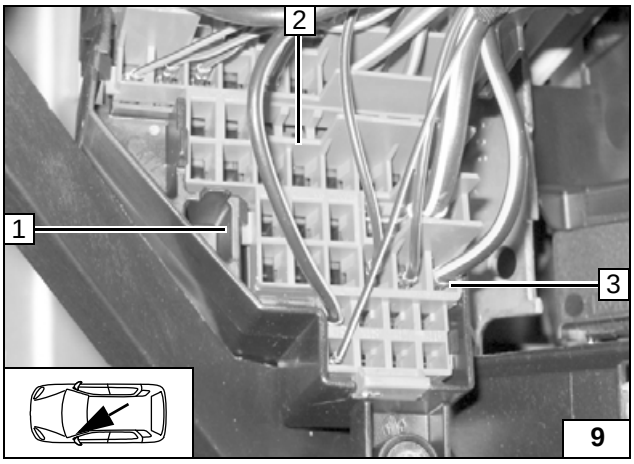
Installing fuse holder and K3 relay

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

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



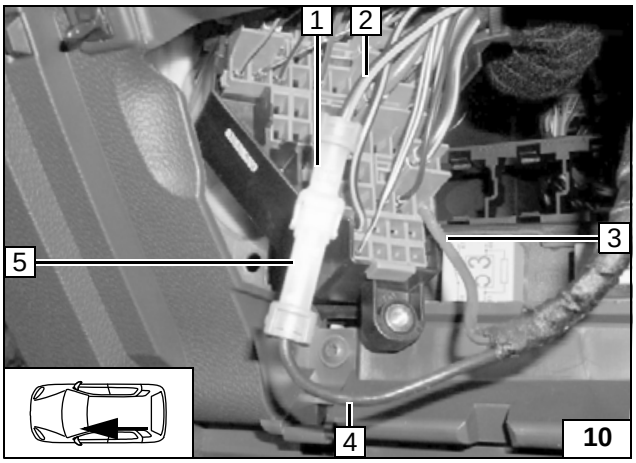
Connecting positive and earth wire



Fan control on Golf V and Eos without Climatronic

Detach original vehicle fuse carrier **1** (instrument panel at upper left) and unlock contact lock **2**.
Remove black/yellow (sw/ge) wire, 4 mm², **3** on fuse output SC40.

Removing wire

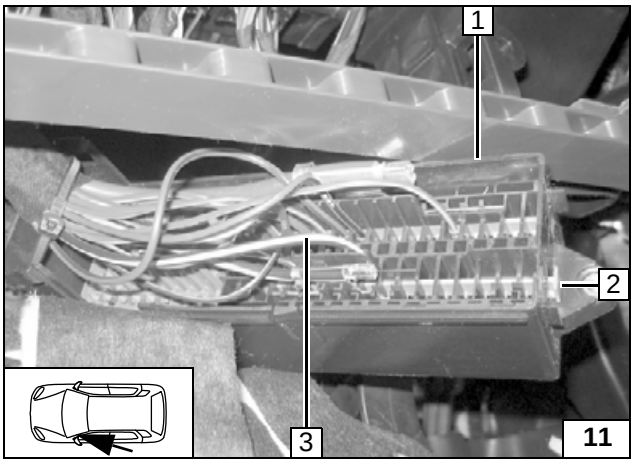


Produce connections as shown in wiring diagram.

2 Black/yellow (sw/ge) wire with original standard power timer
1 AMP housing
4 Black (sw) wire K3/30 with crimped-on tab connector
5 AMP housing
3 Red (rt) wire from K3/87a with crimped-on standard power timer engaged in fuse output SC40

Connecting wires

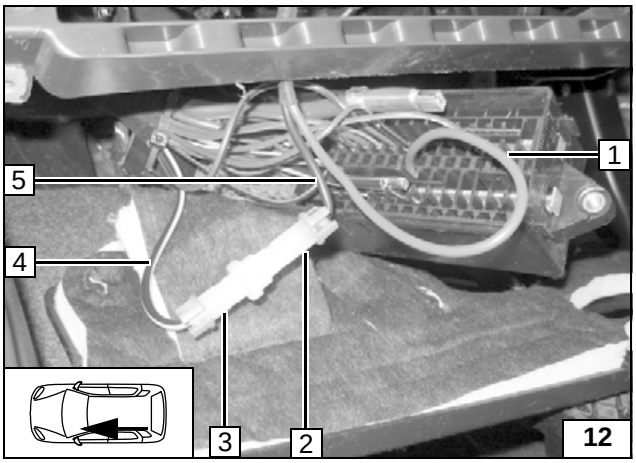
Lock contact lock again.



Fan control for Golf Plus and Caddy without Climatronic

Fuse socket dependent on vehicle equipment SC33 or SC 35; wire colour black (sw) or black/yellow (sw/ge)
Detach original vehicle fuse carrier **1** (instrument panel at lower left) and unlock contact lock **2**.
Remove black (sw) or black/yellow (sw/ge) 4mm² wire **3** on fuse output SC33 or SC35

Removing wire

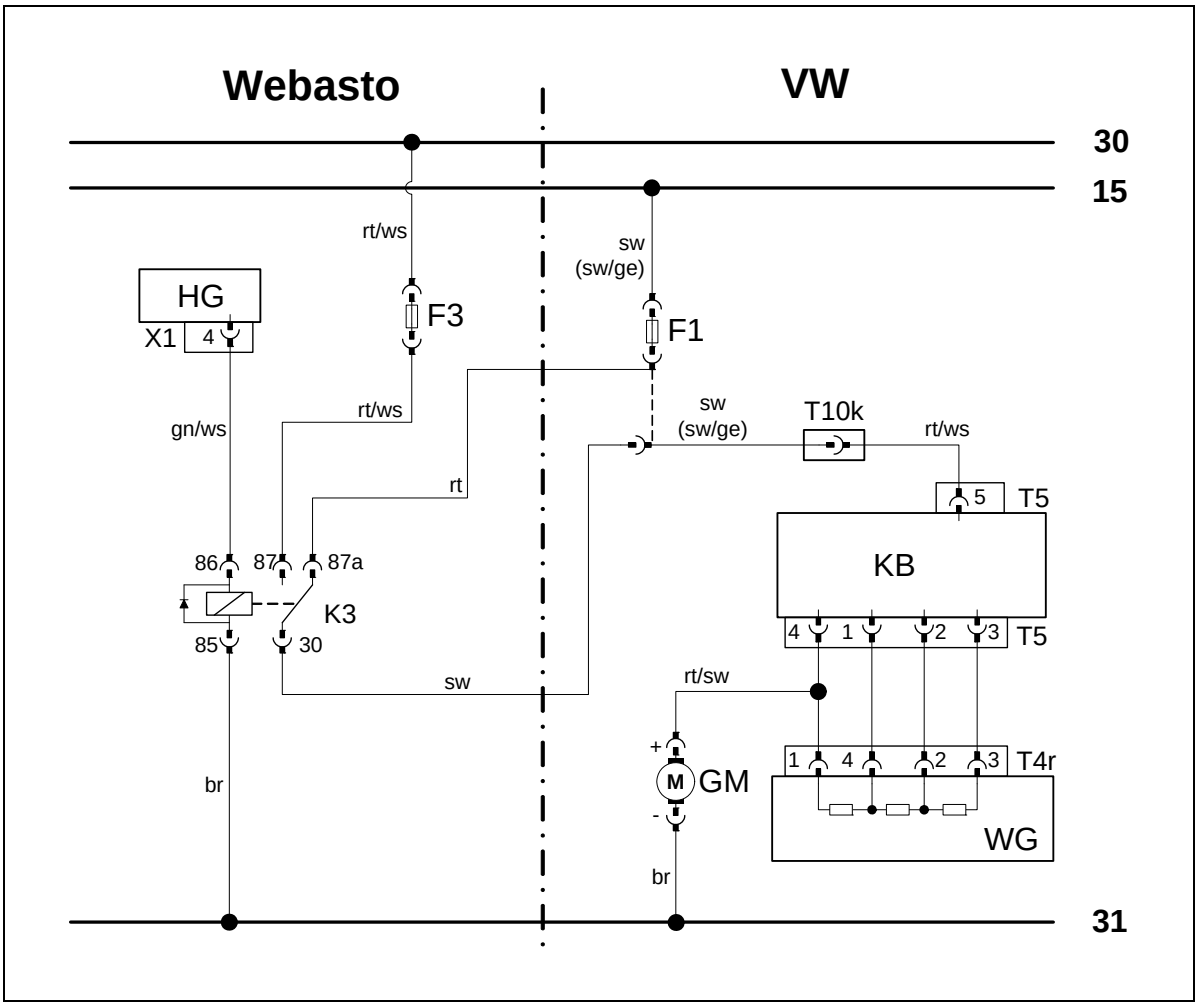


Produce connections as shown in wiring diagram.

4 Black (sw) or black/yellow (sw/ge) wire with original standard power timer
3 AMP housing
5 Black (sw) wire K3/30 with crimped-on tab connector
2 AMP housing
1 Red (rt) wire from K3/87a with crimped-on standard power timer engaged in fuse output SC33 or SC35

Connecting wires

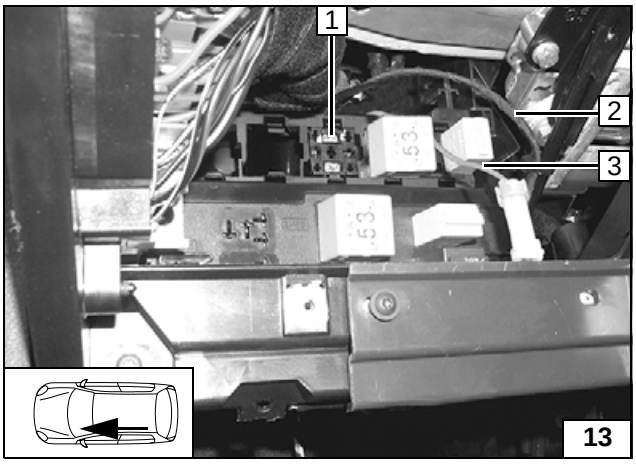
Lock contact lock again.



Wiring diagram without Climatronic

Webasto components		Vehicle components		Colours and symbols	
HG	TT-C heater	F1	Fuse SC33 or SC35 with 40 A	rt	red
X1	6-pin heater connector			ws	white
F3	25 A fuse	KB	Air conditioning control unit J301 or heater switch E16	sw	black
K3	Fan relay			br	brown
		WG	Resistor group N24	gn	green
		GM	Fan motor V2	ge	yellow
		T...	Plug connections		
				Wiring colours may vary.	

Legend

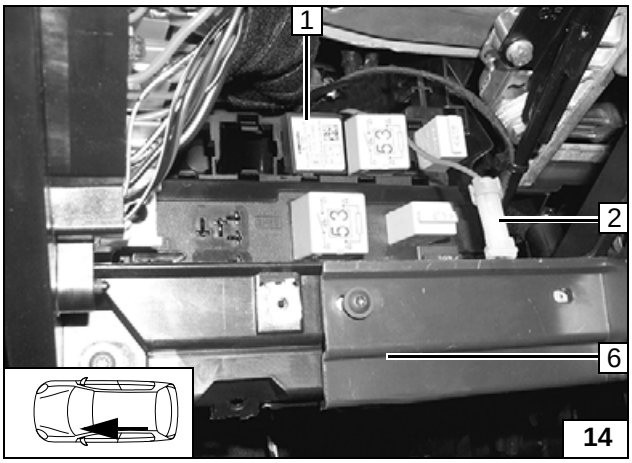


Fan control for Golf V and Eos with Climatronic

Produce connections as shown in wiring diagram.
Position of free sockets dependent on vehicle equipment.

1 IPCU socket
2 Red (rt) and black/white (sw/ws) wires from IPCU
3 Green/white (gn/ws) wire of IPCU/86 with AMP connector

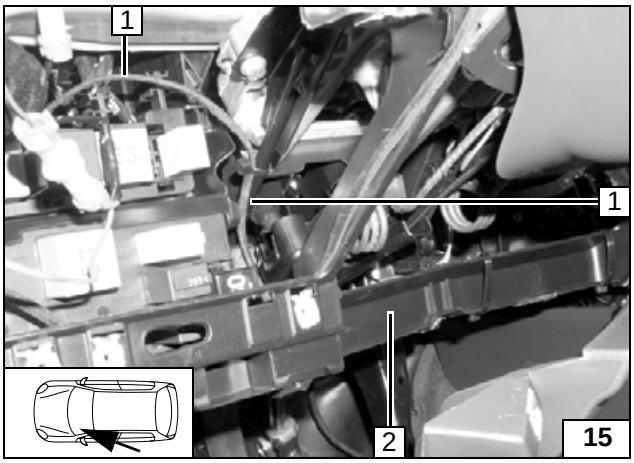
Installing wiring harness of Climatronic



Brown (br) wire from IPCU/85 to original vehicle earth point.
Insulate and tie back red (rt) wire from K3/87a.
Connect black (sw) wire from K3/30 to green/white (gn/ws) wire (AMP connector) **2**.

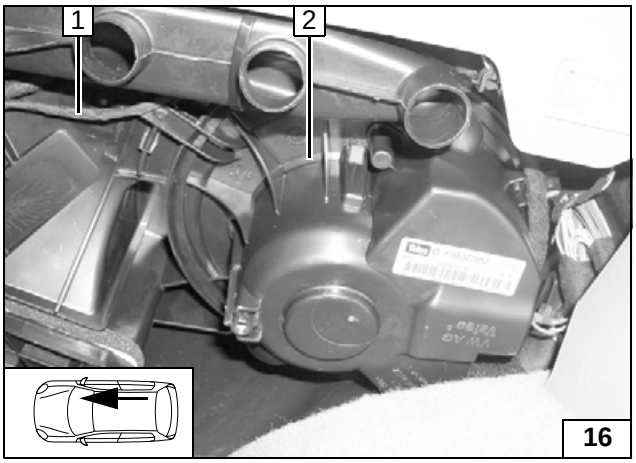
1 IPCU

Connecting wires



Route wiring harness from IPCU **1** along cross member **2** to centre console.

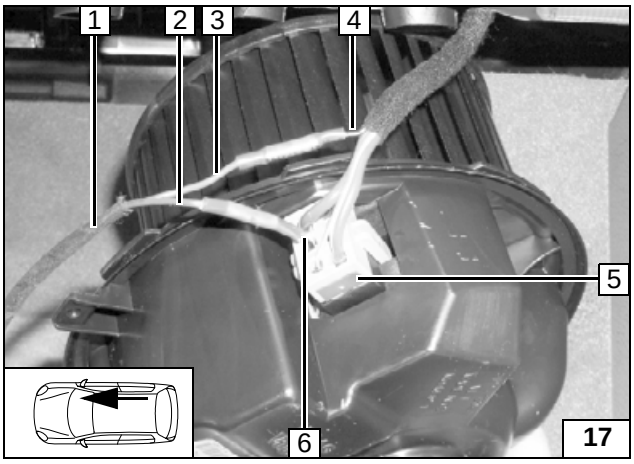
Installing wiring harness of IPCU



Route wiring harness from IPCU to original vehicle wires to fan unit

1 Wiring harness with red (rt) wire from IPCU/E and black/white (sw/ws) wire from IPCU/A
2 Fan unit

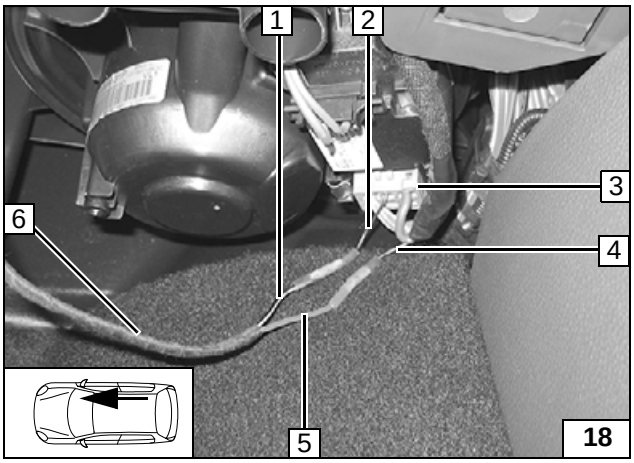
Installing wiring harness of IPCU



Position of connector T6t is dependent on vehicle. If necessary, disconnect fan unit in accordance with manufacturer's instructions. Produce connections as shown in wiring diagram.

1 Wiring harness from IPCU
2 Black/white (sw/ws) wire from IPCU/A
3 Red (rt) wire from IPCU/E
4 Black/white (sw/ws) wire from Climatronic control unit
5 Connector T6t
6 Black/white (sw/ws) wire to connector T6t/2

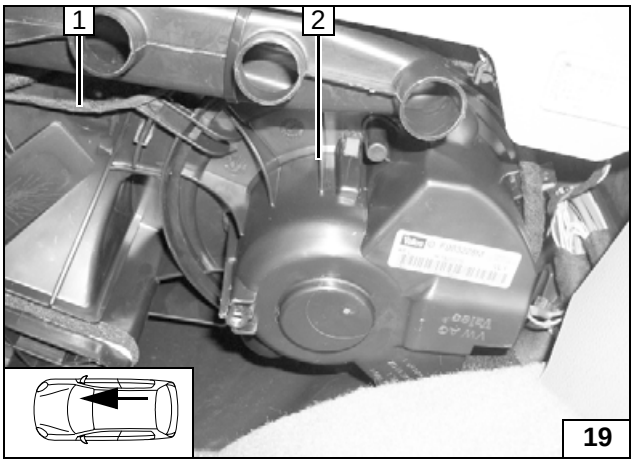
Connecting wires



Picture shows version without having to disconnect fan unit.

1 Black/white (sw/ws) wire from IPCU/A
2 Black/white (sw/ws) wire to connector T6t/2
3 Connector T6t
4 Black/white (sw/ws) wire from Climatronic control unit
5 Red (rt) wire from IPCU/E
6 Wiring harness from IPCU

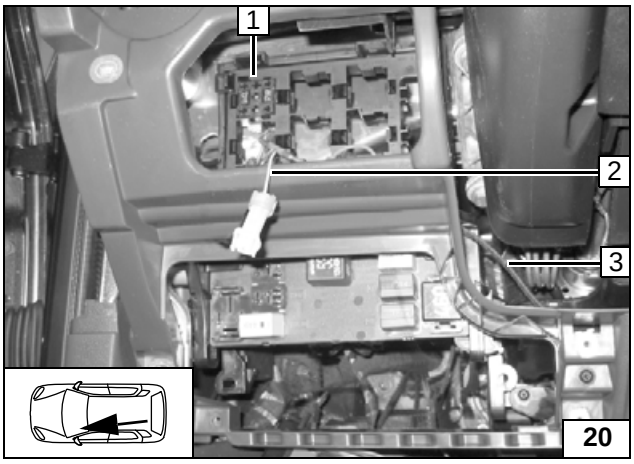
Connecting wires



Reinstall fan unit if previously removed. Fasten wiring harness on original vehicle wires with cable ties.

1 Wiring harness from IPCU
2 Fan unit

Installing fan unit

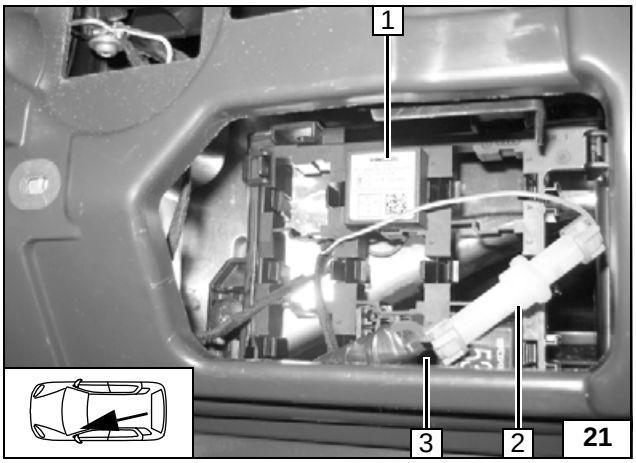


Fan control for Golf Plus and Caddy with Climatronic

Produce connections as shown in wiring diagram.
Position of free sockets dependent on vehicle equipment.

1 IPCU socket
2 Green/white (gn/ws) wire of IPCU/86 with AMP connector
3 Red (rt) and black/white (sw/ws) wires from IPCU

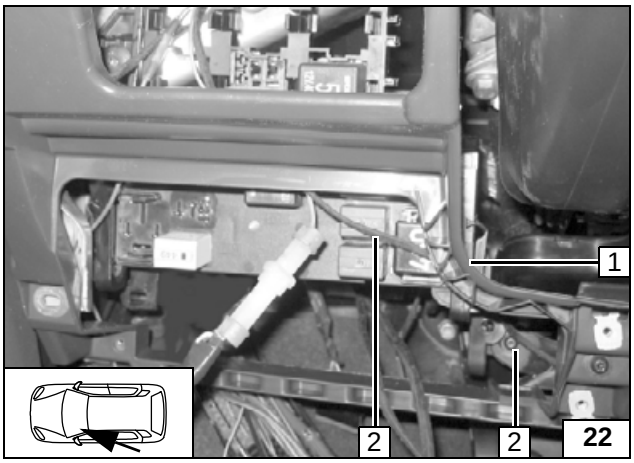
Installing wiring harness of Climatronic



Brown (br) wire from IPCU/85 to original vehicle earth point.
Insulate and tie back red (rt) wire from K3/87a.
Connect black (sw) wire from K3/30 **3** to green (gn) wire (AMP connector) **2**.

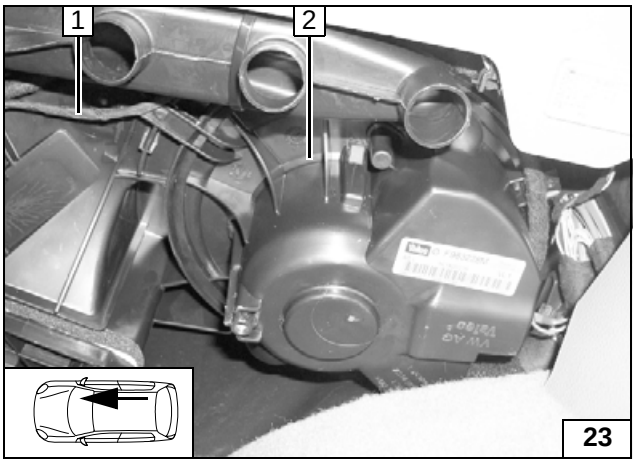
1 IPCU

Installing K3.1 relay and IPCU. Establishing connections



Route wiring harness from IPCU **2** along cross member **1** to centre console.

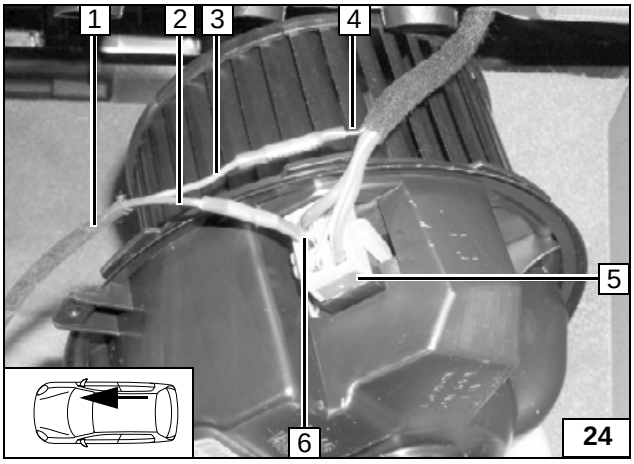
Installing wiring harness of IPCU



Route wiring harness from IPCU to original vehicle wires to fan unit

1 Wiring harness with red (rt) wire from IPCU/E and black/white (sw/ws) wire from IPCU/A
2 Fan unit

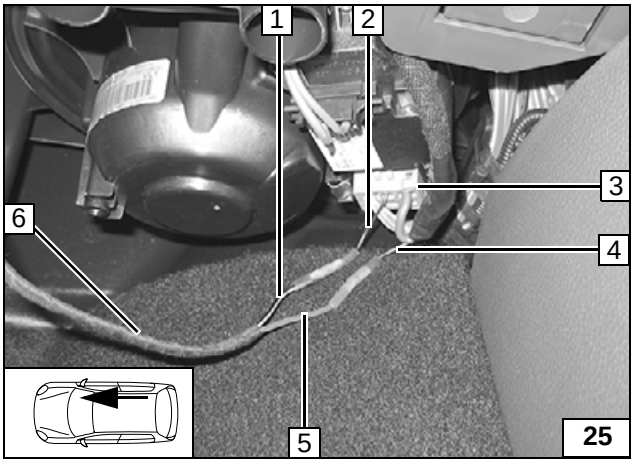
Installing wiring harness of IPCU



Position of connector T6t is dependent on vehicle. If necessary, disconnect fan unit in accordance with manufacturer's instructions. Produce connections as shown in wiring diagram.

1 Wiring harness from IPCU
2 Black/white (sw/ws) wire from IPCU/A
3 Red (rt) wire from IPCU/E
4 Black/white (sw/ws) wire from Climatronic control unit
5 Connector T6t
6 Black/white (sw/ws) wire to connector T6t/2

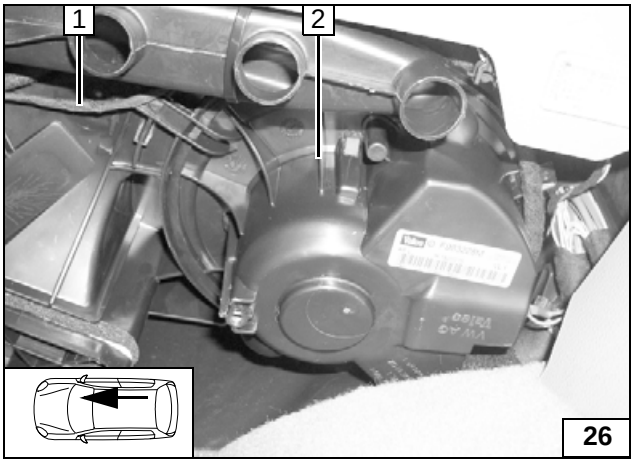
Connecting wires



Picture shows version without having to disconnect fan unit.

1 Black/white (sw/ws) wire from IPCU/A
2 Black/white (sw/ws) wire to connector T6t/2
3 Connector T6t
4 Black/white (sw/ws) wire from Climatronic control unit
5 Red (rt) wire from IPCU/E
6 Wiring harness from IPCU

Connecting wires

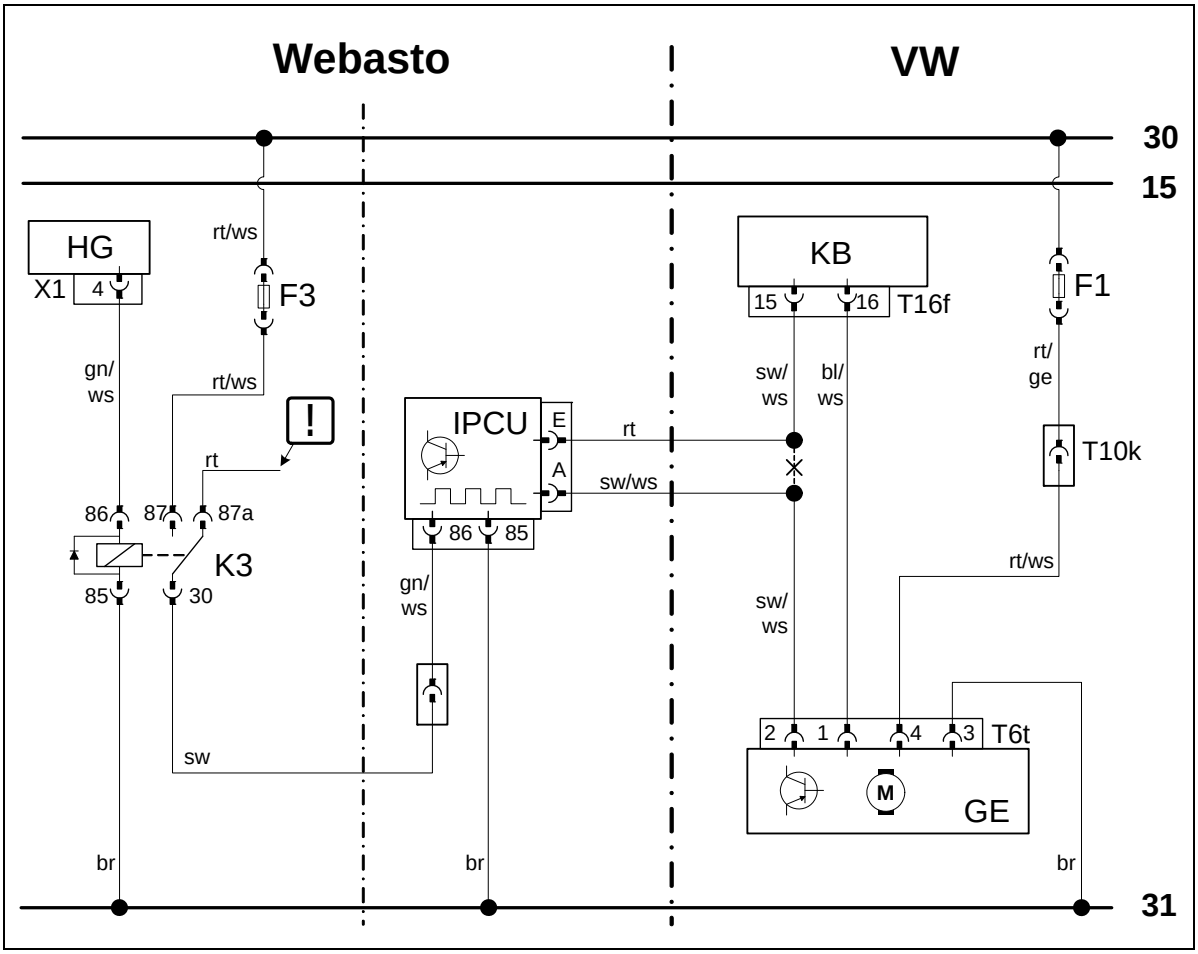


Reinstall fan unit if previously removed. Fasten wiring harness on original vehicle wires with cable ties.

1 Wiring harness from IPCU
2 Fan unit

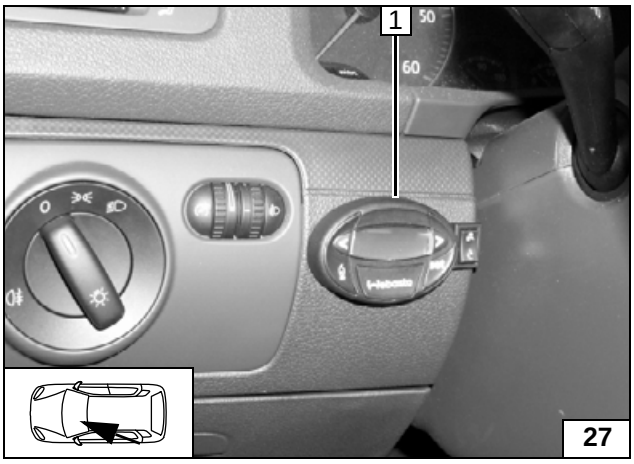
Installing fan unit

Wiring diagram with Climatronic



Legend

Webasto components		Vehicle components		Colours and symbols	
HG	TT-C heater	F1	Fuse SC22 or SC56 with 40 A	rt	red
X1	6-pin heater connector			ws	white
K3	Fan relay	KB	Climatronic control unit J255	sw	black
F3	Fuse (25 A replaced with 3 A)	T...	Plug connections	br	brown
		GE	Fan control unit J126 and fan motor V2	gn	green
IPCU	Pulse width modulator			ge	yellow
				bl	blue
IPCU adjustment values				!	Insulate wire end and tie back
Voltage: 8 V					
Frequency: 400 Hz				**X**	Cutting point
Duty cycle: 30 %				Wiring colours may vary.	
Function: High-side					



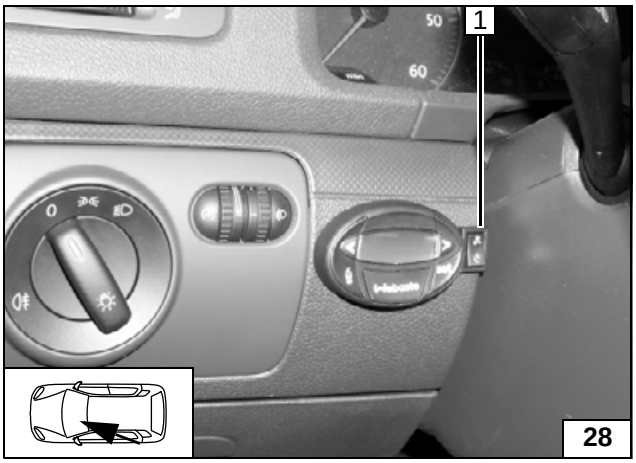
Heater control of Golf V and Eos

Digital timer option

Do not press on display.

1 Digital timer, drilling template

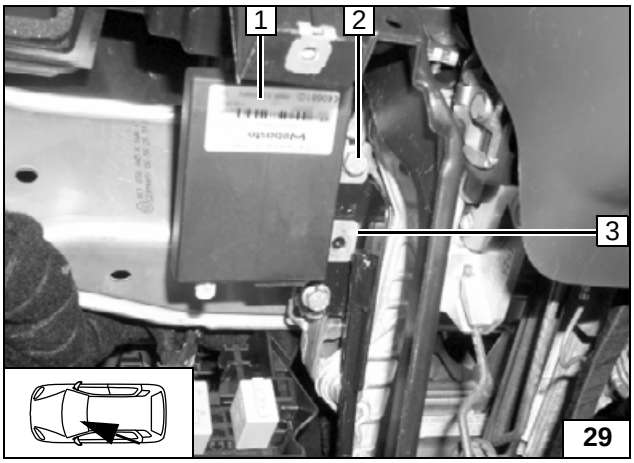
Digital timer option



Summer/winter switch option

1 Summer/winter switch

Summer/winter switch option

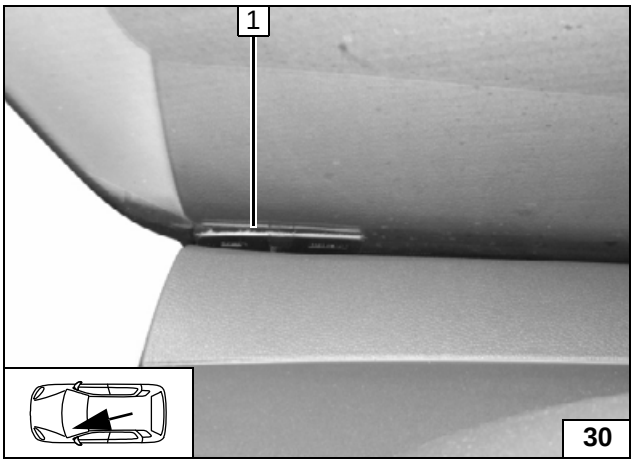


Remote option (Telestart)

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

3 Bracket
1 Receiver
2 M6 bolt

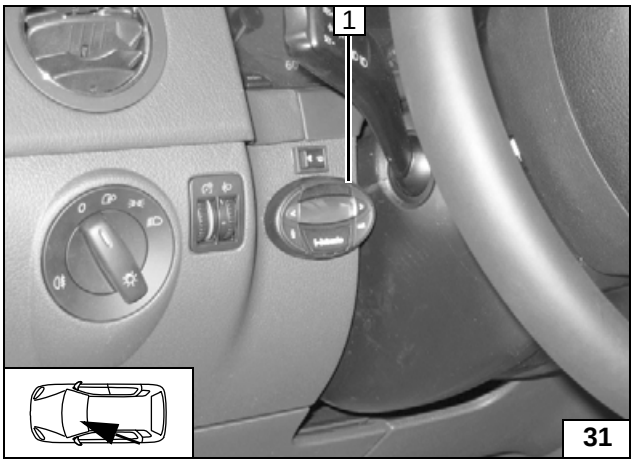
Installing receiver



1 Antenna on windscreen at lower left

Installing antenna

Produce all connections in accordance with general installation instructions and fasten wires with cable ties.



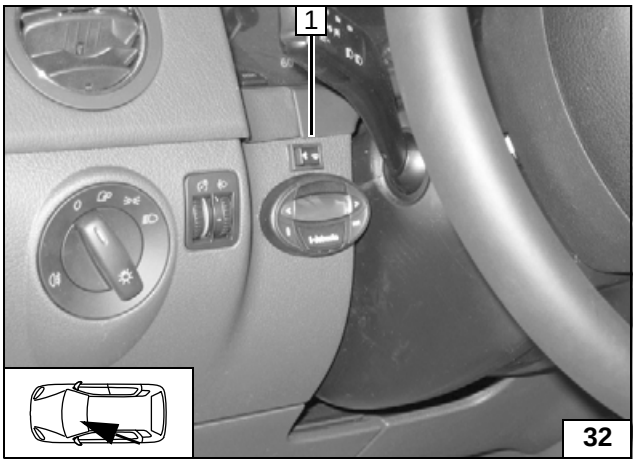
Heater control of Golf Plus

Digital timer option

Do not press on display.

1 Digital timer, drilling template

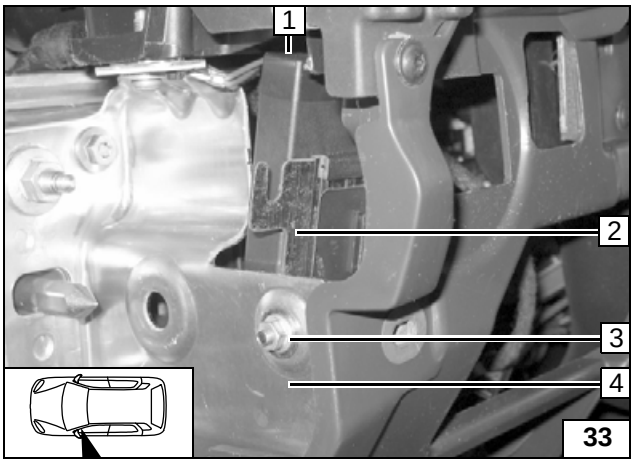
Digital timer option



Summer/winter switch option

1 Summer/winter switch

Summer/winter switch option

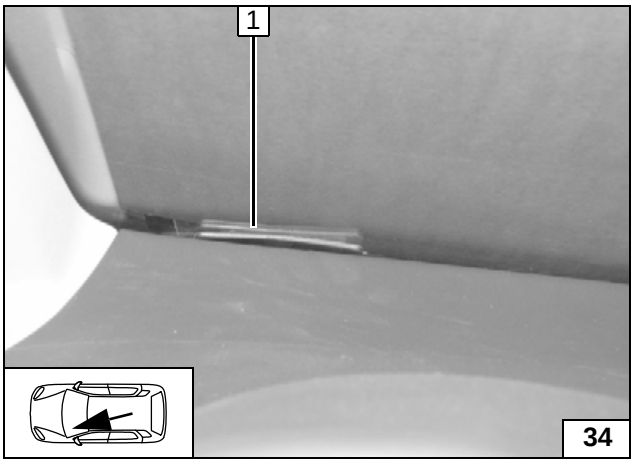


Remote option (Telestart)

Angle down lower tab of bracket by 90° and drill out hole to 6.5 mm dia. as shown.

2 Bracket
1 Receiver
3 M6 bolt, large diameter washer (between bracket instrument carrier), large diameter washer (from outside), flanged nut
4 Instrument carrier, existing hole

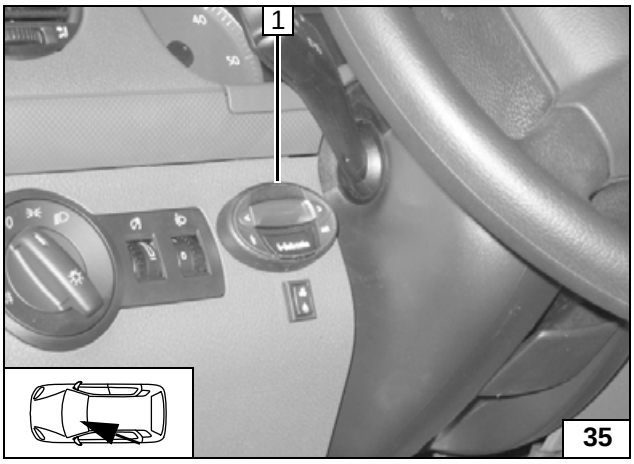
Installing receiver



1 Antenna on windscreen at lower left

Installing antenna

Produce all connections in accordance with general installation instructions and fasten wires with cable ties.



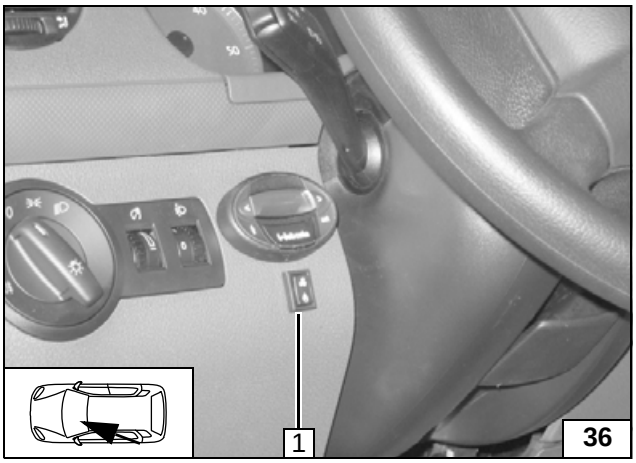
Heater control for Caddy

Digital timer option

Do not press on display.

1 Digital timer, drilling template

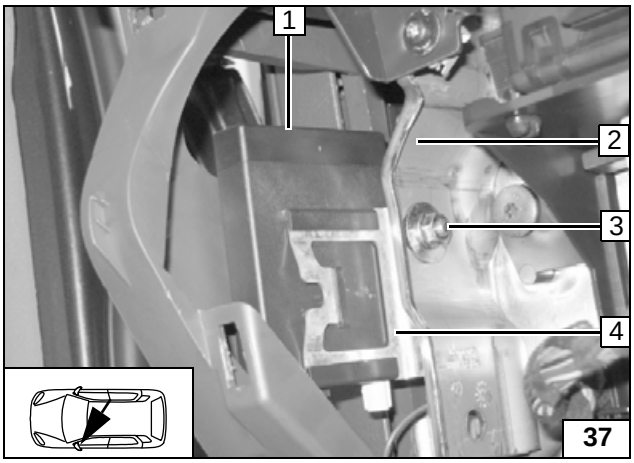
Digital timer option



Summer/winter switch option

1 Summer/winter switch

Summer/winter switch option

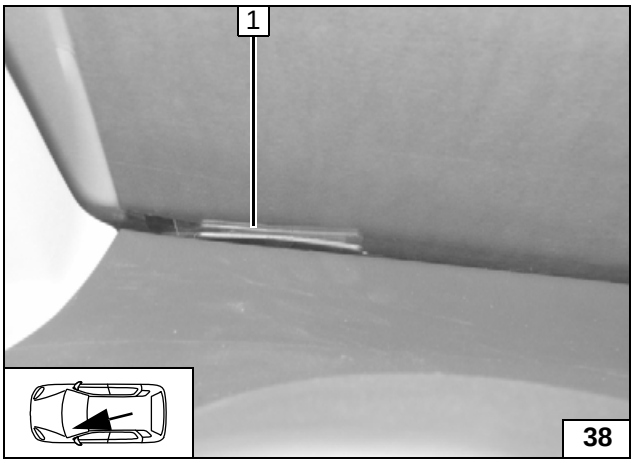


Remote option (Telestart)

Drill out upper hole of bracket to 6.5 mm dia.

4 Bracket
1 Receiver
3 M6 bolt, large diameter washer, flanged nut
2 Instrument carrier, existing hole

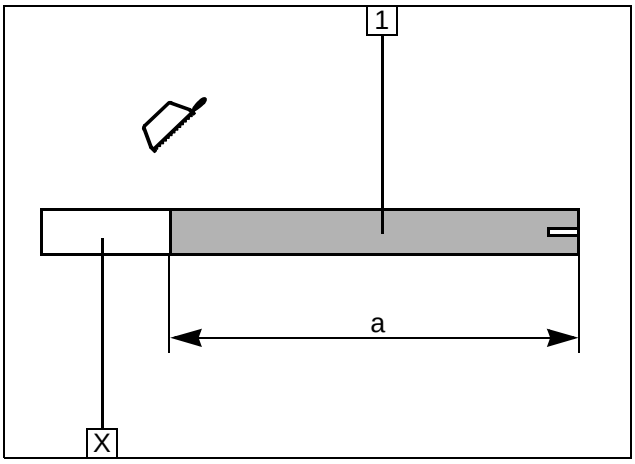
Installing receiver



1 Antenna on windscreen at lower left

Installing antenna

Produce all connections in accordance with general installation instructions and fasten wires with cable ties.

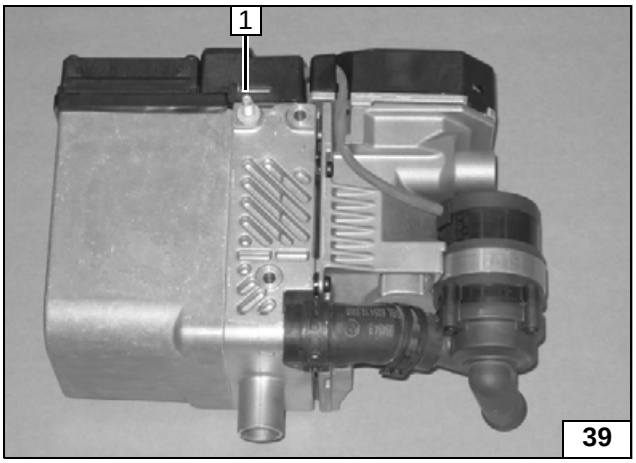


Premounting heater

1 Combustion air pipe
a = 250 mm

Discard section **X**

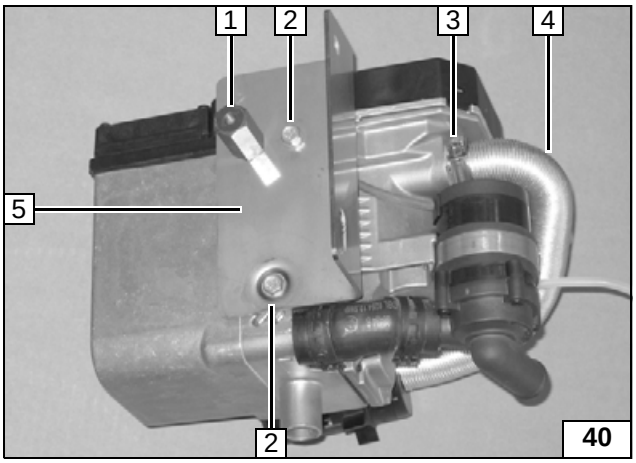
Cutting combustion air pipe to length



Ejot stud, tightening torque 10 Nm.

1 Ejot stud

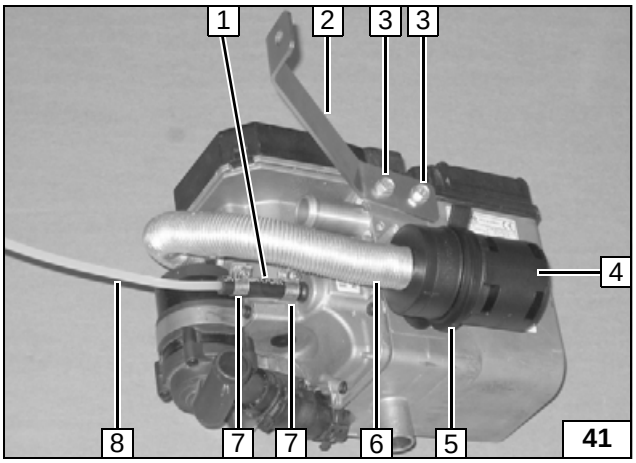
Premounting heater



Tighten Ejot screws to 10 Nm.
Insert one washer each between heater and bracket at positions **2**

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

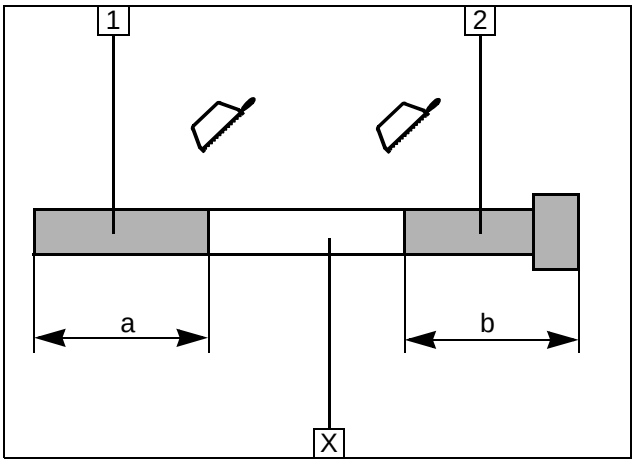
Premounting heater



Tighten Ejot screws to 10 Nm. Ensure proper installation position of combustion-air intake silencer, see "Installation Instructions".

2 Strut
3 Ejot screw [2x]
5 Retaining clip in hole of heater
4 Silencer
6 Combustion air pipe
8 Mecanyl line
1 Hose section
7 10 mm dia. hose clamp [2x]

Premounting heater



Installing exhaust gas pipe

Discard section **X**.

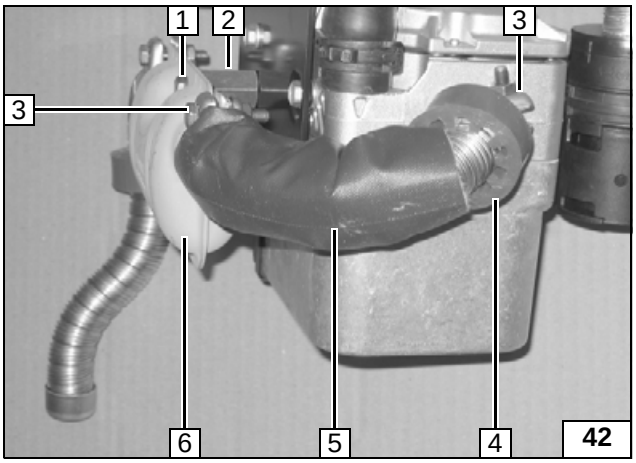
Golf V, Golf Plus and Caddy

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

Eos

1 Exhaust pipe
a = 190 mm
2 Exhaust end section
b = 290 mm

Preparing exhaust pipe

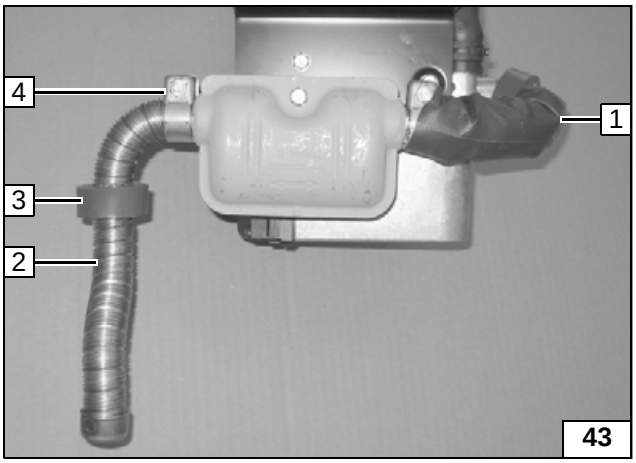


All vehicles

Shape exhaust pipe as shown in Figures and slide on insulation.

6 Silencer
1 M6x16 bolt, spring lockwasher
2 Premounted M6x30 spacer nut
5 Exhaust pipe with insulation
4 Red (rt) rubber isolator, without groove
3 Hose clamp [2x]

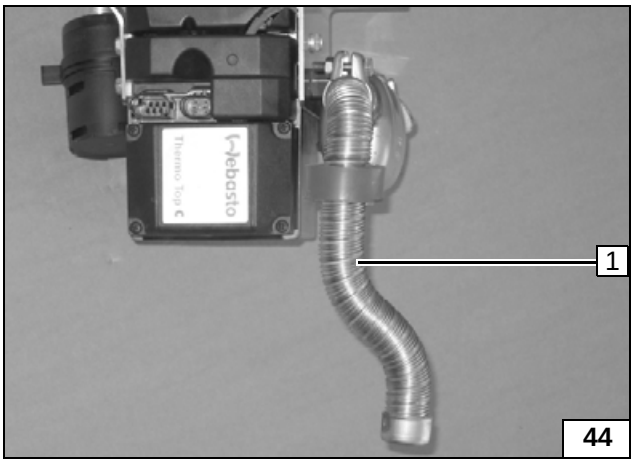
Premounting exhaust system



Shape exhaust end section as shown in the Figures.

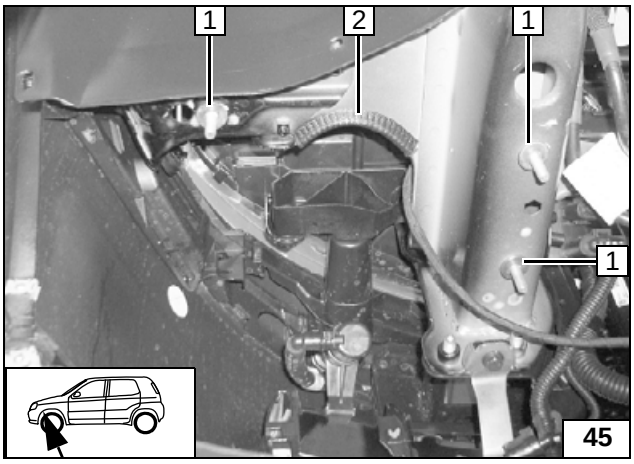
1 Exhaust pipe
2 Exhaust end section
4 Hose clamp
3 Red (rt) rubber isolator, without groove

Premounting exhaust system



1 Exhaust end section

Premounting exhaust system

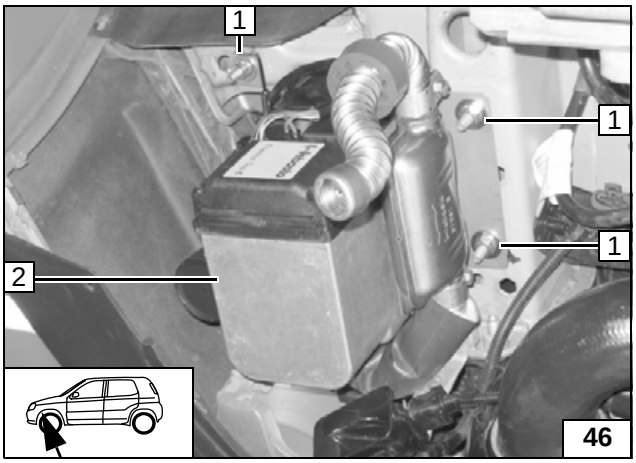


Preparing installation location

Prevent large diameter washer from falling by securing with putty etc.

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

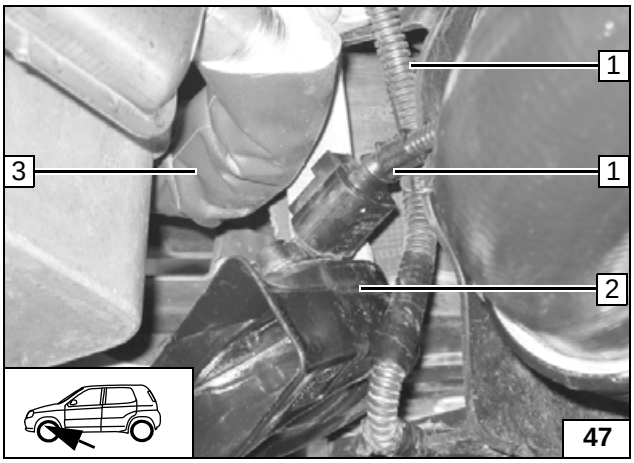
Preparing installation location



Installing heater

1 Large diameter washer, flanged nut M8 [3x]
2 Heater (premounted)

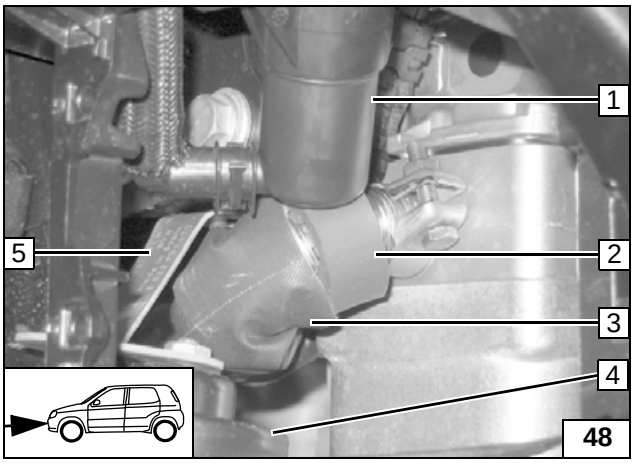
Installing heater



Ensure freedom of movement of exhaust system in relation to original vehicle components and lines.

3 Exhaust pipe
1 Original vehicle wiring harnesses (secured with cable ties)
2 Horn

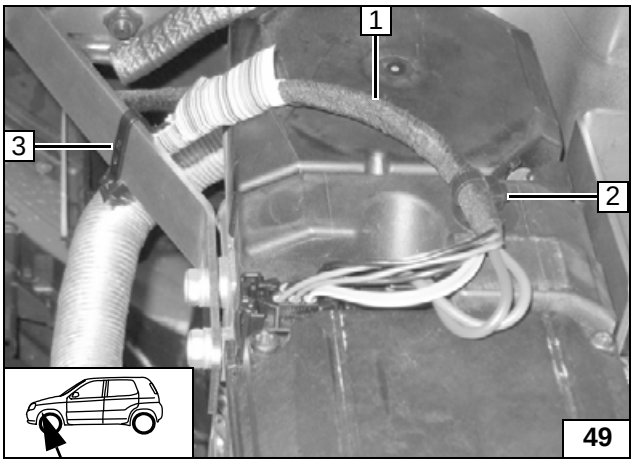
Aligning exhaust system



Ensure freedom of movement of exhaust system in relation to original vehicle components and lines.
Position rubber isolator as shown in picture.
(Picture shows Golf Plus with headlight washer system)

1 Headlight washer system (Golf Plus)
2 Red (rt) protective rubber isolator
3 Exhaust pipe with insulation
4 Horn
5 Horn bracket

Aligning exhaust system

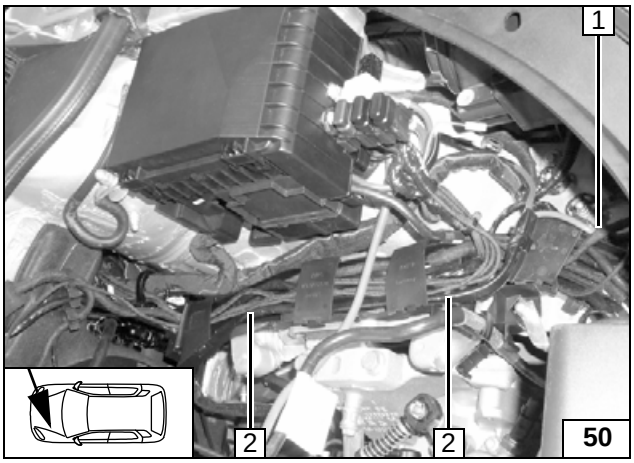


Wiring harness of heater

Watch routing of wiring harness. Danger of rubbing!

1 Wiring harness of heater
2 Clip cable tie in pre-perforated hole of heater cover
3 Cable tie

Mounting and routing wiring harness



Watch routing of wiring harness. Danger of rubbing!

Route excess lengths from wiring harness **1** in cable duct **2** below battery and secure with cable ties.

1 Wiring harness from heater
2 Cable duct

Routing wiring harness

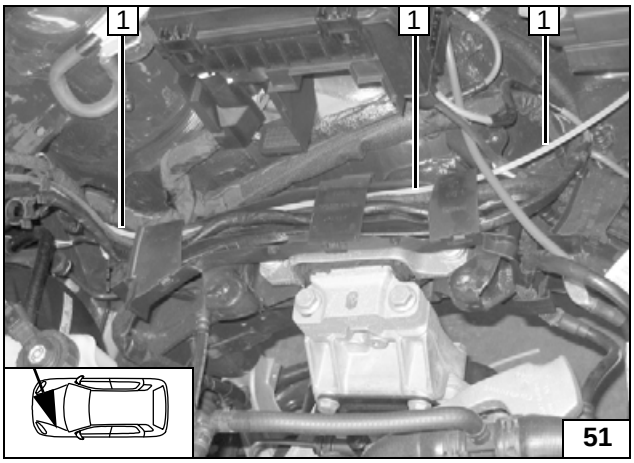
Fuel

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

Catch any fuel running off in an appropriate container.

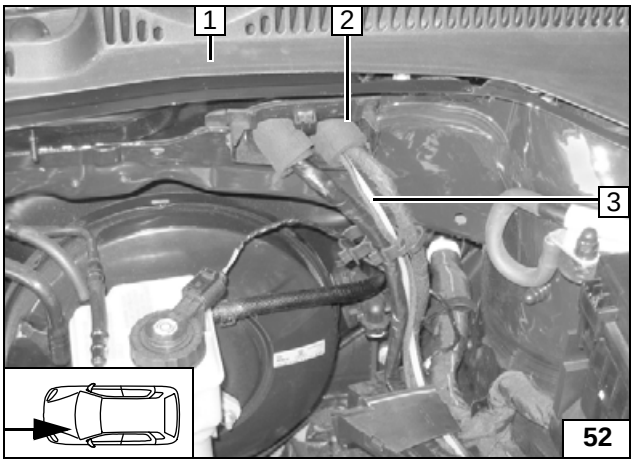
Install fuel line and metering pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.
Mount the fuel line and wiring harness with rub protection on sharp edges.

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



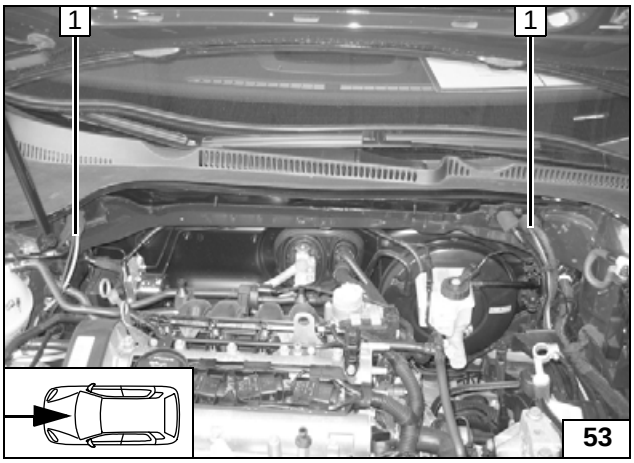
1 Mecanyl line

Routing mecanyl line to firewall



1 Coolant reservoir cap detached
2 Existing pass through
3 Mecanyl line and wiring harness of metering pump

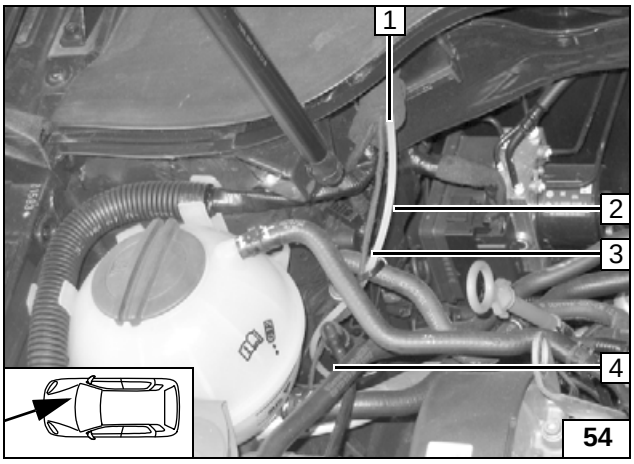
Routing mecanyl line and wiring harness of metering pump into coolant reservoir



Fasten mecanyl line and wiring harness of metering pump in coolant reservoir on original vehicle lines with cable tie.
Pay particular attention to freedom of movement of wiper linkage.

1 Mecanyl line and wiring harness of metering pump

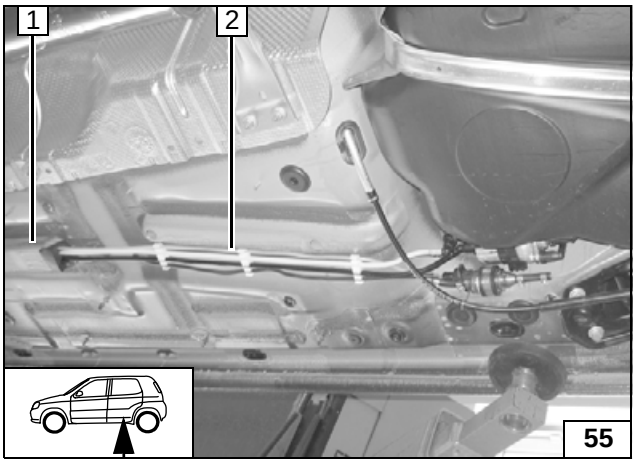
Routing mecanyl line and wiring harness of metering pump to right



Route mecanyl line **2** and wiring harness of metering pump **3** into original vehicle line duct and then to underbody.

1 Existing pass through
2 Mecanyl line
3 Metering pump wiring harness
4 Original vehicle line duct

Routing mecanyl line and wiring harness of metering pump

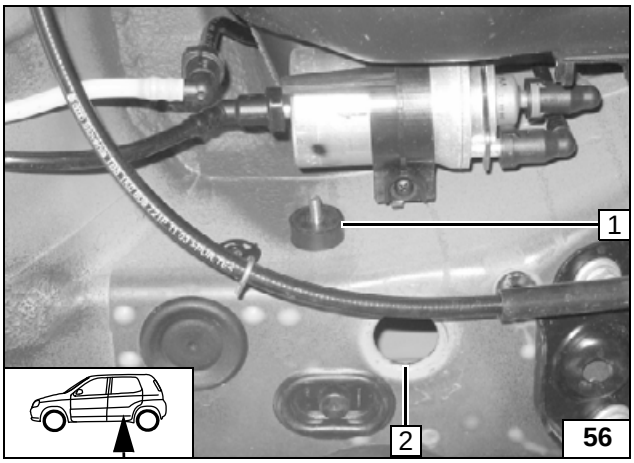


Golf V, Golf Plus and Eos

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

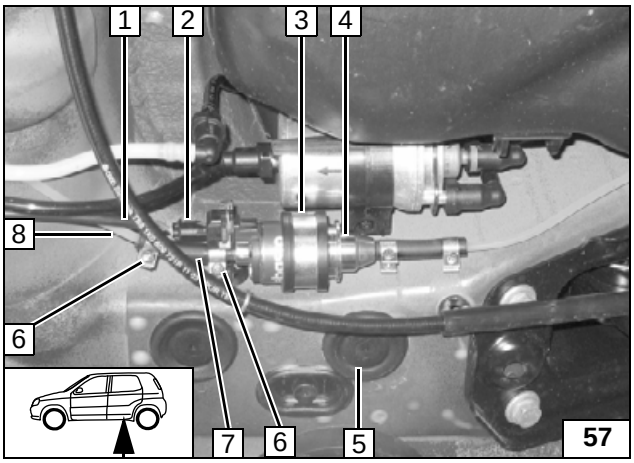
1 Line duct
2 Original vehicle fuel lines

Routing mecanyl line and wiring harness of metering pump



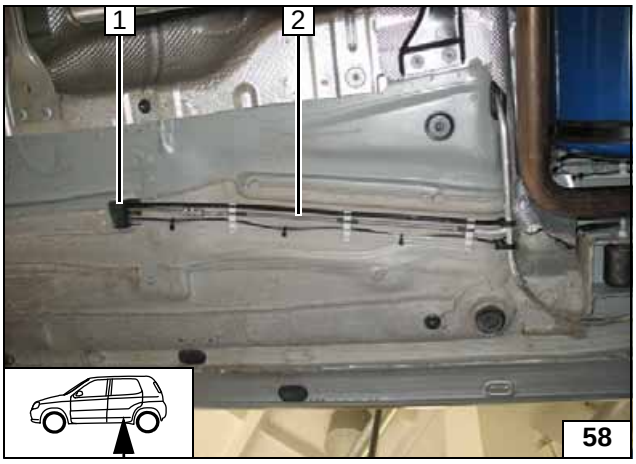
2 Sealing plug removed
1 Silent block, large diameter washer, M6 flanged nut

Installing silent block



4 Metering pump
3 Secure rubber-coated p-clamp on silent block with flanged nut
1 Metering pump wiring harness
2 Connector housing, single-wire seals, plug-in contacts
8 Mecanyl line
7 Hose section
6 10mm dia. hose clamp [2x]
5 Plug remounted

Installing metering pump and connecting pressure side

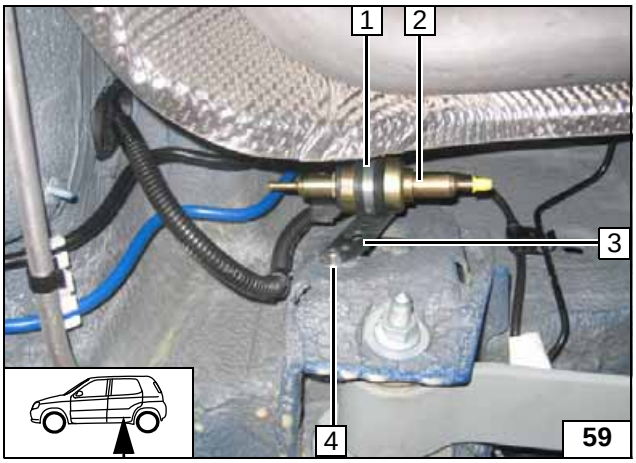


Caddy

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

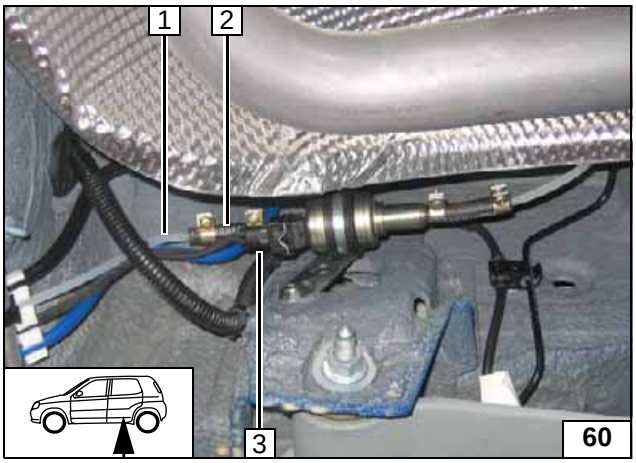
1 Line duct

Routing mecanyl line and wiring harness of metering pump



1 Rubber-coated p-clamp, silent block, flanged nut [2x]
2 Metering pump
3 Perforated bracket
4 Mount M6x20 bolt, large diameter washer, M6 flanged nut in existing hole

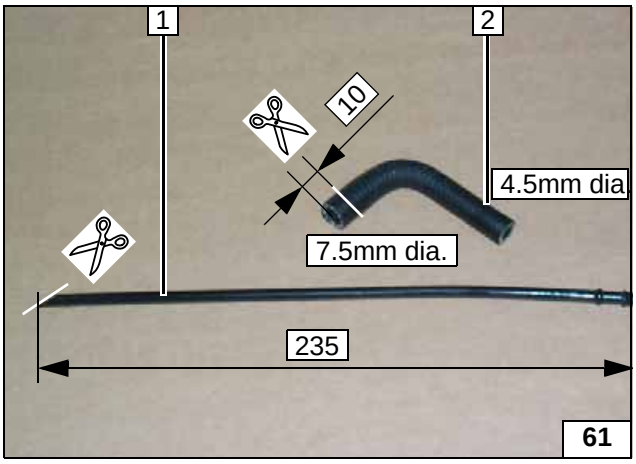
Installing metering pump



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

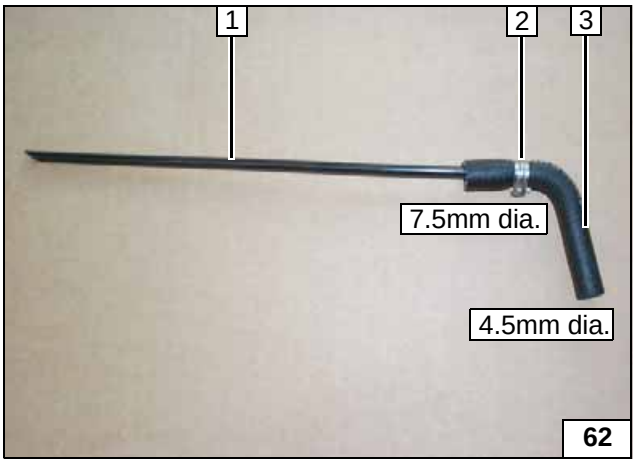
Connecting metering pump

Removing fuel



1 Standpipe
2 Moulded hose

Cutting standpipe and moulded hose to size

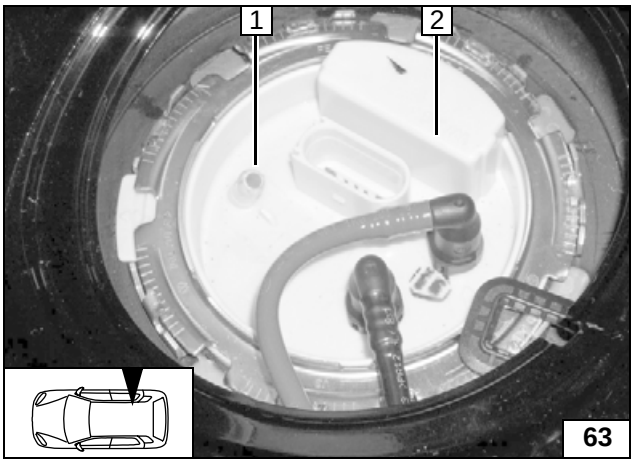


Caillau clamp **2** in centre between beads on end of standpipe.

1 Standpipe
2 10mm dia. Caillau clamp
3 Moulded hose

Premounting standpipe and moulded hose

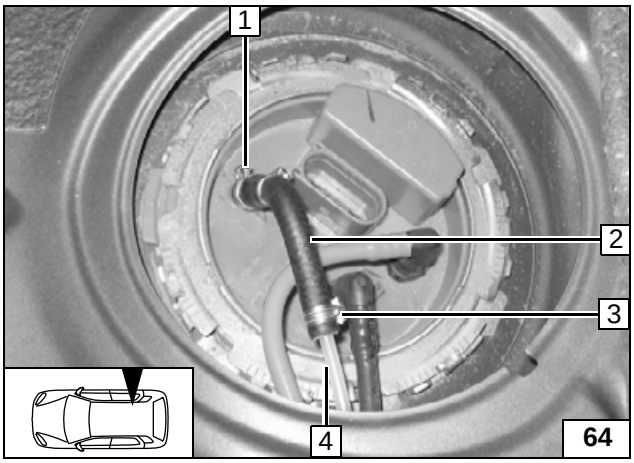
Golf, Golf Plus and Eos



Cut 3 mm off blind plug.

1 Tip cut off blind plug
2 Fuel-tank sending unit

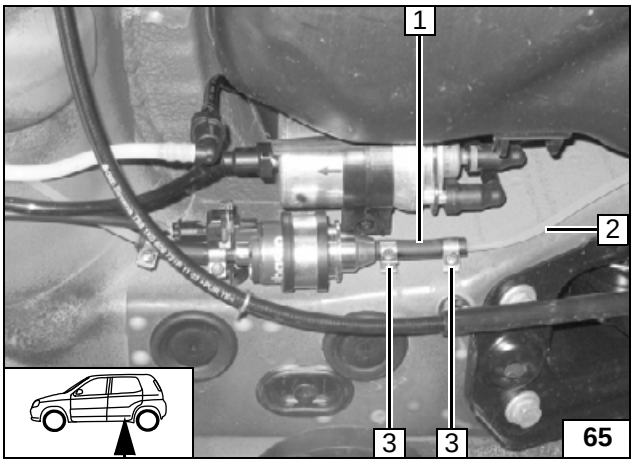
Cutting off blind plug



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

1 13.5mm dia. Caillau clamp
2 Premounted moulded hose with standpipe
3 10mm dia. Caillau clamp
4 Remaining piece of mecanyl line

Connection to fuel-tank sending unit

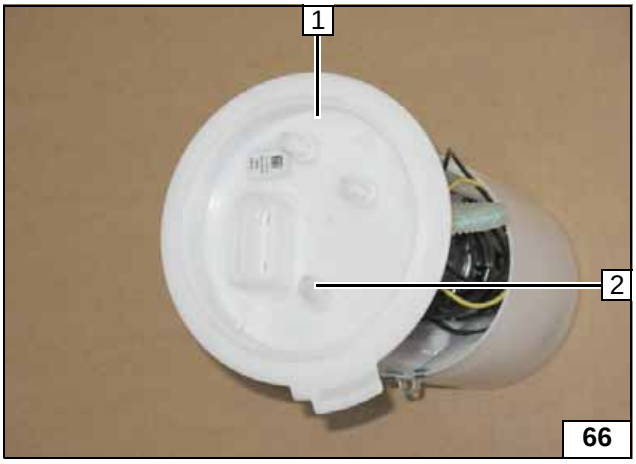


2 Mecanyl line from fuel-tank sending unit
1 Hose section
3 10mm dia. hose clamp [2x]

Connecting intake side of metering pump

Align mecanyl fuel lines and wiring harness of metering pump over entire length and secure with cable ties

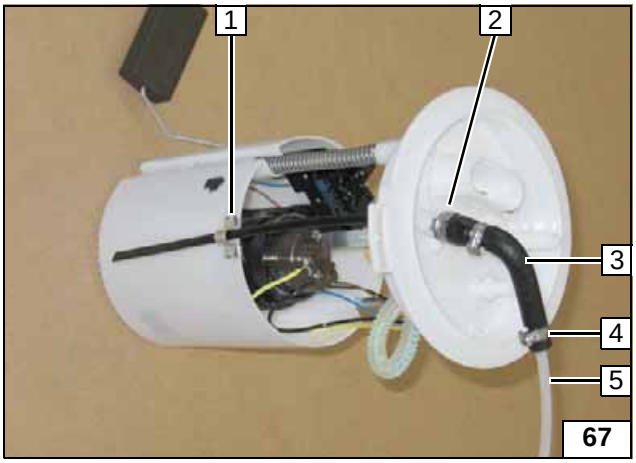
Caddy



Remove fuel-tank sending unit in accordance with manufacturer's instructions.
Cut 3 mm off blind plug.

1 Fuel-tank sending unit
2 Tip cut off blind plug

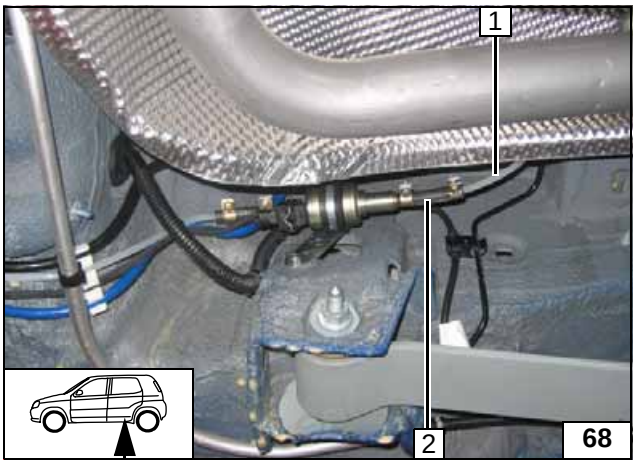
Cutting off blind plug



Position guide clip **1** for standpipe.
Reinstall fuel-tank sending unit and fuel tank in accordance with manufacturer's instructions.

2 13.5mm dia. Caillau clamp
3 Premounted moulded hose with standpipe
4 10 mm dia. Caillau clamp
5 Remaining section of fuel line

Connecting fuel-tank sending unit



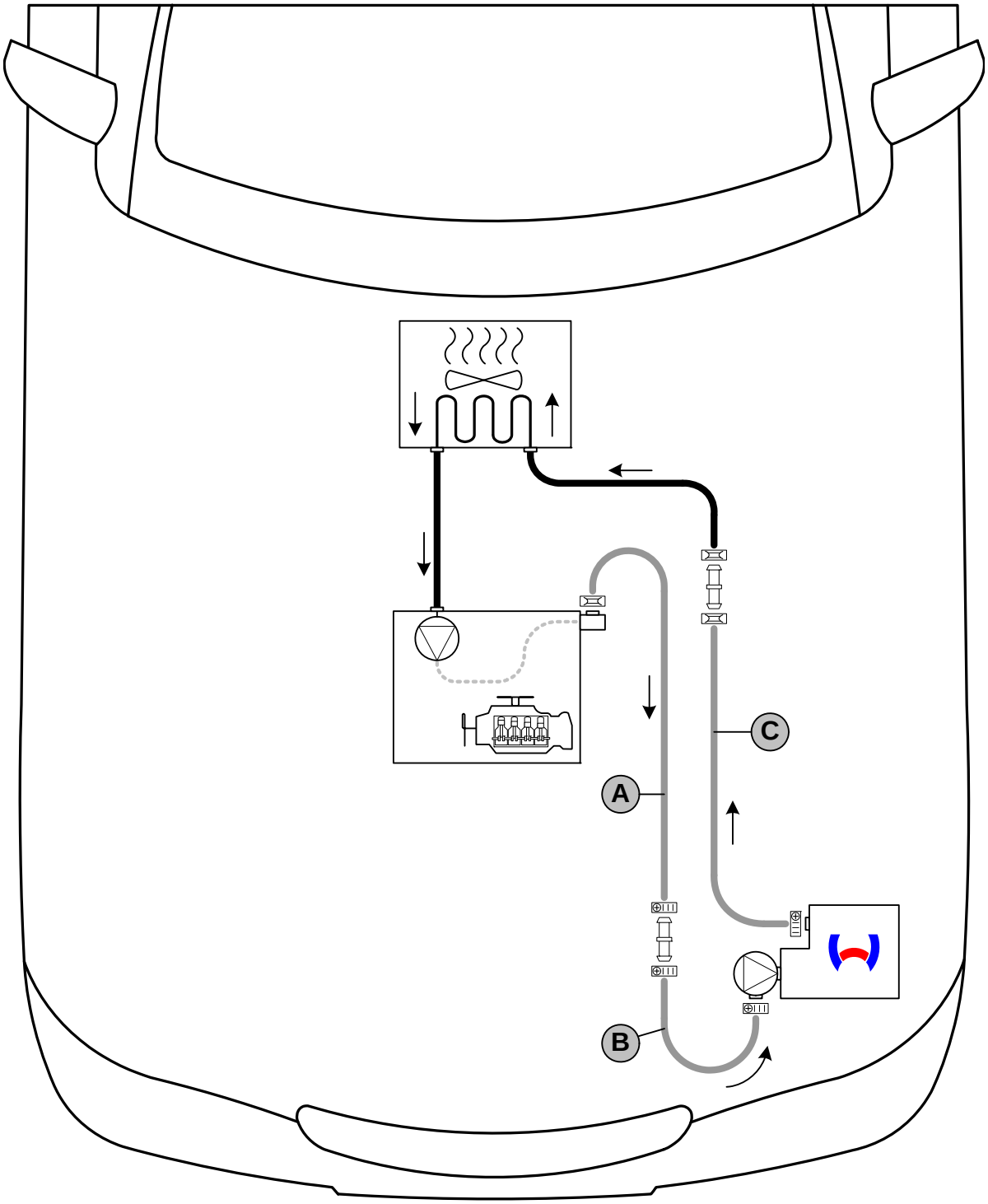
1 Mecanyl line from fuel-tank sending unit
2 Hose section, 10mm dia. hose clamp [2x]

Connecting intake side of metering pump

Align mecanyl fuel lines and wiring harness of metering pump over entire length and secure with cable ties

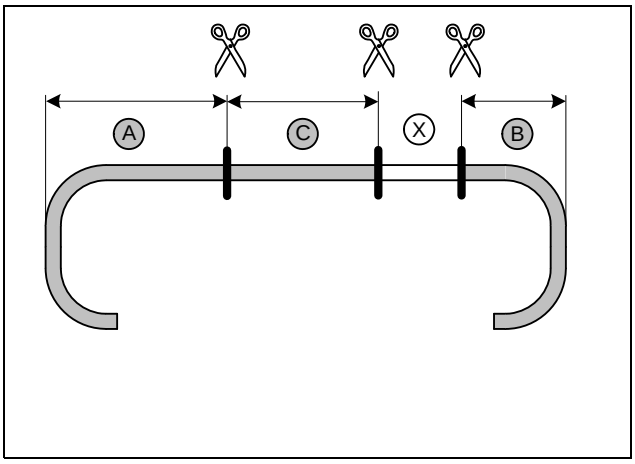
Coolant circuit 1.4 MPI

WARNING!
Any coolant running off should be collected in 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

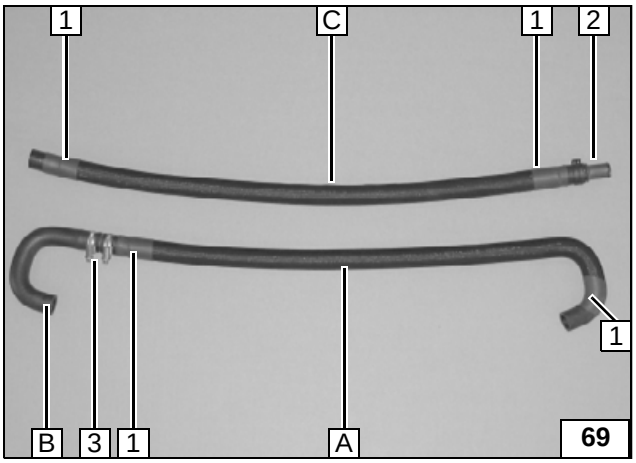
All spring clips = 27 mm dia.. All hose clamps = 20-27 mm dia.
All connecting pipes = dia. 20x20.



Discard section **X**.

A = 670 mm
B = 120 mm
C = 770 mm

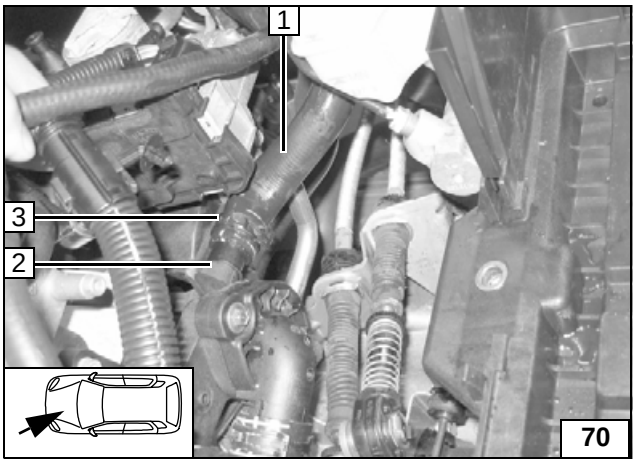
Cutting hoses to size



Push braided protection hoses onto hose **A** and **C** and cut to length. Cut heat shrink plastic tubing to size.

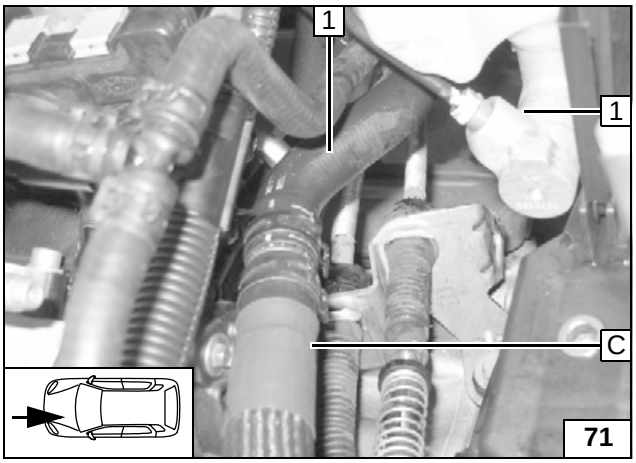
1 50 mm long heat shrink plastic tubing [4x]
2 20x20 connecting pipe, 27 mm dia. spring clip
3 20x20 mm connecting pipe, 24-27 mm dia. hose clamp [2x]

Premounting coolant hoses



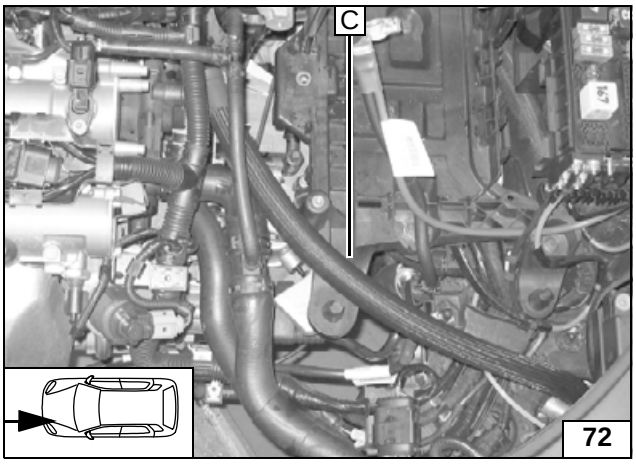
Pull off hose on engine outlet to heat exchanger inlet **1** on connection piece of engine outlet **2**. Spring clip **3** will be reused.
Install battery carrier.

Cutting point

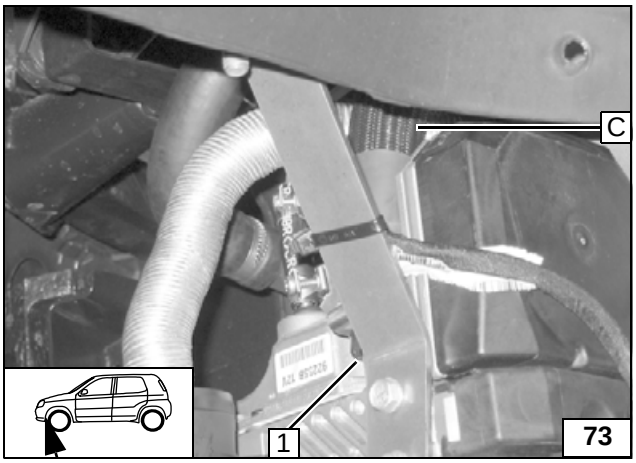


1 Hose to heat exchanger inlet

Connection to heat exchanger inlet

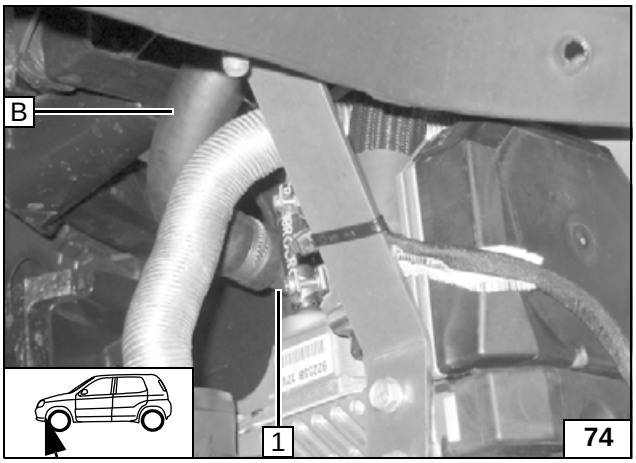


Routing hose C to heater



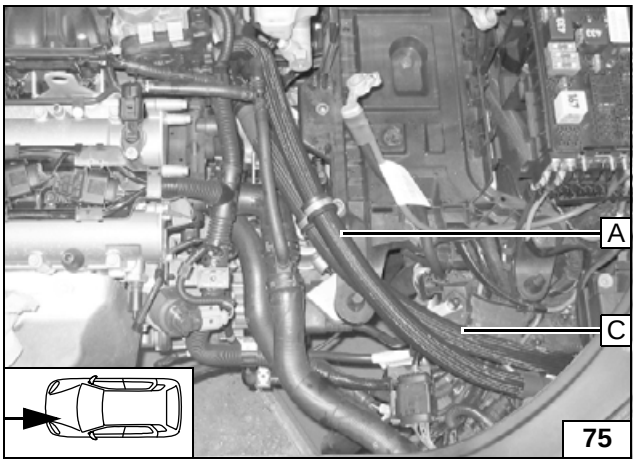
1 Heater outlet

Connection to heater outlet

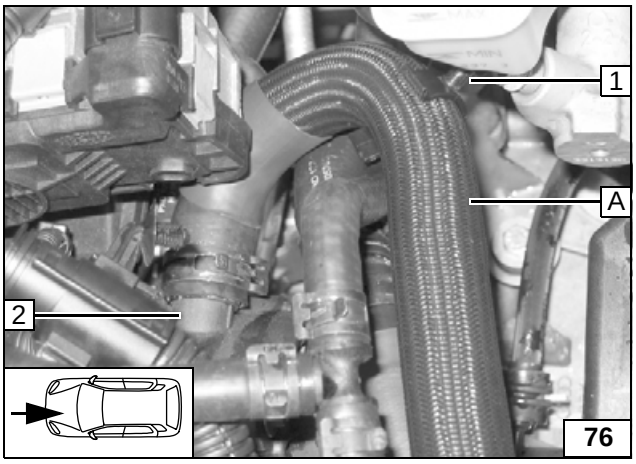


1 Heater inlet

Connection to heater inlet



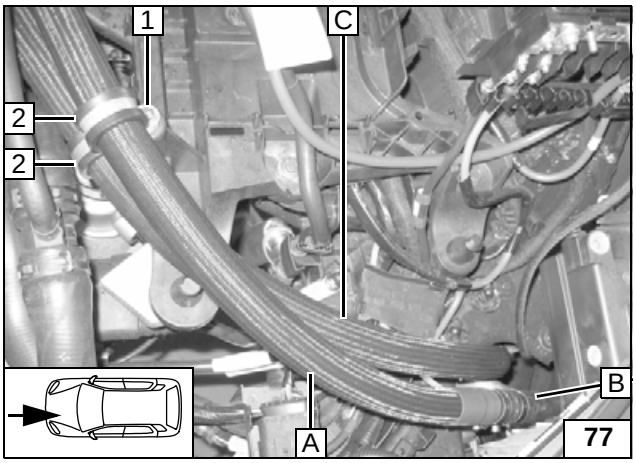
Routing hose A to engine outlet



Fill the coolant hoses with coolant before connecting.

2 Engine outlet connection piece
1 27x6 double clip on hose **A** and brake line from brake master cylinder

Connection to engine outlet



1 M6x20 screw, spring lockwasher on existing thread
2 29 mm dia. rubber-coated p-clamp [2x]

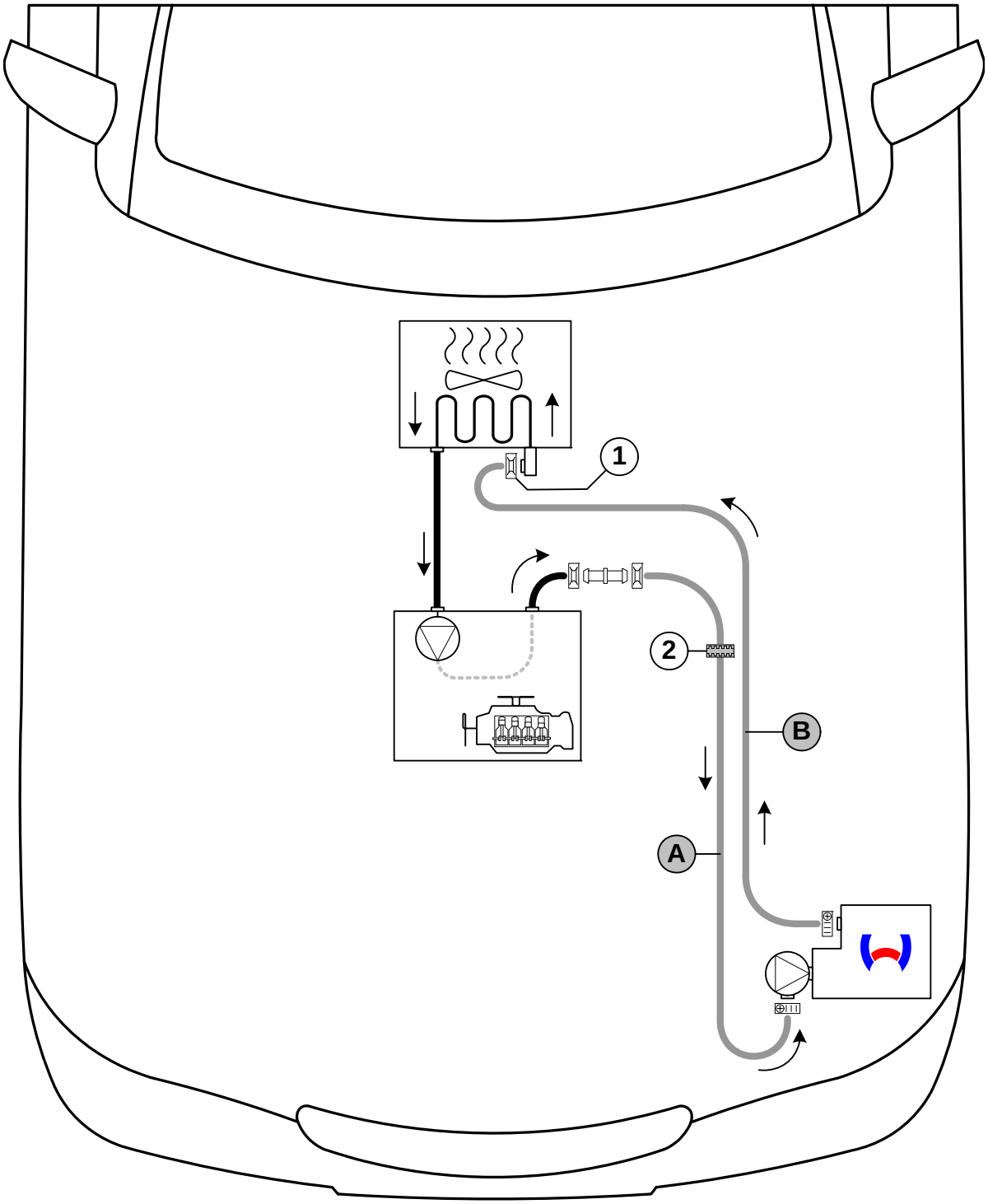
Securing hoses A ,B and C

Align hoses **A, B and C** over entire length and secure with cable ties

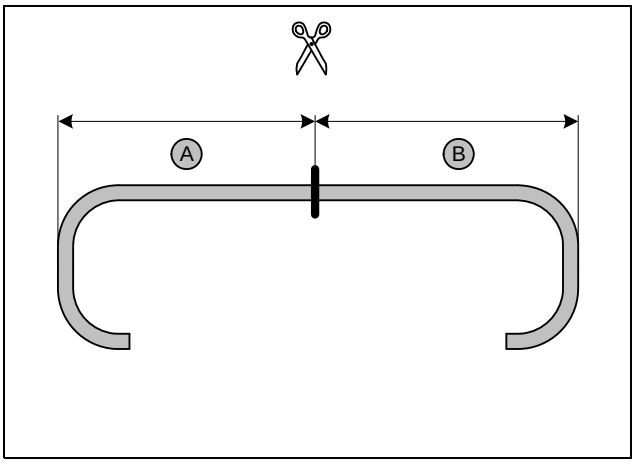
Coolant circuit for 1.6 FSI

WARNING!
Any coolant running off should be collected in 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

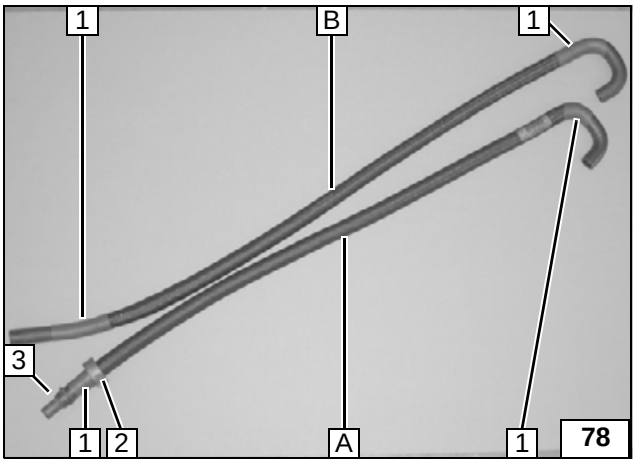


All spring clips = 27 mm dia.. **1** = Original vehicle spring clip .
All hose clamps = 20-27 mm dia. Connecting pipe = 20x20 dia.
2 = Black (sw) rubber isolator .



A = 1070 mm
B = 1120 mm

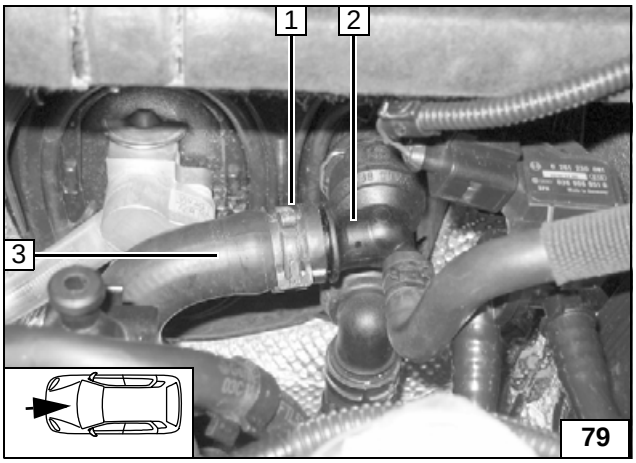
Cutting hoses to length



Push braided protection hoses onto hose **A** and **B**. Cut heat shrink plastic tubing to size.

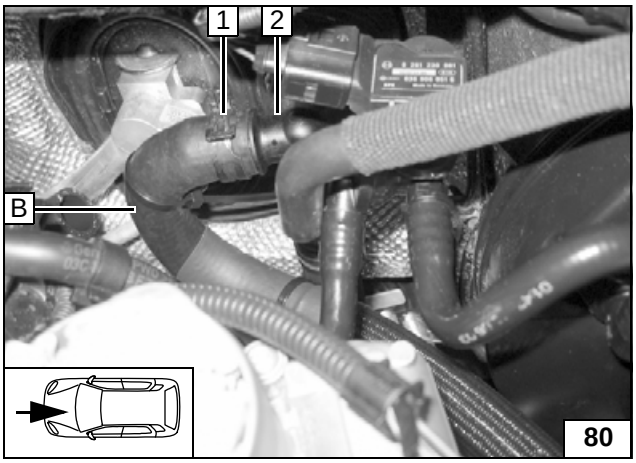
1 50 mm long heat shrink plastic tubing [4x]
2 Black (sw) rubber profile
3 20x20 connecting pipe, 27 mm dia. spring clip

Premounting hoses



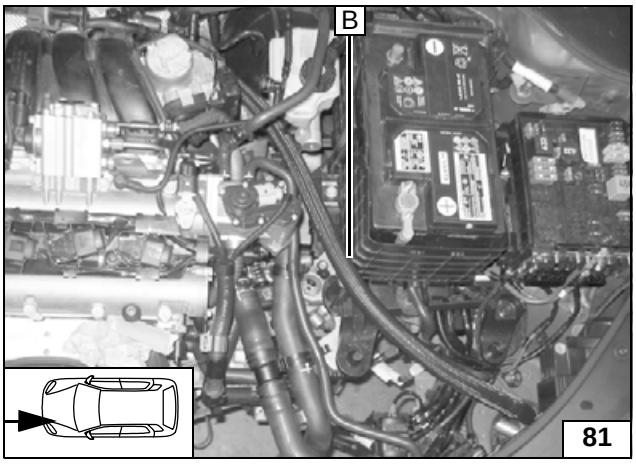
Pull off hose on engine outlet to heat exchanger inlet **3** on connection piece of heat exchanger inlet **2**. Spring clip **1** will be reused. Install battery carrier.

Cutting point

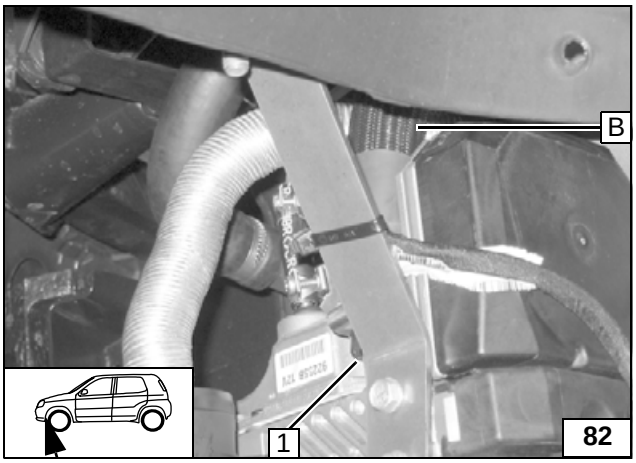


1 Original vehicle spring clip
2 Connection piece of heat exchanger inlet

Connection to heat exchanger inlet

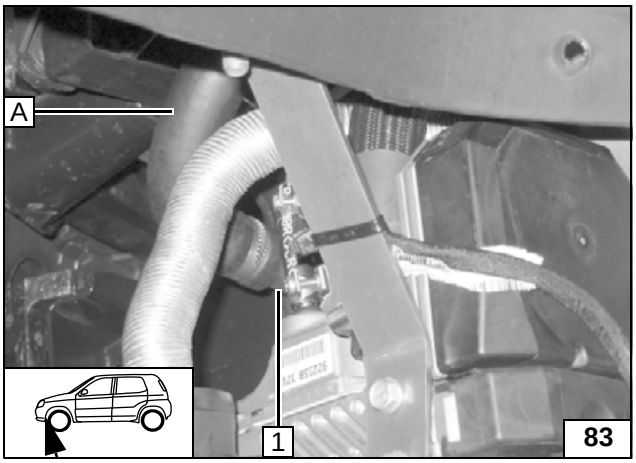


Routing hose B to heater



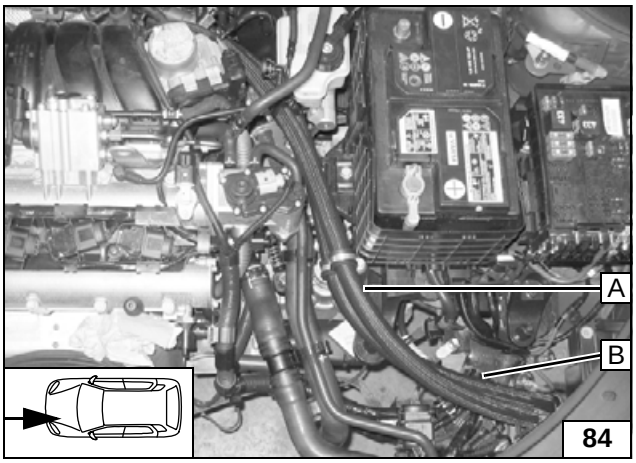
1 Heater outlet

Connection to heater outlet

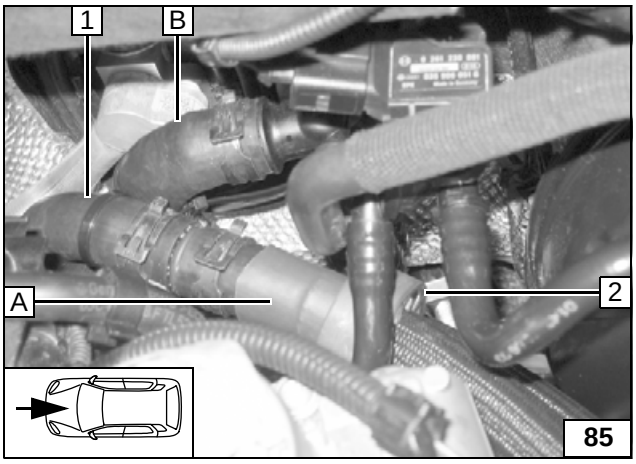


1 Heater inlet

Connection to heater inlet



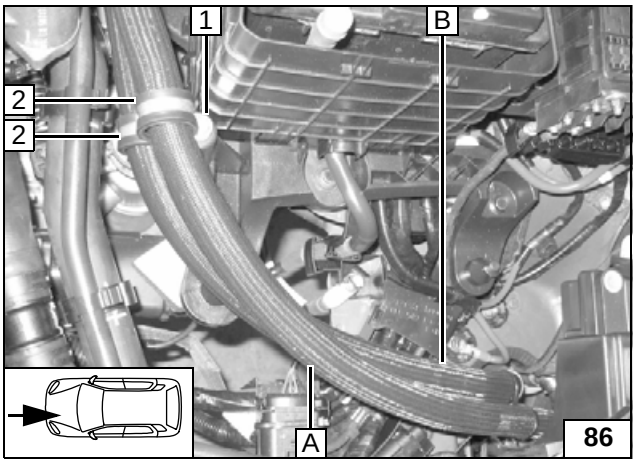
Routing hose A to engine outlet



Fill the coolant hoses with coolant before connecting.

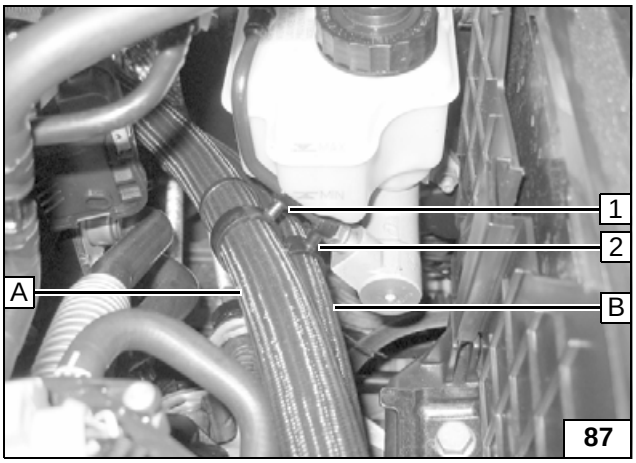
1 Hose of engine outlet
2 Align protective rubber isolator

Connection to engine outlet



1 M6x20 screw, spring lockwasher on existing thread
2 29 mm dia. rubber-coated p-clamp [2x]

Securing hoses A, B



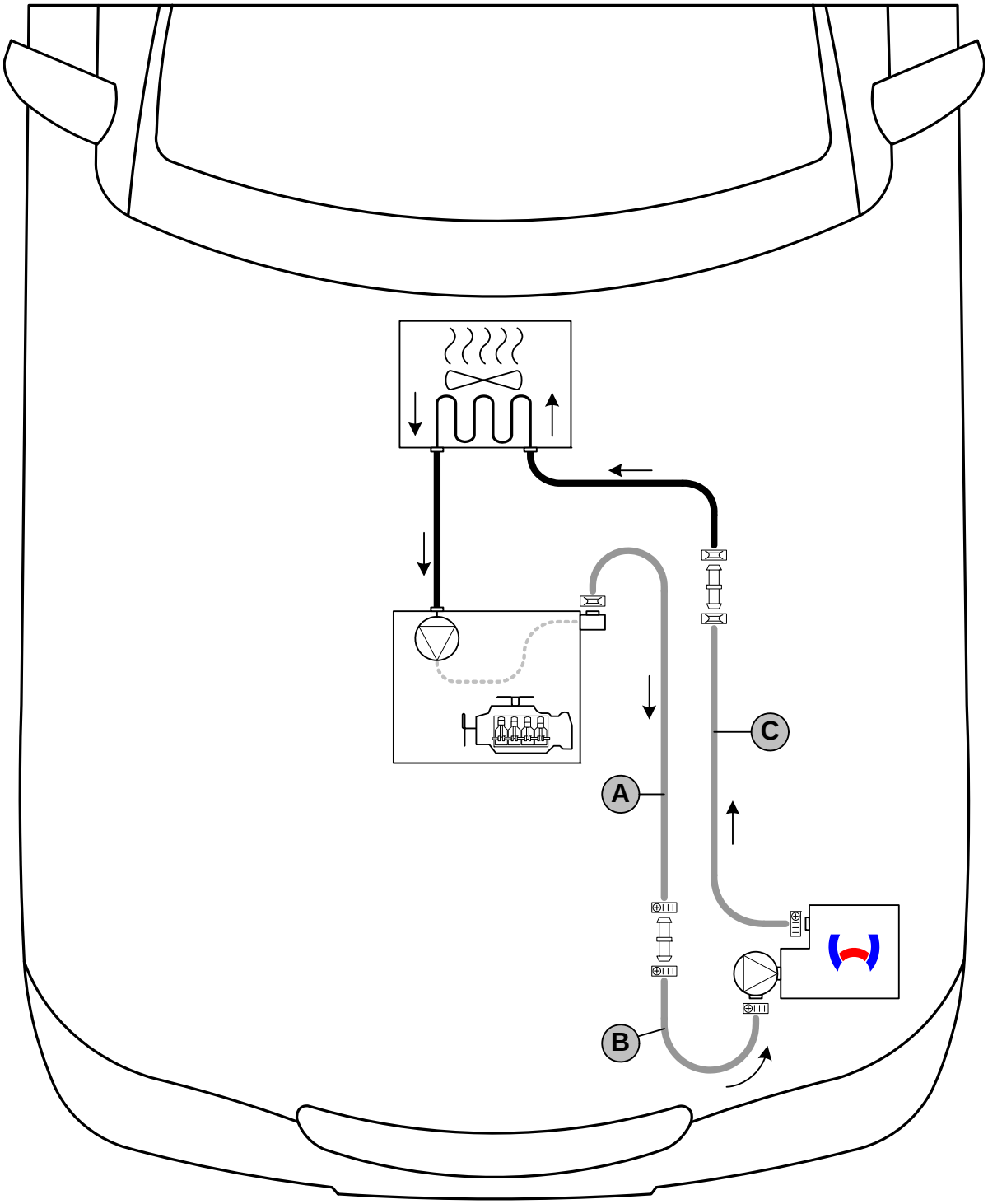
1 27x6 double clip on hose **A** and brake line from brake master cylinder
2 27x6 double clip on hose **B** and brake line from brake master cylinder

Fastening hoses A, B

Align hoses **A and B** over entire length and secure with cable ties

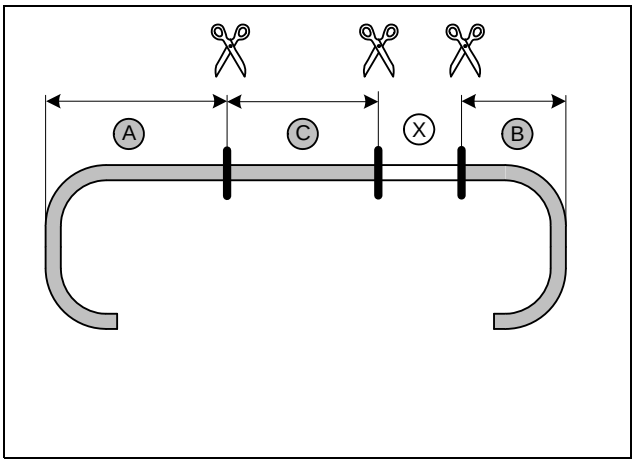
Coolant circuit 2.0TFSI

WARNING!
Any coolant running off should be collected in 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

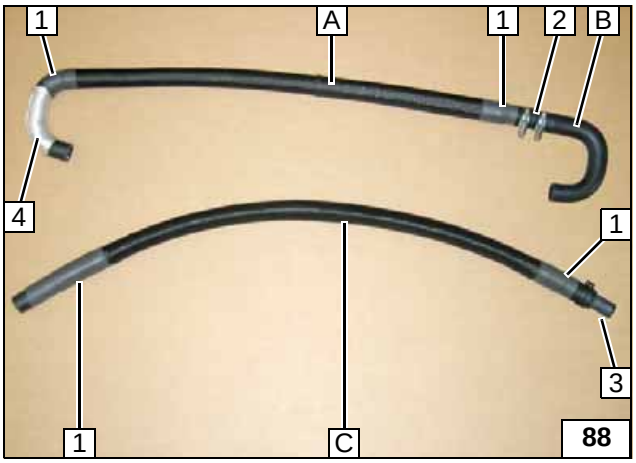
All spring clips = 27 mm dia.. All hose clamps = 20-27 mm dia.
All connecting pipes = dia. 20x20.



Discard section **X**.

A = 700 mm
B = 120 mm
C = 800 mm

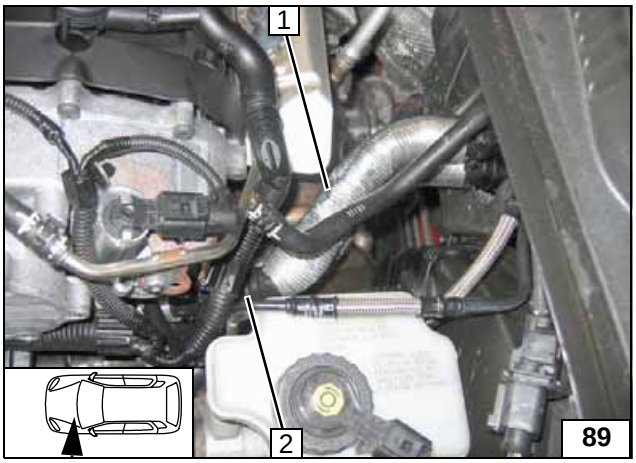
Cutting hoses to size



Push braided protection hoses onto hose **A** and **C** and cut to length.
Slide on 110mm heat protection hose **4** on hose **A**.

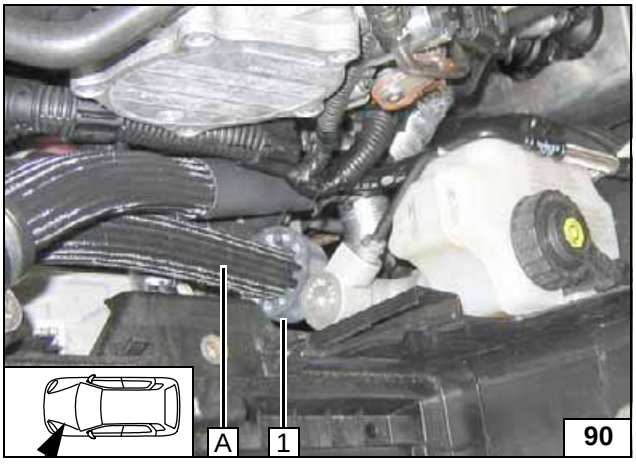
1 Push on heat shrink plastic tubing, shrink down [4x]
2 20x20 mm connecting pipe, 24-27 mm dia. hose clamp [2x]
3 20x20 connecting pipe, 27 mm dia. spring clip

Premounting hoses



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

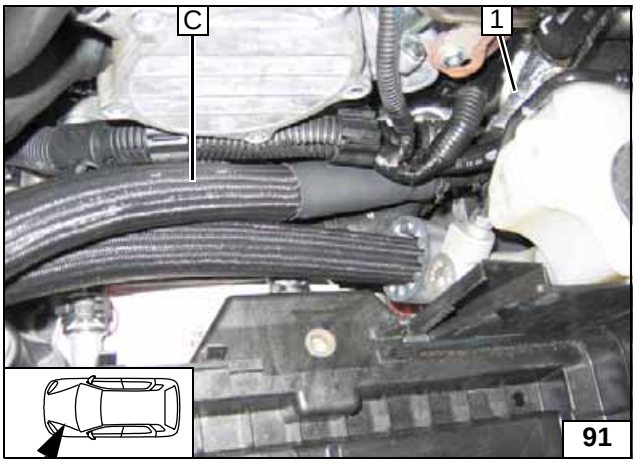
Cutting point



Connect hose **A** to 180° elbow on connection piece of engine outlet

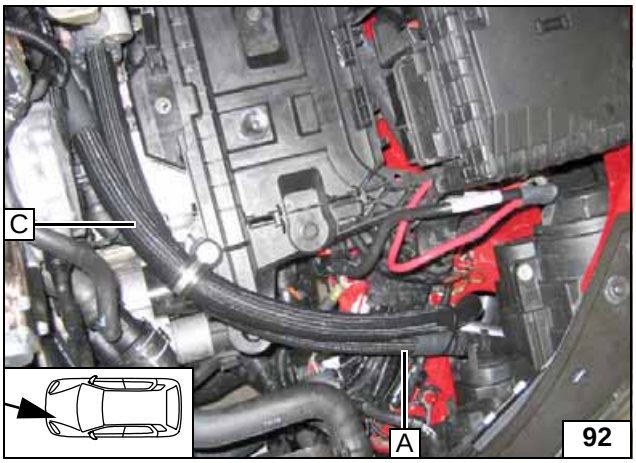
1 Black (sw) rubber isolator

Connection to engine outlet

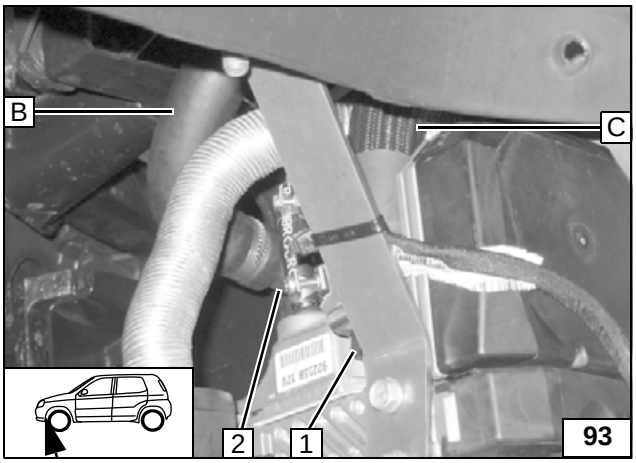


1 Hose on heat exchanger inlet

Connection to heat exchanger inlet

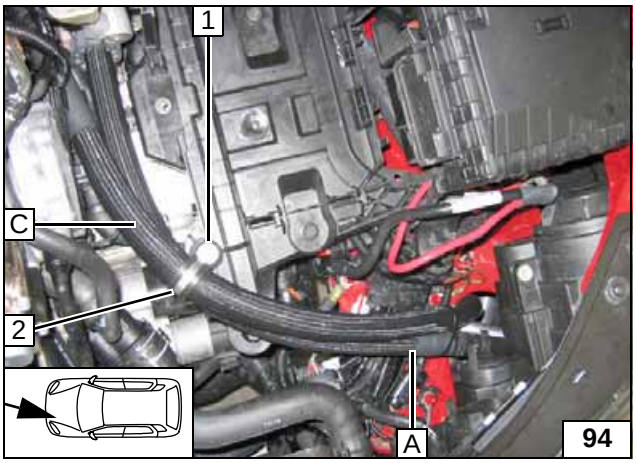


Routing in engine compartment



1 Heater outlet
2 Heater inlet

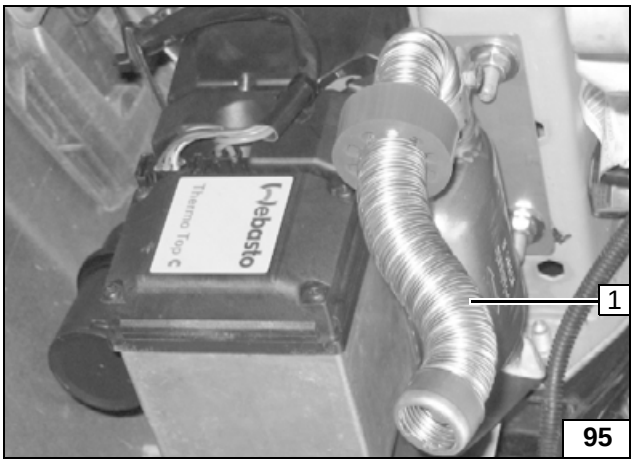
Connecting heater



Align hoses **A, B and C** over entire length and secure with cable ties.

1 M6x20 screw, spring lockwasher on existing thread
2 29 mm dia. rubber-coated p-clamp [2x]

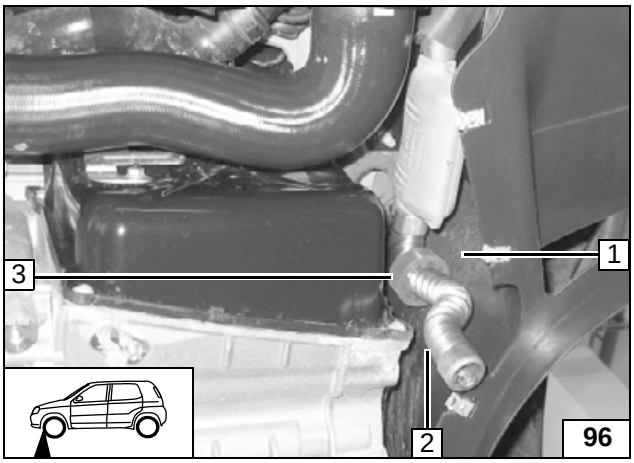
Securing hoses A ,B and C



Exhaust gas

Shape exhaust end section **1** as shown.

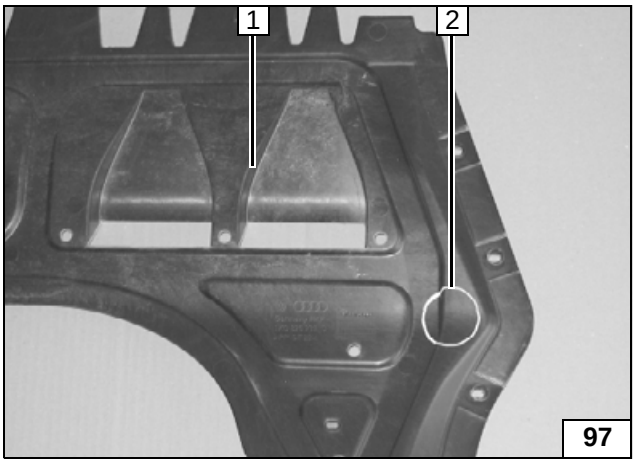
Shaping exhaust end section



Align exhaust end section and rubber isolator as shown.
Ensure sufficient space between exhaust end section and transmission and wheel well trim. (Picture shows vehicle with direct gear transmission)

1 Wheel well trim
2 Exhaust end section
3 Red (rt) protective rubber isolator

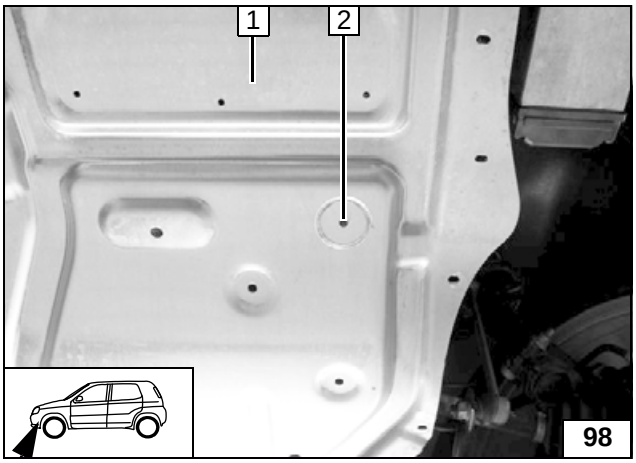
Installing wheel well trim



Underride protection for Golf V and Golf Plus

1 Underride protection
2 42 mm dia. hole

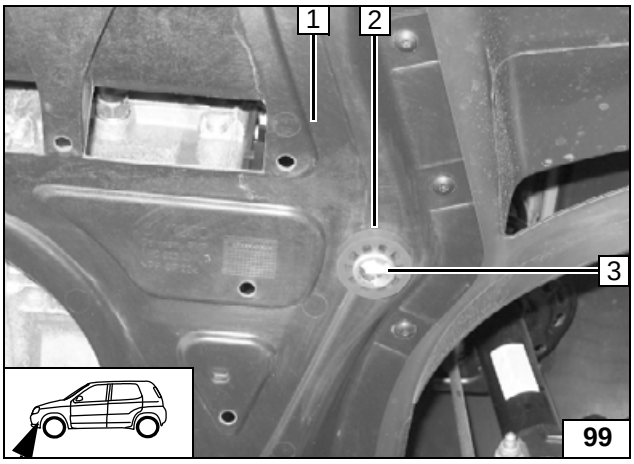
Hole in underride protection



Underride protection for Eos

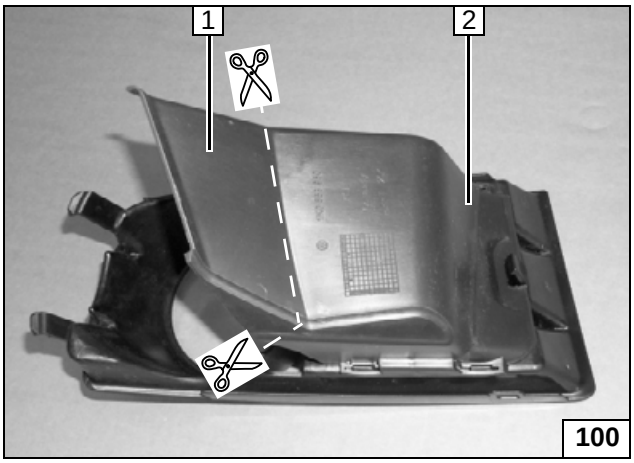
1 Underride protection
2 42 mm dia. hole

Hole in underride protection



Picture shows Golf V.
First position red (rt) rubber isolator **2** on exhaust end section **3** from below, then insert with groove in underride protection **1**. Align end cap of exhaust end section **3** flush on red (rt) rubber isolator **2** as shown.

Inserting rubber isolator



Front fog light trim piece

Golf, Golf Plus and Eos

1 Cut off section
2 Front fog light trim piece (depends on equipment)

Cutting front fog light trim piece to size

Final Work

WARNING!
Mount removed parts in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate and tie back all loose lines.
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 digital timer, teach telestart transmitter**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Place the "Switch off parking heater before refuelling" sticker near the filler neck.**
- **See installation instructions for initial start-up and function test**

Adjustment of sensitivity of the passenger compartment monitoring

WARNING!
This can only be carried out at an authorised 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

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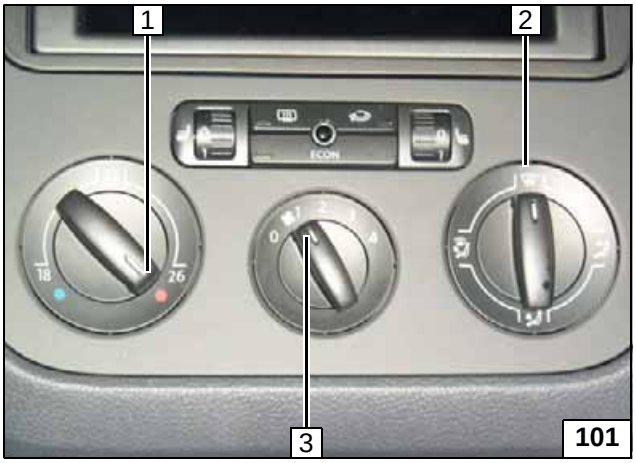
Operating Instructions for End Customer

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, this 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.

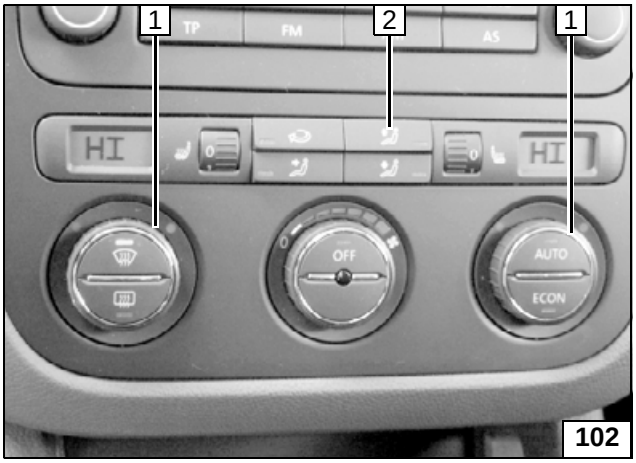
Before parking the vehicle, make the following settings:



All vehicles

Vehicles without Climatronic

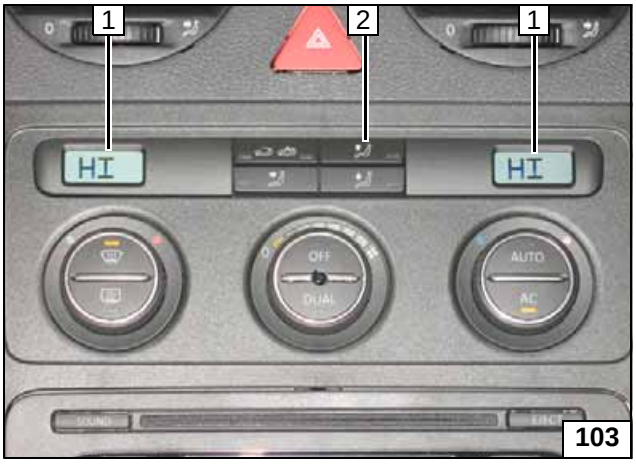
1 Set temperature to "max."
2 Air outlet to windscreen
3 Set fan to level "1", or possibly "2"



Golf V, Golf Plus, Eos

Vehicles with Climatronic

1 Set temperature to "HI“ [2x]
2 Air outlet faces upward



Caddy

Vehicles with Climatronic

1 Set temperature to "HI" [2x]
2 Air outlet to windscreen