Water Heater Unit

Webasto
Feel the drive

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

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

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

Installation Instructions

Skoda Octavia

Diesel with DPF
from Model Year 2005
Left-hand drive vehicle



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, specialized tools and equipment are required to install and repair Webasto heating and cooling systems.

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

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

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

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Validity

Manufacturer	Model	Type	EG-BE No./ABE
Skoda	Octavia	1Z	e1 * 2001 / 116 * 0230 * ...

Engine type	Engine model	Output in kW	Displacement in cm³
BLS	Diesel	77	1896
BMM	Diesel	103	1968
BMN	Diesel	125	1968

Vehicle and engine types, equipment variants and national specifications not listed in these installation instructions have not been tested. However, installation according to these installation instructions may be possible.
The installation location of a digital timer and summer/winter switch should be confirmed with the end customer before installation.

Heater Unit/Installation Kit

Quantity	Description	Order No.:
1	Delivery Scope *Thermo Top C-D* for vehicle Climatic	9016853A
or		
1	Delivery Scope *Thermo Top C-D* for vehicle Climatronic	9016854A

Other components required (must be ordered separately):

Quantity	Description	Order No.:
1	Quick-release coupling for connection of heat exchanger	
	Skoda Order No.:	3B0 122 291B

Other required heater controls:

Quantity	Description	Order No.:
1	3-time digital timer	1301444B
and/or		
1	Telestart T90	9014428A

Foreword

These installation instructions apply to Skoda Octavia vehicles with diesel engines - for validity see page 2 from model year 2005 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 these installation instructions. However, the stipulations in the "installation instructions" and "operating and maintenance 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.

General Instructions

Installation should be carried out according to the general, standard rules of technology. Unless specified otherwise, fasten hoses, lines and wiring harnesses to original vehicle lines and wiring harnesses using cable ties.
Sharp edges should be fitted with edge protectors (split-open plastic hose).
Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).

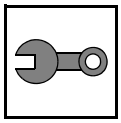
Special Tools

- Center bit up to 42 mm dia.
- Countersink bit
- Hose clamping pliers
- Riveting pliers

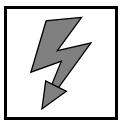
Explanatory Notes on Document

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

Mechanical system



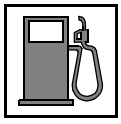
Electrical system



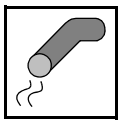
Coolant connection



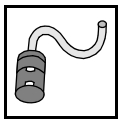
Fuel connection



Exhaust system



Combustion air



Special features are highlighted using the following symbols:



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



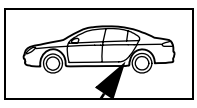
Specific risk of fire or explosion.



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



Reference to a special technical feature.

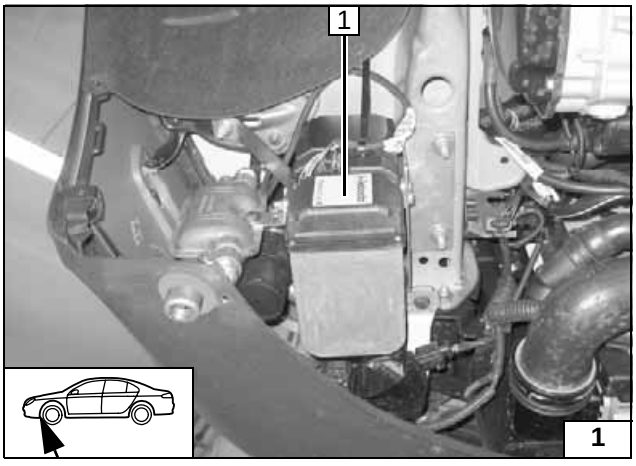


The arrow in the vehicle icon indicates the position on the vehicle and the viewing angle.

Preliminary Work

WARNING!

- Open the fuel tank cap, ventilate the tank.
- Close the tank cap again.
- Depressurize the cooling system.
- Copy the factory number from the original type label to the duplicate type label.
- Remove years that do not apply from the duplicate label.
- Attach the duplicate label (type label) in the appropriate place.
- Disconnect the battery "earth" or "ground" connection.
- Remove the battery
- Remove the battery carrier
- Remove the air filter together with the intake hose
- 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 rear bench seat
- Open the right-hand fuel sender 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 unit installation location

1 Heater unit

Installation location

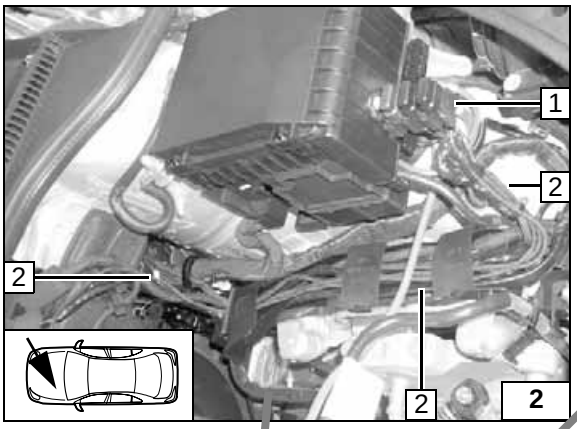
Electrical Connections

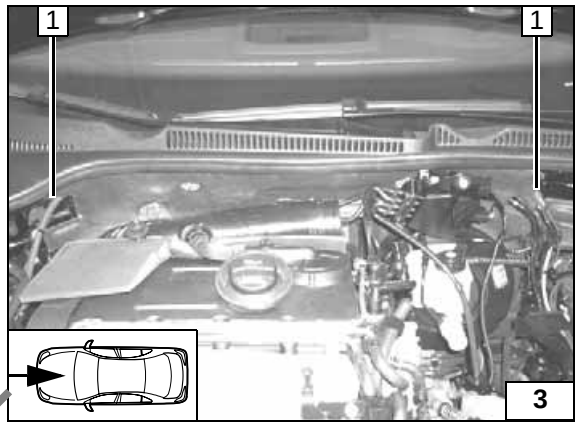
Fuse holder

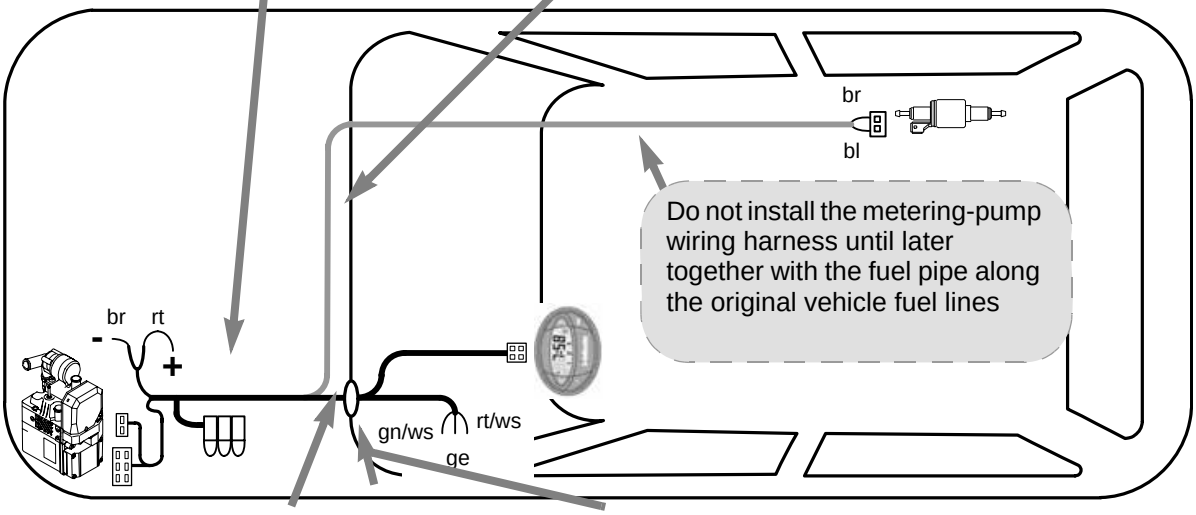
1 Fuse holder (for installation instructions, see page 7)
2 Route wiring harness of heater control, fan controller and metering pump in cable duct to firewall [3x]

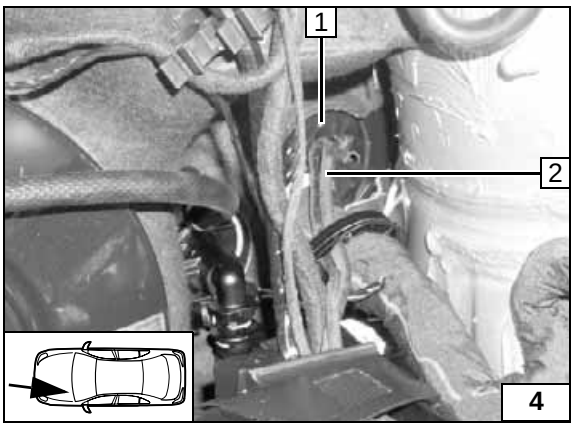
Wiring routing

1 Route wiring harness of metering pump behind insulation mat toward right



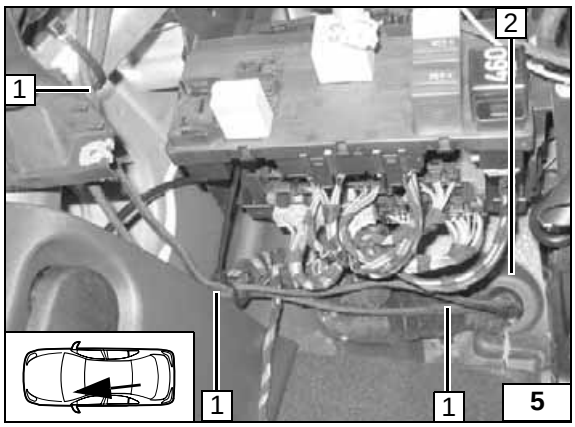






Wiring harness pass through

1 Original vehicle wiring harness pass through
2 Wiring harnesses for fan controller and heater control (for instructions on connecting fan, see pages 8-12; and on connecting heater control, see pages 13-14)

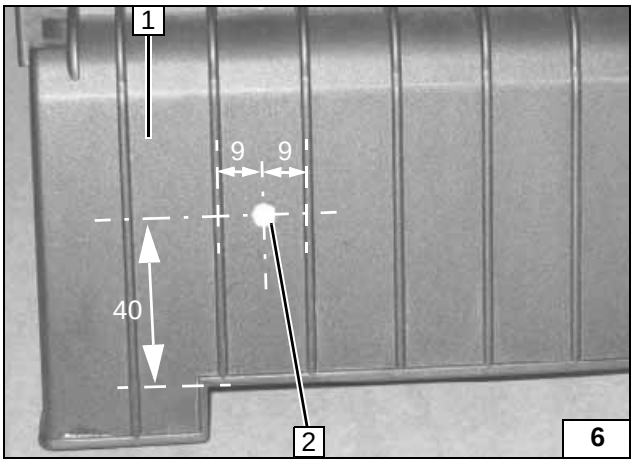


Wiring harness pass through

2 Original vehicle wiring harness pass through
1 Wiring harnesses for fan controller and heater control [3x]

Wiring harness installation diagram

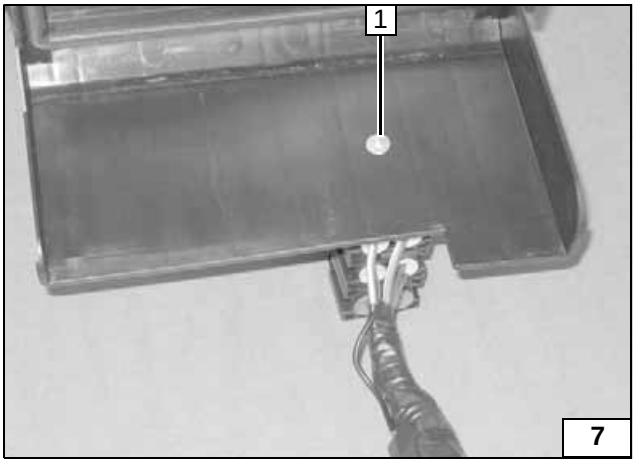
Installing wiring harness



Countersink hole (**2**) from behind for M5 countersunk head screw.

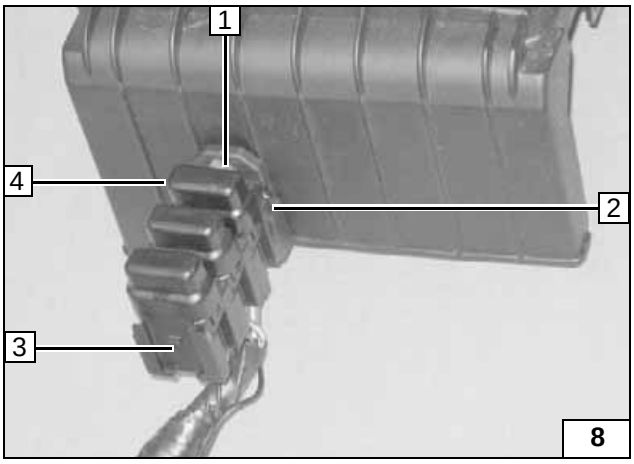
1 Cover of fuse/relay carrier in engine compartment
2 5.0 mm dia. hole

Hole for fuse holder



1 M5x10 countersunk head screw

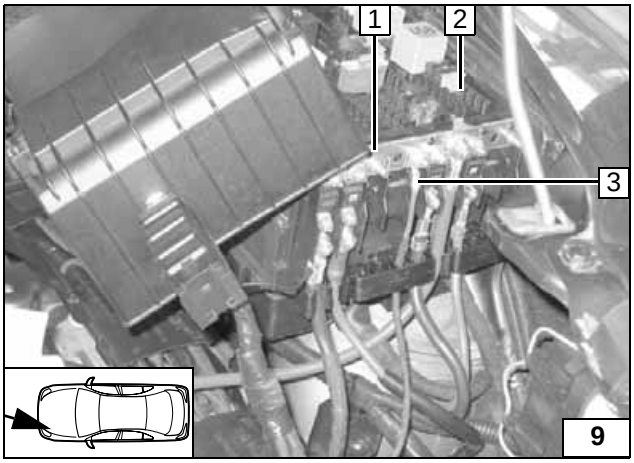
Installing fuse holder



On vehicles with Climatronic, remove fuse F3 (25 A).

1 Large diameter washer (between cover and retaining plate), M5 flanged nut
2 Retaining plate
3 Fuse holder
4 F3 fuse

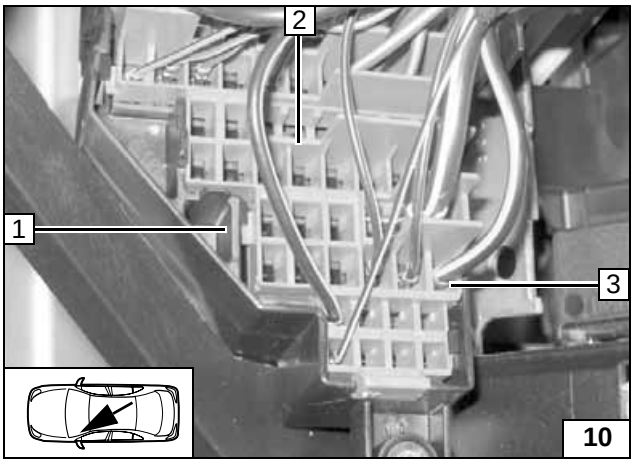
Installing fuse holder



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

2 Fuse/relay carrier
3 Red (rt) positive wire
1 Positive rail

Connecting positive and ground wire

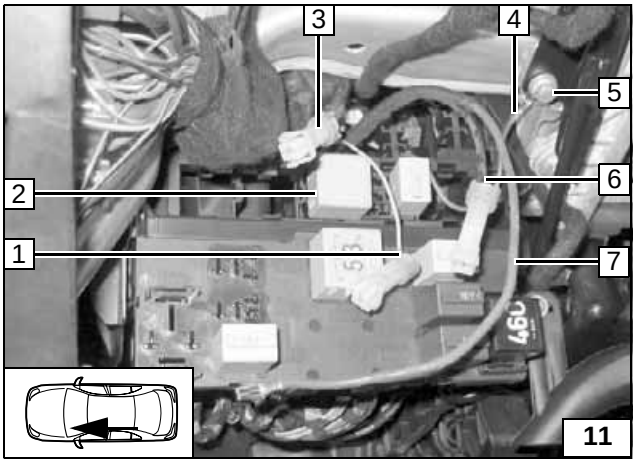


Climatic fan control

Disconnect original vehicle fuse carrier (**1**) (instrument panel at upper left) and unlock contact lock (**2**)
Release black/blue (sw/bl) wire, 4 mm² (**3**) on fuse outlet SC40

1 Fuse carrier
2 Contact lock
3 Black/blue (sw/bl) wire, 4 mm²

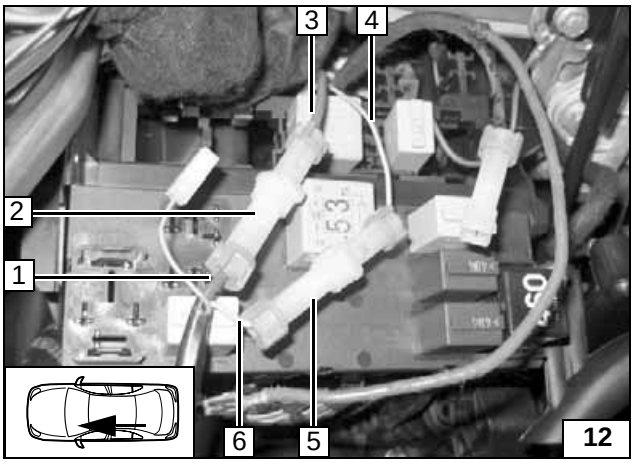
Uncrimping wire



Position of free socket dependent on vehicle equipment.

2 Relay K3
4 Brown (br) wire from K3/85
5 Original vehicle bolt
3 Red/white (rt/ws) wire to K3/87
6 Black (sw) wire from K3/30
7 Red (rt) wire to K3/87a
1 Green/white (gn/ws) wire to K3/86

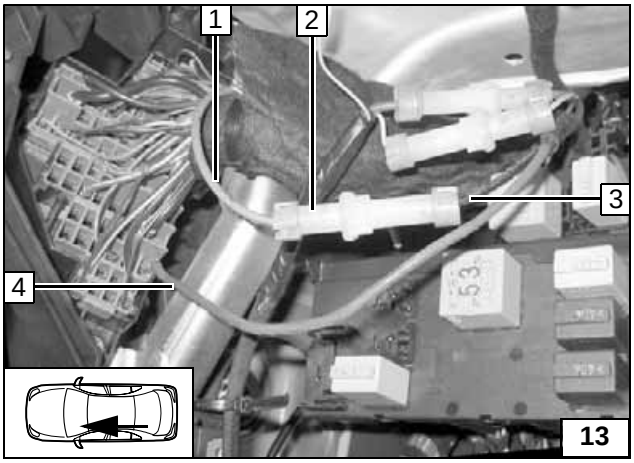
Installing wiring harness



Produce connections as shown in wiring diagram.

1 Red/white (rt/ws) wire from fuse F3
2 AMP housing
3 Red/white (rt/ws) wire (**11/3**) to K3/87
6 Green/white (gn/ws) wire from heater unit connector X1/4
5 AMP housing
4 Green/white (gn/ws) wire (**11/1**) to K3/86

Connecting wires to heater unit wiring harness

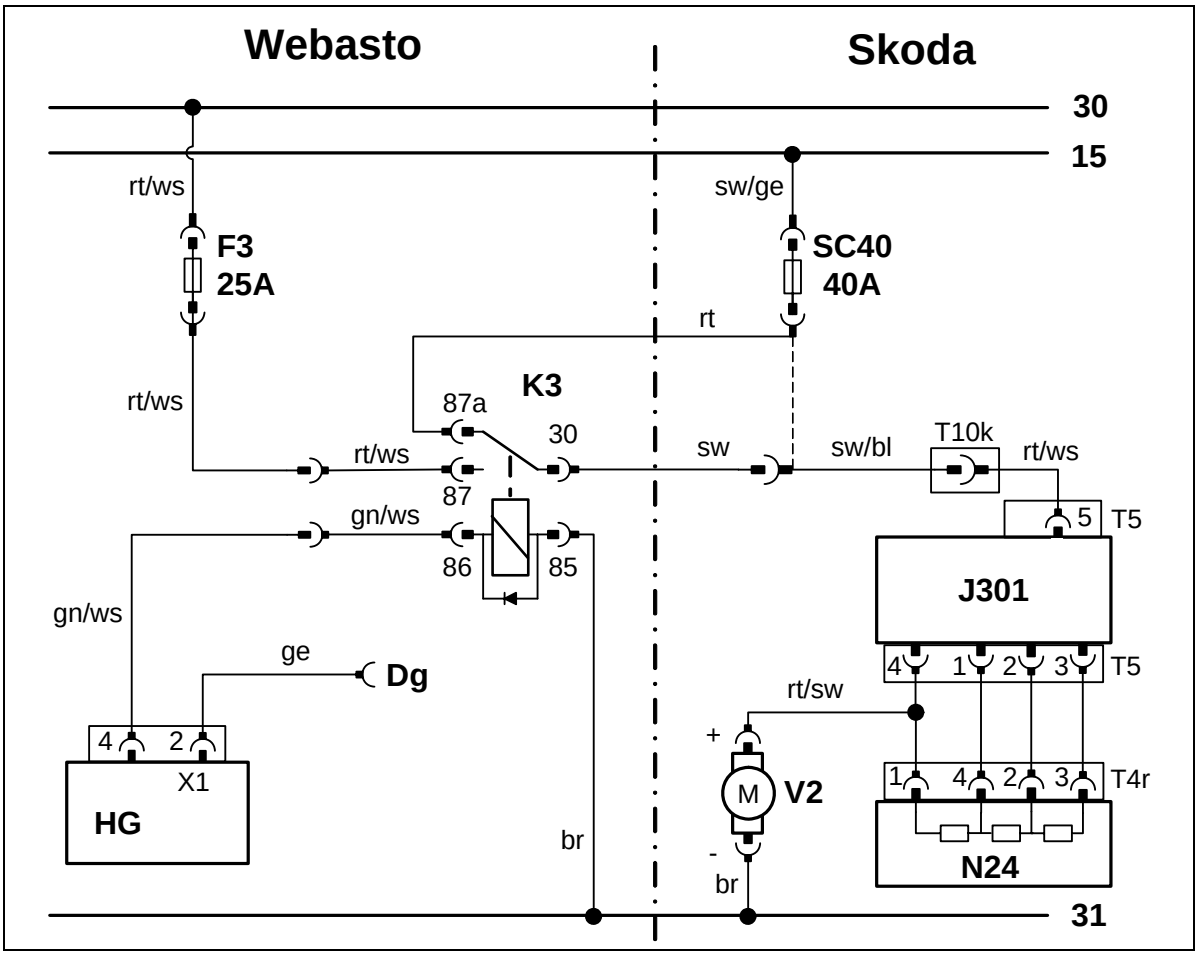


Produce connections as shown in wiring diagram.

1 Black/blue (sw/bl) wire (**10/3**) with original standard power timer
2 AMP housing
3 Black (sw) wire (**11/6**) from K3/30
4 Red (rt) wire (**11/7**) from K3/87a engaged in fuse output SC40

Connecting wires to vehicle wiring harness

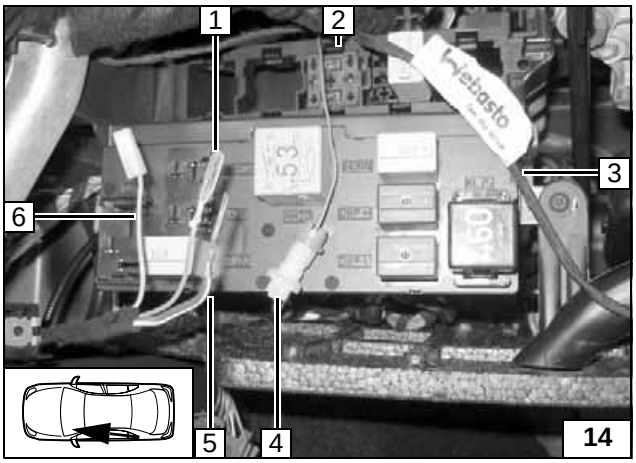
Climatic wiring diagram



Legend

Components of genuine accessories		Vehicle components		Colors and symbols	
HG	Heater unit TT-C/E	SC40	Fan fuse	rt	red
F3	Fuse	J301	Control unit of air conditioning	ws	white
K3	Fan relay	N24	Resistor group	sw	black
Dg	Diagnosis connection	V2	Fan motor	br	brown
				gn	green
				ge	yellow

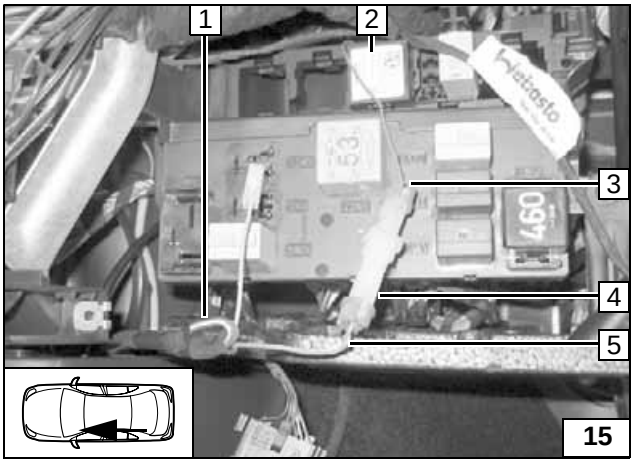
Climatronic fan controller



Position of free socket dependent on vehicle equipment.

1 Green/white (gn/ws) wire from heater unit X1/4
5 Red/white (rt/ws) wire from fuse holder F3
6 Yellow (ge) diagnosis wire
2 Socket for IPCU module
3 Wiring harness with red (rt) wire from IPCU/E and black/white (sw/ws) wire from IPCU/A
4 Green/white (gn/ws) wire from IPCU/86

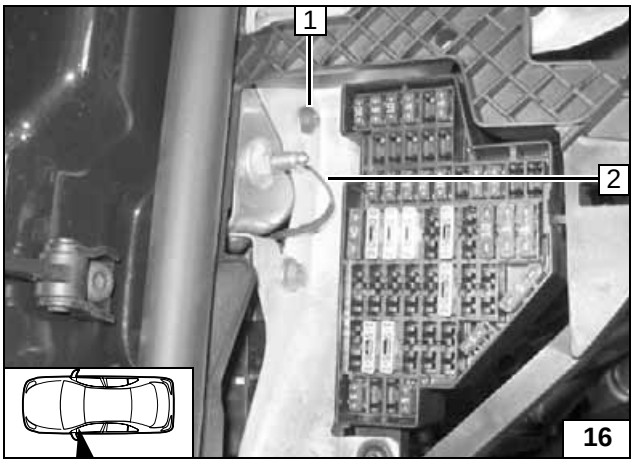
Installing wiring harnesses



Produce connections as shown in wiring diagram, insulate and tie back red/white (rt/ws) wire **(1)** from fuse holder F3.

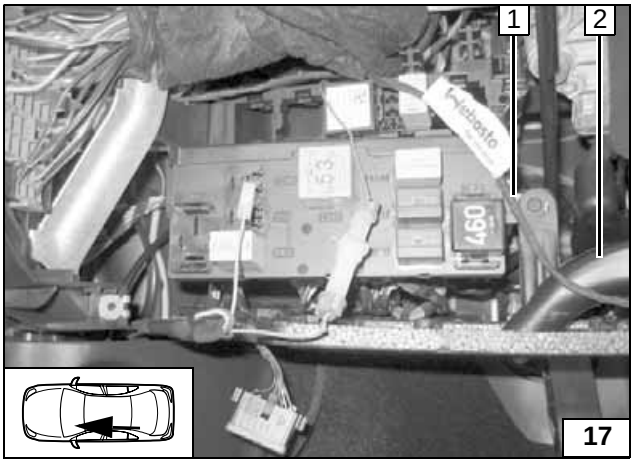
2 IPCU module
3 Green/white (gn/ws) wire (**14/4**) from IPCU/86
5 Green/white (gn/ws) wire (**14/1**) from heater unit X1/4
4 AMP housing
1 Red/white (rt/ws) wire from fuse holder F3

Connecting wires



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

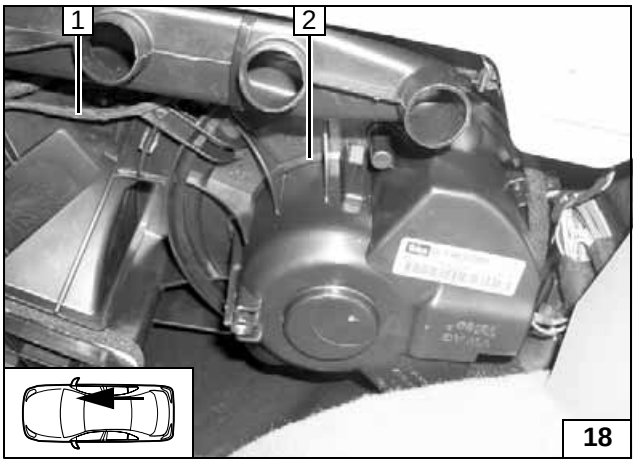
Ground connection



Route wiring harness from IPCU module (**1**) on air duct (**2**) to center console.

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

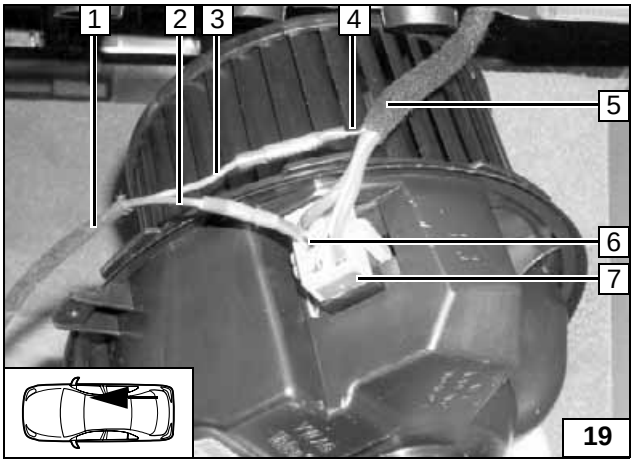
Routing wiring harness from IPCU module



Route wiring harness from IPCU module along 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

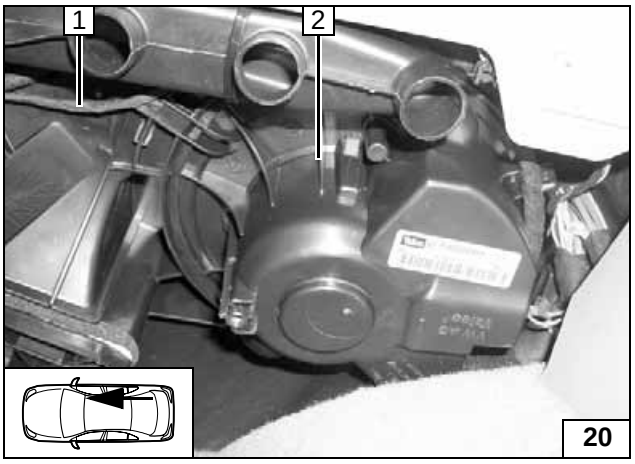
Routing wiring harness



Disconnect fan unit.
Disconnect black/white (sw/ws) wire (**4**, **6**) before connector T6t/2.
Produce connections as shown in wiring diagram with connectors (crimp and shrink).

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

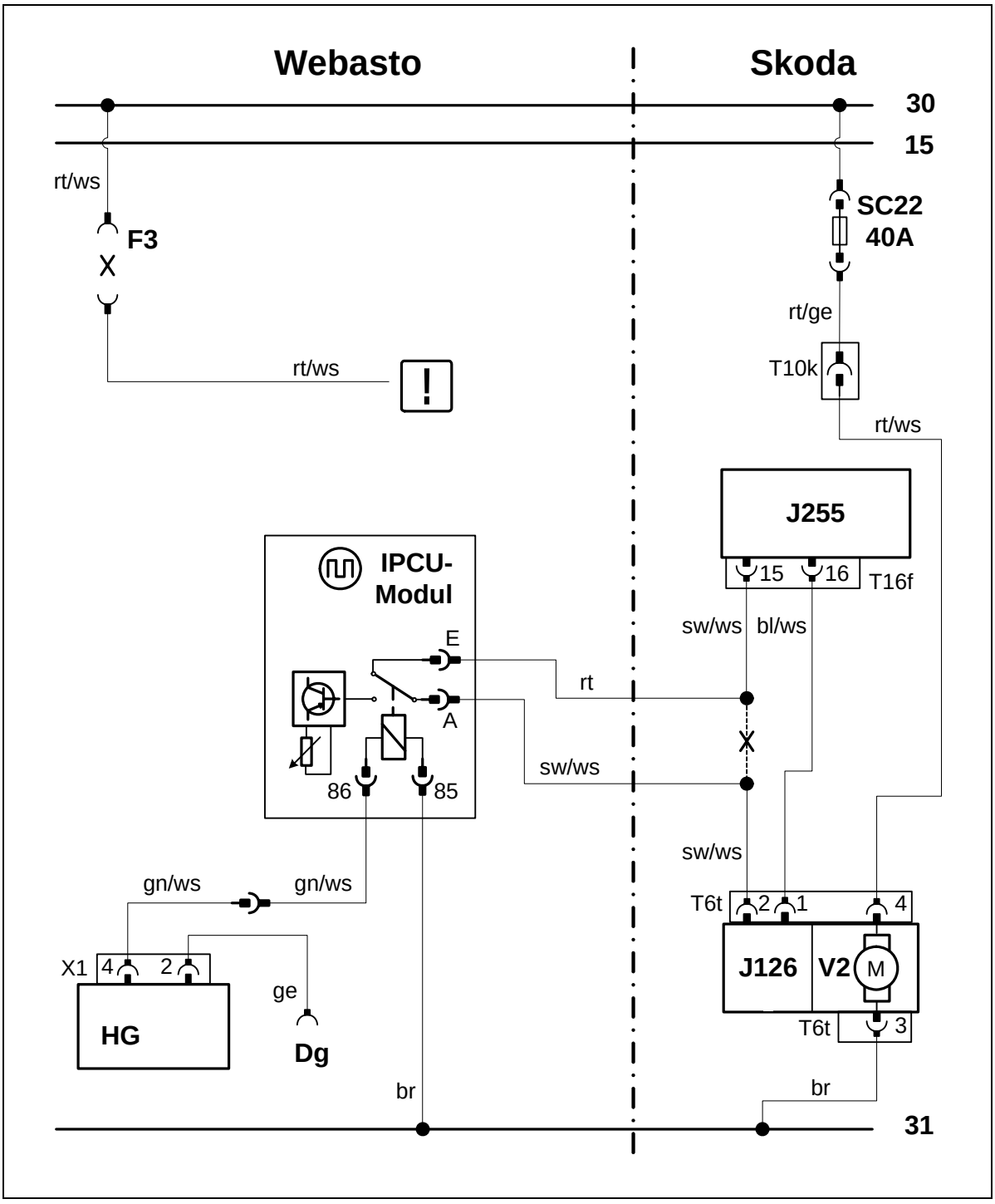
Connecting wires



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

1 Wiring harness from IPCU module
2 Fan unit

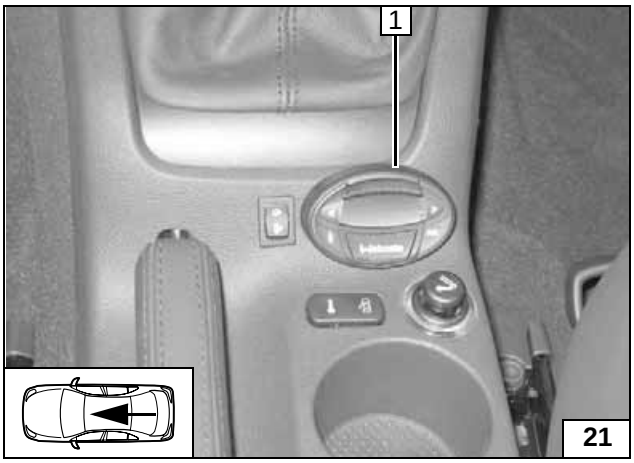
Installing fan unit



Climatronic wiring diagram

Components of genuine accessories		Vehicle components		Colors and symbols	
HG	Heater unit TT-C/E	SC22	Fan fuse	rt	red
F3	Fuse removed	J255	Climatronic control unit	ws	white
Dg	Diagnosis connection	V2	Fan motor	sw	black
IPCU	Intelligent Pulse Control Unit	J126	Fan control unit	br	brown
				gn	green
				ge	yellow
				bl	blue
				!	Insulate wire end and tie back

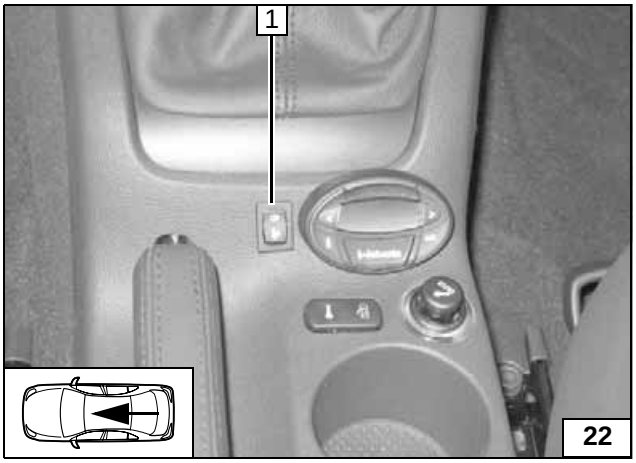
Legend



Digital timer option

Do not press on display!

1 Digital timer, drilling template

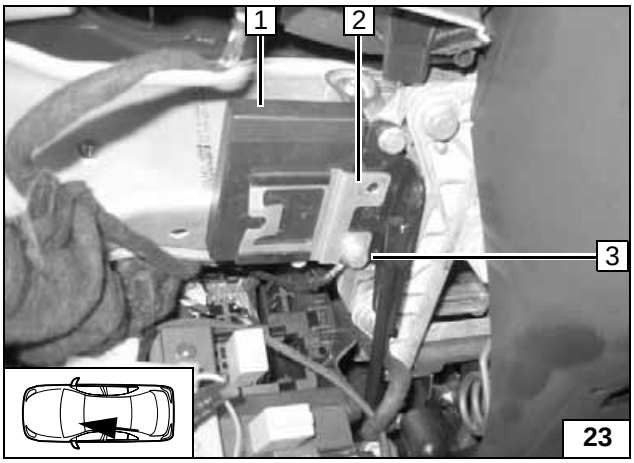


Summer/winter switch option

1 Summer/winter switch, 12.0 mm dia. hole

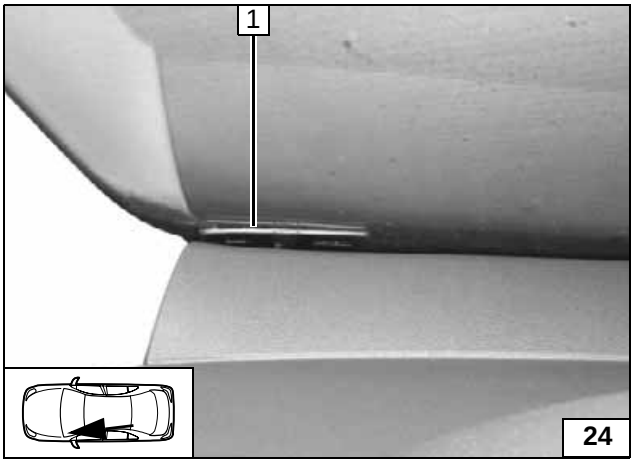
Radio remote control option

If M6 bolt (**3**) is not present, then use suitable M6 bolt with spring lockwasher.



2 Bracket, lower hole drilled out to 6.5 mm dia.
1 Receiver
3 M6 bolt

Installing receiver



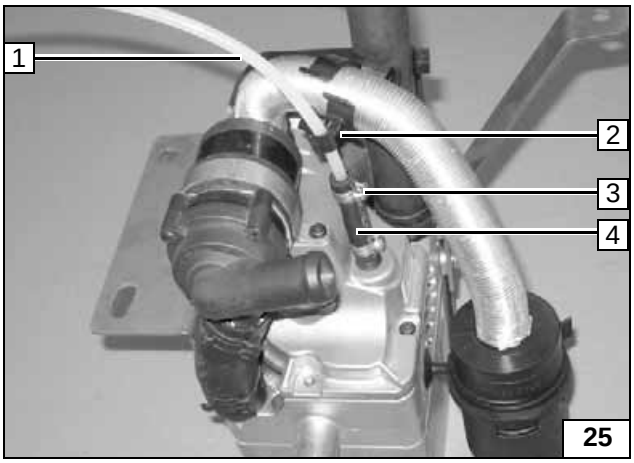
1 Antenna

Gluing on antenna

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

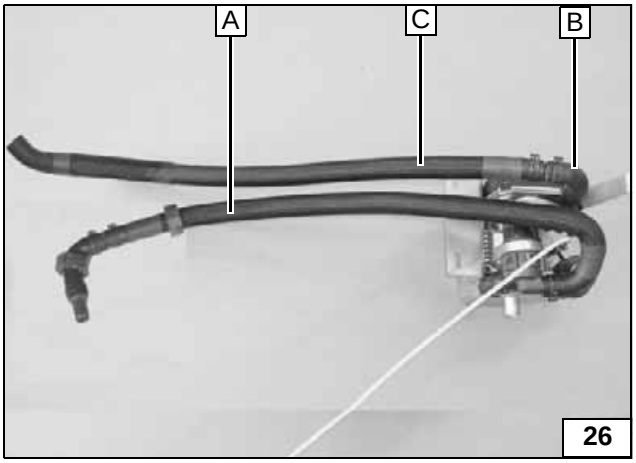
Preassembling heater unit

Connecting mecanyl line on heater unit

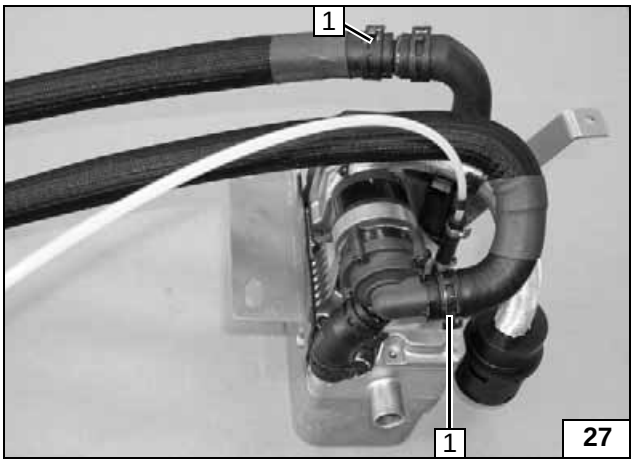


1 Mecanyl line
3 10 mm dia. Caillau clamp
4 Fuel hose (preassembled)
2 18x5 wire holder for mecanyl line (preassembled)

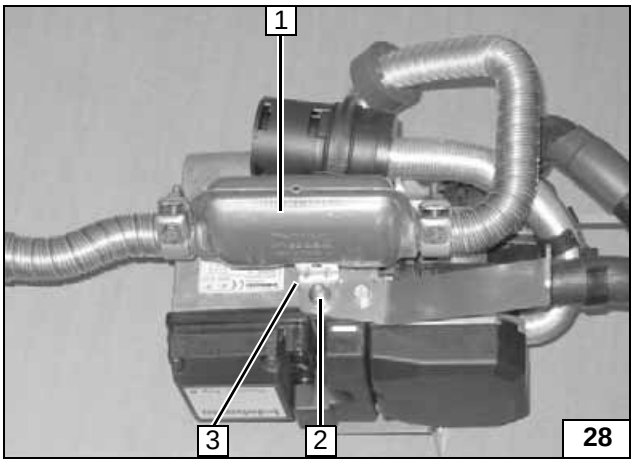
Connecting preassembled water hoses on heater unit



Connecting preassembled water hoses on heater unit



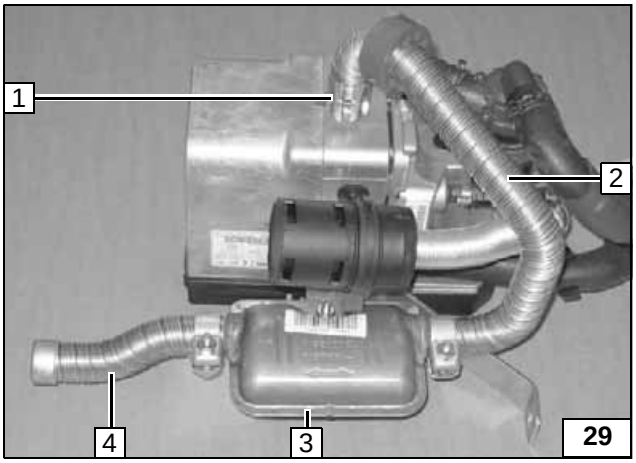
1 27 mm dia. spring clip [2x]



Unscrew flanged nut at position (**2**) before installing.

1 Exhaust system
2 Flanged nut
3 Angle bracket mounted on stud bolt

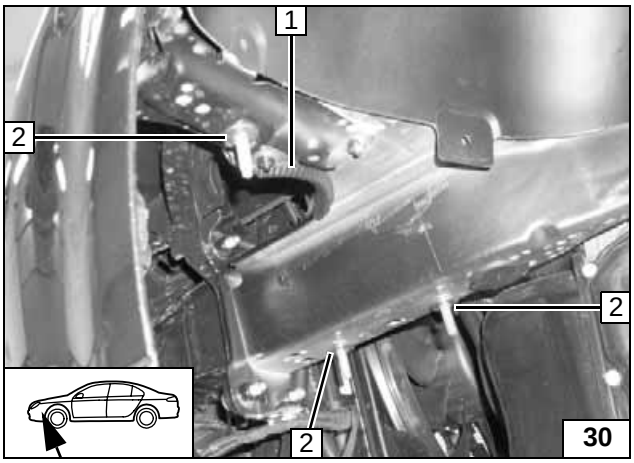
Installing pre-assembled exhaust system on heater unit



Disconnect exhaust pipe end section (**4**) from muffler (**3**), turn as shown and refasten. Install exhaust gas assembly torque-free.

2 Exhaust pipe
1 Hose clamp
3 Muffler
4 Exhaust pipe end section

Installing pre-assembled exhaust system on heater unit

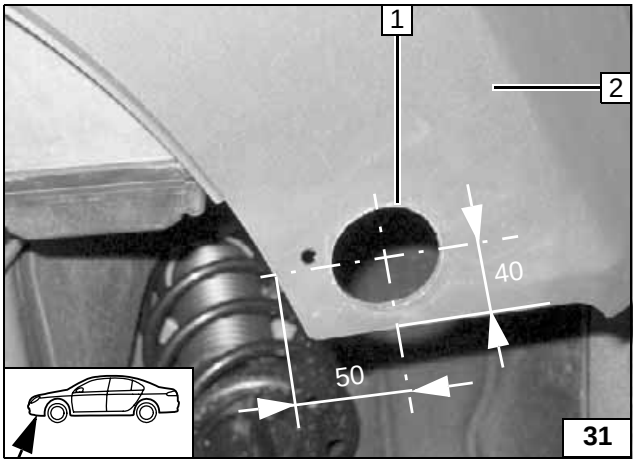


Preparing installation location

Secure large diameter washer against falling with putty etc.

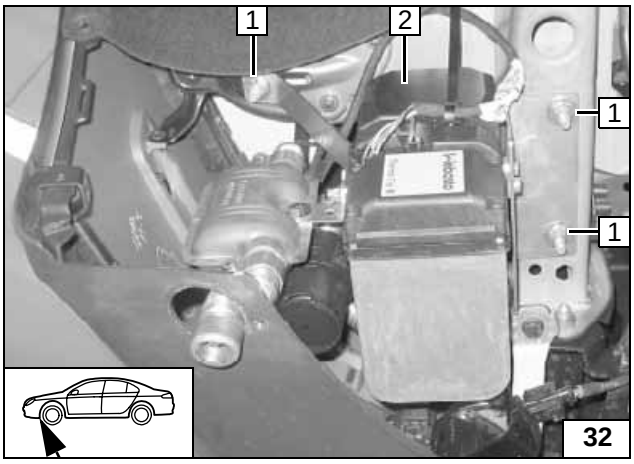
2 Large diameter washer on original vehicle stud bolt [3x]
1 Edge protection section

Preparing installation location



2 Bumper
1 42 mm dia. hole

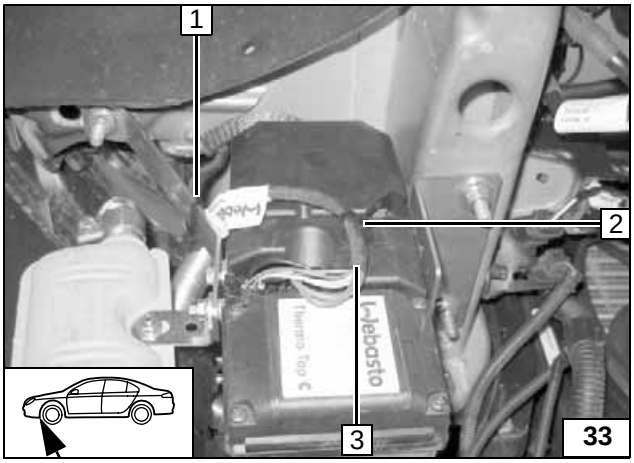
Preparing installation location



Installing heater unit

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

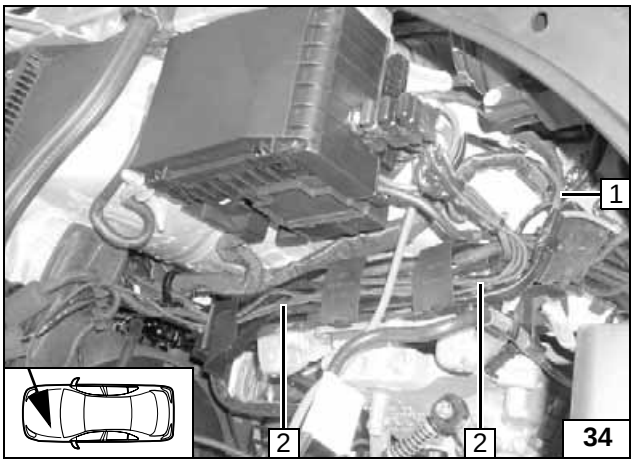
Installing heater unit



Watch routing of wiring harness. Danger of rubbing!

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

Mounting and routing wiring harness

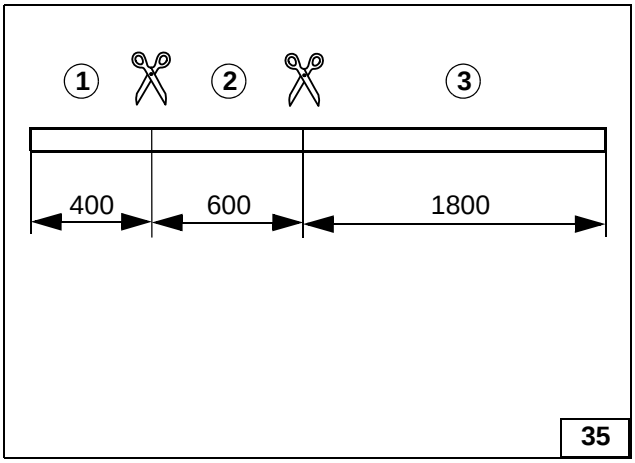


Watch routing of wiring harness. Danger of rubbing!

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

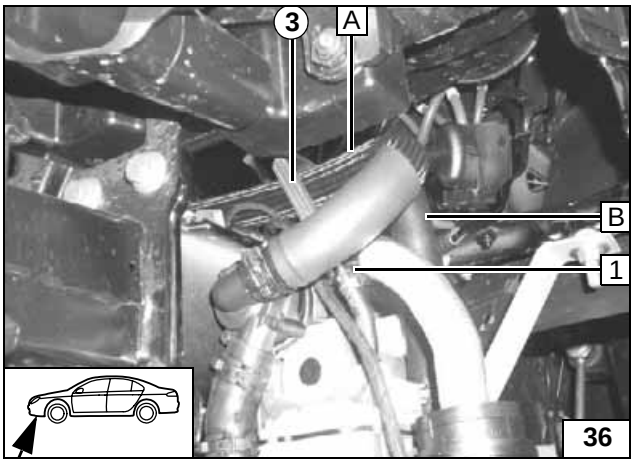
1 Wiring harness from heater unit
2 Cable duct

Routing wiring harness



6x11 protective hose

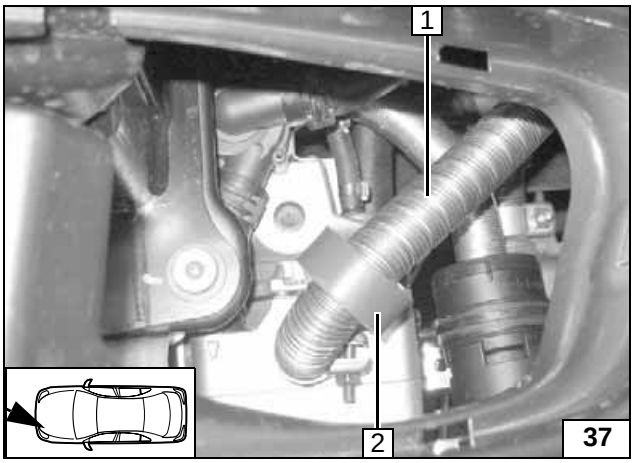
Cutting protective hose to length



Push protective hose (3) onto mecanyl line.

1 Mecanyl line
3 Protective hose (3)

Routing water hoses and mecanyl line in engine compartment

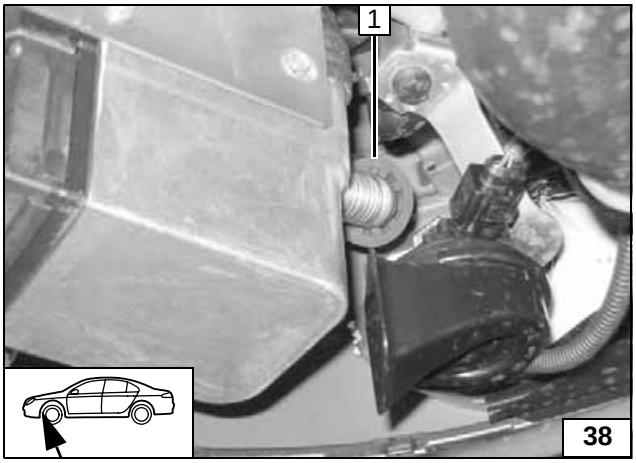


Installing exhaust system

Ensure sufficient spacing to original vehicle components and lines.

1 Exhaust pipe
2 Red (rt) rubber isolator (**38/1**)

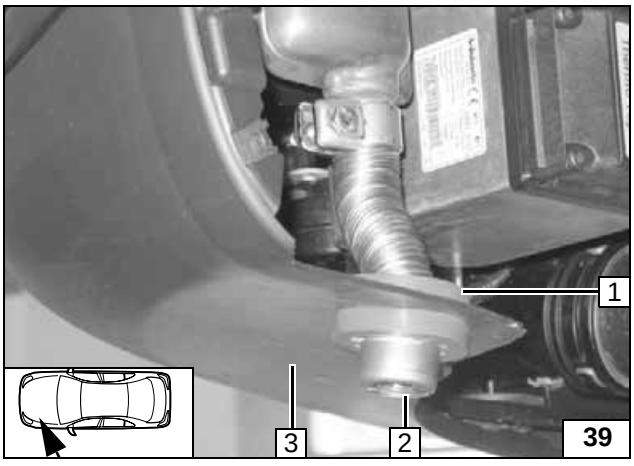
Positioning rubber isolator



Ensure sufficient spacing to original vehicle components and lines.
Position rubber isolator on left-hand front fog light.

1 Red (rt) rubber isolator (**37/2**)

Positioning rubber isolator



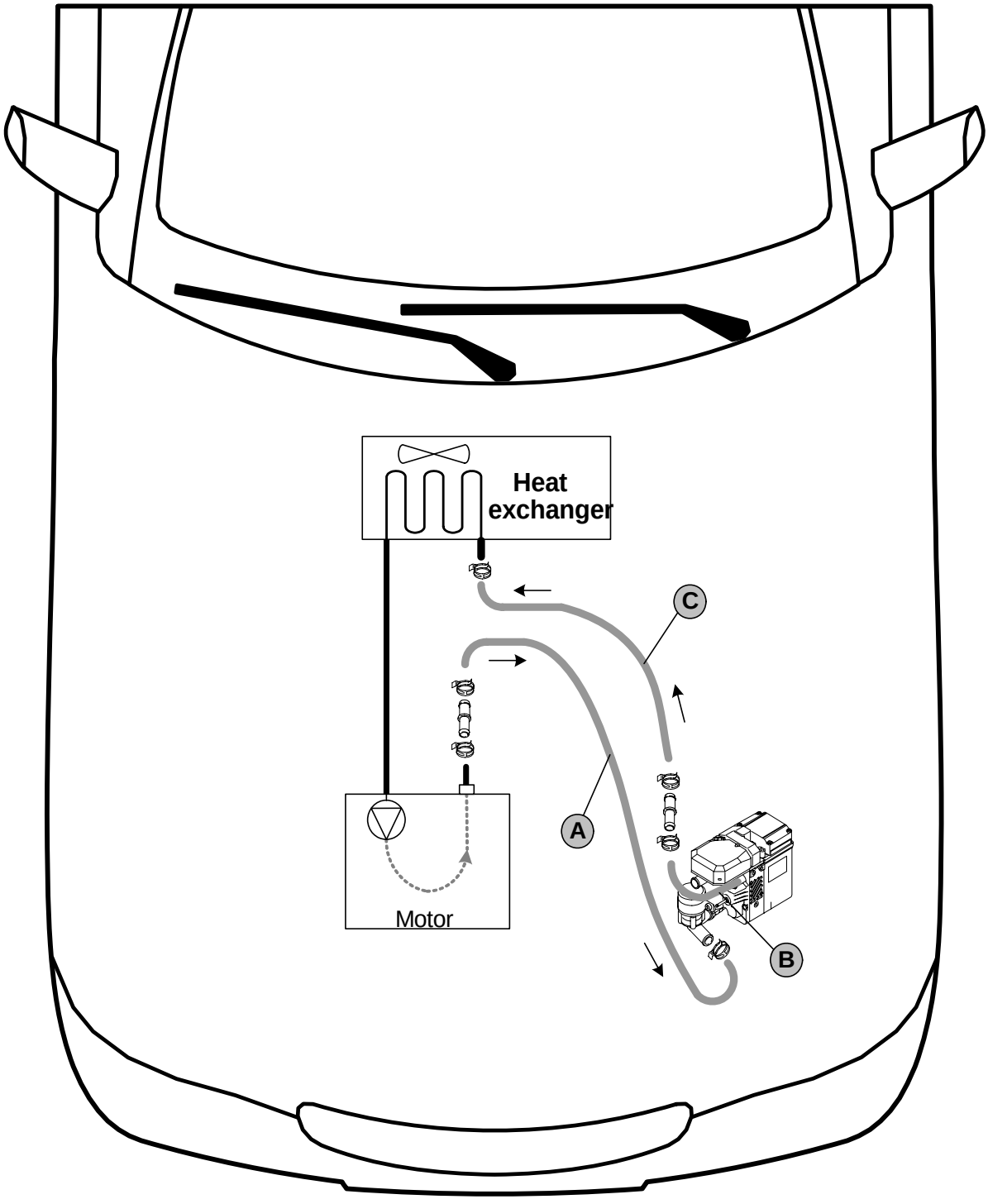
First position red (rt) rubber isolator (**1**) on exhaust end section (**2**) from below, then insert with groove in bumper (**3)**.

1 Red (rt) rubber isolator with groove
2 Exhaust end section
3 Bumper

Installing rubber isolator

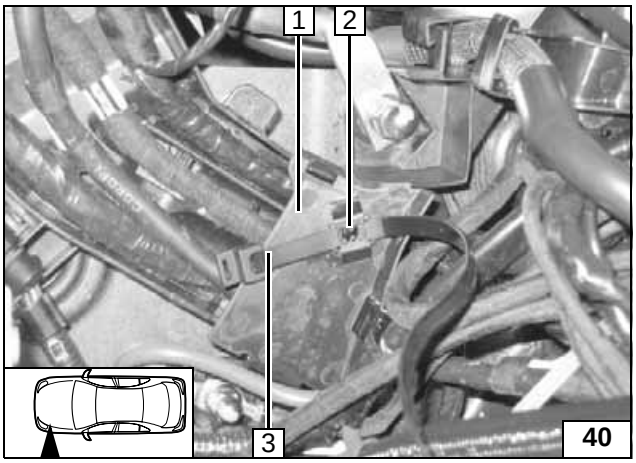
Coolant connection

WARNING!
Any cold water running off should be collected using an appropriate container!
Install hoses so that they are kink-free.
Position spring clips so that no other hose can be damaged!
The connection should be "inline" based on the following diagram:



Coolant connection diagram

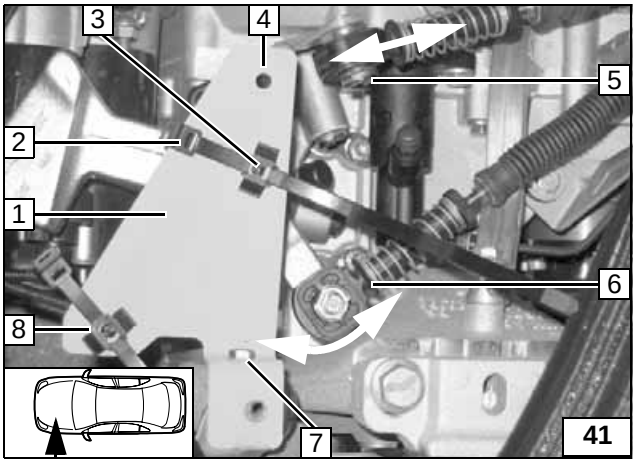
All clamps without a specific designation = 27 mm dia. spring clips!
All connecting pipes are 20 mm dia. x 20 mm dia.!



When drilling holes, watch lines located behind them! Clip-type cable tie (**3**) faces toward front.

1 Cover
2 6 mm dia. hole
3 Clip-type cable tie

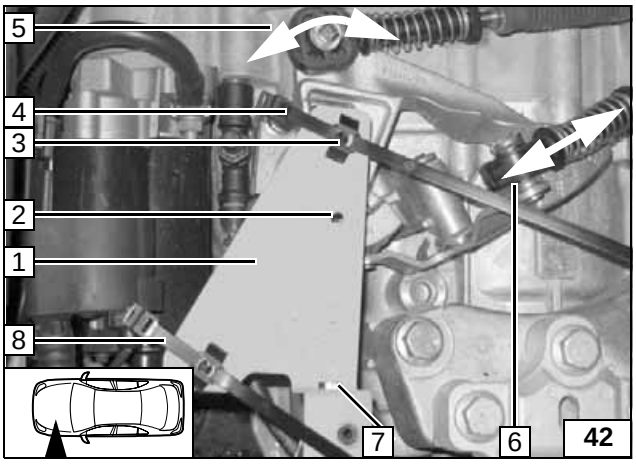
Installing clip-type cable tie



With manual transmission (**5, 6**) as shown, clip-type cable tie (**2**) is installed in hole (**3**)! Locks of clip-type cable ties (**2, 8**) face toward front!
Hole (**4**) remains clear!

1 Bracket
7 Original vehicle hole**,** M6x12 bolt, washer, self-locking nut
2 Clip-type cable tie
8 Clip-type cable tie
4 Free hole
5 Manual gearshift
6 Manual gearshift

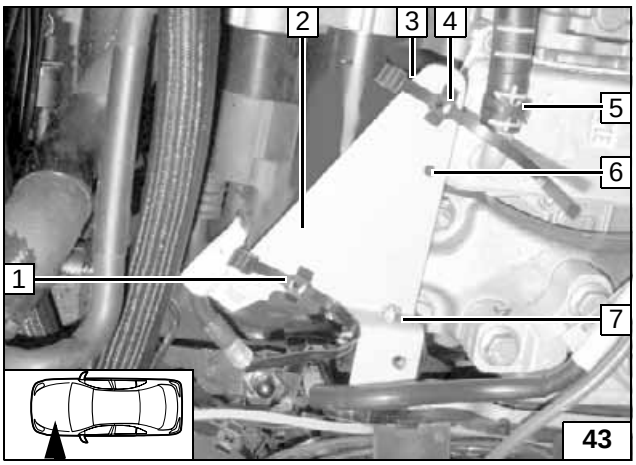
Version 1: Installing bracket and clip-type cable tie



With manual transmission (**5, 6**) as shown, clip-type cable tie (**4**) is installed in hole (**3**)! Locks of clip-type cable ties (**4, 8**) face toward front!
Hole (**2**) remains clear!

1 Bracket
7 Original vehicle hole**,** M6x12 bolt, washer, self-locking nut
4 Clip-type cable tie
8 Clip-type cable tie
2 Free hole
5 Manual gearshift
6 Manual gearshift

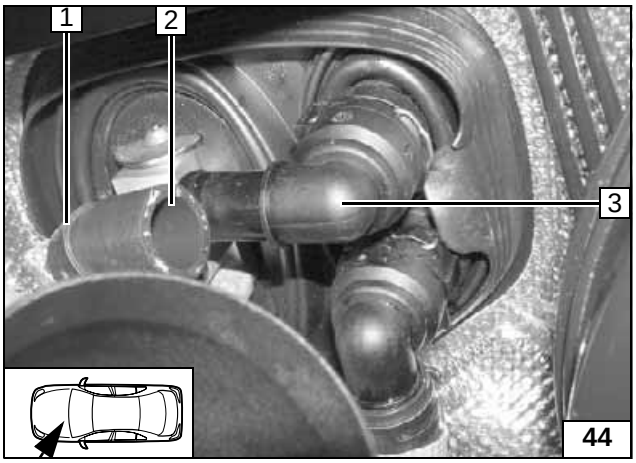
Version 2: Installing bracket and clip-type cable tie



With direct shifting transmission (DSG), clip-type cable tie (**3**) is installed in hole (**4**)! Locks of clip-type cable ties (**1, 3**) face toward front!
Hole (**6**) remains clear!

2 Bracket
7 Original vehicle hole, **M6x12 bolt** , washer, self-locking nut
1 Clip-type cable tie
3 Clip-type cable tie
6 Free hole
5 Spring clip pointing upward turned downward

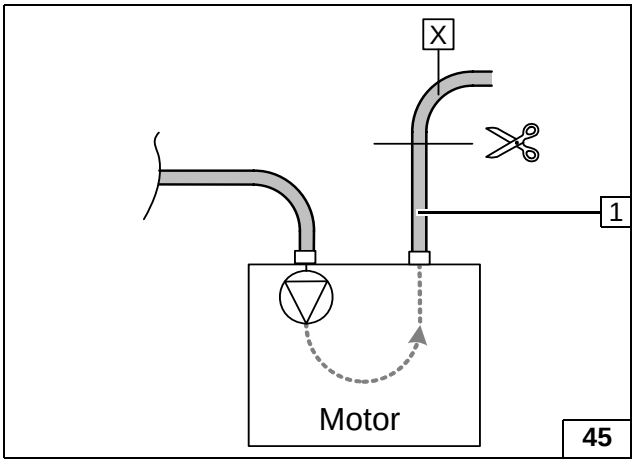
Version 3: Installing bracket and clip-type cable tie



Disconnect original 90° vehicle connection on heat exchanger inlet.

1 Original vehicle spring clip
2 Original vehicle hose on engine outlet
3 Original 90° vehicle connection on heat exchanger inlet with quick-release lock

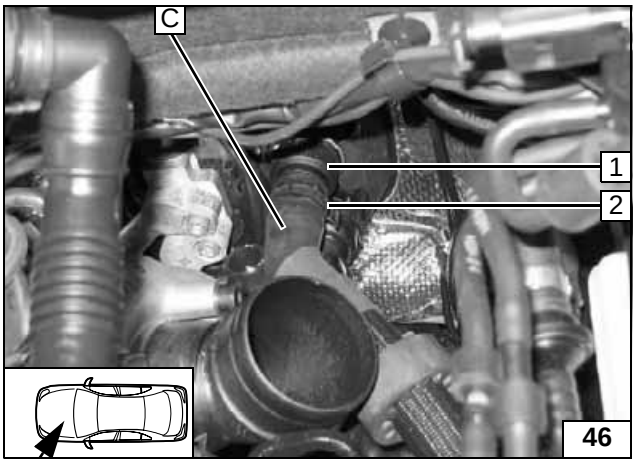
Cutting point



Prepare hose on engine outlet.

Cut hose on engine outlet **1** (see Figure 44 Item **1**) to length behind 90° elbow as shown in diagram in Figure 45. Discard section X

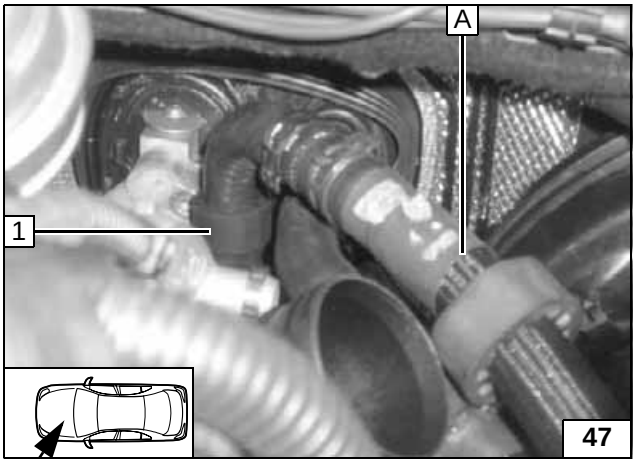
Connection on engine outlet



Mount new quick-release coupling **1** on coolant hose on heater unit outlet. Lock quick-release coupling **1** on heat exchanger.

2 27 mm dia. spring clip

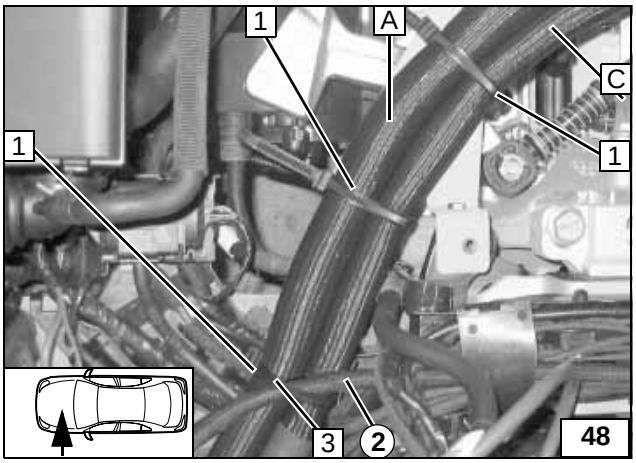
Connection on heat exchanger inlet



Connect coolant hose **A** to 20x20 connecting pipe, 27 mm dia. spring clip, to original vehicle hose on engine outlet, see page 20 (connection point is below rubber isolator).

1 Black (sw) rubber isolator

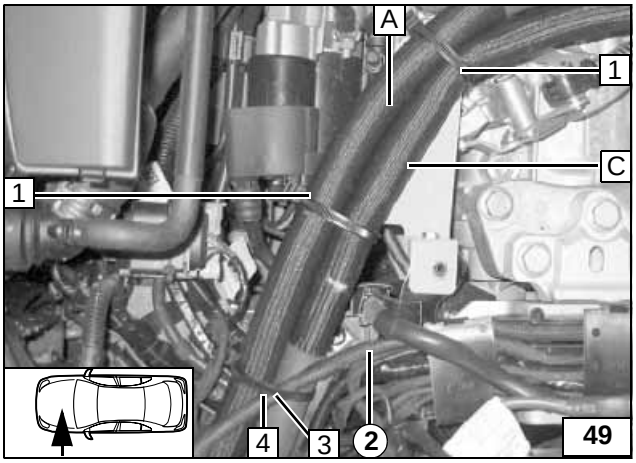
Connection to engine outlet



Fasten mecanyl line in protective hose (2) together with coolant hoses at position (3). Ensure freedom of movement of shifting actuation.

1 Clip-type cable tie [3x]
2 Mecanyl line in protective hose (2)

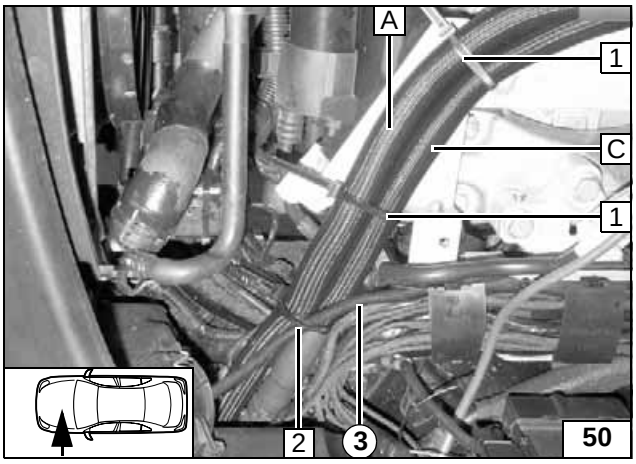
Version 1: Routing in engine compartment



Fasten mecanyl line in protective hose (2) together with coolant hoses at position (4). Ensure freedom of movement of shifting actuation.

1 Clip-type cable tie [2x]
2 Mecanyl line in protective hose (2)
3 Clip-type cable tie

Version 2: Routing in engine compartment



Fasten mecanyl line in protective hose (3) together with coolant hoses at position (3).

1 Clip-type cable tie [2x]
2 Clip-type cable tie
3 Mecanyl line in protective hose (3)

Version 3: Routing in engine compartment

Fuel Connection

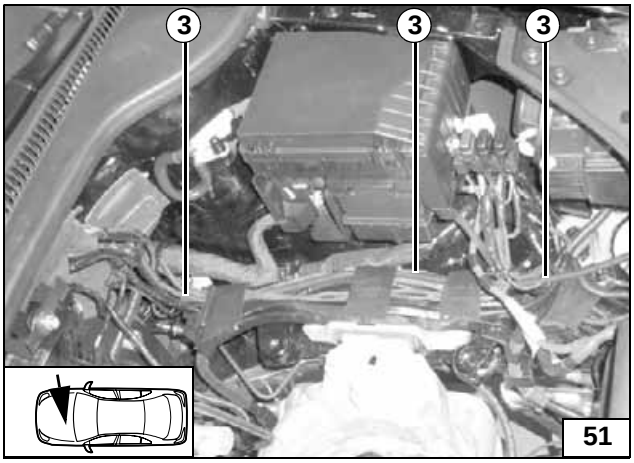
CAUTION!

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.

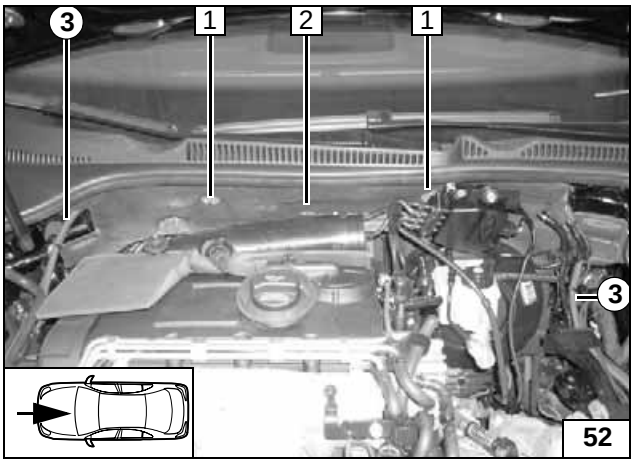
Install fuel line and wiring harness so that they are protected against stone impact.

Mount the fuel line and wiring harness with rub protection on sharp edges.



3 Mecanyl line in protective hose (3)

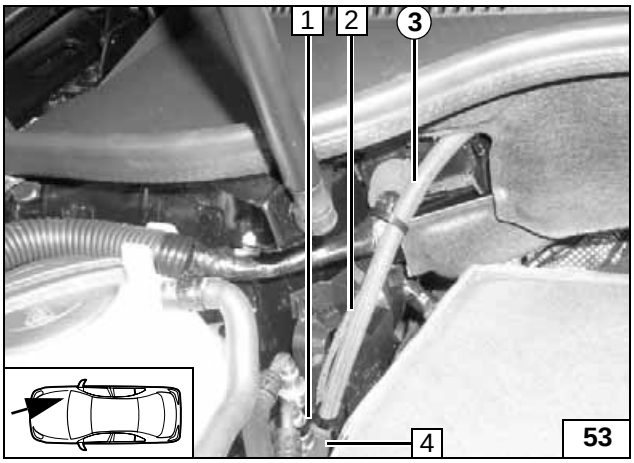
Routing mecanyl line to firewall



Route mecanyl line with protective hose (3) behind insulation mat (**2**) below two fastening points (**1**).

2 Insulation mat
1 Fastener of insulation mat [2x]

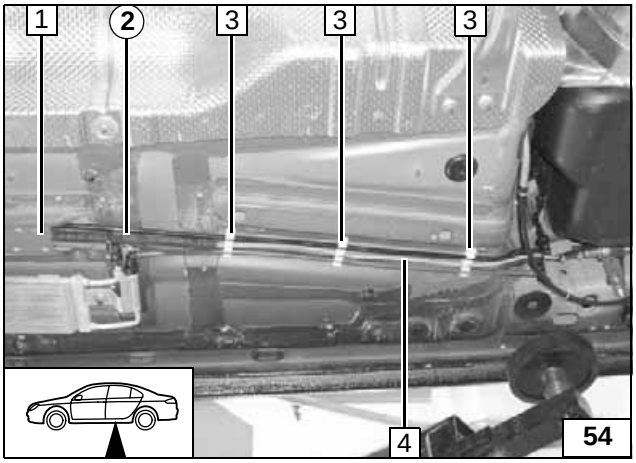
Routing mecanyl line on firewall toward right



Guide mecanyl line with protective hose (3) and wiring harness of metering pump (**2**) into original vehicle line duct (**4**). Route mecanyl line together with wiring harness of metering pump (**2**) in original vehicle line duct (**55/1**) to underbody.

2 Metering pump wiring harness
1 9x10 double clip on mecanyl line in protective hose (3) and original vehicle fuel line
4 Original vehicle line duct

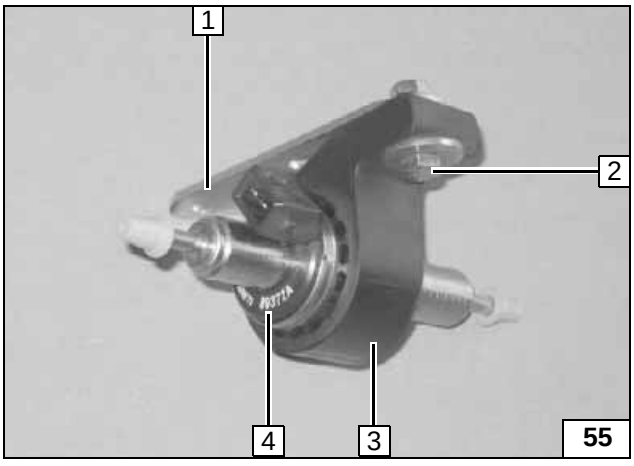
Routing mecanyl line and wiring harness of metering pump



Push protective hose (2) onto mecanyl line in line duct (**1**).
Route mecanyl line and wiring harness of metering pump in free line holder (**3**) along original vehicle fuel lines.

1 Line duct
3 Original vehicle line holder [3x]
4 Mecanyl line, wiring harness of metering pump

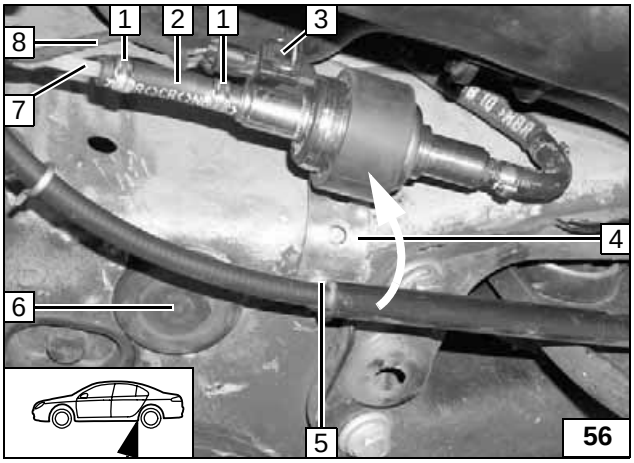
Routing mecanyl line and wiring harness of metering pump



Installing metering pump

4 Metering pump
3 Rubber holder
1 Perforated bracket
2 M6x20 bolt, large diameter washer, rubber holder (3), M6 flanged nut

Pre-assembling metering pump



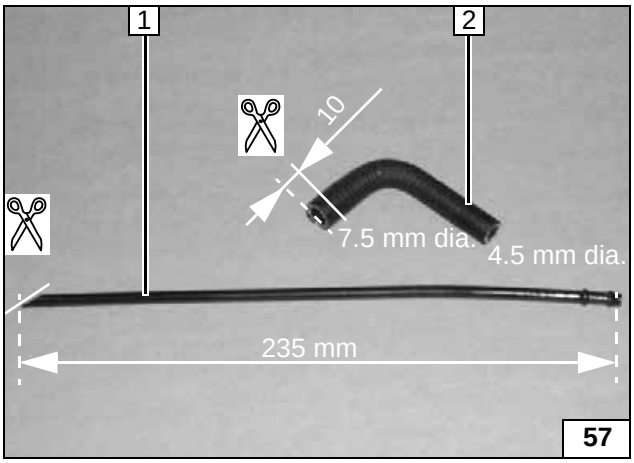
6 Remove sealing plug
5 M6x12 **bolt** with large diameter washer guided into hole from above
4 Perforated bracket with self-locking nut fastened at position **5**

Bend metering pump with perforated bracket upward and align as shown.

7 Mecanyl line
2 Hose section
1 10 mm dia. Caillau clamp [2x]
8 Metering pump wiring harness
3 Connector housing, single-wire seals, plug-in contacts
6 Plug remounted

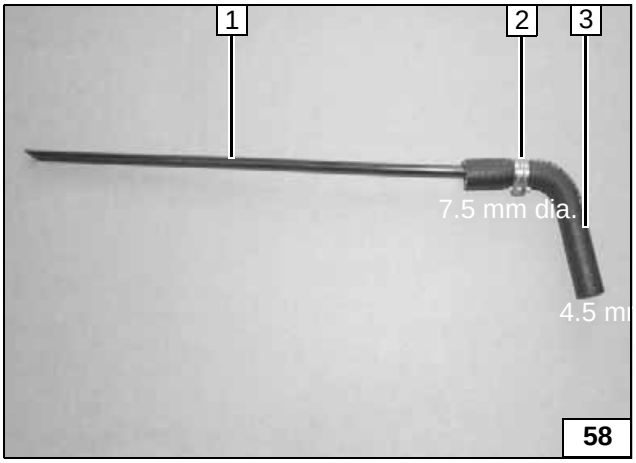
Connecting pressure side of metering pump

Removing fuel



1 Standpipe
2 90° molded hose; 4.5 mm dia. to 7.5 mm dia.

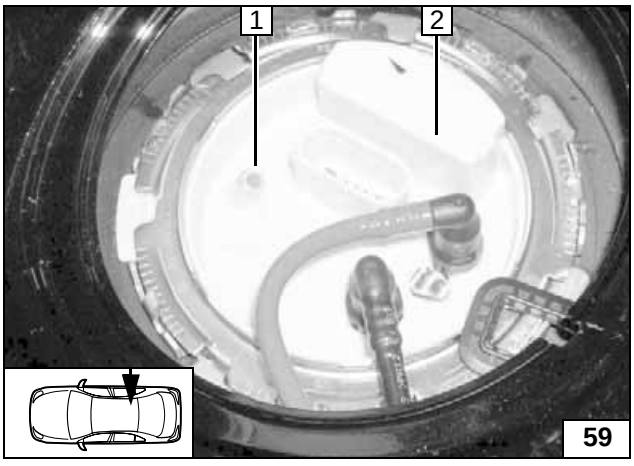
Cutting standpipe and molded hose to length



Caillau clamp (**2**) centered between beads at end of standpipe

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

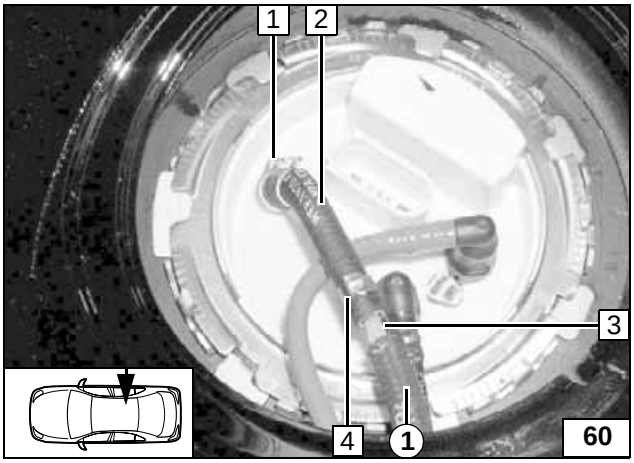
Pre-assembling standpipe and molded hose



Cut 3 mm off blind plug.

1 Tip cut off blind plug
2 Fuel sender

Cutting off blind plug

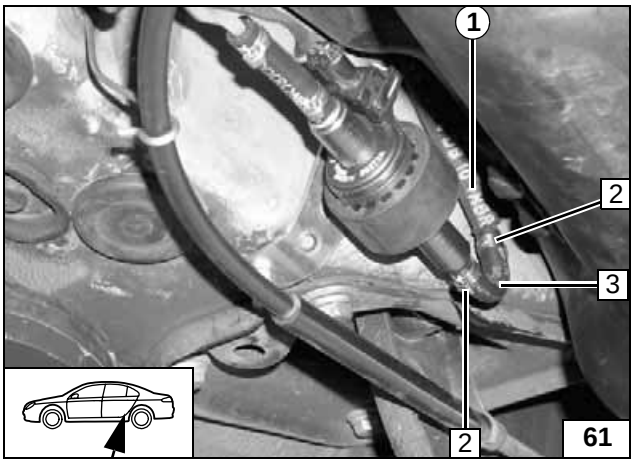


Should the standpipe be slightly curved on delivery, then it must be aligned so that the end points toward the rear right.
Otherwise there is a danger of the fuel gauge being impaired.

1 13.5 mm dia. Caillau clamp
2 Preassembled molded hose with standpipe
4 10 mm dia. Caillau clamp
3 Mecanyl line

Push protective hose (1) onto mecanyl line.

Fuel removal



1 Mecanyl line with protective hose (1)
3 90° molded hose; 4.5 mm dia.
2 10 mm dia. Caillau clamp [2x]

Connecting intake side of metering pump

Final Work

WARNING!

Reassemble the disassembled components in reverse order.
Check all hoses, hose, spring and Caillau clamps, as well as all electrical connections for firm seating.
Secure all loose cables using cable ties.
Spray the heater unit components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- Connect the battery
- Start the engine, bleed the coolant circuit according to the instructions of the vehicle manufacturer and add coolant
- Set the digital timer.
- Adjust vehicle heater in accordance with "Operating Instructions for End Customer"
- Check the proper operation of the additional heater, see the operating instructions/installation instructions.
- File the "Operating Instructions for End Customer" in the vehicle logbook.
- Attach the "Switch off additional heater before refueling" sticker to the left-hand B-pillar.

Adjusting passenger compartment monitoring

WARNING!

Observe the valid repair manual of the respective vehicle.

- Connect the VAG 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.

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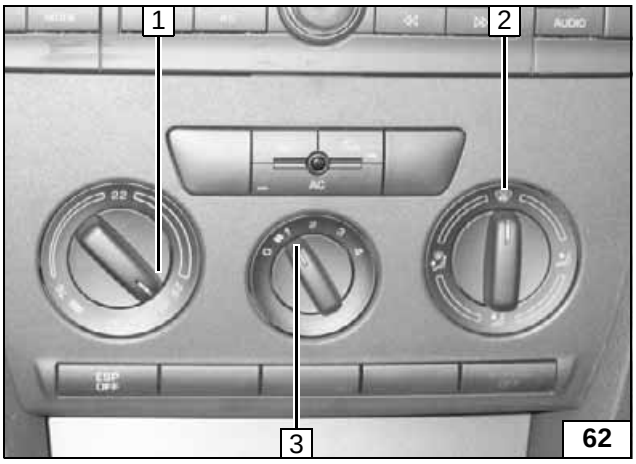
Hotfax +49-(0)395-5592-353 -

Operating Instructions for End Customer

Please remove the page and file it in the vehicle logbook.

Before parking the vehicle, make the following settings:

Vehicles with Climatic



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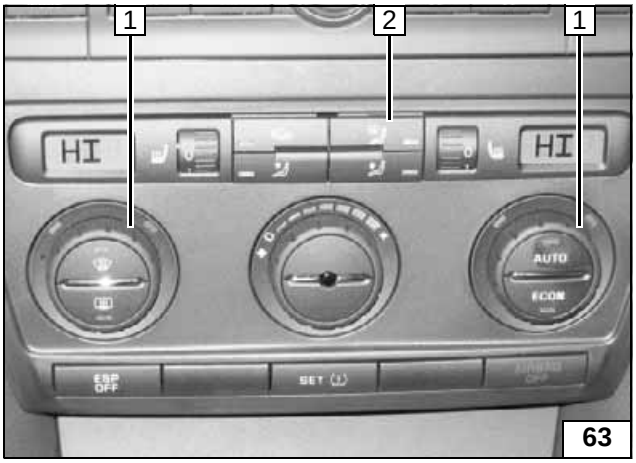
1 Set temperature to "max."
2 Direct air outlet toward windshield
3 Set fan to level "1", or possibly "2"

Vehicles with Clima-tronic



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1 Set temperature to "HI." [2x]
2 Direct air outlet toward windshield