

Thermo Top C Additional Heater



Installation Instructions

Volvo XC 90 V8

Gasoline

from Model Year 2005

For left-hand drive vehicles only

Note:

Only in conjunction with Webasto Gateway!

Only in conjunction with the corresponding Volvo vehicle software!

For combination with Telestart and/or Thermo Call, the Volvo AEM must also be used with the corresponding software!



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. Only genuine Webasto parts may be used. Also see the Accessories Catalog for Air and Water Heater Units from Webasto.

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

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

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

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Validity

Manufacturer	Model	Type	EG-BE No./ABE
Volvo	XC90	C	e9 * 2001/116 * 0046 * ...

Engine type	Engine model	Output in kW	Displacement in cm ³
85 (B8444S)	Gasoline	232	4414

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

Heater Unit/Delivery Scope

Quantity	Description	Order No.:
1	Vehicle-specific delivery scope of <i>Thermo Top C</i> Gasoline	9014189C

The following is also required depending on vehicle equipment:

Quantity	Description	Volvo Order No.:
1	Volvo heater software in accordance with equipment	Various

When using Telestart and/or Thermo Call:

Quantity	Description	Volvo Order No.:
1	Volvo AEM up to Model Year '04	8666691
1	Volvo AEM from Model Year '05	30660541
1	Volvo Y-Adapter for Telestart ThermoCall	12001637

Foreword

These installation instructions apply to Volvo XC 90 vehicles with a Gasoline engine - 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, where this is the case the stipulations in the "installation instructions" and "operating and maintenance instructions" for the *Thermo Top C* should 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 must be provided with rub protection (cut-open fuel hose) !

Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).

Teaching Telestart option

Note:

To teach the Telestart, the connector must be pulled off at the Telestart receiver!

Teach Telestart as described in Telestart operating instructions

Operating Telestart with Thermo Call option

Note:

The Thermo Call must be programmed to digital timer (factory setting push button). The acoustic menu guidance must be followed for this purpose.

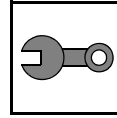
Special Tools

- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers
- Metric thread-setter kit

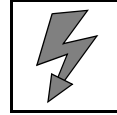
Explanatory Notes on Document

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

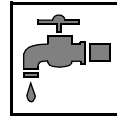
Mechanical system



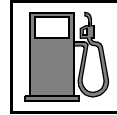
Electrical system



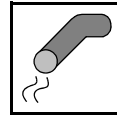
Coolant circuit



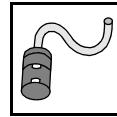
Fuel



Exhaust gas



Combustion air



Special features are highlighted using the following symbols:



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



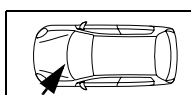
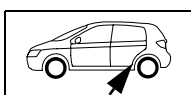
Specific risk of fire or explosion.



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



Reference to a special technical feature.

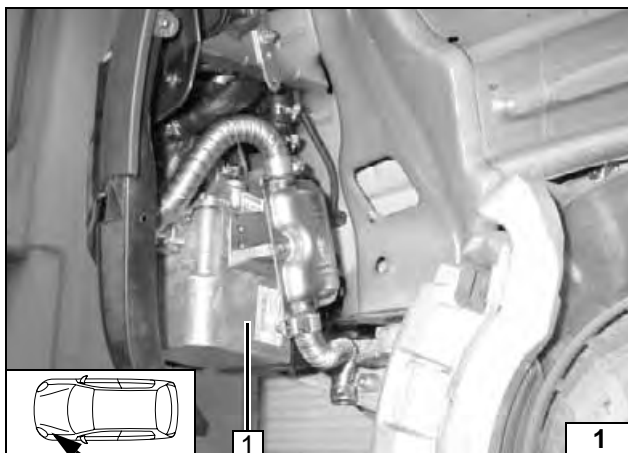


The arrow in the vehicle icon indicates the position on the vehicle and the viewing angle.

Preliminary Work

WARNING!

- Disconnect the battery and remove it.
- Open radiator cap, release pressure and close radiator cap again.
- Copy the factory number from the original type label to the duplicate type label.
- Remove years that do not apply from the duplicate label.
- Attach the duplicate label (type label) in the appropriate place.
- Remove the wiper arms.
- Remove the coolant reservoir cap.
- Remove the wiper unit.
- Remove the air filter housing and the intake hose.
- Open fuel tank cap, release pressure from fuel tank system and close fuel tank cap again
- Remove the left front wheel well trim.
- Remove the left-hand bumper trim.
- Remove the left-hand headlight.
- Remove left/right lower instrument panel cover (on right only with installation of Thermo Call 1.1)
- Remove the rear sheet-metal trim in the cargo space.
- Remove the left rear trim in the cargo space.
- Remove left rear and front door sill trim
- Remove floor cover in cargo space
- Remove bracket and battery cover in the cargo space.
- Remove the entire 2nd row rear bench seat.



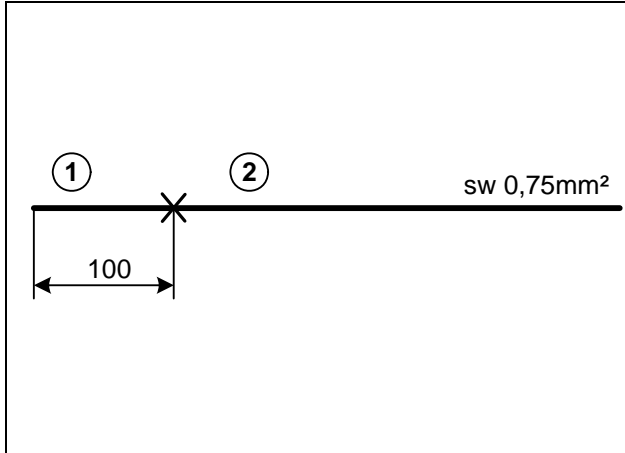
Heater unit installation location

- 1 Heater unit

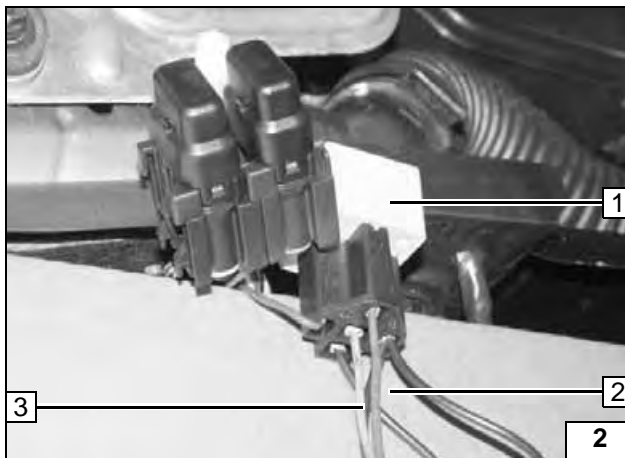
Installation location



Preparing electrical system



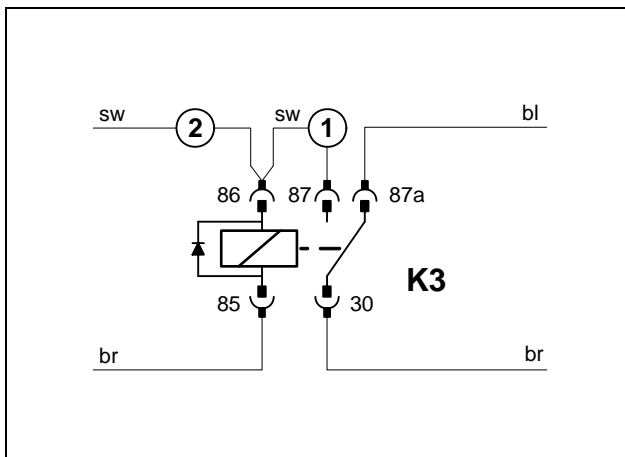
Cutting additional line to length



Remove fuse F3, 25 A, insulate red/white (rt/ws) wire and tie back.
Remove all wires (except brown (br) wire of Terminal 85) from socket of K3 relay **1**.
Green/white (gn/ws) wire from Terminal 86 will be connected to green (gn) wire from gateway later.
Complete K3 relay with blue (bl) and brown (br) wires provided and prepared black (sw) wires in accordance with wiring diagram.
Pull blue (bl) wire **3**, brown (br) wire **2** and black (sw) wire **2** into protective sleeving provided.

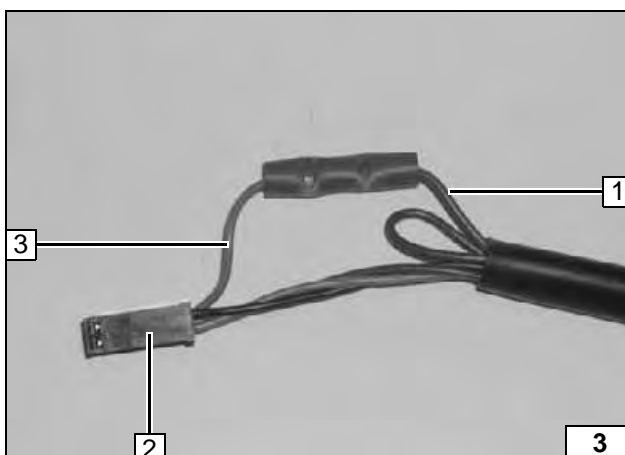
Cutting wires to length

- 1** K3 relay
- 2** Brown (br) wire
- 3** Blue (bl) wire



Make connections as shown in the wiring diagram with the tab receptacles provided.
Fasten black (sw) wire **2** to wiring harness of metering pump with insulating tape.

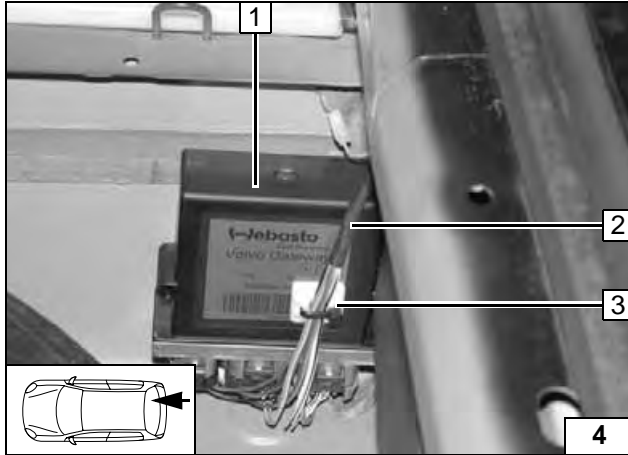
Premounting K3 relay



Produce connection according to wiring diagram with included connector.

- 1** Purple (li) wire from wiring harness of digital timer
- 3** Purple (li) wire provided
- 2** Connector of digital timer

Integrating purple (li) wire



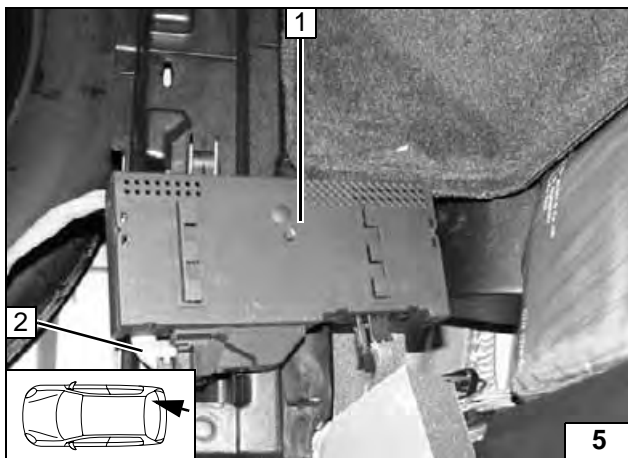
Installing gateway control unit

Mount wiring harness on gateway control unit and route to rear left as shown. Fasten gateway control unit with cable tie.

- 1 Gateway, loosely position
- 2 Wiring harness
- 3 Socket for cable tie, glued on



Gateway wiring harness



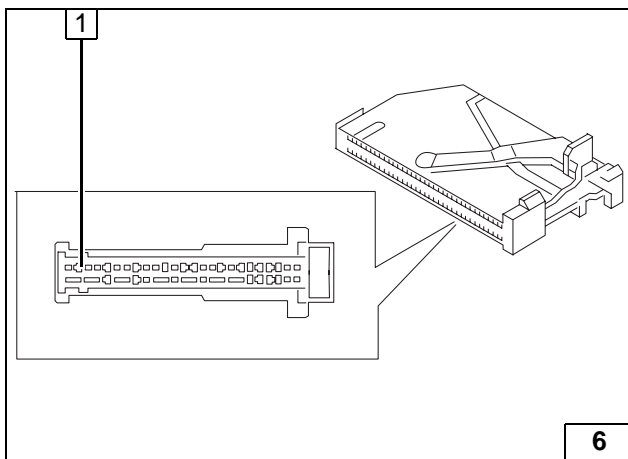
Only with Telestart

Blue (bl) wire from gateway wiring harness with microtimer on Pin 3 from 50-pin connector of AEM.

- 1 AEM
- 2 Blue (bl) wire, microtimer



Connection on AEM

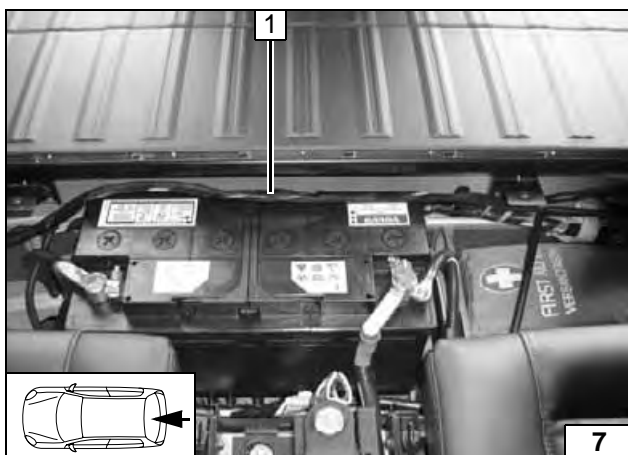


Fasten gateway with cable ties.

- 1 Socket 3 on 50-pin connector of AEM



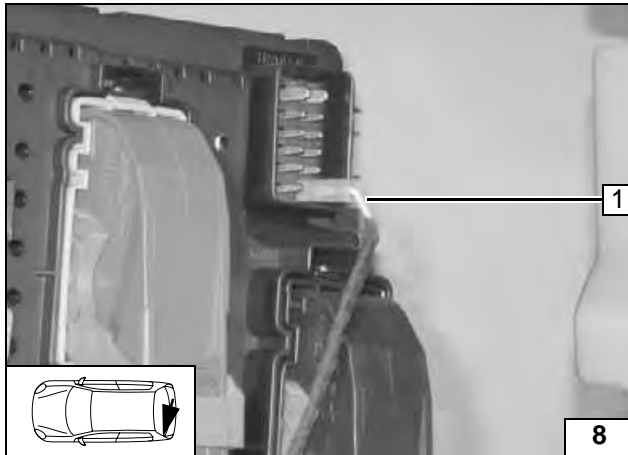
Connector of AEM



Route wiring harness (1) behind battery to left-hand side to REM.
Route white (ws) 0.5 mm² wiring harness (branch) to REM at rear left.
Route wiring harness further under side trim to front, along original vehicle wiring harness in left-hand door sill into footwell on driver's side.



Wiring harness routing

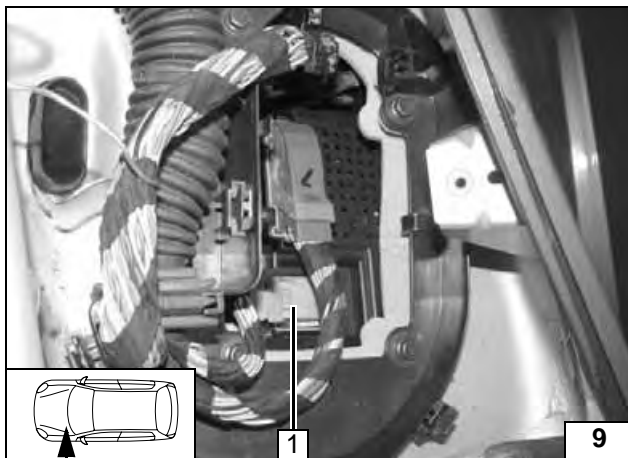


White (ws) wire from gateway with microtimer to Pin F from connector E of REM (lower right socket, Terminal 15).

If Pin F is occupied (e.g. when a trailer towing device is installed), then connect white (ws) wire from gateway to white (ws) 2.5 mm² wire from Pin F.

- 1 White (ws) wire, microtimer

**Conne-
ction on
REM**

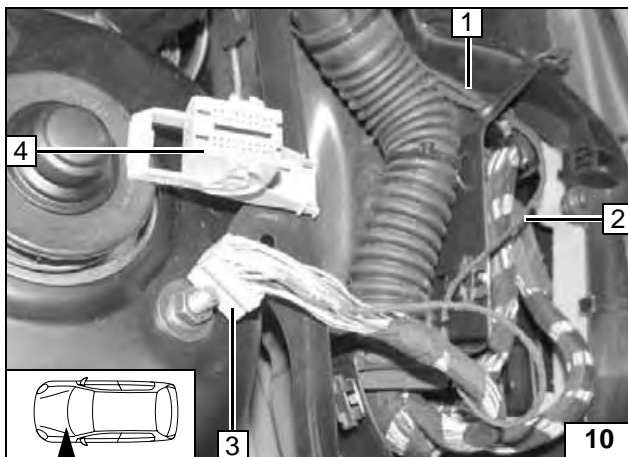


Route green (gn) and green/white (gn/ws) wire from gateway wiring harness through existing opening from passenger compartment into coolant reservoir.

Green (gn) wire will be routed to K3 relay later.

- 1 Remove connector C (gray) from CEM

**Socket of
connector
C**



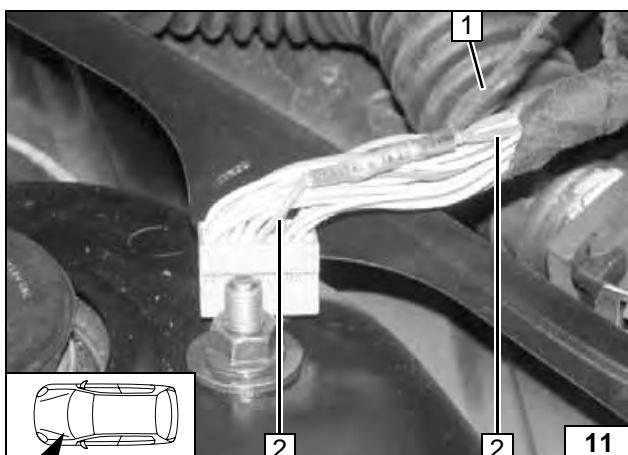
- 4 Pull compact housing (blue) out of cover with locking device (light blue)

- 3 36-pin connector C (gray)

- 2 Green/white (gn/ws) wire

- 1 Green (gn) wire

**Wiring har-
ness rout-
ing**



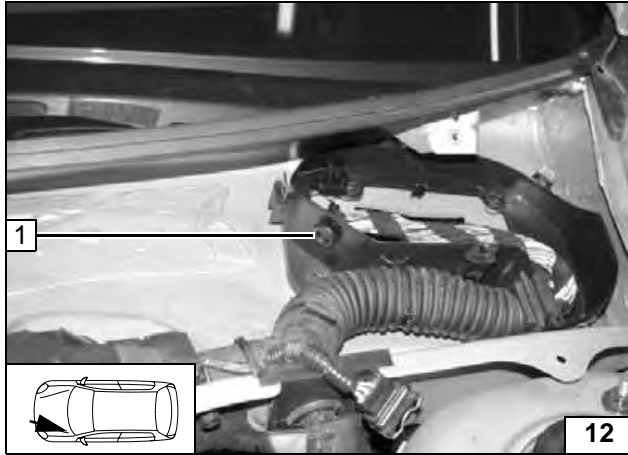
Connect green/white (gn/ws) wire from gate-way wiring harness to green/white (gn/ws) wire from connector C, Pin 32 as shown in wiring diagram.

Produce connection according to wiring dia-gram with included connector.

- 1 Green/white (gn/ws) wire

- 2 Green/white (gn/ws) wire from connector C, Pin 32

**Conne-
ction on
connector
C**



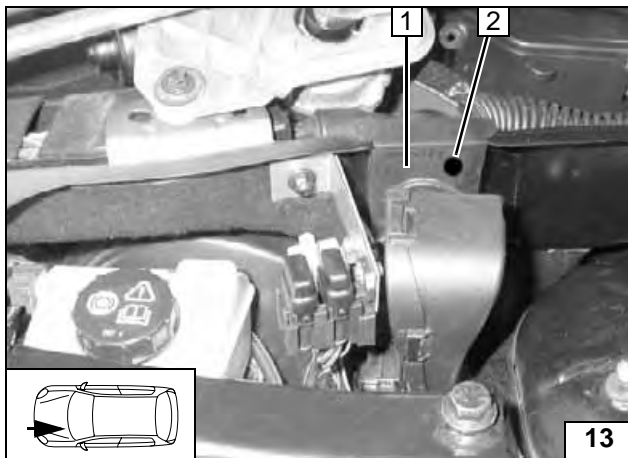
Installing fuse holder

Drill 18 mm dia. hole in plastic trim, insert protective rubber plug and seal off with butyl tape. For example, use following part numbers to do this: 1161780, 1161783, 1161784.

- 1 18 mm dia. hole, protective rubber plug



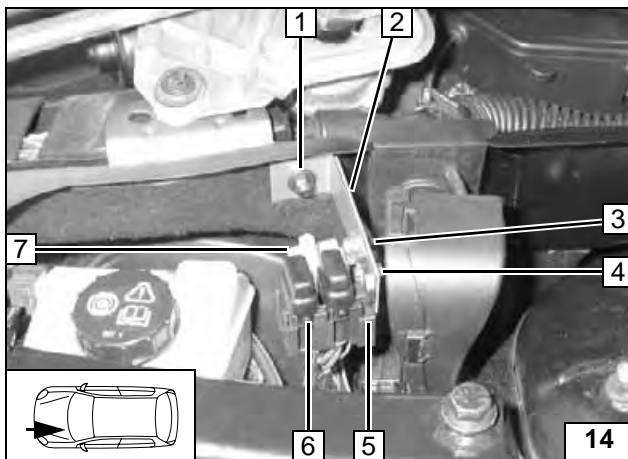
Mounting protective rubber plug



Detach protective rubber plug 1 and drill 10 mm dia. hole at position 2. When drilling, watch components located behind!

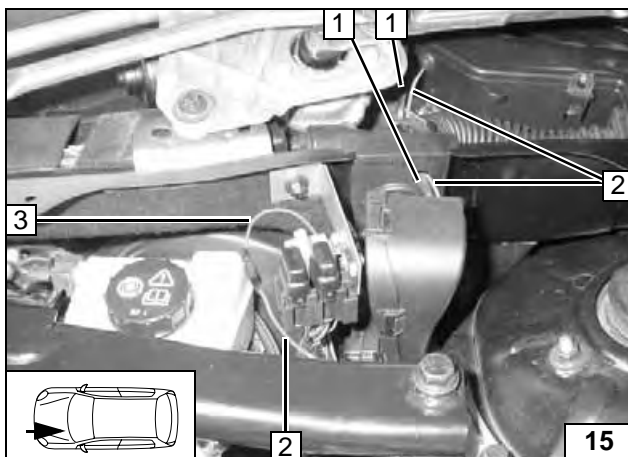


Hole for wiring harness



- 2 Fuse holder
- 1 Original vehicle stud bolt, plastic nut
- 7 Prepared K3 relay
- 3 M5x16 bolt, flanged nut
- 5 Retaining plate for fuse holder
- 4 M5x16 bolt, washer, flanged nut
- 6 Fuses F1 and F2, mounted

Installing fuse holder



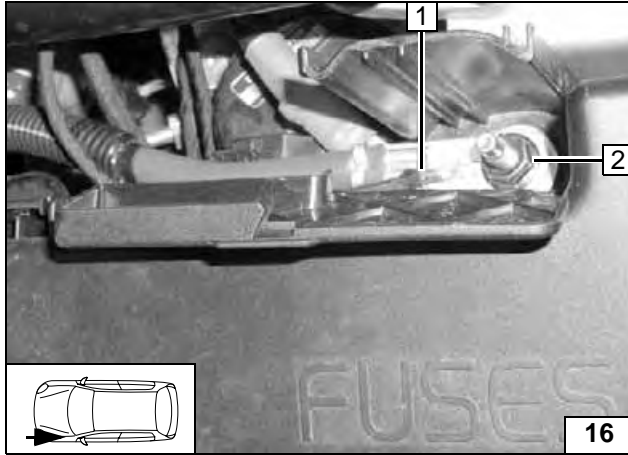
Route wiring harness of digital timer 1 through prepared protective rubber plugs into passenger compartment.

Route green (gn) wire from gateway wiring harness along wiring harness of digital timer through prepared protective rubber plugs to K3 relay and connect to green /white (gn/ws) wire from heater unit.

- 2 Green (gn) wire from gateway wiring harness
- 3 Green/white (gn/ws) wire from heater unit X1/4

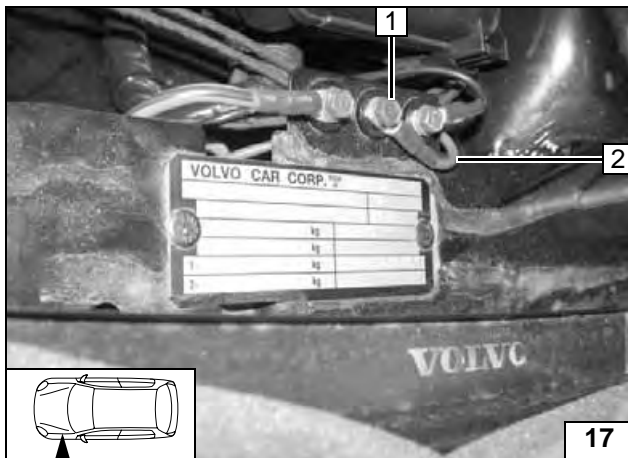


Wiring harness routing



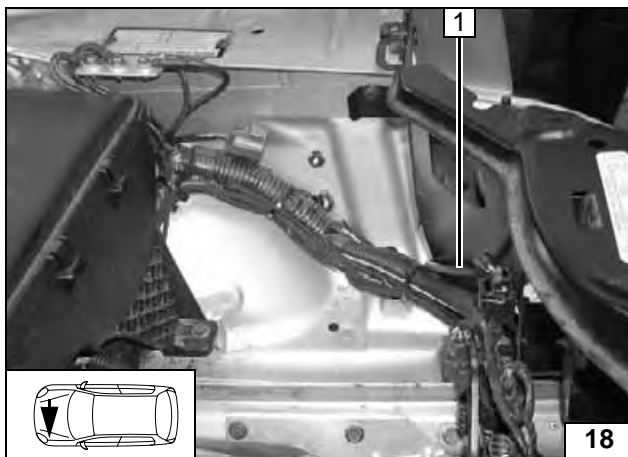
- 1 Positive wire, 8 mm dia. ring eye
- 2 Positive support point

Positive connection



- 2 Ground wire
- 1 Ground support point

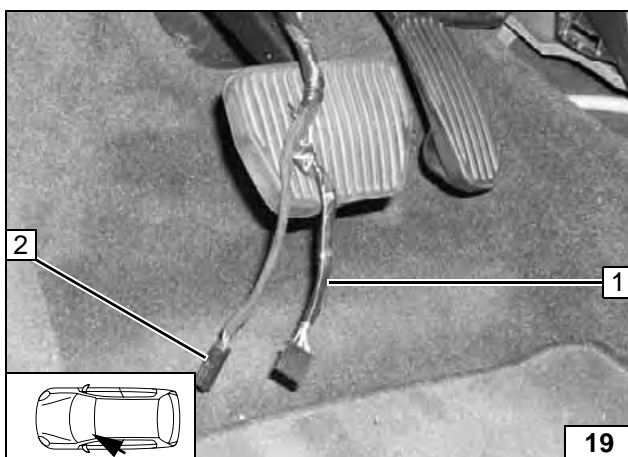
Ground connection



Route blue (bl), brown (br) and black (sw) wires in protective sleeving and wiring harness of heater unit 1 along original vehicle lines to left-hand headlight and then on to installation location of heater unit. Fasten wiring harness with cable ties.



Wiring harness routing

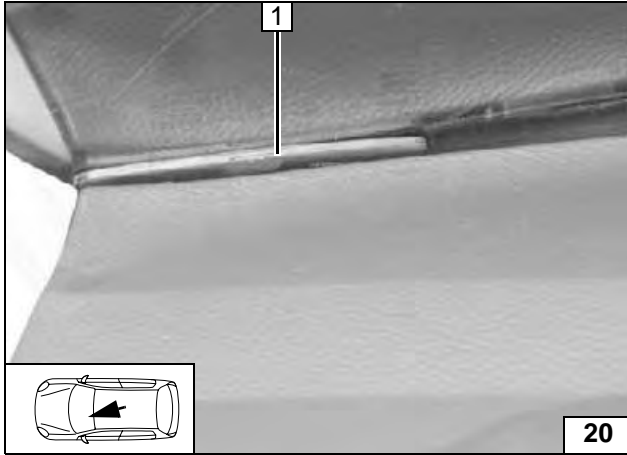


Connect connector 2 to heater unit to connector of digital timer (see Figure 3).

- 1 Telestart connector
- 2 Connector



Wiring harness routing



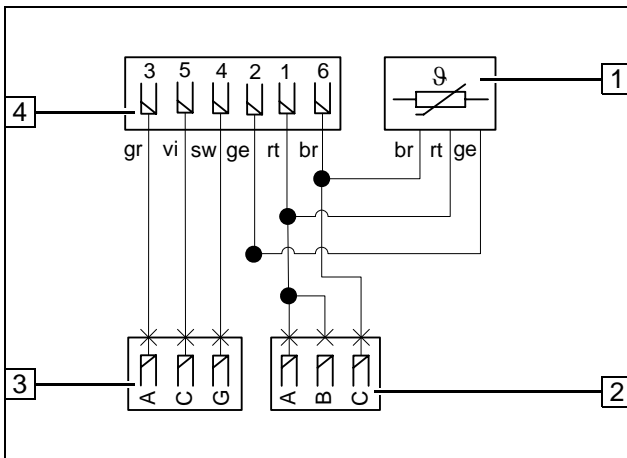
Remote option (Telestart)

Installation location of Telestart antenna on windshield at upper left next to rearview mirror.
Route antenna cable into footwell on driver's side.

- 1 Antenna



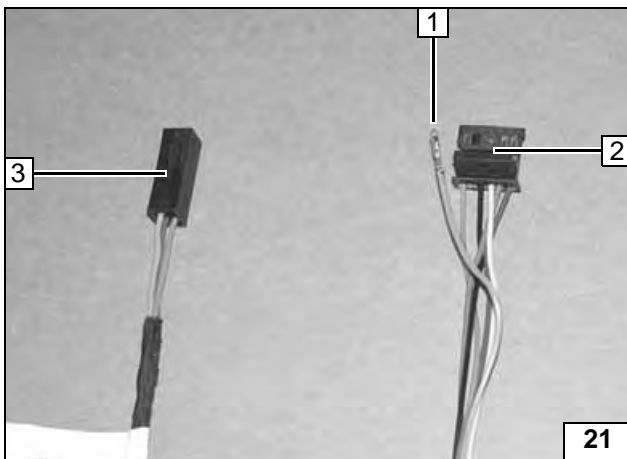
Installing antenna



Only with Telestart T100 HTM

- 1 Temperature sensor
- 2 Connector X2
- 3 Connector X3
- 4 Telestart connector

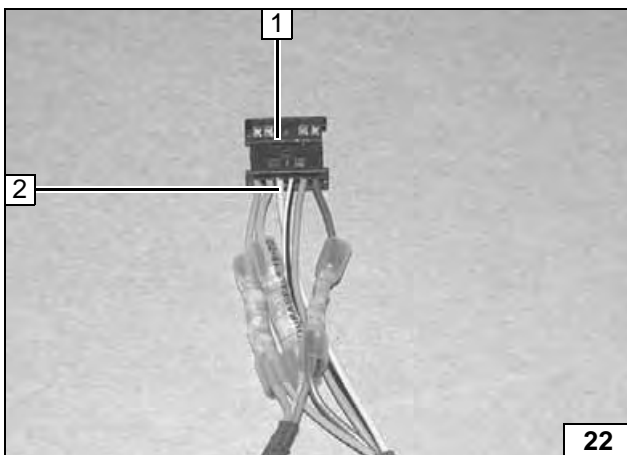
Wiring diagram for T100 HTM



Disconnect yellow (ge) wire 1 from 6-pin connector 2 of Telestart T100 HTM Y-cable and cut off after approx. 60 mm. Discard remaining Y-cable. Cut off and discard connector of temperature sensor 3



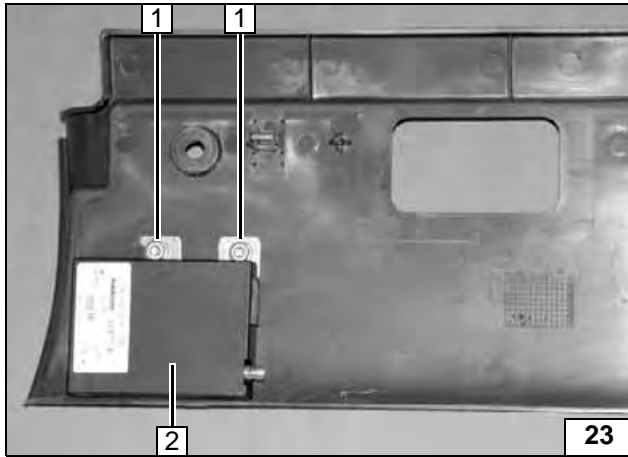
Preparing wiring harness



Engage yellow (ge) additional wire 2 in Telestart connector 1 from gateway wiring harness
Produce connections in accordance with wiring diagram (see above).



Preparing wiring harness

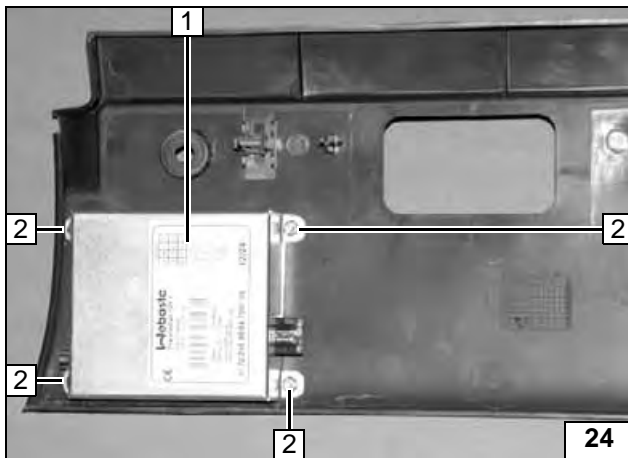


Lay receiver on footwell trim of driver's side and copy hole pattern at position 1 [2x] as shown.

- 1 5.5 mm dia. hole, M5x12 bolt, washer, spring lock washer and nut [2x each]
- 2 Receiver



Installing receiver



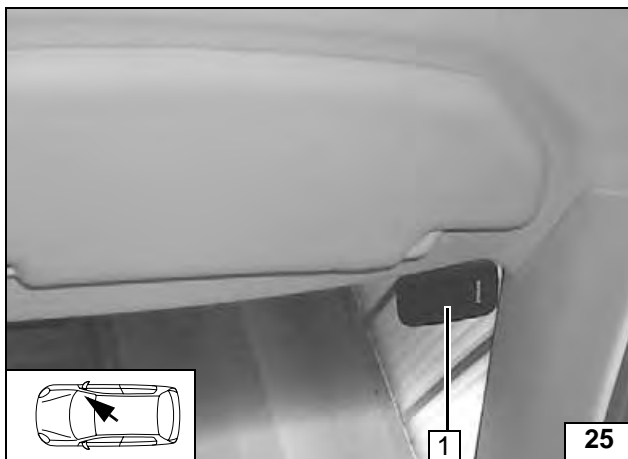
Remote option (Thermo Call)

Lay receiver on footwell trim on driver's side and copy hole pattern at position 2 [4x]. Fasten receiver with screws. Produce connections with adapter wiring harness Order No. 12001637, or loop in Thermo-Call in accordance with wiring diagram on Pg. 13. When installing Telestart and Thermo Call, installation location of Telestart receiver must be specified in coordination with customer.

- 1 Receiver



Installing receiver

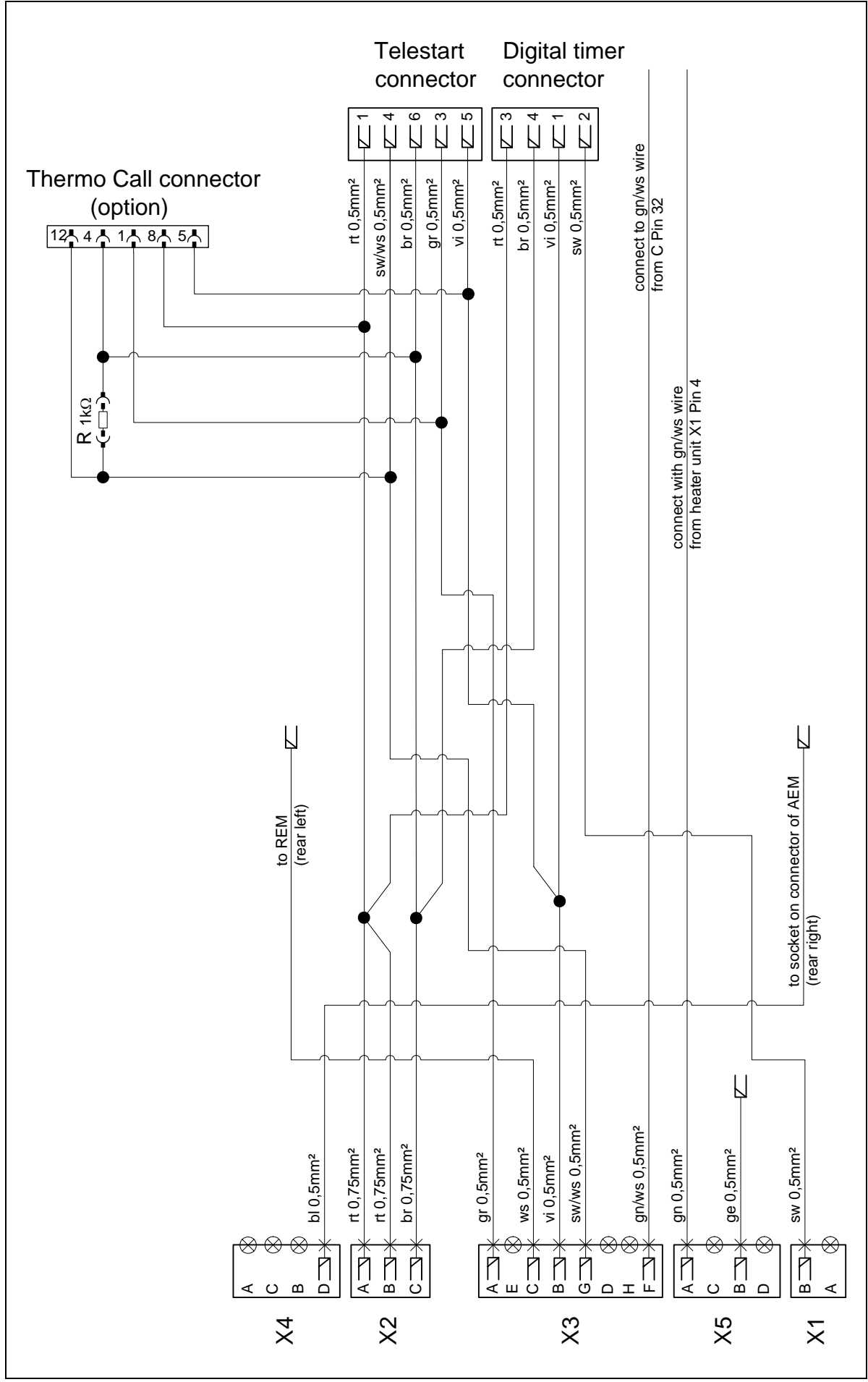


Installation location of Telestart antenna on windshield at upper right.

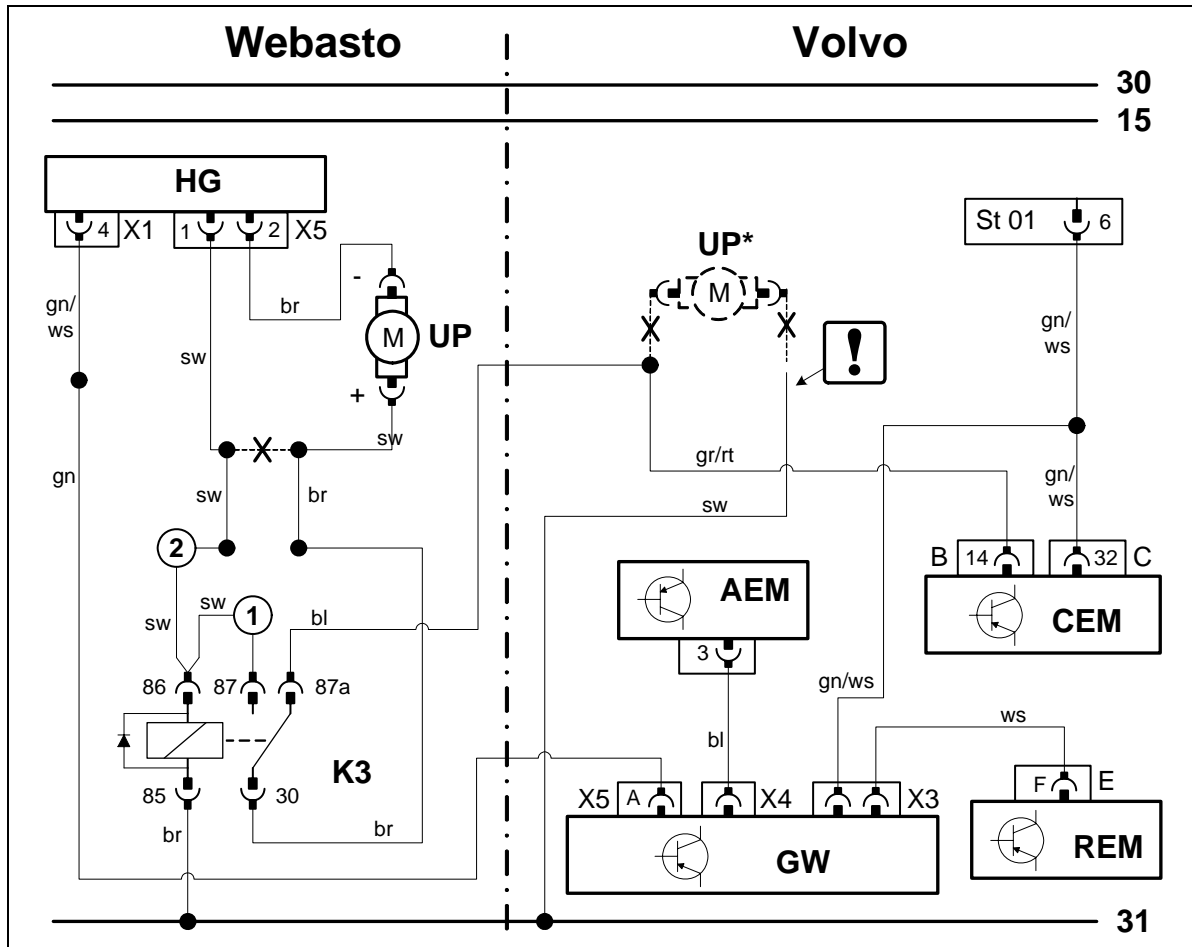
- 1 Antenna




Installing antenna



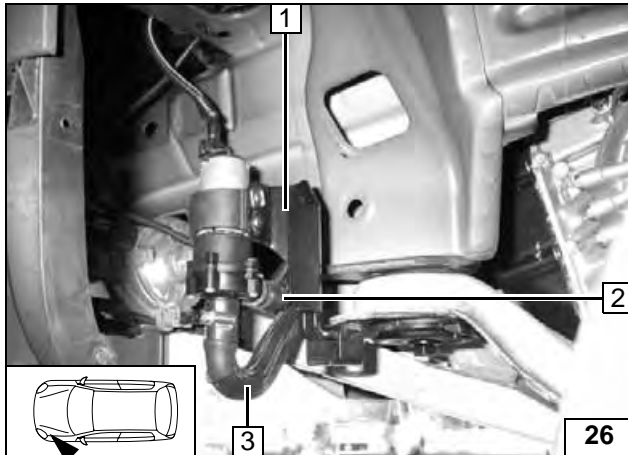
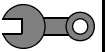
Gateway wiring harness



Wiring diagram

Webasto components		Volvo components		Colors and symbols	
HG	Heater unit TT-C/E	GW	Gateway	rt	red
X1	Connector on heater unit	X3	Connector on gateway	ws	white
X5	Connector of circulating pump on heater unit	X4	Connector on gateway	sw	black
F3	Fuse, remove	X5	Connector on gateway	br	brown
K3	Fan relay	AEM	Comfort electronics module	gn	green
CP	Circulating pump	CEM	Central electronics module	bl	blue
		b	Connector on CEM	gr	gray
		C	36-pin connector, gray		
		REM	Rear electronics module		
		E	Connector on REM		
		Circulating pump*	Circulating pump, remove		
		ST01	for CPM		
					Insulate wire ends and tie back
				X	Cutting point

Legend



Preparing installation location

Support engine mount from below before removing circulating pump.
 Disconnect coolant hoses **2** and **3** at circulating pump of external heater with hose clamping pliers, detach from circulating pump and route upward via frame side member to installation location of heater unit.
 Remove circulating pump with bracket **1**.



Removing circulating pump

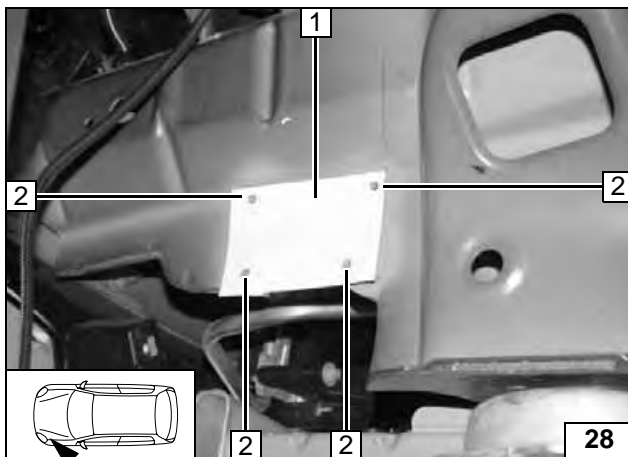


Remove circulating pump.
 Cut away bracket at markings.
 Fasten cut-off stop disk again with original vehicle screw.



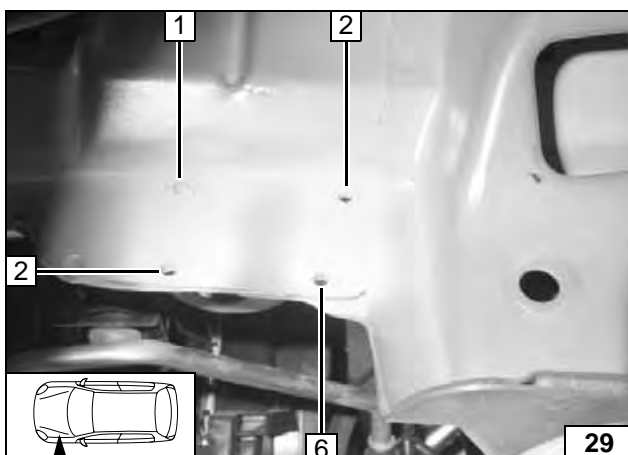
- 1** Stop disk
- 3** Circulating pump

Cutting bracket to size



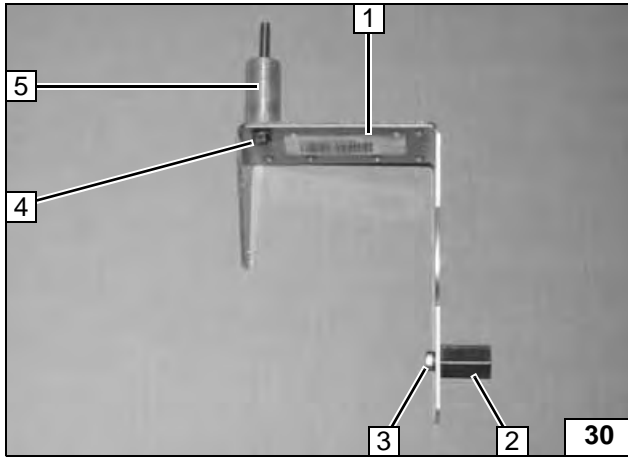
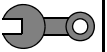
- 1** Template for Bracket
- 2** Copy hole pattern to frame side member [4x]

Copying hole pattern



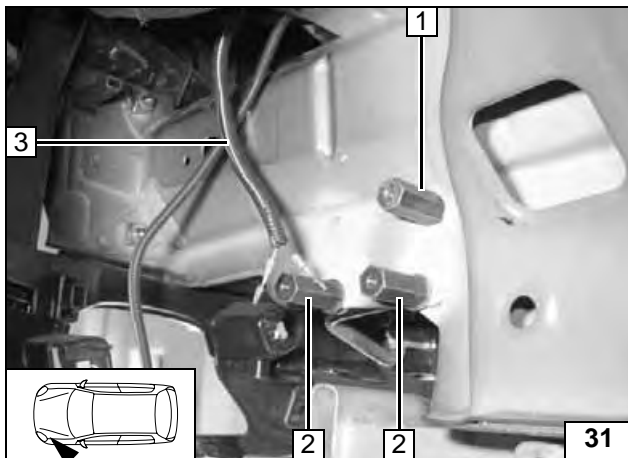
- 1** 9.1 mm dia. holes, rivet nut
- 2** 7 mm dia. holes [3x]

Holes and rivet nut



- 1 Bracket
- 2 30 mm spacer nut
- 3 M6x20 bolt, spring lock washer
- 5 40 mm spacer sleeve
- 4 M6x70 bolt, spring lock washer, pin lock

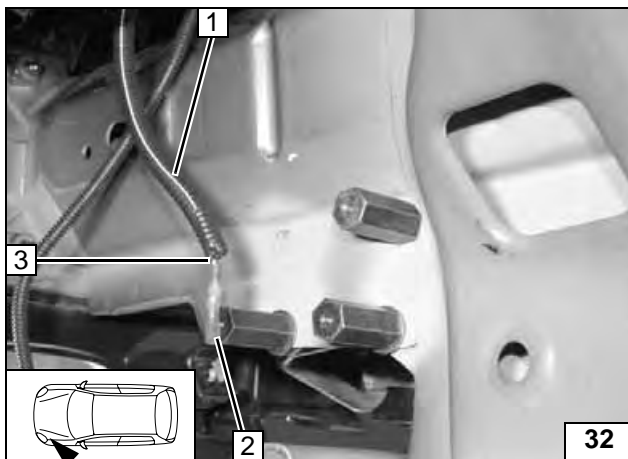
Preparing bracket



Fasten spacer nuts from behind on prepared 7 mm dia. holes with M6x20 bolts, spring lock washers and large diameter washers. Remove connector on wiring harness of circulating pump.

- 1 40 mm spacer nut, washer [2x]
- 2 40 mm spacer nut, large diameter washer [2x each]
- 3 Wiring harness of circulating pump

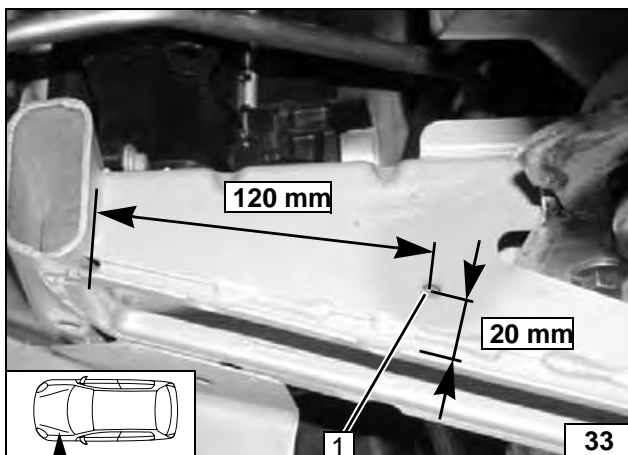
Premounting spacer nuts



Insulate black (sw) washer and tie back. Mount connector on gray/red (gr/rt) wire.

- 1 Wiring harness of circulating pump
- 3 Gray/red (gr/rt) wire
- 2 Connector

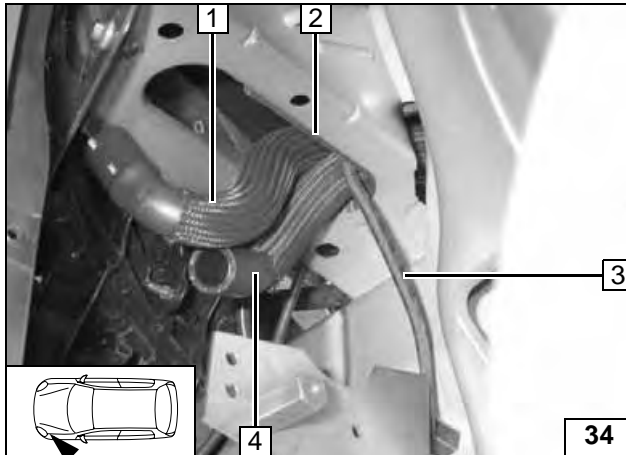
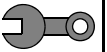
Preparing wiring harness of circulating pump



When drilling, watch components located behind!

- 1 7 mm dia. hole in cross member

Hole for fastening exhaust end section

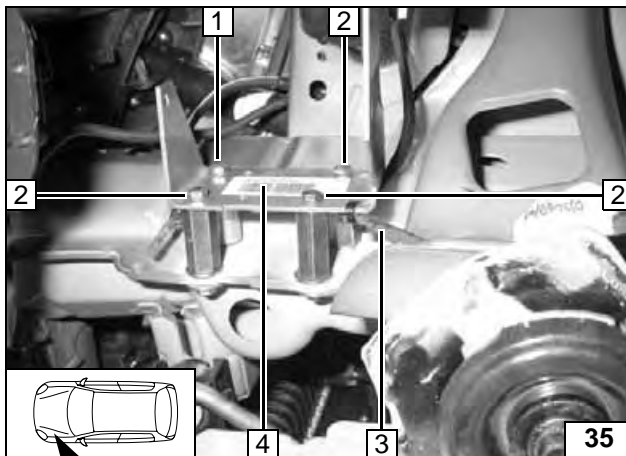


Cut 220 mm off edge protection provided. Route hose on engine outlet **1**, hose on heat exchanger inlet **2** and wiring harness of heater unit **3** through pass through.

- 2** Edge protection
- 1** Hose from engine outlet
- 4** Hose to heat exchanger inlet
- 2** Wiring harness of heater unit



Mounting edge protection

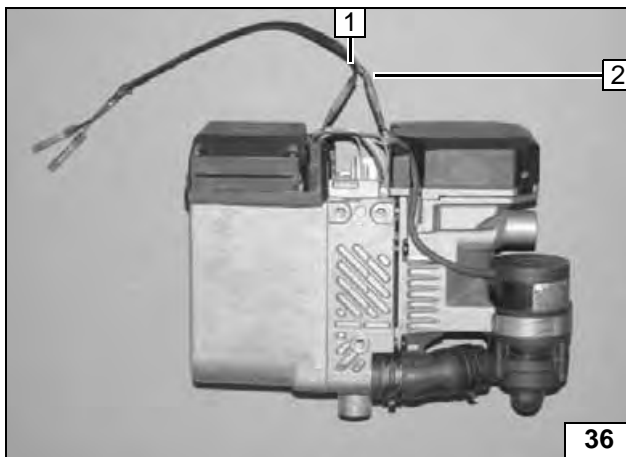


Fasten bracket on prepared rivet nut with pre-mounted M6x70 bolt **1**. Fasten wiring harness of heater unit on existing hole with cable tie.

- 4** Bracket
- 2** M6x20 bolt, spring lock washer [3x each]
- 3** Wiring harness of heater unit



Installing bracket



Preparing heater unit

Remove center heater unit cover. Disconnect black (sw) wire from connector X5, Pin 1 to circulating pump and brown (br) and black (sw) additional wires provided to connector in accordance with wiring diagram.

- 1** 250 mm black (sw) wire
- 2** 300 mm long brown (br) wire



Premounting wires on heater unit

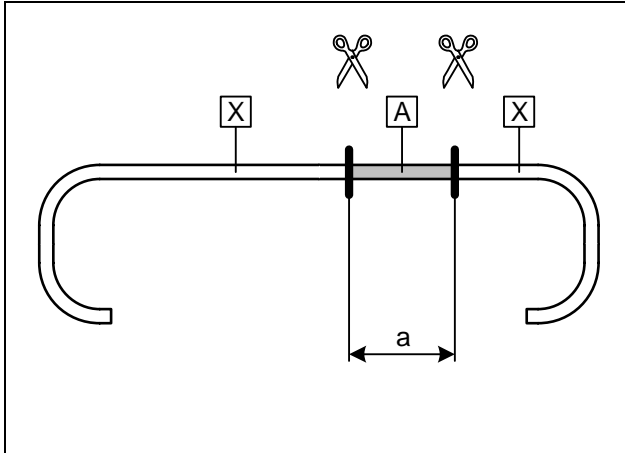
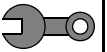


Route brown (br) and black (sw) additional wires on heater unit as shown. Reinstall heater unit cover.

- 1** 300 mm long brown (br) wire
- 2** 250 mm black (sw) wire



Premounting wires on heater unit

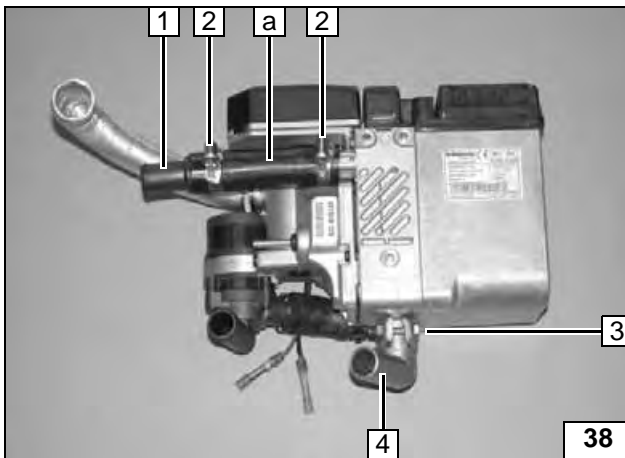


a = 100 mm

Discard section X



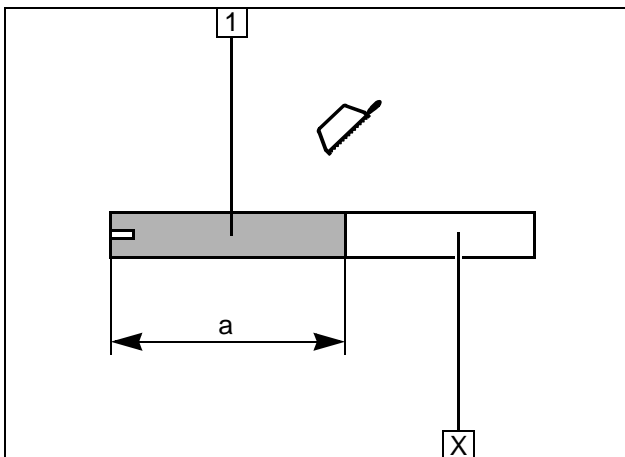
Cutting coolant hose to length



A Hose on heater-unit coolant outlet

- 1 20x20 mm connecting pipe
- 2 27 mm dia. hose clamp [2x]
- 4 Exhaust elbow
- 3 Hose clamp

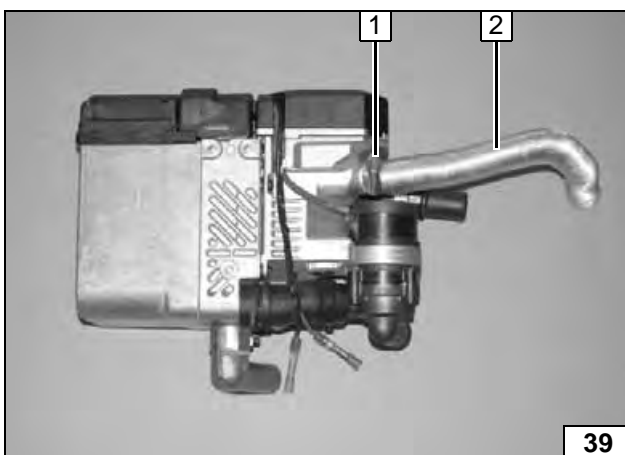
Premounting heater unit



1 Combustion air pipe
a = 260 mm

Discard section X

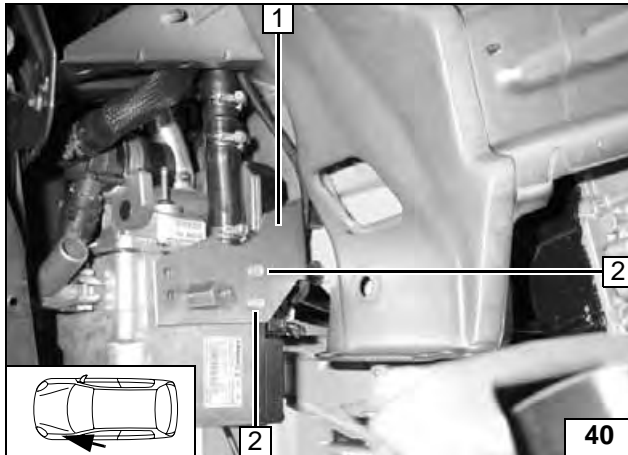
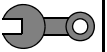
Cutting combustion air pipe to length



2 Prepared combustion air pipe

- 1 27 mm dia. hose clamp

Installing combustion air pipe



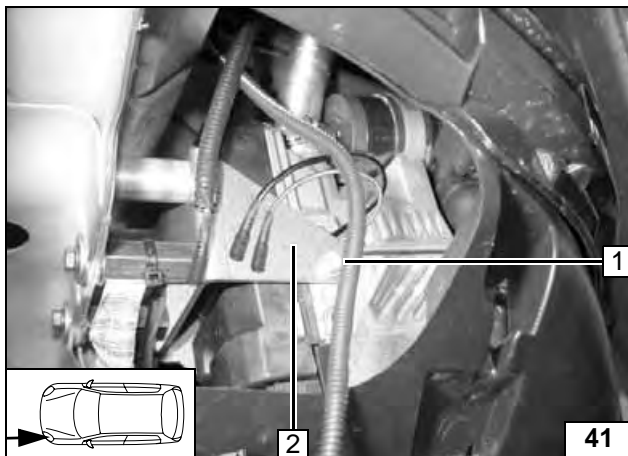
Installing heater unit

Mount wiring harness of heater unit prior to installation.
Ejot screws, tightening torque 10 Nm!

- 1 Pre-mounted bracket
- 2 E-jot screw [2x]



Installing heater unit

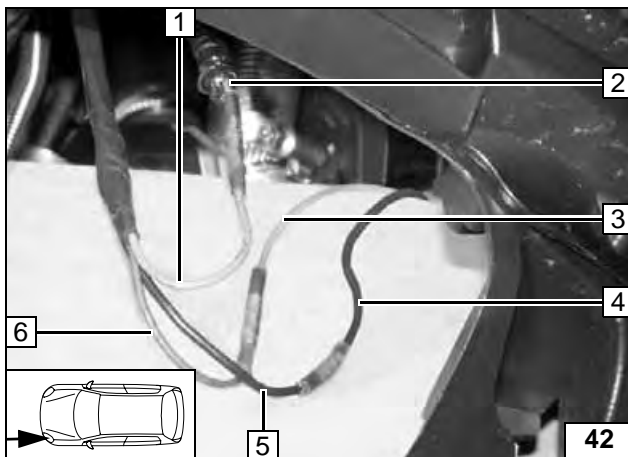


Ejot screw, tightening torque 10 Nm!

- 2 Pre-mounted bracket
- 1 E-jot screw



Installing bracket

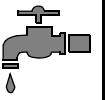


Produce connection with connectors provided.

- 1 Blue (bl) wire to K3/87a
- 2 Gray/red (gr/rt) wire from engine control unit
- 6 Brown (br) wire from K3/30
- 3 Brown (br) wire to circulating pump (sw)
- 5 Black (sw) wire to K3/86
- 4 Black (sw) wire from heater unit connector X5, Pin 1 (sw)



Connection of circulating pump



Coolant circuit

WARNING!

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

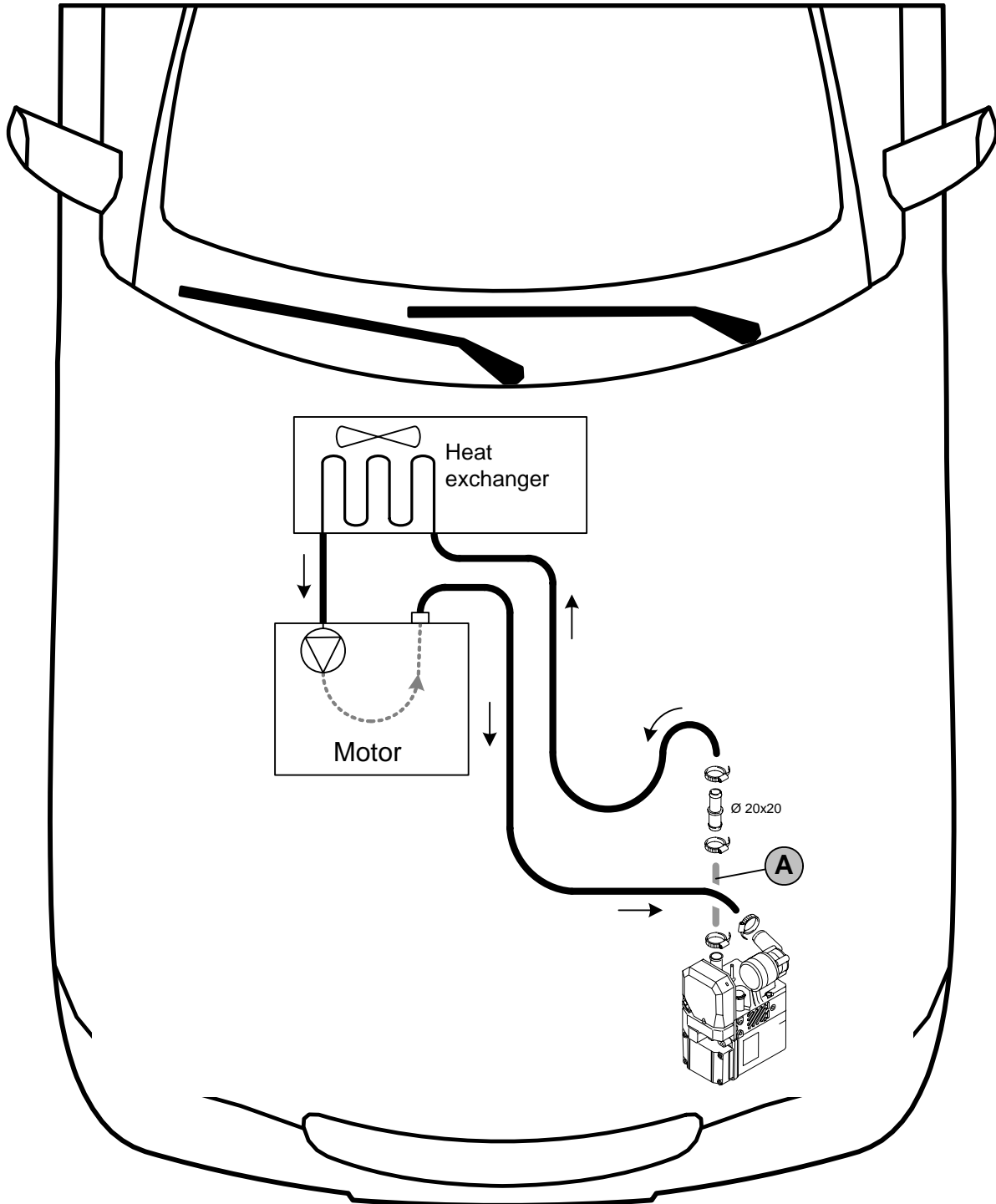
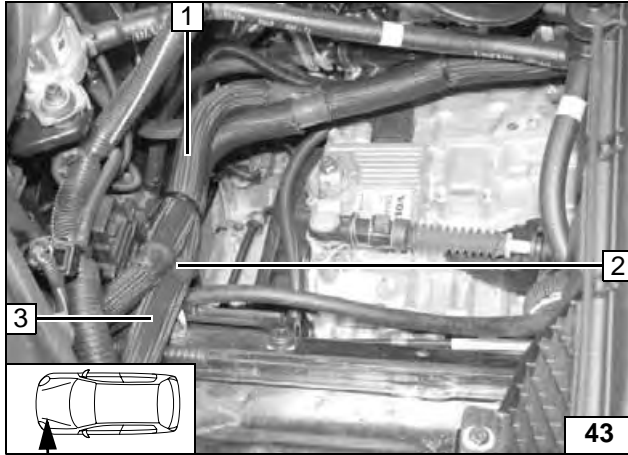


Diagram of hose routing

All clamps without a specific designation = 20 -27 mm dia. hose clamps!



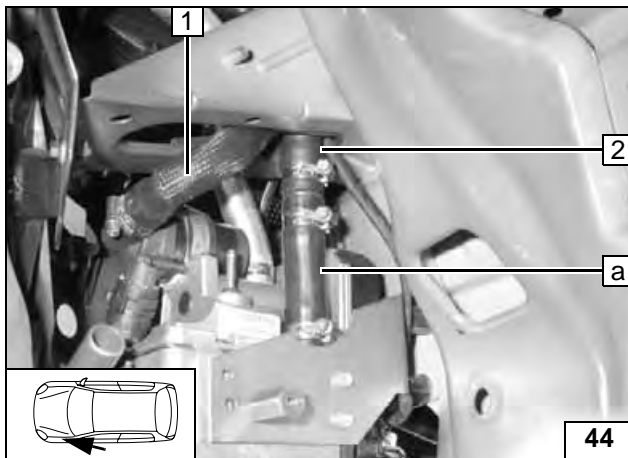


Disconnect hose connection at position 2.

- 1 Hose from engine outlet
- 3 Hose to heat exchanger inlet
- 2 Hose connection, disconnected



Hose routing in engine compartment



Connection on heater unit



Fuel

CAUTION!

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

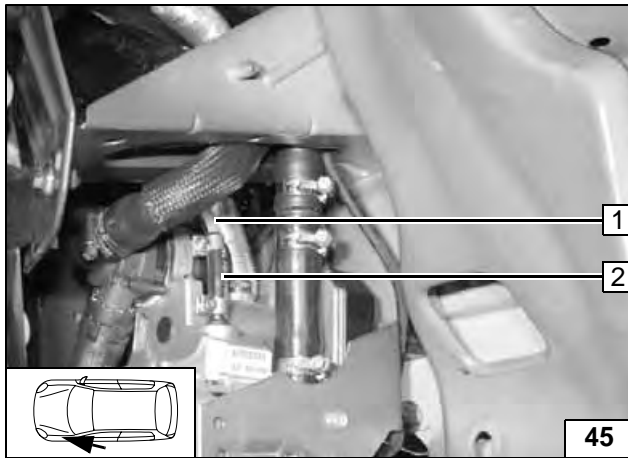
Catch any fuel running off with an appropriate container.

Install fuel line and metering-pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.

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

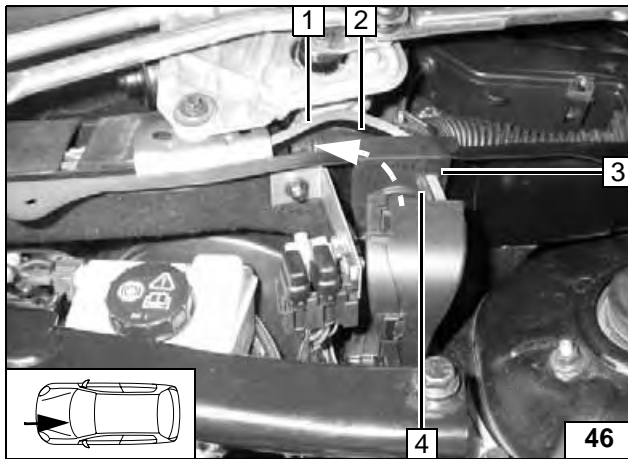
WARNING!

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



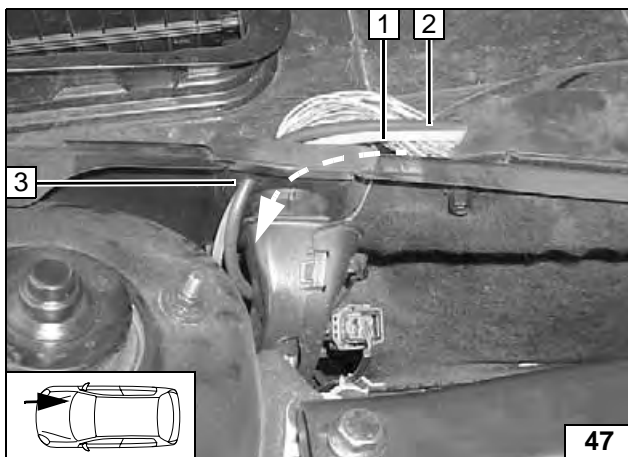
Route Mecanyl fuel line along heater-unit wiring harness to fuse/relay box.

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



Route Mecanyl fuel line 1 and wiring harness of metering pump 2 along wiring harness of digital timer through prepared 10 mm dia. hole 3 into coolant reservoir and then further to right-hand side of vehicle.

- 4 Wiring harness of digital timer
- 3 Prepared hole in protective rubber plug
- 1 Mecanyl fuel line
- 2 Metering pump wiring harness



Drill 10 mm dia. hole 3 in pass through to coolant reservoir. Route Mecanyl fuel line 1 and wiring harness of metering pump 2 through 10 mm dia. hole 3 into engine compartment.

- 3 10 mm dia. hole in pass through
- 1 Mecanyl fuel line
- 2 Metering pump wiring harness



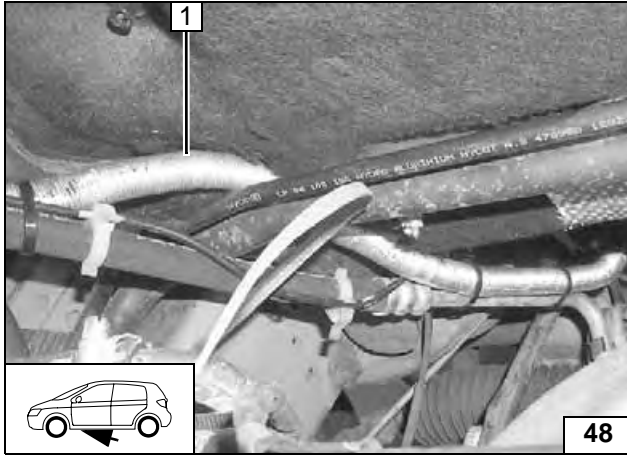
Conne-
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heater unit



Install-
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lines



Install-
ing
lines

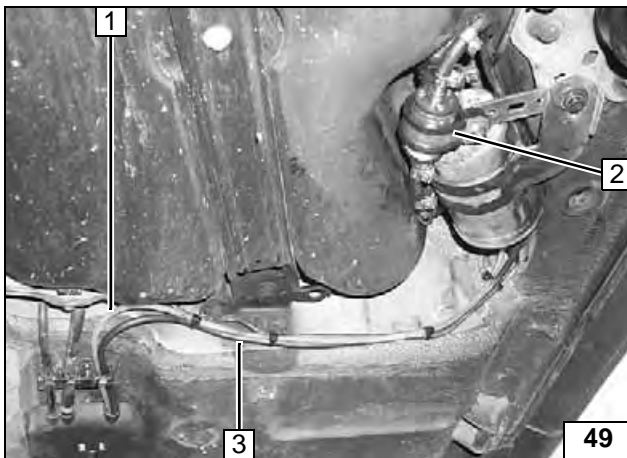


Push included heat protection hose **1** onto Mecanyl fuel line and wiring harness of metering pump. Route Mecanyl fuel line and wiring harness of metering pump along original vehicle fuel lines on firewall to underbody.

1 Position heat protection hose



Installing lines

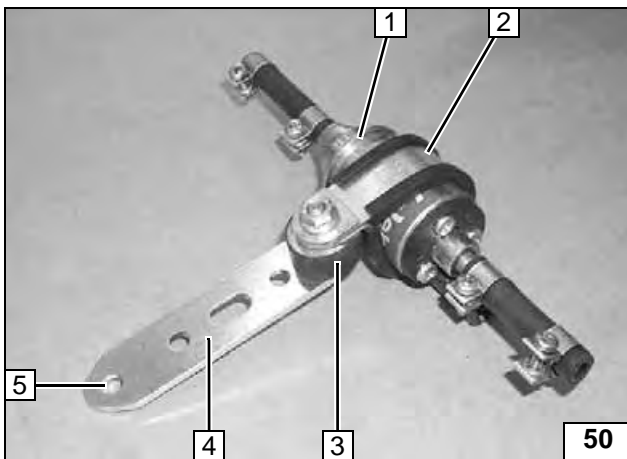


Route Mecanyl fuel line **1** and wiring harness of metering pump **2** along original vehicle fuel lines to installation location of metering pump as shown.

1 Mecanyl fuel line
3 Metering pump wiring harness
2 Metering pump



Installing lines



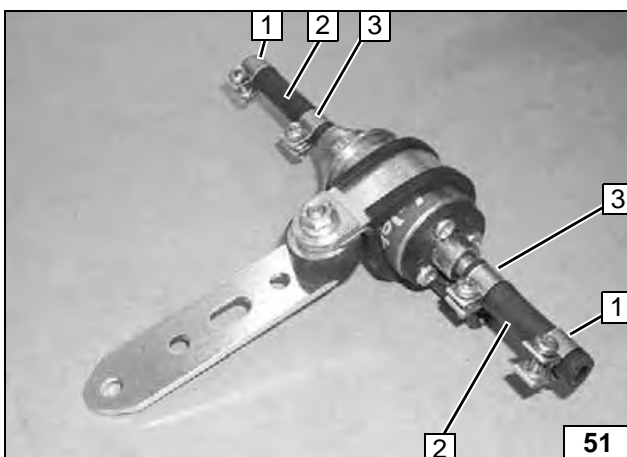
Metering pump

Drill out perforated bracket to 8.5 mm dia. at position **5**.

1 Metering pump
2 Rubber-coated pipe clamp
4 Perforated bracket
3 Silent block, flanged nut [2x]

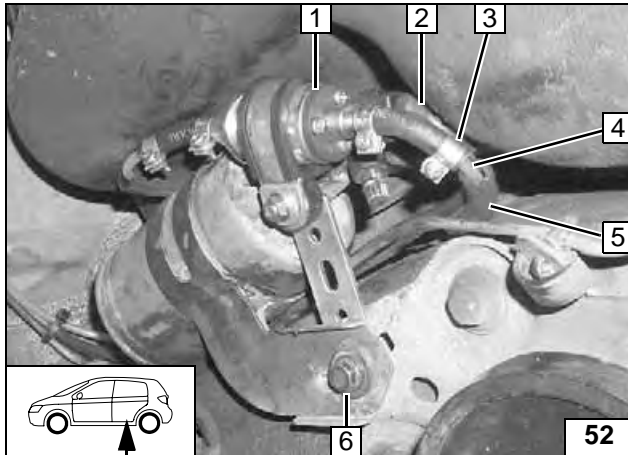


Premounting metering pump



4 Hose section [2x]
3 10 mm dia. hose clamp [2x]
1 10 mm dia. hose clamp [2x], slide on loosely

Premounting metering pump

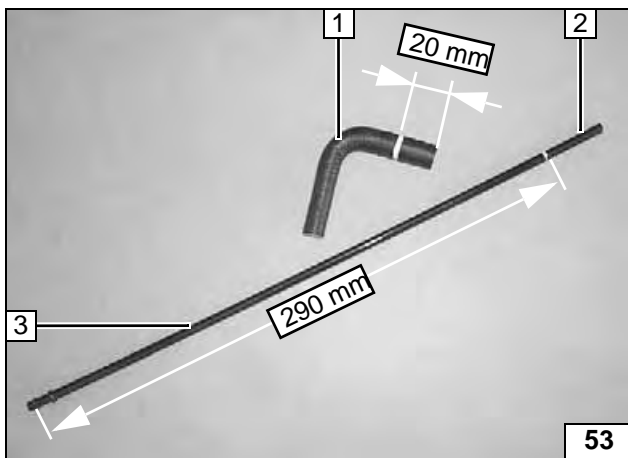


Ensure proper installation position of metering pump, see "Installation Instructions". Fuel line from heater unit on pressure side of metering pump [side with connector]. Slide fabric-reinforced hose section provided 5 onto Mecanyl fuel line 4.

- 1 Premounted metering pump
- 6 Original vehicle bolt
- 5 Fabric-reinforced hose section
- 4 Mecanyl fuel line
- 3 tighten 10 mm dia. hose clamp
- 2 Wiring harness of metering pump, protective rubber plug, tab connector, connector housing



Installing metering pump

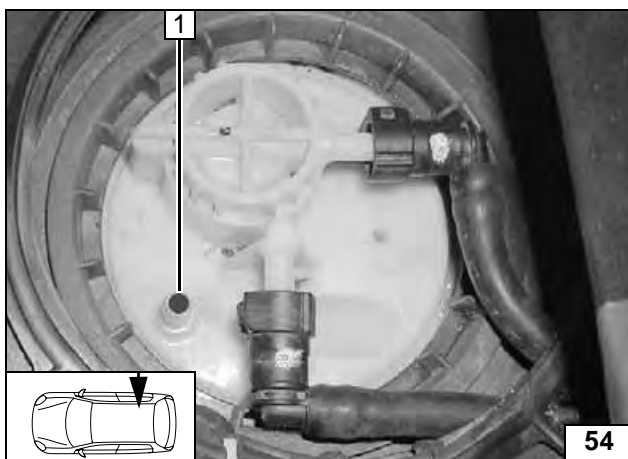


Removing fuel

Shorten standpipe provided 3 at end without bead 2 (cut to length at an angle). Shorten 90° molded hose provided 1 at end with 8.0 mm inside dia.



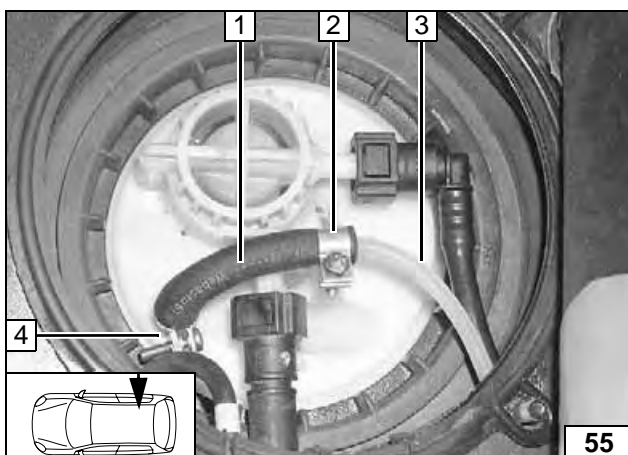
Preparing fuel removal



Drill out connection piece 1 of fuel-tank sending unit exactly in center (watch chips).



Mounting fuel standpipe

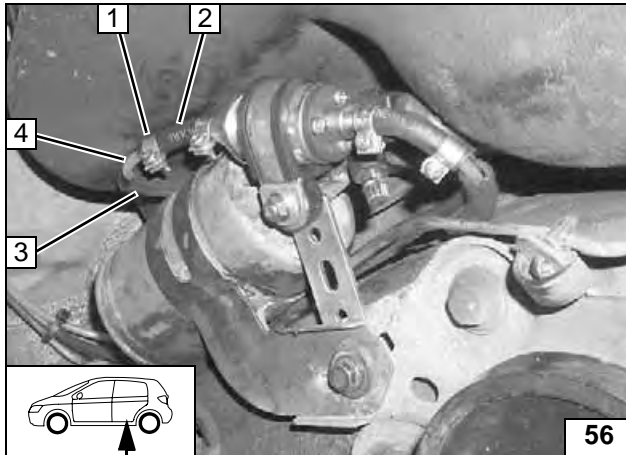


Insert standpipe as far as possible into drilled-out connection piece. Push molded hose 1 as far as possible onto standpipe and connection piece at end with inside 8.0 mm dia.

- 1 Molded hose
- 4 12 mm dia. hose clamp
- 3 Remaining end of Mecanyl fuel line
- 2 10 mm dia. hose clamp



Connection of fuel line

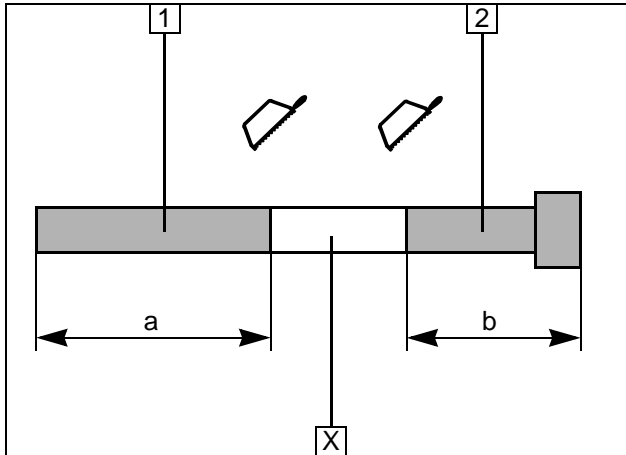


Fuel line from fuel standpipe on intake side of metering pump [side without connector]. Slide fabric-reinforced hose section provided **3** onto Mecanyl fuel line **4**. Check the position of the components; adjust if necessary. Check that they have free clearance.

- 3** Fabric-reinforced hose section
- 4** Mecanyl fuel line
- 2** Premounted molded hose
- 1** Tighten 10 mm dia. hose clamp



**Connec-
tion to me-
tering
pump**

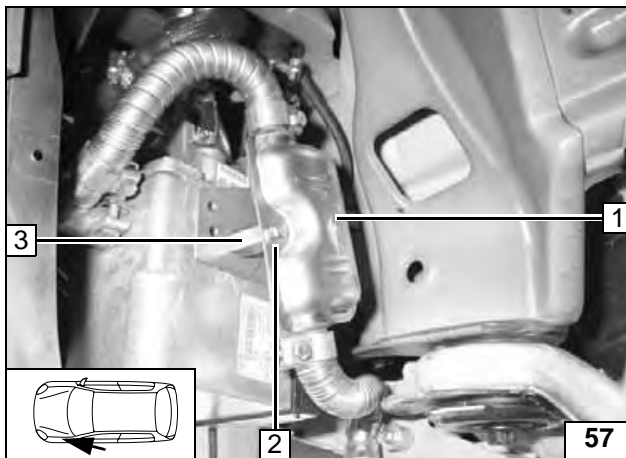


Exhaust gas

- 1 Exhaust pipe
a = 200 mm
- 2 Exhaust end section
b = 230 mm

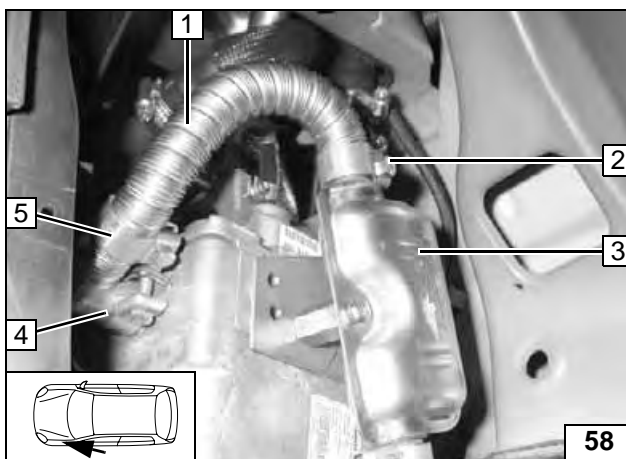
Discard section X

Preparing exhaust pipe



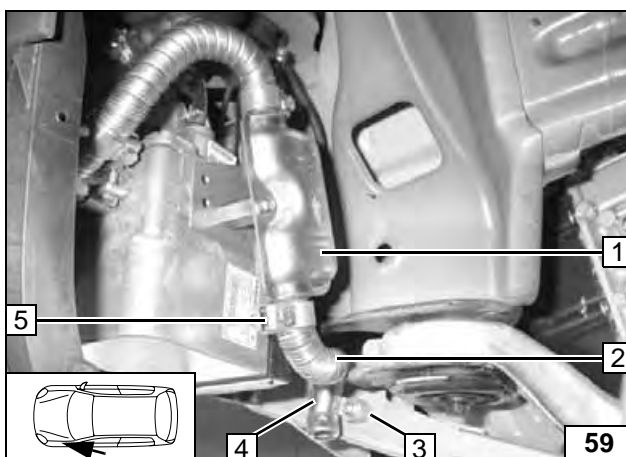
- 1 Muffler
- 2 M6x20 bolt, spring lock washer
- 3 Pre-mounted 30 mm spacer nut

Installing muffler



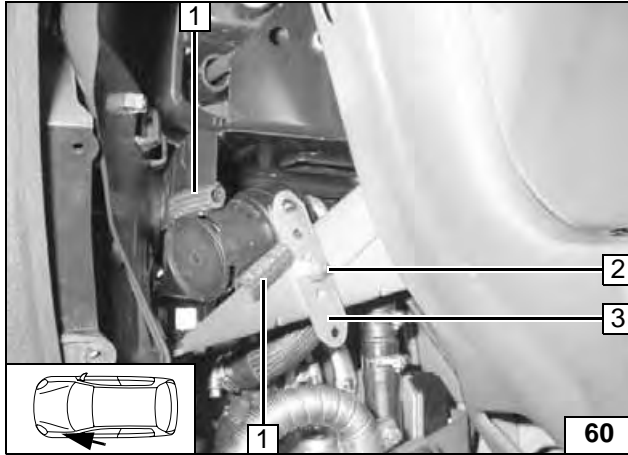
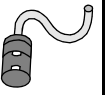
- 1 Exhaust pipe
- 3 Exhaust muffler
- 4 Exhaust elbow
- 3 Hose clamp [2x]

Installing exhaust pipe



- 1 Exhaust muffler
- 2 Exhaust pipe
- 5 Hose clamp
- 4 P-clamp
- 3 M6x30 bolt, 20 mm spacer sleeve on prepared hole

Installing exhaust end section



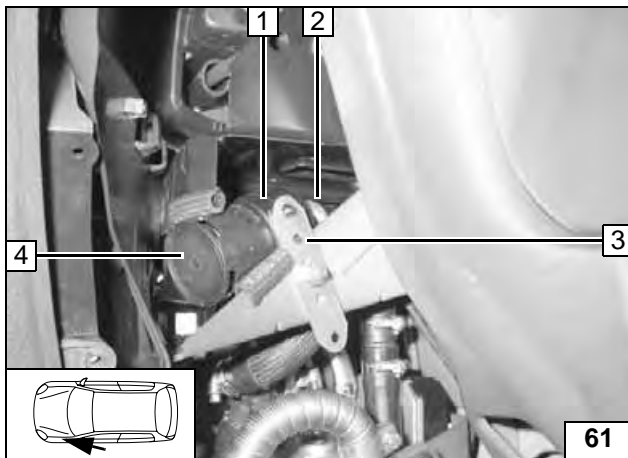
Combustion air

Cut open fabric-reinforced hose sections provided 1 [2x] and install as edge protection as shown.

- 1 Fabric-reinforced hose sections [2x]
- 3 Perforated bracket
- 2 Original vehicle bolt



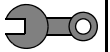
Premounting combustion air system



- 3 Perforated bracket
- 1 Retaining clip in hole of perforated bracket
- 2 Combustion-air intake pipe
- 4 Combustion-air intake muffler



Installing muffler



Final Work

WARNING!

Mount removed parts 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.

Seal off all cable pass throughs with sealing compound.

Spray heater unit components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- Connect battery
- Start engine, bleed coolant circuit according to vehicle manufacturer's instructions and top up coolant
- Set the digital timer.
- Adjust vehicle heater with automatic air-conditioning or without automatic air-conditioning in accordance with "Operating Instructions for End Customer"

Teaching Telestart option

Teach Telestart as described in Telestart operating instructions

To teach the Telestart, the connector must be pulled off at the Telestart receiver!

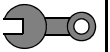
Installing software

- Depending on date of manufacture and equipment of vehicle, the corresponding Volvo software must be installed on the vehicle
- Check the proper operation of the additional heater, see the operating instructions/installation instructions.
- Mount information sign "Switch off additional heater before refueling" near the filler neck

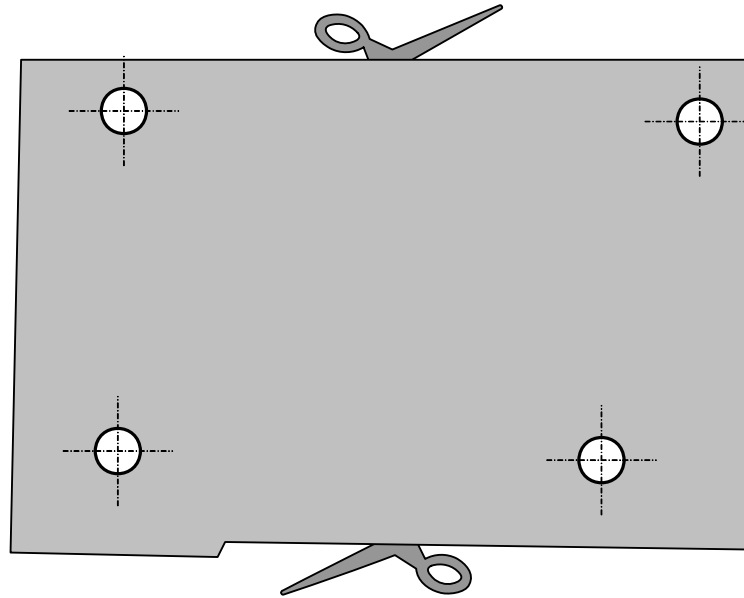


Webasto
Feel the drive

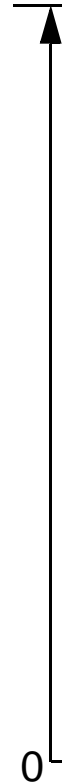
Webasto AG
Postfach 80
82131 Stockdorf, Germany
National Hotline: 01805 93 22 78
(14 euro cents from the German land-line network)
Hotfax: 0395 5592 353
Hotmail: hotline@webasto.de
<http://www.webasto.de>



Template for Bracket



100 mm



Scale 1:1

Compare the size of the printed version with dimension lines.
Permitted tolerance a maximum of 2%.

Correct major differences in the printer settings or request an original printout.

100 mm



0

Operating Instructions for End Customer

Please remove page and add to the vehicle operating instructions.

Additional heater can be switched with following heater controls:

- Steering column lever over original vehicle display in instrument panel (clock/direct start),
- "Telestart" radio remote control,
- "Thermo-Call" telephone remote control

Note!

If the additional heater has been switched on with the "Telestart" radio remote control or the "Thermo-Call" telephone remote control, then the heater can only be switched off again with **the same** heater control **or** with the steering column lever over the display! If the heater has been switched on with the steering column lever (clock/direct start) in the vehicle display, then it can **only** be deactivated again with this heater control!

Rule of thumb for operating additional heater: driving time = heating time!