

Thermo Top Evo Parking Heater



Installation documentation

Toyota Verso-S / Subaru Trezia

Petrol and Diesel

from model year 2011

Left-hand drive vehicle

Manual transmission: Petrol and Diesel

Multidrive transmission (CVT): Petrol

MultiMode transmission (MMT): Diesel



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.

Table of Contents

Validity	2	Preparing installation location	14
Heater/Installation Kit	3	Preparing heater	16
Foreword	3	Installing heater	17
General Instructions	3	Combustion air	19
Special Tools	3	Coolant circuit petrol	20
Explanatory Notes on Document	4	Coolant circuit, diesel	24
Preliminary Work	5	Fuel	29
Heater installation location	5	Exhaust gas	33
Preparing electrical system	6	Final Work	36
Electrical system	7	Template for fuel standpipe petrol	37
Fan control for manual air conditioning	9	Template for fuel-tank sending unit. Petrol	37
Automatic air-conditioning fan control	10	Template for fuel standpipe diesel	38
Combination heater controls	11	Operating Instructions for End Customer	39
Digital timer	12		
Remote option (Telestart)	12		

Validity

Manufacturer	Model	Type	EG-BE No. / ABE
Toyota	Verso-S	XP12	e11 * 2001 / 46 * 0020 * ...
Subaru (Fuji Heavy Industries)	Trezia	D1(a)	e11 * 2007 / 46 * 0021 * ...

Engine type	Engine model	Output in kW	Displacement in cm ³
1NR-FE	Petrol	73	1329
1ND-TV	Diesel	66	1364

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

The installation location of the digital timer should be confirmed with the end customer before installation.

Heater/Installation Kit

Quantity	Designation	Order No.:
1	<i>Thermo Top Evo</i> Basic delivery scope	See price list
1	Installation kit for Toyota Verso-S / Subaru Trezia 2011 Petrol and Diesel	1317146A
1	Heater control	See price list

Foreword

This installation document applies to the Toyota Verso-S / Subaru Trezia Petrol and Diesel vehicles - for validity, see page 2 - from model year 2011 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.

In any case, please follow the specifications of this "installation documentation" and the "operating and installation instructions" of the *Thermo Top Evo*.

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. Insulate and tie back loose wires.

Sharp edges should be fitted with rub protection (split-open fuel hose).

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

When installing an IPCU, the corresponding settings must be checked or adjusted before installation.

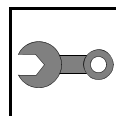
Special Tools

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

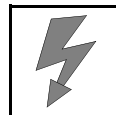
Explanatory Notes on Document

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.

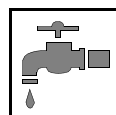
Mechanical system



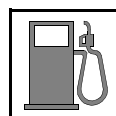
Electrical system



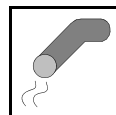
Coolant circuit



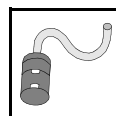
Fuel



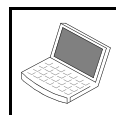
Exhaust gas



Combustion air



Software



Special features are highlighted using the following symbols:



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



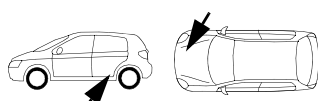
Specific risk of fire or explosion.



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



Reference to a special technical feature.



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

All dimensions are in mm!

Tightening torque of 5x13 heater bolts = 8Nm!

Tightening torque of 5x15 bolt of water connection piece retaining plate = 7Nm!

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 and remove the battery.
- Remove the battery support.
- Remove the windscreen wipers.
- Remove the coolant reservoir cap.
- Remove the windscreen wiper motor.
- Remove the entire coolant reservoir.
- Remove the left headlight.
- Remove the front bumper trim.
- Remove the front left-hand underride protection.
- Remove the rear bench seat.
- Open the tank-fitting service lid.
- Remove the fuel-tank sending unit in accordance with the manufacturer's instructions.
- Remove the lower instrument panel trim on the driver's side.
- Remove the footwell trim on the driver's side.

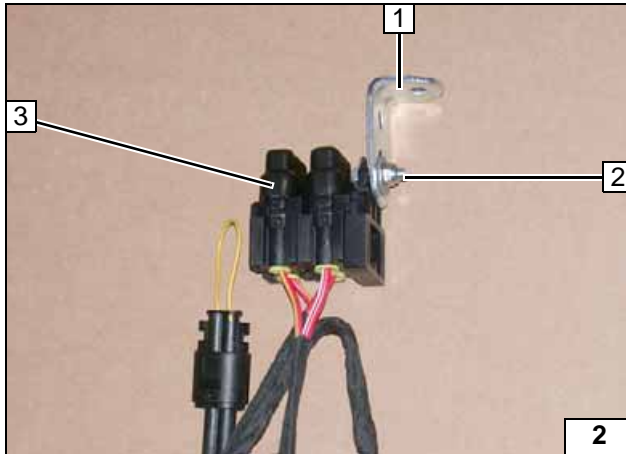
Remove page 39 "Operating Instructions for End Customer" and add to the vehicle operating instructions.



Heater installation location

1 Heater

Installation location

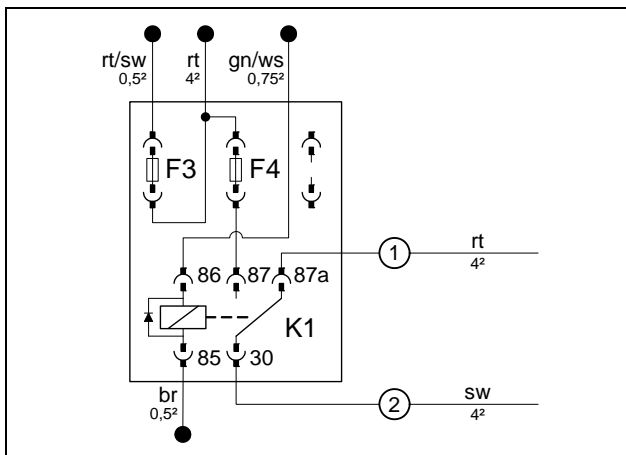


Preparing electrical system

Wire sections retain their numbering in the whole document.

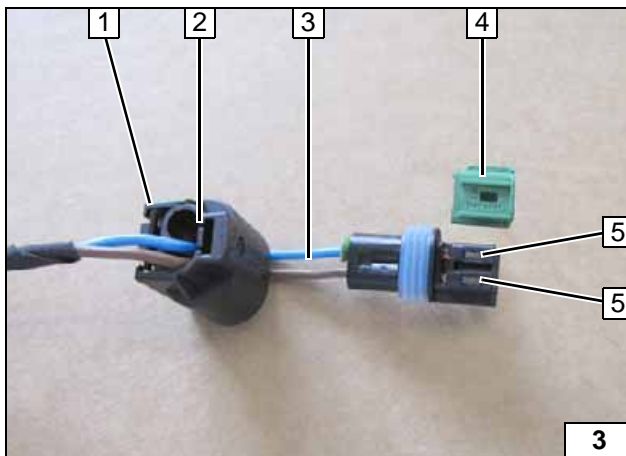
- 1 Angle bracket
- 2 M5x16 bolt, large diameter washer [2x], retaining plate for engine compartment fuse holder, nut
- 3 Fuses F1-2

Premounting fuse holder of engine compartment



Produce connections as shown in wiring diagram. Install fuse F4 25A in manual air conditioning and 7.5A in automatic air-conditioning system. K1 relay will be inserted after installing the fuse holder.

Premounting fuse holder of passenger compartment



Complete metering pump connector again after routing. Pin assignment is not relevant.

- 1 Connector housing
- 2 Lock
- 3 Blue (bl) / brown (br) wires
- 4 Coding
- 5 Timer lock

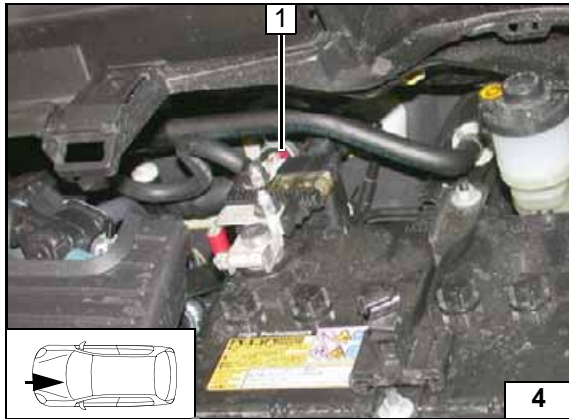
Dismantling connector



Electrical system

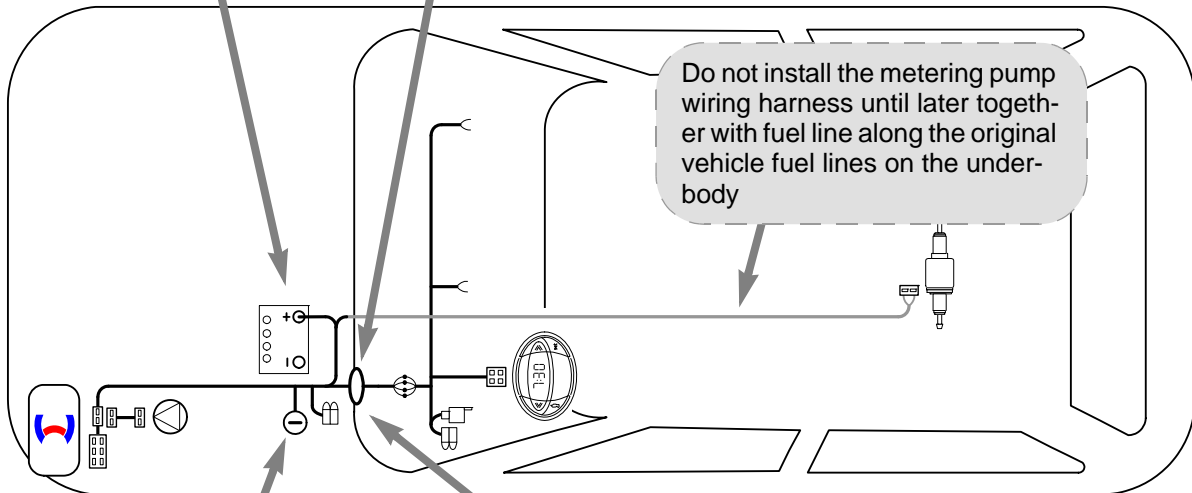
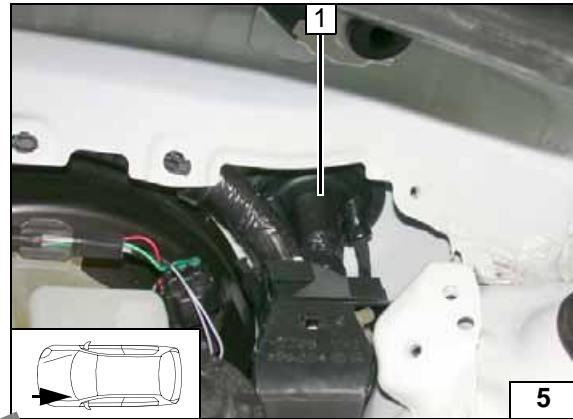
Positive wire

1 Positive wire on positive battery terminal

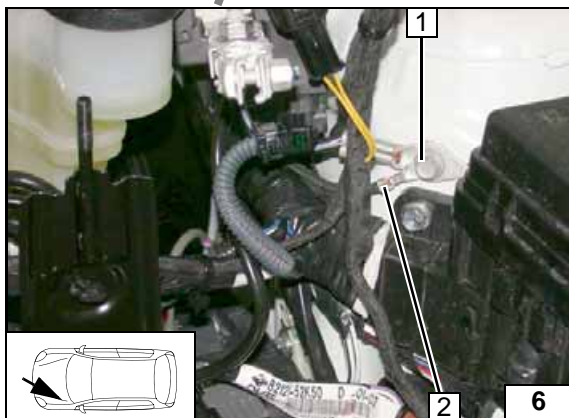


Wiring harness pass through

1 Protective rubber plug

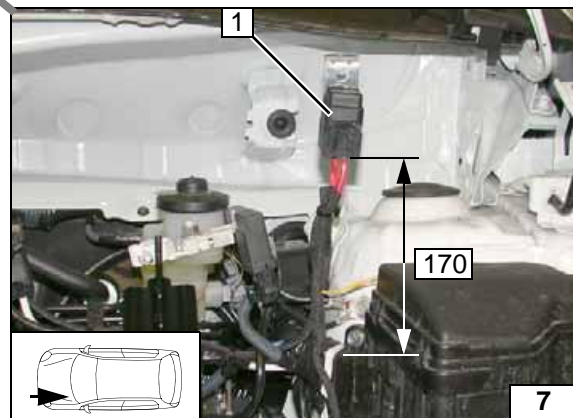


Wiring harness routing diagram



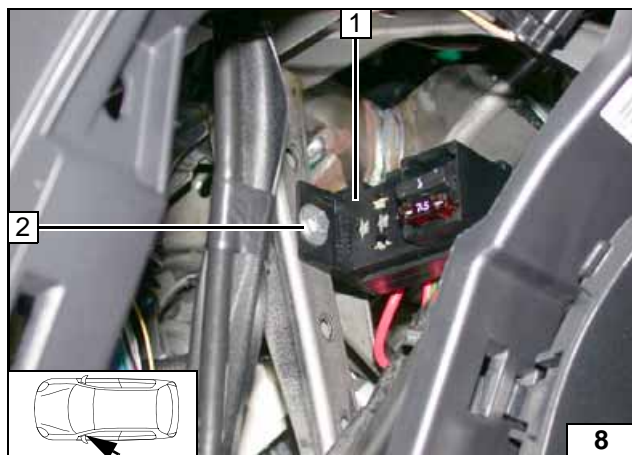
Earth wire

1 Original vehicle earth support point
2 Earth wire



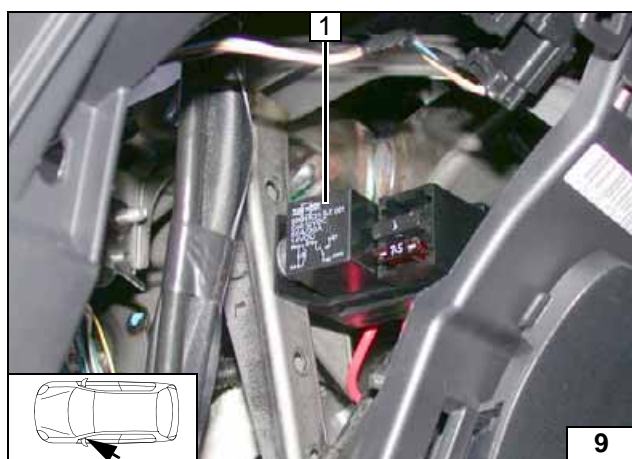
Fuse holder of engine compartment

Position fuse holder of engine compartment 1 as shown over the cable duct. Will be mounted during final work.



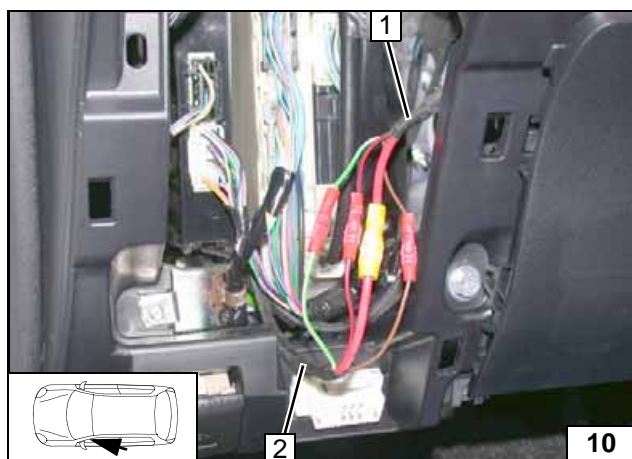
- 1 Fuse holder of passenger compartment
- 2 M5x16 bolt, large diameter washer [2x], nut, existing hole

Mounting
fuse holder
of passen-
ger com-
partment



- 1 K1 relay

Mounting
K1 relay

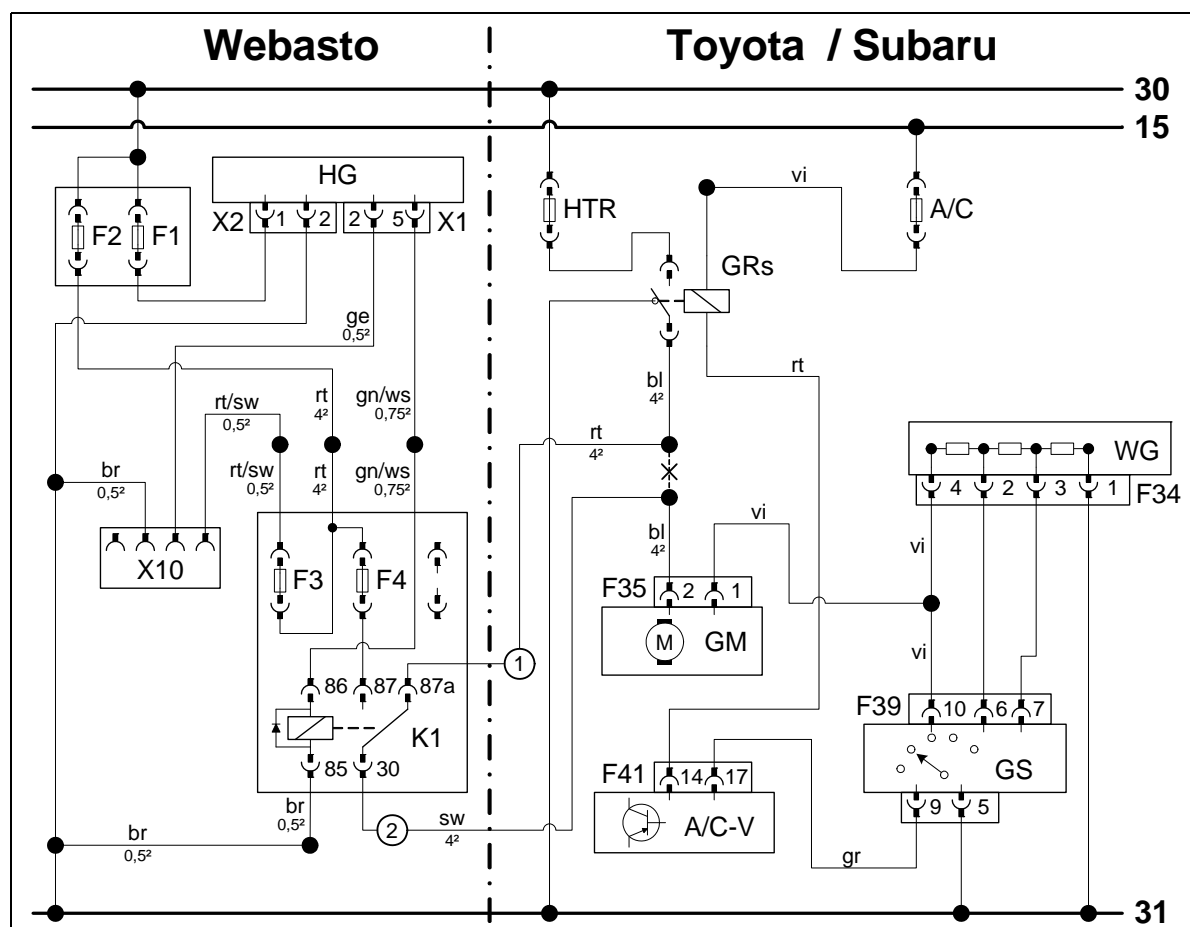


Connect same colour wires of wiring harness of passenger compartment fuse holder 1 and the wiring harness of the heater 2 according to wiring diagram.

Connect-
ing wiring
harnesses



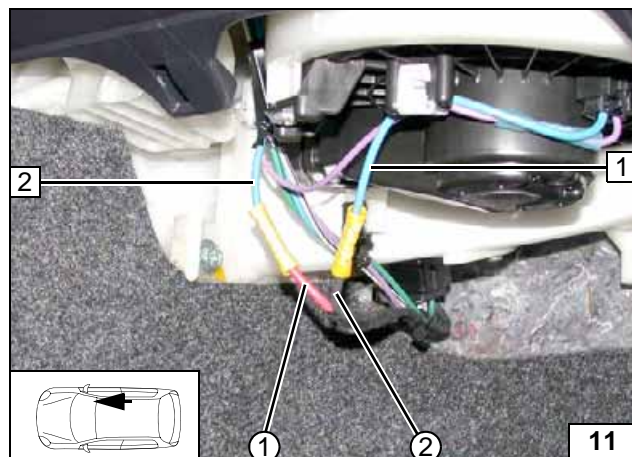
Fan control for manual air conditioning



Wiring diagram

Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-Evo	GRs	Fan relay	rt	red
X1	6-pin heater connector	WG	Resistor group	sw	black
X2	2-pin heater connector	GS	Fan switch	ge	yellow
X10	4-pin connector Heater control	A/C-V	A/C booster	gn	green
K1	Fan relay	GM	Fan motor	vi	violet
F1	20A fuse	F35	2-pin connector GM	ws	white
F2	30A fuse	HTR	40A fuse	br	brown
F3	1A fuse	A/C	7.5A fuse	bl	blue
F4	25A fuse			gr	grey
				X	Cutting point
Wiring colours may vary.					

Legend



Connection to 2-pin connector F35 from fan motor. Produce connections as shown in wiring diagram.

- 1 Blue (bl) wire to connector F35 Pin 2
- 2 Blue (bl) wire of fan relay
- ① Red (rt) wire to K1/87a
- ② Black (sw) wire from K1/30

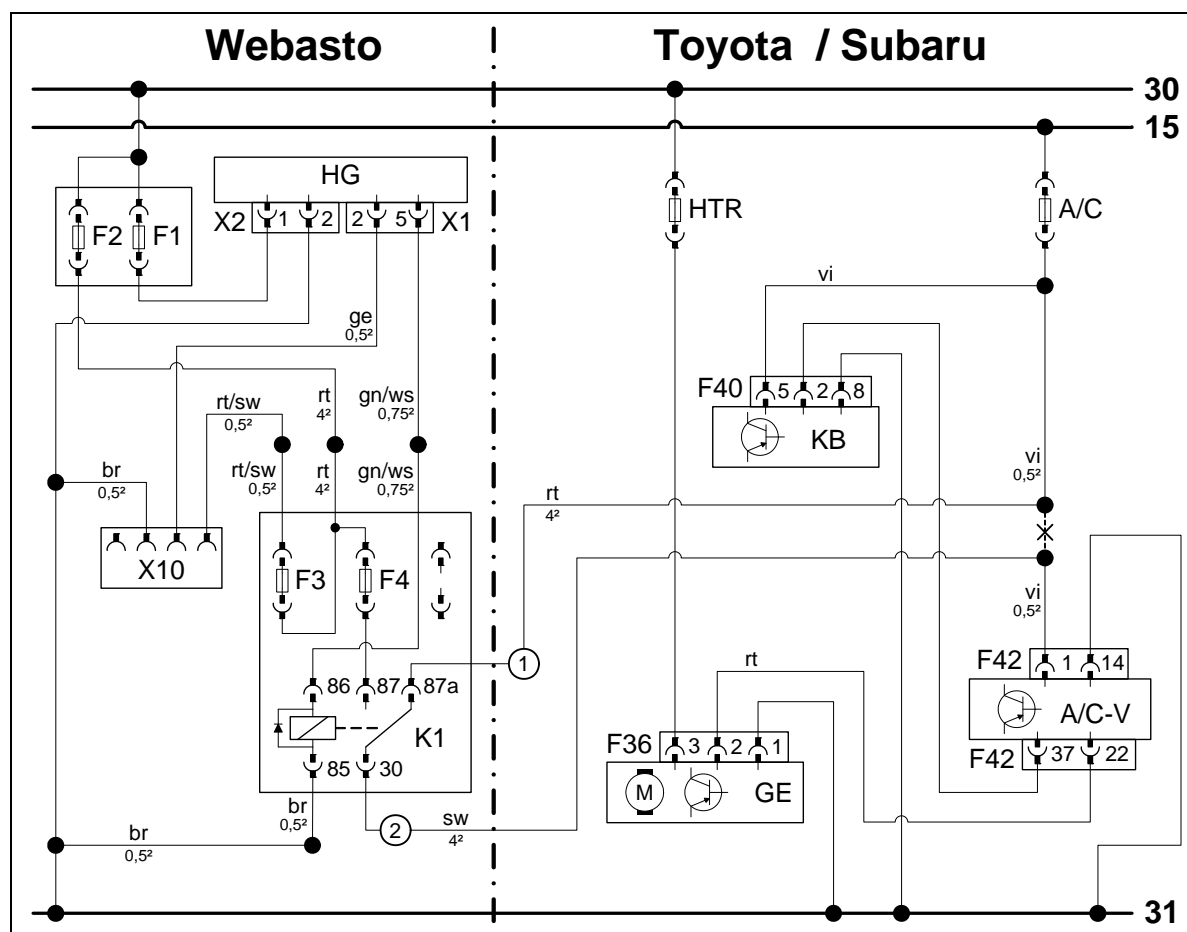
Connecting fan motor



Automatic air-conditioning fan control

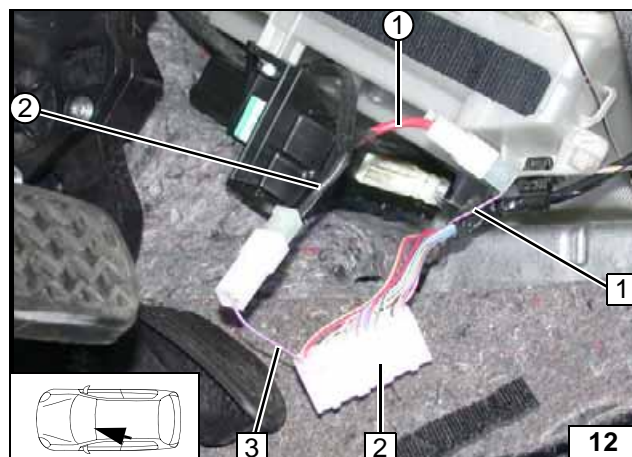


Wiring diagram



Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-Evo	GE	Fan unit	rt	red
X1	6-pin heater connector	KB	A/C control panel	sw	black
X2	2-pin heater connector	A/C-V	A/C booster	ge	yellow
X10	4-pin connector Heater control	F42	40-pin connector A/C V	gn	green
K1	Fan relay	HTR	40A fuse	vi	violet
F1	20A fuse	A/C	7.5A fuse	ws	white
F2	30A fuse			br	brown
F3	1A fuse			X	Cutting point
F4	7.5A fuse			Wiring colours may vary.	

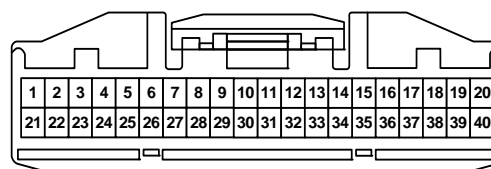
Legend



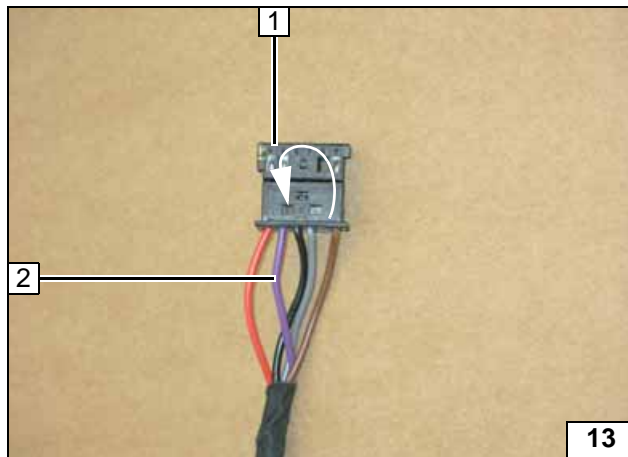
Connect to the 40-pin connector F42 2 of the A/C booster. Produce connections as shown in wiring diagram.

- 1 Violet (vi) wire of fuse A/C
- 3 Violet (vi) wire of connector F42 A/C booster pin 1
- ① Red (rt) wire to K1/87a
- ② Black (sw) wire from K1/30

View of F42 connector from contact side



Connecting the A/C booster



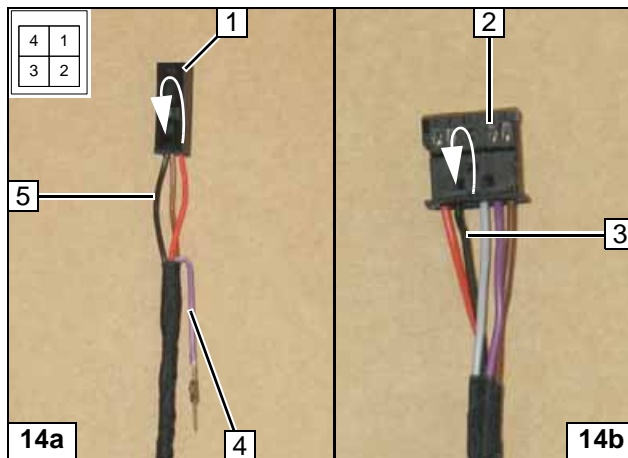
Combination heater controls

Only for Telestart "silver".
Observe provided installation instructions for Telestart "black".

Telestart T91 with and without push button.

Figure 13 (Y-adapter connector)

Detach violet (vi) wire 2 from 6-pin connector 1 pin 5 and insert it in pin 2



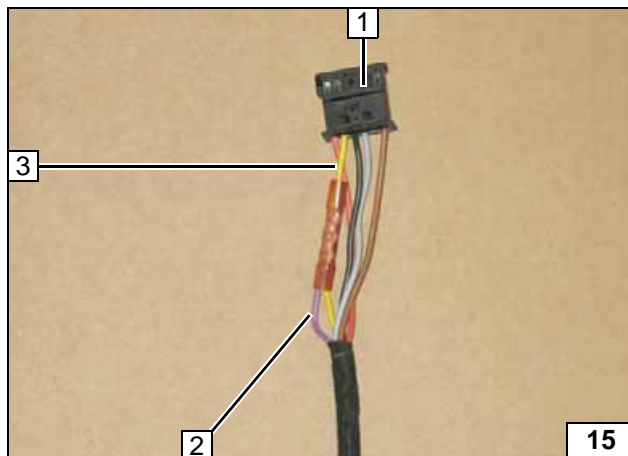
Digital timer and Telestart T91.

Figure 14a (Y-adapter coupling, wire-side view)

Detach violet (vi) wire 4 from 4-pin coupling 1 pin 1, insulate and tie back.
Detach black (sw) wire 5 from 4-pin coupling 1 pin 2, and insert it in pin 1.

Figure 14b (Y-adapter connector)

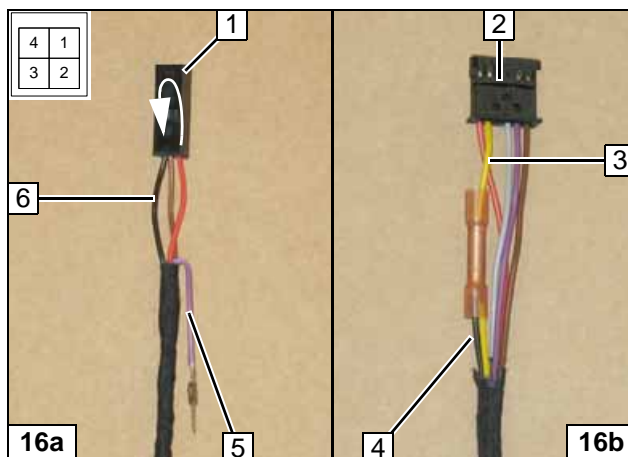
Detach black (sw) wire 3 from 6-pin connector 2 pin 3 and insert it in pin 2.



Telestart T100 HTM with and without push button.

Figure 15 (Y-adapter connector)

Detach violet (vi) wire 2 from 6-pin connector 1 Pin 5. Cut yellow (ge) wire 3 approx. 50mm before connector 1. Connect violet (vi) wire 2 and yellow (ge) wire 3 with connectors.



Digital timer and Telestart T100 HTM.

Figure 16a (Y-adapter coupling, wire-side view)

Detach violet (vi) wire 5 from 4-pin coupling 1 pin 1, insulate and tie back.
Detach black (sw) wire 6 from 4-pin coupling 1 pin 2, and insert it in pin 1.

Figure 16b (Y-adapter connector)

Detach black (sw) wire 4 from 6-pin connector 2 pin 3. Cut yellow (ge) wire 3 approx. 50mm before connector 2. Connect black (sw) wire 4 and yellow (ge) wire 3 with connectors.



Preparing connector



Preparing connector



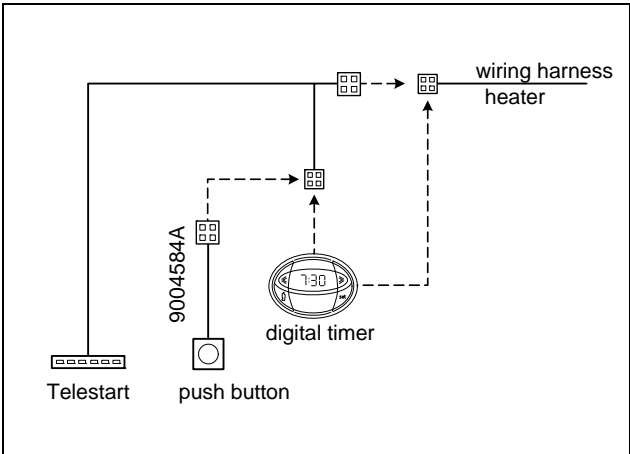
Preparing connector



Preparing connector



Heater controls diagram



Digital timer

1 Digital timer

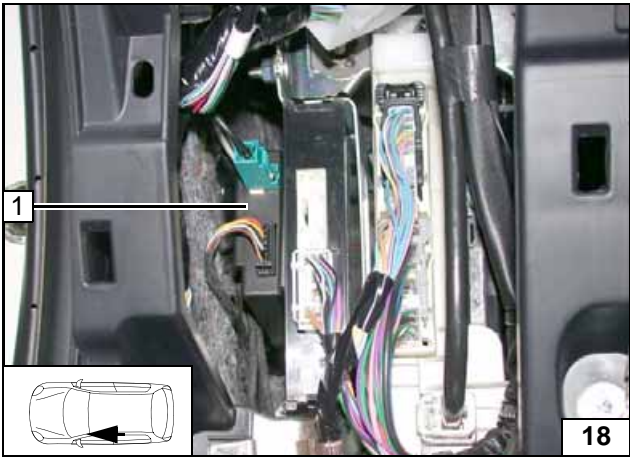


Mounting digital timer



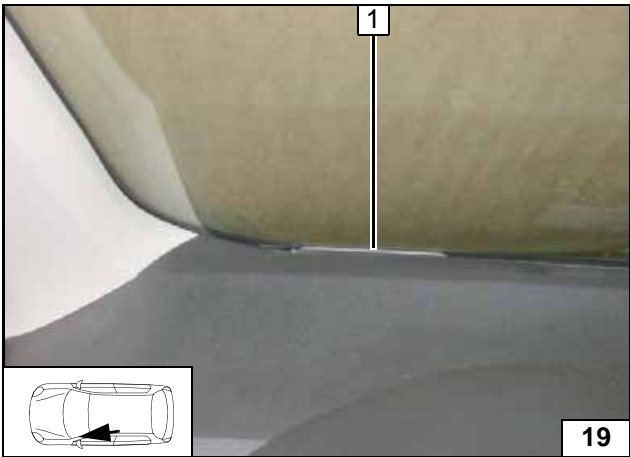
Remote option (Telestart)

Fasten receiver 1 with adhesive tape.

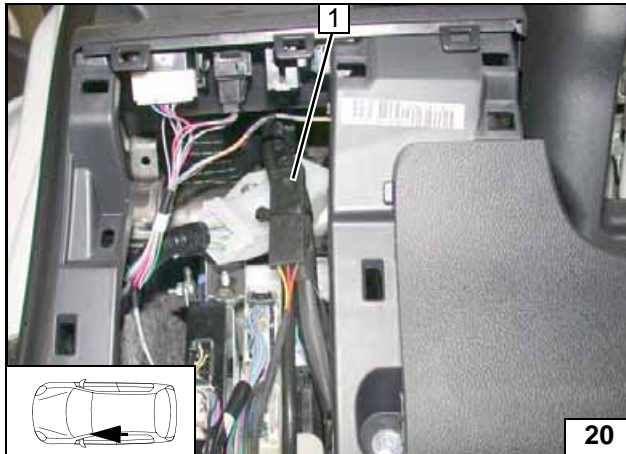


Mounting receiver

1 Antenna



Mounting antenna

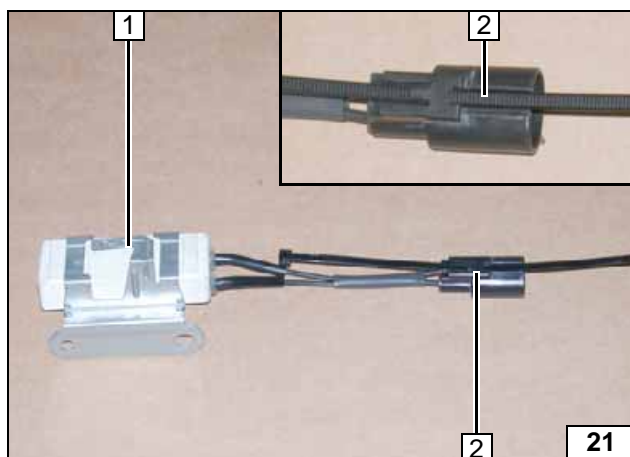


Temperature sensor T100 HTM

Fasten temperature sensor 1 with cable tie.



**Mounting
tempera-
ture sensor**

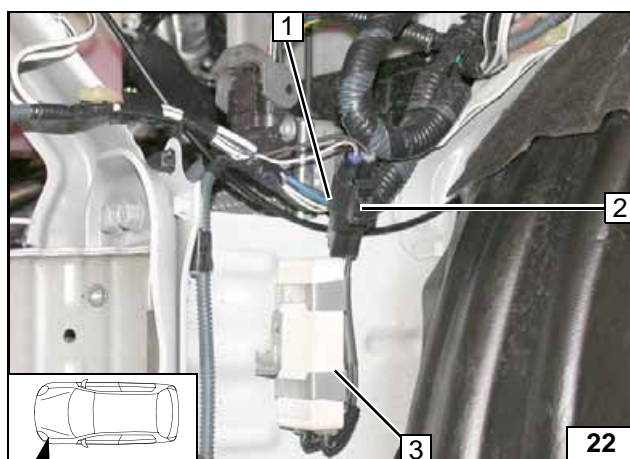


Preparing installation location

Resistor with bracket and connector 1 removed for better display.

2 Cable tie mounted on connector

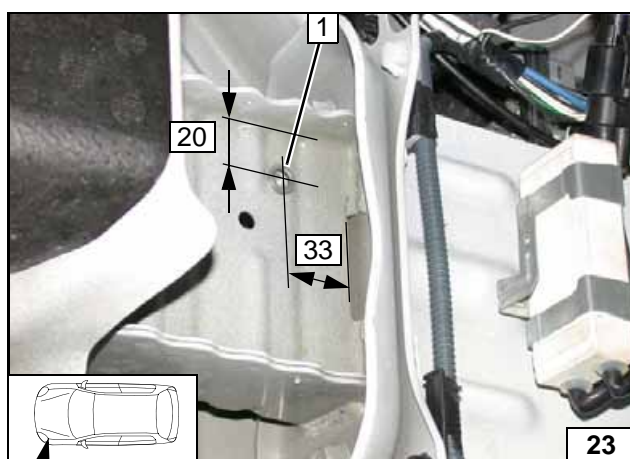
Preparing resistor



Fasten original vehicle connector 2 with cable tie to original vehicle wiring harness (close cable tie 1)

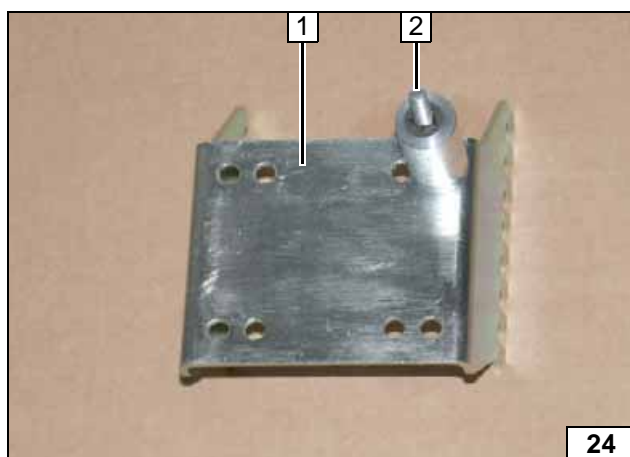
3 Resistor with bracket installed at same position

Mounting resistor



1 9.1 mm dia. hole; rivet nut

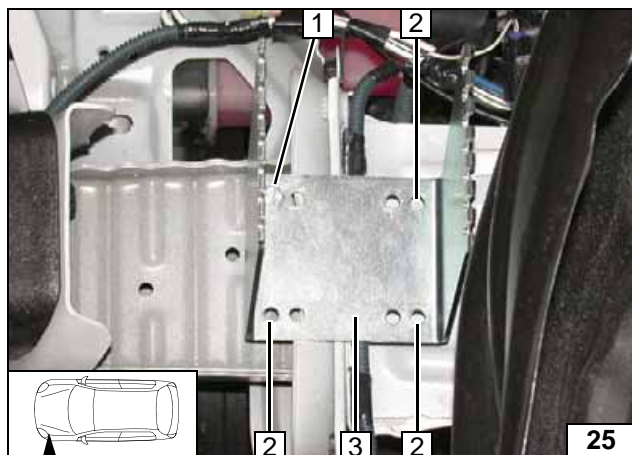
Installing rivet nut



1 Bracket

2 M6x60 bolt, spring lockwasher, 5 mm shim, 30 mm shim, washer, pin lock

Preparing bracket

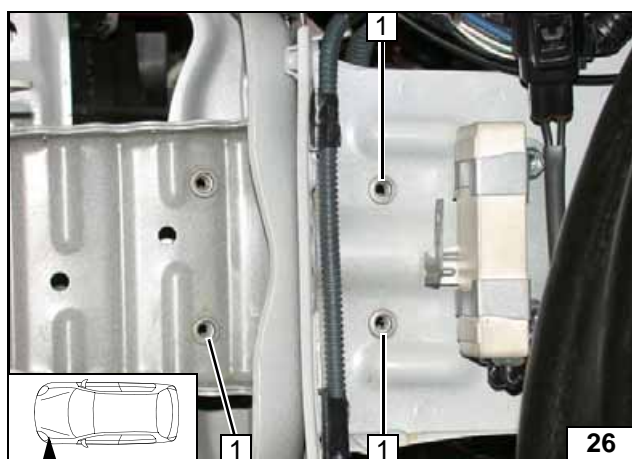


Align bracket **3** and mount loosely.

- 1** M6x60 bolt
- 2** Copy hole pattern [3x]



**Copying
hole pat-
tern**

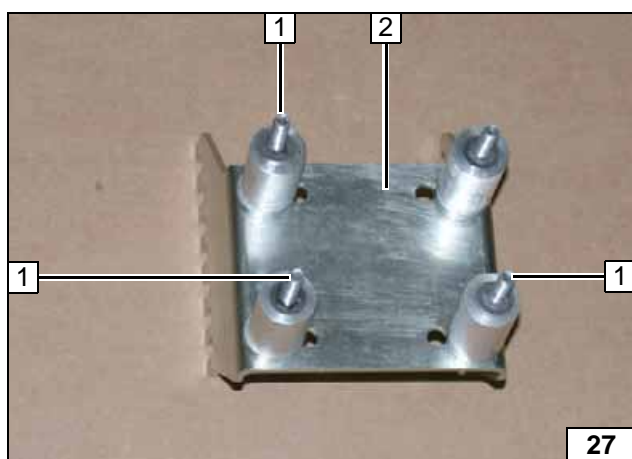


Remove the bracket.

- 1** 9.1 mm dia. hole; rivet nut [3x each]

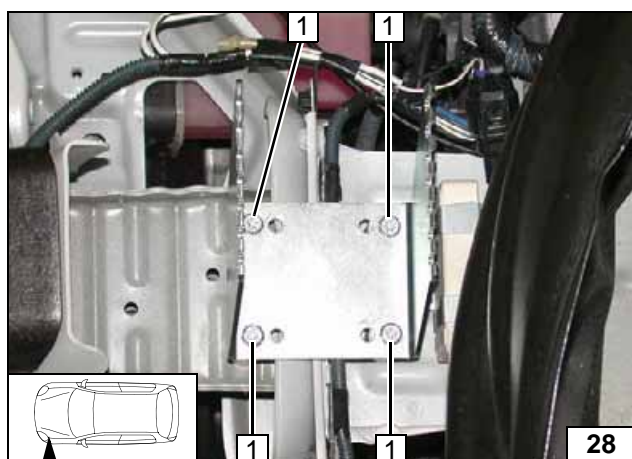


**Installing
rivet nut**



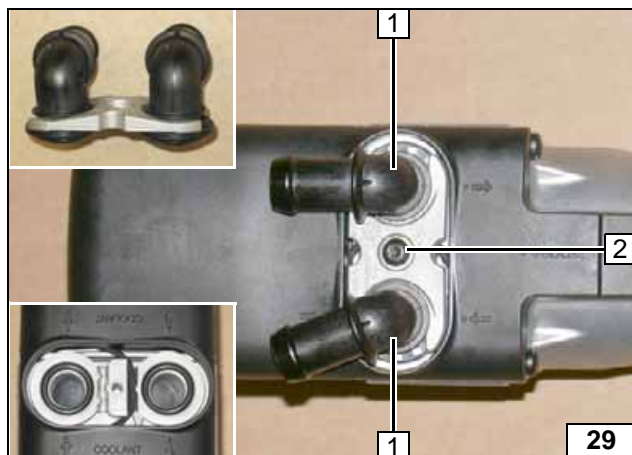
- 1** Bracket
- 2** M6x60 bolt, spring lockwasher, 5 mm shim, 30 mm shim, washer, pin lock [3x each]

**Preparing
bracket**



- 1** Tighten M6x60 bolt [4x]

**Mounting
bracket**

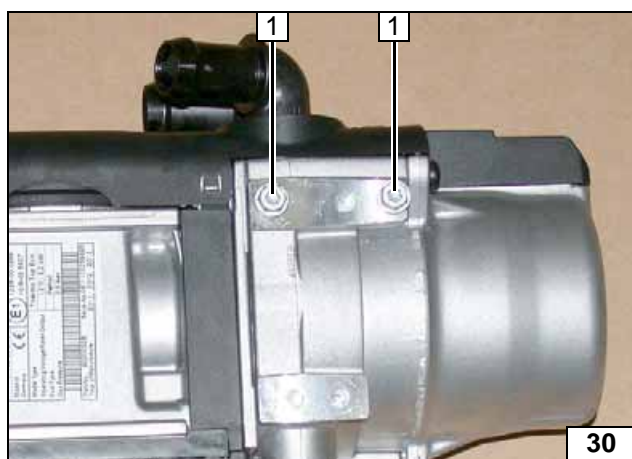


Preparing heater

- 1 Water connection piece, sealing ring [2x each]
- 2 5x15 self-tapping bolt, retaining plate of water connection piece



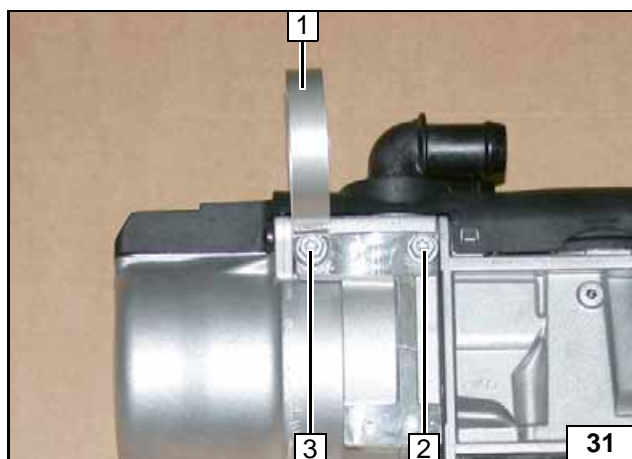
Mounting water connection piece



Tap threads with 5x13 self-tapping screw 1 [2x] and mount loosely (turn max. 3 threads).



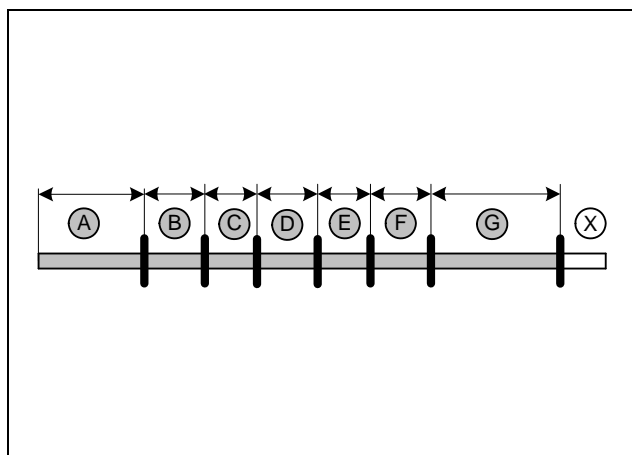
Premounting bolt loosely



Tap threads with 5x13 self-tapping screw 2 [2x] and 3 and mount loosely (turn max. 3 threads). Loosely mount 51 mm dia. clamp at position 3.



Premounting bolt loosely



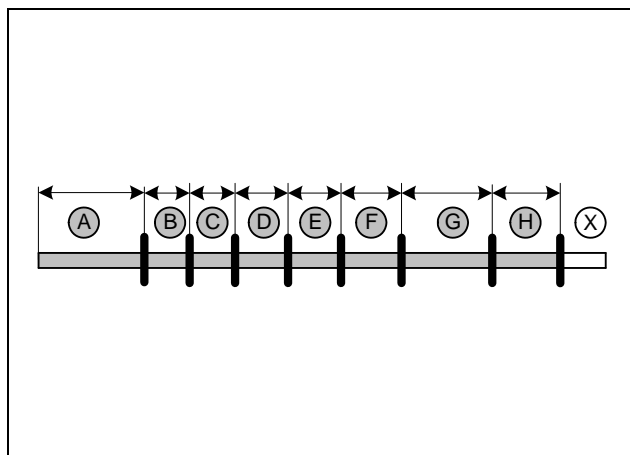
Petrol

Discard section X.

- A = 500
- B = 60
- C = 65
- D = 110
- E = 80
- F = 150
- G = 510



Cutting hoses to length

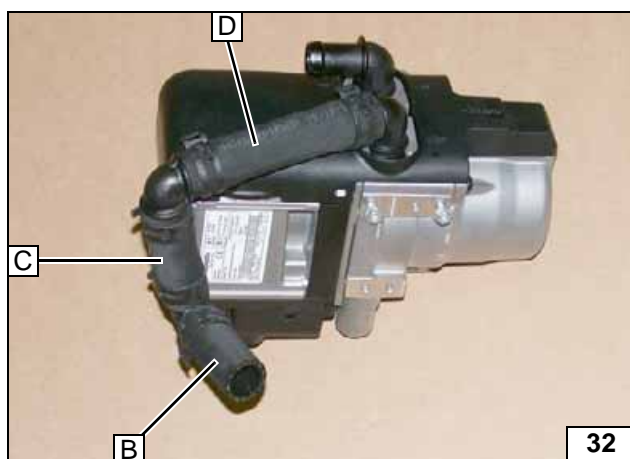


Diesel

Discard section X.

A =	520
B =	60
C =	65
D =	110
E =	80
F =	150
G =	320
H =	260

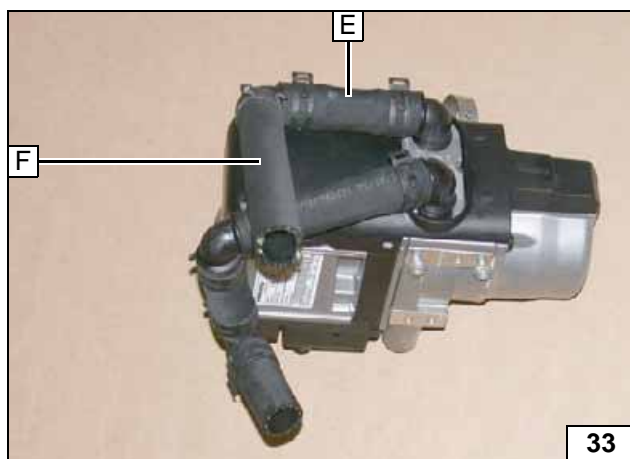
Cutting hoses to length



All vehicles

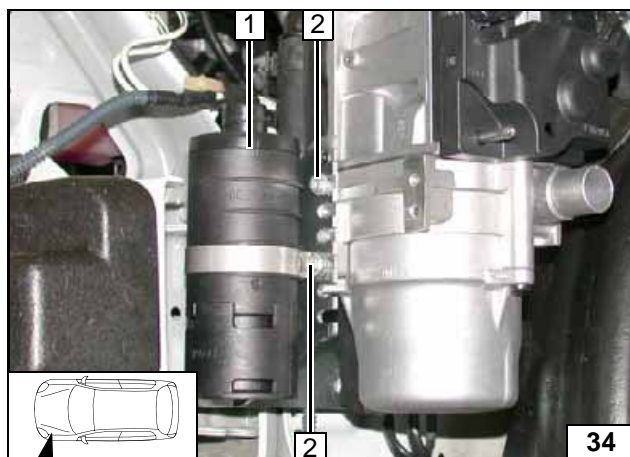
All spring clips 25 mm dia.. All connecting pipes 90°, 18x18 mm dia.

Premounting hoses of heater inlet



All spring clips 25 mm dia. Connecting pipe 90°, 18x18 mm dia.

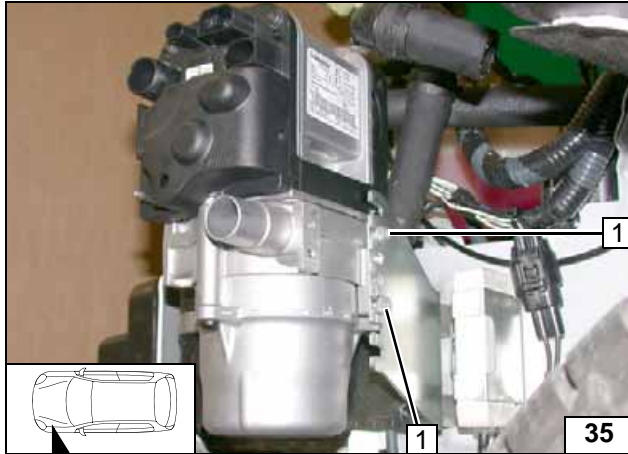
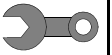
Premounting hoses of heater outlet



Installing heater

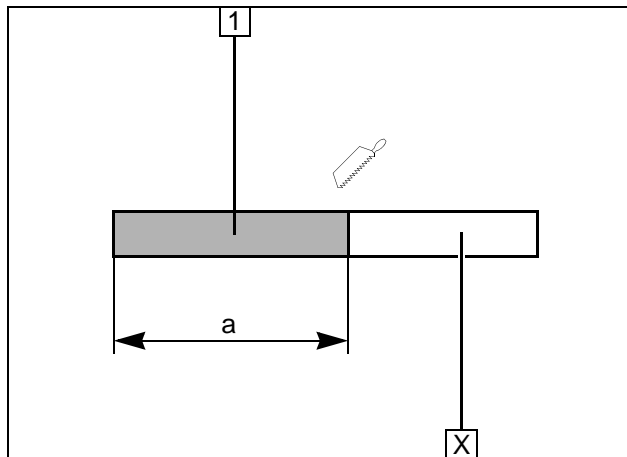
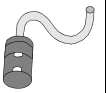
- 1 Combustion air silencer
- 2 Tighten 5x13 self-tapping bolt [2x]

Mounting heater



1 Tighten 5x13 self-tapping bolt [2x]

Mounting
heater



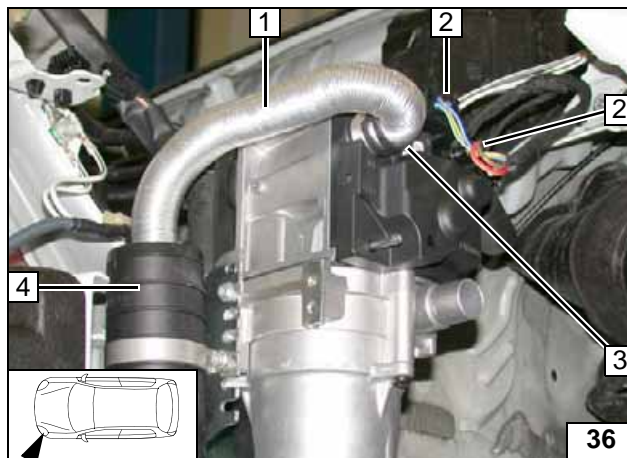
Combustion air

Discard section X.

- 1 Combustion air pipe
a = 270



Cutting combustion air pipe to length



- 1 Combustion air pipe
2 Mount wiring harness of heater [2x]
3 25 mm dia. clamp
4 Silencer

Mounting combustion air pipe



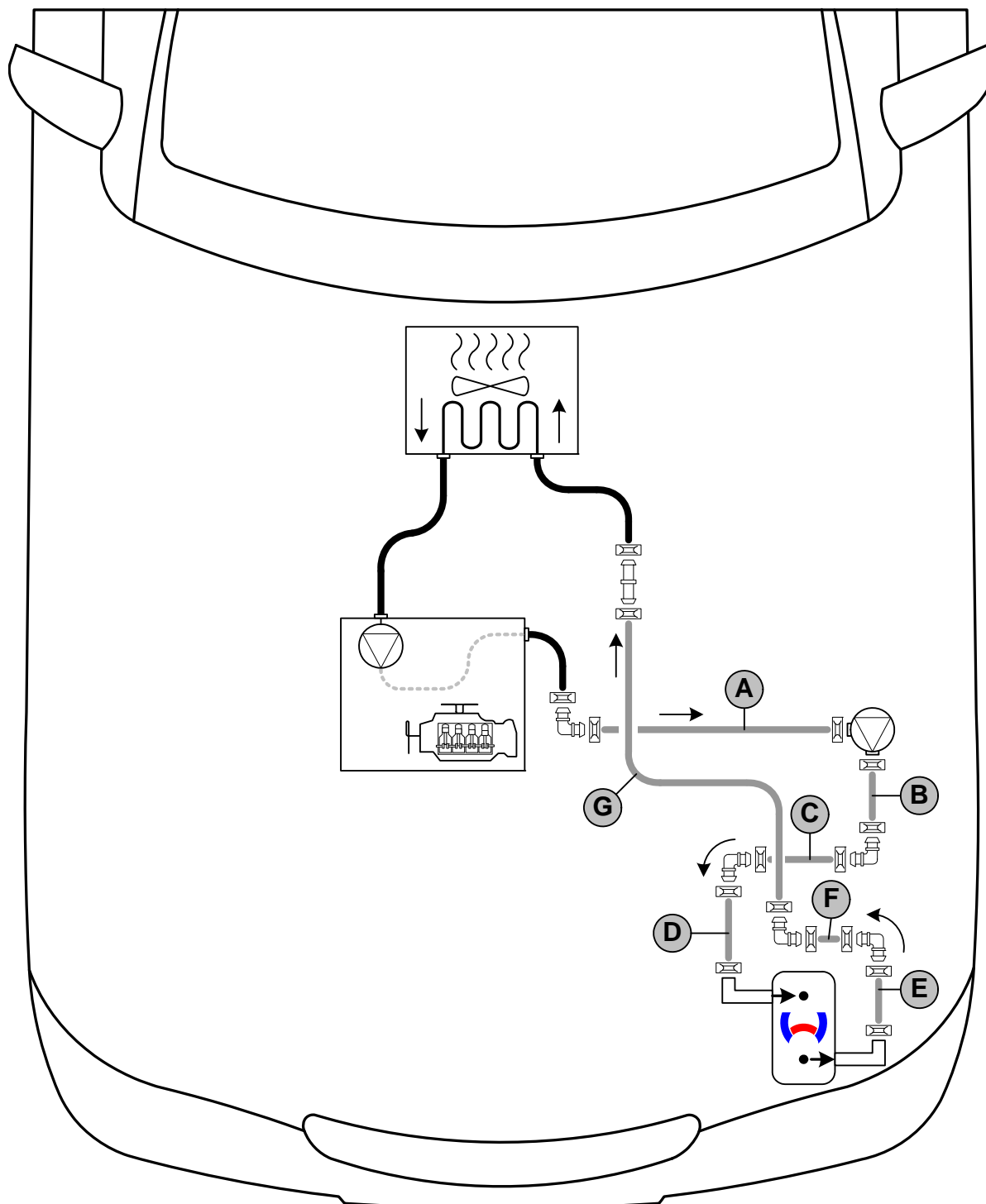
Coolant circuit petrol


WARNING!



Any coolant running off should be collected using an appropriate container. Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses. The connection should be "inline" based on the following diagram:



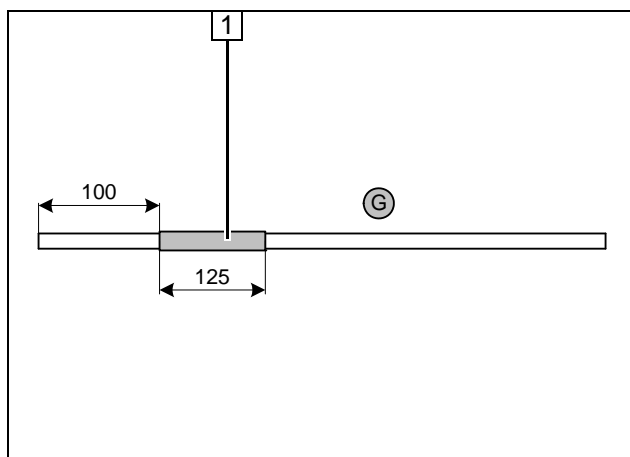
Hose routing diagram



All spring clips  = 25 mm dia.

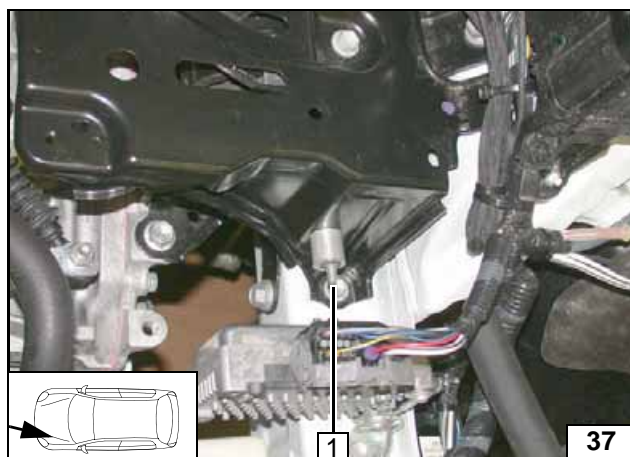
All connecting pipes  and  = 18 mm dia. x18.





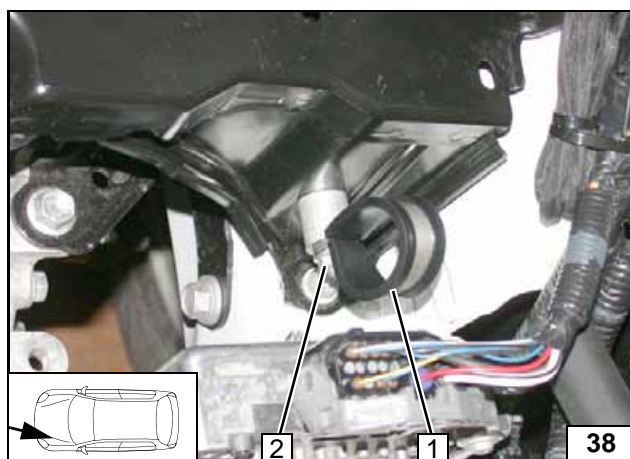
1 Heat shrink plastic tubing

Preparing
hose G



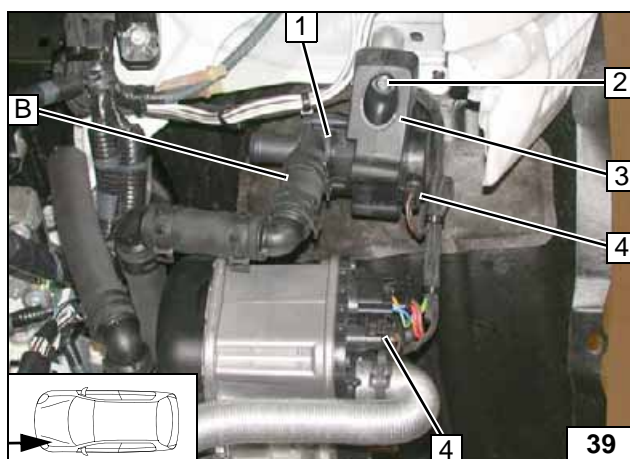
1 M6x40 bolt, large diameter washer, 20 mm shim, pin lock, existing hole

Installing
bolt



1 38 mm dia. rubber-coated p-clamp
2 Flanged nut

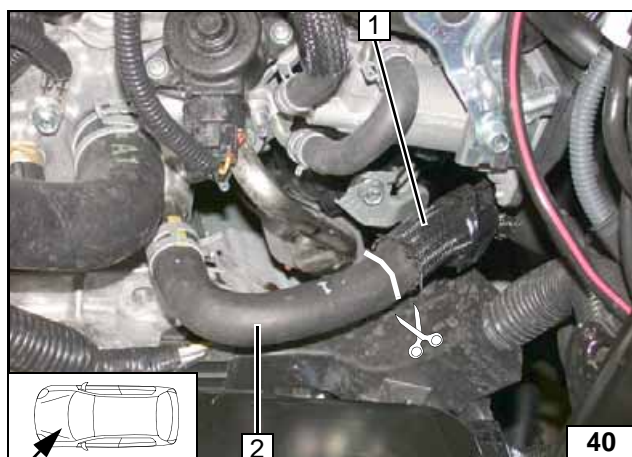
Mounting
rubber-
coated p-
clamp



Remove original vehicle bolt at position 2 and discard.

1 Circulating pump
2 M6x60 bolt, 30 mm shim, existing threaded hole
3 Circulating pump mounting
4 Mount wiring harness of circulating pump

Mounting
and con-
necting cir-
culating
pump



Cut the engine outlet hose / heat exchanger inlet at the marking. Turn hose section of engine outlet **2** at connection piece of engine outlet by approx. 180 ° in the forward direction.

1 Hose section of heat exchanger inlet

Cutting point

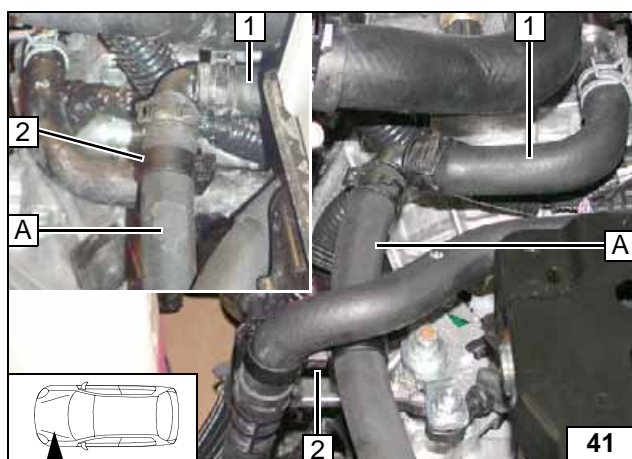
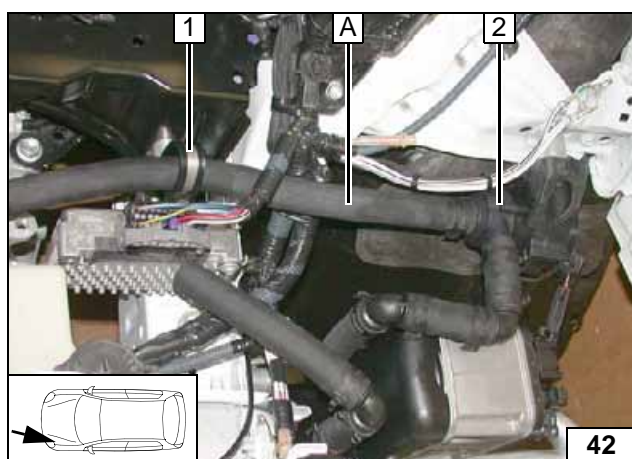


Figure shows CVT transmission In the manual transmission (see small figure) hose **A** runs above the cross-running original vehicle hose.

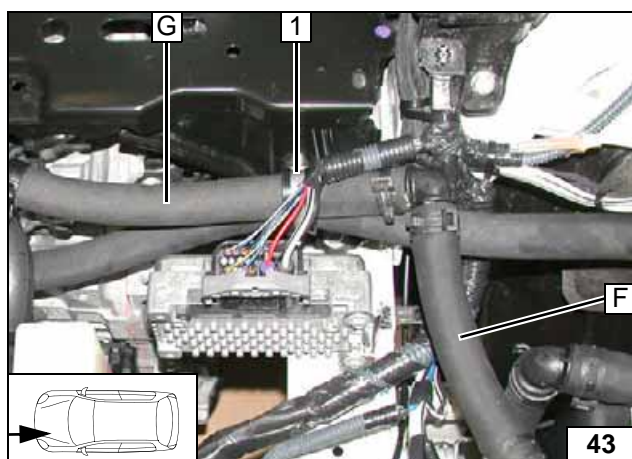
1 Hose of engine outlet turned
2 25x25 mm hose bracket is lockable

**Connect-
ing engine
outlet**



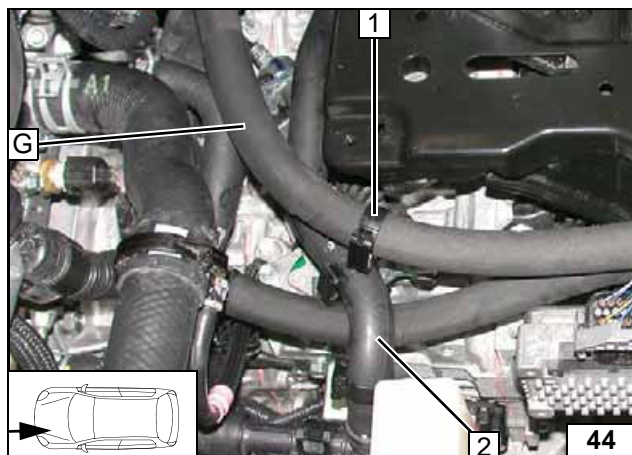
1 Rubber-coated p-clamp
2 Circulating pump

**Connect-
ing circu-
lating
pump**



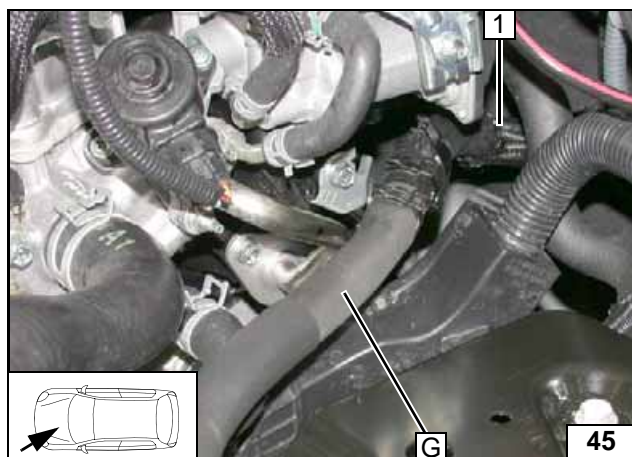
1 Rubber-coated p-clamp

**Routing in
engine
compartment**



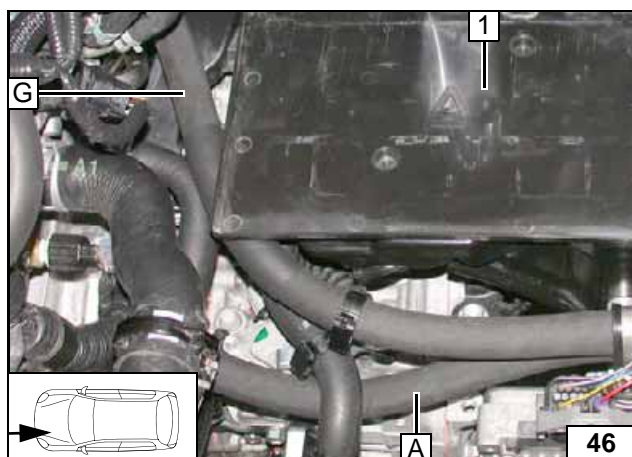
- 1 25x25 mm hose bracket is lockable
- 2 Original vehicle hose

Routing in engine compartment



- 1 Hose on heat exchanger inlet

Connecting heat exchanger inlet



Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.

- 1 Battery support

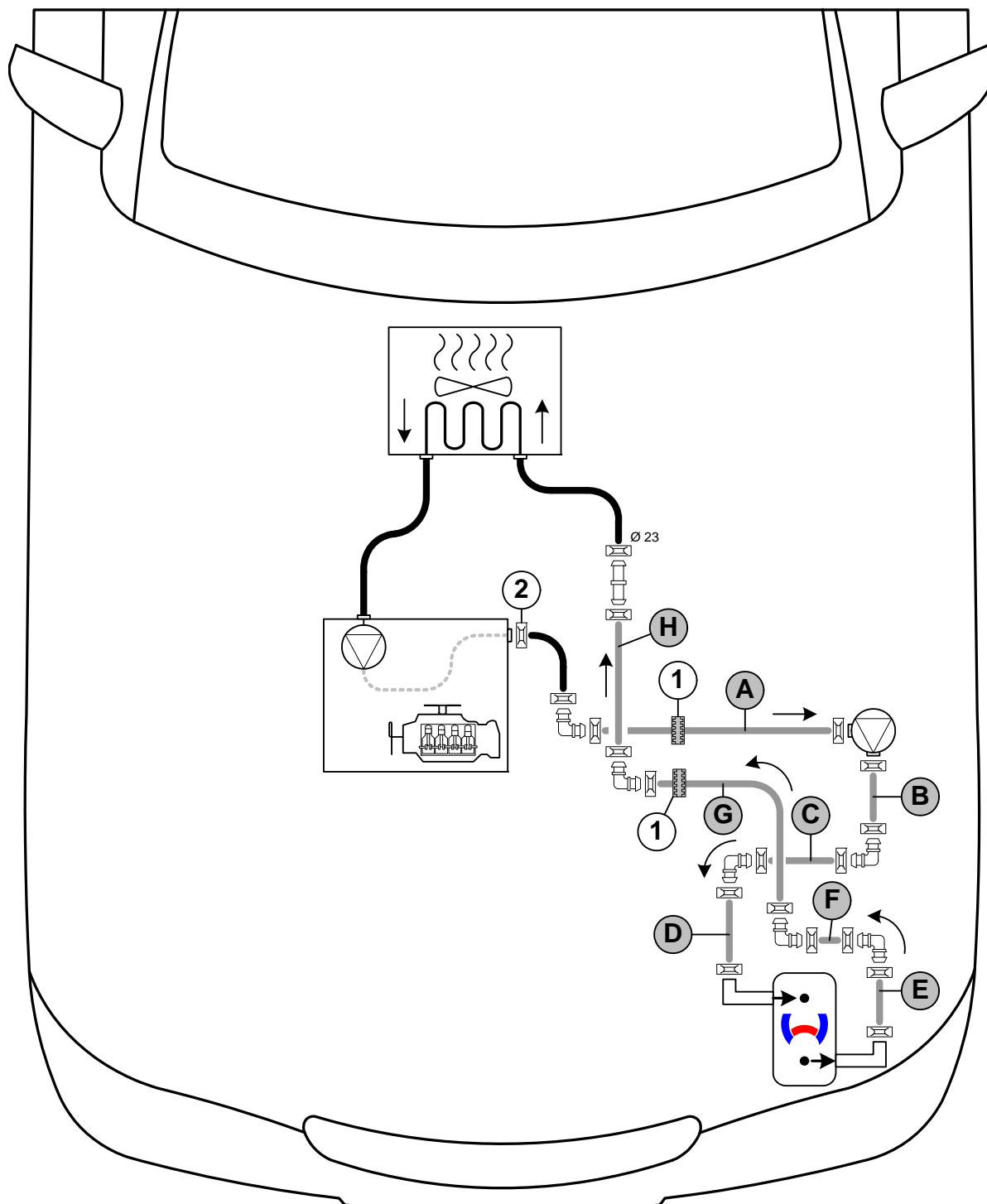
Installing battery support








Coolant circuit, diesel

WARNING!

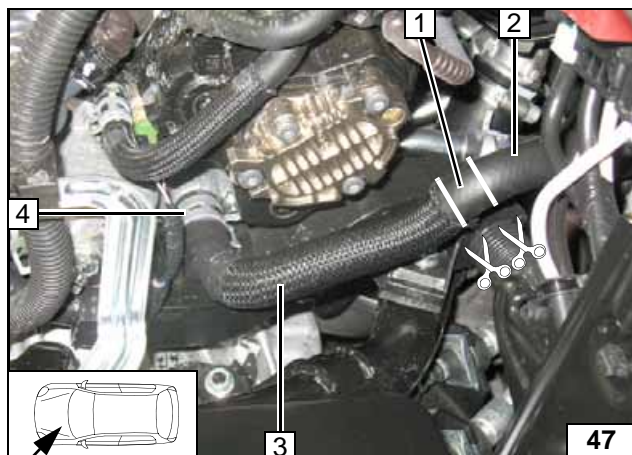
Any coolant running off should be collected using an appropriate container. Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses. The connection should be "inline" based on the following diagram:



Hose routing diagram

All spring clips without a specific designation  = 25 mm dia. **2** = Original vehicle spring clip .
1 = Black (sw) rubber isolator . Connecting pipe  = 16x18 dia. All connecting pipes  = 18x18mm dia.

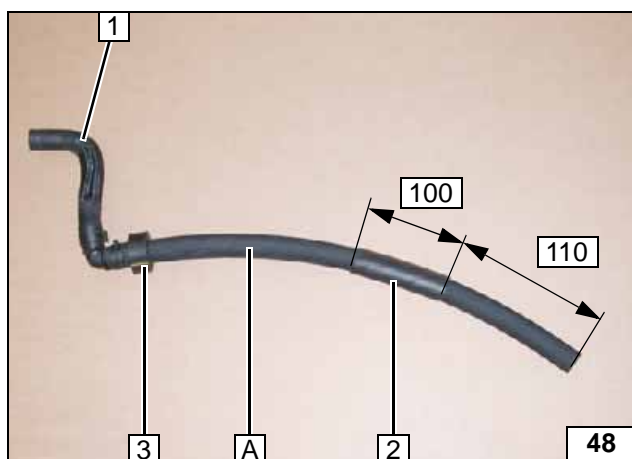




Cut the engine outlet / heat exchanger inlet hose at the marking. Remove engine outlet hose section 3. Hose section 3 and spring clip 4 will be reused.

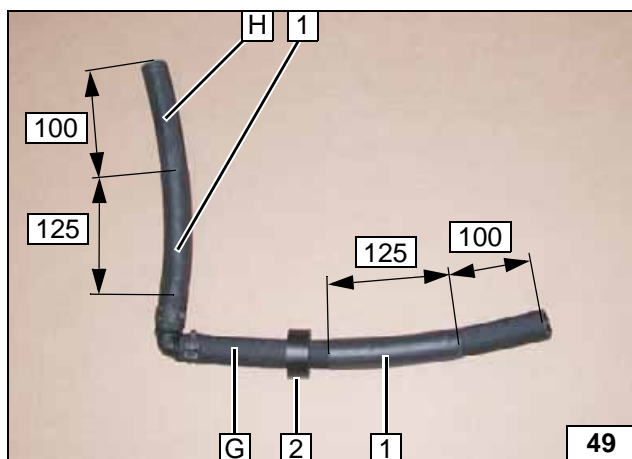
- 1 Discard section
- 2 Hose section of heat exchanger inlet

Cutting point



- 1 Hose of engine outlet
- 2 Heat shrink plastic tubing
- 3 Black (sw) rubber isolator

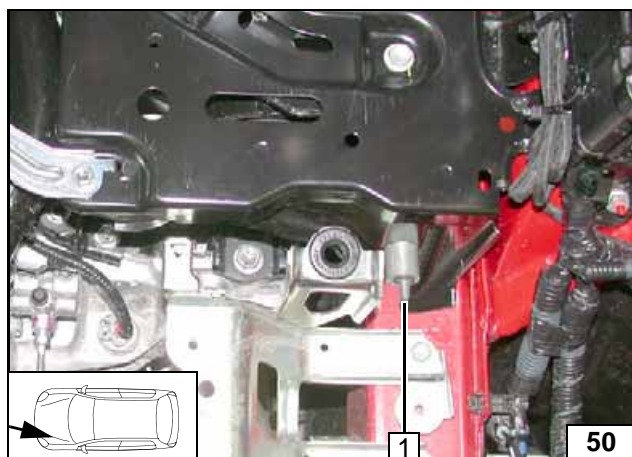
Preparing hose A



Split 250 mm heat shrink plastic tubing at centre.

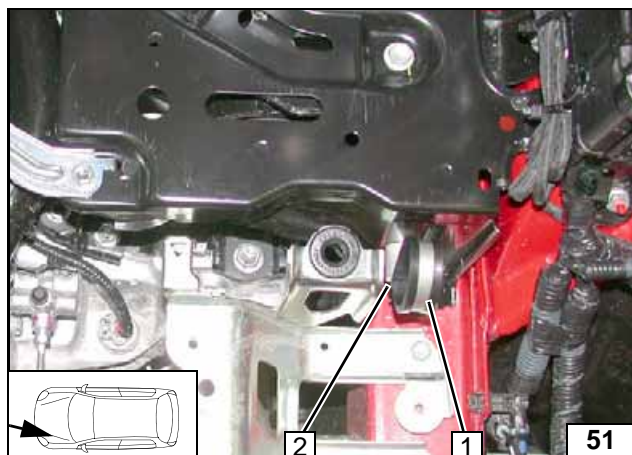
- 1 Heat shrink plastic tubing [2x]
- 2 Black (sw) rubber isolator

Preparing hose G and H



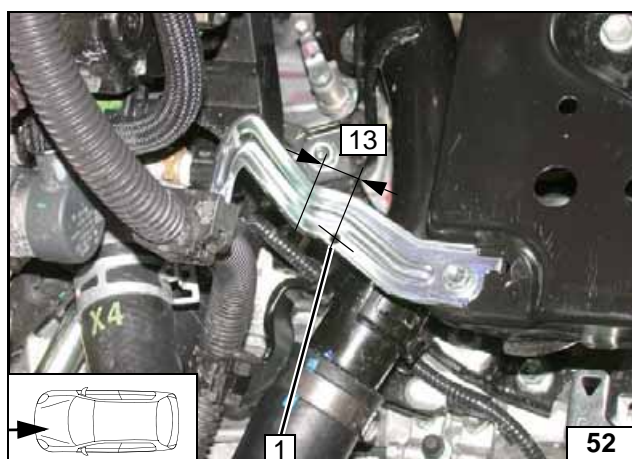
- 1 M6x40 bolt, large diameter washer, 20 mm shim, pin lock, existing hole

Installing bolt



- 1 38 mm dia. rubber-coated p-clamp
- 2 Flanged nut

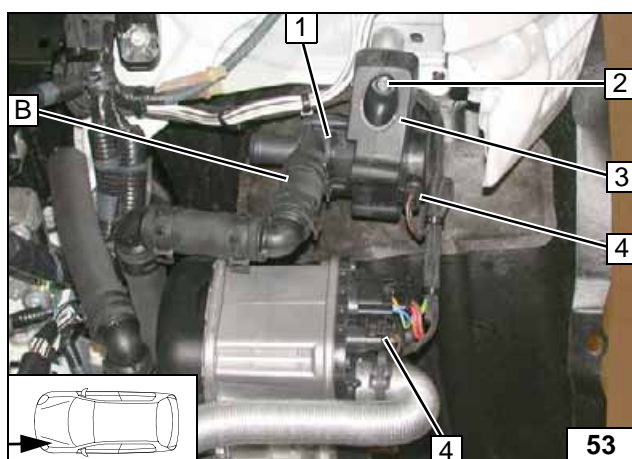
**Mounting
rubber-
coated p-
clamp**



When drilling, be careful of components located behind.

- 1 5 mm dia. hole

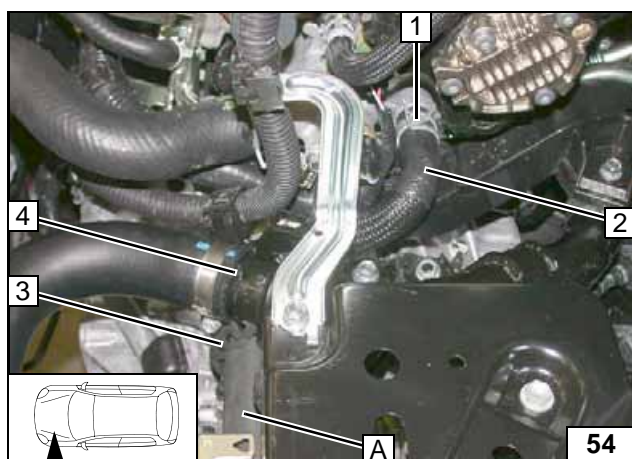
**Hole for
mounting
hose H**



Remove original vehicle bolt at position 2 and discard.

- 1 Circulating pump
- 2 M6x60 bolt, 30 mm shim, existing threaded hole
- 3 Circulating pump mounting
- 4 Mount wiring harness of circulating pump

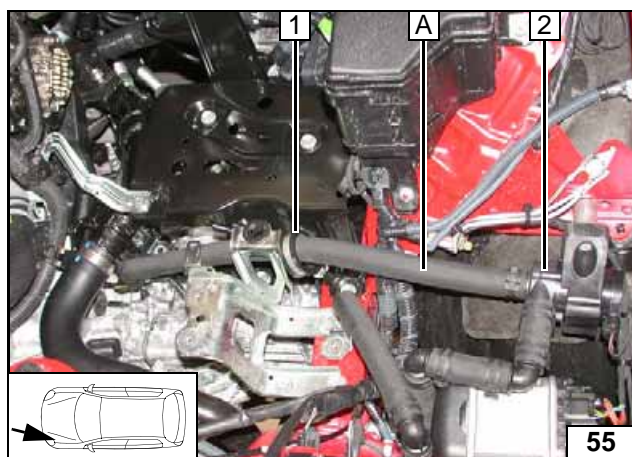
**Mounting
and con-
necting cir-
culating
pump**



Fasten black (sw) rubber isolator 3 with cable tie 4 on charge-air tube.

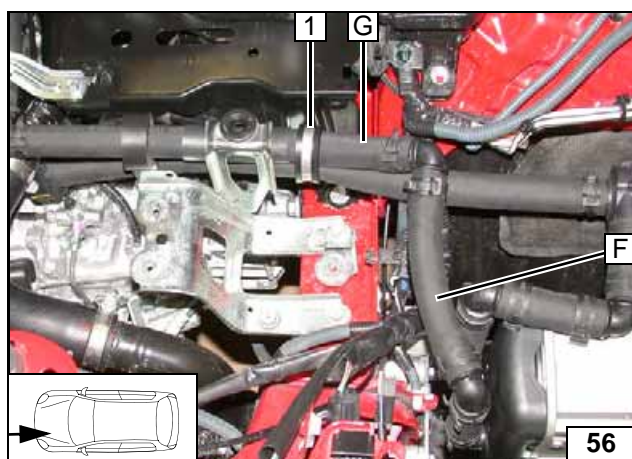
- 1 Original vehicle spring clip
- 2 Hose of engine outlet

**Connect-
ing engine
outlet**



- 1 Rubber-coated p-clamp
- 2 Circulating pump

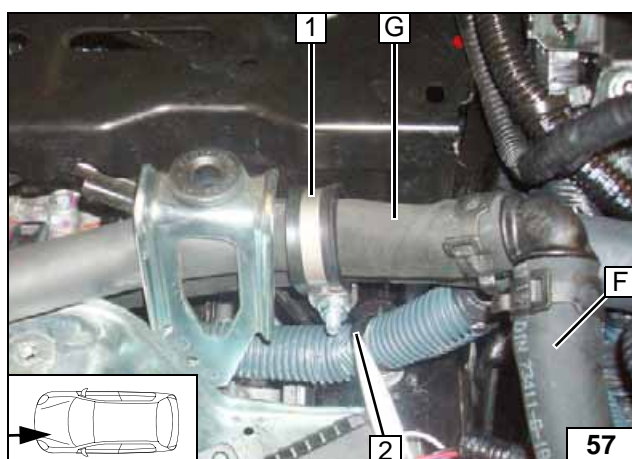
Connect-
ing circu-
lating
pump



Vehicle with manual transmission

- 1 Rubber-coated p-clamp

Routing in
engine
compart-
ment

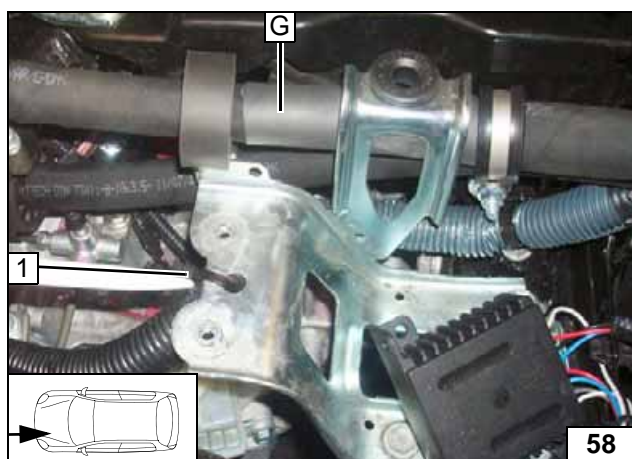


Vehicle with MMT transmission

Detach retaining clip 2 from original vehicle wiring harness.

- 1 Rubber-coated p-clamp

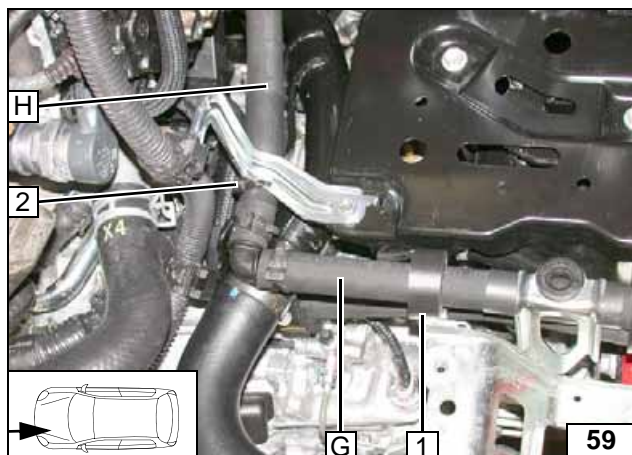
Routing in
engine
compart-
ment



Fasten original vehicle wiring harness with cable tie.

- 1 Cable tie, existing hole

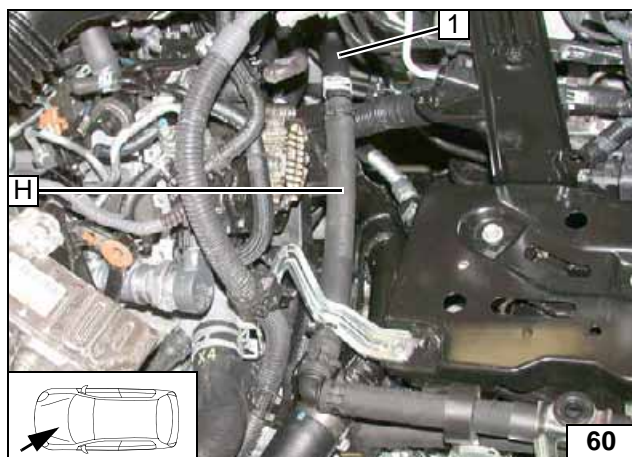
Fastening
wiring har-
ness



All vehicles

- 1 Align black (sw) rubber isolator
- 2 Cable tie in prepared hole

Routing in engine compartment



- 1 Hose on heat exchanger inlet

Connecting heat exchanger inlet



Fuel

CAUTION!

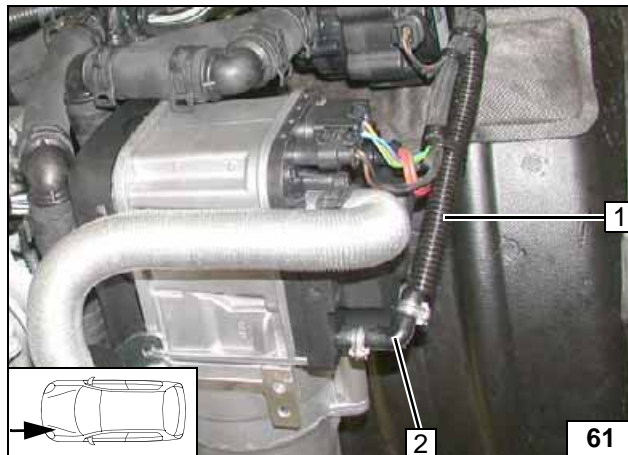
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

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.

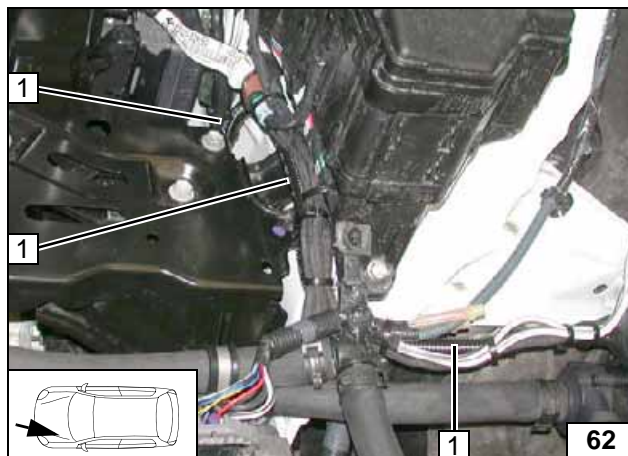
WARNING!

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



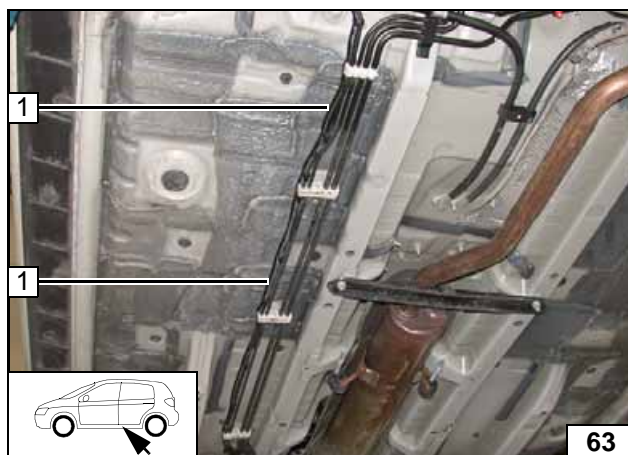
- 1 Fuel line and wiring harness of metering pump in corrugated tube
- 2 90° moulded hose, 10 mm dia. clamp [2x]

Connect-
ing heater



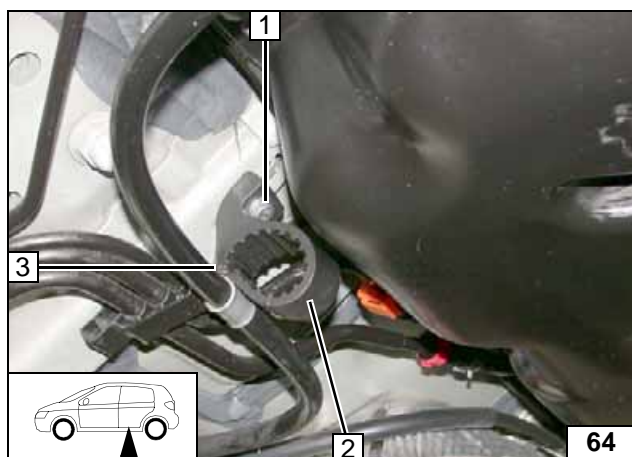
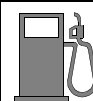
- 1 Fuel line and wiring harness of metering pump in corrugated tube

Routing
lines



- 1 Fuel line and wiring harness of metering pump in corrugated tube

Routing
lines



Remove original vehicle bolt at position 1 and discard.

- 1 M6x25 bolt
- 2 Metering pump mounting
- 3 Cable tie on brake line bracket



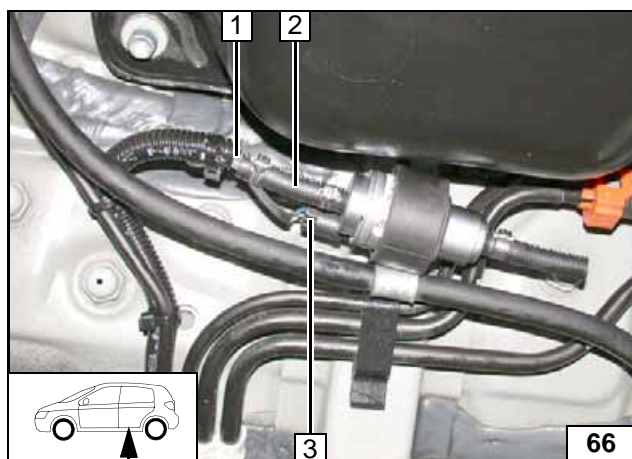
**Installing
metering
pump
mounting**



- 1 Metering pump

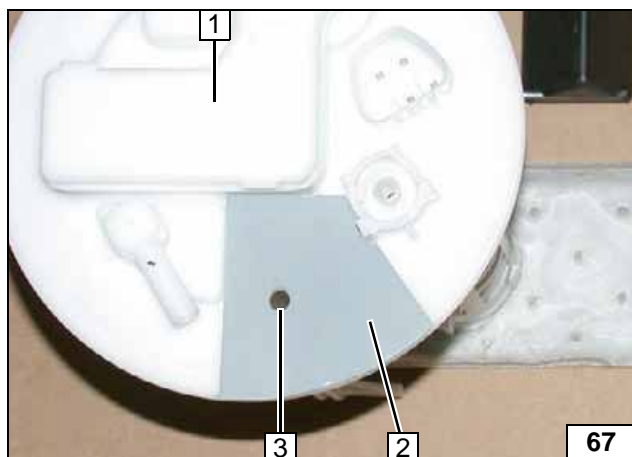


**Mounting
metering
pump**



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

**Connect-
ing meter-
ing pump**



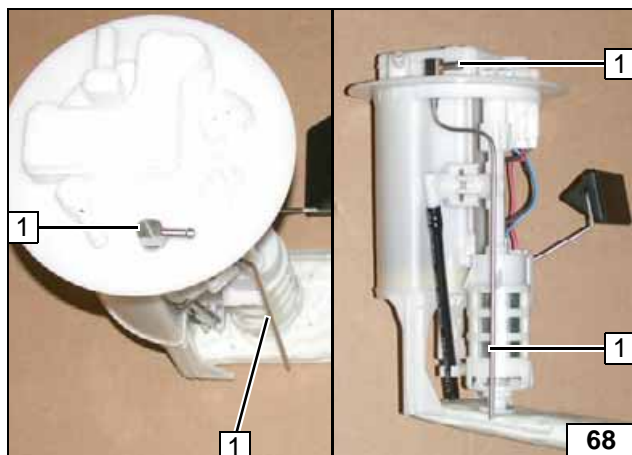
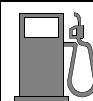
Petrol

Remove fuel-tank sending unit 1 in accordance with manufacturer's instructions. Cut out template 2 and place as shown.

- 3 Copy hole pattern, 6 mm dia. hole



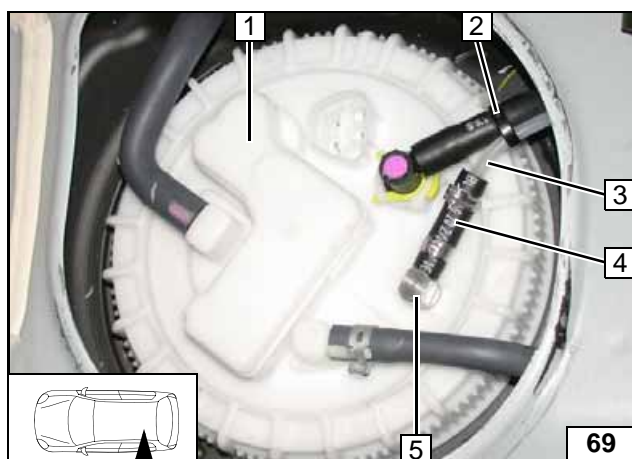
**Fuel ex-
traction**



Shape fuel standpipe 1 according to template, cut to length and install.



Installing fuel standpipe

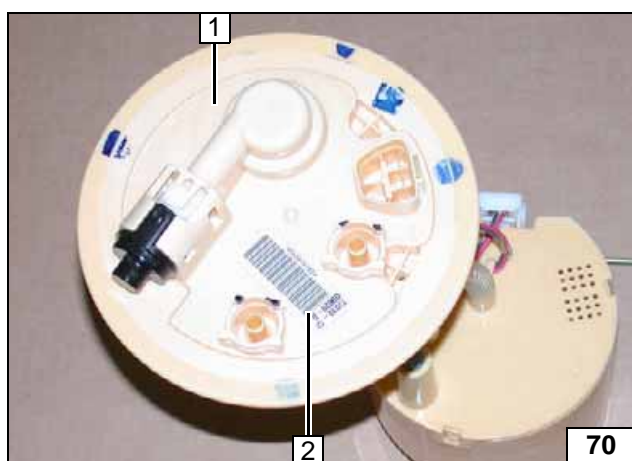


Install fuel-tank sending unit 1 in accordance with manufacturer's instructions. Slide corrugated tube onto fuel line 3.



Connecting fuel line

- 2 Cable tie
- 4 Moulded hose, 10 mm dia. clamp [2x]
- 5 Fuel standpipe



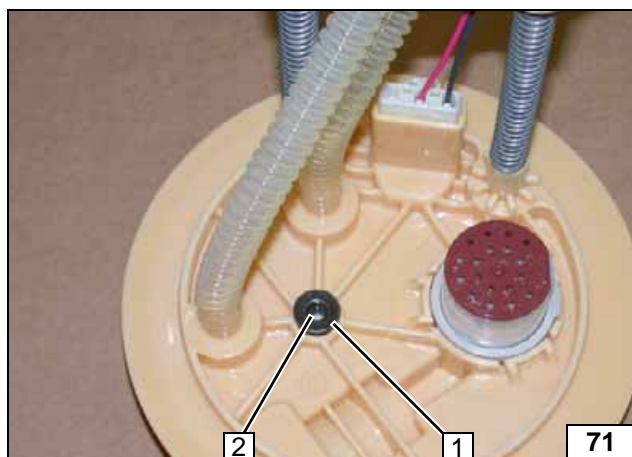
Diesel

Remove fuel-tank sending unit 1 in accordance with manufacturer's instructions.

- 2 Remove sticker



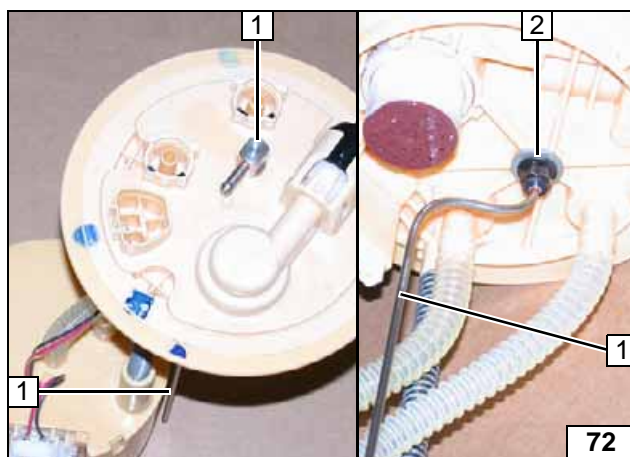
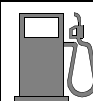
Fuel extraction



- 1 Place flanged nut of fuel standpipe (with collar facing upwards)
- 2 Copy hole pattern, 6 mm dia. hole



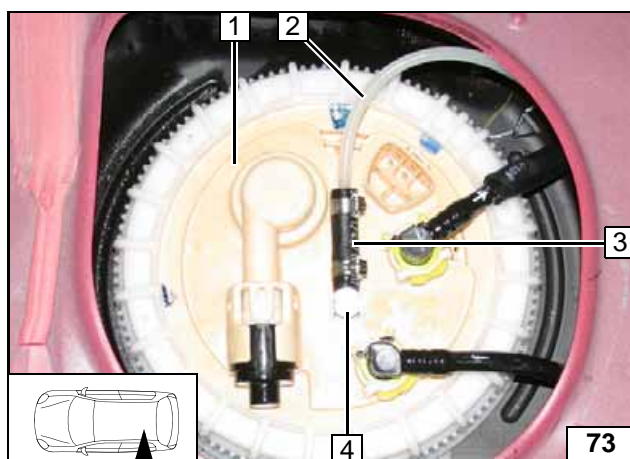
Copying hole pattern



Shape fuel standpipe **1** according to template, cut to length and install. Insert large diameter washer, $d_a = 17.6$ mm dia. **2** from below.

2 Large diameter washer, flanged nut

Installing fuel standpipe

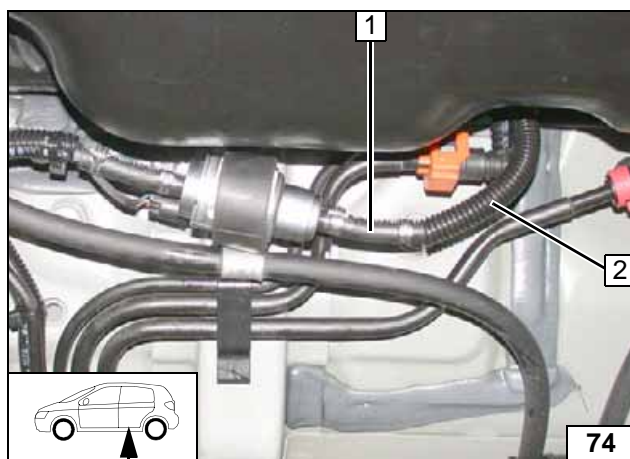


Install fuel-tank sending unit **1** in accordance with manufacturer's instructions. Slide corrugated tube onto fuel line **2**.

3 Moulded hose, 10 mm dia. clamp [2x]

4 Fuel standpipe

Connecting fuel line



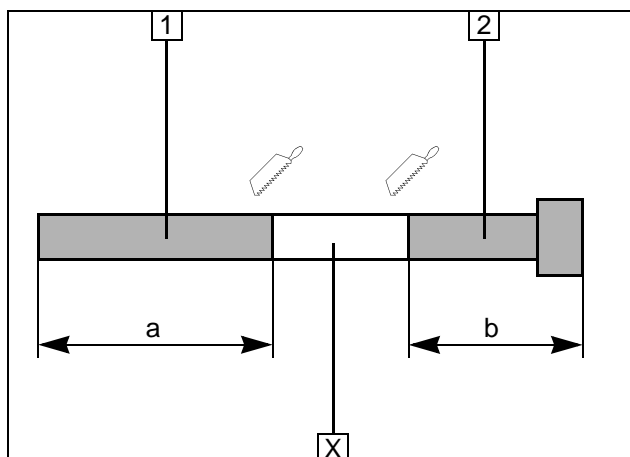
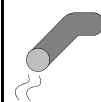
All vehicles

Check the position of the components; adjust if necessary. Check that they have freedom of movement.

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

2 Fuel line of fuel standpipe in corrugated tube

Connecting metering pump

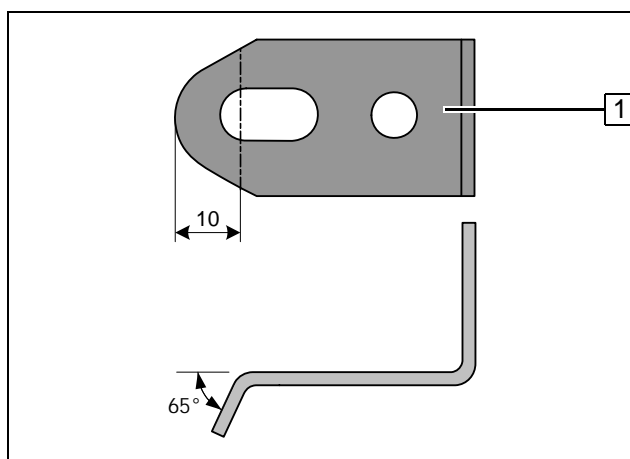


Exhaust gas

Discard section X.

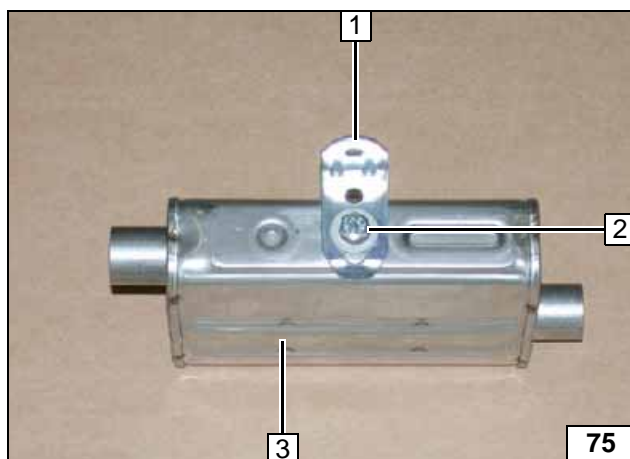
- 1 Exhaust pipe
a = 330
- 2 Exhaust end section petrol
b = 200
Exhaust end section diesel
b = 230

Preparing
exhaust
pipe



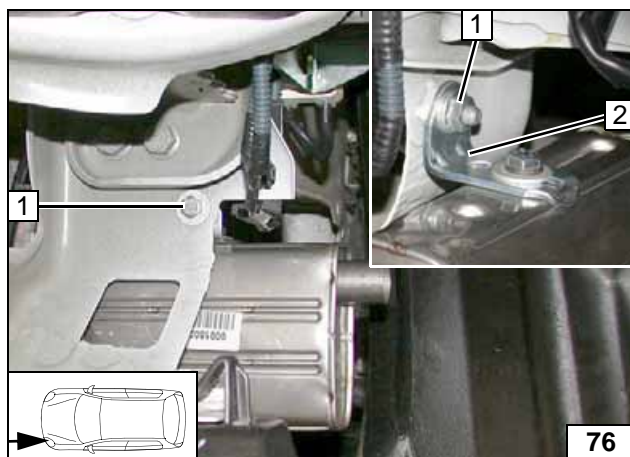
- 1 Angle bracket

Bending
angle
bracket



- 1 Angle bracket
- 2 M6x16 bolt, spring lockwasher, large diameter washer
- 3 Silencer

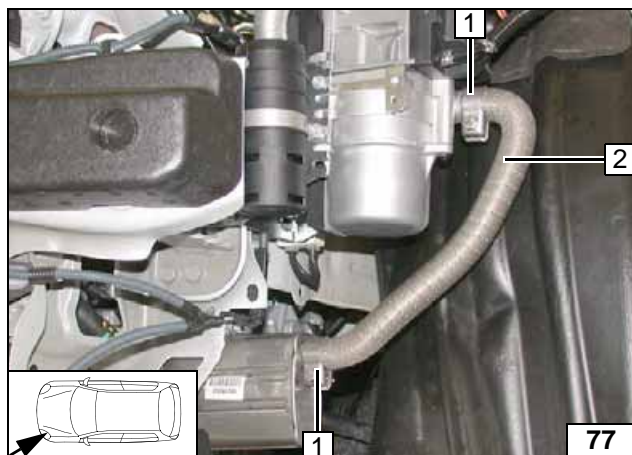
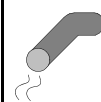
Premount-
ing silenc-
er



Remove original vehicle bolt at position 1 and discard.

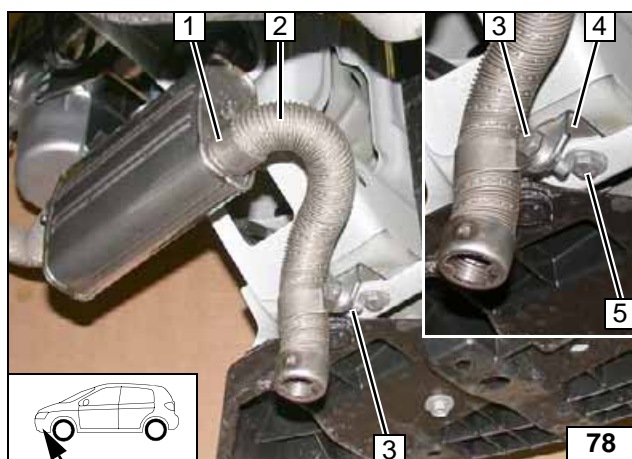
- 1 M6x25 bolt, large diameter washer, flanged nut
- 2 Angle bracket

Mounting
silencer



- 1 Hose clamp [2x]
- 2 Exhaust pipe

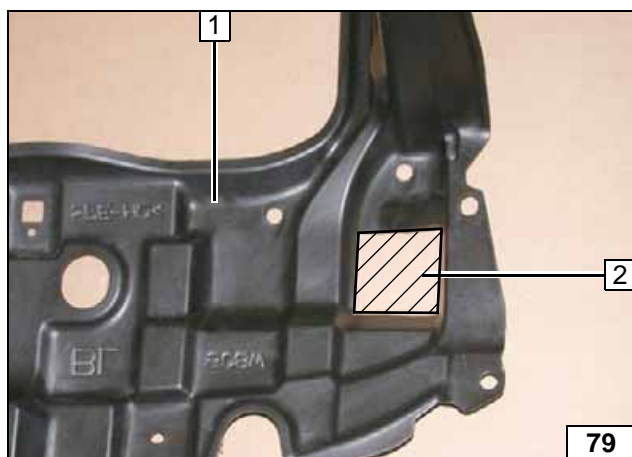
**Mounting
exhaust
pipe**



Petrol

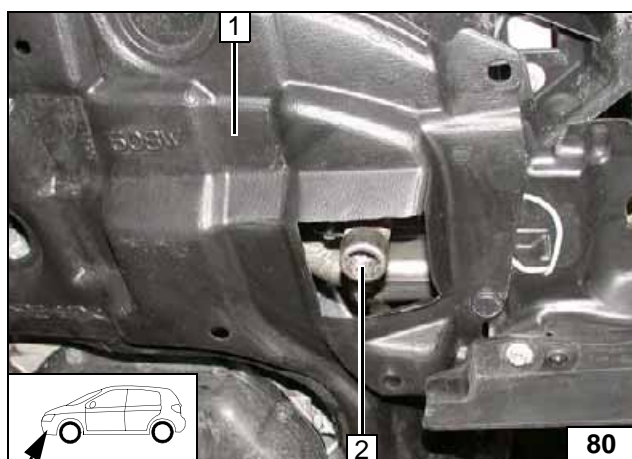
- 1 Hose clamp
- 2 Exhaust end section
- 3 M6x20 bolt, p-clamp, flanged nut
- 4 Angle bracket
- 5 M6x20 bolt, large diameter washer, flanged nut, existing hole

**Mounting
exhaust
end sec-
tion**



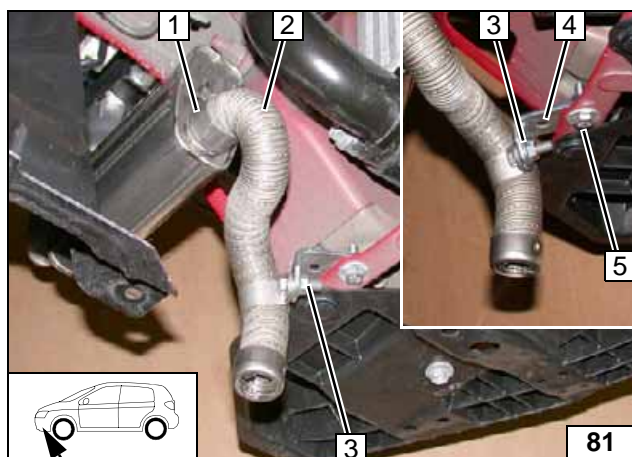
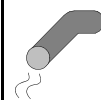
- 1 Underride protection
- 2 Discard section

**Cutting out
underride
protection**



Mount underride protection 1. Align exhaust end section 2 at centre of recess and flush with underride protection 1. Ensure sufficient distance from neighbouring components.

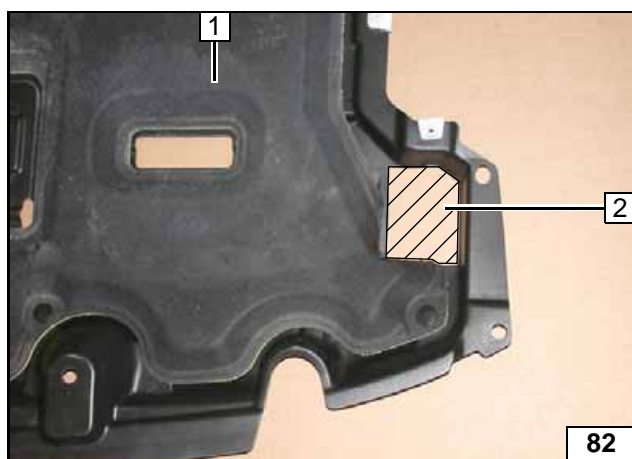
**Aligning
exhaust
end sec-
tion**



Diesel

- 1 Hose clamp
- 2 Exhaust end section
- 3 M6x20 bolt, p-clamp, flanged nut
- 4 Angle bracket
- 5 M6x20 bolt, large diameter washer, flanged nut, existing hole

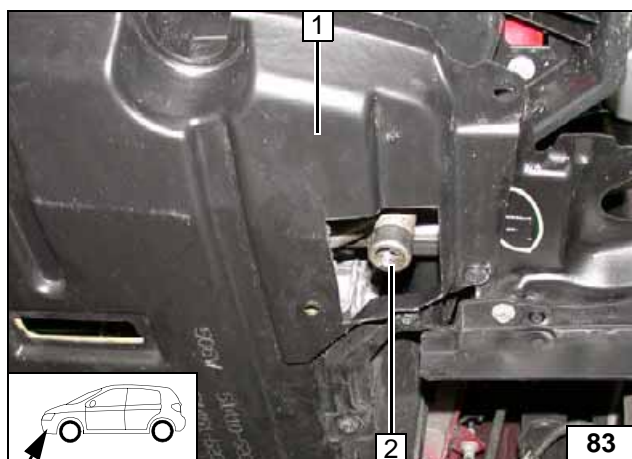
Mounting exhaust end section



Cut out underide protection 1 and insulation at the marking

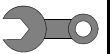
- 2 Discard section

Cutting out underide protection



Mount underide protection 1. Align exhaust end section 2 at centre of recess and flush with underide protection 1. Ensure sufficient distance from neighbouring components.

Aligning exhaust end section



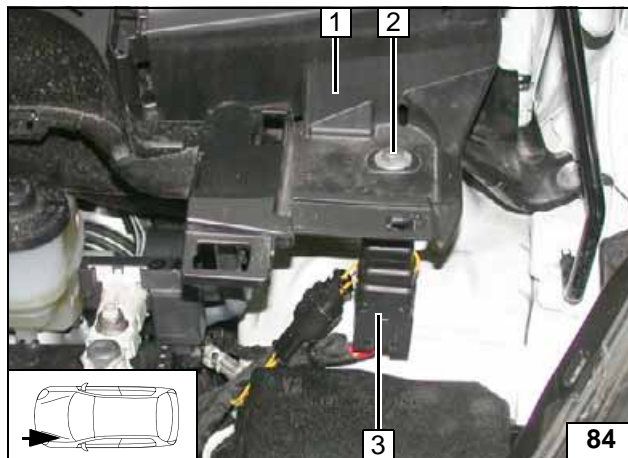
Final Work

WARNING!

Reassemble the disassembled components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate and tie back all loose wires.

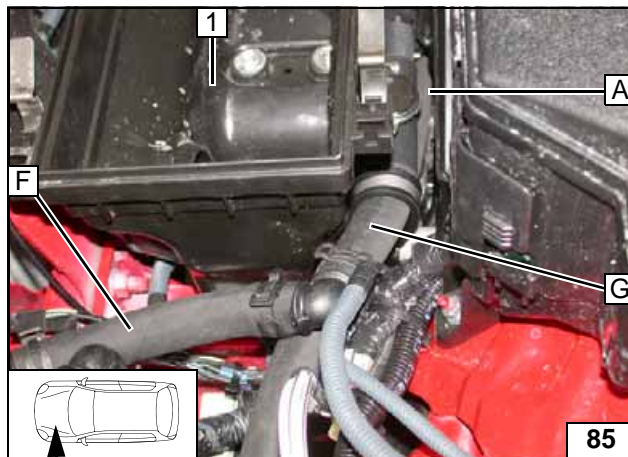
Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- 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".
- Mount "Switch off parking heater before refueling" signboard in area of filler neck.
- For initial startup and function check, see installation instructions



- 1 Mount coolant reservoir cap
- 2 M6x20 bolt, large diameter washer, flanged nut, existing hole
- 3 Fuse holder of engine compartment

Mounting
fuse holder



Diesel

Mount air filter box 1. Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.



Mounting
air filter
box



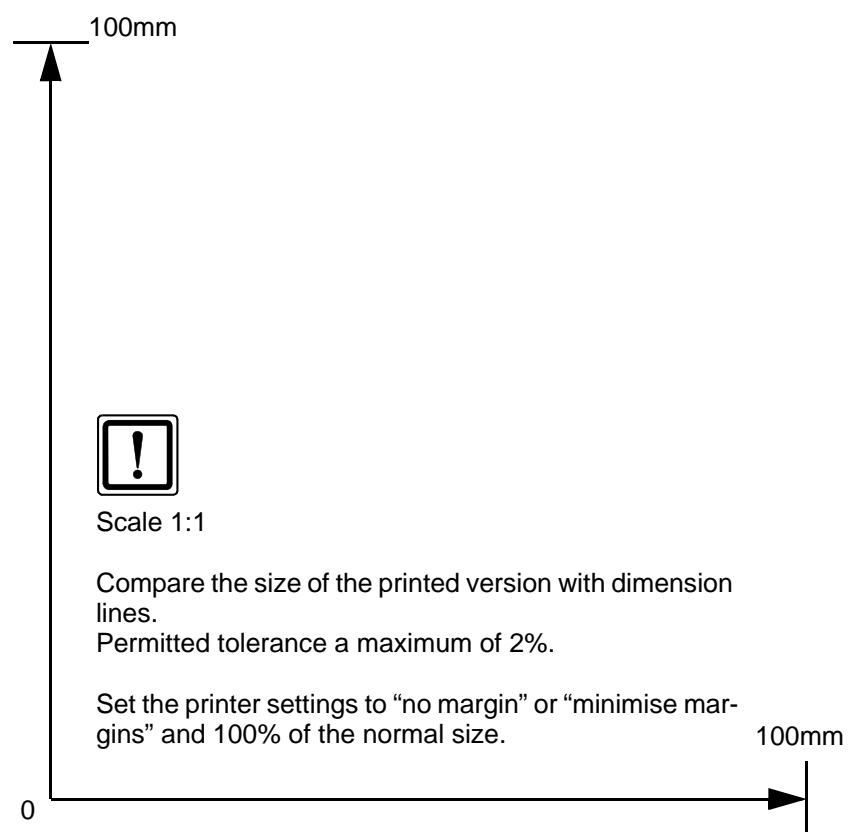
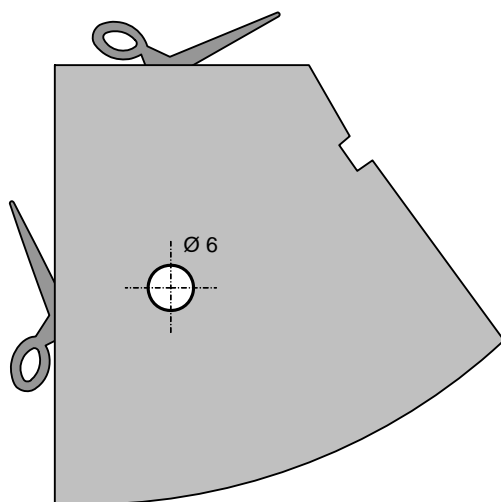
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Template for fuel standpipe petrol

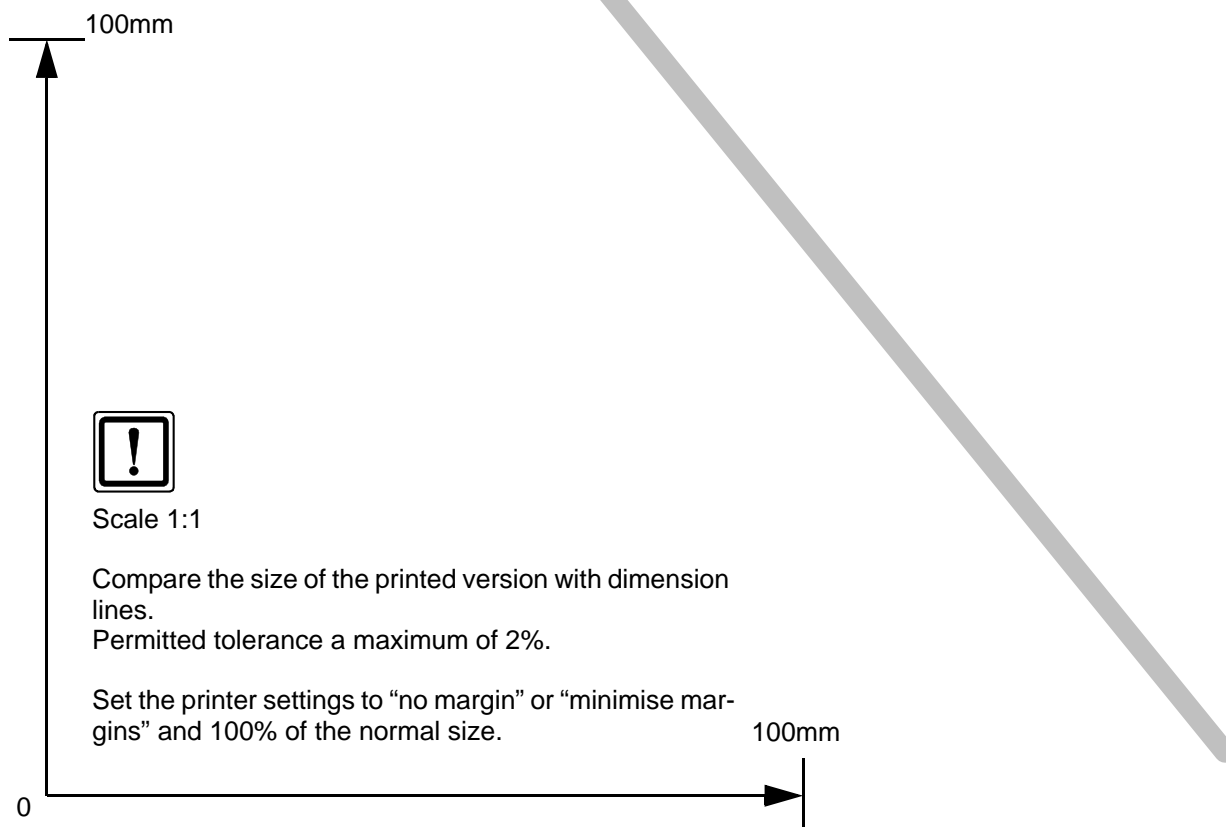
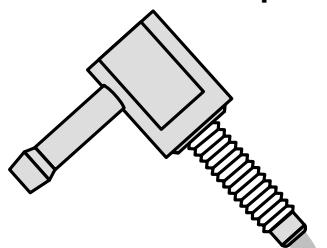


Template for fuel-tank sending unit.





Template for fuel standpipe diesel



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.

Passenger compartment monitoring unit, if installed, must be deactivated in addition to vehicle settings for the heating cycle.

Please refer to the operating manual of the vehicle for instructions regarding deactivation.

Before parking the vehicle, make the following settings:



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

Manual air-conditioning



- 1 Air outlet to windscreen
- 2 Set fan to level "1" or max. "2"
- 3 Set temperature to "HI"

Automatic air-conditioning