WaterHeater

***Thermo Top Evo* Parking Heater** E1 00 0258

Installation Documentation
Dacia Duster

Validity

Manufacturer	Model	Type	EG BE No. / ABE
Dacia	Duster	SD	e2 * 2001 / 116 * 0314 *...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.2 P	Petrol	6-speed SG	92	1199	H5Ft
1.6 P	Petrol	5-speed SG	77	1598	K4M
1.6 P	Petrol	5-speed SG	84	1598	H4M
1.5 D	Diesel	6-speed SG	80	1461	K9K

SG = Manual transmission

From model year 2014
Left-hand drive vehicle

Verified equipment variants: Manual air-conditioning
Front fog lights
LED daytime running lights
Automatic Start-Stop system
Front fog lightsEuro 5 emission standard
2 WD / 4 WD

Total installation time: approx. 7 hours

Dacia Duster

Table of Contents

Necessary Components

- Basic delivery scope of Thermo Top Evo in accordance with price list
- Installation kit for Dacia Duster 2014 Petrol and diesel: **1322630B**
- Heater control in accordance with price list and upon consultation with end customer
- For installation of MultiControl CAR: MultiControl installation frame: **9030077_**
- In case of Telestart, indicator lamp in accordance with price list and in consultation with end customer

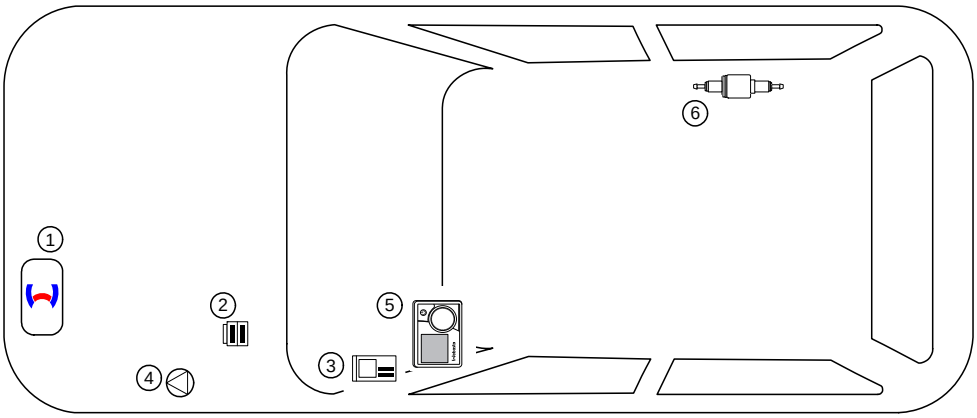
Installation instructions:

- Arrange for the vehicle to be delivered with the tank only about ¼ full.
- The installation location of the push button in case of Telestart or Thermo Call should be confirmed with the end customer.
- Depending on the space required and the vehicle manufacturer's instructions, we recommend the use of a vehicle battery with a higher electrical capacity.

Installation Overview

Legend:

1. Heater
2. Engine compartment fuse holder
3. Passenger compartment relay and fuse holder
4. Circulating pump
5. MultiControl CAR
6. Metering pump



Information on Total Installation Time

The total installation time includes the time needed for mounting and demounting the vehicle-specific components, the heater specific installation time and all other times required for the system integration and initial start-up of the heater.
The total installation time may vary for vehicle equipment other than provided.

Information on Operating and Installation Instructions

1 Important information (not complete)

1.1 Installation and repair

The improper installation or repairing of Webasto heating and cooling systems can cause fire or the leakage of deadly carbon monoxide, leading to serious injury or death.

To install and repair Webasto heating and cooling systems you need to have completed a special company training course and have the appropriate technical documentation, special tools and special equipment.

Installation and repair may ONLY be carried out by persons trained and certified in a Webasto training course. NEVER try to install or repair Webasto heating or cooling systems if you have not completed a Webasto training course, you do not have the necessary technical skills and you do not have the technical documentation, tools and equipment available to ensure that you can complete the installation and repair work properly.

Only use genuine Webasto parts. See the Webasto air and water heaters accessories catalogue for this purpose.

1.2 Operation

To ensure safe operation, we recommend having the heater checked every two years by an authorised Webasto dealer, especially when used over a long period and/or under extreme environmental conditions.

Do not operate the heater in closed rooms due to the danger of poisoning and suffocation.

Always switch off the heater before refuelling.

The heater may only be used with the prescribed fuel diesel (DIN EN 590) or petrol (DIN EN 228).

The heater may not be cleaned with a high-pressure cleaner.

1.3 Please note

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

To become familiar with and understand all functions and properties of the heater, the operating instructions must be read carefully and observed at all times.

For proper, safe installation and repair work, the installation instructions with all warnings and safety information must be carefully read and observed at all times. Please always contact a workshop authorised by Webasto for all installation and repair work.

Important

Webasto shall assume no liability for defects, damage and injuries resulting from a failure to observe the installation, repair and operating instructions of the information contained in them.

This liability exclusion particularly applies to improper installations and repairs, installations and repairs by untrained persons or in the case of a failure to use genuine spare parts.

The liability due to culpable disregard to life, limb or health and due to damage or injuries caused by a wilful or reckless breach of duty remain unaffected, as does the obligatory product liability.

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 loose wire ends and tie back. Connectors on electronic components must audibly snap into place during assembly.

Sharp edges should be fitted with rub protection. Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K).

Observe the instructions and guidelines of the respective vehicle manufacturer for demounting and mounting vehicle specific components!

The initial startup is to be executed with the Webasto Thermo Test Diagnosis.

When installing a programmable control module (e.g. a PWM Gateway), the corresponding settings must be checked or adjusted.

2 Statutory regulations governing installation

Guidelines	Thermo Top Evo
Heating Directive ECE R122	E1 00 0258
EMC Directive ECE R10	E1 04 5627

Note

The regulations of these guidelines are binding in the scope of the Directive 70/156/EEC and/or 2007/46/EC (for new vehicle models from 29/04/2009) and should also be observed in countries in which there are no special regulations.

Important

Failure to follow the installation instructions will result in the invalidation of the type approval for the heater and therefore invalidation of the general **homologation of the vehicle**.

Note

The heater is licensed in accordance with paragraph 19, section 3, No. 2b of the StVZO (German Road Traffic Licensing Authority).

2.1 Excerpt from ECE regulation 122 (heating system) paragraph 5 for the installation of the heater

Beginning of excerpt.

ANNEX VII

REQUIREMENTS FOR COMBUSTION HEATERS AND THEIR INSTALLATION

1. GENERAL REQUIREMENTS

1.7.1. A clearly visible tell-tale in the operator's field of view shall inform when the combustion heater is switched on or off.

2. VEHICLE INSTALLATION REQUIREMENTS

2.1. Scope

2.1.1. Subject to paragraph 2.1.2. combustion heaters shall be installed according to the requirements of this Annex.

2.1.2. Vehicles of category O having liquid fuel heaters are deemed to comply with the requirements of this Annex.

2.2. Positioning of heater

2.2.1. Body sections and any other components in the vicinity of the heater must be protected from excessive heat and the possibility of fuel or oil contamination.

2.2.2. The combustion heater shall not constitute a risk of fire, even in the case of overheating. This requirement shall be deemed to be fulfilled if the installation ensures an adequate distance to all parts and suitable ventilation, by the use of fire resistant materials or by the use of heat shields.

2.2.3. In the case of M2 and M3 vehicles, the heater must not be positioned in the passenger compartment. However, an installation in an effectively sealed envelope which also complies with the conditions in paragraph 2.2.2 may be used.

2.2.4. The label referred to in paragraph 1.4 or a duplicate, must be positioned so that it can be easily read when the heater is installed in the vehicle.

2.2.5. Every reasonable precaution should be taken in positioning the heater to minimise the risk of injury and damage to personal property.

2.3. Fuel supply

2.3.1. The fuel filler must not be situated in the passenger compartment and must be provided with an effective cap to prevent fuel spillage.

2.3.2. In the case of liquid fuel heaters, where a supply separate to that of the vehicle is provided, the type of fuel and its filler point must be clearly labelled.

2.3.3. A notice, indicating that the heater must be shut down before refuelling, must be affixed to the fuelling point. In addition a suitable instruction must be included in the manufacturer's operating manual.

2.4. Exhaust system

2.4.1. The exhaust outlet must be located so as to prevent emissions from entering the vehicle through ventilators, heated air inlets or opening windows.

2.5. Combustion air inlet

2.5.1. The air for the combustion chamber of the heater must not be drawn from the passenger compartment of the vehicle.

2.5.2. The air inlet must be so positioned or guarded that blocking by rubbish or luggage is unlikely.

2.6. Heating air inlet

2.6.1. The heating air supply may be fresh or recirculated air and must be drawn from a clean area not likely to be contaminated by exhaust fumes emitted either by the propulsion engine, the combustion heater or any other vehicle source.

2.6.2. The inlet duct must be protected by mesh or other suitable means.

2.7. Heating air outlet

2.7.1. Any ducting used to route the hot air through the vehicle must be so positioned or protected that no injury or damage could be caused if it were to be touched.

2.7.2. The air outlet must be so positioned or guarded that blocking by rubbish or luggage is unlikely.

End of excerpt.

In multilingual versions the German language is binding.

Dacia Duster

Information on Validity

This installation documentation applies to Dacia Duster Petrol and diesel vehicles - for validity, see page 1 - from model year 2014 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’.

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

Technical Information

Special Tools
- Hose clamp pliers for auto-tightening hose clamps
- Hose clamp pliers for Clic hose clamps of type W
- Automatic wire stripper 0.2 - 6mm²
- Crimping pliers for cable lug / tab connector 0.5 - 6mm²
- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers
- Metric thread-setter kit
- Deep-hole marker
- Webasto Thermo Test Diagnosis with current software

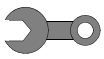
Dimensions
- All dimensions are in mm.

Tightening torque values
- Tightening torque values of 5x13 heater bolts and 5x11 heater stud bolts = 8Nm.
- Tightening torque value of 5x15 water connection piece retaining plate bolt = 7Nm.
- Tighten other bolt connections in accordance with manufacturer's instructions or in accordance with state-of-the-art-technology.

Explanatory Notes on Document

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

Mechanical System

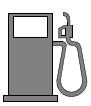


Electrical System

Coolant Circuit

Combustion Air

Fuel



Exhaust Gas

Software

Special features are highlighted using the following symbols:

Specific risk of injury or fatal accidents.

Specific risk due to electrical voltage.

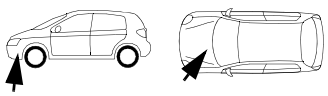
Specific risk of damage to components.

Specific risk of fire and explosion.

Reference to general installation instructions of the 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.



Tightening torque according to the manufacturer's vehicle-specific documents

Dacia Duster

Preliminary Work

Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect and completely remove the battery together with the carrier.
- Remove the air filter completely, together with the intake hose.
- Remove the resonator
- Remove the engine underride protection.
- Remove the underride protection before the fuel tank, if present.
- Remove the instrument panel trim and footwell trim (footwell cover) on the driver's side.
- Remove the radio and navigation system.
- Detach the A/C control panel.
- Fold up the rear bench seat.
- Remove the fuel tank sending unit in accordance with the manufacturer's instructions.

Heater

- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) visibly in the appropriate place in the engine compartment.

Heater Installation Location

Figure shows 1.6 P 77kW!

1 Heater

Installation location

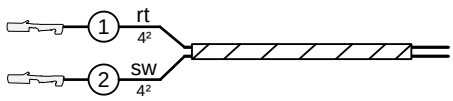
Preparing Electrical System

Wire sections retain their numbering in the entire document.

Produce all following electrical connections as shown in the wiring diagram.

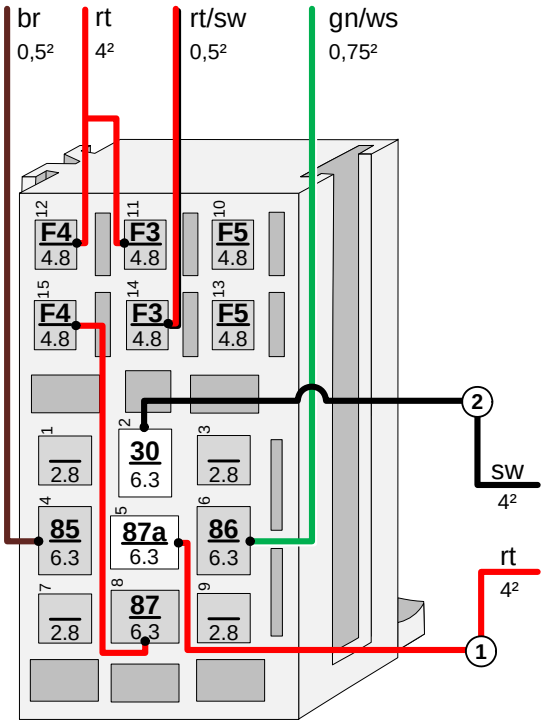
① Red (rt) wire of fan wiring harness
② Black (sw) wire of fan wiring harness

Assigning wires



2

Connecting wires to passenger compartment relay and fuse holder



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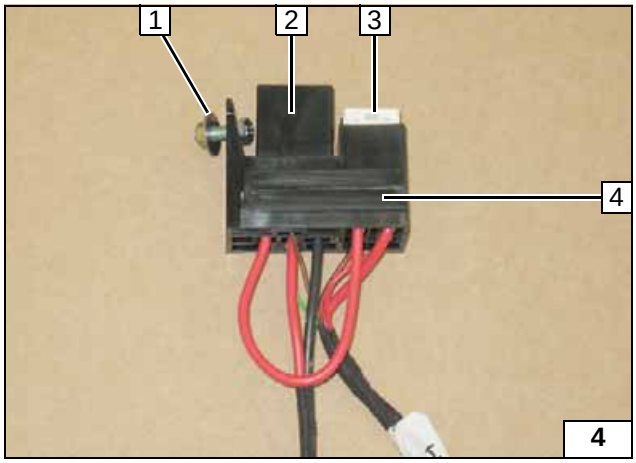


4

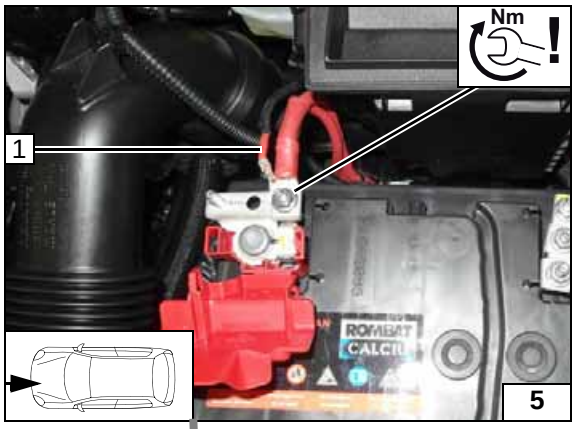
1 Premount M5x16 bolt, large diameter washer [2x], nut loosely
2 Relay K1
3 Insert 25A fuse F4
4 Passenger compartment relay and fuse holder

Premounting passenger compartment relay and fuse holder

Electrical System

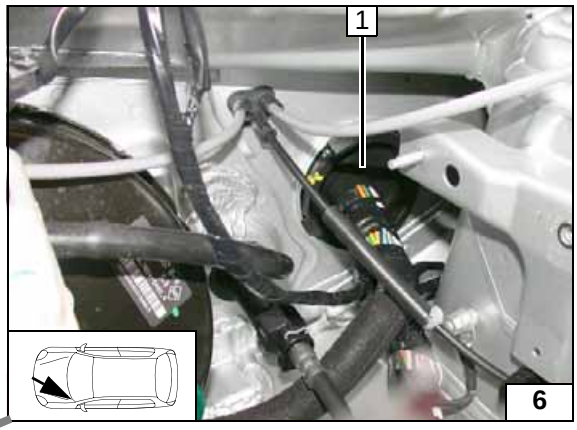
Positive wire

1 Positive wire on positive battery terminal

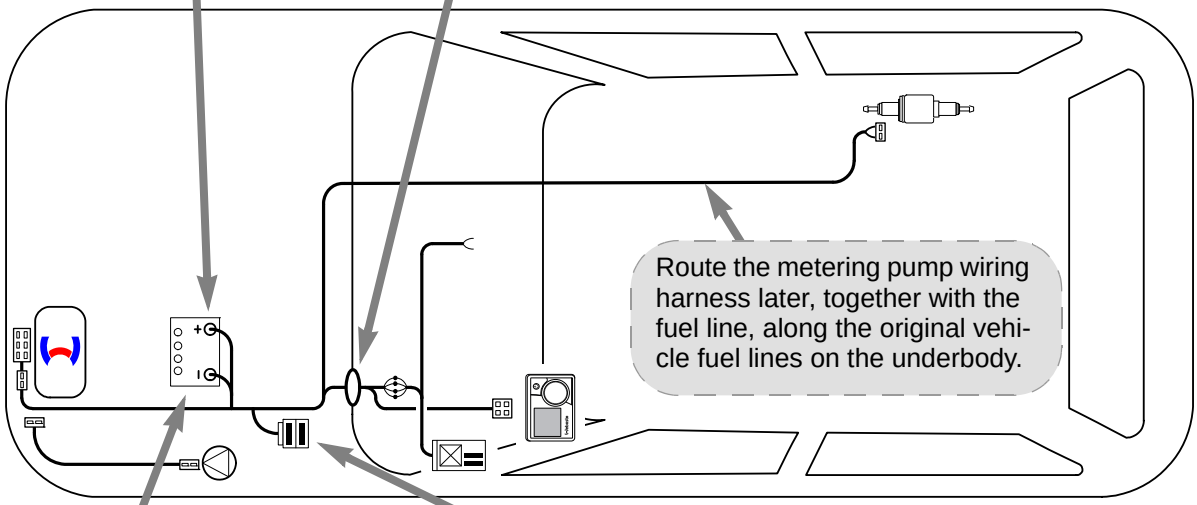


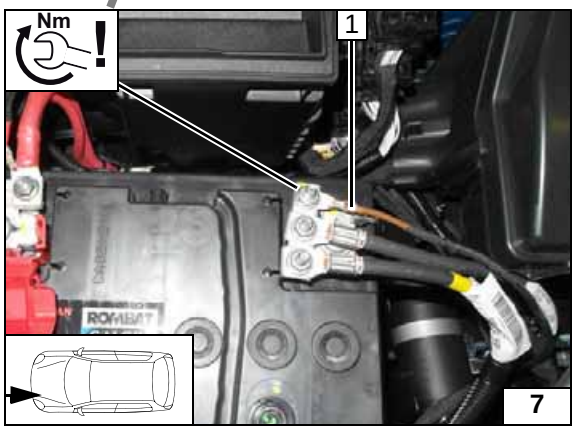
Wiring harness pass through

1 Protective rubber plug



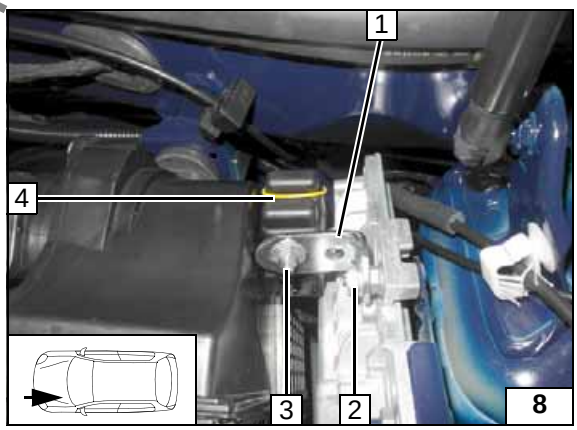
Wiring harness routing diagram





Earth wire

1 Earth wire on negative battery terminal

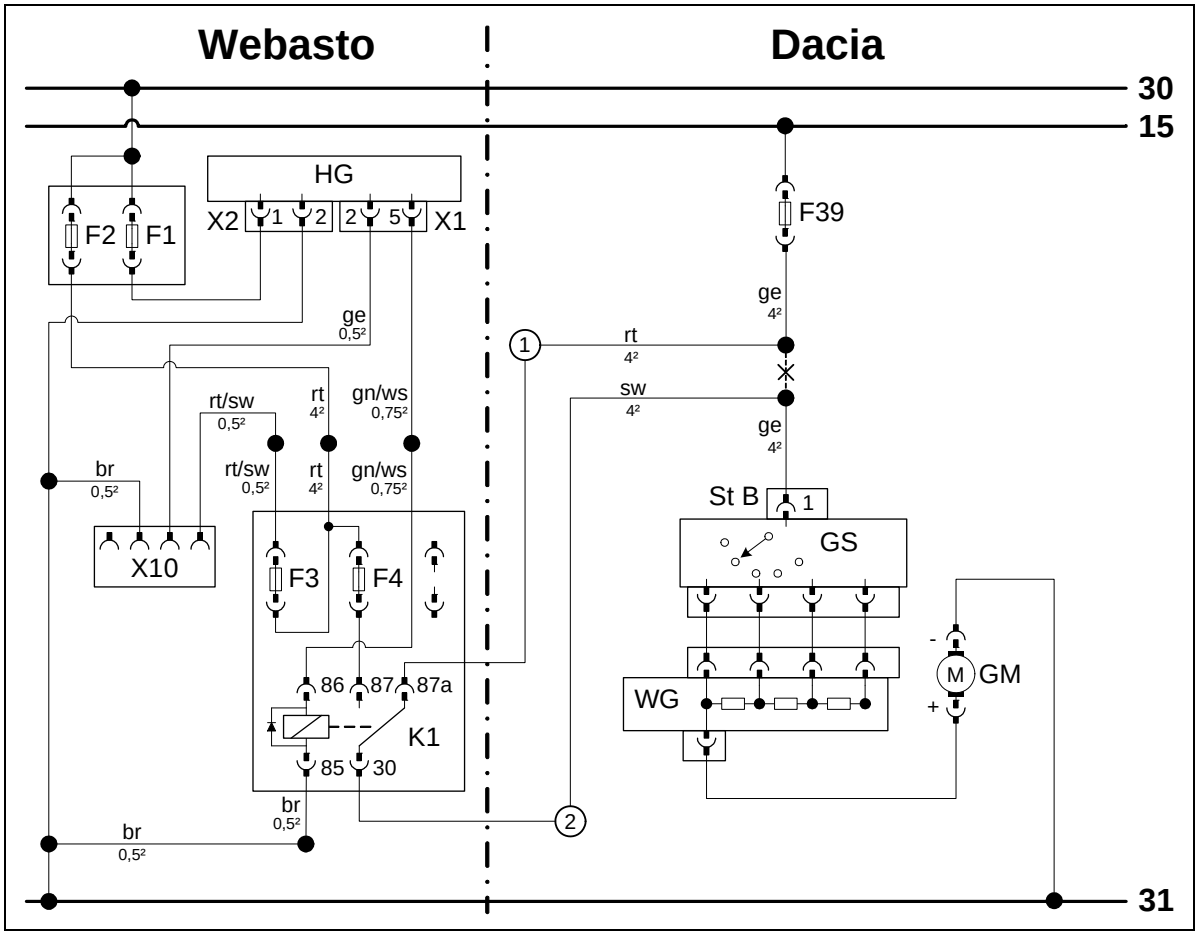


Engine compartment fuse holder

1 Angle bracket
2 Original vehicle bolt
3 M5x16 bolt, large diameter washer [2x], retaining plate of fuse holder, nut
4 Fuses F1-2

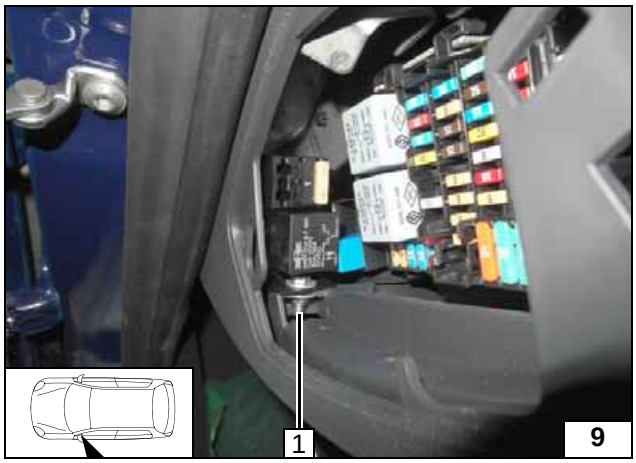
Fan Controller

Wiring diagram



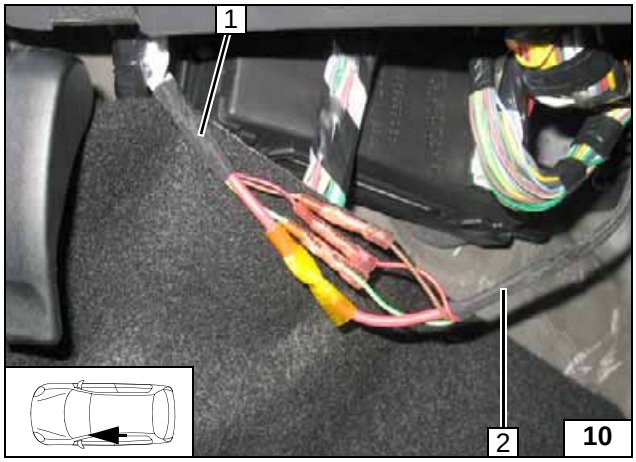
Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	F39	30A fuse	rt	red
X1	6-pin heater connector	St B	15-pin heater connector of GS	sw	black
X2	2-pin heater connector	GS	Fan switch	ge	yellow
F1	20A fuse	GM	Fan motor	gn	green
F2	30A fuse	WG	Resistor group	br	brown
X10	4-pin connector of heater control			ws	white
				br	brown
F3	1A fuse				
F4	25A fuse				
K1	Fan relay			**X**	Cutting point
				Wiring colours may vary.	

Legend



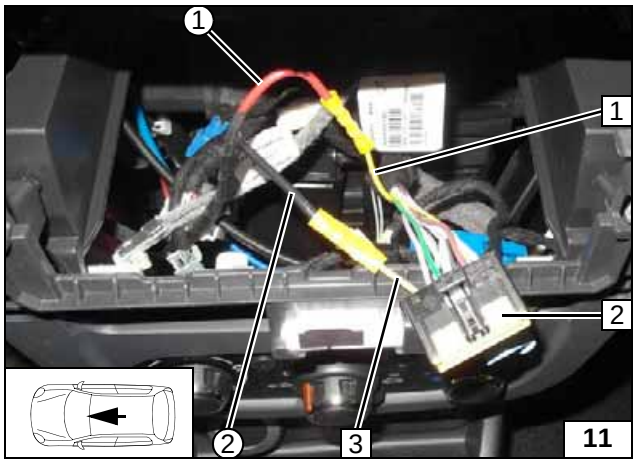
Insert relay and fuse holder of passenger compartment into the recess, tighten bolt **1** .

Installing passenger compartment relay and fuse holder



1 Wiring harness of passenger compartment relay and fuse holder
2 Wiring harness of heater

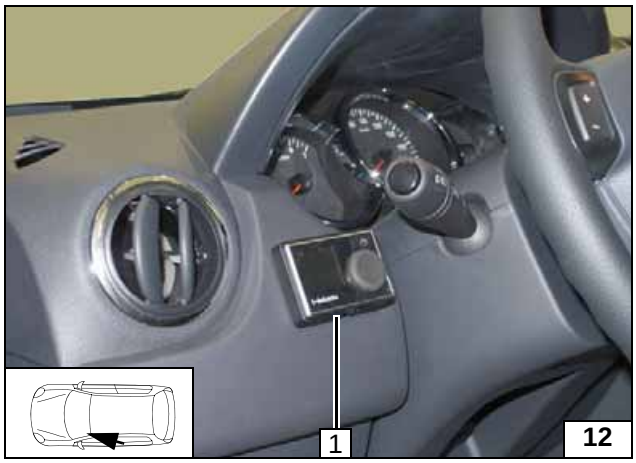
Connecting same colour wires of wiring harnesses



Connection to 15-pin connector B **2** from fan switch.

1 Yellow (ge) wire of fuse F39
3 Yellow (ge) wire from 15-pin connector Pin1
① Red (rt) wire of K1/87a
② Black (sw) wire of K1/30

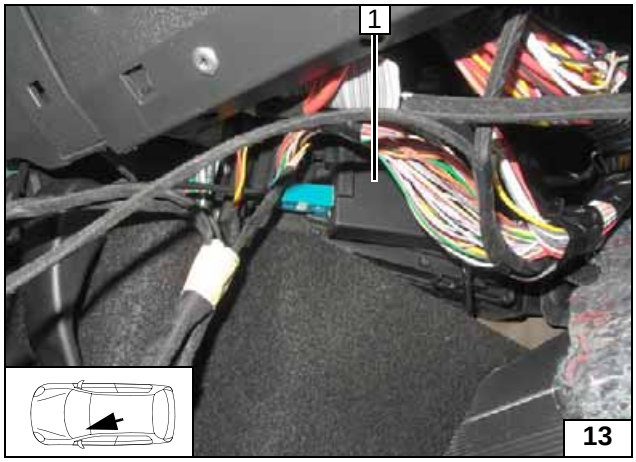
Connecting fan switch



MultiControl CAR Option

1 MultiControl CAR with installation frame

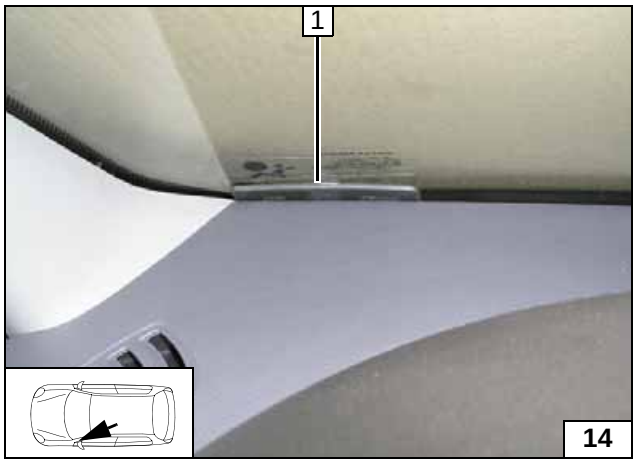
Installing MultiControl CAR



Remote Option (Telestart)

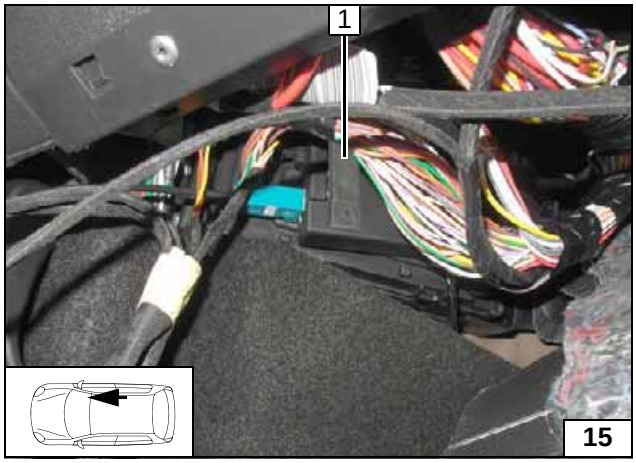
Fasten receiver **1** with double-sided adhesive tape.

Installing receiver



1 Aerial

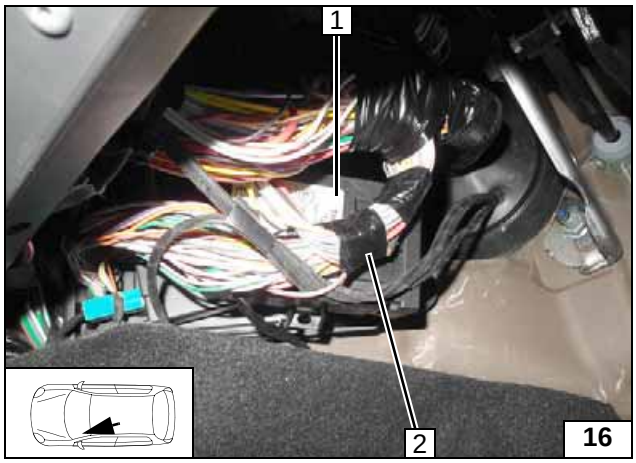
Installing aerial



Temperature sensor T100 HTM

Fasten temperature sensor **1** with double-sided adhesive tape.

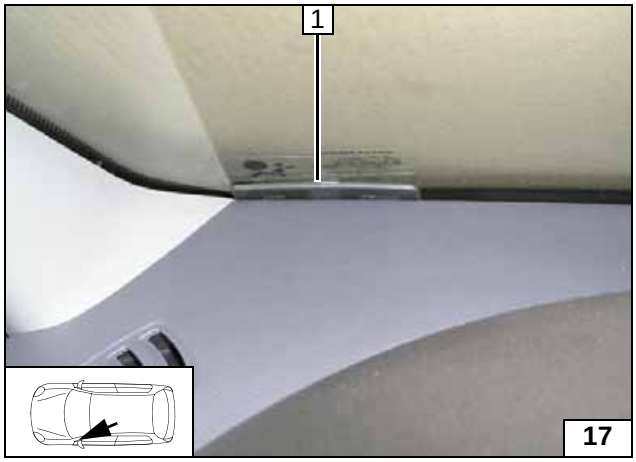
Installing temperature sensor



ThermoCall Option

Fasten receiver **1** to original vehicle wiring harness **2** using a cable tie.

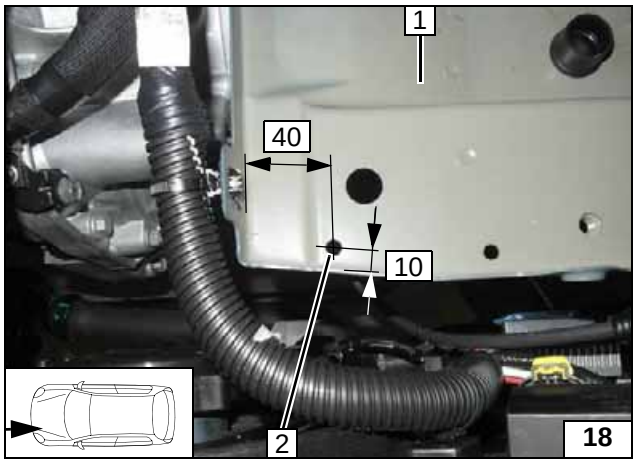
Installing receiver



1 Aerial (optional)

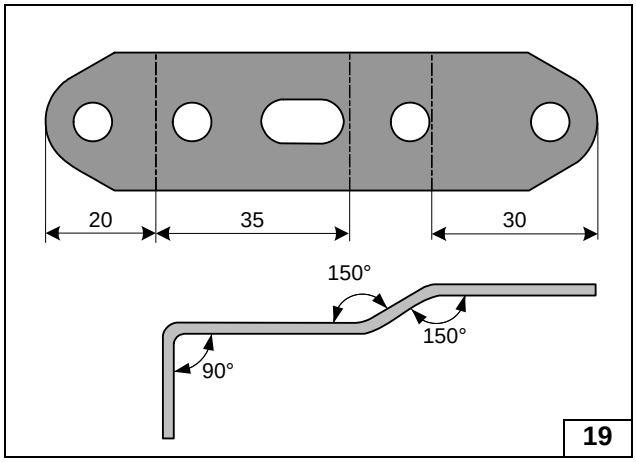
Installing aerial

Preparing Installation Location

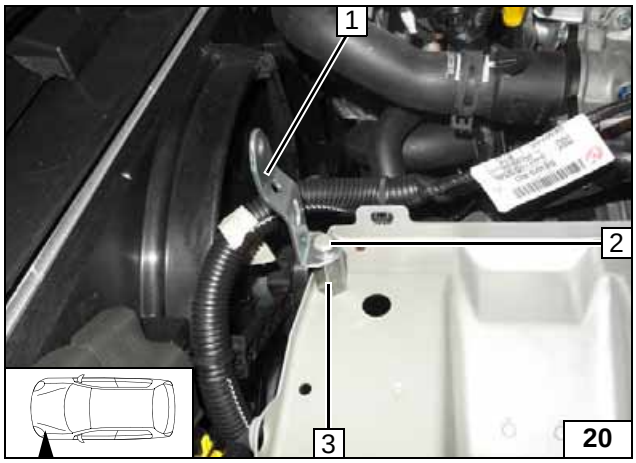


1 Battery carrier
2 Copy hole pattern, 7mm dia. hole

Hole in battery carrier



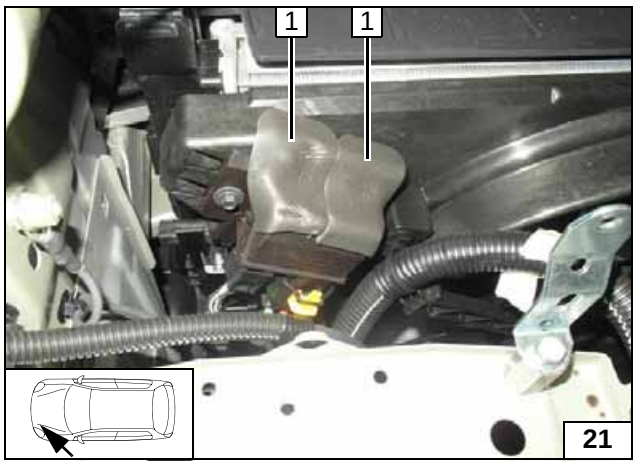
Preparing perforated bracket



Mount M6x30 spacer nut **3** from below using M6x16 bolt and spring lockwasher.

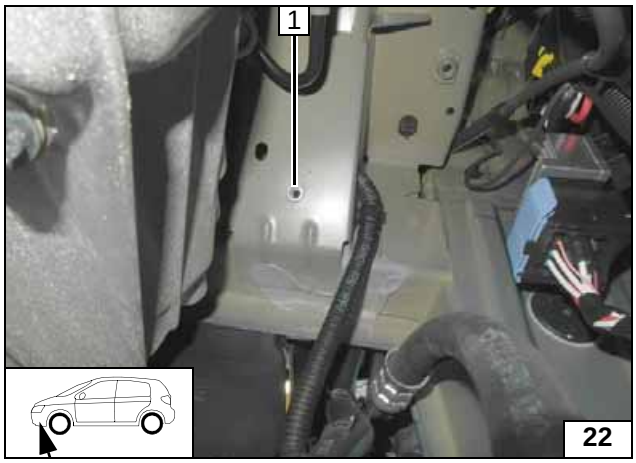
1 Perforated bracket
2 M6x16 bolt, spring lockwasher

Premounting perforated bracket



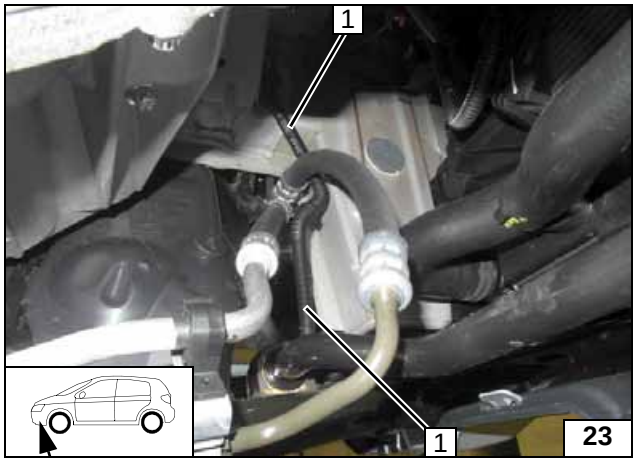
Separate insulation protection strips **1** in the middle and apply rub protection [2x].

Applying rub protection



1 Drill existing hole to 9.1 mm dia.; rivet nut

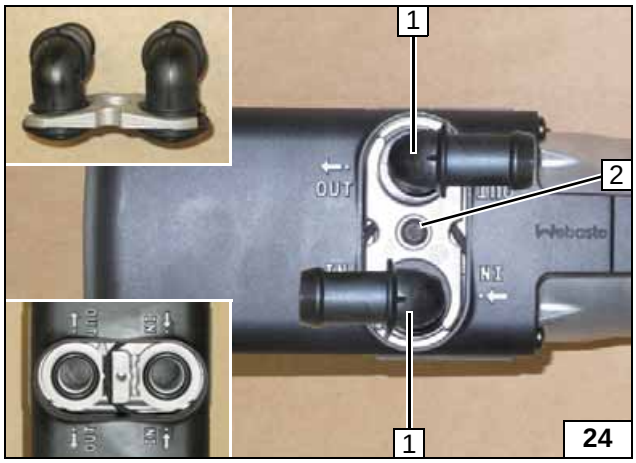
Installing rivet nut



Route drain line **1** from battery box as shown.

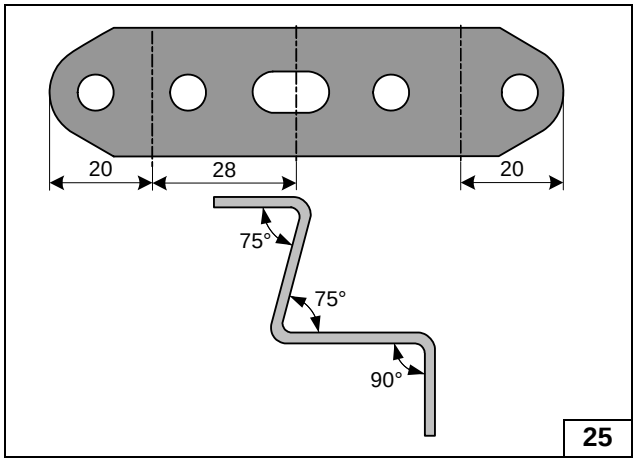
Routing drain line

Preparing Heater

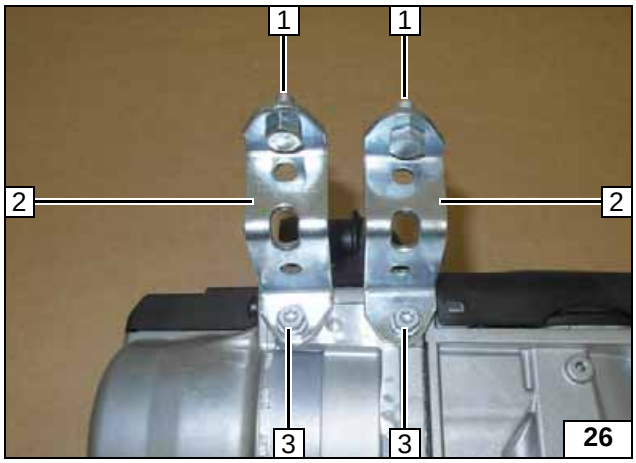


1 Water connection piece, sealing ring [2x each]
2 5x15 self-tapping bolt, retaining plate of water connection piece

Installing water connection piece



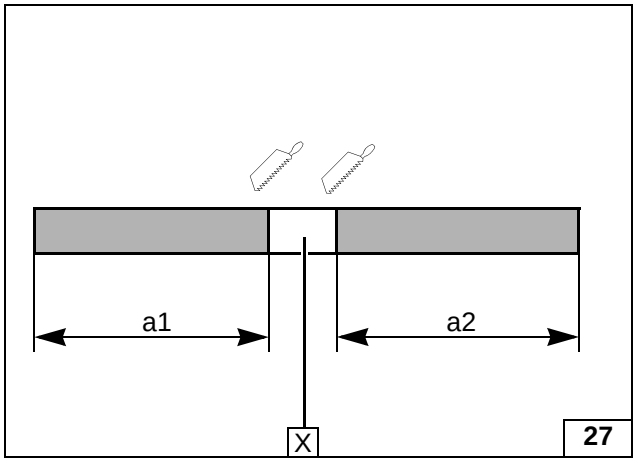
Preparing perforated bracket [2x]



Mount perforated bracket **2** [2x] with long legs on heater.

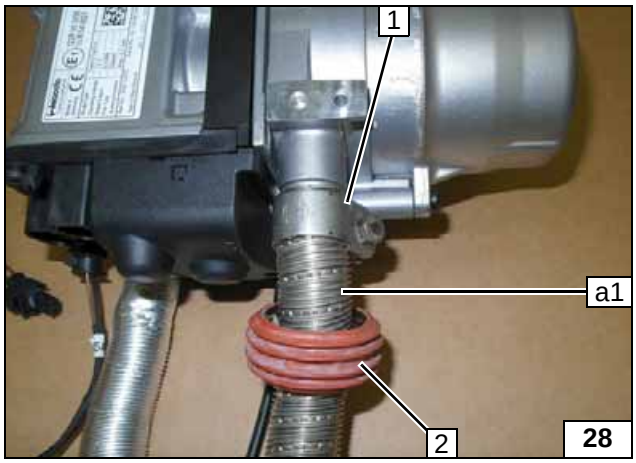
1 M6x12 bolt, pin lock [2x each]
3 5x13 self-tapping bolt [2x]

Premounting perforated bracket [2x]



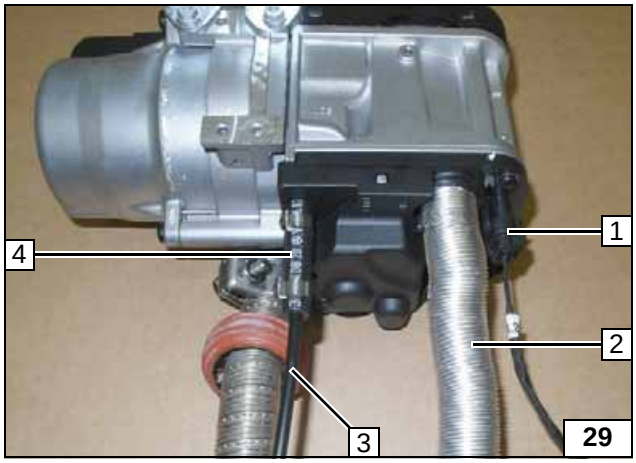
a1 = 260
a2 = 360
X =

Preparing exhaust pipe



1 Hose clamp
2 Slide on spacer bracket

Premounting exhaust pipe a1



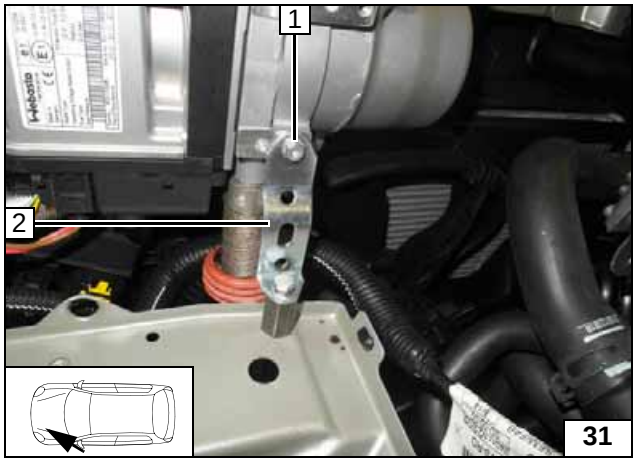
1 Connector of circulating pump wiring harness
2 Combustion air pipe
3 Fuel line
4 Hose section, 10mm dia. clamp [2x]

Premounting heater

Installing Heater

1 Flanged nut [2x] on M6x12 bolt, existing holes

Installing heater

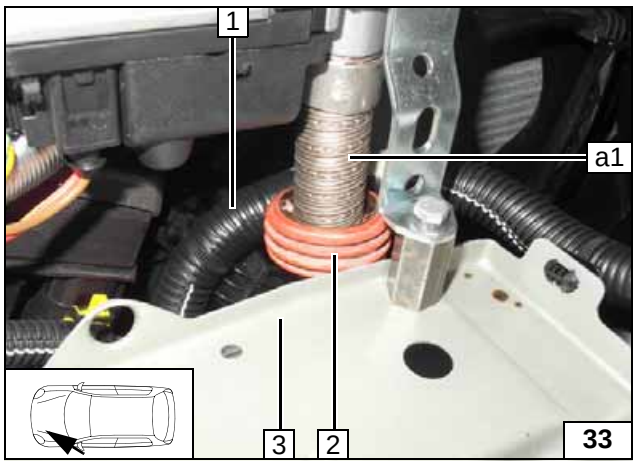


1 5x13 self-tapping bolt
2 Perforated bracket

Installing heater

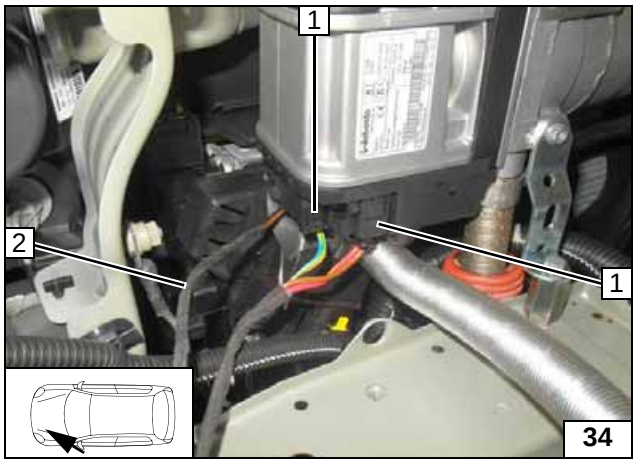
Install resonator only in case of 1.6 petrol. Ensure sufficient distance from heater at position **1**, correct if necessary. Remove the resonator again.

Aligning heater



Align spacer bracket **2** with battery carrier **3** and and original vehicle wiring harness **1**.

Aligning spacer bracket



1 Heater wiring harness connector [2x]
2 Circulating pump wiring harness

Installing wiring harness of heater

Fuel

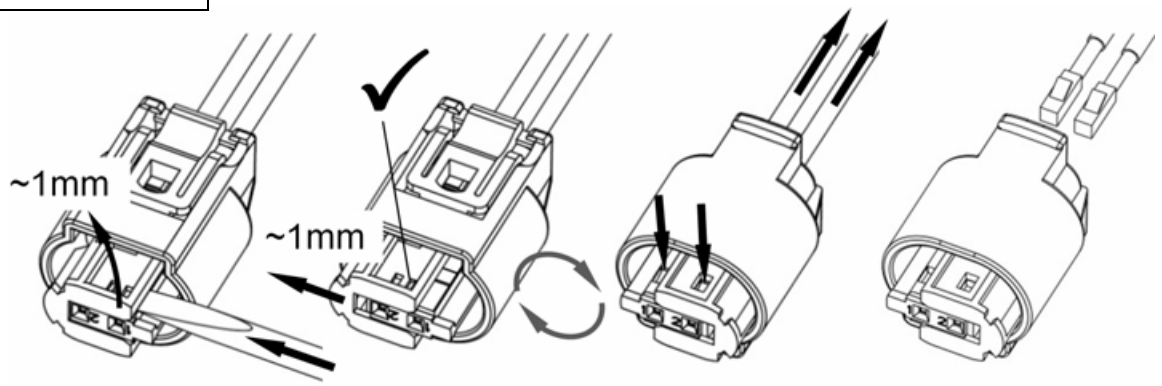
CAUTION!
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

Catch any fuel running off in an appropriate container.

Route fuel line and metering pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.
Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

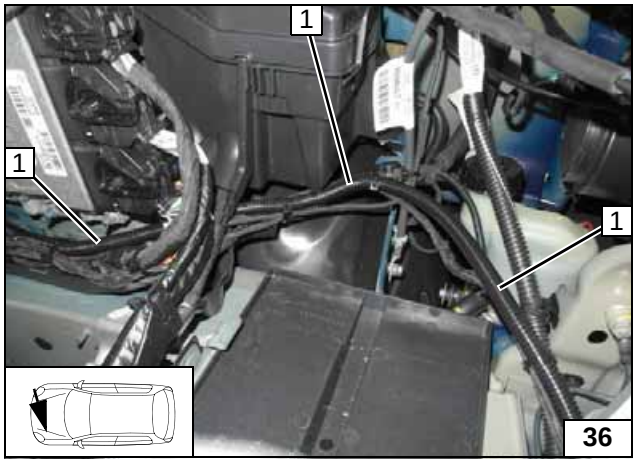
WARNING!
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.

Connector X7



35

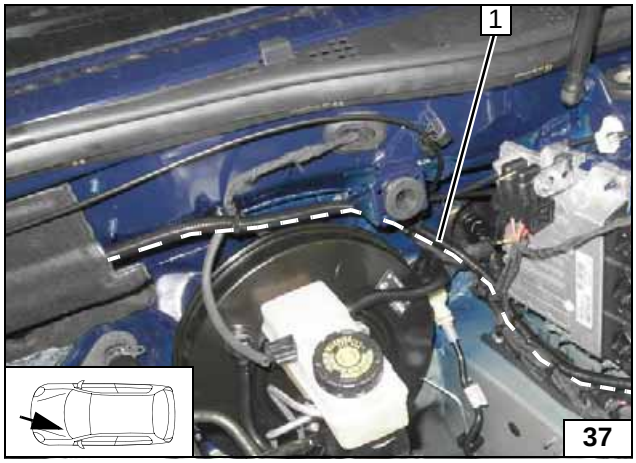
Dismantling metering pump connector



36

Insert fuel line and wiring harness of metering pump into 10 mm dia. corrugated tube **1** and route to firewall.

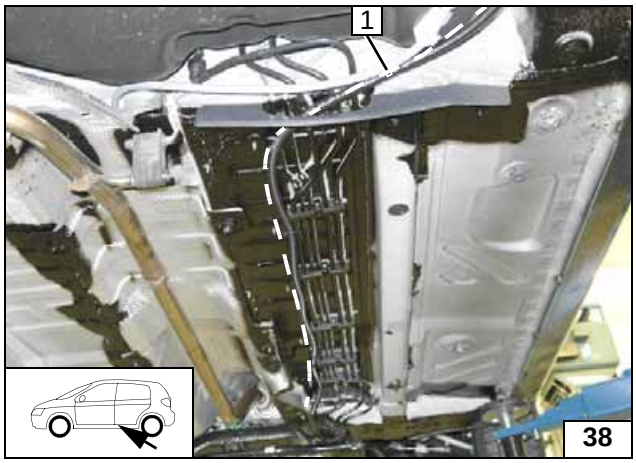
Routing lines



37

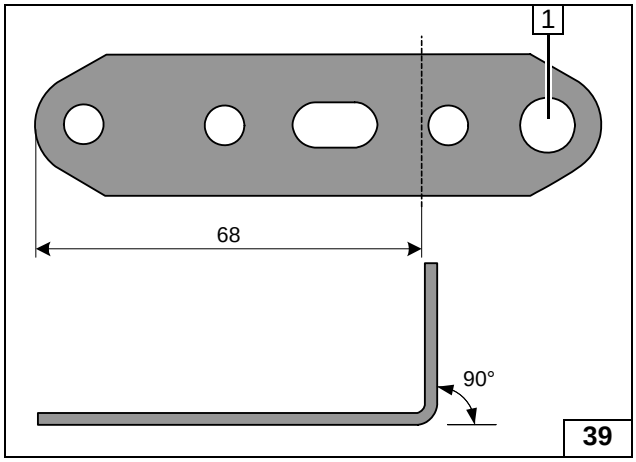
Route fuel line and wiring harness of metering pump into 10mm dia. corrugated tube **1** behind insulation mat to the vehicle's right side and further along original vehicle lines to the underbody.

Routing lines



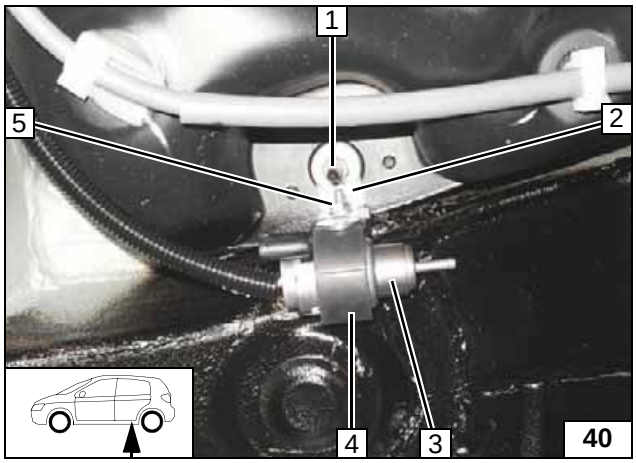
Route fuel line and wiring harness of metering pump in 10 mm dia. corrugated tube **1** to the installation location of the metering pump.

Routing lines



1 8.5mm dia. hole

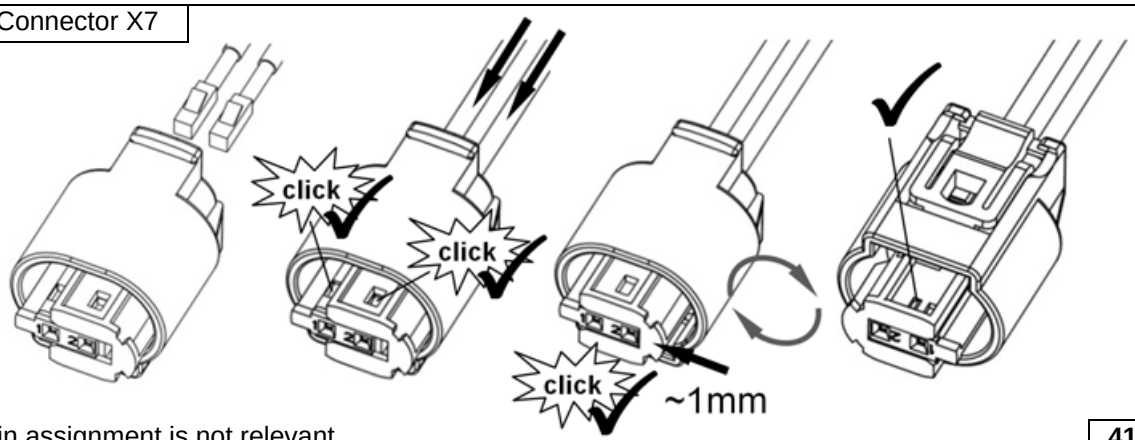
Preparing perforated bracket



1 Original vehicle stud bolt
2 Perforated bracket
3 Metering pump
4 Metering pump mount
5 M6x25 bolt, support angle bracket, flanged nut

Installing metering pump

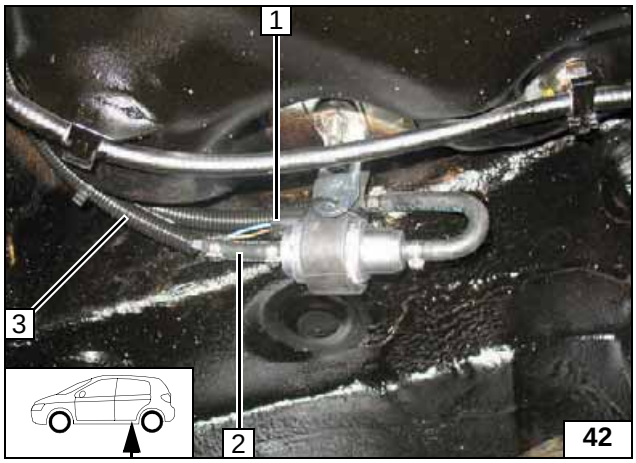
Connector X7



Pin assignment is not relevant.

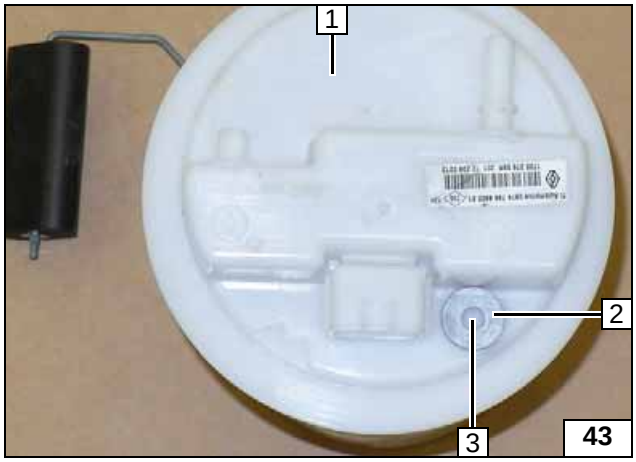
41

Completing metering pump connector



1 Metering pump wiring harness, connector X7 mounted
2 Hose section, 10mm dia. clamp [2x]
3 Corrugated tube with metering pump wiring harness and fuel line

Connecting metering pump

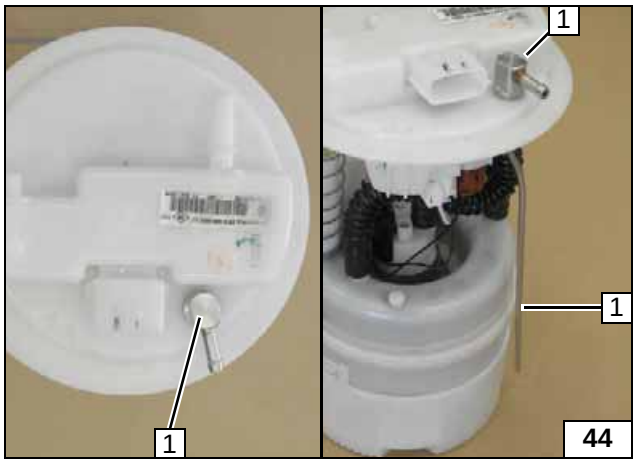


Petrol

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

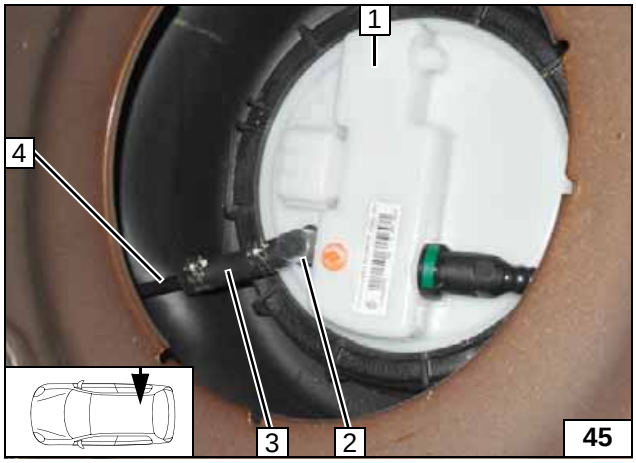
Fuel extraction

2 Washer with outer dia. d_a = 17.6mm
3 Copy hole pattern, 6mm dia. hole



Bend fuel standpipe **1** according to template and cut to length.

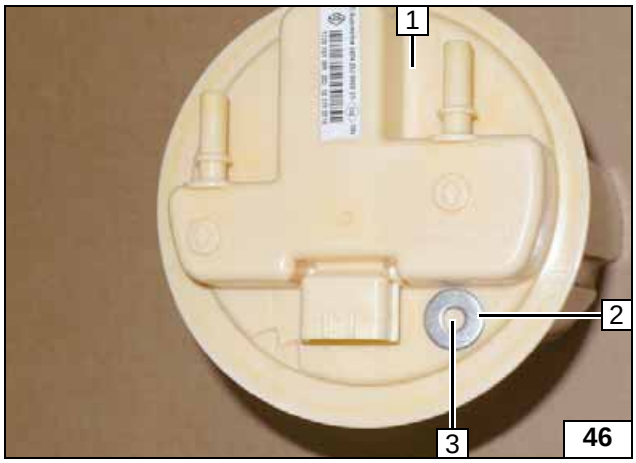
Installing fuel standpipe



Install fuel tank sending unit **1** in accordance with the manufacturer's instructions.

Connecting fuel line

2 Fuel standpipe
3 Moulded hose, 10 mm dia. clamp [2x]
4 Fuel line

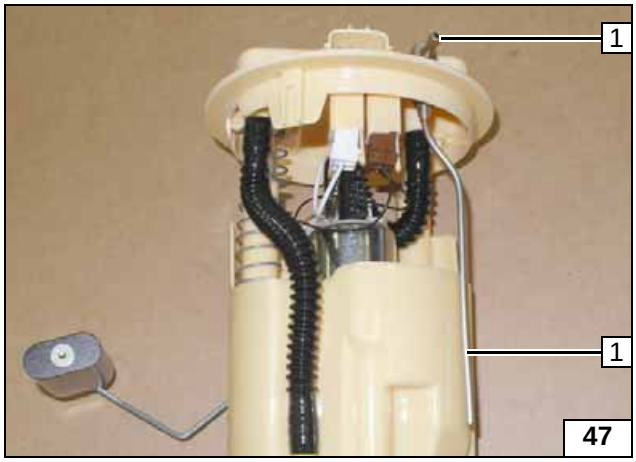


Diesel

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

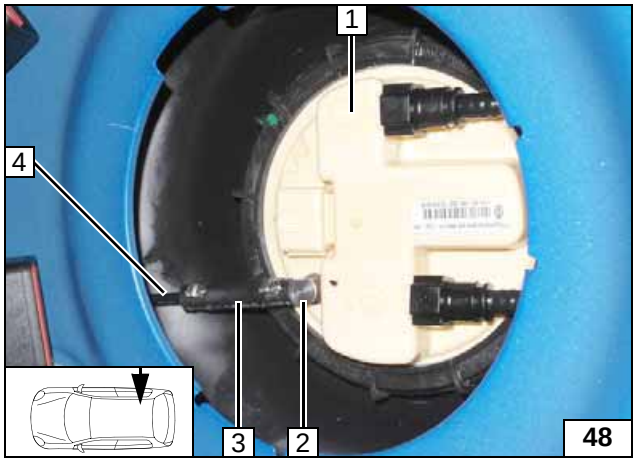
2 Washer with outer dia. d_a = 17.6mm
3 Copy hole pattern, 6mm dia. hole

Fuel extraction



Bend fuel standpipe **1** according to template and cut to length.

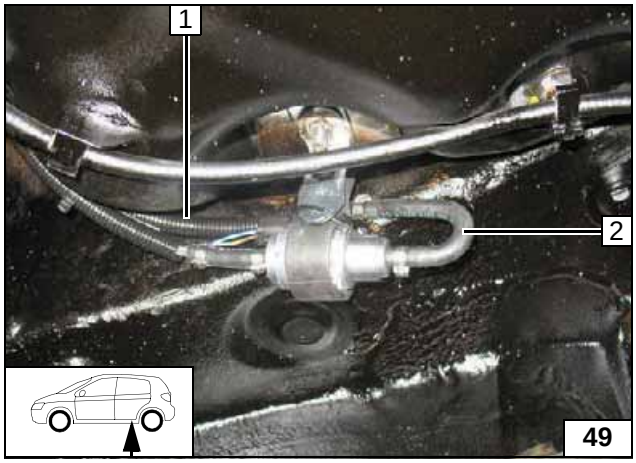
Installing fuel standpipe



Install fuel tank sending unit **1** in accordance with the manufacturer's instructions.

2 Fuel standpipe
3 Hose section, 10mm dia. clamp [2x]
4 Fuel line

Connecting fuel line



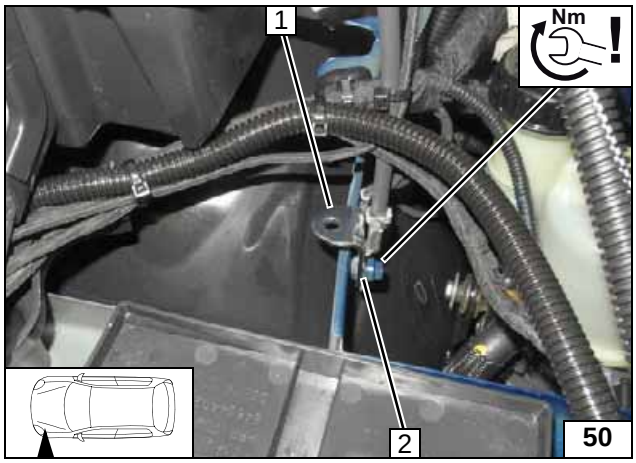
All vehicles

Ensure sufficient distance from neighbouring components; correct if necessary.

1 Corrugated tube with fuel line
2 180° moulded hose, 10mm dia. clamp [2x]

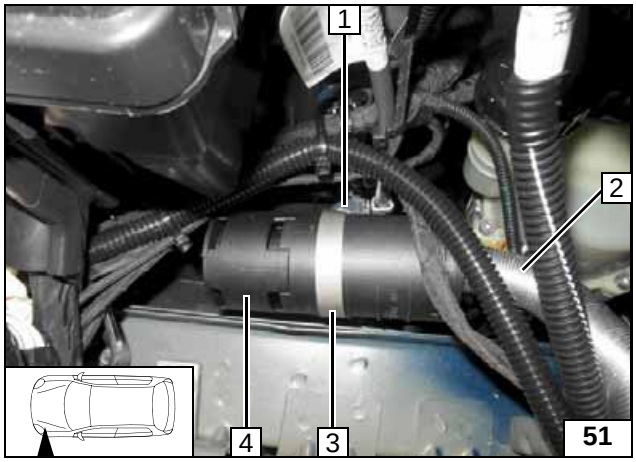
Connecting metering pump

Combustion Air



1 Angle bracket
2 Original vehicle earth support point

Installing angle bracket



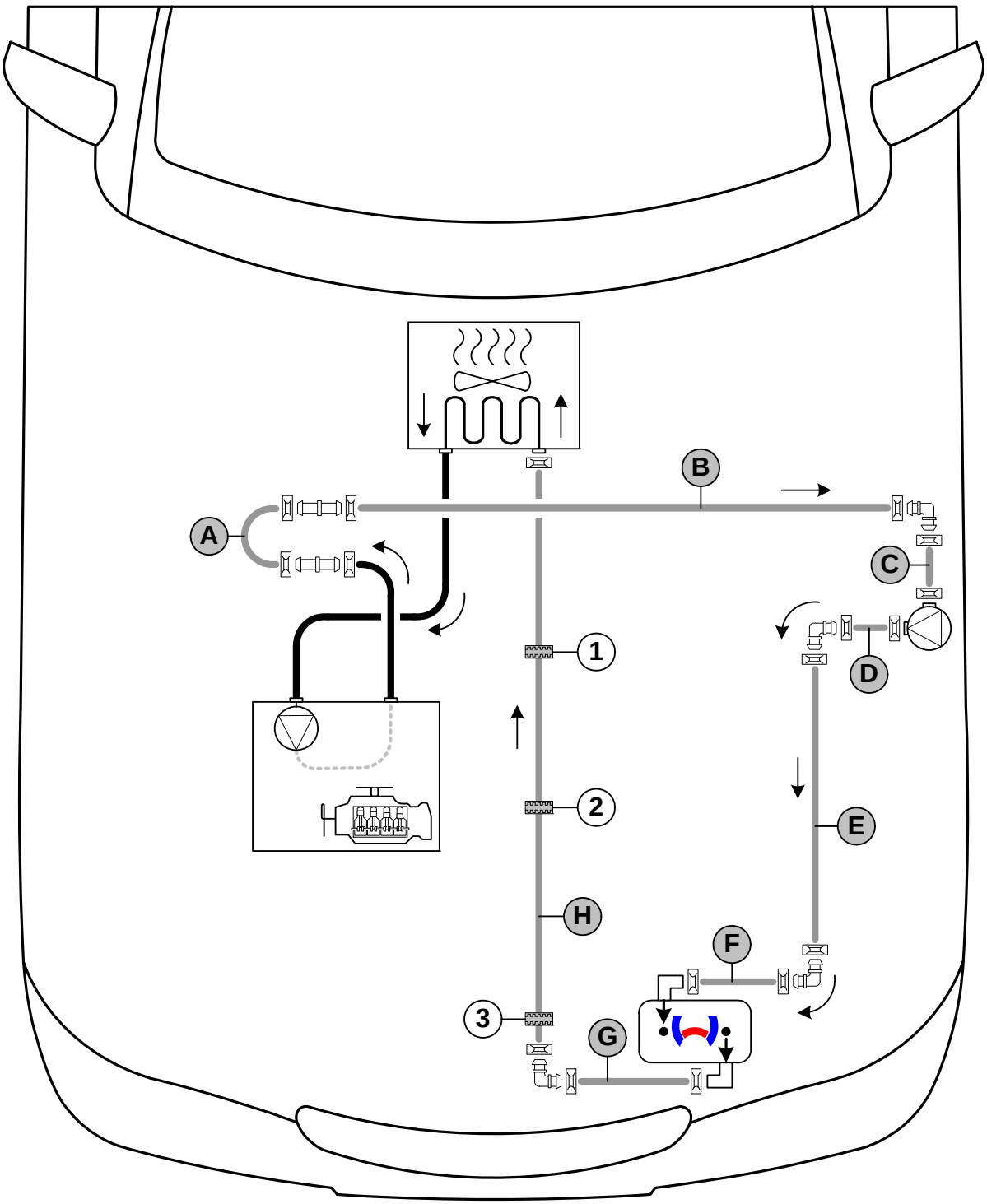
1 M5x16 bolt, flanged nut on angle bracket
2 Combustion air pipe
3 51mm dia. clamp
4 Silencer

Installing silencer

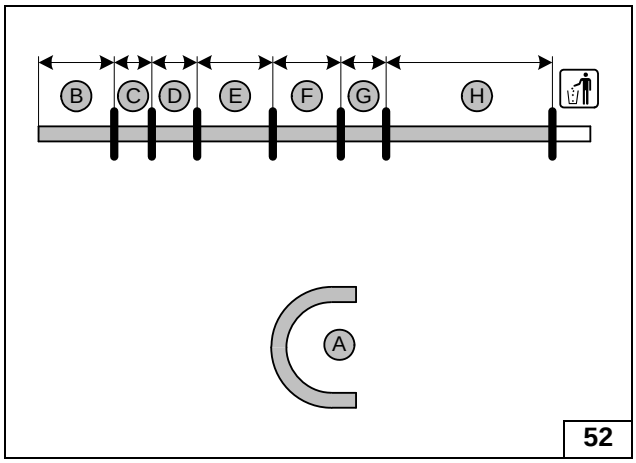
Coolant Circuit

WARNING!
Any coolant running off should be collected in an appropriate container. Route hoses 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 modelled on an 'inline' circuit and based on the following diagram:

Hose routing diagram



All spring clips = 25 mm dia. All connecting pipes and = 18x18 mm dia.
1 = black (sw) rubber isolator all vehicles.
2 = black (sw) rubber isolator in case of 1.6 P 77kW/84kW.
3 = black (sw) rubber isolator in case of 1.6 P 84kW.



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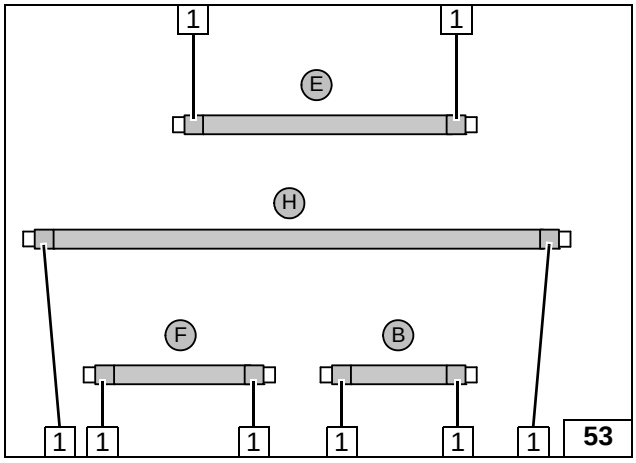
	1.2 P / 1.5 D	1.6 P 77kW	1.6 P 84kW
A=	180°, 18mm dia.	180°, 18mm dia.	180°, 18mm dia.
B=	330	280	280
C=	60	60	60
D=	100	100	80
E=	440	440	440
F=	380	380	380
G=	100	150	130
H=	780	790	740

Cutting hoses to length



53

Slide braided protection hoses onto hoses **B**, **E**, **F** and **H** and cut to length. Cut heat shrink plastic tubing to size.

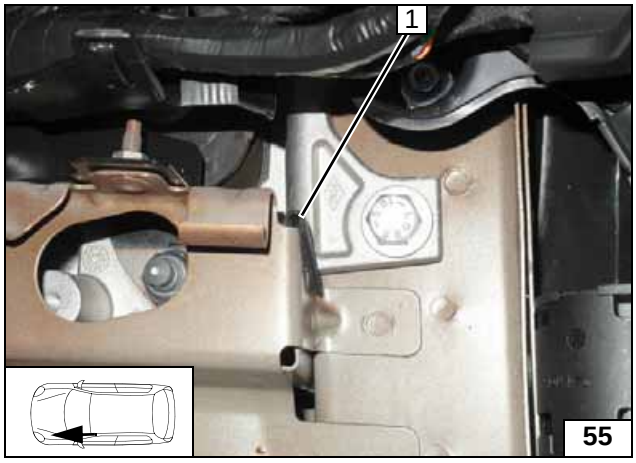
1 50 mm long heat shrink plastic tubing [8x]

Preparing hoses

54

1 Cut 150mm edge protection to length and slide on

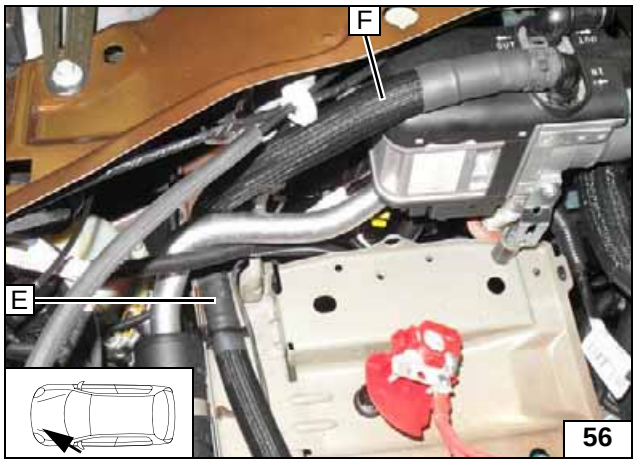
Installing edge protection



55

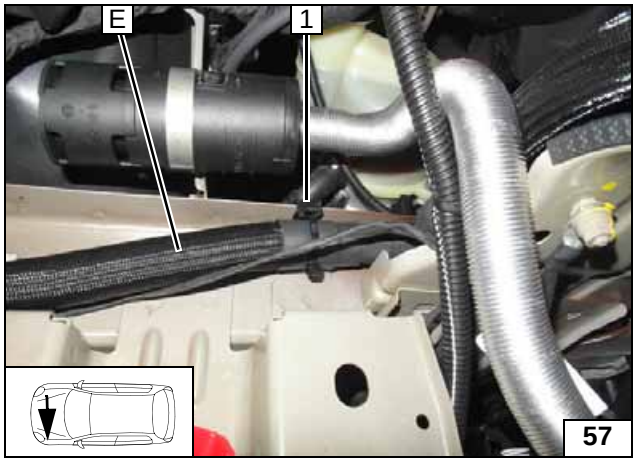
1 Cut 30 mm edge protection to length and slide on

Installing edge protection



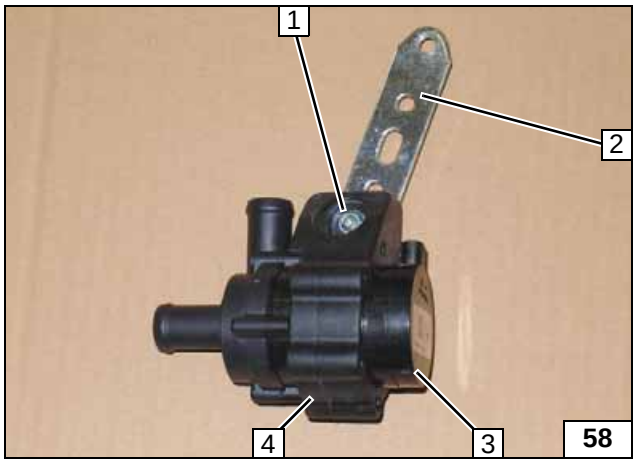
Connect hose **E** and **F** with 90° 18x18 mm dia. connecting pipe and 25 mm dia. spring clip [2x] (via hidden combustion air pipe).

Connecting heater inlet



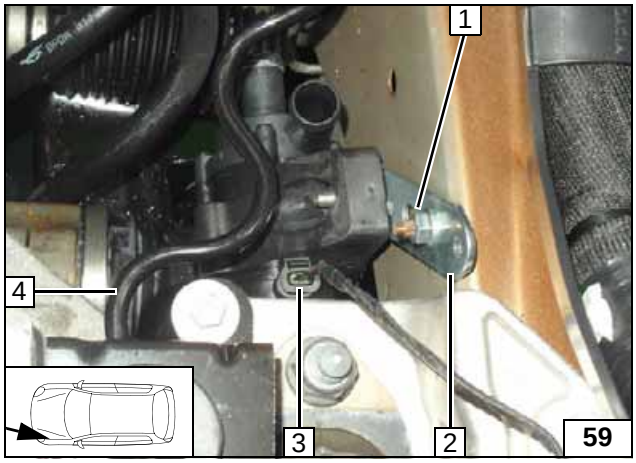
1 Clip-type cable tie on frame side member's side

Fastening hose E



1 M6x25 bolt, flanged nut
2 Perforated bracket
3 Circulating pump
4 Circulating pump mount

Premounting circulating pump

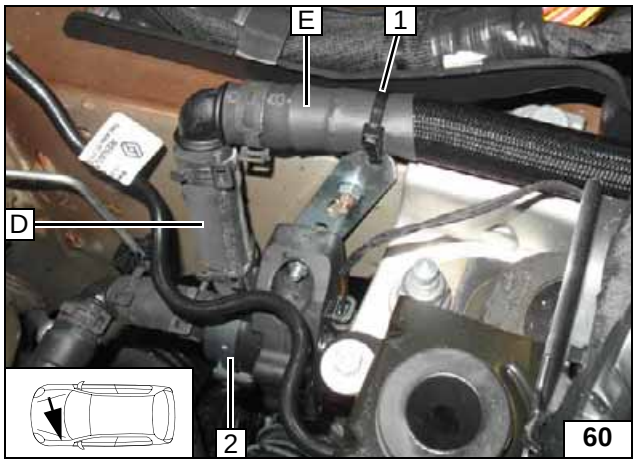


The installation of the circulating pump depends on the on-board routing of the coupling line.

Version A

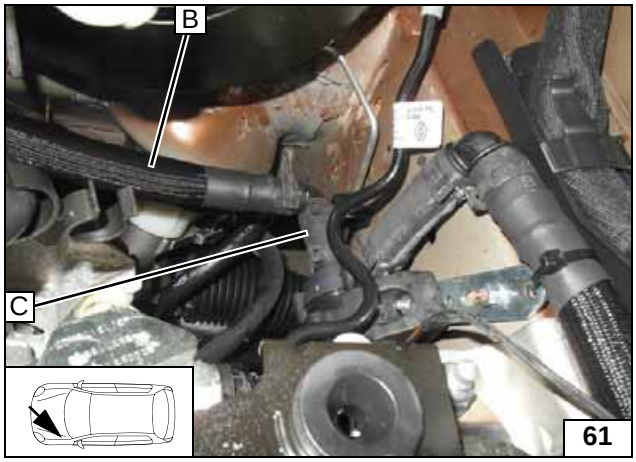
1 Flanged nut on original vehicle stud bolt
2 Perforated bracket
3 Circulating pump wiring harness
4 Coupling line

Installing circulating pump

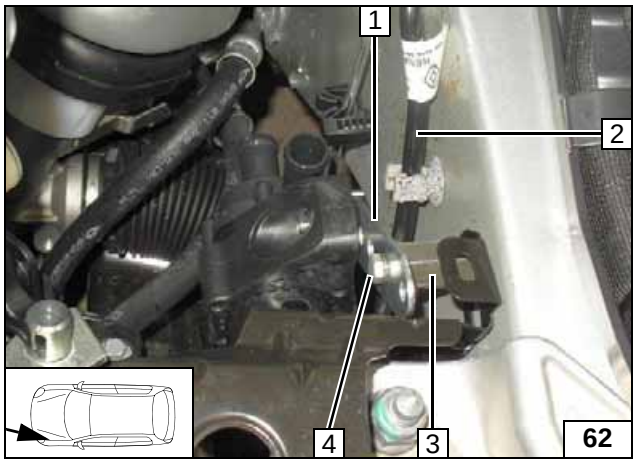


1 Cable tie on perforated bracket
2 Circulating pump

Connecting circulating pump outlet



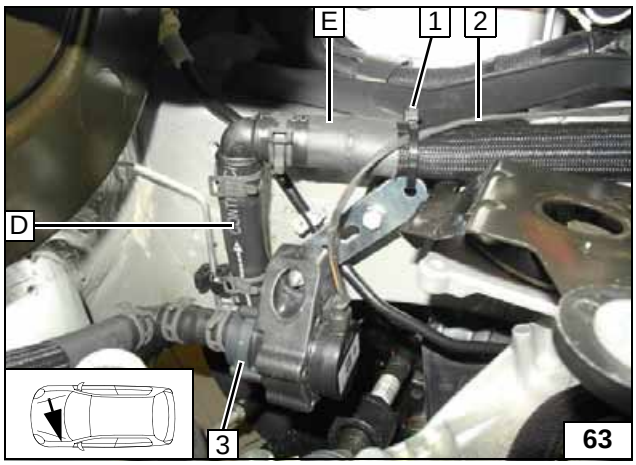
Connecting circulating pump inlet



Version B

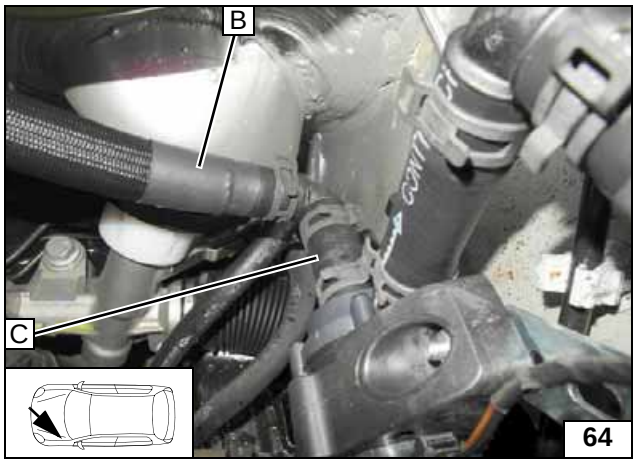
1 Perforated bracket
2 Coupling line
3 M6x30 spacer nut on original vehicle stud bolt
4 M6x12 bolt, spring lockwasher

Installing circulating pump



1 Cable tie on perforated bracket
2 Circulating pump wiring harness
3 Circulating pump

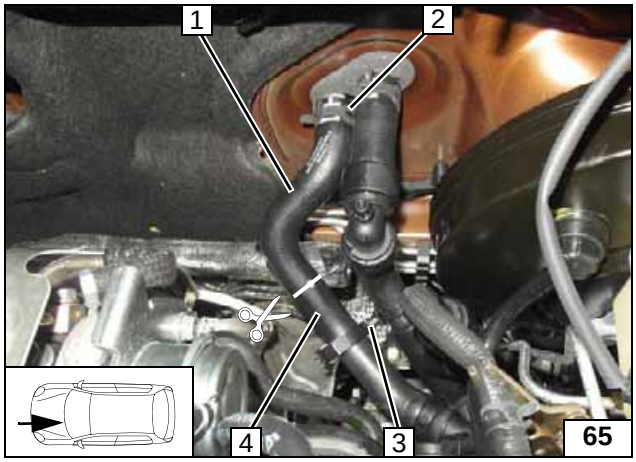
Connecting circulating pump outlet



Connecting circulating pump inlet

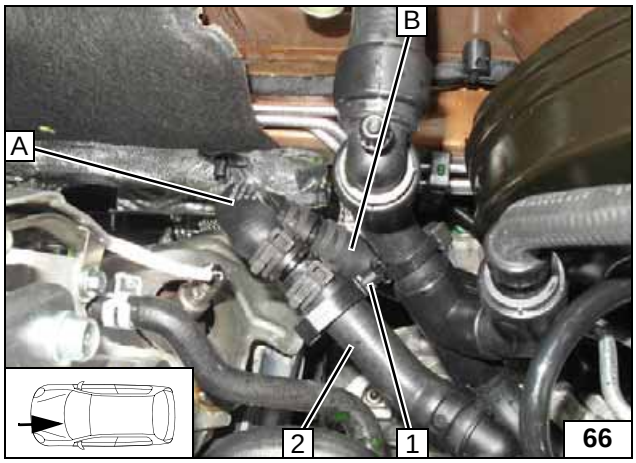
1.2 Petrol

Cut off hose of engine outlet/heat exchanger inlet at the marking.



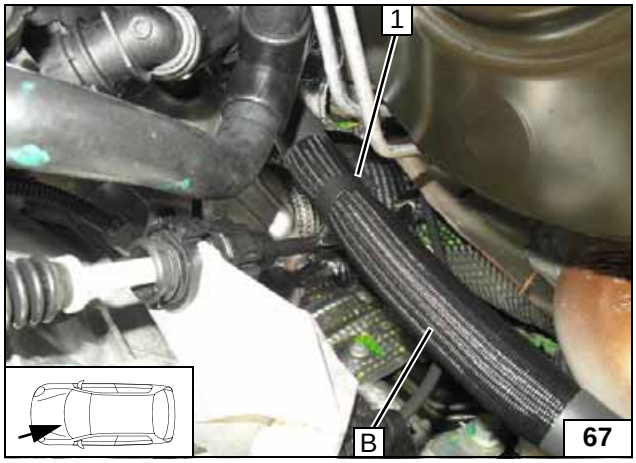
Cutting point

1 Remove and discard hose section of heat exchanger inlet.
2 Remove and discard spring clip
3 Remove hose bracket, will be reused.
4 Hose section of engine outlet



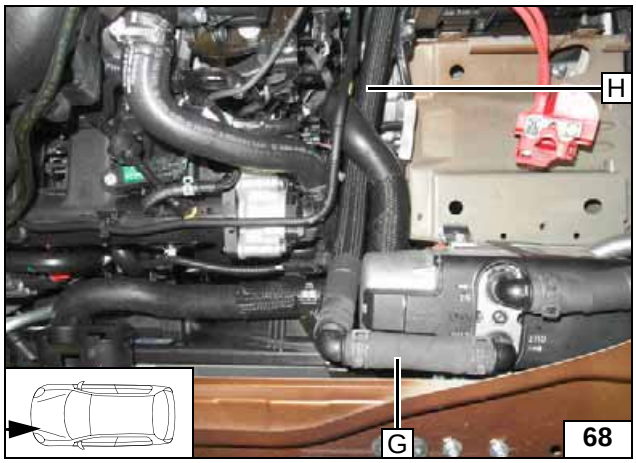
1 Original vehicle hose bracket
2 Hose of engine outlet

Connecting engine outlet

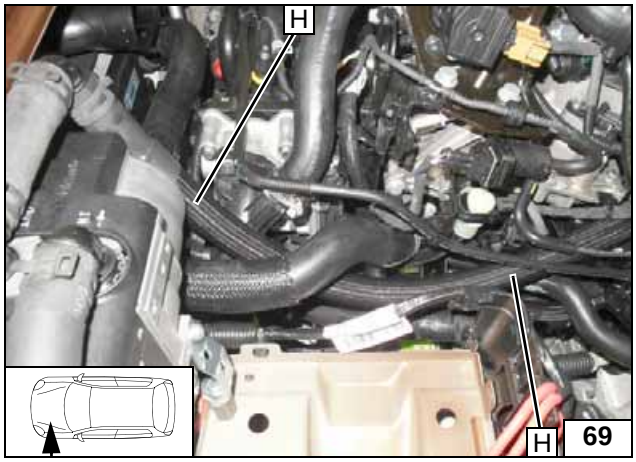


1 22x8 hose bracket between hose **B** and gearshift cable

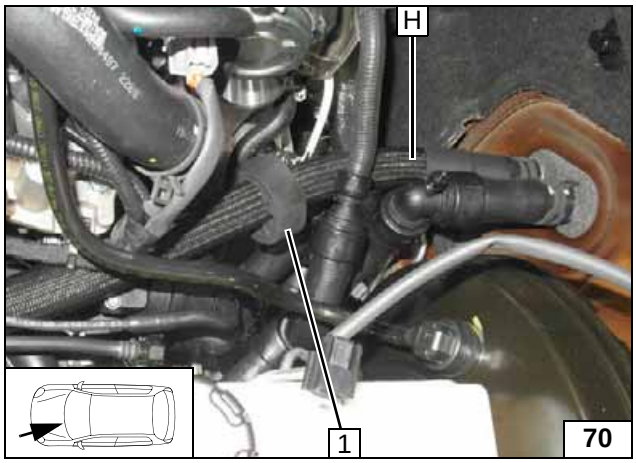
Installing hose bracket



Connecting heater outlet

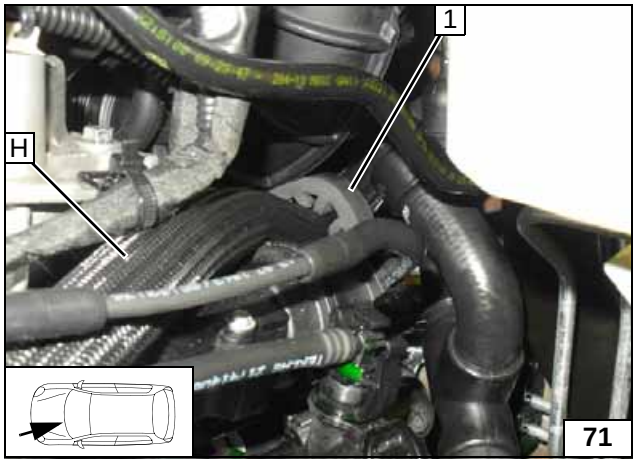


Routing in engine compartment



1 Slide on black (sw) rubber isolator

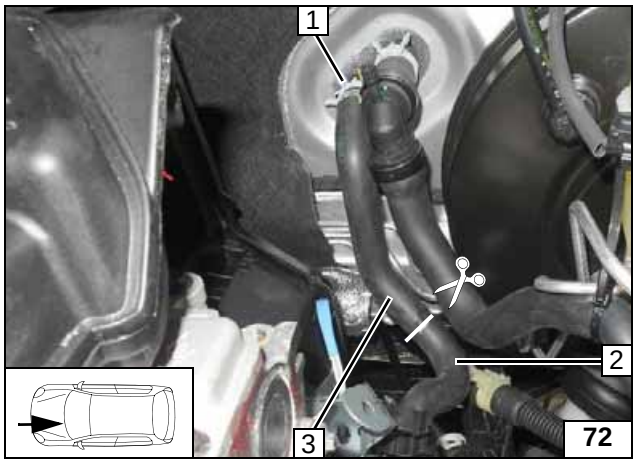
Connecting heat exchanger inlet



Mount the intake hose. Ensure sufficient distance from neighbouring components; correct if necessary.

1 Align black (sw) rubber isolator with intake hose

Aligning hoses

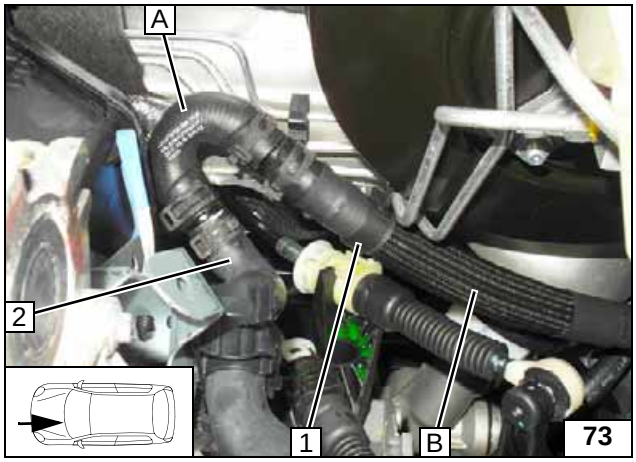


1.6 Petrol 77kW

Cut off hose of engine outlet/heat exchanger inlet at the marking.

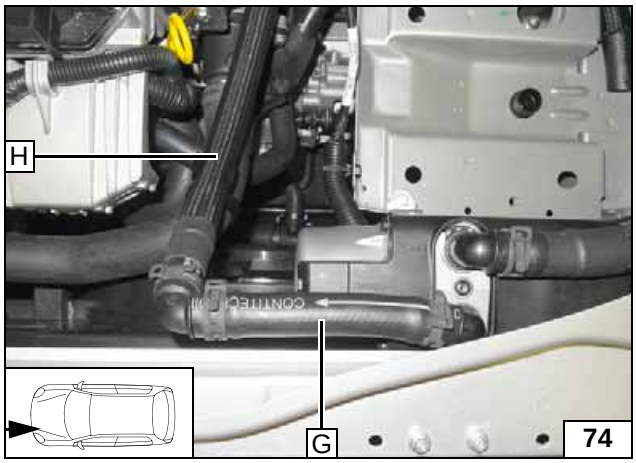
1 Remove and discard spring clip
2 Hose section of engine outlet
3 Remove and discard hose section of heat exchanger inlet.

Cutting point

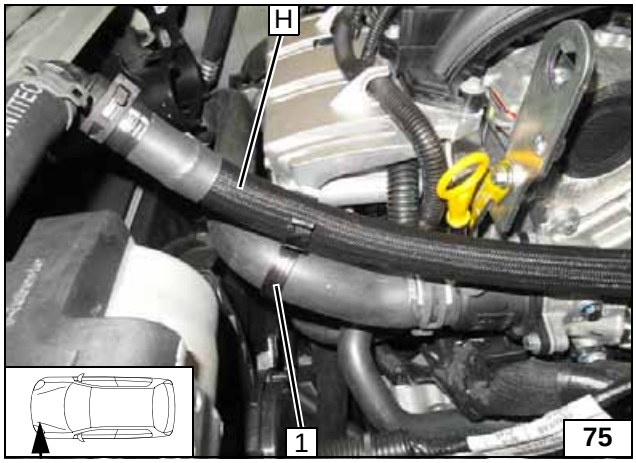


1 22x4 hose bracket between hose **B** and original vehicle line.
2 Hose of engine outlet

Connecting engine outlet

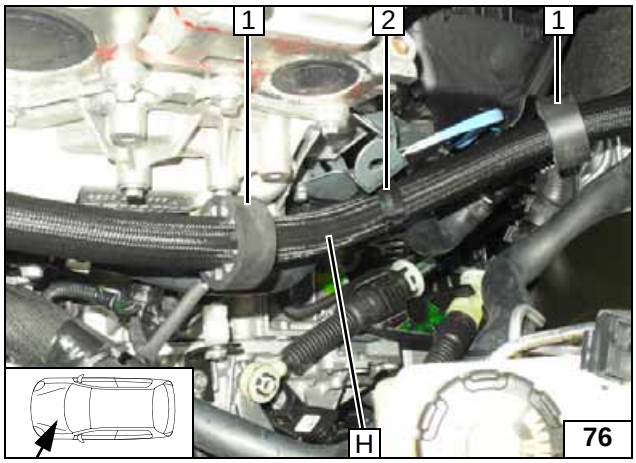


Connecting heater outlet



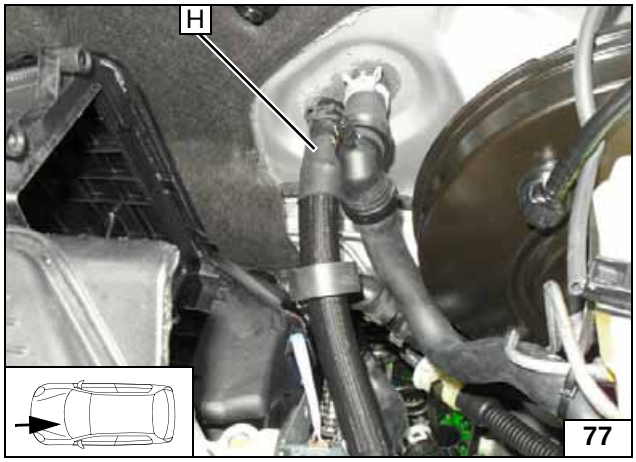
1 37x25 hose bracket between radiator hose and hose **H**

Routing in engine compartment

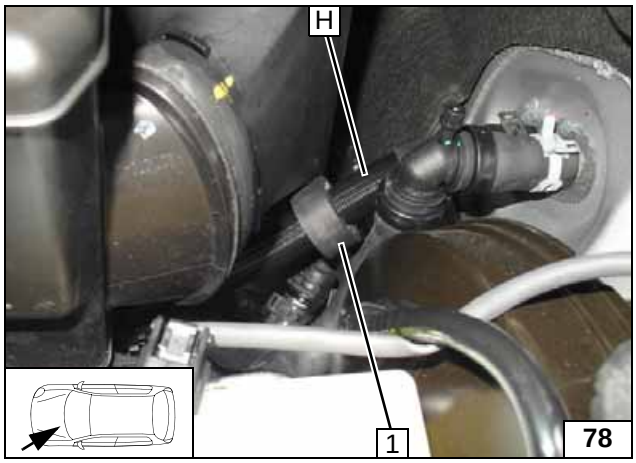


Slide black (sw) rubber isolator **1** [2x] onto hose **H**. Insert hose **H** into original vehicle hose bracket **2**.

Routing in engine compartment

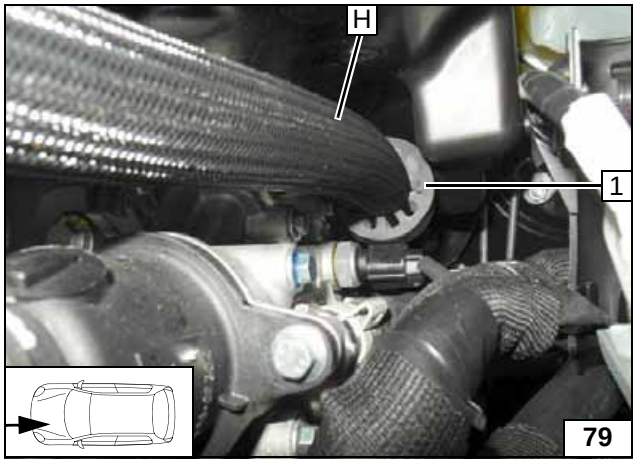


Connecting heat exchanger inlet



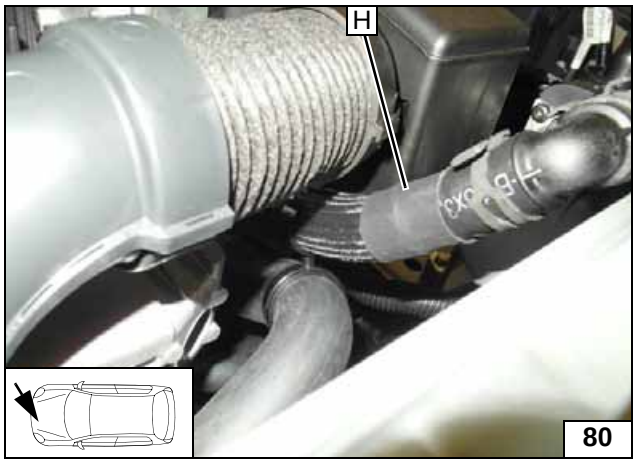
Install air filter housing. Align black (sw) rubber isolator **1** with air filter housing.

Aligning hose H



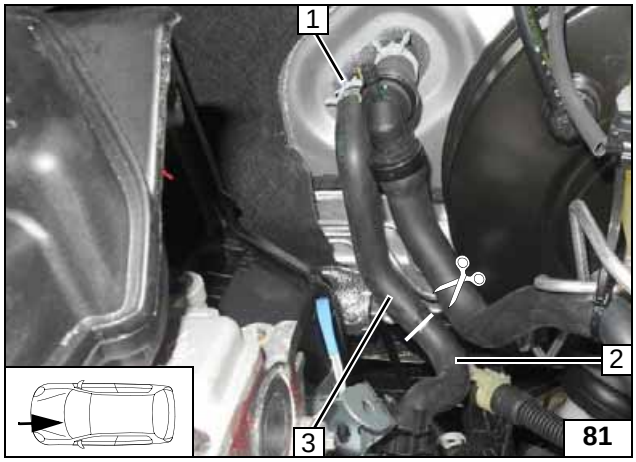
Align black (sw) rubber isolator **1** with connector and air filter housing.

Aligning hose H



Mount the intake hose. Align hose **H** as shown. Ensure sufficient distance from neighbouring components; correct if necessary.

Aligning hose H

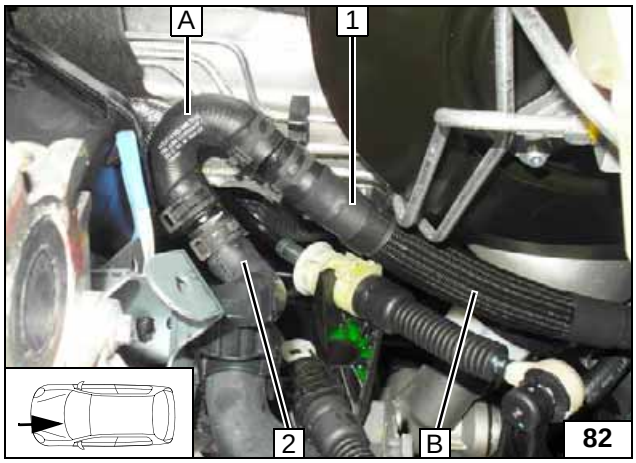


1.6 Petrol 84kW

Cut off hose of engine outlet/heat exchanger inlet at the marking.

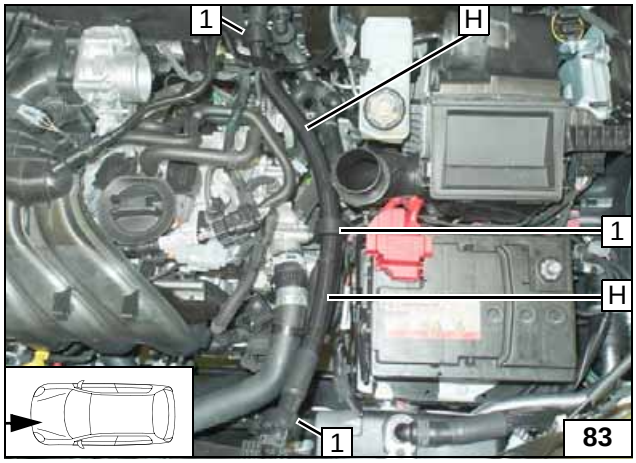
1 Remove and discard spring clip
2 Hose section of engine outlet
3 Remove and discard hose section of heat exchanger inlet.

Cutting point



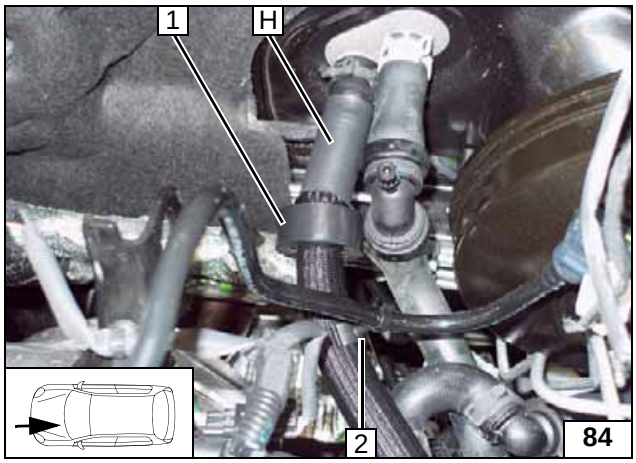
1 22x4 hose bracket between hose **B** and original vehicle line.
2 Hose of engine outlet

Connecting engine outlet



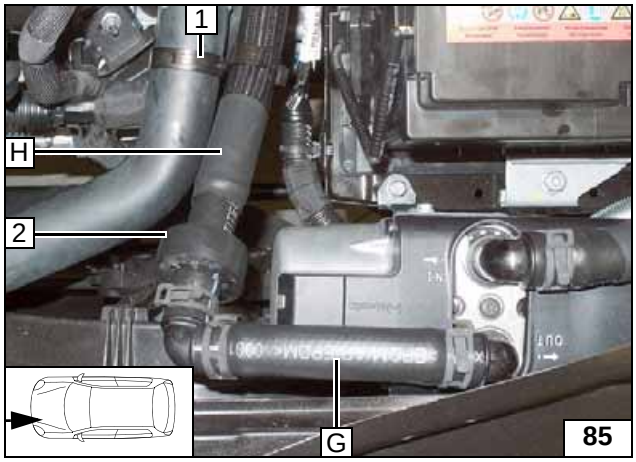
Slide black (sw) rubber isolator **1** [3x] onto hose **H**.

Routing hose H



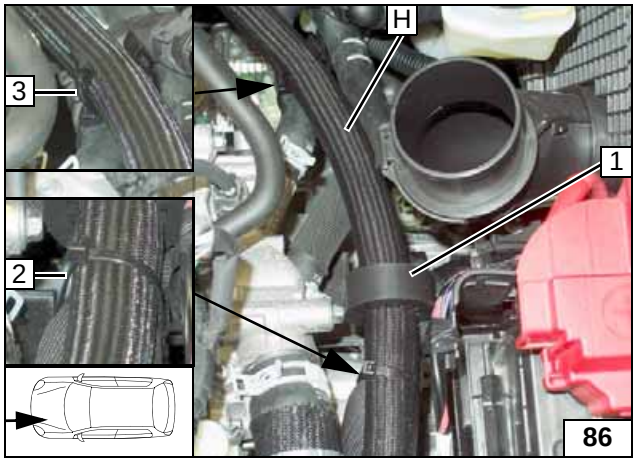
1 Position black (sw) rubber isolator
2 22x8 hose bracket

Connecting heat exchanger inlet



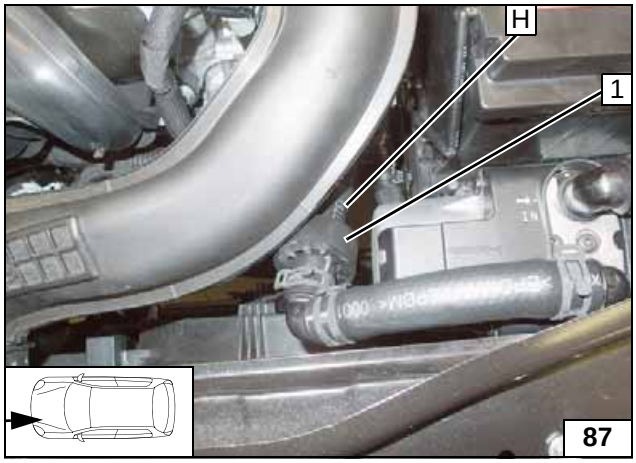
1 37x25 hose bracket between radiator hose and hose **H**
2 Position black (sw) rubber isolator

Connecting heater outlet



1 Position black (sw) rubber isolator, between engine block and battery box
2 Cable tie on original vehicle wiring harness
3 Original vehicle hose bracket

Routing in engine compartment



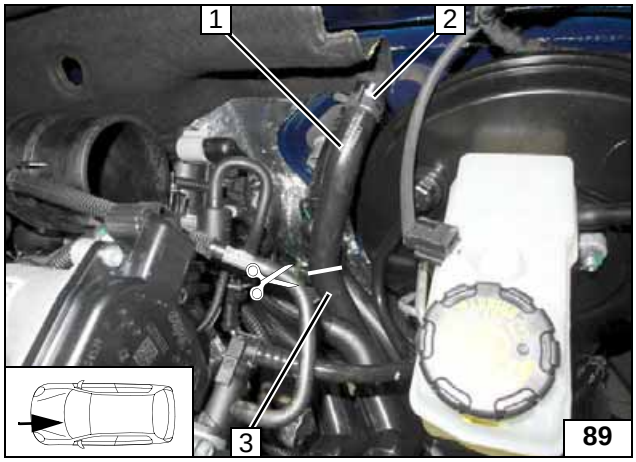
Mount the intake hose. Align hose **H** as shown. Align rubber isolator **1** between air intake pipe and heater.

Aligning hose H

Diesel

Pull engine outlet / heat exchanger inlet hose **1** off heat exchanger inlet connection piece.

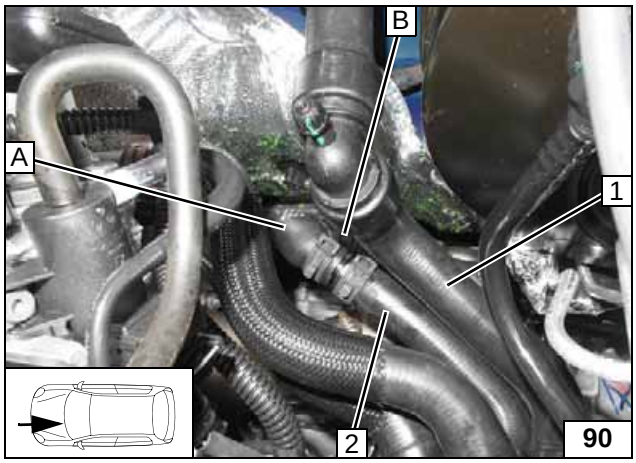
Cutting point



Cut off hose of engine outlet/heat exchanger inlet at the marking.

1 Remove and discard hose section of heat exchanger inlet.
2 Remove and discard spring clip
3 Hose section of engine outlet

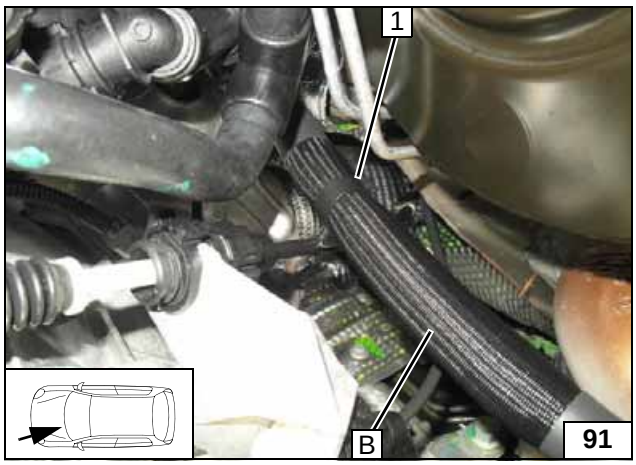
Cutting point



Route hose **B** beneath hose / heat exchanger outlet / engine inlet.

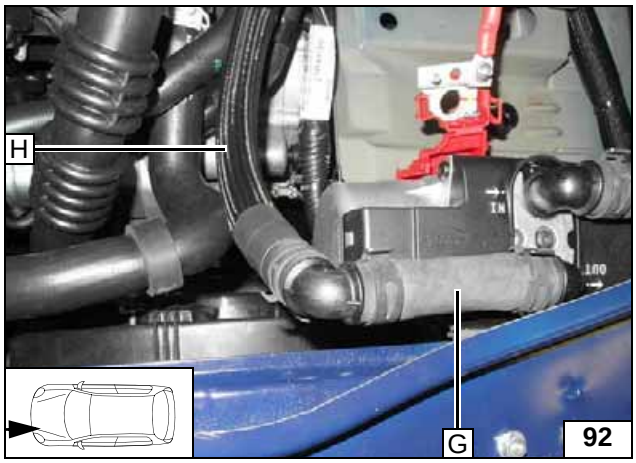
1 Hose of engine inlet
2 Hose of engine outlet

Connecting engine outlet

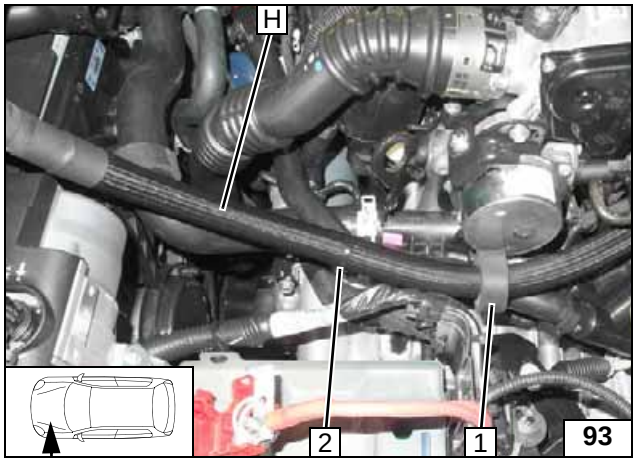


1 22x8 hose bracket between hose **B** and gearshift cable

Installing hose bracket

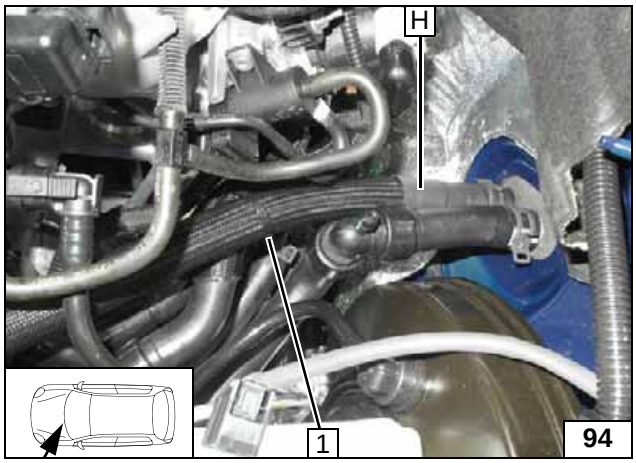


Connecting heater outlet



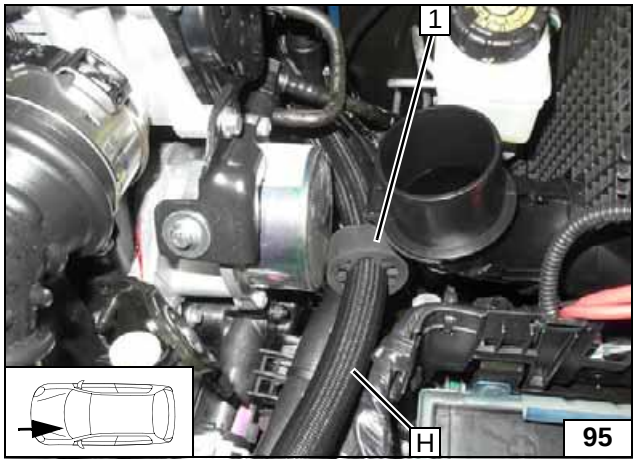
1 Slide on black (sw) rubber isolator
2 Cable tie

Routing in engine compartment



1 Cable tie

Connecting heat exchanger inlet

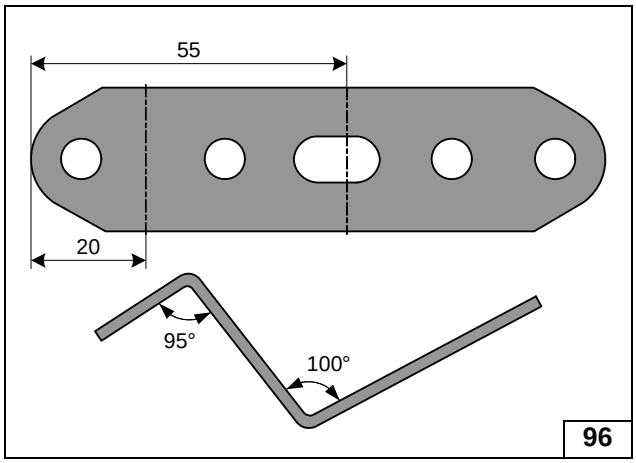


Ensure sufficient distance from neighbouring components; correct if necessary.

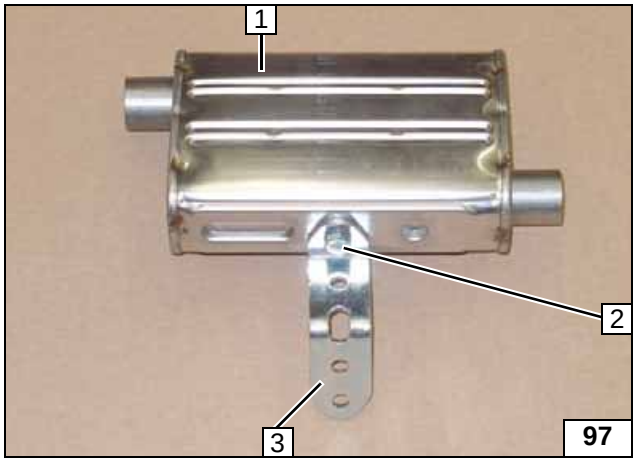
1 Position black (sw) rubber isolator

Aligning hoses

Exhaust Gas

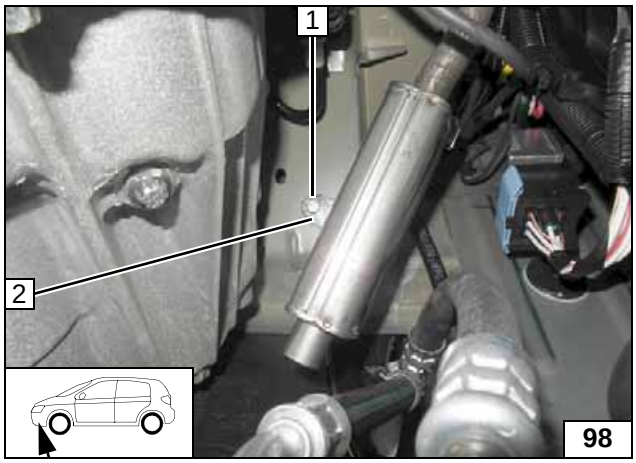


Preparing perforated bracket



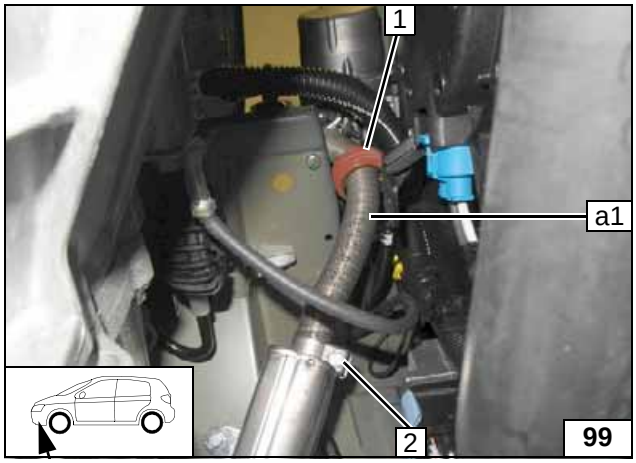
1 Silencer
2 M6x16 bolt, spring lockwasher
3 Perforated bracket

Premounting silencer



1 M6x20 bolt, spring lockwasher on rivet nut
2 Perforated bracket

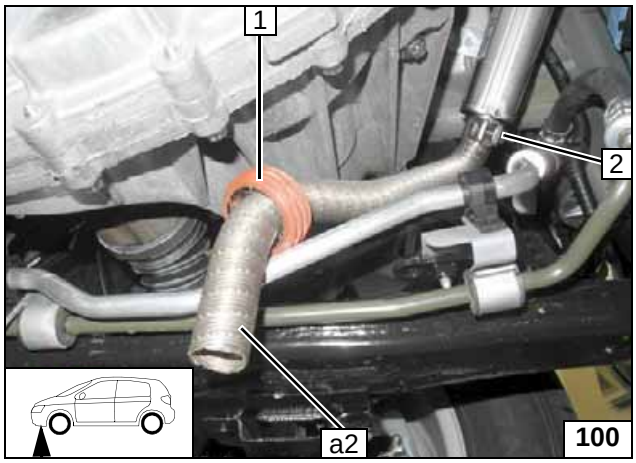
Installing silencer



Ensure sufficient distance (at least 20mm) from neighbouring components; correct if necessary.

1 Spacer bracket
2 Hose clamp

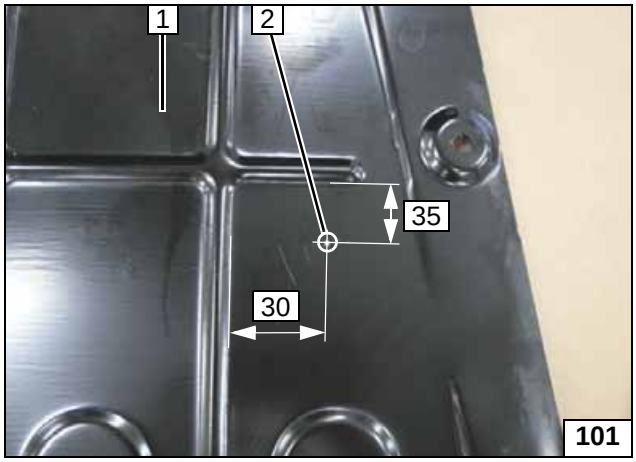
Installing exhaust pipe a1



Slide on spacer bracket **1** and align with A/C line. Ensure sufficient distance (at least 20mm) from neighbouring components; correct if necessary.

2 Hose clamp

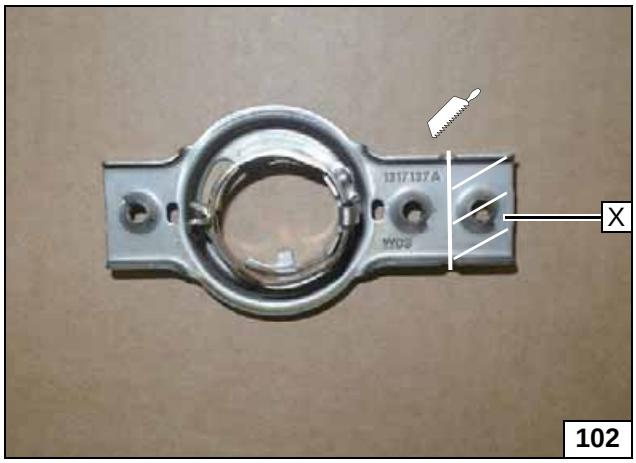
Installing exhaust pipe a2



Version 1 - Metallic underride protection

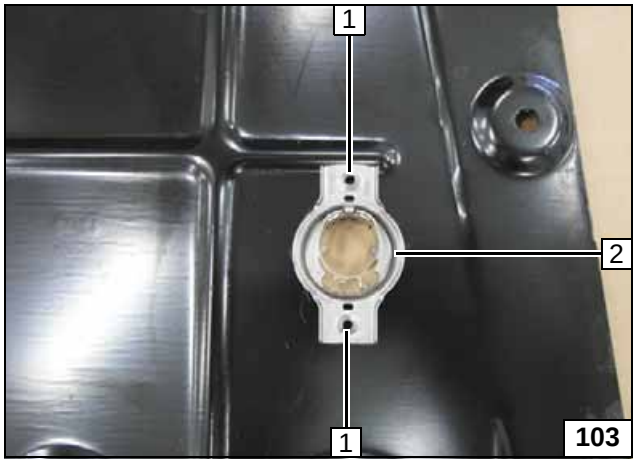
1 Underride protection
2 Copy hole pattern, hole (as per work step 1 of the installation instructions)

Cutting out underride protection



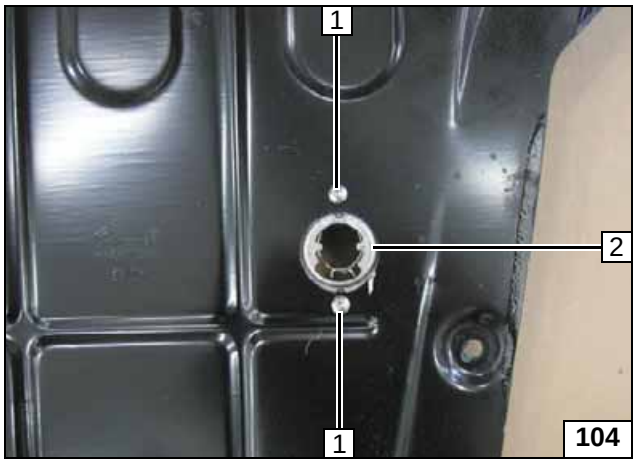
X =

Cutting exhaust end fastener to length



Position exhaust end fastener **2** as per work step 3 of the installation instructions and copy hole pattern **1** [2x].

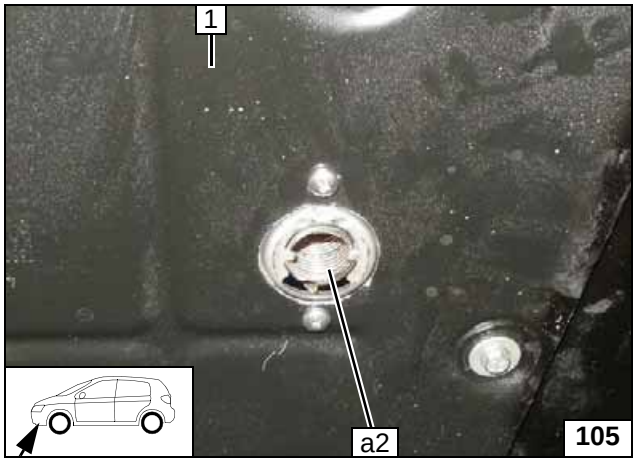
Holes in underride protection



Hole [2x] as per work step 4 of the installation instructions.

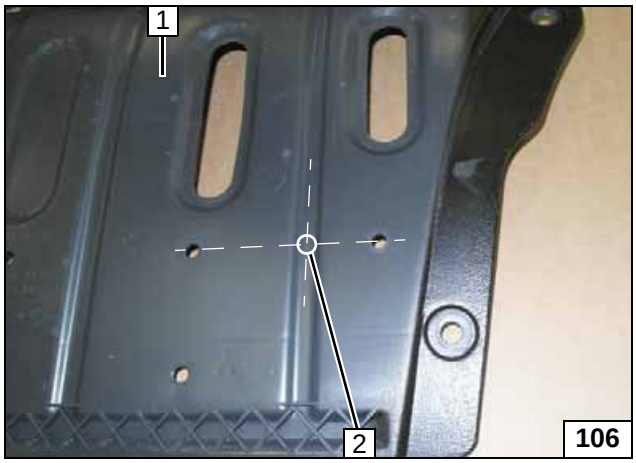
1 5x13 self-tapping screw [2x] as per work step 5 of the installation instructions.
2 Exhaust end fastener

Installing exhaust end fastener



Install underride protection **1**.
Install exhaust pipe **a2** as per work steps 6 - 8 of the installation instructions.

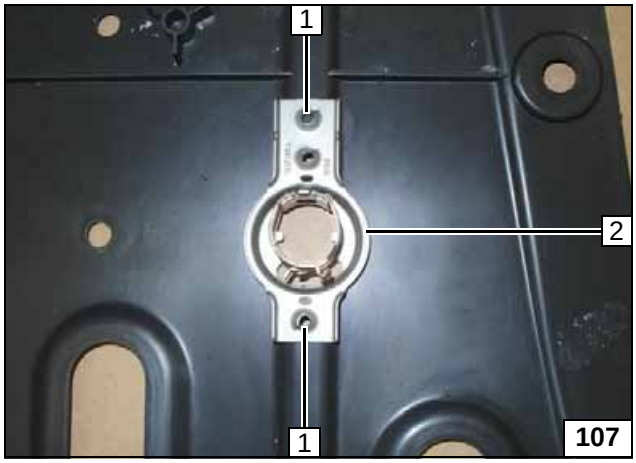
Installing exhaust pipe a2



Version 2 - Plastic underride protection

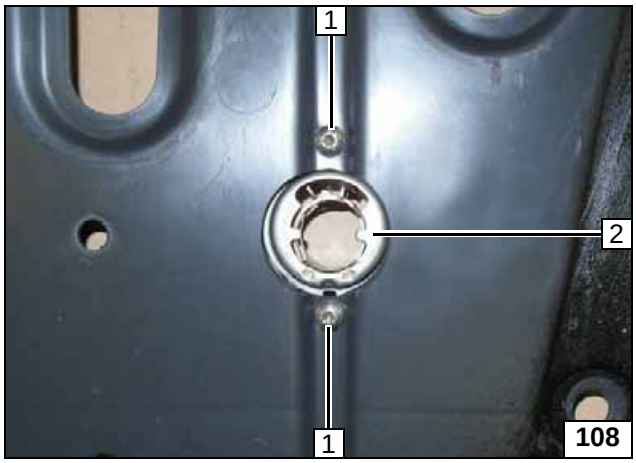
1 Underride protection
2 Copy hole pattern (in centre of bead), hole (as per work step 1 of the installation instructions)

Cutting out underride protection



Position exhaust end fastener **2** as per work step 3 of the installation instructions and copy hole pattern **1** [2x].

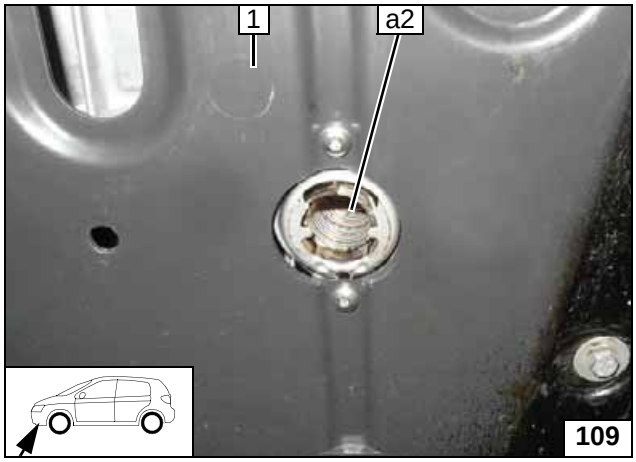
Holes in underride protection



Hole [2x] as per work step 4 of the installation instructions.

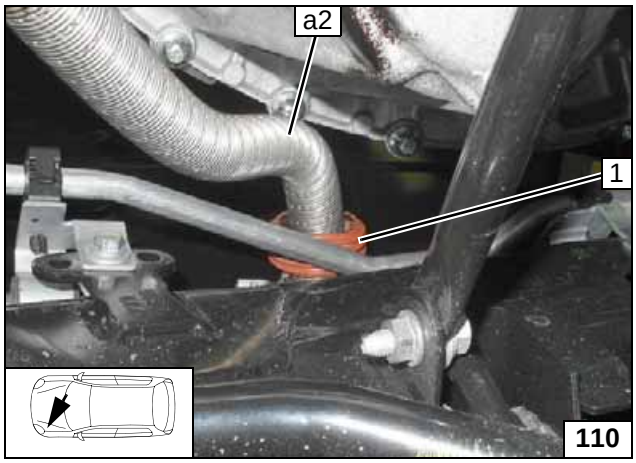
1 5x13 self-tapping screw [2x] as per work step 5 of the installation instructions.
2 Exhaust end fastener

Installing exhaust end fastener



Install underride protection **1**.
Install exhaust pipe **a2** as per work steps 6 - 8 of the installation instructions.

Installing exhaust pipe a2



All vehicles

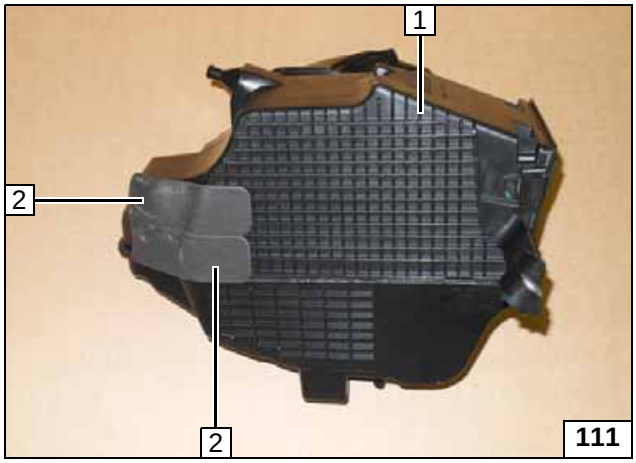
Align spacer bracket **1** of exhaust pipe **a2** with A/C line. Ensure sufficient distance (at least 20mm) from neighbouring components; correct if necessary.

Aligning exhaust pipe a2

Final Work

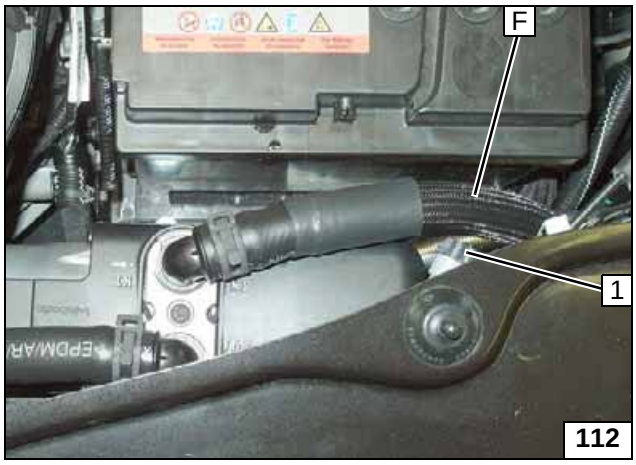
WARNING!
Reassemble the components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate and tie back loose lines.
Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K).

- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's instructions.**
- **Program MultiControl CAR, teach Telestart transmitter.**
- **Make settings on the A/C control panel according to the 'Operating Instructions'.**
- **Place the 'Switch off parking heater before refuelling' caution label near the filler neck.**
- **For initial startup and function check, please see installation instructions.**



1 Air filter box
2 Insulation protection strips [2x]

Applying insulation protection strips



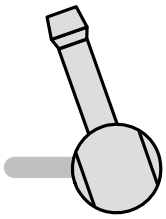
Align hose **F** with bonnet contact switch **1**. Ensure sufficient distance from neighbouring components; correct if necessary.

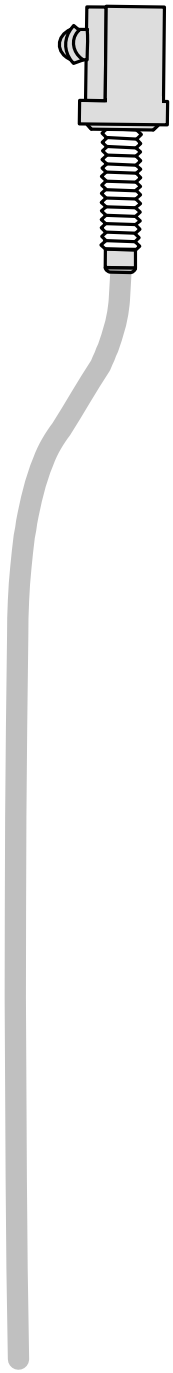
Aligning hose F

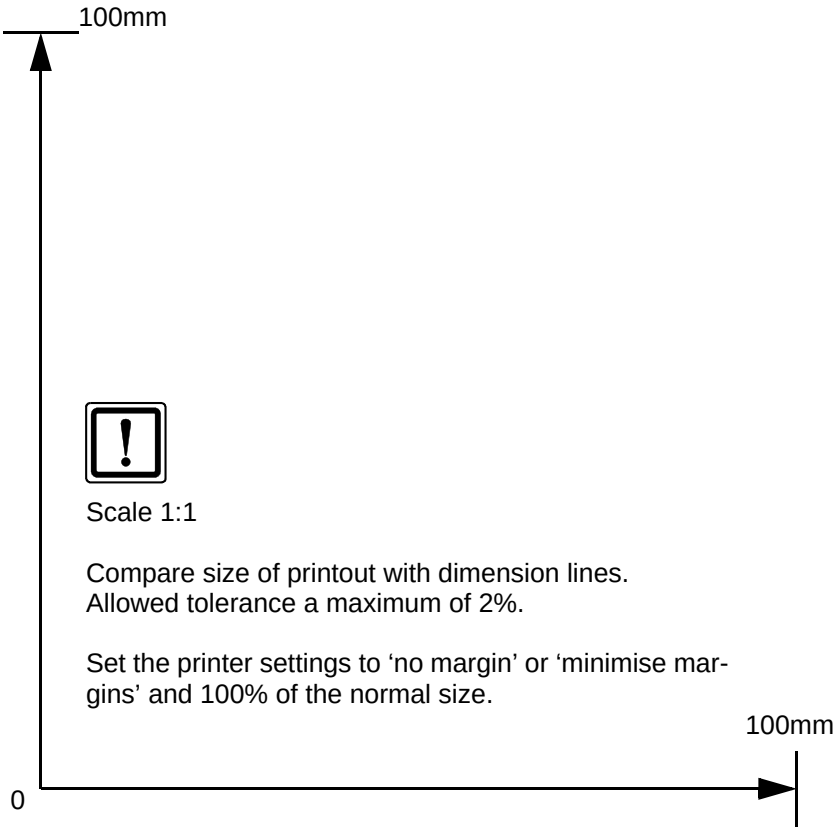
Webasto Thermo & Comfort SE
Postfach 1410
82199 Gilching
Germany
Internet: www.webasto.com
Technical Extranet:
http://dealers.webasto.com

Fuel Standpipe Template

Top view







Scale 1:1

Compare size of printout with dimension lines.
Allowed tolerance a maximum of 2%.

Set the printer settings to ‘no margin’ or ‘minimise margins’ and 100% of the normal size.

Operating Instructions

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.

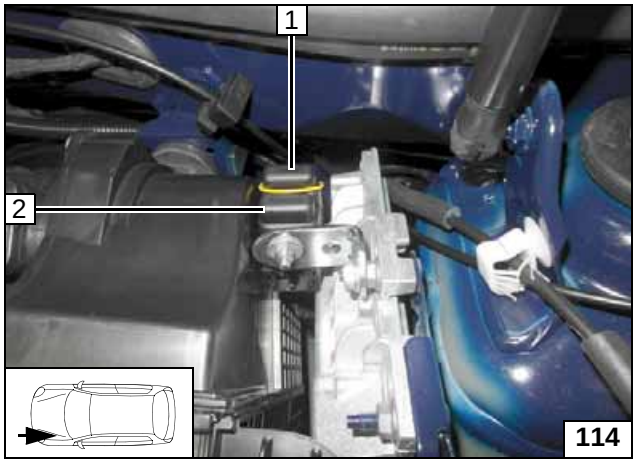
Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:

A/C control panel

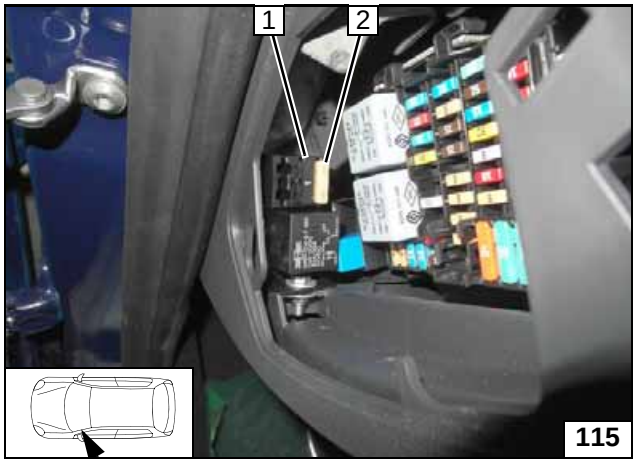
1 Air outlet to windscreen
2 Set fan to level ‘1’, or max. ‘2’
3 Set temperature to ‘max.’

Engine compartment fuses



1 20A heater fuse F1
2 30A passenger compartment main fuse F2

Passenger compartment fuses



1 1A heater control fuse F3
2 25A fan fuse F4