Water Heater

Webasto
Feel the Drive

***Thermo Top Evo* Parking Heater**

E1
00 0258

Installation Documentation
Ford Fiesta

Validity

Manufacturer	Model	Type	EG-BE-No. / ABE
Ford	Fiesta	JA 8	e9 * 2001 / 116 * 0069 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
1.0 EcoBoost	Petrol	5-speed SG	74	998	C1B9
1.0 EcoBoost	Petrol	6-speed SG	92	998	M1JE
1.0	Petrol	5-speed SG	48	998	CA6G
1.0	Petrol	5-speed SG	59	998	P4JA
1.25	Petrol	5-speed SG	60	1242	SNJA / SNJB

SG = manual transmission

From Model Year 2013
Left-hand drive vehicle

Verified equipment variants:	Manual / automatic air-conditioning system
	Front fog light
	Start - Stop
Not verified:	Passenger compartment monitoring
	Headlight washer system
Total installation time:	approx. 7.5 hours

Ford Fiesta

Table of Contents

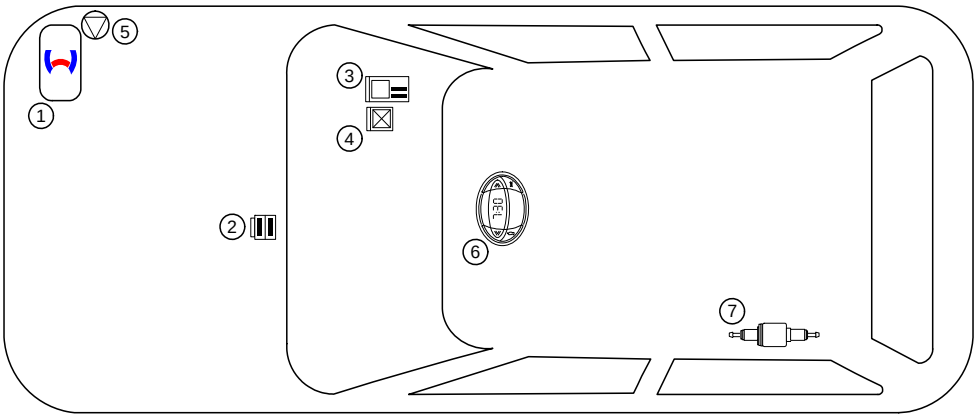
Necessary Components

- Basic delivery scope *Thermo Top Evo* in accordance with price list
- Installation kit Ford Fiesta 2013 Petrol: **1319234B**
- Kit for Automatic Air-Conditioning Ford Fiesta: **1314410B**
- Heater control in accordance with price list and upon consultation with end customer
- In case of Telestart, indicator lamp in accordance with price list and in consultation with end customer

Installation Overview

Legend:

1. Heater
2. Engine compartment fuse holder
3. Passenger compartment relay and fuse holder
4. IPCU (only in the case of automatic air-conditioning)
5. Circulating pump
6. Digital timer
7. Metering pump



Information on Total Installation Time

The total installation time includes the time needed for mounting and demounting of 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 repair 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 227).

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, Order No. 111329).

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

2 Statutory regulations governing installation

Guidelines	Thermo Top Evo
Heating Directive ECE R122	E1 00 0258
EMC Directive ECE R10	E1 03 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

For vehicles with an EU permit, no entry in accordance with § 19 Sub-Section 4 of Annex VIII b to the Road Traffic Act is required.

2.1 Excerpt from the directive 2001/56/EC Appendix VII 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.

Ford Fiesta

Information on Validity

This installation documentation applies to Ford Fiesta Petrol vehicles - for validity, see page 1 - from model year 2013 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 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 self-clamping 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
- Webasto Thermo Test diagnosis with current software

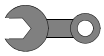
Dimensions
- All dimensions are in mm

Tightening torque values
- Tightening torque values of 5x13 heater bolts and 5x11 heater stud bolts = 8Nm.
- Tightening torque values of 5x15 retaining plate of water connection piece bolts = 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.

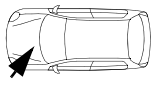
Specific risk of damage to components.

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.



Ford Fiesta

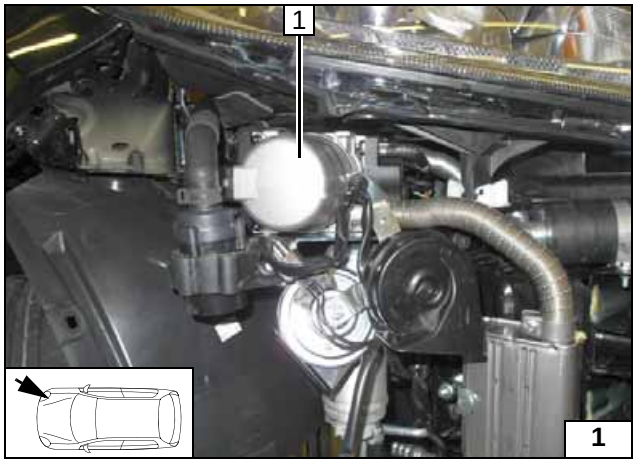
Preliminary Work

Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect and remove the battery.
- Drain off the coolant.
- Loosen the expansion tank and lay it aside (only for 1.0 B)
- Remove the expansion tank (only for 1.25 B).
- Remove the intake hose between the engine and the air filter box (only for 1.0 48kW).
- Loosen the wheel well trim in the right and left front areas.
- Remove the bumper trim.
- Remove the right headlight, loosen the left.
- Remove the horn with bracket and disassemble it.
- Remove the footwell trim on the front passenger's side (only in case of automatic air-conditioning).
- Remove the glove compartment (only with automatic air-conditioning).

Heater

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



Heater Installation Location

1 Heater

Installation location

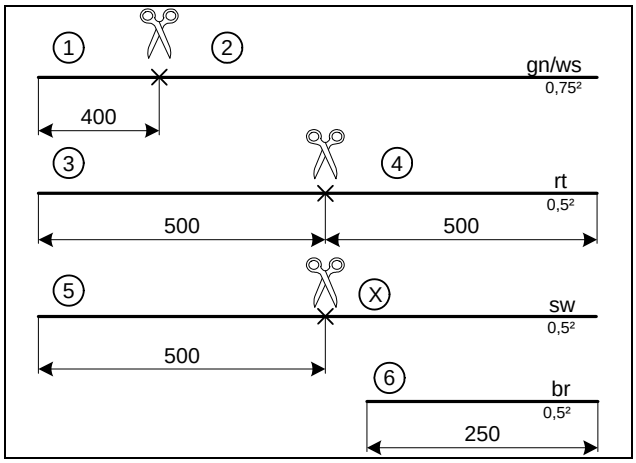
Preparing Electrical System

Wire sections retain their numbering in the entire document.
Discard section **X**.

Automatic air-conditioning

Wire section ② will be required later for connecting IPCU.

Cutting wires to length

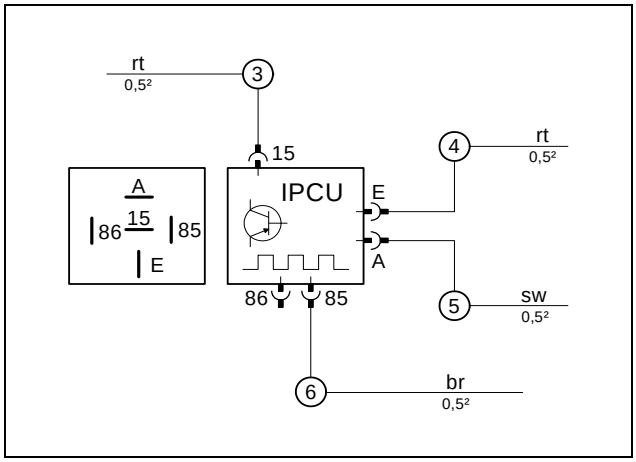


Connect wires to IPCU socket.
IPCU view on contact side.
Check the IPCU settings before start-up of the heater and adjust if necessary.

IPCU settings:

Duty cycle: 27%
Frequency: 400Hz
Voltage: 10V
Function: Low side

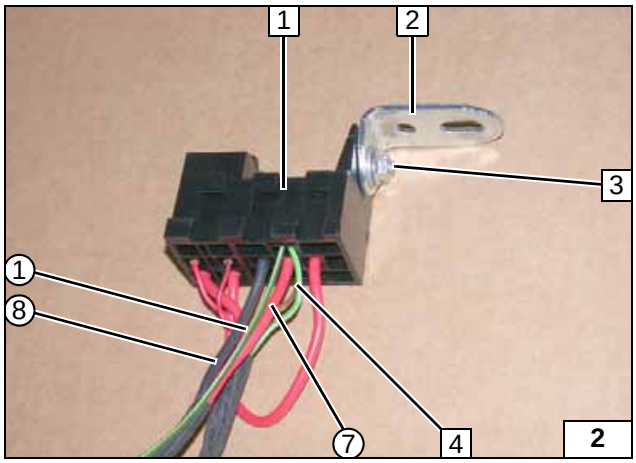
Premounting IPCU



K1 relay is inserted only after installing the passenger compartment fuse holder.
Detach/remove K1/86 contact.
Install wires as shown in following wiring diagram with contacts supplied.

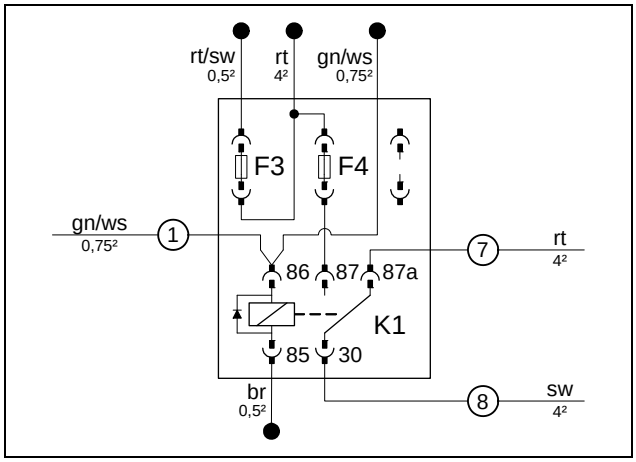
1 Passenger compartment relay and fuse holder
2 Angle bracket
3 M5x16 bolt, large diameter washer, nut
4 Green/white (gn/ws) wire of K1/86
① Green/white (gn/ws) wire of K1/86

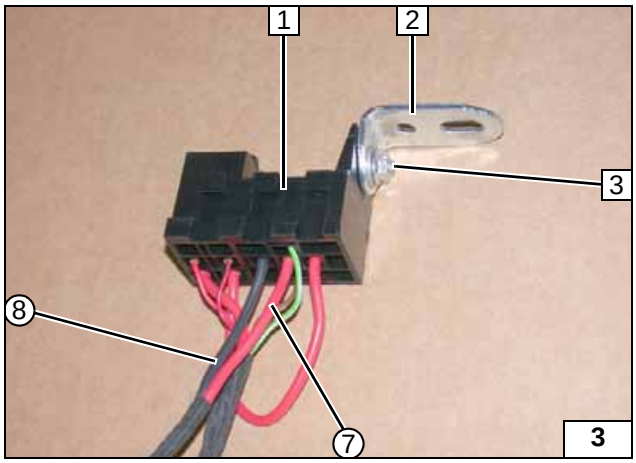
Preparing the relay and fuse holder of the passenger compartment



Insert 25A fuse F4.

Preparing the relay and fuse holder of the passenger compartment





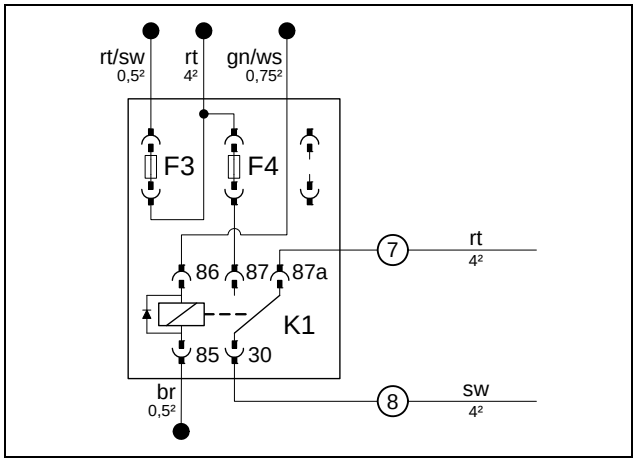
3

Manual air-conditioning

Connect wires as shown in the wiring diagram. K1 relay is inserted only after installing the fuse holder.

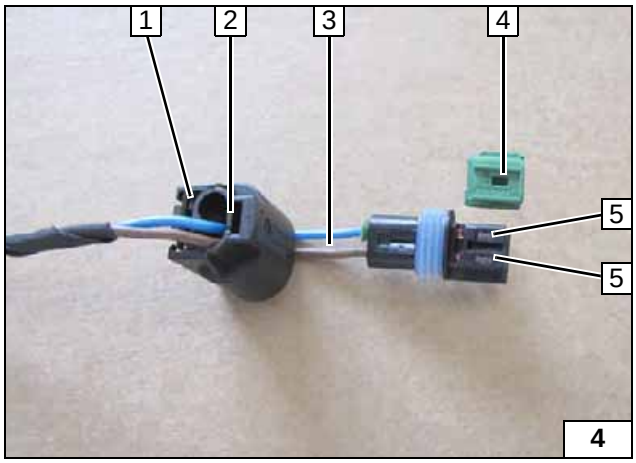
1 Passenger compartment relay and fuse holder
2 Angle bracket
3 M5x16 bolt, large diameter washer, nut

Cutting wires to length



Insert 25A fuse F4.

Preparing the relay and fuse holder of the passenger compartment



4

All vehicles

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

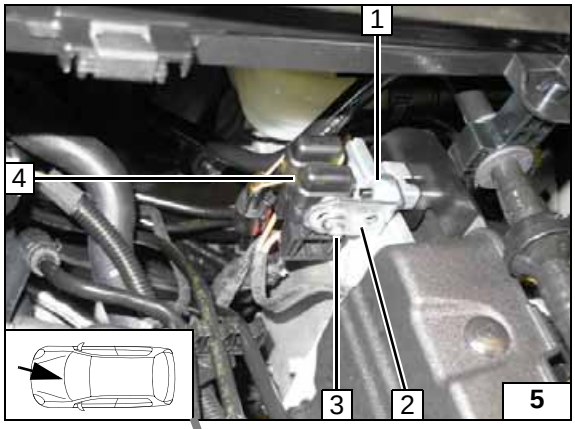
1 Connector housing
2 Lock
3 Blue/brown (bl / br) wires
4 Coding
5 Timer lock

Dismantling connector

Electrical System

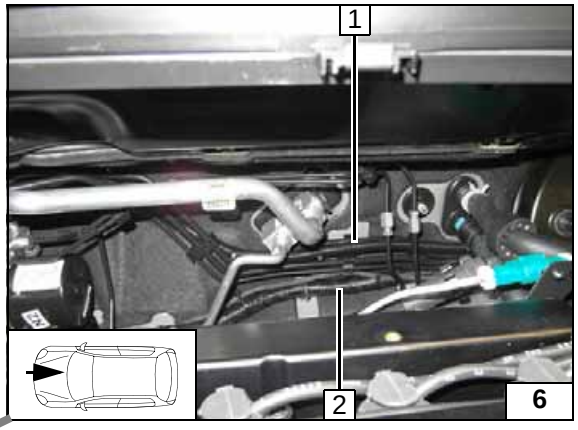
Fuse holder of engine compartment

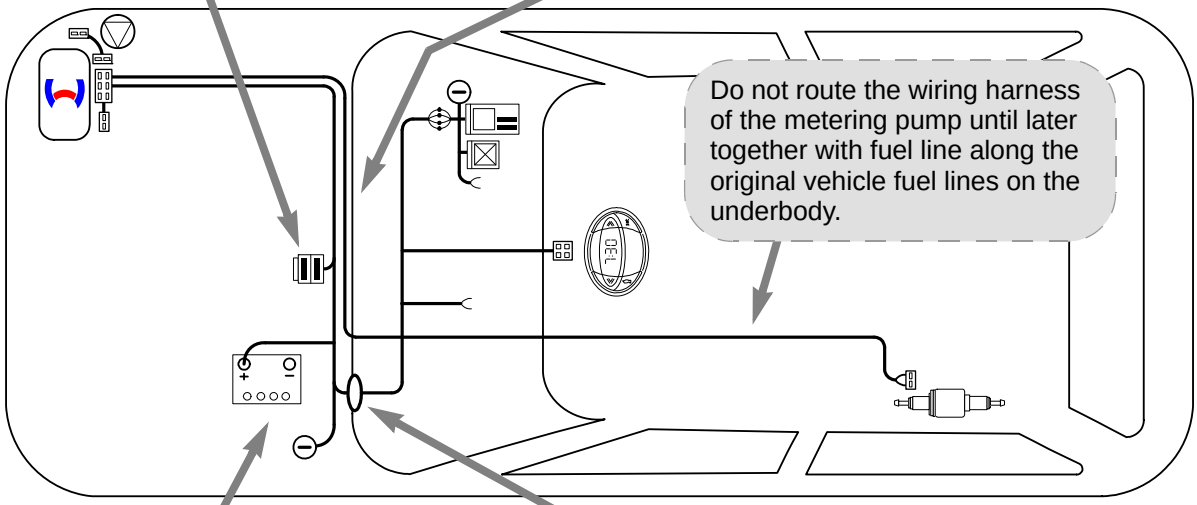
1 Original vehicle stud bolt, original vehicle nut
2 Angle bracket
3 M5x16 bolt, large diameter washer [2x], nut
4 Fuses F1-2



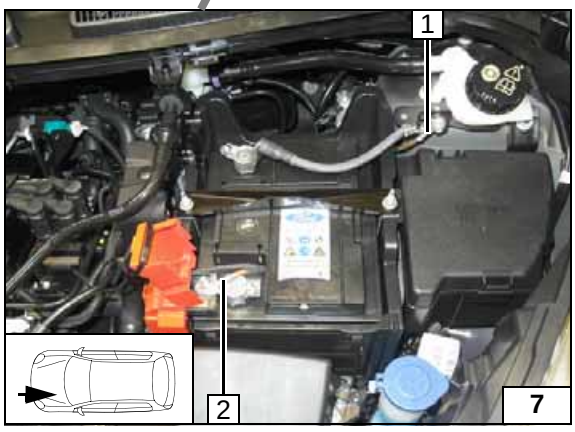
Wiring harness routing

1 Fuel line, wiring harness of metering pump in 10mm dia. corrugated tube
2 Wiring harness of heater, wiring harness of heater control in 10mm dia. corrugated tube



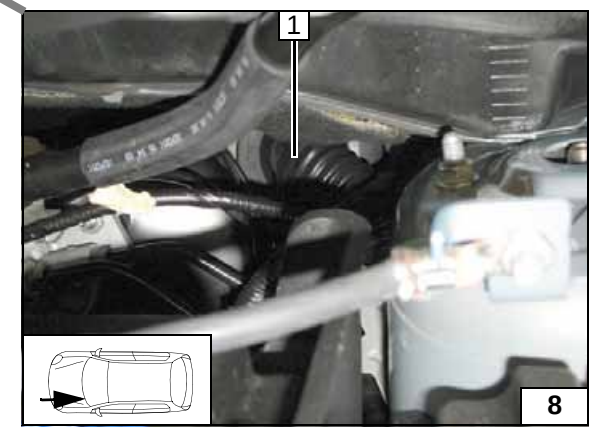


Wiring harness routing diagram



Plus and earth wire

1 Earth wire on original vehicle earth point
2 Positive wire, 8mm dia. cable lug on positive battery terminal

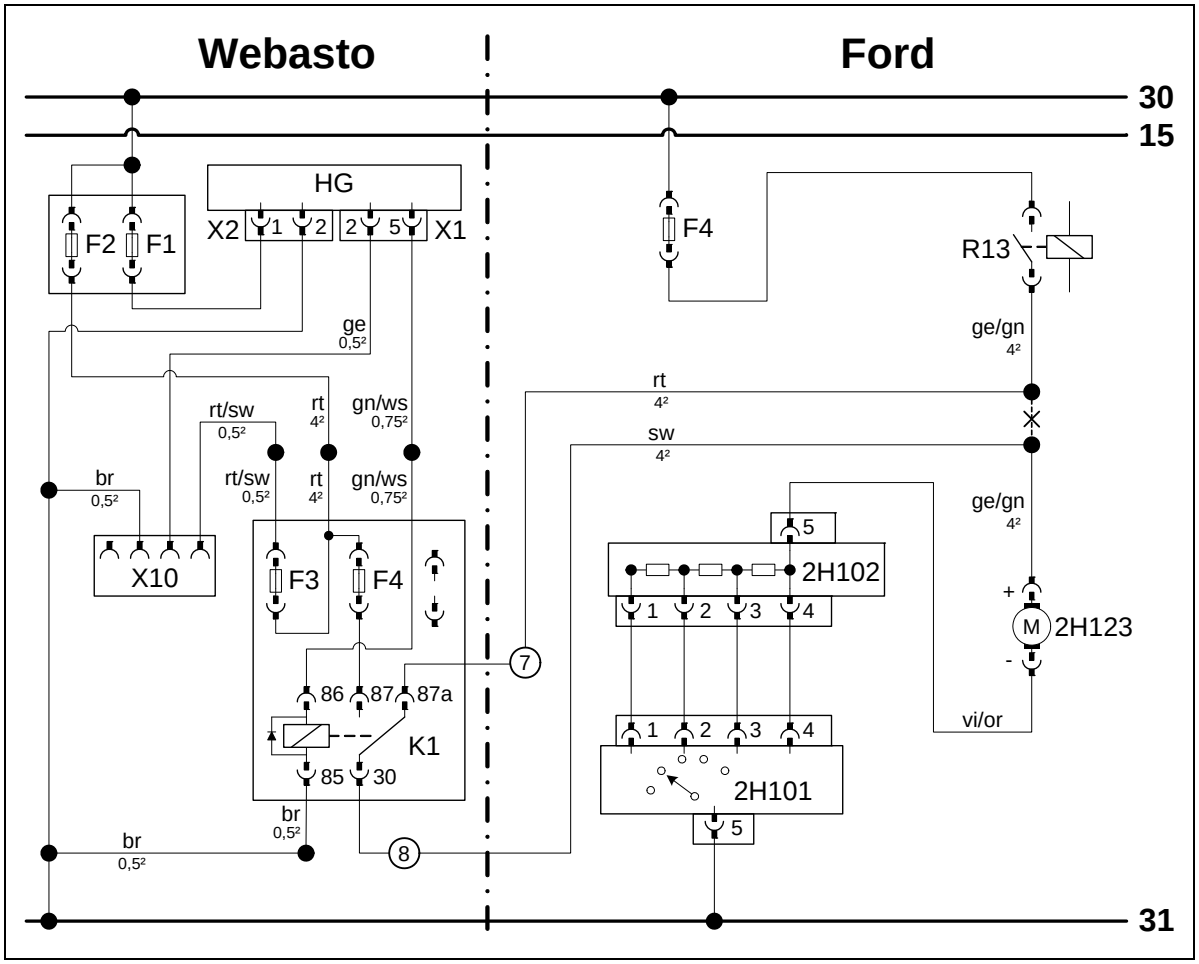


Wiring harness pass through

1 Protective rubber plug

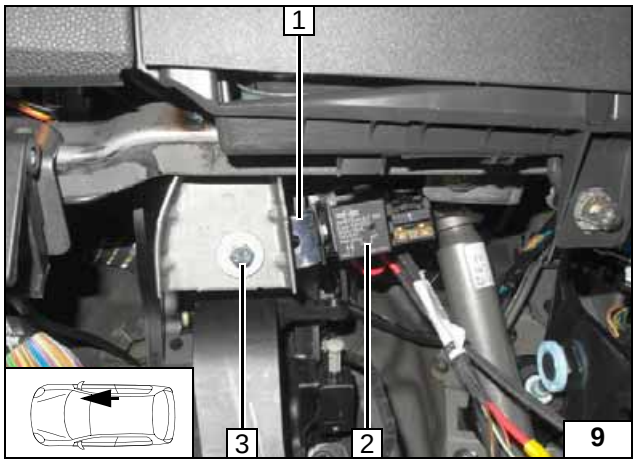
Fan Controller for Manual Air-Conditioning

Wiring diagram



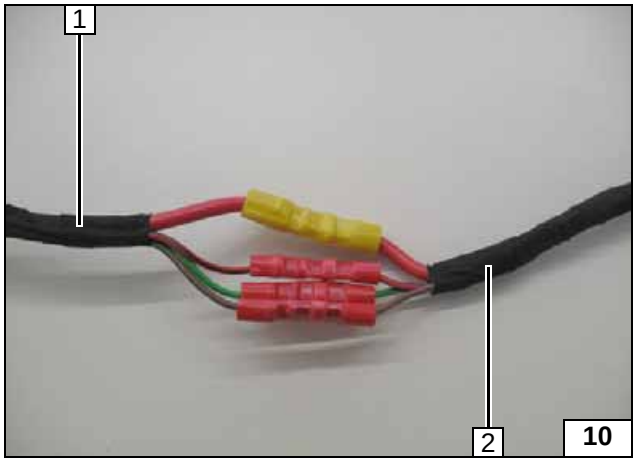
Legend

Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-Evo	F4	30A fuse	rt	red
X1	6-pin heater connector	R13	Fan relay	sw	black
X2	2-pin heater connector	2H102	Resistor group	ge	yellow
X10	4-pin connector of heater control	2H123	Fan motor	gn	green
		2H101	Fan switch	or	orange
K1	Fan relay			ws	white
F1	20A fuse			br	brown
F2	30A fuse			vi	violet
F3	1A fuse				
F4	25A fuse				
				X	Cutting point
				Wiring colours may vary.	



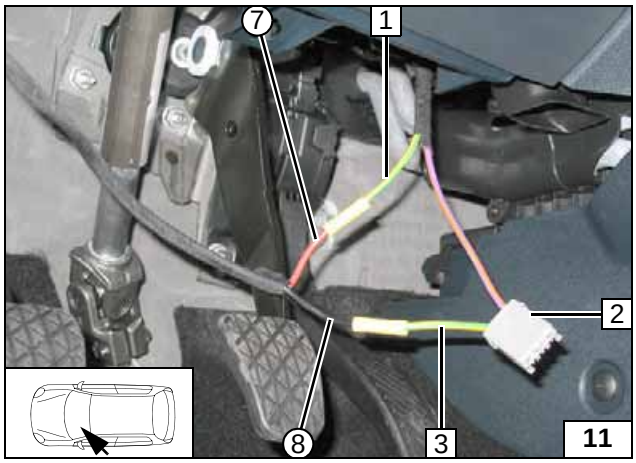
1 Angle bracket
2 K1 relay
3 M6x20 bolt, large diameter washer, flanged nut, existing hole

Installing relay and fuse holder of passenger compartment



Connect wiring harness of passenger compartment relay and fuse holder **1** to wiring harness of heater **2** according to wiring diagram, in such a way that wires of the same colour are connected to each other.

Connecting wiring harnesses



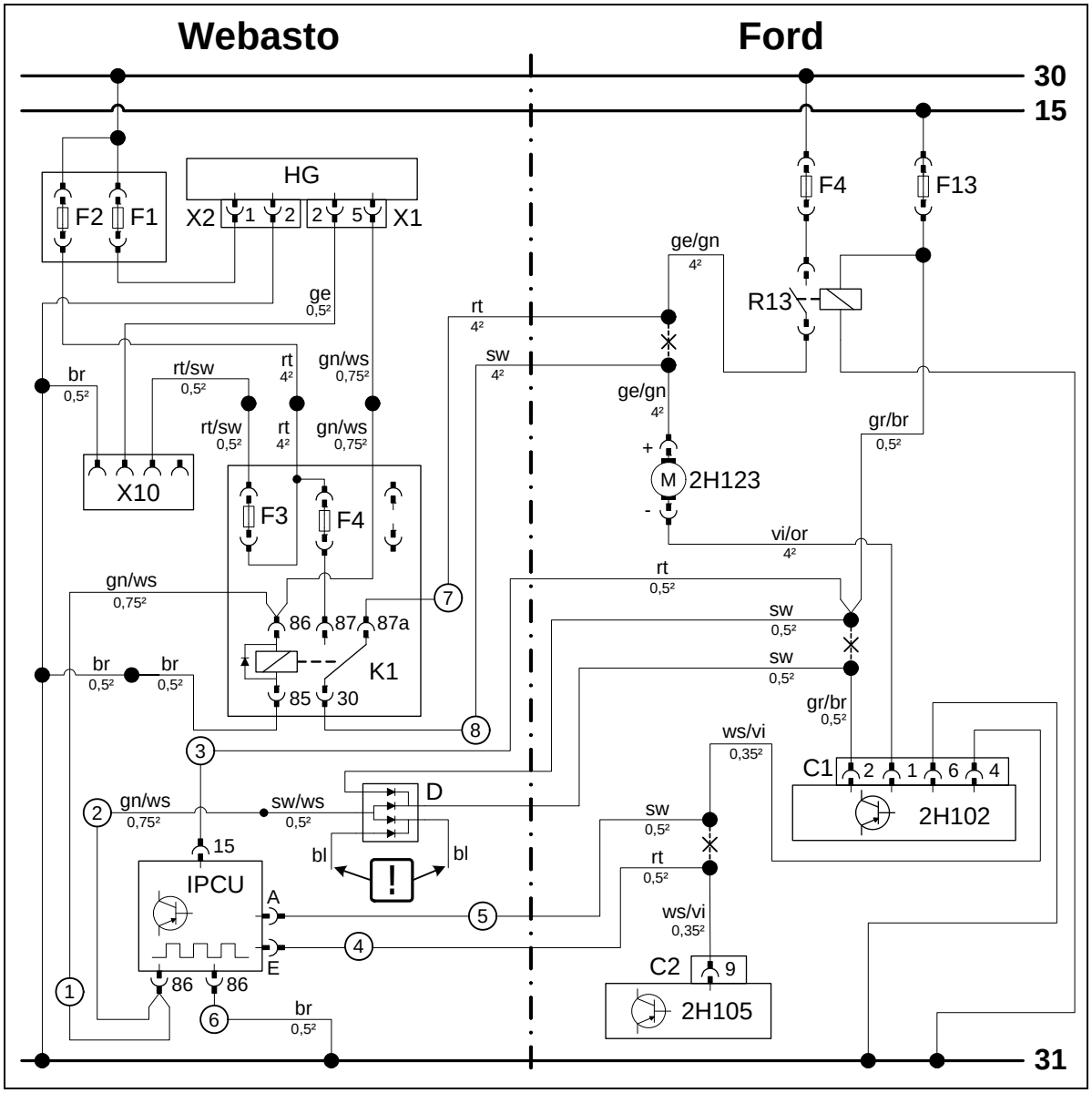
Connection to 2-pin connector **2** from the fan motor. Produce connections as shown in wiring diagram.

1 Yellow/green (ge/gn) wire of fuse F4
3 Yellow/green (ge/gn) wire of connector
⑦ Red (rt) wire of K1/87a
⑧ Black (sw) wire of K1/30

Connecting fan motor

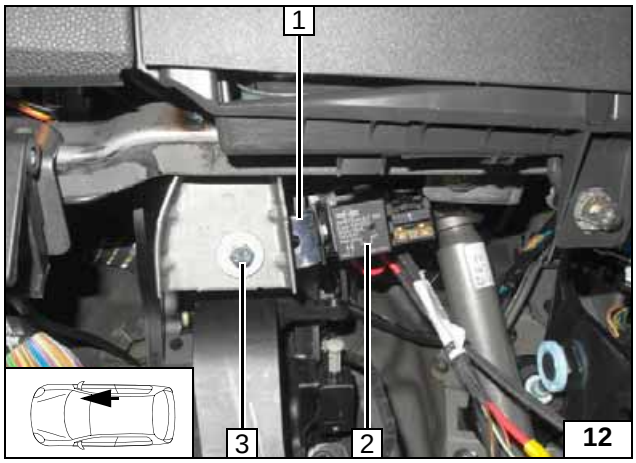
Fan Controller for Automatic Air-Conditioning

Wiring diagram



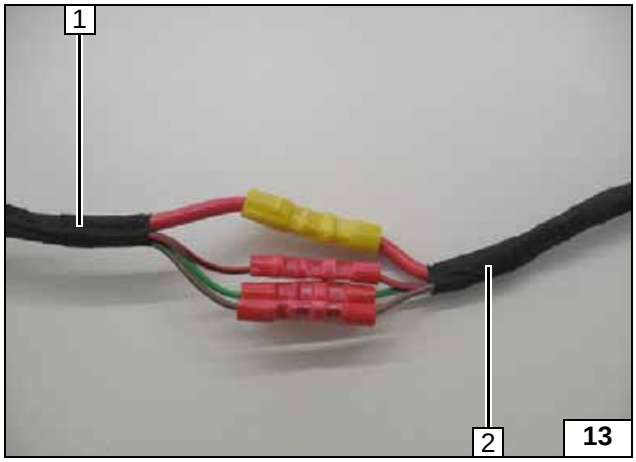
Webasto components		Vehicle components		Colours and symbols	
HG	Heater TT-Evo	F4	30A fuse	rt	red
X1	6-pin heater connector	F13	10A fuse	sw	black
X2	2-pin heater connector	R13	Fan relay	ge	yellow
X10	4-pin connector of heater control	2H123	Fan motor	gn	green
		C1	6-pin connector 2H102	or	orange
K1	Fan relay	2H102	Fan controller	ws	white
F1	20A fuse	C2	Connector 2H105	br	brown
F2	30A fuse	2H105	A/C control panel	bl	blue
F3	1A fuse			vi	violet
F4	25A fuse			gr	grey
D	Diode group				
IPCU	Pulse width modulator				
IPCU settings:					
Duty cycle: 27%				Insulate wire ends and tie back	
Frequency: 400Hz					
Voltage: 10V				**X**	Cutting point
Function: Low side				Wiring colours may vary.	

Legend



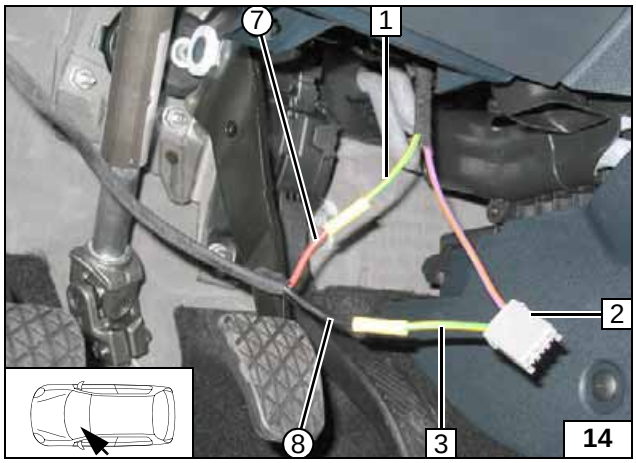
1 Angle bracket
2 K1 relay
3 M6x20 bolt, large diameter washer, flanged nut, existing hole

Installing relay and fuse holder of passenger compartment



Connect wiring harness of passenger compartment relay and fuse holder **1** to wiring harness of heater **2** according to wiring diagram, in such a way that wires of the same colour are connected to each other.

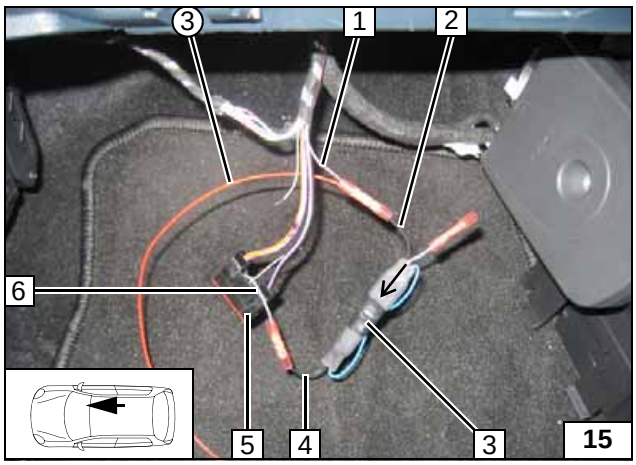
Connecting wiring harnesses



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

1 Yellow/green (ge/gn) wire of fuse F4
3 Yellow/green (ge/gn) wire of connector
⑦ Red (rt) wire of K1/87a
⑧ Black (sw) wire of K1/30

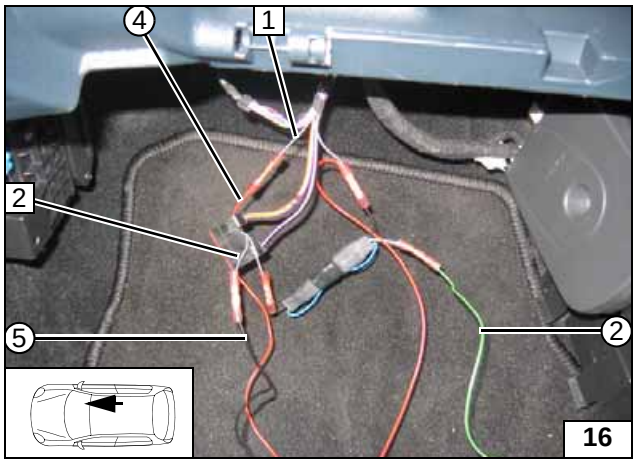
Connecting fan motor



Connection to 6-pin connector **5** from fan controller. Produce connections as shown in wiring diagram.

1 Grey/brown (gr/br) wire of fuse F13
2 Black (sw) wire of diode group/input
3 Diode group
4 Black (sw) wire of diode group/output
6 Grey/brown (gr/br) wire of connector C1 Pin 2
③ Red (rt) wire of IPCU/15

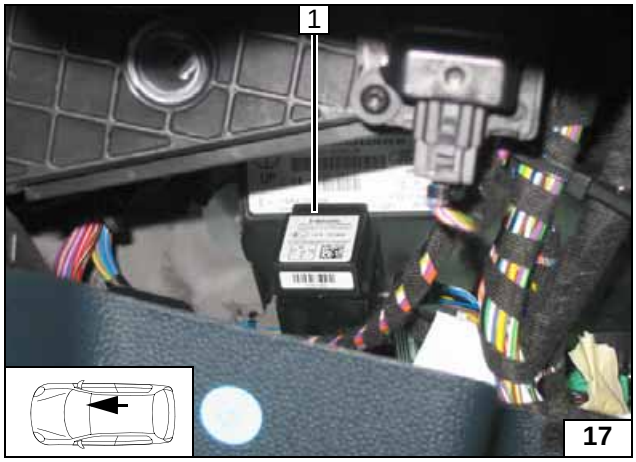
Connecting fan controller



Produce connections as shown in wiring diagram.

1 White/violet (ws/vi) wire of air-conditioning control panel, Pin 9
2 White/violet (ws/vi) wire of connector, Pin 4
② Green/white (gn/ws) wire of IPCU/86
④ Red (rt) wire of IPCU/E
⑤ Black (sw) wire of IPCU/A

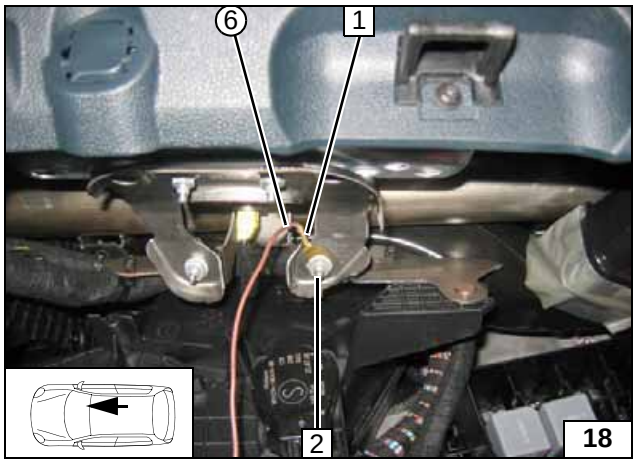
Connecting fan controller



Connect green/white (gn/ws) wire ① and green/white (gn/ws) wire ② to IPCU/86 socket.

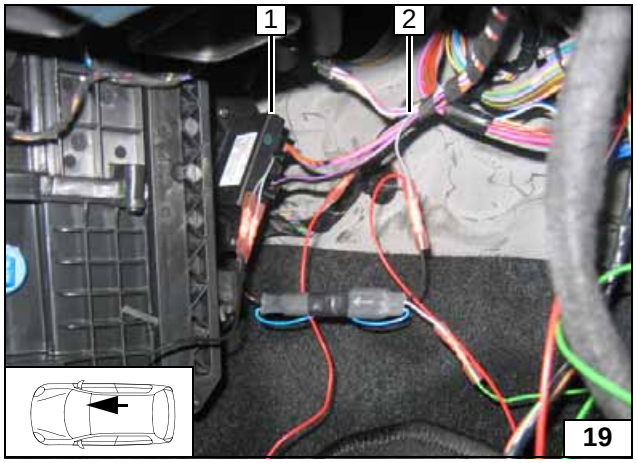
1 IPCU installed with adhesive tape

Installing IPCU



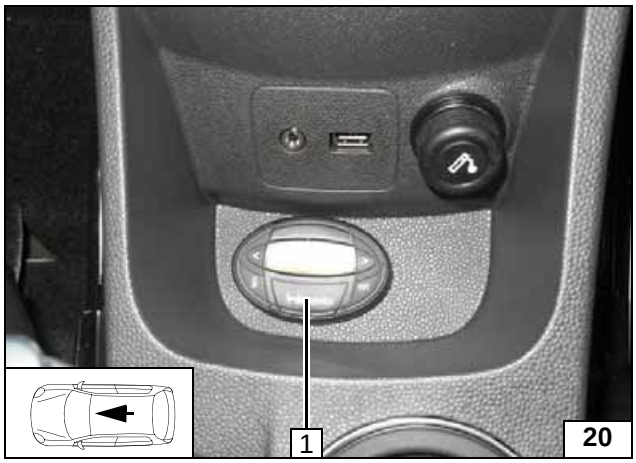
1 Cable lug
2 Original vehicle bolt M5
⑥ Brown (br) wire of IPCU/85

IPCU earth connection



Mount 6-pin connector on fan controller **1** and fasten wires to original vehicle wiring harness **2** with cable tie.

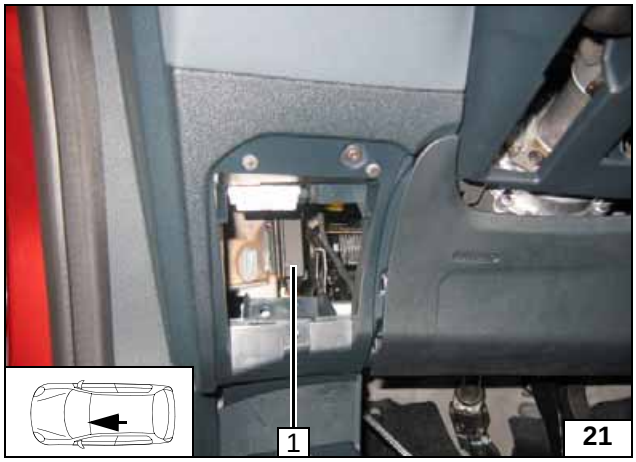
Routing lines



Digital Timer

1 Digital timer

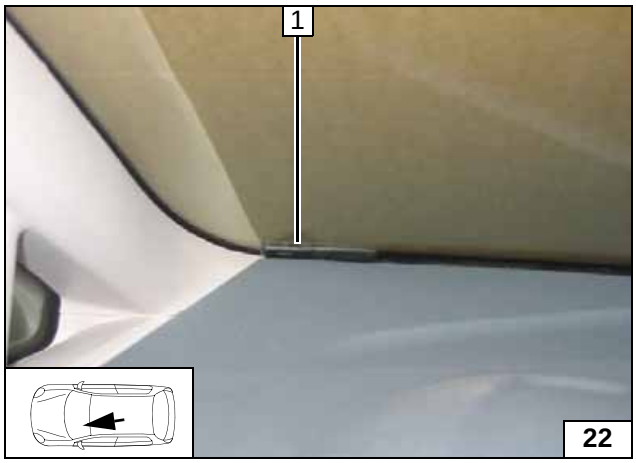
Installing digital timer



Remote Option (Telestart)

Fasten receiver **1** with adhesive tape.

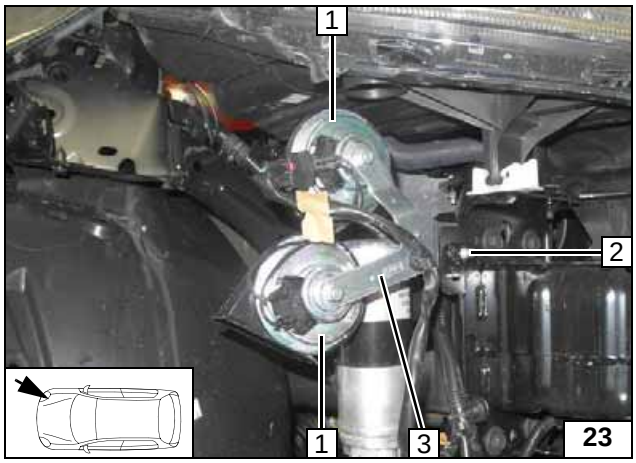
Mounting receiver



1 Antenna

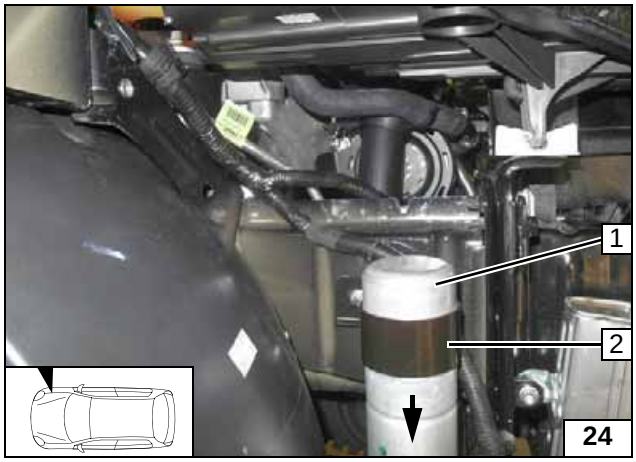
Mounting antenna

Preparing Installation Location



1 Remove horn [2x]
2 Original vehicle bolt, will be re-used
3 Remove bracket of horns

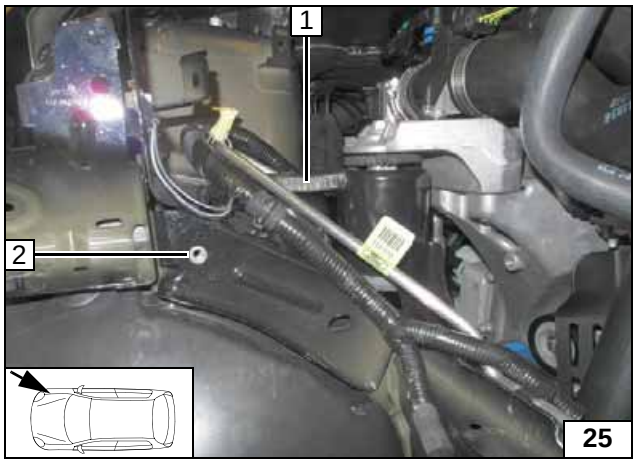
Removing horns



1.0 EcoBoost

Loosen clamp **2**, shift dryer cartridge **1** downwards, loosely mount clamp **2**. Will be shifted upwards again later.

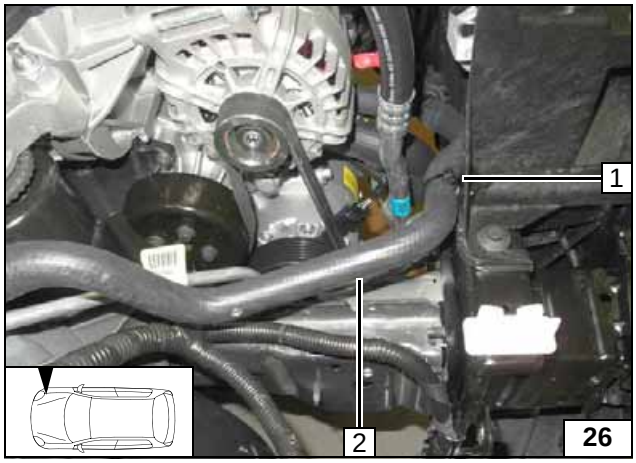
Shifting the dryer cartridge



All vehicles

1 50mm edge protection
2 M6 rivet nut, existing hole

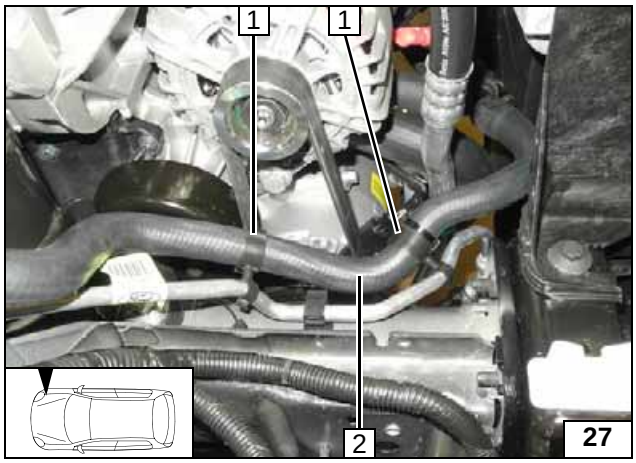
Installing rivet nut



1.25 and 1.0 48kW / 59 kW

1 Loosen retaining clip
2 Coolant hose

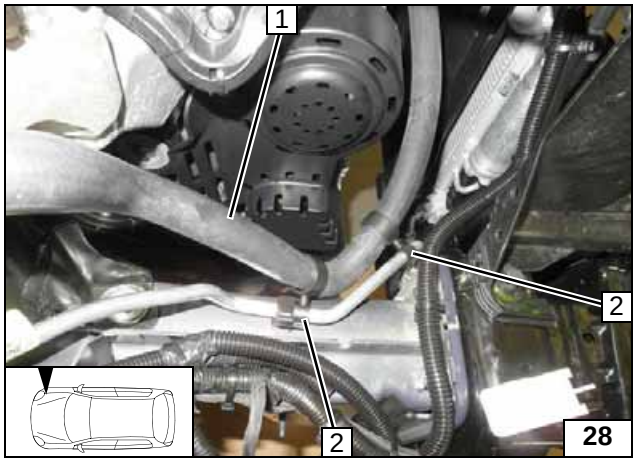
Loosening the coolant hose



1.25 and 1.0 59kW

1 9x25 hose bracket [2x] on A/C line
2 Coolant hose

Shifting the coolant hose

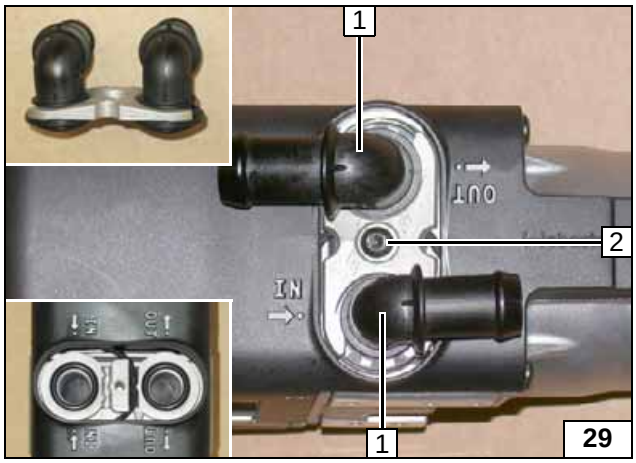


1.0 48kW

1 Coolant hose
2 9x25 hose bracket [2x] on A/C line

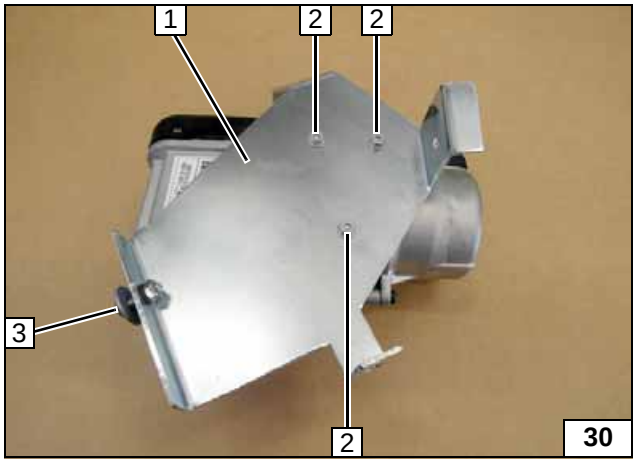
Shifting the coolant hose

Preparing Heater



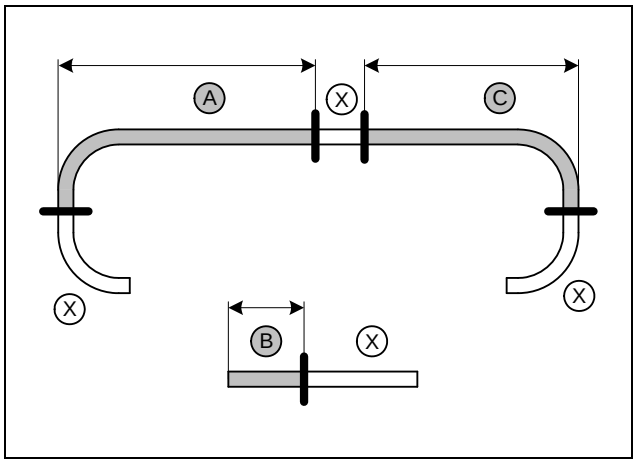
1 Water connection piece, sealing ring [2x each]
2 5x15 self-tapping bolt, retaining plate of water connection pieces

Mounting water connection pieces



1 Bracket
2 5x13 self-tapping bolt [3x]
3 Premount loosely M6x20 bolt, large diameter washer, spring lockwasher, nut

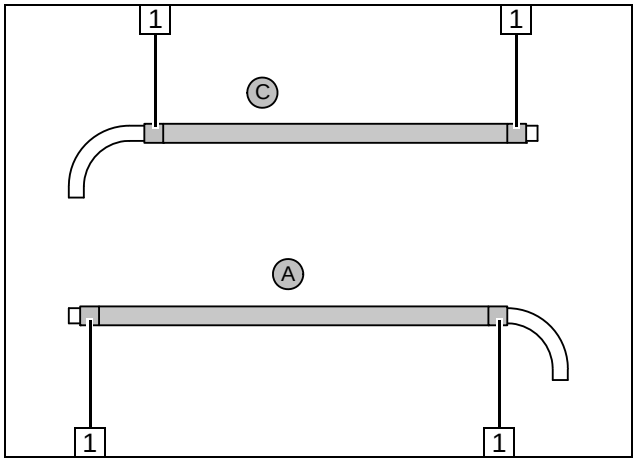
Mounting bracket



Discard section **X**.

	1.0 EcoBoost	1.0 48kW / 59kW
A =	1050	1135
B =	60	60
C =	1100	1010

Cutting hoses to length

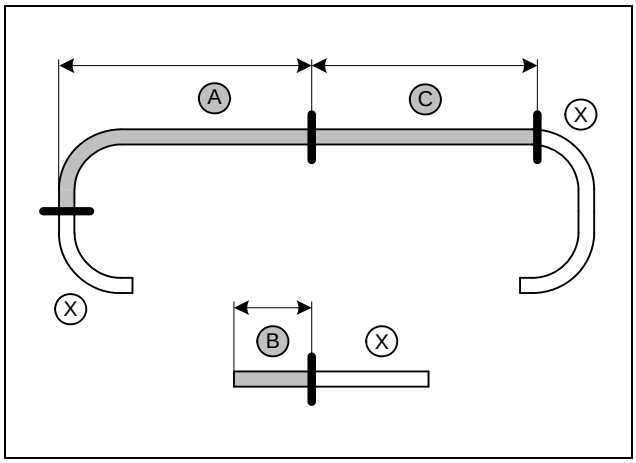


All 1.0

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

1 50 mm long heat shrink plastic tubing [4x]

Preparing hoses

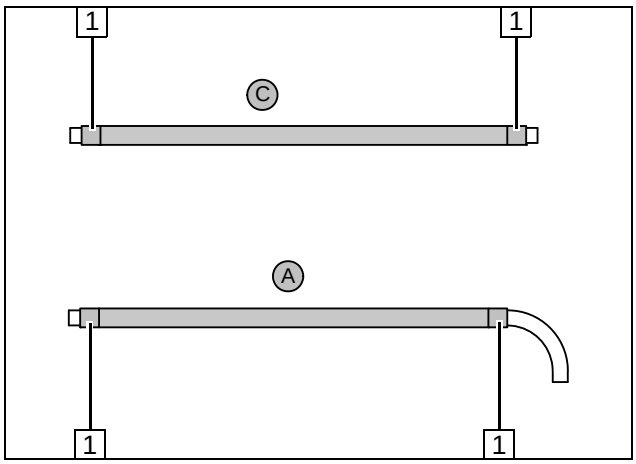


1.25

Discard section **X**.

A = 1130
B = 60
C = 1020

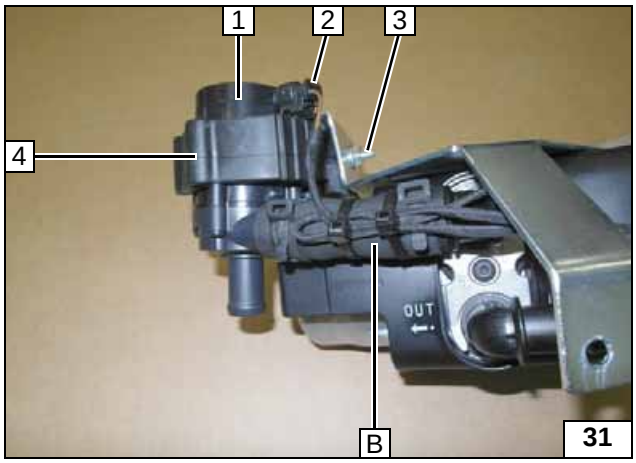
Cutting hoses to length



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

1 50 mm long heat shrink plastic tubing [4x]

Preparing hoses

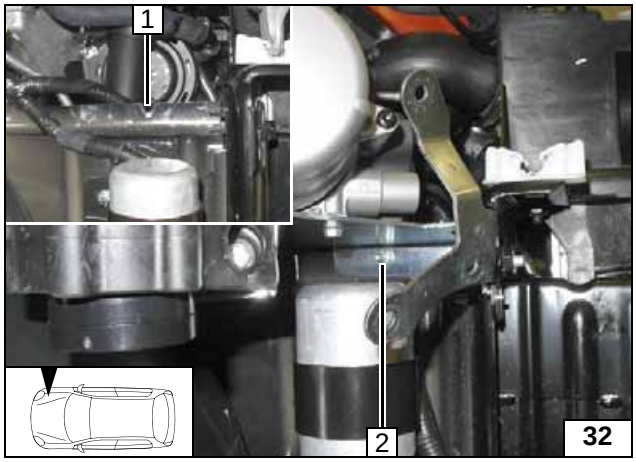


All vehicles

All spring clips = 25 mm dia.
Attach wiring harness of circlating pump **2** to circulating pump and heater and fasten using cable ties.

1 Circulating pump
3 M6x25 bolt, flanged nut
4 Circulating pump mounting

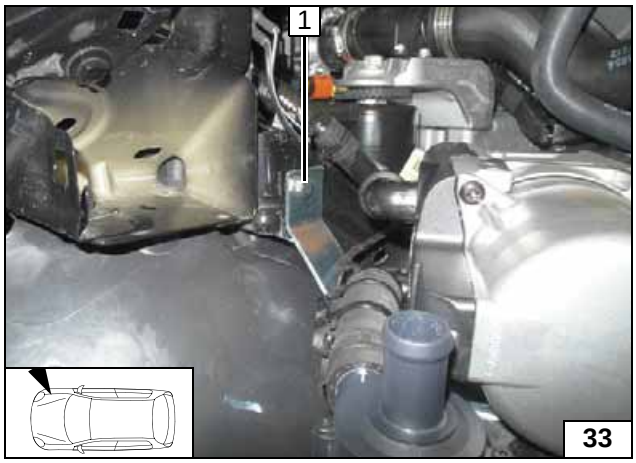
Premounting heater



Installing Heater

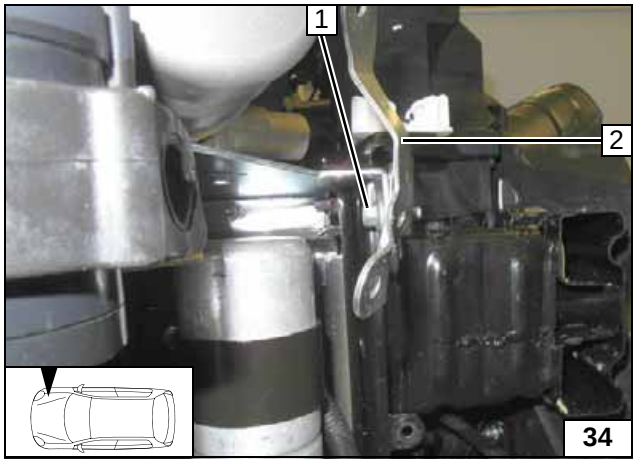
Insert loosely premounted bolt **2** of bracket at position **1** into recess of body and align heater.

Mounting heater



1 M6x20 bolt, spring lockwasher

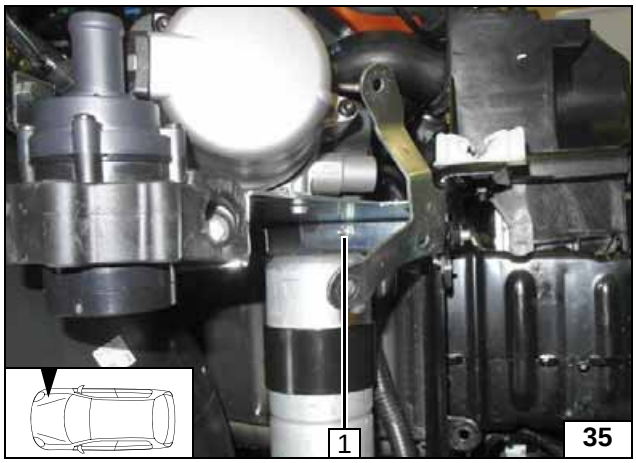
Mounting heater



Position bracket of horns **2** between body and bracket of heater.

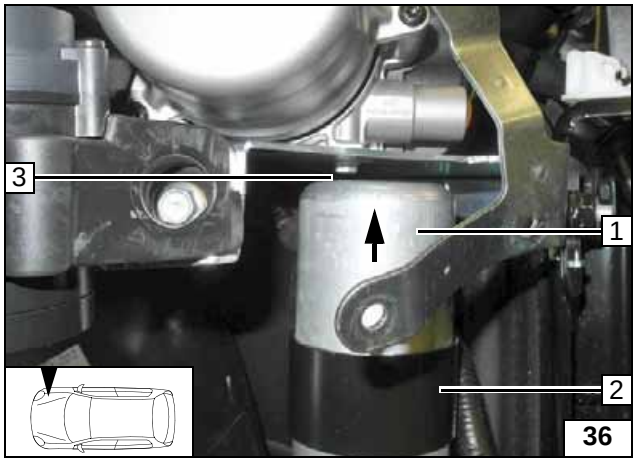
1 Original vehicle bolt

Mounting heater



1 Tighten bolt

Mounting heater

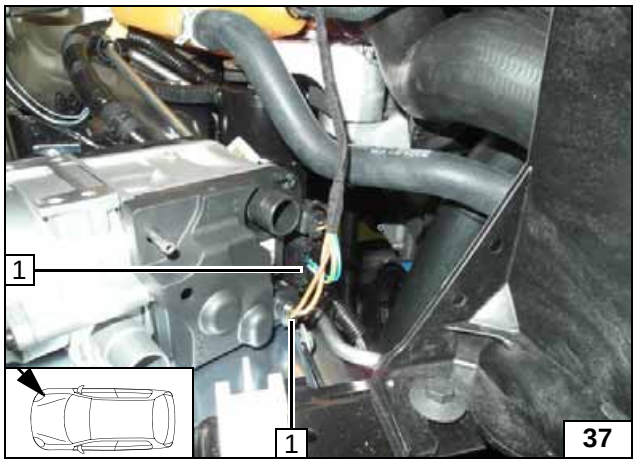


1.0 EcoBoost

Position dryer cartridge **1** to point upwards. Mind distance (at least 5mm) at position **3**.

2 Tighten clamp

Shifting the dryer cartridge



1 Wiring harness of heater [2x]

Mounting wiring harness

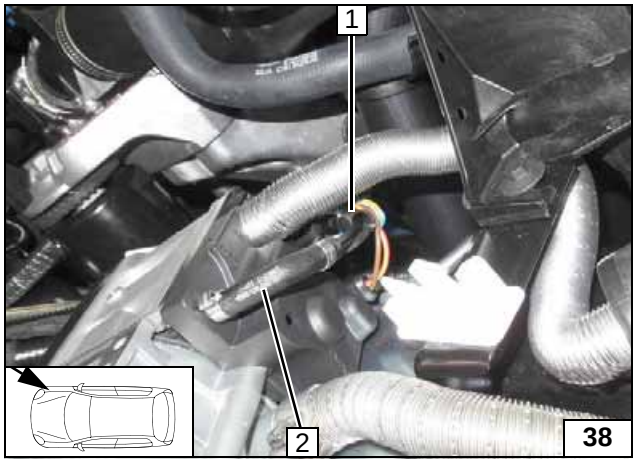
Fuel

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

Any fuel running off should be collected in an appropriate container.

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

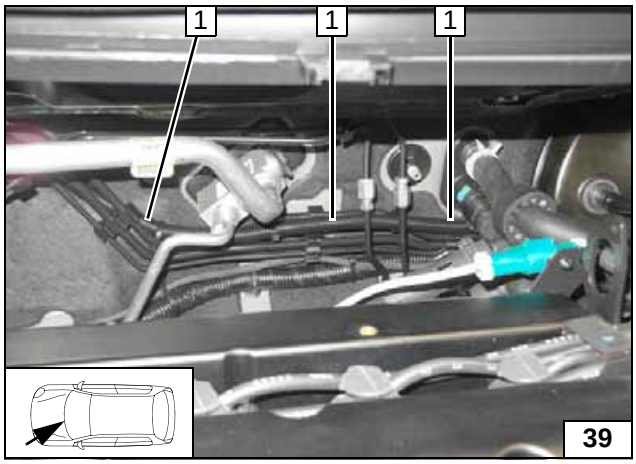
WARNING!
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.



Pull fuel line and wiring harness of metering pump in 10mm dia. corrugated tube **1** and route to the firewall.

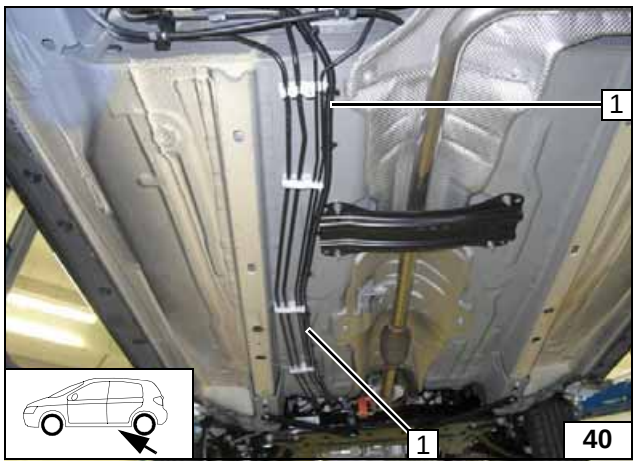
2 90° moulded hose, 10 mm dia. clamp [2x]

Connecting heater



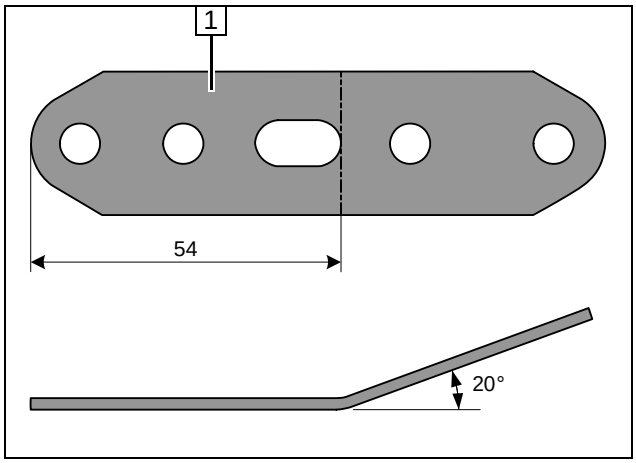
Route fuel line and wiring harness of metering pump in 10mm dia. corrugated tube **1** to the left side of the vehicle and to the underbody along original vehicle lines.

Routing lines



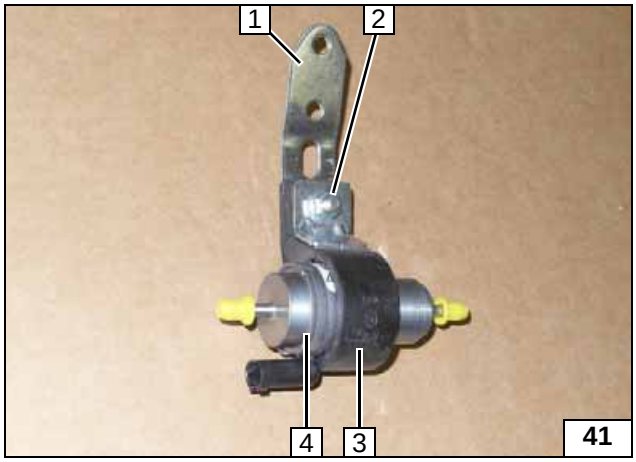
1 Fuel line and wiring harness of metering pump in 10mm dia. corrugated tube

Routing lines



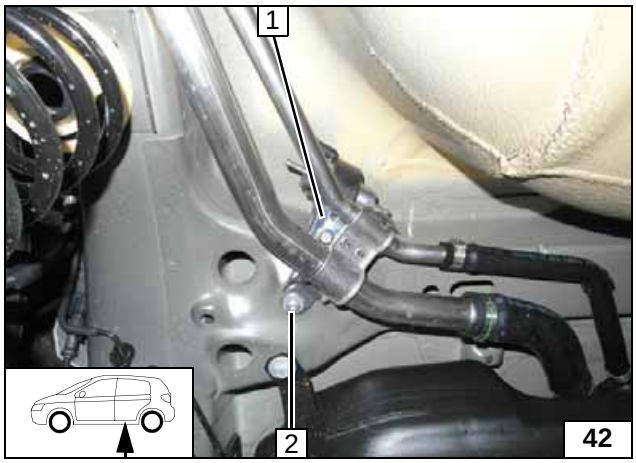
1 Perforated bracket

Preparing perforated bracket



1 Perforated bracket
2 M6x25 bolt, support angle bracket, flanged nut
3 Mounting of metering pump
4 Metering pump

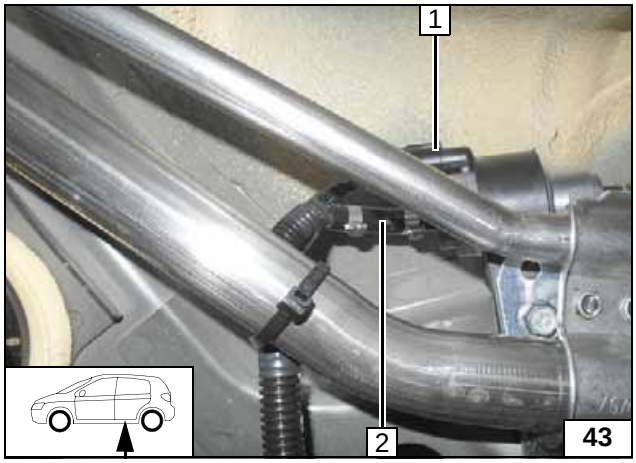
Premounting metering pump



Position perforated bracket **1** between body and original vehicle bracket.

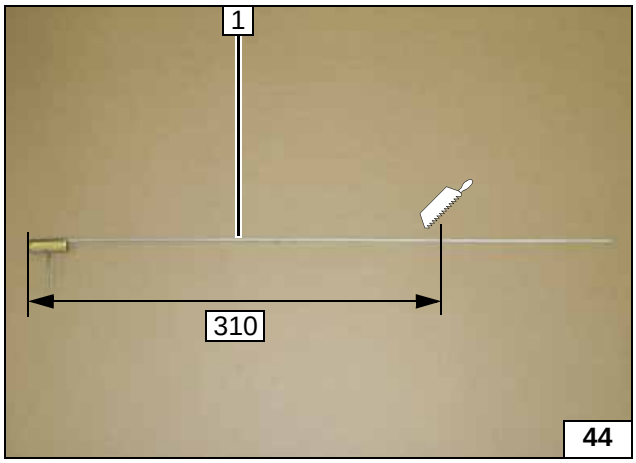
2 Original vehicle bolt

Mounting metering pump



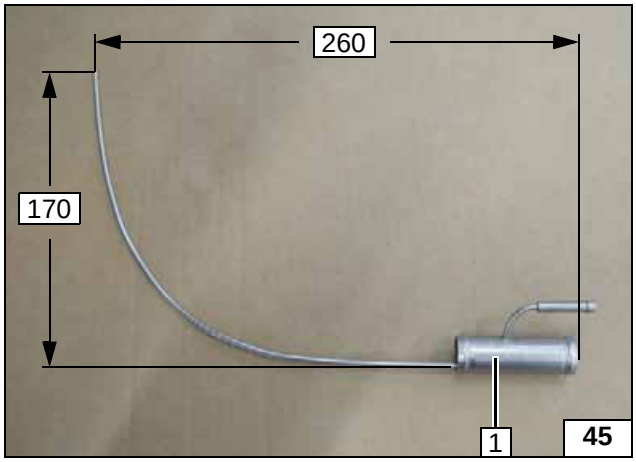
1 Wiring harness of metering pump, connector mounted
2 Fuel line of heater, hose section, 10 mm dia. clamp [2x]

Connecting metering pump



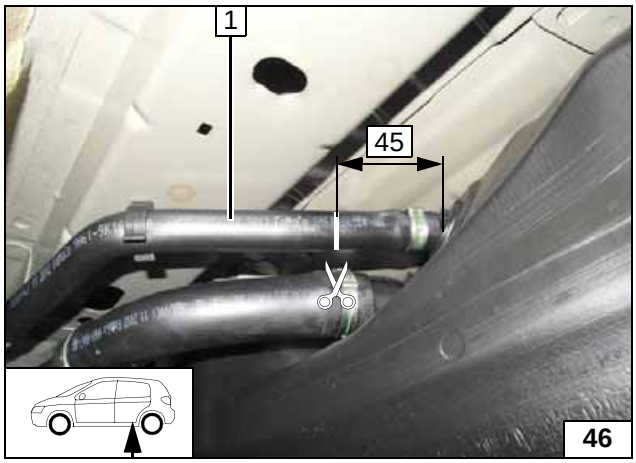
1 Fuel standpipe

Cutting fuel standpipe to length



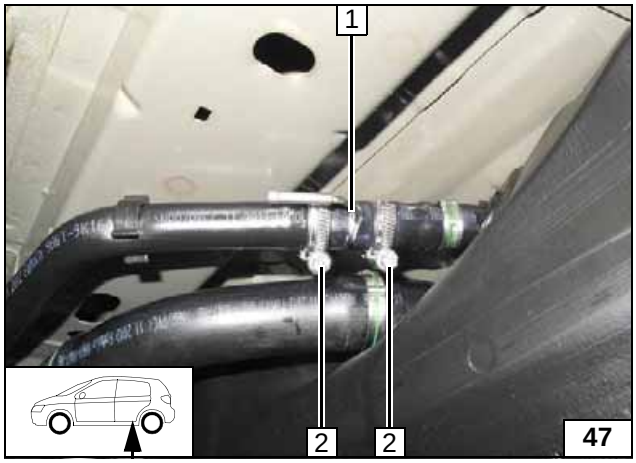
Shape fuel standpipe **1** according to the template. Watch the position of the standpipe.

Shaping fuel standpipe



1 Fuel-tank vent line

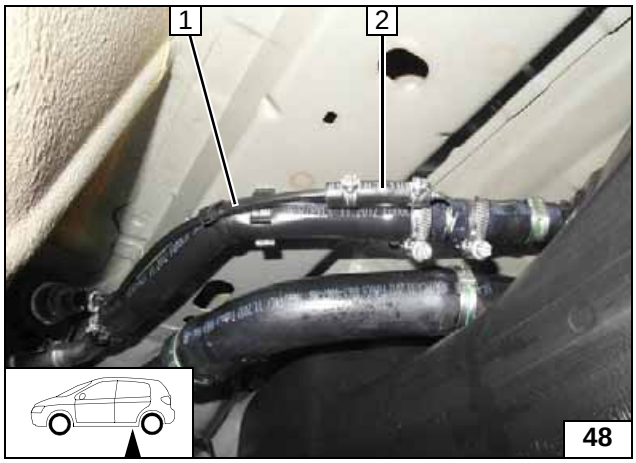
Cutting point



Align standpipe of fuel standpipe with tank bottom (to the left in the direction of travel).

1 Fuel standpipe
2 27mm dia. clamp [2x]

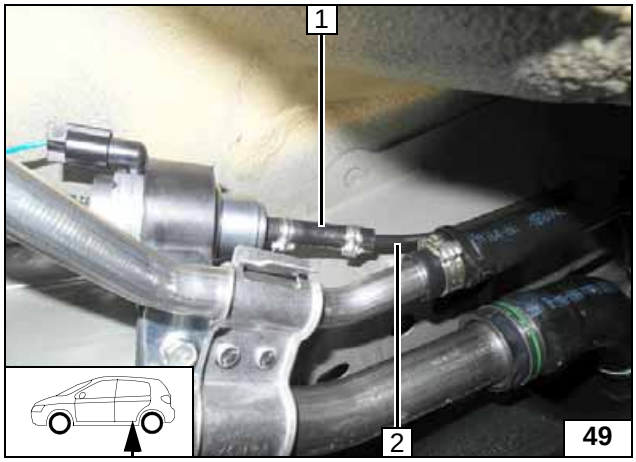
Installing fuel standpipe



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

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

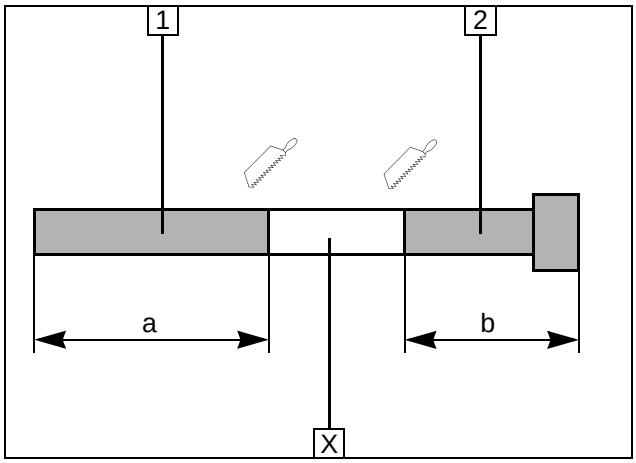
Connecting fuel line



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

Connecting metering pump

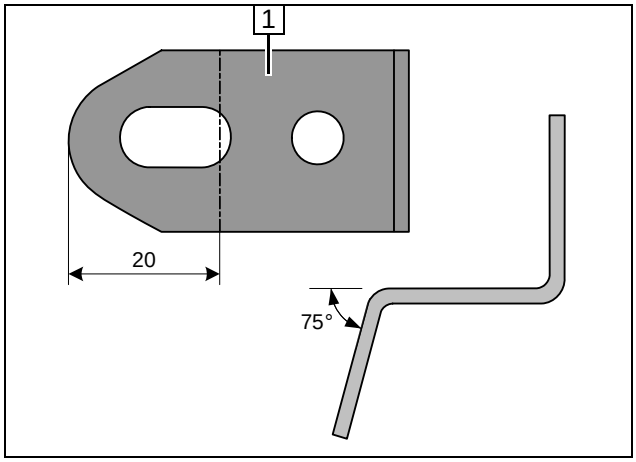


Exhaust Gas

Discard section **X**.

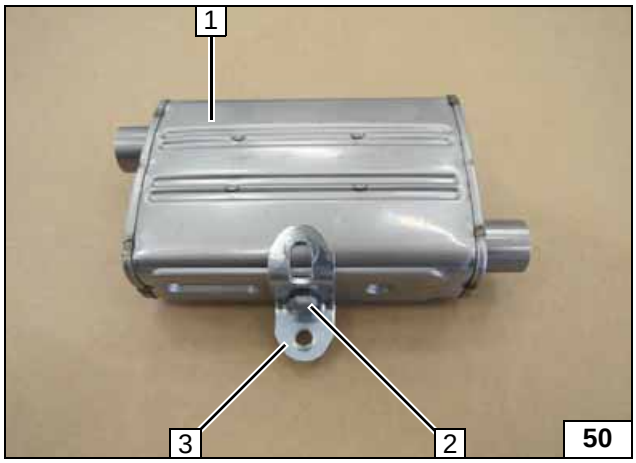
1 Exhaust pipe
a = 220
2 Exhaust end section
b = 270

Preparing exhaust pipe



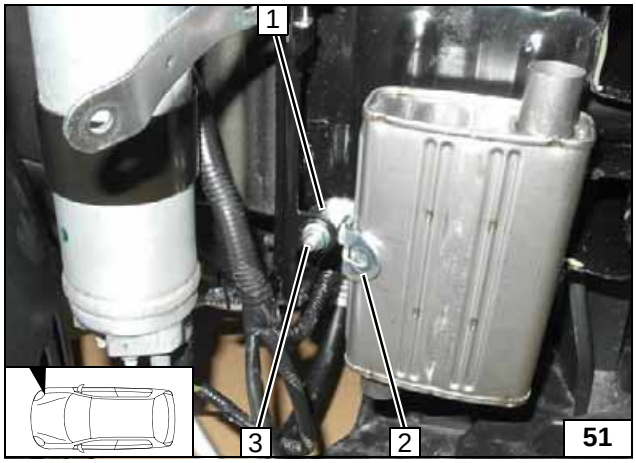
1 Angle bracket

Preparing angle bracket



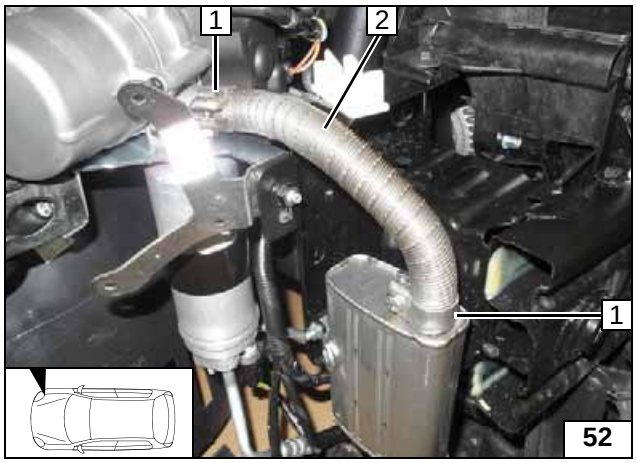
1 Silencer
2 M6x16 bolt, spring lockwasher
3 Angle bracket

Premounting silencer



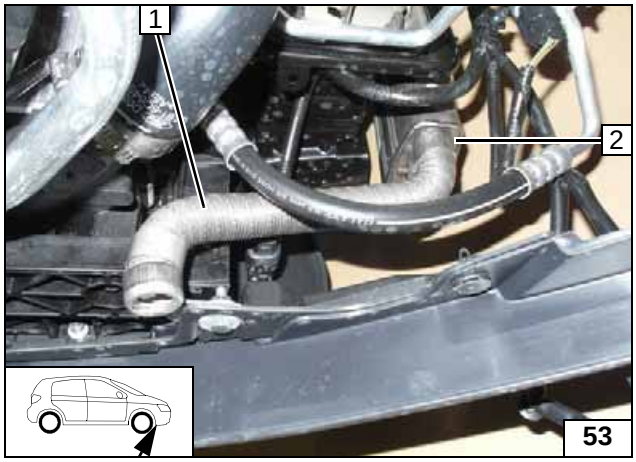
1 M8x15 spacer nut
2 Angle bracket
3 M6x30 bolt, flanged nut

Mounting silencer



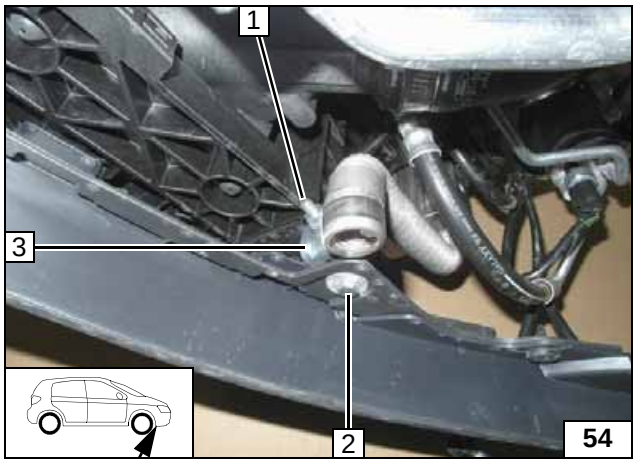
1 Hose clamp [2x]
2 Exhaust pipe

Mounting exhaust pipe



1 Exhaust end section
2 Hose clamp

Mounting exhaust end section

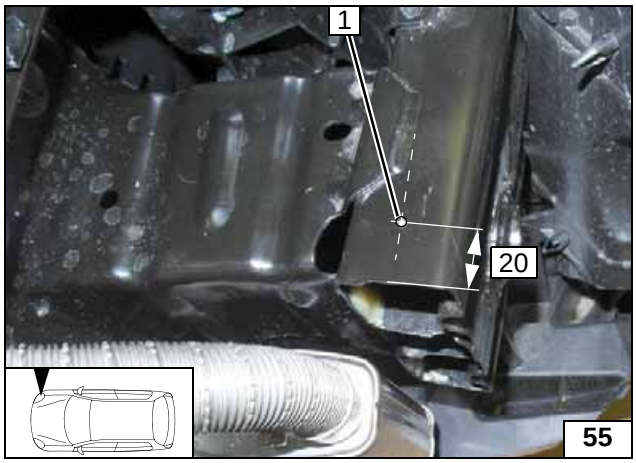


Ensure sufficient distance from neighbouring components, or correct.

1 M6x20 bolt, p-clamp, flanged nut
2 M6x20 bolt, large diameter washer [2x], flanged nut
3 Angle bracket

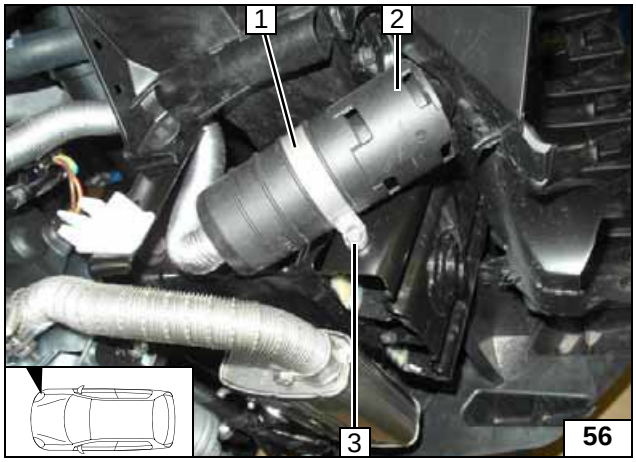
Fastening exhaust end section

Combustion Air



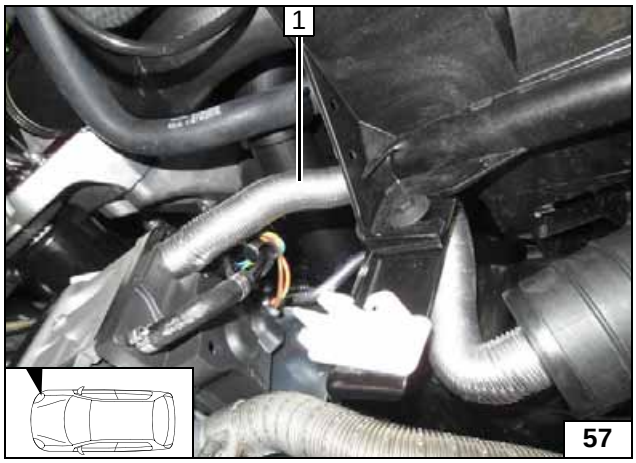
1 5.5mm dia. hole in centre of cross member

Hole for silencer



1 51 mm dia. clamp
2 Silencer
3 M5x16 bolt, flanged nut

Mounting silencer



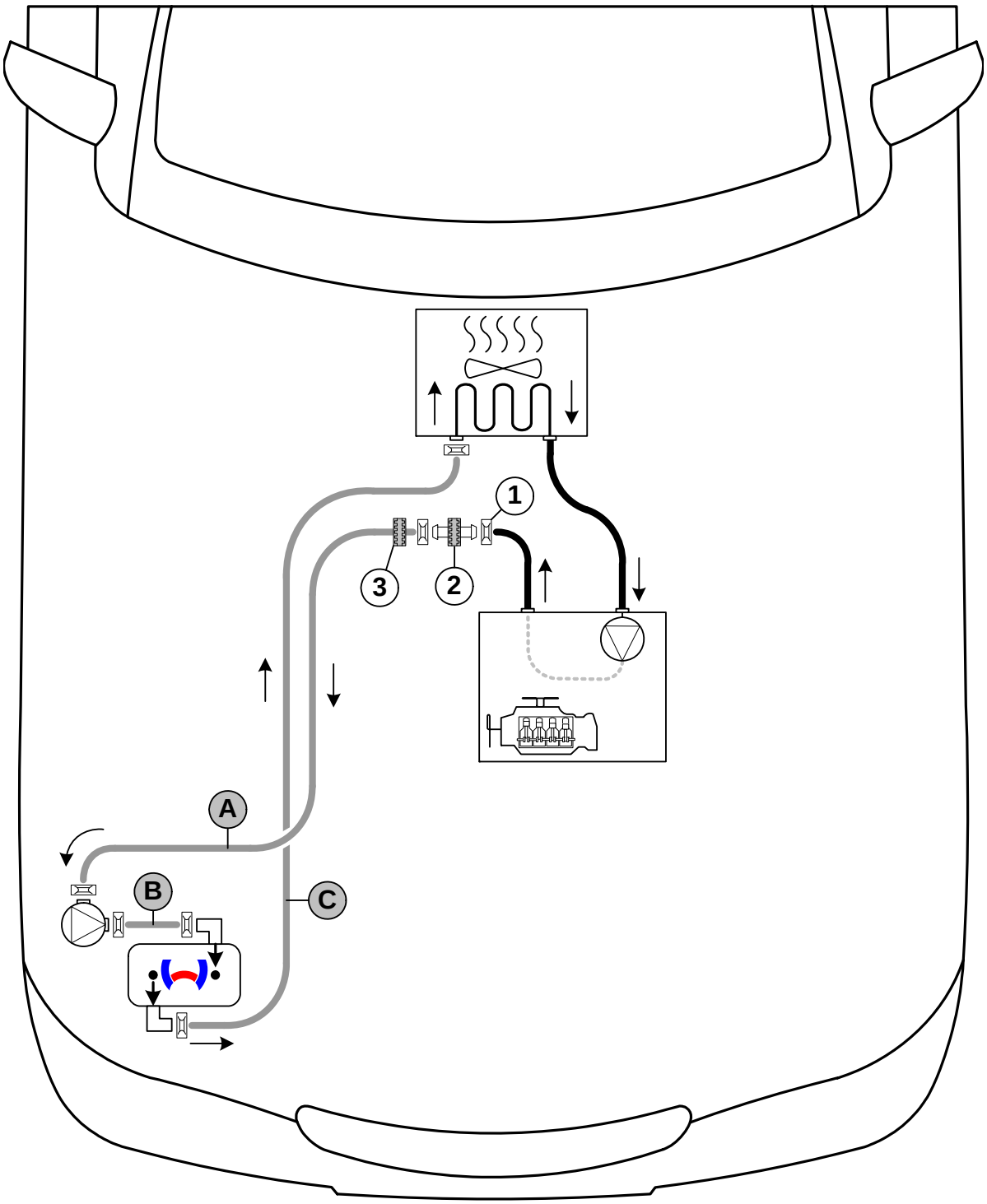
1 Combustion air pipe

Mounting combustion air pipe

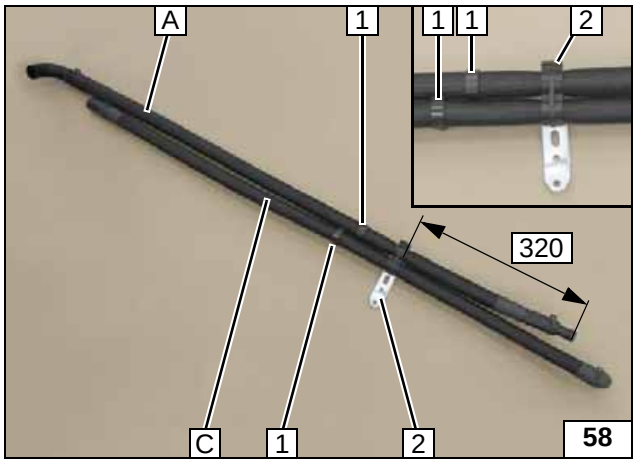
Coolant Circuit for All 1.0

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. When installing the hoses, the heater must be filled with coolant.
The connection should be "inline" based on the following diagram:

Hose routing diagram



All spring clips without a specific designation = 25 mm dia. **1** = Original vehicle spring clip !
Connecting pipe = 18x18mm dia.!
2 = Black (sw) rubber isolator on 1.0 48 kW! **3** = Black (sw) rubber isolator for 1.0 EcoBoost.

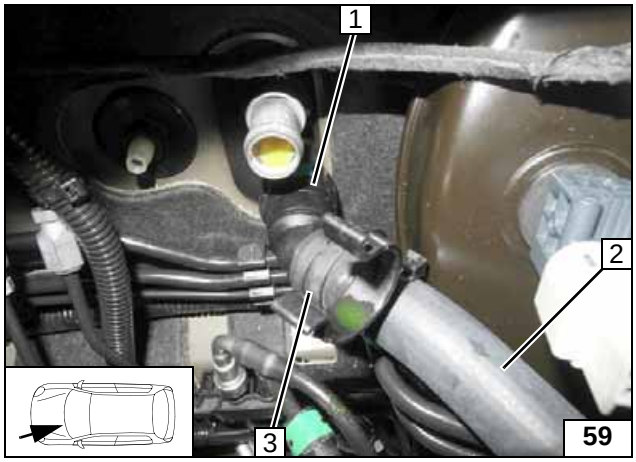


1.0 EcoBoost

Drill out hole in perforated bracket for hose bracket **2** to 8mm dia.

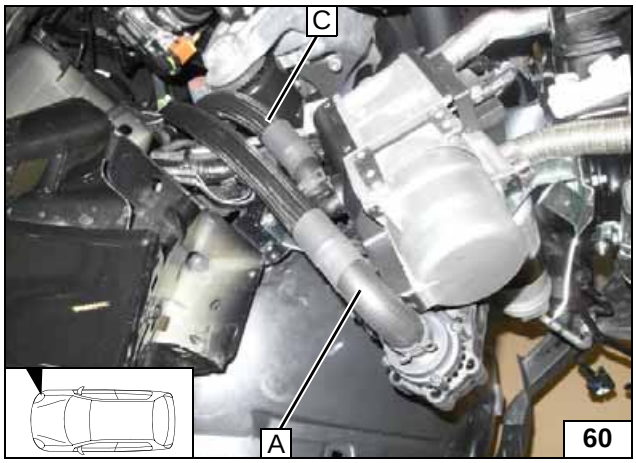
1 Mount 9x25 hose bracket [2x]
2 Perforated bracket, 25x25 lockable hose bracket

Premounting hoses

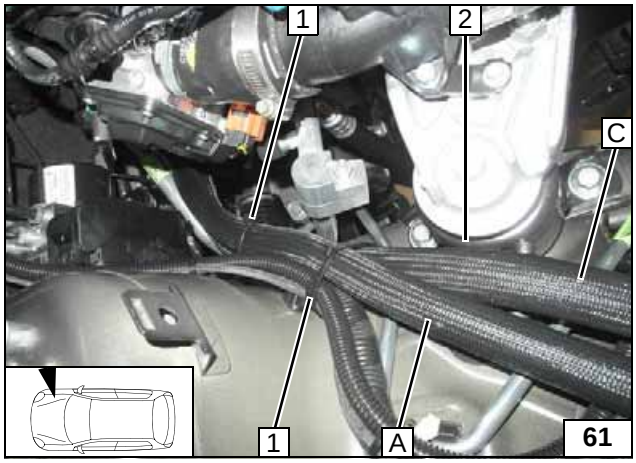


Hose of heat exchanger outlet removed for demonstration purposes.
Pull coupling piece **1** off heat exchanger inlet and remove it from hose of engine outlet **2**. Spring clip **3** will be reused.

Cutting point

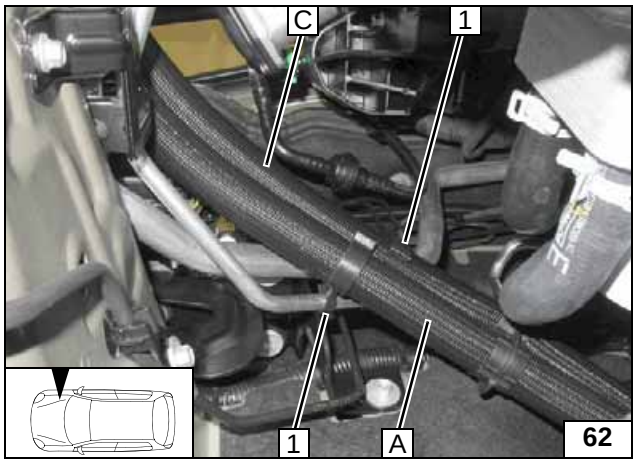


Connecting heater



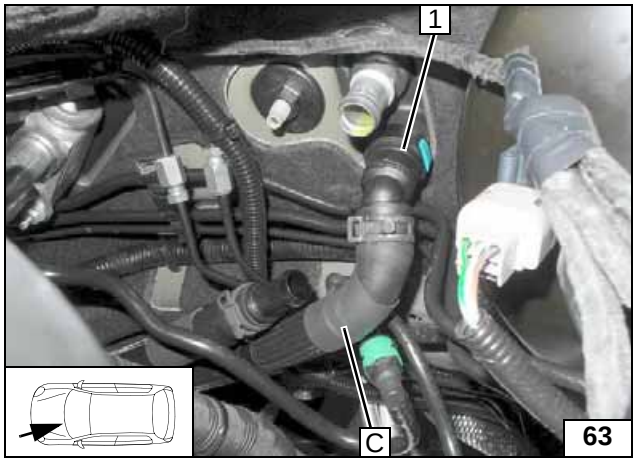
Fix hose **A** and **C** with cable tie **1** to original vehicle wiring harness. Ensure sufficient distance at position **2**.

Routing in engine compartment



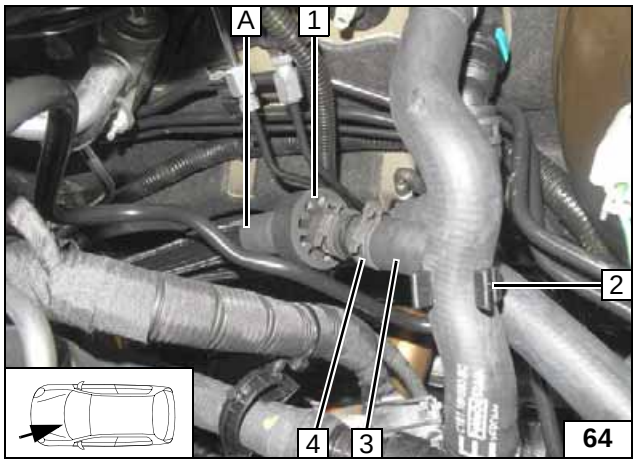
Fix hose **A** and **C** with 9x25 hose bracket [2x] **1** to A/C lines.

Routing in engine compartment



1 Coupling piece of heat exchanger inlet, twisted downwards

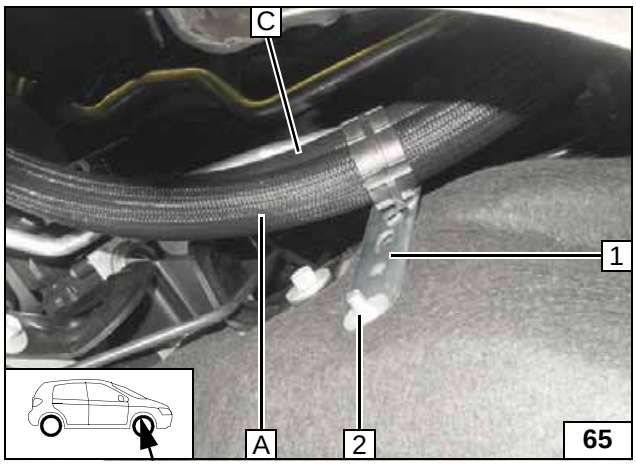
Connection on heat exchanger inlet



Push black (sw) rubber isolator **1** onto hose **A** and align it between brake and fuel line.

2 Hose of heat exchanger outlet in original vehicle hose bracket
3 Hose of engine outlet
4 Original vehicle spring clip

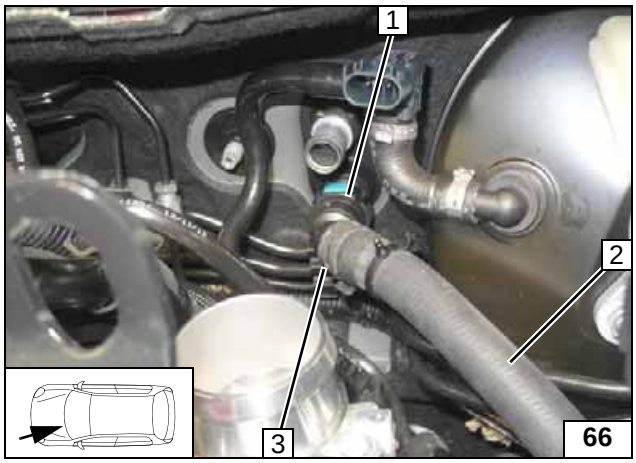
Connecting engine outlet



Remove original vehicle plastic nut at position **2** and discard it. Align hoses. Ensure sufficient distance from neighbouring components, or correct.

1 Perforated bracket
2 Original vehicle stud bolt, plate nut

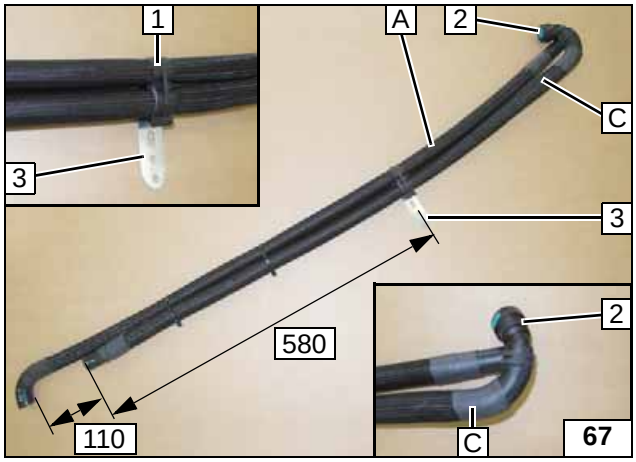
Fastening hoses



1.0

Hose of heat exchanger outlet removed to facilitate operations. Pull coupling piece **1** off heat exchanger inlet and remove it from hose of engine outlet **2**. Spring clip **3** will be reused.

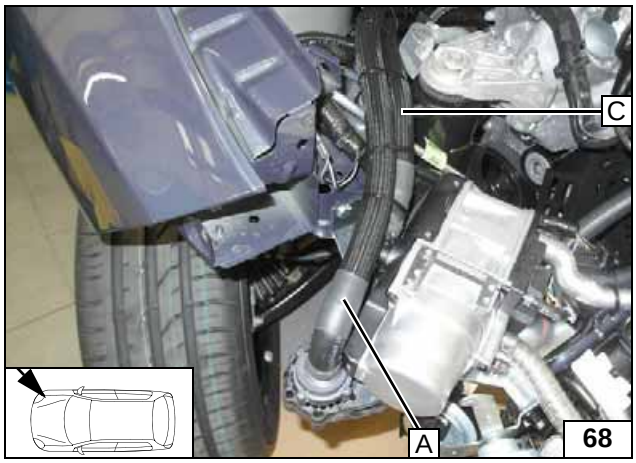
Cutting point



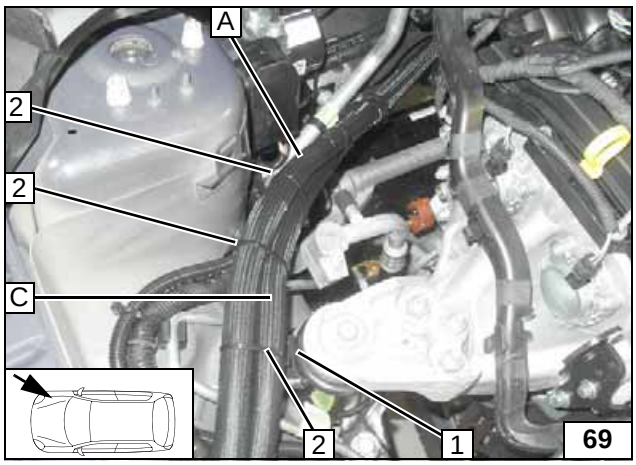
Drill out hole in perforated bracket for hose bracket **1** to 8mm dia.

2 Coupling piece of heat exchanger inlet
3 Perforated bracket, 25x25 lockable hose bracket

Premounting hoses

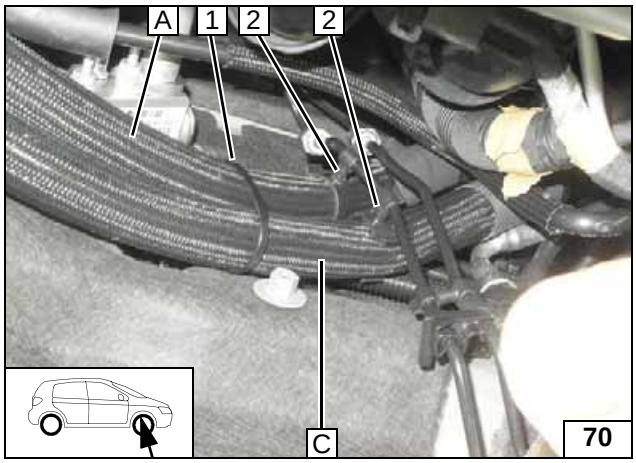


Connecting heater



Fix hose **A** and **C** with cable tie **2** to original vehicle wiring harness. Ensure sufficient distance at position **1**.

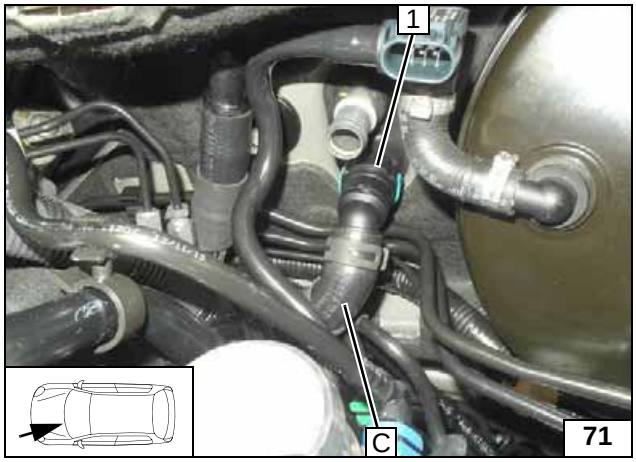
Routing in engine compartment



Route hoses **A** and **C** behind the brake lines and fix them in place using 4x25 hose bracket [2x] **2**.

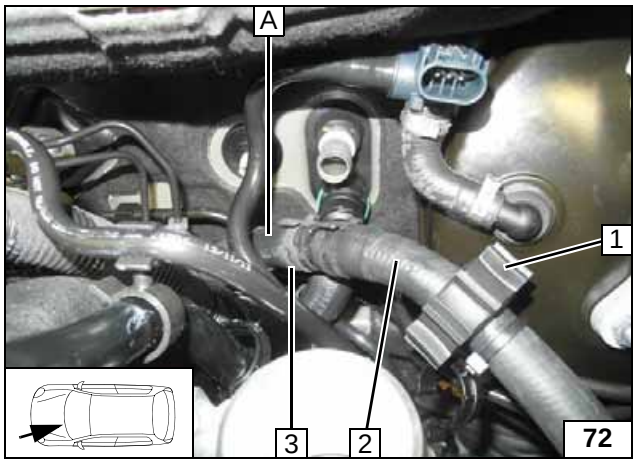
1 Cable tie

Routing in engine compartment



1 Coupling piece of heat exchanger inlet mounted

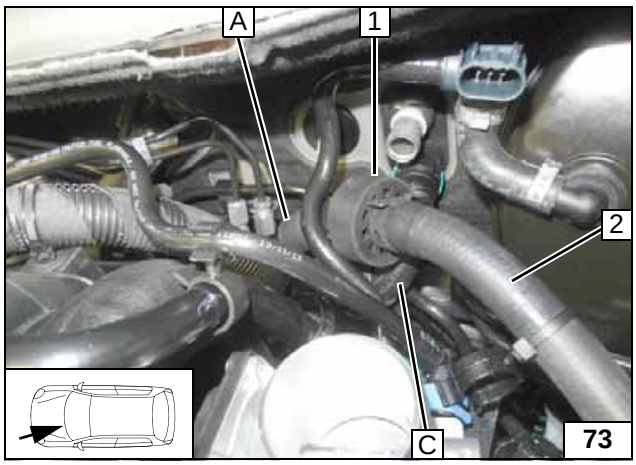
Connection on heat exchanger inlet



Slide black (sw) rubber isolator **1** onto hose of engine outlet **2**.

3 Original vehicle spring clip

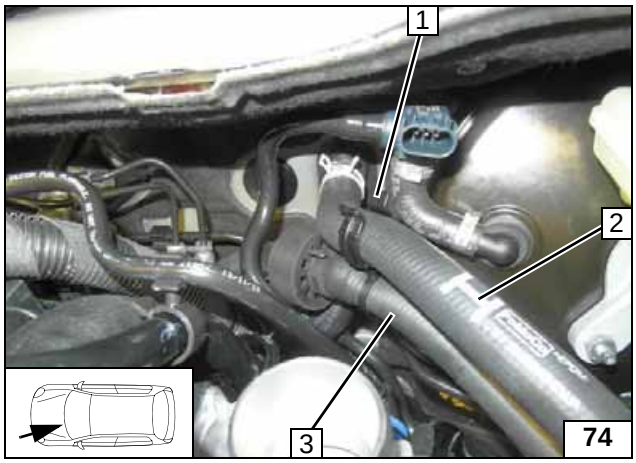
Connecting engine outlet



Align black (sw) rubber isolator **1** between hose **C** and fuel line.

2 Hose of engine outlet

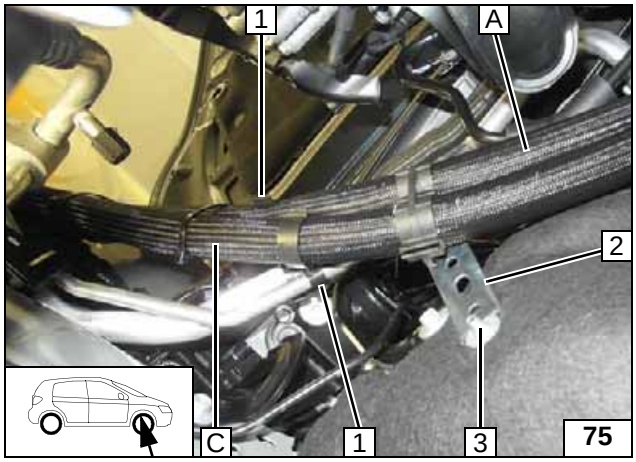
Aligning rubber isolator



Re-insert original vehicle hose bracket **1**.

2 Install hose of heat exchanger outlet
3 Hose of engine outlet

Inserting hose bracket



Fix hose **A** and **C** with 9x25 hose bracket [2x] **1** to A/C lines.
Remove original vehicle plastic nut at position **3** and discard it. Align hoses. Ensure sufficient distance from neighbouring components, or correct.

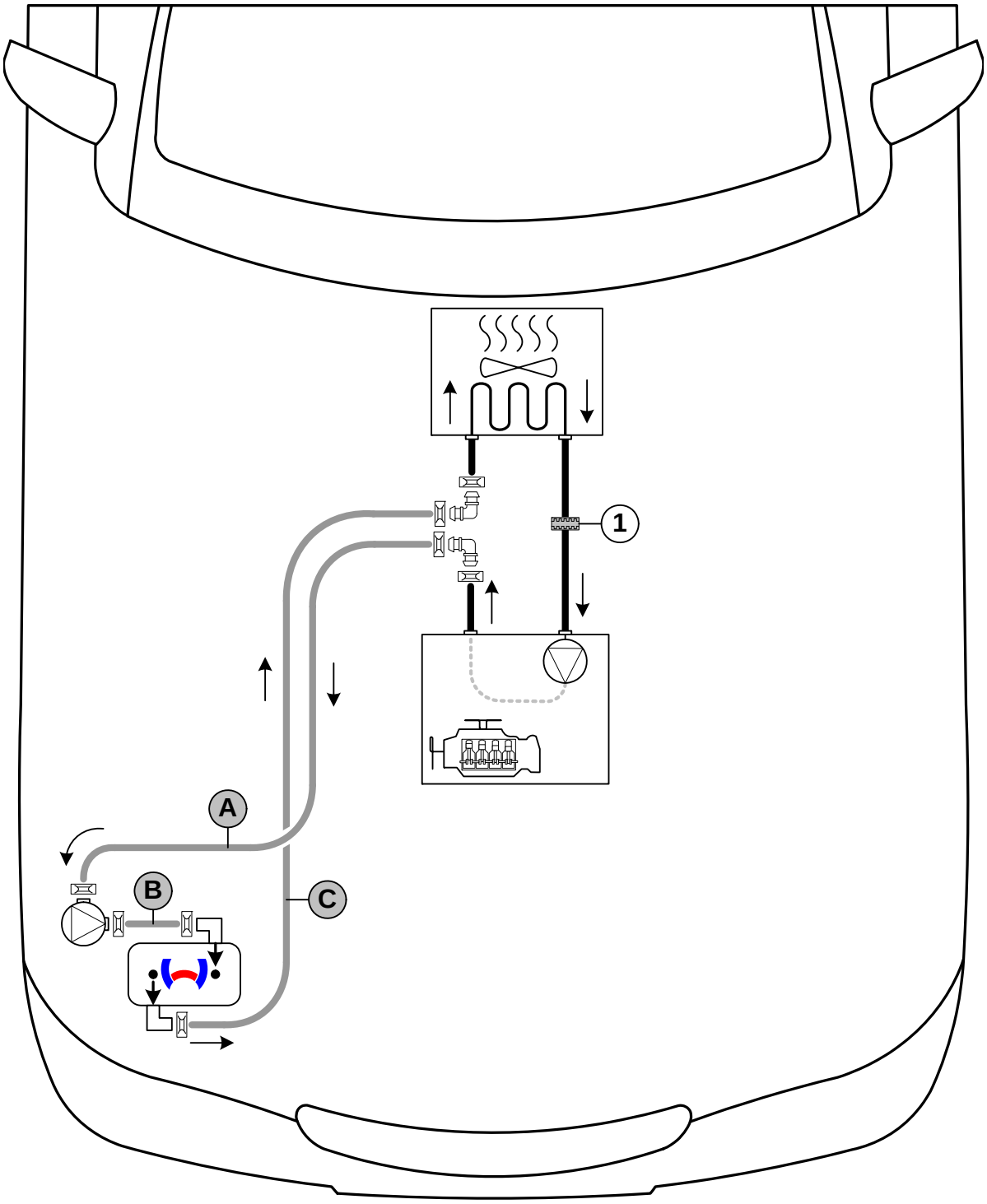
2 Perforated bracket
3 Original vehicle stud bolt, plate nut

Fastening hoses

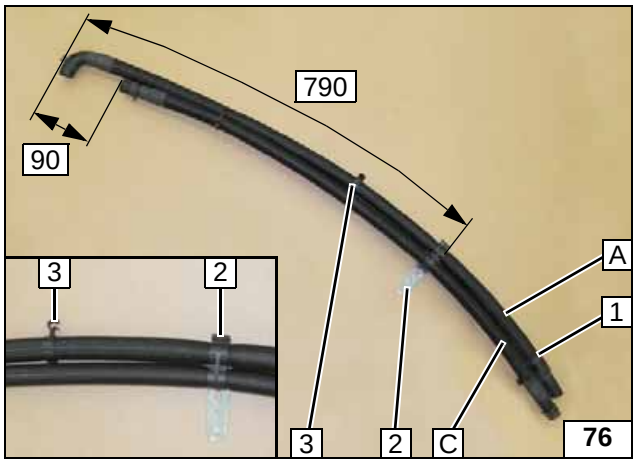
Coolant Circuit for 1.25

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. When installing the hoses, the heater must be filled with coolant.
The connection should be "inline" based on the following diagram:

Hose routing diagram



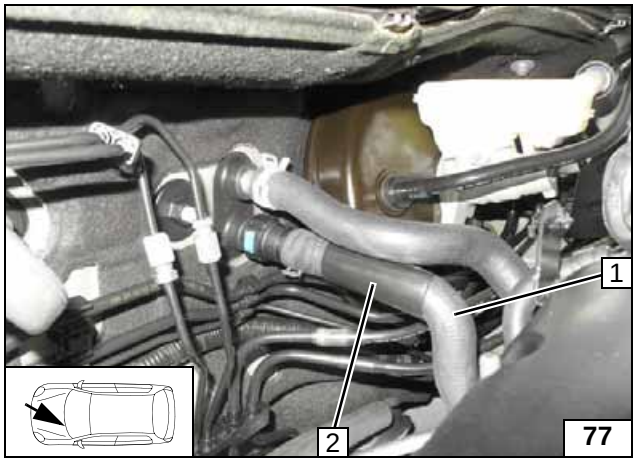
All spring clips without a specific designation = 25 mm dia. **1** = Black (sw) rubber isolator
All connecting pipes = 18x18 mm dia.



Drill out hole in perforated bracket for hose bracket **2** to 8mm dia.

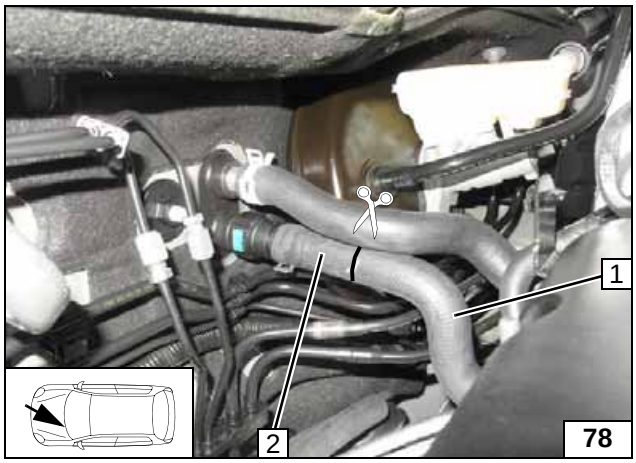
1 Attach 25x25 hose bracket
2 Perforated bracket, 25x25 lockable hose bracket
3 Attach 9x25 hose bracket

Premounting hoses



1 Hose on engine outlet/heat exchanger inlet
2 Protective hose

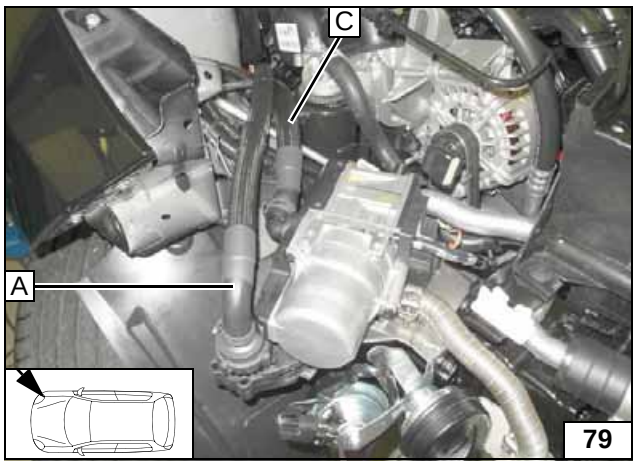
Removing protective hose



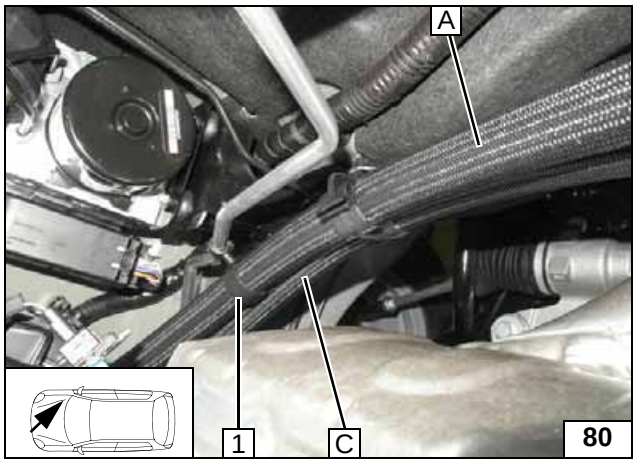
Cut hose of engine outlet / heat exchanger inlet at the marking.

1 Engine outlet hose section
2 Hose section of heat exchanger inlet

Cutting point

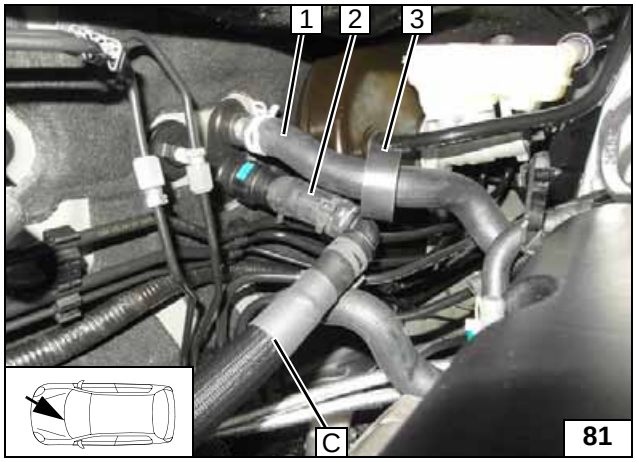


Connecting heater



Fix hose **A** with 9x25 hose bracket **1** to A/C line.

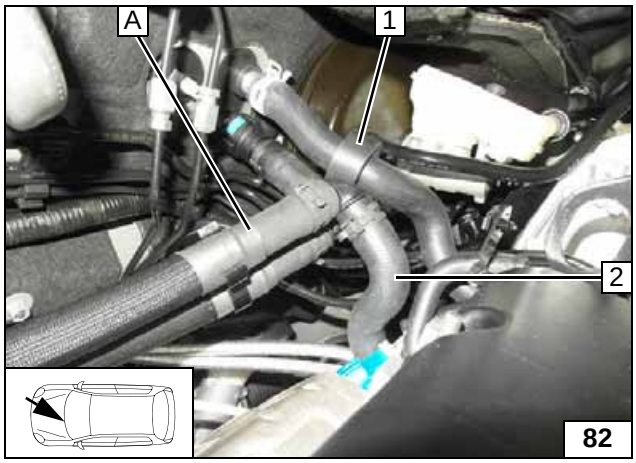
Routing in engine compartment



Pull off hose of heat exchanger outlet **1**, push on black (sw) rubber isolator **3** and re-mount.

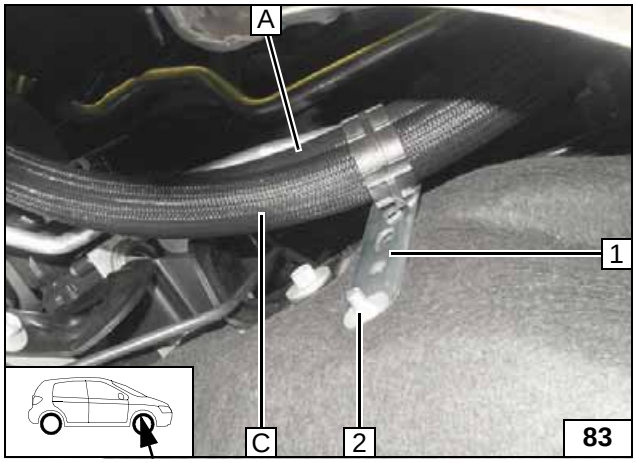
2 Hose on heat exchanger inlet

Connection on heat exchanger inlet



1 Align black (sw) rubber isolator
2 Hose of engine outlet

Connecting engine outlet

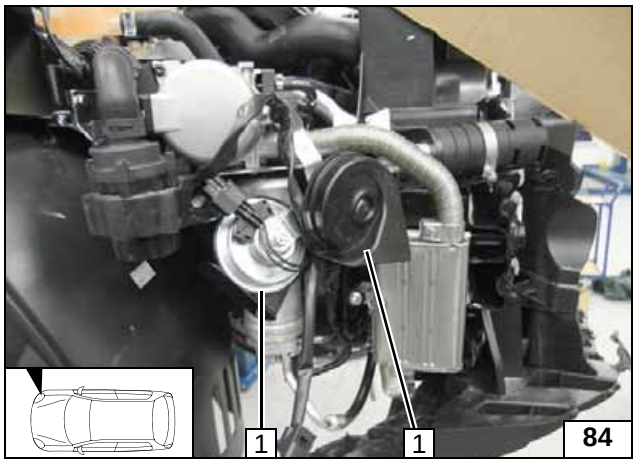


Remove original vehicle plastic nut at position **2** and discard it. Align hoses. Ensure sufficient distance from neighbouring components, or correct.

1 Perforated bracket
2 Original vehicle stud bolt with plate nut

Fastening hoses

Final Work



1 Horns [2x]

Installing horns

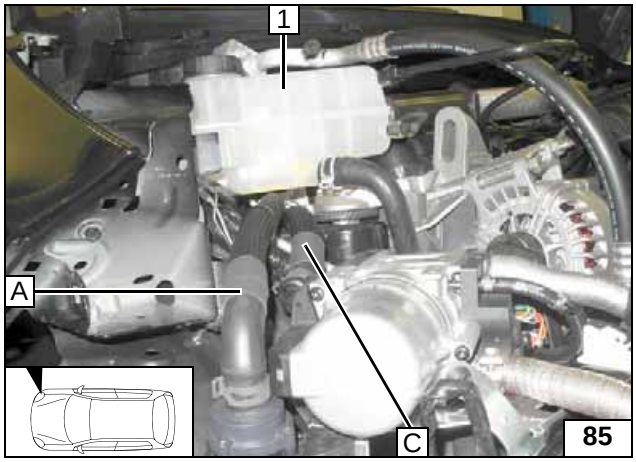
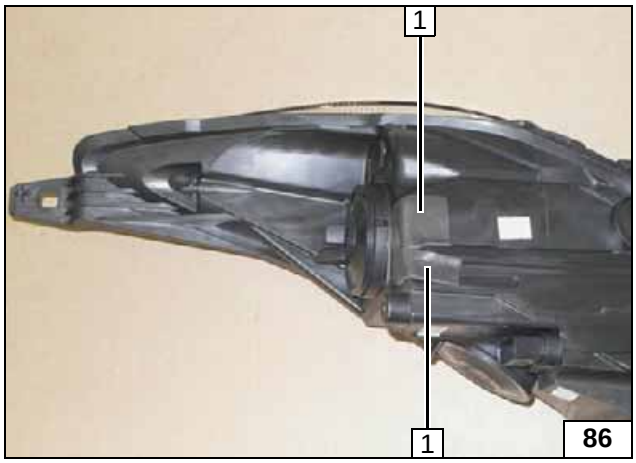


Figure shows 1.25!
Ensure sufficient distance to neighbouring components, especially to hoses **A** and **C**, correct if necessary.

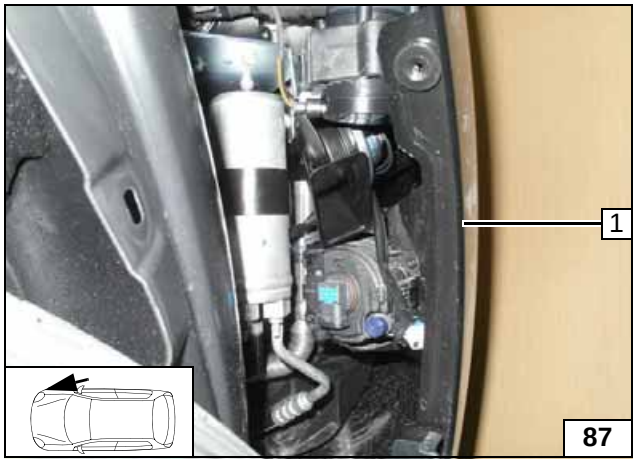
1 Expansion tank mounted

Aligning hoses



1 Foam strips [2x]

Gluing on foam strips



Ensure sufficient distance from neighbouring components, or correct.

1 Bumper mounted

Aligning horns

WARNING!
Mount removed parts 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 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.**
- **Adjust digital timer, teach Telestart transmitter.**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Place the "Switch off parking heater before refuelling" caution label in the area of the filler neck.**
- **See installation instructions for initial startup and function check.**

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Internet: www.webasto.com
Technical Extranet:
http://dealers.webasto.com

Webasto
Feel the Drive

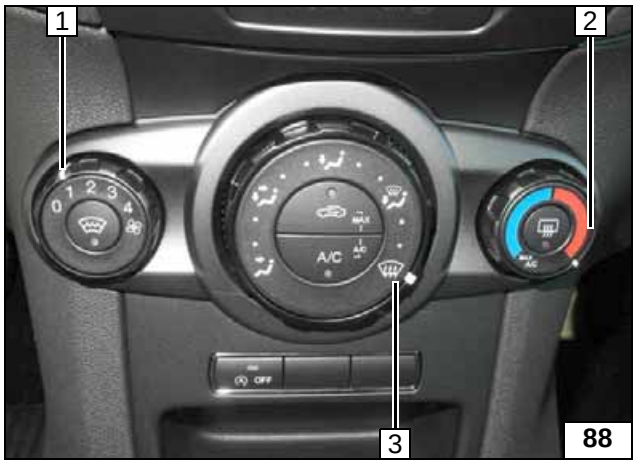
Operating Instructions for Manual Air-Conditioning

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.

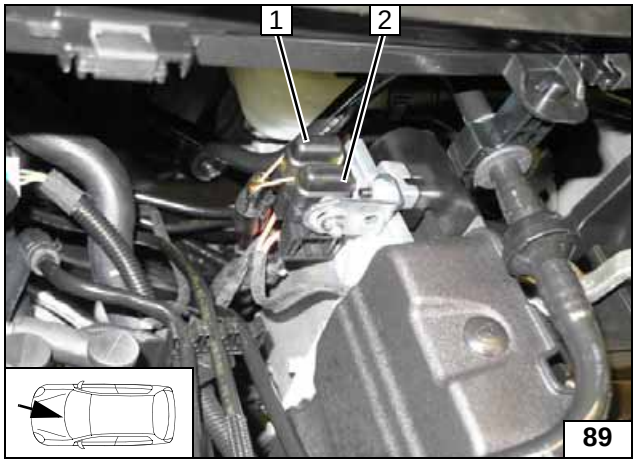
Passenger compartment monitoring , if installed, must be deactivated in addition to the vehicle settings for the heating operation.
Instructions for deactivation can be taken from the operating instructions manual of the vehicle.

Before parking the vehicle, make the following settings:



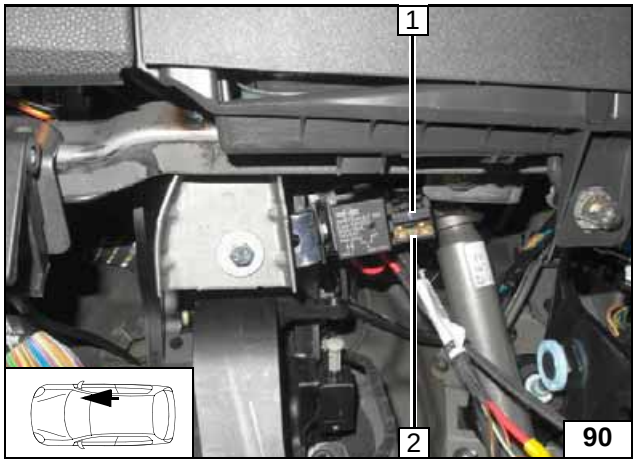
1 Set fan speed to level "1", or max. "2"
2 Set temperature to "HI"
3 Air outlet to windscreen

A/C control panel



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

Fuses of engine compartment



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

Fuses of passenger compartment

Webasto
Feel the Drive

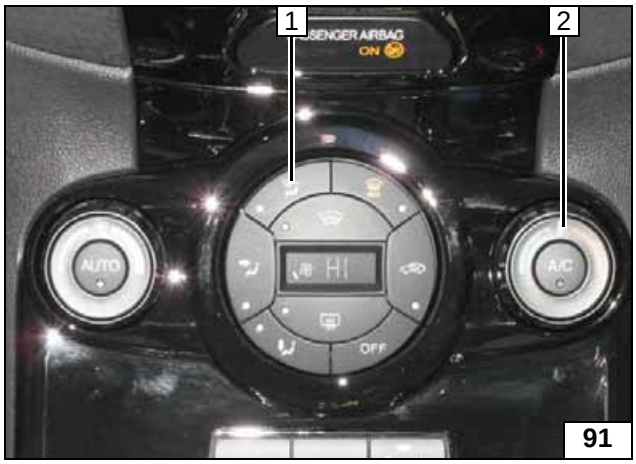
Operating Instructions for Automatic Air-Conditioning

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.

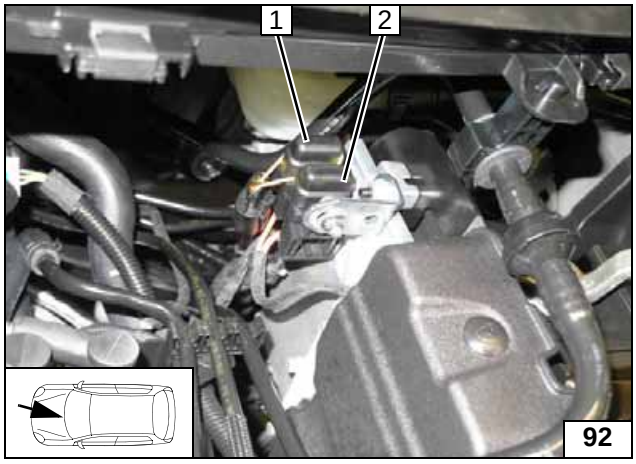
Passenger compartment monitoring , if installed, must be deactivated in addition to the vehicle settings for the heating operation.
Instructions for deactivation can be taken from the operating instructions manual of the vehicle.

Before parking the vehicle, make the following settings:



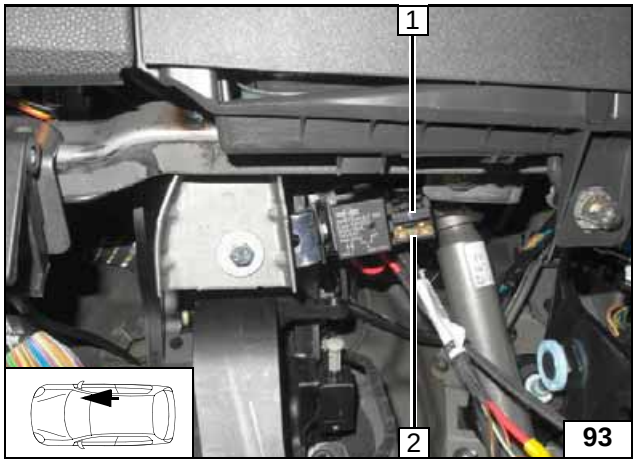
1 Air outlet to windscreen
2 Set temperature to "HI"

A/C control panel



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

Fuses of engine compartment



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

Fuses of passenger compartment