Water Heater

Webasto
Feel the Drive

***Thermo Top Evo* Parking Heater**

E1
00 0258

Installation Documentation
Mercedes Benz E-Class
Coupe C207

Validity

Manufacturer	Model	Type	EG BE No. / ABE
Daimler AG	E-Class	C207	e1 * 2001 / 116 * 0502 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm³	Engine code
E 200 CGI	Petrol / R4	AG / SG	135	1796	271.860/ .820
E 250 CGI	Petrol / R4	AG	150	1796	271,860
E 300	Petrol / V6	AG	185	3498	276,957
E 350	Petrol / V6	AG	200 / 225	3498	276.957/ .988
E 350 CGI	Petrol / V6	AG	215	3498	272,982
E 350 CGI	Petrol / V6	AG	225	3498	276,957
E 220 CDI	Diesel / R4	AG / SG	125	2143	651,911
E 250 CDI	Diesel / R4	AG / SG	150	2143	651,911
E 350 CDI	Diesel / V6	AG	170/195	2987	642.836/ .838
E 350 CDI	Diesel / V6	AG	185	2987	642,838

AG = 7G - Tronic
SG = manual transmission

From model year 2009
Left-hand drive vehicle

Verified equipment variants: Automatic air-conditioning
Blue Efficiency / Blue Tec / 4Matic
Headlight washer system
Daytime running lights

Not verified: AMG Optical package
Passenger compartment monitoring

Exclusion: E 63 AMG

Total installation time: approx. 12 hours

Mercedes Benz E-Class Coupe C207

Table of Contents

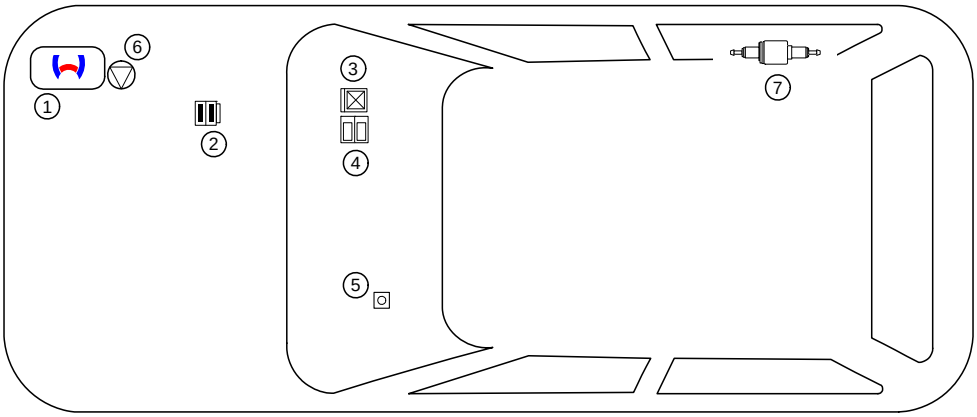
Necessary Components

- Delivery scope of *Thermo Top Evo* Mercedes Benz E-Class Coupe C207 2009 Petrol: **1315952C**
- Delivery scope of *Thermo Top Evo* Mercedes Benz E-Class Coupe C207 2009 Diesel: **1315953C**
- Heater controls in accordance with price list and upon consultation with end customer
- In case of Telestart: Wiring harness extension: **1319724**_
- In case of Telestart: Indicator lamp in accordance with price list and upon 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 ThermoCall 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. PWM Gateway
4. Relay [2x]
5. Push button
6. Circulating pump
7. 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 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 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.

Mercedes Benz E-Class Coupe C207

Information on Validity

This installation documentation applies to Mercedes Benz E-Class Coupe C207 Petrol and diesel vehicles - for validity, see page 1 - from model year 2009 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 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
- Deep-hole marker
- Metric thread-setter kit
- Stepped drill bit
- Webasto Thermo Test Diagnosis with current software

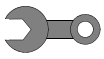
Dimensions
- All dimensions are in mm.

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.

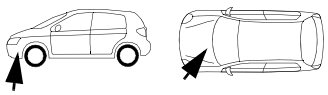
Specific risk of damage to components.

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.

Mercedes Benz E-Class Coupe C207

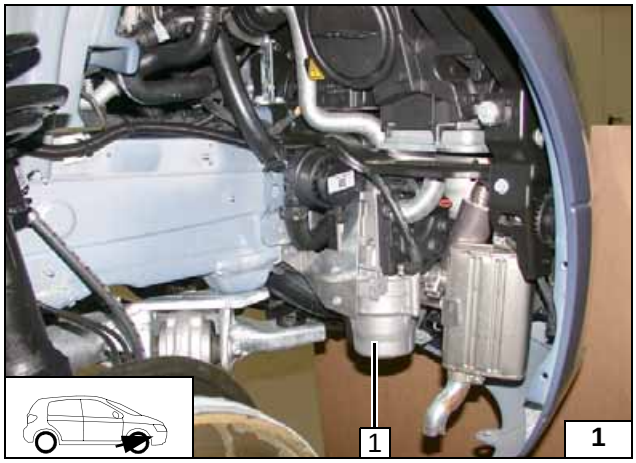
Preliminary Work

Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Remove the trim of the passenger compartment fan air intake.
- Disconnect the battery.
- Remove the windscreen wipers.
- Remove the coolant reservoir cap.
- Remove the strut brace on the left.
- Remove the windscreen wiper motor fully.
- Remove the cover of the air intake for the passenger compartment fan in the engine compartment on the right.
- Remove the battery with the carrier fully.
- Remove the battery control unit.
- Remove the engine design cover.
- Remove the intake hose (right).
- Remove the lower engine cover.
- Remove the lower vehicle trim (right).
- Remove the right-hand front wheel.
- Remove the wheel well trim (right).
- Remove the seat of the rear bench seat.
- Remove the fuel tank sending unit in accordance with the manufacturer's instructions (right).
- Remove the cover below the instrument panel on the driver's side.
- Remove the door sill panel trim at the front right.
- Remove the lower A-pillar trim at the front right.
- Fold back the front cover in the footwell on the front passenger's side, loosen the cover plate (plastic nuts) and tilt back.
- Remove the front A/C control panel.
- Remove the shift lever cover or storage compartment in case of 7-speed automatic.
- Remove the ashtray or storage compartment with the socket outlet below the A/C control panel.
- Drain off the engine coolant according to 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

1 Heater

Installation location

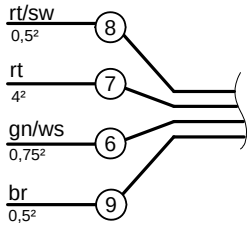
Preparing Electrical System

Wire sections retain their numbering in the entire document.

Assigning heater wiring harness

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

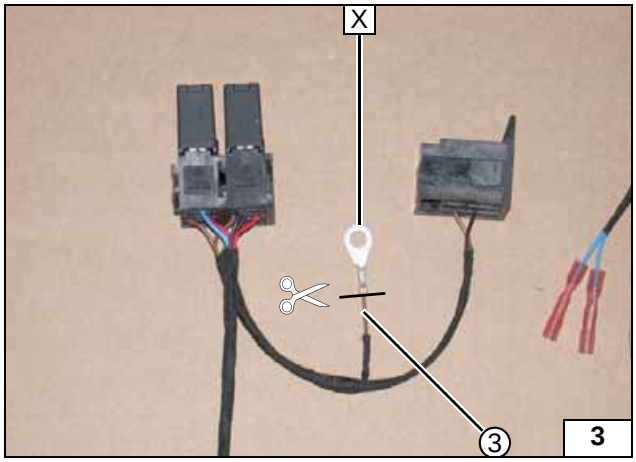
- ⑧ Red/black (rt/sw) wire of heater wiring harness, X10
- ⑦ Red (rt) wire of heater wiring harness, F2
- ⑥ Green/white (gn/ws) wire of heater wiring harness, X1/5
- ⑨ Brown (br) wire of heater wiring harness, earth 31



2

X = 

Preparing fan controller wiring harness/ assigning wire



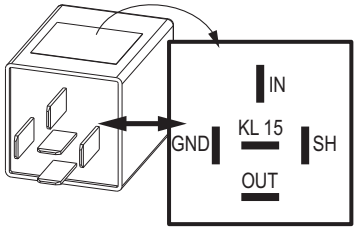
3

Check the PWM Gateway settings when starting up the heater and adjust if necessary.

Preparing PWM Gateway

Settings:

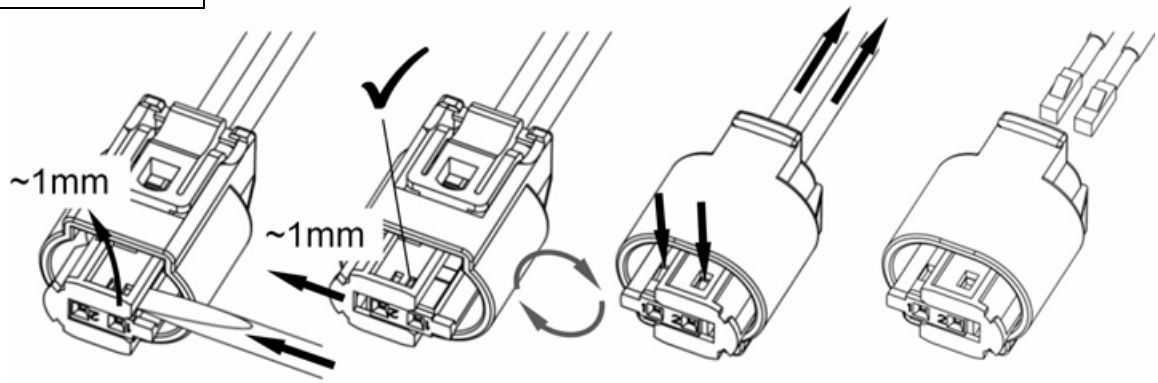
Duty cycle: 56%
Frequency: 400Hz
Voltage: 3.0V
Function: High-side



4

Connector X7

Dismantling metering pump connector

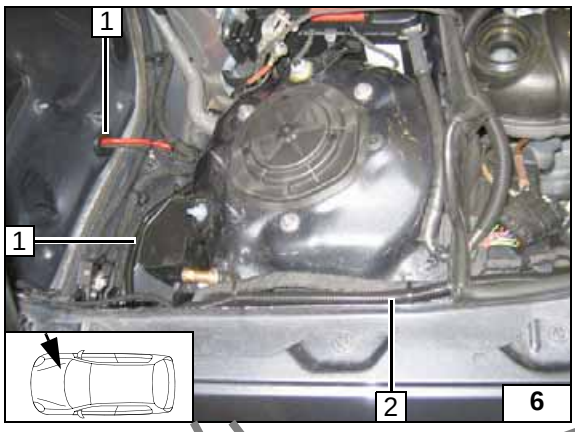


5

Electrical System

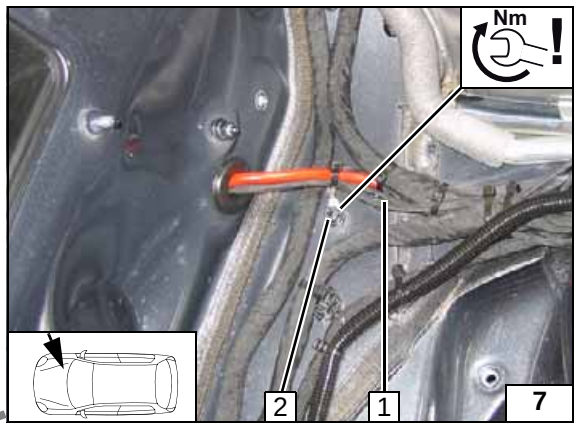
Wiring harness routing and pass through

1 Rubber plug; heater wiring harness and control
2 Wiring harness to heater in 10 mm dia. corrugated tube

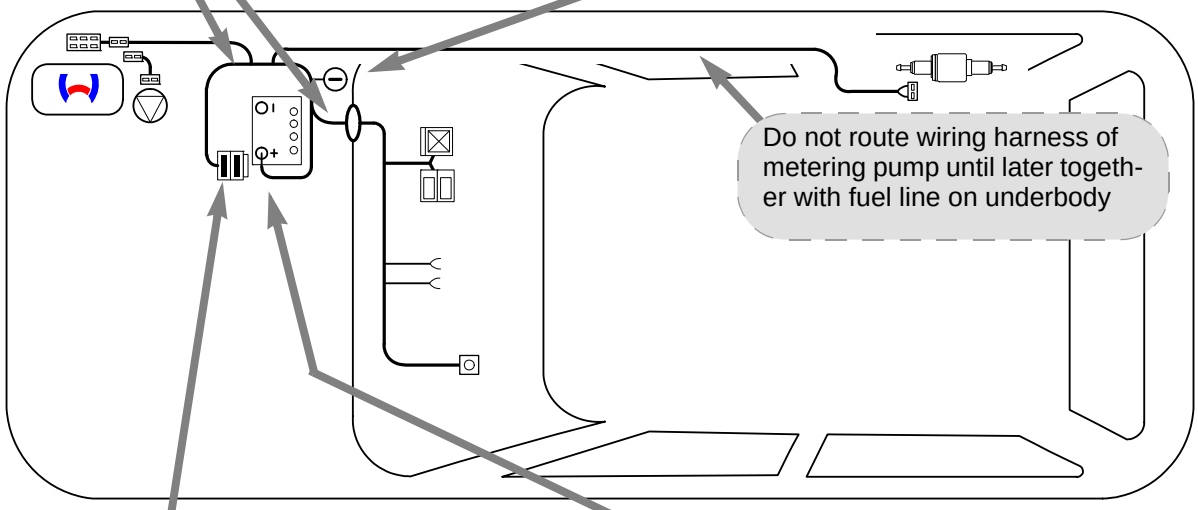


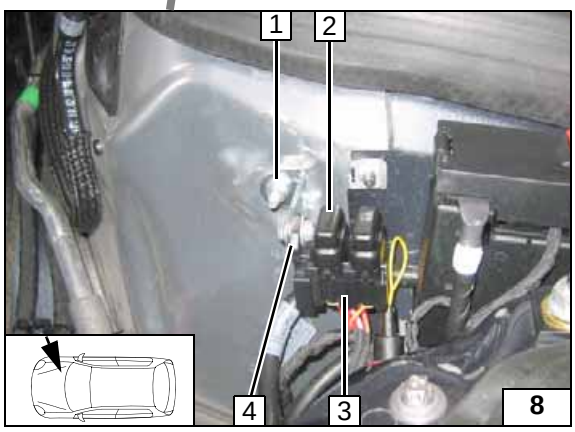
Earth wire

1 Earth wire, 6 mm dia. cable lug
2 Original vehicle earth support point



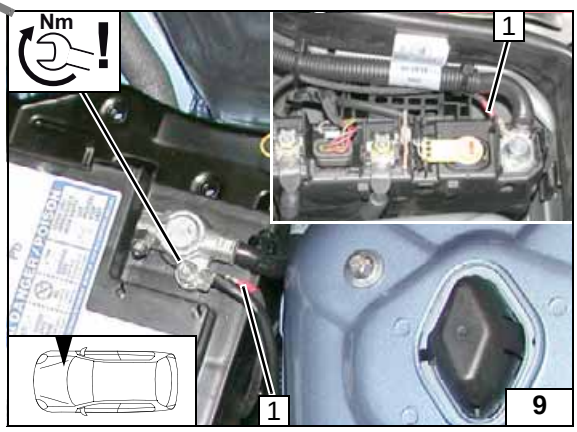
Wiring harness routing diagram





Engine compartment fuse holder

1 Remove clip, M6x20 bolt, angle bracket, large diameter washer [2x], flanged nut
2 Replace F2 with 1A fuse
3 F1+2 fuses mounted
4 M5x16 bolt, washers, retaining plate of fuse holder, flanged nut

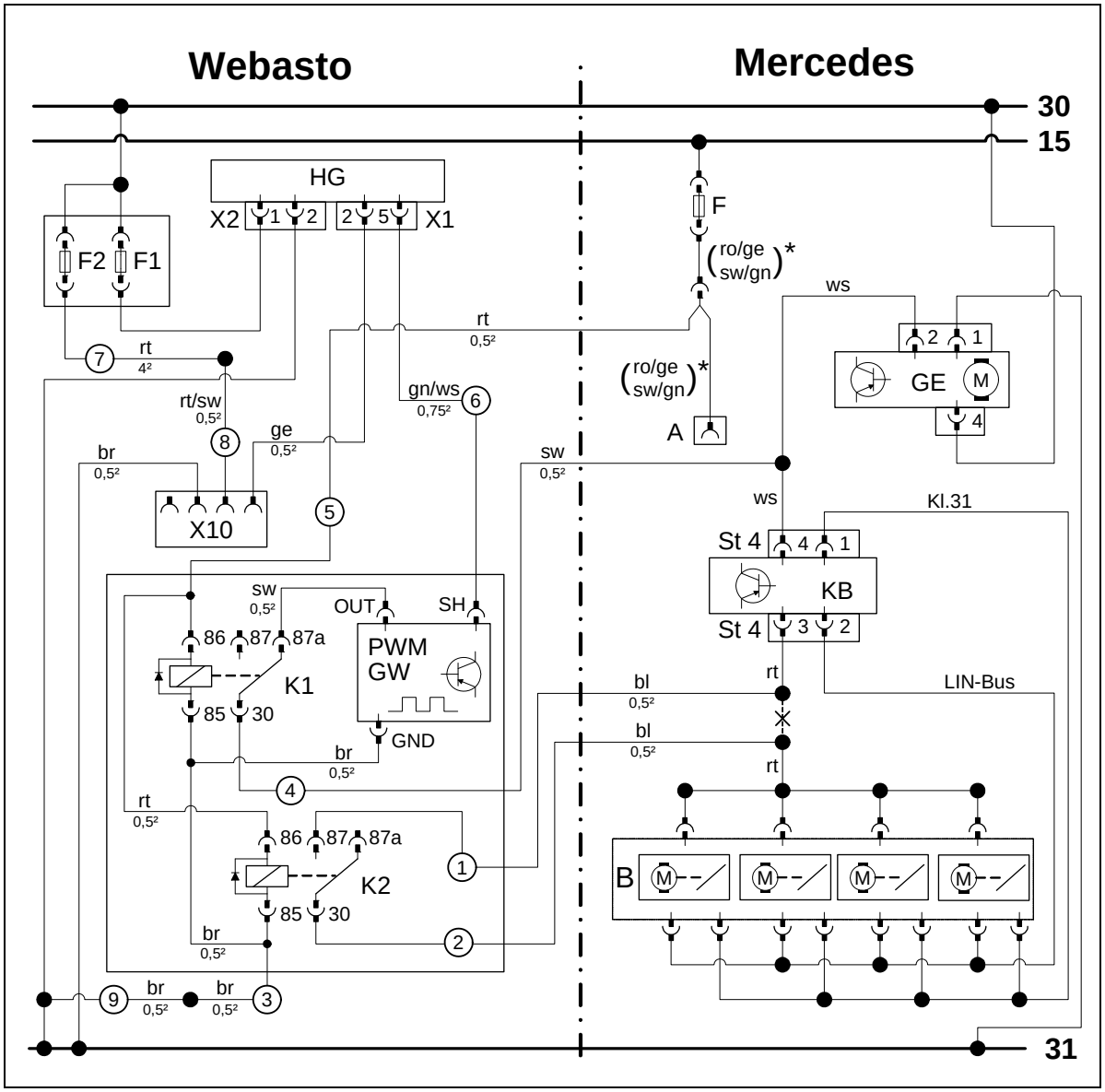


Positive wire

Manufacturer installs different positive support points. Connect power supply of heater **1** to positive terminal (battery or starter cable of positive support point).

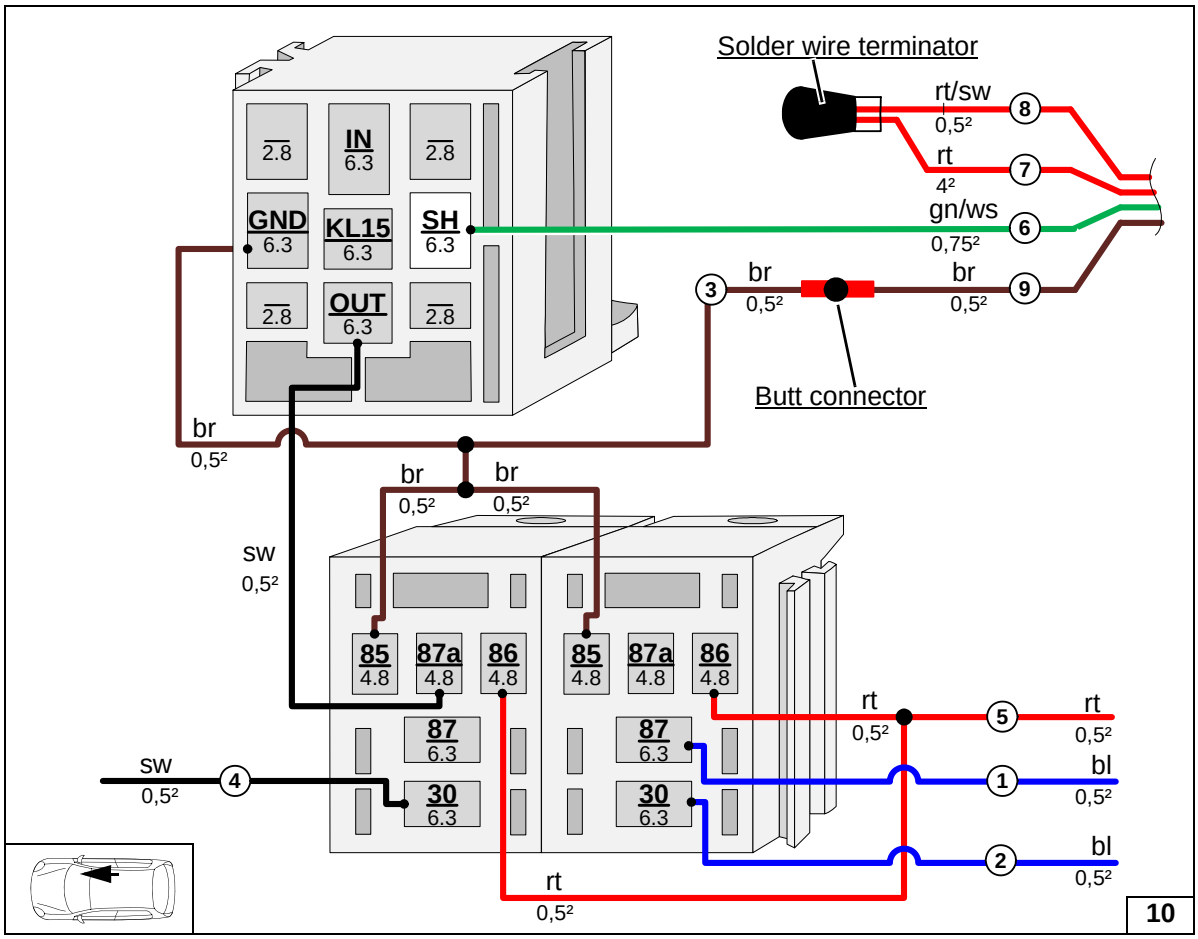
Fan Controller

Wiring diagram

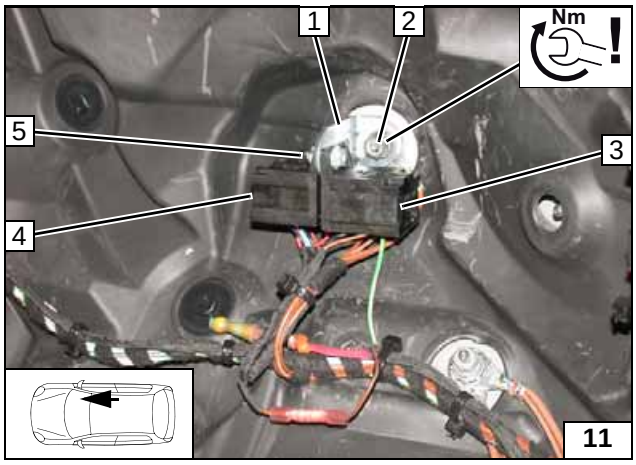


Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	F	Fuse	rt	red
X1	6-pin heater connector	GE	Fan unit	ws	white
X2	2-pin heater connector	A	Socket outlet/lighter	sw	black
F1	20A fuse	KB	A/C control panel	bl	blue
F2	Replace 30A fuse with 1A fuse.	St 4	4-pin connector KB	ge	yellow
		B	Flap positioning module	br	brown
X10	4-pin connector of heater control			gn	green
				ro	pink
K1	Fan relay			rt/sw	red/black
PWM GW	Pulse width modulator			gn/ws	green/white
				ro/ge	pink/yellow
K2	Additional relay			sw/gn	black/green
PWM GW settings:					
Duty cycle:	56%			*	depending on the equipment
Frequency:	400Hz				
Voltage:	3.0V			**X**	Cutting point
Function:	High-side			Wiring colours may vary.	

Legend



Connecting wiring harness of heater and fan controller in passenger compartment/ connecting green/white (gn/ws) wire ⑥ to PWM GW socket

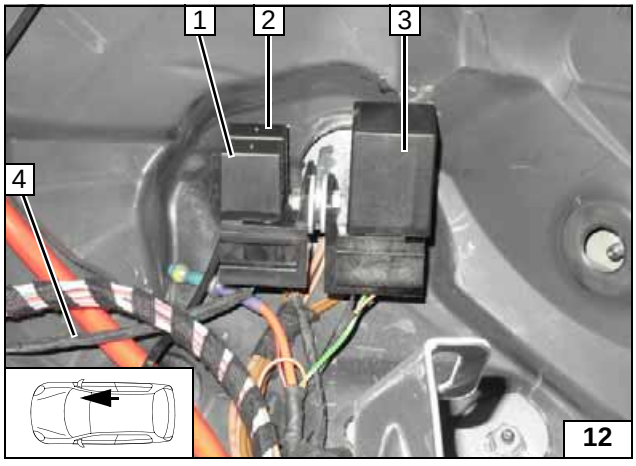


Vehicle equipment may vary. Check the equipment beforehand.

Version 1

1 Angle bracket
2 Original vehicle stud bolt, original vehicle earth wires
3 PWM Gateway socket
4 Relay socket [2x]
5 M5x16 bolt, large diameter washer [2x], flanged nut

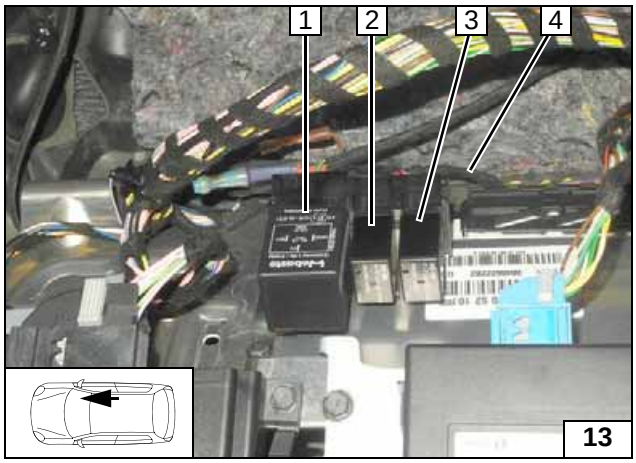
Mounting relay socket and PWM GW socket



Route fan controller wiring harness **4** to centre console and secure with cable ties.

1 Relay K1
2 Relay K2
3 PWM Gateway

Mounting relay [2x] and PWM GW

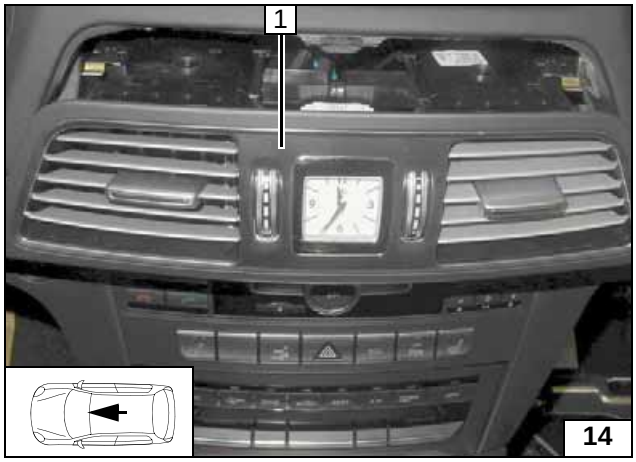


Version 2

Fasten relay socket and PWM Gateway socket using double-sided adhesive tape.
Route fan controller wiring harness **4** to centre console.

1 PWM Gateway
2 Relay K1
3 Relay K2

Mounting relay socket and PWM GW socket

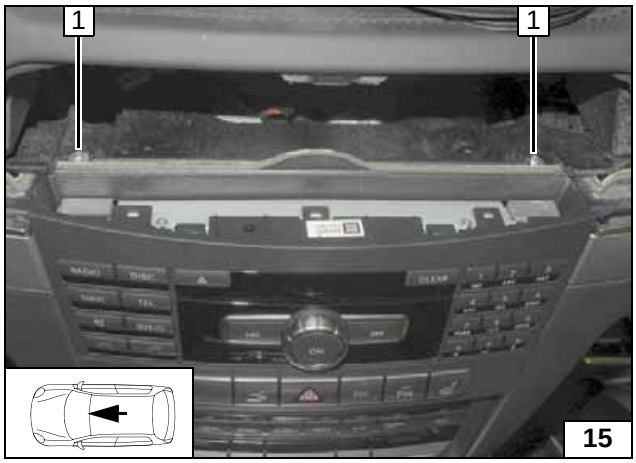


A/C Control Panel Dismantling Aid

From model year 2015.

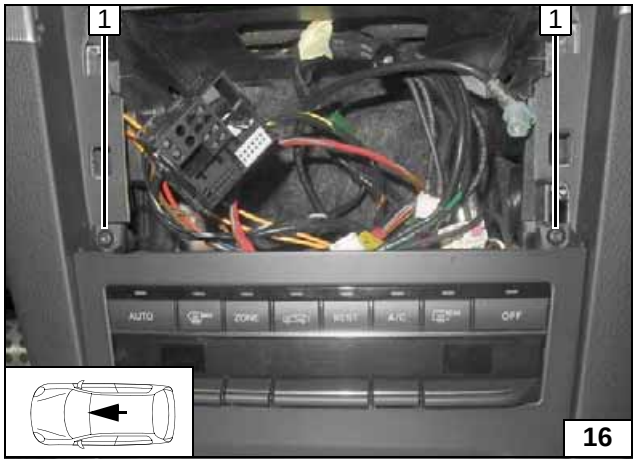
Unclip trim piece **1** by pulling it forward.
(Note: Lever it out carefully using an assembly wedge.)

Removing A/C control panel



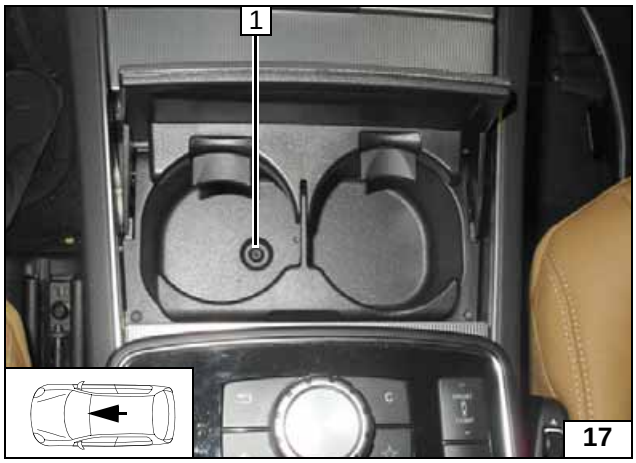
1 Original vehicle bolt [2x]

Loosening original vehicle bolts



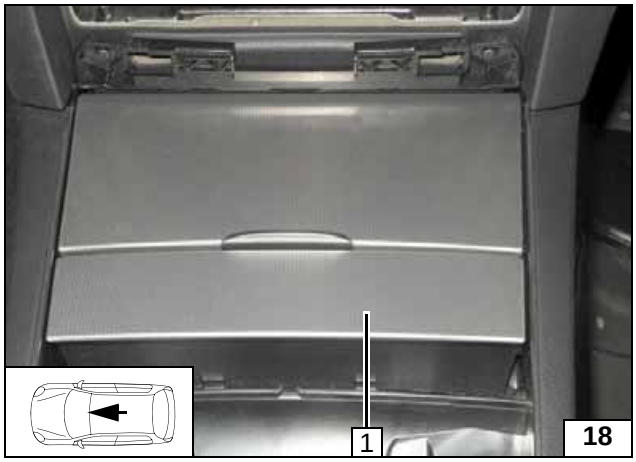
1 Original vehicle bolt [2x]

Loosening original vehicle bolts



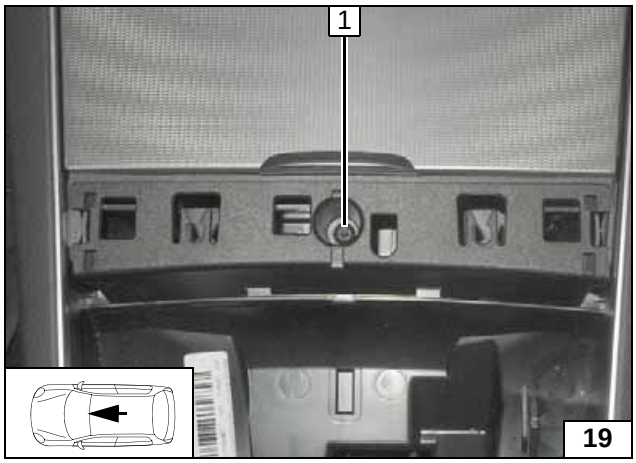
Loosen original vehicle bolt **1**.

Removing cover



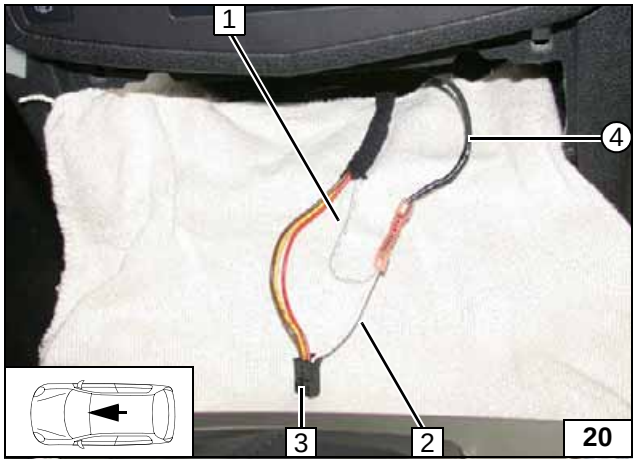
1 Cover

Removing cover



1 Original vehicle bolt

Loosening original vehicle bolt

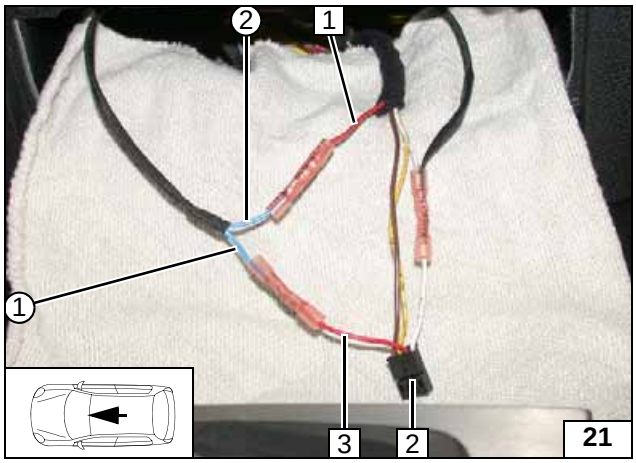


All vehicles

Connection to 4-pin connector **3** from A/C control panel.

1 White (ws) wire of fan unit
2 White (ws) wire of 4-pin connector KB, pin 4
④ Black (sw) wire of K1/30, fan controller wiring harness

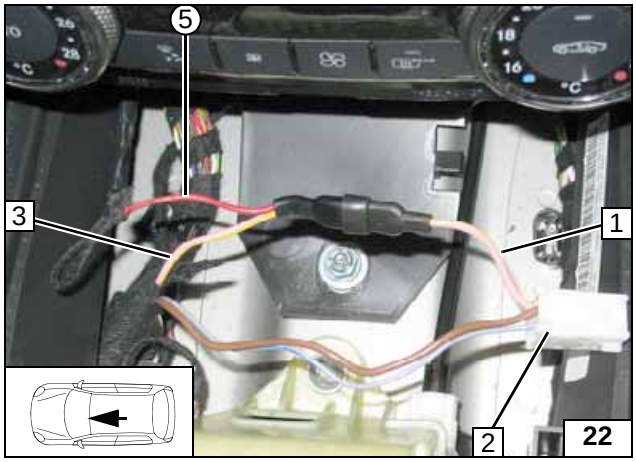
Connecting A/C control panel



Connection to 4-pin connector **2** from A/C control panel.

1 Red (rt) wire of flap positioning module
3 Red (rt) wire of 4-pin connector ST 4/ A/C control panel, pin 3
① Blue (bl) wire of K2/87 from fan controller wiring harness
② Blue (bl) wire of K2/30 from fan controller wiring harness

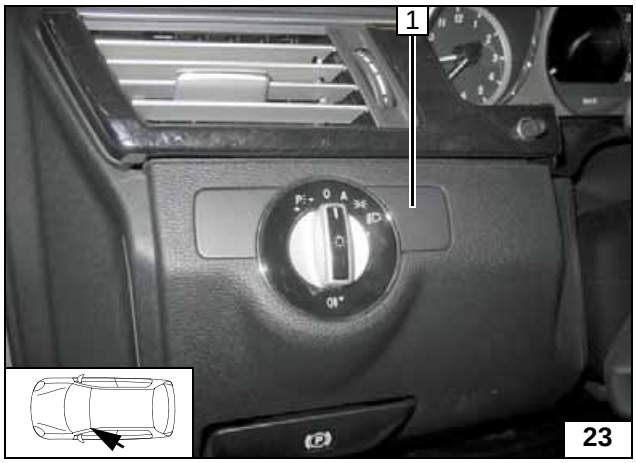
Connecting A/C control panel



Connection to plug-in connector **2** of socket outlet / lighter.

1 Pink/yellow (ro/ge) or black/green (sw/gn) wire of socket outlet /lighter
3 Pink/yellow (ro/ge) or black/green (sw/gn) wire of fuse
⑤ Red (rt) wire of K1/86, wiring harness of fan controller

Connection to socket outlet/lighter



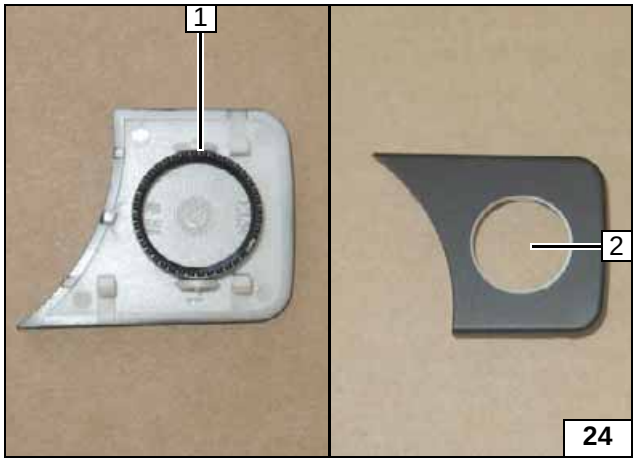
Installing Push Button

Only in connection with Telestart. Use wiring harness extension.

Warning:
If the push button cannot be installed in the trim piece due to parts lying behind it, the installation is done according to image 28.

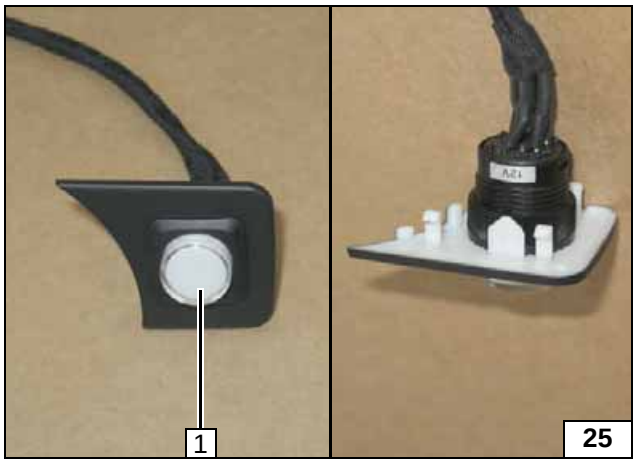
1 Cover

Removing cover



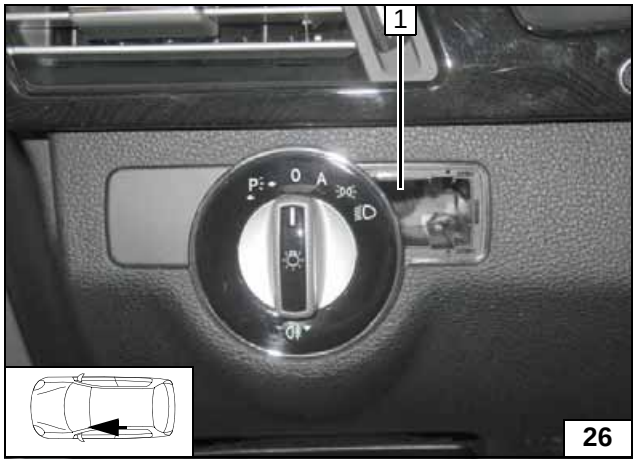
Mount union nut **1** of push button, align in centre and drill 16 mm dia. hole **2** in the cover (stepped drill bit).

Hole in cover



Install push button **1** , align and secure with union nut.

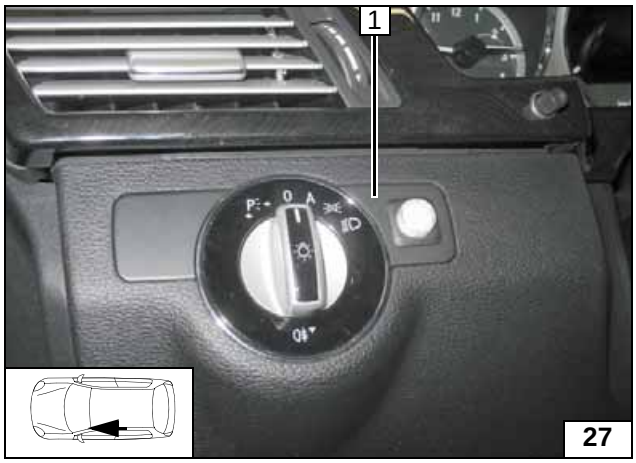
Mounting push button



When drilling, watch components located behind.

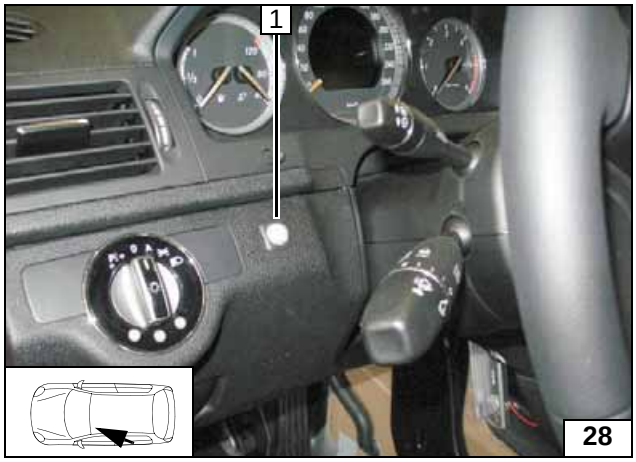
1 12 mm dia. hole

Hole for wiring harness



1 Cover

Mounting cover

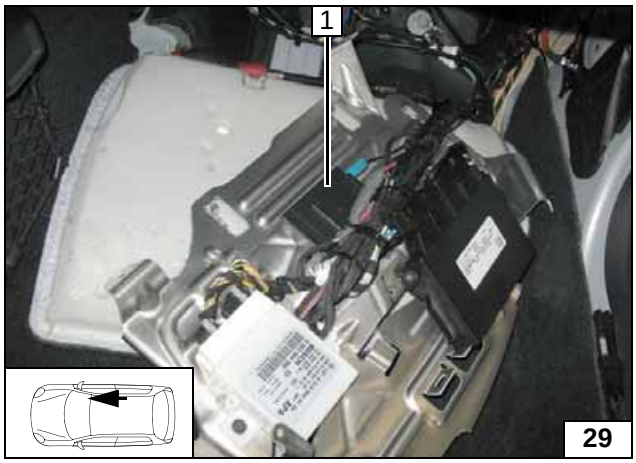


Alternative installation location

Only in connection with Telestart. Use wiring harness extension.

1 12 mm dia. hole, push button

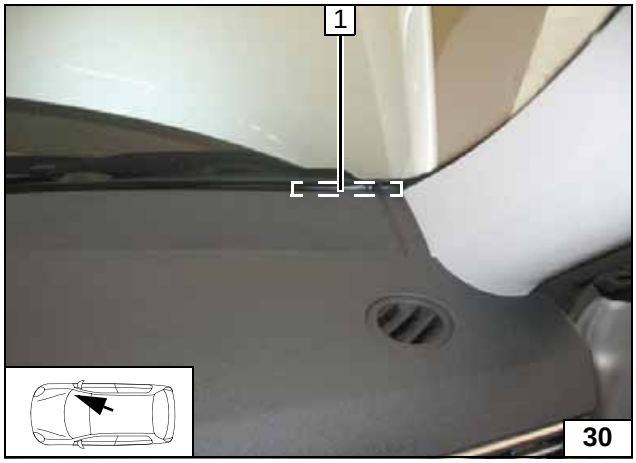
Mounting push button



Telestart

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

Installing receiver



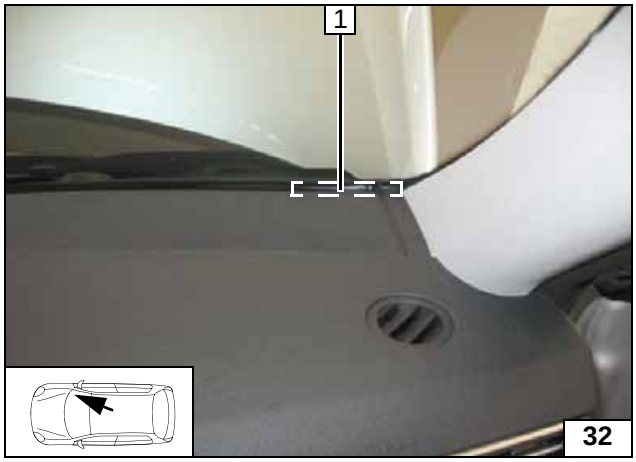
1 Aerial

Installing aerial

ThermoCall Option

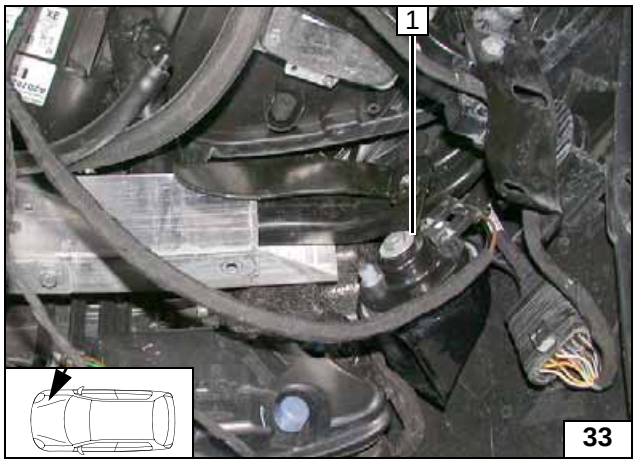
Fasten receiver **1** with double-sided adhesive tape.

Installing receiver



1 Aerial (optional)

Installing aerial



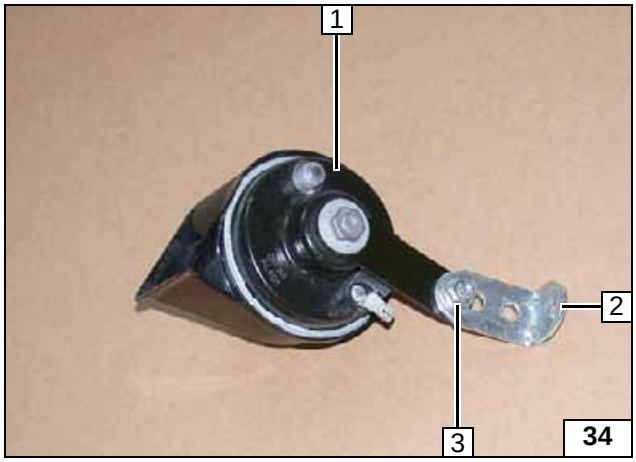
Preparing Installation Location

Two versions can be distinguished based on the vehicle equipment. Before starting, check the vehicle!

Horn version 1

Removing horn

Remove horn **1** with bracket. Bolt will be re-used!



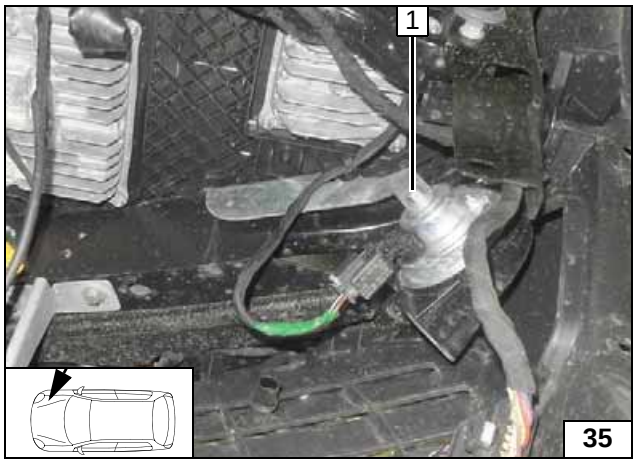
1 Horn
2 Angle bracket
3 Original vehicle bolt, flanged nut

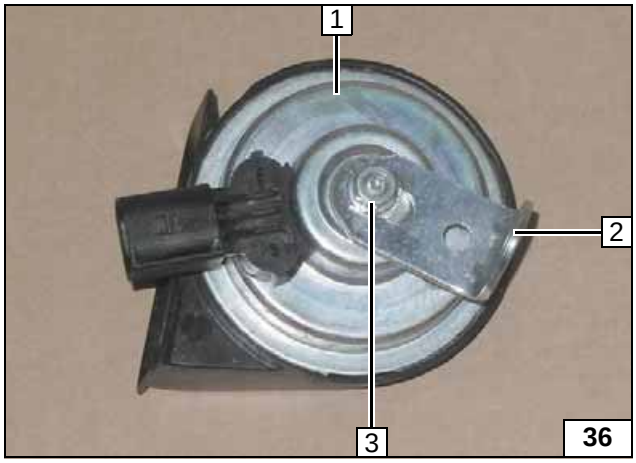
Preparing horn

Horn version 2

Removing horn

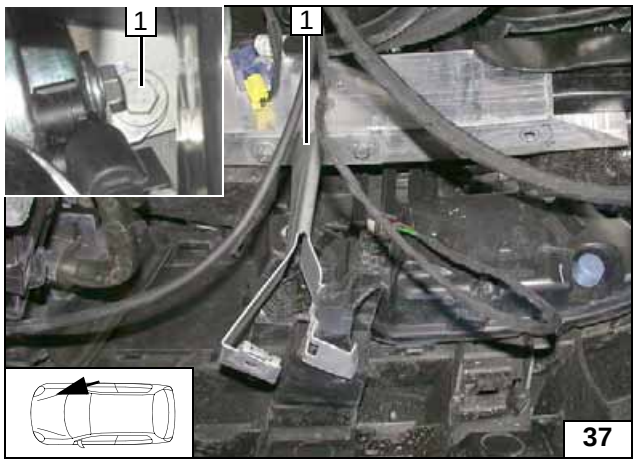
Remove horn **1** with bracket. Nut will be re-used.





1 Horn
2 Angle bracket
3 Original vehicle stud bolt, original vehicle flanged nut

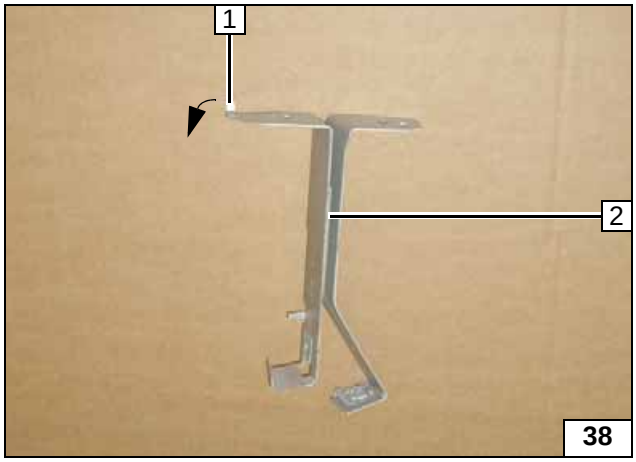
Preparing horn



All vehicles

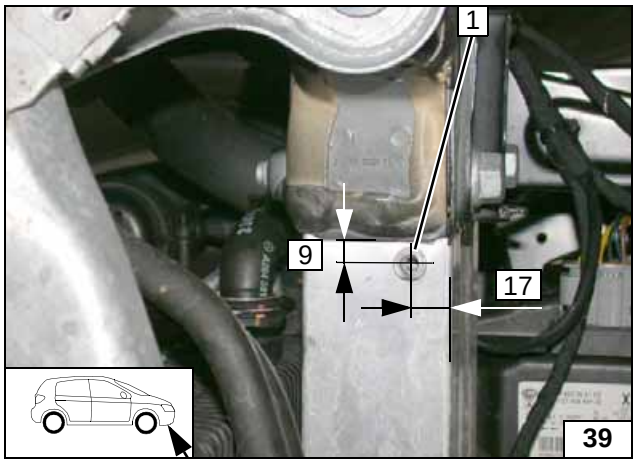
Remove bracket **1**. Bolts will be reused!

Removing bracket



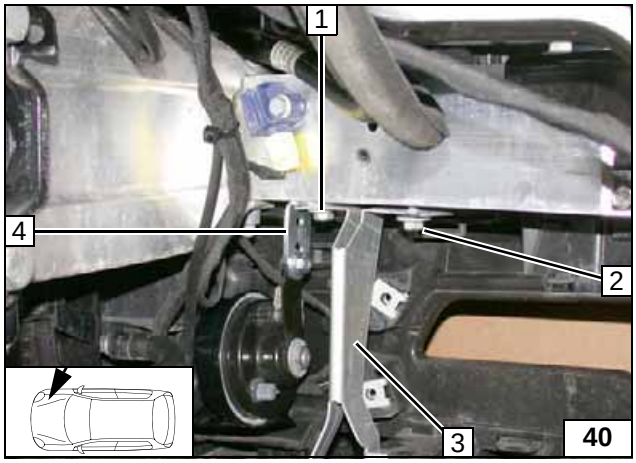
Bend back tab (twist protection) **1** of bracket **2**.

Preparing bracket



1 9.1 mm dia. hole, rivet nut

Installing rivet nut

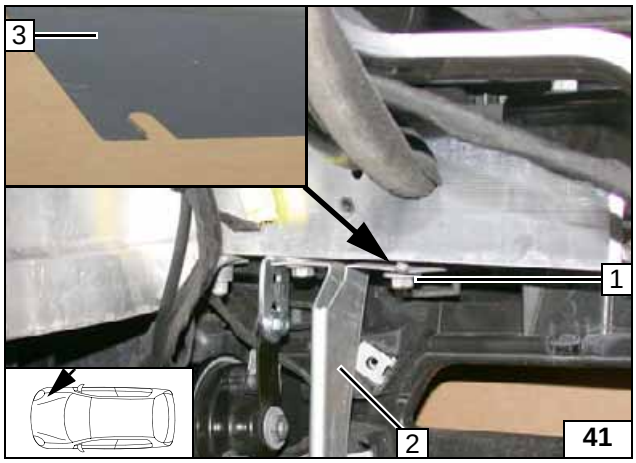


Horn version 1

Install angle bracket **4** between bracket **3** and cross member. Reroute LED TFL wiring harness and secure with cable tie!

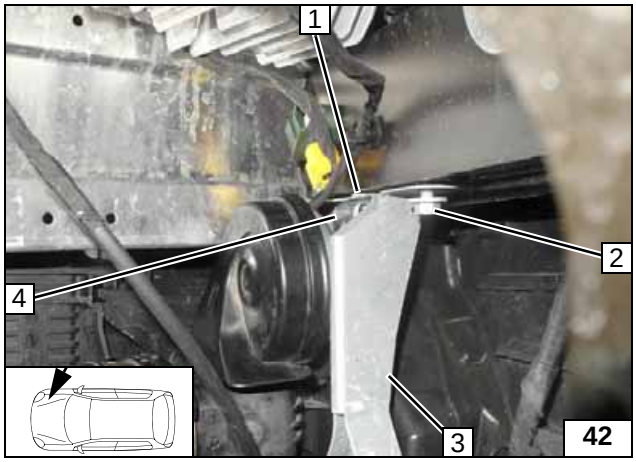
1 Original vehicle bolt
2 Loosely mount original vehicle bolt

Installing bracket, horn



Mount heater bracket **3** with oblong hole between bracket **2** and bumper at position **1**.

Installing heater

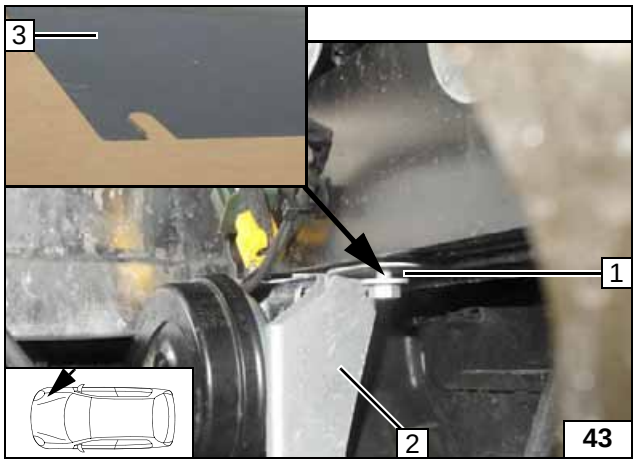


Horn version 2

Reroute LED TFL wiring harness and secure with cable tie!

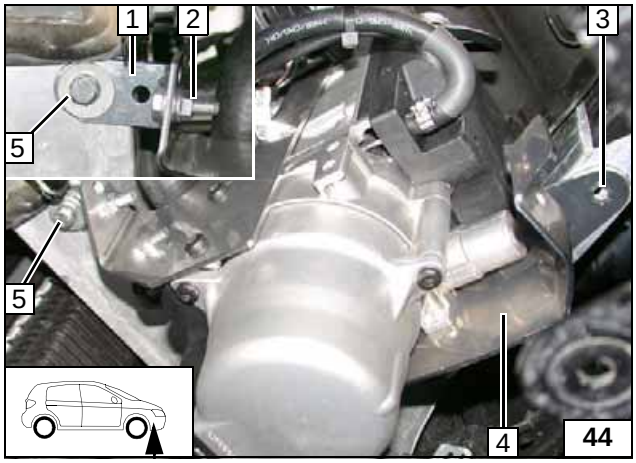
1 Original vehicle bolt
2 Loosely mount original vehicle bolt
3 Bracket
4 Angle bracket

Installing bracket, horn



Install heater bracket **3** with oblong hole between bracket **2** and bolt at position **1**.

Installing heater

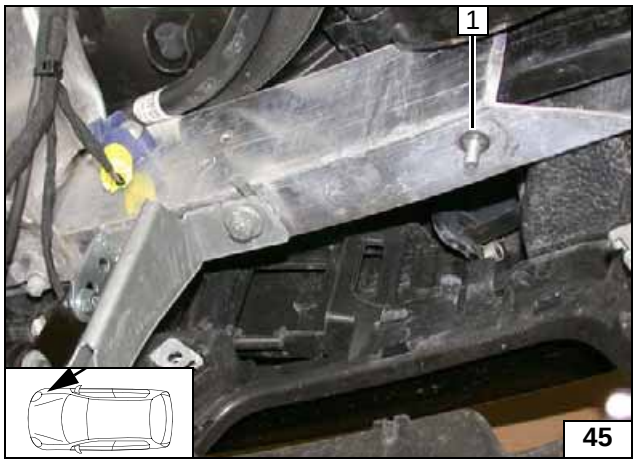


All vehicles

Install heater bracket **4** with oblong hole between bracket and bumper or between bracket and bolt (see previous figures). Loosely mount heater at position **5**.

1 Angle bracket
2 M6x20 bolt, flanged nut
3 Copy hole pattern
5 M6x20 bolt, large diameter washer

Copying hole pattern

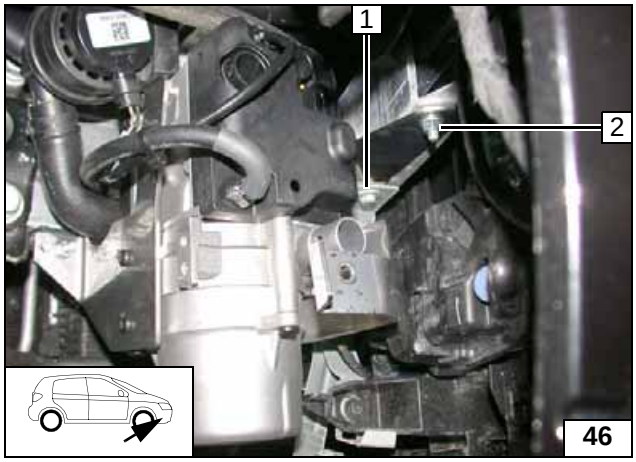


Remove heater.

1 7 mm dia. hole, M6x20 bolt, pin lock

Hole in bumper

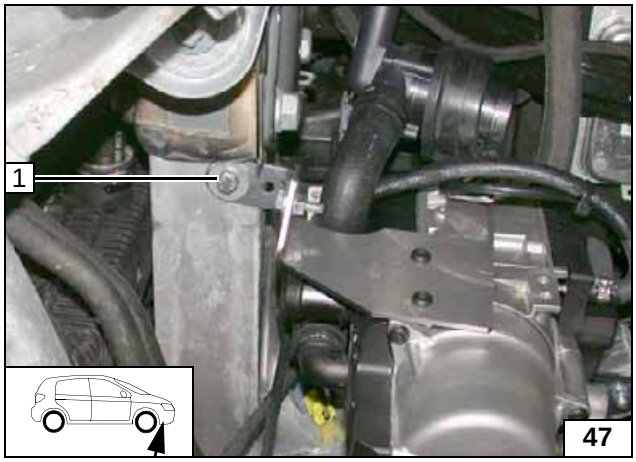
Installing Heater



Install heater bracket with oblong hole between bracket and bumper or between bracket and bolt and align (see previous work steps). Fasten bolt at position **1**.

2 Flanged nut

Installing heater



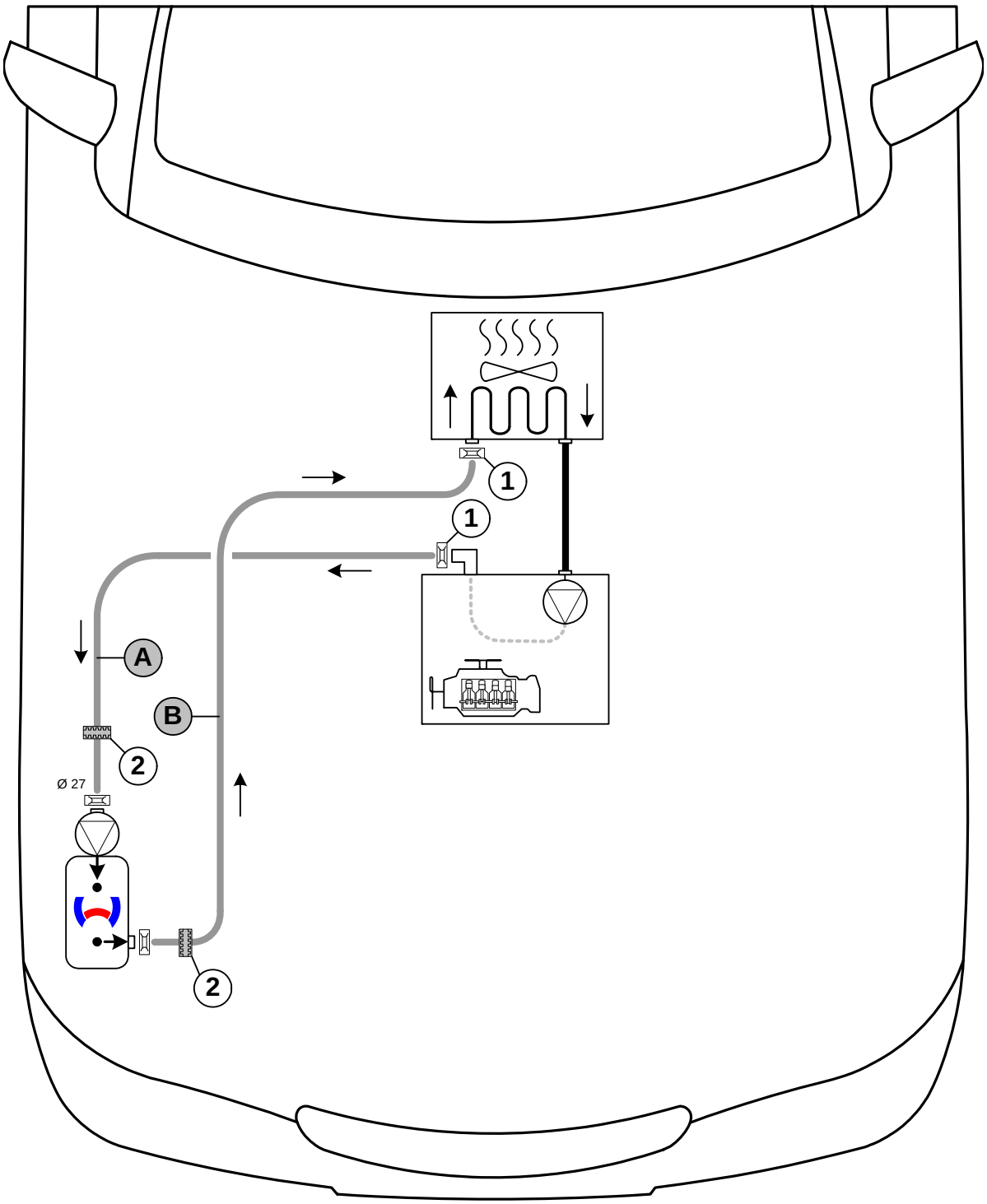
1 M6x20 bolt, large diameter washer

Installing heater

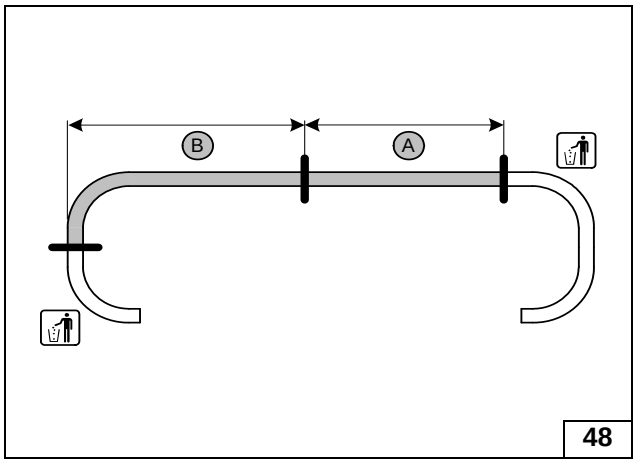
Coolant Circuit

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 based on the following diagram:

Hose routing diagram

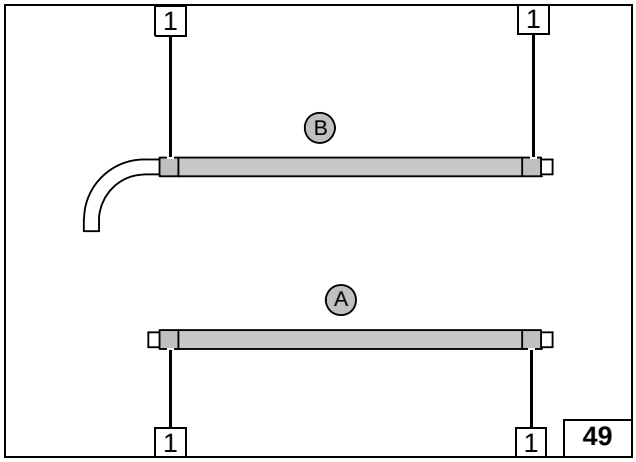


All spring clips without a specific designation = 25 mm dia. **1** = Original vehicle spring clip. **2** = Black (sw) rubber isolator.



A = 1270
B = 1580

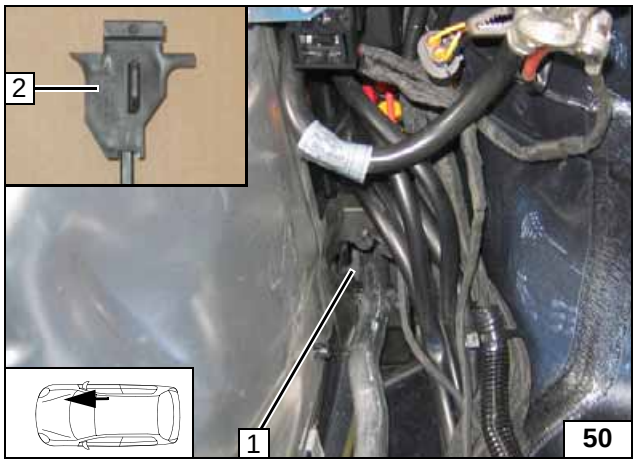
Cutting hoses to length



Slide braided protection hoses onto hoses **A**and **B** and cut to length.
Cut heat shrink plastic tubing to size.

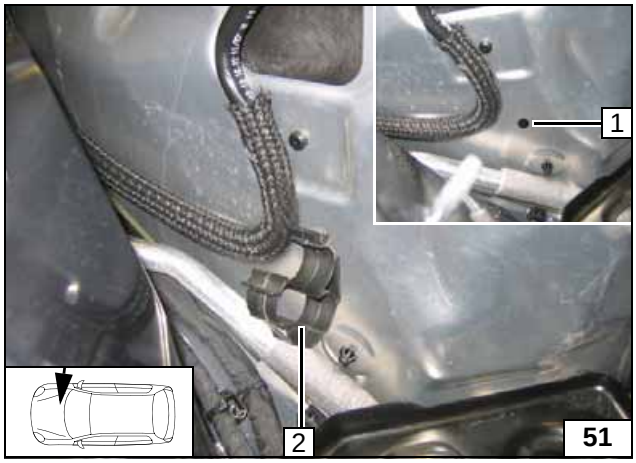
1 50 mm long heat shrink plastic tubing [4x]

Preparing hoses



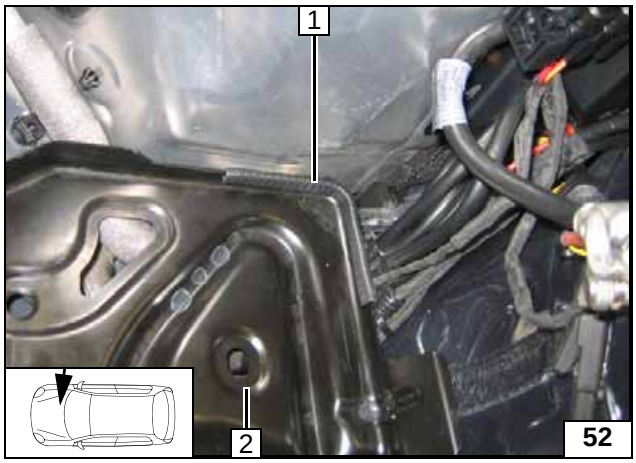
Remove pass through **2** at position **1**, will not be reused.

Removing cover



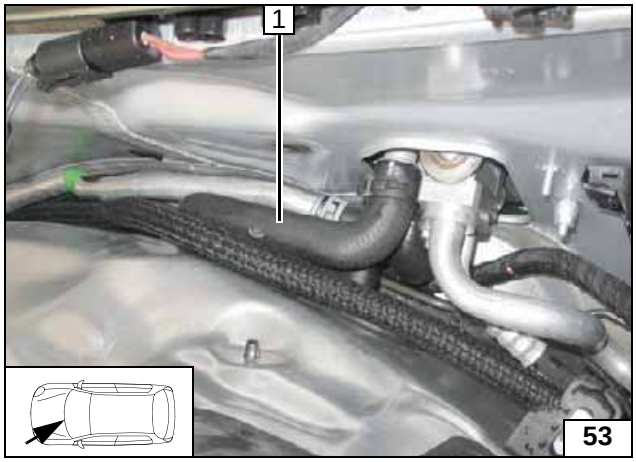
1 8 mm dia. hole
2 Double hose bracket (lockable)

Inserting hose bracket



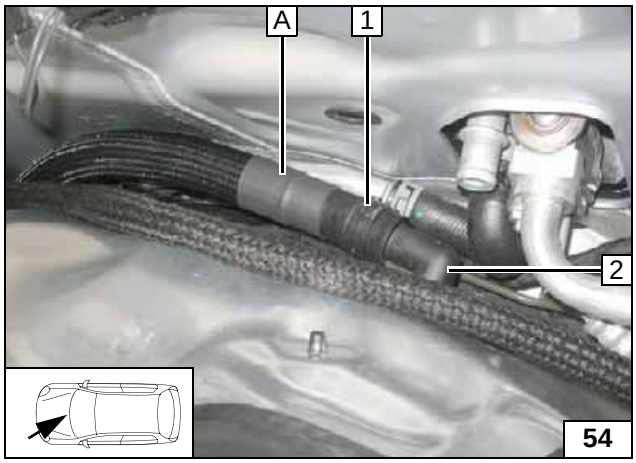
1 200 mm edge protection
2 Battery carrier

Mounting edge protection



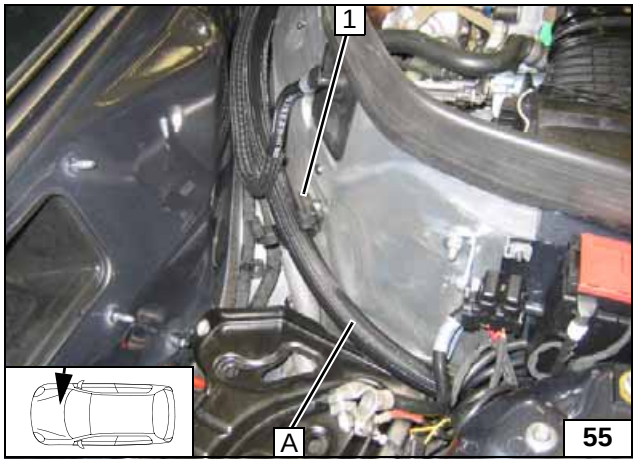
Remove original vehicle hose **1**.

Cutting point



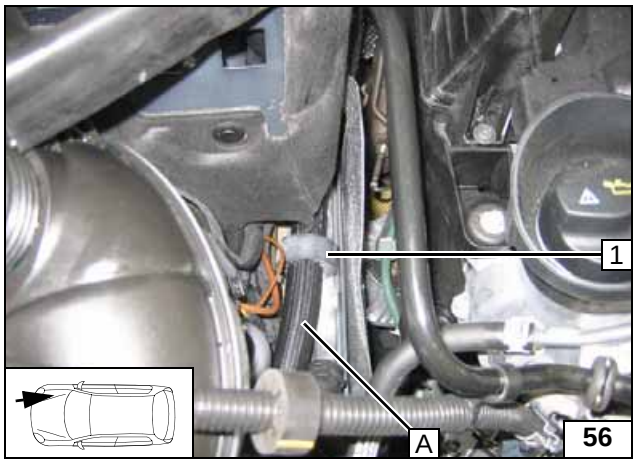
1 Original vehicle spring clip
2 Connection piece of engine outlet

Connecting engine outlet



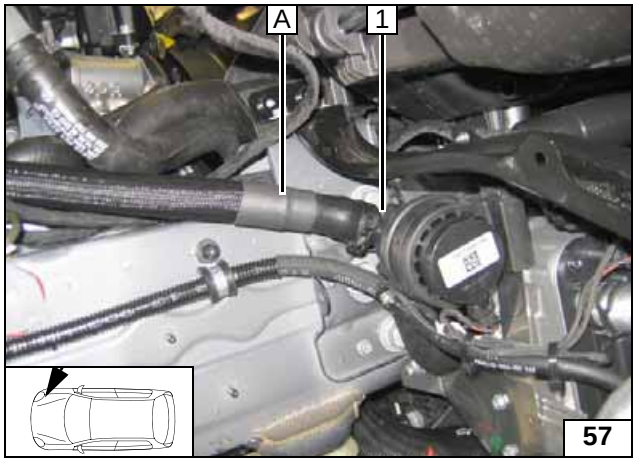
Route hose **A** into hose bracket **1** and route forward through pass through.

Routing in engine compartment



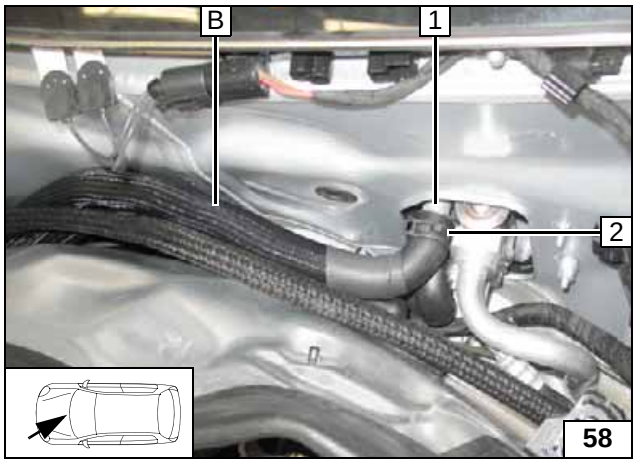
Slide black (sw) rubber isolator **1** onto hose **A**.

Routing in engine compartment



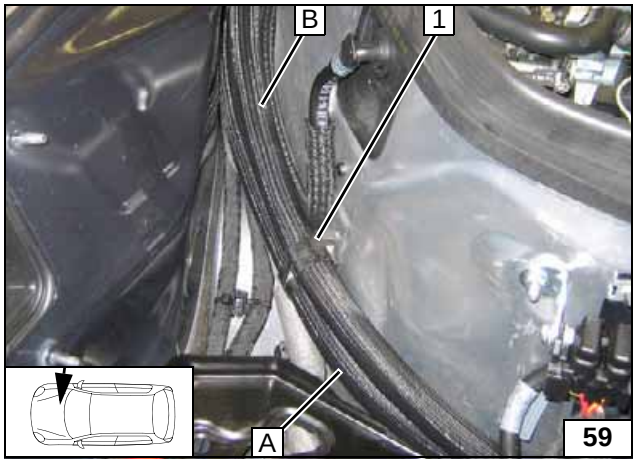
1 Connection piece of circulating pump

Connecting heater inlet



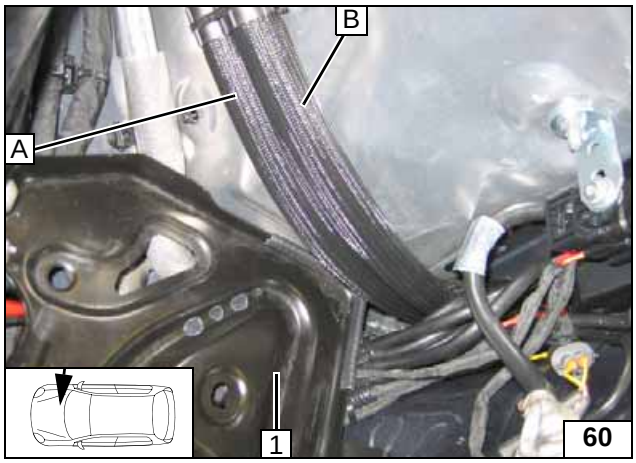
1 Connection piece of heat exchanger inlet
2 Original vehicle spring clip

Connecting heat exchanger inlet



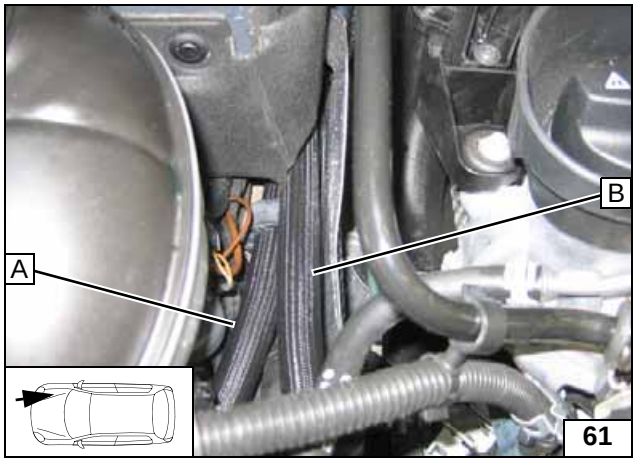
Route hose **B** into hose bracket **1** and route forward through pass through.
Close lock.

Routing in engine compartment

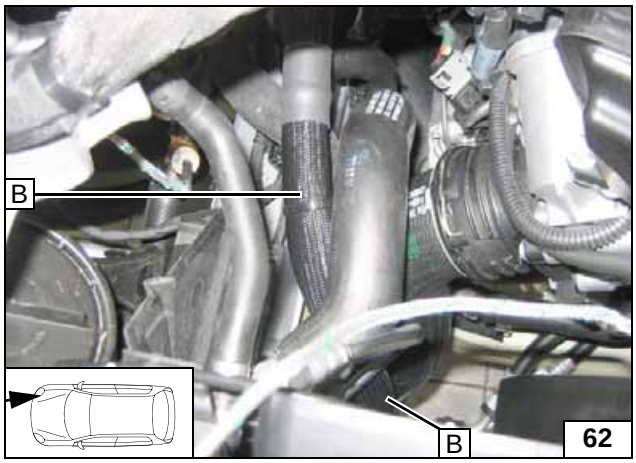


1 Battery carrier

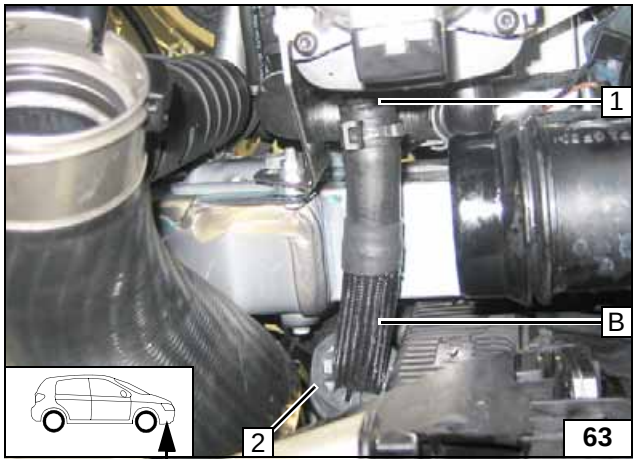
Routing in engine compartment



Routing in engine compartment



Routing in engine compartment

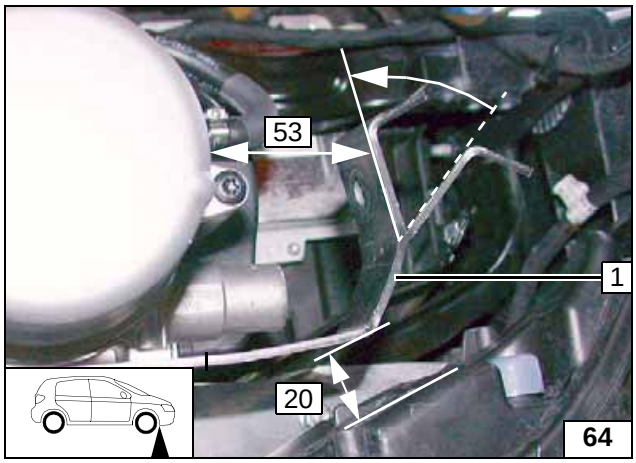


Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.

1 Connection piece of heater outlet
2 Slide on black (sw) rubber isolator and align

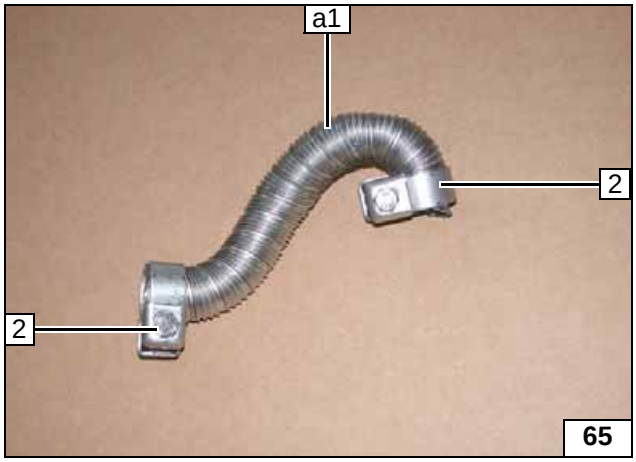
Connecting heater outlet

Exhaust Gas



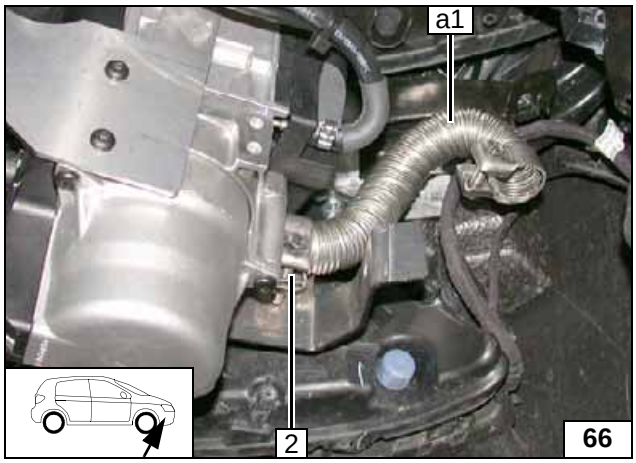
Bend heater bracket **1** as shown. Check the distances.

Aligning bracket



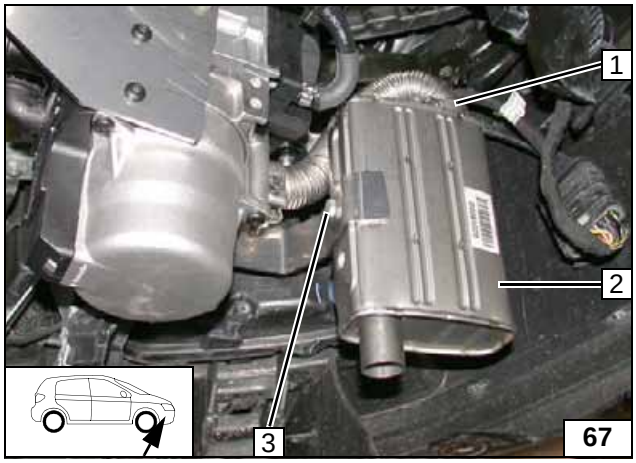
Shape exhaust pipe **a1** as shown and position hose clamps **2** [2x] loosely.

Preparing exhaust pipe a1



1 Exhaust pipe
2 Tighten hose clamp

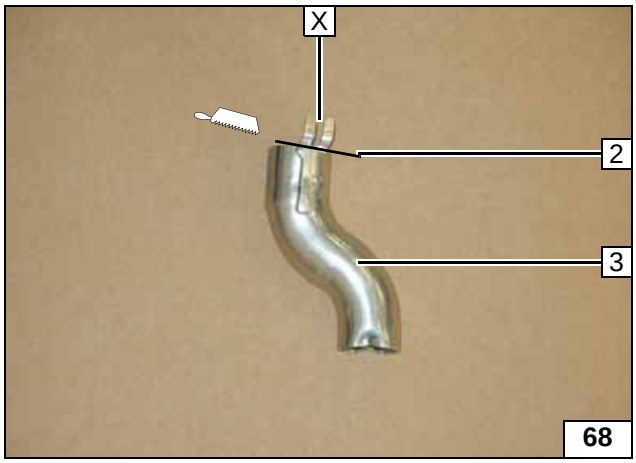
Installing exhaust pipe a1



Ensure sufficient distance from neighbouring components, correct if necessary.

1 Tighten hose clamp
2 Exhaust silencer
3 M6x12 bolt, spring lockwasher

Installing silencer

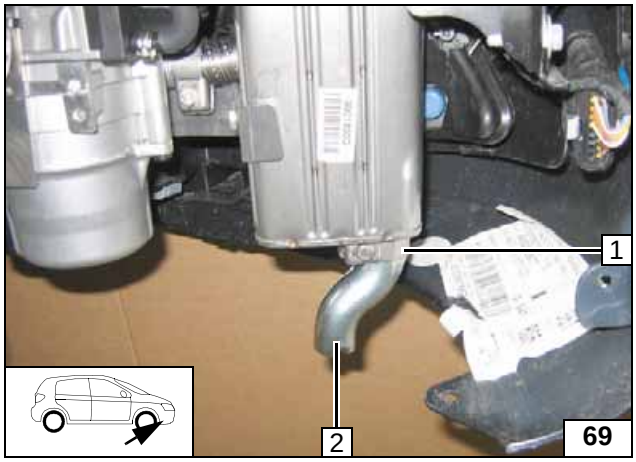


Cut tab of exhaust end section **3**.

2 Cutting point

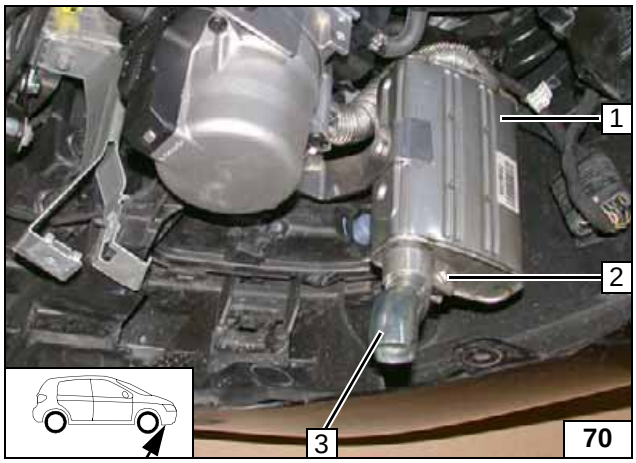
X =

Preparing exhaust end section



1 Hose clamp
2 Exhaust end section

Installing exhaust end section



1 Silencer
2 Hose clamp
3 Exhaust end section

Installing exhaust end section

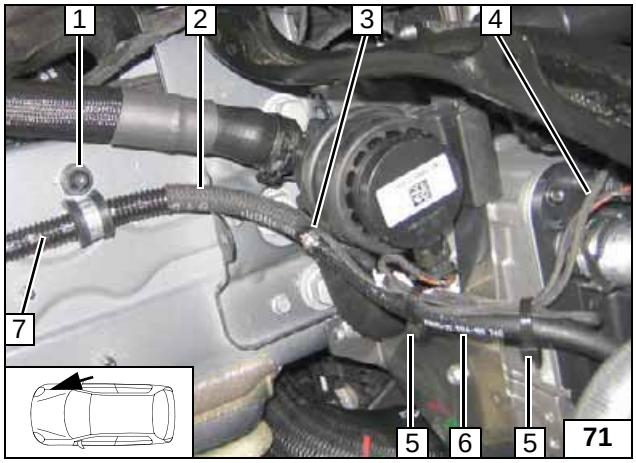
Fuel

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.

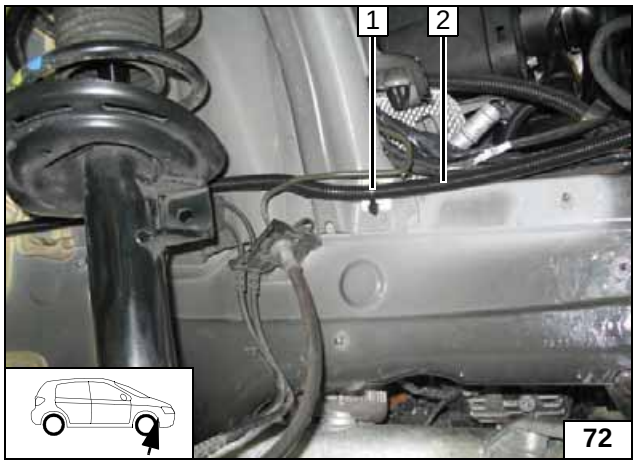
WARNING!
The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.



Secure moulded hose**6** and circulating pump wiring harness **4** with cable ties **5** [2x].
Cut 10 mm dia. corrugated tube to length by 950 mm. Route fuel line and metering pump wiring harness in 10mm dia. (950mm long) corrugated tube **7** in wheel well.

Connecting heater

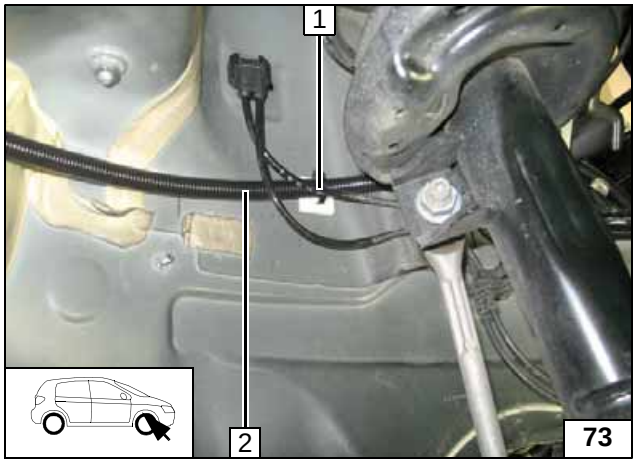
- **1** Original vehicle stud bolt, 15 mm dia. rubber-coated p-clamp, plastic nut
- **2** 8x12 mm dia. hose section as rub protection
- **3** Fuel line, 10 mm dia. clamp



Degrease bonding surfaces for adhesive base **1**.

Routing lines

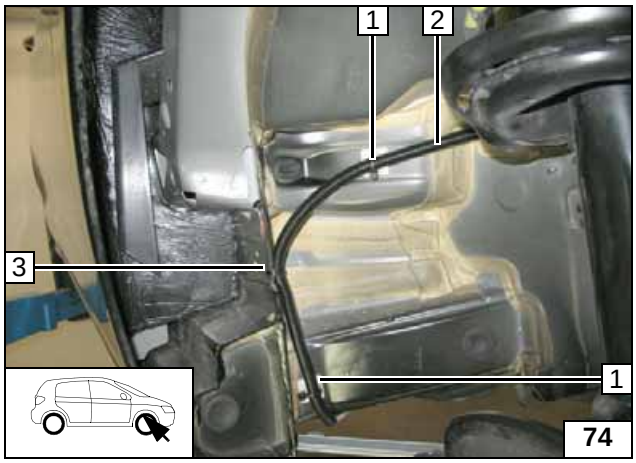
- **1** Adhesive base, cable tie
- **2** 10 mm dia. corrugated tube



Degrease bonding surfaces for adhesive base **1**.

Routing lines

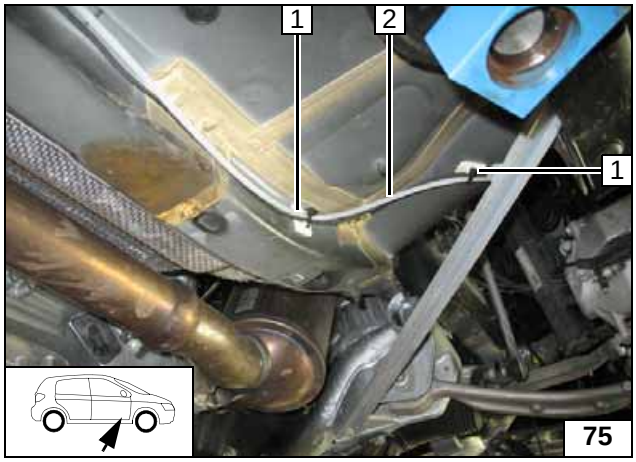
- **1** Adhesive base, cable tie
- **2** 10 mm dia. corrugated tube



Degrease bonding surfaces for adhesive base **1**.

1 Adhesive base [2x], cable tie [2x]
2 10 mm dia. corrugated tube
3 Cable tie, existing hole

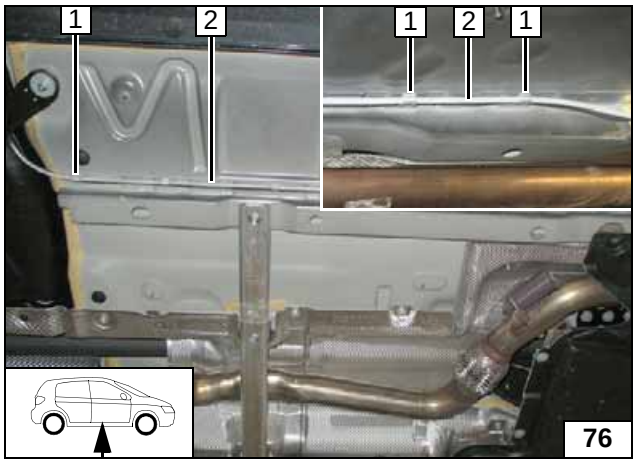
Routing lines



Degrease bonding surfaces for adhesive base **1**.

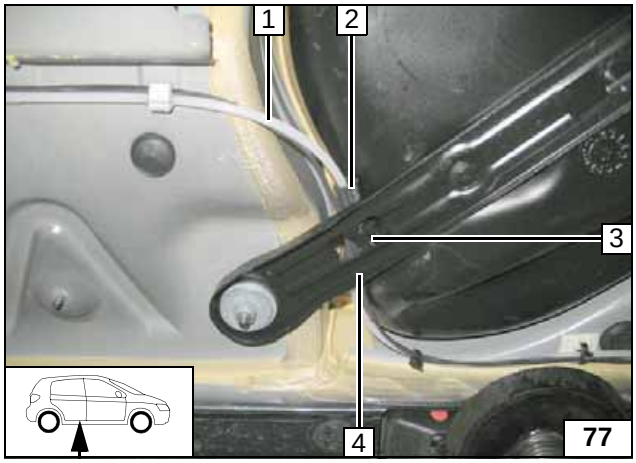
1 Adhesive base [2x], cable tie [2x]
2 Fuel line, metering pump wiring harness

Routing lines



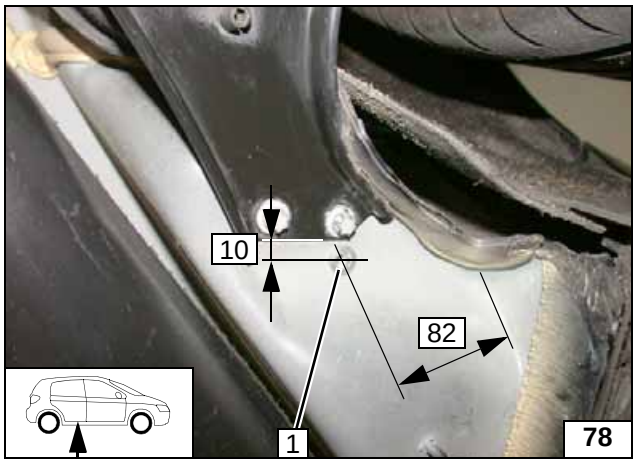
Distribute retaining clamps **1** [6x] evenly along vehicle underbody and insert fuel line and metering pump wiring harness **2**.

Routing lines



1 Fuel line, metering pump wiring harness
2 8x12 mm dia. hose section
3 Cable tie
4 Original vehicle retaining strap

Routing lines

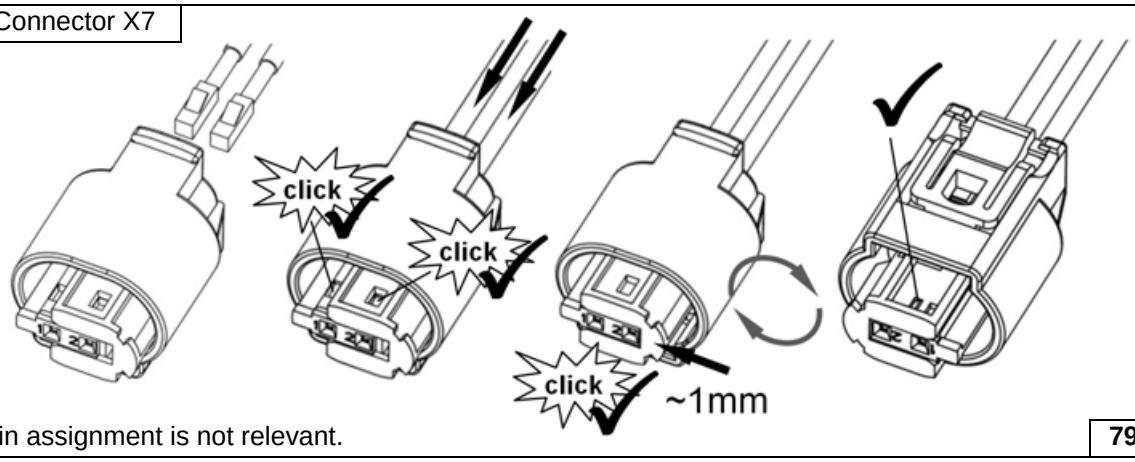


Metering Pump

1 9.1 mm dia. hole, rivet nut

Installing rivet nut

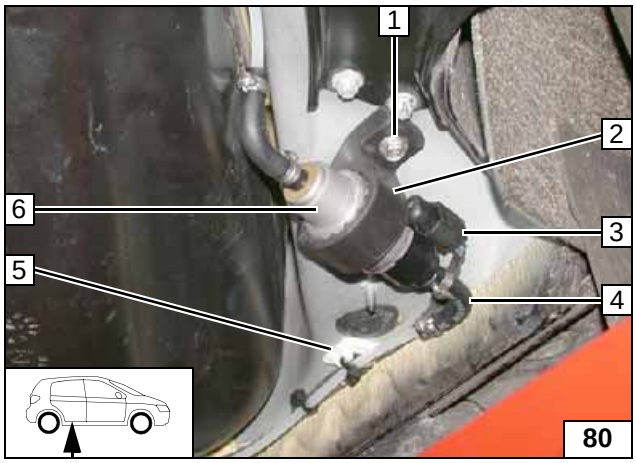
Connector X7



Pin assignment is not relevant.

79

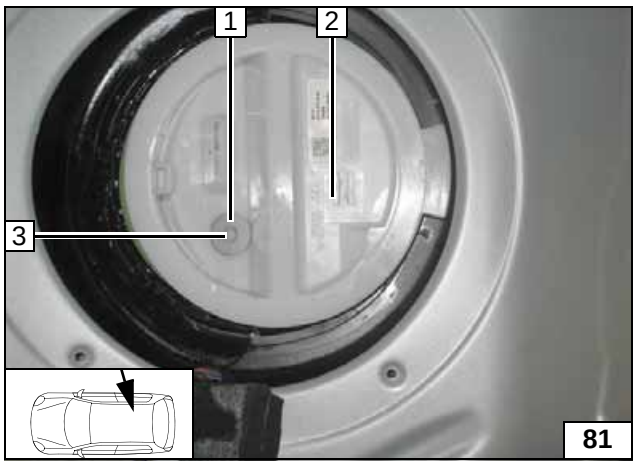
Completing metering pump connector



Degrease bonding surfaces for adhesive base **5**.

1 M6x25 bolt, support angle bracket
2 Metering pump mount
3 Metering pump wiring harness, connector X7 mounted
4 90° moulded hose, 10 mm dia. clamp [2x], fuel line of heater
5 Adhesive base, cable tie
6 Metering pump

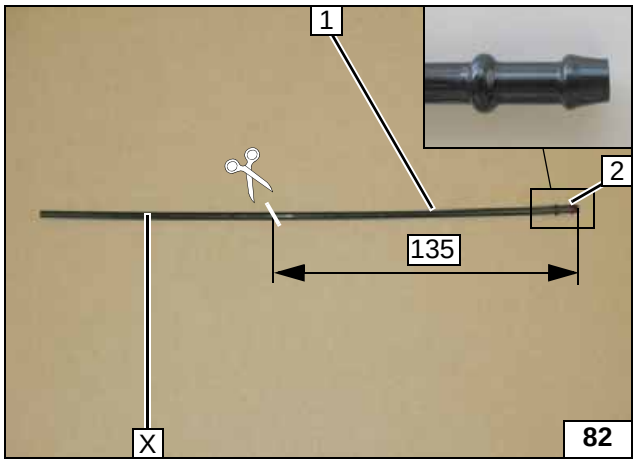
Mounting and connecting metering pump



Fuel Standpipe Version A

Remove fuel tank sending unit **2** according to manufacturer's instructions.
Place large diameter washer **1** as shown, copy hole pattern **3** for 6 mm dia. hole.
When drilling, make sure drilling shavings do not get into the fuel tank or fuel tank sending unit.

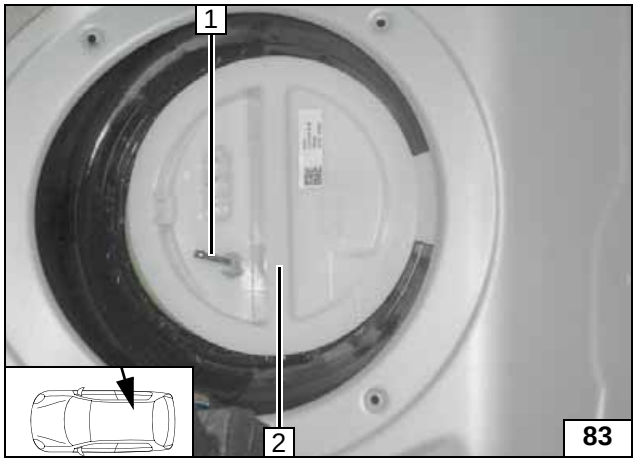
Fuel extraction



Cut standpipe **1** to length at an angle. Discard section **X**.

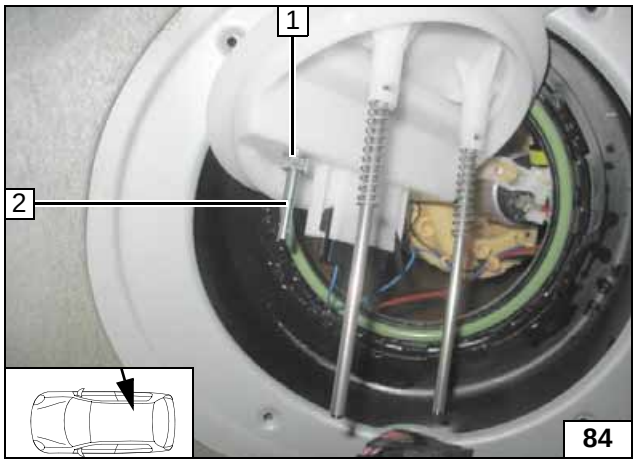
2 Connection side for hose section

Cutting standpipe to length



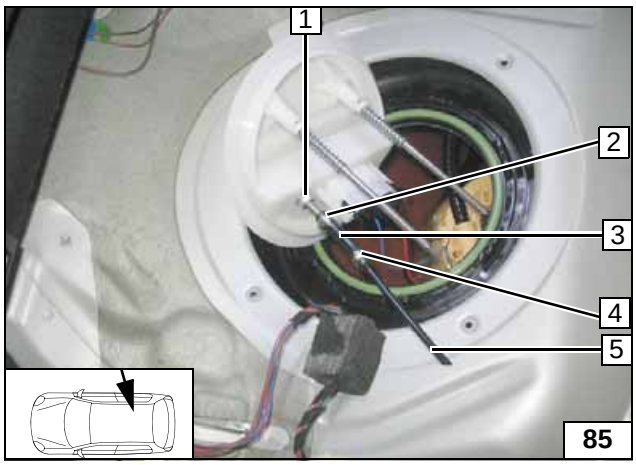
Install fuel standpipe **1** in fuel tank sending unit **2**.

Installing fuel stand-pipe



Observe a tightening torque of **5 Nm** for flanged nut **1** of fuel standpipe **2**.

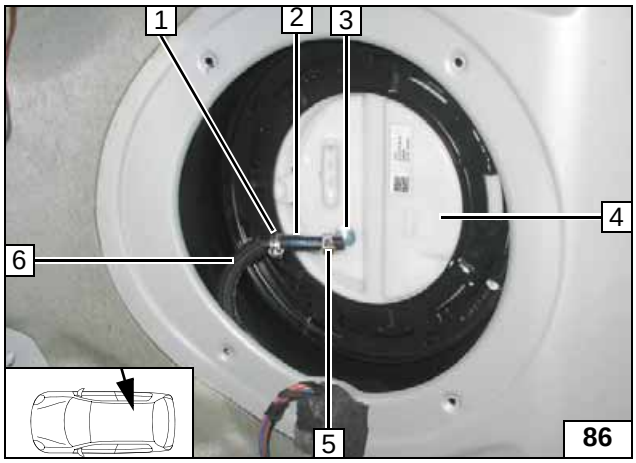
Installing fuel stand-pipe



Install 3.5 mm dia. moulded hose**3** on fuel standpipe **1**.

2 8 mm dia. clamp
4 10 mm dia. clamp
5 Standpipe

Mounting standpipe

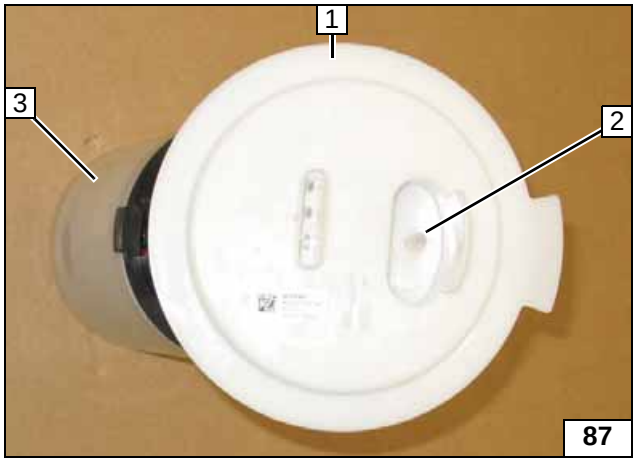


Install fuel tank sending unit **4** according to manufacturer's instructions.
Install 3.5 mm dia. moulded hose**2** on fuel standpipe **3**.

1 10 mm dia. clamp, fuel line
5 8 mm dia. clamp
6 6x11 fabric-reinforced hose, rattle protection

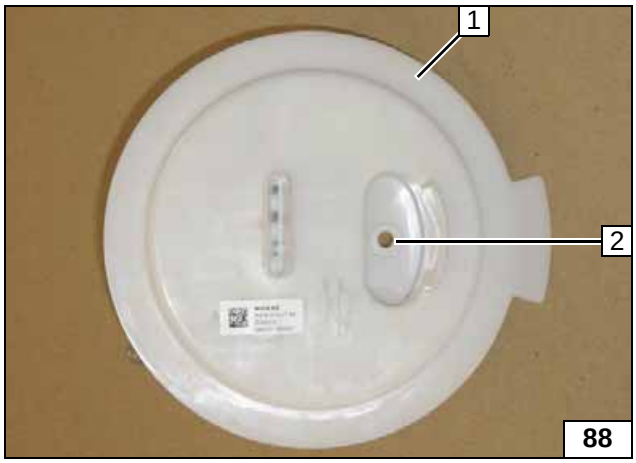
Mounting fuel line

Fuel Standpipe Version B



Remove fuel tank sending unit in accordance with manufacturer's instructions.
Remove upper section **1** from lower section **3** according to manufacturer's instructions.
Cut off original vehicle connection piece 2 flush (see next figure).

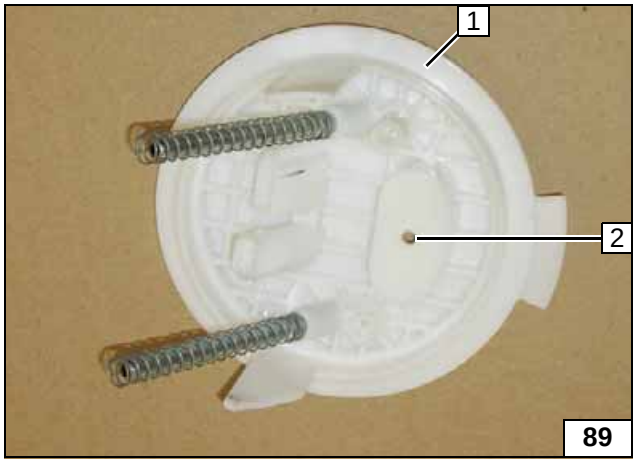
Fuel extraction



Ensure an even surface in area **2**.

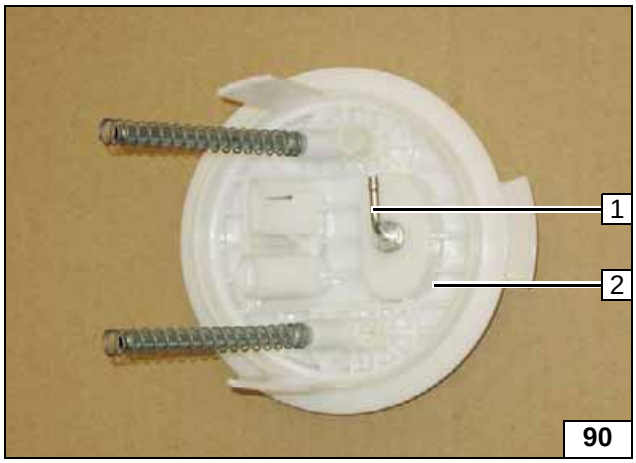
1 Upper section of fuel tank sending unit, outside

Preparing fuel tank sending unit



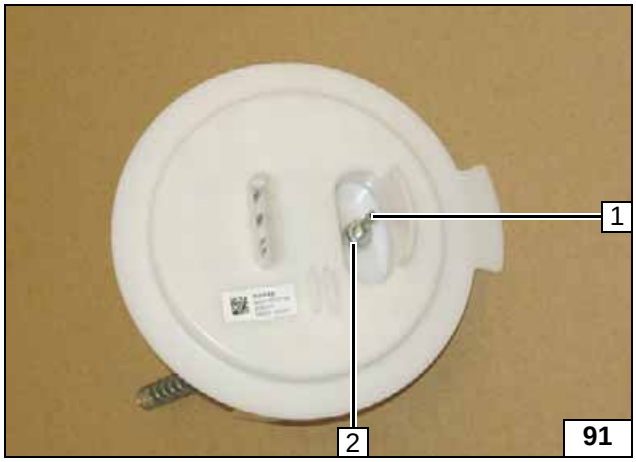
1 Upper section of fuel tank sending unit, inside
2 6 mm dia. hole (in the middle of the area where the connection piece was removed)

Preparing fuel tank sending unit



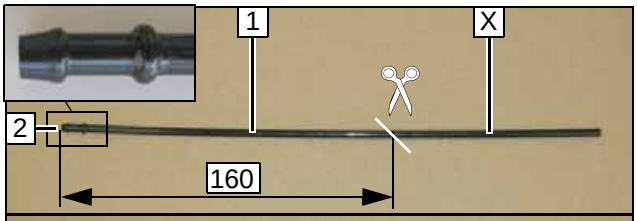
1 Upper section of fuel tank sending unit, inside
2 Fuel standpipe

Installing fuel standpipe



Observe a tightening torque of **5 Nm** for flanged nut **2** of fuel standpipe **1**.

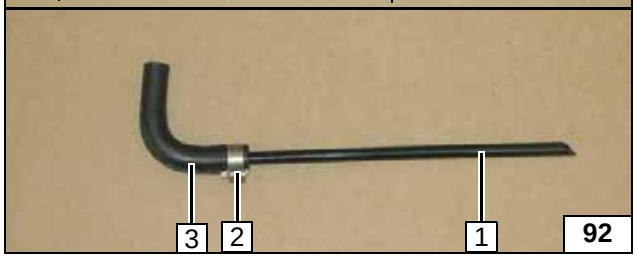
Installing fuel standpipe



Cut standpipe **1** to length at an angle.

2 Connection side for hose section

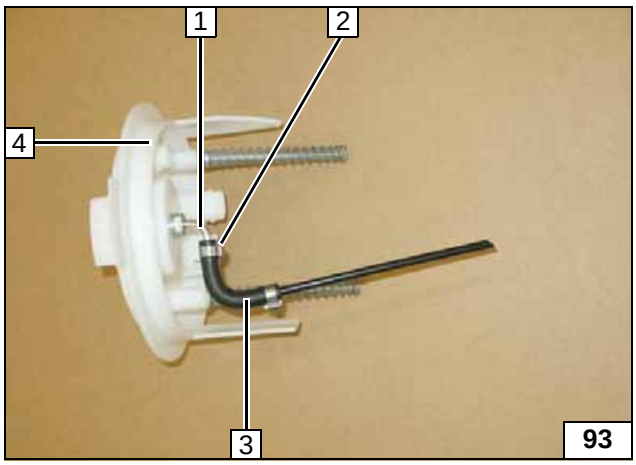
X = 



Install standpipe **1** in 4.5 mm dia. moulded hose **3**.

2 10 mm dia. clamp

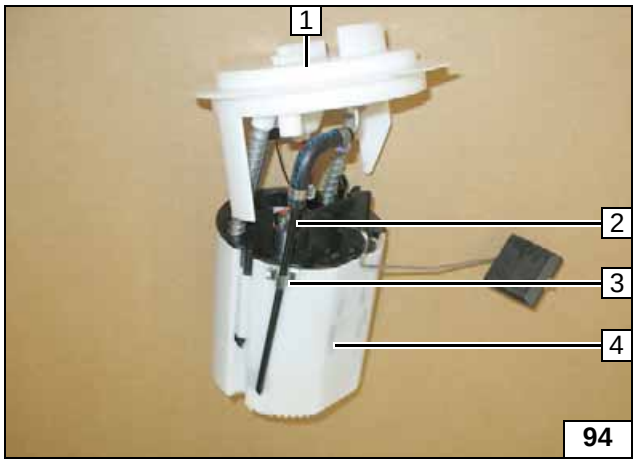
Cutting to length and premounting standpipe



Attach premounted standpipe **3** on fuel standpipe **1** and secure with 8 mm dia. clamp **2**.

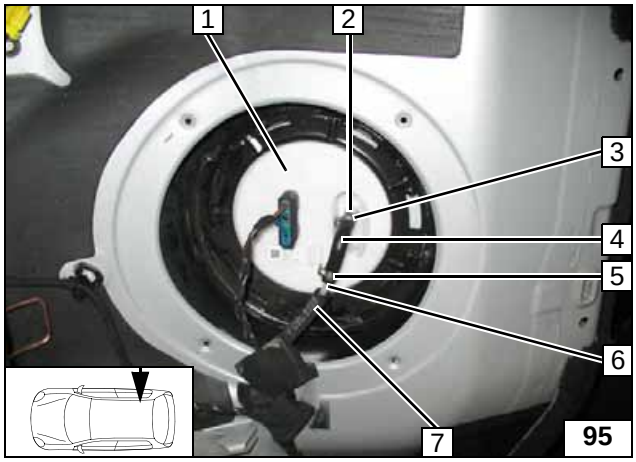
4 Fuel tank sending unit

Mounting standpipe



Install fuel tank sending unit **1** according to manufacturer's instructions.
Insert retaining clamp **3** for guiding standpipe **2** in lower section of fuel tank sending unit **4**.

Mounting standpipe

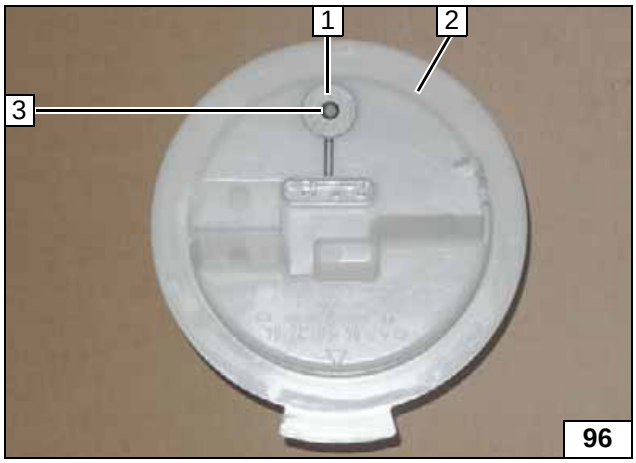


Install fuel tank sending unit **1** according to manufacturer's instructions.
Install 3.5mm dia. moulded hose **4** on fuel standpipe **2**.

3 8 mm dia. clamp
5 10 mm dia. clamp
6 Fuel line
7 6x11 hose (rattle protection)

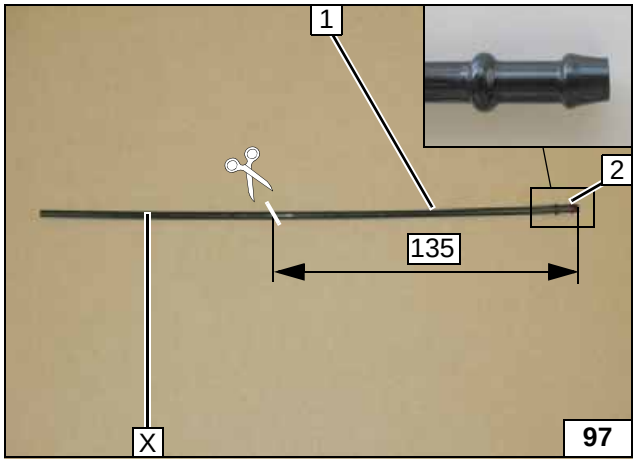
Mounting line

Fuel Standpipe Version C



Remove fuel tank sending unit **2** according to manufacturer's instructions.
Place large diameter washer **1** as shown, copy hole pattern **3** for 6 mm dia. hole.

Fuel extraction

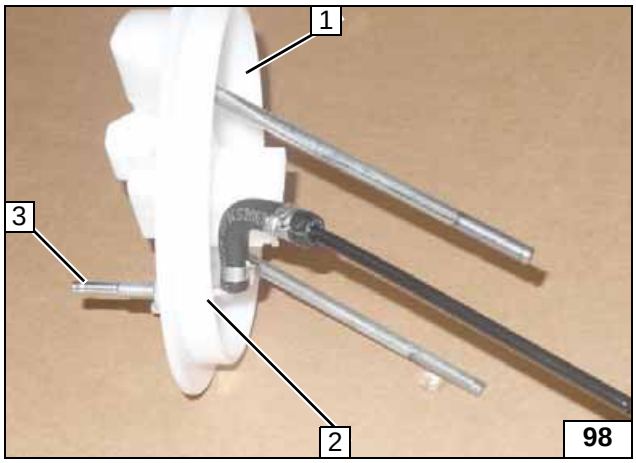


Cut standpipe **1** to length at an angle.

2 Connection side for hose section

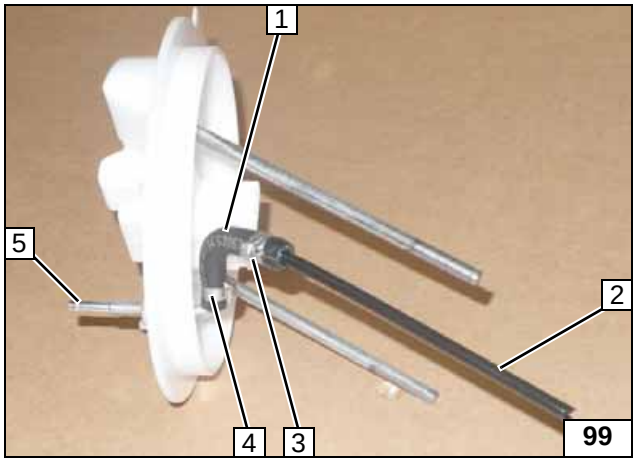
X =

Cutting standpipe to length



Install fuel standpipe **2** in fuel tank sending unit **1**.
Observe a tightening torque of **5 Nm** for flanged nut **2** (hidden) of fuel standpipe **3**.

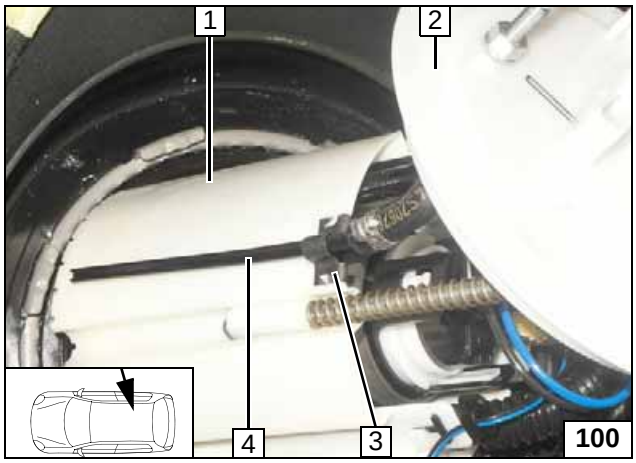
Installing fuel standpipe



Install 90°, 3.5mm dia. moulded hose **1** on fuel standpipe **5**.

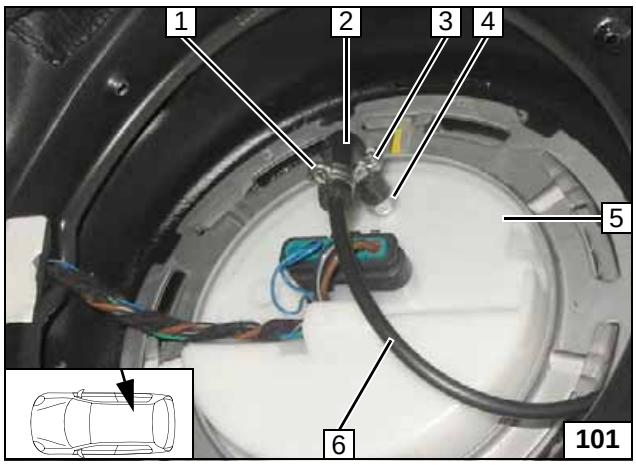
2 Standpipe
3 10 mm dia. clamp
4 8 mm dia. clamp

Mounting standpipe



Install fuel tank sending unit **2** according to manufacturer's instructions.
Insert retaining clamp **3** for guiding standpipe **4** in lower section of fuel tank sending unit **1**.

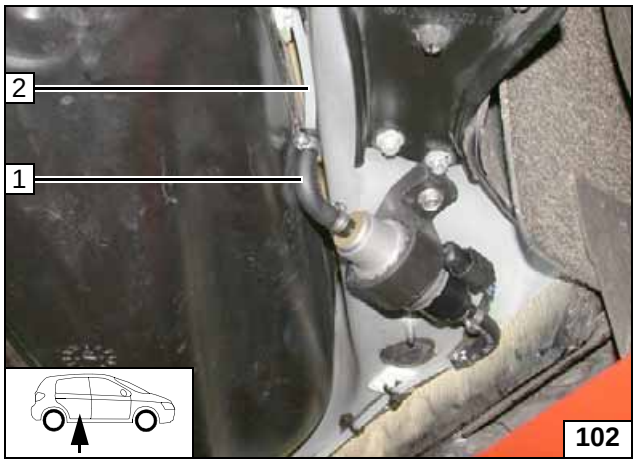
Mounting standpipe



Install fuel tank sending unit **5** according to manufacturer's instructions.
Install 90°, 3.5mm dia. moulded hose **2** on fuel standpipe **4**.

1 10 mm dia. clamp
3 8 mm dia. clamp
6 Fuel line

Mounting fuel line



Connection of Metering Pump

All vehicles

Ensure sufficient distance to neighbouring components.

1 90° moulded hose, 10 mm dia. clamp [2x]
2 Fuel line

Connecting metering pump

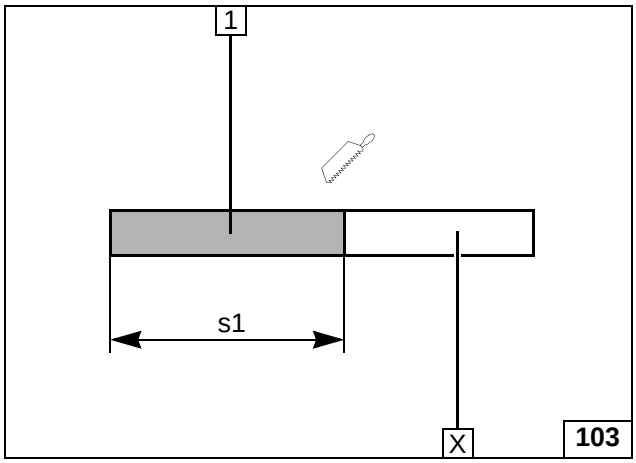
Combustion Air

Two versions can be distinguished based on the vehicle equipment. Before starting, check the vehicle!

Version 1

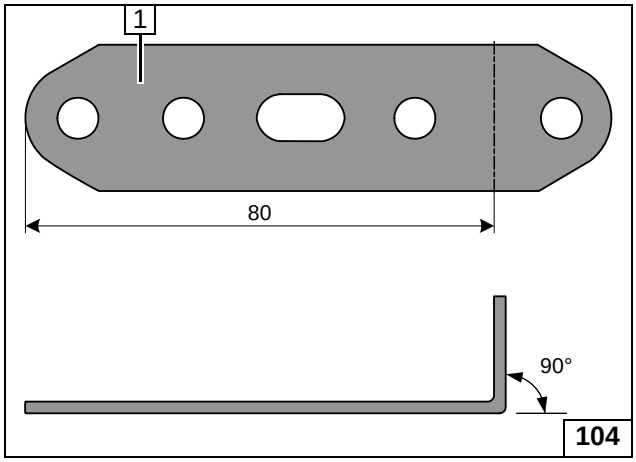
s1 = 480

X =



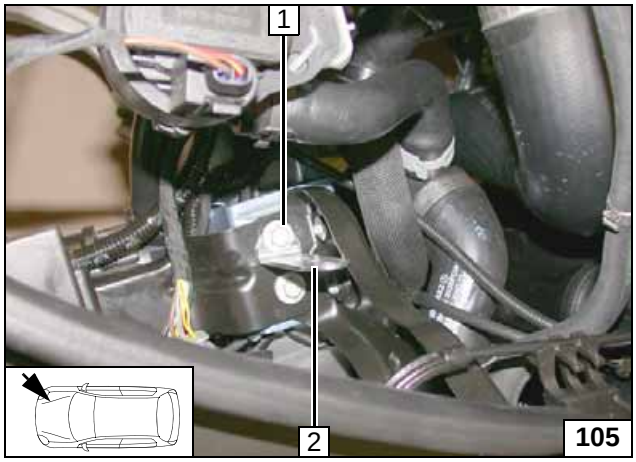
Cutting combustion air pipe to length

1 Perforated bracket

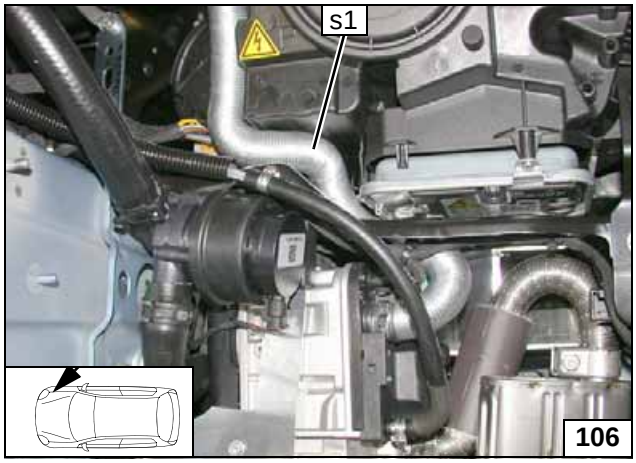


Angling down perforated bracket

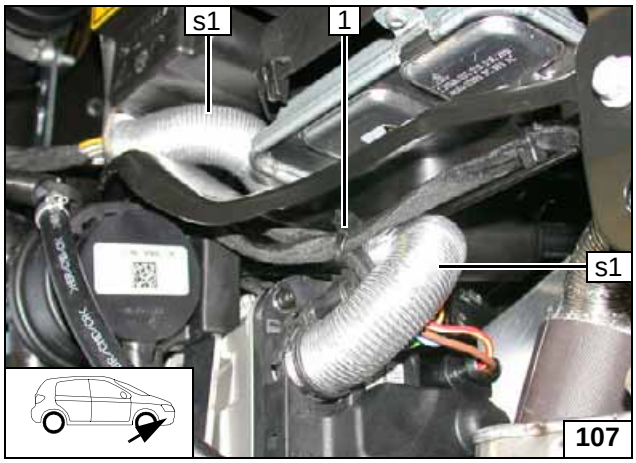
1 Original vehicle bolt
2 Angle bracket



Installing angle bracket

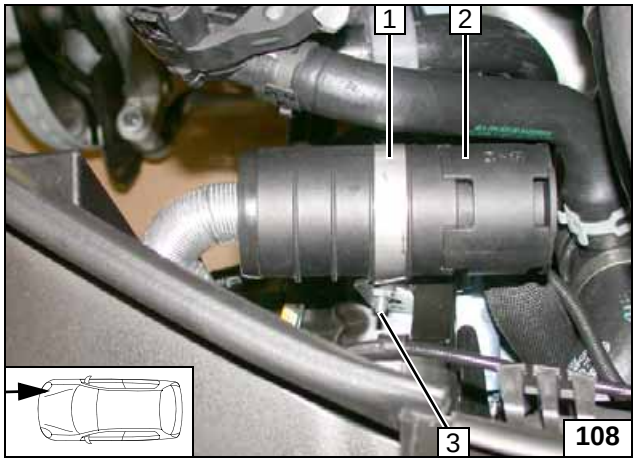


Installing combustion air pipe s1



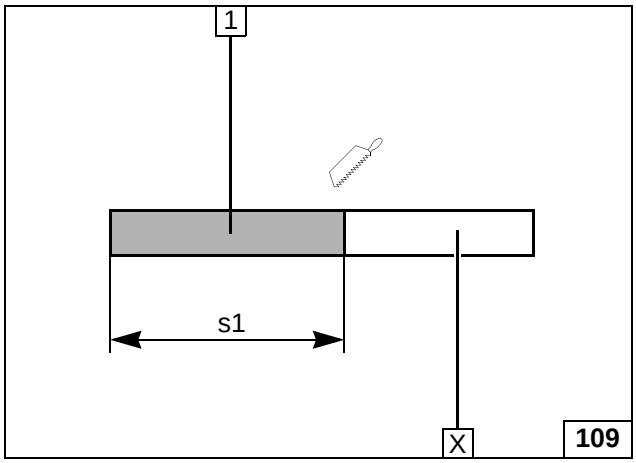
1 Cable tie

Routing combustion air pipe s1



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

Installing silencer

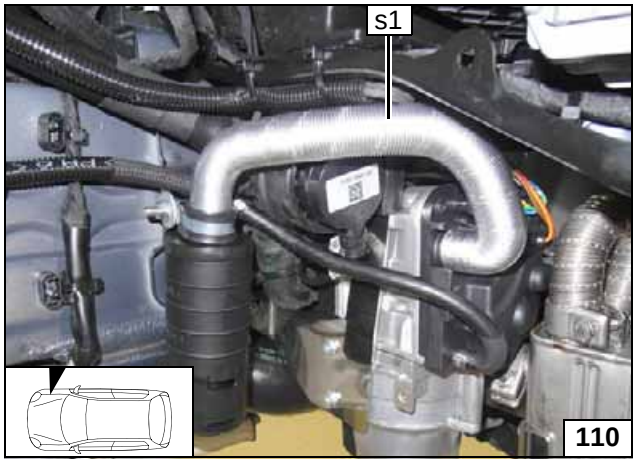


Version 2

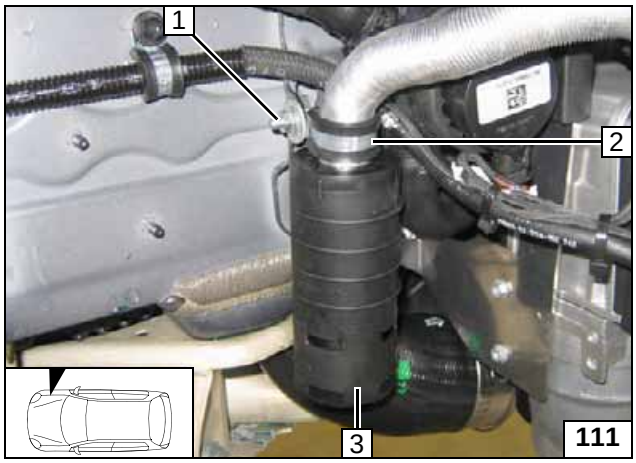
s1 = 300

X =

Cutting combustion air pipe to length

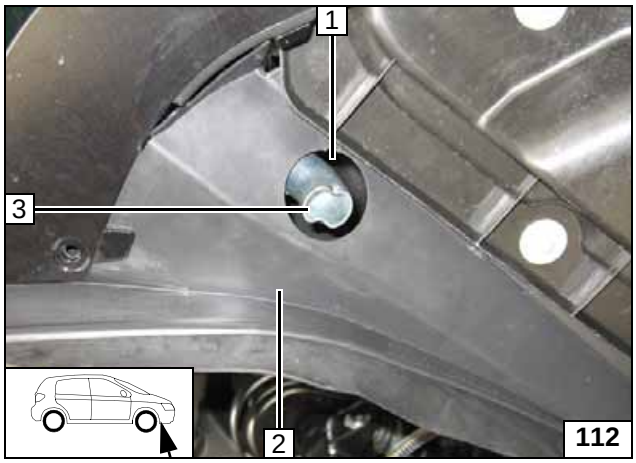


Installing combustion air pipe s1



1 Existing hole, M6x20 bolt, large diameter washer [2x], flanged nut
2 25 mm dia. rubber-coated p-clamp
3 Silencer

Installing silencer



Final Work

Two versions can be distinguished based on the vehicle equipment. Before starting, check the vehicle!

Version 1

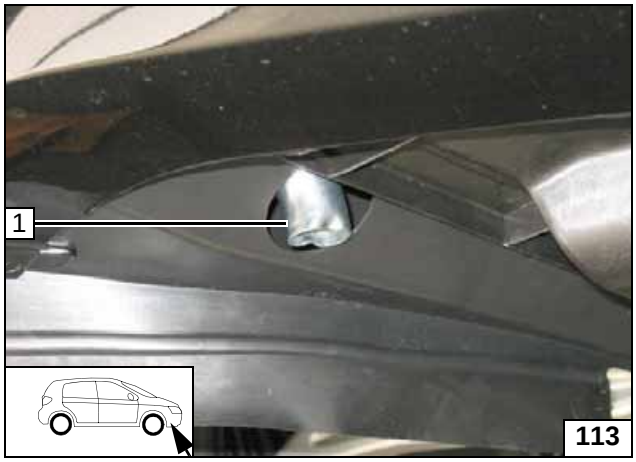
Drill 45 mm dia. hole **1** in trim **2**.
Exhaust end section **3** must be aligned with the centre of hole **1** and flush with trim **2**, realign exhaust end section **3** if necessary.

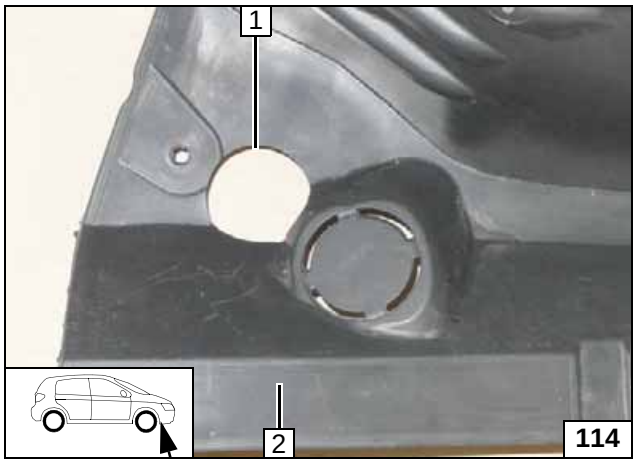
3 Exhaust end section

1 Exhaust end section

Installing wheel-well inner panel

Aligning exhaust end section

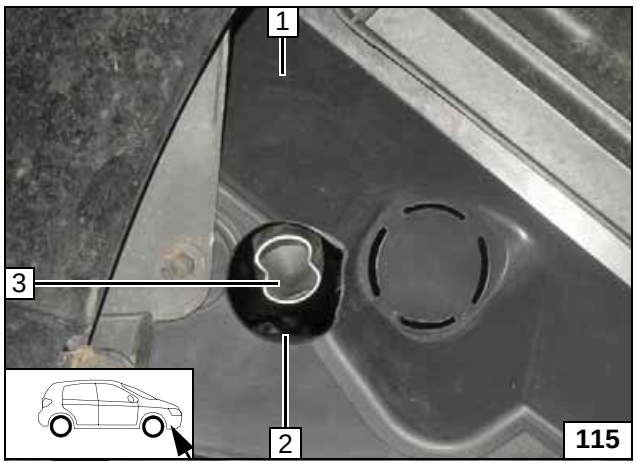




Version 2

Drill existing hole **1** in trim **2** to 45 mm dia.

Installing wheel-well inner panel



Exhaust end section **3** must be aligned with the centre of hole **2** and flush with trim **1**, realign exhaust end section **3** if necessary.

Aligning exhaust end section

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

- **Connectthe battery**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's instructions.**
- **Teach Telestart according to 'Installation documentation T91 / T100 HTM', adjust digital timer if necessary**
- **Activate push button according to 'Installation documentation T91 / T100 HTM' (Repositioning of switch input)**
- **Define settings of A/C control panel according to the "TT-Evo Operating and Maintenance 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.**

Warning:
After conducting an operating test of the parking heater, carry out an 'input short test' with the 'Diagnosis assistance system' of the manufacturer on the vehicle.
Reprogram the positioning motors in the KLA air conditioner.

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