

Water Heater

Thermo Top Evo 5+ Parking Heater 00 0258

Installation Documentation Mercedes Benz E-Class / CLS-Class Saloon w212 / Estate car s212 / CLS c218

Validity

Manufacturer	Model	Type	EG-BE No. / ABE
Daimler AG	E-Class	W212	e1 * 2001 / 116 * 0501 * ...
Daimler AG	E-Class	S212	e1 * 2001 / 116 * 0501 * ...
Daimler AG	E-Class	S212K	e1 * 2007 / 46 * 0200 * ...
Daimler AG	CLS class	C218	e1 * 2007 / 46 * 0485 * ...

CLS (C218)

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm ³	Engine code
CLS 250 CDI	Diesel / R4	AG / SG	150	2143	651.924
CLS 350 CDI	Diesel / V6	AG	195	2987	642.854/ .853
CLS 350	Petrol / V6	AG	225	3498	276.952

AG = 7G - Tronic
SG = Manual transmission

Saloon (W212)

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm ³	Engine code
E 200 CDI	Diesel / R4	AG / SG	100	2143	651.925
E 220 CDI	Diesel / R4	AG / SG	125	2143	651.924
E 250 CDI	Diesel / R4	AG / SG	150	2143	651.924
E 300 CDI	Diesel / V6	AG	170	2987	642.852/ .850
E 350 CDI	Diesel / V6	AG	155 170 185 195	2987	642.850 642.856/ .850 642.858/ .852 642.858/ .852
E 200 CGI	Petrol / R4	AG / SG	135	1796	271.820/ .977
E 250 CGI	Petrol / R4	AG	150	1796	271.860
E 350	Petrol / V6	AG	200	3498	272.977/276.952
E 350	Petrol / V6	AG	225	3498	276.952
E 350 CGI	Petrol / V6	AG	215	3498	272.983

AG = 7G - Tronic
SG = Manual transmission

Mercedes Benz E-Class / CLS-Class

Estate Car (S212)

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm ³	Engine code
E 200 CDI	Diesel / R4	AG / SG	100	2143	651.925
E 220 CDI	Diesel / R4	AG / SG	125	2143	651.924
E 250 CDI	Diesel / R4	AG / SG	150	2143	651.924
E 300 CDI	Diesel / V6	AG	170	2987	642.850
E 350 CDI	Diesel / V6	AG	155 170 185 195	2987	642.850 642.856/ .850 642.858/ .852 642.858/ .852
E 200 CGI	Petrol / R4	AG / SG	135	1796	271.860/ .820
E 250 CGI	Petrol / R4	AG	150	1796	271.860
E 250	Petrol / R4	AG	150	2496	272.923
E 300	Petrol / V6	AG	185	3498	276.952
E 350	Petrol / V6	AG	200	3498	272.977/ .980
E 350 CGI	Petrol / V6	AG	215	3498	272.983
E 350	Petrol / V6	AG	225	3498	276.952

AG = 7G - Tronic

SG = Manual transmission

From Model Year 2009

Left-hand drive vehicle

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

Not verified: AMG Optical package

Exclusion: E 63 AMG
M 274 motorisation

Total installation time: about 12 hours

Mercedes Benz E-Class / CLS-Class

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Necessary Components

- Delivery scope of *Thermo Top Evo* Mercedes Benz E-Class / CLS-Class 2009 Petrol: **1315952C**
- Delivery scope of *Thermo Top Evo* Mercedes Benz E-Class / CLS-Class 2009 Diesel: **1315953C**
- Heater controls 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

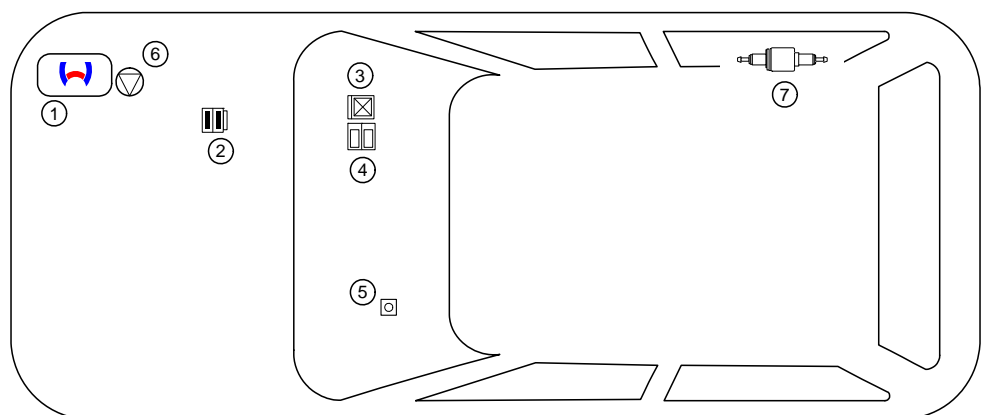
Installation instructions:

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

Installation Overview

Legend:

1. Heater
2. Fuse holder of engine compartment
3. PWM Gateway
4. Relay [2x]
5. Push button option
6. Circulating pump
7. Metering pump



Notes 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 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, 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 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 / CLS-Class

Information on Validity

This installation documentation applies to the Mercedes Benz E-Class W212 / S212 Petrol and diesel vehicles starting with model year 2009 and later, as well as the CLS-Class C218 Petrol and diesel vehicles starting with model year 2011 and later - for validity, see page 1/2 -, 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 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
- Stepped drill bit
- Webasto Thermo Test diagnosis with current software

Dimensions

- All dimensions are in mm.













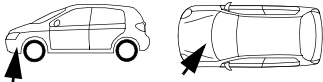


Tightening torque values

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

Special features are highlighted using the following symbols:

Mechanical system		Specific risk of injury or fatal accidents.	
Electrical system		Specific risk due to electrical voltage	
Coolant circuit		Specific risk of damage to components.	
Combustion air		Specific risk of fire or explosion.	
Fuel		Reference to general installation instructions of the Webasto components or to the manufacturer's vehicle-specific documents.	
		Reference to a special technical feature.	
Exhaust gas		The arrow in the vehicle icon indicates the position on the vehicle and the viewing angle	
Software		Tightening torque according to the manufacturer's vehicle-specific documents	

Mercedes Benz E-Class / CLS-Class

Preliminary Work

Vehicle

- Open the fuel tank cap.
- Ventilate the tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect the battery earth connection.
- Remove the trim of the passenger compartment fan air intake.
- 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 manifold (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).
- 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

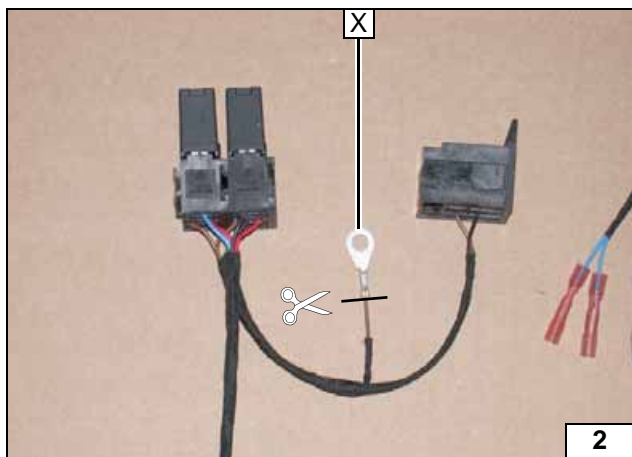
- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) in the appropriate place inside the engine compartment.



Heater Installation Location

1 Heater

Installation location



Preparing Electrical System

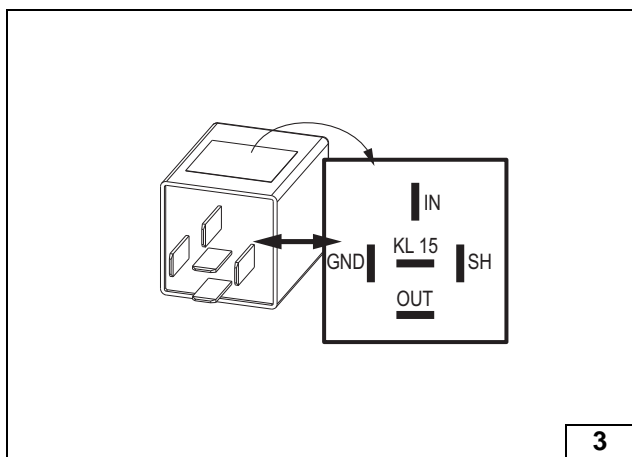
Wire sections retain their numbering in the entire document.

Produce all following electrical connections as shown in wiring diagram.

Detach and discard 6 mm dia. cable lug X.



Preparing fan controller wiring harness



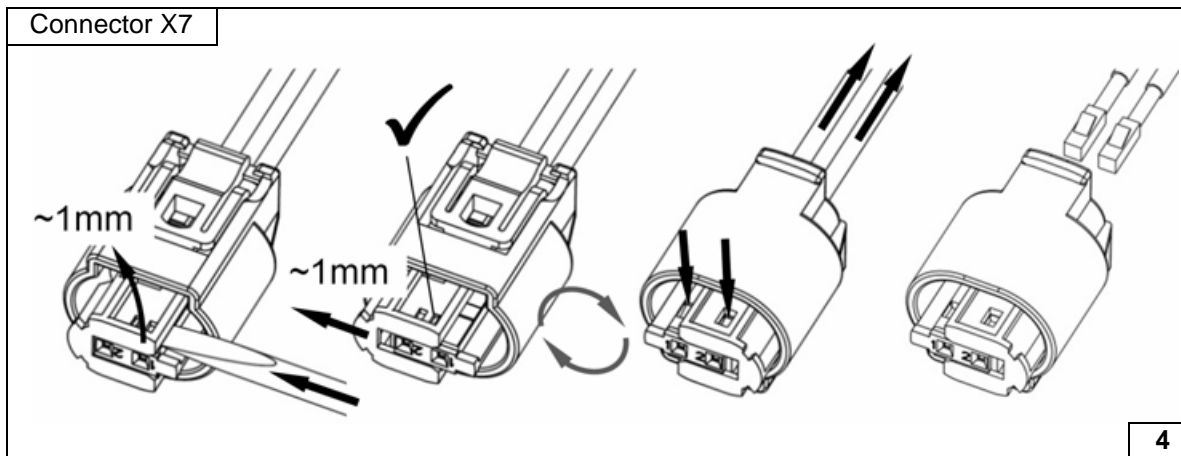
Check the PWM Gateway settings when starting up the heater and adjust if necessary.

Settings:

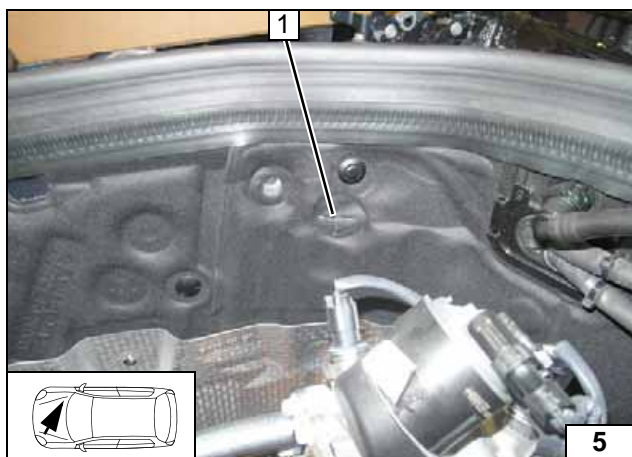
- Duty cycle: 56%
- Frequency: 400Hz
- Voltage: 3.0V
- Function: High-side



Preparing PWM GW



Removing metering pump connector



From model year 2013.

6.5mm dia. hole in middle of embossing 1. When drilling, watch components located behind.



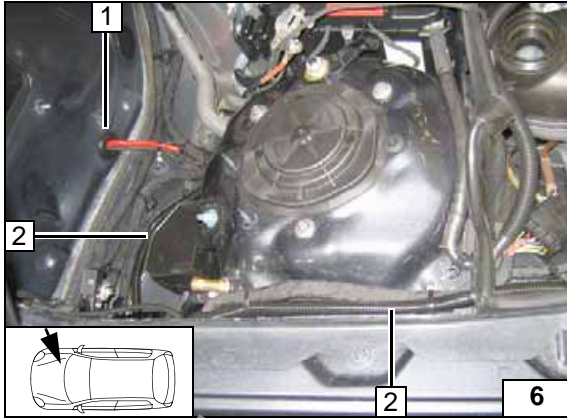
Preparing installation location of engine compartment fuse holder



Electrical System

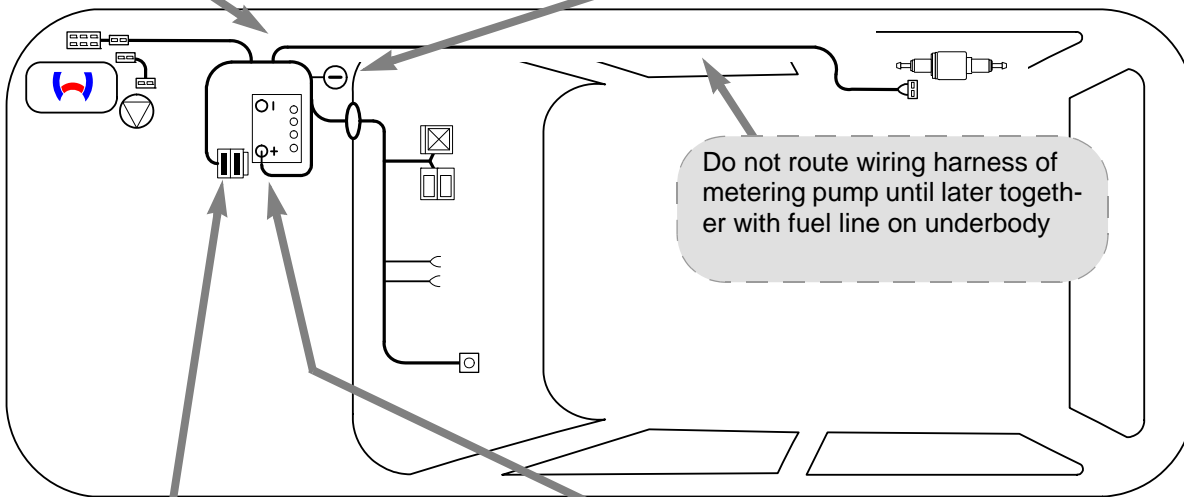
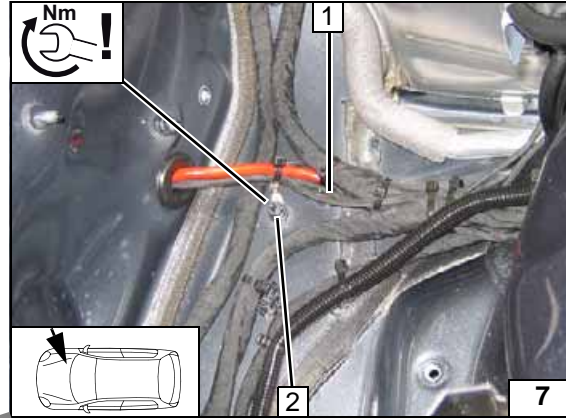
Wiring harness routing and pass through

- 1 Protective rubber plug, wiring harnesses of heater and heater control
- 2 Wiring harness to heater in 10mm dia. corrugated tube

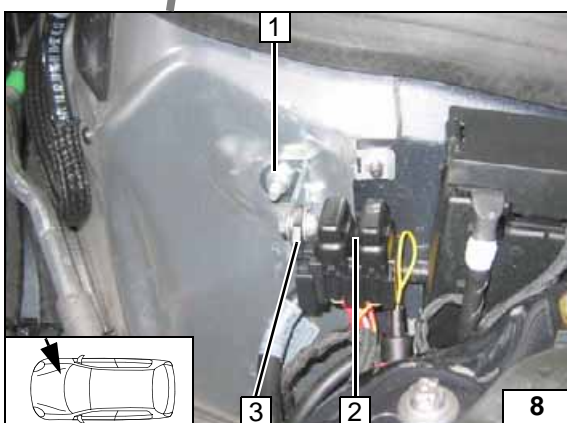


Earth wire

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



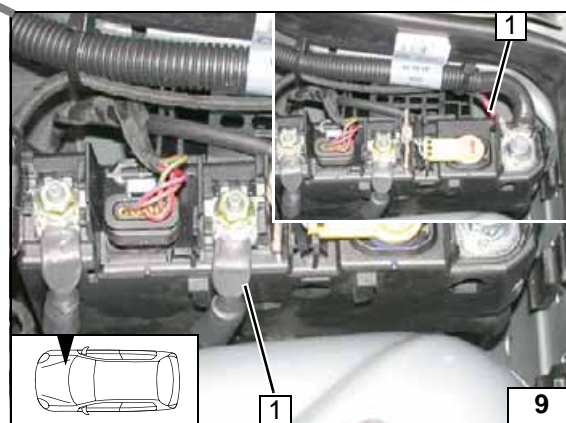
Wiring harness routing diagram



Fuse holder of engine compartment

Replace F2 with 1 A fuse.

- 1 Remove clip (only up to MY 2012), hole, M6x20 bolt, angle bracket, large diameter washer, flanged nut
- 2 F1+2 fuses mounted
- 3 M5x12 bolt, washer [2x], retaining plate of fuse holder, flanged nut

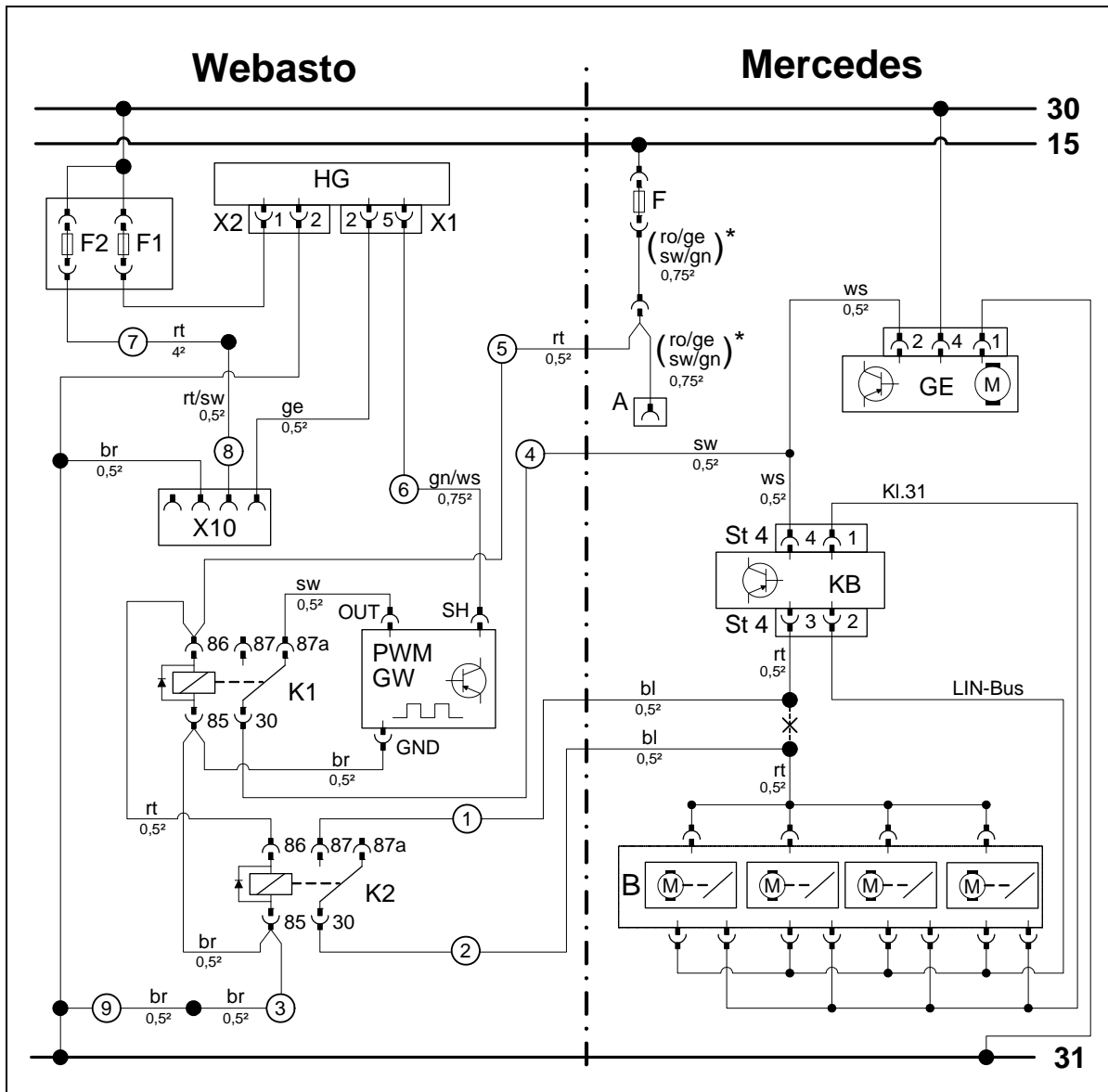


Positive wire

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



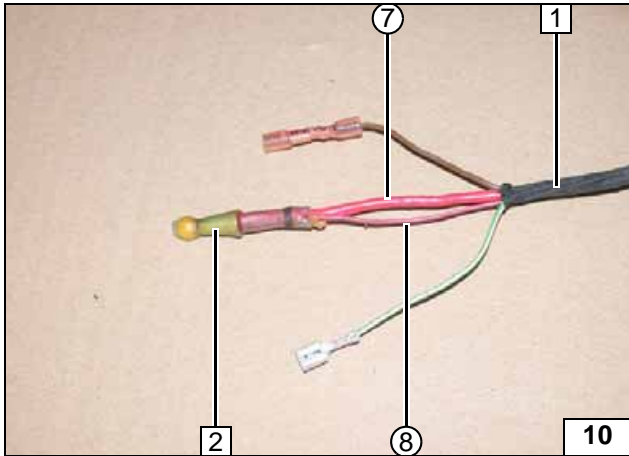
Fan Controller



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 of wiring harness (KB)	ge	yellow
X10	4-pin connector of heater control	B	Flap positioning module	br	brown
K1	Fan relay			gn	green
PWM GW	Pulse width modulator			rt/sw	red/black
K2	Additional relay			gn/ws	green/white
PWM GW settings:				ro/ge	pink/yellow
Duty cycle: 56%				sw/gn	black/green
Frequency: 400Hz				*	depending on the equipment
Voltage: 3.0V				X	Cutting point
Function: High-side				Wiring colours may vary.	

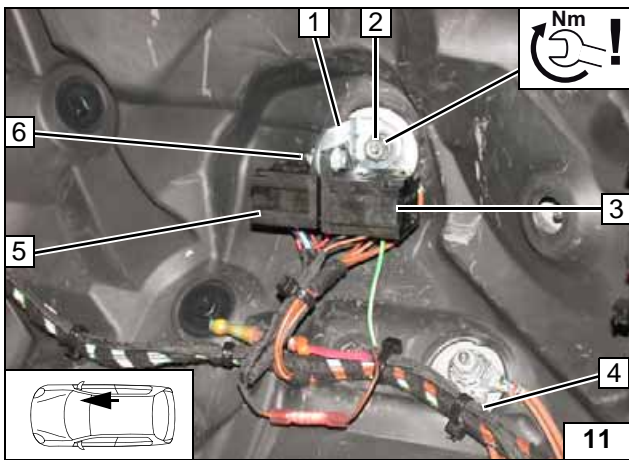
Legend



Prepare wiring harness of heater 1 in the passenger compartment. Connect red (rt) wire 4² ⑦ and red/black (rt/sw) wire 0,5² ⑧ to solder wire terminator 2.



Preparing wiring harness of heater

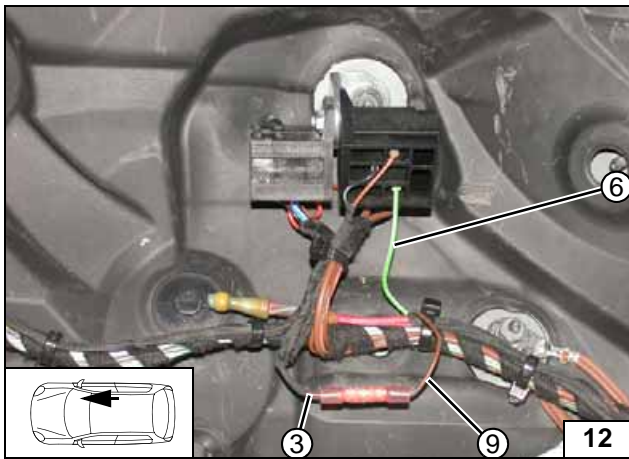


Route wiring harness of heater 4 in the footwell on the front passenger's side, and secure with cable ties.



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

Mounting relay socket and PWM Gateway socket

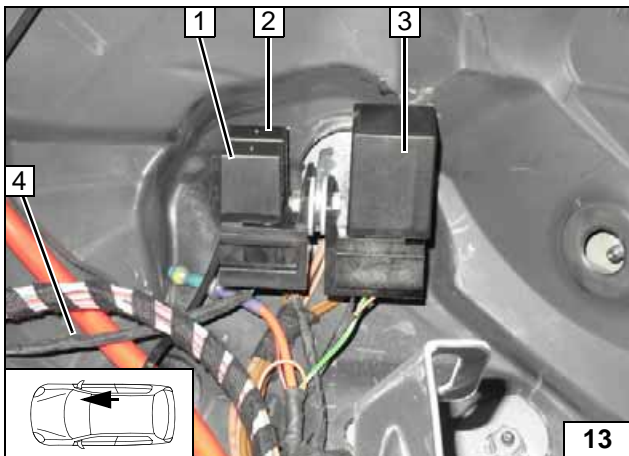


Insert green/white (gn/ws) wire ⑥ into PWM GW/SH socket.



- ③ Brown (br) wire of fan controller wiring harness
- ⑨ Brown (br) wire of heater wiring harness

Connecting wiring harnesses

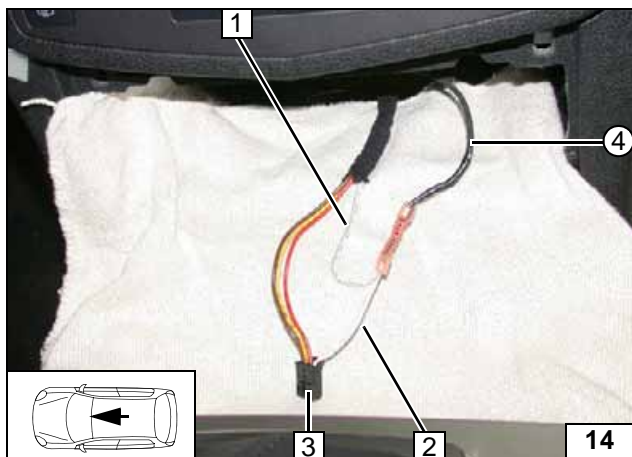


Route wiring harness of fan controller 4 to centre console and secure with cable ties.



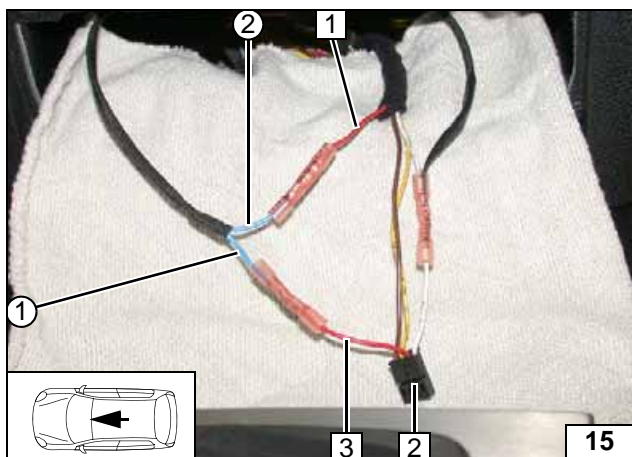
- 1 K2 relay
- 2 K1 relay
- 3 PWM Gateway

Mounting relay [2x] and PWM GW



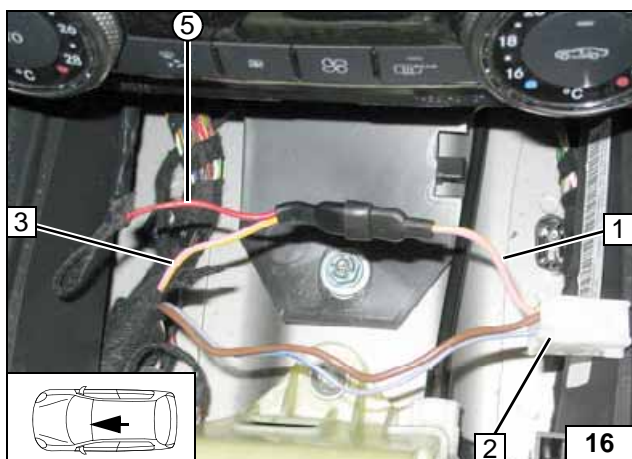
- 1 White (ws) wire of fan unit connector, pin 2
- 2 White (ws) wire of 4-pin connector ST 4 from A/C control panel, pin 4
- 3 4-pin connector ST 4 from A/C control panel
- ④ Black (sw) wire of K1/30

Connect-
ing A/C
control
panel



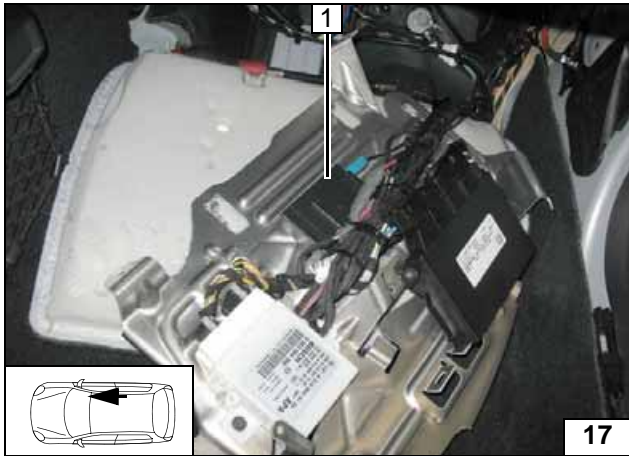
- 1 Red (rt) wire of flap positioning module
- 2 4-pin connector ST 4 from A/C control panel
- 3 Red (rt) wire of 4-pin connector ST 4 from A/C control panel, pin 3
- ① Blue (bl) wire of K2/87
- ② Blue (bl) wire of K2/30

Connect-
ing A/C
control
panel



- 1 Pink/yellow (ro/ge) wire or black/green* (sw/gn*) wire of socket outlet/lighter
- 2 Plug-in connector from socket outlet / lighter
- 3 Pink/yellow (ro/ge) or black/green* (sw/gn*) wire of fuse F
- ⑤ Red (rt) wire of K1/86

Conne-
ction to
socket out-
let/lighter



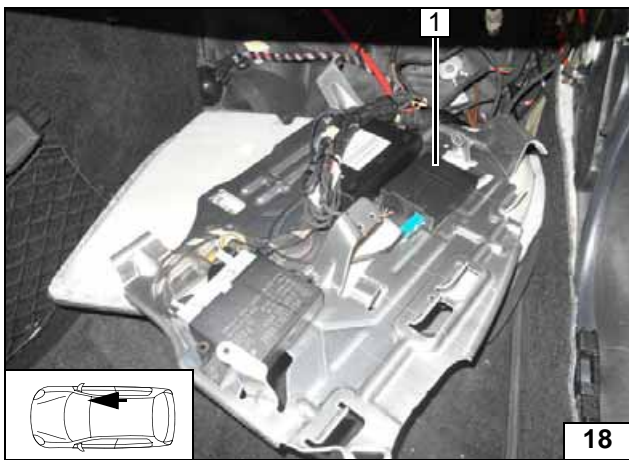
Telestart

Dependent on equipment, version 1

- 1 Receiver, adhesive tape



Installing receiver

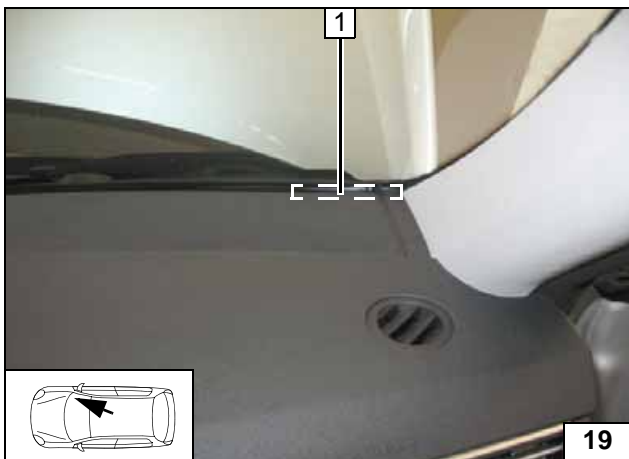


Dependent on equipment, version 2

- 1 Receiver, adhesive tape



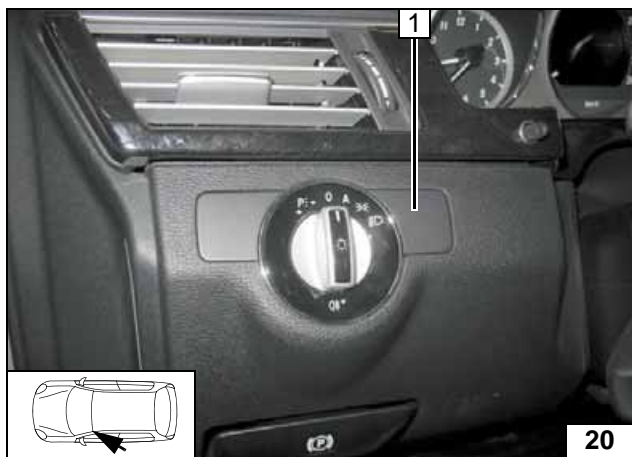
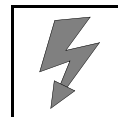
Installing receiver



All vehicles

- 1 Antenna

Installing antenna



Push Button Option

Mounting push button here is not possible in CLS C218.

Only in connection with Telestart. Use wiring harness extension.

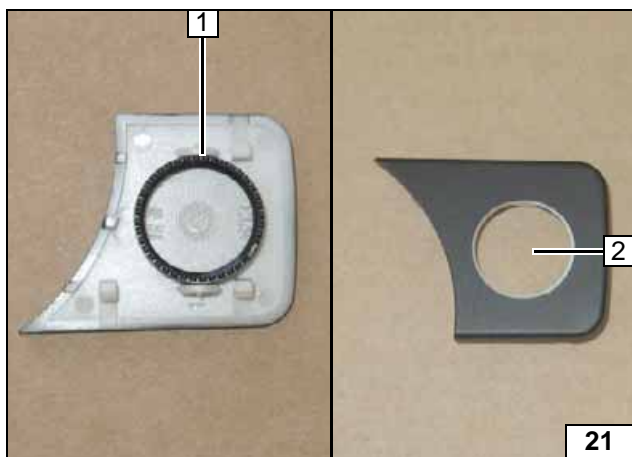
WARNING:

If the push button cannot be installed in the trim piece due to parts lying behind it, the installation is done as shown in figure 25.

1 Cover



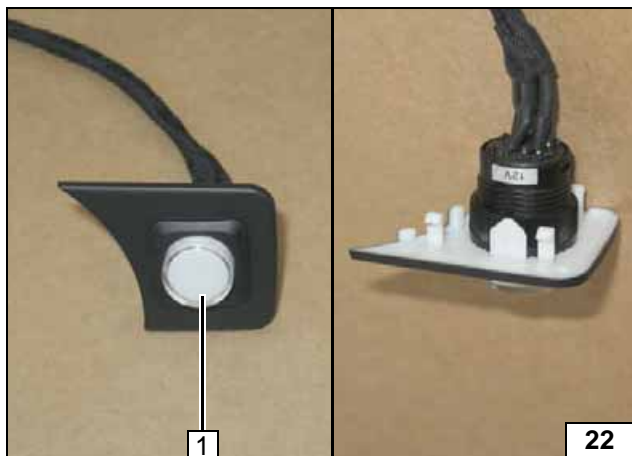
Removing cover



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



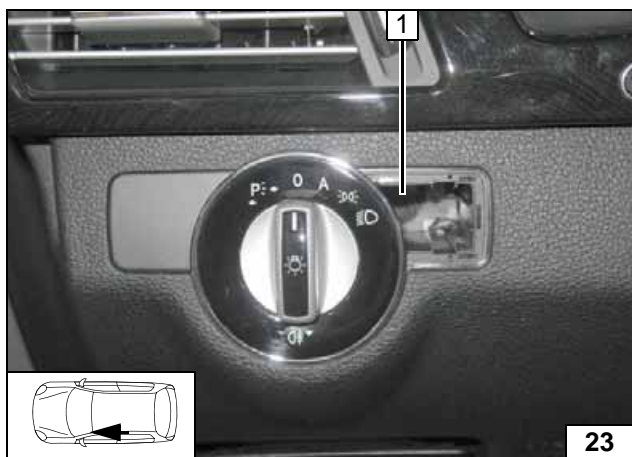
Hole in cover



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



Mounting push button

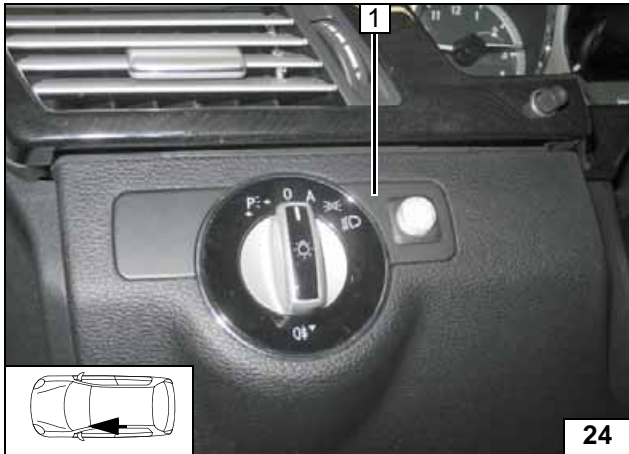


When drilling, watch components located behind.

1 12mm dia. hole

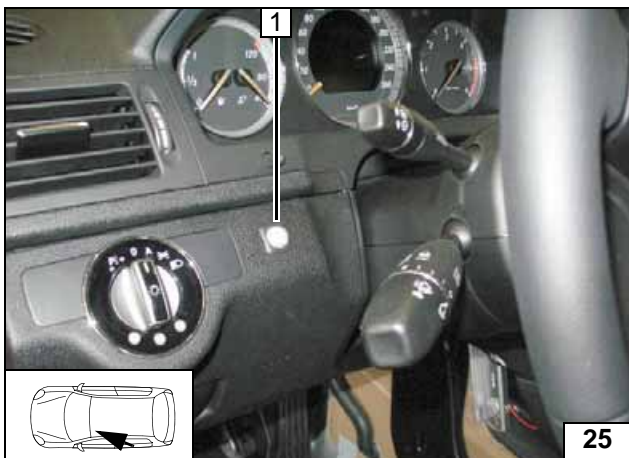


Hole for wiring harness



1 Cover

Mounting cover



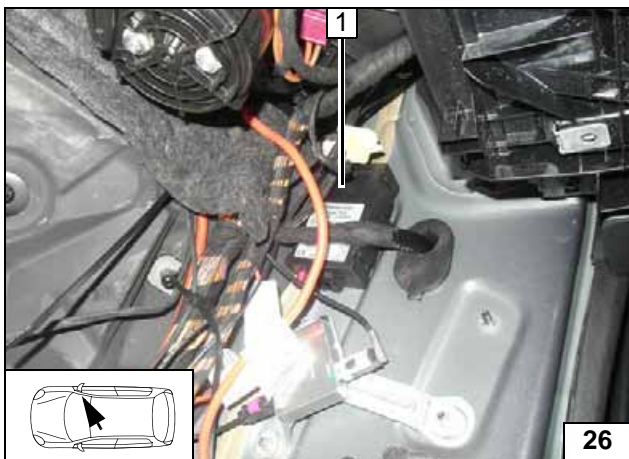
Alternative installation location

Only in connection with Telestart. Use wiring harness extension.

- 1 12mm dia. hole, push button



Mounting push button

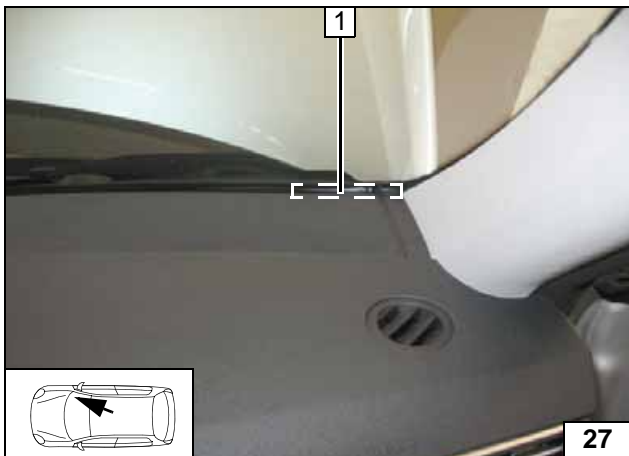


Remote Option (Thermo Call)

- 1 Receiver, double-sided adhesive tape

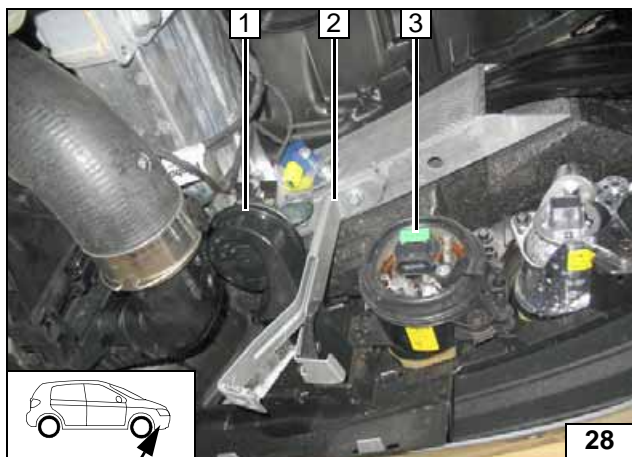
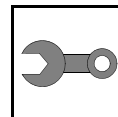


Installing receiver



1 Antenna

Installing antenna



Preparing Installation Location



WARNING!

Figure shows vehicle with front fog light. Use the same procedure for daytime running lights

Up to model year 2012

Remove horn 1, bracket 2, front fog light or daytime running light 3.

Preparing Installation Location

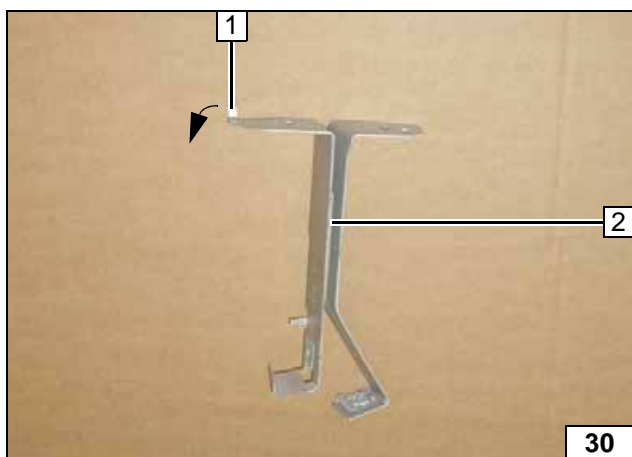


From model year 2013.

Remove horn 1 and bracket 2.



Preparing Installation Location

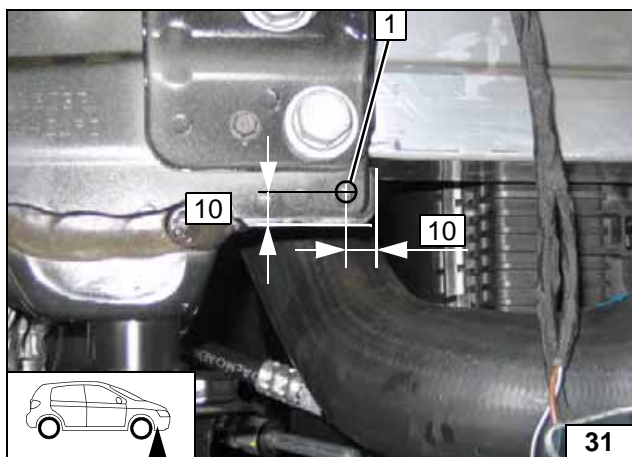


All vehicles

Bend back tab (twist protection) 1 of bracket 2!



Preparing bracket

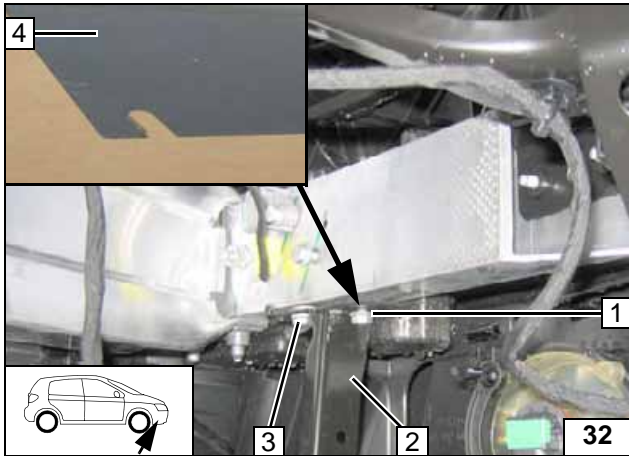
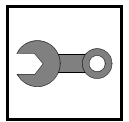


Remove joint sealer on inside of frame side member, in the area of hole 1.

1 7 mm dia. hole



Hole in frame side member

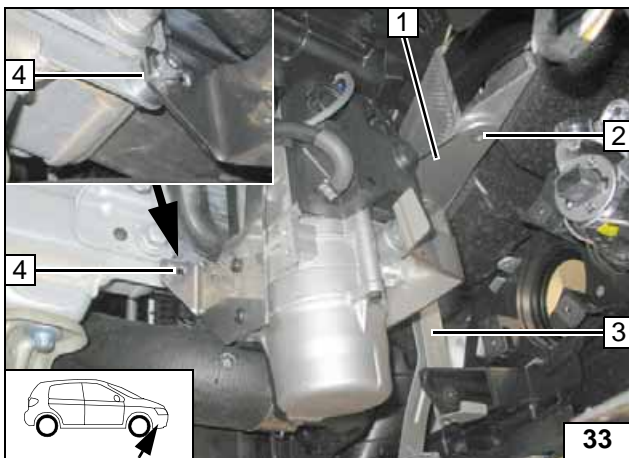


Install bracket **2** . Insert large diameter washer between bracket **2** and bumper at position **3**. Mount heater bracket **4** with oblong hole between bracket **2** and bumper at position **1** .



- 1** Mount original vehicle bolt loosely
- 3** Original vehicle bolt, large diameter washer

Installing heater

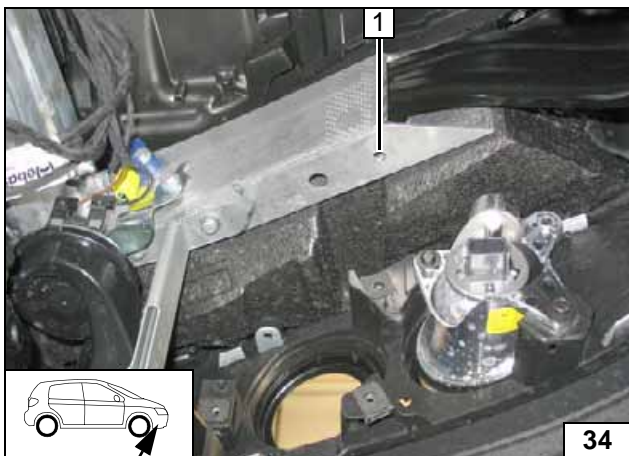


Mount heater bracket **1** with oblong hole between bracket **3** and bumper (see previous figure). Mount heater at position **4** loosely.



- 2** Copy hole pattern
- 4** M6x25 bolt, 8 mm shim, flanged nut

Copying hole pattern

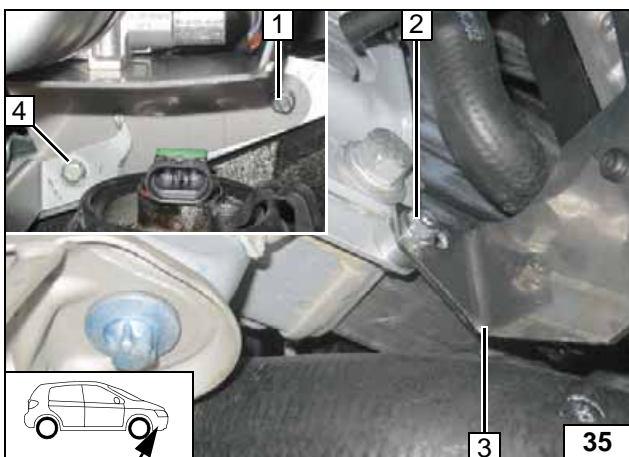


Remove heater. Reinstall horn (all vehicles) and front fog light or daytime running light (only up to MY 2012) after drilling the hole.



- 1** 7 mm dia. hole

Hole in bumper



Mounting Heater

Mount heater bracket with oblong hole between bracket and bumper and align (see previous work step).



- 1** M6x20 bolt, flanged nut
- 2** M6x25 bolt, 8 mm shim, bracket **3**, flanged nut
- 4** Tighten bolt

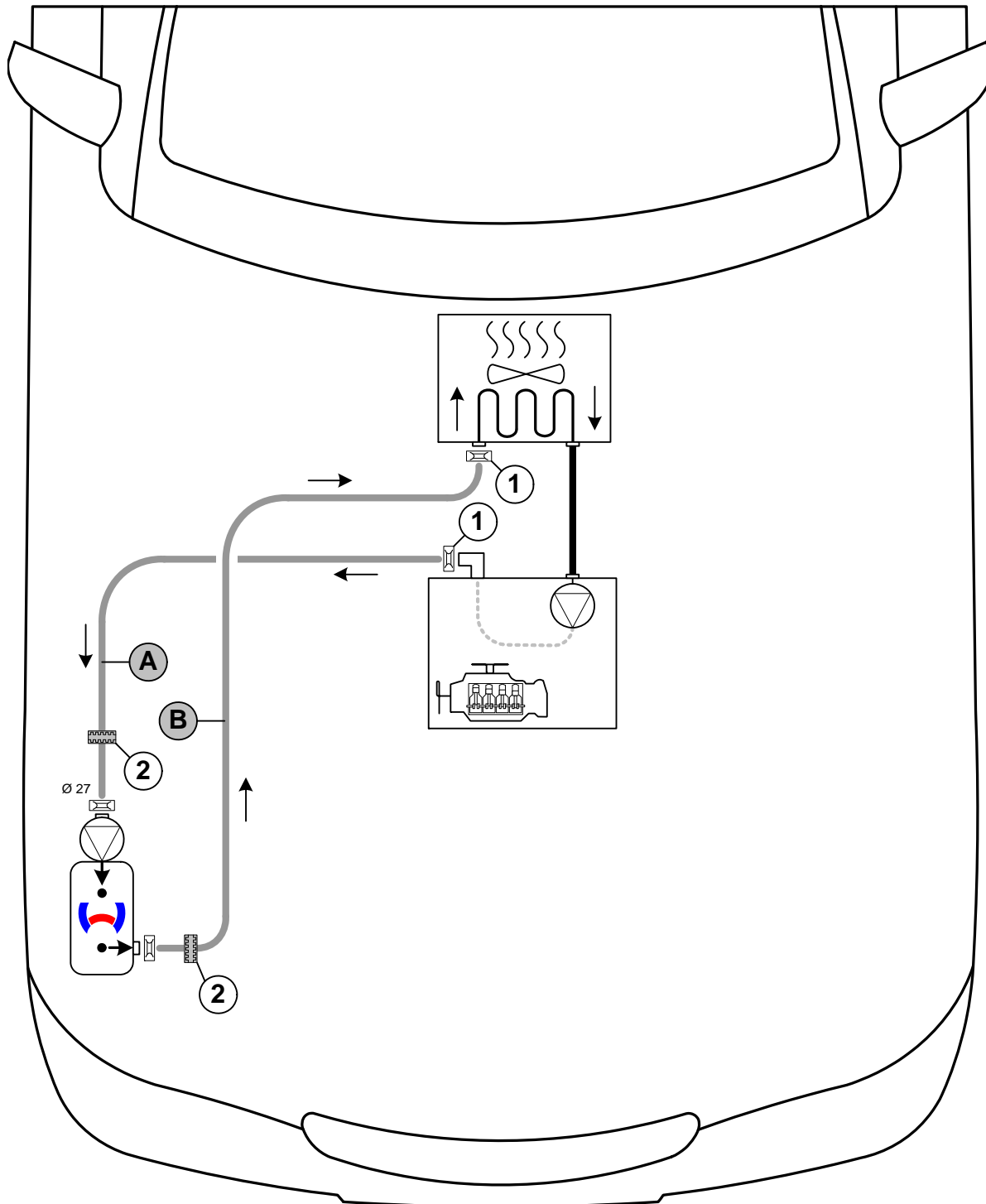
Installing heater






Coolant Circuit

WARNING!

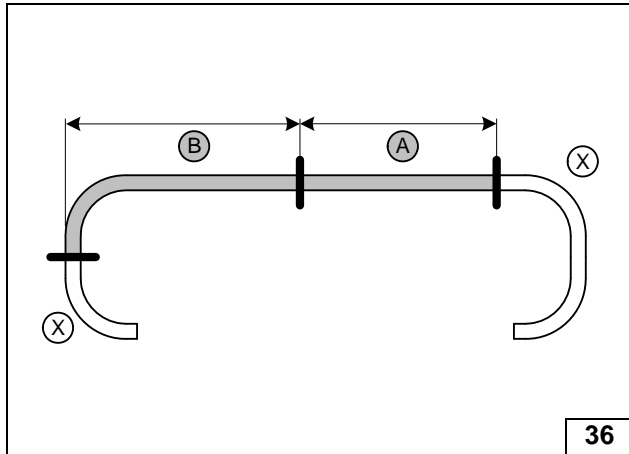
Any coolant running off should be collected using an appropriate container. Install hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that no other hose can be damaged. When installing the hoses, the heater must be filled with coolant. The 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  !





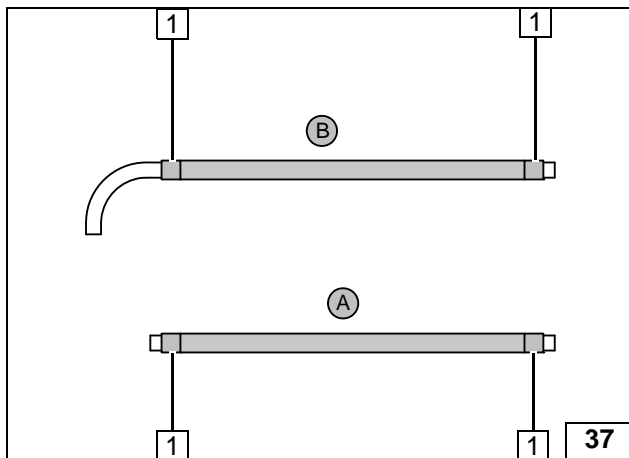
Discard section X.

A = 1270

B = 1580



Cutting hoses to length

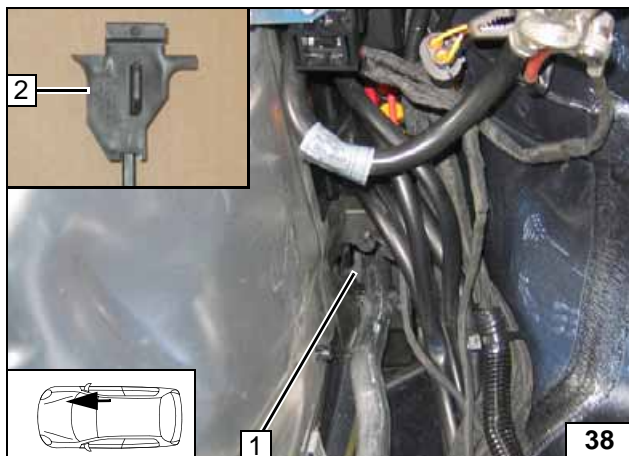


Slide braided protection hoses on to hoses A and B and cut to length.
Cut heat shrink plastic tubing to size.

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



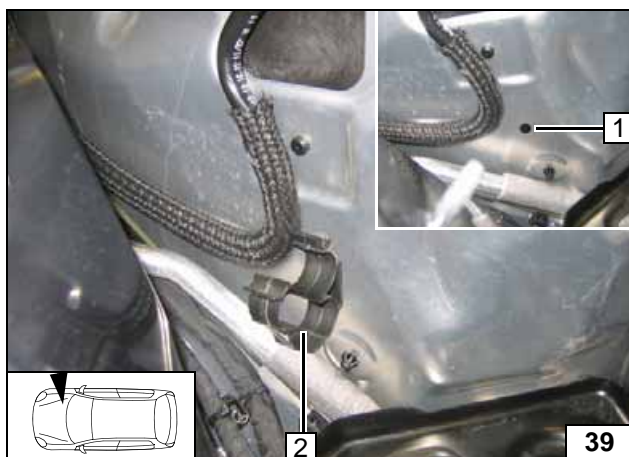
Preparing hoses



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

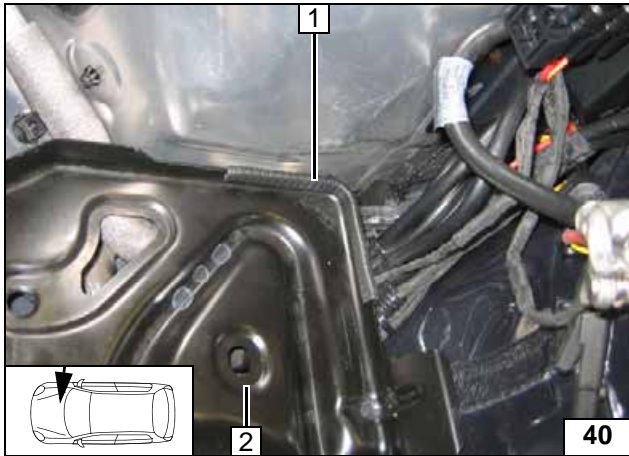


Removing cover



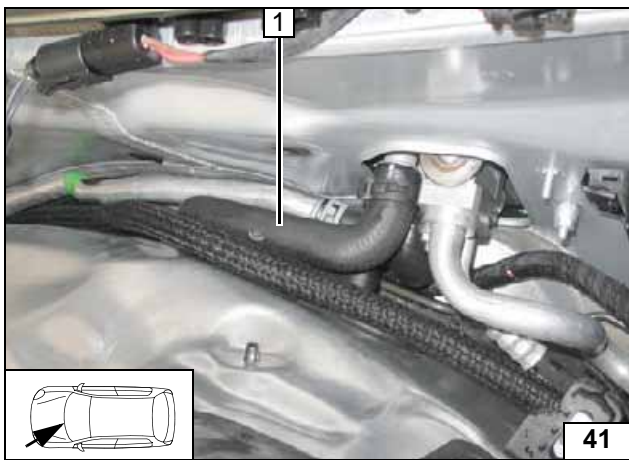
- 1 8 mm dia. hole
- 2 Double hose bracket (lockable)

Installing hose bracket



- 1 200mm edge protection
- 2 Battery carrier

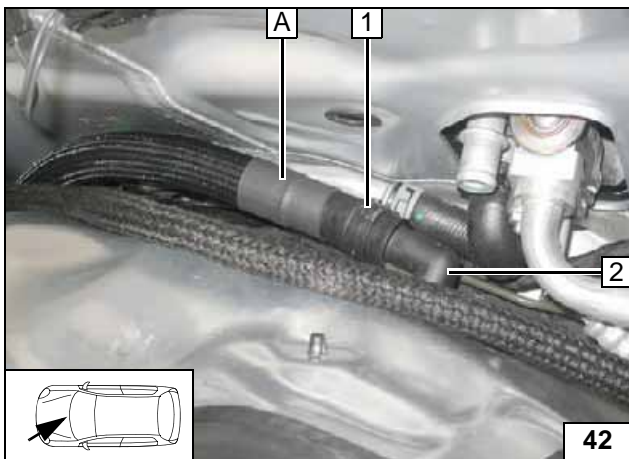
Installing edge protection



Remove original vehicle hose 1, will not be reused. Spring clips will be reused.

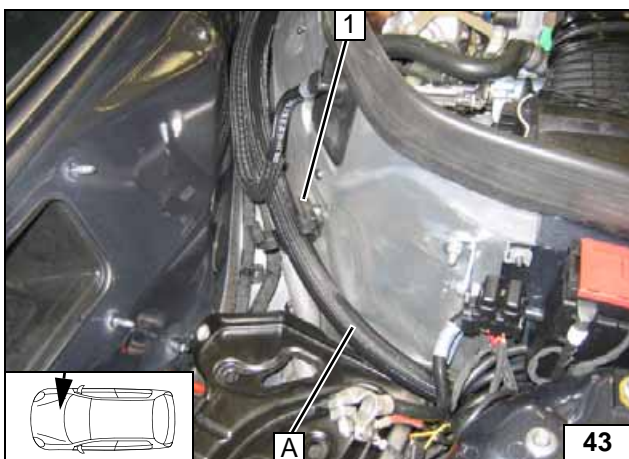


Cutting point



- 1 Original vehicle spring clip
- 2 Connection piece on engine outlet

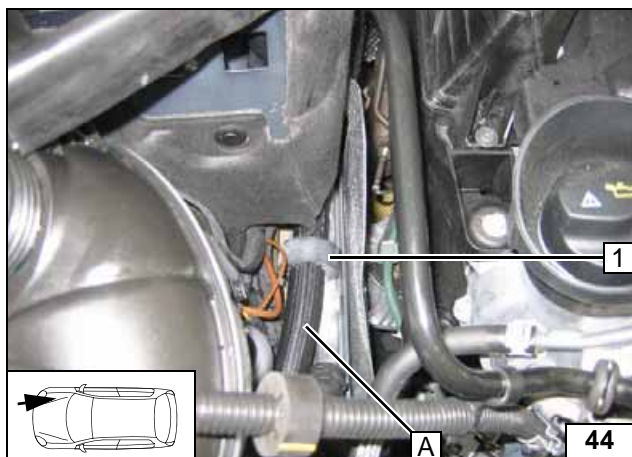
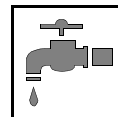
Connection of engine outlet



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



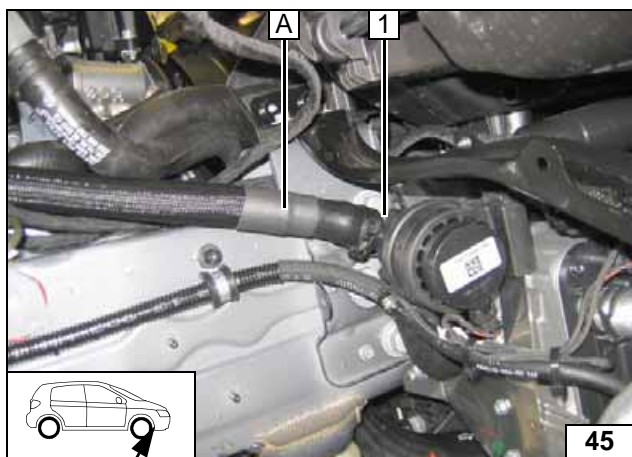
Routing in engine compartment



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

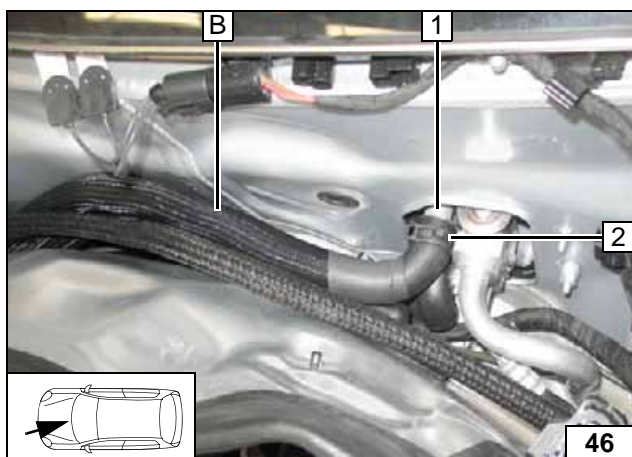


Routing in engine compartment



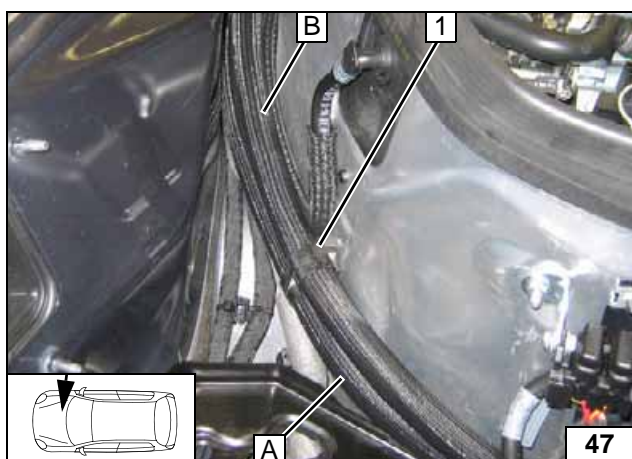
1 Connection piece of circulating pump

Connect-ing heater inlet



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

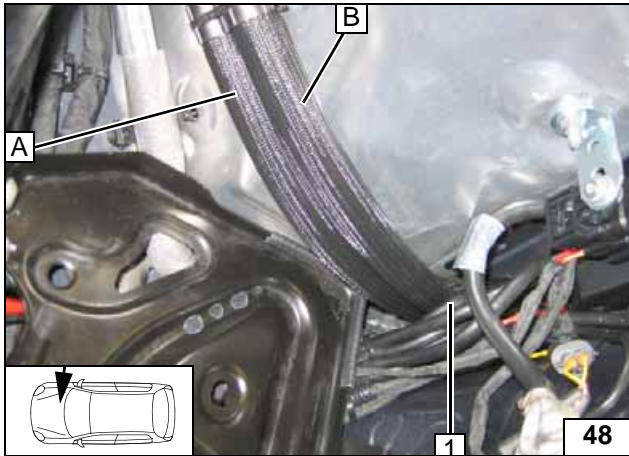
Connect-ing heat ex-changer inlet



Route hose **B** into hose bracket **1** and route forward through pass through.
Close locking device of hose bracket **1**.



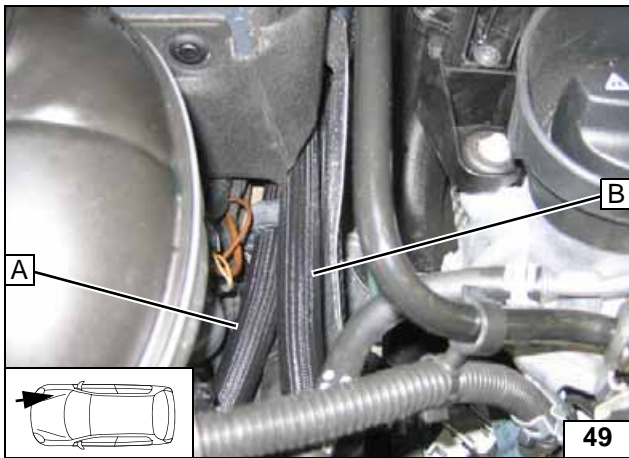
Routing in engine compartment



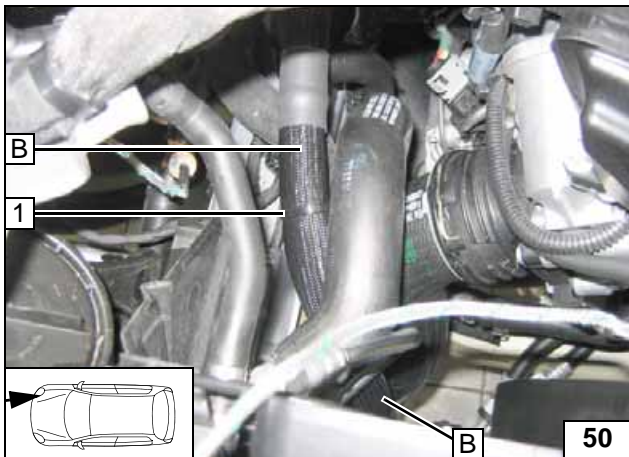
Route hose **B** forwards through pass through to position **1**.



Routing in engine compartment

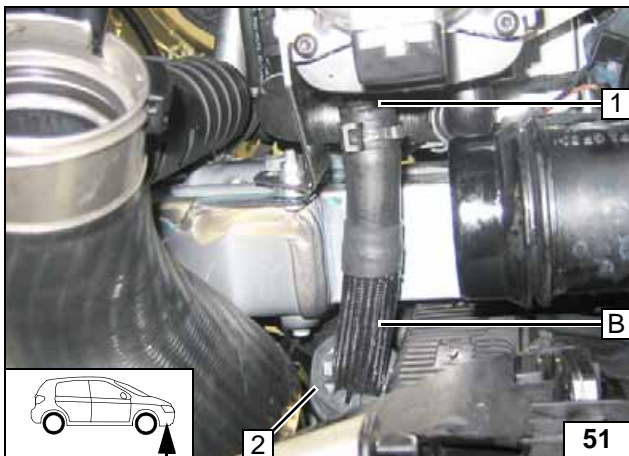


Routing in engine compartment



1 Cable tie

Routing in engine compartment

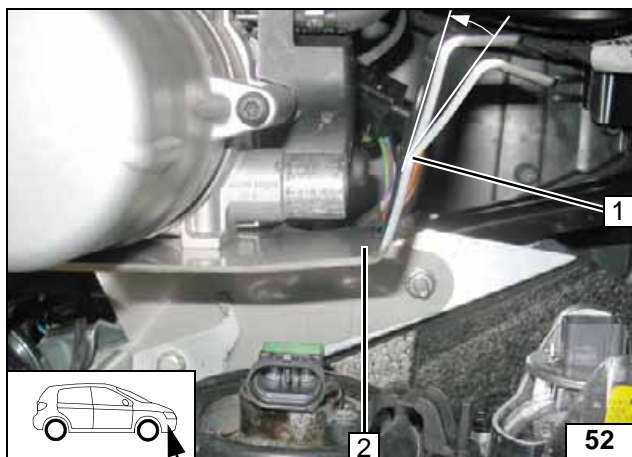
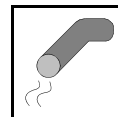


Align hoses. Ensure sufficient distance from neighbouring components, correct if necessary.



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

Connecting heater outlet

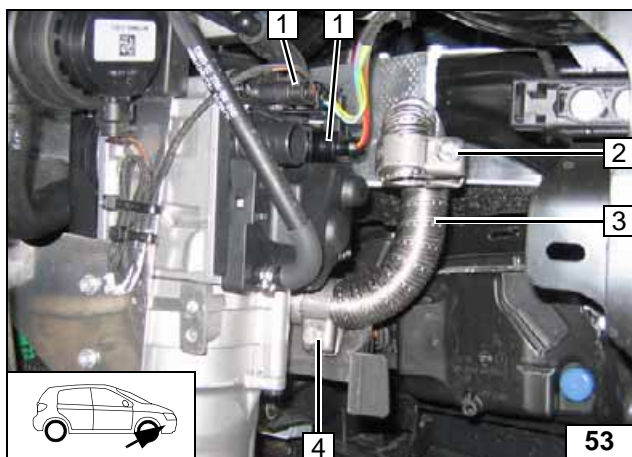


Exhaust Gas

Bend bracket 2 at position 1 straight.



Aligning bracket

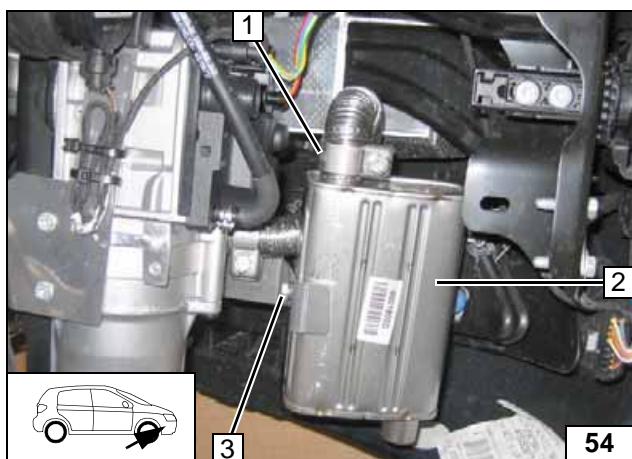


Mould exhaust pipe 3 as shown.

- 1 Connector of heater wiring harness [2x]
- 2 Premount hose clamp loosely
- 4 Hose clamp



Mounting exhaust pipe

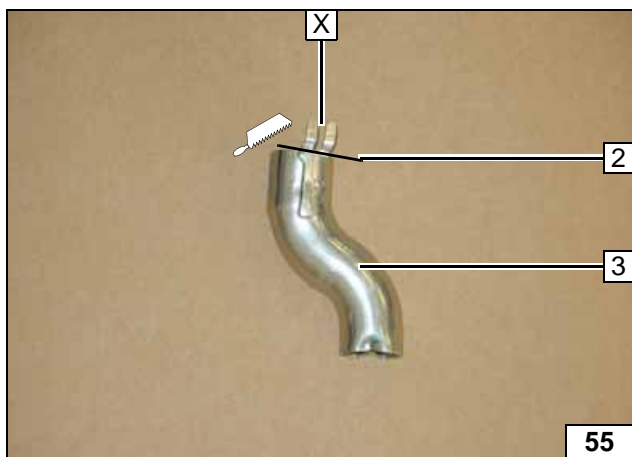


Ensure sufficient distance from neighbouring components, correct if necessary.

- 1 Hose clamp
- 2 Exhaust silencer
- 3 M6x12 bolt, spring lockwasher

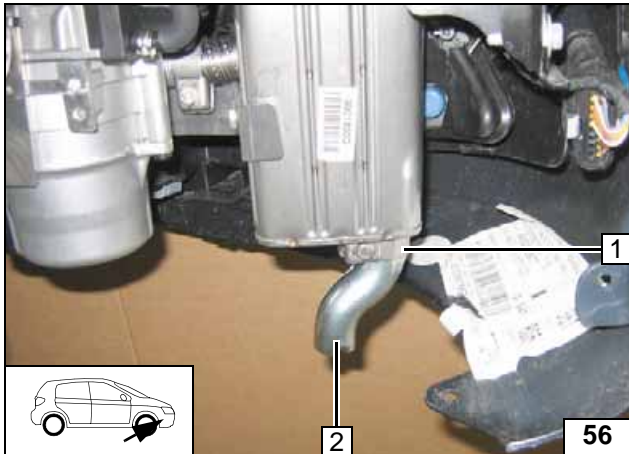
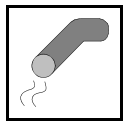


Mounting silencer



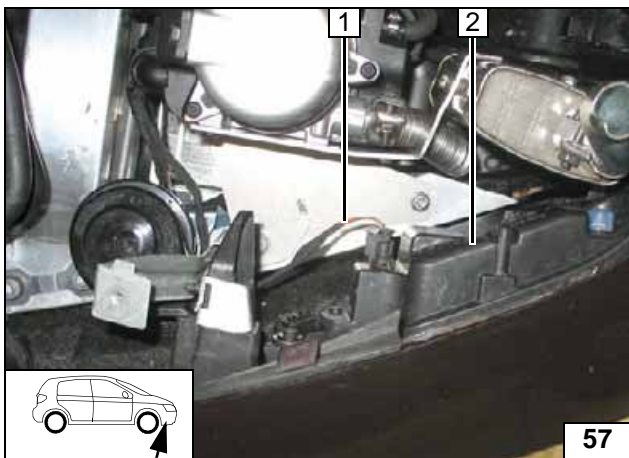
- X Discard section
- 1 Cutting point
- 2 Exhaust end section

Cutting tab



- 1 Hose clamp
- 2 Exhaust end section

**Mounting
exhaust
end section**



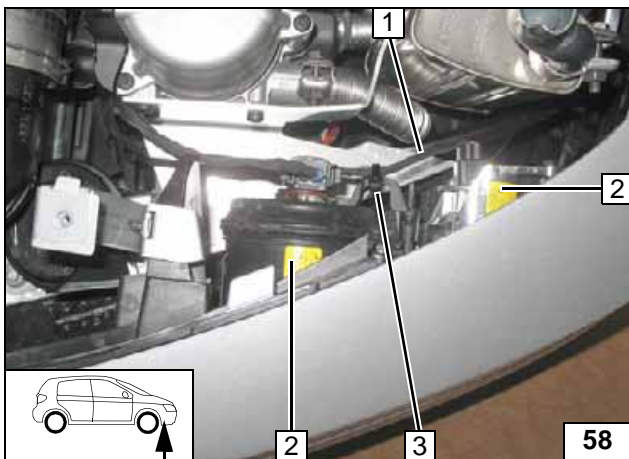
Up to model year 2012

Version with LED daytime running light

Secure wiring harness 1 of LED TFL 2 with cable ties.



**Securing
wiring har-
ness**

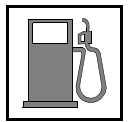


Version with front fog light and cornering light

Secure wiring harness 1 of front fog light and cornering light 2 with cable tie 3.



**Securing
wiring har-
ness**



Fuel

CAUTION!

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

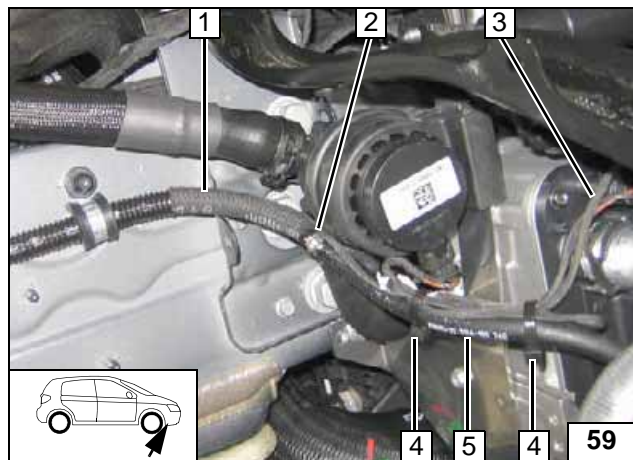
Catch any fuel running off in an appropriate container.

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.

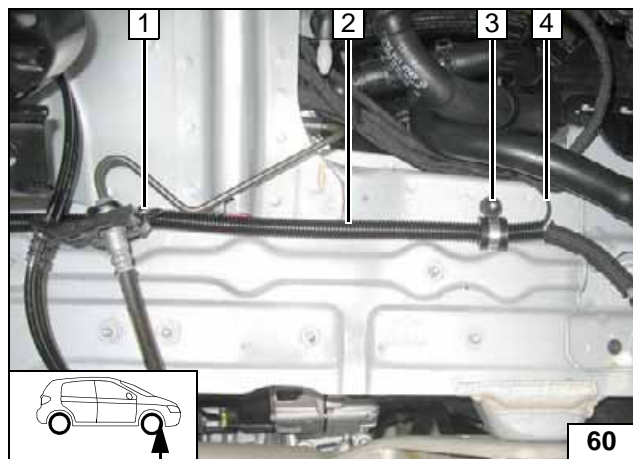


Cut 10mm dia. corrugated tube to length by 950 mm.

Push 8x12 mm dia. hose section 1 as rub protection onto the fuel line. Pull fuel line into 10 mm dia. corrugated tube. Secure moulded hose 5 and wiring harness of circulating pump 3 with cable ties 4 [2x].

2 Fuel line, 10mm dia. clamp

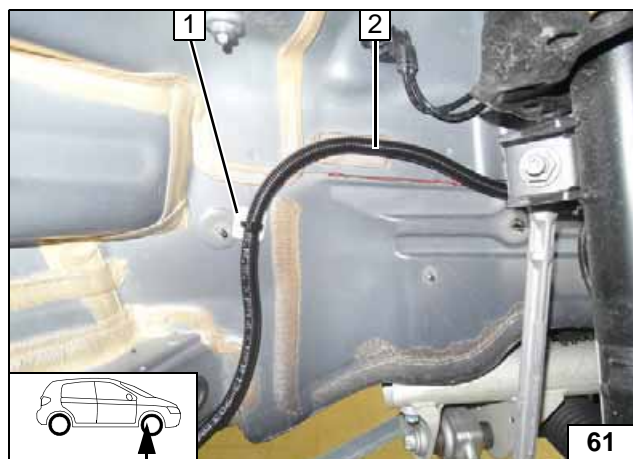
Connection of heater



Pull fuel line 4 into 10 mm dia. corrugated tube 2. Route 10 mm diameter corrugated tube 2 in wheel well.

- 1 Cable tie
- 3 Original vehicle stud bolt, 15mm dia. rubber-coated p-clamp, plastic nut

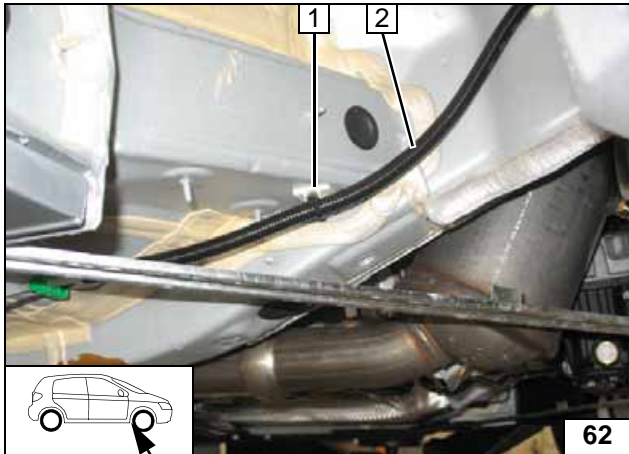
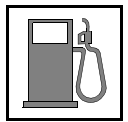
Routing lines



Degrease adhesive surface for adhesive base 1.

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

Routing lines

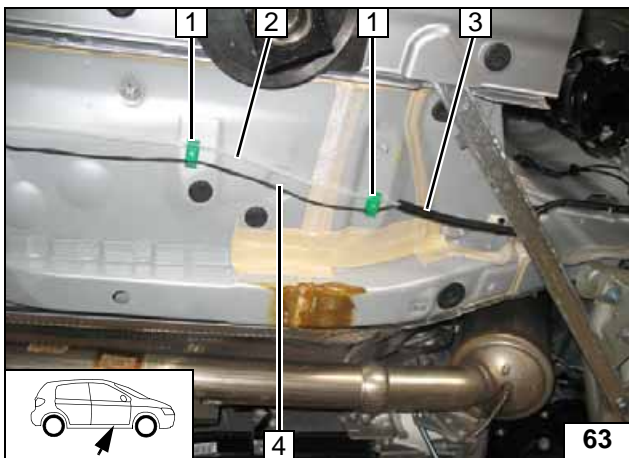


Degrease adhesive surface for adhesive base 1. Route 10 mm dia. corrugated tube 2 to vehicle underbody.

- 1 Adhesive base, cable tie



Routing lines

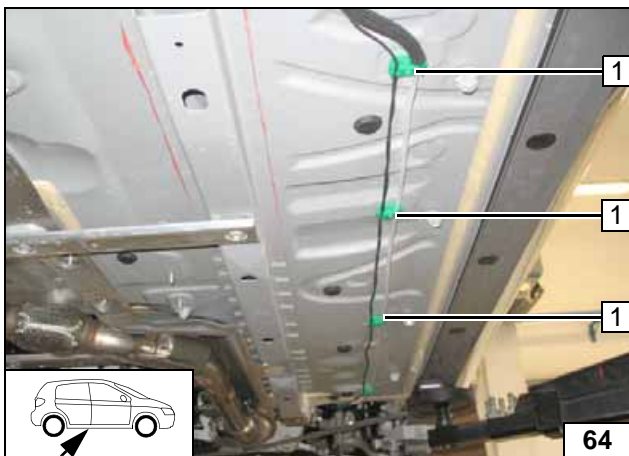


Attach double line holder 1 [2x] on existing stud bolts. Install fuel line 2 and wiring harness for metering pump 4 in double line holder 1.

- 3 10 mm dia. corrugated tube



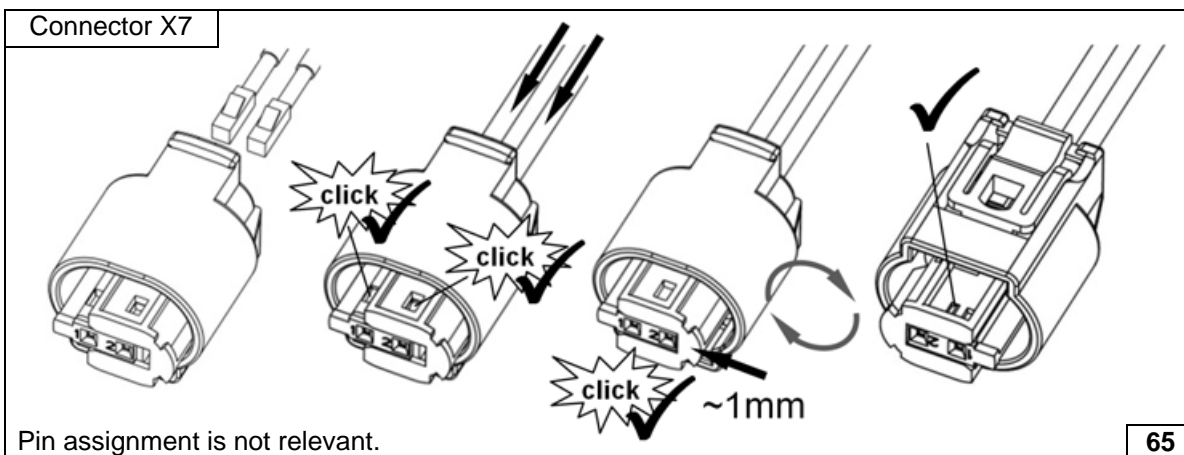
Routing lines



Attach double line holder 1 [3x] on existing stud bolts. Install fuel line and wiring harness of metering pump in double line holder 1.

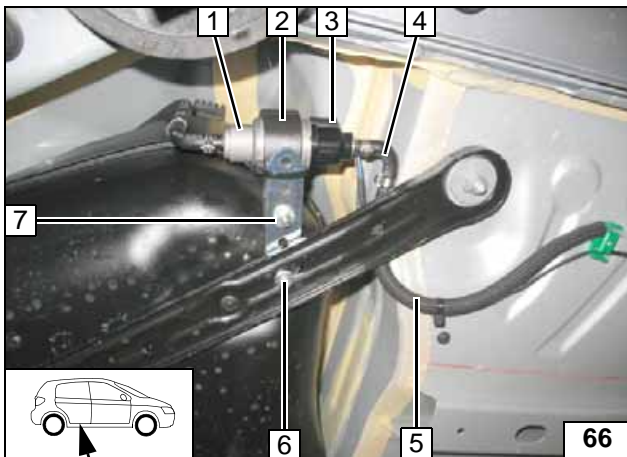


Routing lines



Completing connector of metering pump

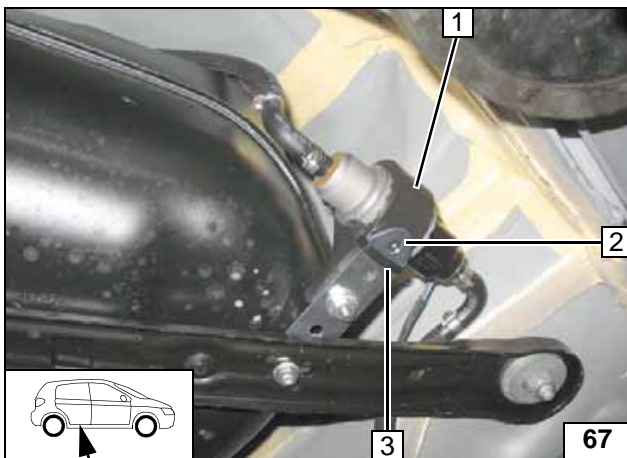
65



60L Fuel Tank Metering Pump

- 1 Metering pump
- 2 Metering pump support
- 3 Wiring harness of metering pump, connector X7 mounted
- 4 90° moulded hose, 10 mm dia. clamp [2x], heater fuel line
- 5 6x11 fabric protective hose on heater fuel line
- 6 Original vehicle hole, M6x12 bolt, flanged nut
- 7 Perforated bracket, M6x25 bolt, support angle bracket, flanged nut

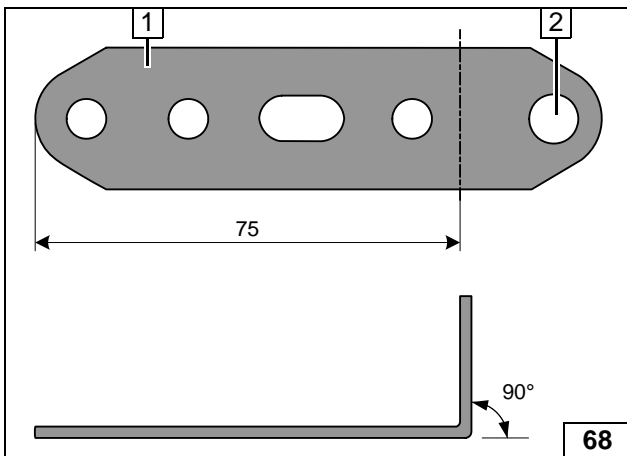
Mounting / connecting metering pump



Install cable ties **3** through mounting of metering pump **1** and around perforated bracket **2**.



Installing metering pump



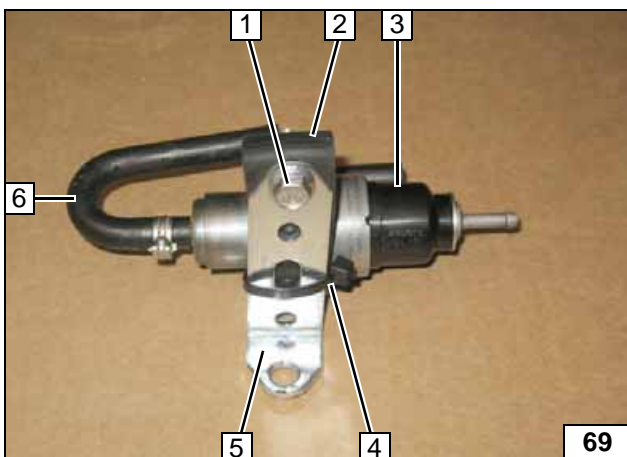
80L Fuel Tank and BR 218 Metering Pump

Up to model year 2012.

Angle down perforated bracket **1** and drill hole at position **2** to 8.5mm dia.

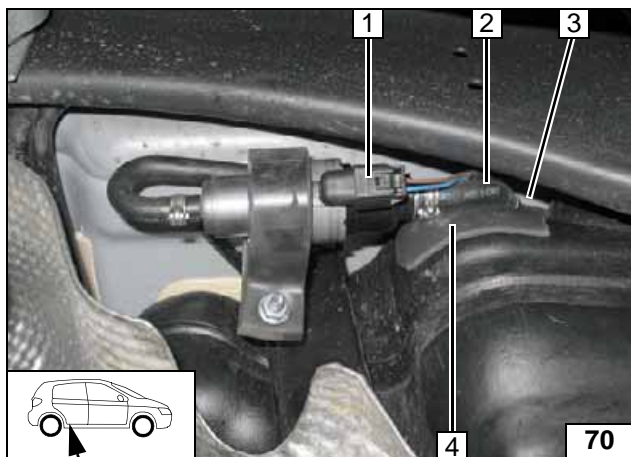


Preparing perforated bracket



- 1 M6x25 bolt, support angle bracket, flanged nut
- 2 Metering pump support
- 3 Metering pump
- 4 Cable tie
- 5 Perforated bracket
- 6 180° moulded hose, 10 mm dia. clamp

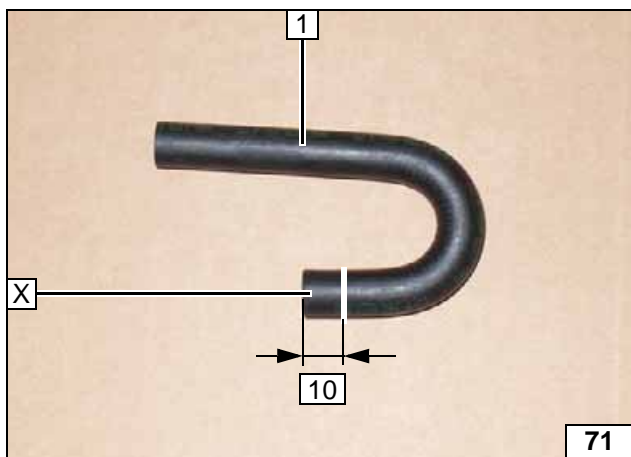
Premounting metering pump



Mount perforated bracket on original vehicle bolt of fuel tank fastening. Paste insulation protection strips 4.

- 1 Wiring harness of metering pump, connector X7 mounted
- 2 90° moulded hose, 10 mm dia. clamp [2x]
- 3 Fuel line of heater

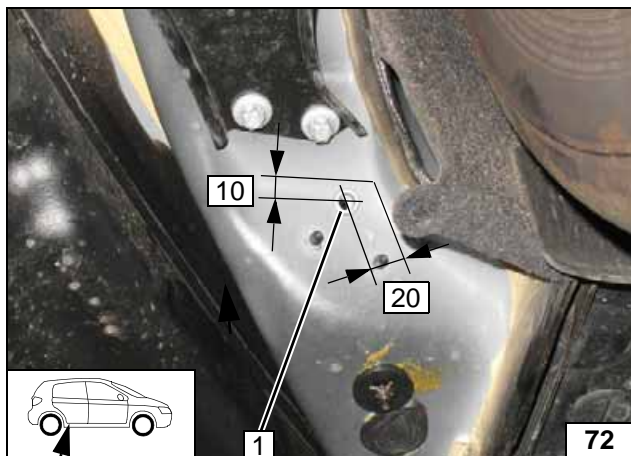
Mounting metering pump



From model year 2013.

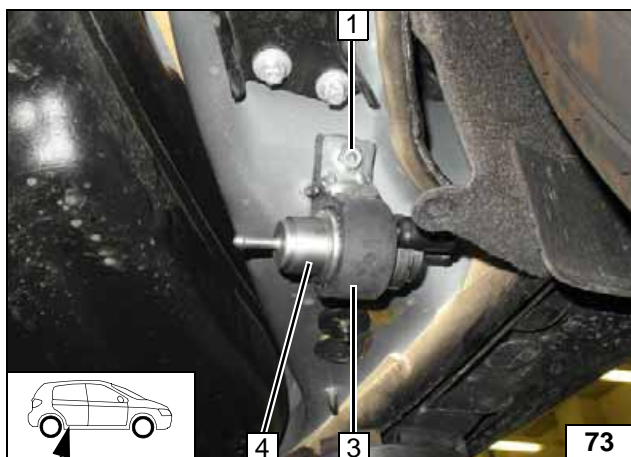
- 1 180° moulded hose
- X Discard section

Shortening moulded hose



- 1 9.1 mm dia. hole, rivet nut

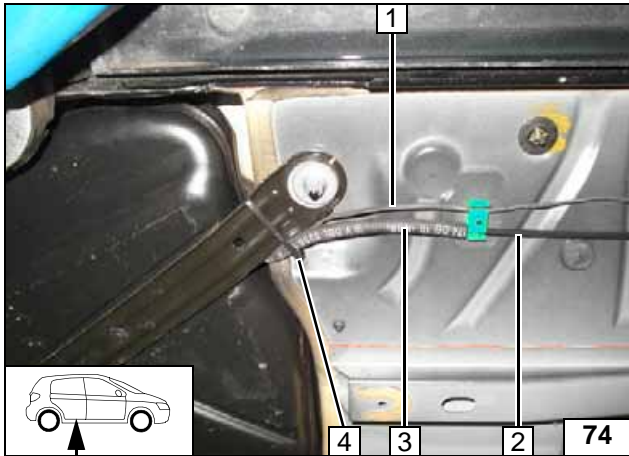
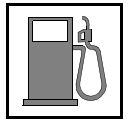
Installing rivet nut



- 1 M6x25 bolt, support angle bracket
- 3 Mounting of metering pump
- 4 Metering pump



Mounting metering pump

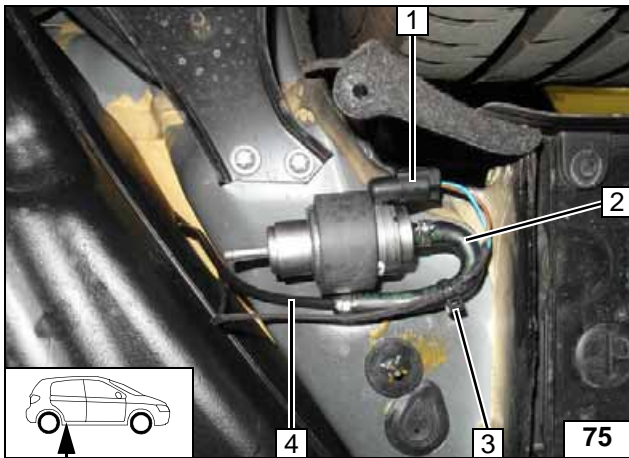


Slide 6x11 fabric protective hose 3 onto fuel line of heater 2.

- 1 Metering pump wiring harness
- 4 Cable tie



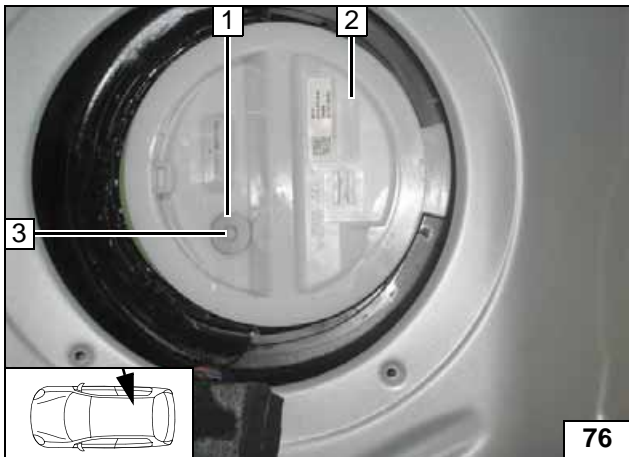
Routing lines



- 1 Wiring harness of metering pump, connector X7 mounted
- 2 Moulded hose 180°, 10 mm dia. clamp[2x]
- 3 Cable tie
- 4 Fuel line of heater



Connection of metering pump



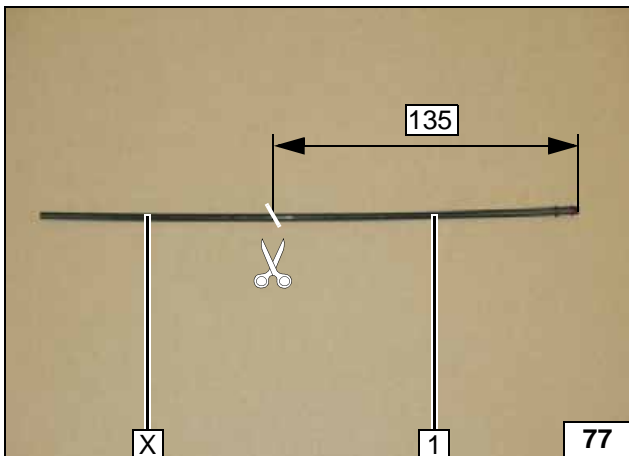
Diesel Fuel Standpipe

Remove fuel-tank sending unit 2 in accordance with manufacturer's instructions. When drilling, make sure drilling chips do not get into the fuel tank or fuel-tank sending unit.

- 1 Large diameter washer with outer dia. $d_a = 21.6 \text{ mm}$
- 3 Copy hole pattern, 6 mm dia. hole



Fuel extraction

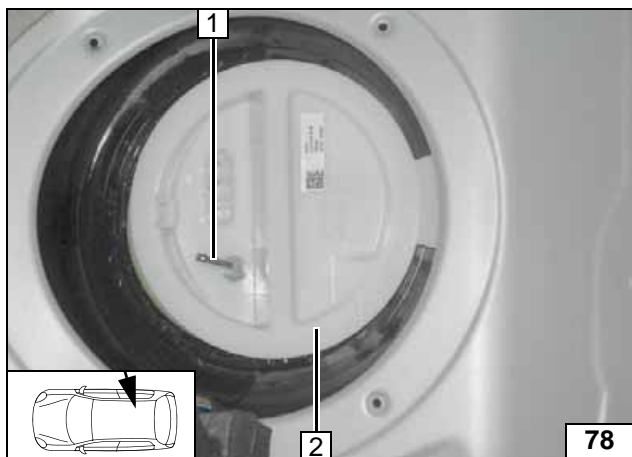
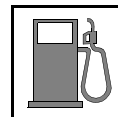


Cut standpipe 1 at an angle.

- X Discard section



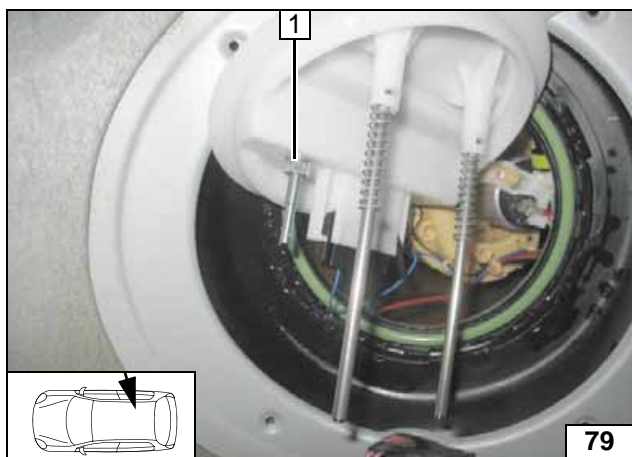
Cutting standpipe to size



Mount fuel standpipe 1 in fuel-tank sending unit 2.



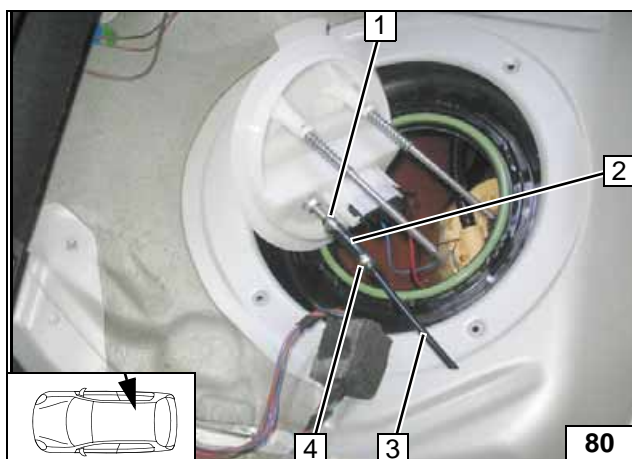
Installing fuel standpipe



Observe tightening torque of 5 Nm of flanged nut 1 from fuel standpipe.



Installing fuel standpipe

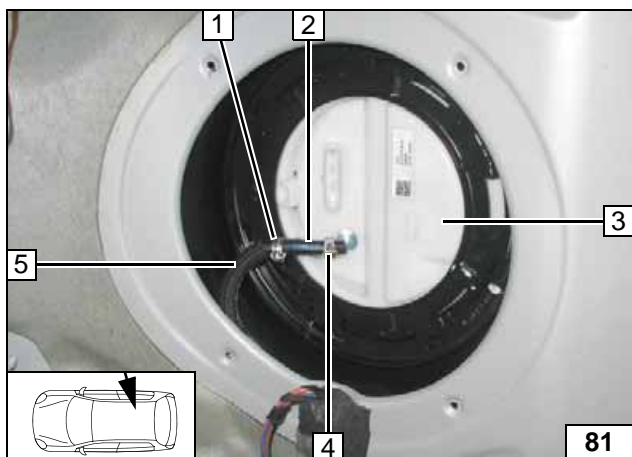


Fit 3.5 mm dia. end of hose section 2 onto fuel standpipe.

- 1 8 mm dia. clamp
- 2 Hose section 3.5x4.5 mm dia.
- 3 Standpipe
- 4 10 mm dia. clamp



Mounting standpipe

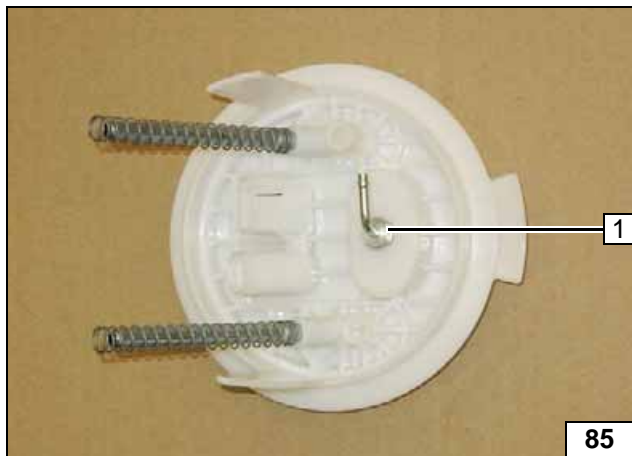
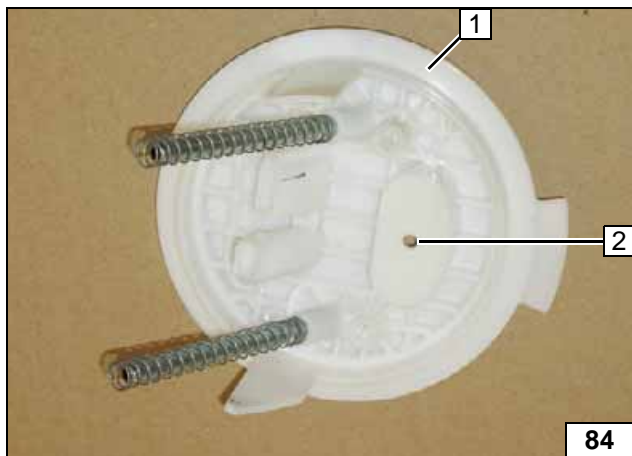
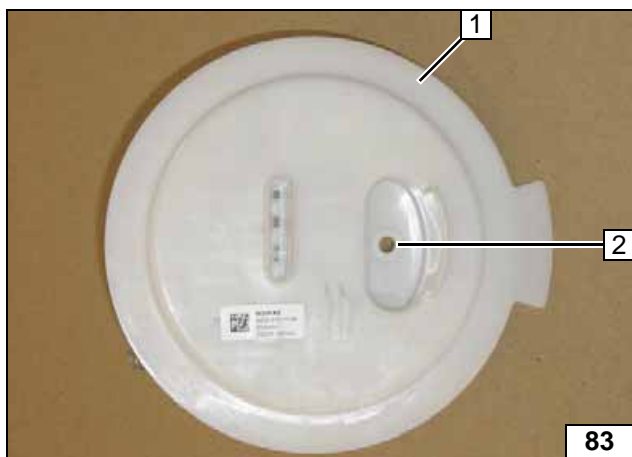
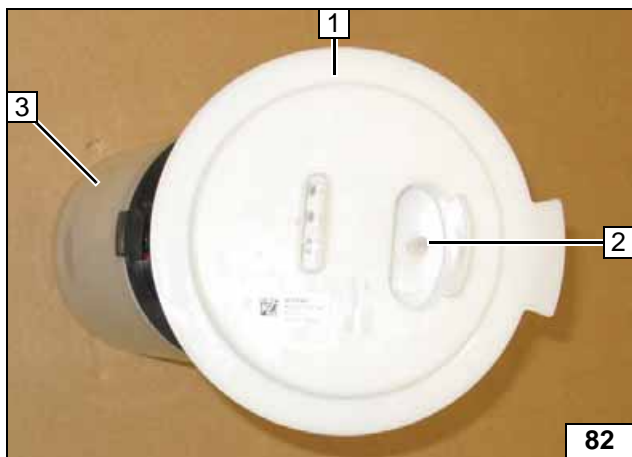
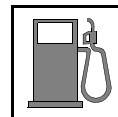


Mount fuel-tank sending unit 3 in accordance with manufacturer's instructions. Fit 3.5 mm dia. end of hose section 2 onto fuel standpipe.

- 1 10 mm dia. clamp, fuel line
- 2 Hose section 3.5x4.5 mm dia.
- 4 8 mm dia. clamp
- 5 6x11 fabric protective hose on fuel line



Mounting fuel line



Petrol Fuel Standpipe

Up to model year 2012

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

Ensure an even surface in area 2.

- 1 Upper section of fuel-tank sending unit, outside

- 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)

- 1 Fuel standpipe



Fuel extraction



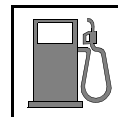
Preparing fuel-tank sending unit



Preparing fuel-tank sending unit

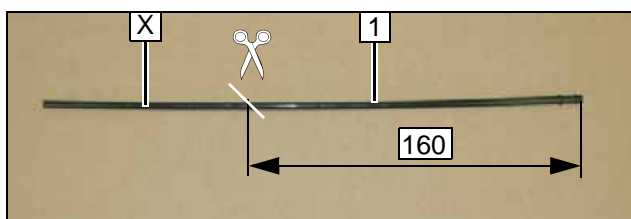


Installing fuel standpipe



Observe 5 Nm tightening torque on flanged nut 1 of fuel standpipe.

Installing fuel standpipe



Cut standpipe 1 at an angle.

X Section, discard

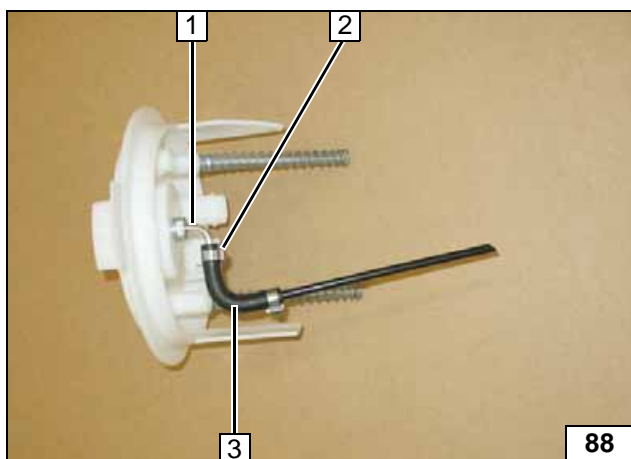


Cutting to length and premounting standpipe



Fit standpipe 1 into 4.5 mm dia. end of moulded hose 4.

- 2 10 mm dia. clamp
- 3 3.5x4.5 mm dia. 90° moulded hose

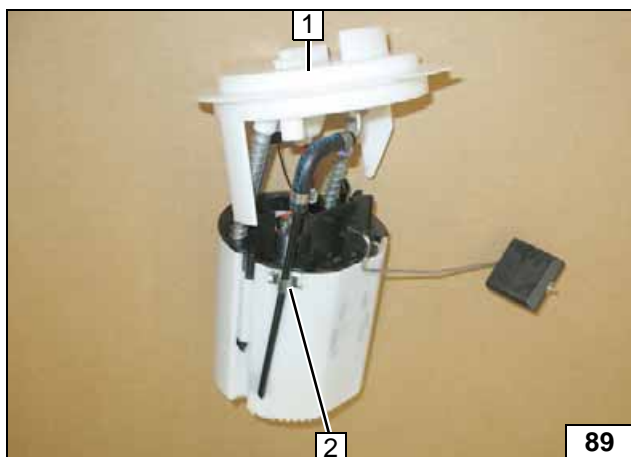


Fit 3.5 mm dia. end of 90° moulded hose onto fuel standpipe 1.

- 2 8 mm dia. clamp
- 3 90° moulded hose preassembled with standpipe



Mounting standpipe

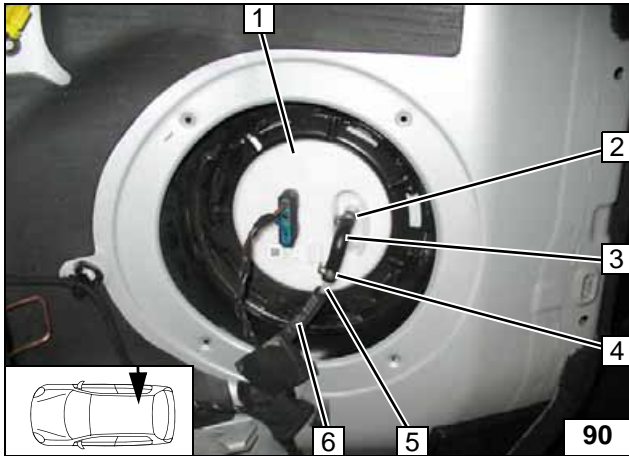
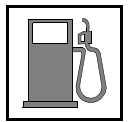


Mount fuel-tank sending unit 1 in accordance with manufacturer's instructions.

- 2 Retaining clamp to guide standpipe into lower section of fuel-tank sending unit



Mounting standpipe

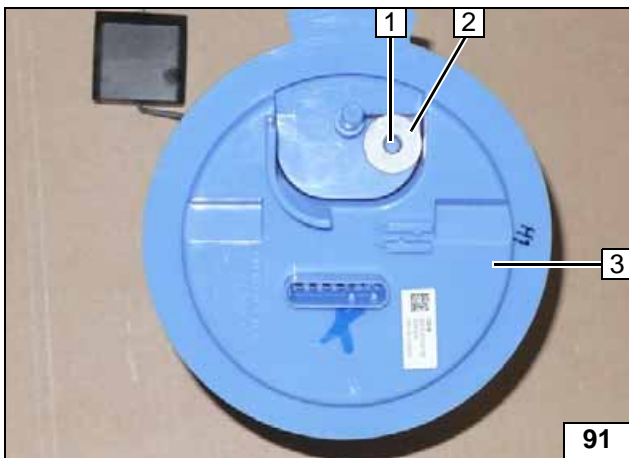


Mount fuel-tank sending unit **1** in accordance with manufacturer's instructions. Mount 3.5 mm dia. end of moulded hose **4** onto fuel standpipe **2**.

- 2** 8 mm dia. clamp
- 3** 3.5x4.5 mm dia. 90° moulded hose
- 4** 10 mm dia. clamp
- 5** Fuel line
- 6** 6x11 fabric protective hose on fuel line



Mounting line



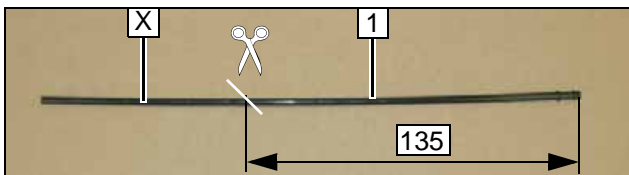
From model year 2013.

Remove fuel-tank sending unit **3** in accordance with manufacturer's instructions. Place large diameter washer **2** flush at edges as shown.

- 1** Copy hole pattern, 6 mm dia. hole



Fuel extraction



Cut standpipe **1** at an angle.

- X** Section, discard

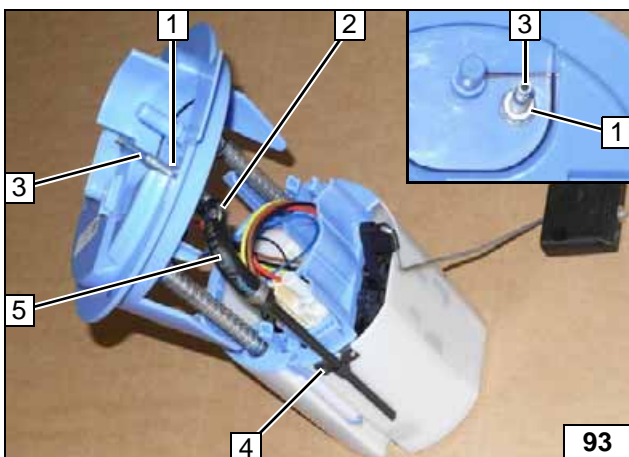


Cutting to length and premounting standpipe



Fit standpipe **1** into 4.5 mm dia. end of moulded hose **3**.

- 2** 10 mm dia. clamp
- 3** 3.5x4.5 mm dia. 90° moulded hose

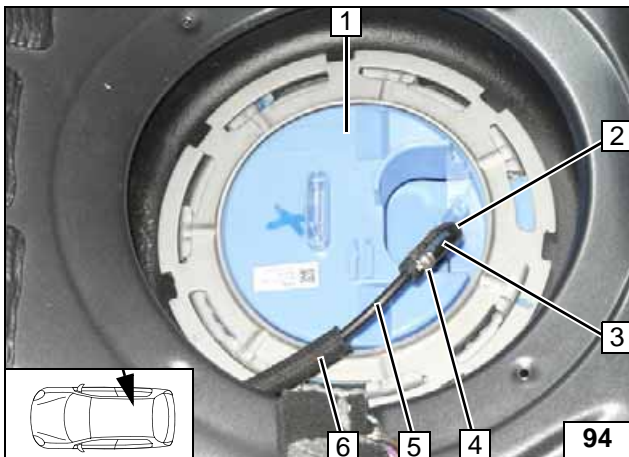


Observe 5 Nm tightening torque on flanged nut **1** of fuel standpipe **3**. Fit 3.5 mm dia. end of 90° moulded hose **5** onto fuel standpipe **3**.

- 2** 8 mm dia. clamp
- 4** Retaining clamp to guide standpipe into lower section of fuel-tank sending unit
- 5** 90° moulded hose preassembled with standpipe



Installing fuel standpipe

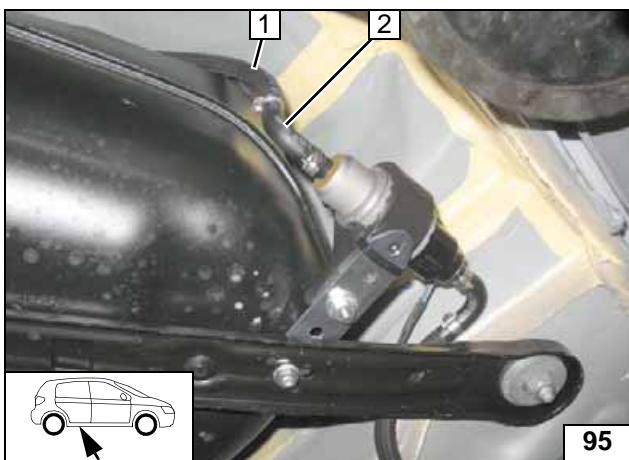


Mount fuel-tank sending unit **1** in accordance with manufacturer's instructions. Fit 3.5 mm dia. end of 90° moulded hose **3** onto fuel standpipe .

- 2** 8 mm dia. clamp
- 3** 3.5x4.5 mm dia. 90° moulded hose
- 4** 10 mm dia. clamp
- 5** Fuel line
- 6** 6x11 fabric protective hose on fuel line



Mounting fuel line



Connection of Metering Pump

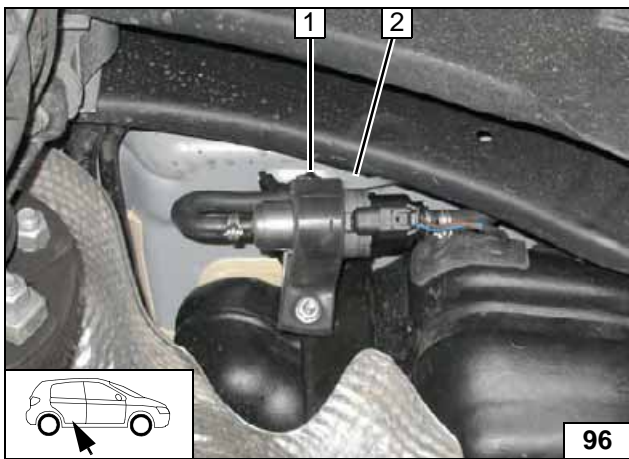
60l fuel tank

Ensure sufficient distance to neighbouring components.

- 1** 6x11 fabric protective hose on fuel line of fuel standpipe
- 2** 90° moulded hose, 10 mm dia. clamp [2x]



Connection of metering pump



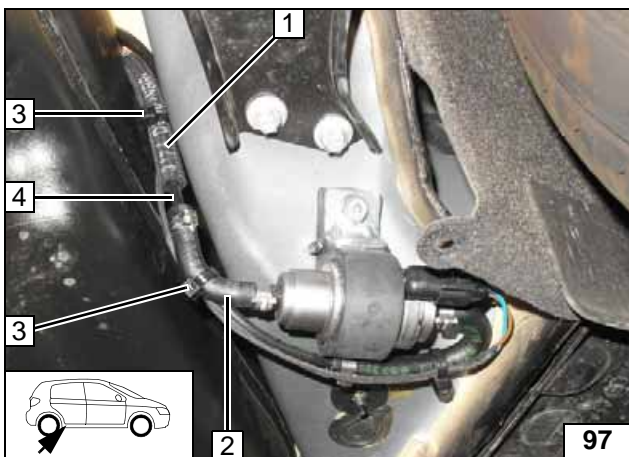
80l fuel tank

Up to model year 2012

Ensure sufficient distance to neighbouring components.

- 1** 10 mm dia. clamp
- 2** Fuel line

Connection of metering pump

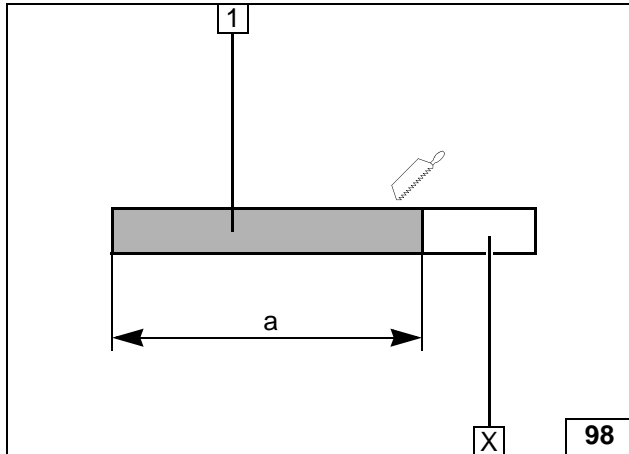
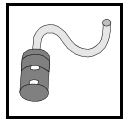


From model year 2013.

- 1** 6x11 fabric protective hose on fuel line of fuel standpipe **4**
- 2** Moulded hose 90°, 10 mm dia. clamp[2x]
- 3** Cable tie [2x]



Connection of metering pump



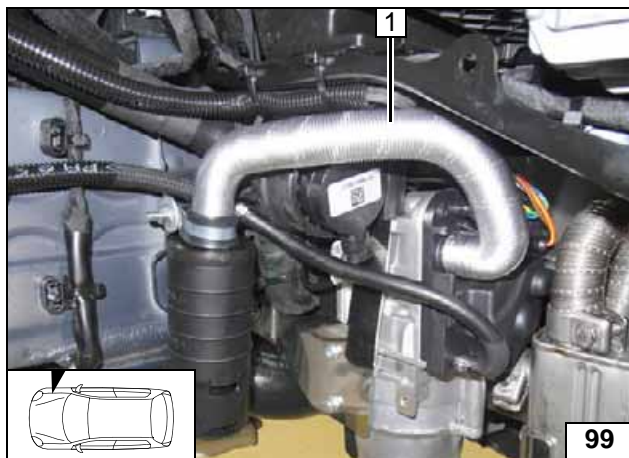
Combustion Air

Discard section X.

- 1 combustion air pipe
a = 300 mm.

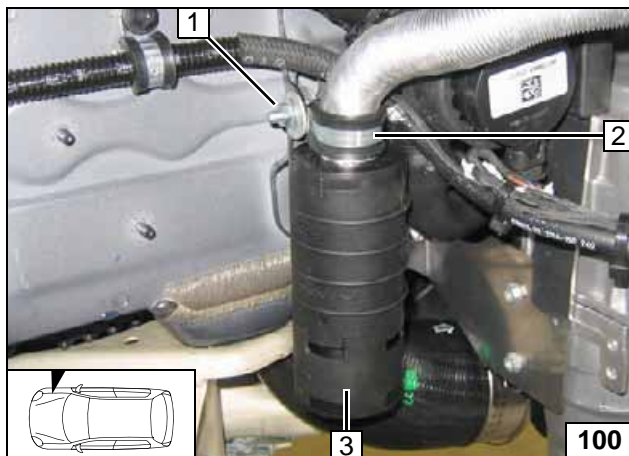


Cutting combustion air pipe to length



- 1 Combustion air pipe

Mounting combustion air pipe



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



Mounting silencer



Final Work

WARNING!

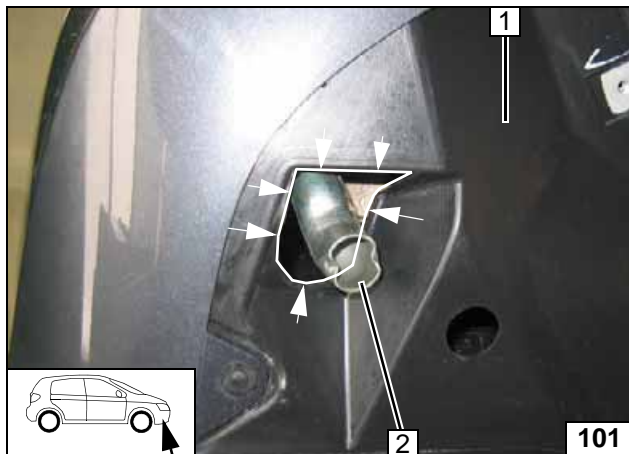
Reassemble the disassembled components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Secure all loose wires using cable ties. Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).



- **Connect 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" (adjustment of switch input)**
- **Define settings of A/C control panel according to the "TT-Evo Operating and Maintenance Instructions"**
- **Place caution label "Switch off parking heater before refuelling" in the area of the filler neck.**
- **For initial start-up and function check, 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.



Cut out wheel well trim **1** at the marking. Exhaust end section **2** must be placed in the middle of the recess and it must be aligned flush with wheel well trim **1**, if necessary, correct exhaust end section **2**.

**Aligning
exhaust
end section**

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