part number: 13445539

D	Änderungen bezüglich Konstruktion, Ausstattung, Farbe sowie Irrtum vorbehalten. Angaben und Abbildungen unverbindlich.	D **Einbauanleitung / nur Händlereinbau**
GB	Subject to change in terms of construction, equipment and colour, and may contain errors. The information and illustrations are non-binding.	GB **Installation instructions / Dealer installation only**
F	Sous réserve de modifications de la construction, de équipement, de la couleur et sous réserve d'erreurs. Les indications et les illustrations sont sans engagement.	F **Consignes de montage / Montage uniquement par le concessionnaire**
NL	Wijzigingen met betrekking tot constructie, uitvoering en kleur evenals vergissingen voorbehouden. Gegevens en afbeeldingen niet bindend.	NL **Montagehandleiding / Montage alleen door dealers**
DK	Ændringer med hensyn til konstruktion, udstyr, farver samt fejl forbeholdes. Oplysninger og illustrationer er uforpligtende.	DK **Montagevejledning / Montage kun hos forhandleren**
N	Endringer angående konstruksjon, utstyr, farge og feiltagelse forbeholdes. Opplysninger og illustrasjoner uforbindtlig.	N **Monteringsinstruksjon / Montasje kun hos forhandleren**
S	Med reservation för ändringar vad det gäller konstruktion, utrustning, färg samt för misstag. Uppgifterna och bilderna är inte bindande.	S **Installationsanvisning / Får endast monteras av återförsäljaren**
FIN	Pidätämme oikeuden rakennetta, varustusta, väriä koskeviin sekä erehdyksestä johtuviin muutoksiin. Tiedot ja kuvat eivät ole sitovia.	FIN **Asennusohje / Asennus vain myyntiliikkeen toimesta**
IS	Breytingar í tengslum við samsetningu, tengihluti og lit verða gerðar ef um galla er að ræða. Upplýsingar og myndir án ábyrgðar.	IS **Samsetningarleiðbeiningar / samsetning einungis af hálfu söluaðila**
I	Con riserva di modifiche relative a progettazione, dotazione, colore ed errori. Le indicazioni e figure sono fornite sensa impegno.	I **Istruzioni per il montaggio / Installazione solo presso la concessionaria**
E	Reservadas las modificaciones respecto a diseño, equipamiento, color, asi como error. Indicaciones y figuras sin compromiso.	E **Instrucciones de montaje / Instalación exclusiva por el distribuidor**
P	Reservamos o direito de alterações relativamente ao desenho, equipamento, cor, bem como de erro. Os dados e as gravuras não implicam compromisso da nossa parte.	P **Instruções de montagem / Montagem só no concessionário**
GR	Διατυπώνουμε κάθε επιφύλαξη ως προς αλλαγές σε σχέση με κατασκευή, εξοπλισμό, διαρρύθμιση, χρωματισμούς και λάθη παραδρομής.	GR **Οδηγίες εγκατάστασης / Συναρμολόγηση μόνο από εμπόρους**
CZ	Změny, týkajici se konstrukce, vybaveni, barvy, jakož i omyly jsou vyhrazeny. Údaje a vyobrazeni jsou nezávazné.	CZ **Návod k montáži / Montá pouze prodejcem**
PL	Zastrzega się prawo do zmian dot. konstrukcji, wykończenia, kolorystyki oraz pomyłek. Dane i ilustracje niewiążące.	PL **Instrukcja montażu / Montaż tylko u dealera**
TR	Tasarım, donanım ve renk bakımından değişiklik yapma hakkı ve hata ve eksiklik mahfuzdur. Veriler ve resimler bağlayıcı değildir.	TR **Montaj talimatı / Sadece satıcı tarafında monte edilir**
H	A szerkezet, a kivitel és a szín változtatása, valamint a változások joga fenntartva. Az adatok és az ábrák nem kötelelző érvényüek.	H **Beépítési útmutató / Csak a kereskedő építheti be**
HR	Pravo promjena u svezi konstrukcije, opreme, boje kao i zabune oridžavamo. Podaci i ilustracije su neobavezne.	HR **Upute o ugradnji / Ugradnja samo od strane trgovca**
SER	Права промене у вези конструкције, опреме, боје као и погрешки продржана. Подаци и слике су необавезујући.	SER **Упутство за уградњу / Уградња само преко трговца**
BUL	Запазени права по отношение на конструкцията, обзавеждането, цвета и грешки. Данните и изображенията не са обвързващи.	BUL **Инструкция за монтаж / Монтажът може да се извърши само от търговеца**
RO	Ne rezervăm dreptul unor modificări ale construcției, dotării, culorii și dreptul la erori Datele indicate și imaginile sunt orientative.	RO **Instrucțiuni de montaj / Se va monta numai de către dealer**
RUS	Права на внесение изменений относительно конструкции, оснащения, окраски, а также на ошибки сохраняются. Данные и иллюстрации имеют примерный характер.	RUS **Инструкция по монтажу и установке / Устанавливать только у дилера**
LT	Pasiliekama konstrukcijos, įrangos bei reikmenų, spalvos pakeitmų ir klaidų teisė. Duomenys ir ilistracijos neįpareigojantys.	LT **Montavimo informacija / Montuoja tik prekybininkas**
LV	Tiek paturētas tiesības uz konstrukcijas, iekārtu, krāsu izmaiņām, kā arī kļūdīšanos. Dati un attēli bez saistībām.	LV **Iemontēšanas pamācība / Tikai pārdevēja iebūve**
EST	Konstruktsiooni, varustuse ja vœrvi osas muudatused ning eksimine lubatud. Andmed ja joonised on mittesiduvad.	EST **Paigaldusjuhend / Paigaldab ainult müüja**
SLO	Zadržana pravica do sprememb glede konstrukcije, opreme, barve ter pomote. Podatki in slike so neobvezne.	SLO **Navodilo za vgradnjo / Vgradnja le od trgovca**
SK	Zmeny, ktoré sa týkajú konštrukcie, vybavenia, farby, ako aj omyly sú vyhradené. Údaje a zobrazenia sú nezávázné.	SK **Montážny návod / Montá iba obchodníkom**
J	構造、装備、色に関しての変更、または間違いがある可能性があります。 記載事項および図に関して責任を負いません。	J **取り付け説明書 / 販売業者取り付けのみ**
ROK	구조, 장치, 색채와 그의 오류점의 번경 보류함. 지시 사항과 사진들에 관해 책임을 지지 않음.	ROK **장치 지시사항 / 오직 전문상인이 장치**
THA	อาจมีการเปลี่ยนแปลงแก้ไขในแง่ของโครงสร้าง อุปกรณ์ และสี และอาจมีข้อผิดพลาดได้ ข้อมูลและภาพประกอบไม่ถือเป็นข้อผูกมัด	THA **คู่มือการติดตั้ง / ติดตั้งโดยตัวแทนจำหน่ายเท่านั้น**
VR	保留设计、配置、颜色以及错误的修改权。 给出的资料和插图均没有法律约束力。	VR **安装说明书 / 仅供销售商安装用**
VR	保留設計、配置、顏色以及錯誤的修改權。 給出的資料和插圖均沒有法律約束力。	VR **安裝說明書 / 僅供銷售商安裝用**

Adam Opel AG, D-65423 Rüsselsheim, Germany

13 450 921 08/13

part number: 13445539

HYDRONIC

Eberspächer

→ Check NEW UPDATES → www.ifz-berlin.de

New vehicle-specific installation kit + heater

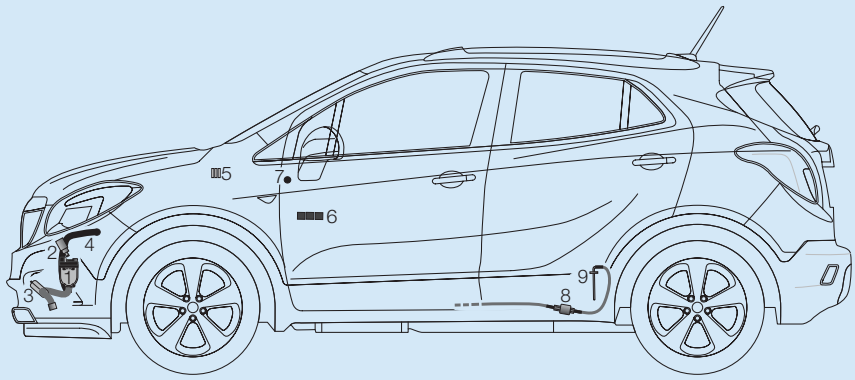
Hydronic II B 5 S in Opel Mokka (J-A)
Hydronic II D 5 S in Opel Mokka (J-A)

from 2013 model
HSN: 0035
1.4 l cubic capacity / 4 cylinder in-line engine ecoFLEX (Turbo) / 103 kW - 140 HP
1.7 l cubic capacity / 4 cylinder in-line engine CDTI / 96 kW - 130 HP

- with manual AirCon or two-zone automatic AirCon
- with xenon headlamps
- with fog lamps
- with manual gearbox or 6 speed automatic gearbox

with front-wheel drive (FWD) or four-wheel drive (AWD)

This installation recommendation is valid for the vehicle described above and is exempt from any liability claims whatsoever.
Depending on the version or modification status of the vehicle, differences can result between the vehicle and this installation recommendation.
The installer must check this before installation and, if necessary, take into account the differences compared to this installation recommendation.



1 Hydronic II
2 Water pump
3 Exhaust pipe with exhaust silencer
4 Combustion air tube
5 Fuse holder
6 Relay, stationary part R+ and control box SVM
7 Button
8 Metering pump
9 Fuel tank extractor

Installation location

The Hydronic II is fitted in normal position in the right-hand corner of the engine compartment, to the outside of the right front member.
The exhaust connection faces downwards and the control box upwards.

Parts needed for installation:

(1) Vehicle-specific installation kit
(2) D 5 S / B 5 S
(3) EasyStart R+ control unit

Please note!

Please deliver the vehicle with the tank 1/4 full.

Eberspächer Climate Control Systems GmbH & Co. KG
Eberspächerstr. 24
D - 73730 Esslingen

Service Hotline
03976 - 2350235
Facsimile
01805 - 26 26 24

www.eberspaecher.com

Contents

		Page
1	Introduction	4
2	Electrics	6
3	Installation - Heater	16
4	Exhaust system	20
5	Water circuit	22
6	Fuel supply	32
7	After installation	36
8	Parts overview	39

22 9000 90 00 17 08.2013

1 Introduction

Important!
Safety instructions for installation and repair!

Improper installation or repair of Eberspächer heaters can cause a fire or result in poisonous exhaust fumes entering the vehicle interior.
This can pose a serious risk to life and limb.

The heater may only be installed according to the specifications in the technical documents and repaired using original spare parts by authorised and trained persons. Installation and repairs by unauthorised and untrained persons, repairs using non-original spare parts and without the technical documents required for installation and repair are dangerous and therefore are not permitted.

Please note!

Installation according to this installation recommendation may only be carried out in conjunction with the respective unit type-related technical description, installation instructions, operating instructions and maintenance instructions.
This document must be carefully read through before / during installation and followed throughout.
Particular attention is to be paid to the safety instructions and the general information.
The relevant rules of sound engineering practice and any information provided by the vehicle manufacturer are to be heeded during the installation.
Eberspächer does not accept any liability for defects and damage due to installation by unauthorised and untrained persons.

Accident prevention

General accident prevention regulations / health and safety regulations and the corresponding workshop, company and operating safety instructions are to be observed.

Installation recommendation validity

The installation recommendation is valid for the vehicle with the engine and gearbox options listed in the following.

Engine and gearbox options		
Cubic capacity	kW / HP	Gearbox
1.4 l Turbo	103 / 140	6S
1.7 l CDTI	96 / 130	6S / 6AT

6S = 6-gear manual gearbox
6AT = 6-speed automatic gearbox

Please note!

The installation recommendation is not valid for right-hand drive vehicles.

Vehicle types, engine types and feature options not listed in this installation recommendation have not been tested. Installation according to this installation recommendation can still be possible.

1 Introduction

Parts required for installation

Quantity/Designation	Order No.
(1) Vehicle-specific installation kit:	
1 Vehicle-specific installation kit *	
GM No.	13445539
(2) Heater:	
1 Hydronic II B 5 S	
GM No.	13438564
1 Hydronic II D 5 S	
GM No.	13438563

Special tools required

- Torque wrench (5....50 Nm)
- Anti-corrosion agent
- Pliers for spring band clamps
- Tool for blind rivet nuts
- Ejector tool for plug-in contacts
- Crimping tool
- Step drill

Preparation on the vehicle

- Disconnect the battery
- Dismantle the left and right centre tunnel trim
- Remove upper and lower glove compartment
- Loosen right footwell trim
- Dismantle the cover of the diagnostic plug
- Remove cover on fuse box in engine compartment
- Detach the charge air hose at the throttle valve (1.4 l only)
- Remove air filter box
- Remove middle and rear silencer
- Loosen cardan shaft (only in four-wheel version)
- Remove fuel tank according to the manufacturer's instructions
- Remove front wheels
- Remove right-hand wheelhouse panel
- Remove front bumper and lower panelling
- Disconnect hose from the headlamp cleaning system
- Disconnect fog lamps, park assist and temperature sensor
- Depressurise the cooling system
- Drain coolant into a clean container

Please note!

Comply with the manufacturers' guidelines/instructions during dismantling.

Tightening torques

If no tightening torques are specified, tighten the screw connections (hexagon screw and hexagon nut) according to the following table.

Screwed connections	Tightening torques
M6	10 Nm
M8	20 Nm
M10	45 Nm

Other tightening torques:

- Fixing screws on the heater 15 Nm
- M6 stud bolt 5 Nm
- Cardan shaft on differential flange 36 Nm
- Cardan shaft support bearing 42 Nm
- Exhaust system 17 Nm
- Silencer on holder 9 Nm
- Tank strap on body 22 Nm

2 Electrics

Position of the components
(see photo 1)

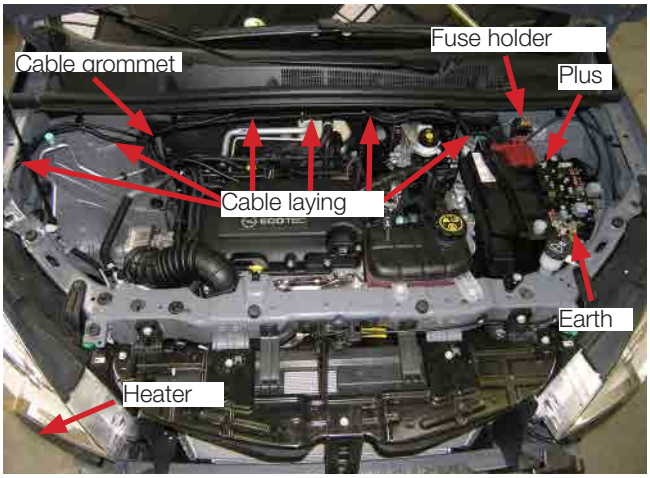


Photo 1

Cable laying (cable loom 1)
(see photos 2 to 9 and diagram 1)

① Water pump cable
② Connection, cable loom 2
③ Metering pump cable with connector
④ Connection, heater
⑤ Earth cable
⑥ Positive cable
⑦ Fuses

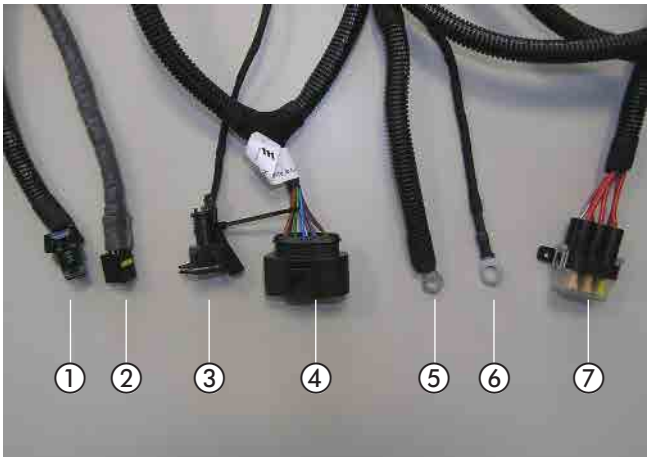


Photo 2

Connections, cable loom 1

Drill a 20 mm Ø hole on the right side of the engine partition as shown.

Cut out the insulation matting in the interior around the drilled hole.

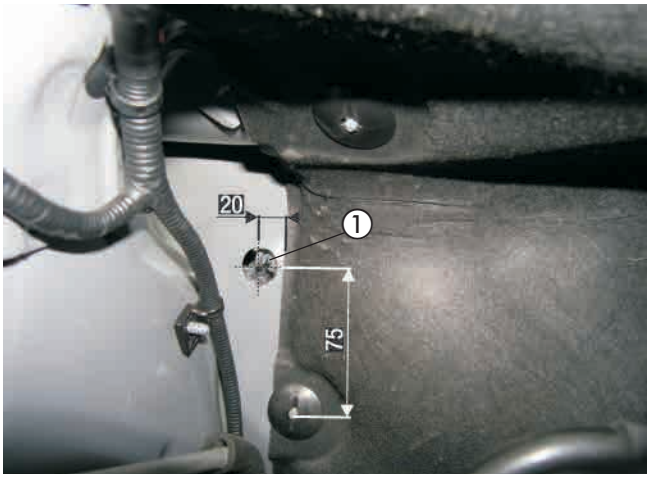


Photo 3

① Drill a 20 mm Ø hole for the cable leadthrough

Please note!

Deburr all finished holes and treat with anti-corrosion agent.

2 Electrics

Lay the connection to cable loom 2 through the cable penetration made in the engine partition and into the interior of the vehicle.
Insert the cable grommet in the hole drilled in the engine partition.

Route the 10-pin connector of cable loom 1 along the vehicle's cable loom on the right inner wing to the installation position of the heater and secure with cable ties.

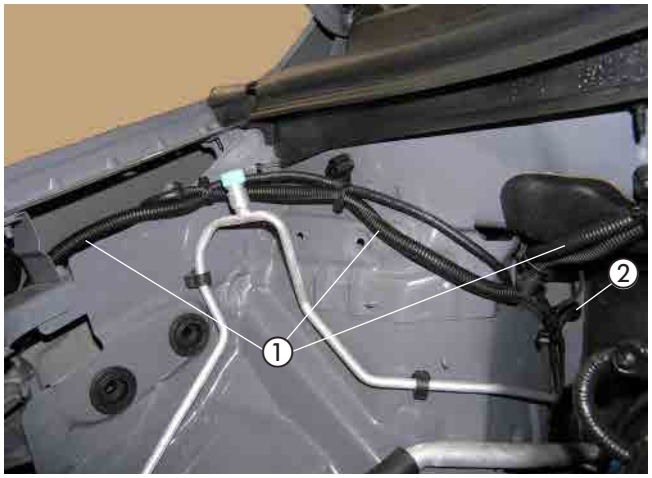


Photo 4

① Cable laying
② Insert cable grommet in the engine partition

Use body sealing compound to seal the cable grommet inserted in the engine partition as shown.

Photo 5

① Use body sealing compound to seal the cable grommet

Drill the existing hole on the left of the engine partition to 8.5 mm Ø.
Insert an M5 blind rivet nut into the drilled hole.

Photo 6

① Drill the existing holes open to 8.5 mm Ø and insert an M5 blind rivet nut

Please note!

Deburr all finished holes and treat with anti-corrosion agent.

2 Electrics

Fasten the fuse block to the fuse holder using two M4x10 fillister head screws as shown.

Fasten the fuse holder with an M5x13 screw to the M5 blind rivet nut and align as shown.
Fasten the diagnostic plug-in connector to the fuse block with a cable tape.

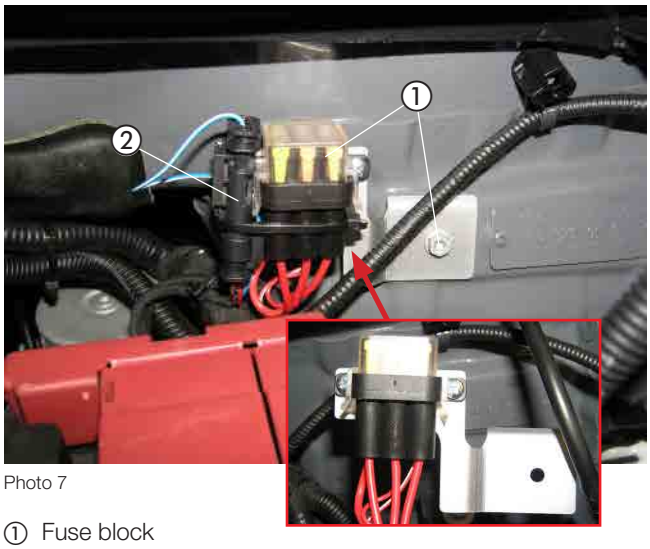


Photo 7

① Fuse block
② Diagnostic plug-in connector

Route the 4 mm² rt positive cable from cable loom 1 to the positive support point of the fuse box and connect with the A6 cable lug as shown.

Photo 8

① Connect positive cable 4 mm² rt

Route the 2.5 mm² br earth cable from cable loom 1 to the negative terminal of the battery and connect with the A6 cable lug as shown.

Photo 9

① Connect earth cable 2.5 mm² br

2 Electrics

Cable laying (cable loom 2)
(see photos 10 to 27 and diagram 1)

① Connection, stationary part R+
② Relay block for auxiliary heater relay
③ SVM control box
④ Connection, cable loom 1
⑤ Temperature sensor R+
⑥ Button R+
⑦ Connection, CAN bus (DLC connector)

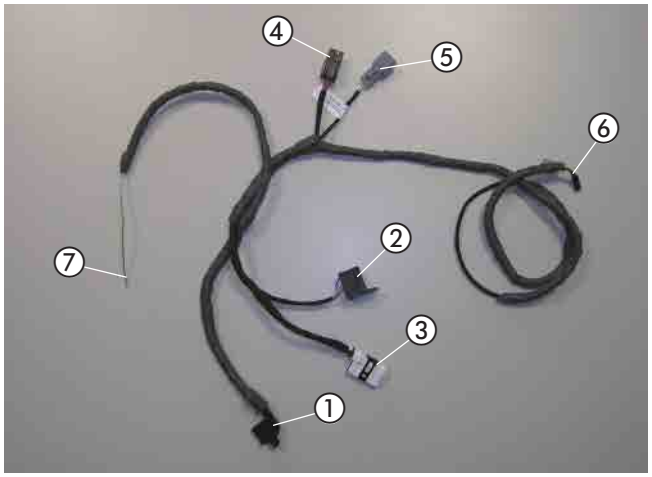


Photo 10

Connections, cable loom 2

Use two M4 nuts to fasten the EasyStart R+ receiver to the holder as shown.
From cable loom 2, connect the connector for the EasyStart R+ receiver and the antenna cable to the receiver of EasyStart R+.

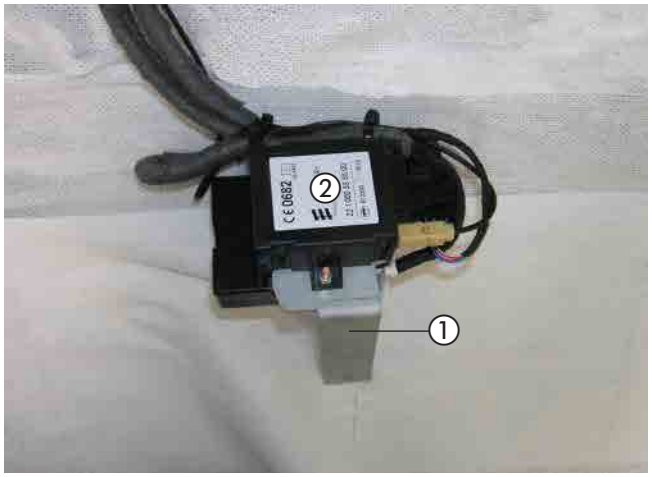


Photo 11

① Holder for SVM module, auxiliary heater relay and R+ receiver
② Mount R+ receiver

Use two M4 nuts to fasten the SVM module to the back of the holder as shown.

Fasten the relay block of the auxiliary heater relay to the holder using an M5x13 screw as shown.
Insert the relay in the relay block.
Connect the connector of cable loom 2 for the SVM control box.

Secure the cable loom with cable ties.

Please note!

Do not use the auxiliary heater relay in vehicles with electric auxiliary heater (C 32).
The installation site for the electric auxiliary heater (C 32) is described in photo 14.

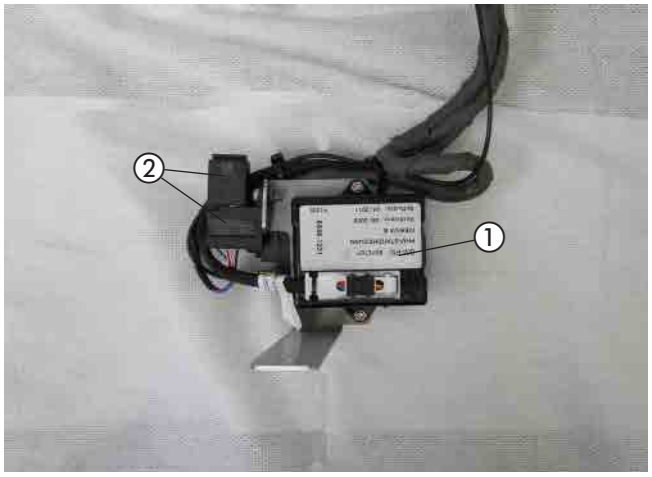


Photo 12

① Mount SVM module
② Mount relay block and auxiliary heater relay

2 Electrics

Cut out the insulation matting on the passenger's side around the centre console as shown.

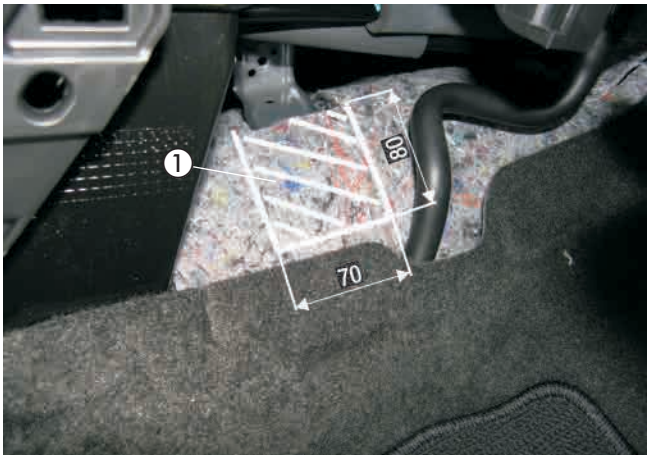


Photo 13

① Cut insulation matting

The electric auxiliary heater (C 32) is fitted in the air duct behind the plastic cover.

Insert the holder with the premounted control boxes in the centre console from the right as shown.

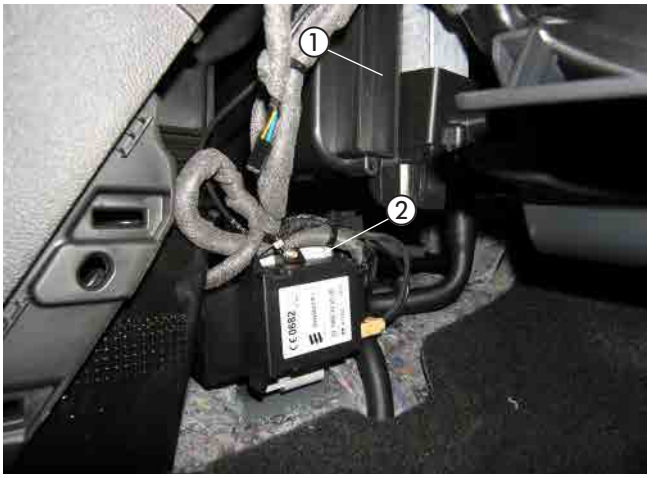


Photo 14

① Installation site of the electric auxiliary heater (C 32)
② Premounted control boxes

Insert an M6x18 torx screw into the holder from below and mount the control box holder with an M6 nut as shown.

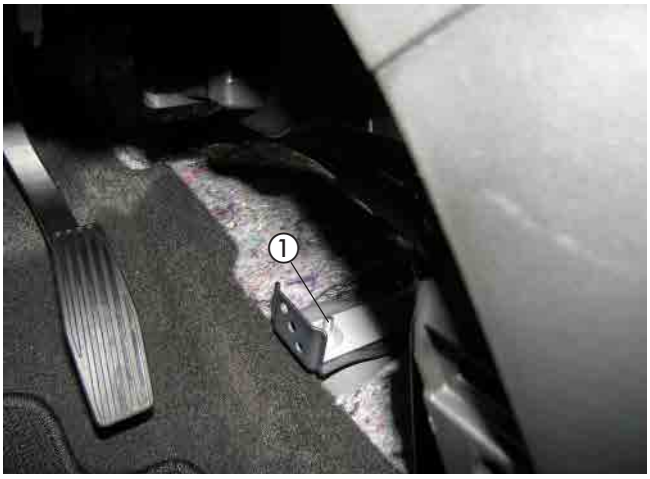


Photo 15

① Fasten control box holder

2 Electrics

Route the 0.5 mm² gn / ws cable to the DLC connector along the air duct on the driver's side.
Use cable ties to secure the 0.5 mm² gn/ws cable to the air duct.

Photo 16

① Air duct
② Cable ties

Disconnect the 0.5 mm² gn cable at the 16-pin DLC connector, pin 1, and use a red butt-type connector to tie in the cable 0.5 mm² gn / ws as shown in the photo.

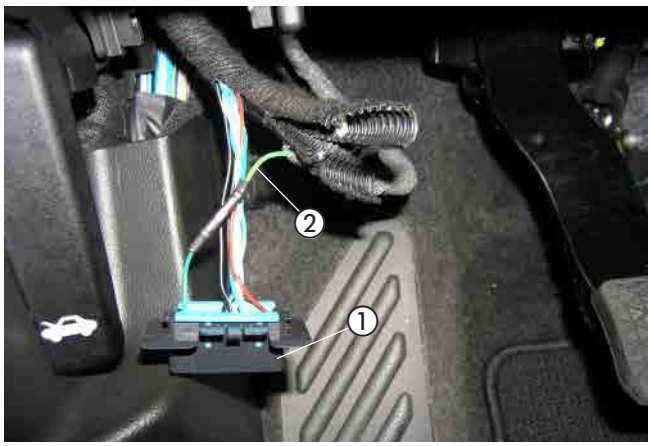


Photo 17

① 16-pin black DLC connector
② Cable 0.5 mm² gn / ws integrated

Please note!

The cable colours may vary!

Mount the temperature sensor in the passenger footwell to the A-pillar panelling using an M2.9x25 screw as shown.

Slot the 1 mm² ws cable in pin 1 of the grey 2-pin mating connector of the temperature sensor and the 1 mm² br/ws cable in pin 2, then connect with the grey 2-pin connector of cable loom 2.

Photo 18

① Mount temperature sensor

Please note!

When laying the cable looms, ensure they are at an adequate distance from hot vehicle and heater parts.
Use cable ties to fix the cable looms in suitable places.

2 Electrics

To mount the button and the rubber spacer plug in the upper shelf, drill a 16 mm Ø hole for the button and a 4.5 mm Ø hole for the rubber spacer plug.

Insert the button and the rubber space plug each in their respective holes.

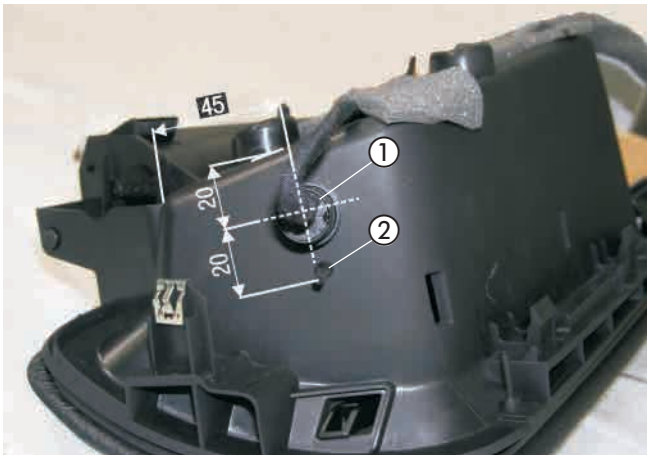


Photo 19

① Button
② Spacer rubber plugs

Use two insulating strips to fasten the button cable to underneath the shelf and wind another insulating strip around the cable.

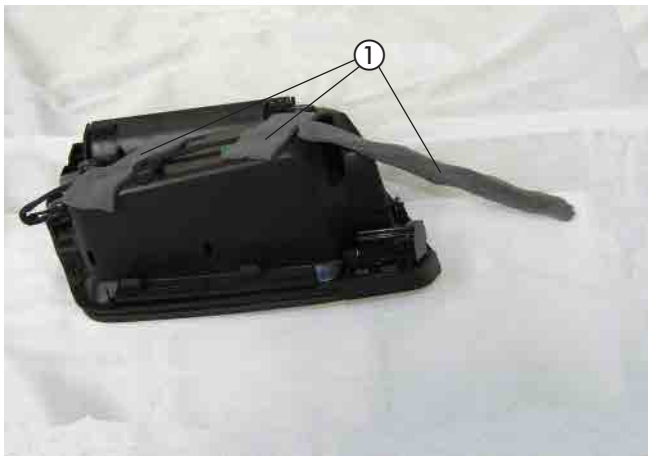


Photo 20

① Wind insulating strips around the button cable

Cut out the marked points at the installation position of the upper shelf as shown.

Photo 21

① Cut out marked points at installation position of upper shelf

2 Electrics

The photo shows the button and the rubber spacer plug from inside the upper shelf.

Photo 22

① Button and rubber spacer plug, mounted

Take antenna cable of the EasyStart R+ round to the right and lay it in the rubber door seal on the passenger side.

Please note!

Avoid contact with metal parts at the uninsulated end of the antenna cable.
Use cable ties to fix any excessive length of antenna cable underneath the instrument panel.

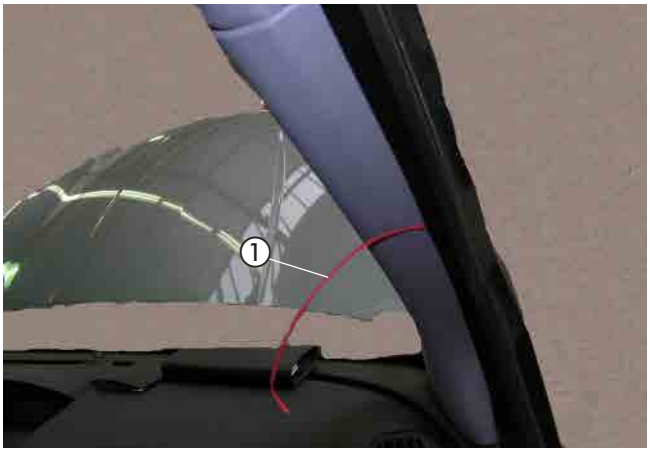


Photo 23

① Lay the antenna cable of the EasyStart R+ in the rubber door seal on the passenger side

Lay cable loom 1 above the air duct on the passenger side to the centre console.

Fasten the antenna cable, the button cable and the temperature sensor cable to cable loom 1 using cable ties.

Photo 24

① Route cable loom 1

2 Electrics

Connect cable loom 1 with cable loom 2 and wind plastic strips around them as shown.

Photo 25

① Connect cable loom 1 with cable loom 2 and wind plastic strips round

Install the upper shelf again and connect the button cable with the connector plug of cable loom 2.

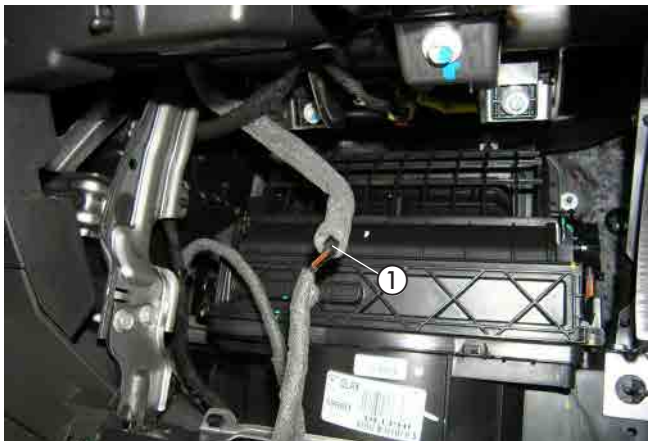


Photo 26

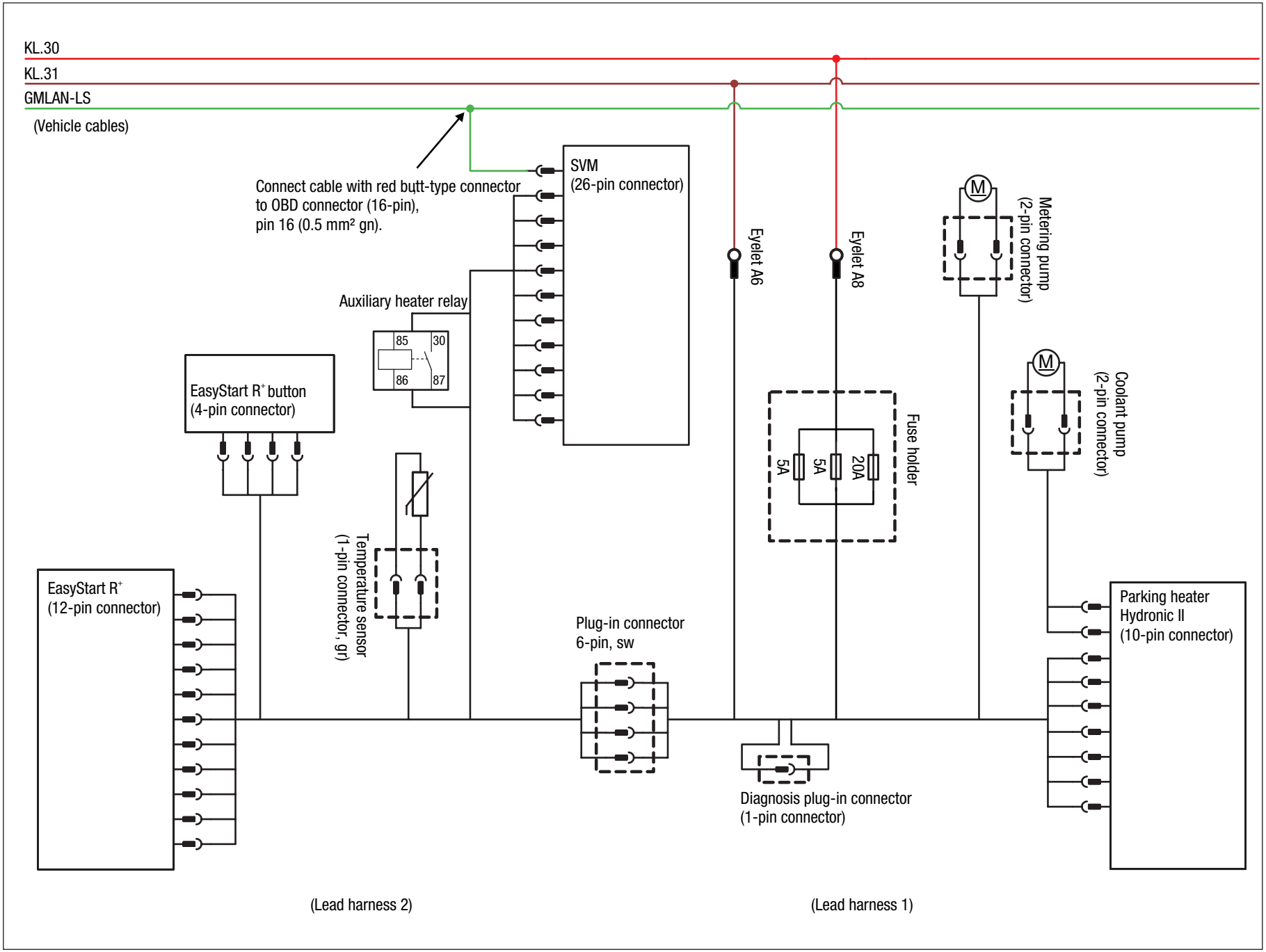
① Connect button cable with connector plug of cable loom 2

Fasten the connected cable loom to the vehicle's cable loom using a cable tie as shown.

Photo 27

① Fasten cable loom

Diagram 1


KL.30
KL.31
GMLAN-LS
(Vehicle cables)
Connect cable with red butt-type connector to OBD connector (16-pin), pin 16 (0.5 mm² gn).
SVM (26-pin connector)
Auxiliary heater relay
85
30
86
87
EasyStart R+ button (4-pin connector)
Eyelet A6
Eyelet A8
Metering pump (2-pin connector)
M
Coolant pump (2-pin connector)
M
Fuse holder
5A
5A
20A
Temperature sensor (1-pin connector, gr)
EasyStart R+ (12-pin connector)
Plug-in connector 6-pin, sw
Parking heater Hydronic II (10-pin connector)
Diagnosis plug-in connector (1-pin connector)
(Lead harness 2)
(Lead harness 1)

3 Installation - Heater

Premount heater and affix duplicate nameplate
(see photos 28 to 33)

Insert the four rubber buffers and the two spacer sleeves (note installation direction) in the unit bracket as shown.

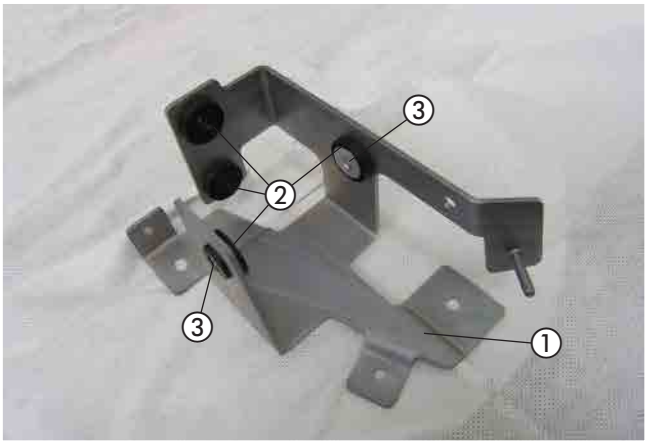


Photo 28

① Unit holder
② Insert four rubber buffers
③ Insert two spacer sleeves

Remove the duplicate nameplate from the heater.

Insert the heater in the unit bracket as shown and fasten with two M6x25-10.9 torx screws.

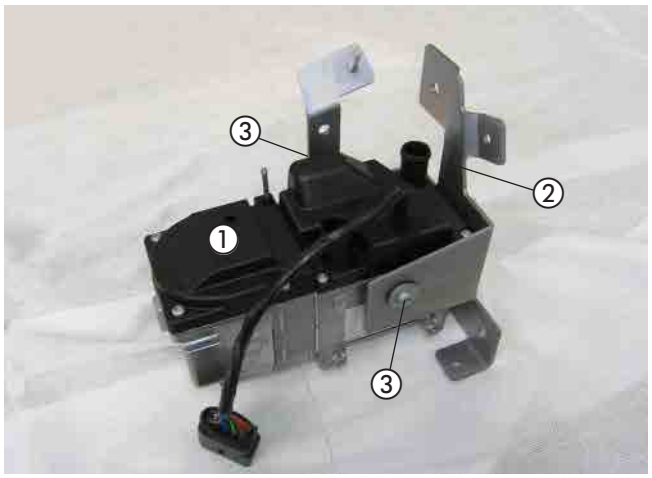


Photo 29

① Heater
② Unit holder
③ Two M6x25 torx screws

Insert the water pump in the rubber holder as shown and fasten to the unit bracket with an M6 nut and a B6 body washer.

Connect the short water hose to the heater's water outlet connection and to the intake connection of the water pump, using two clamps.

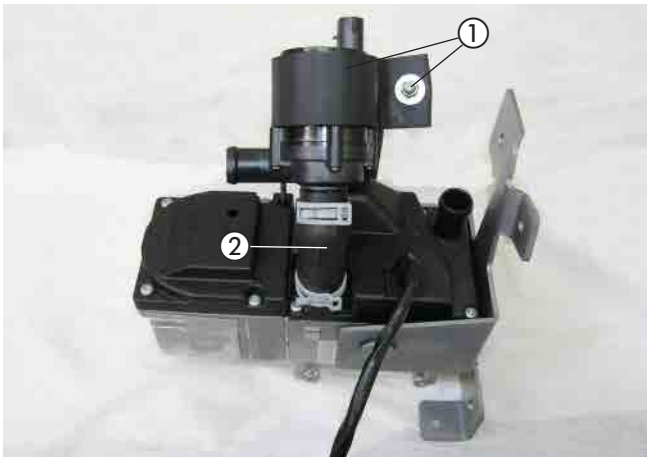


Photo 30

① Install water pump
② Connect water house

3 Installation - Heater

Connect the combustion air pipe with the clipped side to the heater using a 16-25 mm Ø hose clip and fasten to the heater using a 28 mm Ø pipe clip with an M6x16-8.8 torx screw as shown.

Push the end sleeve onto the inlet side of the combustion air pipe.

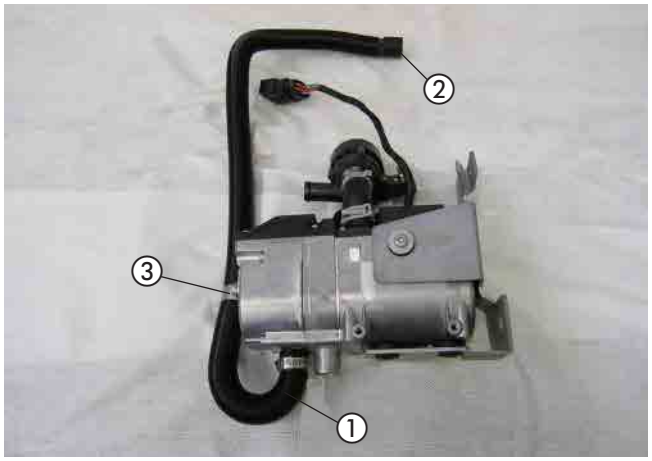


Photo 31

① Connect combustion air pipe
② Mount end sleeve
③ Mount 28 mm Ø clamp

Push the 105° fuel hose elbow onto the 4x1.25 mm Ø fuel pipe and fasten with a 10.5 mm Ø clamp.

Push the 105° fuel hose elbow onto the heater fuel connection and fasten with another 10.5 mm Ø clamp.

Secure the 4x1.25 mm Ø fuel pipe to the unit bracket using cable tape and a cable tape clip as shown.

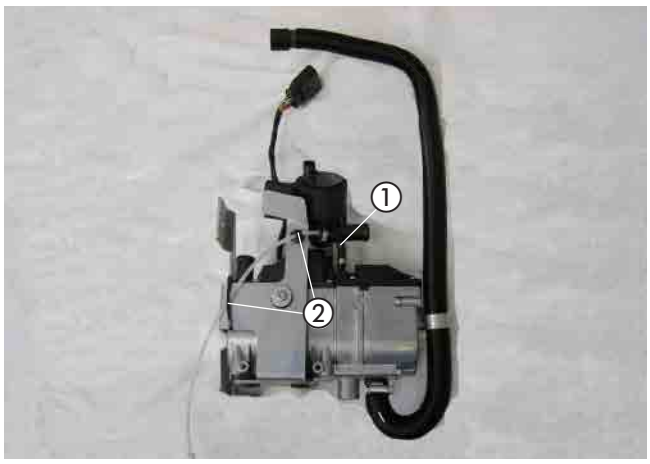


Photo 32

① 105° fuel hose elbow, mounted
② Cable tape and cable tape clip

Adhere the duplicate nameplate below the vehicle's nameplate on the B-pillar on the driver's side as shown.

Photo 33

① Fit duplicate nameplate

3 Installation - Heater

Prepare the installation position
(see photos 34 and 35)

Detach the cable tape clip from the front of the right chassis beam.

Drill open the existing hex punched hole on the outside of the right-hand side member to 9 mm Ø and insert an M6 blind rivet nut.

Introduce the insert disk from below into the right chassis beam using a magnetic holder and fit in the existing hole as shown.

Please note!

Deburr all finished holes and treat with anti-corrosion agent.

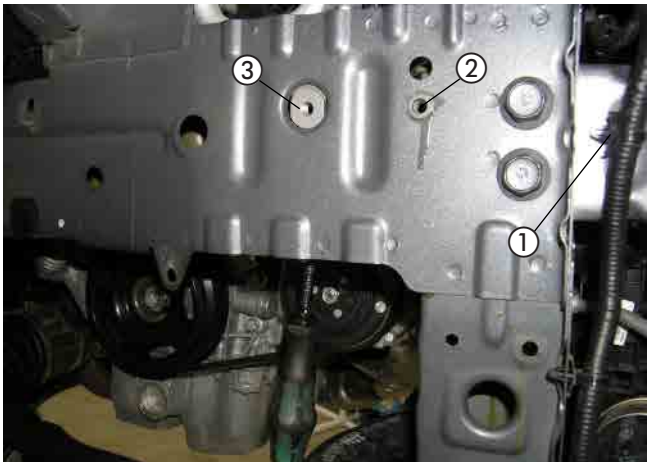


Photo 34

① Detach cable tape clip
② Insert M6 blind rivet nut
③ Fit insert disk

Slot two cable tape clips in the holder for fastening the main cable harness connector as shown.

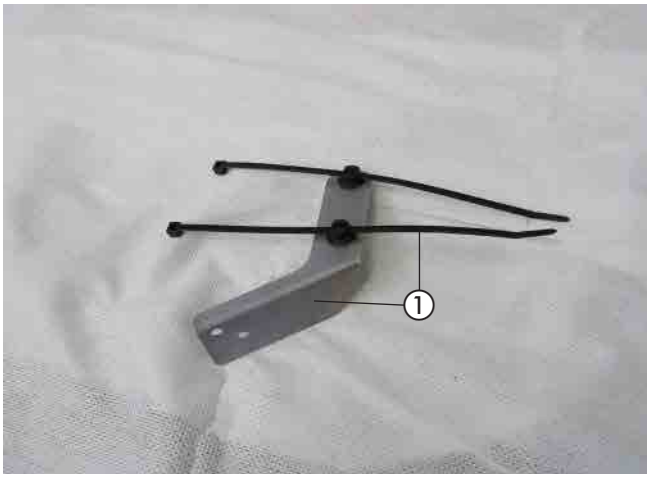


Photo 35

① Prepare holder with two cable tape clips

Mount the heater and route the combustion air pipe
(see photos 36 to 39)

Using an M8x30 screw, mount the prepared heater with the unit bracket to the inserted holding plate with an M6x23 screw at the M6 blind rivet nut.

Introduce another insert disk through the opening on the front of the right chassis beam and screw tight to the lower fastening point using an M8x30 screw.

Photo 36

① Screw M8x30 and screw M6x23
② Fit insert disk and fasten with the M8x30 screw

3 Installation - Heater

Lay the combustion air pipe in the protected area of the right-hand wheel arch liner.

Use cable ties to fix the combustion air pipe in suitable places.

Photo 37

① Lay combustion air pipe

Please note!

Lay the combustion air pipe so that only clean, dry combustion air is drawn in through the heater.

Fasten the holder for fastening the main cable harness connector to the existing hole of the cable tape clip using an M5x13 screw and an M5 collar lock nut.

Photo 38

① Fasten holder with an M5x13 screw

Connect the 10-pin connector of the main cable harness with the 10-pin tab connector housing of the heater and fasten to the holder with the two cable ties.

Slot the cable tape clip in the existing hole of the holder.

Connect the 2-pin connector to the water pump as shown.

Photo 39

① Both connector housings fastened with the cable ties
② Slot cable tape clip into the holder
③ Connect 2-pin plug to the water pump

4 Exhaust system

Premount exhaust silencer
(see photos 40 and 41)

Mount the bracket for the exhaust silencer to the exhaust silencer using an M6x18 outer torx screw.

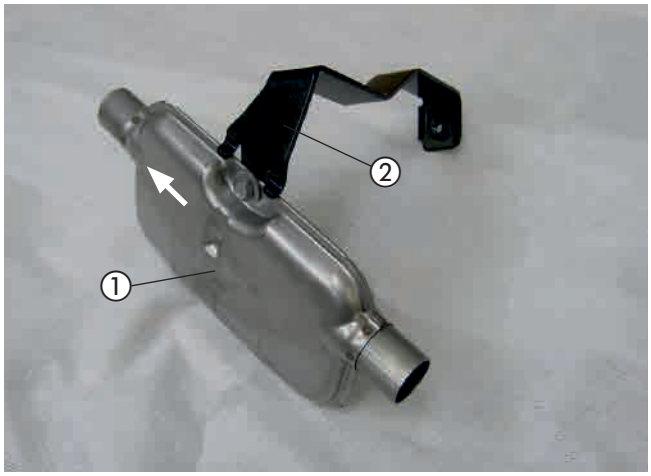


Photo 40

① Exhaust silencer
② Exhaust silencer holder

Cut the exhaust pipe to a length of 125 mm.

Fasten the exhaust pipe with a pipe clamp to the exhaust pipe elbow.
Use a pipe clamp to connect the exhaust pipe elbow to the exhaust silencer's inlet connection and align as shown.

Cut the exhaust pipe end to a length of 105 mm and shape as shown.
Use a pipe clamp to connect the exhaust end pipe to the outlet connection of the exhaust silencer.

The arrow on the exhaust silencer marks the direction of flow and points to the left.

Photo 41

① Exhaust pipe with exhaust pipe elbow
② Exhaust pipe end

Mount the exhaust silencer
(see photo 42)

Mount the exhaust silencer bracket to the existing tab of the unit bracket using an M6x18 outer torx screw.

Use a pipe clamp to connect the exhaust pipe to the exhaust connection of the heater.

Please note!

When laying the exhaust pipes, ensure they are at a sufficient distance from adjacent body components.

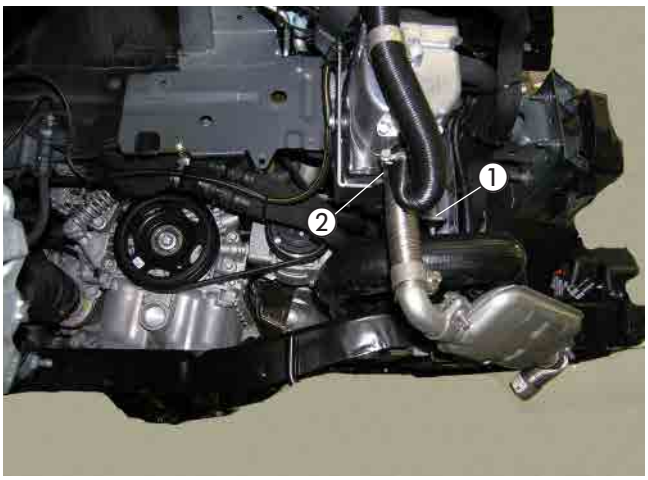


Photo 42

① Mount the exhaust silencer
② Connect the exhaust pipe

4 Exhaust system

Cut out sub-cowling
(see photo 43)

Cut out the sub-cowling using the dimensions shown.

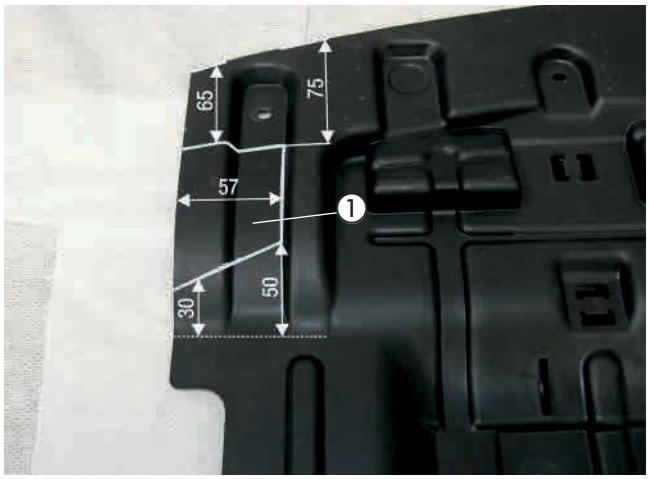


Photo 43

① Cut out sub-cowling

Cut out wheel arch liner
(see photo 44)

Cut out the right-hand wheel arch liner using the dimensions shown.

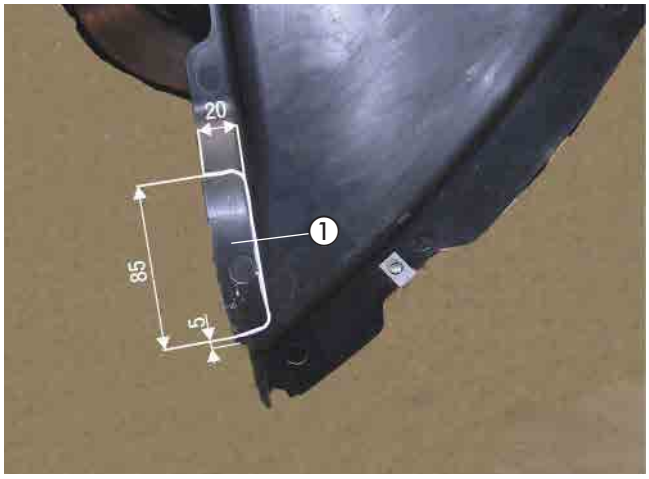
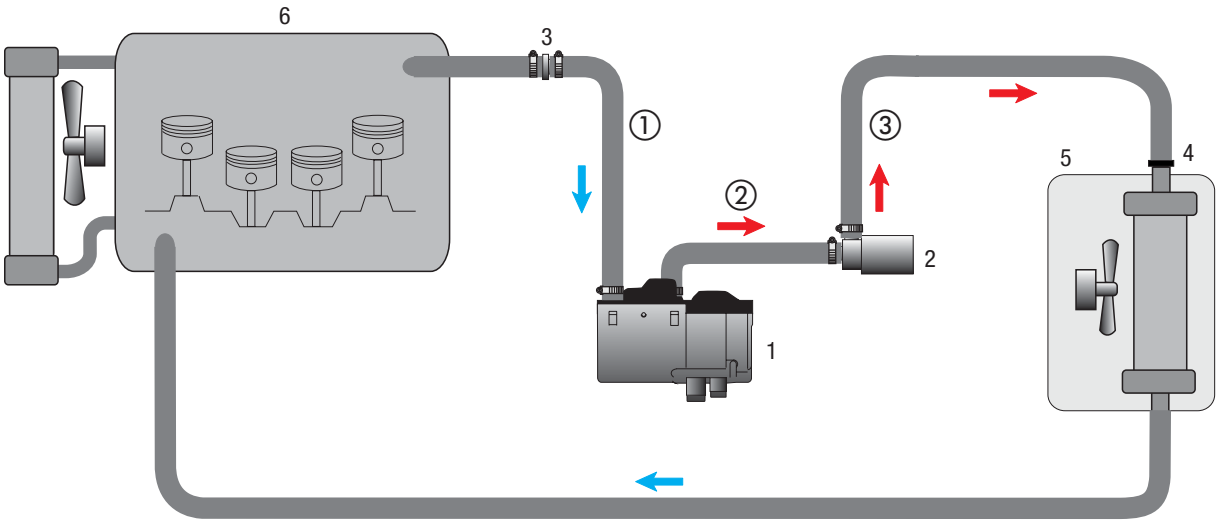


Photo 44

① Cut out right-hand wheel arch liner

5 Water circuit



1 - Heater
2 - Water pump
3 - Reducer 20/15 mm Ø (only 1.7 l CDTI)
4 - Quick-release coupling
5 - Vehicle heat exchanger
6 - Engine
- Spring band clip
① - Water hose 1
② - Water hose 2
③ - Water hose 3

Diagram 2

Remove the water flow hose
in vehicles with 1.4 l cubic capacity
(see photo 45)

Remove the vehicle's water flow hose (the lower left water hose at the heat exchanger connection) by loosening the spring band clamp at the engine connection and the quick-release coupling at the heat exchanger connection.

The dismantled water hose is no longer required.

Photo 45

① Remove water flow hose

5 Water circuit

Lay the water hoses and connect in vehicles with 1,4 l cubic capacity
(see photos 46 to 58 and diagram 2)

Make a 7 mm Ø hole on the outside of the right chassis beam using the dimensions shown.

Please note!

Deburr all finished holes and treat with anti-corrosion agent.

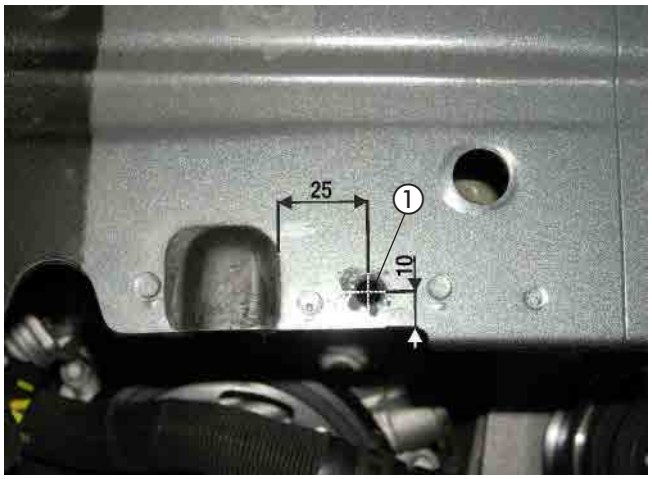


Photo 46

① Drill a 7 mm Ø hole

Route the water hose group behind the chassis beam to the heater.

Connect water hose 1 "engine - heater" to the water inlet connection of the heater using a spring band clamp.

Connect water hose 3 "water pump - heat exchanger" to the discharge end of the water pump using a spring band clamp.

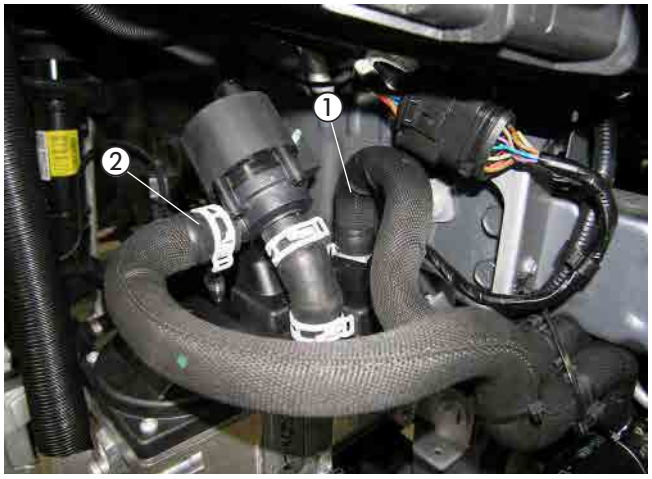


Photo 47

① Connect water hose 1
② Connect water hose 3

Fit the edge protection to the inside edge of the right chassis beam.

Use a cable tape to fasten the water hose group to the vehicle cable loom.

Photo 48

① Fit edge protection
② Cable tape on the vehicle cable loom

5 Water circuit

Position the rubber spacer profile of the front water hose at the charge air hose.
Position the rubber spacer profile of the rear water hose on the inside of the right chassis beam and secure to the air-con line using an 8-22 spacer.

Use cable ties to fix the water hoses to each other.

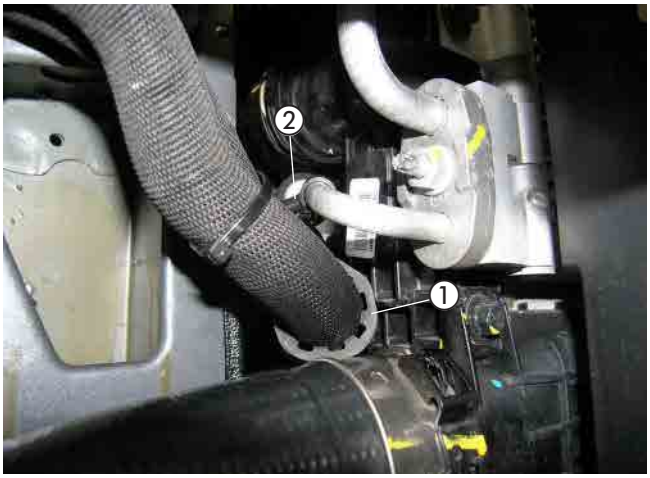


Photo 49

① Position rubber spacer at the charge air pipe
② Holder 8-22

Fasten the upper water hose of the water hose group to the using a rotatable hose holder to the power assisted steering line.

Photo 50

① Rotatable hose holder, mounted

Lay the water hose group below the right chassis beam to the cutting-off point.

Using a 25 mm Ø clamp, fasten the lower water hose of the water hose group to the 7 mm Ø drilled hole, with an M6x50 screw, a B6 body washer, an M6x30 spacer sleeve and an M6 nut.

Photo 51

① Mount rubberised 25 mm Ø clamp and spacer sleeve

5 Water circuit

Fasten the water hose group as shown to the fuel line using a triple hose holder and to the air-con line using a line holder.

Photo 52

① Fasten the water hose group to the fuel line with a hose holder
② Fasten the water hose group to the air-con line with a line holder

Loosen the holder from the air-con line, turn and refasten as shown.

Photo 53

① Refasten air-con line holder

Connect water hose 3 "water pump - heat exchanger" along the air-con line to the cutting-off point and connect to the heat exchanger connection using the quick-release coupling as shown.

Photo 54

① Connect water hose 3 "water pump - heat exchanger"

5 Water circuit

Secure water hose 3 "water pump - heat exchanger" to the air-con line using two hose holders as shown.

Photo 55

① Secure water hose 3 "water pump - heat exchanger" to the air-con line using two hose holders

Please note!

When installing the water hoses, ensure they are at a sufficient distance from moving vehicle parts.
Protect the water hoses against chafing and use cable ties to secure in suitable positions.

Lay water hose 1 "engine - heater" along the brake lines to the cut-off point at the engine connection and secure to the brake line with a hose holder.

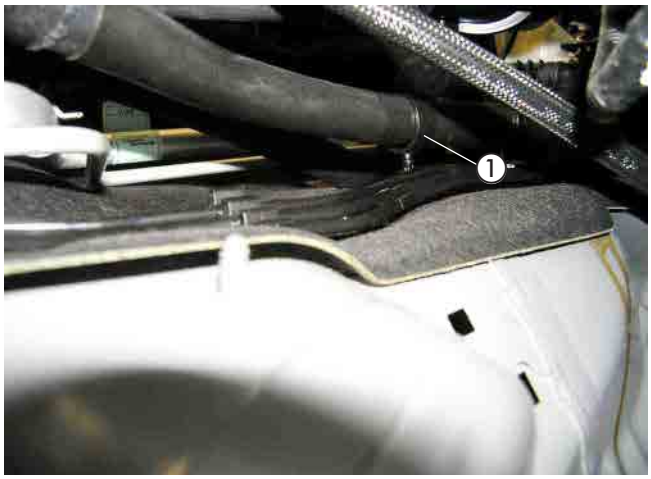


Photo 56

① Secure water hose 1 "engine - heater" to the brake with a hose holder

Fasten water hose 1 "engine - heater" to the vehicle's water hose using a rotatable hose holder and to the vehicle cable loom with a cable tape.

Photo 57

① Hose holder, rotatable
② Cable tape

5 Water circuit

Connect water hose 1 "engine - heater" to the engine connection using a spring band clamp.

Photo 58

① Connect water hose 1 "engine - heater at engine connection

Please note!

Secure all hose connections with spring band clamps. Protect the water hoses against chafing and use cable ties to secure in suitable positions.

Disconnect water flow hose in vehicles with 1.7 l cubic capacity
(see photo 59)

Remove the vehicle's water flow hose (the lower left water hose at the heat exchanger connection) by loosening the quick-release coupling at the heat exchanger connection.

Disconnect the heat-shrink hose of the water flow hose about 70 mm from the heat exchanger connection.

Cut the disconnected water flow hose with the dimensions shown in the photo.

The piece of water hose that has been cut off is no longer required.

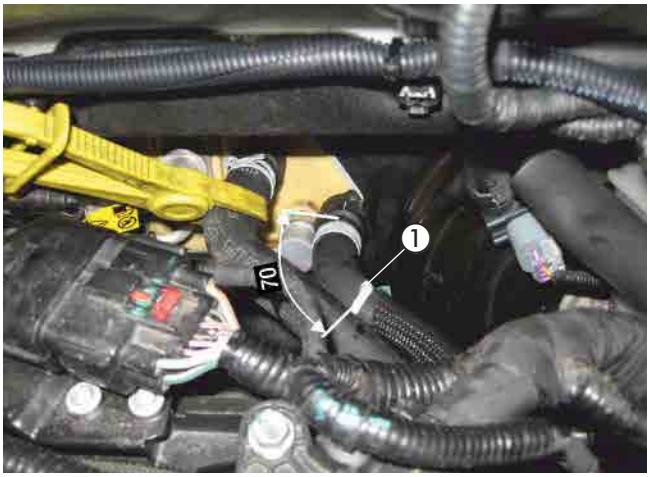


Photo 59

① Cutting point in the water flow hose

Lay and connect water hoses in vehicles with 1.7 l cubic capacity
(see photos 60 to 72 and diagram 2)

Make a 7 mm Ø hole on the outside of the right chassis beam using the dimensions shown.

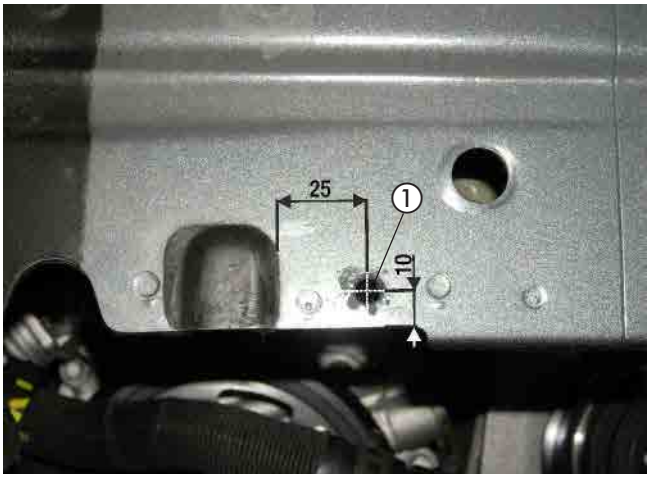


Photo 60

① Drill a 7 mm Ø hole

Please note!

Deburr all finished holes and treat with anti-corrosion agent.

5 Water circuit

Route the water hose group behind the chassis beam to the heater.

Connect water hose 1 "engine - heater" to the water inlet connection of the heater using a spring band clamp.

Connect water hose 3 "water pump - heat exchanger" to the discharge end of the water pump using a spring band clamp.

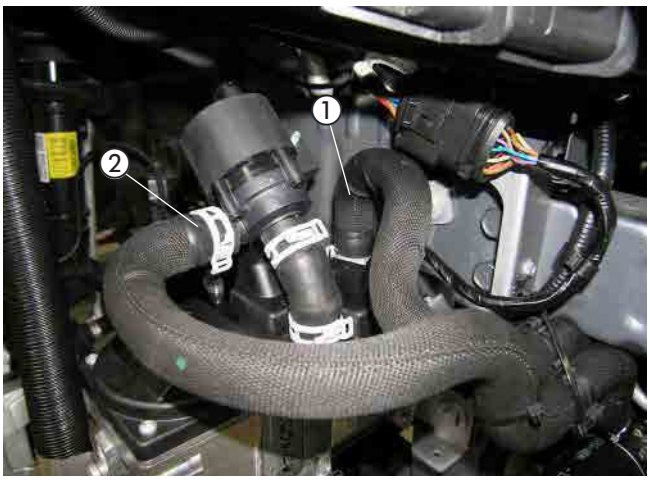


Photo 61

① Connect water hose 1
② Connect water hose 3

Fit the edge protection to the inside edge of the right chassis beam.

Use a cable tape to fasten the water hose group to the vehicle cable loom.

Photo 62

① Fit edge protection
② Cable tape on the vehicle cable loom

Position the rubber spacers of the water hose group at the front crossbeam as shown.

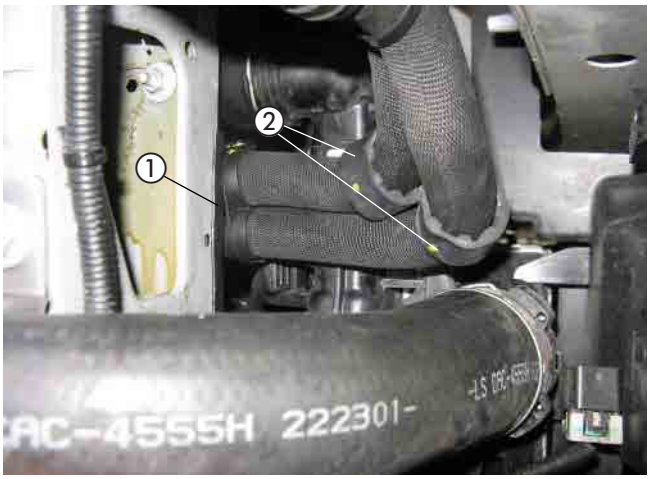


Photo 63

① Edge protection
② Position rubber spacers

5 Water circuit

Push a 50 mm Ø rubberised clip onto the water hose group and fasten to the existing hole on the inside of the chassis beam using an M6x23 screw and a M6 collar nut with washer.

Photo 64

① Rubberised clip Ø 50 mm

The fastening point of the 50 mm Ø rubberised clip can be seen through the opening in the right chassis beam.

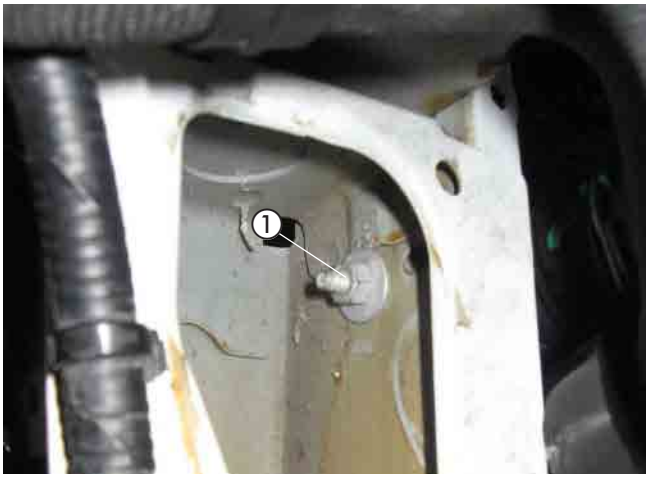


Photo 65

① Fastening point of the 50 mm Ø rubberised clip

Lay the water hose group below the right chassis beam to the cutting-off point.

Using a 25 mm Ø rubberised clip, fasten the water hose group to the 7 mm Ø drilled hole, with an M6x50 screw, a B6 body washer, an M6x30 spacer sleeve and an M6 nut.

Photo 66

① Mount rubberised 25 mm Ø clamp and spacer sleeve

5 Water circuit

Mount the holder for the water hose group to the existing stud bolt of the particulate filter fastening using the existing M6 nut as shown.

Photo 67

① Mount holder for water hose group

Push a rubberised clip onto each of the water hoses in the water hose group and fasten to the holder with two M6 collar nuts.

Hold the water hoses together with a cable tape.

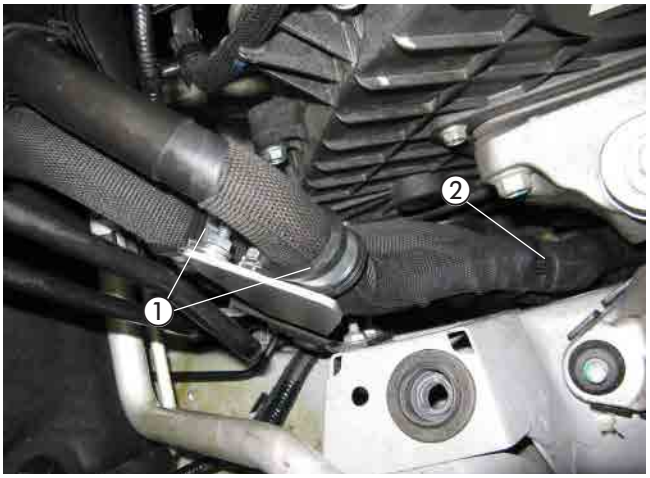


Photo 68

① Mount two 25 mm Ø clips to the holder
② Cable tape

Cut through the water hose 1 "engine - heater" of the water hose group at the marked point.

Cut off about 20 mm of the heat shrink hose.

Photo 69

① Cutting off point at water hose 1 "engine - heater"

5 Water circuit

Connect water hose 3 "water pump - heat exchanger" along the air-con line to the cutting-off point and connect to the heat exchanger connection using the quick-release coupling as shown.

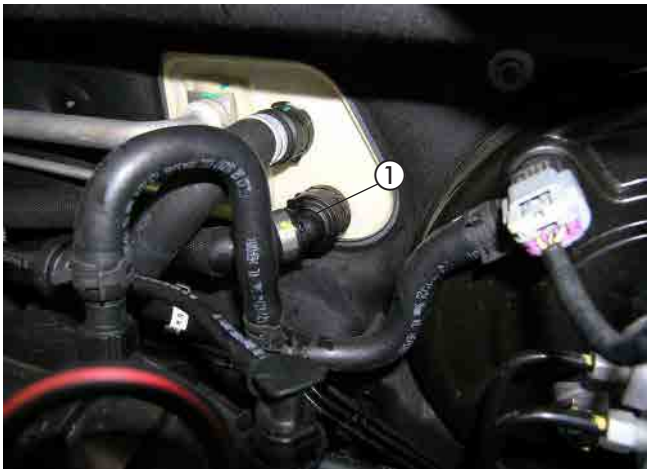


Photo 70

① Connect water hose 3 "water pump - heat exchanger"

Connect water hose 1 "engine - heater" with the 20/15 mm Ø reducer to the disconnected water flow hose piece from the engine using two spring band clamps.

Photo 71

① Connect water hose 1 "engine - heater" to the water hose piece from the engine connection

Use the cable tapes to hold water hoses 1 and 3 together and to secure them to the connection holders on the air-con line.

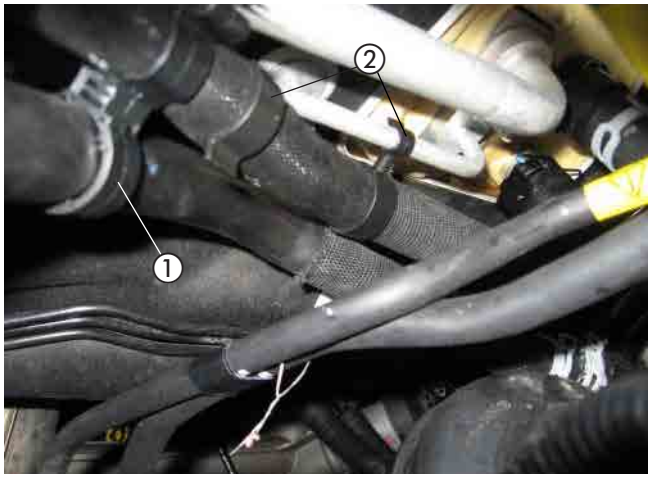


Photo 72

① Connection holder of the water hose group
② Connection holder

Please note!

Secure all hose connections with spring band clamps.
Protect the water hoses against chafing and use cable ties to secure in suitable positions.

6 Fuel supply

Install fuel tank extractor
(see photos 73 to 76 and diagram 3)

Prepare the riser pipe of the fuel tank extractor as shown in the diagram.

Remove the tank according to the manufacturer's instructions. At the same time, undo the plug-in connection and the fuel line at the tank connection.
Remove the tank fitting from the tank opening by undoing the locking ring.

Please note!

The tank fitting should not be removed for longer than 10 minutes because of expansion of the tank!

Detach the sticker from the upper part of the tank fitting and fasten it again at a suitable point on the upper part of the tank fitting.
Make an 8 mm Ø hole in the top part of the tank fitting with the dimensions shown in the photo.

Please note!

When drilling, ensure that no dirt gets into the tank or supply lines.

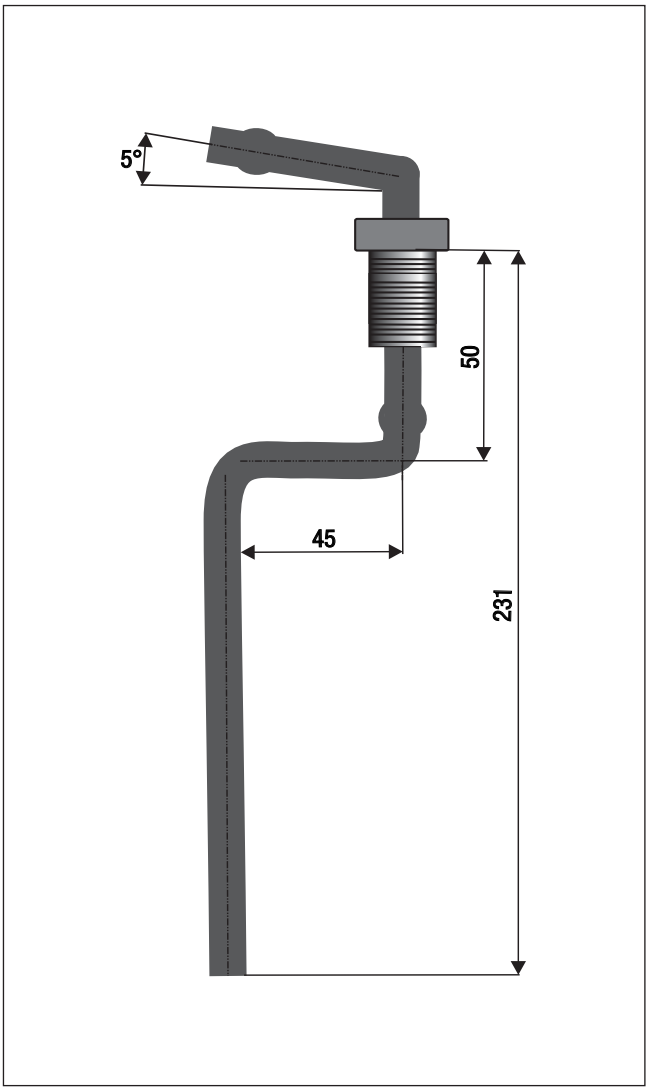


Diagram 3

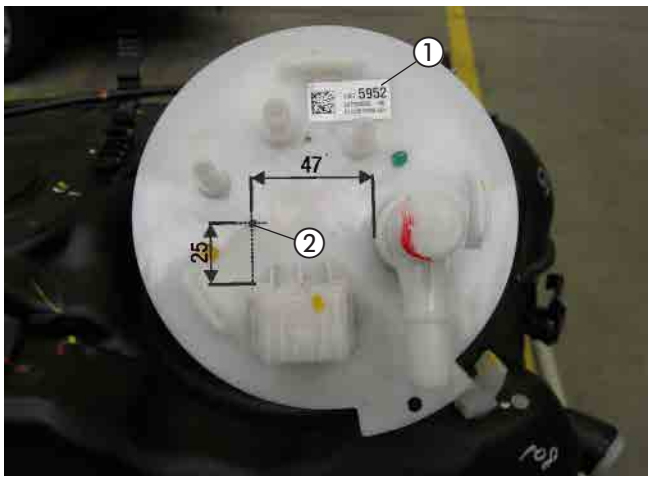


Photo 73

① Move sticker
② Drill an 8 mm Ø hole in the top part of the tank fitting

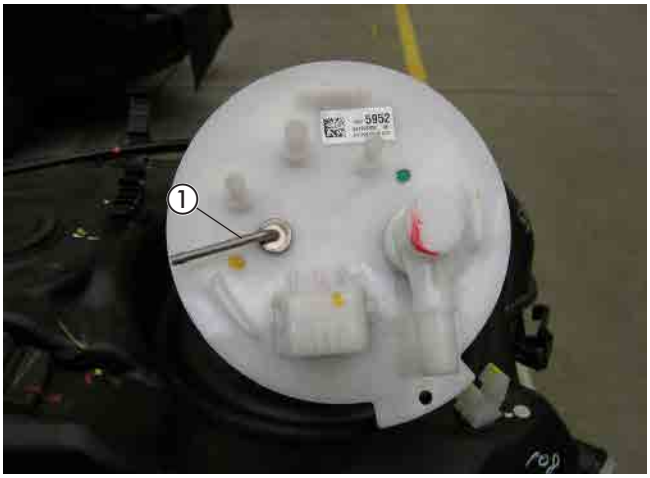


Photo 74

① Fuel tank extractor mounted

6 Fuel supply

Feed the fuel tank extractor through the hole made, align and screw tight with the nut M8 and body washer B8 from underneath.

Guide the tank extractor along the tank fitting as shown.

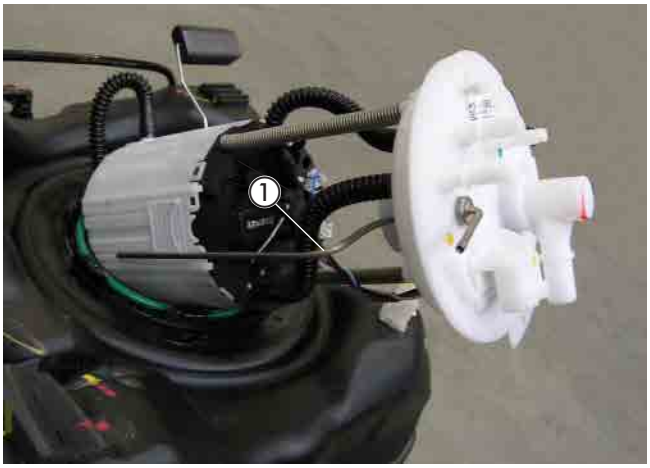


Photo 75

① Fasten the tank extractor with a B8 body washer and an M8 nut.

Insert the tank fitting in the tank again with a new seal and fasten with the clamping ring; ensure the seal fits properly.

At the intake connection of the fuel tank extractor, connect the 4 x 1 mm Ø fuel pipe with 105° fuel hose elbow and lay as shown.

Secure the connection points with 10.5 mm Ø clamps.

Install the tank again according to the manufacturer's instructions.

Photo 76

① Fuel pipe, Ø 4 x 1 mm, connected

Lay fuel pipe with metering pump cable
(see photos 77 to 79)

Secure the 4 x 1.25 mm Ø fuel pipe to the unit bracket with a cable tape clip and lay along the water hose group to the engine partition.

Use cable ties to secure the 4 x 1.25 mm Ø fuel pipe to the water hose group and to the unit bracket.

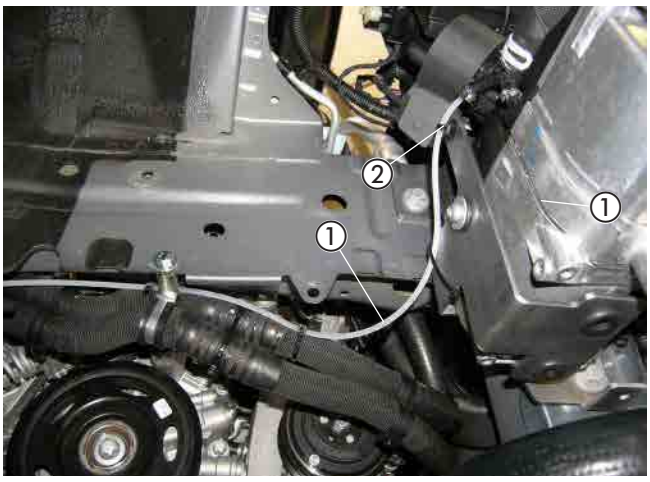


Photo 77

① Route 4 x 1.25 mm Ø fuel pipe
② Slot cable tape clip in unit bracket

6 Fuel supply

Lay the 4 x 1.25 mm Ø fuel pipe and the metering pump cable on to the right underbody side and fasten to the vehicle fuel pipe with cable ties.

Photo 78

① Fasten 4 x 1.25 mm Ø fuel pipe and metering pump cable laid to the vehicle fuel line

Lay the fuel pipe Ø 4 x 1.25 mm together with the metering pump cable above the vehicle's fuel line to the installation position of the metering pump.

Use cable ties to secure the fuel pipe Ø 4 x 1.25 mm and the metering pump cable to the vehicle's fuel line.

Please note!

Use a sharp knife to cut the fuel pipe to length.
Secure all hose connections with hose clips.
When laying fuel lines, always ensure they are at an adequate distance from hot vehicle and heater parts.

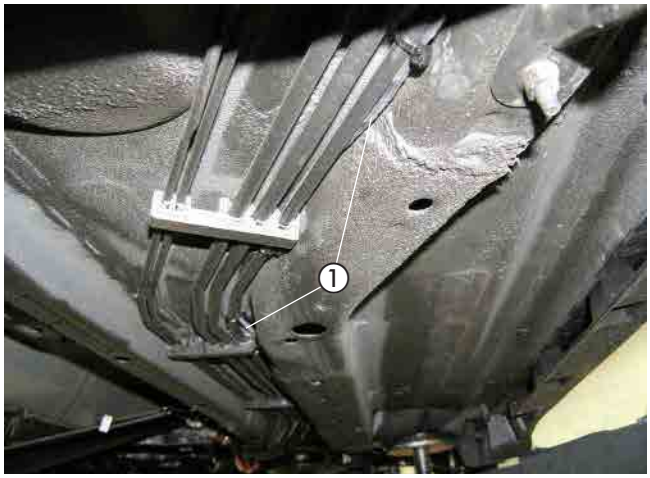


Photo 79

① Lay 4 x 1.25 mm Ø fuel pipe and metering pump cable along vehicle fuel line to metering pump

6 Fuel supply

Install and connect the metering pump
(see photos 80 to 82)

The installation position for the metering pump is on the right next to the tank.
Insert the metering pump in the rubber holder and screw the rubber holder to the holder stud bolt using an M6 nut and B6 body washer.
Ensure it is installed with at least 15° rising gradient on the discharge side.
The discharge end of the metering pump points towards the front.

Insert the holder for the metering pump in the opening on the right underbody side and screw tight with the two M6 torx screws.

Connect the 4 x 1.25 mm Ø fuel pipe with 3.5 x 3 mm Ø fuel hose to the discharge end of the metering pump using two 10.5 mm Ø clamps.

Remove the mating connector of the metering pump connection at the metering pump cable.
Slot the plug-in contacts of the metering pump cable into the mating connector regardless of polarity.
Connect the connector to the metering pump.

Use cable ties to tie back and fasten the surplus length of cable.

Cut the 4 x 1 mm Ø fuel pipe from the tank extractor to the metering pump to length and connect to the intake connection of the metering pump with the fuel hose elbow, using a 10.5 mm Ø clamp.

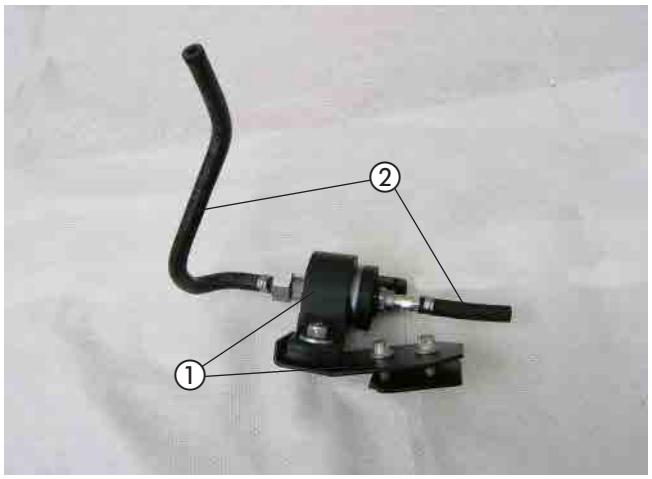


Photo 80

① Mount metering pump to holder
② Mount fuel hoses to metering pump

Photo 81

① Install and connect the metering pump

Secure the fuel hose elbow to the tank ventilation line using the rotatable line holder as shown.

Please note!

Use a sharp knife to cut the fuel pipe to length.
Secure all hose connections with hose clips.
When laying fuel lines, always ensure they are at an adequate distance from hot vehicle and heater parts.

Photo 82

① Line holder, rotatable

7 After installation

Adhere the "fuel tank" sticker
(see photo 83)

Stick the "refuel" information sticker on the inside of the fuel tank flap as shown in the photo.

Photo 83

① Adhere the "fuel tank" sticker

Complete the vehicle

- Comply with the manufacturers' guidelines/instructions when fitting the removed parts.
- Reconnect the battery.
- Check that the hoses, hose clips and pipe clamps as well as all electrical connections are fitted securely.
- Use cable ties to secure all loose cables, lines, etc.
- Restore all the vehicle's programmed settings (radio, window lift, etc.).
- Fill the cooling system, start the engine, vent the cooling system and check for leaks, top up any missing cooling liquid up to the marking (arrow).
- Please also note and follow the vehicle manufacturer's information on filling and venting the cooling system.
- Read and observe all official regulations and safety instructions in the Technical Description.
- Program the control unit and place the Operating Instructions, the Technical Description and the leaflet for the customer in the glove compartment.

Please note!

Fill the cooling system only with the coolant liquid specified by the vehicle manufacturer.

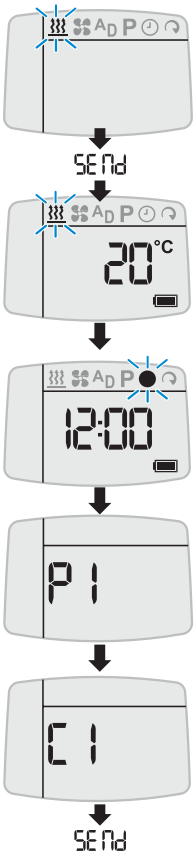
Starting up the heater

- Switch on the heater at the control.
  See Operating Instructions - Control.

Initial start-up

- **Configure system**
  The system must be configured depending on the application.

press until the menu bar appears in the display, then release the key.
The symbol and the SEnd text appear briefly.



Select symbol using or .
then briefly press **and** **simultaneously**.

Confirm menu **P1** with OK.

Select the submenu **C1** or **C2** using or and confirm with OK.

The submenu **C1** has been selected:
After the individual menu items have been set to of or on using or or selected using or and confirmed with OK, they are displayed step by step.

00	Add-on unit AD (see table of „permissible unit combinations“	of / on
01	Temperature unit	of for °C on for F
02	Language / weekdays	of for DE on for EN
03	Time display format	of for 24h on for AM / PM
04	– – –	of
05	Upgrade box mode	of / on
06	In water heater, use or to change vehicle engine capacity, e.g. 18 = 1800 ccm	10 – 40 or of (automatic calculation of the operating period is deactivated).
	In air heater	of
07	Automatic runtime calculation, change operating period with or	10 – 60

If the menu item C1 / 07 has been confirmed with OK the data is transferred. Then the time is displayed.

The system configuration is finished.

Notes on the menu items

04
- These menu item is not to be used for the current heaters and must be set to ”of“.

05
- This menu item only applies to heaters in the function as an independent heater and with JE diagnosis.

06
In air heaters:
- This menu item must be set to ”of“.

In water heaters:
- If the valve 25 2014 80 62 00 or 25 2014 80 72 00 is used in the water circuit, the engine capacity given can be reduced by 500 cm³.
- If a greater heat requirement exists the engine capacity information can be increased by 500 cm³.

Please note!
The values for the increase and reduction of the engine capacity information only apply to cooling water circuits whose vehicle blower heat exchanger is flowed through before the vehicle’s engine.

07
- If the vehicle is only used on short routes the maximum operating time must be reduced in agreement with the customer.

Permissible unit combinations

Unit 1 connected to diagnosis cable	**Unit 2** connected to switching output
Air heater with JE diagnosis (control units with second diagnosis cable)	**Water heater** Diagnosis not connected
Air heater with JE diagnosis (control units with second diagnosis cable)	e.g. **Parking air conditioning**

Diagnostics

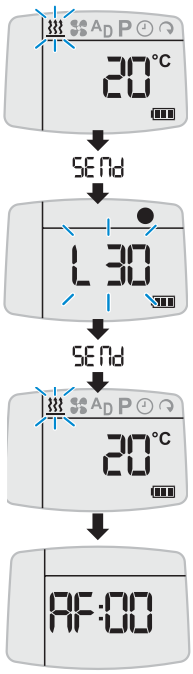
Perform heater diagnosis

Activate mobile unit

Confirm symbol with OK.

Heater is switched on.

Confirm operating time with OK.



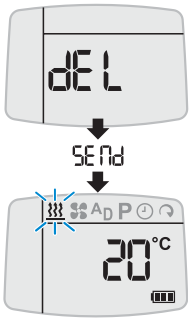
and : simultaneously press briefly.

The following actions are possible

- Call up error memory.
  Use or to call up the error memory F1 – F5.
- Call up error memory again.
  and : simultaneously press briefly.
- Delete error memory (dEL display) OK press.

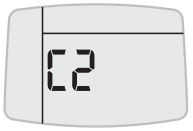
  Press OK again.

  The diagnosis is completed.



Display system configuration

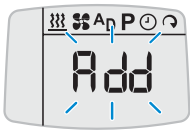
Select submenu **C2** as described on page 8.
After they have been conformed with OK, the individual menu items are displayed step by step.



00	Heater type	0 = unknown unit 1 = Air heater 2 = Water heater 3 = Add-on unit
01	Diagnosis	0 = – – – 1 = None 2 = Free running 3 = JE diagnosis
02	Ventilation function	of / on
03	Temperature sensor installed	of / on
04	Not used	– –
05	Not used	– –

Teach additional mobile unit

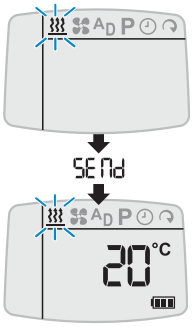
- Press the pushbutton installed in the vehicle until the pushbutton's LED begins to flash.
- Activate mobile unit.
- Select Add symbol using or and confirm with OK.
  The additional mobile unit has been taught.



Reset function

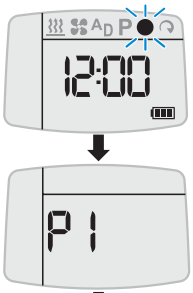
The reset function is used to reset the radio remote control to the factory settings.

press until the menu bar appears in the display, then release the key. The symbol and the SEnd text appear briefly.

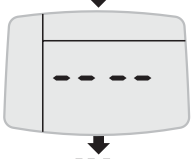


Select symbol using or. then briefly press **and** **simultaneously**.

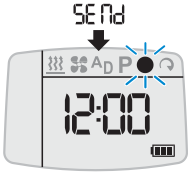
Menu **P1** is displayed.



Select reset function using and and confirm with OK.



The radio remote control is reset to the factory settings.



Please note!

All timer settings are lost.
Heating mode is terminated.

8 Parts overview

No.	Designation	Quantity	Order number
1	Vehicle-specific additional parts		13445539
	Metering pump top bracket	1	
	Metering pump bottom bracket	1	
	Hex screw M6 x 50 DIN931 ZN	1	
	Washer Ø 8.4x24x2 DIN9021 A2	1	
	Washer Ø 6.4x18 ISO7093 ZN	2	
	Collar nut M6	4	
	Fillister head screw M4x10 DIN7985	2	
	Blind rivet nut M6	1	
	Countersunk fillister head screw 2.9x25 DIN7983	1	
	Torx screw M6x25-10.9	2	
	Torx screw M6x16-8.8	1	
	105° fuel hose elbow	2	
	Hose, 3.5x3	1	
	Fuel hose	1	
	Butt-type connector, red	1	
	Edge protection	0.2m	
	Damping rubber	4	
	Spacer	2	
	Screw clamp 16-25	1	
	Pipe clip Ø 28 mm	1	
	Hose clamp, 26 -28 mm Ø	3	
	Pipe clip, rubberised, 25 mm Ø	3	
	End cap	1	
	Reducer 20/15 mm Ø	1	
	Holder, metering pump	1	
	Holder, water pump	1	
	Hose holder, rotatable, 22-24	3	
	Clamp 10.5 mm Ø	8	
	Exhaust pipe elbow with clamp	1	
	Cable tie 3.5x290 mm	60	
	Silencer	1	
	Exhaust pipe, double walled, with end sleeve 300 mm	1	
	Fuel hose	1	
	Radio remote control	1	
	Fuel line blue (4x1)	0.6m	
	Fuel line transparent (4x1.25)	3m	
	Tank connection	1	
	Main cable set	1	
	Extension cable	1	
	Relay 20A N/O contact mini	1	
	Button (43460)	1	
	Insulation	1	
	Holder, heater	1	
	Holder, fuse	1	
	Exhaust holder	1	
	SVM control box	1	
	Holder radio remote control	1	
	HOSE HEATER INLET	1	
	HOSE HEATER INLET AT COOLING FLOW	1	
	Seal, tank module	1	
	Spacer sleeve h=30mm Ø 15x6.5 aluminium	1	
	Holder, connection plug	1	
	Insert disk	2	

8 Parts overview

No.	Designation	Quantity	Order number
1	Vehicle-specific additional parts		13445539
	Holder water hose	1	
	Cardan shaft screw set	3	
	Holder, triple	1	
	Hex nut M4 DIN985 ZN	4	
	Plastic cover cap, black, hex M6 (42386)	1	
	Holder 22.6x22.6 rotatable	3	
	Inner torx screw M5x13 DIN267-30	3	
	Outer torx screw M6x18	6	
	Hex collar nut M5 ON2083.5 ZN	1	
	Hex nut M6 with washer	2	
	Hex collar screw M6x23	2	
	Flat head blind rivet nut M5x12	1	
	Rubber buffer, glove compartment	1	
	Hex screw M8x30 Ø24 ISO9892 ZN	2	
	Clip with cable tape 19-28mm	1	
	Holder 13-22	1	
	Holder 8-22	4	
	Holder 4.3-24	3	
	Holder, cable tie Ø49 hole Ø8	3	
	Holder 8-9.5	2	
	Rubberised clip (RSGU-Ø 53 mm)	1	
	Holder, cable tie L=160 mm hole Ø6	2	
	Spring band clamp 23mm Ø	1	
	Spring band clamp 27mm Ø	5	
	OM parking heater German, KTA9934	1	
	OM parking heater Europe, KTA9935	1	
	Installation instructions JE German	1	
	Installation instructions JE English	1	