part number: 13438560

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**
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, así 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, týkající se konstrukce, vybavení, barvy, jakož i omyly jsou vyhrazeny. Údaje a vyobrazení 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 kötelező érvényűek.	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**
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 construcţieu, dotării, culorii şi dreptul la erori Datele indicate şi imaginile sunt orientative.	RO	**Instrucţiuni 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 nezávažné.	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 변경 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

13 439 373 12/12

part number: 13438560

HYDRONIC

Eberspächer

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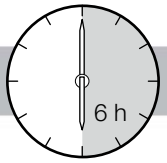


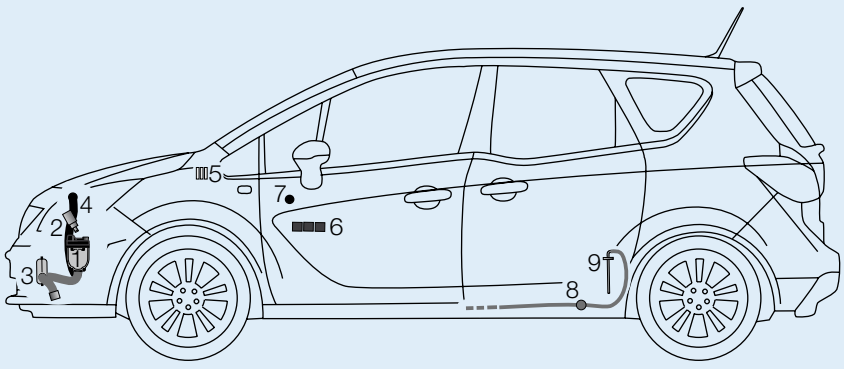
New vehicle-specific installation kit + heater

Hydronic D 5 S in Opel Meriva (S-D MONOCAB B)
Hydronic B 5 S in Opel Meriva (S-D MONOCAB B)

from 2012 model
HSN: 0035
1.3 l cubic capacity / 4 cylinder in-line engine CDTI / 55 kW - 75 HP (A13DTC)
1.3 l cubic capacity / 4 cylinder in-line engine CDTI / 70 kW - 95 HP (A13DTE)
1.7 l cubic capacity / 4 cylinder in-line engine CDTI / 74 kW - 100 HP (A17DT)
1.7 l cubic capacity / 4 cylinder in-line engine CDTI / 81 kW - 110 HP (A17DTI)
1.7 l cubic capacity / 4 cylinder in-line engine CDTI / 81 kW - 110 HP (A17DTC)
1.7 l cubic capacity / 4 cylinder in-line engine CDTI / 96 kW - 130 HP (A17DTS)
1.4 l cubic capacity / 4 cylinder in-line engine ECOTEC / 74 kW - 100 HP (A14XER)
1.4 l cubic capacity / 4 cylinder in-line engine ECOTEC / 88 kW - 120 HP (A14NEL)
1.4 l cubic capacity / 4 cylinder in-line engine ECOTEC / 103 kW - 140 HP (A14NET)

- with manual AirCon or automatic AirCon
- with fog lamps
- with manual gearbox or 6 speed automatic gearbox

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 W S
(3) EasyStart R+ control unit

Please note!

Deliver the vehicle with an empty tank.

J. Eberspächer
GmbH & Co. KG
Eberspächerstr. 24
D - 73730 Esslingen

Service Hotline
01805 - 26 26 26
Facsimile
01805 - 26 26 24

www.eberspaecher.com

Contents

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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
1.7 l CDTI	74 / 100	6S
1.7 l CDTI	81 / 110	6S / 6AT
1.7 l CDTI	96 / 130	6S / 6AT
1.3 l CDTI	55 / 75	5S
1.3 l CDTI	70 / 95	5S
1.4 l ECOTEC	74 / 100	5S
1.4 l ECOTEC	88 / 120	5S 6S / 6AT
1.4 l ECOTEC	103 / 140	6S

5S = 5-gear manual gearbox
6S = 6-gear manual gearbox
6AT = 6-gear 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.	13438560
(2) Heater:	
1 Hydronic D5 S	
GM No.	13438563
1 Hydronic B5 S	
GM No.	13438564

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

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:

- Wiper arms on linkage 35 Nm
- Tank straps 20 Nm
- Exhaust system 18 Nm

Preparation on the vehicle

- Disconnect the battery
- Dismantle the right-hand underbody panelling
- Dismantle the cover of the diagnostic plug
- Remove the right retaining strut of the centre console
- Remove air filter box
- Remove fuel tank according to the manufacturer's instructions
- Remove right-hand wheelhouse panel
- Remove the windscreen wipers and wiper tray cover
- Remove glove compartment
- Remove front bumper
- Remove lower right-hand engine cover
- Depressurise the cooling system
- Drain coolant into a clean container

Please note!

Comply with the manufacturers' guidelines/instructions during dismantling.

2 Electrics

Position of the components
(see photo 1)

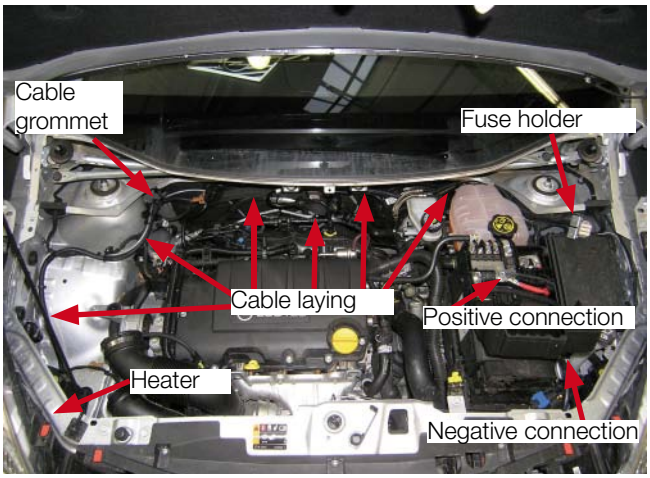


Figure 1

Cable laying (cable loom 1)
(see photos 2 to 9 and 19)

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

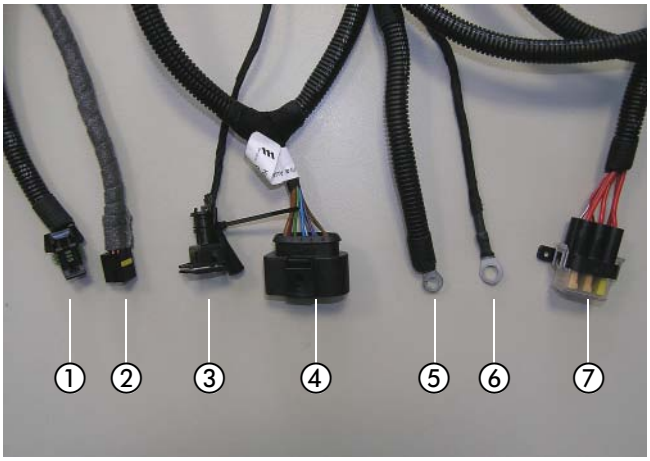


Photo 2 Cable loom connections

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

Please note!

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

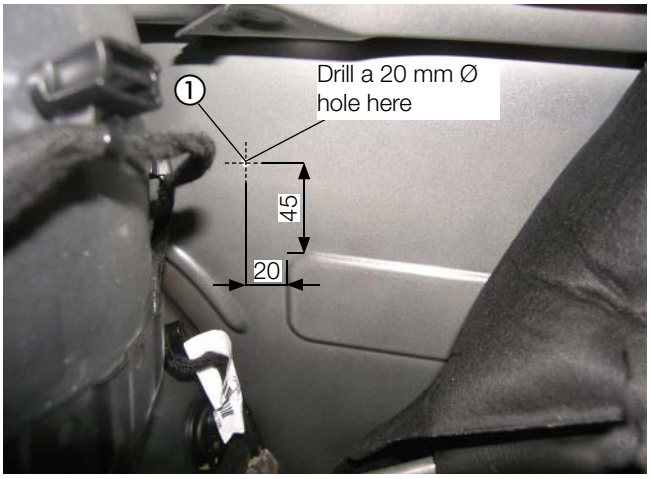


Photo 3

① Drill hole for cable penetration

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.
Use body sealing compound to seal the cable grommet inserted 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.

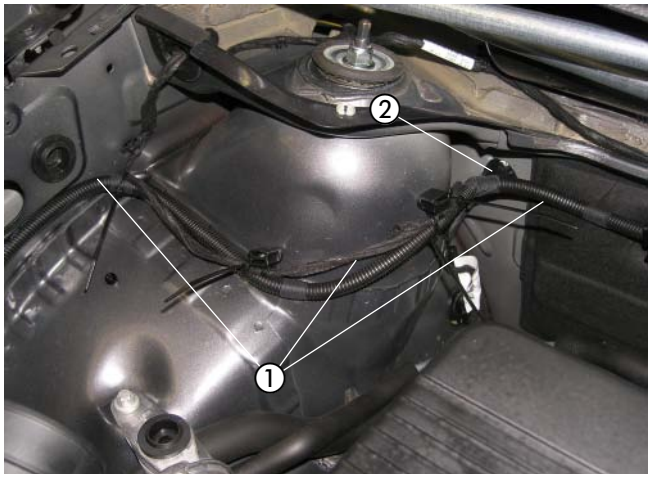


Photo 4

① Cable laying
② Sealed cable grommet in the engine partition

10-pin connector of cable loom 1, routed to the installation position of the heater.

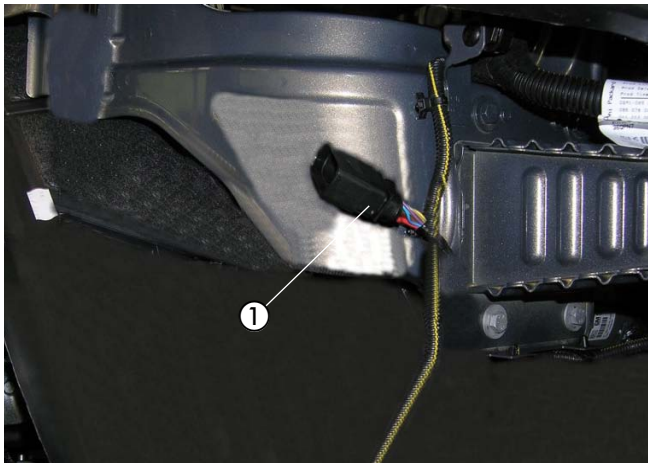


Photo 5

① 10-pin connector from cable loom 1

Route the metering pump cable from cable loom 1 along the engine partition to the middle of the vehicle and then push it through to the vehicle underbody.

Photo 6

① Metering pump cable

2 Electrics

Install the fuse block beneath the wiper tray along the engine partition to the left side of the vehicle as shown.

Fasten the fuse block to the fuse holder using two M4 x 10 fillister head screws as shown.

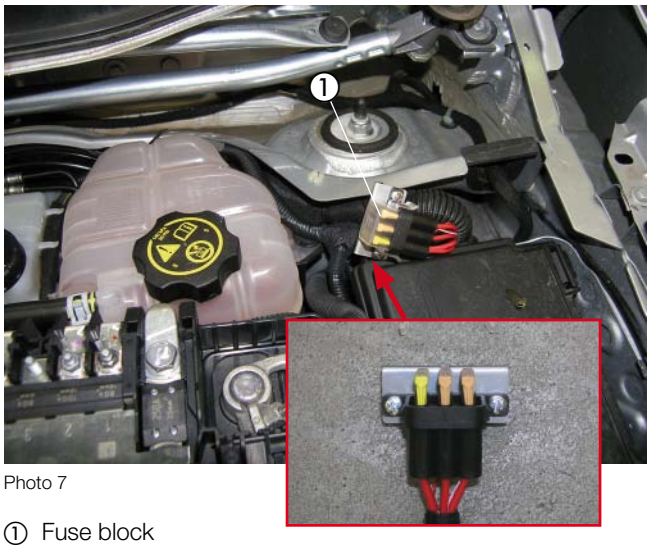


Photo 7

① Fuse block

Route the 4 mm² rt positive cable from cable loom 1 to the battery fuse box and connect with the A8 cable lug as shown.

Photo 8

① Positive cable 4 mm² rt connected

Route the 2.5 mm² br earth cable from cable loom 1 to the earth point on the left next to the battery on the left chassis beam and connect with the A6 cable lug as shown.

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.

Photo 9

① Earth cable 2.5 mm² br connected

2 Electrics

Laying cable loom 2
(see photos 10 to 18 and 19)

Drill two 6.5 mm Ø holes in the right retaining strut of the centre console using the dimensions shown.

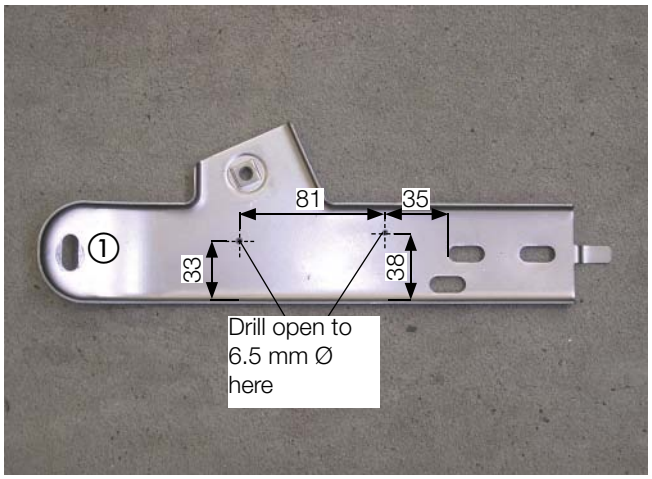


Photo 10

① Holes drilled in the right retaining strut

Fasten the holder for the SVM module and the R+ receiver to the right retaining strut of the centre console using two M6 x 12 screws as shown.

Fasten the SVM module and the EasyStart R+ receiver to the holder using two 3.5 x 19 mm collar screws in each case as shown.

Fasten the relay block of the auxiliary heater relay to the EasyStart R+ receiver using a clamp nut, blue, and an M5 x 20 collar screw as shown, noting the installation angle of 20°.
Insert the relay in the relay block.
From cable loom 2, connect the connector for the stationary part of EasyStart R+ and the antenna cable to the stationary part of EasyStart R+.
Connect the connector of cable loom 2 for the SVM control box.

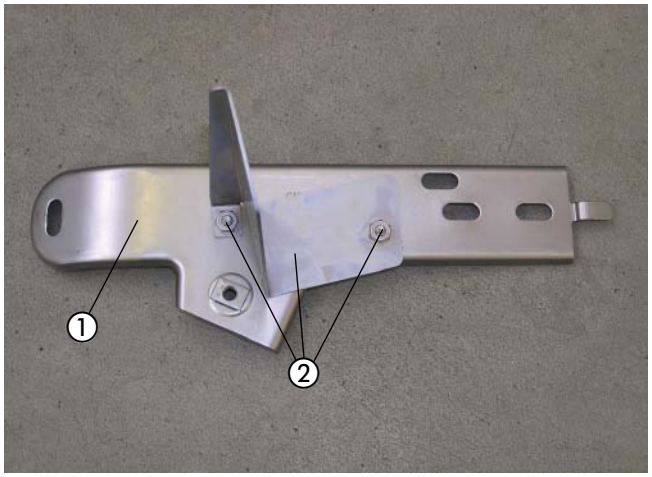


Photo 11

① Right retaining strut of the centre console
② Holder of the SVM module and R+ receiver

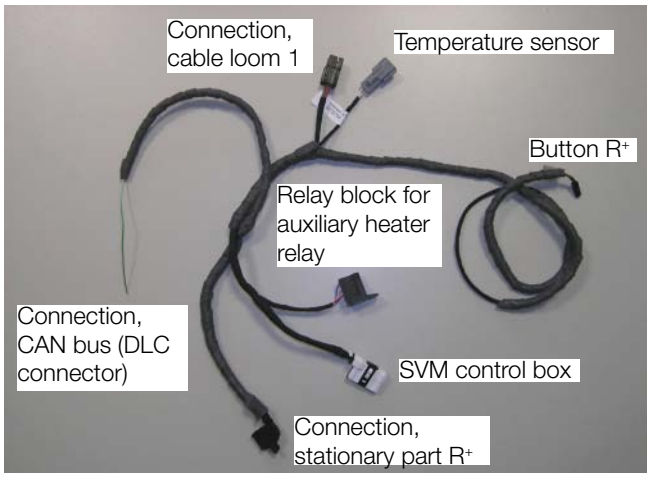


Photo 12

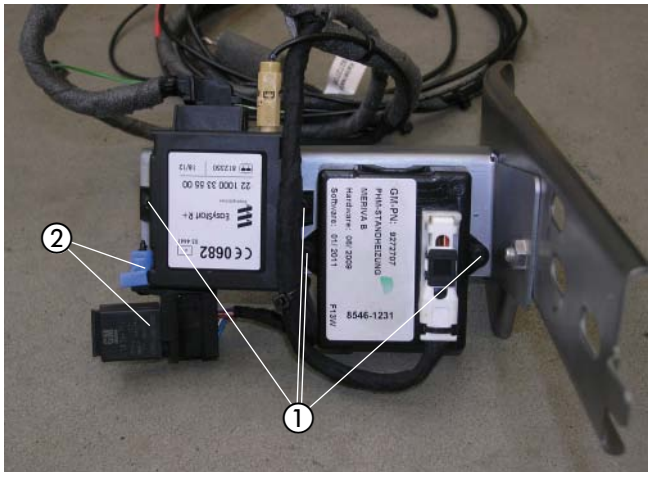


Photo 13

① SVM module and R+ receiver mounted
② Relay block and relay installed

2 Electrics

Mount the premounted right retaining strut of the centre console using the vehicle's M8 screws.

Photo 14

① Right retaining strut mounted

Connect the black 6-pin connector and the black 4-pin connector.

Slot the 1 mm² ws cable in pin 1 of the grey 2-pin connector and the
1 mm² br / ws cable in pin 2 and connect with the grey 2-pin connector.

Feed the antenna cable to the right and lay in the rubber door seal on the passenger side.

In the area of the centre console, wind insulation around all cables and connectors as shown and secure at suitable points with cable ties.

Please note!

Avoid contact with metal parts at the uninsulated end of the antenna cable.

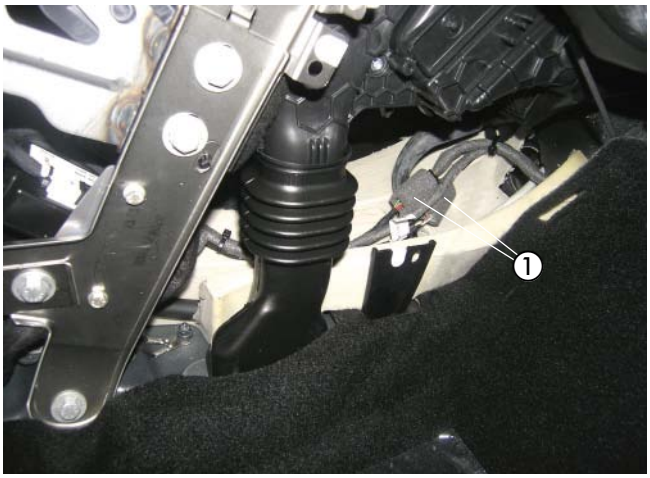


Photo 15

① Connector connected and wound with insulation

Route the 0.5 mm² gn / ws cable to the DLC connector under the centre console.

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.

Please note!

The cable colours may vary!

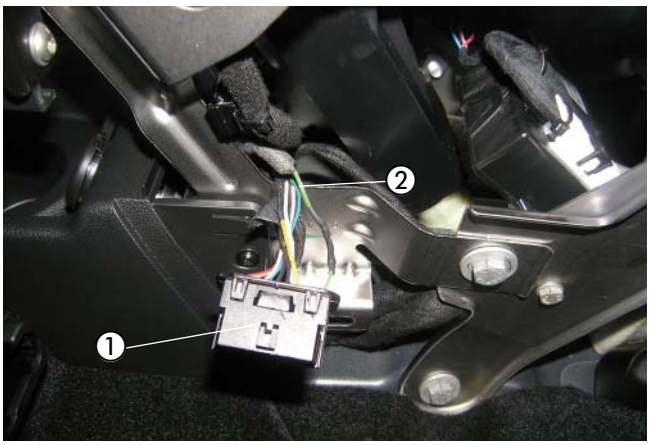


Photo 16

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

2 Electrics

Mount the temperature sensor in the passenger footwell to the A-pillar panelling using an M2.9 x 25 screw as shown.

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.

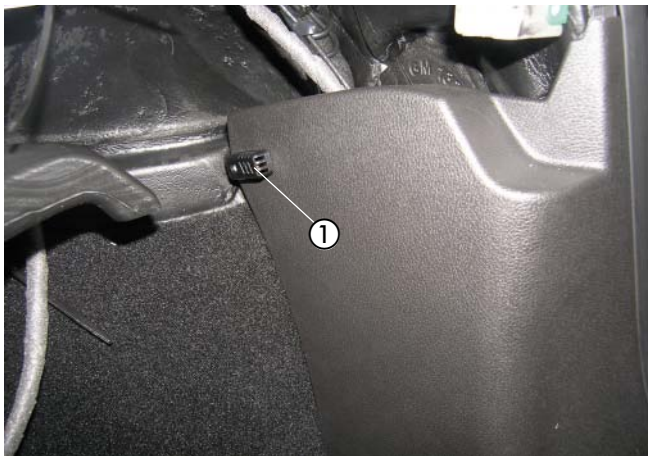


Photo 17

① Temperature sensor mounted

Drill a 16 mm Ø hole on the right side of the glove compartment for the button as shown and insert the button.

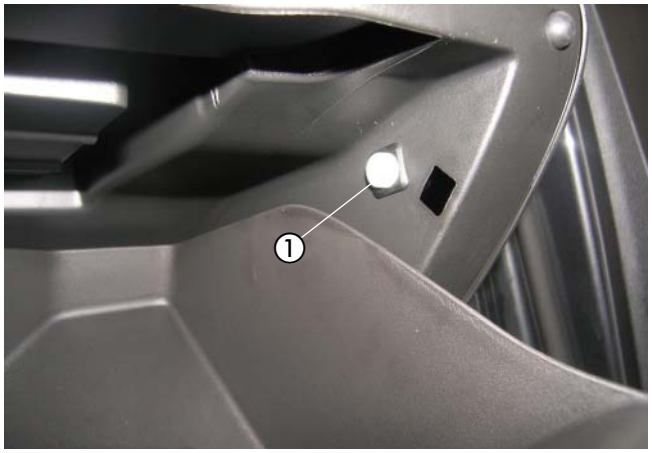


Photo 18

① Button mounted

2 Electrics

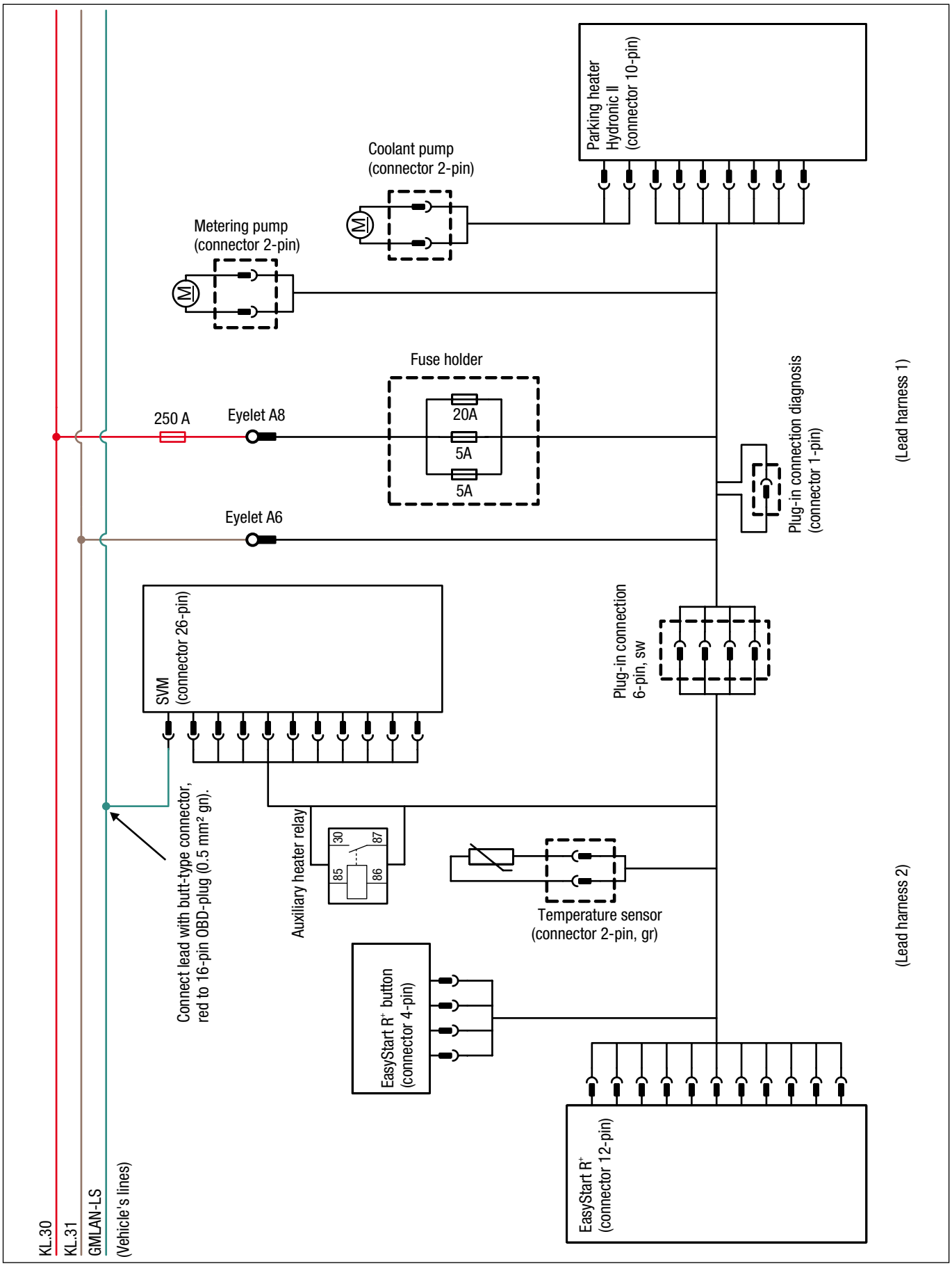


Photo 19

3 Installation - Heater

Prepare the installation position
(see photos 20 and 21)

On the outside of the front right chassis beam, drill a 9 mm Ø hole in the middle of each of the ribbed points as shown and insert an M6 blind rivet nut in each case.
Drill two more 7 mm Ø holes with the dimensions shown.

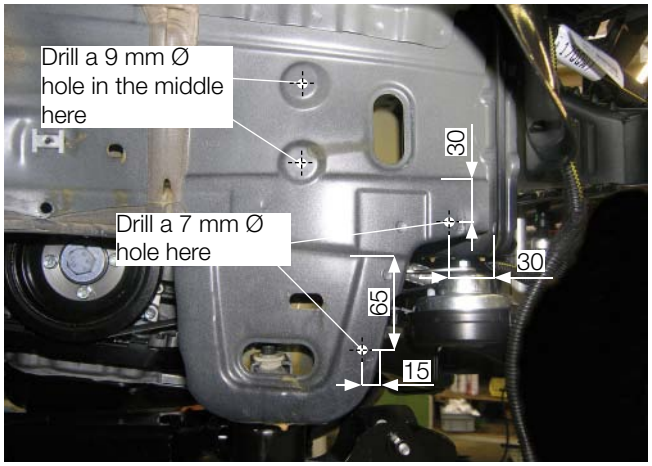


Photo 20

① Drill a 9 mm Ø hole
② Existing M6 stud bolt

Drill a 7 mm Ø hole underneath the front right chassis beam with the dimensions shown.

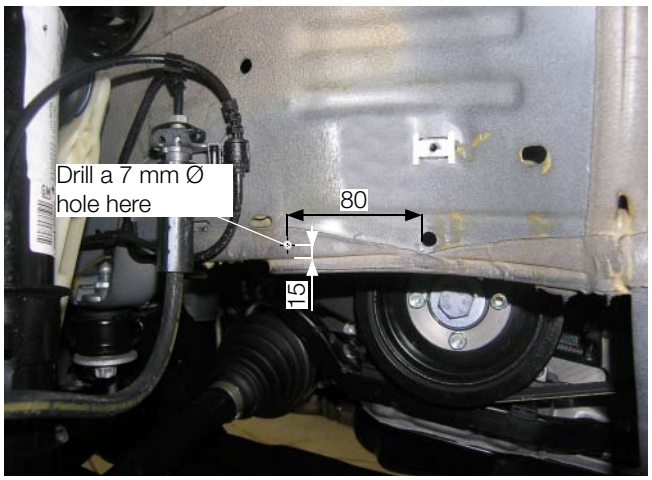


Photo 21

① Water pump mounted

Please note!

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

Prepare lower right-hand engine cover
(see photo 22)

Make a cut-out for the heater in the lower right-hand engine cover with the dimensions shown.

If the vehicle has a trumpet horn, make an additional cut-out with the dimensions shown.

Also adhere friction protection as shown.

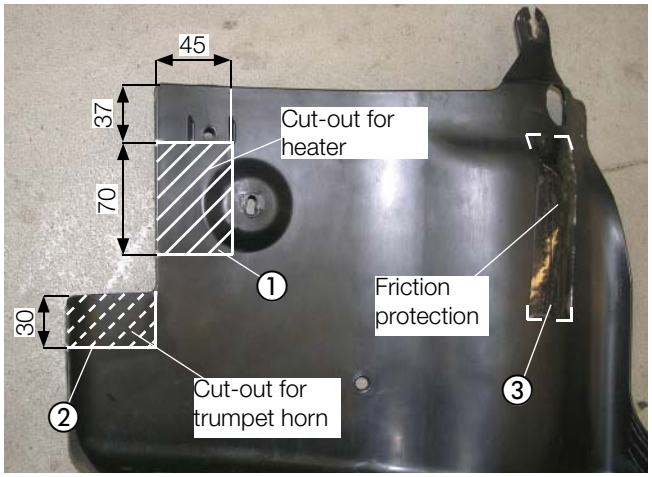


Photo 22

① Make cut-out for heater
② Make cut-out for trumpet horn
③ Adhered friction protection

3 Installation - Heater

For vehicles with trumpet horn
(see photo 23)

Fit a spacer sleeve using an M6 x 12 screw as shown.

Photo 23

① Spacer sleeve mounted

Premount heater and affix duplicate nameplate
(see photos 24 to 28)

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

Remove the duplicate nameplate from the heater.

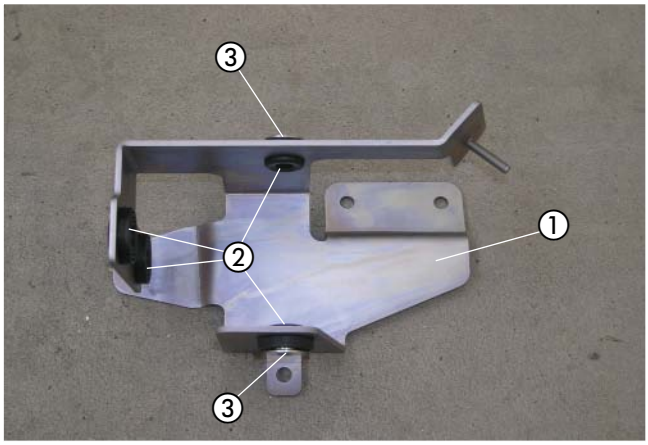


Photo 24

① Unit holder
② Rubber buffers inserted
③ Spacer sleeve inserted

Remove the duplicate nameplate from the heater.

Insert the heater in the unit bracket as shown and fasten with two M6 x 25 Torx screws.

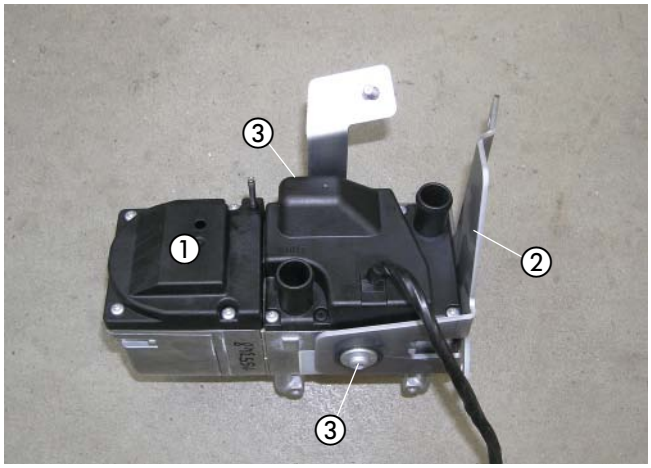


Photo 25

① Heater
② Unit holder
③ Fitted M6 x 25 Torx screw

3 Installation - Heater

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 water hose 2 "heater outlet-water pump inlet" to the water outlet connection of the heater and to the water inlet connection of the water pump using two 16-25 mm Ø hose clips.

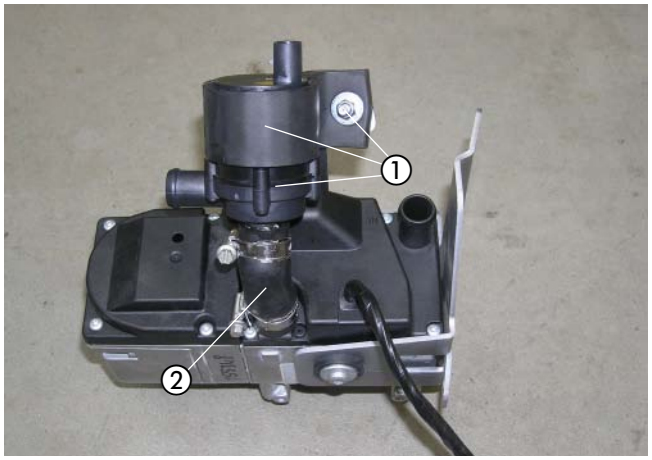


Photo 26

① Water pump mounted
② Water hose 2 mounted

Connect the combustion air pipe to the heater with a 16-25 mm Ø hose clip and fasten to the heater using a 28 mm Ø clamp and an M6 x 16 screw as shown.
Push the end sleeve onto the inlet side of the combustion air pipe.

Connect the 4 x 1.25 mm Ø fuel pipe with 3.5 x 3 x 105° mm Ø fuel hose bend to the fuel connection of the heater using two 9 mm Ø hose clips.

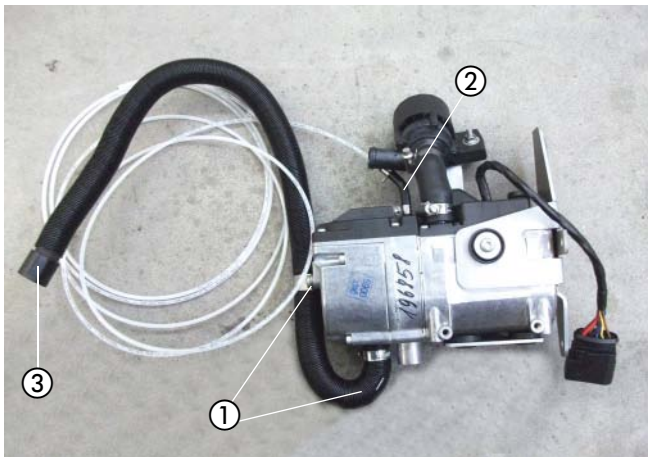


Photo 27

① Combustion air pipe connected
② Fuel pipe, Ø 4 x 1.25 mm, connected
③ End sleeve mounted

Adhere the duplicate nameplate over the vehicle's nameplate on the B-pillar as shown.

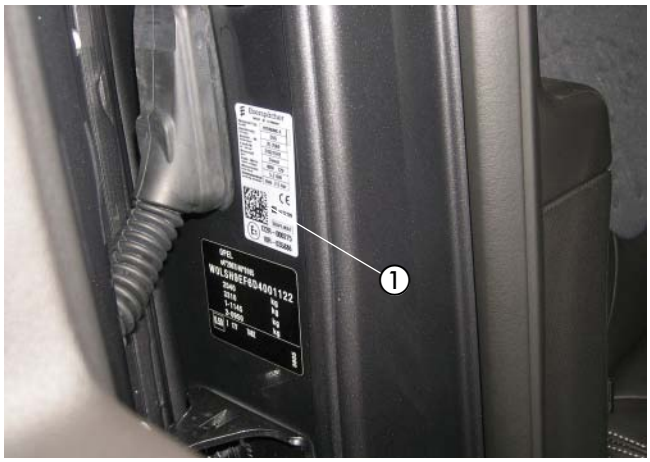


Photo 28

① Duplicate nameplate adhered

3 Installation - Heater

Mount the prepared unit bracket, route the combustion air pipe and route the 1 x 1.25 mm Ø fuel pipe
(see photos 29 to 34)

Mount the prepared unit bracket to the two prepared upper fixing points using two M6 x 20 screws and two B6 body washers as shown.

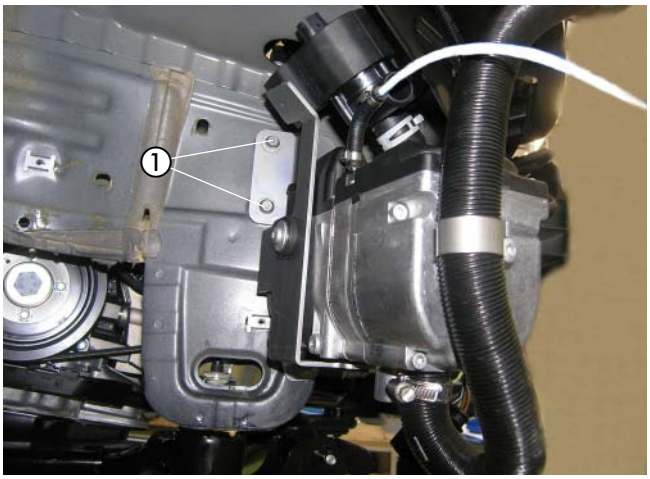


Photo 29

① Unit holder mounted

Mount the prepared unit bracket to the two prepared lower fixing points as shown, using two M6 x 20 screws, four B6 body washers and two M6 nuts.

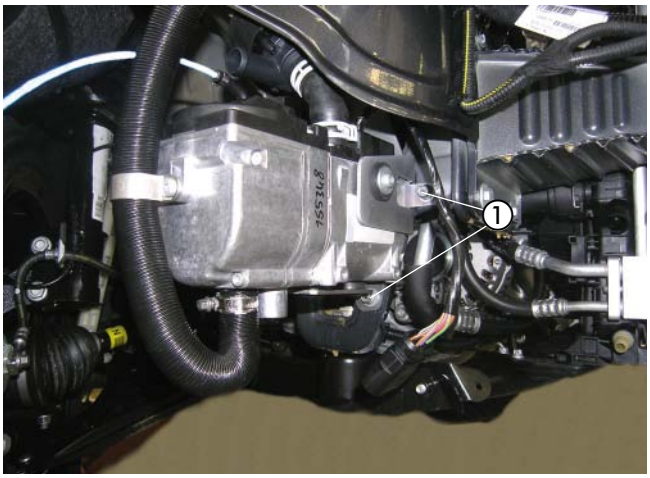


Photo 30

① Unit holder mounted

Route the combustion air pipe together with the 1 x 1.25 mm Ø fuel pipe up into the protected area behind the left-hand headlight and secure them together using cable ties.

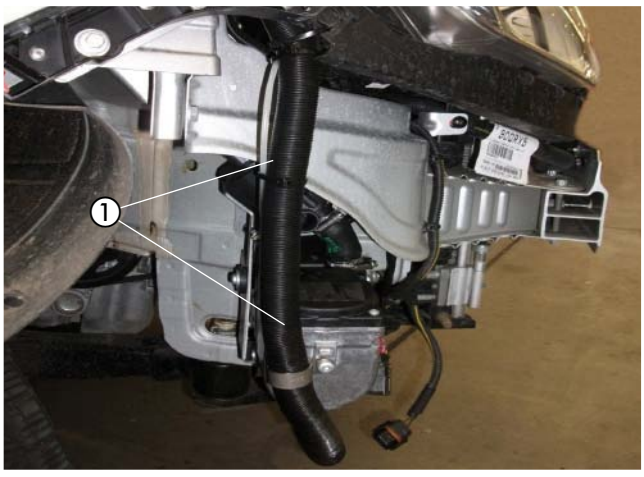


Photo 31

① Combustion air pipe laid with fuel pipe Ø 1 x 1.25 mm

3 Installation - Heater

To fasten the combustion air pipe in the existing 7 mm Ø hole on the right inner wing, screw in an M6 x 25 screw, a B6 body washer and an M6 nut as shown.
Fasten the combustion air pipe to the fitted M6 x 25 screw using a 28 mm Ø clamp and an M6 nut.
Lay the combustion air pipe upwards into the protected area behind the left-hand headlight.

Affix a 100 mm length of edge protection to the edge of the inner wing as shown.

Please note!

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

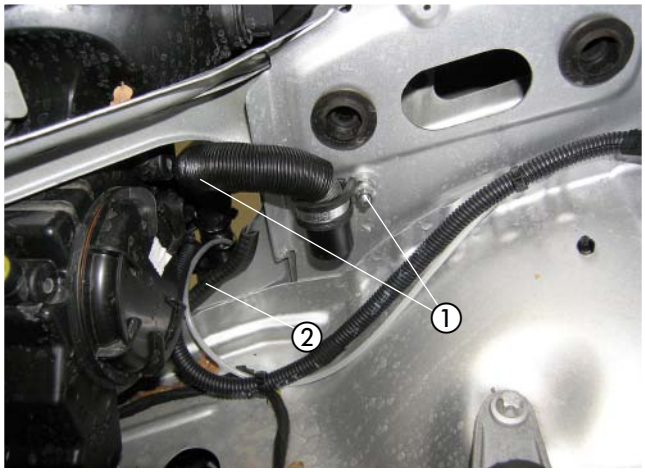


Photo 32

① Combustion air pipe mounted
② Edge protection mounted

Route the 1 x 1.25 mm Ø fuel pipe to the middle of the engine partition and on to the vehicle underbody as shown.

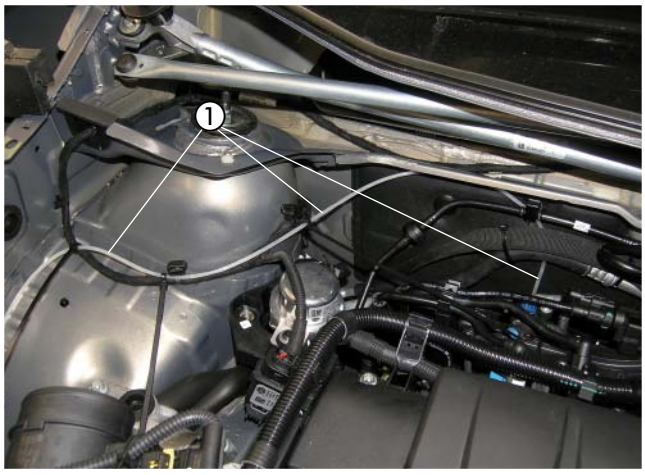


Photo 33

① Fuel pipe, Ø 1 x 1.25 mm, routed

Secure the 1 x 1.25 mm Ø fuel pipe to the vehicle's fuel line using cable ties as shown.

Please note!

When laying fuel lines, always ensure they are at an adequate distance from hot vehicle and heater parts, and secure at suitable points with cable ties.

Photo 34

① 1 x 1.25 Ø mm fuel pipe laid to the vehicle underbody

4 Exhaust system

Premount exhaust silencer
(see photo 35)

Mount the bracket for the exhaust silencer to the exhaust silencer using an M6 x 12 screw.

Push a piece of exhaust insulation onto the exhaust pipe and shape as shown.
Connect the exhaust pipe to the inlet connection of the exhaust silencer using a 26 - 28 mm Ø pipe clip.

Connect the exhaust pipe end to the outlet connection of the exhaust silencer using a 26 - 28 mm Ø pipe clip.
Shape the exhaust pipe end as shown and fasten to the exhaust silencer bracket using a 28 mm Ø clamp and an M6 x 12 screw.

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

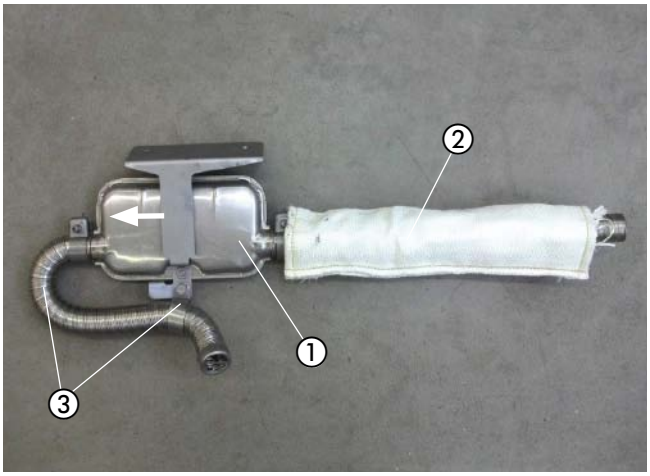


Photo 35

① Exhaust silencer bracket
② Exhaust pipe mounted with heat shield
③ Exhaust end pipe installed

Fit prepared exhaust silencer
(see photo 36)

Fasten the prepared exhaust silencer bracket to the existing M8 stud bolt of the front crossbeam using the vehicle's two M8 nuts as shown.

Connect the exhaust pipe to the exhaust connection of the heater using a 26 - 28 mm Ø pipe clip.

Please note!

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

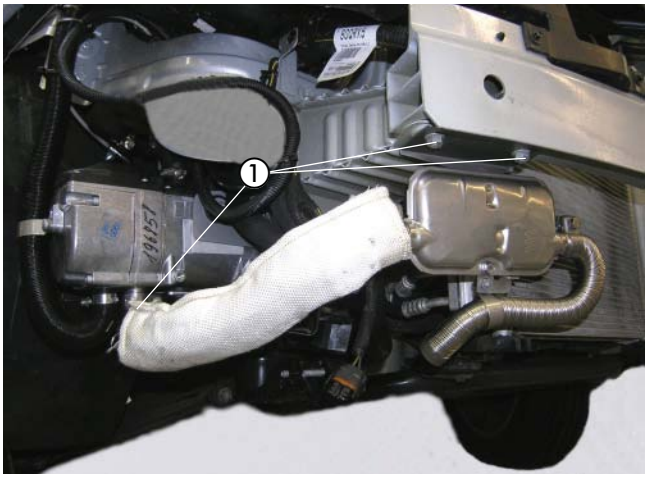
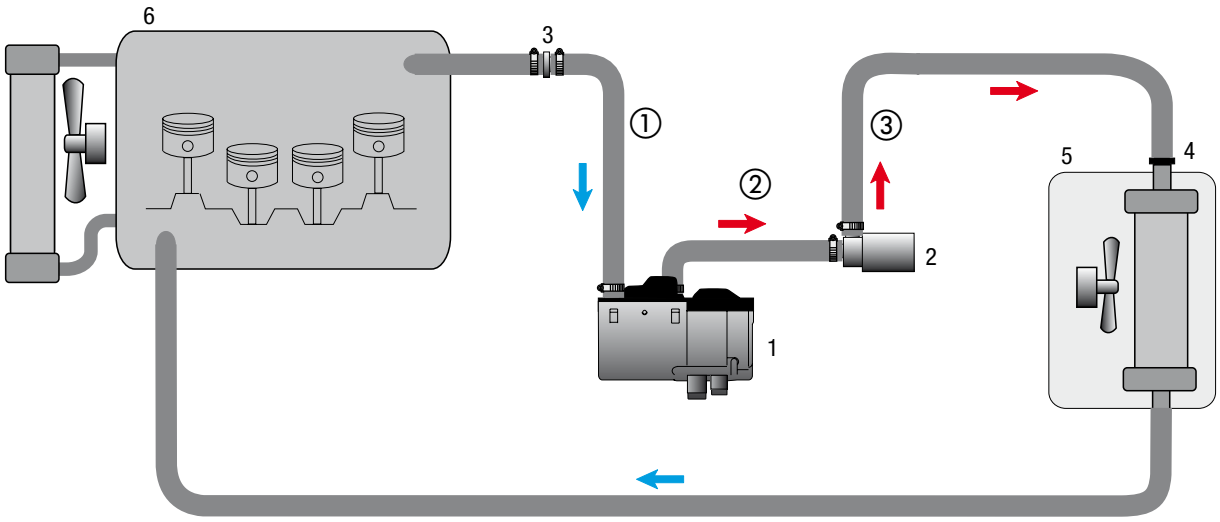


Photo 36

① Exhaust silencer installed

5 Water circuit



1 - Heater
2 - Water pump
3 - Adapter pipe, 15 mm Ø
4 - Quick-acting coupling
5 - Vehicle heat exchanger
6 - Engine
- Hose clip, 20 - 32 mm Ø or 16 – 25 mm Ø
① - Water hose 1
② - Water hose 2
③ - Water hose 3

Photo 37

5 Water circuit

Lay and connect water hoses
(see photos 38 to 45 and 37)

Connect water hose 1 "engine - heater" to the water inlet connection of the heater using a 16-25 mm Ø hose clip.

Connect water hose 3 "water pump - heat exchanger" to the discharge end of the water pump using a 16-25 mm Ø hose clip.

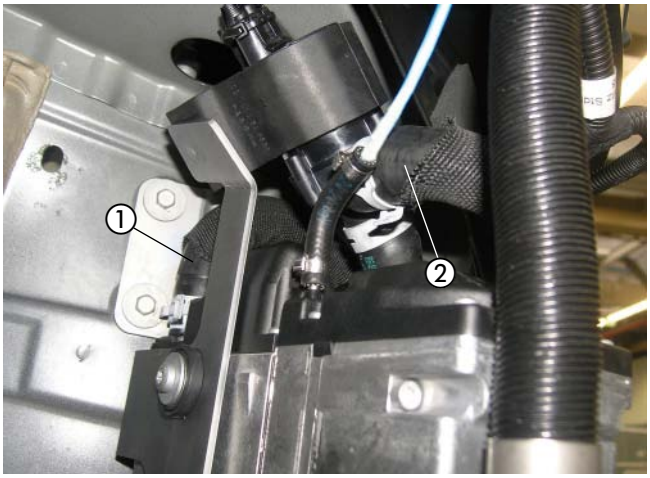


Photo 38

① Water hose 1 connected
② Water hose 3 connected

Route water hoses 1 and 3 to the left along the front right-hand chassis beam to the water cutting point and secure to the vehicle's cable loom using cable ties as shown.

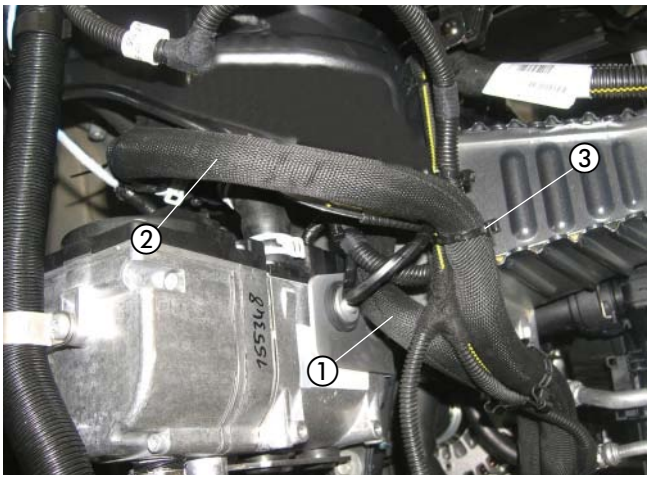


Photo 39

① Water hose 1
② Water hose 3
③ Cable ties

Screw an M6 x 30 screw with two B6 body washers and an M6 nut into the existing 7 mm Ø hole underneath the right-hand chassis beam, as shown.

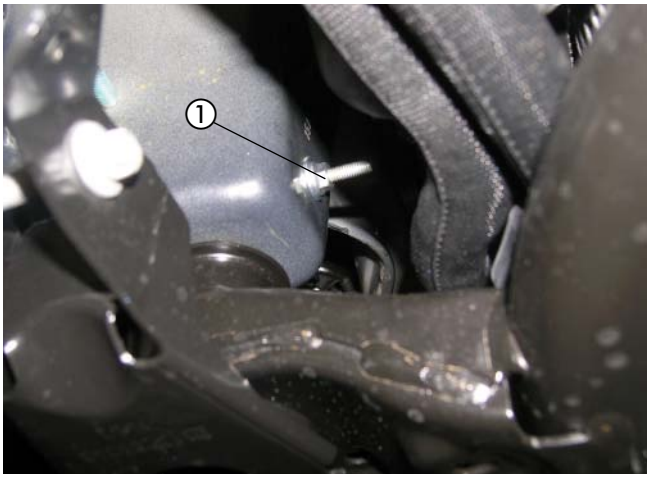


Photo 40

① Screw M6 x 30 fitted

5 Water circuit

Fasten water hose 1 with a rubberised 26 mm Ø clip and an M6 nut to the premounted M6 x 25 screw as shown.

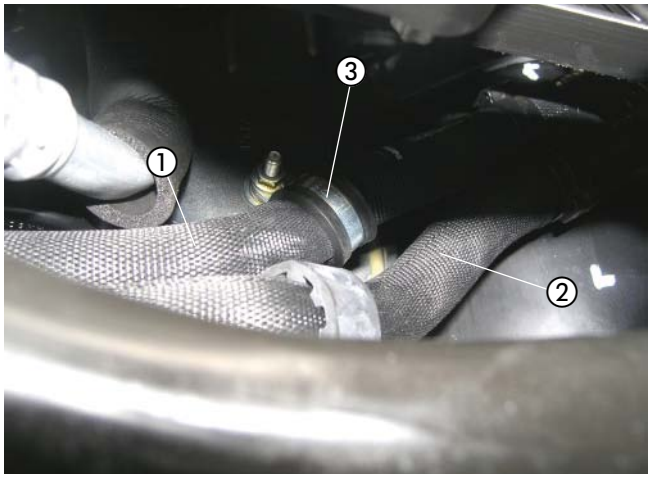


Photo 41

① Water hose 1
② Water hose 3
③ Clip, rubberised, 26 mm Ø, mounted

Route water hoses 1 and 3 along the front right-hand chassis beam to the water cutting point.

Fasten water hose 1 to the drilled 7 mm Ø hole with a rubberised 26 mm Ø clip, using an M6 x 50 screw, a B6 body washer, an M6 x 30 spacer sleeve and an M6 nut.

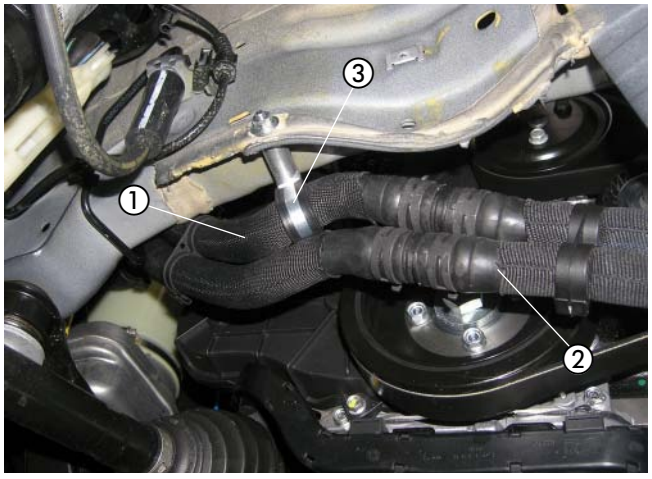


Photo 42

① Water hose 1
② Water hose 3
③ Clip, rubberised, 26 mm Ø, and spacer sleeve, mounted

Secure water hoses 1 and 3 to the vehicle's brake line on the right front chassis beam, using two rotatable line holders as shown.

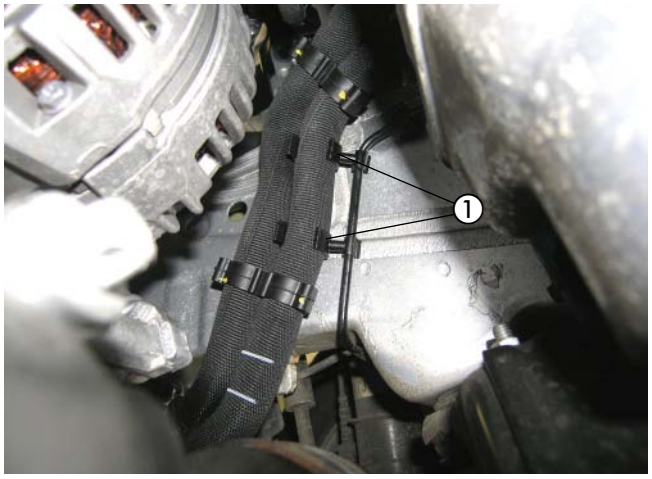


Photo 43

① 2x line holder, rotatable, mounted

5 Water circuit

Take water hose 3 below the vehicle's air-con line as shown and route it on to the left along the engine partition to the cutting point.

Take water hose 1 to the left along the vehicle's air-con line to the cutting point as shown.

Use cable ties to fasten water hoses 1 and 3 to the vehicle's air-con line as shown.

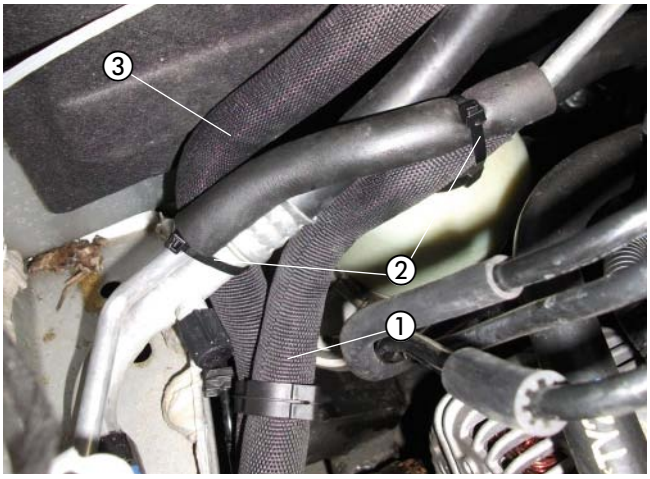


Photo 44

① Water hose 1 routed
② Cable ties
③ Water hose 3 routed

Take water hose 3 on along the vehicle's air-con line to the cutting point as shown.

Take water hose 1 on along the vehicle's air-con line to the cutting point as shown and secure to the air-con line with a rotatable line holder.

Please note!

When installing the water hoses, ensure they are at a sufficient distance from moving vehicle parts.
Protect the water hoses from chafing and secure at suitable points with cable ties.

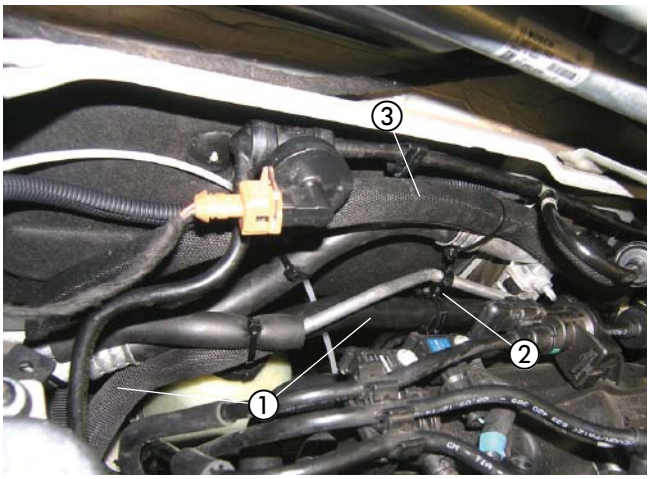


Photo 45

① Water hose 1 routed
② Line holder, rotatable, mounted
③ Water hose 3 routed

FOR VEHICLES WITH 1.4 ECOTEC ENGINE
Disconnect the water flow hose and integrate water hoses 1 and 3
(see photos 46 to 49)

Pull the water flow hose from the engine to the heat exchanger off the engine connection after loosening the clamp.

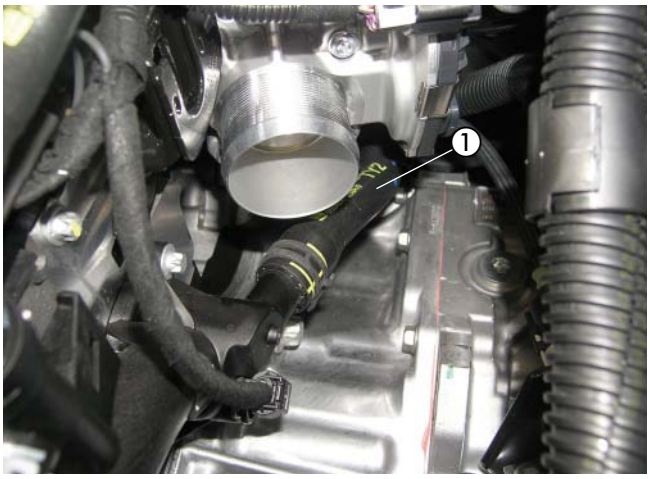


Photo 46

① Water flow hose

5 Water circuit

Pull off the coupling at the heat exchanger (upper water hose on the heat exchanger) and remove the water flow hose (this is no longer needed).

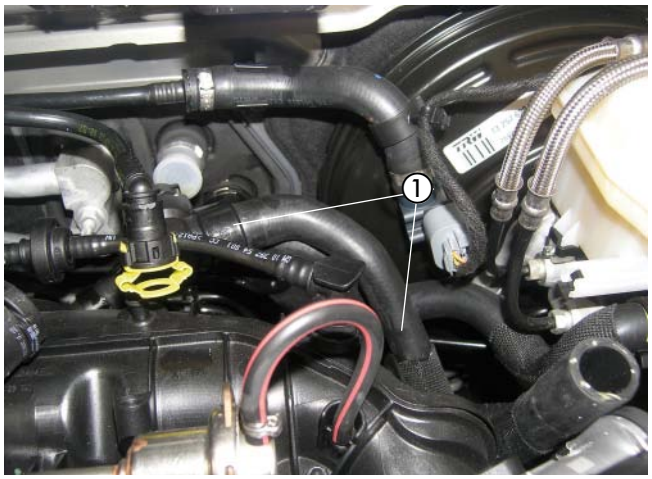


Photo 47

① Remove water flow hose

Use the quick-release hose coupling to connect water hose 3 to the top connection of the heat exchanger.

Use cable ties to secure the water hoses at suitable points as shown.

Photo 48

① Water hose 3 connected
② Cable ties

Connect water hose 1 to the water outlet connection of the engine as shown, using a 20 - 32 mm Ø hose clip.

Please note!

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

Photo 49

① Water hose 1 connected

5 Water circuit

FOR VEHICLES WITH 1.7 CDTI ENGINE
Disconnect the water flow hose and integrate water hoses 1 and 3
(see photos 50 to 52)

Cut the water flow hose from the engine to the heat exchanger (the top water hose at the heat exchanger) according to the dimensions shown in the photo.

Pull off the coupling at the heat exchanger and remove with the disconnected piece of hose (is no longer needed).

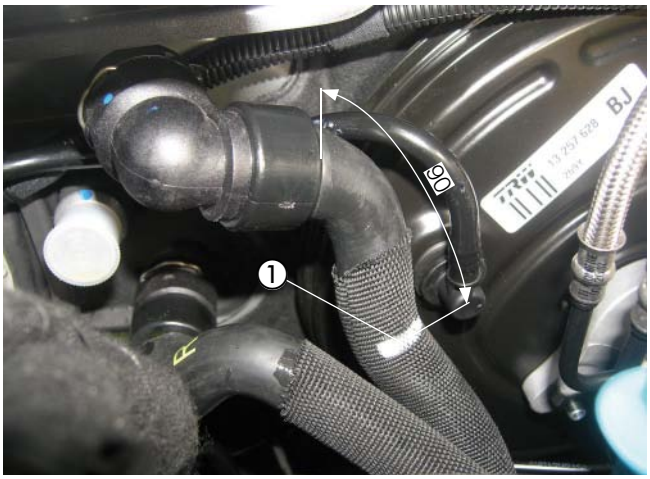


Photo 50

① Cutting point

Cut water hose 1 to length in the dimensions shown.

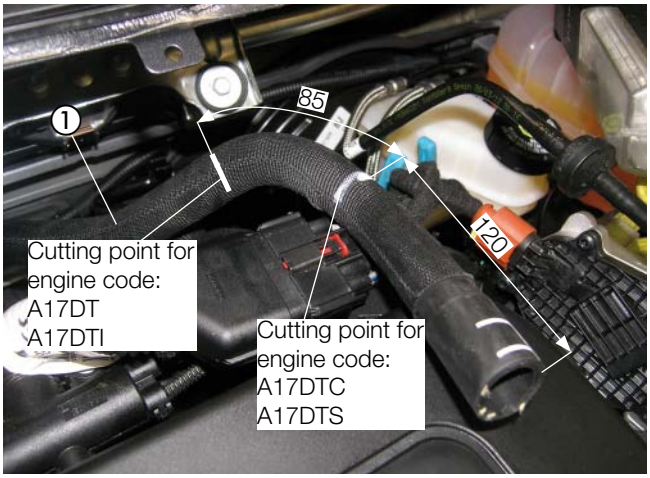


Photo 51

① Water hose 1

Connect water hose 1 to the cut through piece of engine water flow hose, using a 15/15 mm Ø connection pipe and two 16-25 mm Ø hose clips.

Use the quick-release hose coupling to connect water hose 3 to the top connection of the heat exchanger.

Secure the water hoses to each other using rotatable line holder.

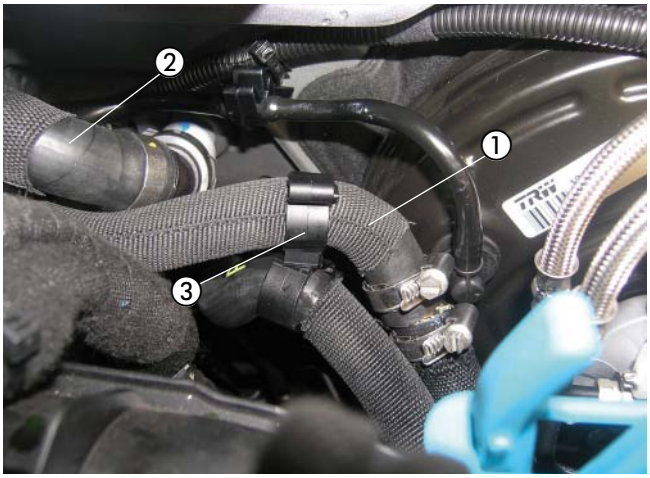


Photo 52

① Water hose 1 integrated
② Water hose 3 integrated
③ Line holder, rotatable

5 Water circuit

FOR VEHICLES WITH 1.3 CDTI ENGINE
Disconnect the water flow hose and integrate water hoses 1 and 3
(see photos 53 to 55)

Cut the water flow hose from the engine to the heat exchanger (the top water hose at the heat exchanger) according to the dimensions shown in the photo.

Pull off the coupling at the heat exchanger and remove the disconnected hose piece (is no longer needed).

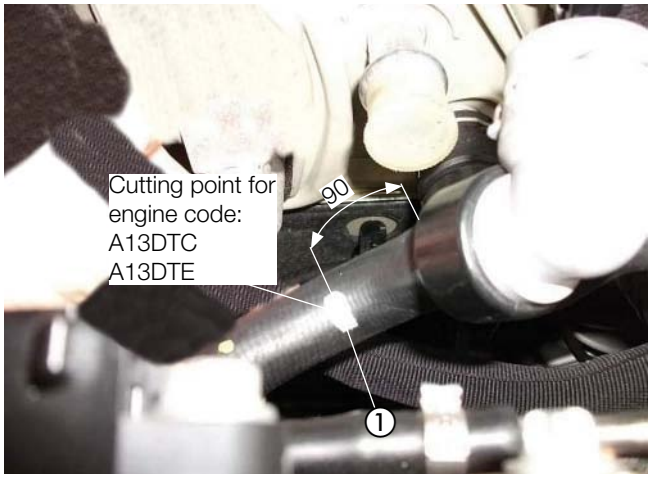


Photo 53

① Water flow hose cutting point

Cut water hose 1 to length according to the length of the disconnected water flow hose.

Push a rubber spacer profile onto the 180° 15 mm Ø hose elbow

Connect the 180° hose elbow to water hose 1 as shown, using a 15/15 mm Ø connection pipe and two 16-25 mm Ø hose clips.

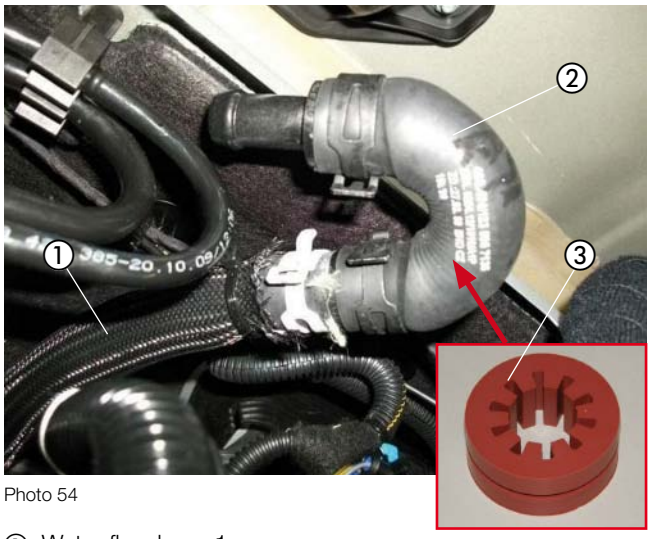


Photo 54

① Water flow hose 1
② 180° 15 mm Ø water hose elbow connected
③ Push on rubber spacer profile

Connect water hose 1 to the cut off piece of engine water flow hose as shown, using a 15/15 mm Ø connection pipe and the 180° 15 mm Ø hose elbow with two 16-25 mm Ø hose clips.

Avoid introducing tension into the water hoses during installation.

Please note!

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

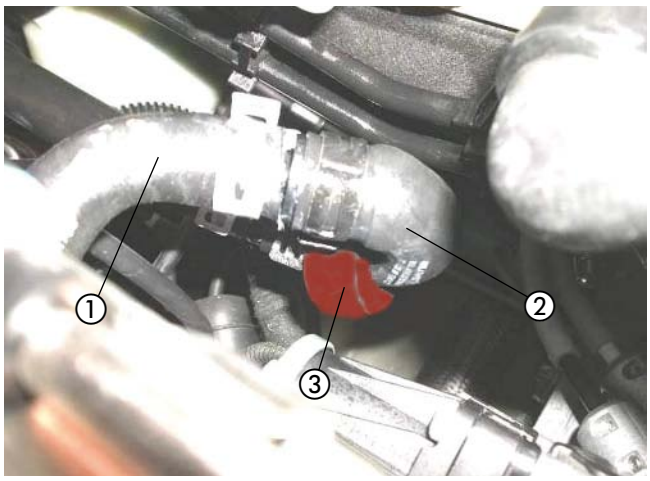


Photo 55

① Water flow hose
② 180° 15 mm Ø water hose elbow integrated
③ Rubber spacer mounted

5 Water circuit

Prepare wiper tray cover
(see photo 56)

After mounting the water hoses, prepare the dismantled water hose as shown and mount again.

Drill two 5 mm Ø holes on the left side of the wiper tray cover in the dimensions shown.

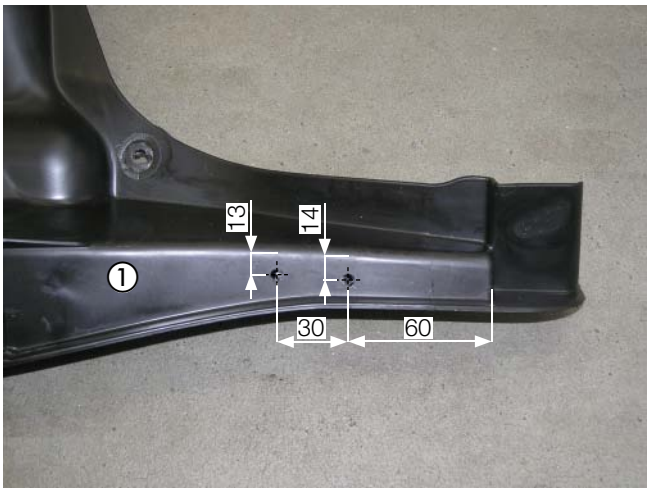


Photo 56

① Wiper tray cover prepared

Install fuse holder
(see photo 57)

Mount the prepared fuse holder to the 5 mm Ø holes drilled in the wiper tray cover using two M4 x 10 screws and two 4.3 x 12 mm Ø washers.

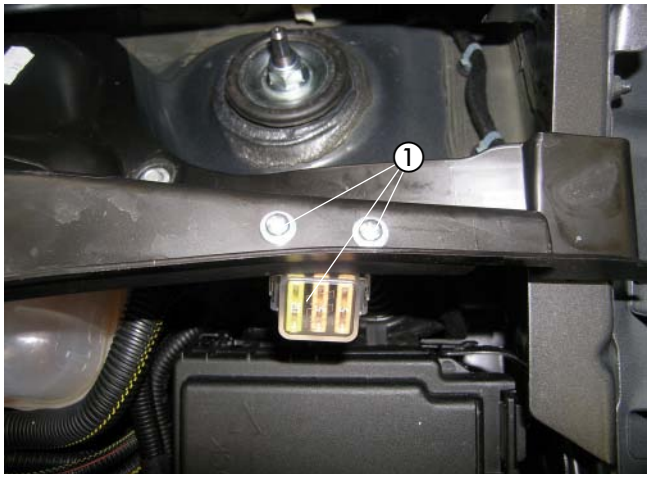


Photo 57

① Prepared fuse holder installed

Fasten 10-pin connector
(see photo 58)

Connect the 10-pin connector of cable loom 1 with the 10-pin flat connector housing of the heater's cable loom.

Fasten the 10-pin connector to water hose 3 using two cable ties as shown.

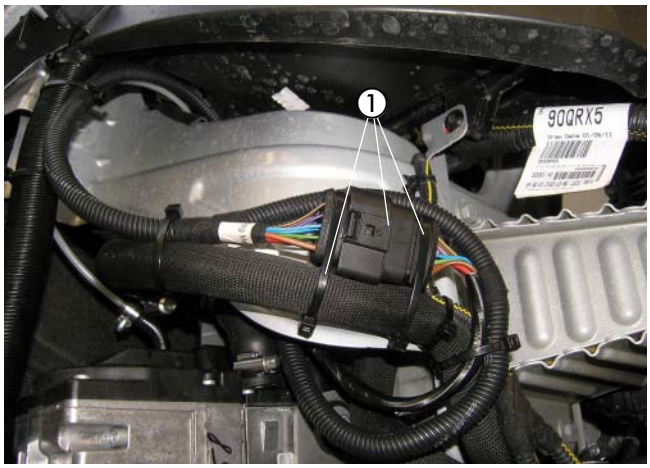


Photo 58

① 10-pin connector, fastened

6 Fuel supply

FOR VEHICLES WITH 1.4 ECOTEC ENGINE
Install fuel tank extractor
(see photos 59 to 62)

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

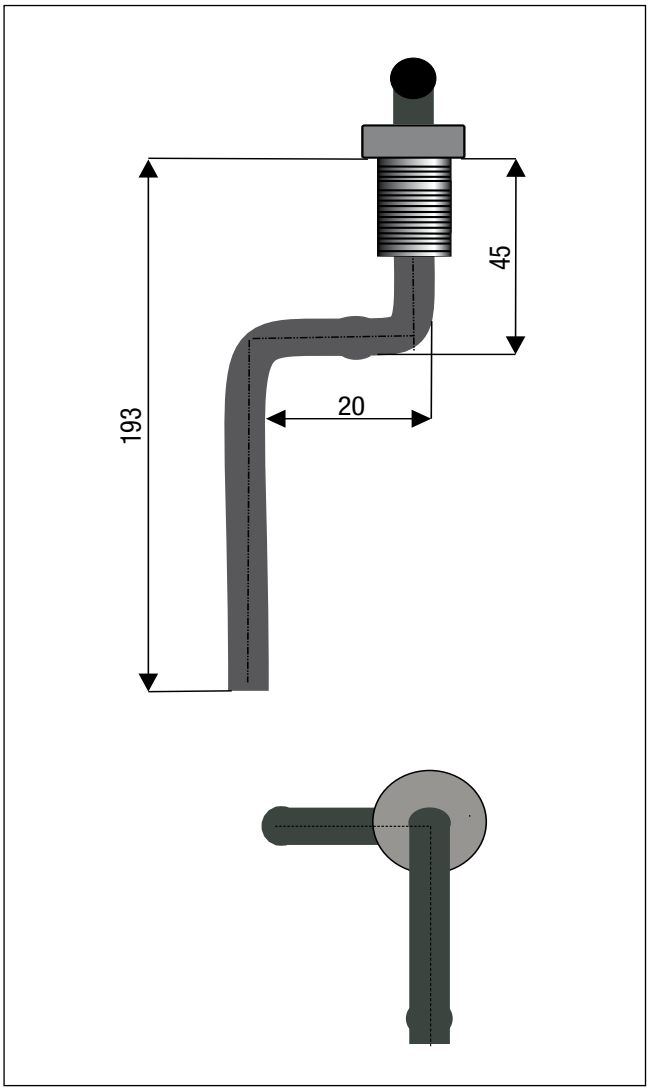


Photo 59

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.

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.

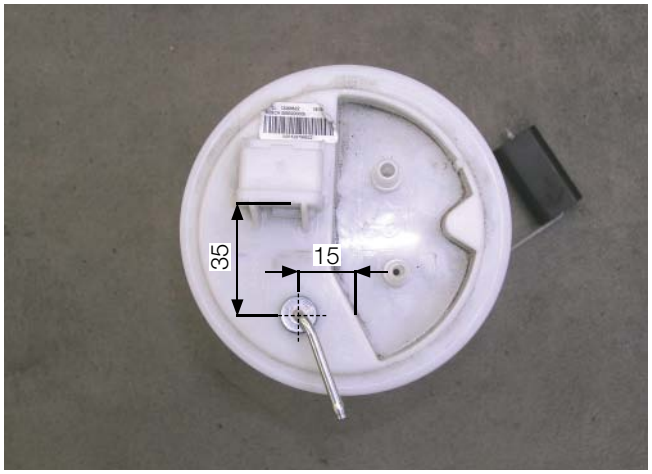


Figure 60

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

6 Fuel supply

Guide the prepared tank extractor through the drilled hole, screw tight with the M8 nut and align as shown.

Please note!

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

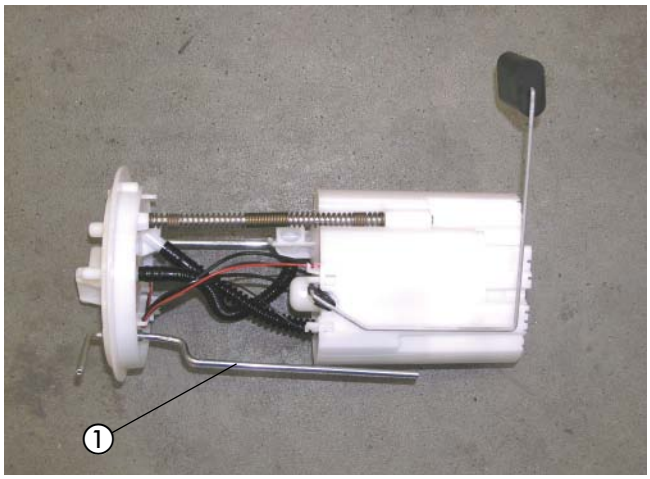


Figure 61

① Fuel tank extractor mounted

Insert the tank fitting in the tank and fasten with the union nut; ensure the seal fits properly.
Reconnect the plug-in connection and the fuel lines at the tank fitting.

Connect the 4 x 1 mm Ø fuel pipe with 3.5 x 3 mm Ø fuel hose, length 50 mm, to the intake connection of the tank extractor, route it along the vehicle's fuel lines as shown and secure with cable ties.

Secure the connection points with 9 mm Ø hose clips.

Re-install the fuel tank.

Figure 62

① Fuel tank extractor connected

6 Fuel supply

FOR VEHICLES WITH 1.3 AND 1.7 CDTI ENGINE
Install fuel tank extractor
(see photos 63 to 66)

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

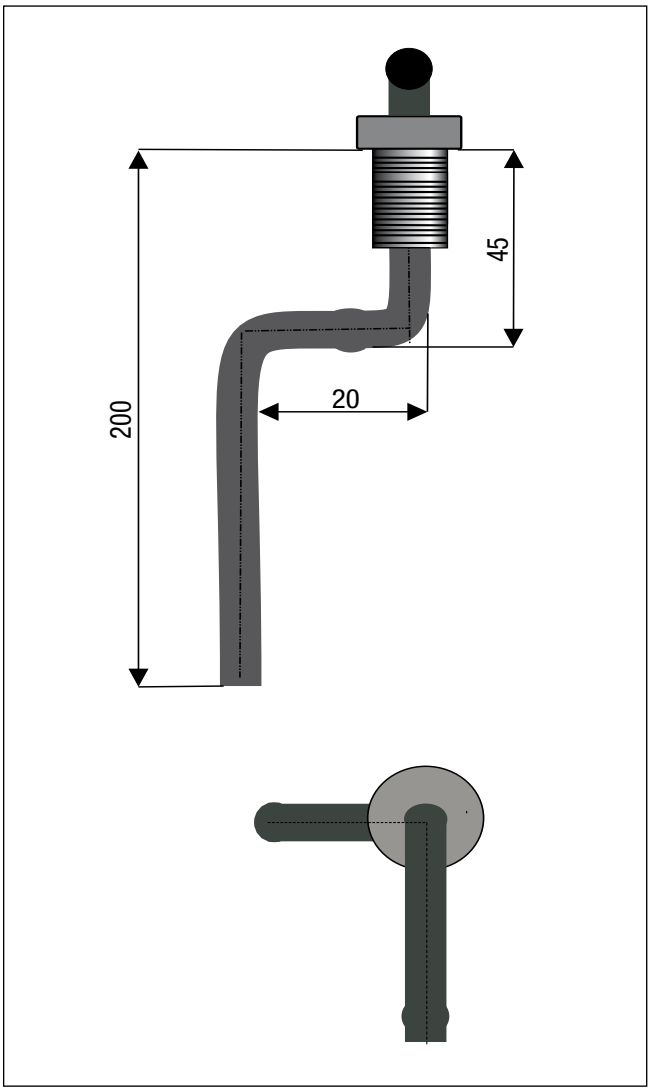


Figure 63

Please note!

The tank fitting should not be removed for longer than 10 minutes because of expansion of the tank!
When drilling, ensure that no dirt gets into the tank or supply lines.

Remove the fuel tank according to the manufacturer's instructions.

Undo the plug-in connection and the fuel lines at the tank connection.
Remove the tank fitting from the tank opening by loosening the universal nut.

Make a hole Ø 8 mm in the top part of the tank fitting with the dimensions shown in the photo.

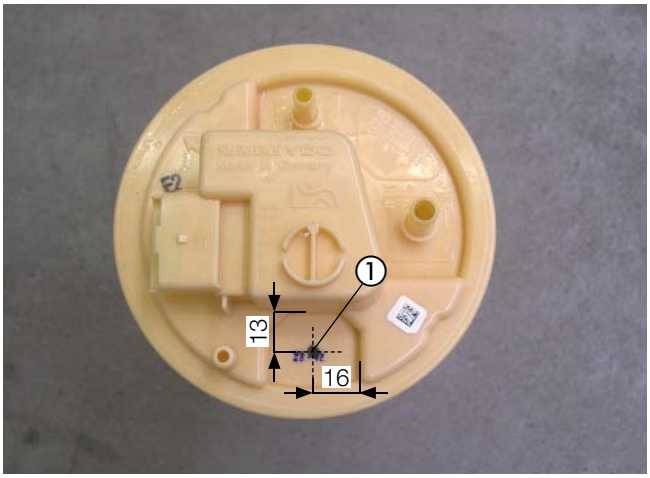


Figure 64

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

Please note!

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

6 Fuel supply

Take the prepared tank extractor through the drilled hole, screw tight with the M8 nut and align as shown.

Please note!

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

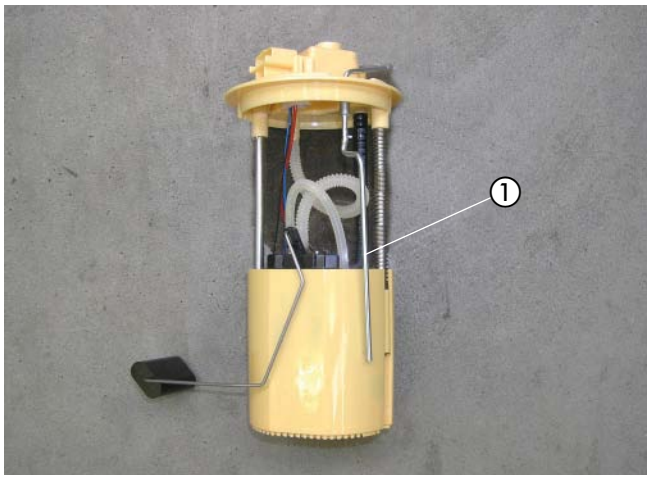


Figure 65

① Fuel tank extractor mounted

Insert the tank fitting in the tank and fasten with the union nut; ensure the seal fits properly.
Reconnect the plug-in connection and the fuel lines at the tank fitting.

Connect the 4 x 1 mm Ø fuel pipe with 3.5 x 3 mm Ø fuel hose, length 50 mm, to the intake connection of the tank extractor, route it along the vehicle's fuel lines as shown and secure with cable ties.

Secure the connection points with 9 mm Ø hose clips.

Re-install the fuel tank.

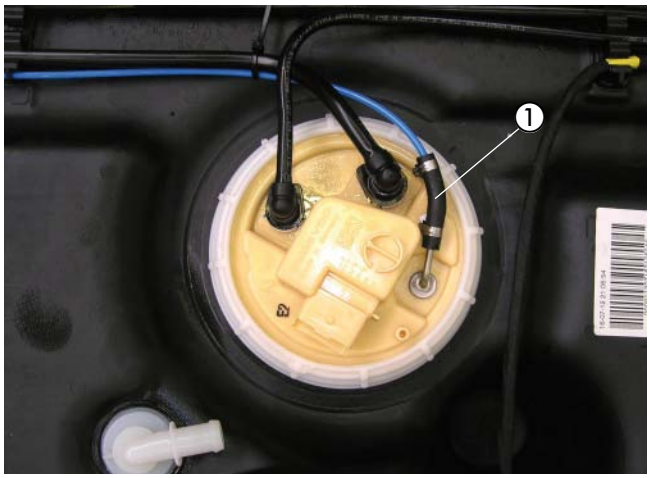


Figure 66

① Fuel tank extractor connected

6 Fuel supply

Install and connect the metering pump
(see photos 67 to 69)

The installation position for the metering pump is located to the left of the tank at the rear opening of the left chassis beam.
Insert the metering pump in the rubber holder and screw the rubber holder to the holder stud bolt using an M6 nut and B6 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.

Prepare the holder for the metering pump as shown in photo 45 and insert in the opening.
Screw the two M6 x 25 screws to the holder.

Route the 4 x 1.25 mm Ø fuel pipe from the heater together with the metering pump cable along the fuel lines on the left underside of the vehicle to the metering pump.
Cut the 4 x 1.25 mm Ø fuel pipe to the required length and fasten with cable ties or clip into the holders.
Connect the 4 x 1.25 mm Ø fuel pipe with 3.5 x 3 mm Ø fuel hose, length 50 mm, to the discharge end of the metering pump using two 9 mm Ø hose clips.

Remove the mating connector of the metering pump connection at the metering pump cable.
Remove the dummy plugs from the mating connector.
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 metering pump intake connection with the 3.5 x 3 mm Ø fuel hose elbow, using two 9 mm Ø hose clips.
Secure the fuel hose elbow to the vehicle's brake 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.

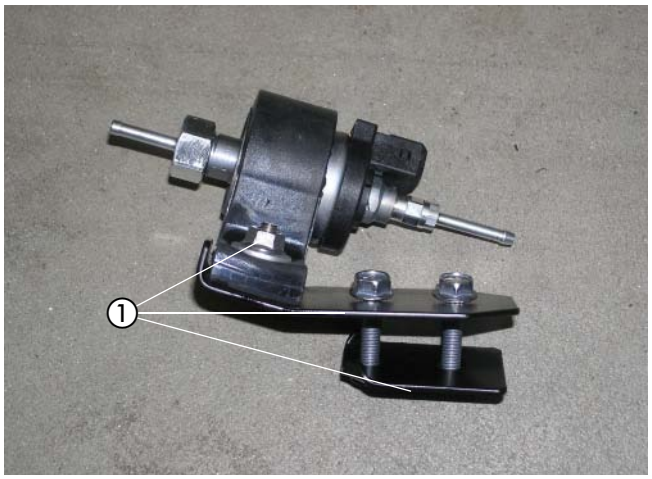


Figure 67

① Metering pump mounted on the holder

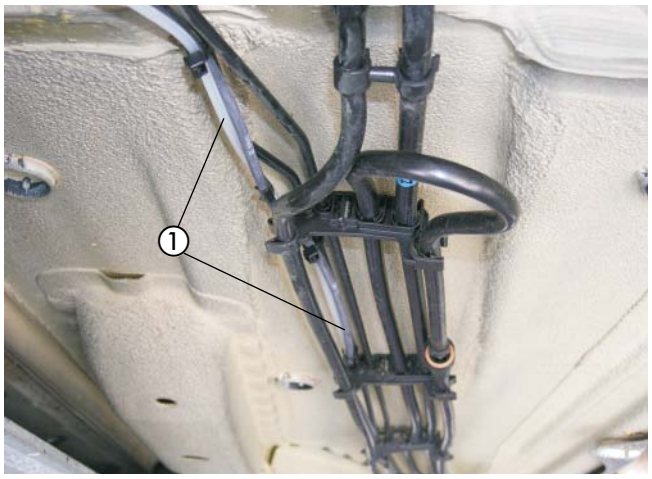


Figure 68

① Fuel pipe 4 x 1.25 mm Ø and metering pump cable laid

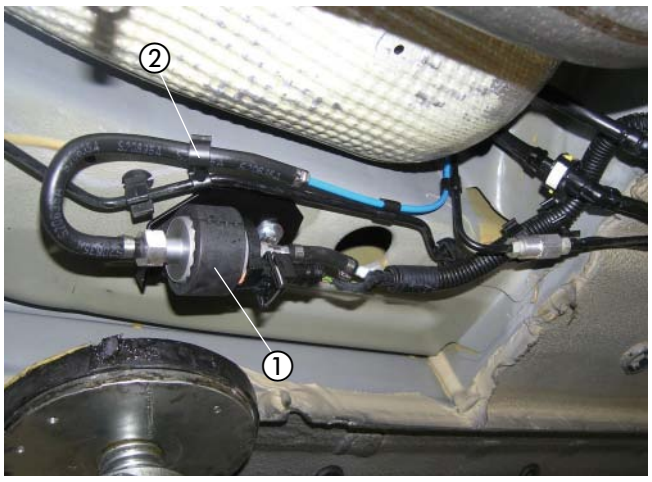


Figure 69

① Metering pump installed and connected
② Line holder, rotatable, mounted

6 Fuel supply

Adhere the "fuel tank" sticker
(see photo 70)

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

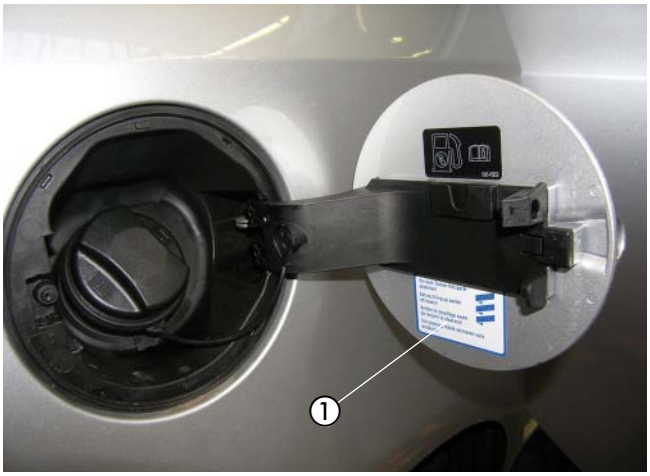


Figure 70

① "Refuel" label adhered

7 After installation

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.

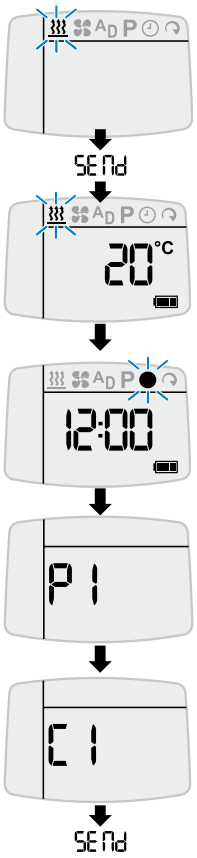
Starting up the heater

- 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**.

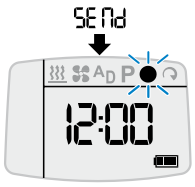
Confirm menu **P1** with OK.

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

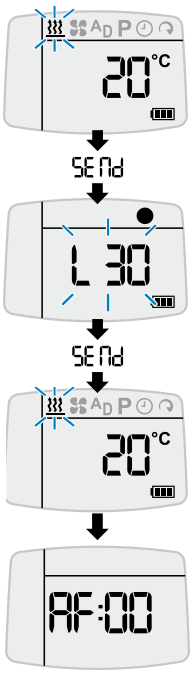
Perform heater diagnosis

Activate mobile unit

Confirm symbol with OK.

Heater is switched on.

Confirm operating time with OK.



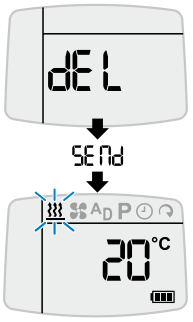
and : simultaneously press briefly.

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.

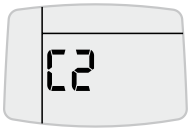
  Press OK again.

  The diagnosis is completed.



Display system configuration

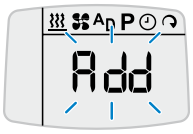
Select submenu **C2** as described on page 8.
After they have been conformed with OK, the individual menu items are displayed step by step.



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

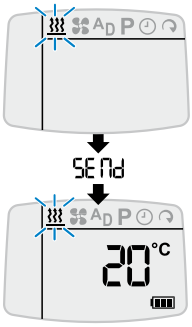
- Press the pushbutton installed in the vehicle until the pushbutton's LED begins to flash.
- Activate mobile unit.
- Select Add symbol using or and confirm with OK.
  The additional mobile unit has been taught.



Reset function

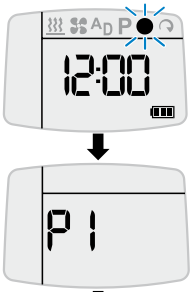
The reset function is used to reset the radio remote control to the factory settings.

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

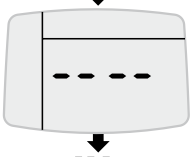


Select symbol using or . then briefly press **and simultaneously**.

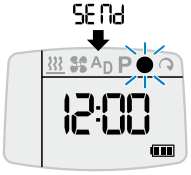
Menu **P1** is displayed.



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		13438560
	Hose holder, rotatable, 22-24	2	
	Hose holder, rotatable, 4.3-5	2	
	Holder 4.3-10	3	
	Hex screw M6 x 20	4	
	Hex screw M6x12	5	
	Hex screw M6x30 DIN933	1	
	Hex screw M6x25	3	
	Hex screw M6x50 DIN931	1	
	Washer Ø6.4x18 ISO7093	15	
	Collar nut M6	9	
	Fillister head screw M4x10 DIN7985	4	
	105° connector	1	
	Tank connection	1	
	Hose, 3.5x3	2	
	Fuel hose	1	
	Holder, metering pump	1	
	Holder, water pump	1	
	End cap	1	
	Silencer	1	
	Exhaust pipe, double walled, with end sleeve 300 mm	1	
	Exhaust pipe, double walled, 350 mm	1	
	White heat shield	1	
	Pipe clip Ø28 b=15 "Norma" not rubberised	2	
	Hose clamp Ø26-28mm W=16mm VA	3	
	Fuel air hose	1	
	Cable ties L = 200 mm	90	
	Edge protection, small	0.1m	
	Screw clamp (diameter 9 mm), 8 ea.	1	
	Butt-type connector, red	1	
	Screw clamp 16-25	9	
	Screw clamp 20-32	1	
	Radio remote control	1	
	Damping rubber	4	
	Spacer	2	
	Connector 15/15	2	
	Pipe clip rubberised Ø25 W=15mm M6	3	
	Rivet nut M6	2	
	Countersunk fillister head screw 2.9x25 DIN7983	1	
	Rubber stopper	1	
	Hose 180° (diameter 15 mm)	1	
	Washer Ø4.3x12 DIN9021	2	
	Fuel line blue (4x1)	1m	
	Fuel line transparent (4x1.25)	4m	
	Metering pump top bracket	1	
	Metering pump bottom bracket	1	
	Self-tapping screw DIN7981-B 3.9x9.5	4	
	Screw, heater M6x25-10.9 (ISO 898-1)	2	
	Screw, heater M6x16-8.8 (DIN 7500)	1	
	Main cable set	1	
	Extension cable	1	
	Installation instructions JE German	1	
	Installation instructions JE English	1	

8 Parts overview

No.	Designation	Quantity	Order number
1	Vehicle-specific additional parts		13438560
	Relay 20A N/O contact mini	1	
	Emergency button	1	
	Insulation	1	
	Collar screw ST5x20	1	
	Clamp nut, pale blue EJOT	1	
	Heater holder	1	
	Fuse holder	1	
	Exhaust holder	1	
	Control box	1	
	FFB holder	1	
	HOSE HEATER INLET	1	
	Spacer horn, parking heater 4470	1	
	HOSE HEATER INLET AT COOLING FLOW	1	
	Self-adhesive friction protection foil 45x120mm	1	
	Seal, tank module	1	
	Spacer sleeve h=30mm Ø15x6.5 aluminium	1	
	Holder 4.3-22	2	
	OM parking heater German, KTA9934	1	
	OM parking heater Europe, KTA9935	1	