D	Änderungen bezüglich Konstruktion, Ausstattung, Farbe sowie Irrtum vorbehalten. Angaben und Abbildungen unverbindlich.
GB	Subject to change in terms of construction, equipment and colour, and may contain errors. The information and illustrations are non-binding.
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.
NL	Wijzigingen met betrekking tot constructie, uitvoering en kleur evenals vergissingen voorbehouden. Gegevens en afbeeldingen niet bindend.
DK	Ændringer med hensyn til konstruktion, udstyr, farver samt fejl forbeholdes. Oplysninger og illustrationer er uforpligtende.
	Endringer angående konstruksjon, utstyr, farge og feiltagelse forbeholdes. Opplysninger og illustrasjoner uforbindtlig.
S	Med reservation för ändringar vad det gäller konstruktion, utrustning, färg samt för misstag. Uppgifterna och bilderna är inte bindande.
FIN	Pidätämme oikeuden rakennetta, varustusta, väriä koskeviin sekä erehdyksestä johtuviin muutoksiin. Tiedot ja kuvat eivät ole sitovia.
(IS)	Breytingar í tengslum við samsetningu, tengihluti og lit verða gerðar ef um galla er að ræða. Upplýsingar og myndir án ábyrgðar.
	Con riserva di modifiche relative a progettazione, dotazione, colore ed errori. Le indicazioni e figure sono fornite sensa impegno.
E	Reservadas las modificaciones respecto a diseño, equipamiento, color, así como error. Indicaciones y figuras sin compromiso.
\bigcirc	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.
GR	Διατυπώνουμε κάθε επιφύλαξη ως προς αλλαγές σε σχέση με κατασκευή, εξοπλισμό, διαρρύθμιση, χρωματισμούς και λάθη παραδρομής.
CZ	Změny, týkající se konstrukce, vybavení, barvy, jakož i omyly jsou vyhrazeny. Údaje a vyobrazení jsou nezávazné.
PL	Zastrzega się prawo do zmian dot. konstrukcji, wykończenia, kolorystyki oraz pomyłek. Dane i ilustracje niewiążące.
TR	Tasarım, donanım ve renk bakımından değişiklik yapma hakkı ve hata ve eksiklik mahfuzdur. Veriler ve resimler bağlayıcı değildir.
H	A szerkezet, a kivitel és a szín változtatása, valamint a változások joga fenntartva. Az adatok és az ábrák nem kötelelző érvényűek.
HR	Pravo promjena u svezi konstrukcije, opreme, boje kao i zabune oridžavamo. Podaci i ilustracije su neobavezne.
SER	Права промене у вези конструкције, опреме, боје као и погрешки продржана. Подаци и слике су необавезујући.
BUL	Запазени права по отношение на конструкцията, обзавеждането, џвета и грешки. Данните и изображенията не са обвързващи.
RO	Ne rezervăm dreptul unor modificări ale construcțieu, dotării, culorii și dreptul la erori Datele indicate și imaginile sunt orientative.
RUS	Права на внесение иэменений относительно конструкции, оснащения, окраски, а также на ошибки сохраняются. Данные и иллюстрации имеют примерный характер.
(LT)	Pasiliekama konstrukcijos, įrangos bei reikmenų, spalvos pakeitmų ir klaidų teisė. Duomenys ir ilistracijos neįpareigojantys.
LV	Tiek paturētas tiesības uz konstrukcijas, iekārtu, krāsu izmaiņām, kā arī kļūdīšanos. Dati un attēli bez saistībām.
EST	Konstruktsiooni, varustuse ja vœrvi osas muudatused ning eksimine lubatud. Andmed ja joonised on mittesiduvad.
(SLO)	Zadržana pravica do sprememb glede konstrukcije, opreme, barve ter pomote. Podatki in slike so neobvezne.
SK	Zmeny, ktoré sa týkajú konštrukcie, vybavenia, farby, ako aj omyly sú vyhradené. Údaje a zobrazenia sú nezáväzné.
\bigcirc	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。
ROK	구조, 장치, 색채와 그의 오류점의 변경 보류함. 지시 사항과 사진들에 관해 책임을 지지 않음.
THA	อาจมีการเปลี่ยนแปลงแก้ไขในแง่ของโครงสร้าง อุปกรณ์ และสิ และอาจมีข้อผิดพลาดได้ ข้อมูลและภาพประกอบไม่ถือเป็นข้อผูกมัด
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	保留設計、配置、額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。

D	Einbauanleitung/nur Händlereinbau
0	
GB	Installation instructions / Dealer installation only
F	Consignes de montage / Montage uniquement par le concessionnaire
NL	Montagehandleiding / Montage alleen door dealers
ØK	Montagevejledning / Montage kun hos forhandleren
	Monteringsinstruksjon / Montasje kun hos forhandleren
S	Installationsanvisning / Får endast monteras av återförsäljaren
FIN	Asennusohje / Asennus vain myyntiliikkeen toimesta
IS	Samsetningarleidbeiningar/samsetning einungis af hálfu söluadila
	Istruzioni per il montaggio/Installazione solo presso la concessionaria
E	Instrucciones de montaje / Instalación exclusiva por el distribuidor
P	Instruções de montagem / Montagem só no concessionário
GR	Οδηγίες εγκατάστασης/Συναρμολόγηση μόνο από εμπόρους
CZ	Návod k montáži / Montá pouze prodejcem
PL	Instrukcja montażu / Montaż tylko u dealera
TR	Montaj talimati / Sadece satici tarafında monte edilir
H	Beépítési útmutató / Csak a kereskedő építheti be
HR	Upute o ugradnji / Ugradnja samo od strane trgovca
SER	Упутство эа уградњу / Уградња само преко трговца
BUL	Инструкция за монтаж / Монтажът може да се извърши само от търговеца
RO	Instrucțiuni de montaj / Se va monta numai de către dealer
RUS	
Ľ	Montavimo informacija / Montuoja tik prekybininkas
ĽV	lemontēšanas pamācība/Tikai pārdevēja iebūve
EST	
(SLO	
SK	Montážny návod / Montá iba obchodníkom
J	
ROK	
THA	
VR	
VR	安裝說明書 / 僅供銷售商安裝用

9 272 866 07/13

4

HYDRONIC







24 8414 90 10 00 07	2013 We re	serve the right to make changes	Printed in Germany	© J. Eberspächer GmbH & Co. KG	

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 by authorised and trained persons according to the specifications in the technical documents and repaired using original spare parts. 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 I gasoline	103 / 140	6S		
1,4 I gasoline LPG	103 / 140	6S		
1.61	85 / 115	6S		
1.6 I (T)	132 / 180	6S		
1.81	103 / 140	6S		
2.81	191 / 260	6S / Aut. 4x4		

6S = 6-gear manual gearbox

Aut. 4x4 = automatic gearbox, 4-wheel drive

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.





Parts required for installation

Quantity/Designation	Order No.
(1) Vehicle-specific installation kit:	
1 Vehicle-specific installation kit *	I F
JE No.	24 8414 00 00 00
GM No.	13343695
	1
(2) Heater:	1
1 Hydronic B5W S	1
JE No.	¦ 20 1918 99 02 00
GM No.	13343693

Special tools required

- Torque wrench (5....50 Nm)
- Anti-corrosion agent
- Tool for undoing the tank fitting (KM J-45722)
- Step drill
- 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
•	Vacuum pump on holder	7.5 Nm
•	Tank straps	20 Nm
•	Cardan shaft on	
	flange differential	29 Nm
٠	Exhaust system	18 Nm

Preparation on the vehicle

- Remove the shelf on the left
- Remove bottom instrument panel panelling
- Remove glove compartment
- Remove bottom right-hand instrument panel panelling
- Disconnect the battery
- Dismantle wiper pan with cover
- Dismantle air filter box with air intake pipe
- Dismantle the top engine panelling
- Remove the front bumper
- Dismantle the front right-hand wheel
- Remove right-hand, front wheelhouse panel
- Dismantle the bottom engine panelling
- Dismantle exhaust pipe
- Undo Cardan shaft and lower to the centre bearing
- Remove the tank
- Remove the air filter
- Depressurise the cooling system
- Drain coolant

Please note!

Comply with the manufacturers' guidelines/instructions during dismantling.



Prepare the installation position

(see photo 1)

Make a drillhole \emptyset 8.5 mm in the right-hand side member according to the dimensioning in the photo.

Remove the existing screw $M12 \times 40$ as shown in the photo.

Please note!

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

Pre-assemble the unit bracket

(see photos 2 and 3)

Use two screws M6 \times 16 to fix the exhaust silencer holder to the unit bracket.

Insert three rubber buffers and a spacer sleeve (note installation direction) as shown in the photo.



Photo 1

- 1) Drilled 8.5 mm Ø hole
- ② Remove existing M12 x 40 screw
- ③ Bottom fixing point of the unit bracket



Please note!

The buffers must be fitted with the large support surface from the outside.

Insert a rubber buffer and a spacer sleeve into the front unit bracket (note installation direction).



- 1) Unit holder
- Exhaust silencer holder
- ③ Rubber buffers inserted
- (4) Spacer sleeve inserted





① Front heater bracket installed

Rubber buffer with spacer sleeve

2 Installation - Heater

Premount heater and affix duplicate nameplate

(see photos 4 and 5)

Remove the duplicate nameplate from the heater.

Insert the heater in the unit bracket and use the Torx screw M6 x 130, to screw a hexagon nut with collar M6 and the front unit bracket with 9 Nm.

Insert the water pump in the rubber holder and use one nut M6 and one body washer B6 to fix to the threaded bolt of the unit bracket.

Connect the short water hose to the discharge connection of the water pump and to the water intake connection of the heater.

Please note!

The M6 x 130 torx screw must be inserted from the wheel arch liner to the front in the direction of travel.

Deface the inapplicable dates to make them illegible.

Affix the duplicate nameplate to the B pillar on the driver's side as shown.



Photo 4

- Water pump mounted
- (2) Front heater bracket installed
- ③ Water hose connected



Photo 5

 Duplicate nameplate attached to the B-pillar on the driver's side



Photo 6

- ① Screw M12 x 45 fitted
- Screw M6 x 12 fitted
- ③ Heat plate fitted

Install heater

(see photo 6)

Position the preassembled heater on the side member, at the same time, feed the rear threaded bolt of the unit bracket into the drillhole \emptyset 8.5 mm made and bolt with a nut M8.

Use the new screw M12 x 45 to fix the front unit bracket to the right-hand side member with 100 Nm.

Screw a screw M6 x 12 into the bottom fixing point.

for vehicles with vacuum pump

To make it easier to install the heater, remove the vacuum pump.

Push the heat guard onto the bent hose of the vacuum pump and secure with the two inserted rivets.

3 Exhaust and combustion air system



Install and connect exhaust silencer (see photos 7 to 9)

Cut the exhaust pipe to a length of 120 mm.

screw M6 x 16 and body washer B6.

Shape the exhaust pipe as shown in the photo and connect to the inlet connection of the exhaust silencer.

Cut the exhaust pipe end to a length of 110 mm.

Shape the exhaust end pipe as shown and connect to the outlet connection of the exhaust silencer.

Mount the prepared exhaust silencer onto the bracket using a

Use a pipe clamp to connect the exhaust pipe to the outlet

The arrow for the direction of flow through the exhaust silencer points to the right.



Photo 7

- Exhaust silencer
- Mounted exhaust pipe
- ③ Exhaust end pipe installed



Photo 8

(1) Exhaust silencer installed



Photo 9

 ABS line fixed to the air conditioning line with two cable ties

Please note!

connection of the heater.

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

Use two cable ties to secure the ABS line to the air conditioning line as shown in the photo.



Make drillhole for exhaust end pipe and cut out righthand engine underbody panelling

(see photos 10 and 11)

Mark the drillhole for the exhaust end pipe on the right-hand side of the engine underbody panelling according to the dimensions shown in the photo and drill with \emptyset 50 mm.



Photo 10

1) Hole drilled for exhaust pipe end



Photo 11

① Cut out right-hand sub-cowling

Existing 7 mm Ø hole



Photo 12

Combustion air pipe installed
 Combustion air pipe installed

Cable ties

Cut out the right-hand engine underbody panelling with the dimensions shown in the photo.

Install combustion air pipe

(see photo 12)

Use a hose clip Ø 16 - 25 mm to connect the combustion air pipe to the heater and lay upwards in the protected area of the front cross member.

Use cable ties to fix the combustion air pipe to the intake air pipe.

Please note!

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

Water circuit





Diagram 1

Disconnect water flow hose in vehicles with 1.4, 1.6 I and 1.8 I cubic capacity

(see photo 13)

Cut through the vehicle's water feed hose (upper hose at heat exchanger connection) with the dimensions as shown.

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





① Cutting point in the water flow hose

Water circuit

Lay the water hoses and connect in vehicles with 1,4 l cubic capacity (see photos 14 to 21 and diagram 1)

Connect the water hose from the engine to the water pump to the intake connection of the water pump.

Connect the water hose from the heater to the heat exchanger to the water outlet connection of the heater.

Lay the water hose group above the right-hand engine bearer bearing in the bend to the right-hand side member.





Photo 14

- (1) Water hose from the engine to the water pump
- ② Water hose from heater to the heat exchanger



Photo 15

① Water hose from heater to the heat exchanger Cable tape 2



Photo 16

- (1) Fixing point with spacer sleeve, length 18 mm
- (2) Water hoses secured with cable ties
- (3) Plastic holder 4.3-22

Use a cable strap to fix the water hose from the heater to the heat exchanger to the air conditioning line as shown in the photo.

Use cable ties to secure the water hoses to each other and to the vehicle's cable loom.

Make the hole Ø 6.5 mm in the side member for the front fixing of the water hoses as shown in the photo.

Fix the water hose from the engine to the water pump using a rubberised clip Ø 28 mm, the screw M6 x 40 and the spacer sleeve, length 18 mm.

To ensure adequate spacing, latch the water hose and the brake line on the two sides of the plastic holder 4.3-22.

Please note!

When laying the water hoses, ensure they are at a sufficient distance from moving vehicle parts.



Drill another 6.5 mm \emptyset hole in right-hand side member according to the dimensioning shown in the photo. Use the 28 mm \emptyset rubberised clip and an M6 x 16 screw to fix the water hose from the heater to the heat exchanger at the drilled 6.5 mm \emptyset hole.





Photo 17

- 1) 6.5 mm Ø hole
- Rubberised clip Ø 28 mm
- 3 Water hose from heater to the heat exchanger



Photo 18

 Rubberised clip 28 mm Ø mounted to the right-hand side member



Photo 19

- ① Water hose group
- Cable tape

Please note!

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

Insert the plastic speed nut with foam ring into the square hole punched in the right-hand side member.

Fix the water hose from the heater to the heat exchanger (the bottom hose in the hose group) using a rubberised clip \emptyset 28 mm, a body washer and a plain washer 5.3.

Lay the water hose group behind the air conditioning pipes, along the engine partition and upwards.

Guide the water hose group upward and lay it along the engine partition up to the water disconnection point.

Use a cable strap to secure the water hose group to the air conditioning line.



Use rotatable three hose holders to fix the two water hoses to each other and to the air conditioning line.





Photo 20

① 3 x hose holders, rotatable

Pre-fill both water hoses with coolant.

Connect the water hose from the engine to the water pump with the reducer Ø 20/18 mm to the disconnected water flow hose.

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

Use a cable strap to hold the water hoses together.



Photo 21

① Water hose from the engine to the water pump

- (2) Water hose from heater to the heat exchanger
- ③ Cable tape



Lay the water hoses and connect in vehicles with 1.6 I and 1,8 I cubic capacity

(see photos 22 to 31 and diagram 1)

Connect the water hose from the engine to the water pump to the intake connection of the water pump.

Connect the water hose from the heater to the heat exchanger to the water outlet connection of the heater.

Lay the water hose group above the right-hand engine bearer bearing in the bend to the right-hand side member.



Photo 22

Water hose from the engine to the water pump
 Water hose from heater to the heat exchanger

ing line as shown in the

Photo 23

Water hose from heater to the heat exchanger
 Cable tape



- Photo 24
- 0 Water hose from the engine to the water pump
- ② Fixing point with spacer sleeve, length 18 mm

Use a cable strap to fix the water hose from the heater to the heat exchanger to the air conditioning line as shown in the photo.

Make the hole Ø 6.5 mm in the side member for the front fixing of the water hoses as shown in the photo.

Fix the water hose from the engine to the water pump using a rubberised clip Ø 28 mm, the screw M6 x 40 and the spacer sleeve, length 18 mm.

14



Make a drillhole \varnothing 6.5 mm in the right-hand side member with the dimensions shown in the photo.

Lay the water hose group along the right-hand side member up to the engine partition.

Use the rubberised clip Ø 28 mm and a screw M6 x 16 to fix the water hose from the engine to the water pump at the hole Ø 6.5 mm made.

To ensure adequate spacing, latch the water hose and the brake line on the two sides of the plastic holder 4.3-22.

Please note!

When installing the water hoses, ensure they are at a sufficient distance from moving vehicle parts.

Drill another 6.5 mm \emptyset hole in right-hand side member according to the dimensioning shown in the photo. Use the 28 mm \emptyset rubberised clip and an M6 x 16 screw to fix the water hose from the heater to the heat exchanger at the drilled 6.5 mm \emptyset hole.

for vehicles with OPC

To drill the 6.5 mm \emptyset hole, remove the plug-in connection for the sport suspension from the holder.

Please note!

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

Insert the plastic speed nut with foam ring into the square hole punched in the right-hand side member.

Fix the water hose from the heater to the heat exchanger (the bottom hose in the hose group) using a rubberised clip \emptyset 28 mm, a body washer and a plain washer 5.3.





Photo 25

- ① Water hose from the engine to the water pump
- (2) Rubberised clip Ø 28 mm
- ③ Plastic holder 4.3-22
- ④ Cable tape



Photo 26

- 1 6.5 mm Ø hole
- ② Rubberised clip Ø 28 mm
- ③ Water hose from heater to the heat exchanger



Photo 27

 Rubberised clip 28 mm Ø mounted to the right-hand side member



4 Water circuit

Guide the water hose group upward and lay it along the engine partition up to the water disconnection point.

Use a cable strap to secure the water hose group to the air conditioning line.



Photo 28

- ① Water hose group
- Cable tape





① 3 x hose holders, rotatable



Photo 30

- ① Water hose from the engine to the water pump
- ② Water hose from heater to the heat exchanger
- ③ Cable tape

each other and to the air conditioning line.

Use three rotatable hose holders to fix the two water hoses to

Pre-fill both water hoses with coolant.

Connect the water hose from the engine to the water pump with the reducer Ø 20/18 mm to the disconnected water flow hose.

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

Use a cable strap to hold the water hoses together.



Use a plastic holder 4.3-22 to fix the water hose from the engine to the water pump to the brake line as shown in the photo.

Please note!

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

Lay the water hoses and connect in vehicles with 2,8 I cubic capacity (see photos 32 to 40 and diagram 1)

Connect the water hose from the engine to the water pump to the intake connection of the water pump.

Connect the water hose from the heater to the heat exchanger to the water outlet connection of the heater.

Lay the water hose group above the right-hand engine bearer bearing in the bend to the right-hand side member.

Use a cable strap to fix the water hose from the heater to the heat exchanger to the air conditioning line as shown in the photo.

Use cable ties to secure the water hoses to each other and to the vehicle's cable loom.





Photo 31

- (1) Water hose from the engine to the water pump
- (2) Plastic holder 4.3-22



Photo 32

① Water hose from the engine to the water pump ② Water hose from heater to the heat exchanger



Photo 33

① Water hose from heater to the heat exchanger Cable tape





Fix the water hose from the engine to the water pump using a rubberised clip Ø 28 mm, the screw M6 x 40 and the spacer sleeve, length 18 mm.

To ensure adequate spacing, latch the water hose and the brake line on the two sides of the plastic holder 4.3-22.

Please note!

When laying the water hoses, ensure they are at a sufficient distance from moving vehicle parts.

for vehicles with 2,8 I - engine without OPC

Drill another 6.5 mm \emptyset hole in right-hand side member according to the dimensioning shown in the photo. Use the 28 mm \emptyset rubberised clip and an M6 x 16 screw to fix the water hose from the heater to the heat exchanger at the drilled 6.5 mm \emptyset hole.

Please note!

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

for vehicles with 2,8 I - engine with OPC

To drill the 6.5 mm \varnothing hole, remove the plug-in connection for the sport suspension from the holder.

Make the drillhole Ø 6.5 mm in the right-hand side member according to the dimensioning shown in the photo. Use the 28 mm Ø rubberised clip and an M6 x 16 screw to fix the water hose from the heater to the heat exchanger at the drilled 6.5 mm Ø hole.

Please note!

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



Photo 34

- (1) Fixing point with spacer sleeve, length 18 mm
- ② Water hoses secured with cable ties
- ③ Plastic holder 4.3-22





- ① 6.5 mm Ø hole
- Rubberised clip Ø 28 mm
- ③ Water hose from heater to the heat exchanger



Photo 35b

- 1 6.5 mm Ø hole
- ② Rubberised clip Ø 28 mm
- ③ Water hose from heater to the heat exchanger

4 Water circuit

Insert the plastic speed nut with foam ring into the square hole punched in the right-hand side member.

Fix the water hose from the heater to the heat exchanger (the bottom hose in the hose group) using a rubberised clip \emptyset 28 mm, a body washer and a plain washer 5.3.

Lay the water hose group behind the air conditioning pipes, along the engine partition and upwards.





Photo 36

 Rubberised clip 28 mm Ø mounted to the right-hand side member



Photo 37

- ① Vehicle water flow hose
- ② Water hose from the engine to the water pump
- ③ Water hose cut-off points



Photo 38

① Water hose from the engine to the water pump

Lay the water hose from the engine to the water pump to the connection at the engine.

Cut the vehicle's water flow hose after 140 mm and pull off the coupling at the heat exchanger connection (the top hose), the piece of hose is no longer required.

Cut the end of the water hose from the engine to the water pump after 240 mm.

Connect the water hose from the engine to the water pump with the reducer Ø 18/15 mm to the remaining piece of hose of the engine connection.



In 2010 models and later, the engine connection is made of plastic and is installed as shown in the photo.





Photo 39

① Engine connection made of plastic

Please note!

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

Prefill the water hose from the heater to the heat exchanger with coolant.

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

At the same time, use cable ties to secure the water hose in suitable places and to the vehicles return hose for water.



Photo 40

① Water hose from heater to the heat exchanger

Install the fuel tank extractor in vehicles with 1.4 I cubic capacity

(see photos 41 to 45 and diagram 2)

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 2





1) Move sticker

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



Photo 42

① Fuel tank extractor mounted





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



Photo 43

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





Fuel tank extractor



Photo 45

① Fuel pipe, Ø 4 x 1 mm, connected

Guide the tank extractor along the tank fitting as shown.

Insert the tank fitting in the tank again with a new seal (22682111) and fasten with the new clamping ring (10325852); ensure the seal fits properly.

At the intake connection of the fuel tank extractor, connect the 4 x 1 mm Ø fuel pipe with 3.5 x 3 mm Ø fuel hose, length 50 mm.

Secure the connection points with 10.5 mm Ø clamps.

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

Install the fuel tank extractor in vehicles with 1.6 I and 1.8 I cubic capacity

(see photos 46 to 48 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!

Make an 8 mm \emptyset hole in the top part of the tank fitting with the dimensions shown in the photo. Feed the fuel tank extractor through the hole made, align and screw tight with the nut M8 and body washer B8 from

Please note!

underneath.

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



Photo 46

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





① Fuel tank extractor mounted



Diagram 3

Insert the tank fitting in the tank again with a new seal (22682111) and fasten with the new clamping ring (10325852); ensure the seal fits properly.

At the intake connection of the fuel tank extractor, connect the fuel pipe Ø 4 x 1 mm with fuel hose Ø 3.5×3 mm, length 50 mm.

Secure the connection points with 10.5 mm $\ensuremath{\varnothing}$ clamps.

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



Photo 48

① Fuel pipe, Ø 4 x 1 mm, connected

Install the fuel tank extractor in vehicles with 2.8 I cubic capacity

(see photos 49 to 51 and diagram 4)

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!

Make an 8 mm \emptyset hole in the top part of the tank fitting with the dimensions shown in the photo.

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

Please note!

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



Diagram 4



Photo 49

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



Photo 50

① Fuel tank extractor mounted



part number: 13343695

5 Fuel supply

Insert the tank fitting in the tank again with a new seal (22682111) and fasten with the new clamping ring (10325852); ensure the seal fits properly.

At the intake connection of the fuel tank extractor, connect the fuel pipe \emptyset 4 x 1 mm with fuel hose \emptyset 3.5 x 3 mm, length 50 mm.

Secure the connection points with 10.5 mm Ø clamps.

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



Photo 51

① Fuel pipe, Ø 4 x 1 mm, connected

Lay fuel pipe with metering pump cable

(see photos 52 to 55)

Connect the fuel pipe Ø 4 x 1.25 mm to the heater with a 105° fuel hose elbow and a clamp Ø 10.5 mm.

Connect the 8 pin connector of cable loom 1 with the 8 pin flat connector housing of the heater's cable loom.

Use a cable strap to fix the 8-pin plug-in connection to the gusset plate of the right-hand wheel arch as shown in the photo.

Lay the fuel pipe $Ø 4 \times 1.25$ mm together with the metering pump cable underneath the right-hand headlight in the engine compartment and guide them further up to the right-hand side of the engine partition.



Photo 52

Fuel pipe, Ø 4 x 1.25 mm, connected
 8-pin plug-in connection fixed





① 2-pin connector of the water pump cable loom connected

Connect the 2-pin connector of the water pump cable loom to the water pump as shown in the photo.

Lay the cable in the short bend and secure with a cable tie to the connector.

part number: 13343695



Lay the fuel pipe $Ø 4 \times 1.25$ mm together with the metering pump cable further along the vehicle's fuel pipes to the right-hand side of the underbody.

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

Please note!







Photo 54

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

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.

Install and connect the metering pump

(see photo 56)

Insert the metering pump in the rubber holder and use the screw M6 x 25 and two body washers B6 to screw it into the existing hole of the right-hand side member, as shown in the photo.

Ensure it is installed with at least 15° rising gradient on the discharge side.

The discharge connection of the metering pump points towards the right.

Cut the fuel pipe Ø 4 x 1 mm from the tank extractor to the required length and connect to the intake side of the metering pump with fuel hose Ø 3.5×3 mm.

Cut the fuel pipe Ø 4 x 1.25 mm to the required length and connect to the discharge side of the metering pump with the 105° fuel hose elbow.

Slot the plug-in contacts of the metering pump cable into the mating connector, regardless of polarity, and connect to the metering pump.



Photo 55

(1) Fuel pipe Ø 4 x 1.25 mm and metering pump cable laid on the right-hand side of the underbody



Photo 56

Metering pump mounted
 Cable tape



Adhere the "fuel tank" sticker

(see photo 57)

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



Photo 57

1) "Refuel" label adhered

6 Electrics

Laying cable loom 1

(see photos 58 to 62 and diagram 5)

Make a drillhole \emptyset 20 mm in the wiper pan and a drillhole \emptyset 30 mm in the engine partition, as shown in the photo. To do this, expose the area in the interior.

Lay cable loom 1 through the cable penetration made in the wiper pan.

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.

Use two screws M4 \times 12 to mount the fuses at the fuse holder.

Mount the fuse holder on the existing fixing tab of the wiper pan using one fillister-head screw M6 x 25, two body washers B6 and one nut M5. Insert the body washers B6 between the wiper pan and the wiper pan cover.

Fix the earth cable to the earthing point as shown in the photo.



Photo 58

- ① Wiper tray cable penetration
- Sealed cable grommet in the engine partition



Photo 59 Cable loom 1

- ① Positive cable (fuse 30A)
- Metering pump cable
- (3) Connection, cable loom 2
- ④ Heater connection
- (5) Earth cable
- 6 Fuses

Please note!

When routing the cable looms, ensure that they are at a sufficient distance from hot vehicle and heater parts.

Use cable ties to fix the cable looms in suitable places.



Photo 60

Fuses installed

(2) Earth cable connected





Lay the positive cable in the wiper pan and guide it through the grommet on the left-hand side of the vehicle to the fuse block.

Use cable ties to fix the positive cable in suitable places.



Photo 61

 Positive cable in the wiper pan laid up to the fuse block on the driver's side



Photo 62a

① Fuse 30 A mounted, positive cable connected



Photo 62b

① Single 30 A fuse mounted

Remove the vehicle's 100 A fuse if not used, install 30 A fuse and connect the positive cable.

If the 100 A fuse is used (**quickheat system**), remove the positive cable from the fuse, insulate and tie back. Replace the 100 A fuse with the 30A fuse and connect the positive cable to the heater.

for vehicles without fuse box

Lay the positive cable in the wiper pan and guide it through the grommet on the left-hand side of the vehicle to the battery box.

Use a hexagon screw M5 x 16 and a nut M5 to fix the single 30A fuse with the fuse holder to the battery box as shown in the photo.

Crimp on a plug-in contact to the positive cable and latch it onto the fuse.

Crimp a cable lug A6 and a plug-in contact to cable 4 $\rm mm^2\,rt$ and latch onto the fuse.

Connect the cable 4 $\rm mm^2\,rt$ with cable lug A6 to the positive post of the battery.

6 Electrics

Laying cable loom 2

(see photos 63 to 72 and diagram 5)

Enlarge the drill hole in the holder to \emptyset 5.5 mm. Fit the relay block at the hole made using a screw M5 x 10. Insert the relay in the relay block. Use cable ties to fix the outgoing cable to the outer holes of the holder.

Use a screw M6 x 12 and a body washer B6 to mount the preassembled holder onto the left-hand instrument panel strut on the passenger's side.



Photo 63

Relay mounted on the holder



Photo 64

- (1) Connection, stationary part R⁺
- Relay block
- ③ SVM control box
- (a) Connection, cable loom 1
- (5) Temperature sensor R⁺
- 6 Button R⁺
- Connection, CAN bus (DLC connector)

Push on the two light-blue plastic nuts at the fixing points of the stationary part.

Insert the stationary part of the EasyStart $R^{\scriptscriptstyle +}$ in the holder and fix using two flat-head screws with collar ST 5 x 20.

From cable loom 2, connect the connector for the stationary part of EasyStart $R^{\scriptscriptstyle +}$ and the antenna cable to the stationary part of EasyStart $R^{\scriptscriptstyle +}.$

Feed the antenna cable to the right and lay 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 65

Holder for relay, SVM control box and EasyStart $\mathsf{R}^{\scriptscriptstyle +}$ stationary part mounted



Photo 66

1) Stationary part R⁺ mounted on the holder



6 Electrics

Use two screws 3.9 x 9.5 to mount the SVM control box on the holder. Connect the connector of cable loom 2 for the SVM control box.



Photo 67

① SVM control box mounted on the holder



Photo 68

Temperature sensor mounted
 Connection completed



Photo 69

1) Diagnostics cable 0.5 mm bl / ws

Mount the temperature sensor behind the glove compartment on the holder of the vehicle's cable loom.

Connect the blue connector (6-pin), the black connector (4-pin) and the grey connector (2-pin) with each other.

Lay the diagnostics cable 0.5 $\rm mm^2\,bl$ / ws near the airbag switch on the passenger side.



Make a hole \emptyset 16 mm as shown in the photo for the button in the glove compartment on the right-hand side.

Make two holes Ø 4.5 mm for the spacer-rubber plugs next to the button, as shown in the photo, and insert the spacer-rubber plugs in the holes.





Photo 70

- Button
- Spacer rubber plugs

In the area behind the glove compartment, wind insulating strips around all cables, as shown in the photo, and use cable ties to fix in suitable places.

Wind insulating strips around the cable 0.5 mm² gn / ws and lay it up to the DLC connector behind the shelf on the Driver's

Disconnect the cable 0.5 mm^2 gn at the 16-pin DLC connector (Pin 1) and use a red butt-type connector to tie in the cable 0.5 mm^2 gn / ws as shown in the photo.

side.



Photo 71

① Cables with insulating strips wound around them





0.5 mm² gn cable disconnected
 0.5 mm² gn / ws cable integrated



After installation

Install the heat shield and cover on the right-hand wheel arch housing

(see photos 73 to 75)

Lay the heat shield in line with the hole above the drillhole in the wheel arch liner and align as shown in the photo. Mark and make the four drillholes Ø 8 mm in the wheel arch liner.

Use four plastic plugs and four plain washers M8 to fix the heat shield at the holes made.

Use two flat-head screws, two body washers B6 and two hexagon nuts with collar M6 to fix the cover of the right-hand

Use two cable ties to fix the cover of the right-hand wheel arch housing to the fixing points and align as shown in the photo.

Make two drillholes Ø 6.5 mm in the right-hand wheel arch housing.

wheel arch housing as shown in the photo.





Photo 73

1) Heat plate

4 x plastic plugs with 4 x plain washers M8



Photo 74

- ① Cover of the wheel arch housing
- (2) Two 6.5 mm Ø holes drilled



Photo 75

 Cover of the wheel arch housing Cover fixing points



Install engine underbody panelling (see photo 76)

Install the right-hand engine underbody panelling and guide the exhaust end pipe through the hole.



Photo 76

- ① Engine underbody panelling
- 50 mm Ø hole
- ③ Exhaust pipe end

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 w symbol and the SE nd text appear briefly.



Select symbol (4) using a or

then briefly press and simultaneously.

Confirm menu **P1** with **OK**.



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

The submenu **C1** has been selected:

After the individual menu items have been set to of or on using or or or selected using or and confirmed with or, 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 deac- tivated).
	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 or 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	e.g. Parking air conditioning

Diagnostics



Perform heater diagnosis

Activate mobile unit

Confirm <u><u>*</u>** symbol with or.</u>

Heater is switched on.

Confirm operating time with OK.



86:00

dEl

SEINU

A_DP

Teach additional mobile unit

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



Reset function

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

b press until the menu bar appears in the display, then release the O key. The P symbol and the 5End text appear briefly.





2 St An F

P |

SEINU



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.

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) ок press.

Press or 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	

8 Parts overview



No.	Designation	Quantity	Order number
1	Vehicle-specific additional parts		13343695
	Unit holder	1	
	Unit bracket, front	1	
	Holder, exhaust	1	
	Holder, fuse	1	
	Relay holder, stationary part R ⁺ , SVM control box	1	
	Torx screw M6 x 130	1	
	Spacer sleeve, length 18 mm	1	
	Rubber buffer	4	
	Spacer sleeve	2	
	Hexagon screw M6 x 12	2	
	Hexagon screw M6 x 16	7	
	Hexagon screw M6 x 25	1	
	Hexagon screw M6 x 40	1	
	Spring washer B6	1	
	Hexagon nut M6	8	
	Body washer B6.4	8	
	Flat head screw with collar 3.9 x 9.5	2 2	
	Plastic nut, light blue	2	
	Flat head screw with collar ST 5 x 20	2	
	Fillister-head screw M5 x 25 Screw M5 x 10	2	
	Hexagon screw M5 x 16	1	
	Hexagon nut M5	5	
	Body washer B5	1	
	Fillister-head screw M4 x 12	2	
	Plain washer 8.4	4	
	Plain washer 5.3	2	
	Hexagon nut M8	1	
	Body washer B8	1	
	Body screw B4.8 x 19	1	
	Hexagon screw M12 x 45	1	
	Flat-head screws (wheel arch housing)	2	
	Screw 9 x 19-A2	1	
	Screw M8 x 40 (Cardan shaft)	3	
	Exhaust pipe with end sleeve	0.3 m	
	Exhaust clip	3	
	Foam strips	2	
	Butt-type connector, red	1	
	Hose holder, rotatable	3	
	Exhaust silencer	1	
	Combustion air tube	1	
	Hose clip, 16 -25 mm Ø	3	
	Moulded hose	1	
	Moulded hose 20 x 180° Ø	1	
	Holder, water pump	1	
	Reducer 20/18 mm Ø	1	
	Reducer 18/15 mm Ø	1	
	Clips, 20 - 32 mm Ø	6	
	Rubberised clip \emptyset 28 mm	4	
	Plastic holder 4.3 - 22	2 2 m	
	Fuel pipe, $4 \times 1 \text{ mm } \emptyset$		
	Fuel pipe, 4 x 1.25 mm Ø	5 m	
	Holder, metering pump	1	
	Gemi clip 10.5 mm Ø Fuel tank extractor	8	
	Fuel hose elbow 105°	2	
	Fuel hose elbow 105 Fuel hose 3.5 mm x 50 mm	2 0.05 m	
	Fuel hose 3.5 mm x 50 mm	0.05 m	
		0.00 m	1





No.	Designation	Quantity	Order number
1	Vehicle-specific additional parts		13343695
	Wheel arch housing cover	1	
	Cable loom 1	1	
	Cable loom 2	1	
	Spacer rubber plugs (button)	2	
	Relay 20A	1	
	Fuse 30A	1	
	SVM control box	1	
	Button	1	
	Easy Start R⁺	1	
	Cable ties	10	
	Cable ties	60	
	Cable ties	5	
	Sticker (refuelling)	1	
	Tank fitting seal	1	
	Tank fitting clamping ring	1	
	Plastic plug	4	
	Heat shield material (wheel arch housing)	1	
	Heat shield (vacuum pump)	1	
	Speed nut, plastic	1	
	Cable lug A6	1	
	Single fuse holder		
	Holding plate		
	Seal, yellow	2	
	Fuse contact 4 - 6 mm ²	2	
	Fuse 30A		
	Cable 4 mm ² red	0.2 m	