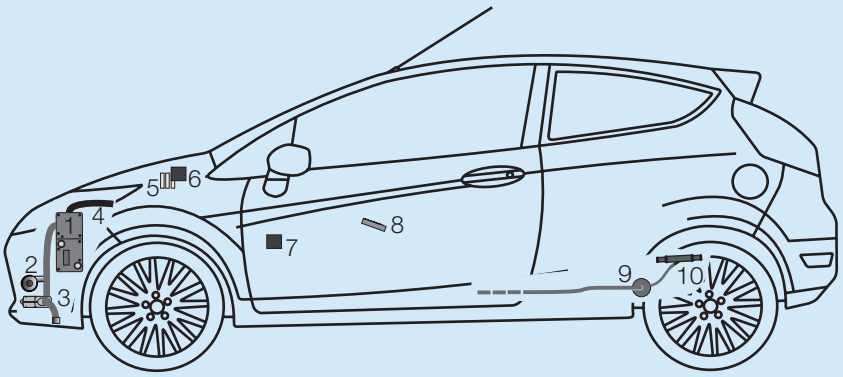
J. Eberspächer
GmbH & Co. KG
Eberspächerstr. 24
D - 73730 Esslingen

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

HYDRONIC B 4 W S in Ford Fiesta (JA8)

2008 model
with fog lights
with manual transmission
with manual air-conditioning or with automatic climate control
- **1,25 l cubic capacity / 4-cylinder-in-line engine Duratec / 44 kW - 60 HP**
- **1,25 l cubic capacity / 4-cylinder-in-line engine Duratec / 60 kW - 82 HP**
- **1,4 l cubic capacity / 4-cylinder-in-line engine Duratec / 71 kW - 96 HP**

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 it 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* B 4 W S
2	Water pump
3	Exhaust pipe with exhaust silencer
4	Combustion air tube
5	Fuse bracket
6	Fan relay
7	IPCU-module
8	EasyStart T
9	Metering pump
10	Y-piece for fuel tank extraction

Installation position
The *HYDRONIC* B 4 W S is fixed in the right-hand quarter bumper.
The exhaust stack faces to the right side, the controller upwards.

Installation time: approx. 6 h

Contents

		Page
1	Introduction	2
2	Installation - Heater	4
3	Exhaust - and combustion air circuit	6
4	Water circuit	9
5	Fuel supply	13
6	Electrics	15
7	After installation	22
8	Parts overview	23
9	Leaflet for the customer	25

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1 Introduction

Caution!
Safety instructions for installation and repair work!

Improper installation or repair of Eberspächer heaters can cause a fire or result poisonous exhaust entering the inside of the vehicle.
This can cause serious and even fatal risks.

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 read through carefully before / during installation and followed throughout.
Particular attention is to be paid to the safety instructions and general instructions.
The relevant rules of sound engineering practice and any information provided by the vehicle manufacturer are to be noted observed during the installation.
Eberspächer does not accept any liability for defects and damage due to installation by unauthorized 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 transmission versions		
cubic capacity	kW / HP	transmission
1,25 l Duratec	44 / 60	5S
1,25 l Duratec	60 / 82	5S
1,4 l Duratec	71 / 96	5S

5S = 5-speed manual 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, however, be possible.

1 Introduction

Parts required for the installation

Quantity	Designation	Order No.
1	*HYDRONIC* B 4 W S as complete kit	20 1866 05 00 00
1	Vehicle-specific additional parts	24 8380 00 00 00
In addition, a control is required:		
1	EasyStart T	22 1000 32 88 00
1	Bracket EasyStart T	22 1000 51 32 00
oder		
1	Radio remote control EasyStart R	22 1000 32 85 00
oder		
1	Radio remote control EasyStart R+	22 1000 32 80 00

Order the following additional components for vehicles with automatic climate control:

1	Air conditioning kit Ford Fiesta	24 8381 00 00 00

Special tools required

- torque wrench (5...50 Nm)
- corrosion inhibitor
- crimping tool
- drill

Tightening torques

If not 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

Fit all screwed connections, except those of the heater itself (M6 x 97), with a circlip (corrugated ring washer) or a split washer.

Preparations to the vehicle

- disconnect batterie
- remove glove compartment
- remove right-hand lining of the centre console
- remove cover of the gearshift lever
- depressurise the cooling system
- drain coolant into a clean catchment tank
- remove the front left and right wheelhouse lining
- remove the front bumper

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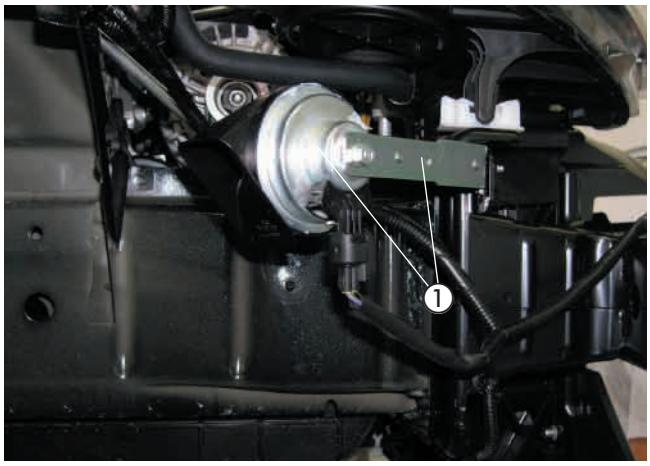
2 Installation - Heater

Prepare installation position
(see pictures 1 and 2)

Demount the signal horn and its bracket from the installation position.
The holder of the signal horn is no longer required.



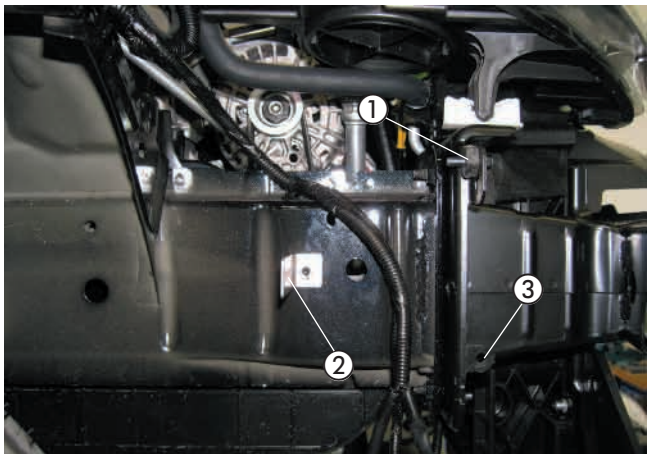
Picture 1

① signal horn and bracket

Screw a M6 anti-vibration buffer to the fixing point of the signal horn.

Mount the bracket (22 9000 50 15 00) to the existent stud bolt at the right main chassis beam by a M6 nut as shown in the picture.

Unlatch the cable harness of the signal horn and the fog lights from the mounting point.



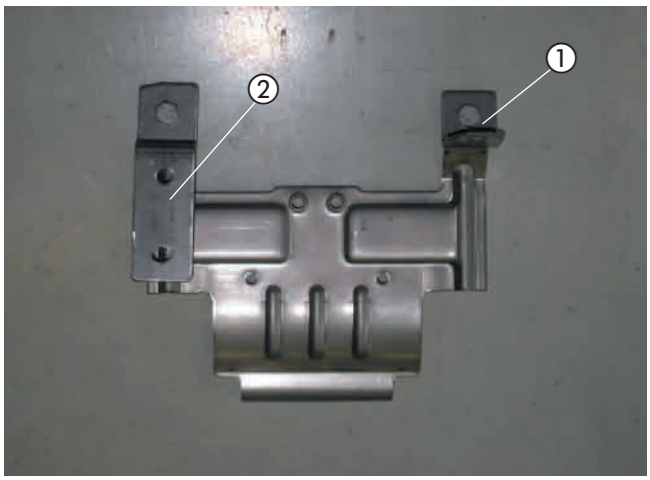
Picture 2

① anti-vibration buffer M6, mounted
② bracket (22 9000 50 15 00), mounted
③ lower mounting point of the heater bracket

Prepare and mount heater bracket
(see pictures 3 and 4)

Detach the lower fastening lug of the heater bracket.

Assemble the bracket (90°-angle) and the bracket (z-angle) by using M6 x 16 screws, according to the picture.



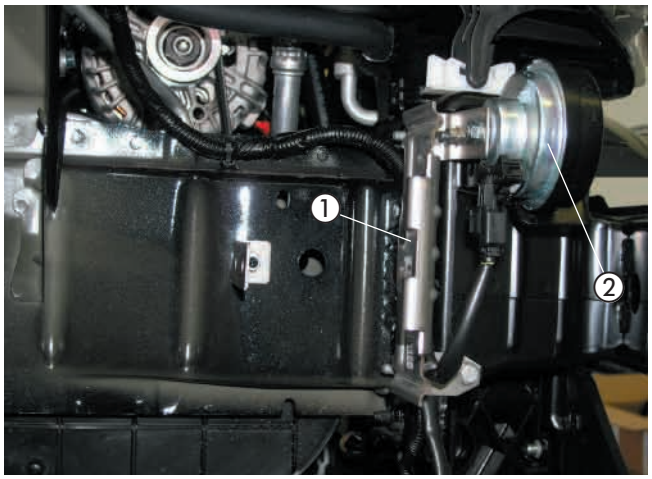
Picture 3

① bracket (90°-angle) 22 9000 50 63 02, assembled
② bracket (z-angle) 22 1000 50 64 00, assembled

2 Installation - Heater

Tighten the heater bracket to the M6 anti-vibration buffer by using a M6 nut and to the lower mounting point (see picture 2) by using a M6 x 16 screw.

Install the signal horn to the nonattached drill hole in the bracket (z-angle) by using a M6 nut.



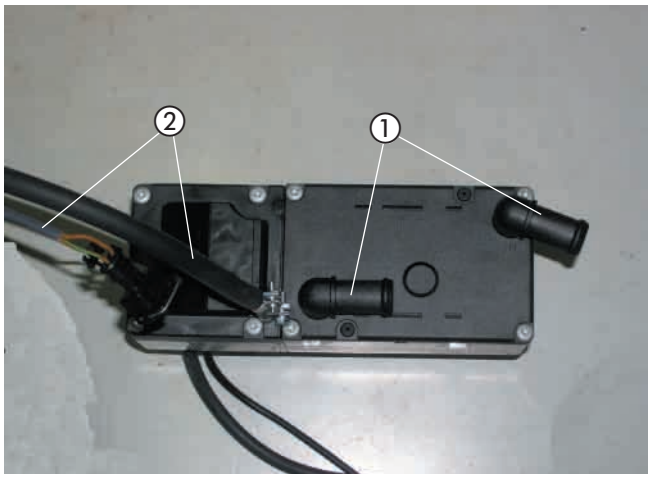
Picture 4

① heater bracket, installed
② signal horn, installed anew

Install heater
(see pictures 5 and 6)

Install the water pipe sockets of the heater as shown in the picture, see Technical Description, “Installation“ chapter, “Installation of the elbowed water pipe sockets“ section.

Cover the fuel pipe Ø 4 x 1.25 mm with sponge rubber hose, and connect it to the heater´s fuel socket, using the fuel hose, 3.5 x 3, approx. 50 mm long.
Additional, attach the metering pump cable to the connected fuel pipe Ø 4 x 1.25 mm.



Picture 5

① elbowed water pipe sockets, installed
② fuel pipe and metering pump cable, pre-assembled

Remove the duplicate rating plate form the heater.
Deface the dates which are not applicable.
Attach the duplicate rating plate in a suitable, clearly visible position in the engine compartment.

Insert the heater into the heater bracket and fix in the bottom threaded hole using the M6 x 97 fixing screw with $6^{+0,5}$ Nm.



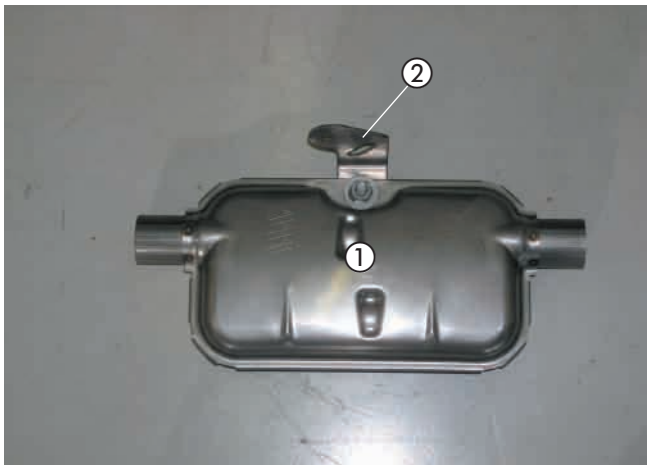
Picture 6

① heater, installed

3 Exhaust- and combustion air circuit

Install exhaust silencer 22 1000 40 09 00 and connect
(see pictures 7 to 10)

Mount the bracket (22 9000 50 95 02) to the exhaust silencer, using a M6 x 16 screw and a B6 large diameter washer, according to the picture.

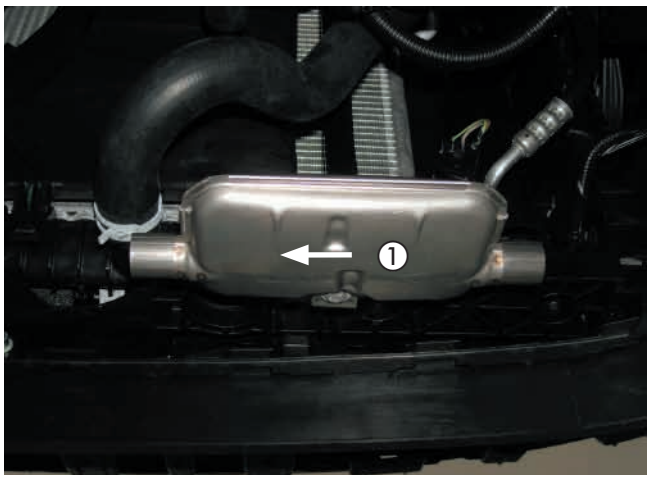


Picture 7

① exhaust silencer 22 1000 40 09 00
② bracket (22 9000 50 95 02)

Mount the pre-assembled exhaust silencer by using the existent M6 x 20 screw to the lower radiator cross beam, according to the picture.

The arrow on the exhaust silencer points to the left.



Picture 8

① exhaust silencer 22 1000 40 09 00, installed

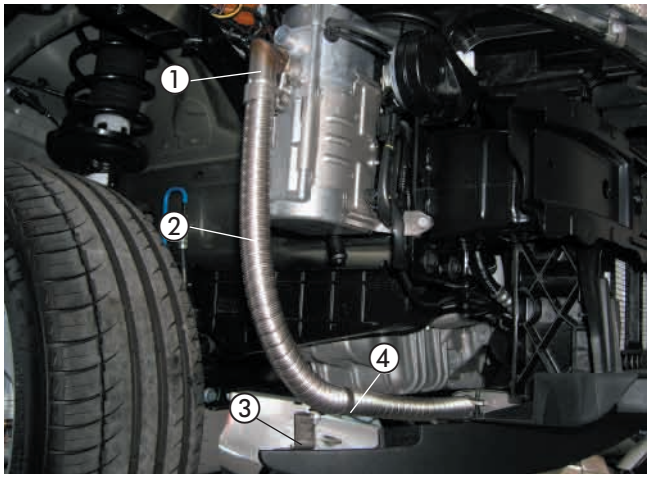
Connect the exhaust elbow to the exhaust outlet connection of the heater.

Cut the exhaust pipe to a length of 640 mm.

Connect the exhaust pipe each with a pipe clamp to the exhaust elbow and to the inlet connection of the exhaust silencer.

Install the bracket (z-angle) to the existent Ø 7 mm drill hole in the front spoiler by using a M6 x 16 screw and a B6 large diameter washer.

Use a Ø 28 mm pipe clamp and a M6 x 16 screw to attach the exhaust pipe to the bracket (z-angle).



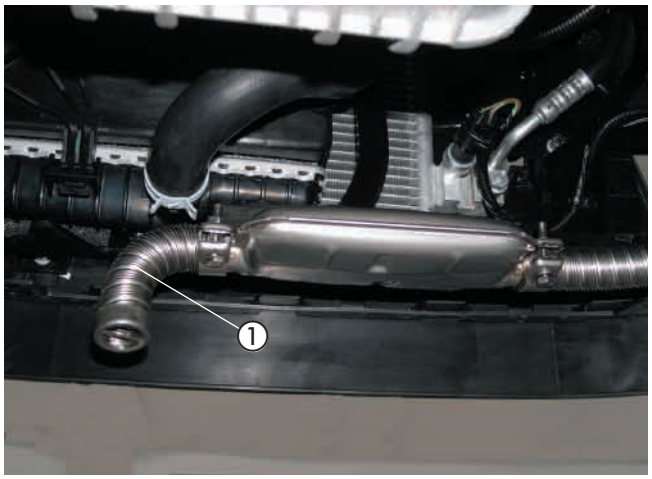
Picture 9

① exhaust elbow, mounted
② exhaust pipe, connected
③ bracket (z-angle), installed at the front spoiler
④ pipe clamp Ø 28 mm

3 Exhaust- and combustion air circuit

Cut the exhaust tailpipe to a length of 100 mm.

Use a pipe clamp to connect the exhaust tailpipe to the exhaust outlet connection of the exhaust silencer.
Shape the exhaust tailpipe downwards, according to the picture.



Picture 10

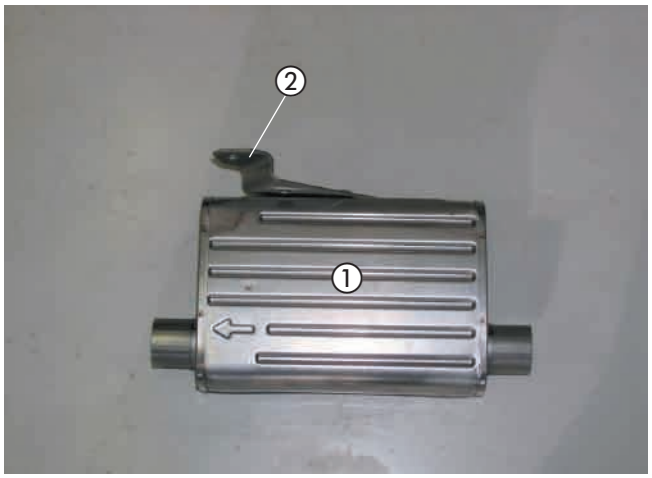
① exhaust tailpipe, mounted

Pleas note!

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

Install exhaust silencer 22 1000 40 19 00 and connect
(see pictures 11 to 14)

Mount the bracket (22 9000 50 70 02) to the exhaust silencer, using a M6 x 16 screw and a B6 large diameter washer, according to the picture.



Picture 11

① exhaust silencer 22 1000 40 19 00
② bracket (22 9000 50 70 02)

Mount the pre-assembled exhaust silencer by using the existent M6 x 20 screw to the lower radiator cross beam, according to the picture.

The arrow on the exhaust silencer points to the left.



Picture 12

① exhaust silencer 22 1000 40 19 00, installed

3 Exhaust- and combustion air circuit

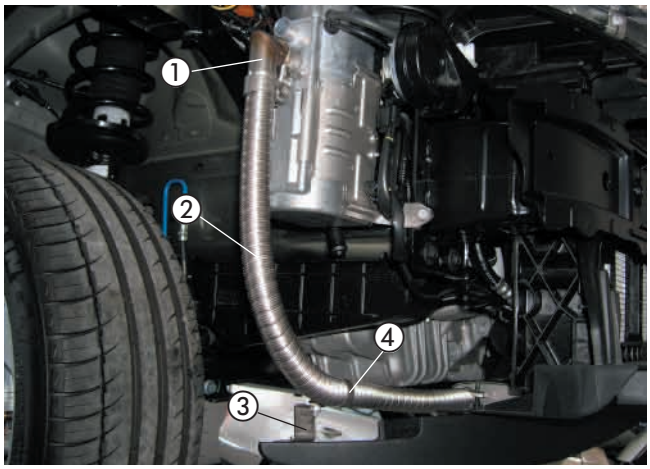
Connect the exhaust elbow to the exhaust outlet connection of the heater.

Cut the exhaust pipe to a length of 600 mm.

Connect the exhaust pipe each with a pipe clamp to the exhaust elbow and to the inlet connection of the exhaust silencer.

Install the bracket (z-angle) to the existent Ø 7 mm drill hole in the front spoiler by using a M6 x 16 screw and a B6 large diameter washer.

Use a Ø 28 mm pipe clamp and a M6 x 16 screw to attach the exhaust pipe to the bracket (z-angle).



Picture 13

① exhaust elbow, mounted
② exhaust pipe, connected
③ bracket (z-angle), installed at the front spoiler
④ pipe clamp Ø 28 mm

Cut the exhaust tailpipe to a length of 100 mm.

Use a pipe clamp to connect the exhaust tailpipe to the exhaust outlet connection of the exhaust silencer.
Shape the exhaust tailpipe downwards, according to the picture.



Picture 14

① exhaust tailpipe, mounted

Please note!

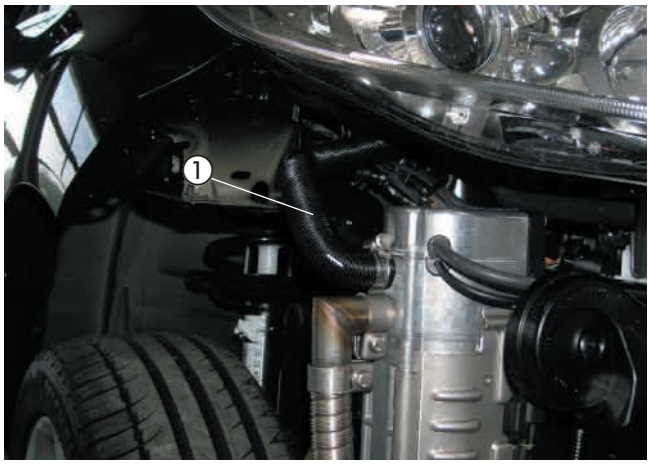
When laying the exhaust pipes, ensure they are at a sufficient distance from adjacent components and lines.

Install combustion air pipe
(see picture 15)

Connect the combustion air pipe to the heater using a hose clamp Ø 16-25 mm and lay it in bent upwards to the protected range of the coolant tank.

Fix the combustion air pipe to appropriate places by means of cable ties.

Make a drain hole Ø 2 mm for condensation in the deepest point of the laid combustion air pipe.



Picture 15

① combustion air pipe, laid

Please note!

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

4 Water circuit

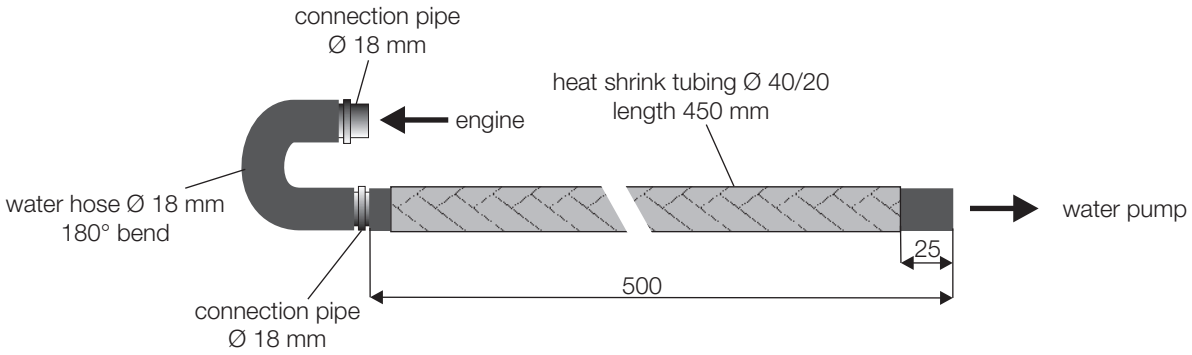
Prepare water hoses
(see sketches 1 and 2)

Cut the water hoses to size according to the dimensioning shown in the sketch.

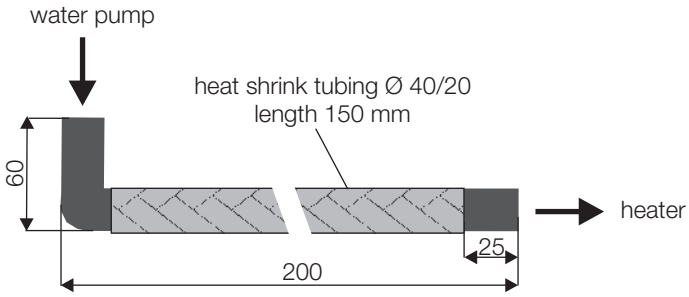
Please note!

The water hoses are connected to the water circuit “Inline“, refer to the Technical Description, “Installation“ chapter, “Connection to the Cooling Water Circuit“ section.

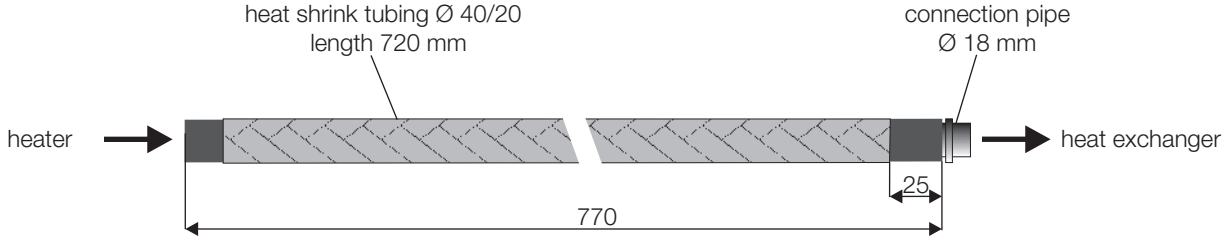
water hose ①
from the enging to the water pump



water hose ②
from the water pump to the heater

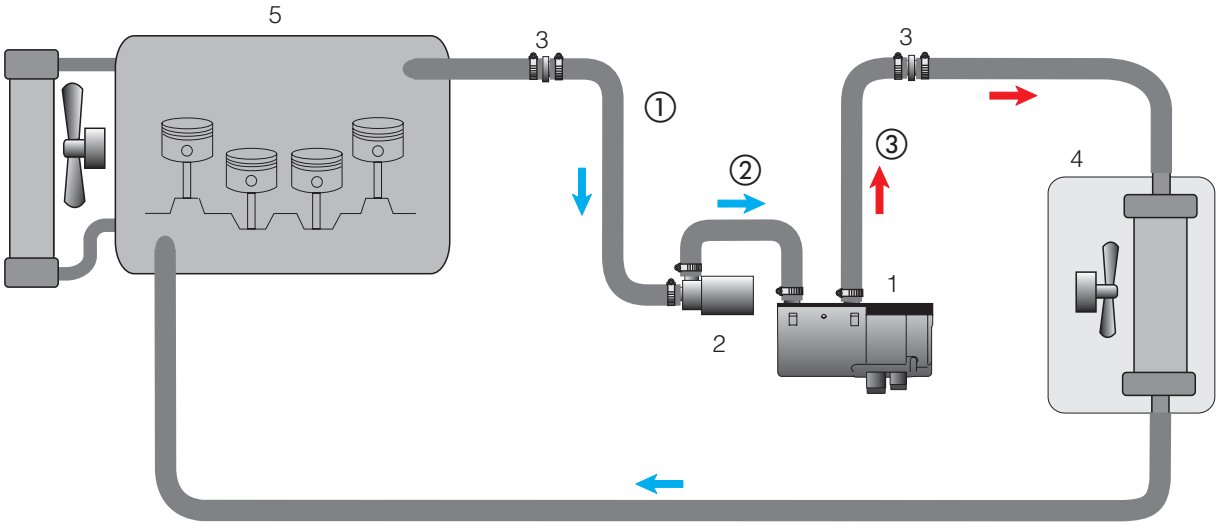


water hose ③
from the heater to the heat exchanger



Sketch 1

4 Water circuit



1 - heater
2 - water pump
3 - connection pipe Ø 18 mm
4 - heat exchanger
5 - engine
- hose clip Ø 20 - 32 mm

Sketch 2

Install water pump
(see pictures 16 and 17)

Insert the water pump into the rubber holder.
Use a M6 x 30 screw and a B6 large diameter washer to attach the bracket (90°-angle) to the rubber holder, according to the picture.



Picture 16

① bracket (90°-angle)

Screw the bracket (90°-angle) of the water pump to the existent lug at the right main chassis beam using a M6 x 16 screw.

Thereby, the intake socket of the water pump points to the left and the pressure socket faces backwards.

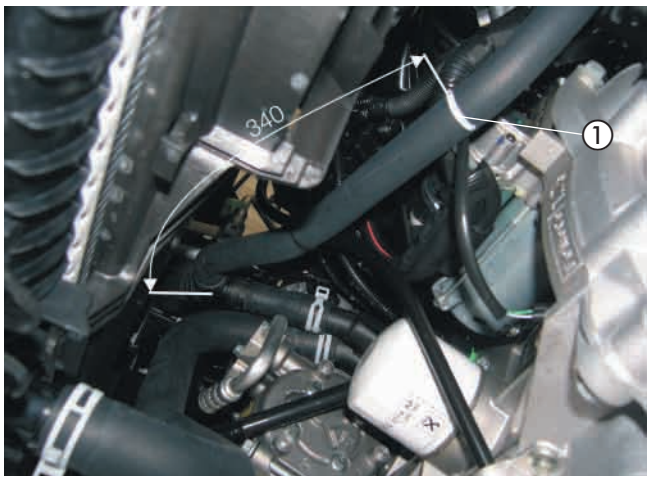


Picture 17

① water pump, installed

Cut water flow hose
in vehicles with a cubic capacity of 1.25 l
(see picture 18)

Cut the water flow hose from the engine to the heat exchanger (the upper hose connection tube at the heat exchanger), according to the dimensioning illustrated in the picture.

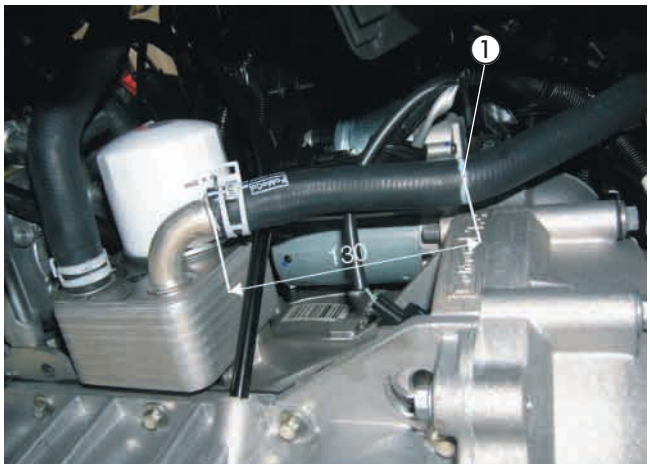


Picture 18

① cut-off point at the water flow hose

Cut water flow hose
in vehicles with a cubic capacity of 1.25 l
(see picture 19)

Cut the water flow hose from the engine to the heat exchanger (the upper hose connection tube at the heat exchanger), according to the dimensioning illustrated in the picture.



Picture 19

① cut-off point at the water flow hose

Lay and connect water hoses
(see pictures 20 and 21 as well as sketches 1 and 2)

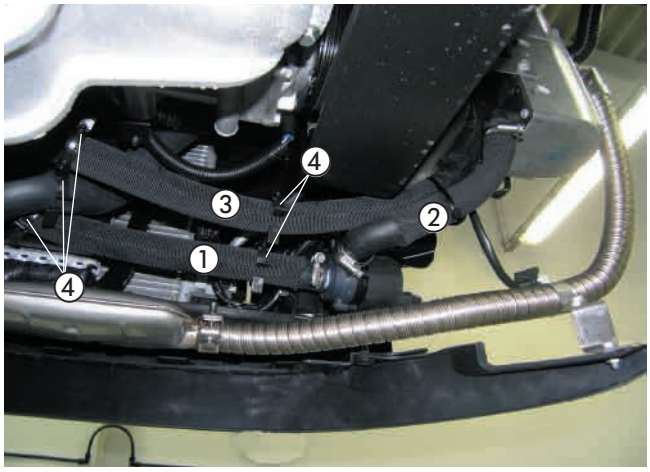
Connect the water hose ① to the intake socket of the water pump and guide it to the cut-off point.

Connect the water hose ② to the pressure socket of the water pump and to the water inlet connection of the heater.

Connect the water hose ③ to the water outlet connection of the heater and guide it to the cut-off point.

Use two hose holders, rotatable, to fix the water hoses ① and ③ among each other.

According to the picture, fix the water hoses ① and ③ at the on-board water return hose, using hose holders.



Picture 20

① water hose ①
② water hose ②
③ water hose ③
④ 5 x hose holder, rotatable

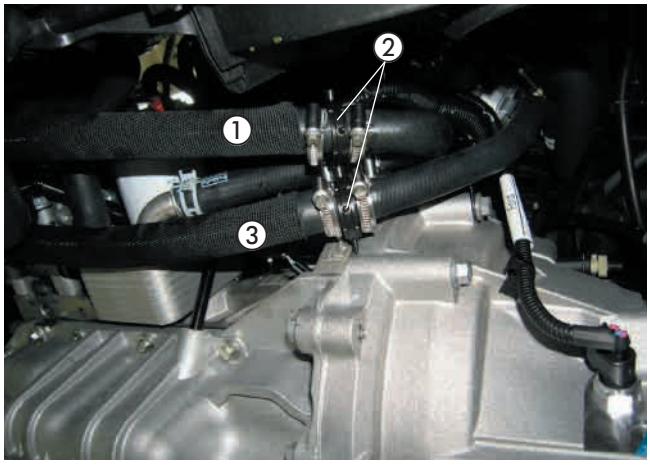
Connect the water hose ① with the connection pipe Ø18 mm to the water flow hose of the engine.

Connect the water hose ③ with the connection pipe Ø 18 mm to the water hose of the heat exchanger.

Use two hose holders, rotatable, to fix the water hoses ① and ③ among each other.

Please note!

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



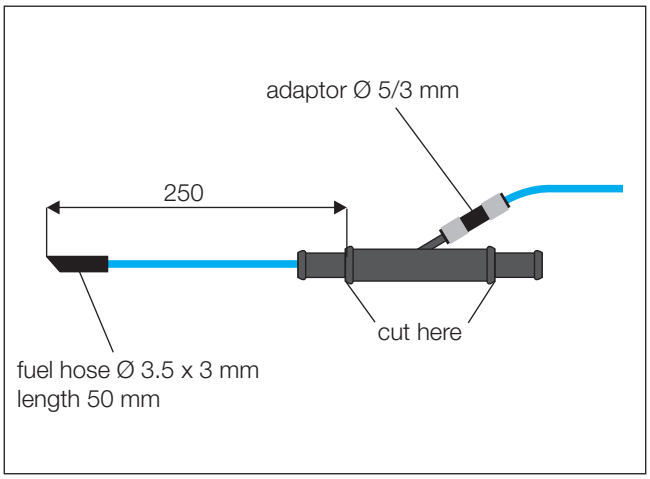
Picture 21

① water hose ①
② 2 x hose holder, rotatable
③ water hose ③

5 Fuel supply

Prepare Y-piece for tank ventilation hose
(see Sketch 3)

Use a hand-held hot air blower to heat and straighten the fuel pipe Ø 4 x 1 mm over a length of approx. 300 mm.
Cut off the both Ø 15 mm sockets from the Y-piece.
Insert the fuel pipe Ø 4 x 1 mm, length 1500 mm, into the Ø 6 mm junction of the Y-piece.
Thereby, the short end of the fuel pipe with an attached fuel hose Ø 3.5 x 3 mm, length 50 mm, protrudes over the Y-piece, approx. 250 mm.
Attach the fuel pipe by means of an adaptor Ø 5 / 3.5 mm, length 50 mm, and using two hose clamps Ø 9 mm to the Ø 6 mm junction, and cover the fuel pipe completely with sponge rubber hose.
Cut the fuel pipe Ø 3.5 x 3 mm to length with a 45° cut.

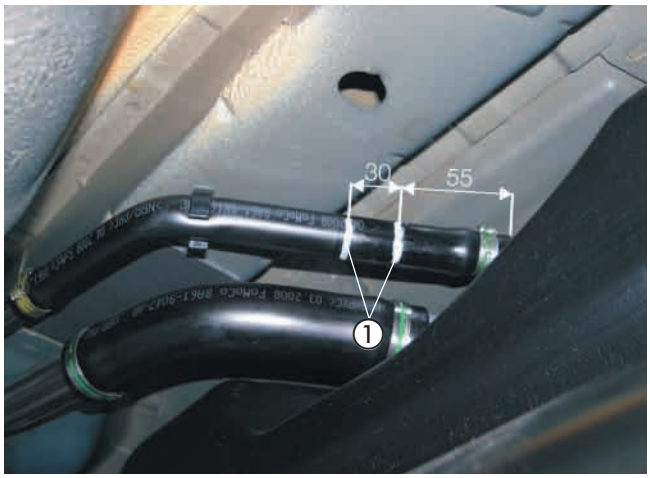


Sketch 3

Mount Y-piece
(see pictures 22 and 23)

According to the dimensioning illustrated in the picture, cut the vent hose of the fuel tank.

The detached piece of the hose (length 30 mm) is no longer required.



Picture 22

① cut-off points at the vent hose

Set the Y-piece into the cut-off point and attach it using two hose clamps Ø 16 - 25 mm.

Use cable ties to fix the fuel pipe Ø 4 x 1 mm to the tank venti hose and lay it to the metering pump.

Please note!

The installation of the Y-piece takes place while the fuel tank is built-in!

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



Picture 23

① Y-piece, installed

5 Fuel supply

Install metering pump and connect
(see pictures 24 and 25)

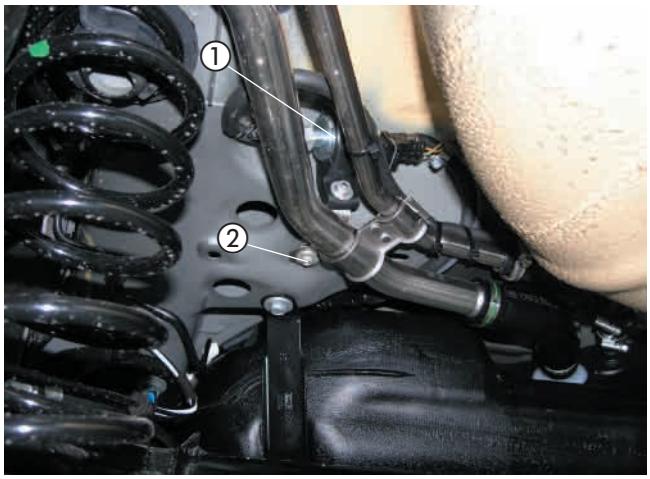
Mount the bracket 22 9000 50 15 00 to the on-board M6 torx screw.
Insert the meterin pump into the rubber holder and attach it to the bracket 22 9000 50 15 00, using a M6 x 20 screw as well as a B6 large diameter washer.
Ensure it is installed with at least 15° rising gradient on the pressure side.
The pressure socket of the metering pump points to the right.
Cut the fuel pipe Ø 4 x 1 mm from the Y-piece to the metering pump to length and connect it with fuel hose Ø 3.5 x 3 mm, length 50 mm, to the intake socket of the metering pump.

Remove the mating connector of the metering pump connection at the main cable harness.
Remove the dummy plugs from the mating connector.
Plug the connector of the enclosed metering pump cable into the metering pump connection of the main cable harness.
Lay the fuel pipe Ø 4 x 1.25 mm from the heater in conjunction with the metering pump cable along the on-board fuel pipes to the metering pump, and connect it with fuel hose, Ø 3.5 x 3 mm, to the pressure socket.
Fix the fuel pipe at adequate places, using cable ties.

Latch the plug-in contacts of the metering pump cable into the mating connector without noting the polarity.
Connect the connector to the metering pump.

Please note!

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



Picture 24

① metering pump, installed
② on-board M6 torx screw



Picture 25

① fuel pipe Ø 4 x 1,25 mm and metering pump cable, laid

Install fuses and fan relay
(see picture 26 as well as sketch 4)

Make a Ø 7 mm drill hole into the battery box, according to the dimensioning illustrated in the picture.

Mount the holder of the fuse and relay base to manufactured drill hole using a M6 x 16 screw.

Tighten the fuse holder, using two M4 x 16 screws, and the relay base, using a M5 x 12 screw, to the holder of the fuse and relay base.

Remove the 25 A fuse of the vehicle fan from the fuse base and set in a 10 A fuse.
Remove the dummy plugs from the fuse base.
Latch the cable 4 mm² RDWH from the relay base into the still free slot of the fuse base.
Connect the 8 pin connector of the main cabel harness to the 8 pin flat connector housing of the heater´s cable harness.

in vehicles with manual air-conditioning

Latch the cable 0.5 mm² BN of the main cable harness into terminal 85 of the relay base.
Remove the push-on contact housing from 0.5 mm² BKRD cable of the main cable harness, and latch the push-on contact into terminal 86.

in vehicles with automatic climate control

Latch the cable 0.5 mm² BN of the main cable harness into terminal 85 of the relay base.
Attach the cables 1 mm² BKRD from the IPCU module (will be installed in the following) and the cable 0.5 mm² BKRD of the main cable harness in a new push-on contact and latch it into terminal 86.

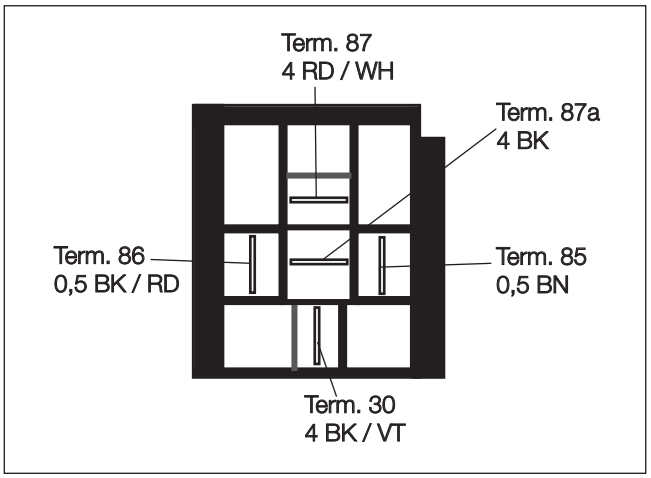
Please note!

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



Picture 26

① holder with fuses and fan relay, installed



Sketch 4

view: relay base, from the cable entry

Cable laying
(see picture 27)

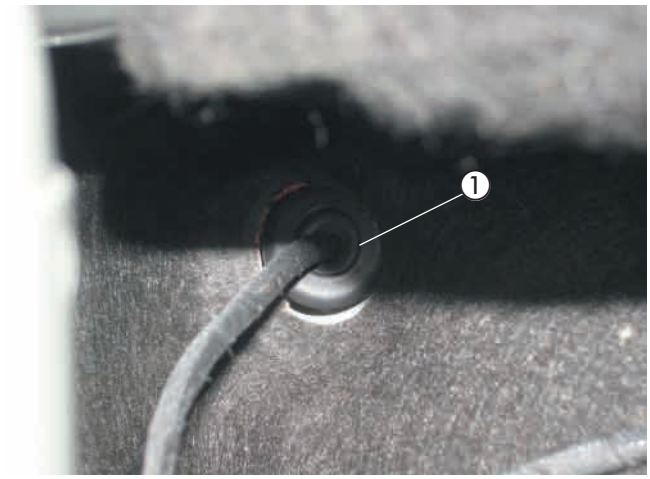
Insert a grommet Ø 16.5 mm into the existent Ø 16 mm hole on the right side of the engine partition.

in vehicles with manual air-conditioning

Lay the cable harness “control element” through the inserted grommet into the vehicle interior.

in vehicles with automatic climate control

Lay the cable harness “control element” as well as the cables 1 mm² GY and 1 mm² GYRD (from the cut-off point at the fan relay R13) through the inserted grommet into the vehicle interior.
Lay the cables 1 mm² BKRD and 1 mm² RDWH (from the IPCU module) through the inserted grommet into the vehicle interior.



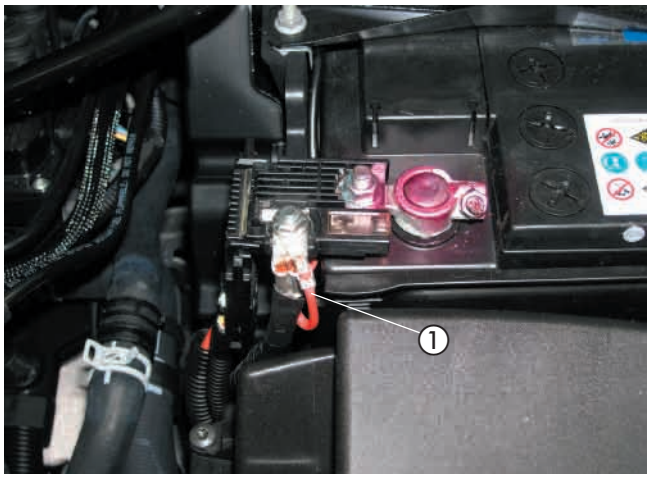
Picture 27

① on-board cable grommet

Power supply
(see pictures 28 and 29)

The power supply occurs immediately at the battery terminal.

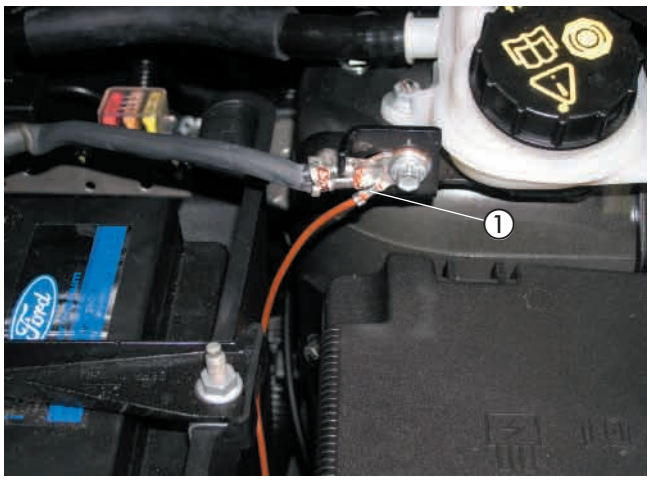
For that purpose, lay the plus cable 4 mm² RD to the terminal and tighten.



Picture 28

① power supply plus cable

Guide the minus cable 2.5 mm² BN to the existent ground connection at the left suspension strut cap, and connect it using the A6 cable lug.



Picture 29

① power supply minus cable

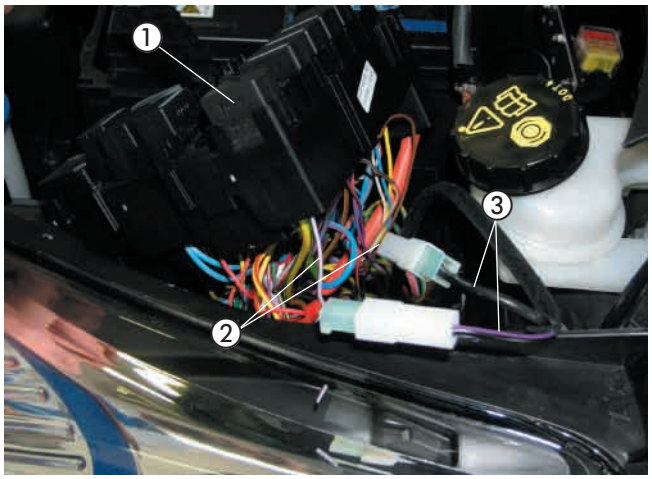
Fan control
in vehicles with manual air-conditioning
(see picture 30 and sketch 5)

The fan control occurs at the on-board fan relay R13 in the relay and fuse box, on the left side of the engine compartment.

At the on-board fan relay R13, sever the cable 0.5 mm² GYBN (terminal1), and use plug-in connectors to connect the cables 4 mm² BK as well as 4 mm² BKVT, according to the circuit diagram.

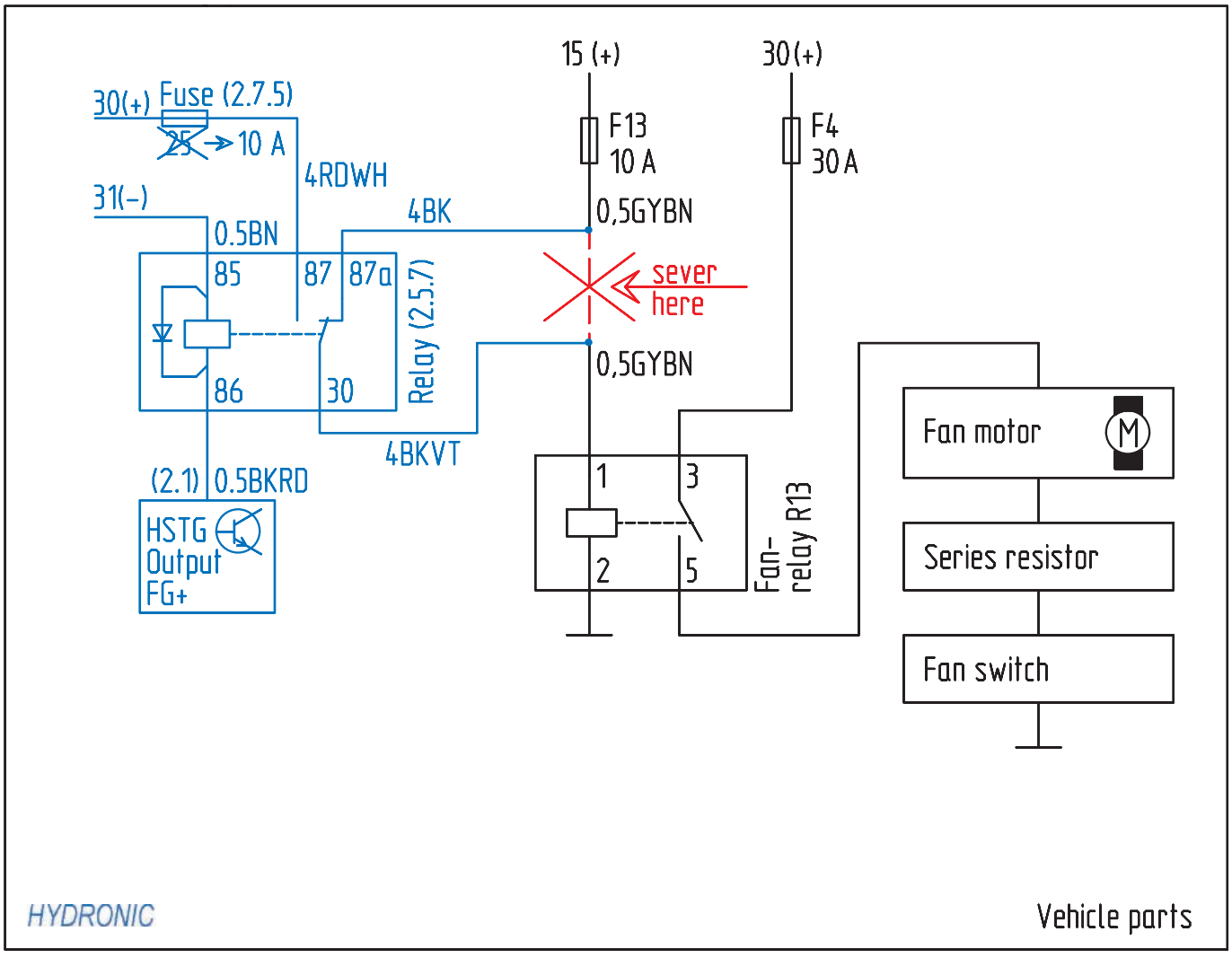
Please note!

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



Picture 30

① on-board fan relay R13
② cable 0.5 mm² GYBN (terminal1), severed
③ cable 4 mm² BK and 4 mm² BKVT, tied



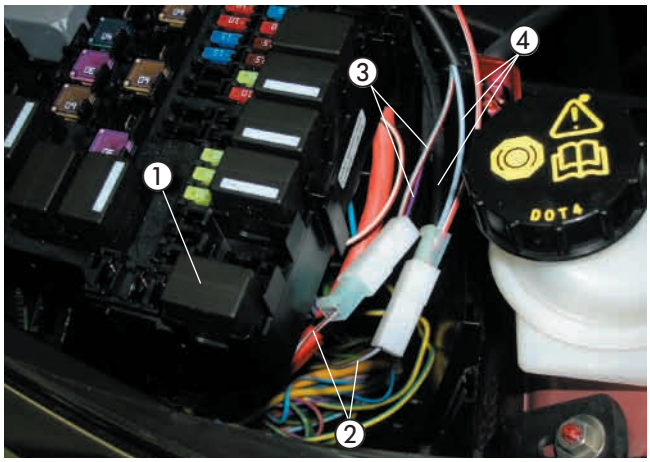
Sketch 5

Fan control
in vehicles with automatic climate control
(see pictures 31 to 33 and sketch 6)

The fan control occurs at the on-board fan relay R13 in the relay and fuse box, on the left side of the engine compartment.

Thread the cable 1 mm² GY and 1 mm² GYRD in the Ø 6 mm insulating tube.

At the on-board fan relay R13, sever the cable 0.5 mm² GYBN (terminal1), and use plug-in connectors to connect the cables 4 mm² BKVT and 1 mm² GYRD as well as the cables 4 mm² BK, 1 mm² GY and 1 mm² RDWH, according to the circuit diagram.



Picture 31

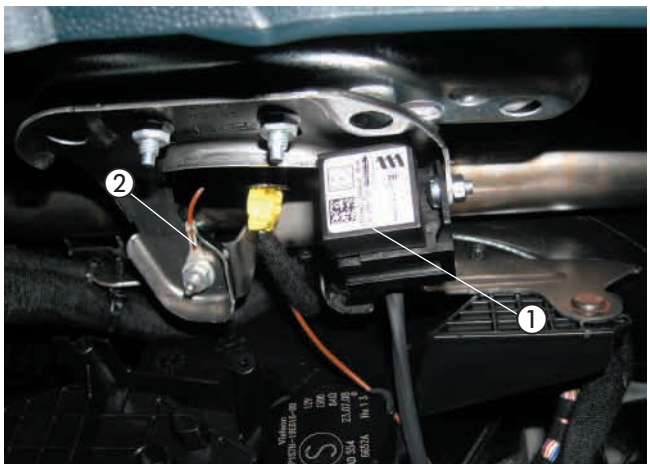
① on-board fan relay R13
② cable 0.5 mm² GYBN (terminal1), severed
③ cable 4 mm² BKVT and 1 mm² GYRD, tied
④ cable 4 mm² BK, 1 mm² GY und 1 mm² RDWH, tied

Attach the base of the IPCU module using a M5 x 10 screw to the dahboard´s supporting strut, behind the glove compartment.

Cut the minus cable 1 mm² BN to length, and crimp a cable lug A6.

According to the picture, connect the minus cable 1 mm² BN to the existent stud bolt using a M6 nut.

Lay the cables 1 mm² BK and 1 mm² BKWH to the fan module in the footwell on the passenger side.



Picture 32

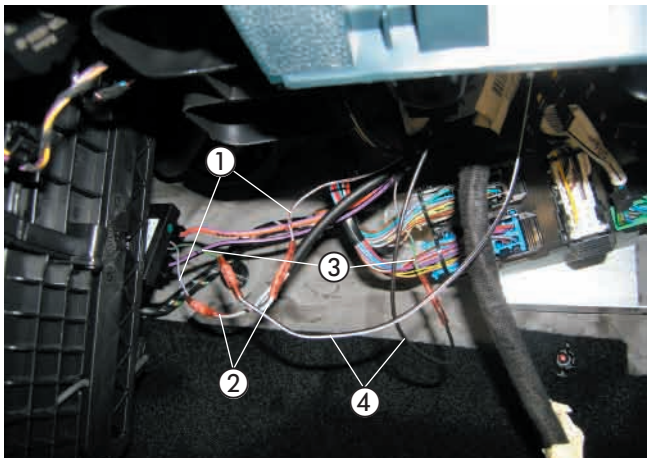
① IPCU module, installed
② minus cable 1 mm² BN, connected

Sever the cable 0.5 mm² GYBN (pin 2) at the 6 pin plug of the fan module, and use impact links 0.5-1.5 mm² to connect the cables 1 mm² GY and 1 mm² GYRD (from the cut-off point at fan relay R13), according to the circuit diagram.

Sever the cable 0.35 mm² GNVT (pin 4) at the 6 pin plug of the fan module, and use impact links 0.5-1.5 mm² to connect the cables 1 mm² BK und 1 mm² BKWH (from the IPCU module), according to the circuit diagram.

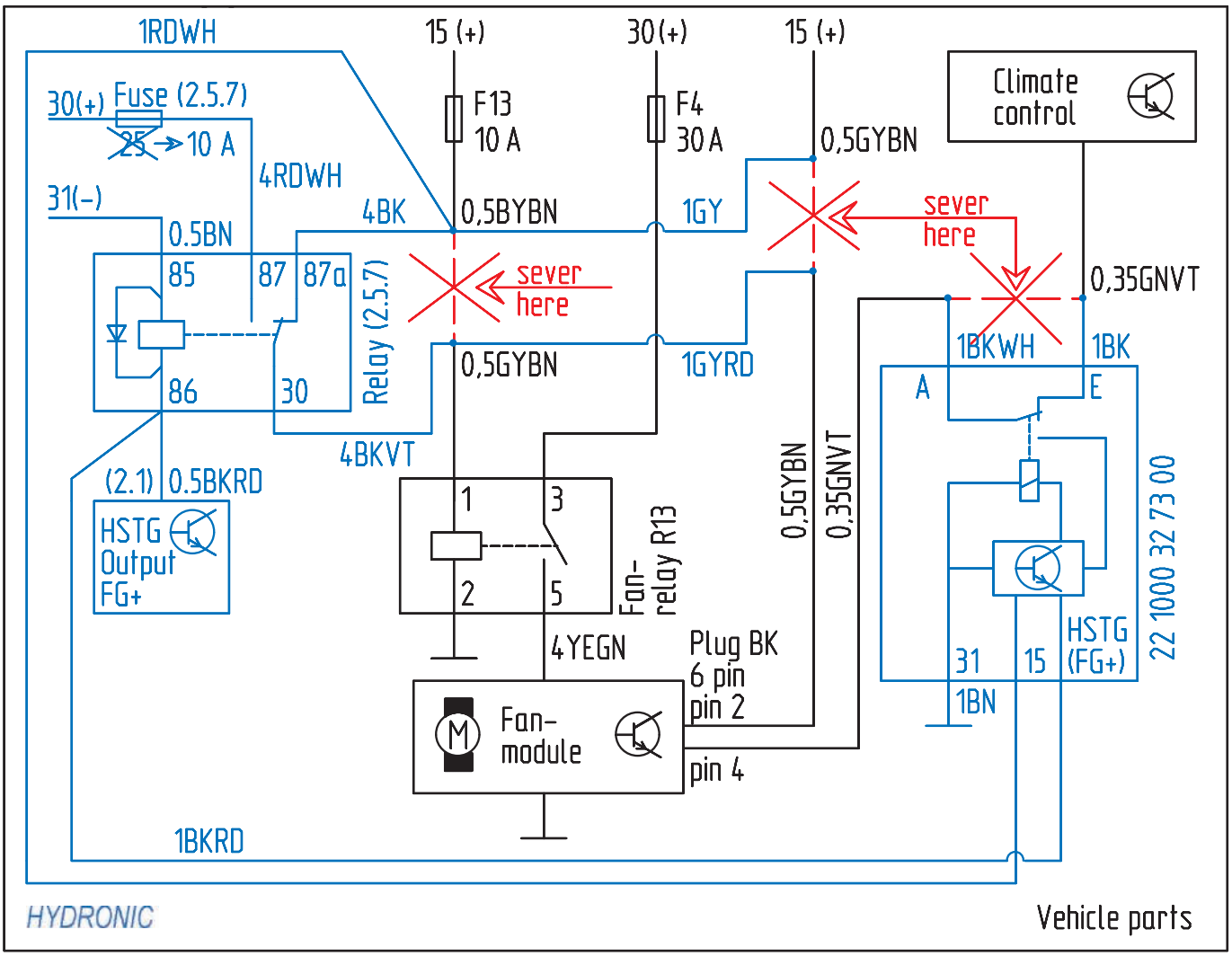
Please note!

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



Picture 33

① cable 0.5 mm² GYBN (pin 2), severed
② cable 1 mm² GY und 1 mm² GYRD, tied
③ cable 0.35 mm² GNVT (pin 4), severed
④ cable 1 mm² BK and 1 mm² BKWH, tied


1RDWH
15 (+)
30 (+)
15 (+)
30(+) Fuse (2.5.7)
25
10 A
F13
10 A
F4
30 A
0,5GYBN
Climate control
4RDWH
31(-)
4BK
0,5BYBN
1GY
sever here
0.5BN
85
87
87a
Relay (2.5.7)
sever here
0,35GNVT
1BKWH
1BK
0,5GYBN
1GYRD
A
E
86
30
4BKVT
(2.1)
0.5BKRD
HSTG
Output
FG+
1
3
2
5
Fan-
relay R13
0,5GYBN
0,35GNVT
4YEGN
Plug BK
6 pin
pin 2
pin 4
Fan-
module
31
15
HSTG
(FG+)
1BN
22 1000 32 73 00
1BKRD
HYDRONIC
Vehicle parts

Sketch 6

Install EasyStart T
(see picture 34)

The EasyStart T is installed according to the „EasyStart T“ installation instruction.

Install the EasyStart T timer with the bracket on the centre console, above the cigarette lighter.
Align the bracket on the mounting surface and trace the drill holes onto the mounting surface.
Make the Ø 3 mm and Ø 8 mm drill holes.
After drilling, remove the drilling template.
Attach the bracket using the enclosed B 3.5 x 19 attachment screws.
Guide the “control” lead harness through the Ø 8 mm drill hole, and use the expansion plug to pre-install the timer in the Ø 6.5 mm hole.
Push or screw the attachment screw into the expansion plug and use it to fix the timer.

Latch in the flat connector from the “control” lead harness into the 9 pin flat connector housing, the already installed push-on contacts into the push-on contact housing.
Push the safety clip into the flat connector housing.
Pull off the protective film of the cover cap and paste in the cover cap.



Picture 34

① EasyStart T, installed

Please note!

Do not decide on the installed location of the timer until consulting the customer.

Install EasyStart R/R⁺ radio remote control (alternative suggestion - consult with the costumer)
(see pictures 35 and 36 as well as sketch 7)

The EasyStart R/R⁺ is installed according to the Technical Description for the EasyStart R/R⁺ Radio Remote Control, see the “Installation Instruction“ section.

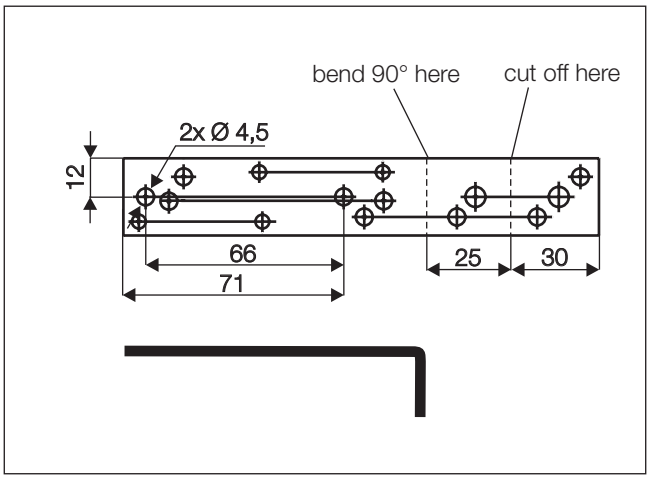
Install the EasyStart R/R⁺ button on the centre console, above the cigarette lighter, according to the picture.
For that purpose, make a Ø 8 mm drill hole into the lining.
Insert the button into the Ø 8 mm drill hole.



Picture 35

① EasyStart R/R⁺ button, installed

Prepare the bracket as shown in the sketch.
Tighten the receiver of the EasyStart R/R+ to the bracket, using two M4 x 10 screws.

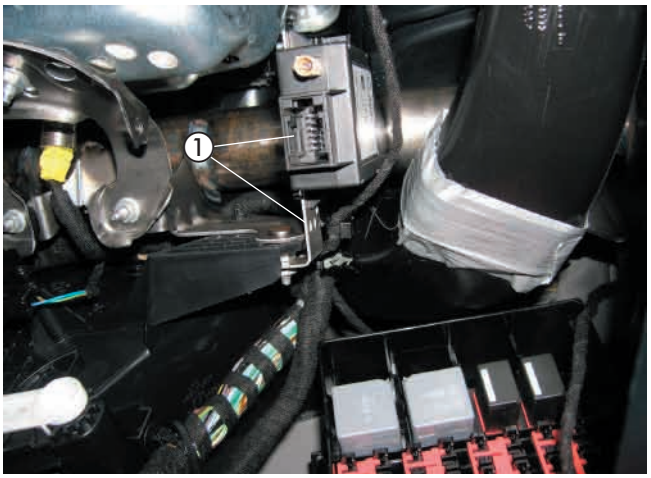


Sketch 7

Mount the receiver of the EasyStart R/R+, along with the bracket, to the supporting strut of the dashboard, using a M6 nut.

Fix the temperature sensor of the EasyStart R/R+ at the footwell coating on the passenger side.

Guide the cables from the mounted push-button and from the temperature sensor, along with the “control element” cable harness to the receiver´s installation place.
Cut the cables to length, suitably.
Crimp the push-on contacts, attach the bush housing B7 and connect to the receiver.
Connect the antenna cable of the EasyStart R/R+ to the receiver and lay it inside the weatherstrip on the passenger side.



Picture 36

① receiver of the EasyStart R/R+, mounted, with bracket

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 dashboard.

7 After installation

Attach bracket (z-angle) to the bumper
(see picture 37)

After mounting of the front bumper, attach the pre-assembled bracket (z-angle) to the front spoiler and to the existent hole in the bumper.



Picture 37

① bracket (z-angle), attached to the front spoiler and the bumper

Complete the vehicle

- Install all removed parts in the reverse order.
- Reconnect the battery.
- Check the hoses, hose clamps and pipe clamps as well as electrical connections for secure fit.
- Use cable ties to secure all loose cables, lines, etc.
- Set the clock time.
- Fill the coolling 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 element and place the Operating Instruction together with the leaflet for the customer in the glove compartment.

Please note!

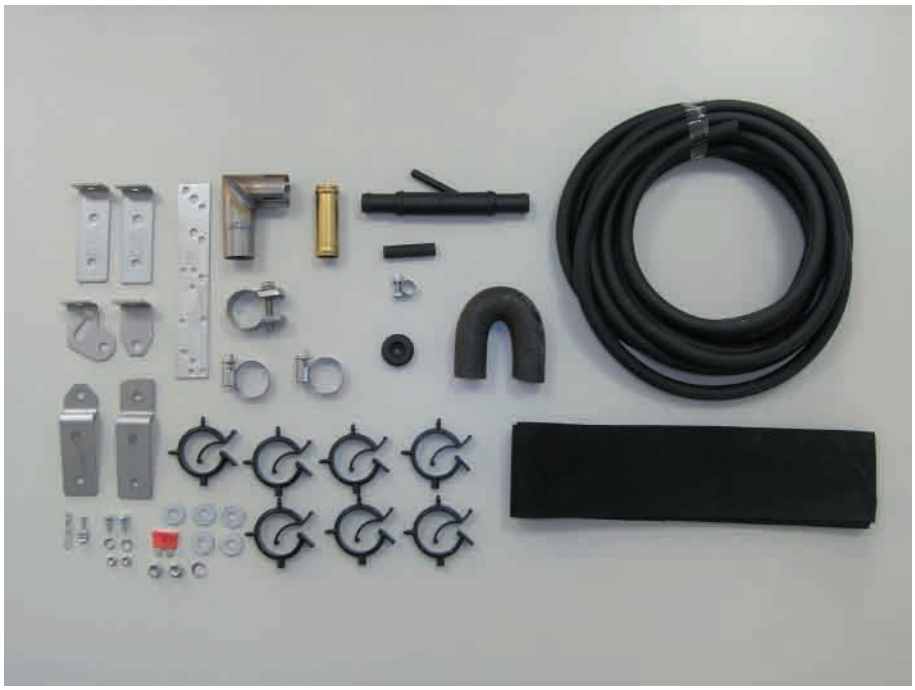
Fill the cooling system with the coolant liquid specified by the vehicle manufacturer only.

Starting up the heater

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

8 Parts overview

Item	Designation	Quantity	Order number
1	Vehicle-specific additional parts including:	1	24 8380 00 00 00
	Bracket (22 9000 50 15 00)	2	
	Bracket z-angle (22 1000 50 64 00)	1	
	Bracket 90°-angle (22 9000 50 63 02)	1	
	Bracket (22 9000 50 70 02)	1	
	Bracket (22 9000 50 95 02)	1	
	Bracket (EasyStart R/R+)	1	
	Hexagon nut, M6	2	
	Lock washer, B6	1	
	Large diameter washer, B6	5	
	Grommet, Ø 16.5 mm	1	
	Fuse, 10A	1	
	Lens head screw, M4 x 10	2	
	Hexagon nut, M4	2	
	Lock washer, B4	2	
	Exhaust elbow	1	
	Pipe clamp	1	
	Water hose, 180°-bend	1	
	Hose holder, rotatable	7	
	Connection pipe, Ø 18 mm	1	
	Y-piece	1	
	Adaptor, Ø 5.5/3.5 mm	1	
	Clamp, Ø 10 mm	1	
	Clamp, Ø 16-25 mm	2	
	Flat connection, B6.3 x 1	1	
	Push-on contact, B6.3 - 1	1	
	Heat shrink hose, Ø 40/20 mm	1.5 m	
	Sponge rubber hose, Ø 5 x 3 mm	5.0 m	



Item1 Vehicle-specific additional parts 1 Set

9 Leaflet for the customer

Before switching-on
in vehicles with manual air-conditioning
(see picture 1)

- Before switching-on or pre-programming heating mode, set the vehicles´s temperatur controller ① to “hot” (maximum) when the ignition is switched on.
- Switch the controller for the air system ② to “defrost”. Maximum air directed to the windscreen.
- Switch the temperatur controller ③ to “warm“ (maximum).



Picture 1

① Fan controller
② Controller for the air system
③ Temperature controller

Before switching-on
in vehicles with automatic climate control
(see picture 2)

- Before switching-on or pre-programming heating mode, set the vehicles´s temperatur controller ① to “HI” (maximum) when the ignition is switched on.
- Switch the controller for the air system ② to “defrost”. Maximum air directed to the windscreen.
- The fan speed doesn´t need to be pre-selected.



Picture 2

① Temperature controller
② Button for the air system