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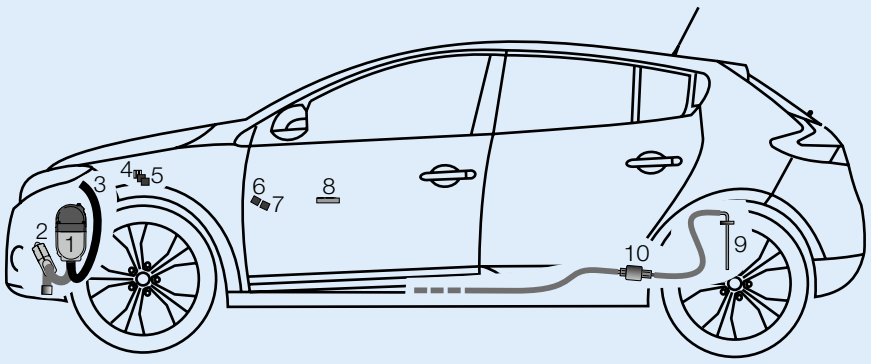
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HYDRONIC B 4 W SC in Renault Mégane III (BZ)

from 2008, model 2009
with automatic AirCon
with gearbox
with fog lamps

- **1.6 l cubic capacity / 4 cylinder in-line engine / 74 kW - 100 HP**
- **1.6 l cubic capacity / 4 cylinder in-line engine / 81 kW - 110 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 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* B 4 W SC	6	IPCU module
2	Exhaust pipe with exhaust silencer	7	Additional relay
3	Combustion air tube	8	EasyStart T
4	Fuse bracket	9	Fuel tank extractor
5	Fan relay / Relief relay	10	Metering pump

Installation location
HYDRONIC B 4 W SC is mounted with a holder to the radiator support on the left. The water connections face to the right.

Installation time: approx. 6 h

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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/or repair are dangerous and are therefore 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 suggestion is valid for the vehicle with the engine and gearbox options listed in the following.

Engine and gearbox options		
Cubic capacity	kW / HP	Gearbox
1.6 l	74 / 100	6S
1.6 l	81 / 110	6S

6S = 6-gear 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 still be possible.

1 Introduction

Parts required for installation

Quantity	Designation	Order No.
1	*HYDRONIC* B 4 W SC as complete kit	20 1861 05 00 00
1	Vehicle-specific additional parts	24 8387 00 00 00

In addition, a control is required:

1	EasyStart T timer	22 1000 32 88 00

or

1	EasyStart R radio remote control	22 1000 32 85 00

or

1	EasyStart R+ radio remote control	22 1000 32 80 00

In addition, to be ordered from Renault

1	Locking ring for tank fitting	Renault No. 77.01.207.449

Special tools required

- Torque wrench (5....50 Nm)
- Anti-corrosion agent
- Ejector tool for plug-in contacts
- Step drill
- Spanner for union nut of the tank fitting
- Tool for bind rivet nuts

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

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

Preparation on the vehicle

- Disconnect battery / remove battery cover
- Tip rear seat bench forwards
- Remove the AirCon control
- Remove bottom left-hand instrument panel covering
- Remove the left wheel arch liner
- Remove bottom engine panelling
- Depressurise the cooling system
- Drain coolant into a clean container

2 Installation - Heater

Install heater
(see photos 1 to 4)

Make two 9 mm Ø holes on the inner side of the left console support and insert M6 blind rivet nuts.

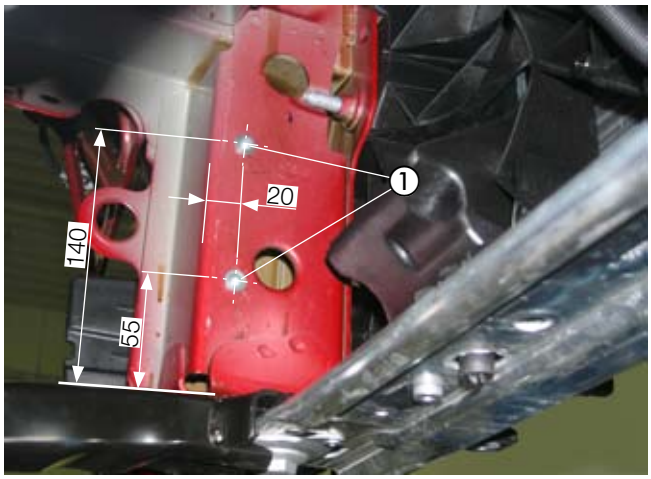


Photo 1

① Blind rivet nuts in drilled 9 mm Ø holes

Mount the supporting strut (22 1000 50 65 00) and the unit holder to the heater holder using M6 x 16 screws as shown in the photo.

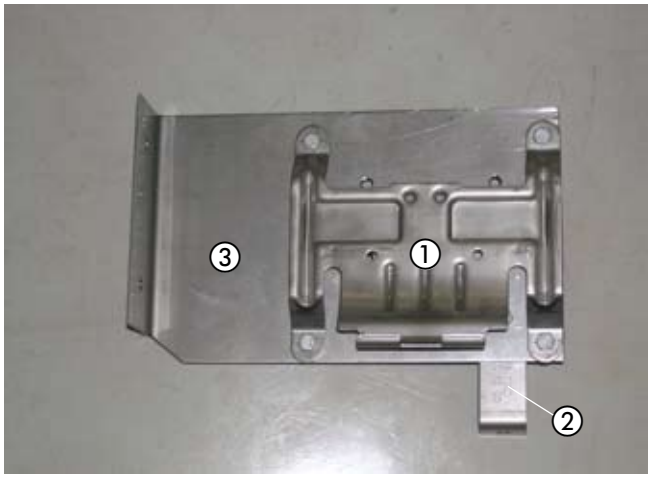


Photo 2

① Unit holder
② Supporting strut (22 1000 50 65 00)
③ Heater holder

Fasten the premounted heater holder to the console support with two M6 x 16 screws and to the existing hole in the radiator support using an M8 x 16 screw and B8 body washer.

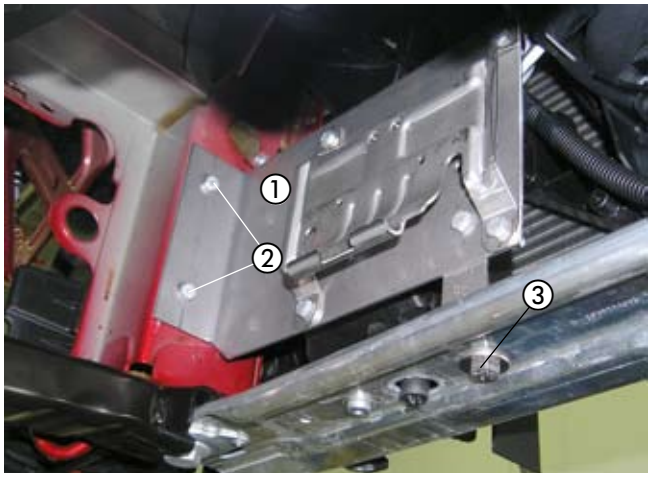


Photo 3

① Heater holder, installed
② Screw M6 x 16
③ Screw M8 x 16

2 Installation - Heater

Remove the duplicate nameplate from the heater.
Deface the inapplicable dates to make them illegible.
Attach the duplicate nameplate in a suitable, clearly visible position in the engine compartment.

Insert the heater in the holder and use the M6 x 97 screw to fasten into the right-hand threaded hole with $6^{+0.5}$ Nm.



Photo 4

① Heater, installed

3 Exhaust and combustion air system

Install and connect exhaust silencer 22 1000 40 09 00
(see photos 5 to 8)

Prepare the holder (9302) as shown in the diagram and fasten to the exhaust silencer with an M6 x 16 screw.

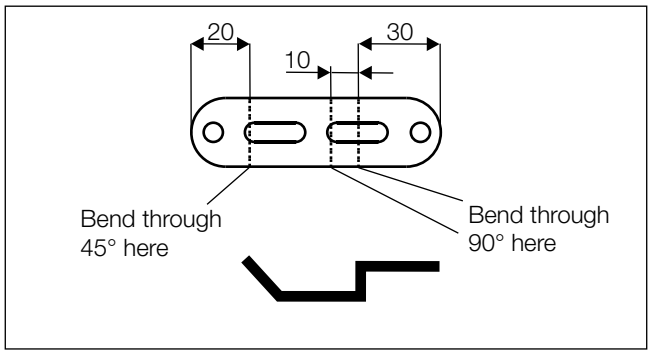


Diagram 1

Fit the premounted exhaust silencer in the existing hole in the radiator support with an M6 x 16 screw.
The flow direction arrow points to the right.

In the middle section of the radiator support, unclip the cable harness, move forwards and mount the holder (9501) to the short leg using an M6 x 16 screw and B6 body washer.

Cut the exhaust pipe to a length of 525 mm and push on a clamp.
Use a pipe clamp to connect the exhaust pipe to the heater and to the exhaust silencer intake connection.

Screw the 28 mm Ø clamp to the holder (9501) with an M6 x 16 screw.

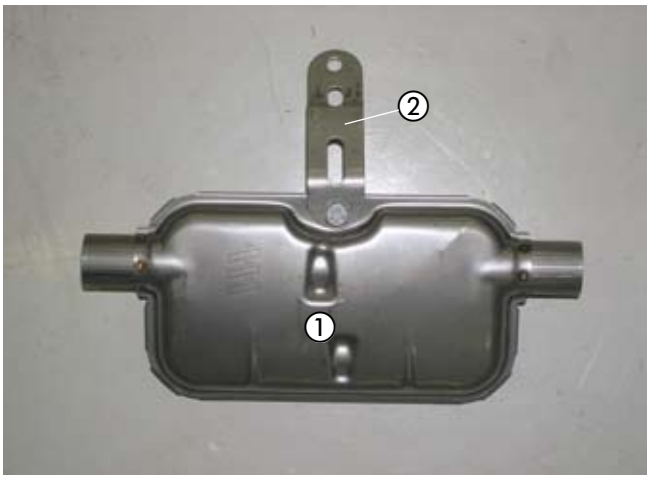


Photo 5

① Exhaust silencer
② Holder (9302), mounted

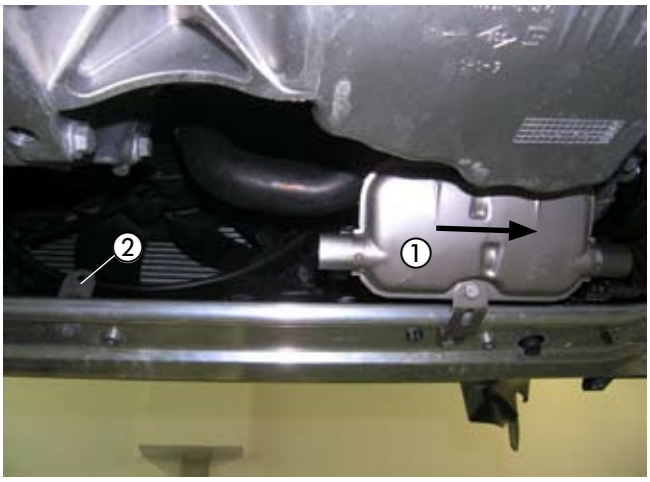


Photo 6

① Exhaust silencer, installed
② Holder (9501), mounted

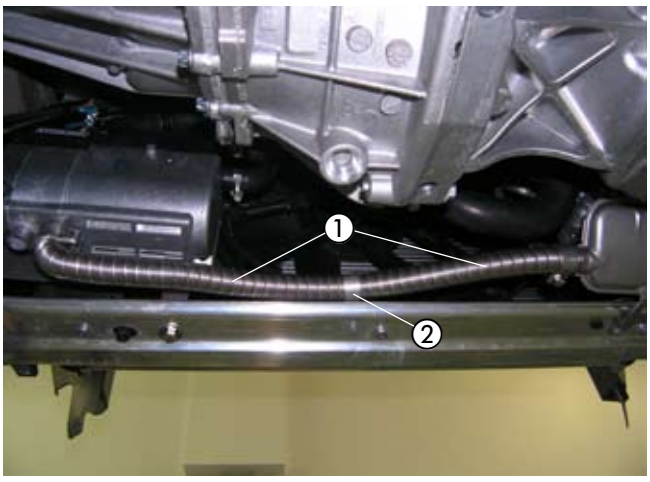


Photo 7

① Exhaust pipe installed
② Clamp 28 mm Ø fastened to holder (9501)

3 Exhaust and combustion air system

Cut the exhaust end pipe to a length of 100 mm and use a pipe clamp to fasten to the outlet connection of the exhaust silencer.
Shape the exhaust end pipe downwards as shown in the photo.

Please note!

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



Photo 8

① Exhaust pipe end, installed

Install and connect exhaust silencer 22 1000 40 19 00
(see photos 9 to 12 and diagram 2)

Fit the prepared holder (9306) to the exhaust silencer with an M6 x 16 screw as shown in the photo.

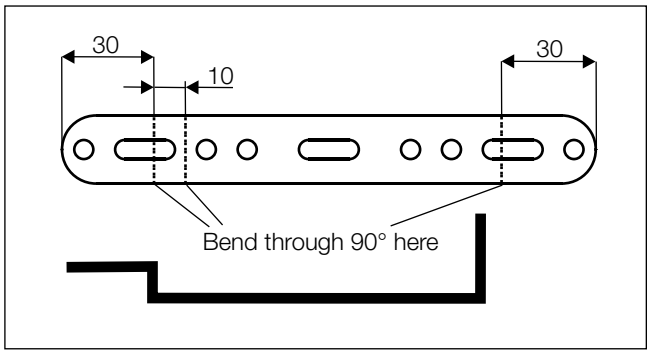


Diagram 2

Fit the premounted exhaust silencer in the existing hole in the radiator support with an M6 x 16 screw.
The flow direction arrow points to the right.

In the middle section of the radiator support, unclip the cable harness, move forwards and mount the holder (9501) to the short leg using an M6 x 16 screw and B6 body washer.

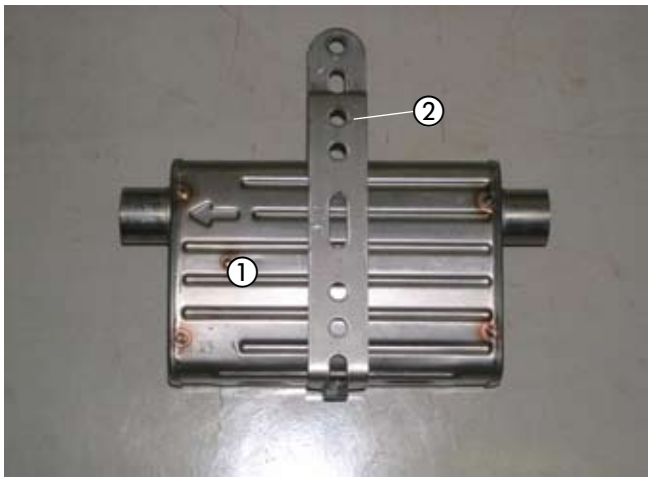


Photo 9

① Exhaust silencer
② Holder (9306), mounted



Photo 10

① Exhaust silencer, installed
② Holder (9501), mounted

3 Exhaust and combustion air system

Cut the exhaust pipe to a length of 550 mm and push on a clamp.
Use a pipe clamp to connect the exhaust pipe to the heater and to the exhaust silencer intake connection.

Screw the 28 mm Ø clamp to the holder (9501) with an M6 x 16 screw.



Photo 11

① Exhaust pipe installed
② Clamp 28 mm Ø fastened to holder (9501)

Cut the exhaust end pipe to a length of 120 mm and use a pipe clamp to fasten to the outlet connection of the exhaust silencer.
Shape the exhaust end pipe downwards as shown in the photo.

Please note!

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



Photo 12

① Exhaust pipe end, installed

Install combustion air pipe
(see photo 13)

Connect the combustion air pipe to the heater using a 16 - 25 mm Ø hose clip, lay upward in the elbow and in the protected section between battery and radiator.

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



Photo 13

① Combustion air pipe, connected and 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 the water hoses
(see diagram 3)

Cut the water hoses according to the dimensions in the diagram and prepare.

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.

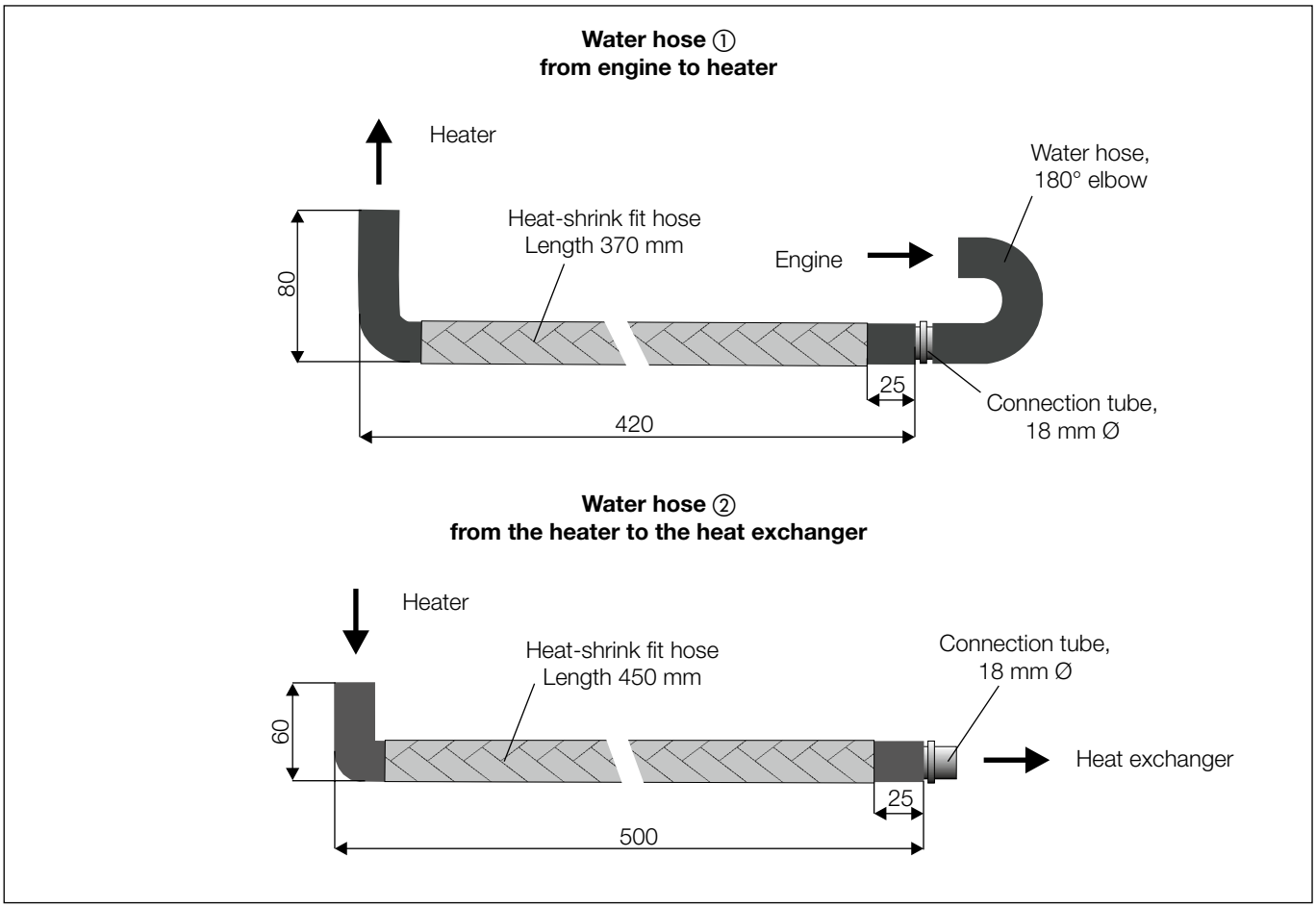


Diagram 3

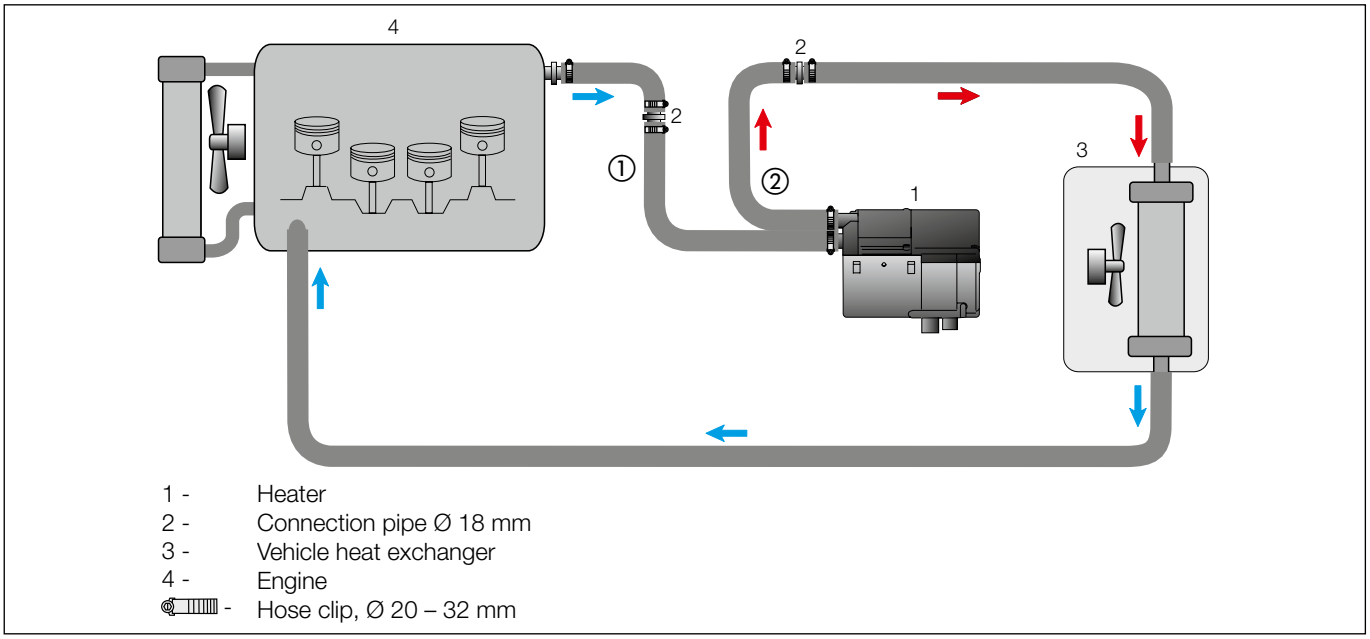


Diagram 4

4 Water circuit

Pull off water flow hose
(see photo 14)

Disconnect the water flow hose from the engine to the heat exchanger (the right lower hose at the heat exchanger) at the engine connection.

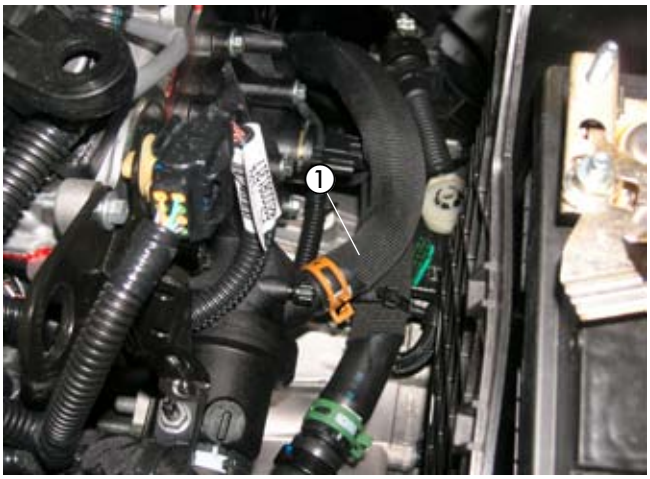


Photo 14

① Water flow hose

Connect and lay water hoses
(see photo 15 and diagram 4)

Connect the water hose ① with the 90° elbow to the water intake connection of the heater.

Connect the water hose ② with the 90° elbow to the water outlet connection of the heater.

Lay both water hoses upwards and fill with coolant liquid.

Connect the water hose ① to the engine connection using the 180° elbow.

Connect water hose ② to the pulled off water flow hose.

Fix both water hoses to each other and to the existing radiator hose with three rotatable hose holders.



Photo 15

① Water hose ①
② Water hose ②
③ 3x rotatable hose holders, mounted

5 Fuel supply

Install fuel tank extractor
(see photos 16 to 18 and diagram 5)

Prepare the riser pipe of the fuel tank extractor as shown in the diagram.
Cut off the lower end of the fuel tank extractor at an angle of 45°.

Loosen the plug-in connection and the fuel line at the tank connection.
Remove the tank fitting by loosening the union nut.

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 the tank or supply lines.

Make an 8 mm Ø hole in the top part of the tank fitting with the dimensions shown in the photo.
Take the fuel tank extractor from above through the prepared hole in the tank fitting and screw tight with the M8 nut and B8 body washer.
Align the fuel tank extractor as shown in the photo.

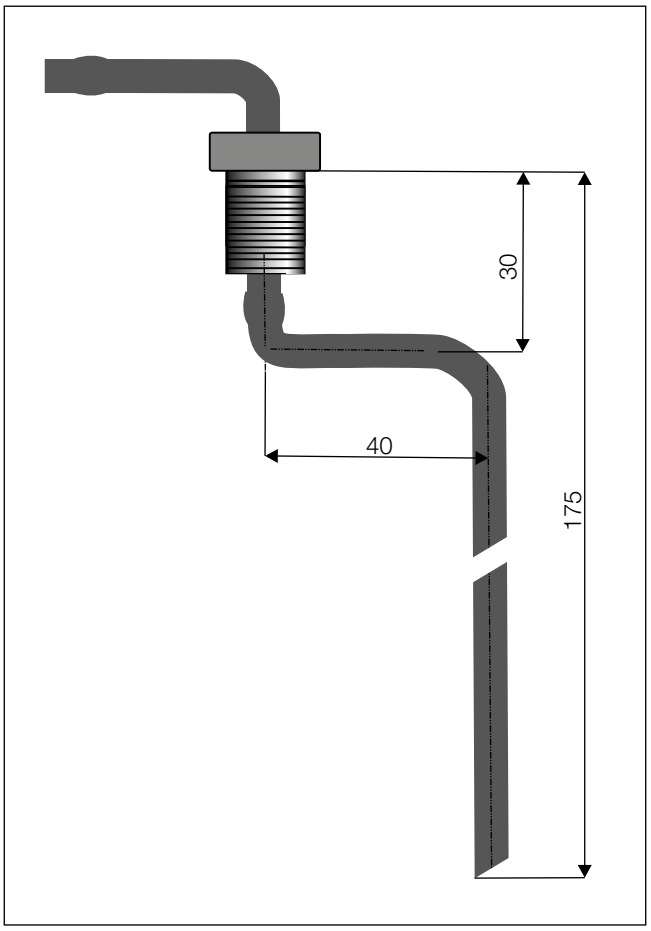


Diagram 5

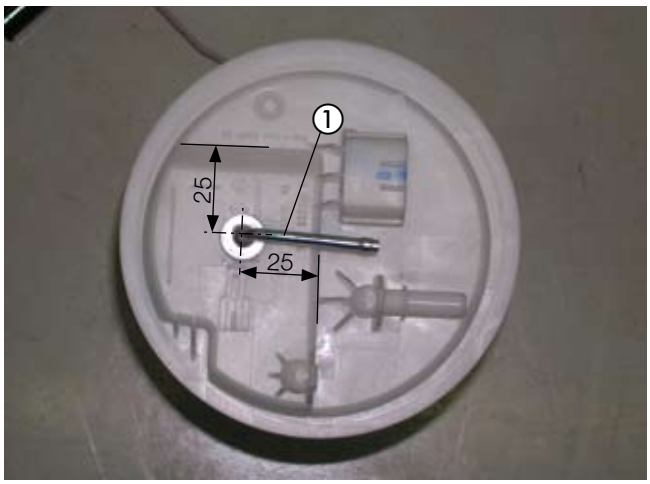


Photo 16

① Fuel tank extractor, installed

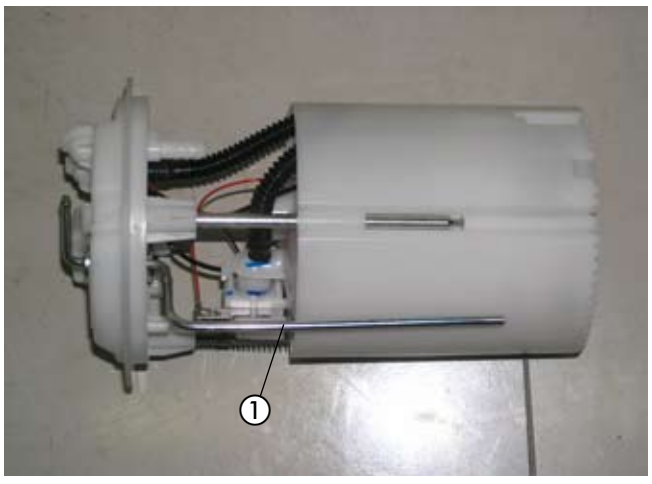


Photo 17

① Fuel tank extractor, installed

Insert the tank fitting with a new seal and fasten with the locking ring; ensure the seal fits properly.
At the intake connection of the fuel tank extractor, connect the 4 x 1 mm Ø fuel pipe with a 3.5 x 3 mm Ø fuel hose, 50 mm long.
Cover the 4 x 1 mm Ø fuel pipe with foam rubber hose and lay to the installation position of the metering pump next to the tank on the right.
Connect the plug-in connection and the fuel line to the upper part of the tank fitting.

Install and connect metering pump
(see photos 19 and 20)

Insert the metering pump in the rubber holder and fit the 90° angle from the installation kit using the M6 x 20 screw and B6 body washer.
Fasten the premounted metering pump to the free hole in the right rear axle holder next to the tank as shown in the photo, using an M6 x 16 screw and a B6 body washer.
Ensure the pump is installed in a position with at least 15° rising gradient on the discharge side.
The discharge connection of the metering pump faces forwards.
Cut the 4 x 1 mm Ø fuel pipe from the fuel tank extractor to the metering pump and connect to the fuel hose Ø 3.5 x 3 mm, length 50 mm on the intake side.

At the main cable harness, pull off the mating plug of the metering pump connection and push on the plug of the enclosed metering pump cable.

Connect the 4 x 1.25 mm Ø fuel pipe to the heater with a 3.5 x 3 mm Ø fuel hose. Lay the fuel pipe together with the metering pump cable along the fuel pipes on the vehicle underbody to the right through to the metering pump and connect with 3.5 x 3 mm Ø fuel hose, 50 mm long, on the discharge side.

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

Use cable ties to secure the 4 x 1.25 mm Ø fuel pipe and the metering pump cable at suitable points.

Please note!

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

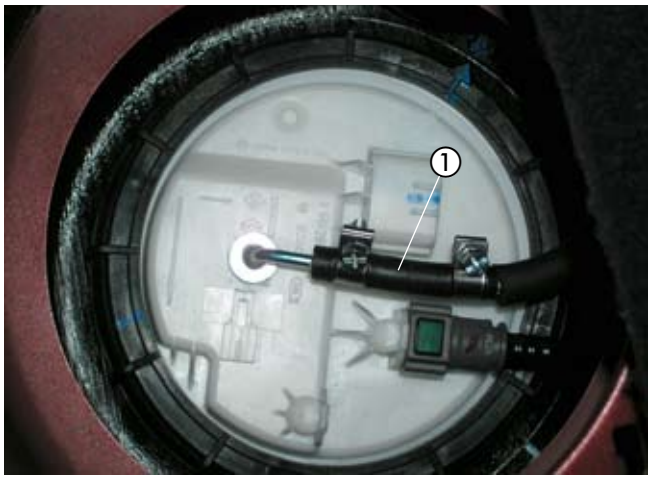


Photo 18

① Fuel tank extractor, connected



Photo 19

① Metering pump with rubber holder, installed

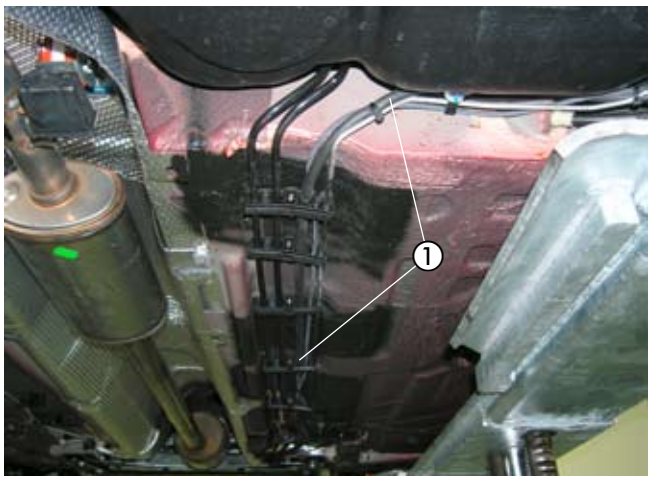


Photo 20

① Fuel pipe and cable, laid

Install the fuses, fan relay and relief relay
(see photo 21 and diagrams 6 and 7)

Prepare the holder for the fuse and relay block as shown in the diagram.

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

Insert the 4 mm² rt/ws cable from the relay block of relay 2.5.7 into the still free slot of the fuse block.

Lay the 1 mm² sw/rt cable from the prefabricated IPCU block from the interior through the existing cable grommet into the engine compartment as shown in photo 22.

Crimp cables 4 mm² sw and 4 mm² sw/vi from the relay block of relay 2.5.7.
Fit the 4 mm²sw cable to the crimped out 4 mm² sw cable at the triple distributor.

Insert the free 4 mm² sw cable with the bushing connector into the relay block of relay 2.5.7 in slot 87 a.
Fit the 4 mm²sw/vi cable to the crimped out 4 mm² sw/vi cable at the triple distributor.

Insert the free 4 mm² sw/vi cable with the bushing connector into the relay block of relay 2.5.7 in slot 30. Disconnect the bushing connectors at the 0.5 mm² sw/rt and 0.5 mm² br cables of the main cable harness.

Attach the 1 mm² br cable from the relief relay together with the 0.5 mm² br cable of the main cable harness in a new bushing connector and insert the bushing connector into the relay block of relay 2.5.7 at slot 85.

Fit the 1 mm² sw/rt cable from the prefabricated IPCU block, the 1 mm² sw/rt cable from the relief relay and the 0.5 mm² sw/rt cable from the main cable harness together in a new bushing connector and insert in the relay block of relay 2.5.7.

Screw the fuse bracket with two M4 x 16 screws and the relay block of relay 2.5.7 to the prepared holder using an M5 x 12 screw.
Screw the premounted holder to the existing fastening point of the battery casing as shown in the photo.

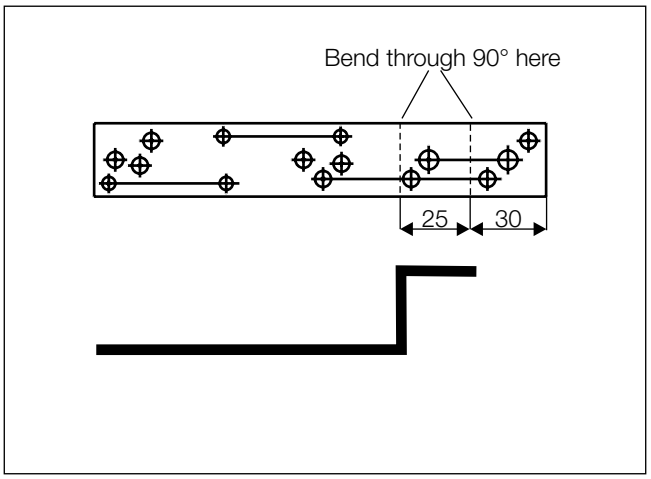


Diagram 6

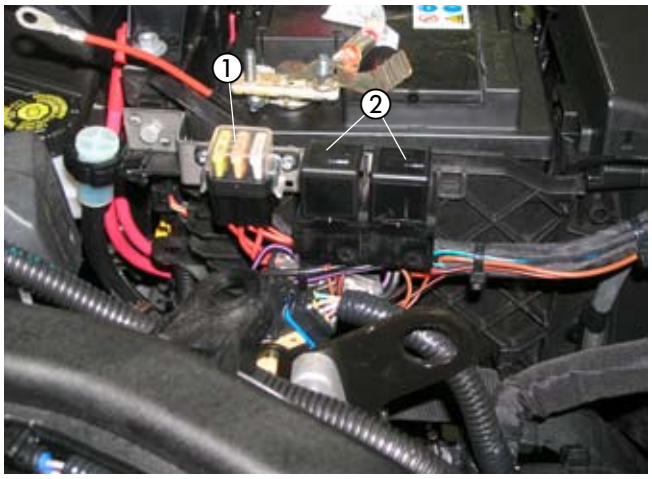


Photo 21

① Fuse bracket, installed
② Fan relay and relief relay, installed

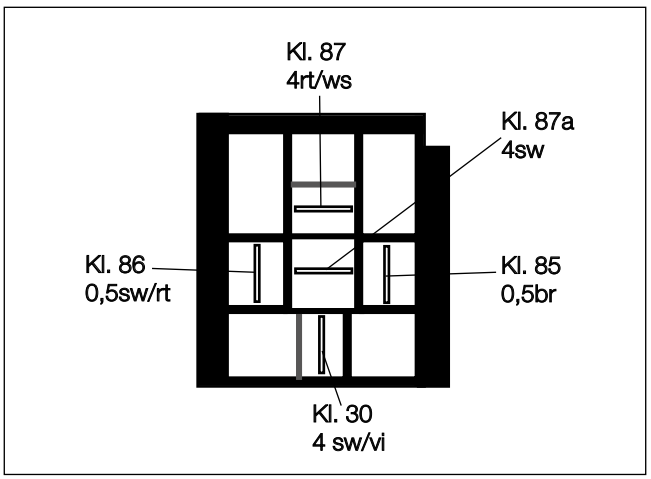


Diagram 7

View of the relay block from the cable inlet side

Cable laying
(see photo 22)

Lay the "control unit" and "fan control" cable loom through the existing cable grommet on the left side of the engine partition on the left to the interior.

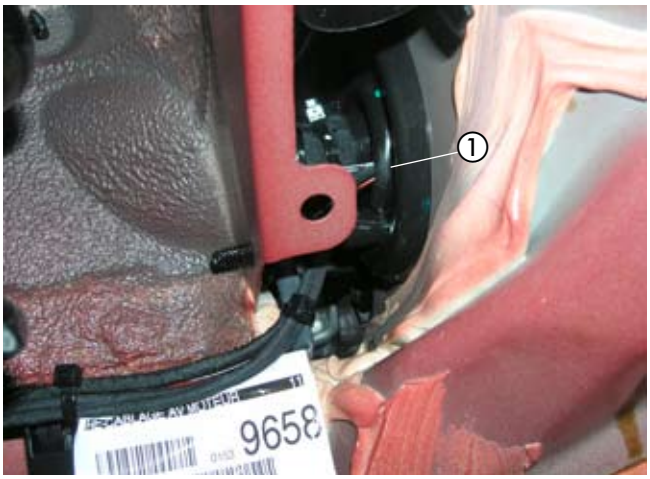


Photo 22

① Existing cable grommet

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.

Fan control
(see photos 23 to 26 and diagram 8)

Mount the prefabricated IPCU and additional relay block to the instrument panel support with an M6 x 16 screw as shown in the photo.

Fasten the 1 mm² br cable from the additional relay block to the left lower screwed connection of the instrument panel support.

Insert the additional relay and the IPCU in the corresponding block.

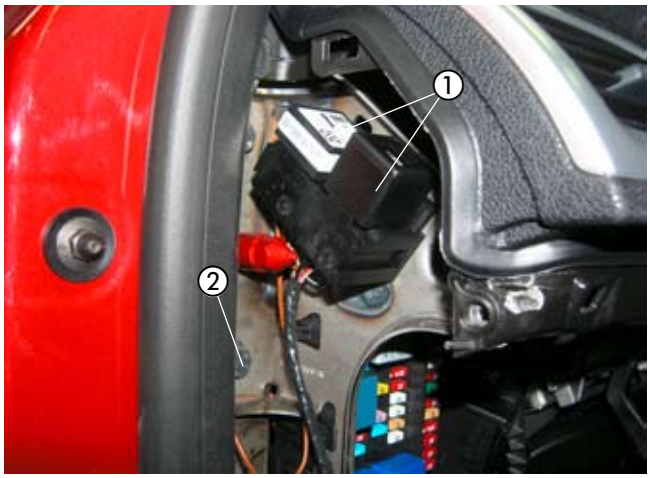


Photo 23

① IPCU module and additional relay, installed
② Cable 1 mm² br connected

At the 4-pin black plug at the brake light switch, disconnect the 0.5 mm² ge PIN 2 cable and integrate the 1 mm² rt/ws cable from the additional relay block with a 0.5 - 1.5 mm² butt-type connector.

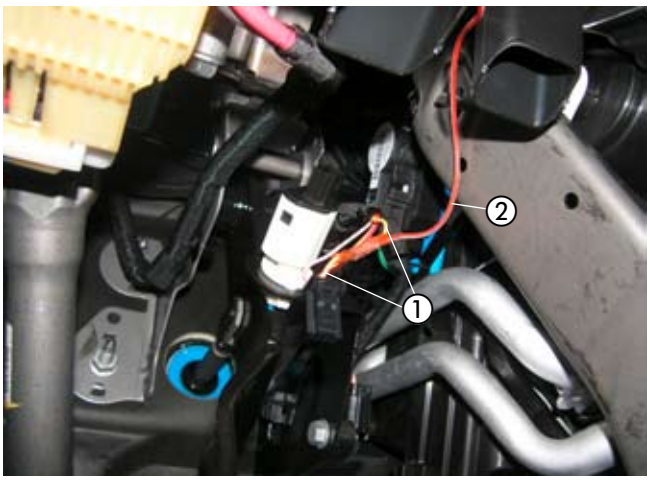


Photo 24

① 0.5 mm² ge cable, disconnected
② Cable 1 mm² rt/ws, integrated

At the 40-pin grey plug at the AirCon control, disconnect the 0.5 mm² ge PIN 19 cable and integrate the 1 mm² sw/ws cable from the additional relay block with a 0.5 - 1.5 mm² butt-type connector.

Please note!

Make sure that the battery is disconnected before disconnecting the 0.5 mm² ge cable at the AirCon control.

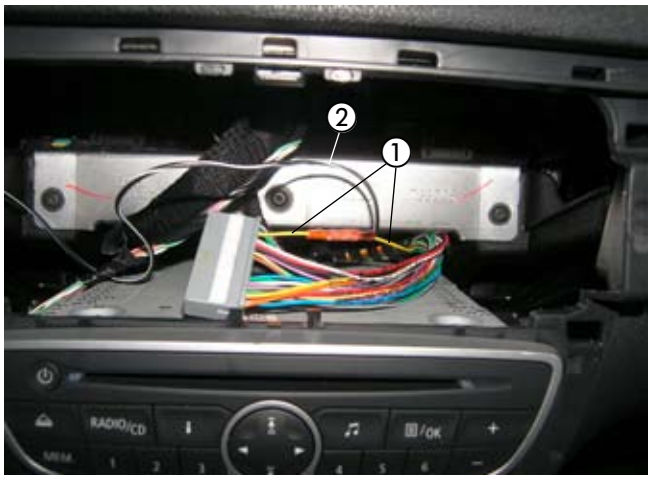


Photo 25

① 0.5 mm² ge cable, disconnected
② Cable 1 mm² sw/ws, integrated

Lay the "Fan control" cable loom to the central fuse box in the driver's footwell.

Disconnect the 4 mm² rt cable at the outlet of the F40/40A fuse and integrate the 4 mm² sw and 4 mm² sw/vi cables with 4 - 6 mm² butt-type connectors as shown in the circuit diagram.

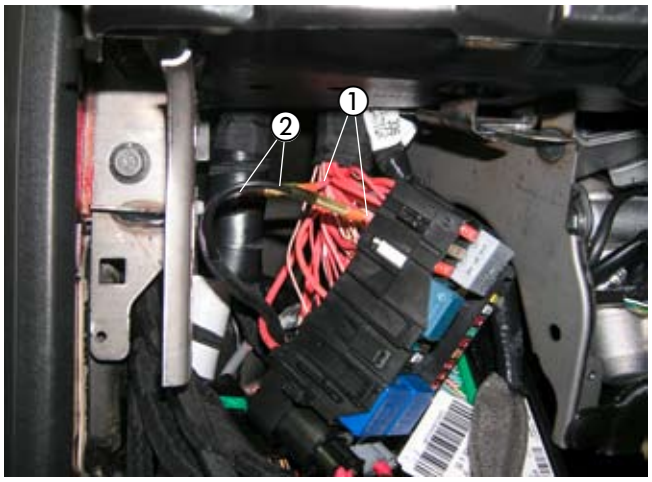


Photo 26

① 4 mm² rt cable, disconnected
② 4 mm² sw and 4 mm² sw/vi cables, integrated

Power supply
(see photo 27)

Take the 4 mm² rt cable to the positive terminal post of the battery and connect it there.

Take the 2.5 mm² br negative cable to the negative terminal post of the battery and connect it there.

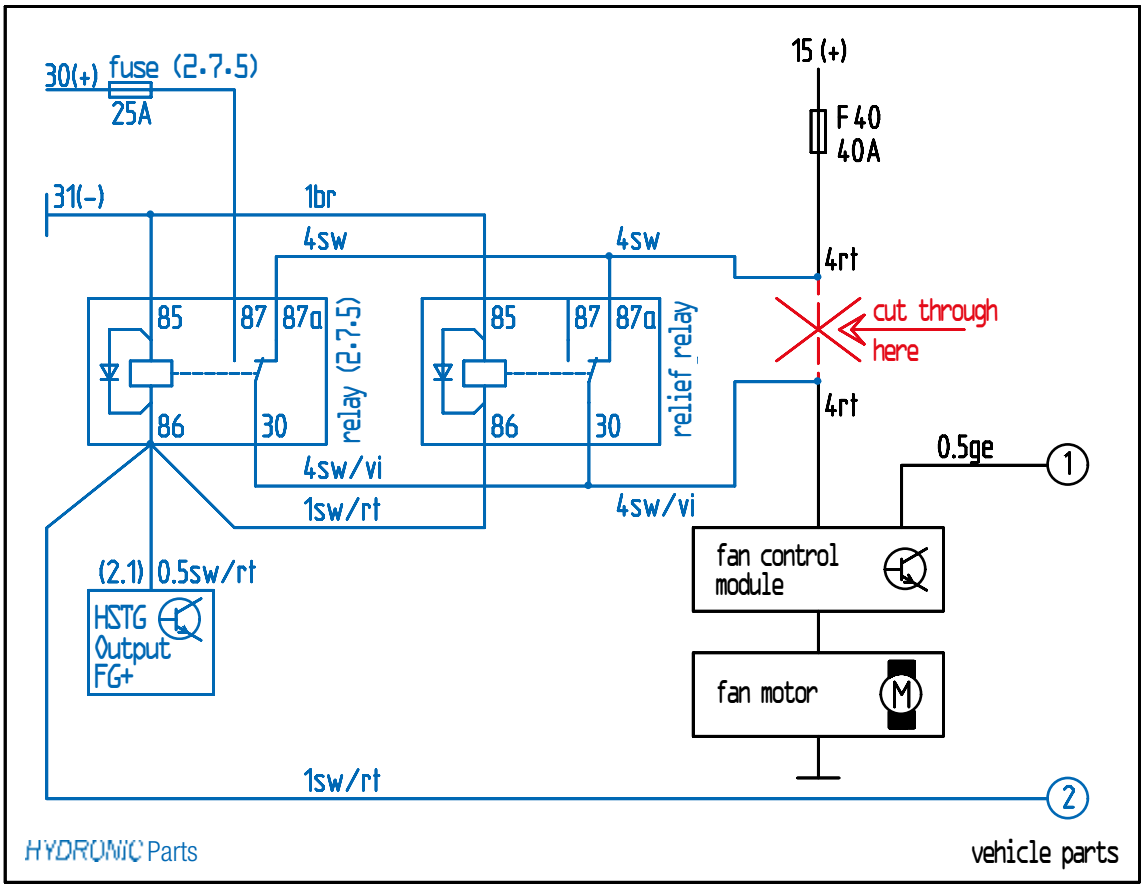
Please note!

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 27

① Power supply plus
② Power supply minus


30(+) fuse (2.7.5)
25A
31(-)
1br
4sw
4sw
15 (+)
F40
40A
4rt
cut through
here
4rt
85
87
87a
86
30
relay (2.7.5)
85
87
87a
86
30
relief relay
4sw/vi
1sw/rt
4sw/vi
0.5ge
1
fan control module
fan motor
M
(2.1) 0.5sw/rt
HSTG Output FG+
1sw/rt
2
HYDRONIC Parts
vehicle parts

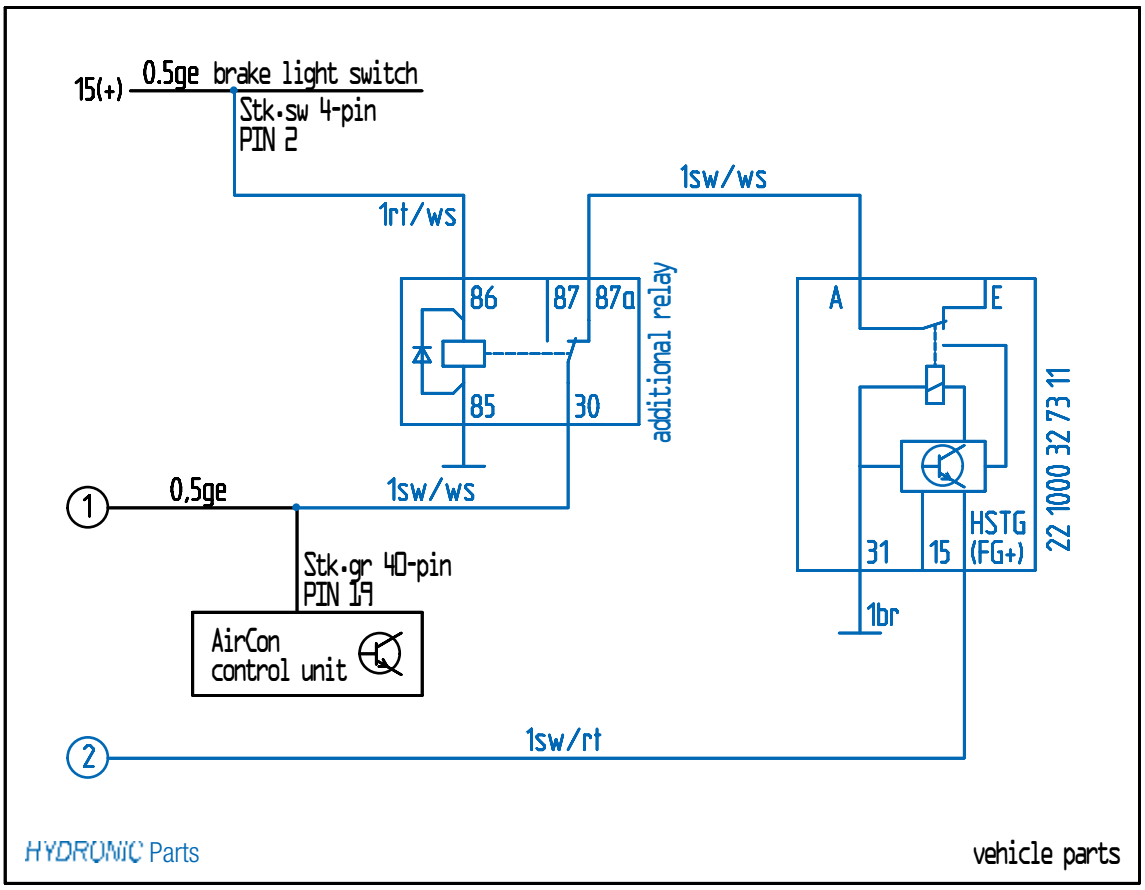

15(+)
0.5ge brake light switch
Stk.sw 4-pin
PIN 2
1sw/ws
1rt/ws
86
87
87a
85
30
additional relay
A
E
22 1000 32 73 11
HSTG (FG+)
31
15
1br
1
0,5ge
1sw/ws
Stk.gr 40-pin
PIN 19
AirCon control unit
2
1sw/rt
HYDRONIC Parts
vehicle parts

Diagram 8

Install EasyStart T timer
(see photo 28)

The EasyStart T timer is installed according to the "EasyStart T" installation instruction.
Fit the EasyStart T timer to the gearshift lever cover.
Use the supplied self-adhesive drilling template to position and drill the holes for fixing the timer and the heater lead harness.
Make the Ø 6.5 mm and Ø 8 mm holes.
Remove the drilling template after making the holes.
If necessary, the foam template can be used to level out the unevenness.
To do this, pull off the protective film and stick the base onto the timer.
Guide the timer lead harness through the 8 mm Ø hole and use the expansion plug to premount the timer in the 6.5 mm Ø hole.
If the foam film is used, pull off the second protective film too.
Push or screw the fixing screw into the expansion plug and use it to fix the timer.
Attach the flat connector from the timer lead harness at the 9 pin flat connector housing and the already installed bushing connectors on the bushing connector housing.
Push the fuse clasp into the flat connector housing.
Pull off the protective film of the cover cap and glue in the cover cap.



Photo 28

① EasyStart T, installed

Please note!

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

Install EasyStart R/R+ radio remote control (Alternative suggestion - consult with the customer)
(see photos 29 to 30 and diagram 9)

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 panelling as shown in the photo.
To do so, make an 8 mm Ø hole and fit the button in the hole.

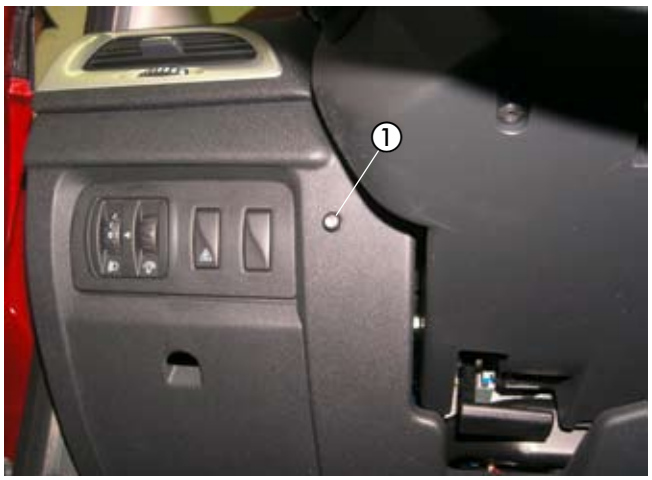


Photo 29

① EasyStart R/R+ button, installed

Prepare the holder as shown in the diagram.
Use two M4 x 10 screws to fix the stationary part to the holder.
Fit the stationary part of EasyStart R/R+ with holder to the existing M8 threaded bolt of the steering column fastening.
Attach the temperature sensor of the EasyStart R/R+ in a suitable position to the panelling in the driver's footwell.
Lay the cable from the installed button and temperature sensor together with the "Control" cable loom to the installed position of the stationary part.
Cut the cables to the correct length, crimp the bushing connectors, attach the bush housing B7 and connect to the stationary part.
Connect the antenna cable of the EasyStart R+ to the stationary part, take it to the left and lay it in the rubber door seal on the driver's side.

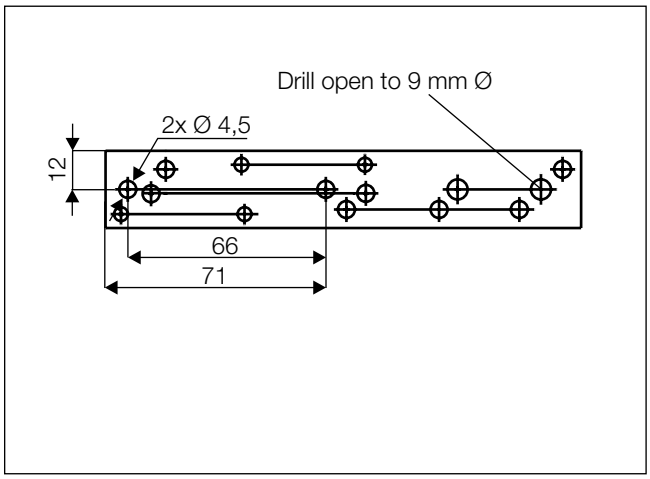


Diagram 9

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.

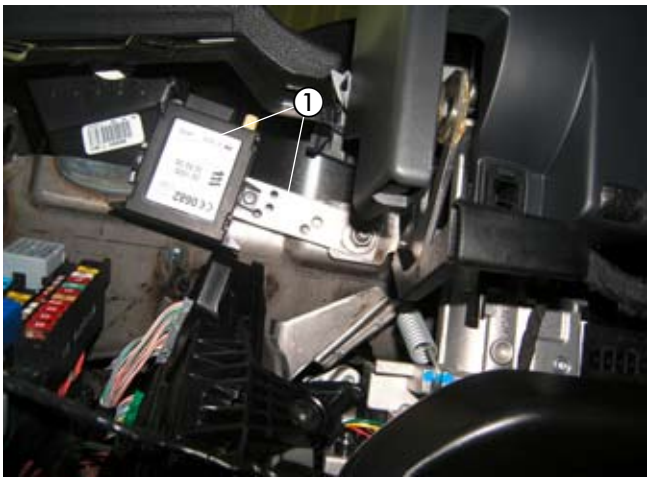


Photo 30

① Stationary part of the EasyStart R/R+, installed with holder

7 After installation

Mount grommet for exhaust end pipe
(see photo 35)

Make a 38 mm Ø in the lower panelling as shown in the picture and insert the grommet for the exhaust pipe end.

When fitting the lower engine panelling, take the exhaust pipe end through the grommet.

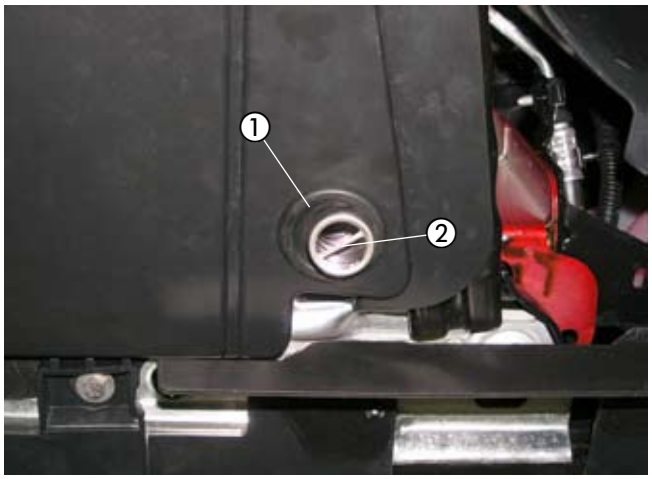


Photo 35

① Grommet for exhaust pipe end, inserted
② Exhaust end pipe, inserted

Complete the vehicle

- Install all removed parts in the reverse order.
- 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.
- Set the clock.
- 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 and place the Operating Instruction together with 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.

8 Parts Overview

Item	Designation	Quantity	Order number
1	Vehicle-specific additional parts of which, the following are to be used:	1	24 8387 00 00 00
	Bracket, heater	1	
	Supporting strut (22 1000 50 65 00)	1	
	Holder, exhaust pipe (9501)	1	
	Holder, exhaust silencer (9302)	1	
	Universal bracket	1	
	Washer B8	2	
	Hexagon Screw M6 x 16	5	
	Hexagon nut M6	1	
	Spring lock washer B6	5	
	Blind rivet nut M6	2	
	Hexagon Screw M8 x 16	1	
	Spring lock washer B8	1	
	Washer 6	4	
	Fillister-head screw M4 x 10	2	
	Hexagon nut M4	2	
	Spring lock washer B4	2	
	Hexagon nut M8	1	
	Screw M5 x 10	1	
	Hexagon nut M5	1	
	Spring lock washer B5	1	
	Water hose, 180° elbow	1	
	Hose holder, rotatable	3	
	Exhaust grommet	1	
	Relay, changeover contact 12V, 20/30A	1	
	Connector 0.5-1.5 mm² red	2	
	Butt-type connector, yellow 4-6 mm²	2	
	Relief relay kit	1	
	Cable loom, IPCU and additional relay	1	
	IPCU module	1	
	Foam rubber hose 5x3	6	
	Heat-shrink fit hose 40/20	0.9 m	



Item 1 Vehicle-specific additional parts 1 set

9 Leaflet for the customer

Before switching on
(see photo 1)

- Before switching on or pre-programming the heating mode with the ignition switched on, set the vehicle's temperature controller ① to "Hot" ("HI" in the display).
- Set the button for the air system ② to maximum air flow for the windscreen.
- Set the fan switch ③ to level 2.



Photo 1

① Temperature controller
② Air system controller
③ Fan controller