INSTALLATION RECOMMENDATION
PLUGTRONIC
K9 PEUGEOT PARTNER, CITROËN BERLINGO, OPEL COMBO V.1



THIS INSTALLATION RECOMMENDATION APPLIES TO VEHICLES FROM PRODUCTION YEAR 2019 TO THE UPCOMING MODEL CHANGE.

1,5 cc Diesel Engine



OPTIONS

- Fog lights
- Headlight washer
- Automatic aircondition
- Automatic transmission
- Manual transmission



Installation time approx. 3 hours



Eberspächer

A WORLD OF COMFORT

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PLEASE NOTE!

This installation recommendation is valid for the above mentioned vehicle to the exclusion of all liability claims.

Deviating model years and/or deviating equipment may result in modifications to this installation recommendation.

It is therefore mandatory to check the feasibility of installing the heater in the vehicle before starting work.

All liability claims resulting from modifications to the vehicle are excluded.

1 INTRODUCTION

SPECIAL TEXT FORMATS, PRESENTATIONS AND PICTURE SYMBOLS

In this installation recommendation, special text formats and picture symbols are used to emphasize different contents. Please refer to the following examples for their meanings and appropriate action.

SPECIAL TEXT FORMATS AND PRESENTATION

- This dot (•) denotes a list, which ist started by a heading.
  - If an indented dash (-) follows a «dot», this list is a sub- section of the black dot.

PICTURE SYMBOLS

DANGER!
This information points out a potential serious or fatal danger. Ignoring this information can result in severe injuries.

→ This arrow refers to precautions that can be taken to reduce the danger.

CAUTION!
This information points out a dangerous situation for a person and / or the product. Ignoring this information can result in injuries to people and / or damage to machinery.
→ This arrow refers to precautions that can be taken to reduce the danger.

PLEASE NOTE!
These remarks contain recommendations for use and useful tips for the operation, installation and repair of the heater.

ACCIDENT PREVENTION

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

SAFETY INTRODUCION FOR INSTALLATION AND REPAIR

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

→Only authorized and trained persons may install the heater according to the specifications in the technical documents or repair it using original spare parts.

→Installation and repairs by unauthorized 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.

→Installation according to this installation recommendation may only be carried out in conjunction with the respective unit-related technical description, installation instructions, operating instructions and maintenance instructions. This document must be carefully read through before / during installation and repair and followed throughout. Particular attention is to be paid to the official regulations, the safety instructions and the general information.

PLEASE NOTE!
- The relevant rules of sound engineering practice and any information provided by the vehicle manufacturer are to be observed during the installation and repair.
- When carrying out electric welding on the vehicle, the positive cable at the battery should be disconnected and earthed to protect the control box.

LIABILITY CLAIM / WARRANTY

Eberspächer does not accept any liability for defects and damage, which are due to installation or repair by unauthorized and untrained persons. Compliance with the official regulations and the safety instructions is prerequisite for liability claims. Failure to comply with the official regulations and safety instructions leads to exclusion of any liability of the heater manufacturer.

1 INTRODUCTION

ADDITIONAL INFORMATION ON THE ALIDITY OF THE INSTALLATION RECOMMENDATION

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

ENGINE AND GEARBOX OPTIONS

Cc	kW / hk	Transmission
1,5	130	Automat
1,5	130	6S

5 S = 5 gear manual box
6 S = 6 gear manual box

PLEAS NOTE!

- The installation recommendation is not valid for right-hand drive vehicles.
- Vehicle models, engine types and featurs options not listed in this recommendation, have not been tested. Installation acccording to this installation recommendation can still be possible

INITIAL STARTUP OF THE HEATER OR FUNCTIONAL TEST

- After installation or carrying out a repair on the heater, the coolant circuit must be carefully vented.
  Comply with the instructions issued by the vehicle manufacturer
- Open all heating circuits before the trial run (set the temperaturecontroller to "hot").
- During the heater trail run, all water connections must be checked for leaks and secure, tight fit.
- If a fault occur while the heater is running, use a diagnostic unit to correct the cause of the fault.

PARTS REQUIRED FOR INSTALLATION

QUANTITY	DESCRIPTION	PART NO.
1	Plugtronic Standard	29.2498.89.0006
1	Plugtronic Cable 0,5M	2480046
1	Plugtronic Adapterkit	29.2498.89.0021
	OPTION	
1	Plugtronic Batterycharge	29.2498.89.0038

SPECIAL TOOLS REQUIRED

- Torque wrench (5…50 Nm)
- Anti-corrosion agent
- Pliers for spring band clamps
- Crimping tool
- Step drill

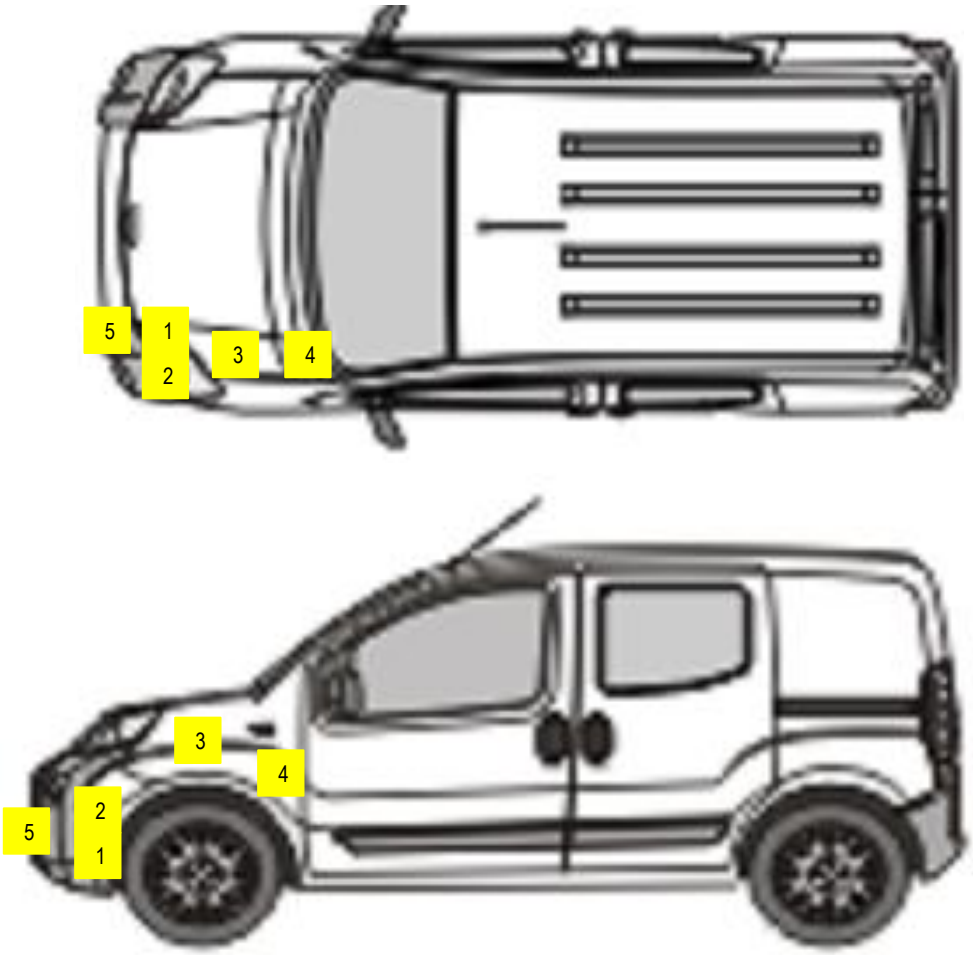
TIGHTENING TORQUES

If no tightening torques are specified, tighten the screw connections according the following table:

BOLT SIZE	TIGHTENING TORQUE
M4	$3^{+0,5}$ Nm
M5	$5^{+0,5}$ Nm
M6	10^{+1} Nm
M8	20^{+2} Nm
M10	45^{+2} Nm
TRX M6	$6^{+0,5}$ Nm
Hoseclamp	$3^{+0,5}$ Nm

1 INTRODUCTION

INSTALLATION OVERVIEW



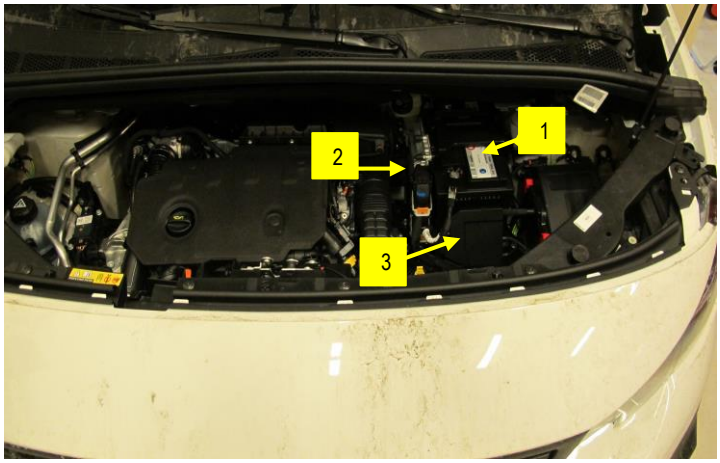
1. Plugtronic heater
2. Waterpump
3. Battery charger
4. Cable grommet
5. 230V connection plug

2 PREPARATION

Diconnect and remove battery (1).

Remove control module (2).

Remove the cover over the main fuses (3).



Picture 1

Release pressure from coolingsystem.

Remove cover.



Picture 2

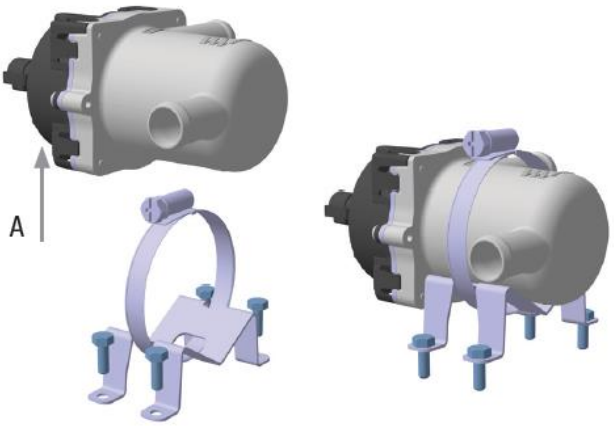
Remove the left front wheel and inner shield.



Picture 3

2 PREPARATION

Install the Plugtronic in the mounting bracket.



Picture 4

Affix the duplicate nameplate (1) to the B-column in a clearly visible position.

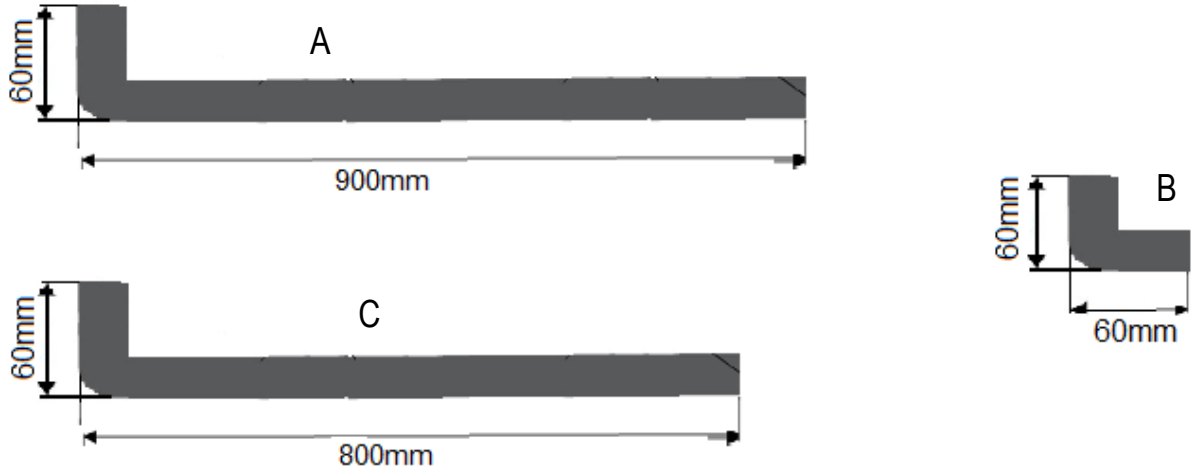




Picture 5

2 PREPARATION

WATER HOSES:



WATER CIRCUIT

1 Plugtronic Heater
2 Waterpump
3 Water connections
4 Vehicle Heatexchanger
5 Engine
A Water hose
B Water hose
C Water hose

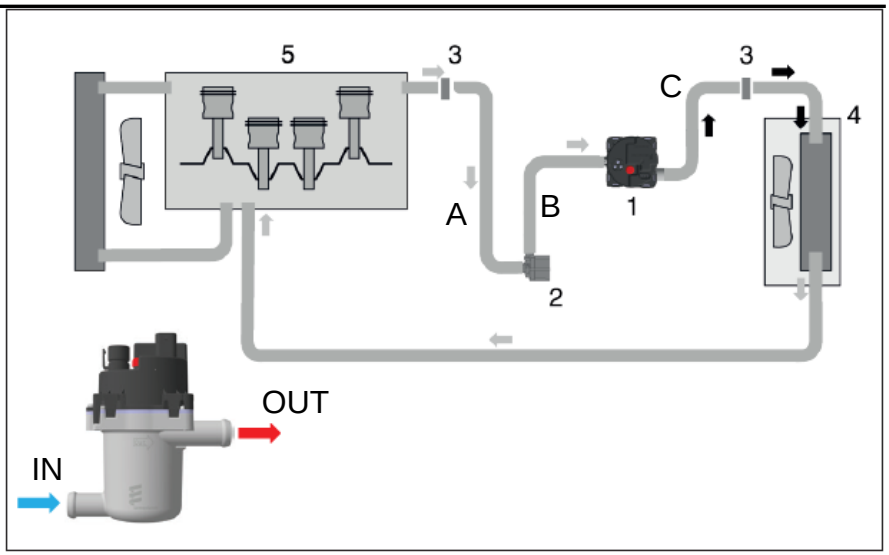


Fig. 8

3 INSTALLATION

Locate a suitable space for mounting the 230Volt socket and install it.

See Plugtronic technical description 3.2.2 for details.



Picture 6

⚠ **CAUTION!**
Make sure there is space behind the bumper.

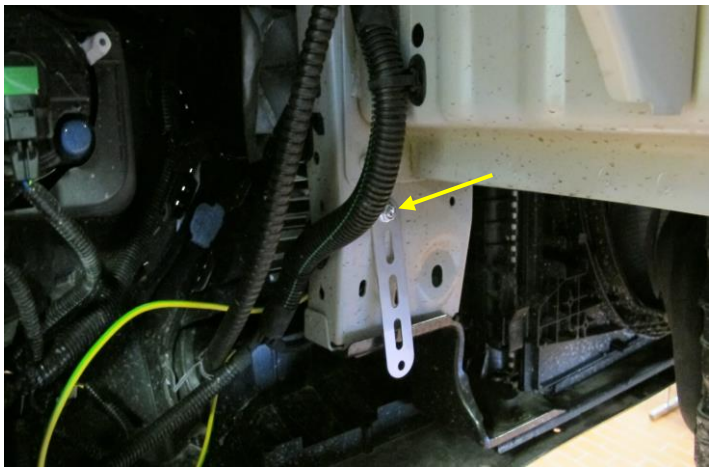
Insert a M6 bolt into the cable lug of the GND cable (yellow/green) of the 230Volt connector as shown.



Picture 7

Insert the M6 bolt through an existing hole in the frame from the back.

Fit bracket no. 9304 with the M6 bolt as shown with a M6 nut, fasten the nut loosely this time.

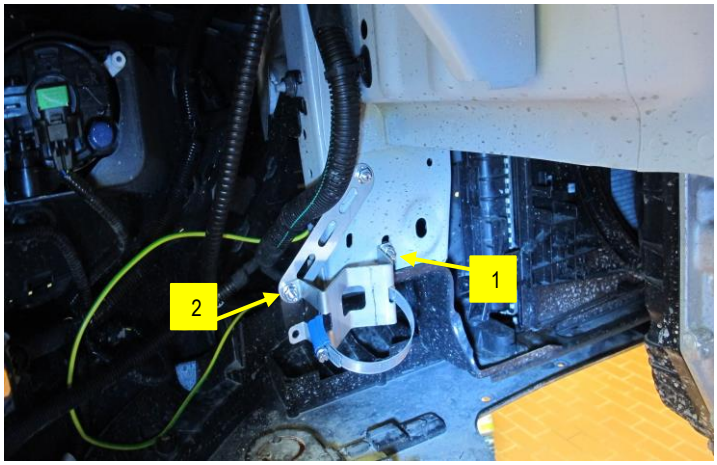


Picture 8

3 INSTALLATION

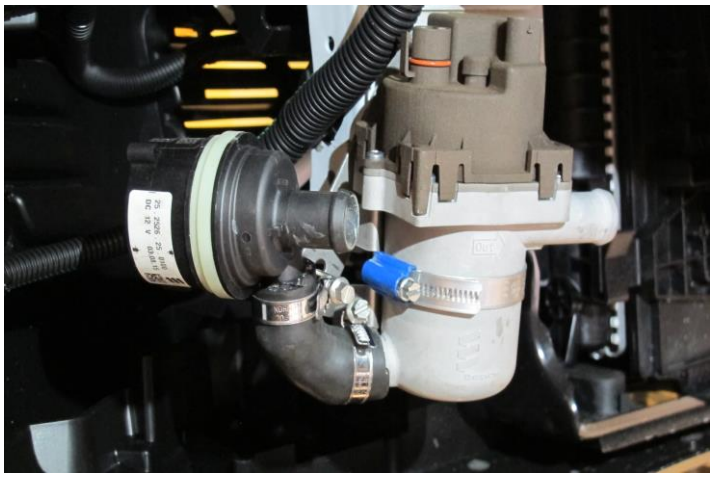
Install the Plugtronic heater with the bracket in existing hole in the frame (1) and on bracket no. 9304 (2) as shown. Fasten with M6 bolts and M6 nuts.

(Picture shows without heater to display mounting position)



Picture 9

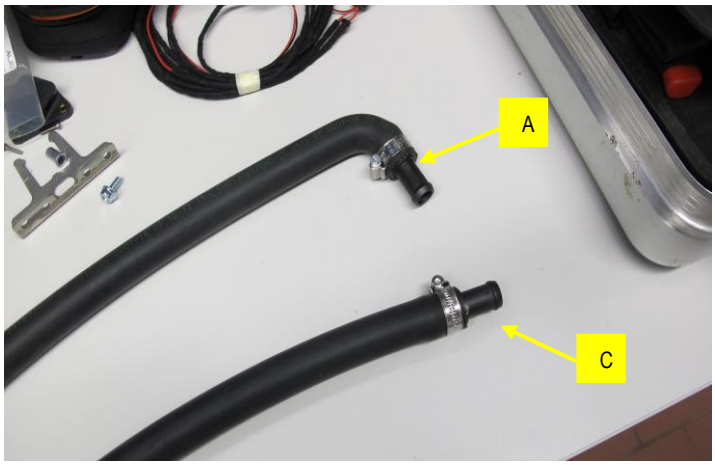
Install water pump on heater with 90 degree water hose B as shown. Secure with hose clamps.



Picture 10

Install water hose reducer Ø20-18mm on water hoses as shown. Secure with hose clamps.

Hose A 60x900mm.
Hose C 60x800mm.



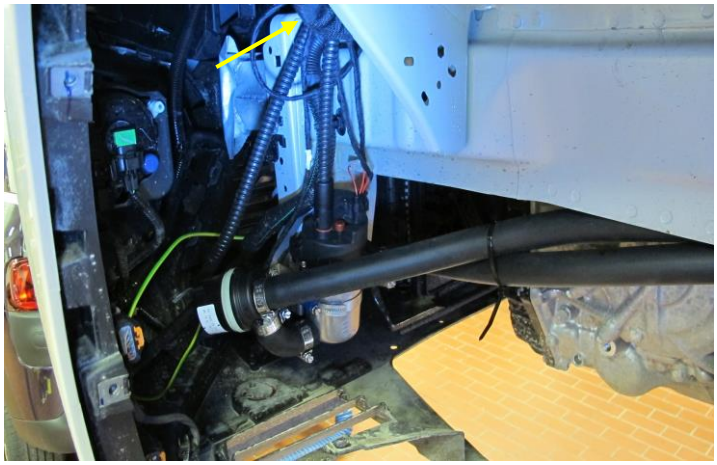
Picture 11

3 INSTALLATION

Install water hoses on heater and water pump as shown.

Connect 0.5m 230V cable to heater
Slide the 230V cables into the engine compartment.

Connect cable harness to heater and water pump, slide cable harness up into engine compartment.

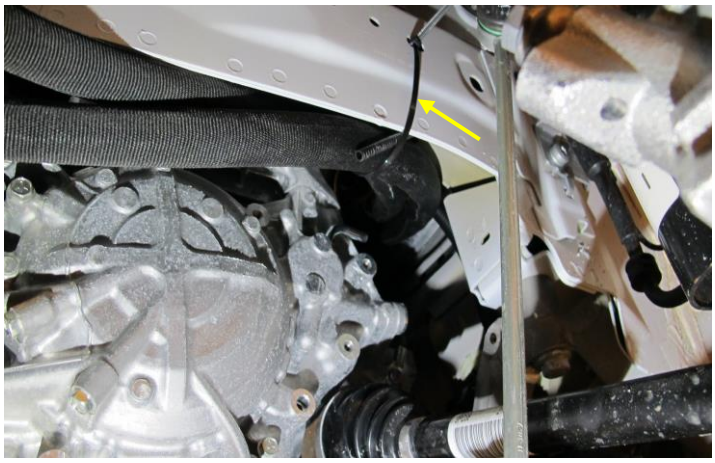


Picture 12

Water hoses are pulled behind the gearbox toward the inlet water hose of the HVAC heat exchanger.

Fasten with cable ties through frame guard as shown I picture.

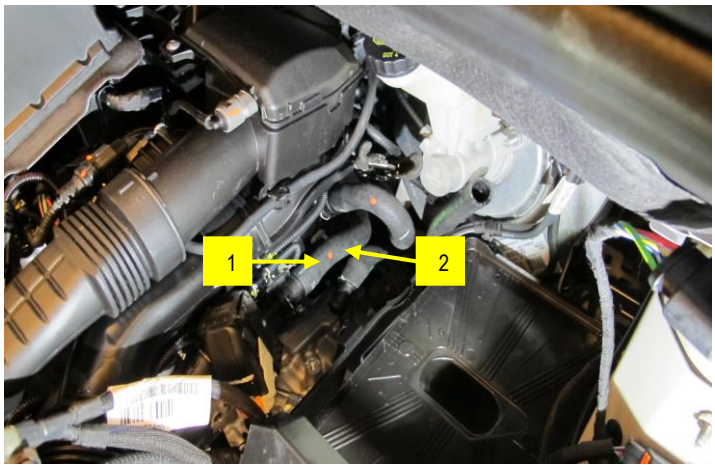
CAUTION!
Make sure water hoses do not conflict with sharp and moving parts.



Picture 13

Locate the hose that runs from the engine to the HVAC heat exchanger (1).

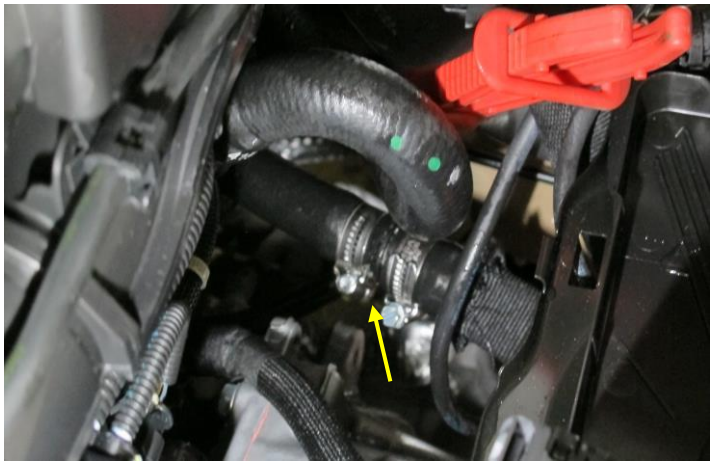
Cut the hose in a suitable place (2).



Picture 14

3 INSTALLATION

Connect the waterhose from the Plugtronic heater with the hose that goes to the HVAC heat exchanger. Secure with hose clamps.



Picture 15

Connect the hose from the engine to the hose that goes to the PLugtronic water pump.
Secure with hose clamps.



Picture 16

CAUTION!
Make sure water hoses do not conflict with sharp and moving parts.

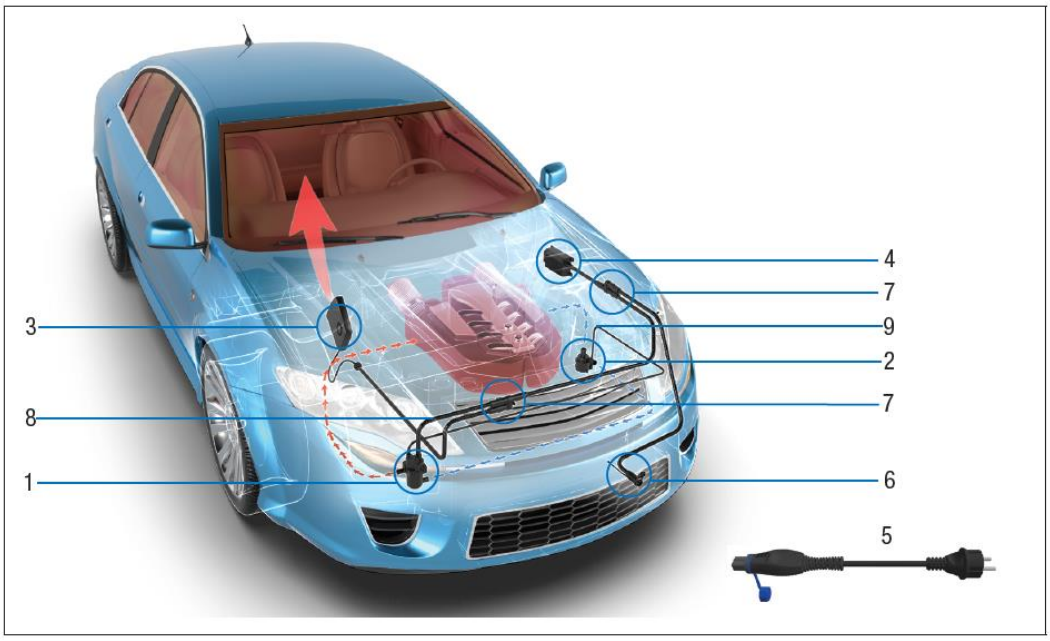
Connect the 230V cable from the Plugtronic heater, 230V cable from 230V socket and *(If used)* 230V cable to the compartment heaterfan together with the 3-way split connector.



Picture 17

3 INSTALLATION

Install the 230Volt cables and components according to the Plugtronic technical docomentation.

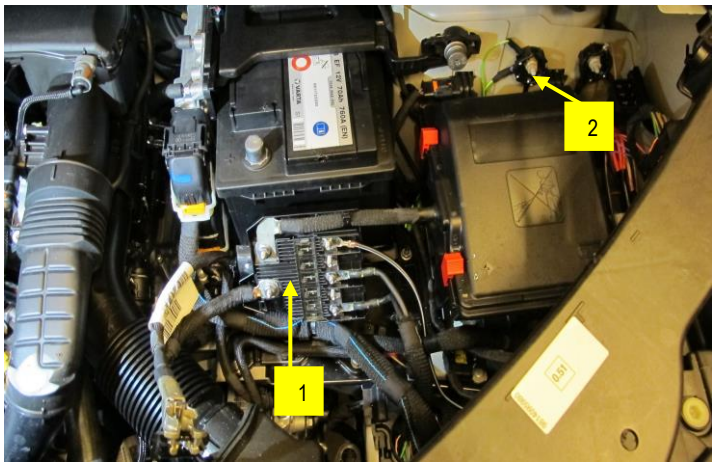


1 Engine heater
2 Water pump
3 Compartment heater
4 Battery charger
5 Connection cable
6 Inlet cable
7 Split contact
8 Extension cable
9 Pump cable

Connect 12V cables from Plugtronic.

Battery + to main fuse box (1).

Battery - connects to minus point (2).



Picture 18

4 BATTERY CHARGER (Option)

Suggested location for battery charger.

Connects to 230V with supplied branch and cable.



Picture 19

CAUTION!
Use rust protection for the drillings to prevent corrosion.

Battery + connected to main fuse box (1).

Battery - connects to minus point (2).



Picture 20

5 HEATER FAN / CLIMATE CONTROL

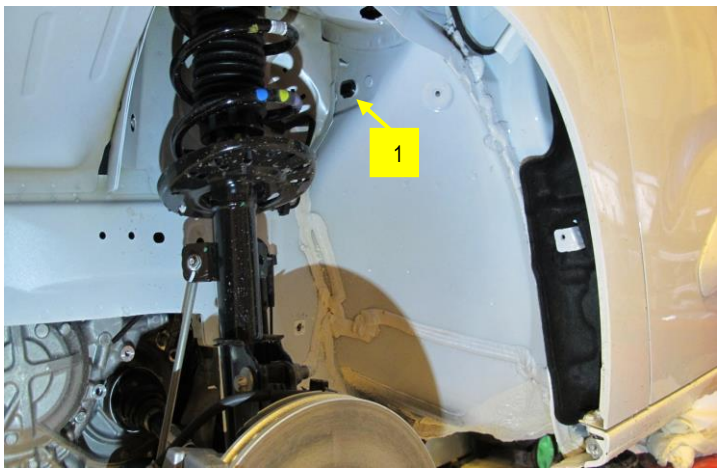
Pull the 230V cable against the hood and out into the wheel arch through an existing hole behind the battery (1).

CAUTION!
Make sure cables do not conflict with sharp and moving parts.



Picture 21

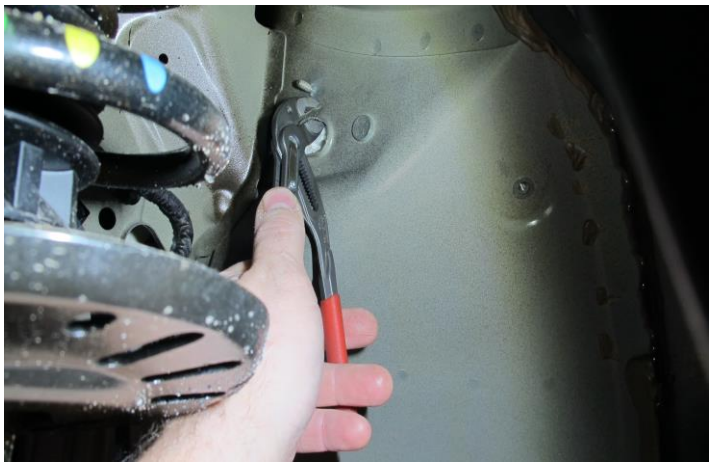
Remove the plastic plug (1).



Picture 22

Use a plier and bend the edge of the hole slightly so that the 230V connection cable can be inserted.

CAUTION!
Use rust protection to prevent corrosion.

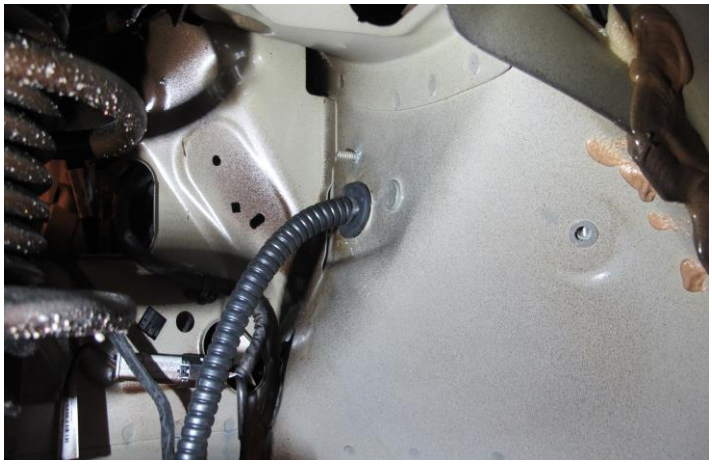


Picture 23

5 HEATER FAN / CLIMATE CONTROL

Use the supplied rubber gromet when inserting the 230V connection cable true the hole.

Use any sealant in addition so that water cannot enter the compartment



Picture 24

230V connection cable into compartment.



Picture 25

Suggestions for placement of the Eberspächer heater fan.

Mounted with supplied bracket and screws



Picture 26

5 HEATER FAN / CLIMATE CONTROL

Suggestion for placing the connector if universal fan oven is to be used.



Picture 27

Connect 230V cables.

Lay cables hidden and fasten firmly

⚠ **CAUTION!**
Make sure cables do not conflict with sharp and moving parts.



Picture 28

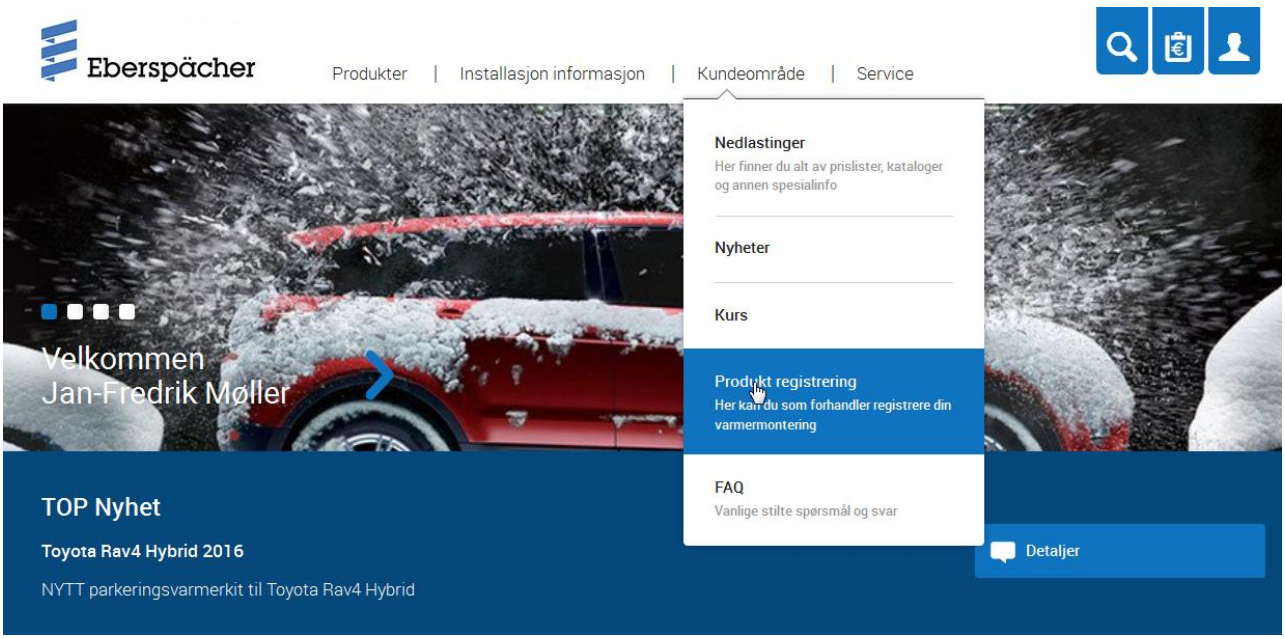
6 AFTER INSTALLATION

COMPLETE THE VEHICLE



- ✓ Install all the 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.
- ✓ Restore all the vehicles's programmed settings (radio, window lift, etc.)
- ✓ Fill the cooling system, start the engine, vent the cooling system and check for leaks, to up any missing cooland liquid.
- ✓ 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.
- ✓ Do a test run and check for leaks

REGISTER THE HEATER IN THE PARTNERPORTALE!



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