INSTALLATION RECOMMENDATION
PLUGTRONIC
PEUGEOT EXPERT, CITRÖEN JUMPY, TOYOTA PROACE V.2



THIS INSTALLATION RECOMMENDATION APPLIES TO VEHICLES FROM PRODUCTION YEAR 2016 TO THE UPCOMING MODEL CHANGE.

1,5 + 2,0 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	100/120	6S
2,0	120/150	6S
2,0	180	Automat

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	Partno. depending on country.
	EU/SWE	29.2498.89.0006
	NO	29.2498.89.0040
	DK	29.2498.89.0013
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

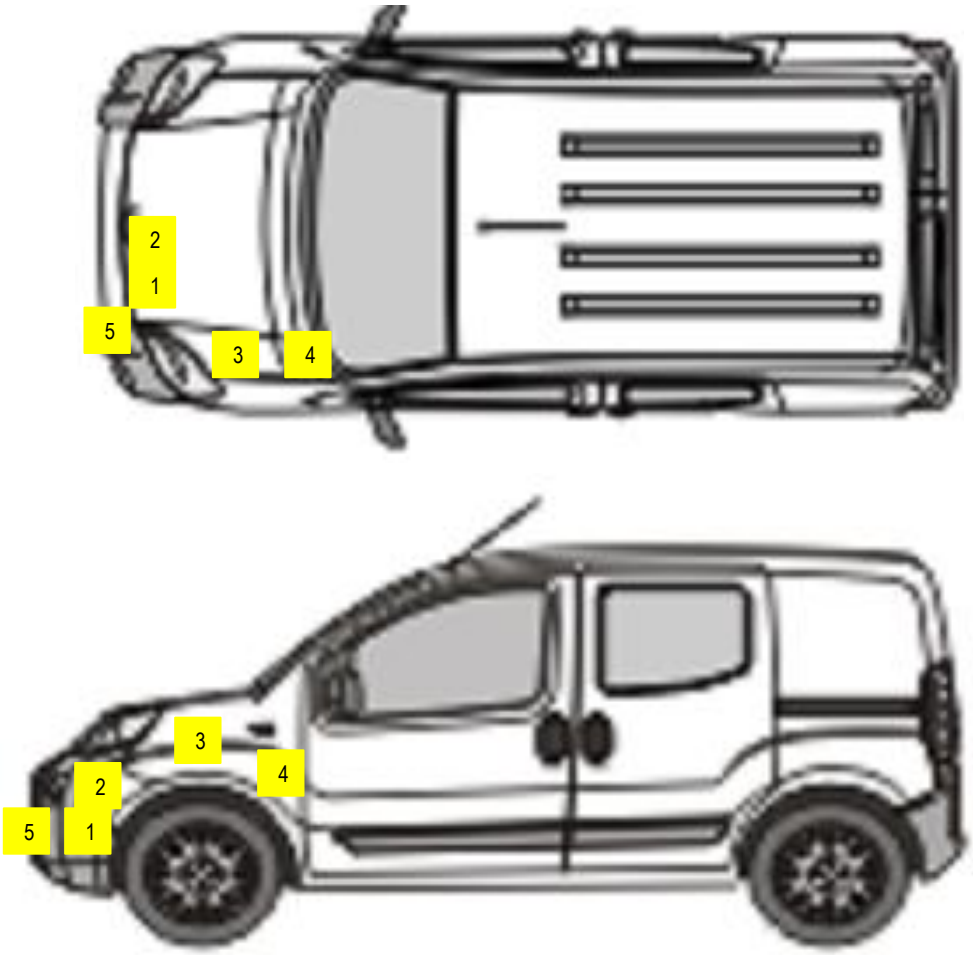
TIGHTENING TORQUES

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

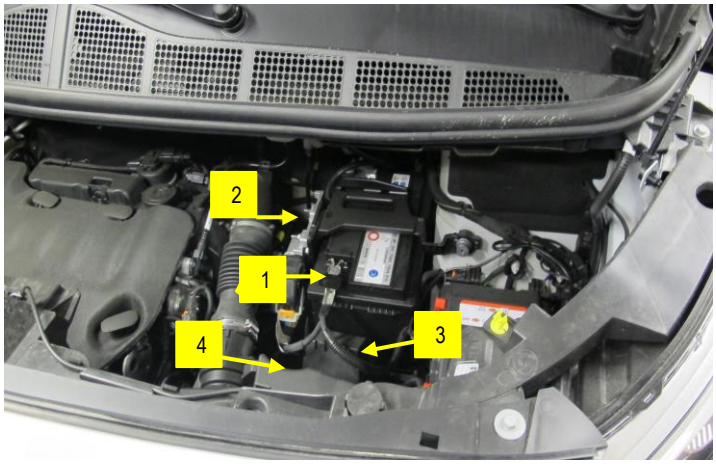
Disconnect and remove battery (1).

Remove control module (2).

Remove the cover over the main fuses (3).

Remove air filter box (4).

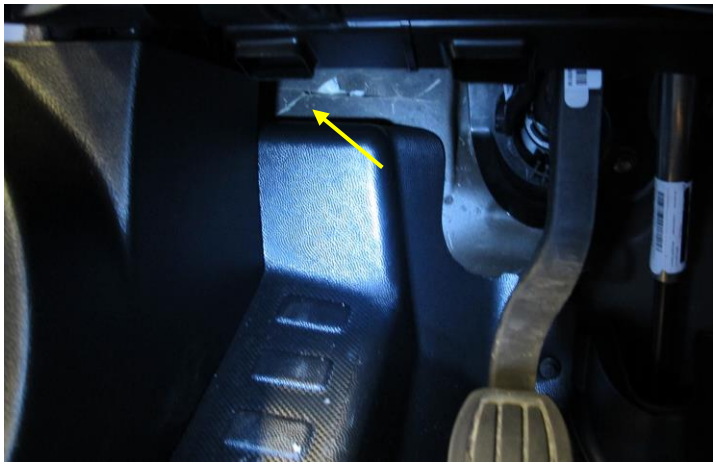
Release pressure from engine cooling system.



Picture 1

Cut incisions in insulation against bulkhead inside the compartment to the left of pedals as shown.

Remove the plastic plug that is behind the insulation.



Picture 2

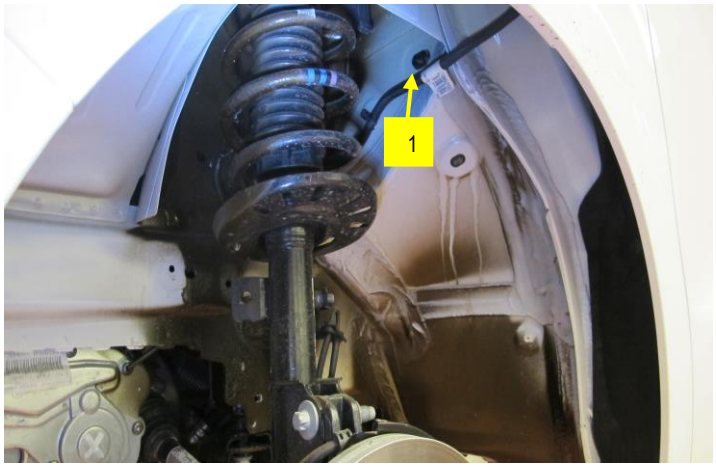
Remove the left front wheel and inner shield.



Picture 3

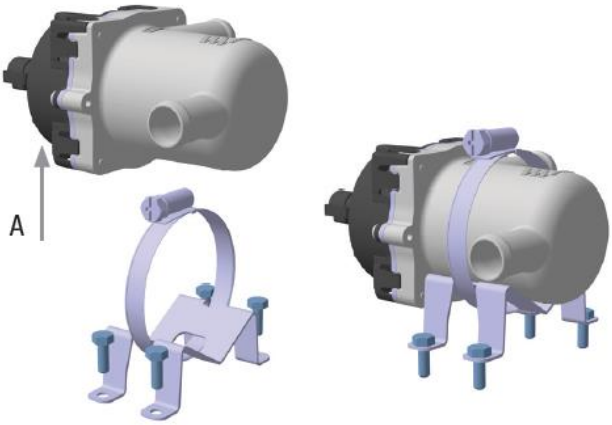
2 PREPARATION

Dismount inner shield and locate hole where plastic plug was removed from inside (1). *(picture 2)*



Picture 4

Install the Plugtronic in the mounting bracket.



Picture 5

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





Picture 7

2 PREPARATION

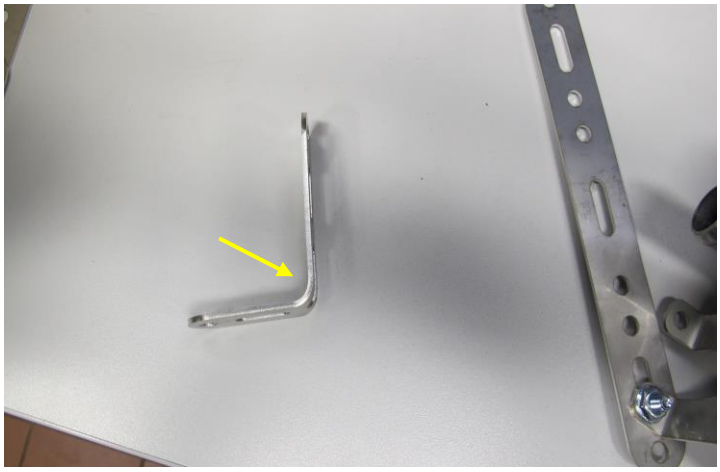
Insert bracket 9304 into the vice as shown and bend it 90 degrees.



Picture. 8

Bracket ready.

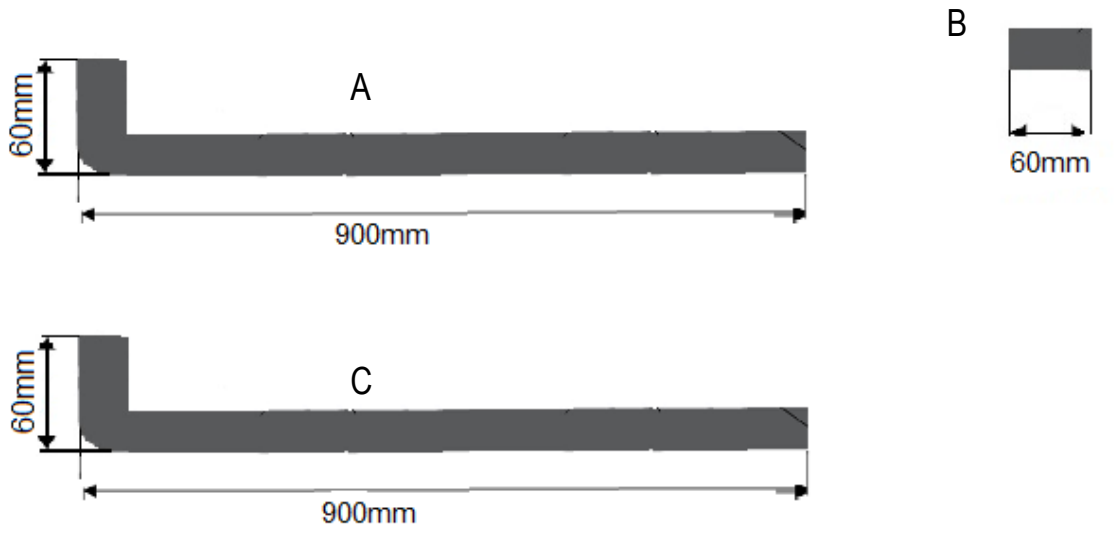
(To be used in picture 13)



Picture 9

2 PREPARATION

CUT OUT AND PREPARE 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

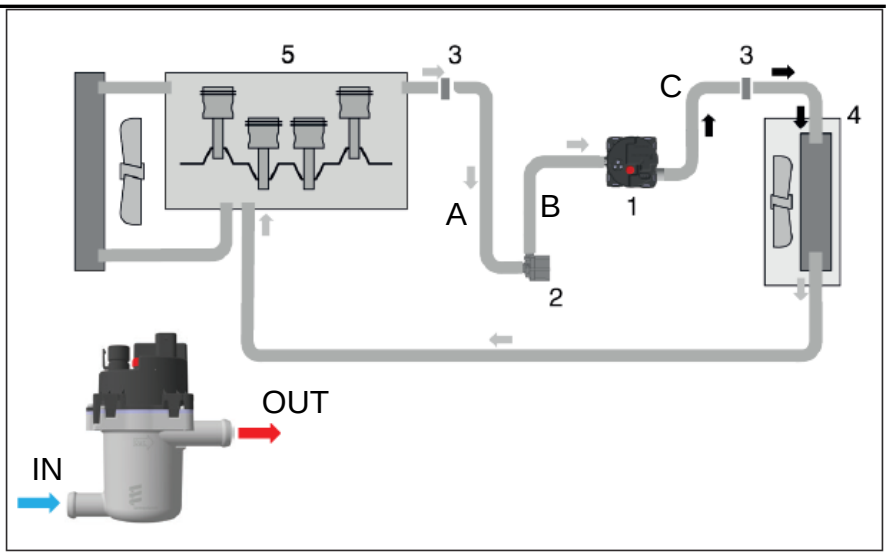
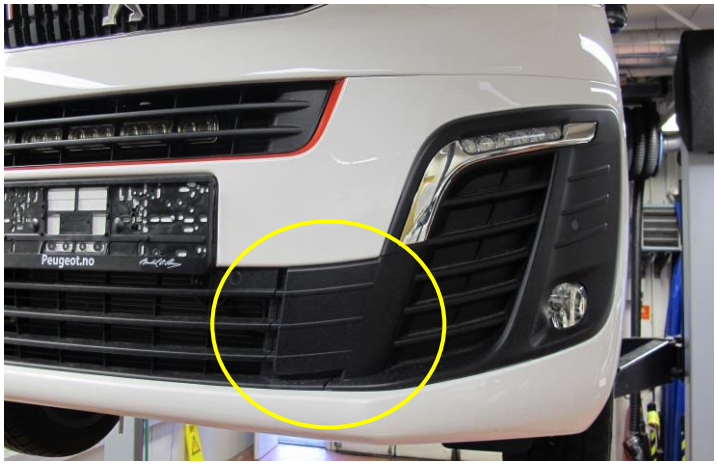


Fig. 10

3 INSTALLATION

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

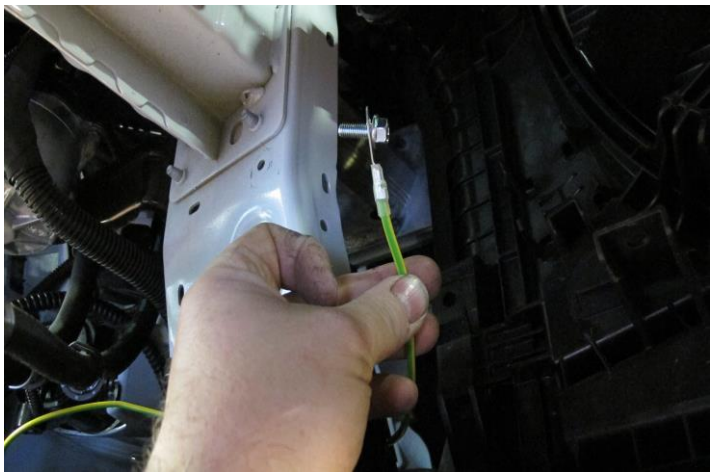
See Plugtronic technical description 3.2.2 for details.



Picture 10

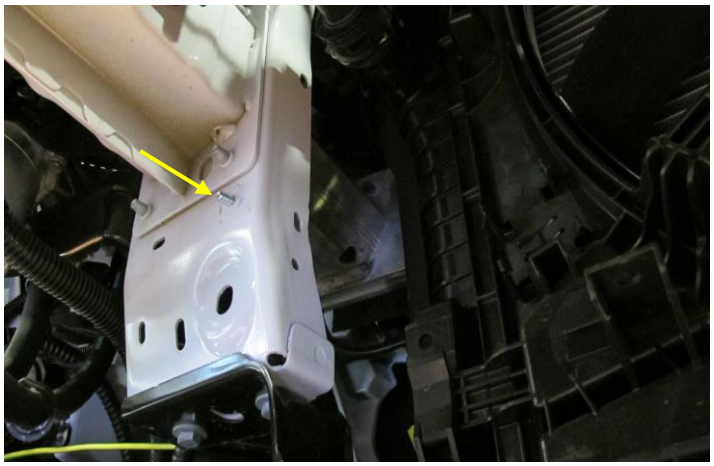
CAUTION!
Make sure there is space behind the bumper.

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



Picture 11

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

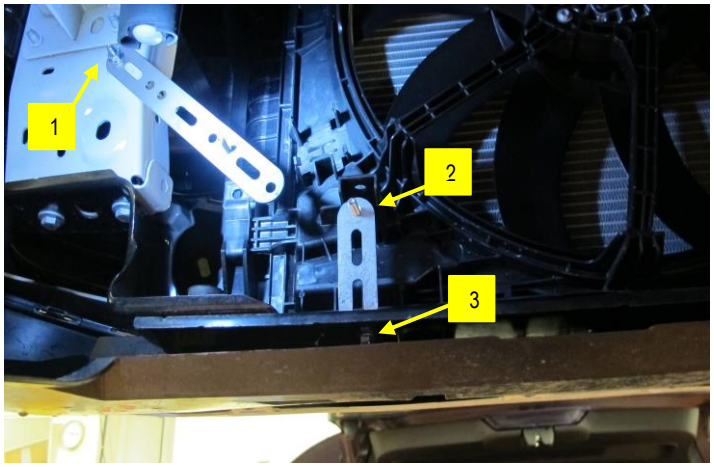


Picture 12

3 INSTALLATION

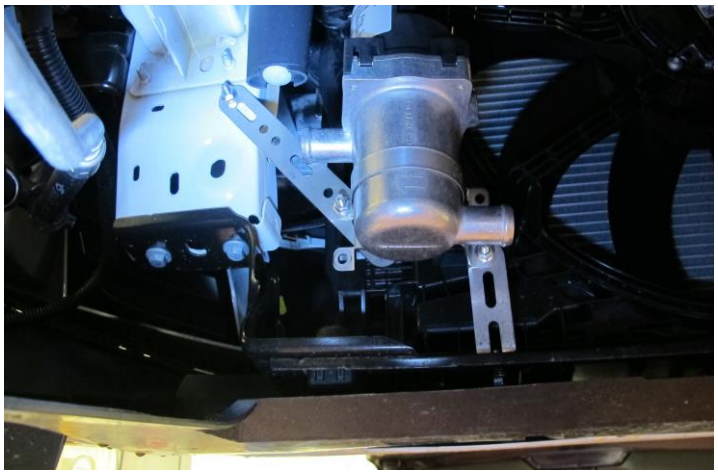
Install bracket 9306 on the M6 bolt (1) and secure with a M6 nut as shown.

Insert a M6 bolt in the top hole of the 90 degree bracket from picture 4. (2) Install the bracket in existing holes in cross beam (3).



Picture 13

Install the Plugtronic heater on to the two brackets as shown.



Picture 14

Install the water pump on heater with 60mm long water hose.

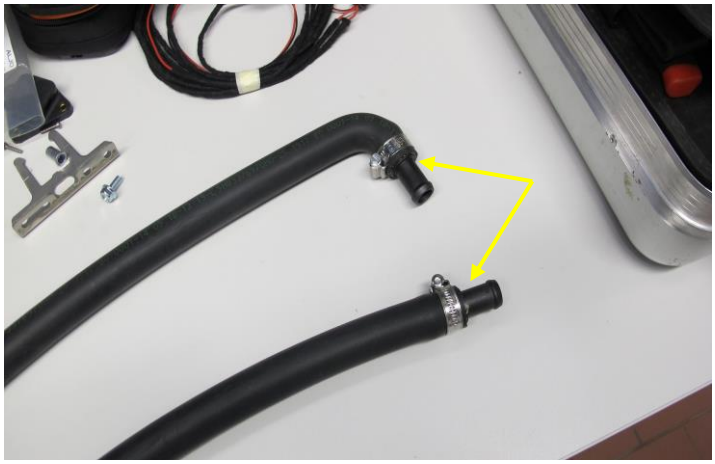
Water pump insertion pointing upwards.



Picture 15

3 INSTALLATION

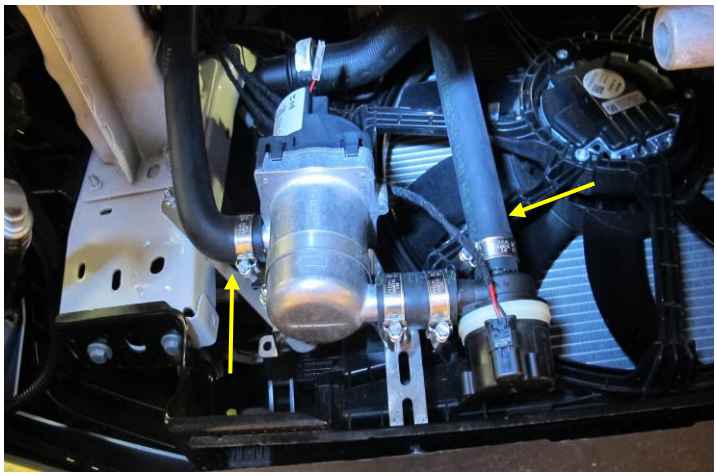
Install water hose reducer 20-18mm on water hoses as shown. Secure with hose clamps.



Picture 16

Mount water hoses on Plugtronic heater and water pump as shown. Secure with hose clamps.

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



Picture 17

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

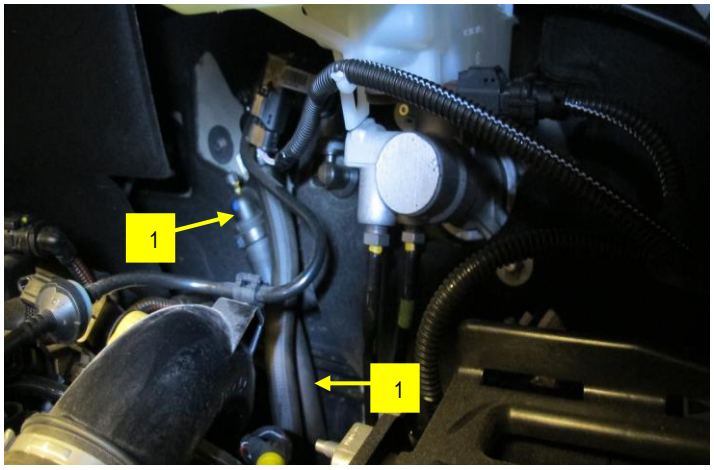
CAUTION!
Make sure water hoses do not conflict with sharp and moving parts.



Picture 18

3 INSTALLATION

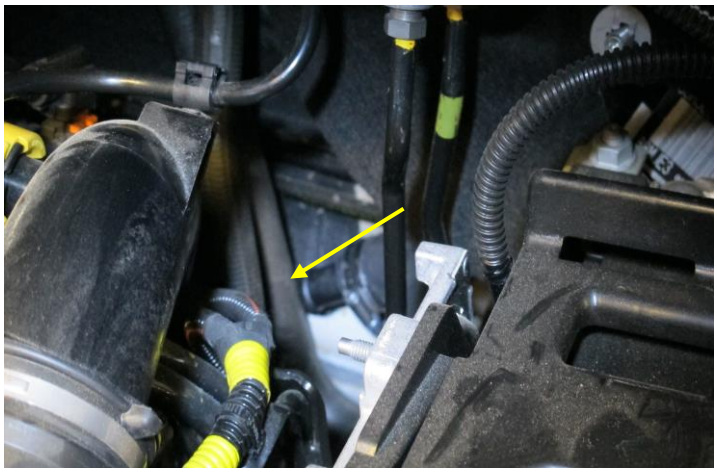
Locate the hose that runs from motor to HVAC heat exchanger (1).



Picture 19

Cut the hose in a suitable place.

Connect the end of the hose that comes from the engine to the hose that goes to the Plugtronic water pump.
Secure with hose clamps.



Picture 20

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

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



Picture 21

3 INSTALLATION

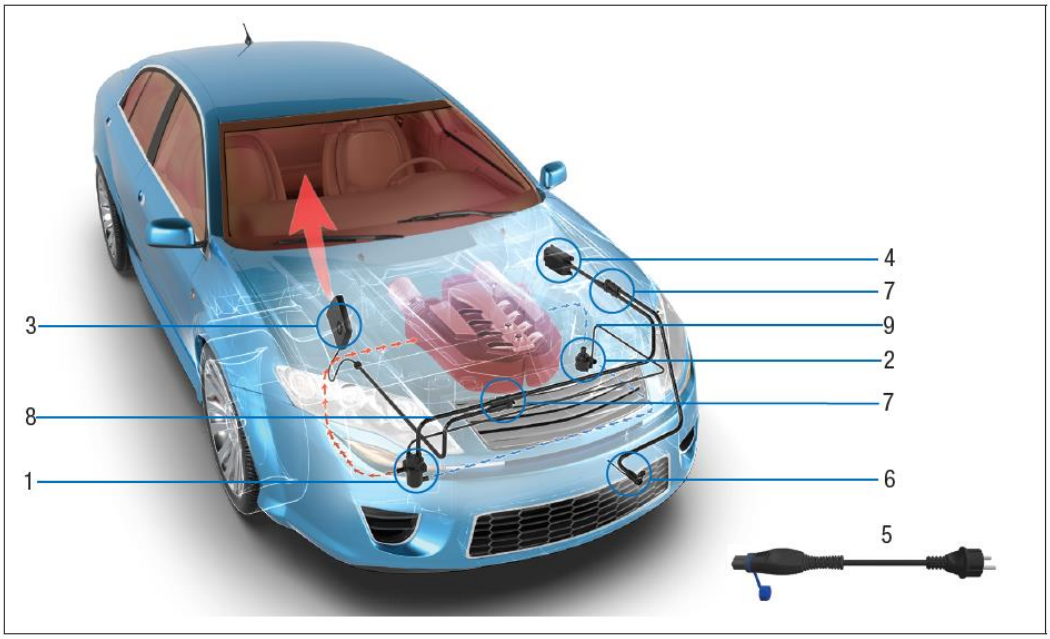
Connect the 0.5m 230V cable to Plugtronic heater.

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 22

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



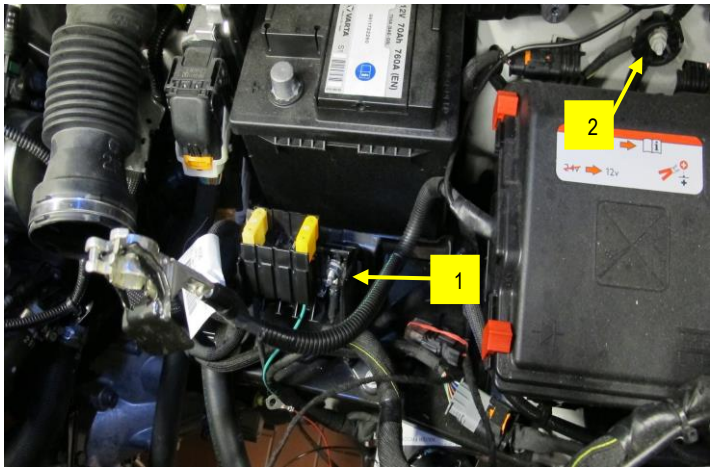
1 Engine heater
2 Water pump
3 Compartment heater
4 Battery charger
5 Connection cable
6 Inlet cable
7 Split contact
8 Extension cable
9 Pump cable

3 INSTALLATION

Connect 12V cables from Plugtronic.

Battery + to main fuse box (1).

Battery - connects to minus point (2).



Picture 23

4 BATTERY CHARGER (Option)

- A Battery charger is possible to add to the system
- Part no. 292498890038 add on kit for 12V plugtronic.



Suggested location for battery charger.

Connects to 230V with supplied branch and cable.

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

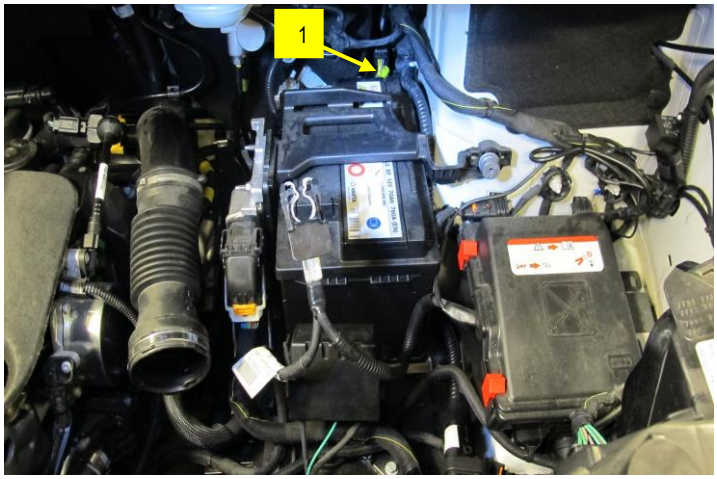


Picture 24

5 HEATER FAN / CLIMATE CONTROL

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

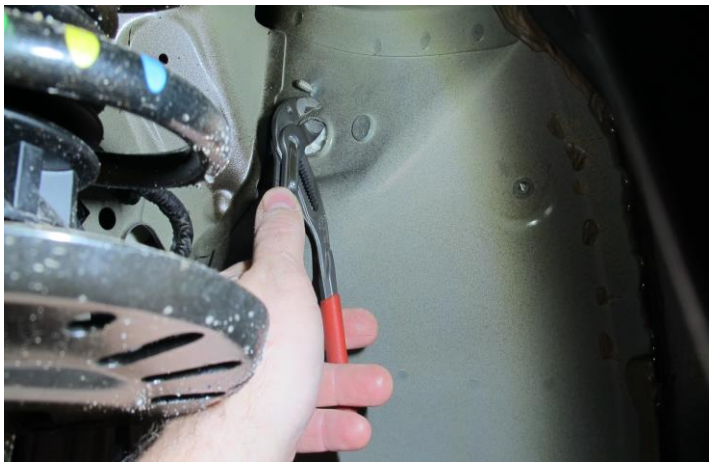
CAUTION!
Make sure cables do not conflict with sharp and moving parts.



Picture 25

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

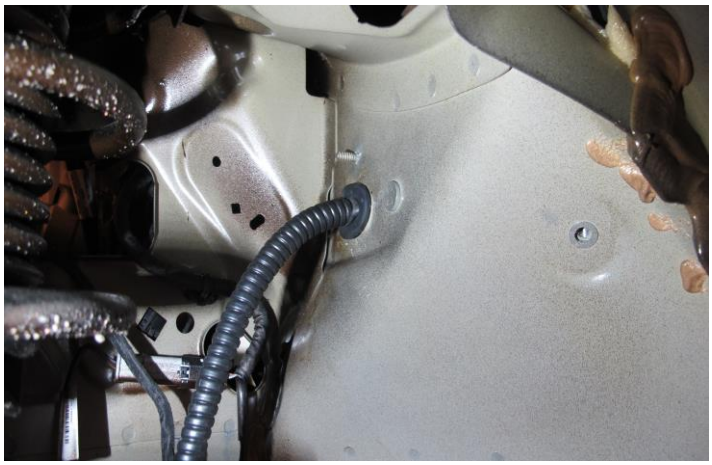
CAUTION!
Use rust protection to prevent corrosion.



Picture 26

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

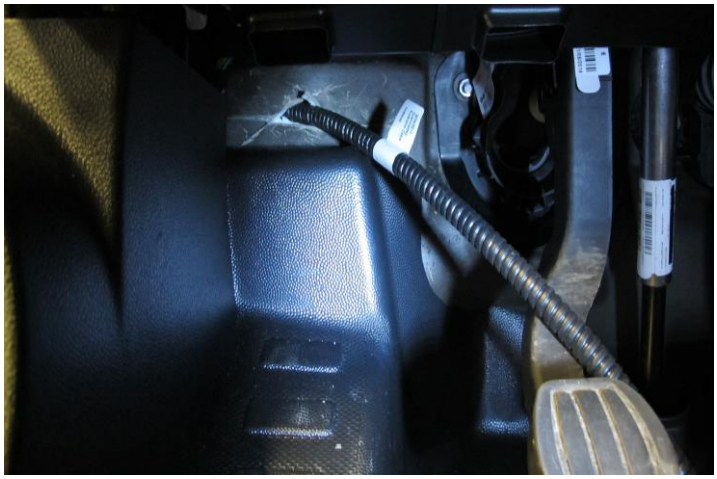
Use any sealant in addition so that water cannot enter the compartment



Picture 27

5 HEATER FAN / CLIMATE CONTROL

230V connection cable into compartment.



Picture 28

Suggestions for placement of the Heater fan.

Mounted with supplied bracket and screws.



Picture 29

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



Picture 30

5 HEATER FAN / CLIMATE CONTROL

Connect 230V cables.

Lay cables hidden and fasten firmly

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



Picture 31

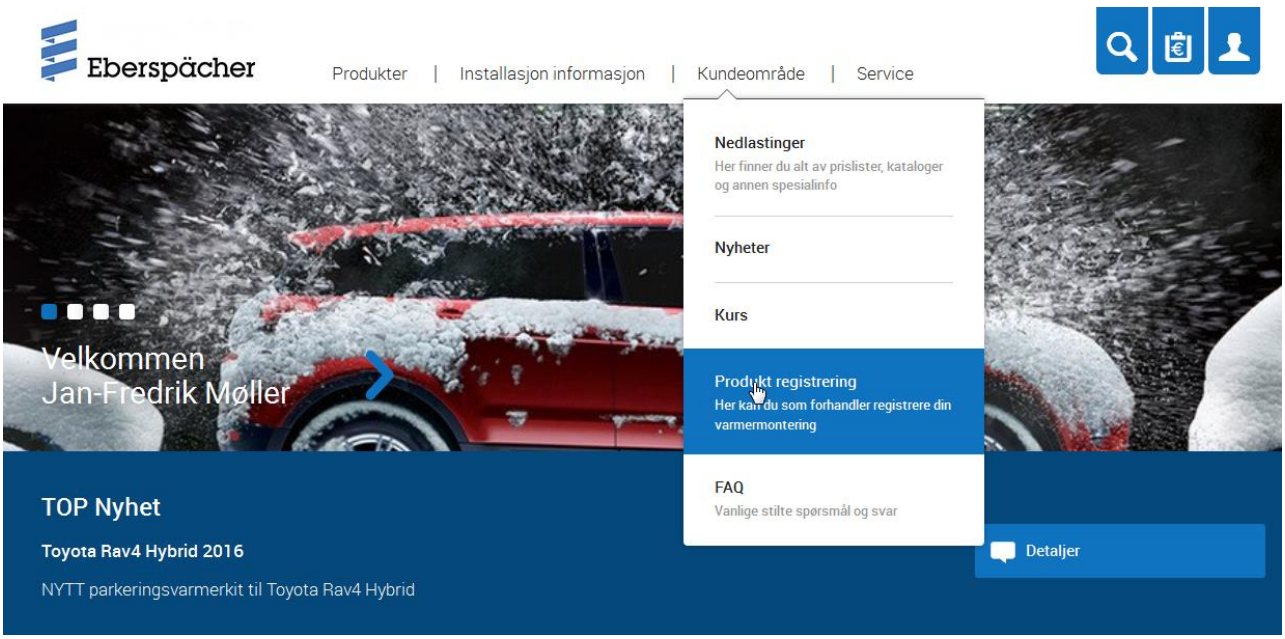
6 AFTER INSTALLATION

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 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!



Hovedkvarter:
J. Eberspächer GmbH & Co. KG
Eberspächerstraße 24
73730 Esslingen
Hotline: 0800 1234300
Faks-hotline: 01805 262624
info@eberspaecher.com

Opprettet av:

Eberspächer AB Norge
Trollåsveien 34
1414 Trollåsen

Tlf: +47 66 82 30 50
support@eberspaecher.com

H.S 14.06.19

Eberspächer