INSTALLATION RECOMMENDATION
HYDRONIC S3 – B 4 E / B 5 E IN THE DACIA DUSTER (SR)



THIS INSTALLATION RECOMMENDATION APPLIES TO VEHICLES FROM MODEL YEAR 2017 WITH THE FOLLOWING MOTORISATION:

1.2 l cubic capacity / 4 cylinder in-line engine TCe / 92 kW - 125 HP (HSN: 3333 / TSN: BIP, BIQ)

WICHTIG für den elektrischen Anschluss der Hydronic S3 CS Heizgeräte: Bitte beachten Sie die Hinweise am Ende dieses Einbauvorschlages!

IMPORTANT NOTE for the electrical wiring of Hydronic S3 CS heaters: Please read the reference at the end of this installation recommendation!

A WORLD OF COMFORT

Eberspächer

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This installation recommendation documents the installation of the Hydronic S3 heater in a vehicle of model year 2017 with the following equipment:

- **with AirCon or automatic AirCon**
- **with fog lamps**
- **with manual gearbox or automatic 6-speed DSG gearbox**
- **with front-wheel drive or four-wheel drive**

The following have not been checked:

- **Interior monitoring**

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.

Installation time: approx. 8 hours

1 INTRODUCTION

SPECIAL TEXT FORMATS, PRESENTATIONS AND PICTURE SYMBOLS

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

SPECIAL TEXT FORMATS AND PRESENTATIONS

- This dot (▪) denotes a list, which is 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 indicates the appropriate precaution to take to avert 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 equipment.

➔ This arrow indicates the appropriate precaution to take to avert the danger.

PLEASE NOTE!

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

SAFETY INSTRUCTIONS FOR INSTALLATION AND REPAIR

DANGER!

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

➔ Only authorised 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 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.

➔ 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 unauthorised 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.

ACCIDENT PREVENTION

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

1 INTRODUCTION

ADDITIONAL INFORMATION ON THE VALIDITY 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

Cubic capacity	kW / HP	Gearbox
1.2 l TCe	92 / 125	6S

6S = 6-gear manual gearbox

PLEASE NOTE!

- The installation recommendation is not valid for right-hand drive vehicles.
- Vehicle models, 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.

INITIAL STARTUP OF THE HEATER OR FUNCTIONAL TEST

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

PARTS REQUIRED FOR INSTALLATION

QUANTITY	DESIGNATION	ORDER NO.
1	Hydronic S3 - B 4 E	20 1994 05 00 00
1	Vehicle-specific installation kit	24 8000 35 00 28
	or:	
1	Hydronic S3 - B 5 E	20 1993 05 00 00
1	Vehicle-specific installation kit	24 8000 35 00 28
EasyStart control unit as chosen:		
1	EasyStart Web	22 1000 34 51 00
1	EasyStart Remote+	22 1000 34 17 00
1	Easy Start Remote	22 1000 34 23 00
Must also be ordered for vehicles with automatic AirCon		
1	Aircon kit	24 8800 00 00 67

SPECIAL TOOLS REQUIRED

- Necessary torque wrench
- Anti-corrosion agent
- Crimping tool
- Step drill

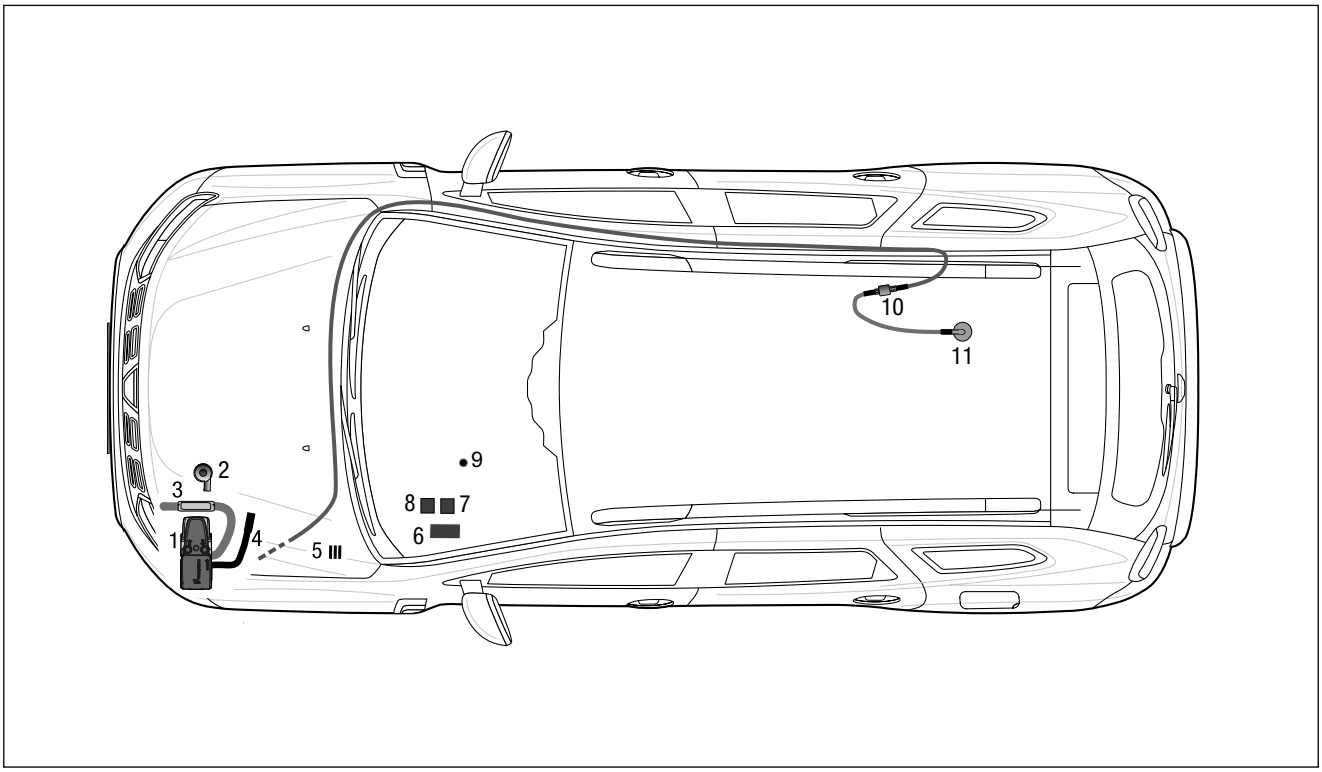
TIGHTENING TORQUES

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

Part name	Tightening torques
Hex screw M6	10 $^{+1}$ Nm
Hex screw M8	20 $^{+2}$ Nm
Hex screw M10	45 $^{+2}$ Nm
Torx screw M6 x 14.5	6 $^{+0.5}$ Nm
Screw M4 x 16	3 $^{+0.5}$ Nm
Screw M5 x 10	5 $^{+0.5}$ Nm
Pipe clip for exhaust pipe	7 $^{+1}$ Nm
Hose clip for water hose	3 $^{+0.5}$ Nm
Hose clip for combustion air pipe	3 $^{+0.5}$ Nm
Hose clip for fuel pipe	1 $^{+0.2}$ Nm

1 INTRODUCTION

INSTALLATION DRAWING



1 Heater Hydronic S3
2 Water pump
3 Exhaust pipe with exhaust silencer
4 Combustion air tube
5 Fuse holder
6 Stationary part EasyStart Remote/Remote+/Web
7 Fan relay
8 IPCU module
9 Button EasyStart Remote/Remote+/Web
10 Metering pump
11 Fuel tank extractor

2 PREPARATION OF THE VEHICLE

PREPARATORY WORK ON THE VEHICLE

- Disconnect the battery
- Remove rear seat bench
- Remove the aircon control
- Remove the left lower trim moulding of the instrument panel
- Remove the lower trim moulding of the instrument panel
- Remove the air filter with intake air pipe
- Remove front bumper
- Remove sub-cowling
- Depressurise the cooling system
- Drain coolant into a clean container

INSTRUCTIONS FOR REMOVING THE AIRCON CONTROL
(see photos 1 and 2)

Use a plastic wedge to loosen the cover with aircon control and the switch panel at the side and take out of the instrument panel.



Fig. 1
① Aircon control and switch panel

Disconnect the electric connectors from the aircon control.

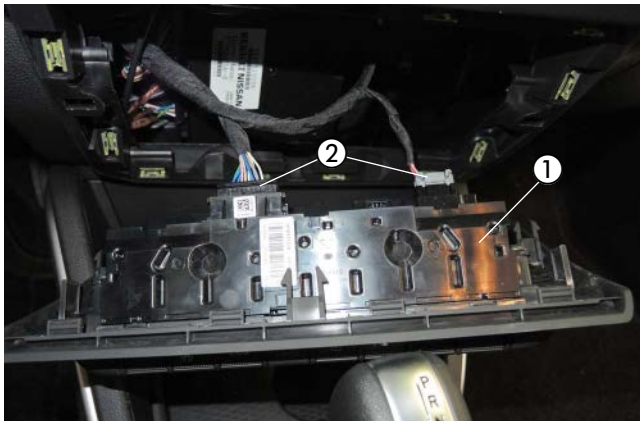


Fig. 2
① Aircon control
② Undo electrical connections

3 PRELIMINARY ASSEMBLY

PREPARE HEATER
(see photos 3 and 4)

Mount the water connection socket to the heater as shown, see "Installation steps".

Remove the duplicate nameplate from the heater.



Fig. 3
① Heater
② Mount water connection socket to heater

Installation steps

- Grease the O-ring (5) and insert in the groove at the connection socket.
- Fit the connection socket (3 or 4) in the cut-outs of the sensor cover (2). The collar of the connection socket is above the cover.
- Position the connection socket with the toothed edge in the sensor cover and fix accordingly.
- Fit the sensor cover on the heater with the connection socket pointing forwards.
- Press the connection socket completely into the corresponding holes on the heat exchanger.
- Adjust the direction for the angled connection socket:
  – Raise the sensor cover up to the collar of the connection socket
  – Turn the connection socket in the required direction
  – Push the sensor cover down and readjust the position of the connection socket so that the toothed edges engage again
- Fasten sensor cover with M5 x 18 (1) screw
  (tightening torque $6.5^{+0.5}$ Nm).

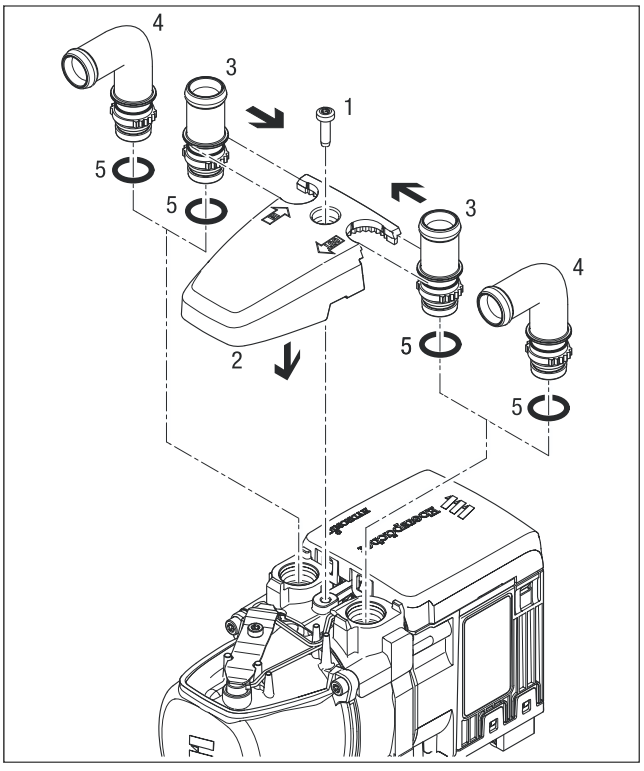


Fig. 4

1 M5 x 18 screw
2 Sensor cover
3 Connection socket, straight
4 Angled connection socket
5 O-ring

3 PRELIMINARY ASSEMBLY

ADHERE DUPLICATE NAMEPLATE
(see photo 5)

Fit the duplicate nameplate on the B-pillar on the driver's side.

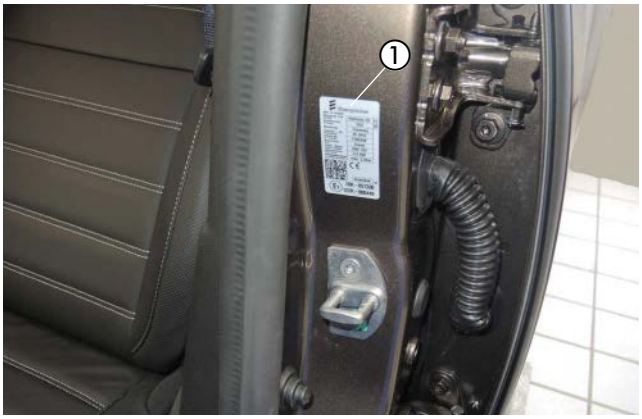


Fig. 5
① Fit duplicate nameplate

PREPARE HEATER BRACKET
(see photo 6)

Prepare unit bracket for installation.

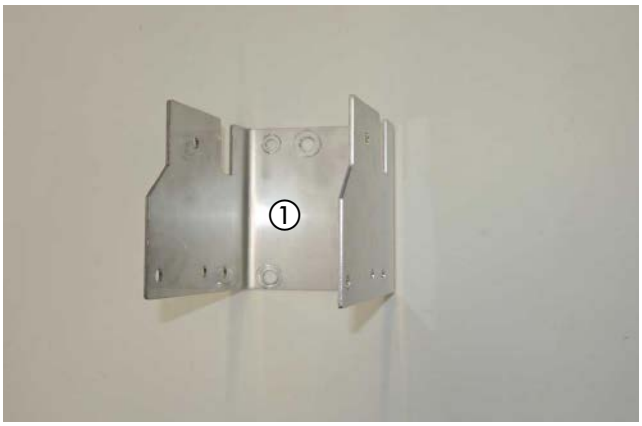


Fig. 6
① Prepare unit bracket

PREPARE EXHAUST SYSTEM
(see photo 7)

Prepare the premounted exhaust system for installation.

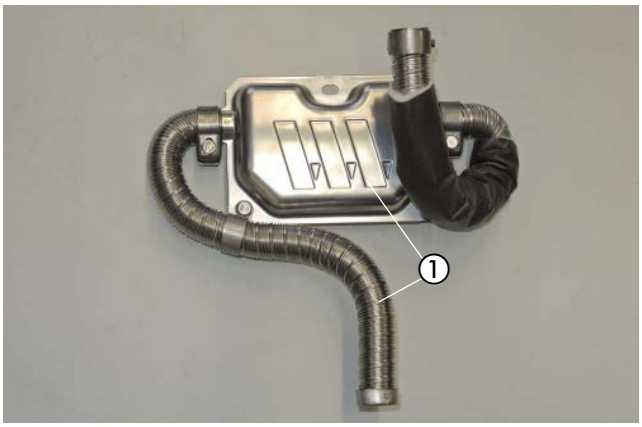


Fig. 7
① Premounted exhaust system

3 PRELIMINARY ASSEMBLY

PREPARE WATER HOSES
(see photos 8 and 9)

The water hoses are already prepared as shown.

PLEASE NOTE!

The water hoses are connected “inline” to the water circuit , refer to the Technical Description, in the chapter on “Installation” and here the section on “Connection to the Cooling Water Circuit”.

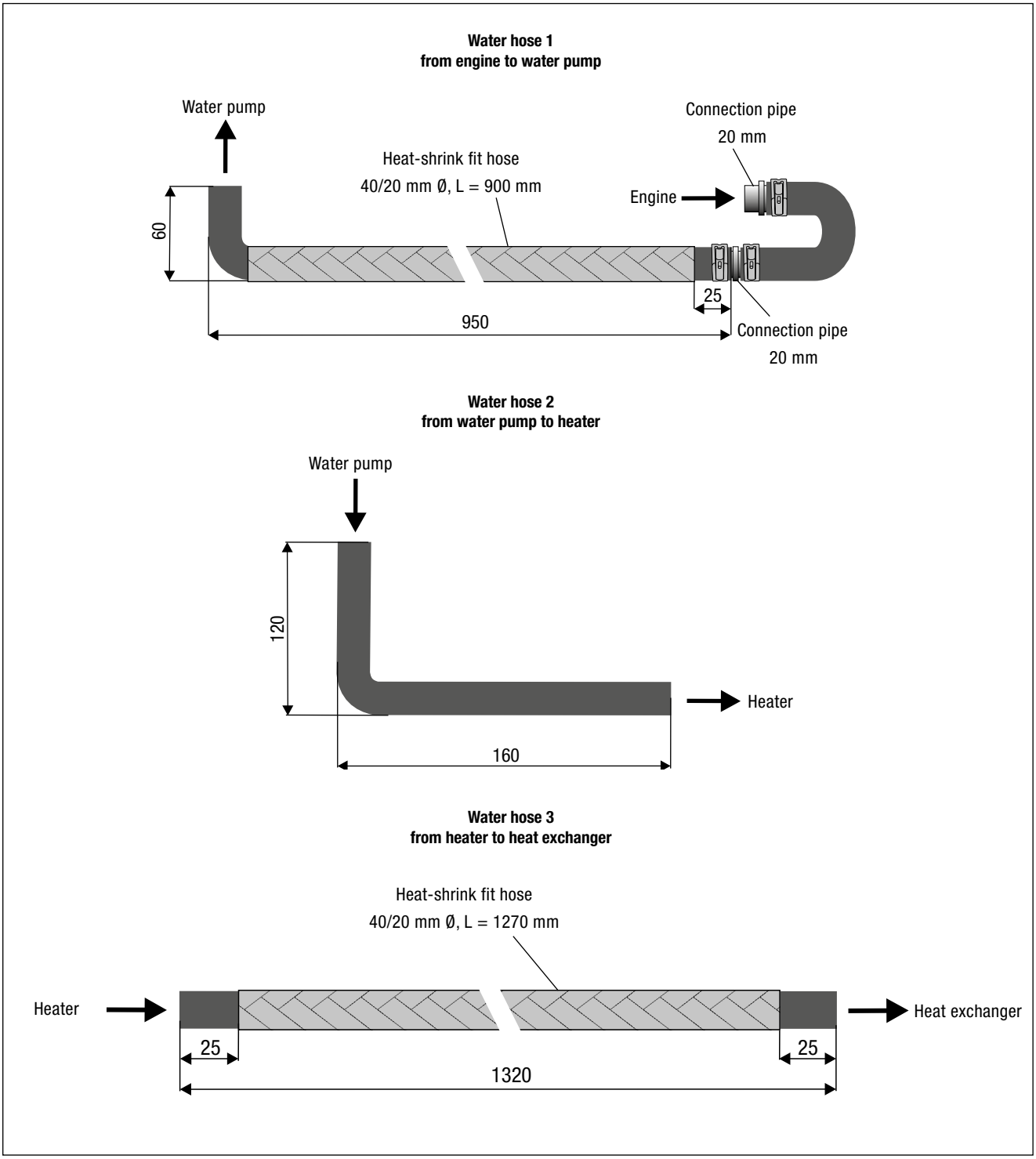


Fig. 8

3 PRELIMINARY ASSEMBLY

Water hoses 1 to 3 in the installation kit are prepared as shown in photos 8 and 9.

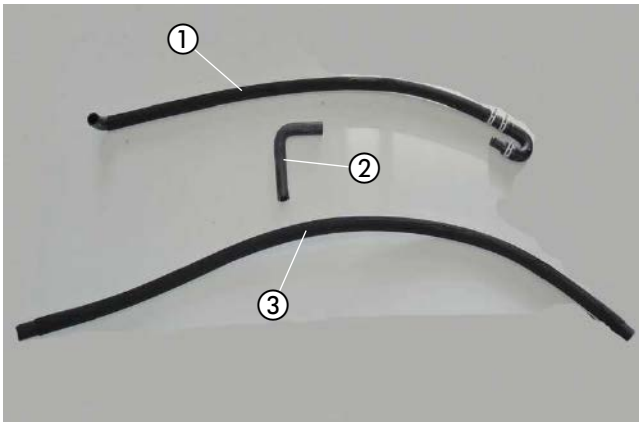


Fig. 9
① Water hose 1
② Water hose 2
③ Water hose 3

PREPARE TANK EXTRACTOR
(see photo 10)

Keep the prepared fuel pipe (for tank extraction), the short tank extractor and the 10.5 mm Ø clamp ready for installation.

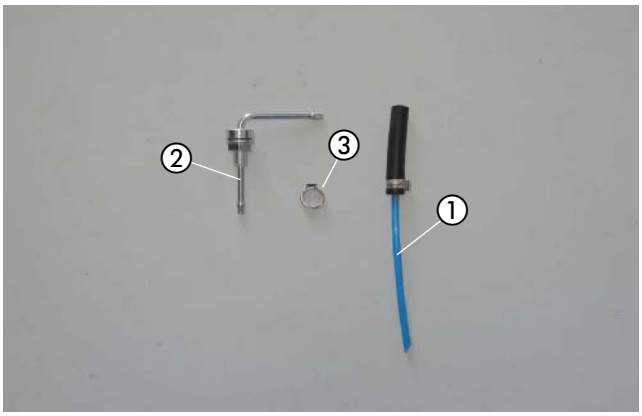


Fig. 10
① Prepared fuel pipe (tank outlet)
② Short tank extractor
③ Clamp 10.5 mm Ø

PREPARE FUEL PIPE (SUCTION LINE)
(see photo 11)

Keep the premounted fuel pipe (suction line) with Ø 3.5 x 3 mm fuel hose ready for later installation.

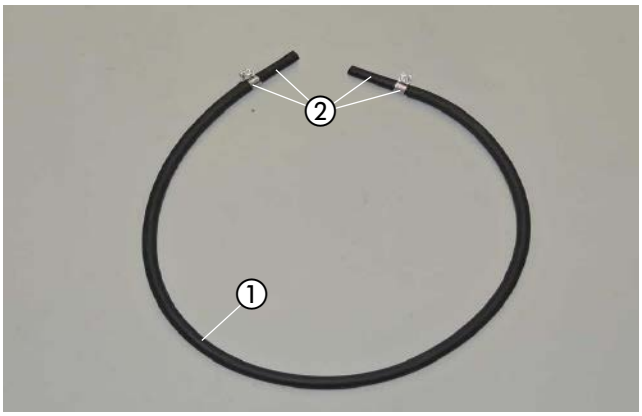


Fig. 11
① Fuel pipe (suction line)
② 2 x 3.5x3 mm Ø fuel hose with 9 mm Ø clips

3 PRELIMINARY ASSEMBLY

PREPARE FUEL PIPE (PRESSURE LINE)
(see photo 12)

Prepare the fuel pipe (pressure line) with 4.5/3.5 mm Ø adapter and 3.5x3 mm Ø fuel hose for subsequent installation.

Mount the 4.5/3.5 mm Ø adapter to the fuel connection of the heater.



Fig. 12
① Fuel pipe (pressure line)
② Adapter 4.5/3.5 mm Ø
③ Fuel hose Ø 3.5 x 3 mm

PREMOUNT METERING PUMP
(see photo 13)

Insert the metering pump in the rubber holder as shown in the photo.

Fasten the 90° angle bracket (22.1000.50.6700) to the rubber bracket offset through approx. 15°, as shown using an M6 x 25 screw, a B6 body washer and an M6 nut.

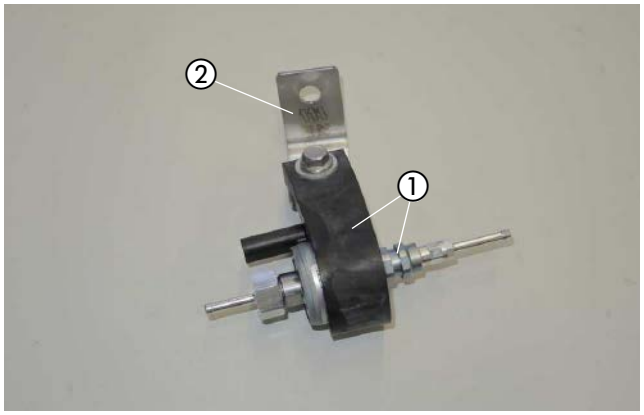


Fig. 13
① Insert metering pump in rubber holder
② Mount 90° angle holder (22.1000.50.6700)

PREMOUNT WATER PUMP
(see photo 14)

Insert the water pump in water pump holder as shown.

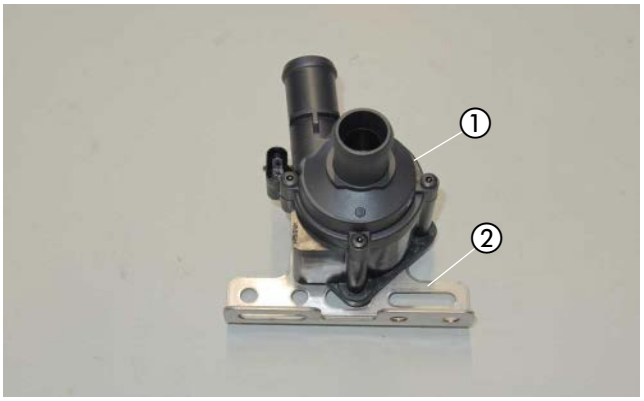


Fig. 14
① Water pump
② Water pump holder

3 PRELIMINARY ASSEMBLY

PREPARE FUSE BLOCK
(see photo 15)

Prepare the premounted holder with fuse block and diagnostic connector for subsequent installation.

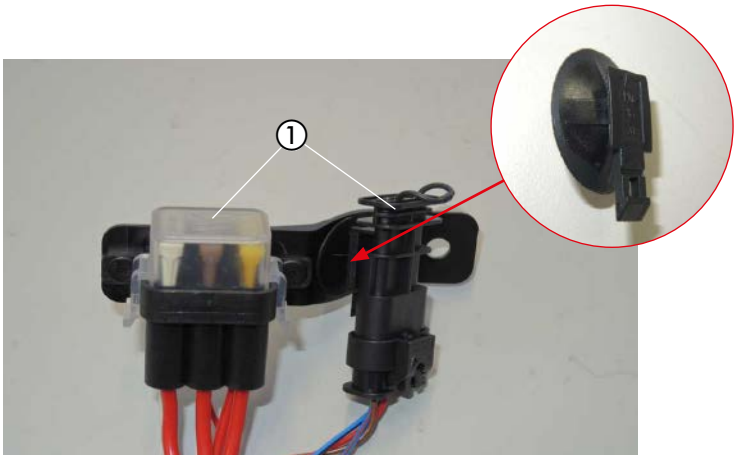


Fig. 15
① Fuse block and plug holder with diagnostic connector already premounted to holder

PREMOUNT FAN RELAY
IN VEHICLES WITH MANUAL AIR-CON
(see photo 16)

Mount the fan relay block to the bracket using an M5 x 10 screw and an M5 nut as shown.

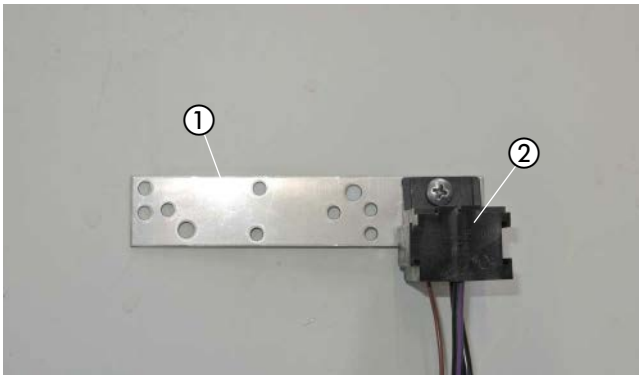


Fig. 16
① Bracket for fan relay block
② Fan relay block

PREMOUNT FAN RELAY
IN VEHICLES WITH AUTOMATIC AIR-CON
(see photo 17)

Mount the IPCU and fan relay block to the bracket using an M5 x 10 screw and an M5 nut in each case, as shown.

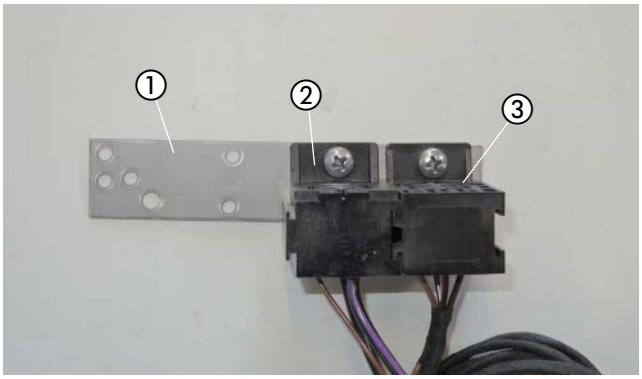


Fig. 17
① IPCU and fan relay block holder
② Fan relay block
③ Block for the IPCU module

3 PRELIMINARY ASSEMBLY

PREASSEMBLE THE STATIONARY PART OF THE EASYSTART REMOTE/ REMOTE+
(see photo 18)

Mount the stationary part of the EasyStart Remote/Remote+ to the holder using two M4 x 10 screws in each case.

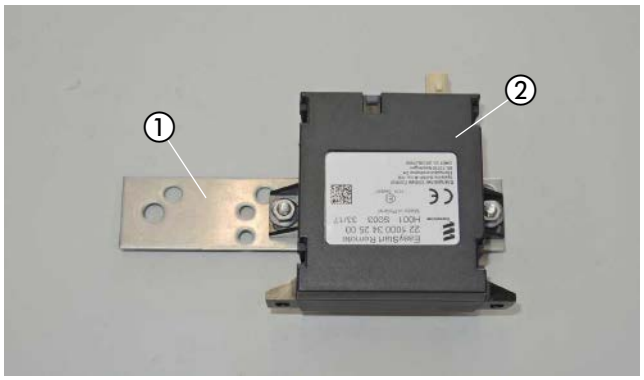


Fig. 18
① Holder for stationary part of EasyStart Remote/Remote+
② Mount EasyStart Remote/Remote+ stationary part to the holder

PREMOUNT STATIONARY PART OF EASYSTART WEB
(see photo 19)

Mount the stationary part of the EasyStart Web to the holder using two M4 x 10 screws as shown.

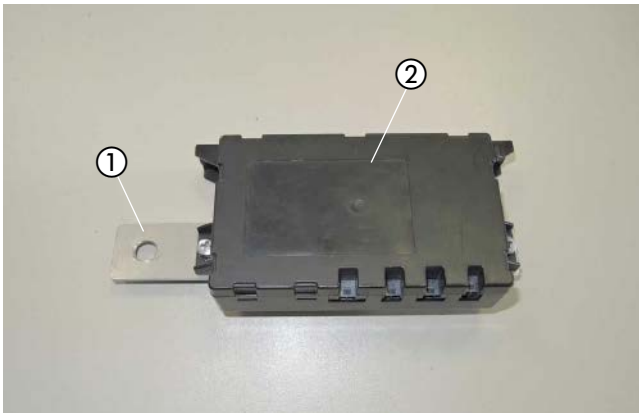


Fig. 19
① Holder for the stationary part
② Stationary part EasyStart Web

MOUNT EXHAUST GROMMET
(see photo 20)

Drill a 38 mm Ø hole on the left-hand underside of the front bumper according to the dimensions shown and insert the exhaust grommet.

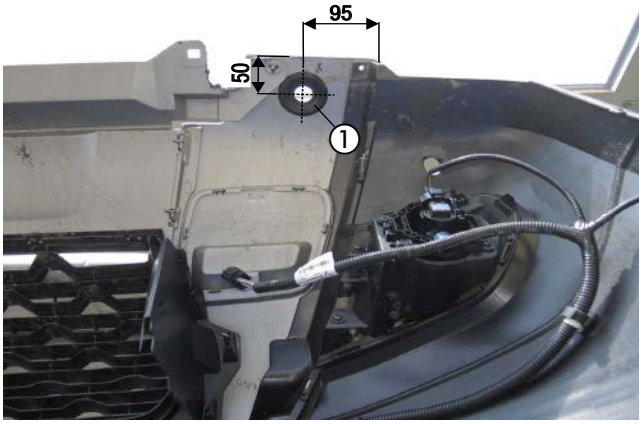


Fig. 20
① Drill the existing hole open to 38 mm Ø hole and insert the exhaust grommet in the drilled hole

4 INSTALLATION

PREPARE THE INSTALLATION POSITION
(see photos 21 and 22)

The installation position for the heater is on the outside of the left chassis beam.

Hold the heater bracket to the edge of the left chassis beam and mark the four drilling points as shown.

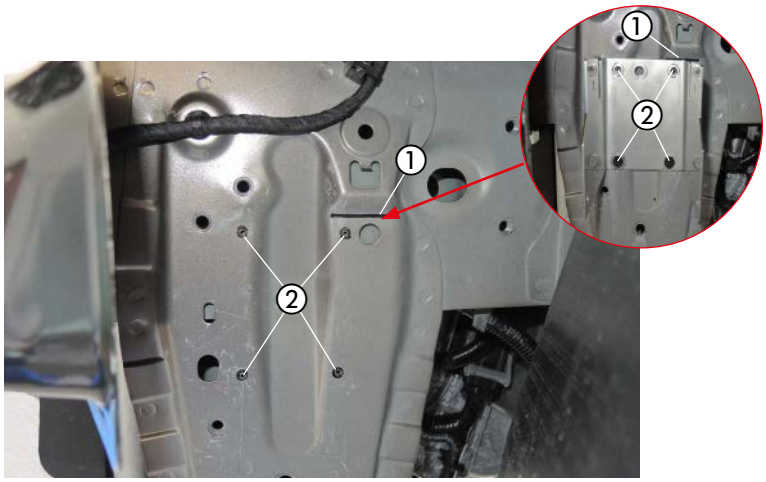


Fig. 21
① Edge of left chassis beam
② Mark drilling points

Drill the upper holes with 3.5 mm Ø.

Drill the lower holes with 9 mm Ø and insert the M6 blind rivet nuts.

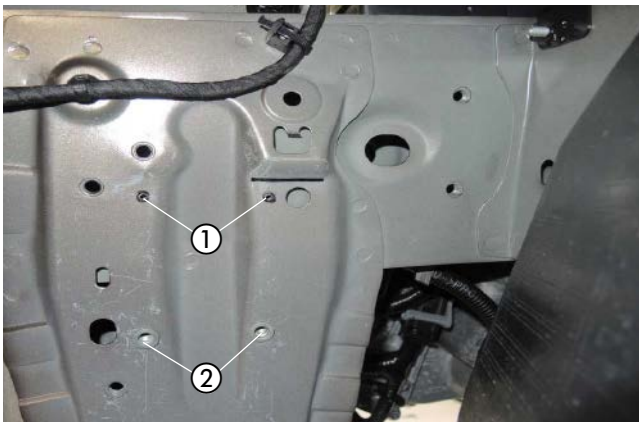


Fig. 22
① Drill 2 x 3.5 mm Ø holes
② Drill 2 x 9 mm Ø holes and insert M6 blind rivet nuts

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

MOUNT HEATER BRACKET
(see photos 23 and 24)

Fasten the heater bracket to the M6 blind rivet nuts using two M6 x 16 screws.

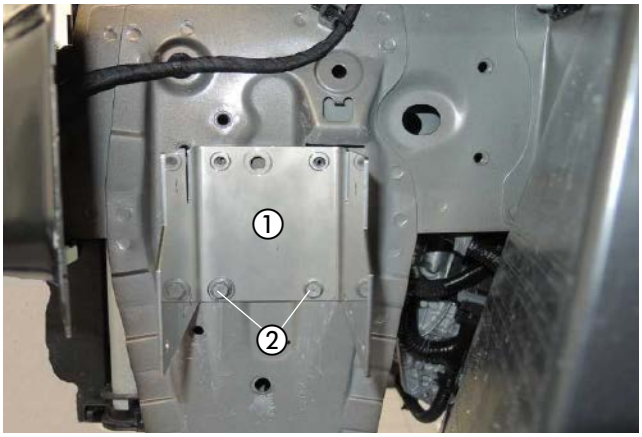


Fig. 23
① Heater bracket
② 2 x M6 x 16 screw

4 INSTALLATION

Fasten the heater bracket in the holes drilled in the left chassis beam using two M6 x 32 tapping screws.

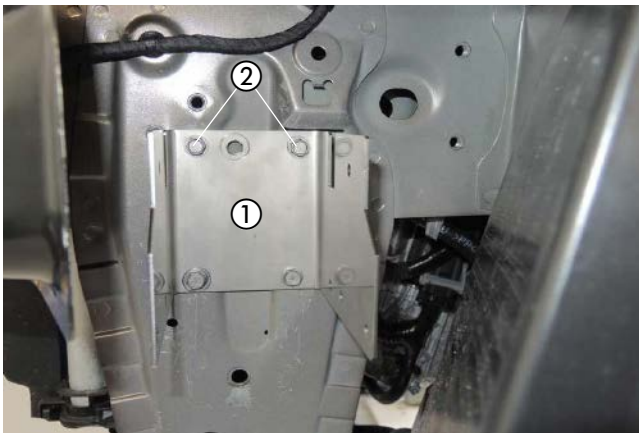


Fig. 24
① Heater bracket
② 2 x M6x32 tapping screw

INSTALL HEATER
(see photos 25 and 26)

Insert the heater in the heater bracket and fasten with two M6 x 12 screws at the front of the heater bracket.

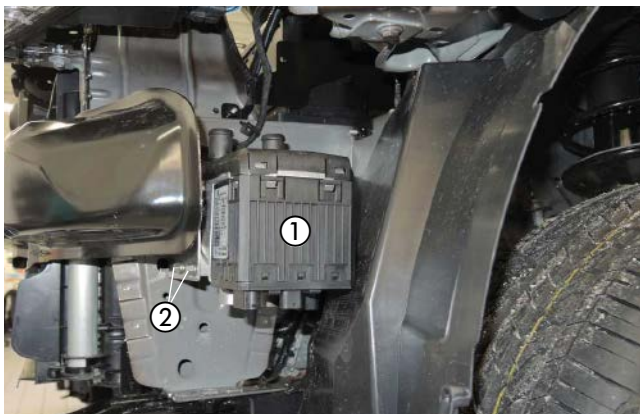


Fig. 25
① Heater
② 2 x M6 x 12 screw

Also fasten the heater to the back of the heater bracket using two M6 x 12 screws.

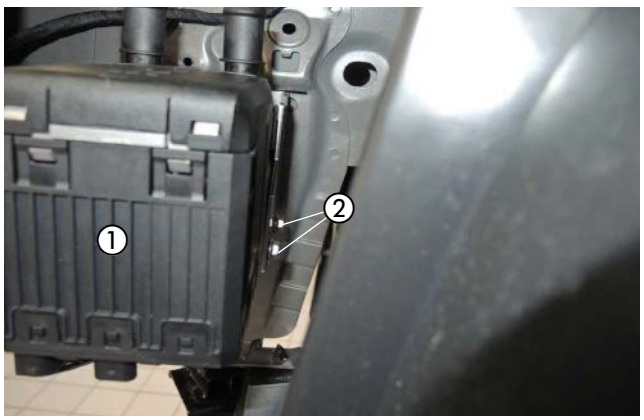


Fig. 26
① Heater
② 2 x M6 x 12 screw

4 INSTALLATION

MOUNT EXHAUST SYSTEM
(see photos 27 to 29)

The existing 8 mm Ø below the heater on the outside of the left chassis beam acts as fastening point for the exhaust silencer.

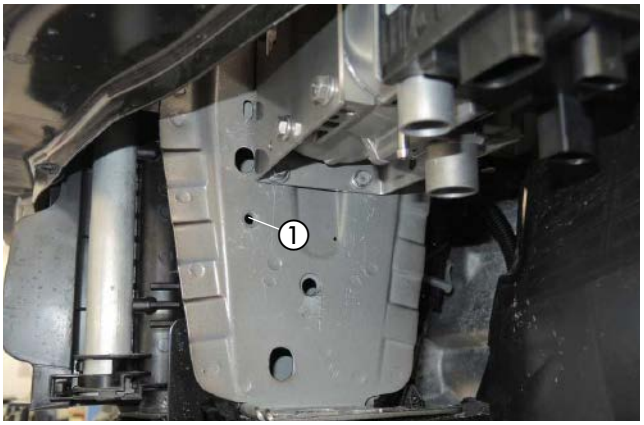


Fig. 27
① Existing 8 mm Ø threaded hole

Fasten the prepared exhaust silencer to the existing 8 mm Ø threaded hole with an M8 x 40 screw and two spacer sleeves.

Insert the spacer sleeves between the exhaust silencer and the chassis beam.

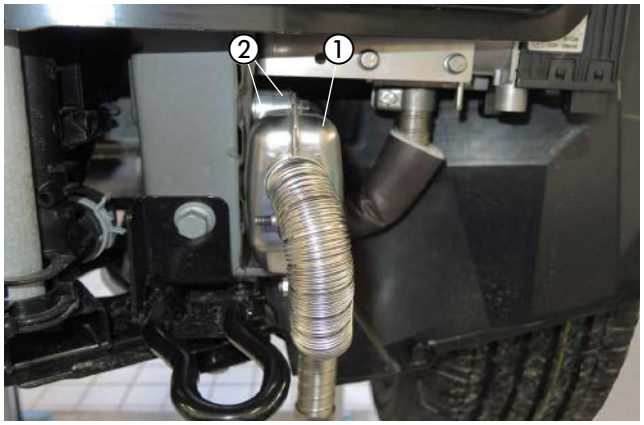


Fig. 28
① Mount the exhaust silencer
② 2 x spacer sleeve

Use a clip to connect the exhaust pipe to the exhaust connection of the heater.

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

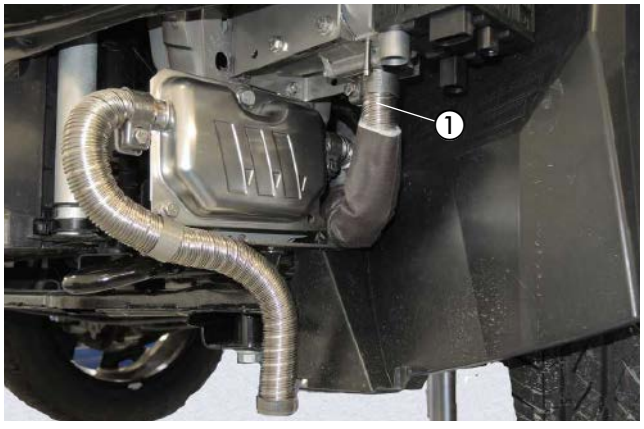


Fig. 29
① Connect the exhaust pipe

4 INSTALLATION

LAY COMBUSTION AIR PIPE
(see photos 30 and 31)

Use a 16-25 mm Ø hose clip to connect the combustion air pipe to the heater, and take it upwards in the bend along the vehicle cable loom.

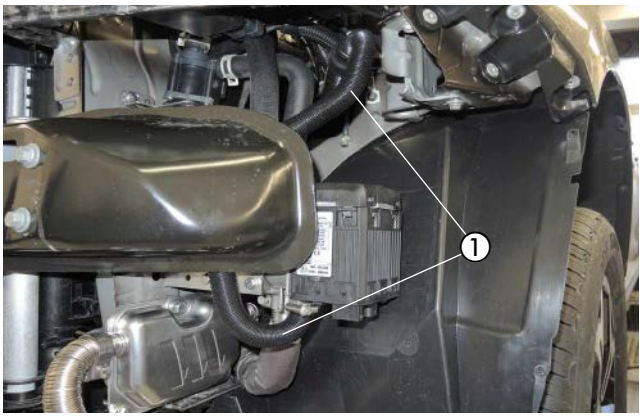


Fig. 30
① Connect combustion air pipe

Secure the combustion air pipe to the vehicle cable loom using cable ties.

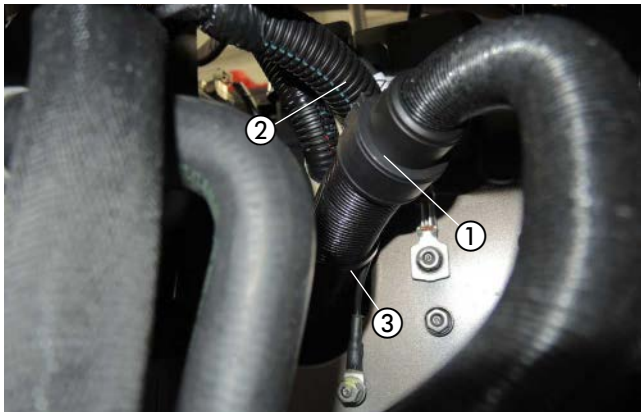


Fig. 31
① Combustion air tube
② Vehicle's cable loom
③ Cable tape

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

INSTALL WATER PUMP
(see photo 32)

Mount the prepared water pump to the front fastening point with an M6 x 16 screw, a spacer sleeve and a B6 body washer, and to the rear fastening point with an M6 nut as shown.

The discharge end faces to the left and the intake end faces upwards.

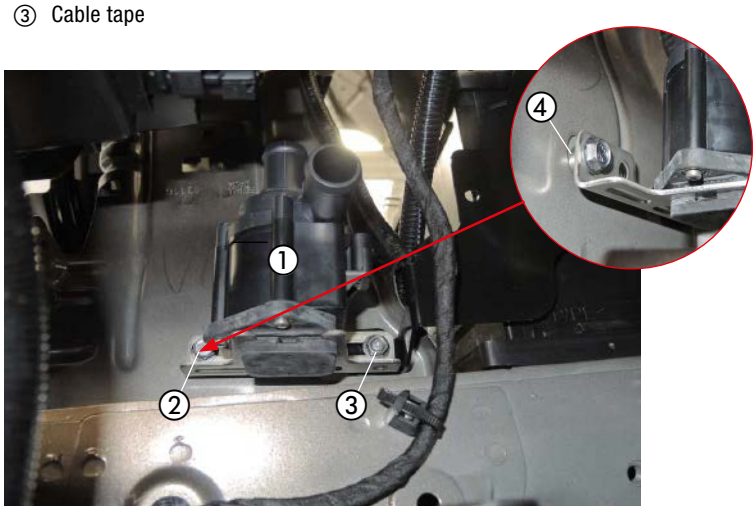


Fig. 32
① Prepared water pump
② Screw M6 x 16 and body washer B6
③ Hexagon nut M6
④ Spacer sleeve

4 INSTALLATION

FIT EDGE PROTECTION
(see photo 33)

Fit the edge protection to the edge of the front crossbeam as shown.

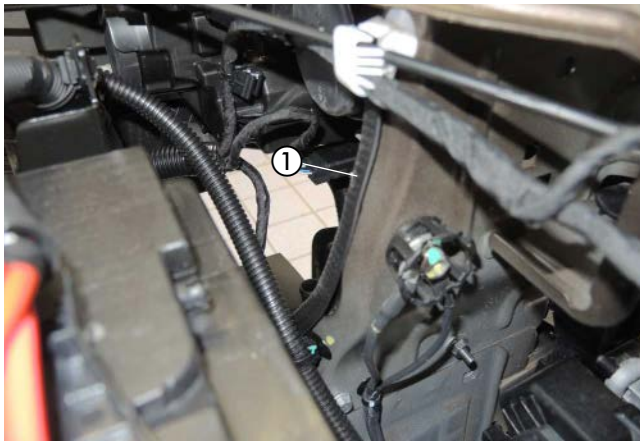


Fig. 33
① Fit edge protection

CUT WATER FLOW HOSE
(see photo 34)

Pull the water flow hose off the heat exchanger socket by undoing the spring band clamp.

The water flow hose is the lower right water hose at the heat exchanger.

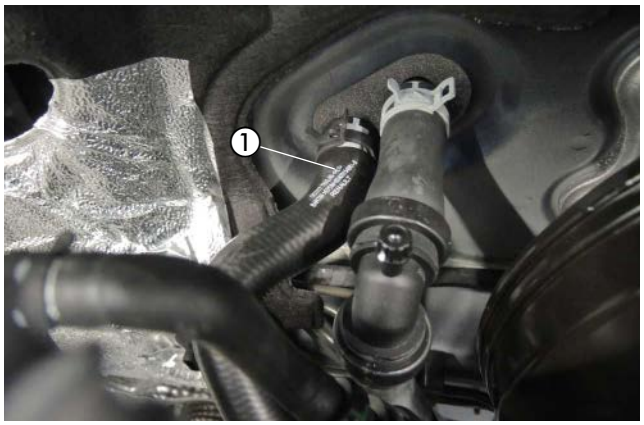


Fig. 34
① Disconnect the water flow hose from the heat exchanger connection

CONNECT AND LAY WATER HOSES
(see photos 35 to 40)

Connect water hose 1 at the intake connection of the water pump and lay it into the engine compartment.

Connect water hose 2 at the discharge end of the water pump and lay it to the heater.

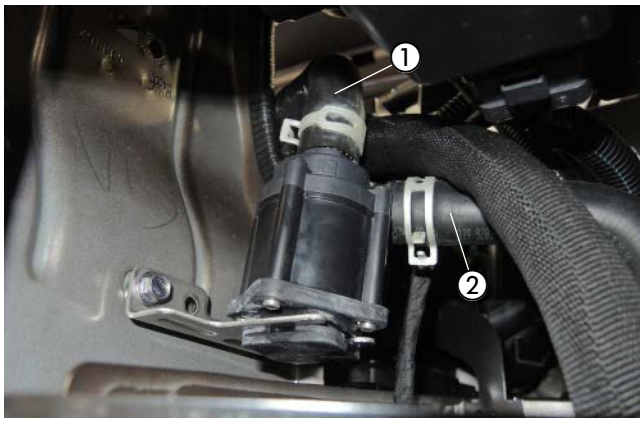


Fig. 35
① Connect water hose 1
② Connect water hose 2

4 INSTALLATION

Connect water hose 2 to the water inlet connection of the heater.

Connect water hose 3 to the water outlet connection of the heater and lay it into the engine compartment.

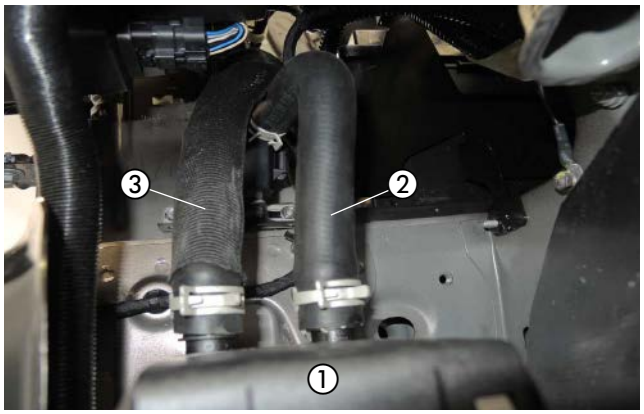


Fig. 36
① Heater
② Connect water hose 2
③ Connect water hose 3

Take the water hoses 1 and 3 in front of the battery to the cutting point on the water flow hose.

Use cable ties to fasten water hoses 1 and 3 to each other and to the vehicle's cable loom.

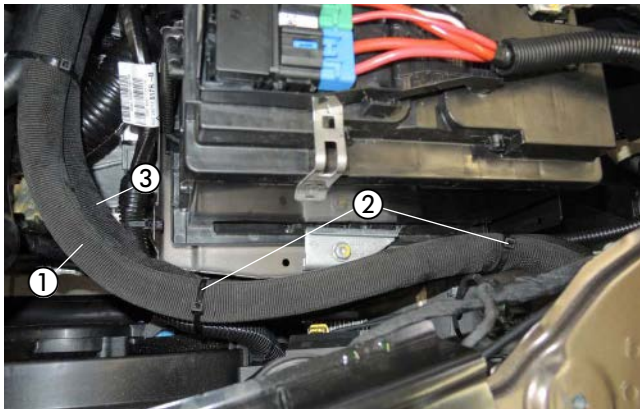


Fig. 37
① Water hose 1
② Cable ties
③ Water hose 3

Take the water hoses 1 and 3 on above the gearbox to the cutting point and secure at suitable points with cable ties.

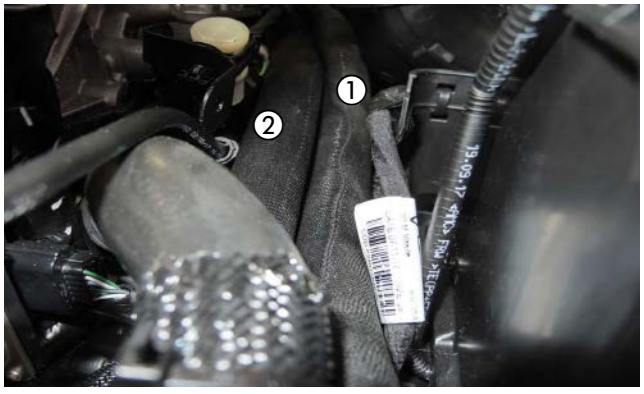


Fig. 38
① Water hose 1
② Water hose 3

4 INSTALLATION

Connect water hose 1 with 20 mm Ø connection pipe to the water flow hose from the engine.

Connect water hose 3 at the upper heat exchanger connection.

Secure the water hoses to each other using two rotatable hose holders.

⚠ CAUTION!
Secure all hose connections with spring band clamps or hose clips. Protect the water hoses against chafing and use cable ties to secure in suitable positions.

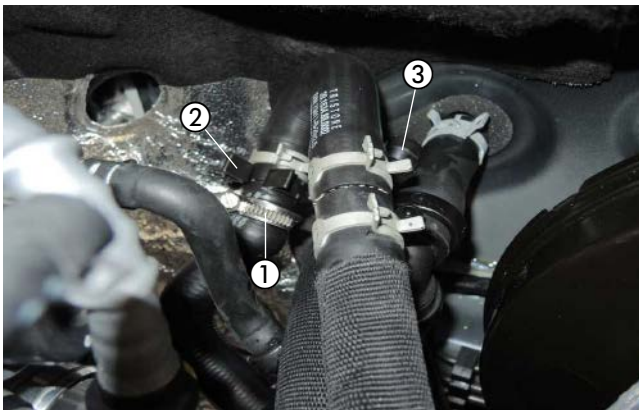
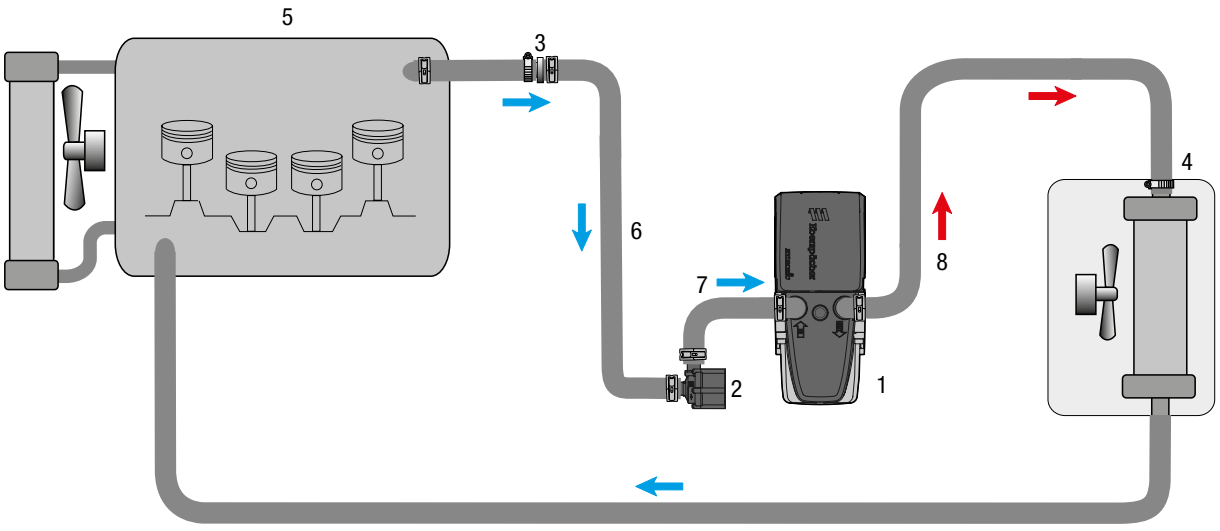


Fig. 39
① Connect water hose 1
② 2 x rotatable hose holders
③ Connect water hose 3



1 - Heater Hydronic S3
2 - Water pump
3 - Connection pipe 20 Ø
4 - Vehicle heat exchanger
5 - Engine
6- Water hose 1
7- Water hose 2
8- Water hose 3
- Spring band clip
- Hose clip, 20 – 32 mm Ø

Fig. 40

4 INSTALLATION

MAKE TANK CONNECTION
(see photos 41 to 43)

Dismantle the tank fitting, disconnect the plug-in connection and the fuel line from the tank fitting.

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

CAUTION!
Make sure no impurities enter the tank when drilling the tank fitting.

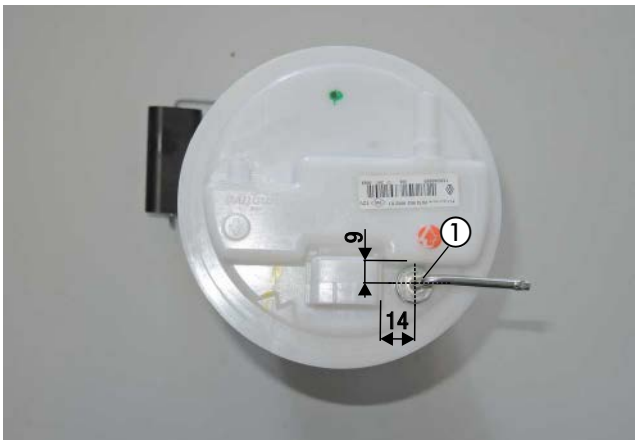


Fig. 41
① Drill an 8 mm Ø hole in the top part of the tank fitting

Introduce the prepared tank extractor through the hole, align as shown and screw firmly with the M8 nut from below.

Push the prepared fuel pipe onto the tank extractor with 3.5/3 mm Ø fuel hose and secure with the clamp (10.5 mm Ø).

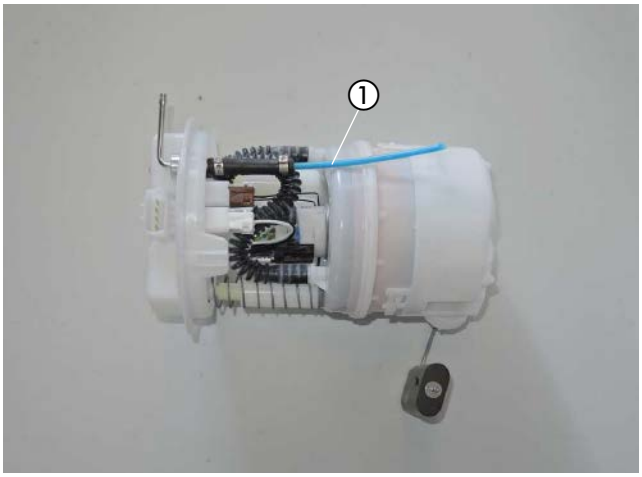


Fig. 42
① Mount tank extractor

CAUTION!
The tank fitting should not be removed for longer than 10 minutes because of the expansion of the fuel tank!

Insert the tank fitting back into the tank and fasten with the locking ring; ensure the seal fits properly.
Connect the fuel line and the plug-in connection at the top of the tank fitting.

At the intake connection of the fuel tank extractor, connect the fuel pipe (intake line) with the 3.5 x 3 mm Ø fuel hose.

PLEASE NOTE!
Secure all connection points with clamps.

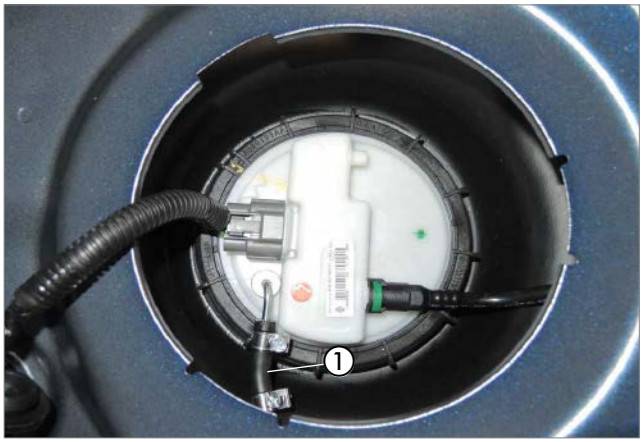


Fig. 43
① Connect fuel pipe (intake line)

4 INSTALLATION

LAYING THE FUEL PIPE
(see photos 44 to 48)

Connect the fuel pipe (pressure line) to the fuel connection of the heater using the 4.5/3.5 mm Ø adapter.

Plug in the connector of the main cable harness and the power supply cable loom to the heater.

Fasten the metering pump cable of the main cable loom to the fuel pipe (pressure line) using insulating tape.

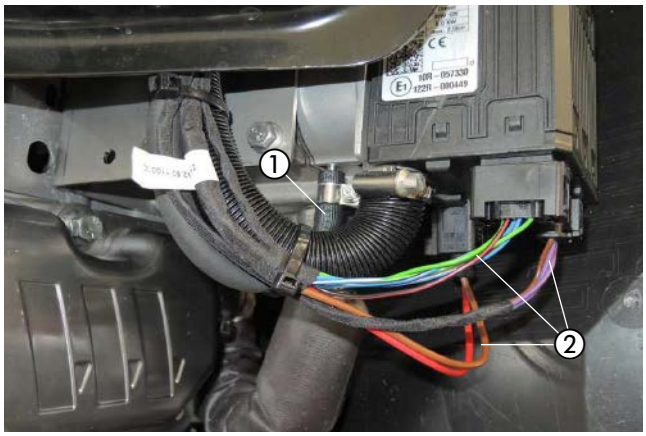


Fig. 44
① Mount fuel pipe (pressure line) with 4.5/3.5 mm Ø adapter
② Plug in electrical connections at heater

Route the fuel pipe (pressure line) together with the metering pump cable at the front support to the right side of the vehicle as shown in the figure.



Fig. 45
① Lay fuel pipe (pressure line)

Route the fuel pipe (pressure line) together with the metering pump cable along the vehicle fuel line on the right vehicle underbody to the installation position of the metering pump.

⚠ CAUTION!
When laying fuel lines, always ensure they are at an adequate distance from hot vehicle and heater parts.



Fig. 46
① Lay fuel pipe (pressure line) to the right underbody

4 INSTALLATION

INSTALL AND CONNECT THE METERING PUMP
(see photo 47)

Fasten the premounted metering pump to the right-hand tank fastening point, using the vehicle's M8 nut.
Ensure it is installed with at least a 15° rising gradient on the pressure side.
Route the fuel pipe (intake line) from the tank extractor to the metering pump and connect with the 3.5 x 3 mm Ø fuel hose to the intake connection of the metering pump.

Connect the fuel pipe (pressure line) from the heater to the 3.5 x 3 mm Ø fuel hose at the discharge end of the metering pump.
Slot the plug-in contacts of the metering pump cable into the mating connector regardless of polarity.
Connect the connector to the metering pump.

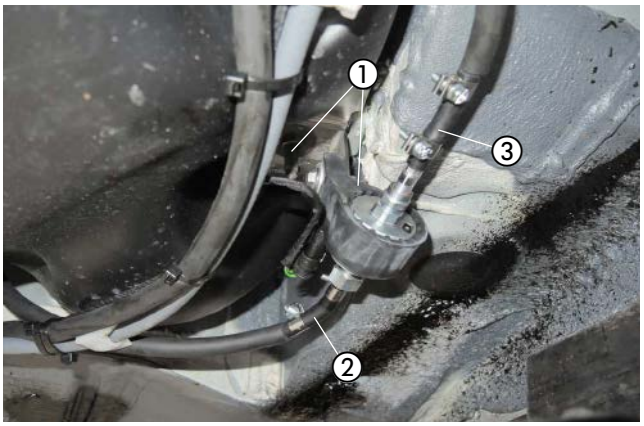


Fig. 47
① Install and connect the metering pump
② Metering pump intake end
③ Metering pump discharge end

⚠ CAUTION!
Use a sharp knife to cut the fuel pipe to length.
Secure all hose connections with hose clips.

4 INSTALLATION

INSTALL FUSE HOLDER
(see photo 48)

Fasten the premounted bracket with fuse block to the fastening point of the engine control unit with the M6 nut as shown.

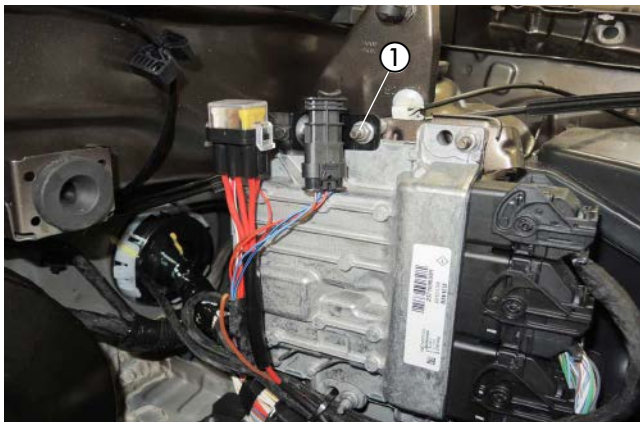


Fig. 48
① Install the premounted bracket with fuse holder

CABLE LAYING
(see photo 49)

Take the vehicle interior cable loom consisting of:
- 4 mm² ws/rt and 1 mm² sw/rt cable
- 3-wire control unit cable loom
- 4-pin fan control box cable loom

through the vehicle's cable grommet on the left side of the engine partition and into the interior of the vehicle.

Insulate and tie back the 4-pin fan control box cable loom in the vehicle interior.

⚠ CAUTION!
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.

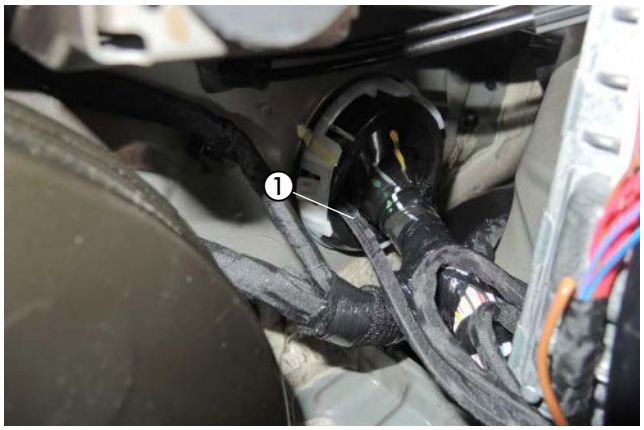


Fig. 49
① Vehicle cable grommet

POWER SUPPLY
(see photo 50)

Route the 4 mm² rt positive cable to the positive terminal of the battery and connect with cable lug A6.

Route the 2.5 mm² br earth cable to the negative terminal of the battery and connect with the A6 cable lug.

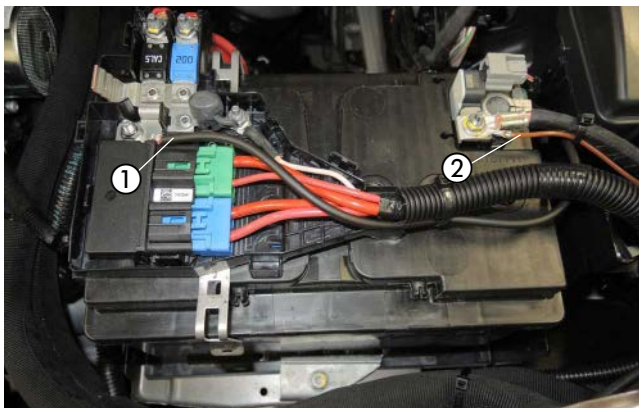


Fig. 50
① Connect positive cable 4 mm² rt
② Connect 2.5 mm² br earth cable

4 INSTALLATION

FAN CONTROL
WITH MANUAL AIR-CONDITIONING
(see photos 51 to 55)

Take the 4 mm² ws/rt cable and the 05 mm² sw/rt cable from the vehicle interior cable loom to the fan relay and cut to the required length.

Fasten the plug-in contact to the 4 mm² ws/rt cable and insert in the free slot (terminal 87) of the fan relay.

Fasten the plug-in contact to the 0.5 mm² sw/rt cable and insert in the free slot (terminal 86) of the fan relay.

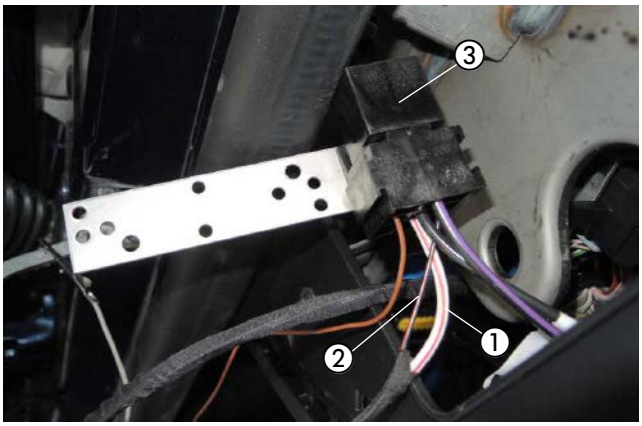


Fig. 51
① Insert 4 mm² ws/rt cable
② Insert 0.5 mm² sw/rt cable
③ Fan relay

View of fan relay block from the cable entry side.

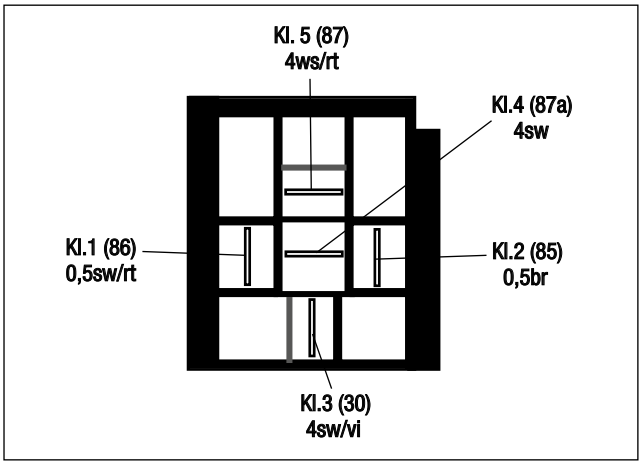


Fig. 52

Fasten the prepared bracket with fan relay to the left side of the instrument panel using the vehicle's Torx screw.

Lay the 4 mm² sw and 4 mm² sw/vi cables from the fan relay to the aircon control.

Connect the 1 mm² br earth cable at the fastening point of the stationary part with an M6 nut.

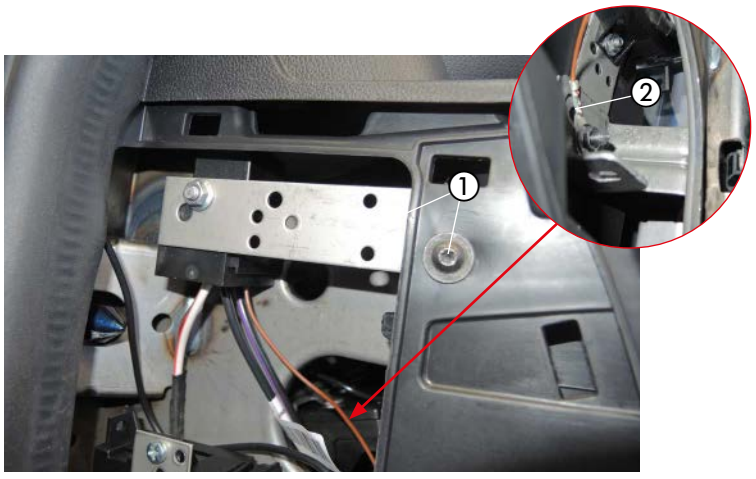


Fig. 53
① Mount prepared holder with fan relay
② Connect 1 mm² br earth cable

4 INSTALLATION

At the 6-pin grey connector of the aircon control, disconnect the 4 mm² gn cable (pin 1) and connect the 4 mm² ge and 4 mm² or/gn cables using two red butt-type connectors according to the circuit diagram.

PLEASE NOTE!

The cable colours may vary!

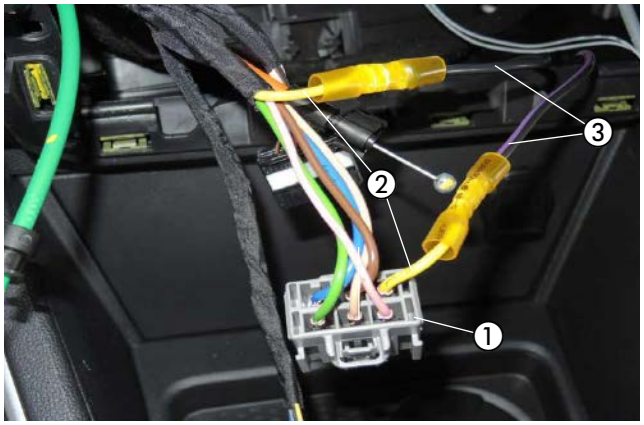


Fig. 54

① Disconnect 4 mm² ge cable (pin 1)

② Integrate 4 mm² sw/rt and 4 mm² sw cables

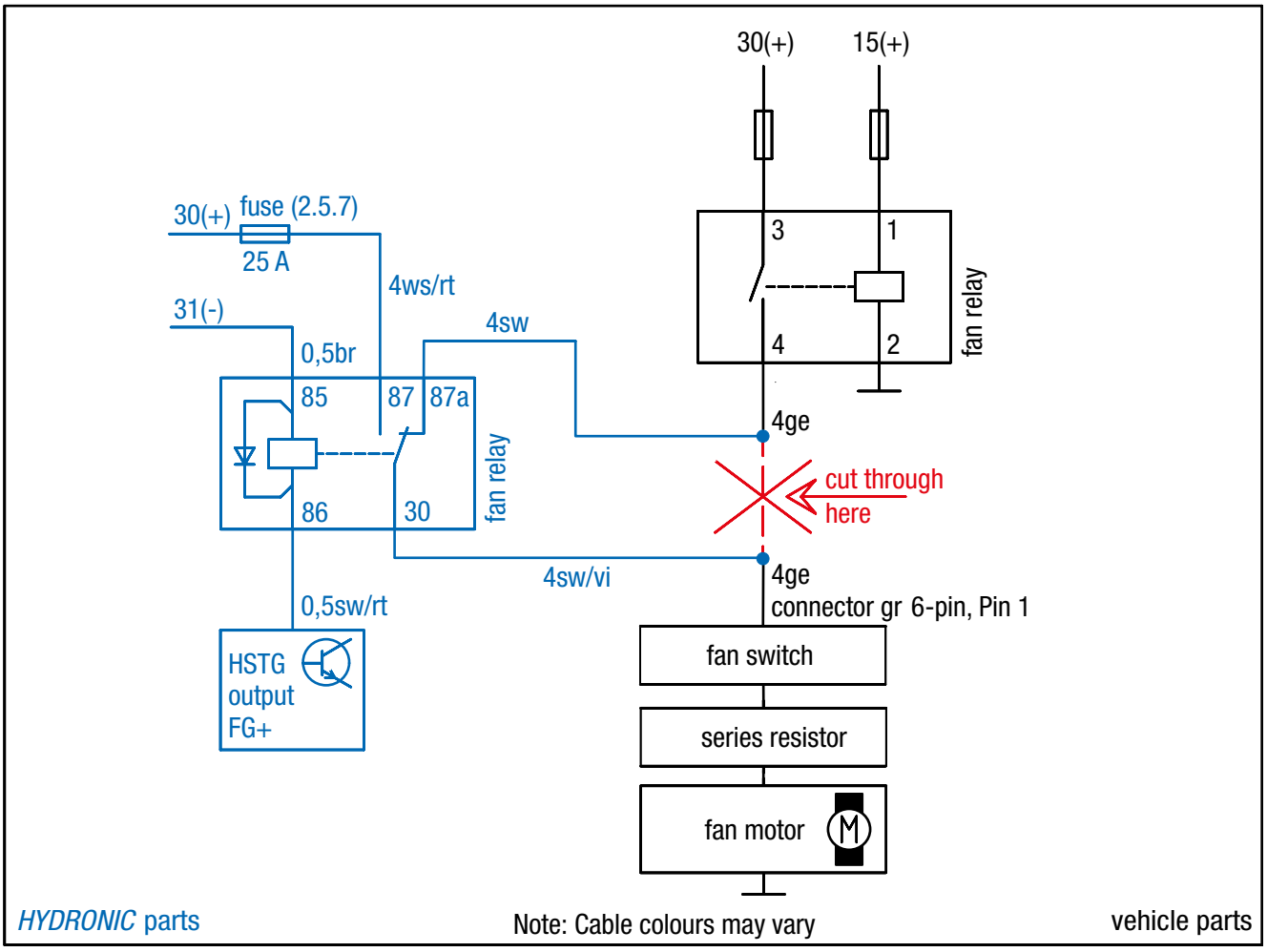


Fig. 55

4 INSTALLATION

FAN CONTROL
IN VEHICLES WITH AUTOMATIC AIR-CON
(see photos 56 to 62)

Take the 4 mm² ws/rt cable and the 05 mm² sw/rt cable from the vehicle interior cable loom to the IPCU and fan relay and cut to the required length.

Fasten the plug-in contact to the 4 mm² ws/rt cable and insert in the free slot (terminal 87) of the fan relay.

Fasten a push-on sleeve to the 0.5 mm² sw/rt cable from the vehicle interior cable loom and 1 mm² sw/rt cable from the IPCU module block and insert in the free slot (terminal 86) of the fan relay.

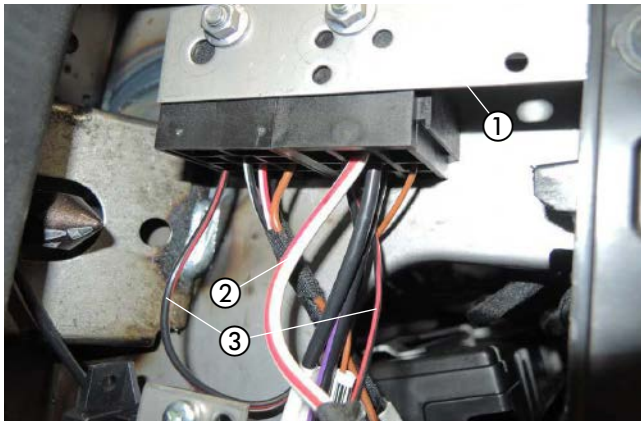


Fig. 56
① Mount bracket with IPCU and fan relay
② Insert 4 mm² ws/rt cable
③ Insert 0.5 mm² sw/rt cable together with 1 mm² sw/rt cable

View of fan relay block from the cable entry side.

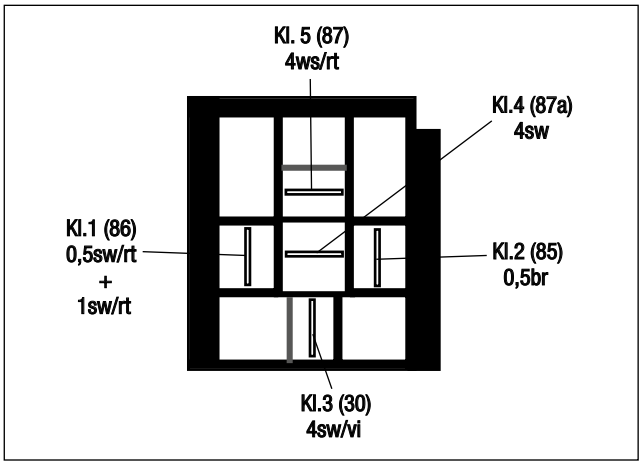


Fig. 57

Fasten the prepared bracket with IPCU and fan relay to the left side of the instrument panel using the vehicle's Torx screw.

Lay the 4 mm² sw and 4 mm² sw/vi cables from the fan relay and the 1 mm² sw and 1 mm² sw/ws cables from the IPCU module to the AC amplifier.

Connect the two 1 mm² br earth cables at the fastening point of the stationary part with an M6 nut.

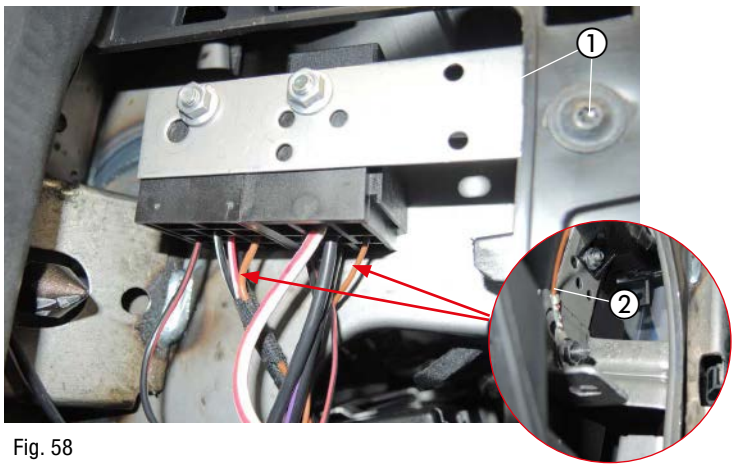


Fig. 58
① Mount prepared holder with fan relay
② Connect 2x 1 mm² br earth cable

4 INSTALLATION

The AC amplifier is located behind the aircon control.

Disconnect the 4 mm² ge cable from the 2-pin grey connector on the right next to the AC amplifier and insert the 4 mm² sw and 4 mm² sw/vi cables with two yellow butt-type connectors as shown in the circuit diagram.

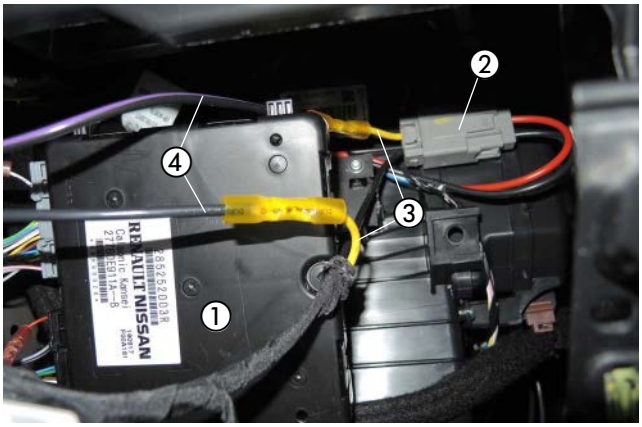


Fig. 59
① Aircon amplifier
② 2-pin grey connector
③ Disconnect 4 mm² gn cable
④ Integrate 4 mm² sw cable and 4 mm² sw/vi cable

Disconnect the 0.35 mm² ws cable (pin 34) at the 40-pin grey connector of the AC amplifier and integrate the 1 mm² sw and 1 mm² sw/ws cables using two red butt-type connectors as shown in the circuit diagram.

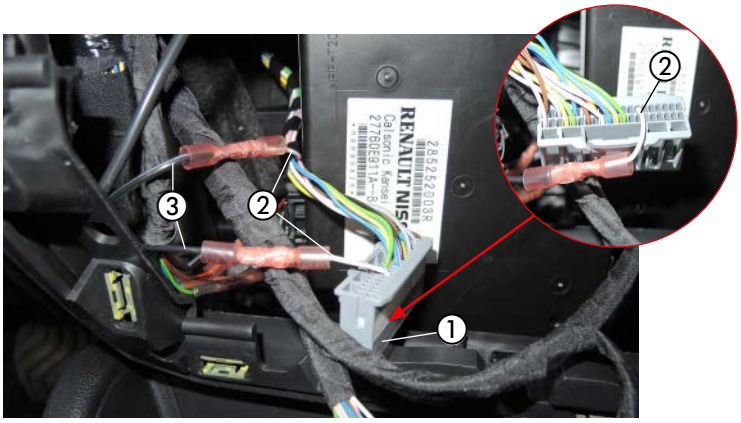


Fig. 60
① 40-pin grey connector
② Disconnect 0.35 mm² ws cable (pin 34)
③ Integrate 1 mm² sw cable and 1 mm² sw/ws cable

PLEASE NOTE!
The cable colours may vary!

Lay the 1 mm² rt/ws cable from the block of the IPCU module socket to the brake light switch.

Disconnect the 0.5 mm² ge cable (pin 3) at the 4-pin white connector of the brake light switch and integrate the 1 mm² rt/ws cable with a blue butt-type connector as shown in the circuit diagram.

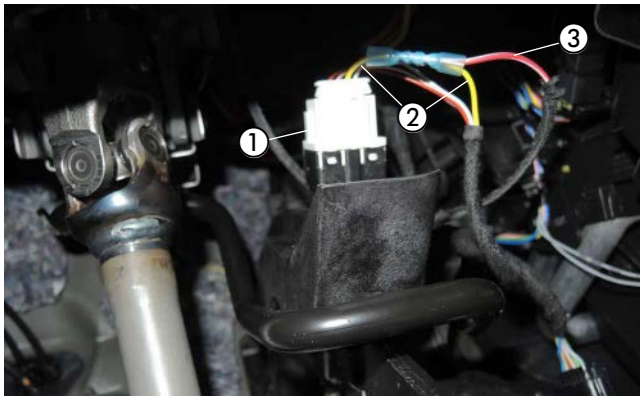


Fig. 61
① Brake light switch
② Disconnect 0.5 mm² ge cable (pin 3)
③ Integrate 1 mm² rt/ws cable

4 INSTALLATION

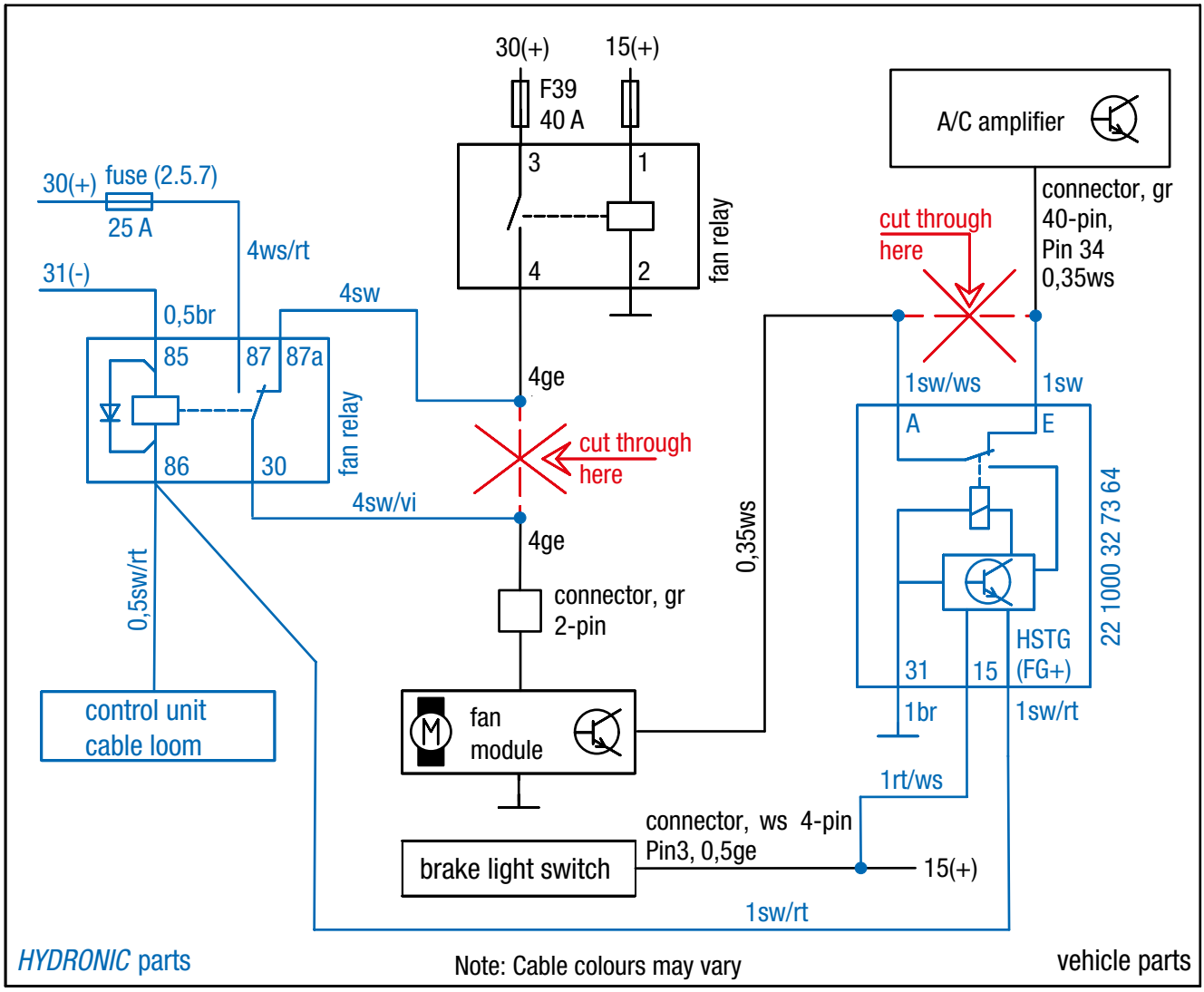


Fig. 62

4 INSTALLATION

INSTALL EASYSTART REMOTE/REMOTE+ RADIO REMOTE CONTROL
(Alternative suggestion - consult with the customer)
(see photos 63 to 65)

EasyStart Remote/Remote+ is installed according to the Technical Description for the EasyStart Remote/Remote+ radio remote control; see the “Installation Instruction” section.

Mount the button of the EasyStart Remote/Remote+ in the left trim moulding of the instrument panel on the right next to the shelf.
To do so, drill a 10 mm Ø hole and insert the button in the drilled hole.



Fig. 63
① Mount the button of the EasyStart Remote/Remote+

Attach the temperature sensor of the EasyStart Remote+ to the trim moulding on the A-pillar in the driver's footwell.

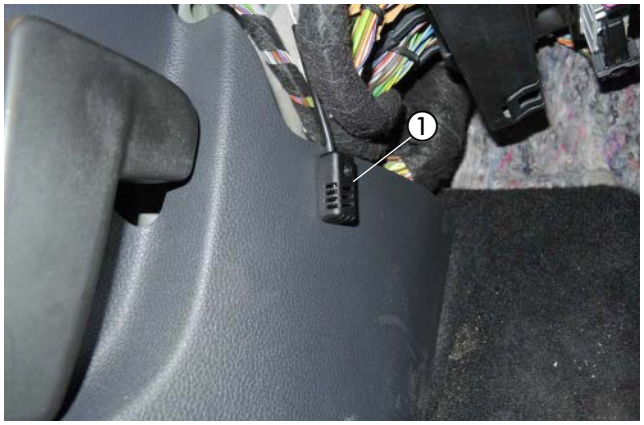


Fig. 64
① Mount the temperature sensor of the EasyStart Remote+

Fasten the stationary part of the EasyStart Remote/Remote+ to the left side of the instrument panel using the vehicle's Torx screw.

Lay the cables from the installed button and temperature sensor together with the “Control unit” cable loom to the installed position of the stationary part and connect to the stationary part.

Connect the antenna cable of the EasyStart Remote / Remote+ to the stationary part, take it to the left and lay it in the rubber door seal on the driver's side.

⚠ CAUTION!
Use cable ties to fix any excessive length of antenna cable underneath the instrument panel.

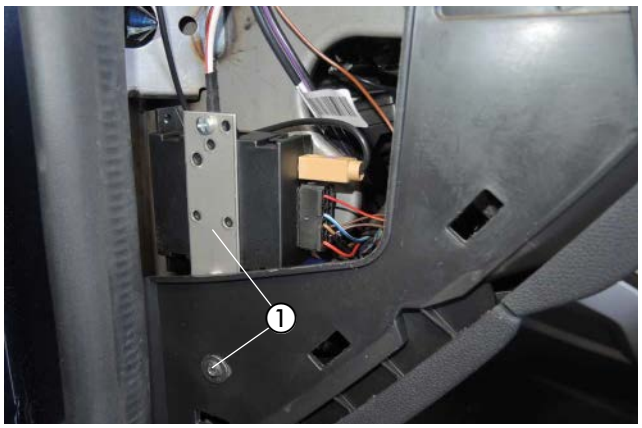


Fig. 65
① Mount the stationary part of the EasyStart Remote/Remote+

5 FOLLOWING INSTALLATION

ADHERE THE “REFUEL” LABEL
(see photo 66)

Adhere the “Refuel” label inside the fuel tank flap as shown.



Fig. 66
① Adhere the “Refuel” label

MOUNT BUMPER
(see photo 67)

Install the front bumper and insert the exhaust pipe end through the grommet.

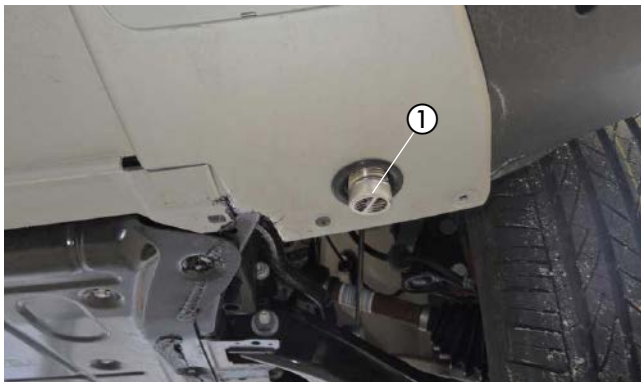


Fig. 67
① Insert the exhaust pipe end through the grommet

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.
- Restore all the vehicle's programmed settings (radio, window lift, etc.).
- Fill the cooling system, start the engine, vent the cooling system and check for leaks, top up any missing coolant liquid up to the marking (arrow).
- Adhere the duplicate nameplate in a clearly visible position near the heater or at a suitable point on the B-pillar.
- Adhere the “Refuel” label in the fuel tank flap or at a suitable point on the B-pillar.
- Please also note and follow the vehicle manufacturer's information on filling and venting the cooling system.
- Read and observe all official regulations and safety instructions in the Technical Description.
- Program the control unit and place the operating instructions in the glove compartment.
- Print out the leaflet for the customer and hand it over to the customer.

⚠ CAUTION!
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.

6 PARTS OVERVIEW



Fig. 68

7 INITIAL COMMISSIONING (EASYSTART REMOTE)

CARRY OUT INITIAL COMMISSIONING

For initial commissioning, the following steps must be carried out one after the other.

- **Insert the battery into the mobile unit**
  Insert the battery supplied in the mobile unit, as described in the EasyStart Remote operating instructions, in the “Maintenance / Replacing the Battery” chapter. Do not activate the mobile unit yet.
- **Applying the operating voltage**
  The operating voltage is applied by inserting the fuse into the fuse holder.

Automatic detection

Five seconds after applying the operating voltage the button's LED starts to light up. The radio remote control now checks which heater is connected and configures the user prompting of the mobile unit.

- **Teaching the mobile unit**
  If the button's LED starts to flash, the mobile unit can be taught.

Note on the Add teaching mode

The **Add** function can be used to teach up to 4 mobile units to one stationary part; but only one mobile unit can make contact with the stationary part.

Notes on the AddE teaching mode

The **AddE** is only used to teach the current mobile unit. All previously taught mobile units are deleted.

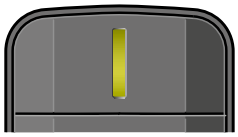
PLEASE NOTE!

If the mobile unit is not taught within 30 seconds, the button's LED indicator goes out.
Press the button until the LED starts to flash. Then teach the mobile unit.

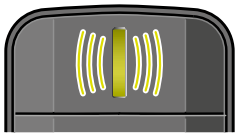
Teach mobile unit - **ADD** teach mode

Press the button or .

If the connection has been set up between the mobile unit and the stationary part, then the LED indicator begins to flicker. The mobile unit is in **Add** teach mode.

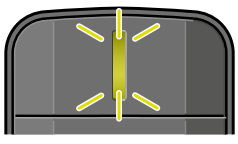


Data transmission
LED: lights up green



LED: flickers green

Confirm Add teach mode by pressing the button while the LED indicator is flickering green.



LED: flashes 2x green

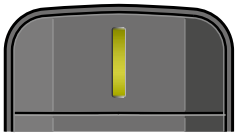
The mobile unit is taught.

7 INITIAL COMMISSIONING (EASYSTART REMOTE)

TEACH MOBILE UNIT - ADDE TEACH MODE

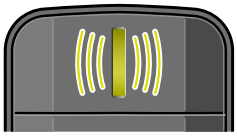
Press the button or .

If the connection has been set up between the mobile unit and the stationary part, then the LED indicator begins to flicker. The mobile unit is in **Add** teach mode.



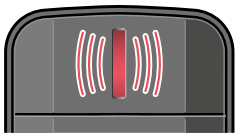
Data transmission
LED: lights up green





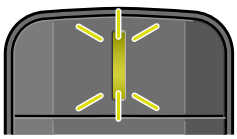
LED: flickers green

Press the button while the green LED is flickering.



LED: flickers red

Confirm AddE teach mode by pressing the button while the LED indicator is flickering green.



LED: flashes 2x green

The mobile unit is taught.

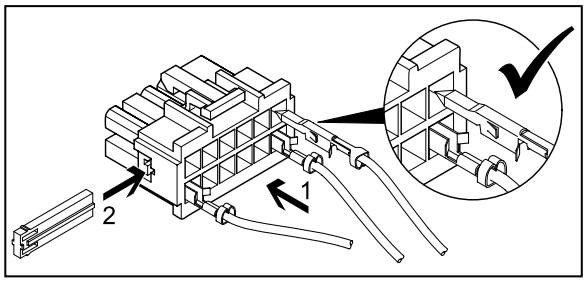
TEACH AN ADDITIONAL MOBILE UNIT

- Press the button installed in the vehicle until the button's LED starts to flash.
- While the button's LED is flashing, activate the mobile unit as described under “Teaching the mobile unit”.

7 PIN CONFIGURATION (EASYSTART REMOTE)

CONNECTING THE CONNECTOR HOUSING TO THE STATIONARY PART

Attach the tab connector to the control unit lead harness.
Clip the control unit lead harness and the button lead harness into 12-pin connector housing. (Connector housing pin assignment)
Push the contact locking device into the connector housing.
Connect the 12-pin connector housing to the stationary part.



PLEASE NOTE!

- When installing the connector, ensure that the locking tongues always face the middle of the connector. Only in this position do the tongues latch into the housing (see sketch).

PIN ASSIGNMENT AT THE STATIONARY PART

PIN	SIGNAL	CABLE COLOUR
1	Terminal 30 (plus)	red
2	-	
3	Terminal 31 (plus)	brown
4	JE diagnostics / DAT cable	blue / white / vi
5	-	
6	Button LED (+)	red / yellow
7	Button (+)	brown / yellow
8	Button (-)	brown
9	-	
10	-	
11	-	
12	-	

Connector housing chamber assignment -XB12 (assignment seen from the cable inlet side)

7 INITIAL COMMISSIONING (EASYSTART REMOTE+)

CARRY OUT INITIAL COMMISSIONING

For initial commissioning, the following steps must be carried out one after the other.

INSERT THE BATTERY INTO THE MOBILE UNIT

Insert the supplied battery in the mobile unit, as described in the EasyStart Remote+ operating instructions, in the “Maintenance / Replacing the Battery” chapter. Do not activate the mobile unit yet.

APPLYING THE OPERATING VOLTAGE

The operating voltage is applied by inserting the fuse into the fuse holder.

AUTOMATIC DETECTION

Five seconds after applying the operating voltage the button's LED starts to light up. The radio remote control now checks which heater is connected and configures the user prompting of the mobile unit.

TEACHING THE MOBILE UNIT

If the button's LED starts to flash, the mobile unit can be taught.

NOTE ON THE ADD TEACHING MODE

The **Add** function can be used to teach up to 4 mobile units to one stationary part; but only one mobile unit can make contact with the stationary part

Notes on the AddE teaching mode

The **AddE** is only used to teach the current mobile unit. All previously taught mobile units are deleted.

PLEASE NOTE!

If the mobile unit is not taught within 30 seconds, the button's LED indicator goes out.
Press the button until the LED starts to flash.
Then teach the mobile unit.

TEACH MOBILE UNIT - ADD TEACH MODE

Press the or button, **Add** is displayed.



Confirm **Add** teach mode by pressing the button.

Teach mobile unit - **AddE** teach mode
Use the or button to select **AddE**.

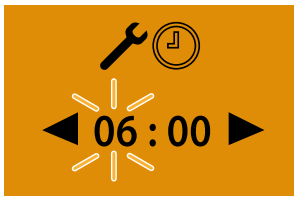


Confirm **AddE** teach mode with the button.

7 INITIAL COMMISSIONING (EASYSTART REMOTE+)

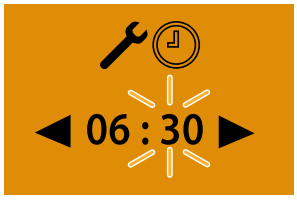
AFTER CONFIRMING ADD OR ADDE

SET THE TIME
Use the ◄ or ► button to set the hours

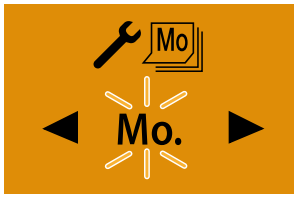


Press the ▭ button to confirm the setting

Use the ◄ or ► button to set the minutes



- Press the ▭ button to confirm the setting
- Set the weekday
  Use the ◄ or ► button to set the weekday



Press the ▭ button to confirm the setting. Then configure the EasyStart Remote+.

Teach an additional mobile unit

Press the button installed in the vehicle until the button's LED starts to flash.
Press the ▭ or ▭ button on the mobile unit, Add is displayed.

Confirm teach mode with the ▭ button.



The additional mobile unit is taught.

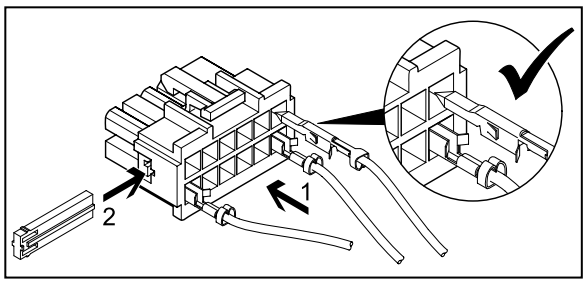
CONFIGURE EASYSTART REMOTE+

The system must be configured according to its use.

7 PIN CONFIGURATION (EASYSTART REMOTE+)

CONNECTING THE CONNECTOR HOUSING TO THE STATIONARY PART

Attach the tab connector to the control unit lead harness.
Clip the control unit lead harness and the button lead harness into 12-pin connector housing.
(Connector housing pin assignment)
Push the contact locking device into the connector housing.
Connect the 12-pin connector housing to the stationary part.



PLEASE NOTE!

- When installing the connector, ensure that the locking tongues always face the middle of the connector. Only in this position do the tongues latch into the housing (see sketch).

PIN ASSIGNMENT AT THE STATIONARY PART

PIN	SIGNAL	CABLE COLOUR
1	Terminal 30 (plus)	red
2	-	
3	Terminal 31 (plus)	brown
4	JE diagnostics / DAT cable	blue / white / vi
5	-	
6	Button LED (+)	red / yellow
7	Button (+)	brown / yellow
8	Button (-)	brown
9	-	
10	-	
11	-	
12	-	

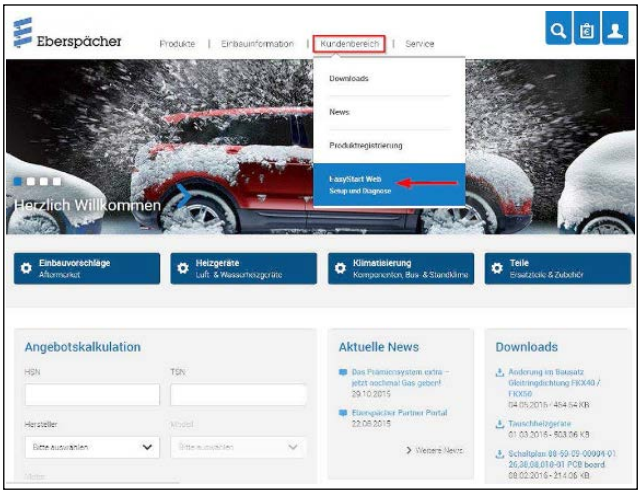
Connector housing chamber assignment -XB12 (assignment seen from the cable inlet side)

7 INITIAL COMMISSIONING (EASYSTART WEB)

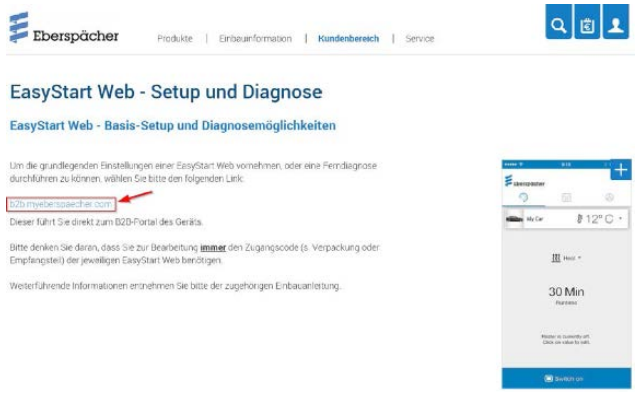
The web-based EasyStart Web operating software can be used to operate an Eberspächer air or water heater via the installed receiver unit.
The installation workshop or garage must log into the EasyStart Web portal to start up the operating software.

Initial commissioning of the EasyStart Web operating software can only be carried out by the installation workshop using a PC / tablet with an internet connection.
To access the "EasyStart Web portal", open the Eberspächer Partner Portal with https://partner.eberspaecher.com/de.
If an access to the portal already exists, it is not necessary to enter an email address and password to log in. If no access exists yet, follow the login instructions.

If the access is successful the main window of the partner portal appears. Click the "EasyStart Web" button under the "Customer Area" menu item.



Click here on the link to the B2B portal of EasyStart Web.



Select the "**Initial Commissioning**" menu item.



Enter the approval code (IMEI) for EasyStart Web.

PLEASE NOTE!

- The approval code (IMEI) is printed on the EasyStart Web packaging box and I also enclosed in the packaging as a sticker.

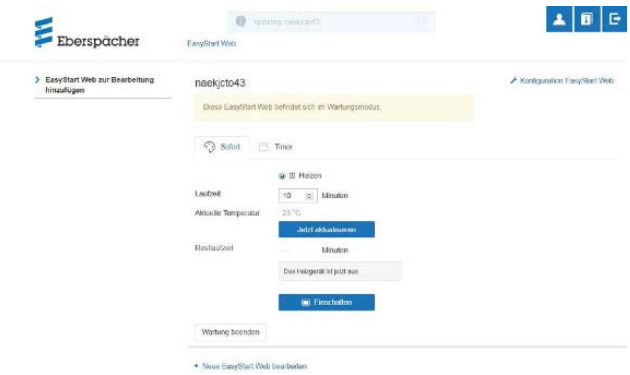


DEFAULT SETTINGS FOR THE CUSTOMER

Configure EasyStart Web as requested by the customer or as necessary for installation.

PLEASE NOTE!

This step is only possible if the EasyStart Web registered on the server beforehand (logged into a GSM network).



7 INITIAL COMMISSIONING (EASYSTART WEB)

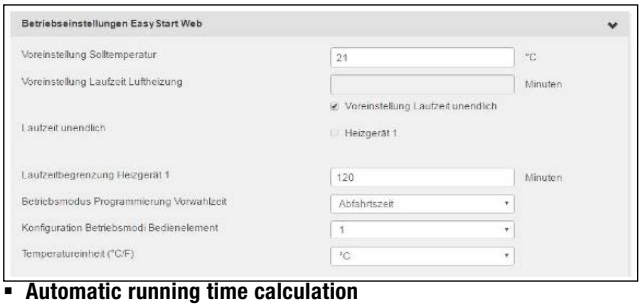
Configuring EasyStart Web

The following functions can be selected

- **EasyStart Web system parameters**
  - Display of the current configuration and properties of the activated EasyStart Web.
- **Connectivity**
  - EasyStart Web can be reached / cannot be reached via the app.
- **Heater fault memory**
  - Read out and delete heater's fault memory.
- **EasyStart Web fault memory**
  - Display EasyStart Web fault memory.



- EasyStart Web operation settings
  - Running time limit of the heater
  - Programming the preset time
  - Configuration of the control unit
  - Temperature unit setting (°C / °F)



- **Automatic running time calculation**

PLEASE NOTE!

Automatic runtime calculation is not possible for air heaters. The engine size entered can be increased by 500 cm³ for a larger heat requirement. If the combination valve 25 2014 80 62 6200 or 25 2014 80 7200 00 is used in the water circuit, the stated engine size can be reduced by 500 cm³. The values for increasing or reducing the stated engine size are only valid for cooling water circuits where the cooling water flows through the vehicle engine. If the vehicle is only used for short trips, consult the customer and reduce the maximum runtime.



- EasyStart Web undervoltage detection
  - See PLUS installation instructions
- Resetting EasyStart Web
  - Reset to factory settings

Click the Änderungen an Konfiguration speichern or Formular zurücksetzen buttons to then save or discard the configuration.
After ending the configuration, perform a test run in “Immediate operation” mode.
Click Einschalten to start the test mode.



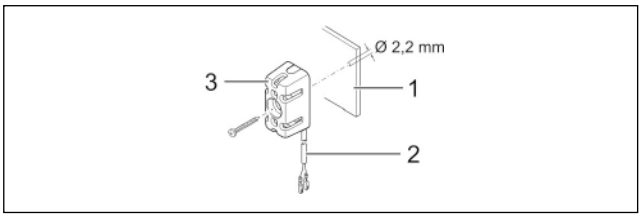
Following the run through test operation is ended. To do this, select the Wartung beenden button and then confirm the message.



Initial commissioning is completed.

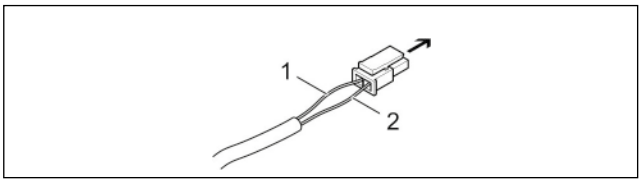
When handing over the vehicle to the customer give them the packaging box and quick start guide with the access code (IMEI).

7 PIN CONFIGURATION (EASYSTART WEB)



1 Instrument panel
2 Lead harness
3 Temperature sensor

- Snap the “Temperature sensor cable loom” cables into the 2-pin connector (small parts bag) as shown.
- Plug the connector into the 2-pin slot (2nd from left) of the stationary part.



➔ EasyStart Web receiver unit, 2-pin slot
1 BNHW cable
2 GY cable

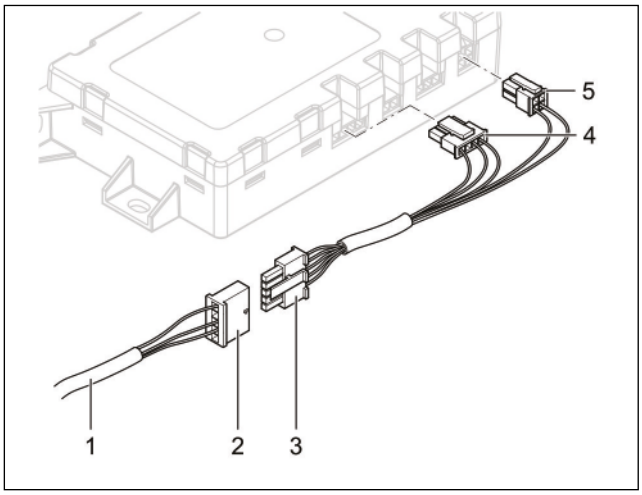
Connect the communication and power supply cables

Check whether the receptacles are fitted to the RD, BN and BUWH cables in the “Operation” lead harness of the heater cable loom.
If receptacles are missing on the corresponding cables, crimp on the receptacles from the small parts bag in the scope of supply.
Snap the cables into the 5-pin receptacle housing as follows.

- RD cable in chamber 1
- BN cable in chamber 3
- BUWH cable in chamber 4

Connect the 5-pin receptacle housing of the “Operation” lead harness to the 5-pin “cable loom” connector.
For air heaters, connect and insulate the GYRD cable to the BNWH also.
Insulate unused cables.

Connect the two 4-pin connectors of the “cable loom” in the corresponding slots of the EasyStart Web receiver unit (flat 4-pin –> far left, square 4-pin –> far right)



1 “Operation” lead harness
2 Receptacle housing, 5 pin
3 “Cable loom” connector, 5 pin
4 Flat connector, 4 pin
5 Square connector, 4 pin

CABLE COLOURS

RD	red	GY	grey	BK	black
BU	blue	YE	yellow	GN	green
WH	white	VT	violet	BN	brown
OR	orange				

Connecting the power supply

After installing the heater and EasyStart Web receiver unit, push in the fuse to establish the power supply for both units.

Automatic detection

After applying the operating voltage the button's LED starts to light up.
EasyStart Web checks which heater is connected and configures the system accordingly.
Start initial commissioning and configuration of EasyStart Web when the LED in the button is no longer flashing.

LEAFLET FOR THE CUSTOMER

BEFORE SWITCHING ON
IN VEHICLES WITH MANUAL AIR-CON

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



Fig. 69
① Temperature controller
② Controller for the air flow
③ Fan controller

RECOMMENDATION!

- Switch the pre-heater on at least once a month for about 10 minutes, also in the summer months! This will ensure that it works properly during the season!
- We recommend adjusting the heating time to the driving time: Driving time > heating time.

RECOMMENDATION!

In vehicles with interior monitoring, this must be disabled for the heating process.
Please refer to the vehicle operating instructions for disabling instructions.

LEAFLET FOR THE CUSTOMER

BEFORE SWITCHING ON
IN VEHICLES WITH AUTOMATIC AIR-CON

- Before switching on or pre-programming the heating mode with the ignition switched on, set the vehicle's temperature controller ① to maximum setting (HI).
- Set the controller for the air flow ② to maximum air flow for the windscreen.
- The fan speed does not need to be pre-set.



Fig. 70
① Temperature controller
② Controller for the air flow
③ Fan controller

RECOMMENDATION!

- Switch the pre-heater on at least once a month for about 10 minutes, also in the summer months! This will ensure that it works properly during the season!
- We recommend adjusting the heating time to the driving time: Driving time > heating time.

PLEASE NOTE!

In vehicles with interior monitoring, this must be disabled for the heating process.
Please refer to the vehicle operating instructions for disabling instructions.

DE

ANSCHLUSSKONSTELLATIONEN FÜR HYDRONIC S3 12V CS

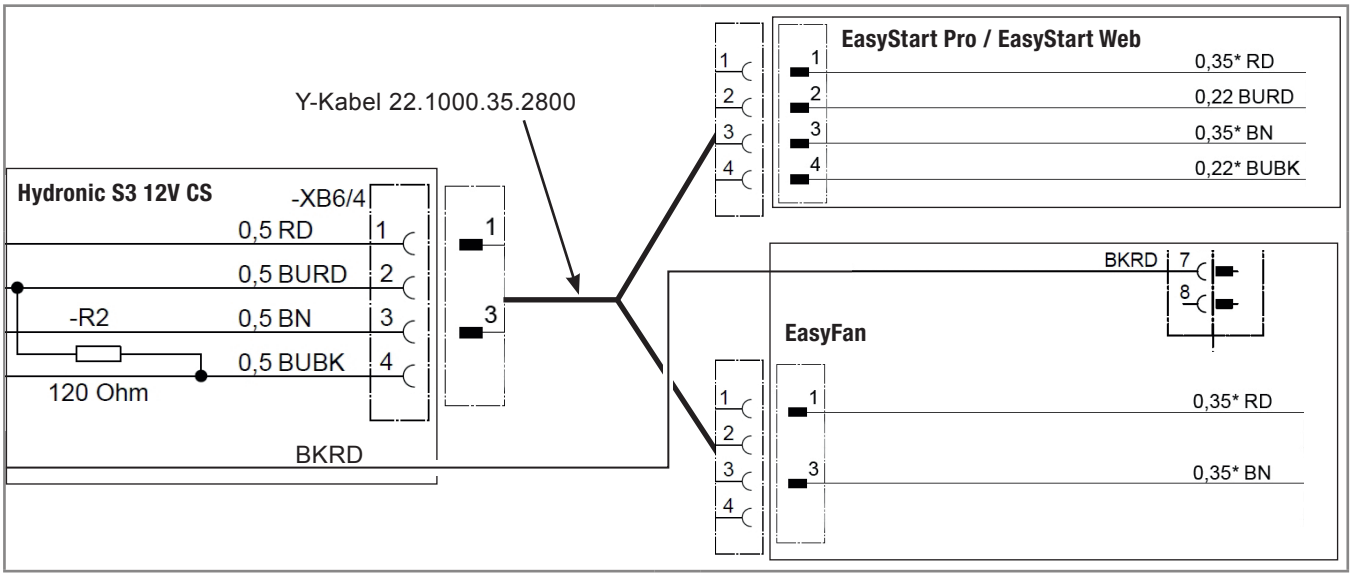
DE

Bitte beachten: Nur gültig für folgende Hydronic S3 Ausführungsvarianten **mit CAN-Schnittstelle und S+ Schaltausgang:**

Heizgeräte für Otto-Kraftstoff (Benzin)	**Bestell-Nr.**
B 4 E – 12 V CS	20.2007.05.0000
B 5 E – 12 V CS	20.2008.05.0000
Heizgeräte für Dieselkraftstoff	**Bestell-Nr.**
D 4 E – 12 V CS	25.2933.05.0000
D 5 E – 12 V CS	25.2934.05.0000

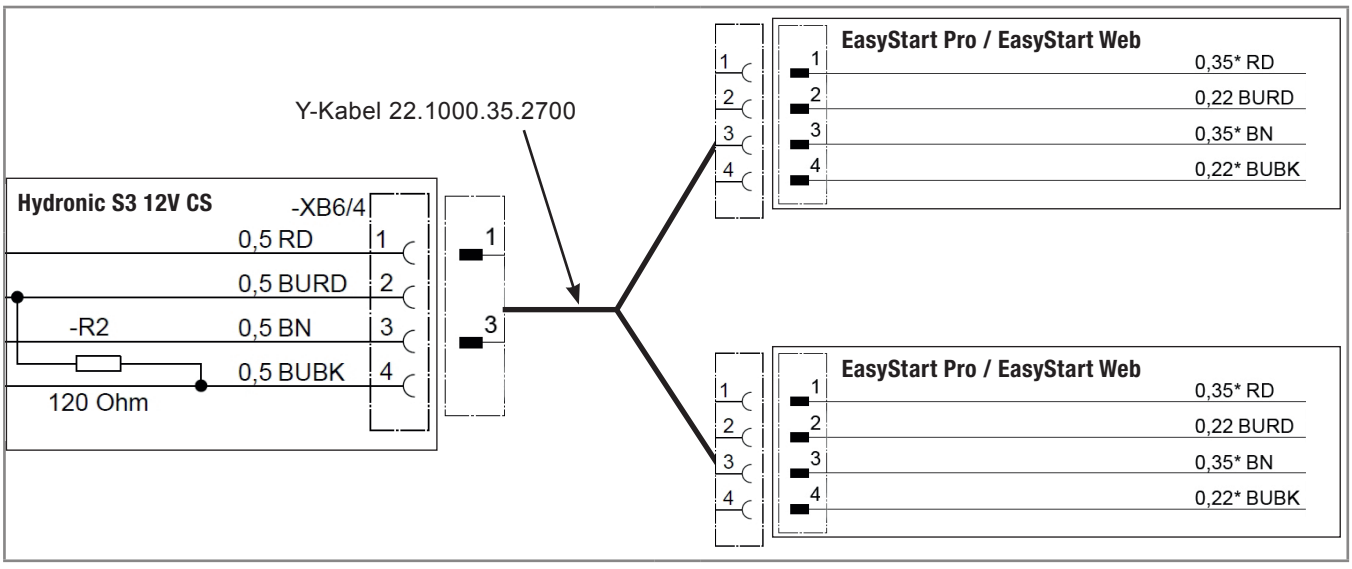
1 Anschluss Hydronic S3 12V CS an EasyStart Pro / EasyStart Web in Verbindung mit EasyFan

Anschluss über Y-Kabel (Mat.-Nr. 22.1000.35.2800) und Leiter BKRD an Bedienelement und EasyFan.



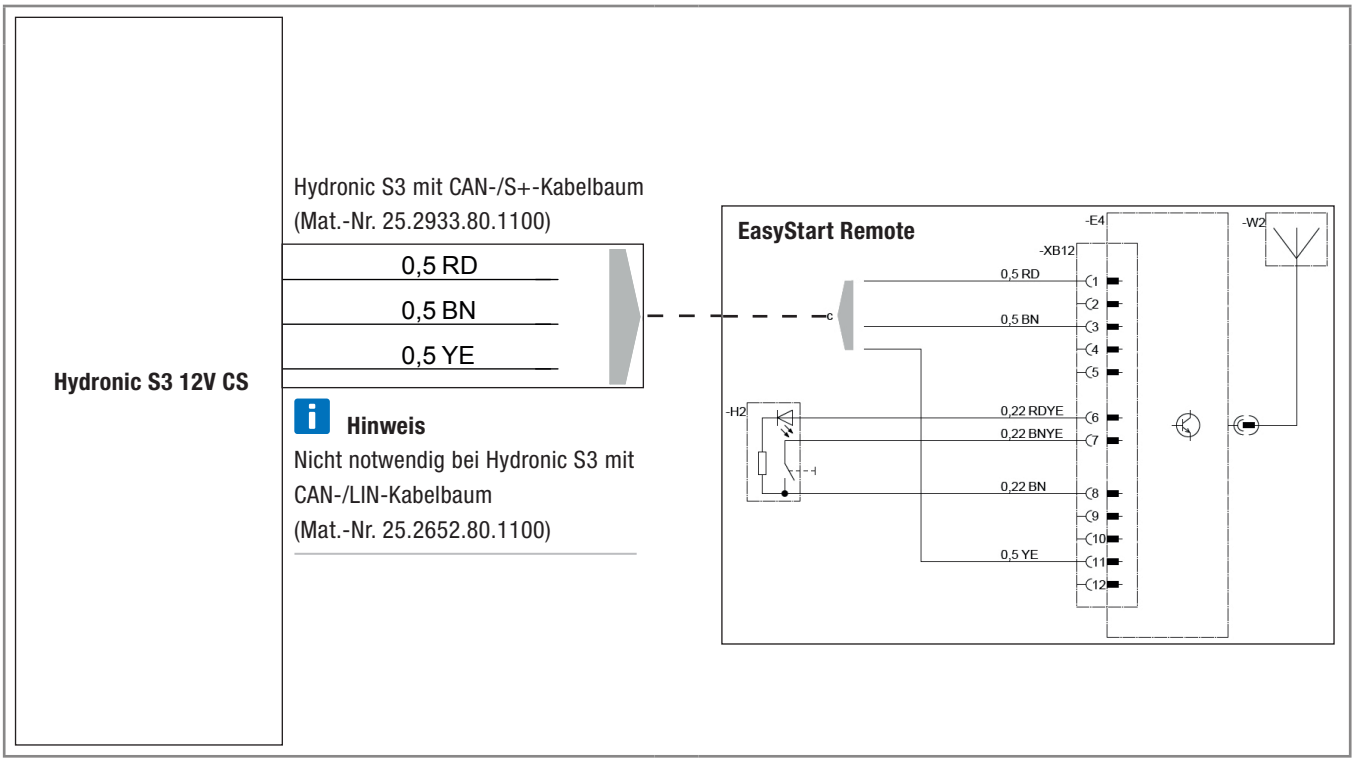
2 Anschluss Hydronic S3 12V CS an 2 x EasyStart Pro / EasyStart Web

Anschluss über Y-Kabel (Mat.-Nr. 22.1000.35.2700) an EasyStart Pro und EasyStart Web.



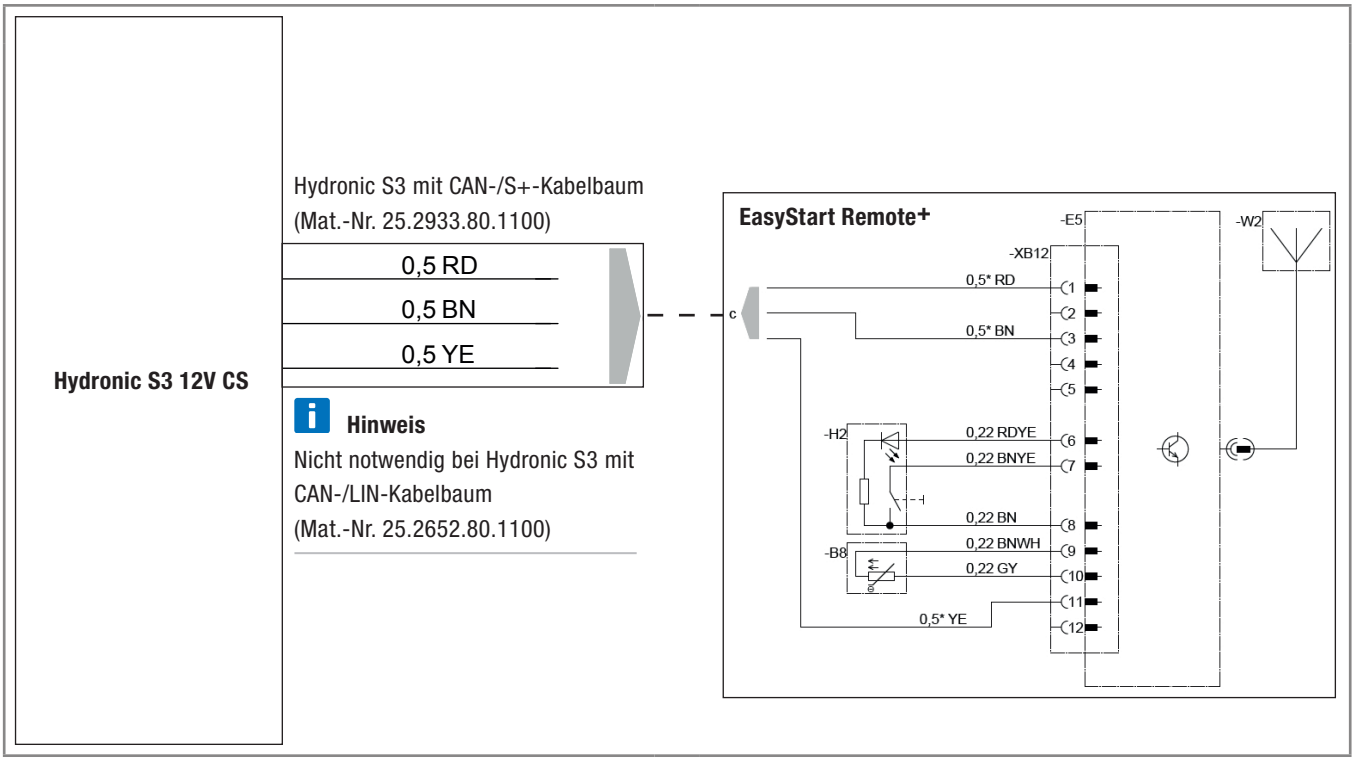
DE

3 Anschluss Hydronic S3 12V CS an EasyStart Remote



DE

4 Anschluss Hydronic S3 12V CS an EasyStart Remote+



EN

CONNECTION CONSTELLATIONS FOR HYDRONIC S3 12V CS

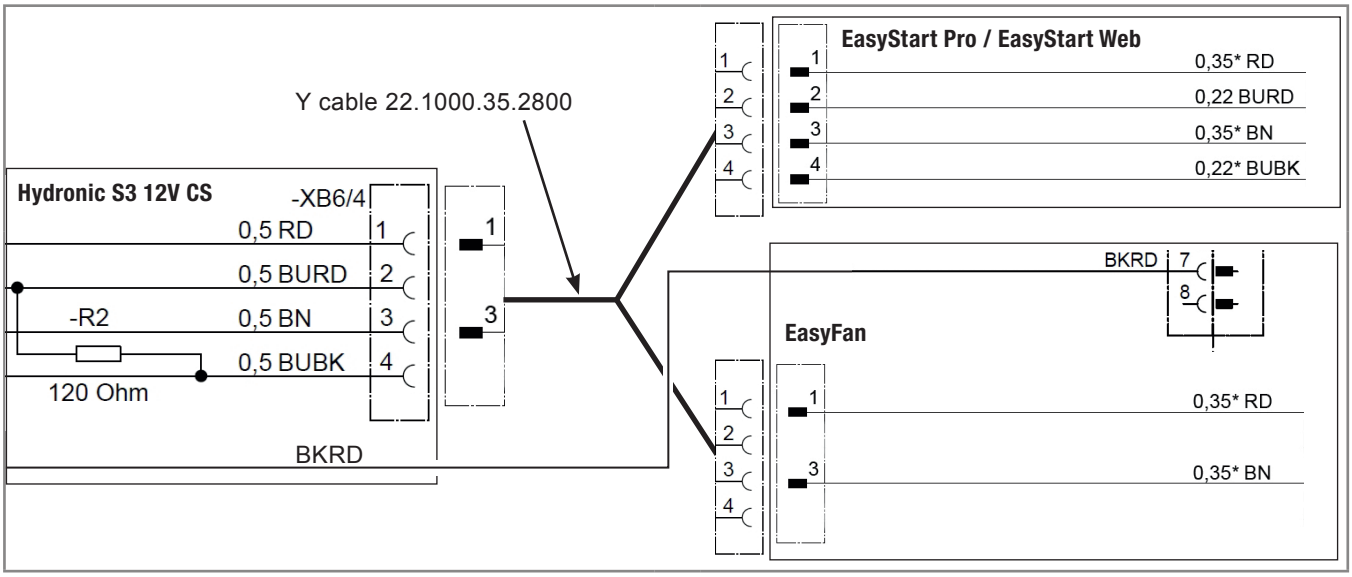
EN

Please note: Only valid for the following Hydronic S3 versions **with CAN interface and S+ switching output:**

Heaters for petrol	**Order No.**
B 4 E – 12 V CS	20.2007.05.0000
B 5 E – 12 V CS	20.2008.05.0000
Heaters for Diesel	**Order No.**
D 4 E – 12 V CS	25.2933.05.0000
D 5 E – 12 V CS	25.2934.05.0000

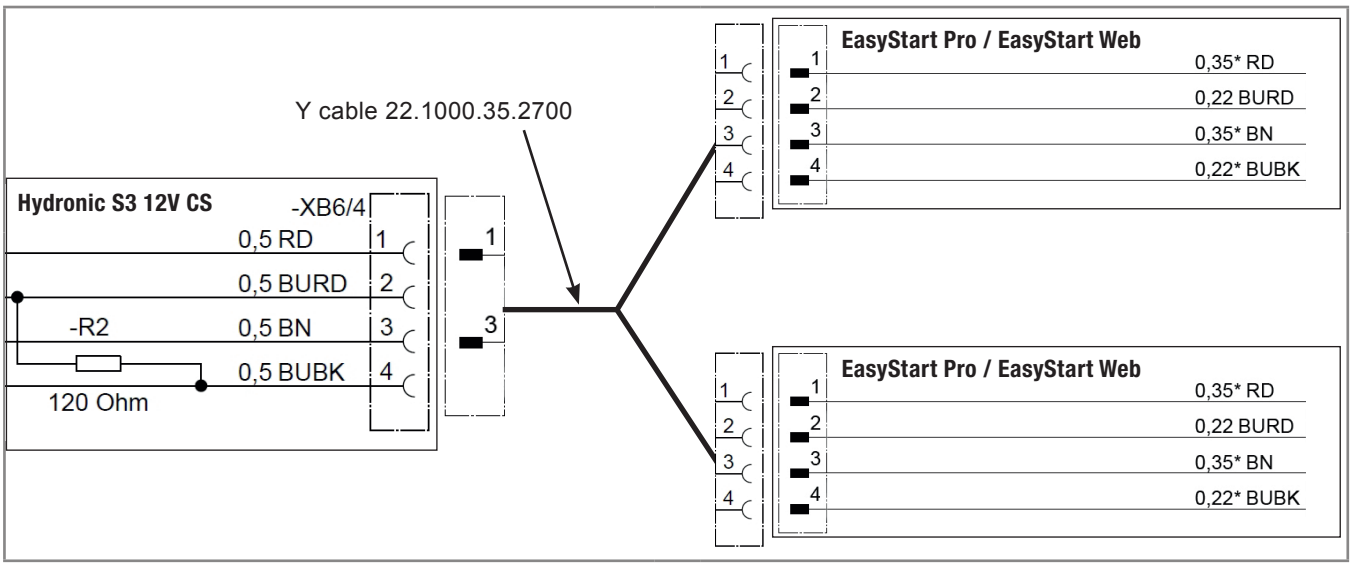
1 Connection of Hydronic S3 12V CS to EasyStart Pro / EasyStart Web including EasyFan

Connect via Y cable (Mat.-No. 22.1000.35.2800) and line BKRD to operating element and EasyFan.



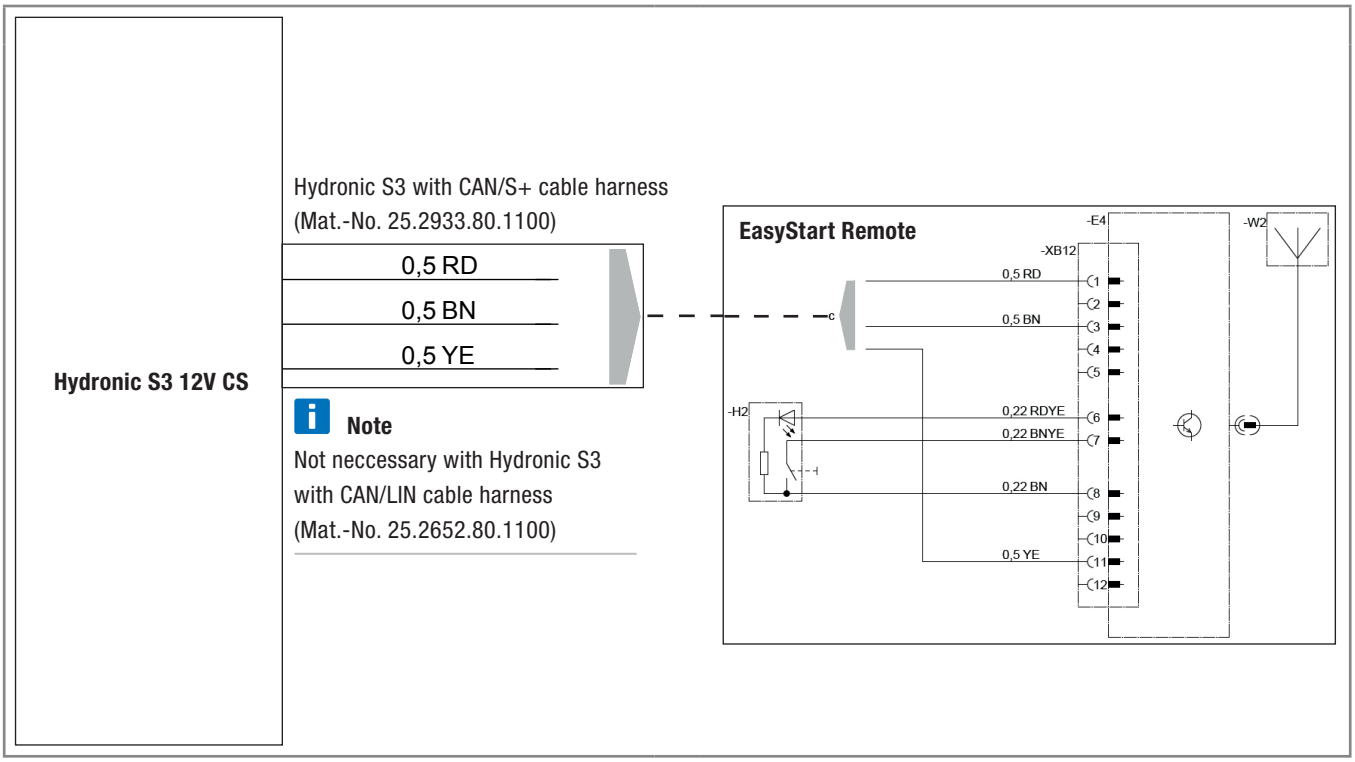
2 Connection of Hydronic S3 12V CS to 2 x EasyStart Pro / EasyStart Web

Connect via Y cable (Mat.-No. 22.1000.35.2700) to EasyStart Pro and EasyStart Web.

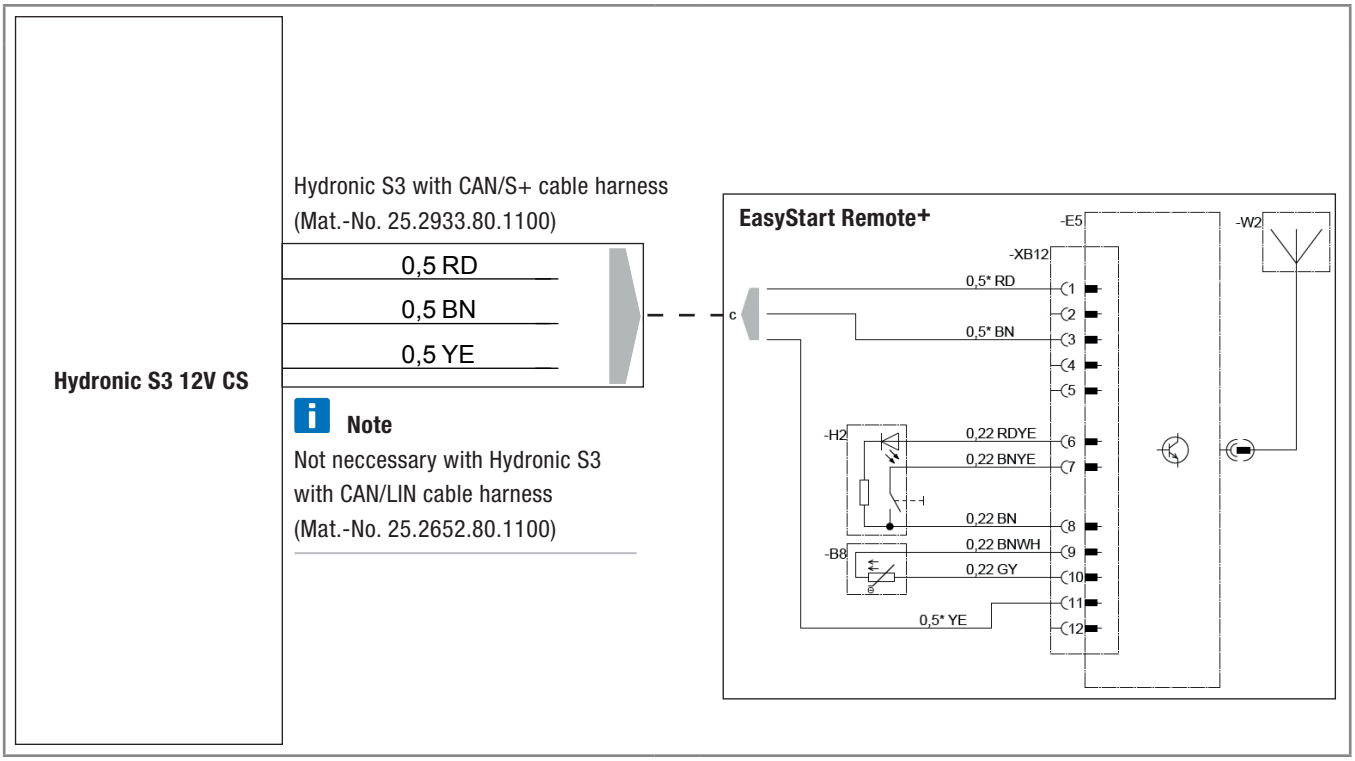


EN

3 Connection of Hydronic S3 12V CS to EasyStart Remote



4 Connection of Hydronic S3 12V CS to EasyStart Remote+



Headquarters:
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