EN

K

# Installation documentation

for coolant circuit conversion from Inline to Island

Jeep Wrangler

Left-hand drive vehicle

| Manufacturer | Model | Type | Model year | EG-BE-No. / ABE |
|---|---|---|---|---|
| Jeep | Wrangler | JL | from 2019 | e4* 2001/116* 0116*… |

| Motorisation | Fuel | Emission standard | Transmission type | Output [kW] | Displace-ment [cm³] | Engine code |
|---|---|---|---|---|---|---|
| 2.0 T-GDI | Petrol | Euro 6;WLTP;BG;… | 8-speed AG | 199 | 1995 | ESS |

| Validity | Equipment variants | Model |
|---|---|---|
| | | Wrangler |
| Verified equipment variants | 2 zone automatic air-conditioning | x |
| | LED main headlights | x |
| | LED front fog lights | x |
| | Long wheelbase | x |
| | Short wheelbase | x |
| | 4 WD | x |
| Unverified equipment variants | Alarm system | x |
| | Halogen main headlights | x |

| Total installation time | Note |
|---|---|
| 4.3 hours | |

# Contents

# 1 List of abbreviations

| | |
|---|---|
| AG | Automatic transmission |
| CL | CL GW |
| MV | Solenoid valve |
| Veh. | Vehicle |

# 2 Installation notes

## 2.1 Information on Validity

This installation documentation applies to vehicles listed on page 1, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded.

Vehicle and engine types, equipment variants and other specifications not listed in this installation documentation have not been tested.

## 2.2 Components used

| Designation | Order number |
|---|---|
| Conversion kit for Jeep Wrangler petrol | 1327972A |
| Rivet for wheel well trim, Jeep order No. | 3x K06506007AA |

## 2.3 Validity notes

This installation documentation applies only in combination with:

| Designation | Order number |
|---|---|
| Installation kit for Jeep Wrangler petrol TT-Evo | 1327264_ |
| Installation documentation for Jeep Wrangler petrol TT-Evo | 1327265_ |
| Additional ‘Webasto Comfort’ A/C control kit for Jeep | 1325260_ |

## 2.4 Information on Total Installation Time

The total installation time includes the time needed for mounting and demounting the vehicle-specific components, the heater specific installation time and all other times required for the system integration and initial start-up of the heater.
The total installation time may vary for vehicle equipment other than provided.

# 3 About this document

## 3.1 Purpose of the document

This installation documentation is part of the product and contains all the information required to ensure professional vehicle specific installation of the:

| Thermo Top Evo heater |
|---|

## 3.2 Warranty and liability

Webasto shall assume no liability for defects, damage and injuries resulting from a failure to observe the installation, repair and operating instructions of the information contained in them.

This liability exclusion particularly applies to improper installations and repairs by untrained persons or in the case of a failure to use genuine spare parts.

The liability due to culpable disregard to life, limb or health and due to damage or injuries caused by a wilful or reckless breach of duty remain unaffected, as does the obligatory product liability.

Installation should be carried out according to the general, standard rules of technology. Unless specified otherwise, fasten hoses, lines and wiring harnesses to original vehicle lines and wiring harnesses using cable ties. Insulate loose wire ends and tie back. Connectors on electronic components must audibly snap into place during assembly.

Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K).

Observe the instructions and guidelines of the respective vehicle manufacturer for demounting and mounting vehicle specific components.

The initial start-up is to be executed with the Webasto Thermo Test Diagnosis.

When installing a programmable control module (e.g. a PWM Gateway), the corresponding settings must be checked or adjusted.

### 3.2.1 Statutory regulations governing installation

The Thermo Top Evo heater has been type-tested and approved in accordance with ECE-R 10 (EMC) and ECE-R 122 (heater). The regulations of these guidelines are binding in the scope of the Directive 70/156/EEC and/or 2007/46/EC (for new vehicle models from 29/04/2009) and should also be observed in countries in which there are no special regulations.

The heater is licensed in accordance with paragraph 19, section 3, No. 2b of the StVZO (German Road Traffic Licensing Authority).

## 3.3 Safety

### Qualifications of installation personnel

The installation personnel must have the following qualifications:

- Successful completion of Webasto training
- Corresponding qualification for working on technical systems

### Regulations and legal requirements

The regulations from the heater's general installation and operating instructions must be observed.

### 3.3.1 Safety information on installation

#### Danger posed by live parts

▶ Prior to installation, disconnect the vehicle from the voltage supply.

▶ Make sure the electrical system is earthed correctly.

▶ Always comply with legal requirements.

▶ Observe data on type label.

#### Danger of fire and leaking toxic gases due to improper installation

▶ Vehicle parts in the vicinity of the heater must be protected against excessive heating by the following measures:

  ⇨ Maintain minimum safety distances.

  ⇨ Ensure adequate ventilation.

  ⇨ Use fire-resistant materials or heat shields.

#### Danger due to sharp edges

- Lacerations
- Short circuit due to electrical wire damage

▶ Fit protectors on sharp edges.

## 3.4 Using this document

Before installing and operating the heater, read this installation documentation, the installation instructions of the heater, the operating instructions and supplementary sheets provided.

### 3.4.1 Explanatory Notes on the Document

There is an identification mark near the respective work step to allow you to quickly allocate the other applicable documents to the Webasto components to be installed:

| | |
|---|---|
| Generally valid Webasto documentation | |
| Vehicle-specific installation documentation | K |
| Vehicle-specific installation documentation of the cold start kit | M |
| Webasto Comfort A/C control | H |
| Webasto Standard A/C control | G |
| Tank extracting device (e.g. FuelFix) | F |
| Exhaust end fastener (EFIX) | E |
| Combustion air intake silencer | L |
| Spacer bracket (ASH) | S |

### 3.4.2 Use of symbols

**DANGER**

Type and source of the risk

Consequences: Failure to follow the instructions can result in death

▶ Actions to protect yourself against risks.

**WARNING**

Type and source of the risk

Consequences: Failure to follow the instructions can lead to serious or even fatal injuries

▶ Actions to protect yourself against risks.

**CAUTION**

Type and source of the risk

Consequences: Failure to follow the instructions can lead to minor injuries

▶ Actions to protect yourself against risks.

Type and source of the risk

Consequences: Failure to follow the instructions can lead to material damage

▶ Actions to protect yourself against risks.

Reference to the vehicle manufacturer's specific documents.

Note on a special technical feature

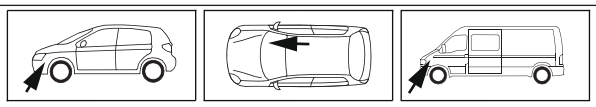
### 3.4.3 Work step identification marks

The ongoing work step is indicated on the outside top corner of the page:

| Mechanical system | Electrical system | High-voltage | Coolant |
|---|---|---|---|
| | | | |

| Combustion air | Fuel | Exhaust | Software |
|---|---|---|---|
| | | | |

### 3.4.4 Orientation aid



The arrow indicates the position on the vehicle and the viewing angle

### 3.4.5 Use of highlighting

| Highlight | Explanation |
|---|---|
| ✓ | Action |
| ▶ | Necessary action |
| ⇨ | Result of an action |
| 1 / 12 / a1 | Position numbers for the image descriptions |
| ① / ⑫ / Ⓐ | Position numbers for the image descriptions for electrical wires and components as well as coolant hose sections |

# 4 Technical Information

| Dimension specifications |
|---|
| – All dimensions specified in mm |
| – Perforated brackets and mounting angles are shown to scale |
| – Observe data regarding scale on the templates |

| Tightening torque specifications |
|---|
| – Tightening torque values of 5x13 heater bolts and 5x11 heater stud bolts = 8Nm |
| – Tightening torque values of 5x15 retaining plate of water connection piece bolts = 7Nm |
| – 5x12 bolt tightening torque of 2-part heater bracket = 6Nm |
| – Tighten other bolt connections in accordance with manufacturer's instructions or in accordance with state-of-the-art-technology |

| Temperature specification for heat shrink plastic tubings |
|---|
| – Fabric heat shrink tubing: shrink temperature max. 230°C |
| – Standard heat shrink plastic tubing: shrink temperature max. 300°C |

| Necessary special tools |
|---|
| – Hose clamp pliers for auto-tightening hose clamps |
| – Hose clamp pliers for Clic hose clamps of type W |
| – Hose clamping pliers |
| – Hose cutter |
| – Automatic wire stripper 0.2 - 6 mm² |
| – Crimping pliers for cable lugs 0.5 – 10 mm² |
| – Crimping pliers for male connector 0.14 – 6 mm² |
| – Crimping pliers for connector 0.25 – 6 mm² |
| – Torque wrench for 2.0 - 10 Nm |
| – Deep-hole marker |
| – Metric thread-setter kit |
| – Webasto Thermo Test Diagnosis with current software |

# 5 Preparations

## 5.1 Vehicle preparation

Further information can be found in the vehicle manufacturer's technical documentation.

| Vehicle area | Components to be removed | Other applicable documents |
|---|---|---|
| General | ▶ Depressurise the cooling system | |
| Engine compartment and body | ▶ Disconnect the battery<br>▶ Engine design cover<br>▶ Wheel and wheel-well inner panel on the driver's side | |
| Passenger compartment | ▶ Carpet on the driver's side, folded back<br>▶ Inside door sill trim on the driver's side<br>▶ Lower instrument panel trim on the driver's side | |

# 6 Installation Overview

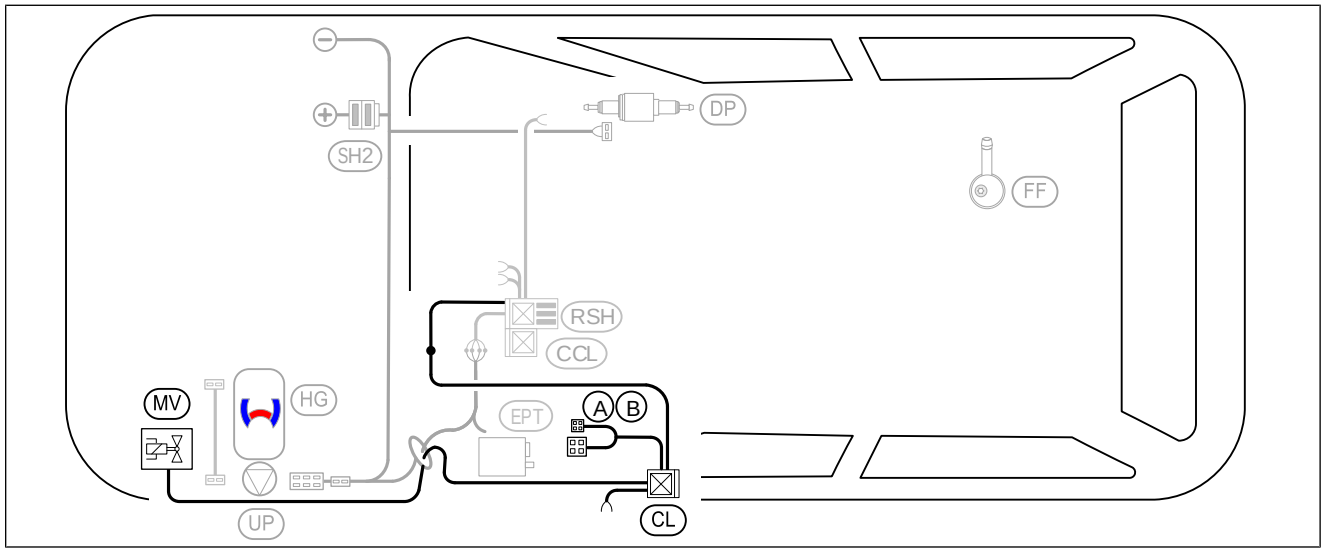



*Fig. 1*

## Legend to installation overview

| Abbreviation | Component |
|---|---|
| A/B | Adapter connector |
| CL | CL GW |
| MV | Solenoid valve |

## Heater installation location

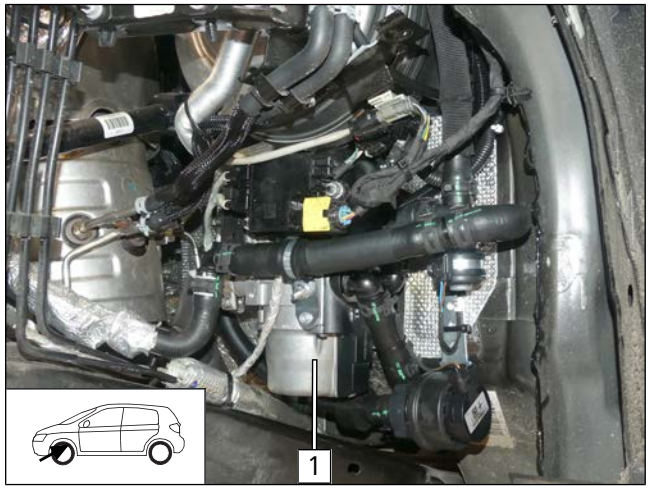



*Fig. 2*

1 Heater

# 7 Coolant

## 7.1 Hose routing diagram

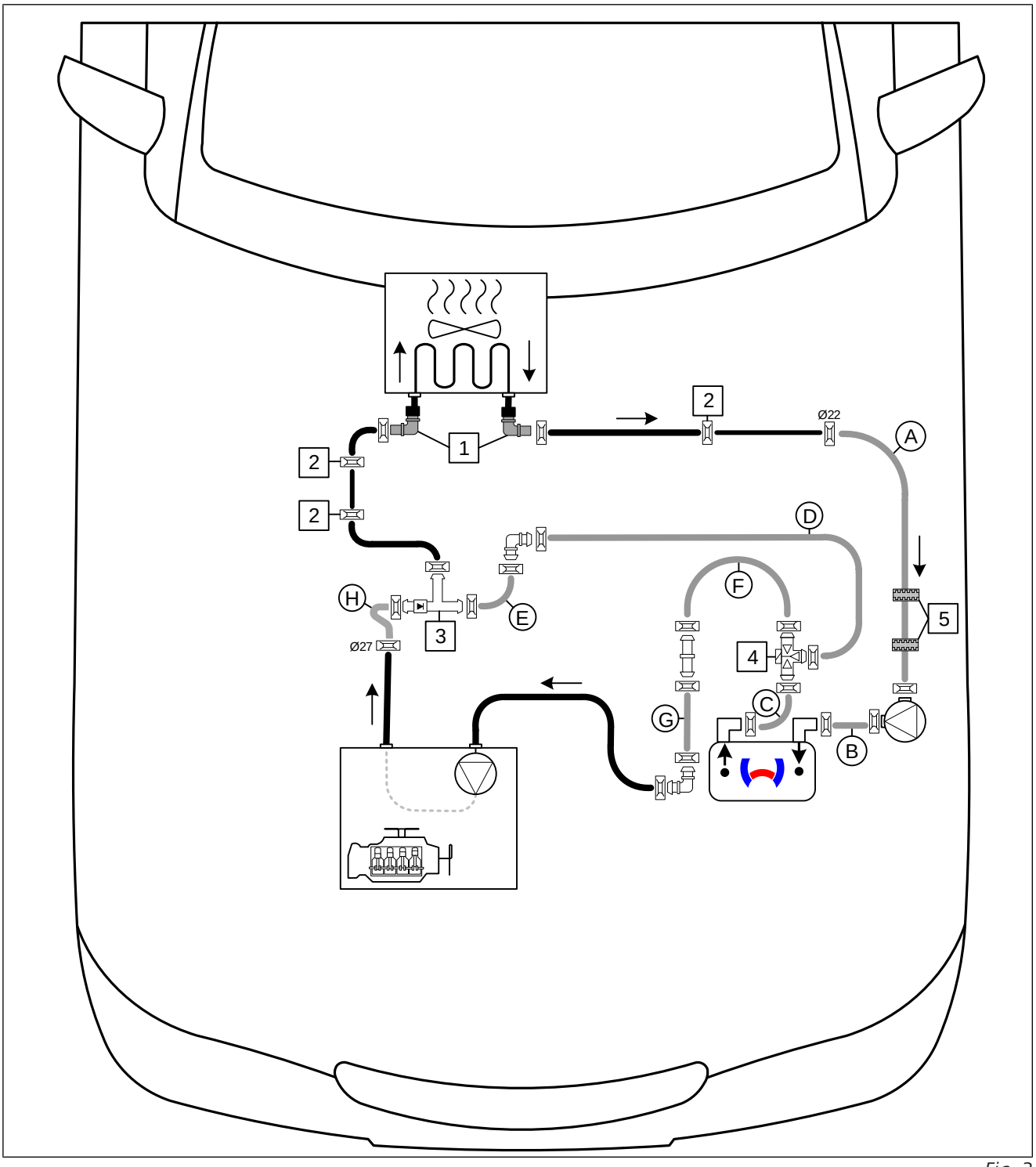



*Fig. 3*

All spring clips without a specific designation = Ø25

All connecting pipe or = Ø18x18

[1] Quick-release coupling; [2] Original vehicle spring clip; [3] Non-return valve; [4] Solenoid valve; [5] Rubber isolator

## 7.2 Coolant circuit conversion

### Removing expansion tank and combustion air intake silencer

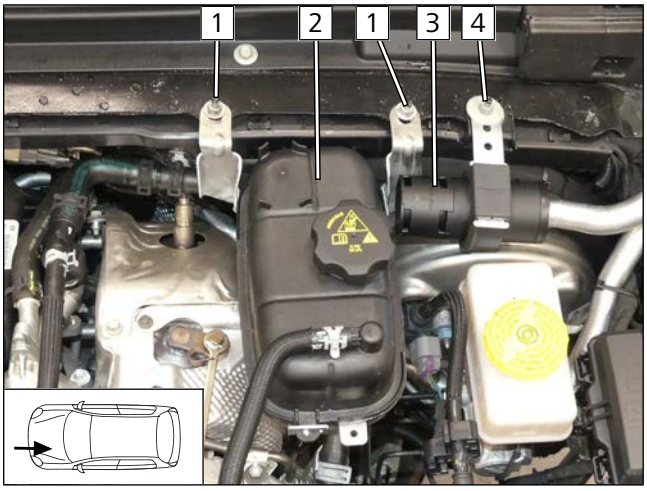



*Fig. 4*

- ▶ Completely remove expansion tank [2] with bracket at pos. [1] and put them aside.
- ▶ Remove combustion air intake silencer [3] at pos. [4] and put it aside.

### Dismantling hoses

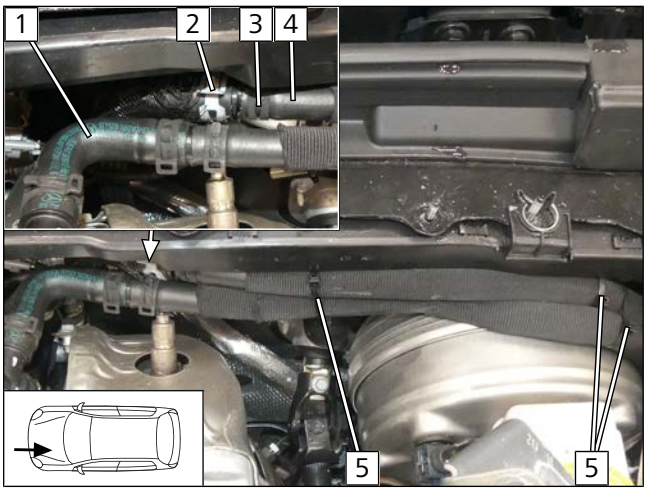



*Fig. 5*

- ▶ Remove and discard hose section [1] and connecting pipe. Spring clips will be reused.
- ▶ Disconnect hose [4] from heat exchanger inlet hose. Spring clip [3] (Ø22) will be reused. Discard original vehicle spring clip [2] and connecting pipe.
- ▶ Cut cable ties [5] carefully.

### Removing exhaust pipe [a1]

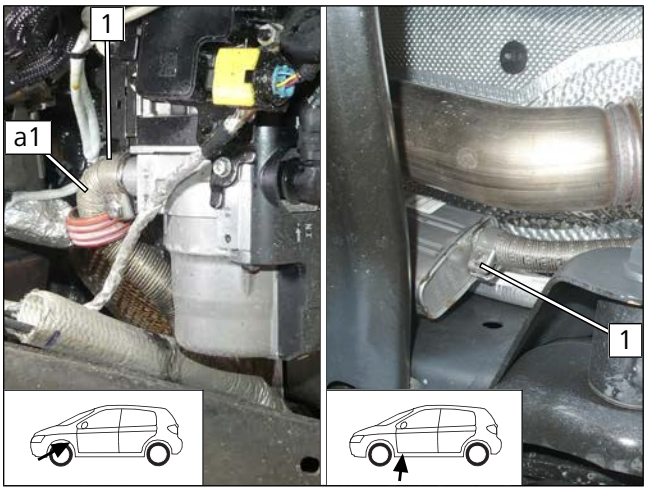



*Fig. 6*

- ▶ Release pipe clamp [1]. Pull off exhaust pipe [a1] and discard it together with spacer bracket and clamps.

## Removing coolant pump

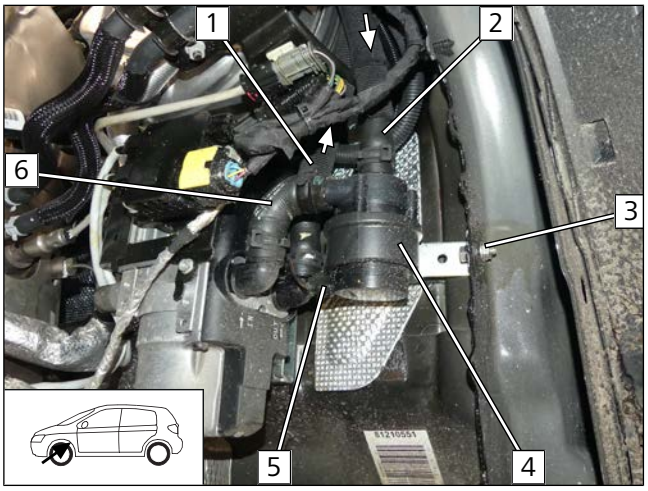



*Fig. 7*

- ▶ Disconnect hose to heat exchanger inlet [1] and pull it out upwards. Hose and spring clip will be reused.
- ▶ Disconnect engine outlet hose [2] coming from the coolant pump. Hose and spring clip will be reused
- ▶ Remove bolt and flanged nut [3], they will be reused. Remove coolant pump mount [4] from perforated bracket, discard perforated bracket.
- ▶ Remove coolant pump connector [5].
- ▶ Remove hose [6], it will be reused together with spring clips.

## Premounting heat exchanger outlet/engine inlet hose

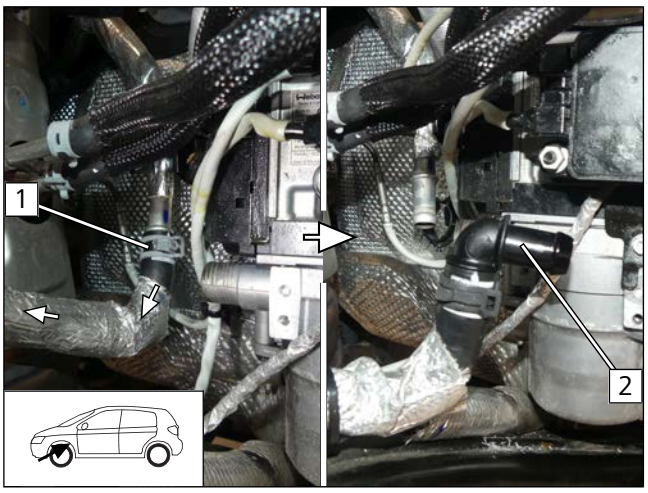



*Fig. 8*

- ▶ Disconnect heat exchanger outlet/engine inlet hose [1] from heat exchanger outlet connection piece. Discard spring clip.
- ▶ Mount 90° connecting pipe [2] with Ø25 spring clip onto the engine inlet hose.

## Removing HG water connection piece

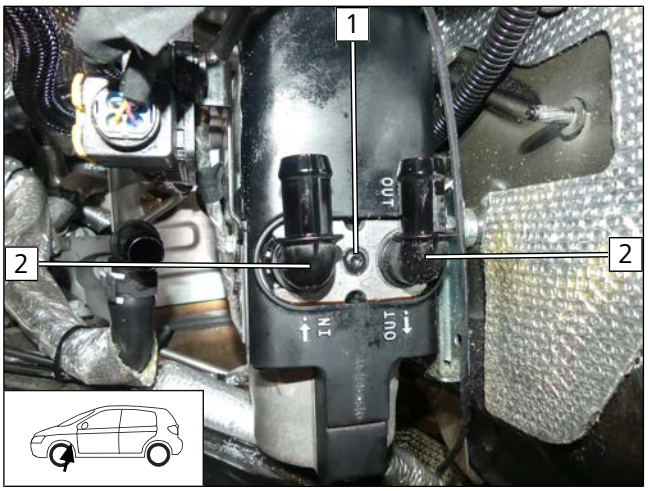



*Fig. 9*

- ▶ Remove bolt [1] and water connection piece [2].

## Mounting HG water connection piece

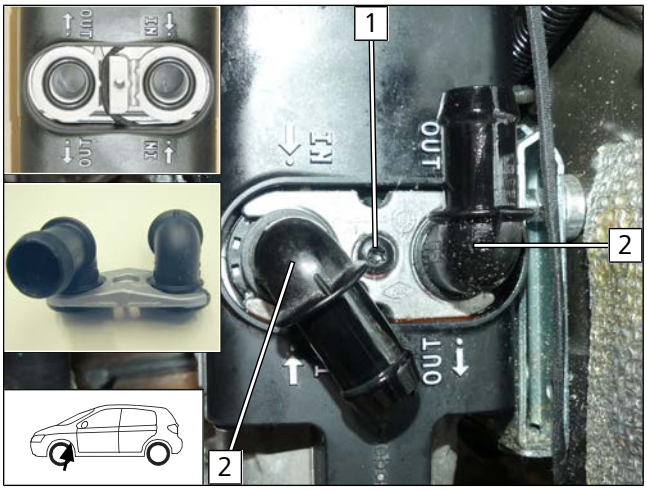



*Fig. 10*

Observe the general installation instructions of the heater.

**1** 5x15 self-tapping bolt, water connection piece retaining plate

**2** 90° water connection piece, new gasket

## Removing wiring harnesses

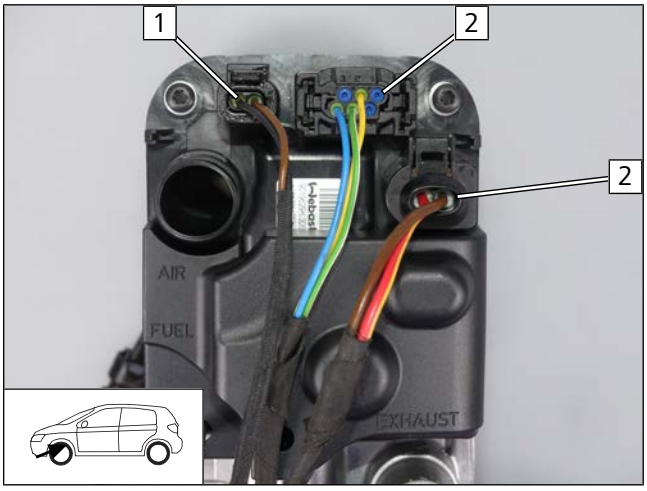



*Fig. 11*

- ▶ Remove connector of coolant pump wiring harness **1**. Discard wiring harness.
- ▶ Remove connector of HG wiring harness **2**.

## Replacing coolant pump wiring harness

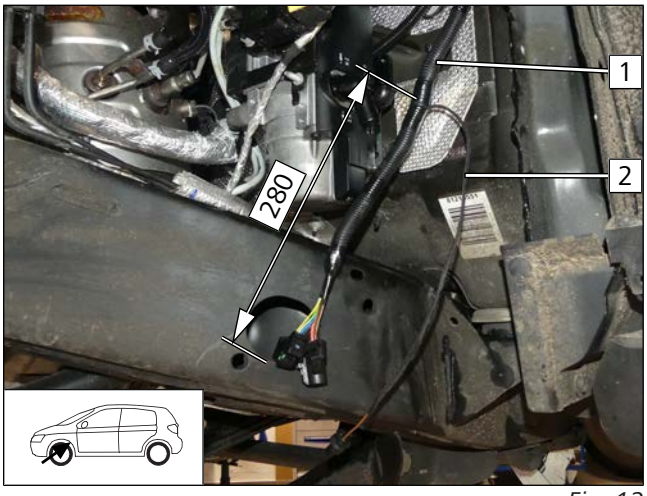



*Fig. 12*

- ▶ Put coolant pump wiring harness **2** from Jeep Wrangler petrol conversion kit into corrugated tube **1** and fasten with insulating tape.

## Connecting connectors of wiring harnesses to HG

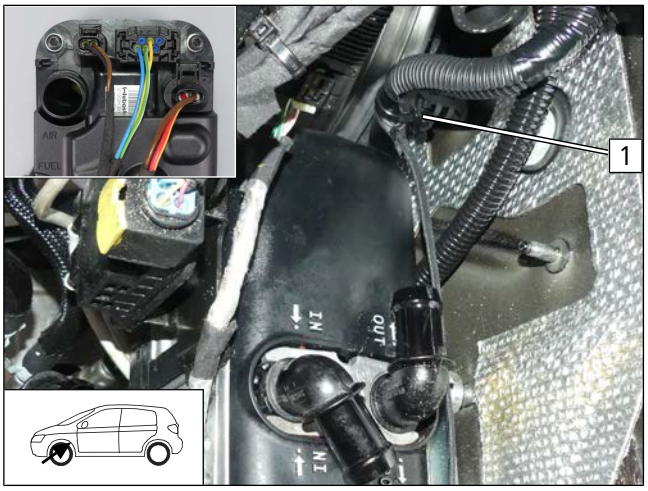



*Fig. 13*

- ▶ Fasten coolant pump wiring harness in original vehicle clip [1] with a cable tie.
- ▶ Reconnect connector of coolant pump wiring harness and connector of HG wiring harness.

## Routing original vehicle control unit line

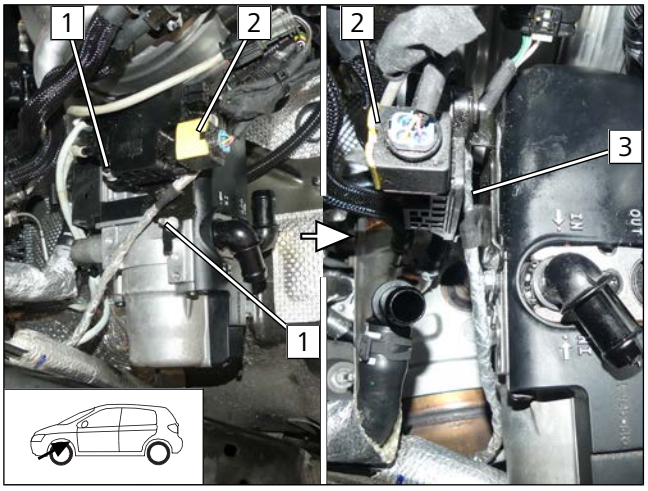



*Fig. 14*

- ▶ Remove original vehicle control unit [2] at pos. [1] and route original vehicle line [3] under the control unit.
- ▶ Reinstall the control unit.

## Routing solenoid valve wiring harness in passenger compartment

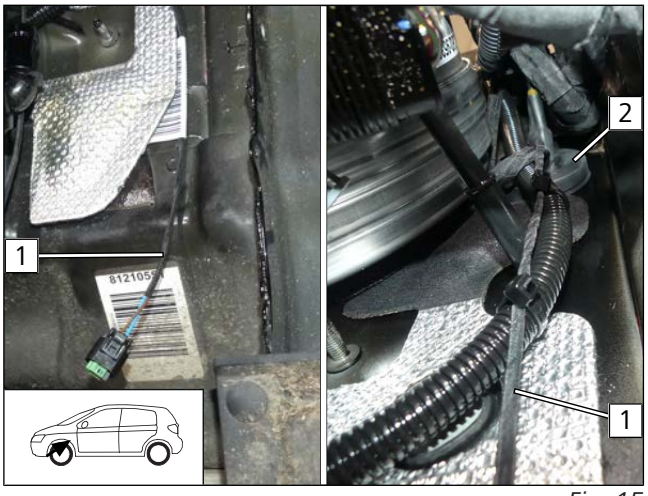



*Fig. 15*

To prevent water seeping into the passenger compartment, the wiring harness must be routed upwards to the protective rubber plug and this plug must then be sealed with a suitable sealing compound.

- ▶ Route solenoid valve wiring harness [1] through protective rubber plug [2] into the passenger compartment. Approx. 400mm wiring harness have to remain in the engine compartment for the solenoid valve installation.

## Bending perforated bracket

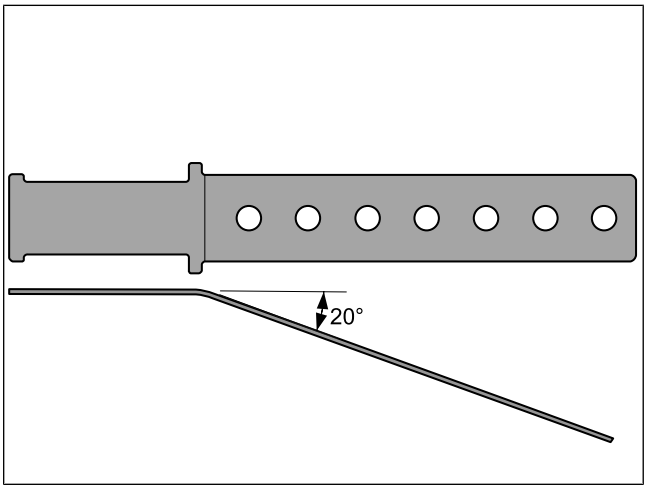



*Fig. 16*

## Premounting coolant pump

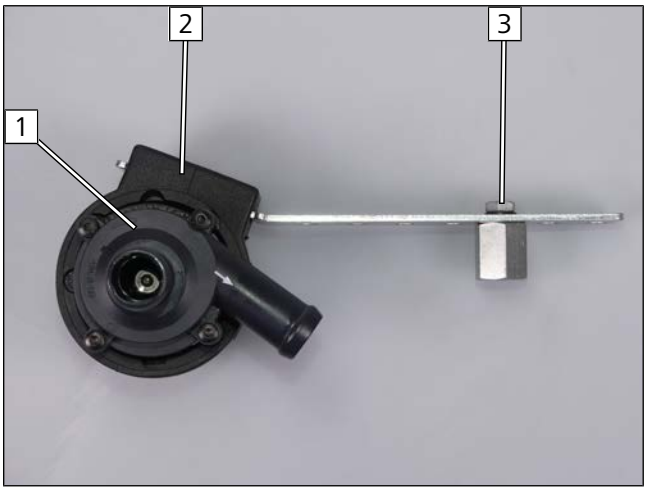



*Fig. 17*

1 Coolant pump
2 Coolant pump mount
3 M6x12 bolt, spring lock washer, perforated bracket, spacer nut (20)

## Cutting to length /assigning existing hoses

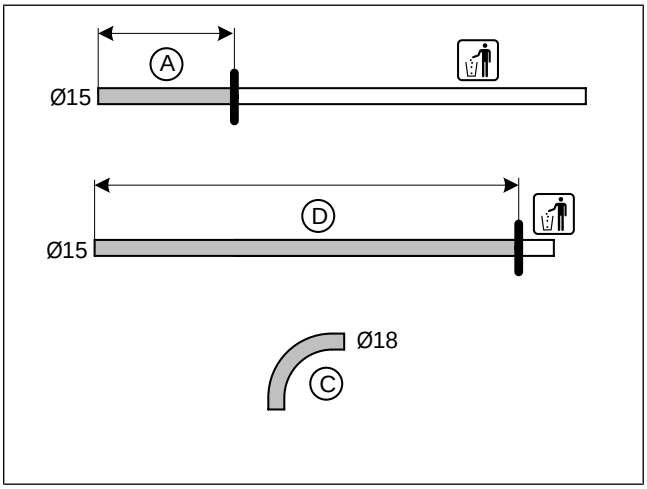



*Fig. 18*

Ⓐ 280 (disconnected at HG/OUT and heat exchanger inlet)
Ⓒ 90° moulded hose (disconnected at coolant pump/OUT and HG/IN)
Ⓓ 680 (disconnected at engine outlet and coolant pump /IN)

## Cutting to length /assigning additional hoses

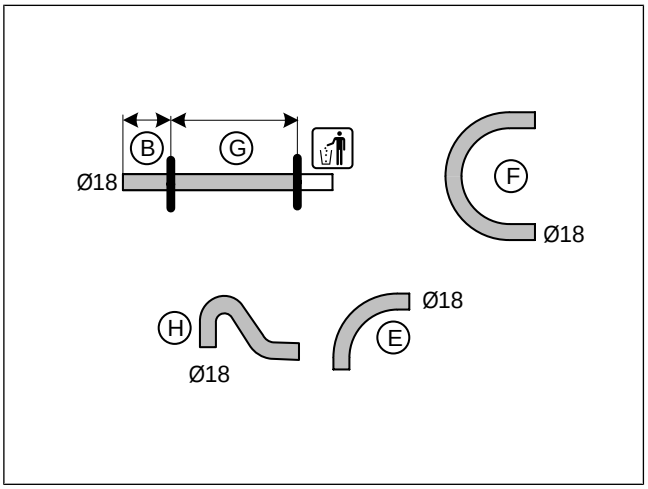



*Fig. 19*

Ⓑ 90
Ⓔ 90° moulded hose
Ⓕ 180° moulded hose
Ⓖ 220
Ⓗ Moulded hose

## Premounting coolant pump hose group

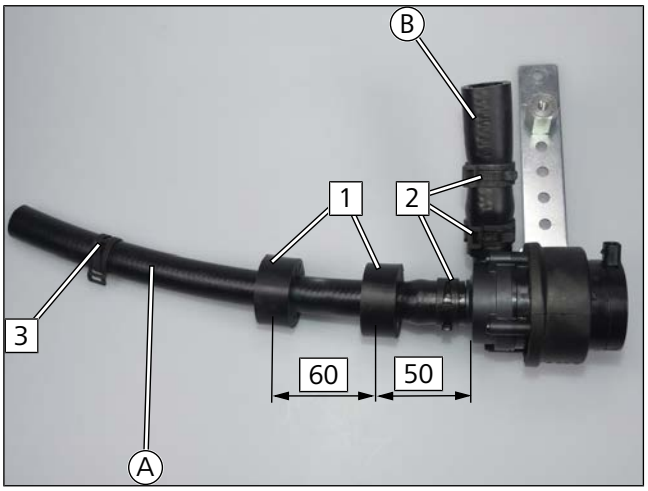



*Fig. 20*

1 Rubber isolator
2 Ø25 spring clip
3 Ø22 spring clip

## Mounting coolant pump hose group

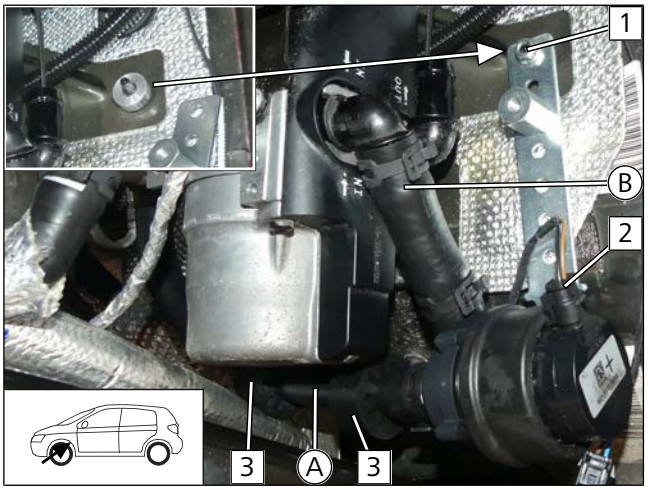



*Fig. 21*

- ▶ Position spacer (8) on original vehicle stud bolt 1.
- ▶ Route hose Ⓐ under the HG to the heat exchanger outlet pipe.
- ▶ Mount hose Ⓑ on HG/IN.

1 Original vehicle stud bolt, spacer, perforated bracket, flanged nut
2 Mount coolant pump connector
3 Aligning rubber isolator

## Mounting hose Ⓐ on heat exchanger outlet

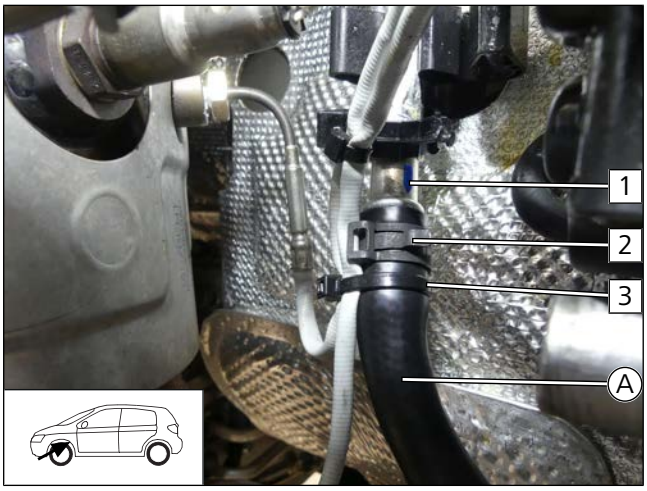



*Fig. 22*

1. Heat exchanger outlet hose
2. Ø22 spring clip
3. Cable tie around hose Ⓐ and original vehicle line

## Fastening coolant pump wiring harness

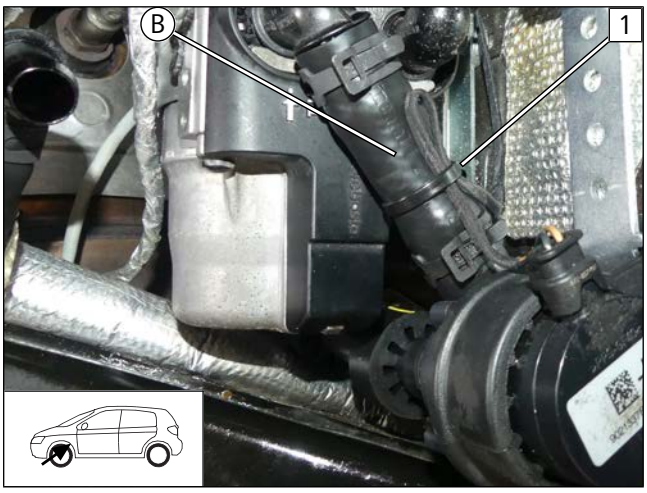



*Fig. 23*

1. Cable tie around hose Ⓑ and coolant pump wiring harness

## Cutting heat shrink plastic tubing to length

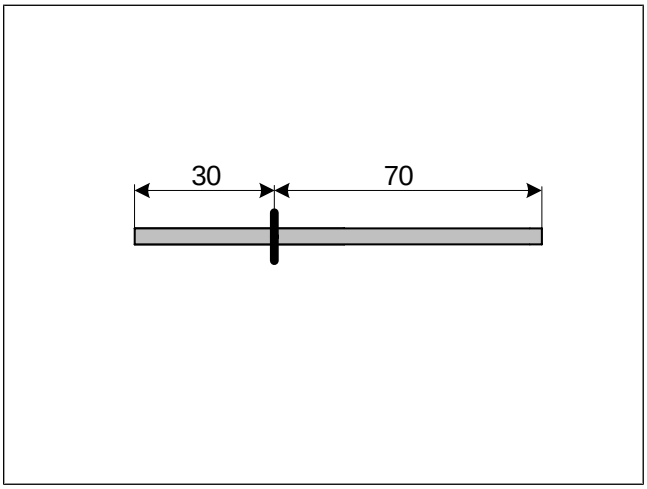



*Fig. 24*

## Preparing solenoid valve

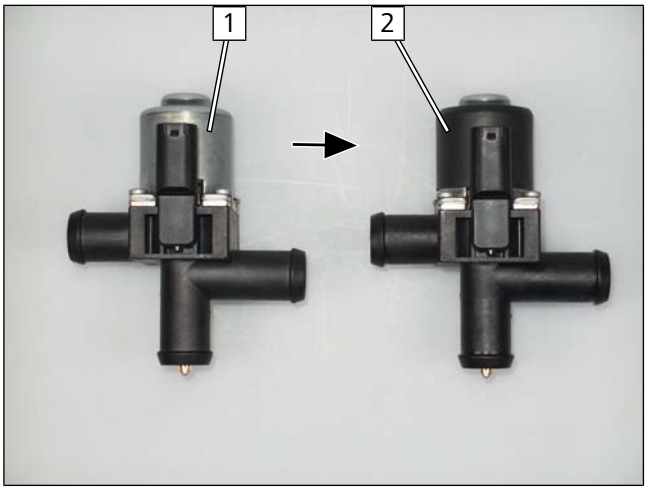



*Fig. 25*

Mount 30mm heat shrink plastic tubing 2 and use at most 300°C to shrink it.

ATTENTION: protect connection socket from overheating using suitable means.

1 Solenoid valve

## Mounting hose Ⓒ on solenoid valve

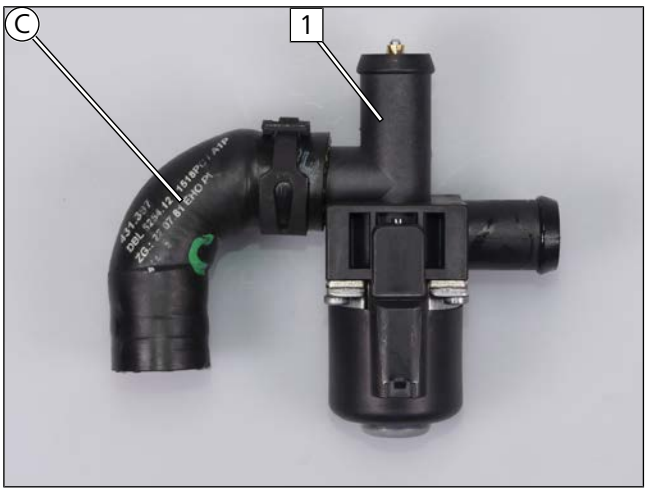



*Fig. 26*

1 Solenoid valve

## Preparing perforated bracket

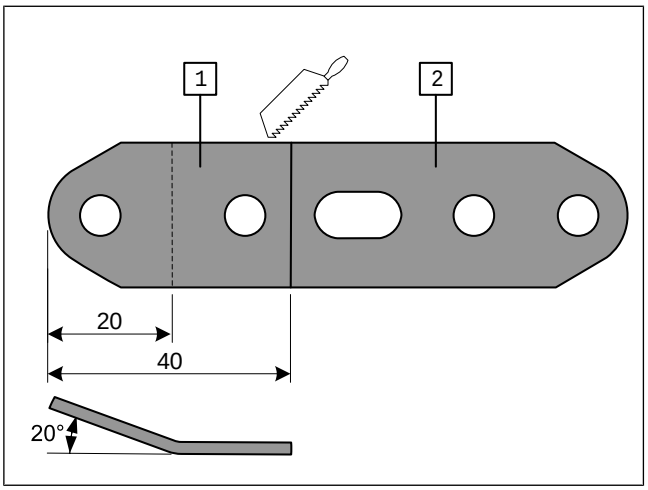



*Fig. 27*

1 Perforated bracket 1
2 Perforated bracket 2

## Premounting solenoid valve hose group

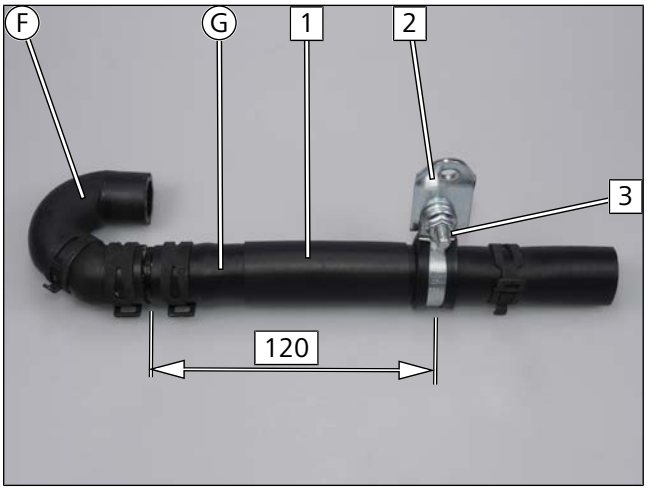



*Fig. 28*

Mount 70mm heat shrink plastic tubing 1 and use at most 300°C to shrink it.

2 Perforated bracket 1

3 M6x20 bolt, perforated bracket 1, Ø25 rubber-coated p-clamp, flanged nut

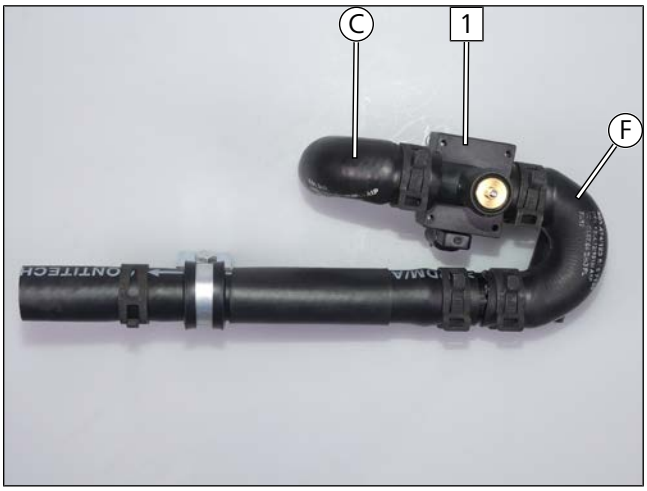



*Fig. 29*

Note the position of the spring clip fastener

1 Solenoid valve

## Mounting solenoid valve hose group

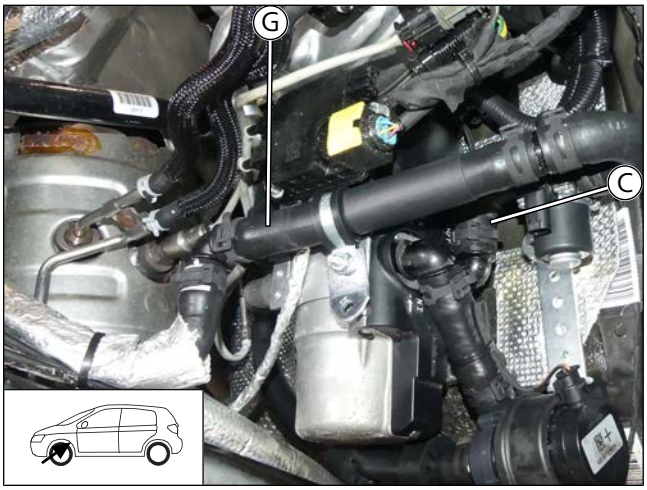



*Fig. 30*

- ▶ Connect hose (G) to engine inlet hose.
- ▶ Mount hose (C) onto HG/OUT.

## Fastening solenoid valve hose group

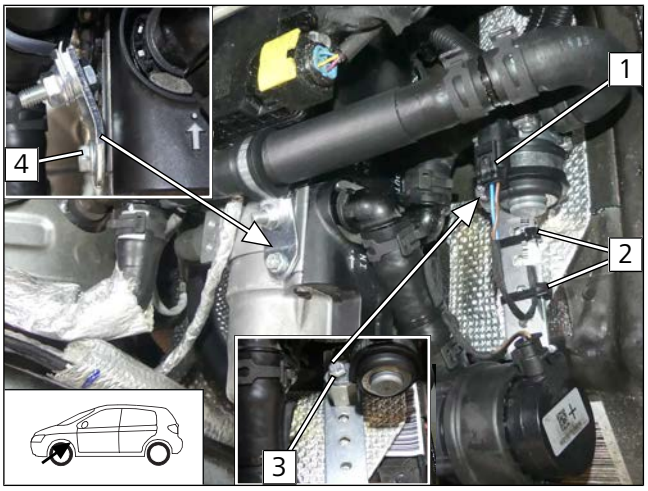



*Fig. 31*

▶ Mount connector of solenoid valve wiring harness [1] and fasten with cable tie [2].

[3] M6x16 bolt, spring lock washer, Ø34 rubber-coated p-clamp, premounted spacer nut

[4] 5x13 self-tapping bolt, perforated bracket, hole in HG

## Connection of hose (D) to solenoid valve

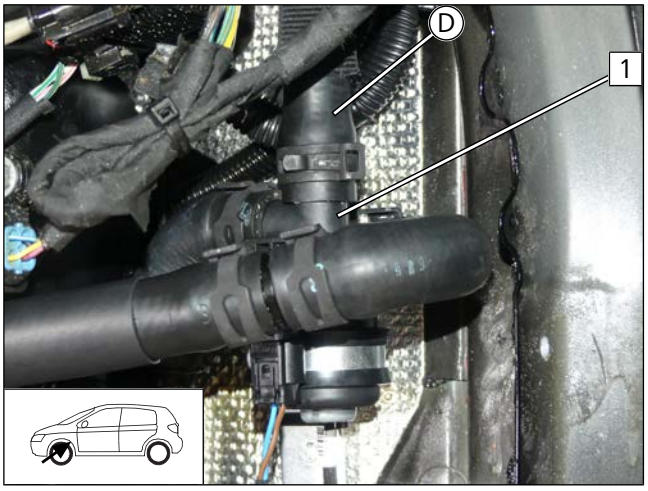



*Fig. 32*

[1] Solenoid valve

## Fastening engine inlet hose

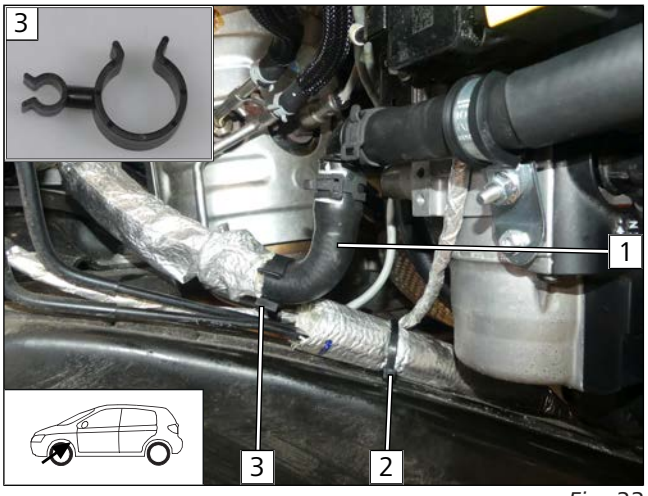



*Fig. 33*

[1] Engine inlet hose

[2] Cable tie

[3] Hose bracket around engine inlet hose and original vehicle line

## Dismantling heat exchanger inlet connection

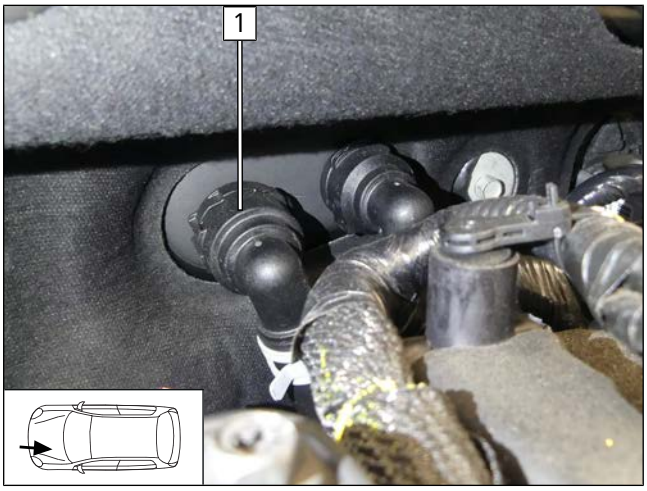



*Fig. 34*

▶ Remove quick-release coupling from heat exchanger inlet connection piece **1**.

## Shortening heat exchanger inlet hose

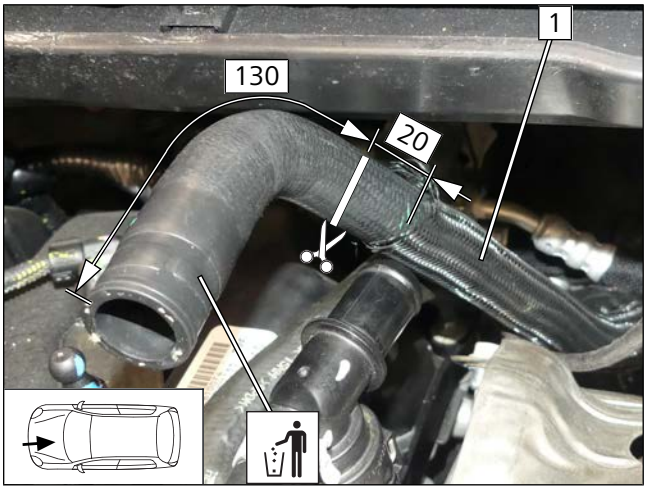



*Fig. 35*

▶ Detach heat exchanger inlet hose /pipe group **1** from original vehicle hose bracket (behind the engine block on the firewall), pull it up, remove fabric tubing protector on the connection side of the engine outlet as shown and shorten the hose.

## Disconnecting lambda sensor connector

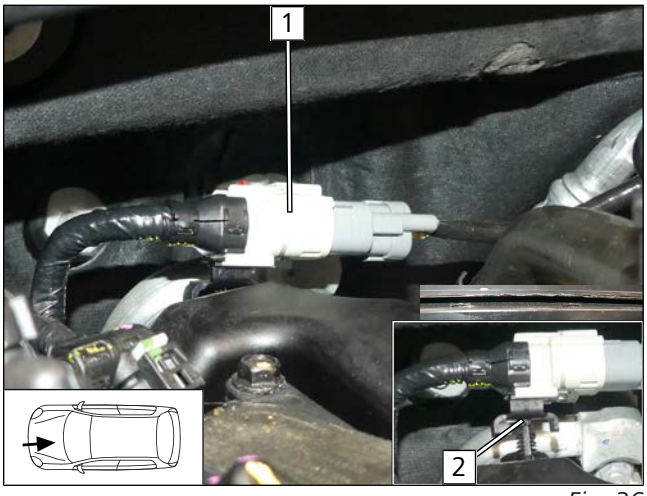



*Fig. 36*

▶ Separate the connection plug of lambda sensor **1** from clip **2**.

## Preparing perforated bracket

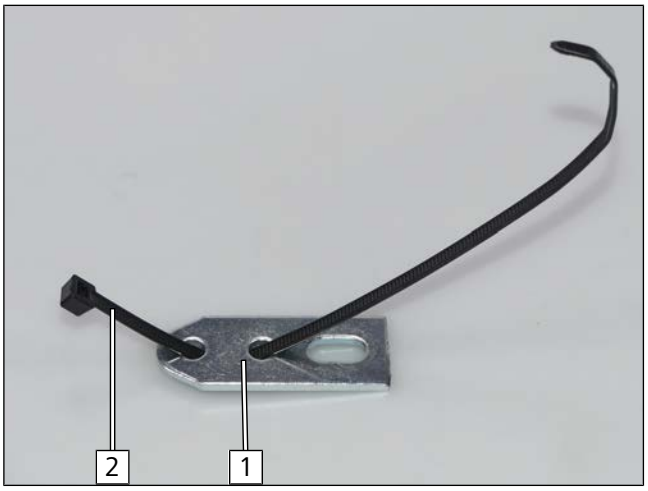



*Fig. 37*

1 Perforated bracket 2
2 Cable tie

## Mounting perforated bracket 2

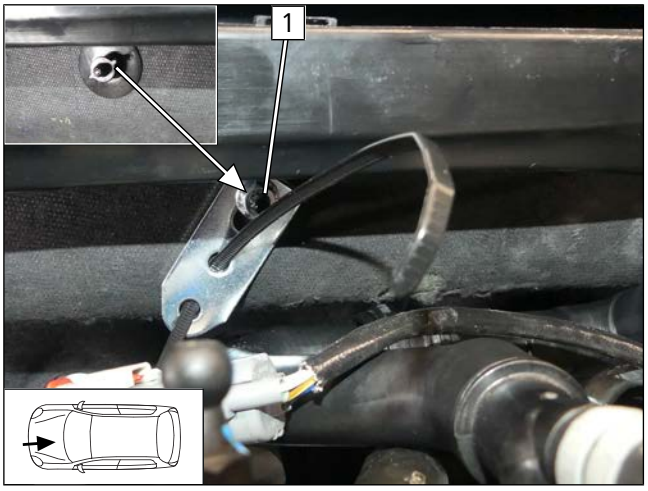



*Fig. 38*

- ▶ Remove plastic nut from original vehicle stud bolt at pos. 1.
- ▶ Mount perforated bracket 2 with flanged nut on original vehicle stud bolt.

## Mounting lambda sensor connector

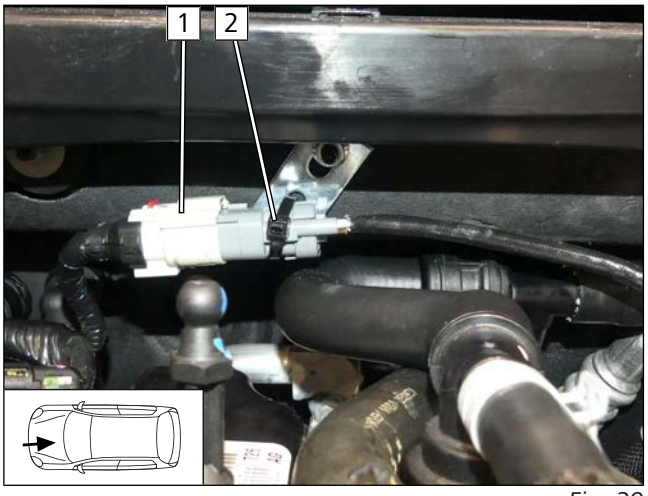



*Fig. 39*

- ▶ Fasten connector 1 with premounted cable tie 2.

## Premounting non-return valve hose group

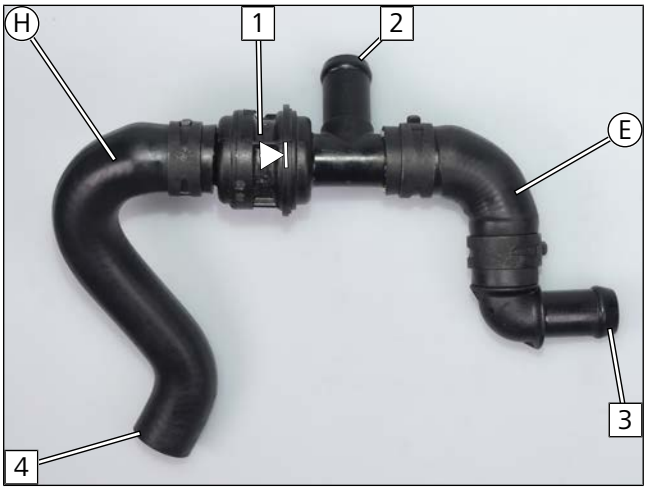



*Fig. 40*

1 Non-return valve
2 Connection to heat exchanger inlet
3 Connection to hose (D)
4 Connection to engine outlet

## Mounting non-return valve hose group

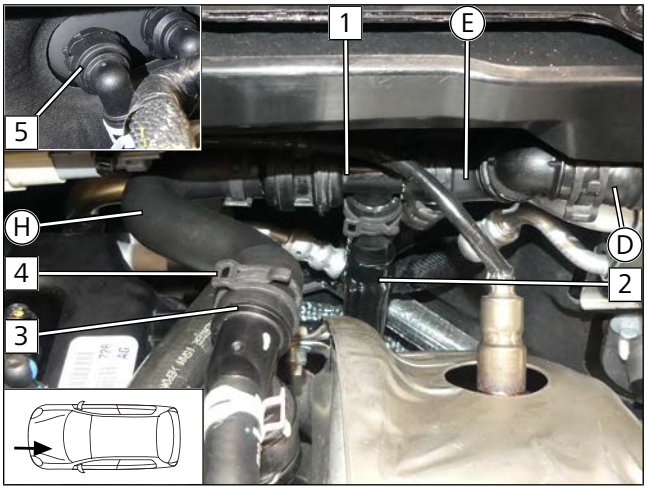



*Fig. 41*

1 Non-return valve
2 Heat exchanger inlet hose
3 Hose of engine outlet
4 Ø27 spring clip

▶ Mount quick-release coupling 5 onto heat exchanger inlet.

## Fastening hoses

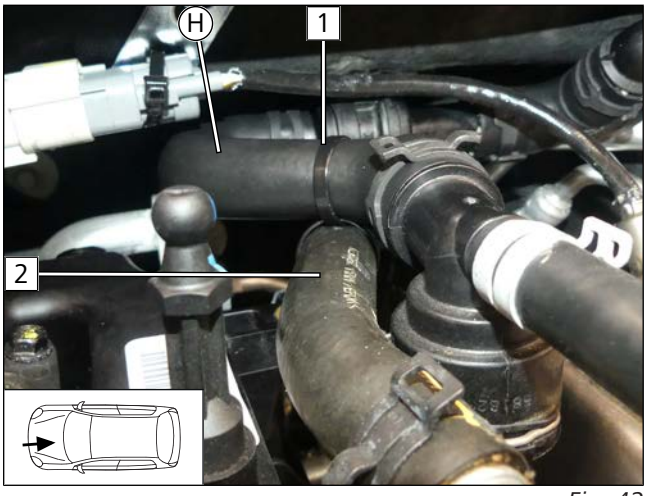



*Fig. 42*

▶ Interlace two cable ties 1 and fasten hose (H) and original vehicle hose 2 together.

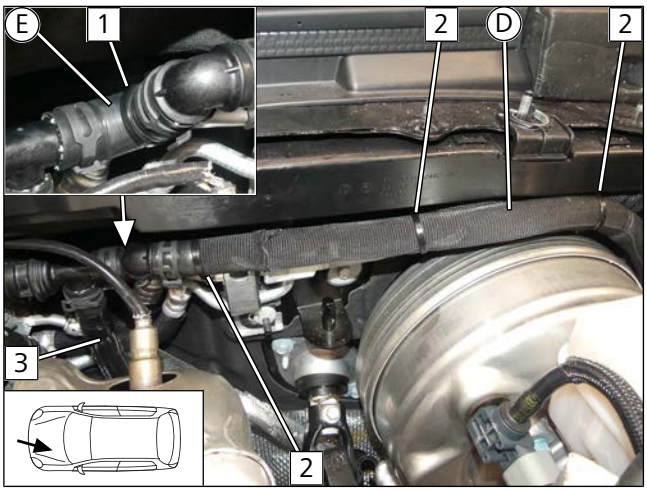



*Fig. 43*

▶ Fix heat exchanger inlet hose 3 again at the bottom of the firewall.

1 Cable tie around hose (E) and A/C line

2 Cable tie around hose (D) and A/C line

## Mounting expansion tank and combustion air intake silencer

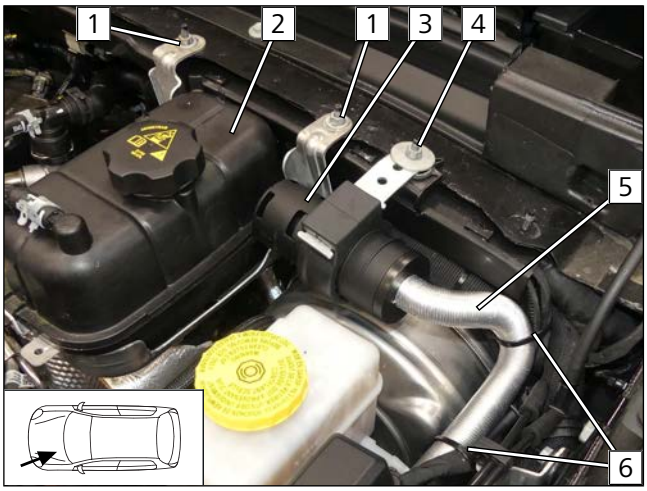



*Fig. 44*

▶ Mount expansion tank 2 with bracket at pos. 1.

▶ Mount combustion air intake silencer 3 at pos. 4.

▶ Fasten combustion air intake pipe 5 with cable tie 6.

# 8 Exhaust

## Cutting exhaust pipe to length

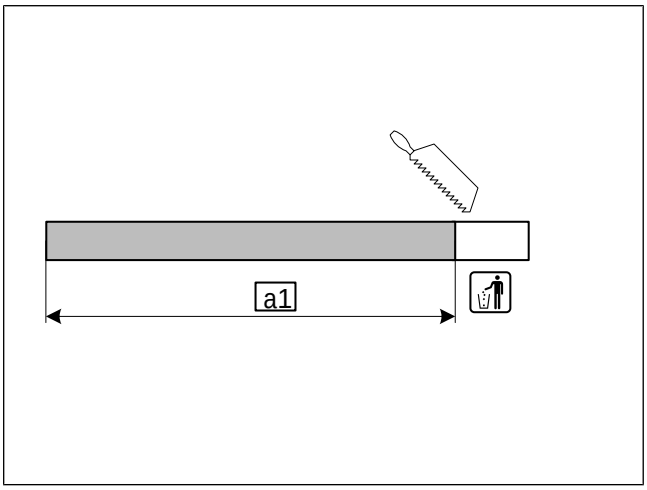



*Fig. 45*

**a1** 560

## Premounting exhaust pipe **a1**

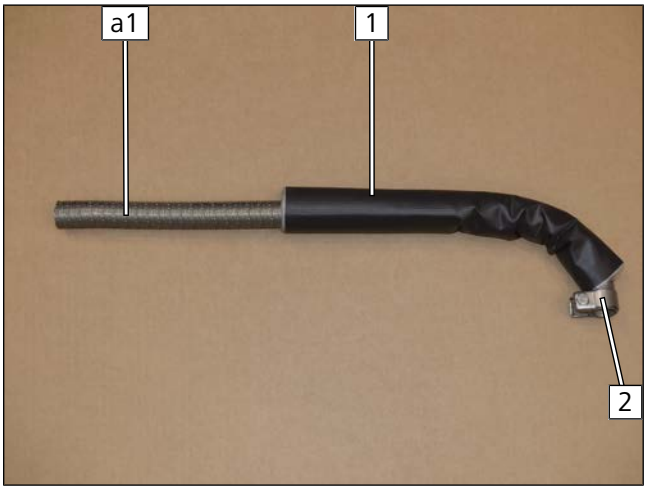



*Fig. 46*

**1** Heat protection hose
**2** Pipe clamp

## Mounting exhaust pipe **a1**

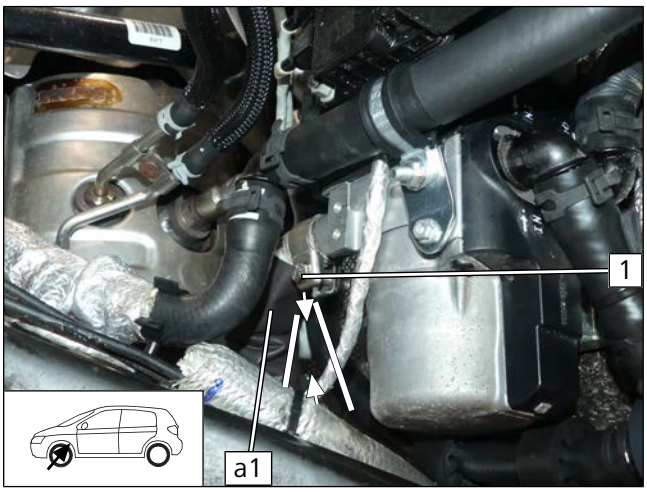



*Fig. 47*

Danger of damage to components

▶ Ensure sufficient distance from neighbouring components, correct if necessary.

**1** Pipe clamp

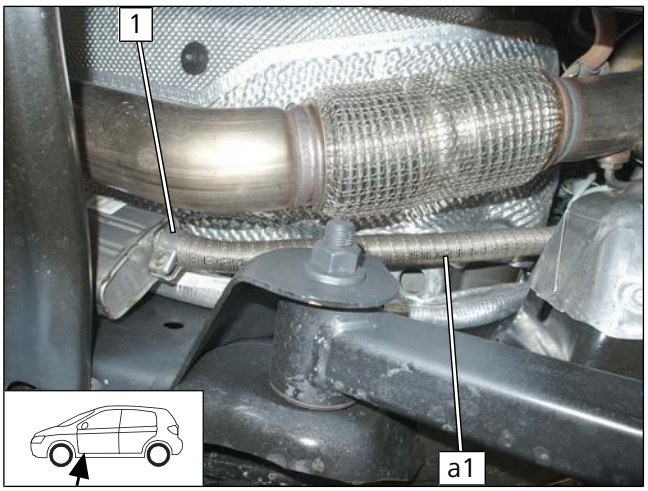



*Fig. 48*

Danger of damage to components

▶ Ensure sufficient distance from neighbouring components, correct if necessary.

1 Pipe clamp

# 9 Electrical system of passenger compartment

## 9.1 Electrical System Preparation

Preparing wiring harness

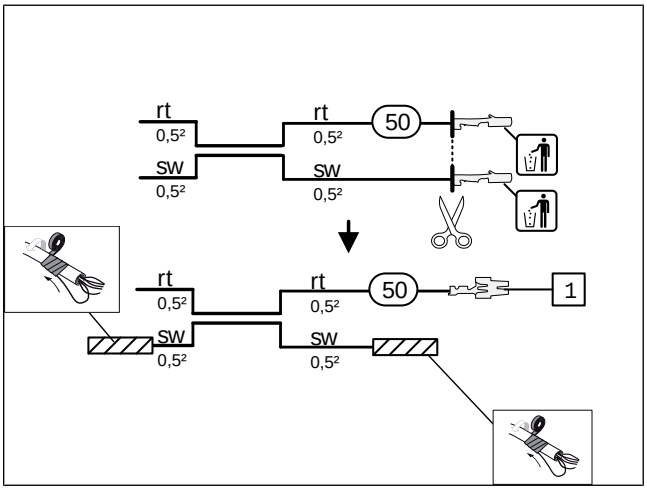



*Fig. 49*

Wire sections retain their numbering in the entire document.

[1] Flat spring contact

Preparing solenoid valve wiring harness

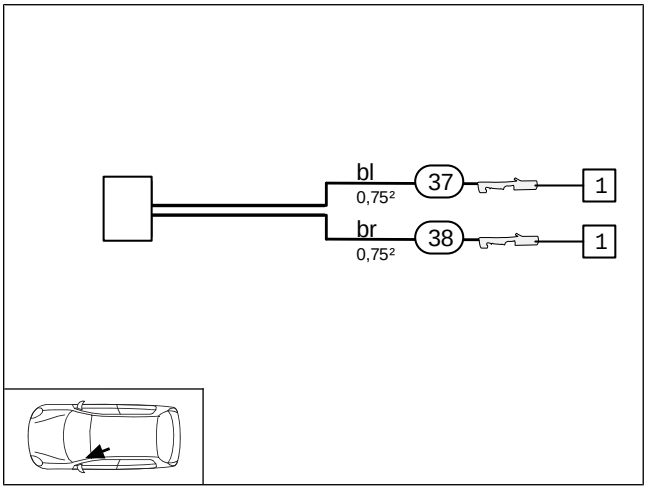


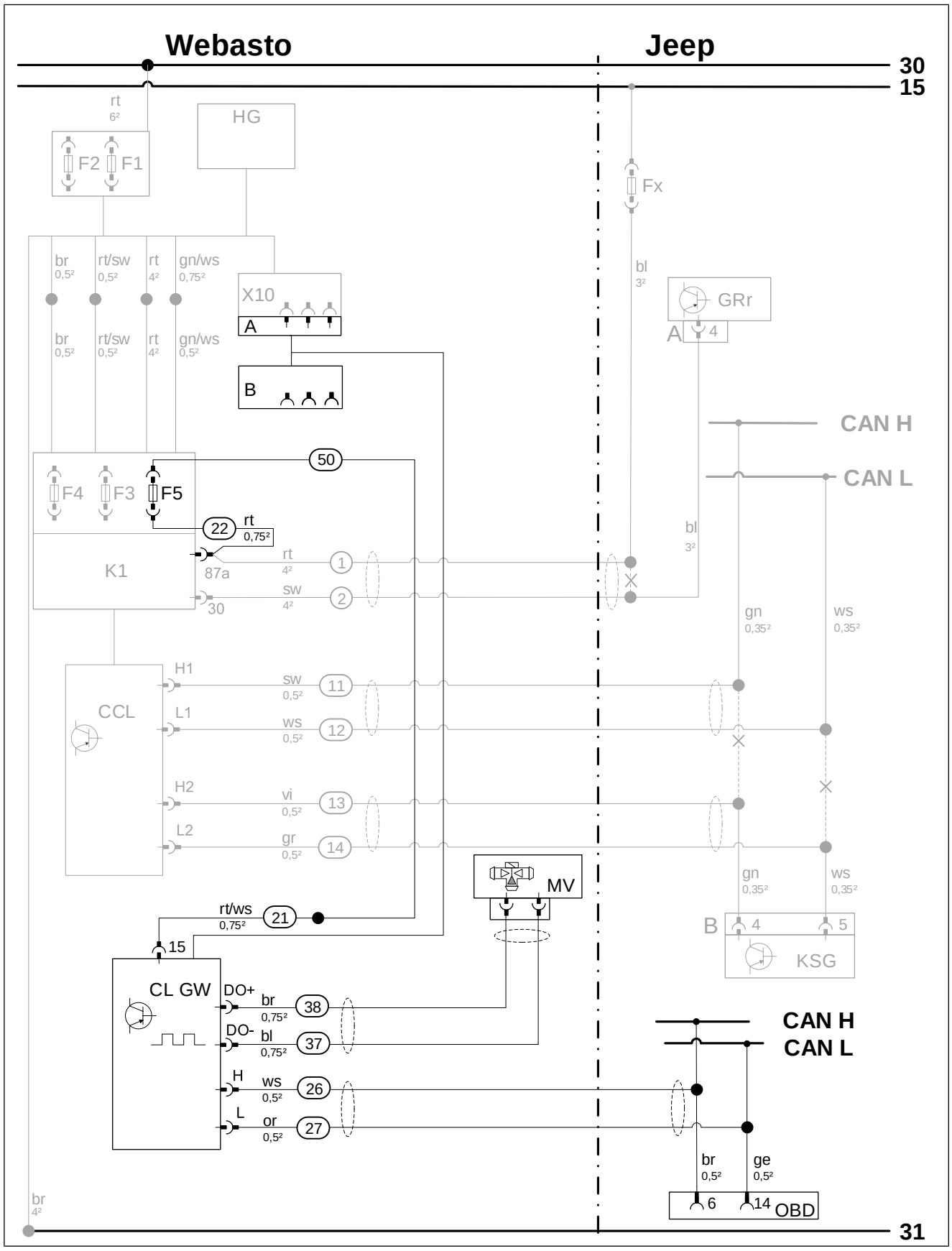

*Fig. 50*

[1] 6.3 female connector

(37) Blue (bl) wire of solenoid valve wiring harness

(38) Brown (br) wire of solenoid valve wiring harness

## 9.2 Wiring diagram



## Legend to wiring diagram

The vehicle connector and component designations are freely chosen by Webasto.
Cable colours may vary.

| Vehicle components | | Symbols | |
|---|---|---|---|
| Abbreviation | Component | Abbreviation | Designation |
| OBD | ON-Board Diagnosis | | |

| Webasto components | | Cable colours | |
|---|---|---|---|
| Abbreviation | Component | Abbreviation | Colour |
| A | Male plug for CLR module wiring harness | bg | beige |
| B | Female plug for CLR module wiring harness | bl | blue |
| C | Male plug for adapter wiring harness | br | brown |
| D | Female plug for adapter wiring harness | dbl | dark blue |
| E | Male plug for Plug&Play wiring harness | dgn | dark green |
| F | Female plug for Plug&Play wiring harness | ge | yellow |
| CCL GW | Micro Gateway CAN CAN LIN | gn | green |
| CL GW | Micro SPS CAN / WBus (Gateway CAN LIN) | gr | grey |
| CLR | CAN LIN Rxx (cold start module) | hbl | light blue |
| D1 | Diode | hgn | light green |
| D2 | Diode group | la | salmon |
| F0 | Additional fuse for power supply | or | orange |
| F1 | Heater main fuse | pk | pink |
| F2 | Passenger compartment fan controller main fuse | rt | red |
| F3 | Control element fuse | sw | black |
| F4 | Fan controller fuse | vi | violet |
| F5 | Additional fuse | ws | white |
| HG | Heater TT-Evo | | |
| K1 | Relay K1 | | |
| K2 | Relay K2 | | |
| K3 | Relay K3 | | |
| LA | Power adapter | | |
| LIN GW | LIN Gateway | | |
| MV | Solenoid valve | | |
| PWM GW | LIN Gateway / PWM (pulse width modulator) | | |
| RSH | Relay and fuse holder of passenger compartment | | |
| RTD | Temperature sensor | | |
| X10 | Female plug for control element | | |

## 9.3 Solenoid valve control

### Preparing CL GW

▶ Detach black (sw) wire from DO+ terminal and insulate.

▶ Route blue (bl) wire (37) and brown (br) wire (38) to the CL GW installation location and connect.

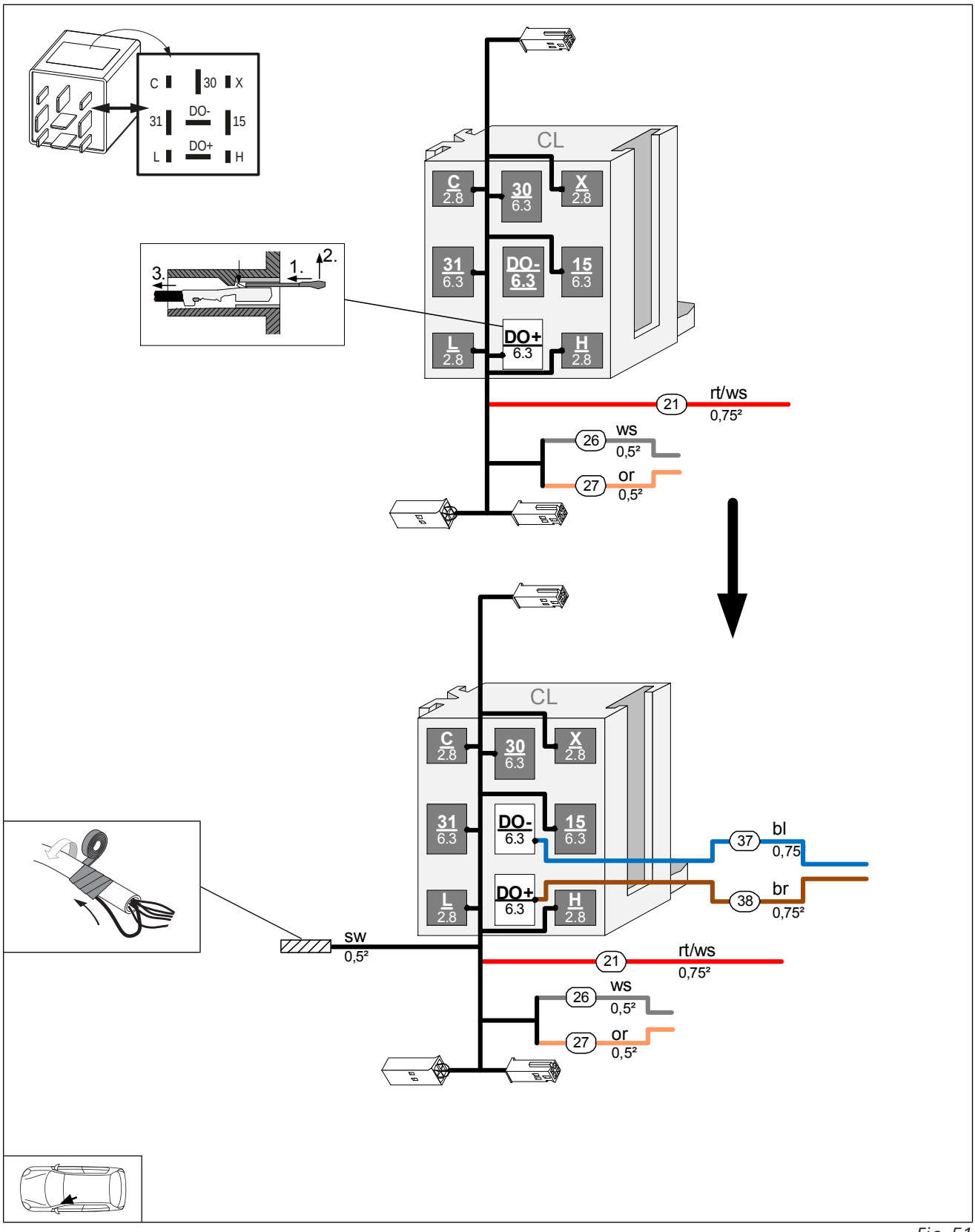



*Fig. 51*

## Cutting to length and bending perforated bracket

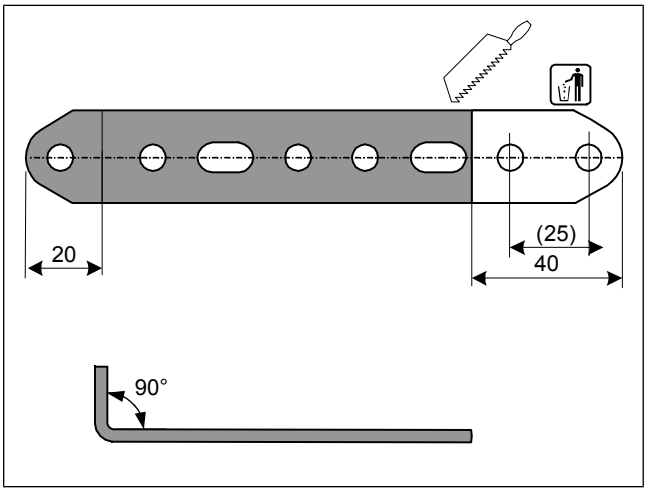



*Fig. 52*

## Premounting CL GW socket

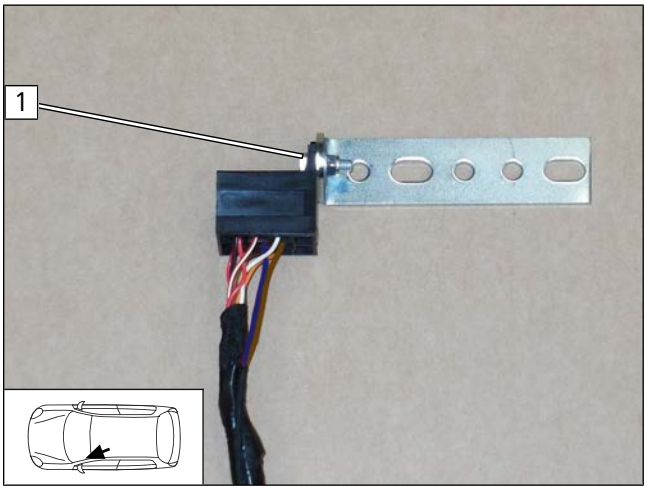



*Fig. 53*

1 M5x16 bolt, large diameter washer, CL GW socket, perforated bracket, large diameter washer, nut

## Premounting CL GW

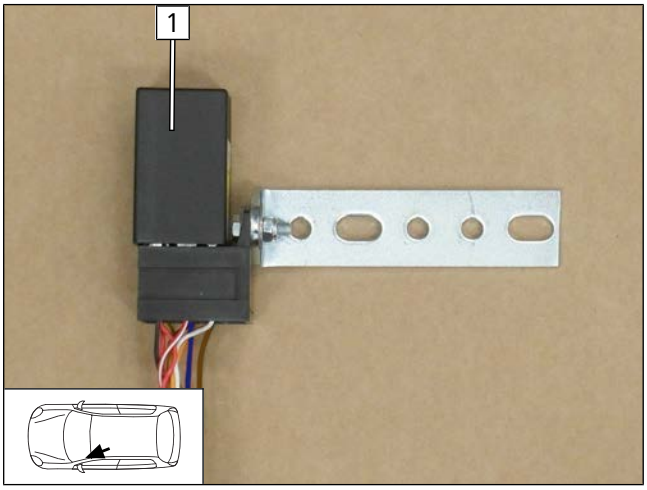



*Fig. 54*

1 CL GW

## Mounting CL GW

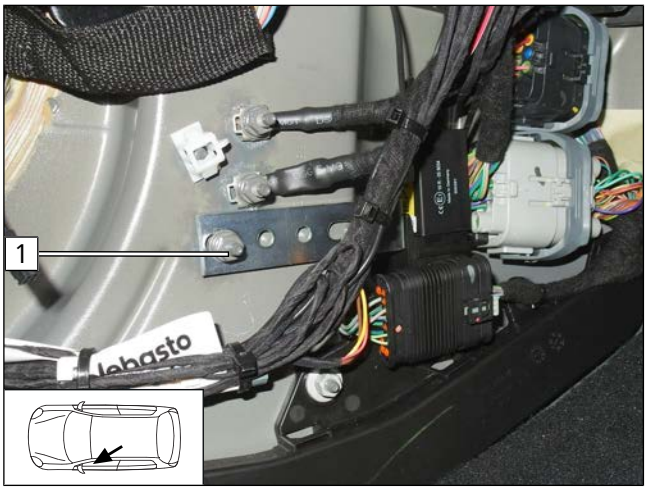



*Fig. 55*

Produce all following electrical connections as shown in the system wiring diagram.

- ▶ Route wires (26) and (27) to OBD socket outlet.
- ▶ Route wire (50) to RSH.

[1] Original vehicle stud bolt, premounted perforated bracket, original vehicle nut

## Mounting CL GW

- ▶ Connect wire (50) with wire (21).
- ▶ Connect connectors and sockets.

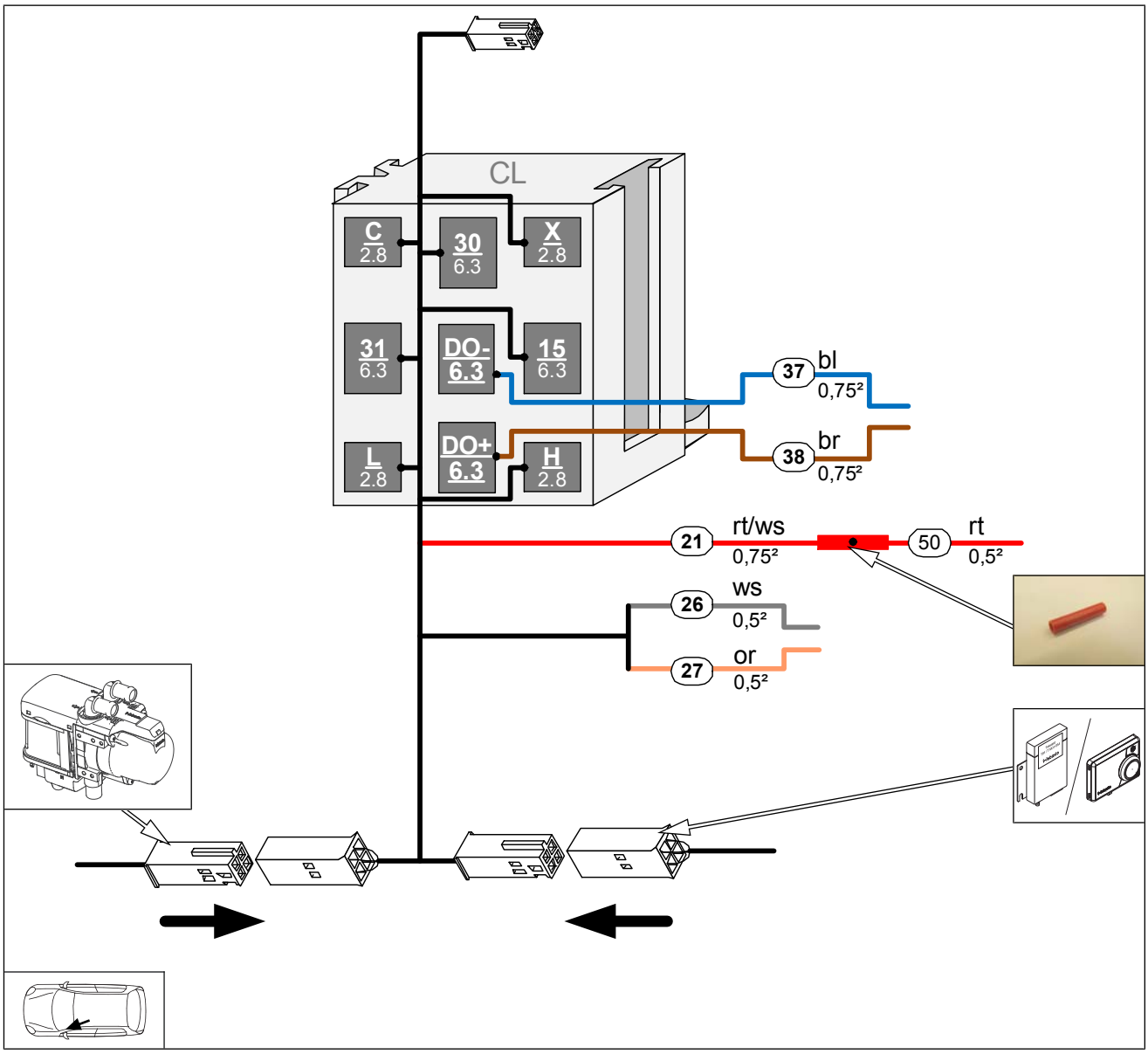



*Fig. 56*

## Connection to OBD socket outlet

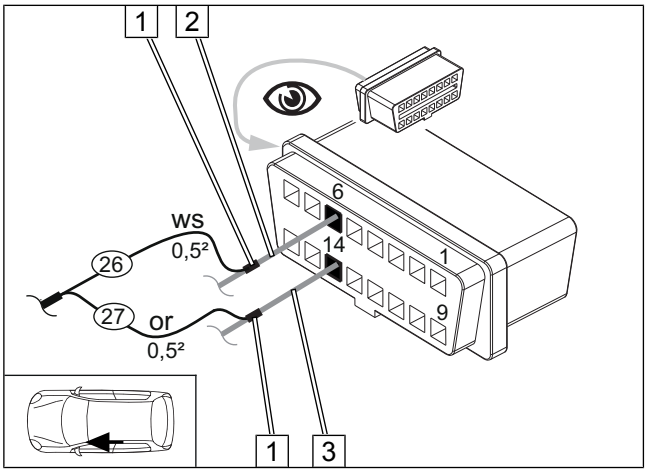



*Fig. 57*

Further information can be found in the vehicle manufacturer's technical documentation.

▶ Remove OBD socket outlet from bracket.

▶ Crimp and shrink butt connector 1

2 Brown (br) wire of OBD socket outlet/ pin 6

3 Yellow (ge) wire of OBD socket outlet/ pin 14

26 White (ws) wire of CLR module/ H, CL GW wiring harness

27 Orange (or) wire of CLR module/ L, CL GW wiring harness

## Preparing wire 22

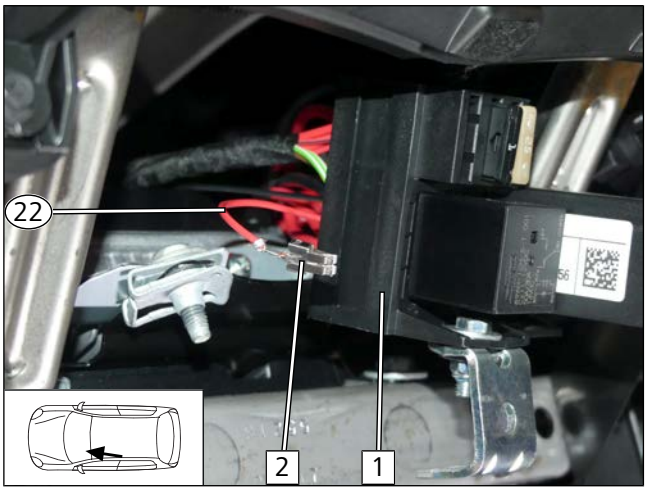



*Fig. 58*

▶ Remove RSH 1.

▶ Locate red (rt) wire 22 of fan wiring harness (insulated and tied back) and mount flat spring contact 2.

Connecting wires (50) and (22) to RSH

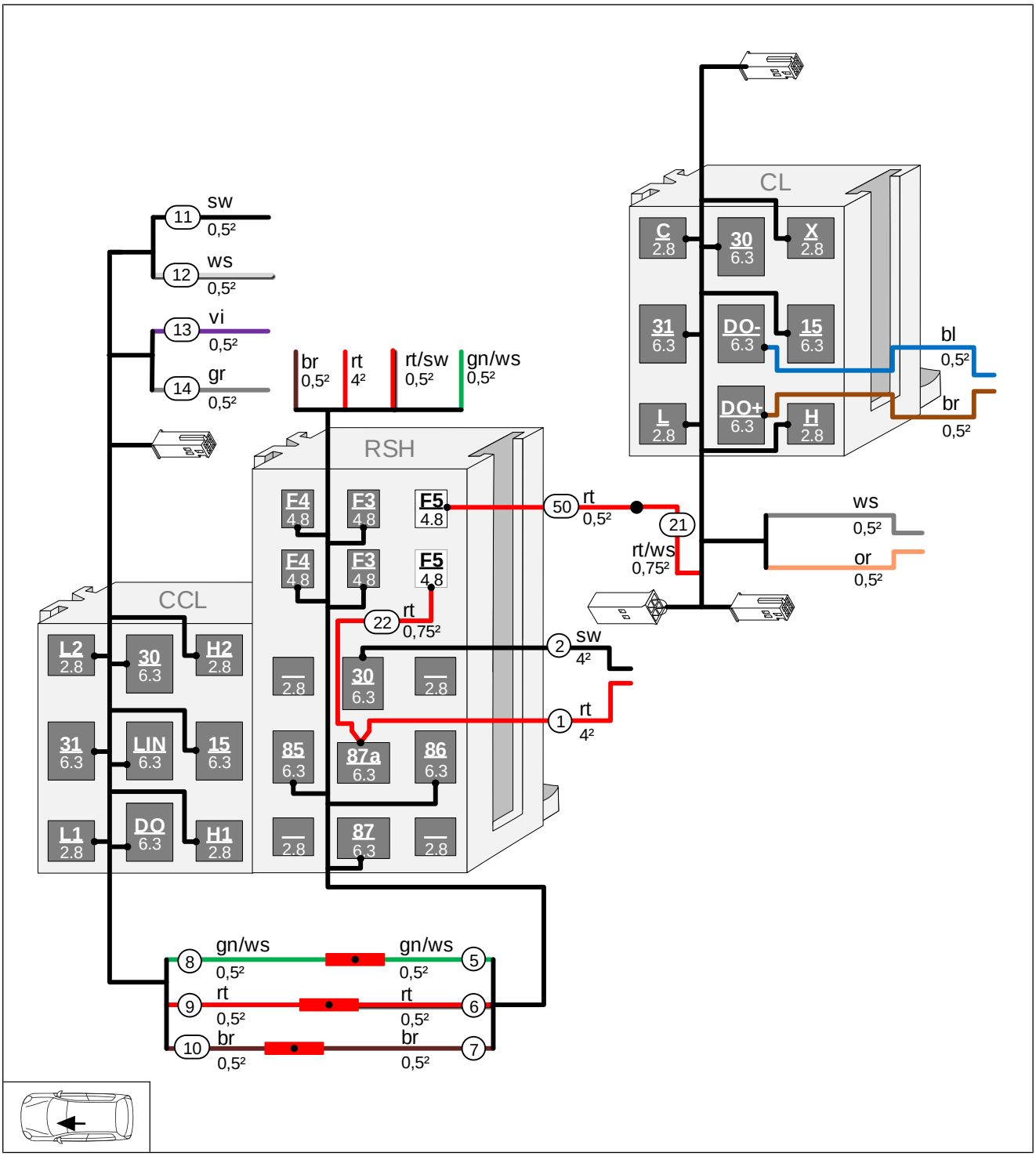



*Fig. 59*

## Mounting RSH

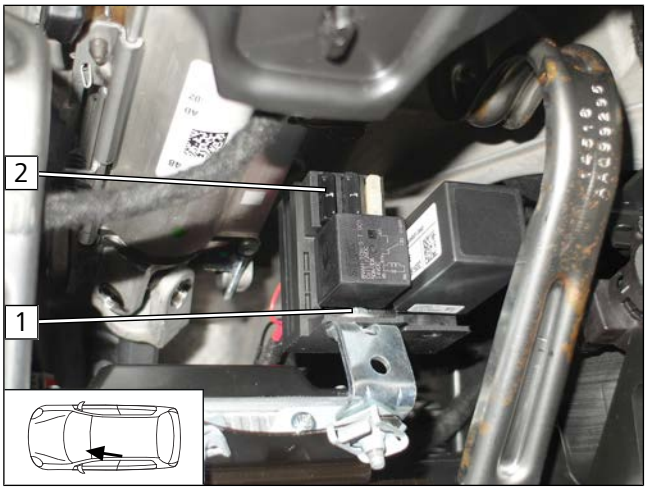



*Fig. 60*

1 M5x16 bolt, large diameter washer, RSH, angle bracket, large diameter washer, nut

2 1A fuse F5

# 10 Final Work

Further information can be found in the vehicle manufacturer's technical documentation.

▶ Mount removed parts in reverse order.

▶ Check all hoses, clamps and all electrical connections for firm seating.

▶ Insulate and tie back loose lines

▶ Spray heater and electrical components with anti-corrosion wax (Tectyl 100K).

▶ Connect the battery.


**Only use manufacturer-approved coolant.**

▶ Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.

Further information can be found in the general installation and operating instructions of the Webasto components.

▶ Initial start-up and function check

**Vehicle event log after parking heating mode**

✓ Components of the original vehicle air conditioning system are activated during parking heating mode. Other vehicle components remain inactive, which in some circumstances may be interpreted as an error and can be filed as such in the event log. An increased power consumption (quiescent current) may also be registered for some vehicles.

▶ If an incorrect installation can be excluded, these entries are exclusively related to the parking heating mode situation and have no effect on the vehicle functions in driving mode.

These are the original instructions. The German language is binding.
You can request your language if it is missing. The telephone number of each country can be found in the Webasto service centre leaflet or the website of the respective Webasto representative of your country.

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# 11 Operating instructions

**Vehicles with passenger compartment monitoring:**

Further information can be found in the vehicle operating instructions.

▶ Deactivate passenger compartment monitoring for the heating operation

**Information regarding the heating time:**

We recommend matching the heating time to the driving time (heating time = driving time)
**Example**: for a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

**Notes about the A/C control panel presettings**

Your vehicle is equipped with a comfort air-conditioning control. As a result, **no** settings are required on the A/C control panel when switching off the vehicle. All necessary presettings, such as fan speed, temperature and flap positions are set automatically.

**Notes about the active parking heating mode**

The vehicle fan is deactivated when the vehicle is opened and is available again once the ignition is switched on.
After the vehicle is closed again, it can take several minutes for it to be active again.

**Note for current consumption in case of parking heating mode**

Depending on the vehicle model, there may be an increased quiescent current consumption message in the vehicle information system during or directly after operation in parking heating mode.

▶ This is not an error that can affect the vehicle on a technical level.

**Note for parking heater function**

Your vehicle is equipped with a passenger compartment preheating unit. There is **no** engine pre-heating.

## 11.1 Installation location of fuses

Fuses in engine compartment

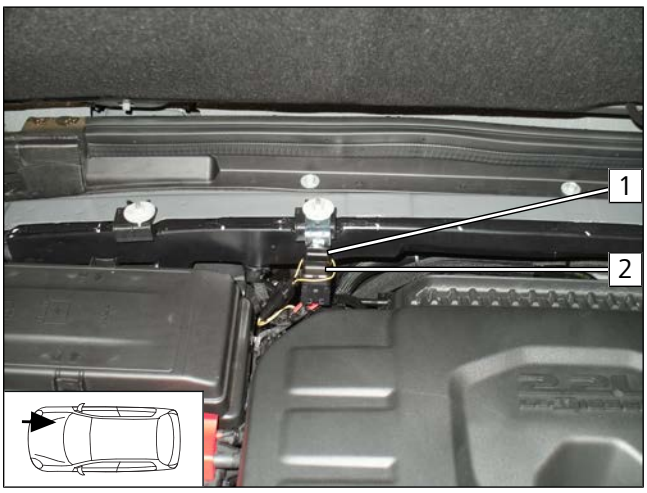


*Fig. 61*

1 F1 - 30A main fuse of passenger compartment
2 F2 - 20A heater main fuse

## Fuses in passenger compartment

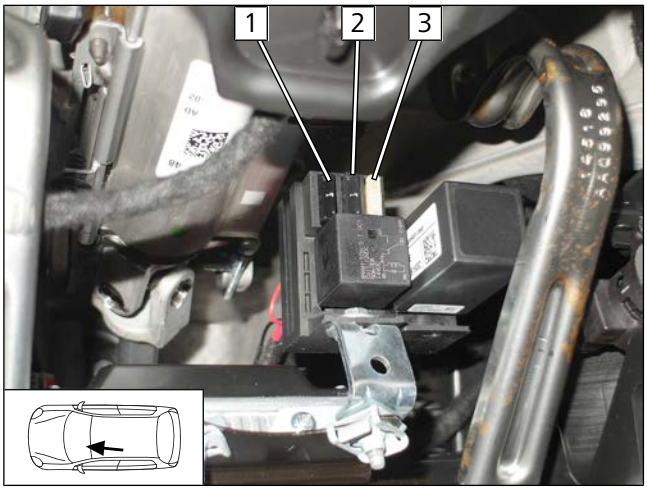


*Fig. 62*

1 F5 – 1A additional fuse
2 F3 - 1A control element fuse
3 F4 - 25A fan controller fuse