

## K Installation documentation

### Cold start for Thermo Top Evo water heater

Audi Q5

Left-hand drive vehicle

Manufacturer	Model	Type	Model year	EG-BE-No. / ABE		
Audi	Q5	8R	from 2016	e1* 2001/116* 0473*...		
Motorisation	Fuel	Emission standard	Transmission type	Output [kW]	Displacement [cm <sup>3</sup> ]	Engine code
3.0D	Diesel	Euro 6	8-speed AG	190	2967	CTBA
3.0D	Diesel	Euro 6	8-speed AG	230	2967	CGQB

Total installation time	Note
1.5 hours	Applies only to the retroffing of a cold start system in vehicles with an already retrofitted parking heater

---

# Contents

<b>1</b>	<b>List of abbreviations</b>	<b>3</b>
<b>2</b>	<b>Installation notes</b>	<b>4</b>
2.1	Information on Validity	4
2.2	Components used	4
2.3	Validity notes	4
2.4	Information on total installation time	4
<b>3</b>	<b>About this document</b>	<b>5</b>
3.1	Purpose of the document	5
3.2	Warranty and liability	5
3.3	Safety	5
3.4	Using this document	6
<b>4</b>	<b>Technical Information</b>	<b>7</b>
<b>5</b>	<b>Preparing measures</b>	<b>8</b>
5.1	Vehicle preparation	8
<b>6</b>	<b>Installation Overview</b>	<b>9</b>
<b>7</b>	<b>Wiring diagram</b>	<b>10</b>
<b>8</b>	<b>Electrical system</b>	<b>12</b>
8.1	Electrical system preparation	12
8.2	Connection in passenger compartment	14
8.3	Connection in engine compartment	16
8.4	Connection to engine control unit	17
<b>9</b>	<b>Final work</b>	<b>19</b>

---

# 1 List of abbreviations

AG Automatic transmission

CLR Cold start module

RTD Temperature sensor

Wire Cable

## 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. The installation is not permitted.

### 2.2 Components used

Designation	Order number
Additional cold start kit for Audi Q5 2016 diesel	1326790A
Cold start installation documentation for Audi Q5 2016 diesel	1326791A

### 2.3 Validity notes

This installation documentation applies only in combination with:

Designation	Order number
Installation kit (including cold start kit) for Audi Q5 2016 diesel	1324026_
Installation documentation for Audi Q5 2016 diesel	1324027_

### 2.4 Information on total installation time

The total installation time includes the time needed for mounting and demounting the vehicle-specific components, the cold start-specific installation times and all other times required for the subsequent installation of the cold start kit with a parking heater that has already been retrofit.

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:

Cold start kit
----------------

### 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	
Webasto Comfort A/C control	
Webasto Standard A/C control	
Tank extracting device (e.g. FuelFix)	
Exhaust end fastener (EFIX)	
Combustion air intake silencer	
Spacer bracket (ASH)	

#### 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.




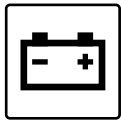
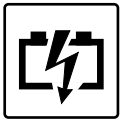





Reference to the vehicle manufacturer's specific documents.



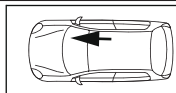
a note on a special technical feature

#### 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 gas	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
►	Necessary action
⇒	Result of an action
<b>1</b> / <b>12</b> / <b>a1</b> / <b>A</b>	Position numbers for the image descriptions
① / ⑫	Position numbers for the image descriptions for electrical wires and wiring harnesses and coolant hose sections

---

## 4 Technical Information

### Dimension specifications

- All dimensions specified in mm

### Tightening torque specifications

- Tighten bolt connections in accordance with manufacturer's instructions or in accordance with state-of-the-art-technology

### Necessary special tools

- Automatic wire stripper 0.2 - 6 mm<sup>2</sup>
- Crimping pliers for tab connector 0.14 – 6 mm<sup>2</sup>
- Crimping pliers for cable lugs 0.5 – 10 mm<sup>2</sup>
- Crimping pliers for connector 0.25 – 6 mm<sup>2</sup>
- Torque wrench for 2.0 - 10 Nm
- Webasto Thermo Test Diagnosis with current software

---

## 5 Preparing measures

### 5.1 Vehicle preparation



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

- ▶ Disconnect the battery
- ▶ Remove the coolant reservoir cover
- ▶ Remove the washer reservoir filler point
- ▶ Remove the engine control unit cover
- ▶ Pull out the engine control unit
- ▶ Remove the side instrument panel trim on the left
- ▶ Detach the upper instrument panel trim of the steering wheel
- ▶ Remove the lower instrument panel trim (central electrical box cover in passenger compartment) on the driver's side



## 6 Installation Overview

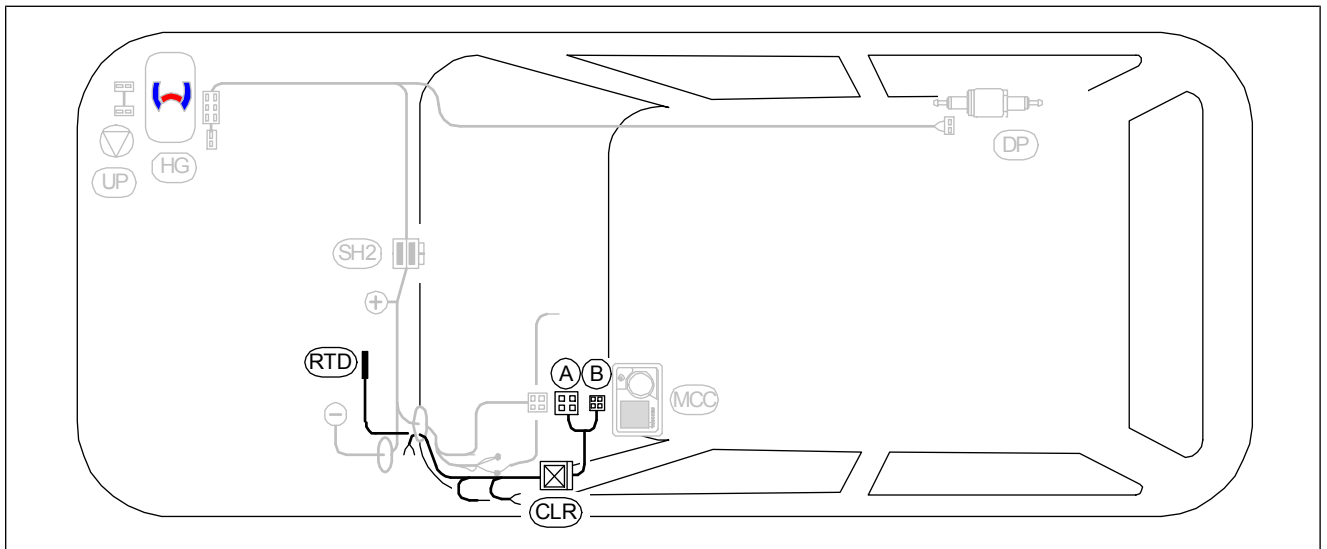


Fig. 1

Legend to installation overview

Abbreviation	Component
CLR	CLR module
RTD	Temperature sensor
A/B	Adapter connector



## 7 Wiring diagram

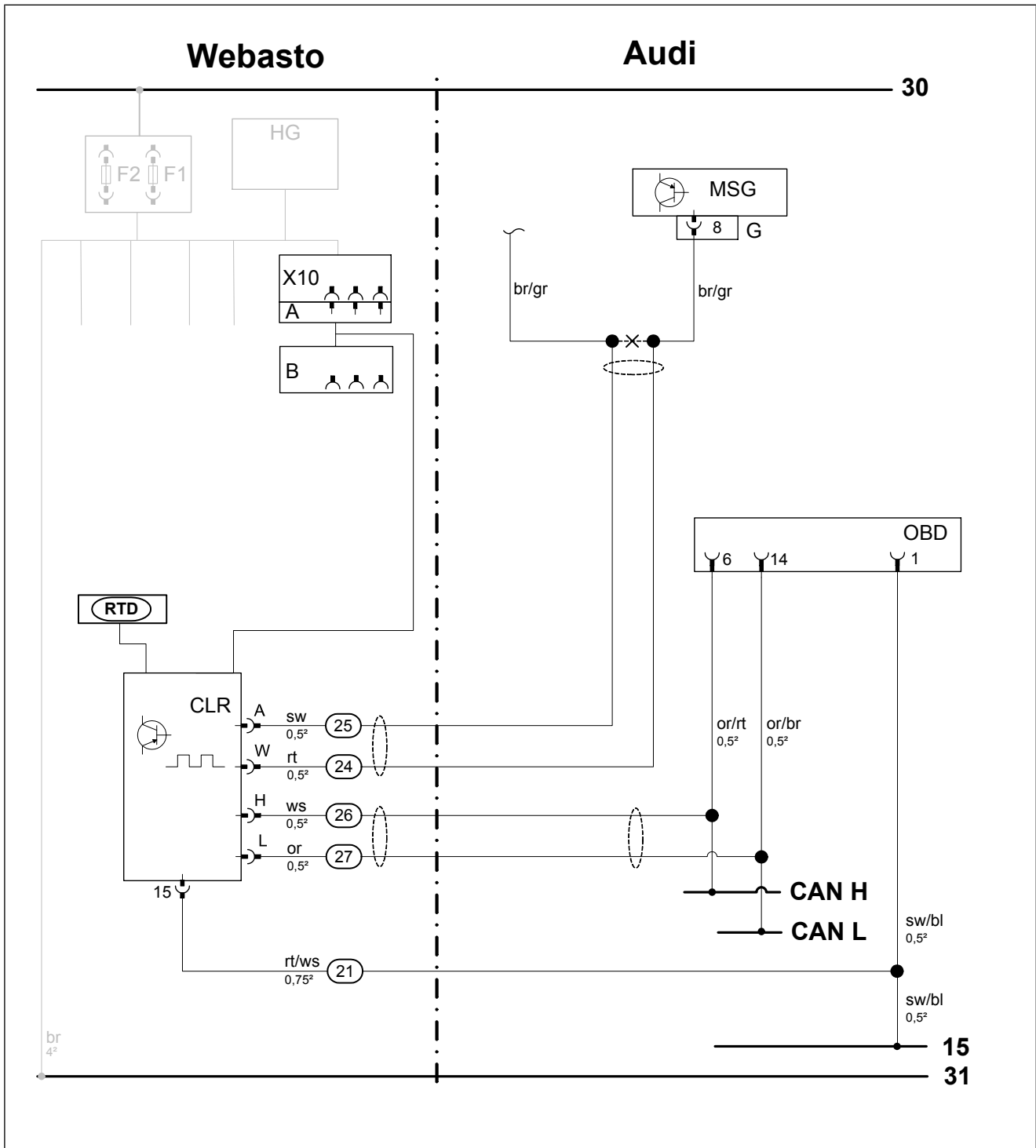


Fig. 2

### Legend to wiring diagram

Vehicle components		Symbols	
Abbreviation	Component	Abbreviation	Designation
MSG	Engine control unit	X	Cutting point
G	105-pin connector of MSG		
OBD	ON-Board Diagnosis		



Webasto components		Cable colours	
Abbreviation	Component	Abbreviation	Colour
A	Connector of CLR module wiring harness	br	brown
B	Socket of CLR module wiring harness	bg	beige
CCL GW	CAN CAN LIN Gateway	dbl	dark blue
CL GW	CAN LIN Gateway	dgn	dark green
CLR	Cold start module	ge	yellow
D1	Diode	gn	green
D2	Diode group	gr	grey
F0	Additional fuse for power supply	hbl	light blue
F1	Heater main fuse	hgn	light green
F2	Passenger compartment fan controller main fuse	or	orange
F3	Heater control fuse	pk	pink
F4	Fan controller fuse	rt	red
F5	Additional fuse	sw	black
HG	Heater TT-Evo	vi	violet
K1	Relay K1	ws	white
K2	Relay K2		
K3	Relay K3		
LIN GW	LIN Gateway		
PWM GW	Pulse width modulator gateway		
RSH	Relay and fuse holder of passenger compartment		
RTD	Temperature sensor		
X10	4-pin socket of heater control		



## 8 Electrical system

### 8.1 Electrical system preparation

#### Assigning wires

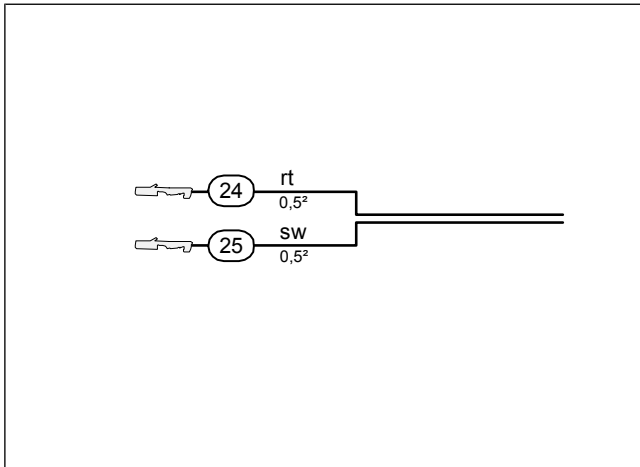


Fig. 3

- ②4 Red (rt) wire of cold start wiring harness
- ②5 Black (sw) wire of cold start wiring harness

#### Premounting CLR module socket

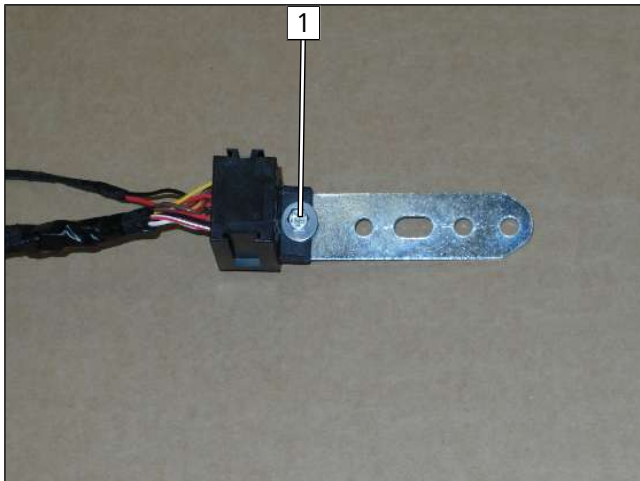


Fig. 4

- ① M5x16 bolt, large diameter washer, CLR module socket, perforated bracket, large diameter washer, nut



## Preparing CLR module

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

- ▶ Detach black (sw) wire from terminal A and insulate.
- ▶ Connect red (rt) wire (24) and black (sw) wire (25).

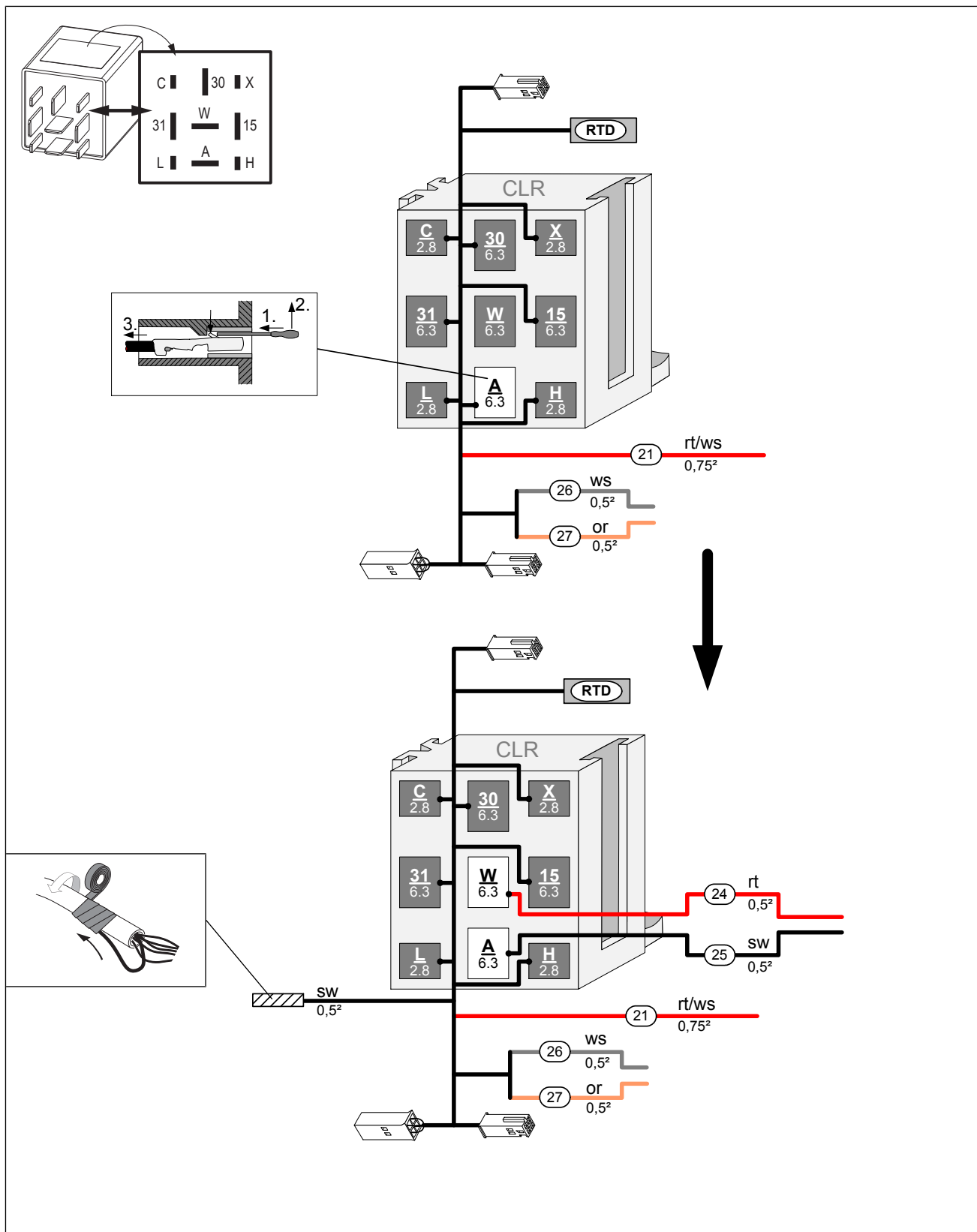


Fig. 5



## 8.2 Connection in passenger compartment

### Mounting CLR module socket

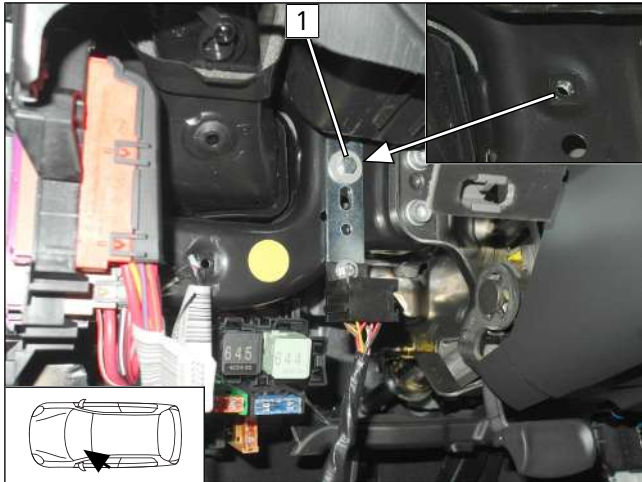


Fig. 6

- 1 M6x20 bolt, large diameter washer, premounted socket, original vehicle threaded insert

### Mounting CLR module

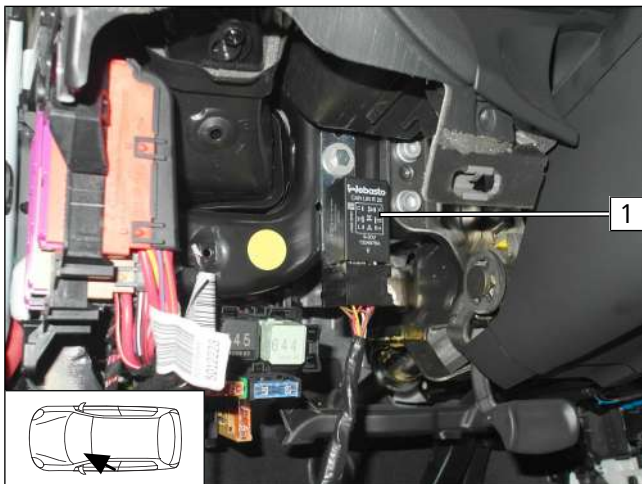
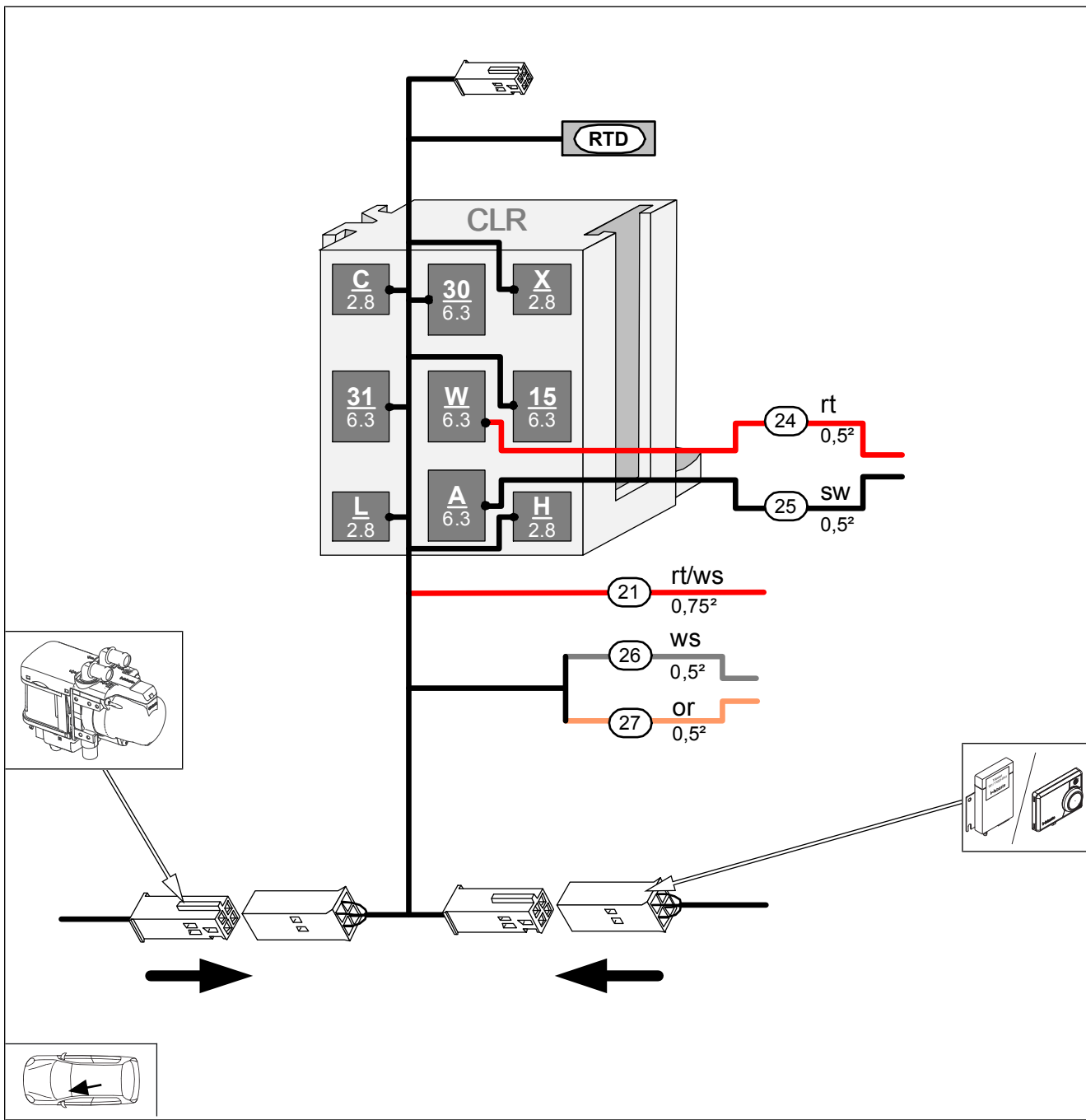


Fig. 7

- ▶ Route wires 24 and 25 as well as temperature sensor RTD to the engine compartment cable grommet.
- ▶ Route wires 21, 26 and 27 to the OBD socket outlet.
- 1 CLR module



# Connecting connectors and sockets





## Connection to OBD socket outlet

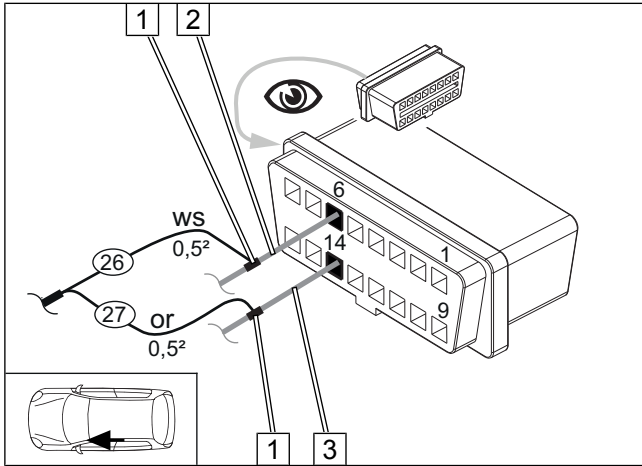


Fig. 8



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** Orange/red (or/rt) wire of OBD socket outlet/ pin 6

**3** Orange/brown (or/br) wire of OBD socket outlet/ pin 14

**26** White (ws) wire of CLR module/ H cold start wiring harness

**27** Orange (or) wire of CLR module/ L cold start wiring harness

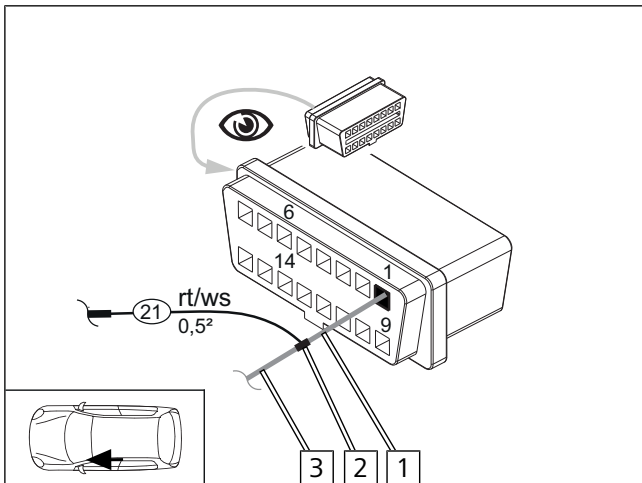


Fig. 9



► Crimp and shrink butt connector **2**

**1** Black/blue (sw/bl) wire of OBD socket outlet/ pin 1

**3** Black/blue (sw/bl) wire of terminal 15

**21** Red/white (rt/ws) wire of CLR module/ 15 cold start wiring harness

## 8.3 Connection in engine compartment

### View of engine control unit

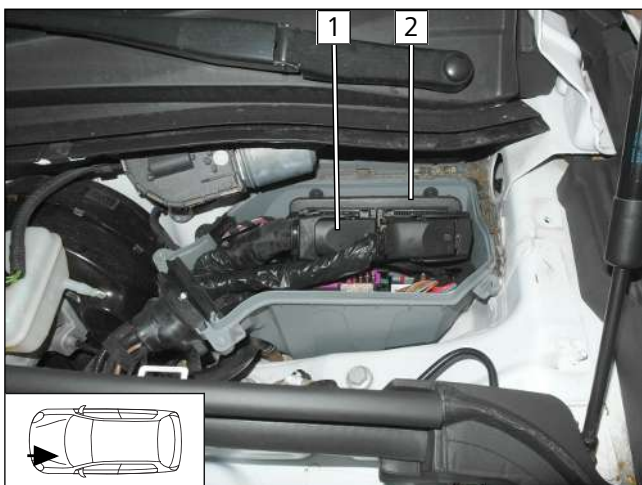


Fig. 10

► Pull out control unit **2**, the passenger compartment cable grommet is located underneath.

► Route wires **24** and **25** as well as temperature sensor RTD through the cable grommet into the engine compartment.

**1** 105-pin connector G of engine control unit





## Fastening temperature sensor **RTD**



Fig. 11

► Fasten temperature sensor **RTD** using cable ties.

## 8.4 Connection to engine control unit

View of engine control unit connector G, contact side

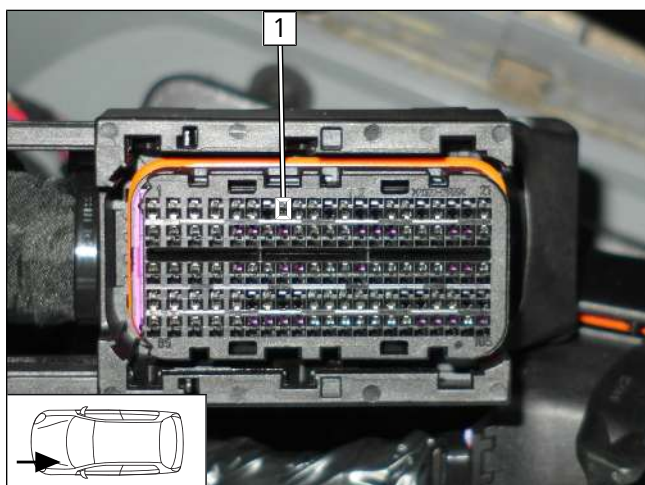


Fig. 12

1 Engine control unit connector G, pin 8

View of engine control unit connector G, wiring side

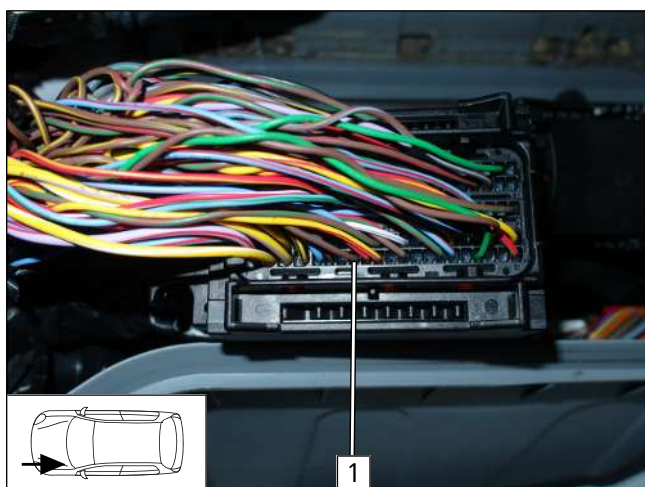


Fig. 13

1 Brown/grey (br/gr) wire of engine control unit connector G, pin 8



## Connection to engine control unit



Fig. 14



► Remove the upper cover from connector G and detach part of the wiring harness wrapping. Insulate and reinstall after completion.



► Crimp and shrink the butt connector.

- 1 Brown/grey (br/gr) wire of 105-pin engine control unit connector G/ pin 8
- 2 Brown/grey (br/gr) wire
- 24 Red (rt) wire of CLR module/W from cold start wiring harness
- 25 Black (sw) wire of CLR module/A from cold start wiring harness



## 9 Final work



- ▶ Final work is not carried out until the installation of the heater in the vehicle has been completed
- ▶ Check all electrical connections for firm seating
- ▶ Insulate and tie back loose lines



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.

Webasto Thermo & Comfort SE  
Postfach 1410  
82199 Gilching  
Germany

Company address:  
Friedrichshafener Str. 9  
82205 Gilching  
Germany

Technical Extranet: <https://dealers.webasto.com>

Only within Germany  
Tel: 0395 5592 444  
E-mail: [technikcenter@webasto.com](mailto:technikcenter@webasto.com)



[WWW.WEBASTO.COM](http://WWW.WEBASTO.COM)