Cold start kit

Thermo Top Evo Parking Heater

E1
00 0258

Installation Documentation
Kia Niro / Hyundai Ioniq Hybrid

Validity

Manufacturer	Model	Type	Model year	EG BE No. / ABE
Kia	Niro	EN	From model year 2017	e4 * 2007 / 46 * 1139 * ...

Motorisation	Fuel	Emission standard	Transmission type	Output in kW	Displacement in cm³	Engine code
1.6 P	Petrol	Euro 6	AG	77	1580	G4LE

Manufacturer	Model	Type	Model year	EG BE No. / ABE
Hyundai	Ioniq	AE	From model year 2017	e4 * 2007 / 46 * 1157 * ...

Motorisation	Fuel	Emission standard	Transmission type	Output in kW	Displacement in cm³	Engine code
1.6 P	Petrol	Euro 6	AG	105	1580	G4LE

AG = automatic transmission

Left-hand drive vehicle

Total installation time: approx. 1.5 hours
(Applies only to the retroffing of a cold start system in vehicles with an already retrofitted parking heater)

Kia Niro / Hyundai Ioniq Hybrid

Table of Contents

Validity	1	Electrical System	5
Necessary Components	2	Preparing Electrical System	6
Information on Validity	2	System Wiring Diagram	8
Installation Overview	2	Cold Start System Installation	9
Information on Total Installation Time	2	Final Work	13
Information on Operating and Installation Instructions	3		
Information on Validity	4		
Technical Information	4		
Explanatory Notes on Document	4		
Preliminary Work	5		

Necessary Components

Designation	Order No.:
Additional cold start kit for Kia Niro / Hyundai Ioniq Hybrid TT-Evo 2017	1325540A
Cold start installation documentation for Kia Niro / Hyundai Ioniq Hybrid TT-Evo 2017	1325539C

Information on Validity

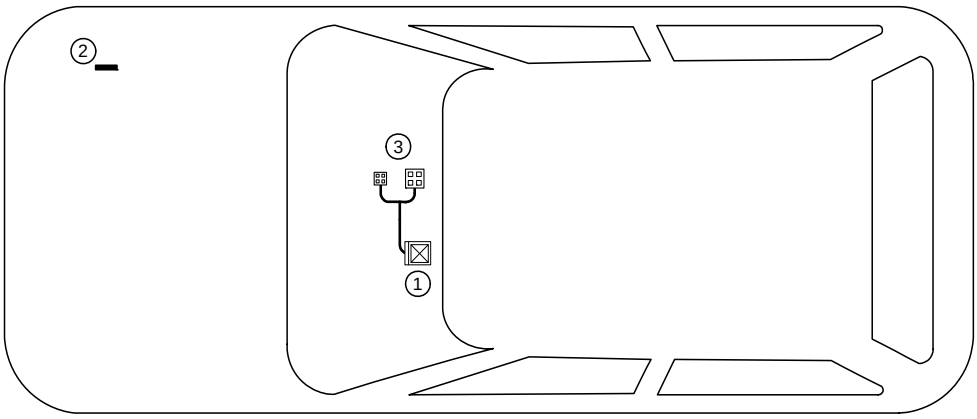
This installation documentation applies only in combination with:

Designation	Order No.:
Installation kit for Kia Niro / Hyundai Ioniq Hybrid TT-Evo	1325365_
Installation documentation for Kia Niro 1.6 Petrol Hybrid TT-Evo or installation documentation for Hyundai Ioniq 1.6 Petrol Hybrid TT-Evo	1325366_ 1325592_

Installation Overview

Legend:

1. CLR Module
2. Temperature sensor (RTD)
3. Adapter connector



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.

Information on Operating and Installation Instructions

1 Important information (not complete)

1.1 Installation and repair

The improper installation or repair of Webasto heating and cooling systems can cause fire or the leakage of deadly carbon monoxide, leading to serious injury or death.

To install and repair Webasto heating and cooling systems you need to have completed a special company training course and have the appropriate technical documentation, special tools and special equipment.

Installation and repair may ONLY be carried out by persons trained and certified in a Webasto training course. NEVER try to install or repair Webasto heating or cooling systems if you have not completed a Webasto training course, you do not have the necessary technical skills and you do not have the technical documentation, tools and equipment available to ensure that you can complete the installation and repair work properly.

Only use genuine Webasto parts. See the Webasto air and water heaters accessories catalogue for this purpose.

1.2 Operation

To ensure safe operation, we recommend having the heater checked every two years by an authorised Webasto dealer, especially when used over a long period and/or under extreme environmental conditions.

Do not operate the heater in closed rooms due to the danger of poisoning and suffocation.

Always switch off the heater before refuelling.

The heater may only be used with the prescribed fuel diesel (DIN EN 590) or petrol (DIN EN 228).

The heater may not be cleaned with a high-pressure cleaner.

1.3 Please note

ALWAYS follow all Webasto installation and operating instructions and observe all warnings.

To become familiar with and understand all functions and properties of the heater, the operating instructions must be read carefully and observed at all times.

For proper, safe installation and repair work, the installation instructions with all warnings and safety information must be carefully read and observed at all times. Please always contact a workshop authorised by Webasto for all installation and repair work.

Important

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, 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 have to audibly click into place during installation.

Sharp edges should be fitted with rub protection. 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 startup 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.

2 Statutory regulations governing installation

Guidelines	Thermo Top Evo
Heating Directive ECE R122	E1 00 0258
EMC Directive ECE R10	E1 04 5627

Note

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.

Important

Failure to follow the installation instructions will result in the invalidation of the type approval for the heater and therefore invalidation of the general **homologation of the vehicle**.

Note

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

2.1 Excerpt from ECE regulation 122 (heating system) paragraph 5 for the installation of the heater

Beginning of excerpt.

ANNEX VII

REQUIREMENTS FOR COMBUSTION HEATERS AND THEIR INSTALLATION

1. GENERAL REQUIREMENTS

1.7.1. A clearly visible tell-tale in the operator's field of view shall inform when the combustion heater is switched on or off.

2. VEHICLE INSTALLATION REQUIREMENTS

2.1. Scope

2.1.1. Subject to paragraph 2.1.2. combustion heaters shall be installed according to the requirements of this Annex.

2.1.2. Vehicles of category O having liquid fuel heaters are deemed to comply with the requirements of this Annex.

2.2. Positioning of heater

2.2.1. Body sections and any other components in the vicinity of the heater must be protected from excessive heat and the possibility of fuel or oil contamination.

2.2.2. The combustion heater shall not constitute a risk of fire, even in the case of overheating. This requirement shall be deemed to be fulfilled if the installation ensures an adequate distance to all parts and suitable ventilation, by the use of fire resistant materials or by the use of heat shields.

2.2.3. In the case of M2 and M3 vehicles, the heater must not be positioned in the passenger compartment. However, an installation in an effectively sealed envelope which also complies with the conditions in paragraph 2.2.2 may be used.

2.2.4. The label referred to in paragraph 1.4 or a duplicate, must be positioned so that it can be easily read when the heater is installed in the vehicle.

2.2.5. Every reasonable precaution should be taken in positioning the heater to minimise the risk of injury and damage to personal property.

2.3. Fuel supply

2.3.1. The fuel filler must not be situated in the passenger compartment and must be provided with an effective cap to prevent fuel spillage.

2.3.2. In the case of liquid fuel heaters, where a supply separate to that of the vehicle is provided, the type of fuel and its filler point must be clearly labelled.

2.3.3. A notice, indicating that the heater must be shut down before refuelling, must be affixed to the fuelling point. In addition a suitable instruction must be included in the manufacturer's operating manual.

2.4. Exhaust system

2.4.1. The exhaust outlet must be located so as to prevent emissions from entering the vehicle through ventilators, heated air inlets or opening windows.

2.5. Combustion air inlet

2.5.1. The air for the combustion chamber of the heater must not be drawn from the passenger compartment of the vehicle.

2.5.2. The air inlet must be so positioned or guarded that blocking by rubbish or luggage is unlikely.

2.6. Heating air inlet

2.6.1. The heating air supply may be fresh or recirculated air and must be drawn from a clean area not likely to be contaminated by exhaust fumes emitted either by the propulsion engine, the combustion heater or any other vehicle source.

2.6.2. The inlet duct must be protected by mesh or other suitable means.

2.7. Heating air outlet

2.7.1. Any ducting used to route the hot air through the vehicle must be so positioned or protected that no injury or damage could be caused if it were to be touched.

2.7.2. The air outlet must be so positioned or guarded that blocking by rubbish or luggage is unlikely.

End of excerpt.

In multilingual versions the German language is binding.

Kia Niro / Hyundai Ioniq Hybrid

Information on Validity

This installation documentation applies to Kia Niro Petrol vehicles - for validity, see page 1 - from model year 2017 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to this installation documentation.

Vehicle and engine types, equipment variants and other specifications not listed in this installation documentation have not been tested. However, installation according to this installation documentation may be possible.

Technical Information

Special Tools
- Automatic wire stripper 0.2 - 6mm²
- Crimping pliers for cable lug / tab connector 0.5 - 6mm²
- Torque wrench for 2.0 - 10 Nm
- Webasto Thermo Test Diagnosis with current software

Dimensions
- All dimensions are in mm.

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

Explanatory Notes on Document

You will find an identification mark on the outside top right corner of the page in question to provide you with a quick overview of the individual working steps.

Mechanical System **Electrical System**

Special features are highlighted using the following symbols:

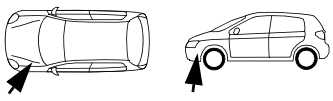
Specific risk of damage to components.

Specific risk due to electrical voltage.

Specific risk of fire or explosion.

Reference to a special technical feature.

The arrow in the vehicle-icon indicates the position on the vehicle and the viewing angle.



Reference to manufacturer's vehicle-specific documents

Reference to installation instructions of Webasto components (shown for example on FuelFix).

Reference to general installation instructions of Webasto components.

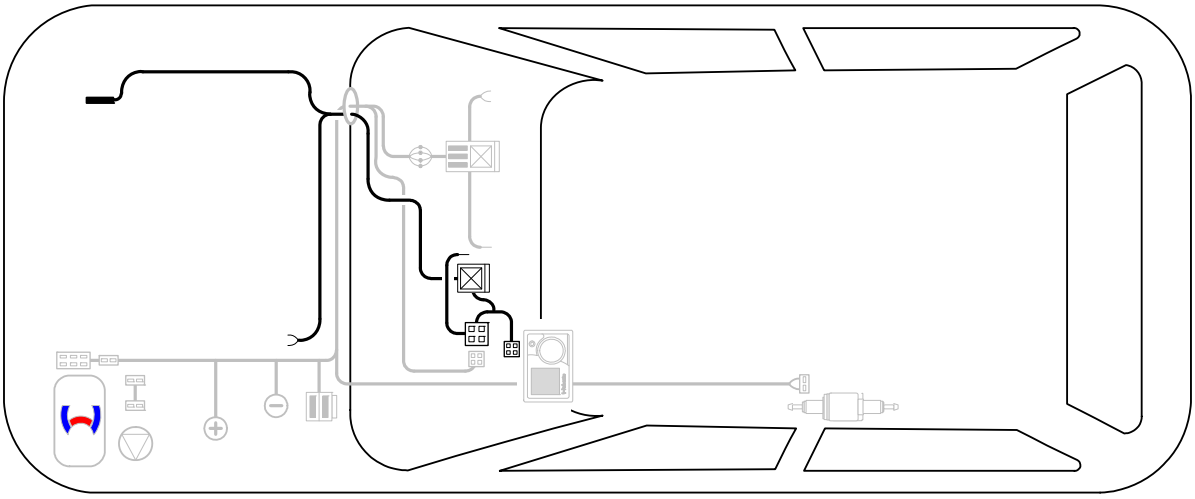
Tightening torque according to the manufacturer's vehicle-specific documents.

Preliminary Work

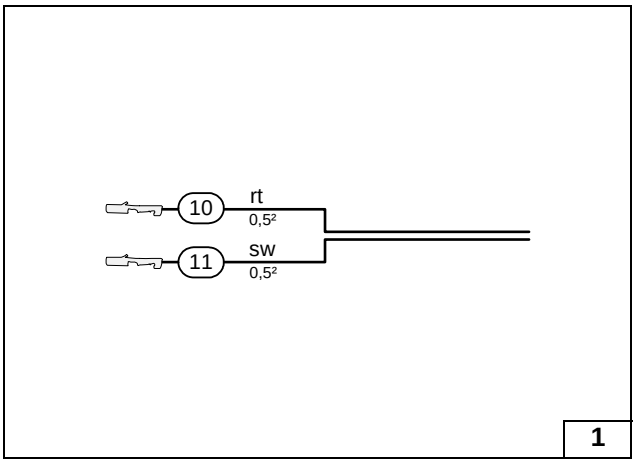
Vehicle

- Disconnect the battery.
- Remove the instrument panel trim on the driver's and front passenger's side.
- Remove the lateral trim of the centre tunnel on the left and right.

Electrical System



Wiring harness routing diagram for passenger compartment



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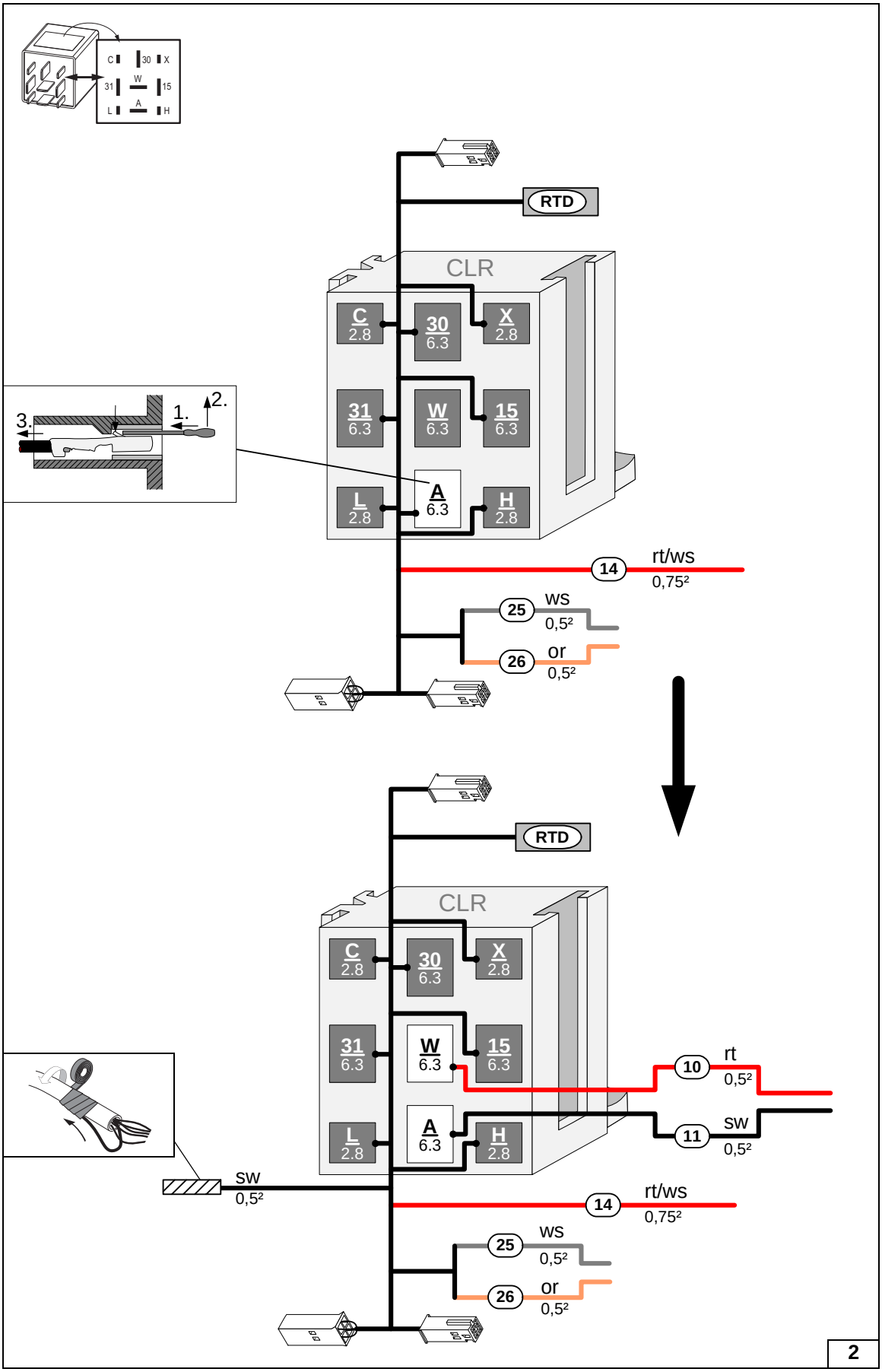
Preparing Electrical System

Wire sections retain their numbering in the entire document.

Assigning wires

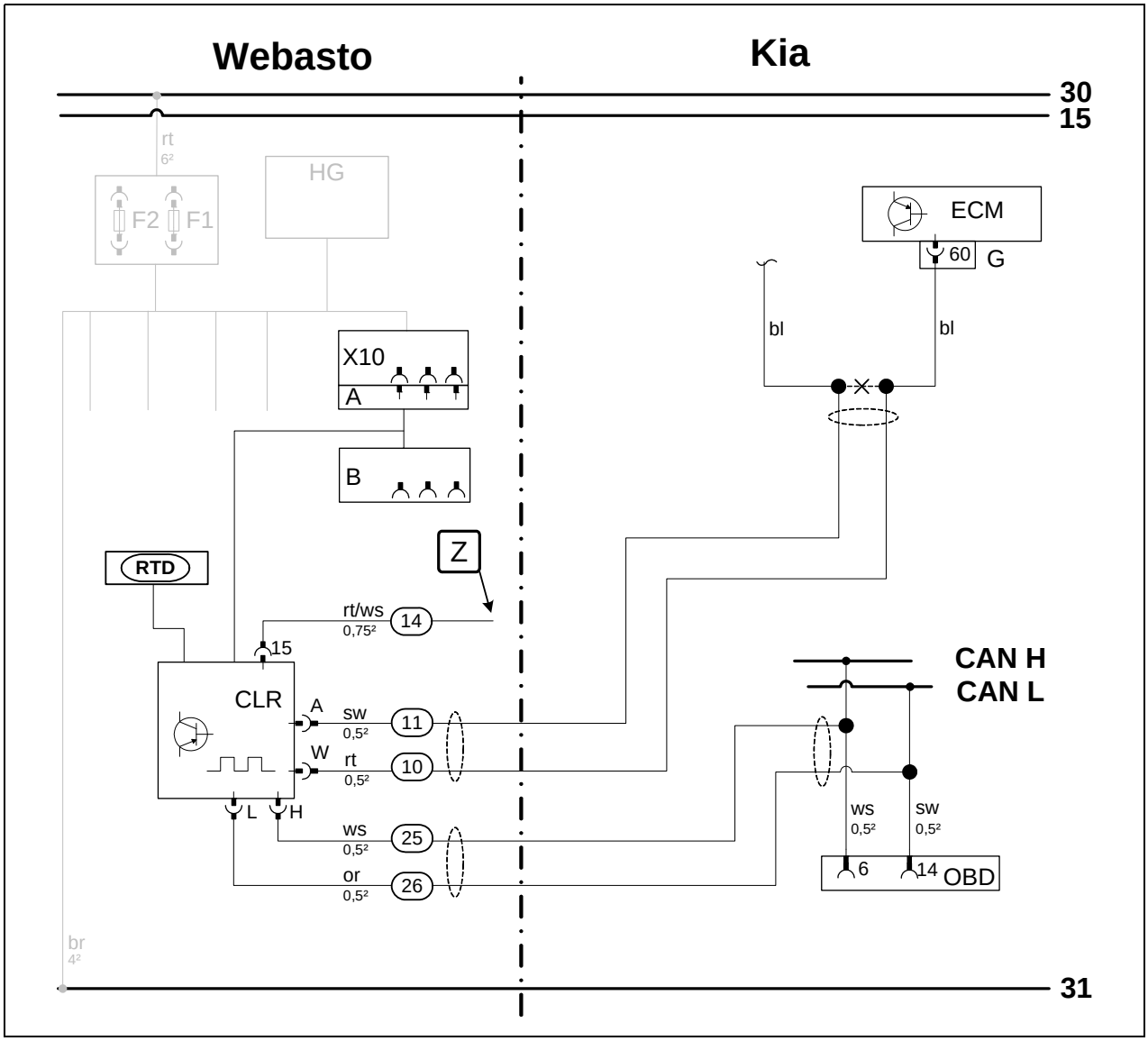
(10) Red (rt) wire of cold start wiring harness
(11) Black (sw) wire of cold start wiring harness



Disconnecting black (sw) wire from terminal A / assignment of wires to be used

Insulating black (sw) wire / connecting wires

System Wiring Diagram



Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	F36	Fuse	rt	red
F1	20A fuse	ECM	Engine control unit	sw	black
F2	30A fuse	G	96-pin connector of ECM	bl	blue
X10	4-pin socket of heater control	OBD	OBD socket outlet	or	orange
				ws	white
A	Connector of CLR module wiring harness			br	brown
B	Socket of CLR module wiring harness			**Z**	Connection is made when assembling the fan controller
RTD	Temperature sensor				
CLR	CLR Module			Wiring colours may vary.	

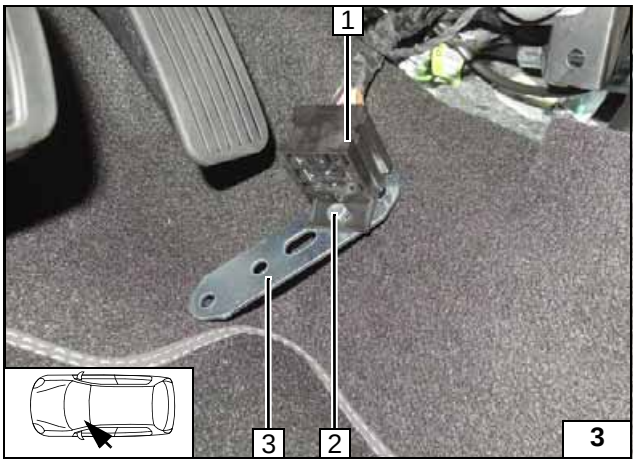
System wiring diagram

Legend

Cold Start System Installation

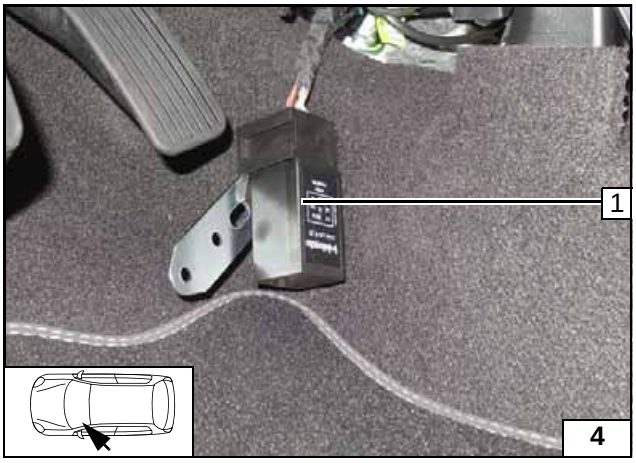
Produce all following electrical connections as shown in the system wiring diagram.

Preparing CLR module



1 CLR module socket
2 M5x16 bolt, large diameter washer [2x], nut
3 Perforated bracket

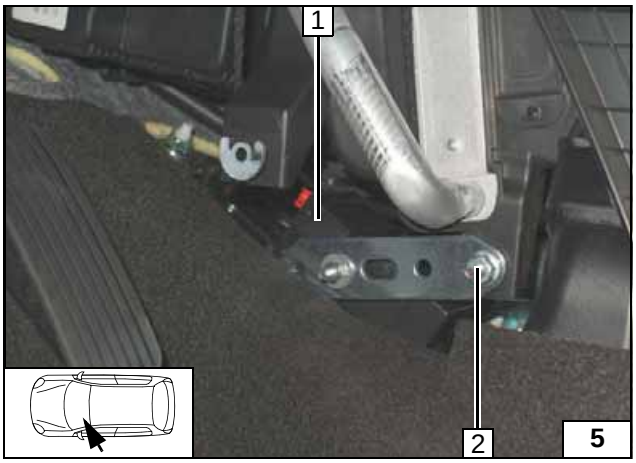
Preparing CLR module



1 CLR module

Installing CLR module

Kia Niro

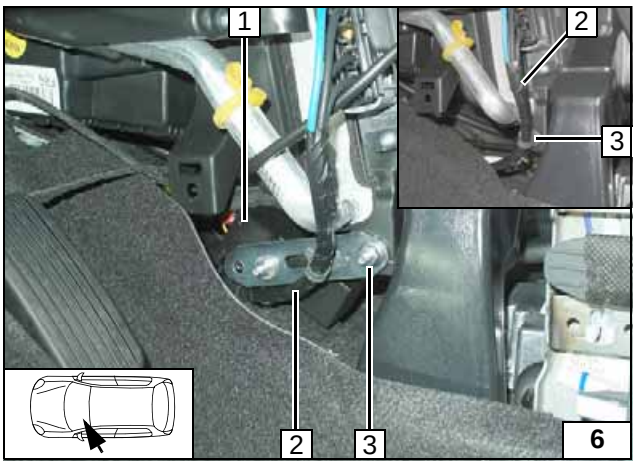


Route wiring harnesses (10) and (11) as well as temperature sensor (RTD) through the cable grommet in the engine compartment.
Draw red/white (rt/ws) wire (14) into protective sleeving and route to the A/C control panel.

1 CLR module
2 M6x20 bolt, large diameter washer [2x], nut

Installing CLR module

Hyundai Ioniq



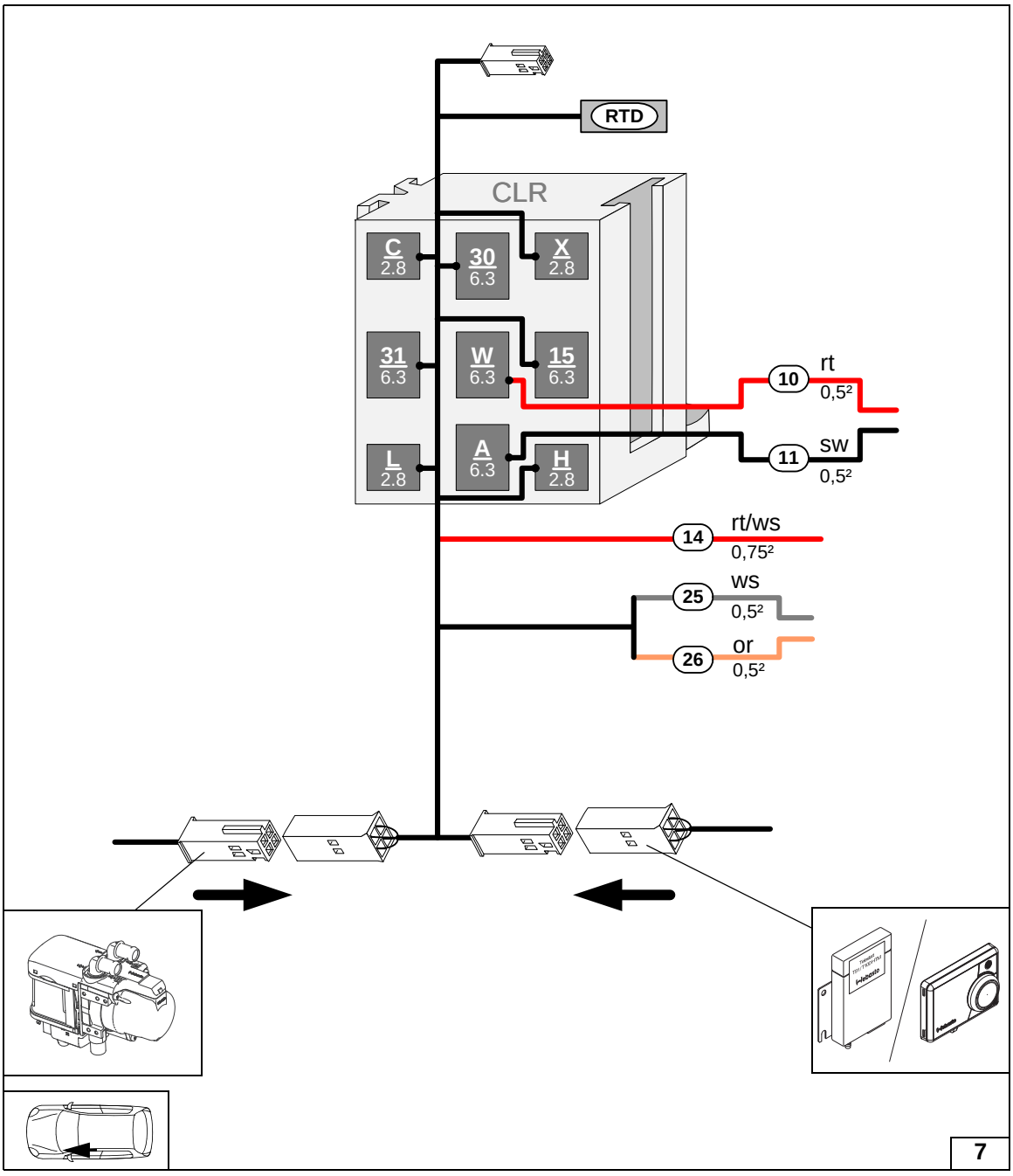
Detach original vehicle wiring harness **2** at position **3** from clip and fasten to perforated bracket.

Route wiring harnesses (10) and (11) as well as temperature sensor (RTD) through the cable grommet in the engine compartment.
Draw red/white (rt/ws) wire (14) into protective sleeving and route to the A/C control panel.

1 CLR module
3 M6x20 bolt, large diameter washer [2x], nut

All vehicles

Connecting sockets and connectors in passenger compartment



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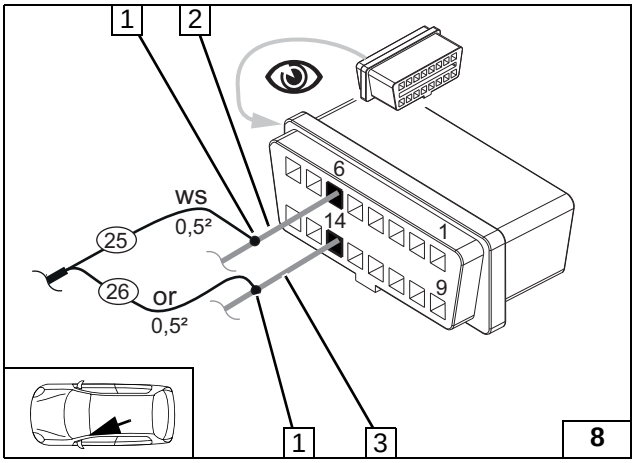

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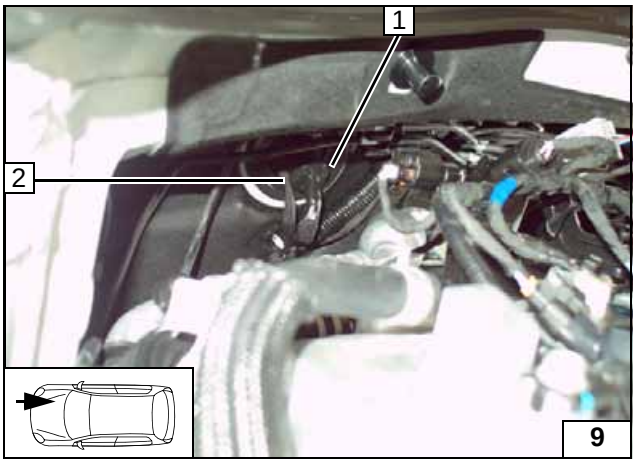
Detach OBD socket outlet from bracket.

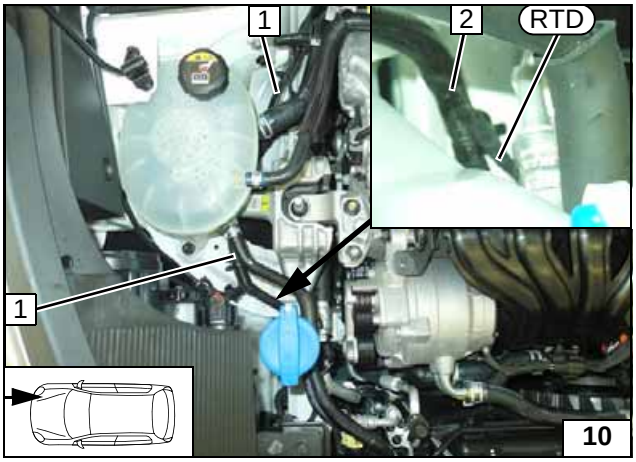
1 Crimp and shrink butt connector [2x]
2 White (ws) wire of OBD socket outlet/ pin 6
3 Black (sw) wire of OBD socket outlet/ pin 14
(25) White (ws) wire of CLR module/ H wiring harness of cold start
(26) Orange (or) wire of CLR module/ L wiring harness of cold start

Connecting OBD socket outlet



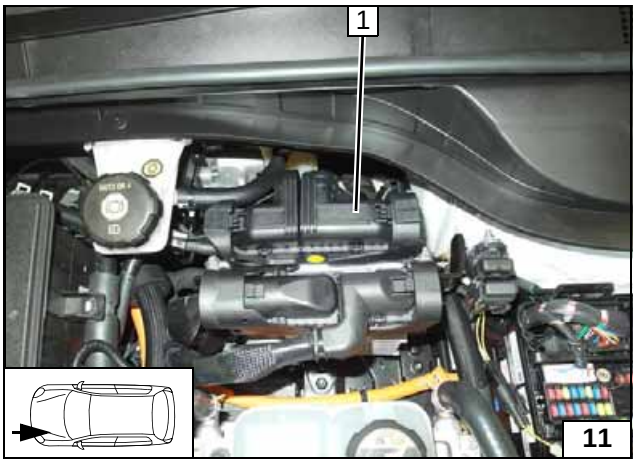
1 Passenger compartment protective rubber plug
2 Cold start wiring harness (10) / (11) and temperature sensor (RTD)

Routing wires from passenger compartment into engine compartment



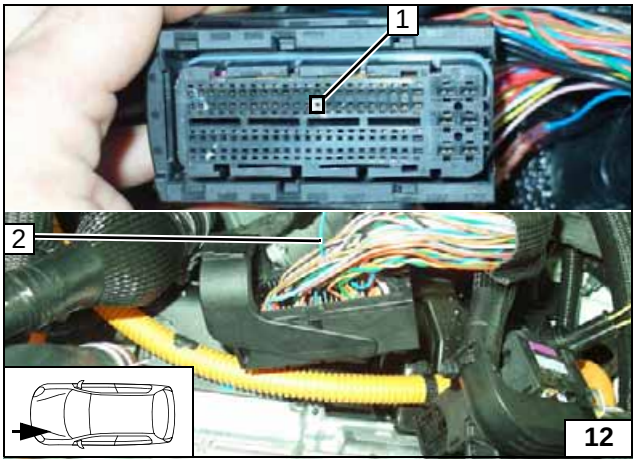
1 RTD wiring harness
2 Cable tie
(RTD) Temperature sensor

Securing temperature sensor



1 96-pin connector G

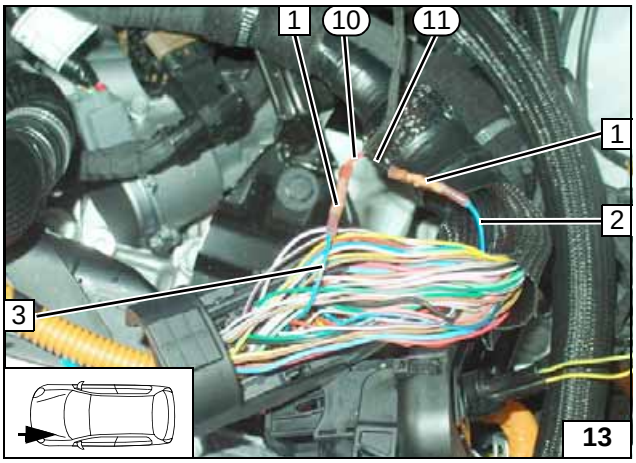
Locating engine control unit connector



1 Pin 60 / engine control unit connector G, contact side

2 Blue (bl) wire from connector G of engine control unit pin 60, wiring side

View of engine control unit connector G



Remove the upper cover of connector G and detach a section of the wiring harness wrapping.
After finishing this, appropriately wrap and install again.

1 Crimp and shrink butt connector [2x]
2 Blue (bl) wire
3 Blue (bl) wire of 96-pin connector G from engine control unit/ pin 60
(10) Red (rt) wire of CLR module/ W wiring harness of cold start
(11) Black (sw) wire of CLR module/ A wiring harness of cold start

Engine control unit connection

Final Work

Warning:
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 loose wire ends and tie back.
Spray the heater components with anti-corrosion wax (Tectyl 100K).

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