EN

K

Installation documentation

for water heater Thermo Top Evo

'Inline' coolant circuit with engine preheating

Kia Ceed

Left-hand drive vehicle

Manufacturer	Model	Type	Model year	EG-BE-No. / ABE
Kia	Ceed	CD	from 2019	e4* 2007/46* 1299*…

Motorisation	Fuel	Emission standard	Transmission type	Output [kW]	Displace-ment [cm³]	Engine code
1.4P	Petrol	Euro 6d Temp	SG	73	1368	G4LC
1.4P	Petrol	Euro 6d Temp	AG	103	1353	G4LD

Validity	Equipment variants	Model
		Ceed
Verified equipment variants	Manual air-conditioning	x
	Automatic air-conditioning	x
	Halogen main headlights	x
	Halogen front fog lights	x
	LED daytime running lights	x
	Automatic Start-Stop system	x
Unverified equipment variants	LED main headlights	x
	Alarm system	x
	Smart key	x

Total installation time	Note
10.0 hours	

Contents

1	**List of abbreviations**	**3**
2	**Installation notes**	**4**
2.1	Information on Validity	4
2.2	Components used	4
2.3	Information on Total Installation Time	4
2.4	Notes on installation, in coordination with the end customer	4
3	**About this document**	**5**
3.1	Purpose of the document	5
3.2	Warranty and liability	5
3.3	Safety	5
3.4	Using this document	6
4	**Technical Information**	**7**
5	**Preparations**	**8**
5.1	Vehicle preparation	8
5.2	Heater preparation	8
6	**Installation overview**	**9**
7	**Electrical system of engine compartment**	**10**
8	**Mechanical system**	**14**
8.1	Preparing installation location	14
8.2	Premounting heater	16
8.3	Heater mounting	17
9	**Fuel**	**19**
9.1	Routing fuel line	19
9.2	Installing FuelFix 73kW	22
9.3	Installing FuelFix 103kW	26
9.4	Fuel pump connection	29
10	**Coolant**	**30**
10.1	Preliminary Work	30
10.2	Hose routing diagram	34
10.3	Coolant circuit installation for 73 kW	35
10.4	Coolant circuit installation for 103 kW	39
11	**Combustion air**	**44**
12	**Exhaust**	**45**
13	**Electrical system of passenger compartment**	**48**
13.1	Mounting cold start system	48
13.2	Electrical system preparation	48
13.3	Wiring diagram	50
13.4	Fan controller	52
14	**Electrical system of control elements**	**54**
14.1	MultiControl CAR option	54
14.2	Telestart option	54
14.3	ThermoCall option	55
15	**Final Work**	**56**
16	**FuelFix template**	**59**
17	**Operating instructions for manual air-conditioning**	**61**
17.1	A/C control panel settings	61
17.2	Installation location of fuses	62
18	**Operating instructions for automatic air-conditioning**	**63**
18.1	A/C control panel settings	63
18.2	Installation location of fuses	64

1 List of abbreviations

AG	Automatic transmission
ASH	Spacer bracket
DP	Fuel pump
EFIX	Exhaust end fastener
FF	FuelFix (tank extracting device)
Fig.	Figure
HG	Heater
MCC	MultiControl (control element)
RSH	Relay and fuse holder of passenger compartment
SG	Manual transmission
SH2	Engine compartment fuse holder for F1/F2
UP	Coolant pump
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. 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.

2.2 Components used

Designation	Order number
Basic delivery scope of Thermo Top Evo	In accordance with price list
Installation kit (incl. cold start system) for Kia Ceed petrol 2018	1327107A
In case of control element as well as Telestart indicator lamp in consultation with end customer	In accordance with price list

2.3 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.

2.4 Notes on installation, in coordination with the end customer

▶ Arrange for the vehicle to be delivered with the tank only about ¼ full.

▶ The installation location of the following elements should be chosen in coordination with the end customer:

- the push button in case of the Telestart and/or ThermoCall and/or ThermoConnect options
- the MultiControl CAR option

Depending on the space required and the veh. manufacturer's instructions, we recommend the use of a vehicle battery with a higher electrical capacity.

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

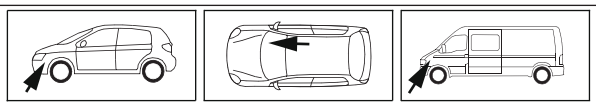
3.4.3 Work step identification marks

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	▶ Open the fuel tank cap ▶ Ventilate the fuel tank ▶ Close the fuel tank cap again ▶ Depressurise the cooling system	
Engine compartment and body	▶ Engine cover ▶ Battery with battery carrier ▶ Engine control unit ▶ Engine underride protection ▶ Bumper cover ▶ Underbody trim on the driver's side	
Passenger compartment	▶ Footwell trim on the driver's and front passenger's side ▶ Front centre tunnel trim on the driver's and front passenger's side ▶ Glove box ▶ A/C control panel (see dismantling instructions) ▶ Rear bench seat on the front passenger's side ▶ Tank fitting service lid on the front passenger's side	

5.2 Heater preparation

Engine compartment	▶ Remove years that do not apply from the type and duplicate label ▶ Attach the duplicate label (type label) in the appropriate place in the engine compartment	

6 Installation overview

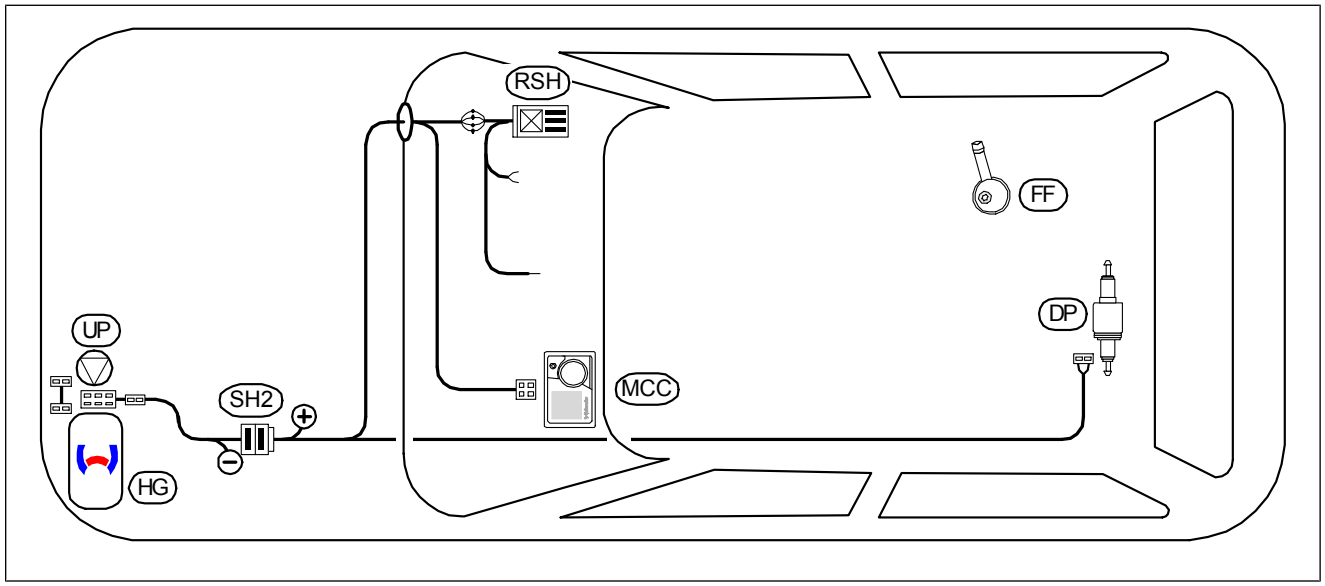


Fig. 1

Legend to installation overview

Abbreviation	Component
DP	Fuel pump
FF	FuelFix
HG	Heater
MCC	MultiControl CAR
RSH	Relay and fuse holder of passenger compartment
SH2	Engine compartment fuse holder for F1/F2
UP	Coolant pump

Heater installation location

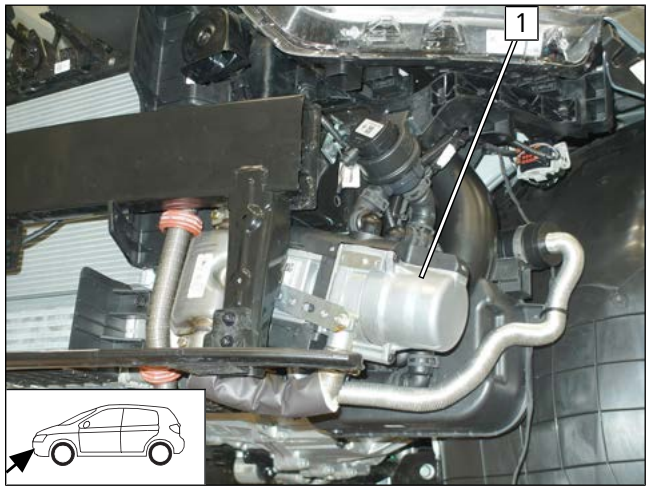


Fig. 2

1 Heater

7 Electrical system of engine compartment

Preparing perforated bracket

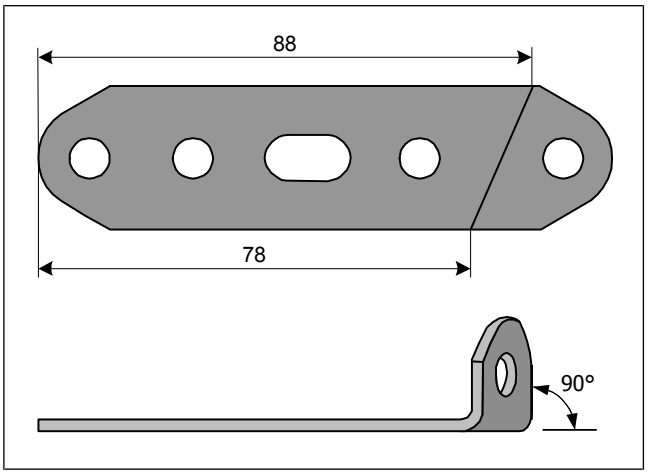


Fig. 3

Preparing fuse holder of engine compartment

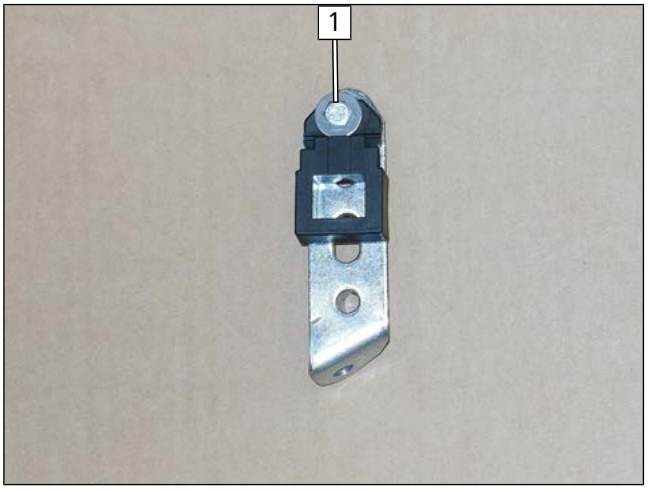


Fig. 4

1 M5x16 bolt, large diameter washer, retaining plate of SH2, perforated bracket, large diameter washer, nut

Mounting retaining plate of SH2

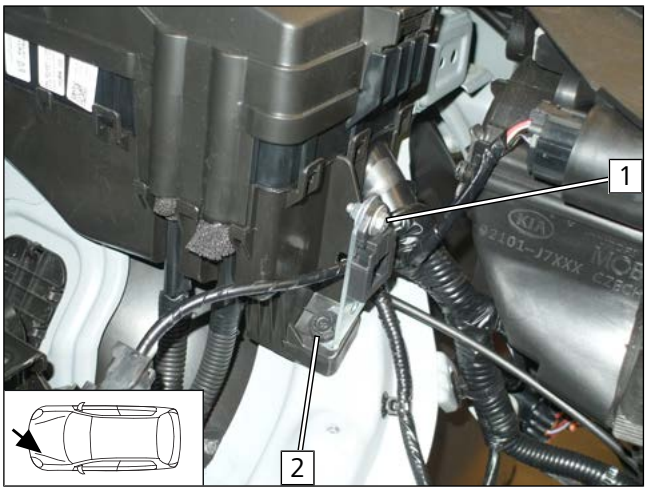


Fig. 5

1 Premounted perforated bracket
2 Original vehicle bolt

Installing SH2

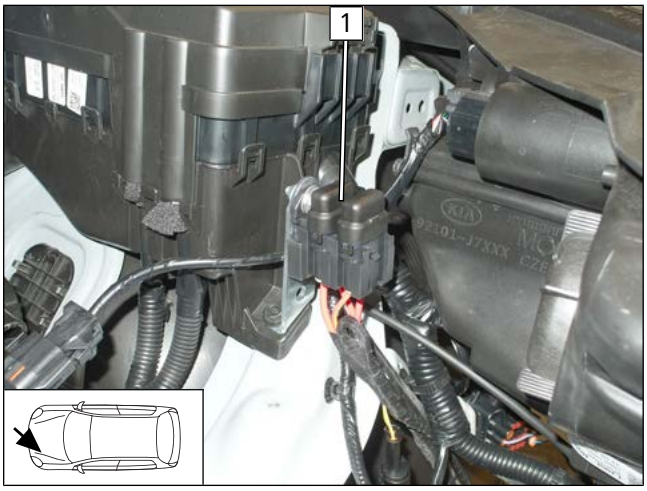


Fig. 6

1 Fuses F1 / F2

Routing wiring harnesses

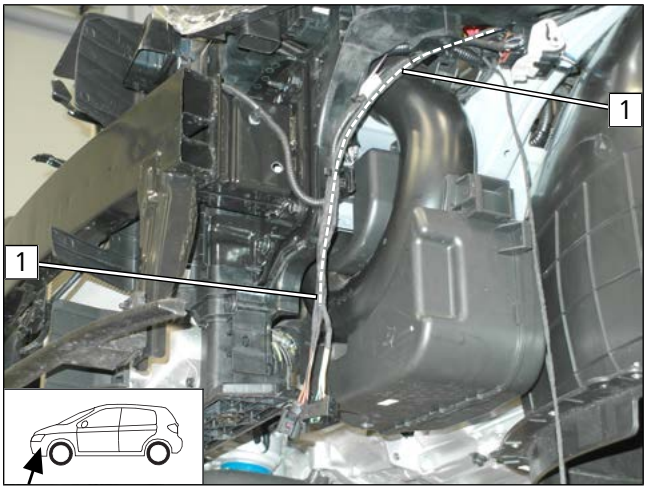


Fig. 7

1 Heater wiring harness

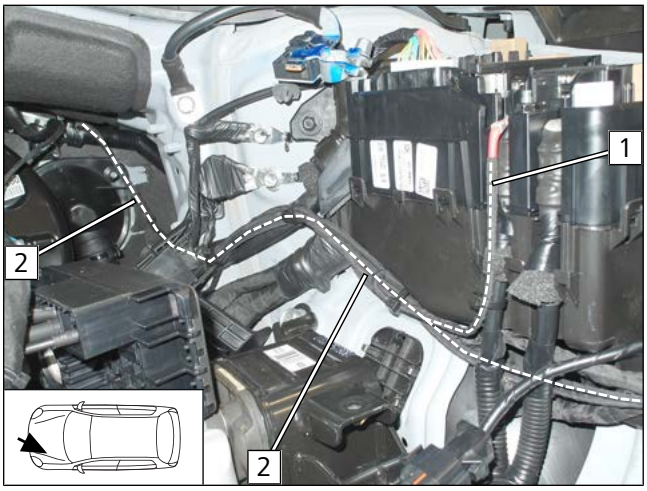


Fig. 8

1 Positive wire

2 Passenger compartment and control element wiring harnesses

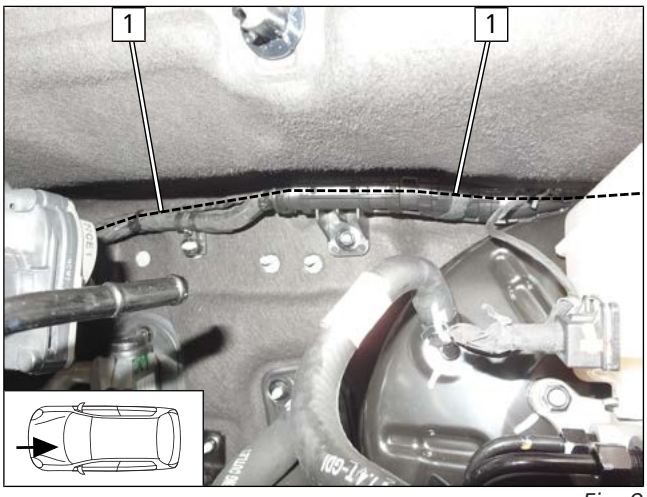


Fig. 9

1 Passenger compartment and control element wiring harnesses

Passenger compartment wiring harness pass through

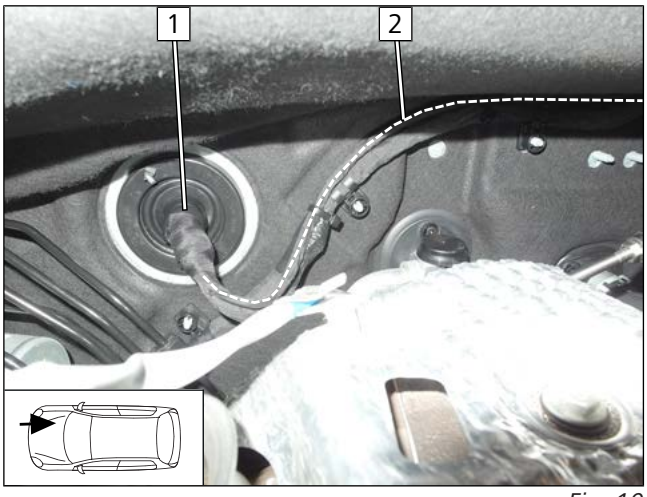


Fig. 10

1 Protective rubber plug

2 Passenger compartment and control element wiring harnesses

Positive wire connection

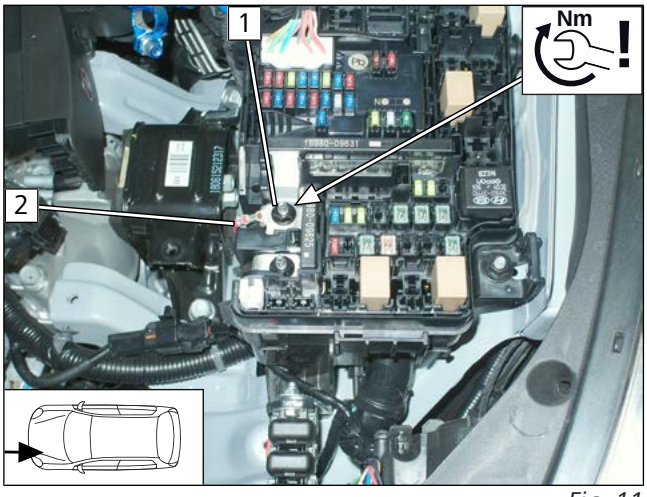


Fig. 11

DANGER

Fire hazard due to insufficient tightening torque

▶ Observe tightening torque

1 Positive support point

2 Positive wire

Earth wire connection

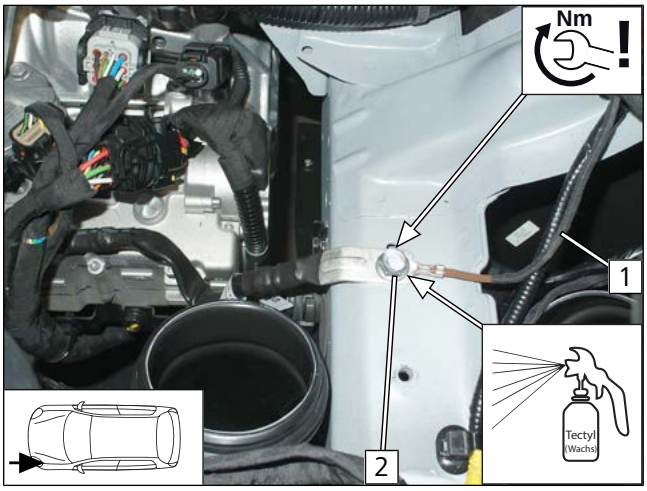


Fig. 12

DANGER

Fire hazard due to insufficient tightening torque

▶ Observe tightening torque

1 Earth wire

2 Original vehicle earth point

8 Mechanical system

8.1 Preparing installation location

Removing original vehicle plastic strip

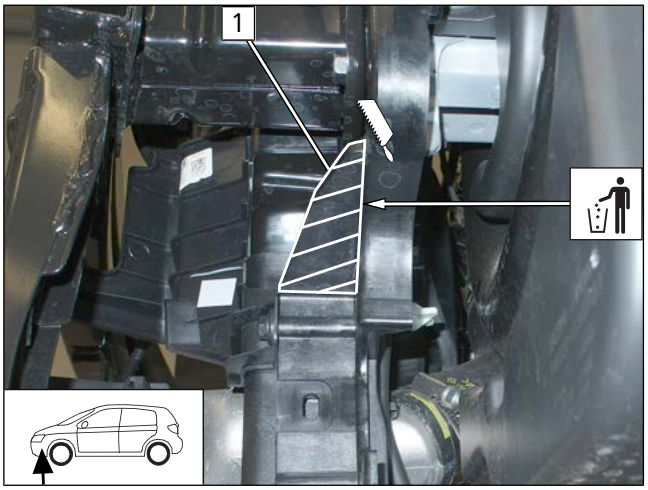


Fig. 13

1 Original vehicle plastic strip

Removing original vehicle bolts

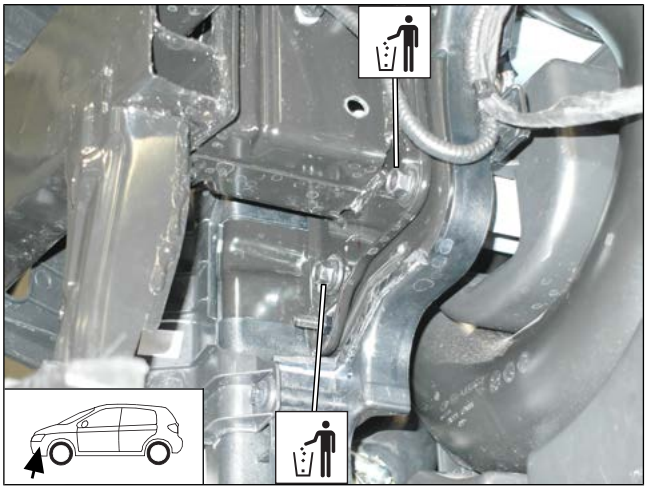


Fig. 14

Inserting rivet nut

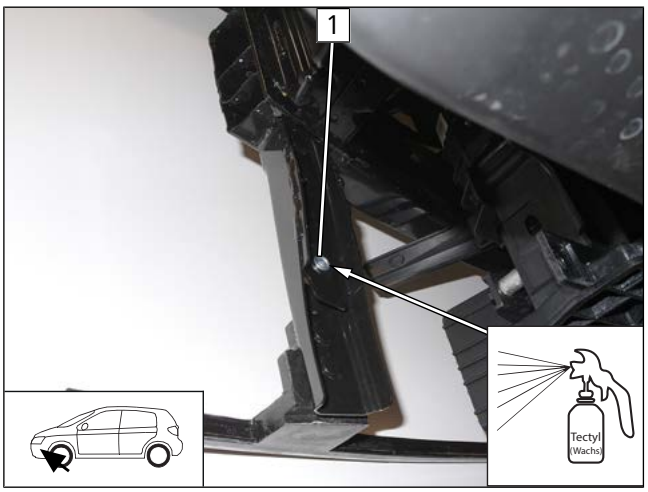


Fig. 15

▶ Enlarge original vehicle hole to Ø9, insert rivet nut 1.

View of perforated bracket for orientation

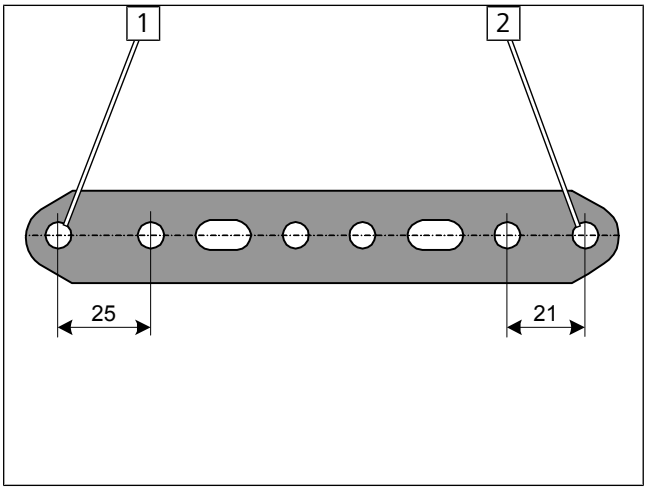


Fig. 16

1 Position 1
2 Position 2

Premounting perforated bracket and exhaust silencer

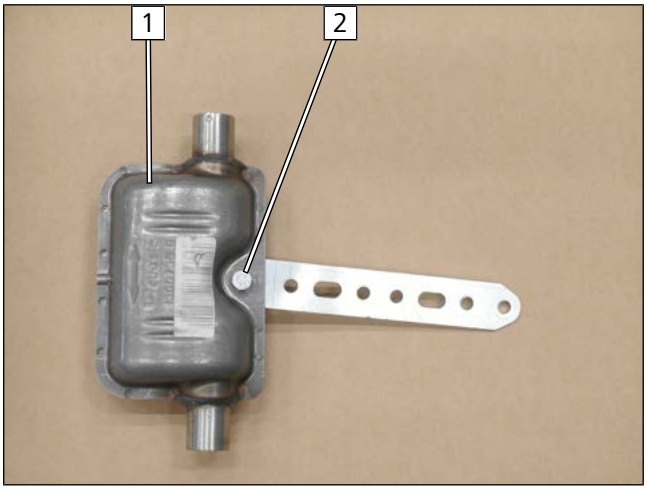


Fig. 17

1 Exhaust silencer
2 M6x16 bolt, exhaust silencer, position 1 of perforated bracket, flanged nut

Mounting perforated bracket with exhaust silencer

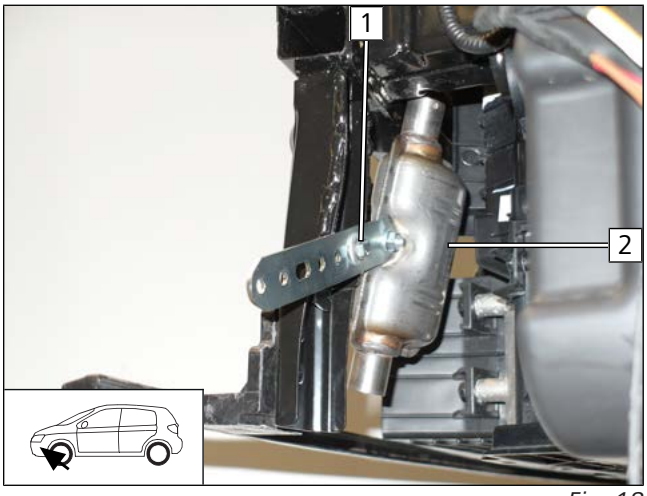


Fig. 18

Danger of damage to components

▶ Bend perforated bracket with exhaust silencer 2 as shown. Ensure sufficient distance from neighbouring components, correct if necessary.

1 M6x40 bolt, spring lock washer, large diameter washer, perforated bracket, 20mm spacer, rivet nut

Mounting heater bracket

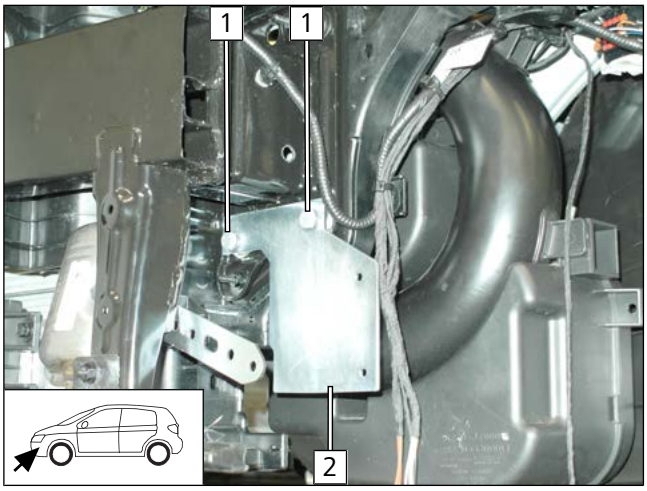


Fig. 19

▶ Position a spacer (5) at position 1 and a large diameter washer between HG bracket 2 and original vehicle cross member.

1 M6x25 bolt, spring lock washer, HG bracket, spacer (5), large diameter washer, original vehicle thread

8.2 Premounting heater

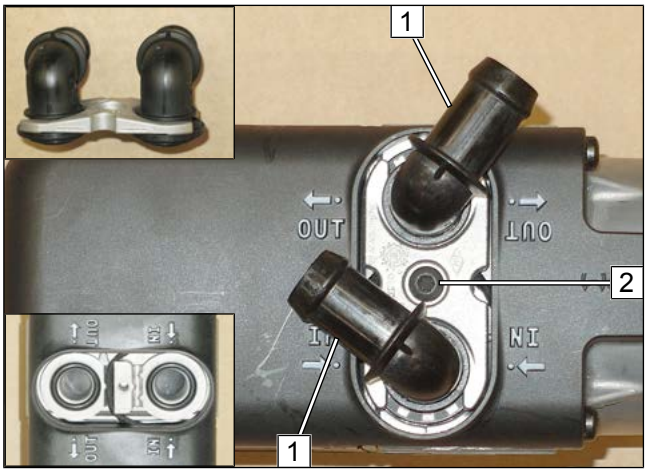


Fig. 20

Observe the general installation instructions of the heater.

1 Water connection piece 90°, sealing ring

2 5x15 self-tapping bolt, water connection piece retaining plate

Mounting stud bolt

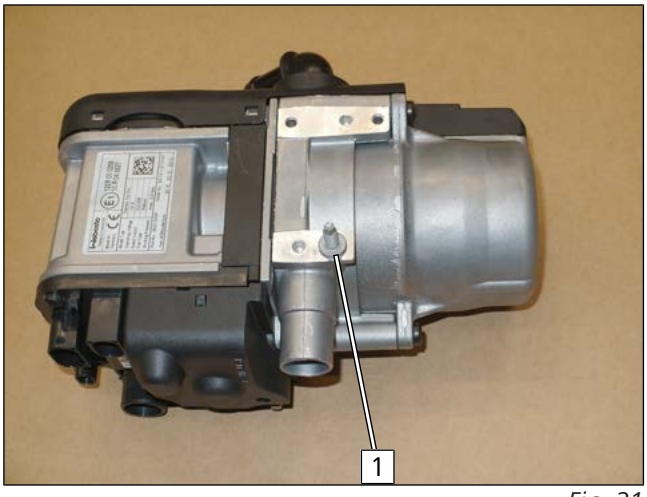


Fig. 21

1 Self-tapping M5/6 x15.5 stud bolt

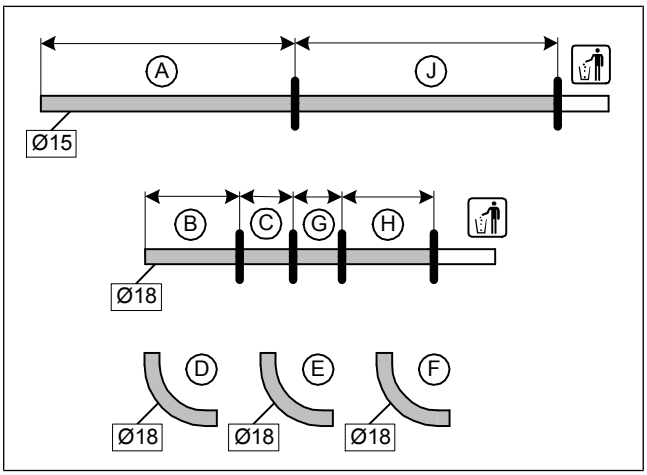


Fig. 22

	73 kW	103 kW
Ⓐ	990	1080
Ⓑ	160	160
Ⓒ	110	110
Ⓓ	90°	90°
Ⓔ	90°	90°
Ⓕ	90°	90°
Ⓖ	85	85
Ⓗ	190	190
Ⓙ	860	1120

Mounting hoses Ⓔ and Ⓕ

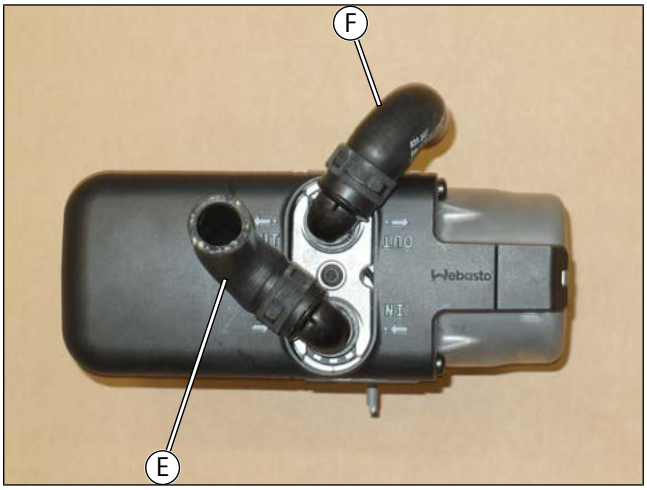


Fig. 23

All spring clips Ø25

8.3 Heater mounting

Mounting heater

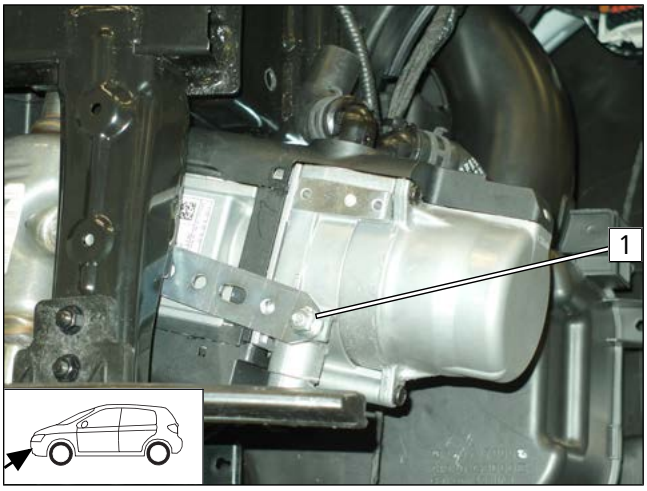


Fig. 24

Observe the general installation instructions of the heater.

1 Flanged nut

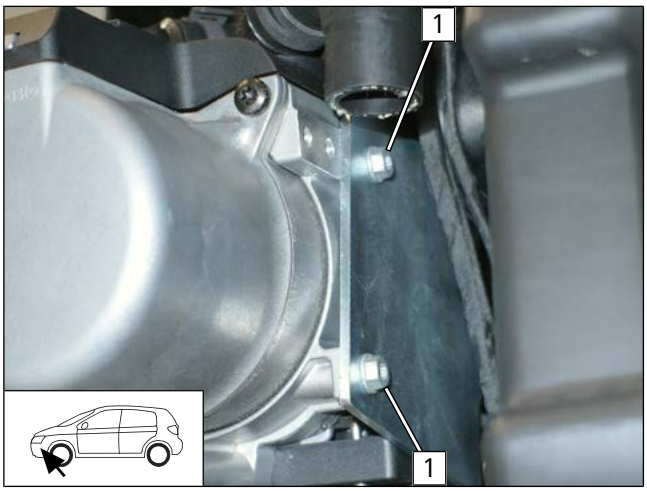


Fig. 25

1 5x13 self-tapping bolt

Mounting wiring harnesses

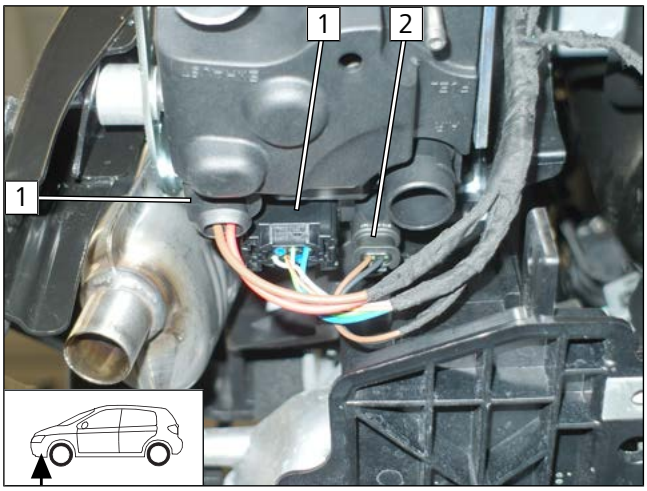


Fig. 26

1 Heater wiring harness connector
2 Coolant pump wiring harness connector

9 Fuel

DANGER

Risk of fire and explosion due to leaking fuel and escaping fuel vapours.

The incorrect installation of the fuel extractor can cause damage and fire.

- ▶ Avoid electrostatic discharges and open fire
- ▶ When working on the fuel system, ensure sufficient ventilation and bleeding
- ▶ Open the fuel tank cap of the vehicle
- ▶ Ventilate the fuel tank
- ▶ Re-close the tank lock
- ▶ Catch any fuel running off with an appropriate container

Danger of damage to components

- ▶ Install fuel line and fuel pump wiring harness so that they are protected against stone impact
- ▶ Provide rub protection for fuel line and wiring harness in areas where there are sharp edges

Dismantling fuel pump connector X7

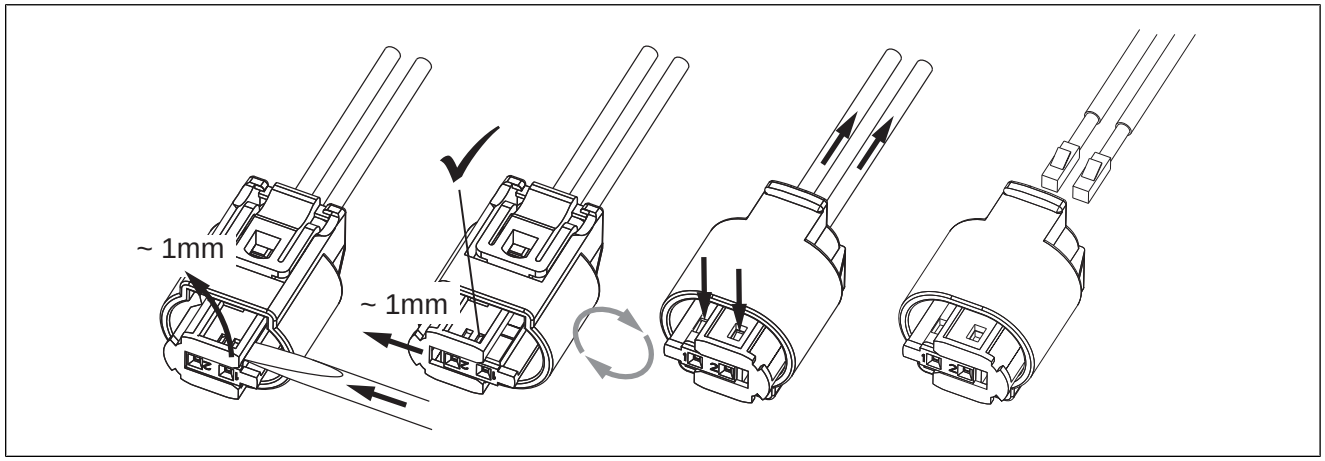


Fig. 27

9.1 Routing fuel line

Connection to heater

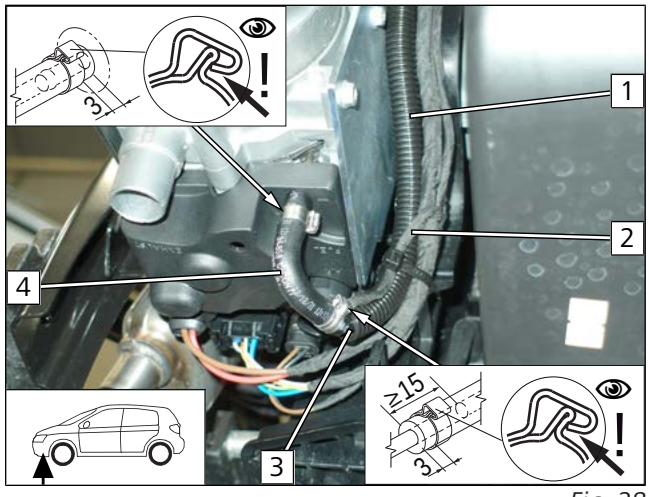


Fig. 28

- ▶ Draw fuel line [3] and fuel pump wiring harness [2] into corrugated tube [1].

  [4] 90° moulded hose, Ø10 clamp [2x]

Installing lines

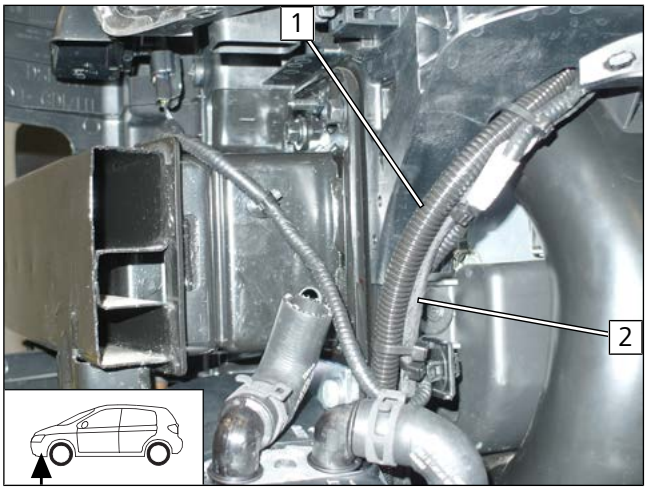


Fig. 29

▶ Route corrugated tube 1 with fuel line and fuel pump wiring harness in the engine compartment and attach together with HG cable tie 2 using cable ties.

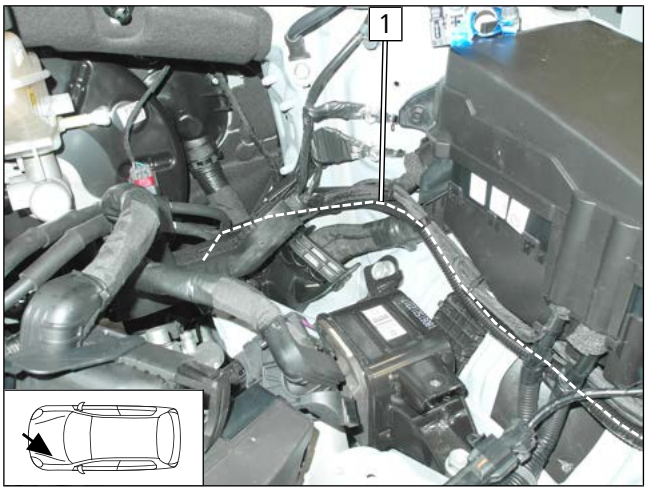


Fig. 30

▶ Route corrugated tube 1 with fuel line and fuel pump wiring harness on original vehicle wires to firewall and further to the underbody.

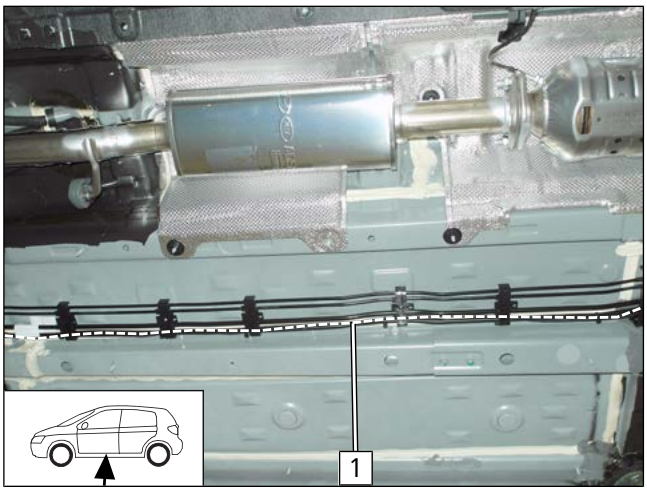


Fig. 31

▶ Route fuel line, fuel pump wiring harness 1 on original vehicle lines to fuel pump installation location.

Premounting fuel pump

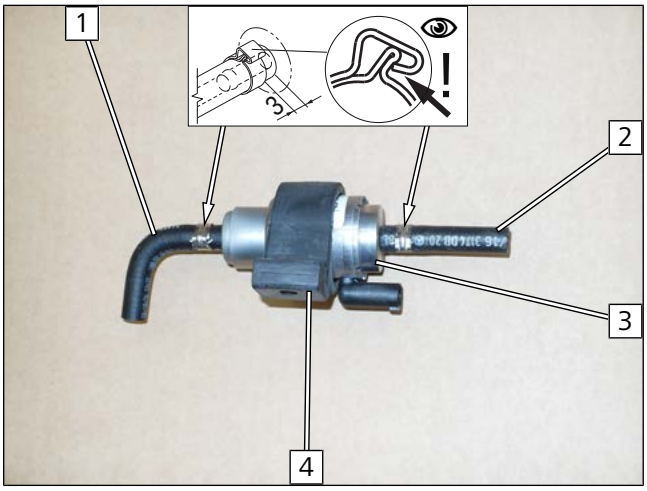


Fig. 32

1 90° moulded hose, Ø10 clamp
2 Hose section, Ø10 clamp
3 Fuel pump
4 Fuel pump mount

Preparing fuel pump installation location

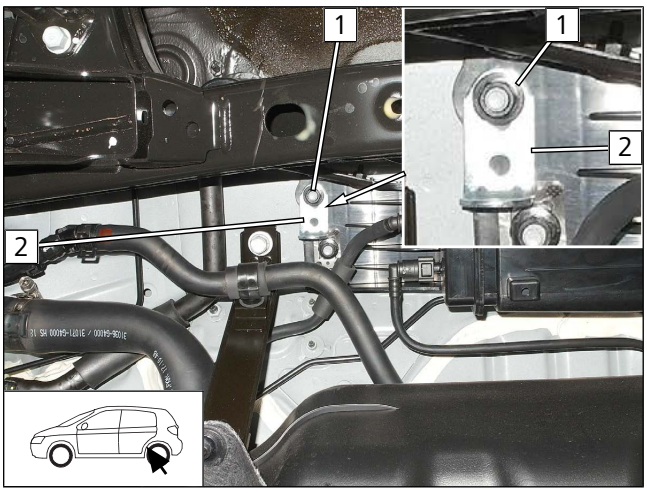


Fig. 33

1 Original vehicle stud bolt, flanged nut
2 Angle bracket

Mounting fuel pump

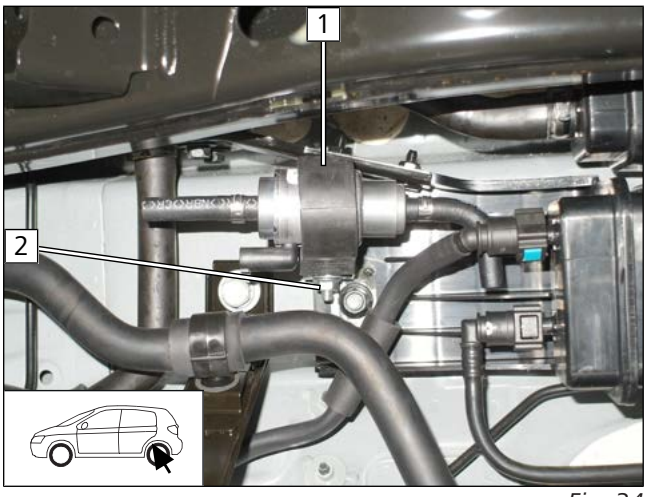


Fig. 34

1 Premounted fuel pump
2 M6x25 bolt, support angle bracket, premounted fuel pump, angle bracket, flanged nut

Assembling fuel pump connector X7

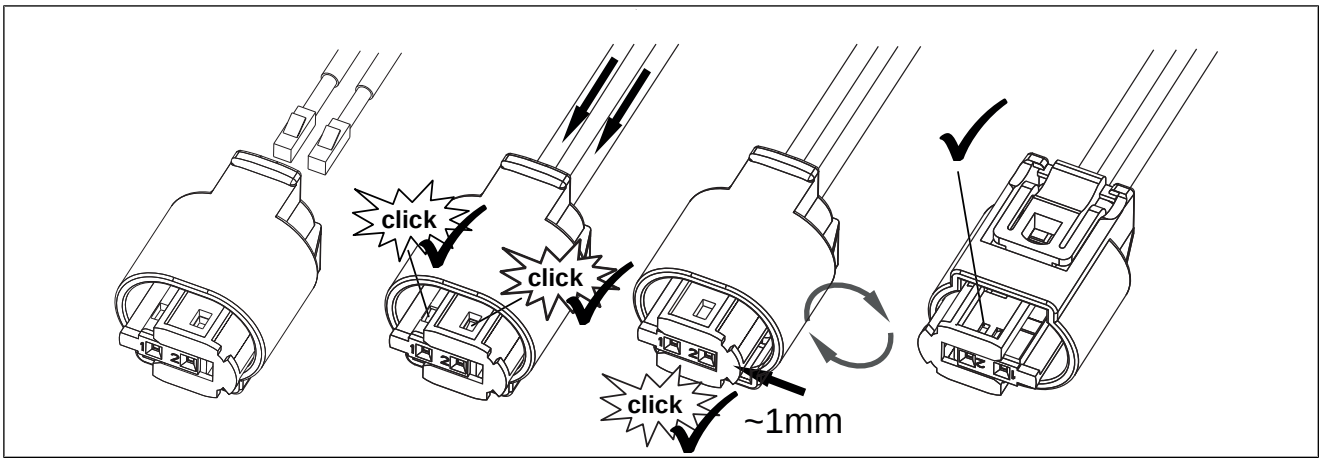


Fig. 35

Connecting fuel pump

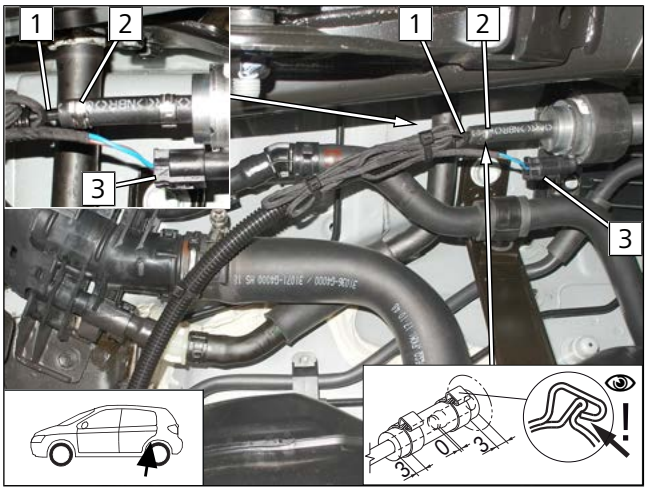


Fig. 36

1 Heater fuel line
2 Ø10 clamp
3 Fuel pump wiring harness, connector X7 mounted

9.2 Installing FuelFix 73kW

Assigning drilling template

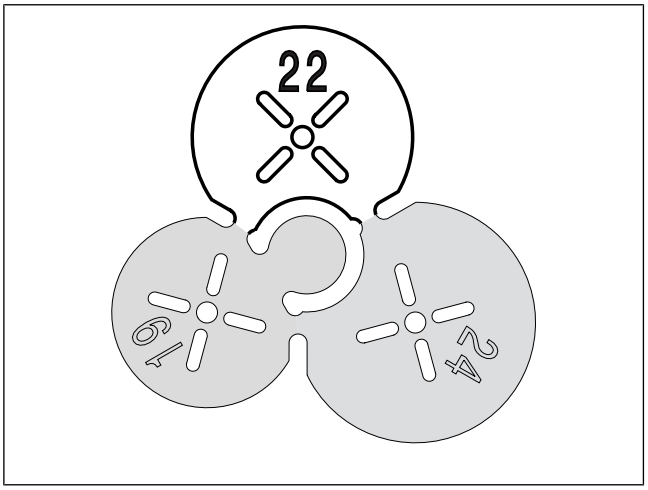


Fig. 37

Work steps F1, F2

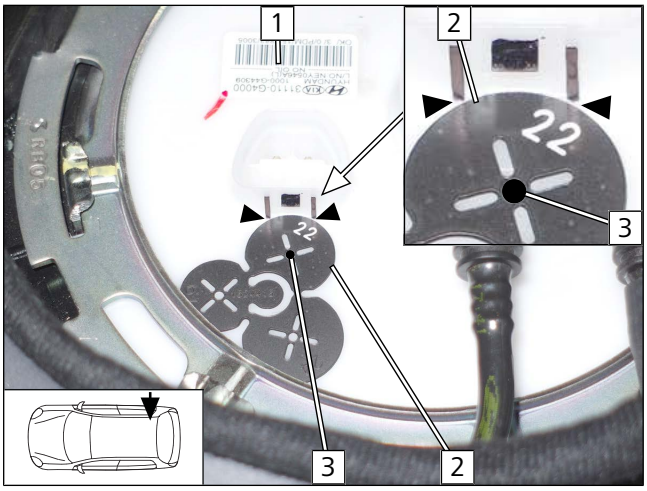


Fig. 38

Observe the installation instructions of the tank extracting device.

[1] Tank fitting
[2] Position Ø22 drilling template as shown in fig.
[3] Copy hole pattern

Work step F3

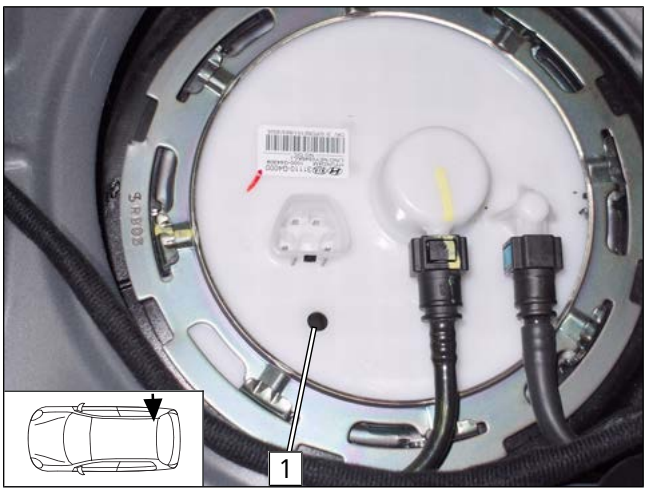


Fig. 39

DANGER
Risk of fire and explosion due to leaking fuel and escaping fuel vapours.

[1] Hole made with provided drill

Work step F5

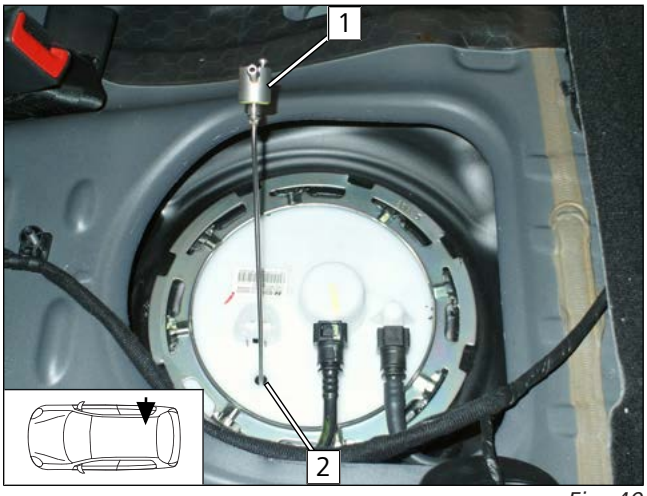


Fig. 40

▶ Insert FuelFix [1] into hole [2].

Fig. 41

Work steps F5.3, F5.4

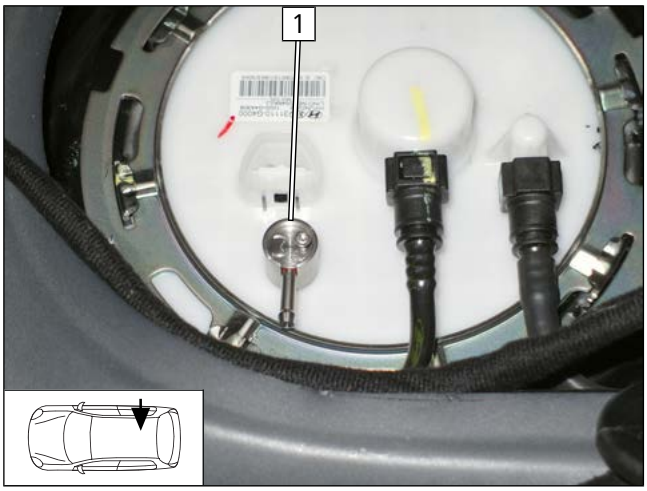


Fig. 42

▶ Align FuelFix 1 as shown in figure.

Work step F6

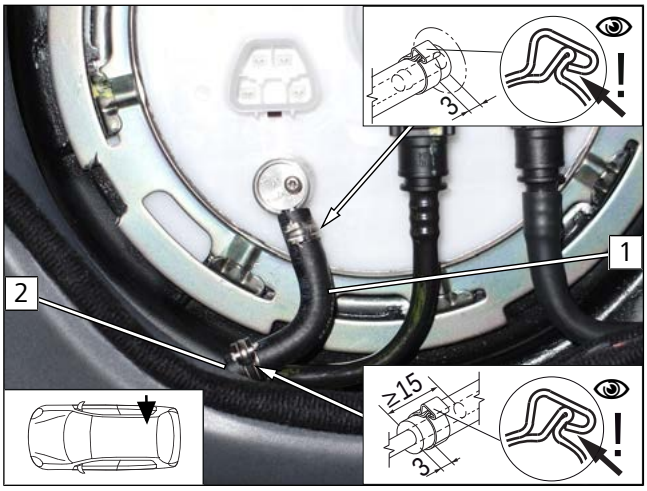


Fig. 43

1 90° moulded hose, Ø10 clamp [2x]
2 Fuel line

Work step F7

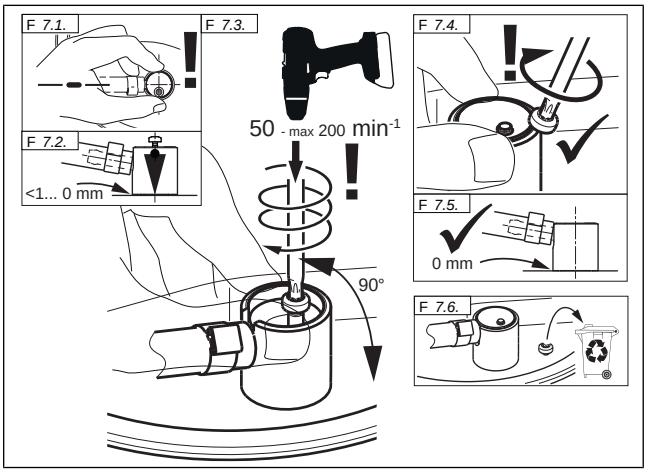


Fig. 44

DANGER

Risk of fire and explosion due to leaking fuel and escaping fuel vapours.

Work step F8

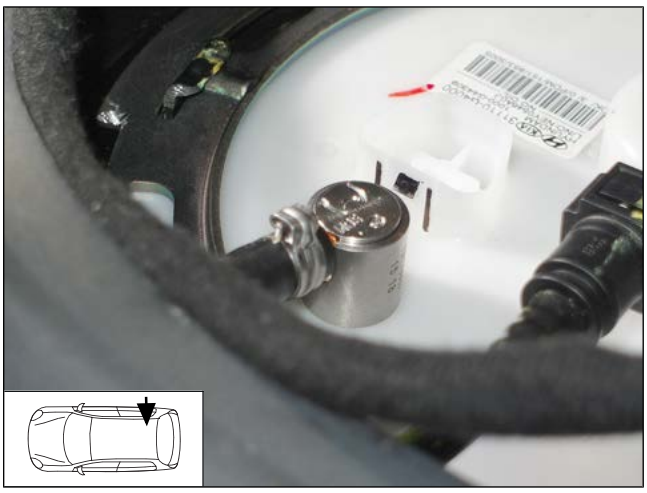


Fig. 45

▶ Checking firm seating of FuelFix

Securing fuel line

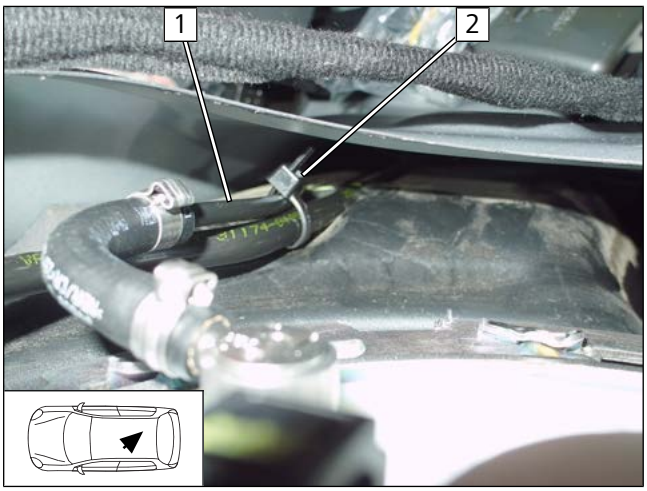


Fig. 46

▶ Secure fuel line 1 using cable tie 2 for tension relief.

9.3 Installing FuelFix 103kW

Assigning drilling template

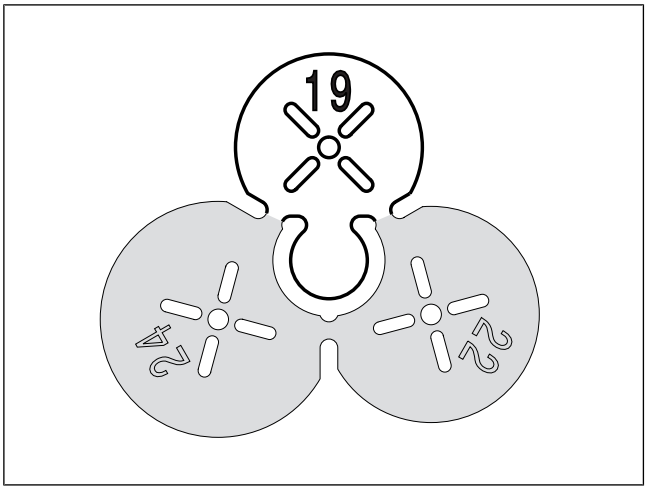


Fig. 47

Work steps F1, F2

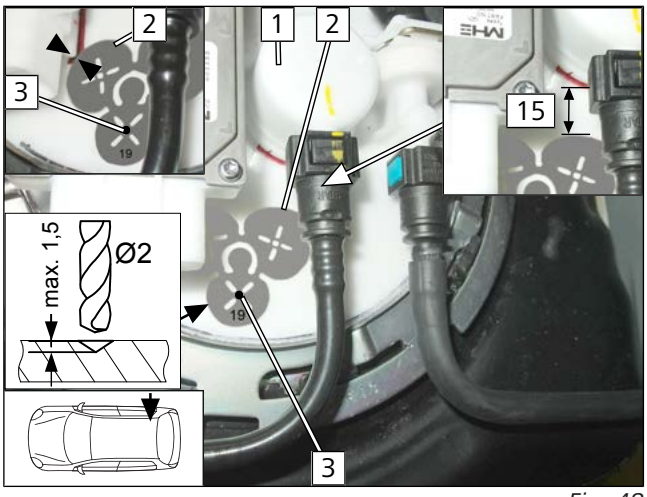


Fig. 48

Observe the installation instructions of the tank extracting device.

1 Tank fitting
2 Position Ø19 drilling template as shown in fig.
3 Ø2 centring hole

Work step F3

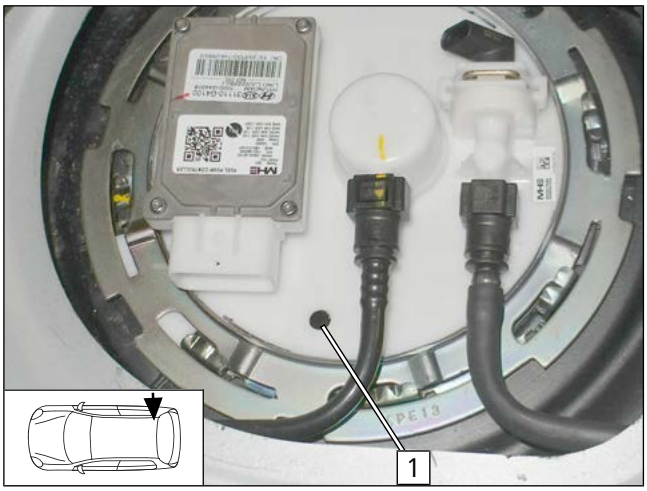


Fig. 49

DANGER

Risk of fire and explosion due to leaking fuel and escaping fuel vapours.

1 Hole made with provided drill

Work step F4

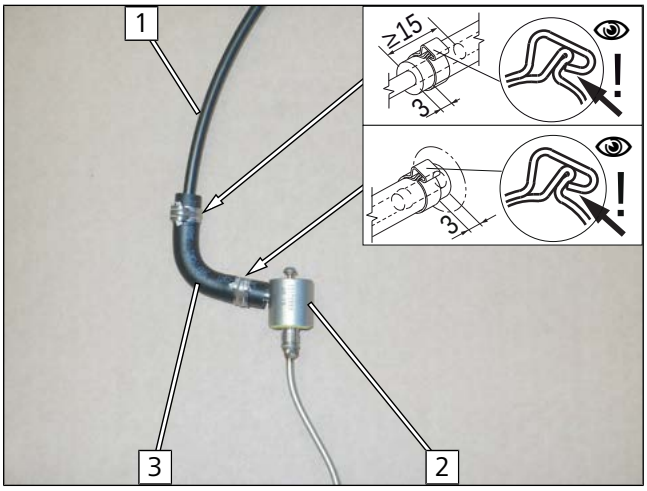


Fig. 50

▶ Bend FuelFix [2] as shown in template and cut to length.

[1] Fuel line

[3] 90° moulded hose, Ø10 clamp [2x]

Work step F5

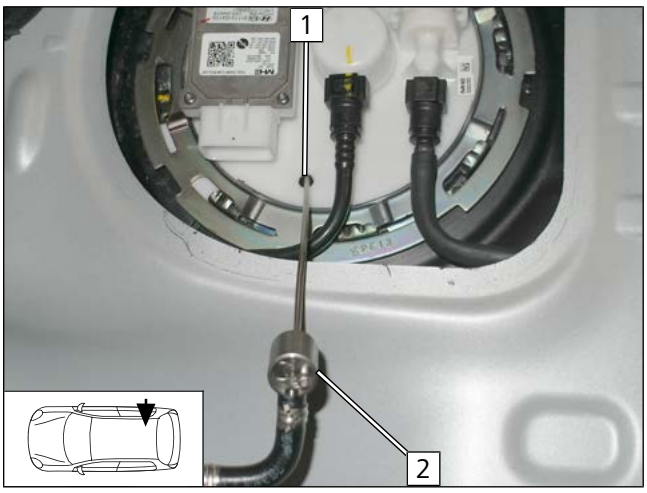


Fig. 51

▶ Insert FuelFix [2] into hole [1].

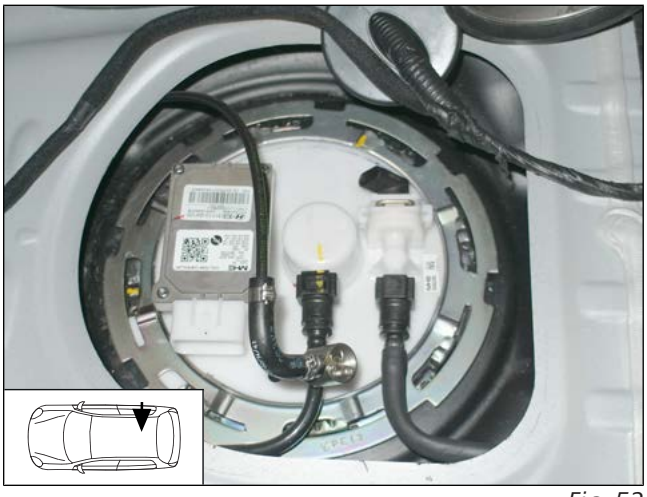


Fig. 52

Work steps F5.3, F5.4

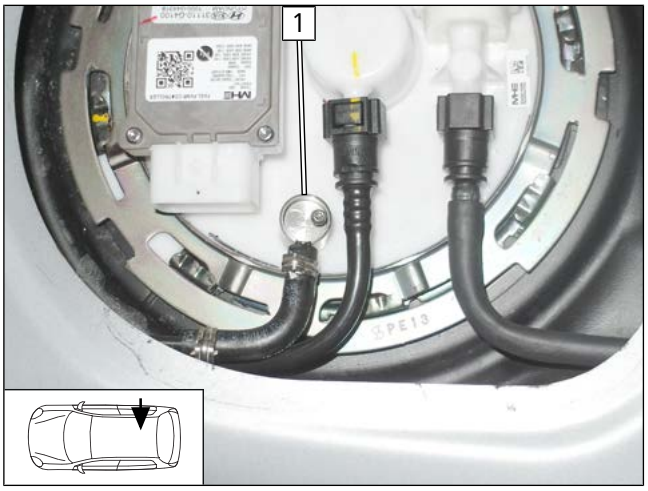


Fig. 53

▶ Align FuelFix [1] as shown in figure.

Work step F7

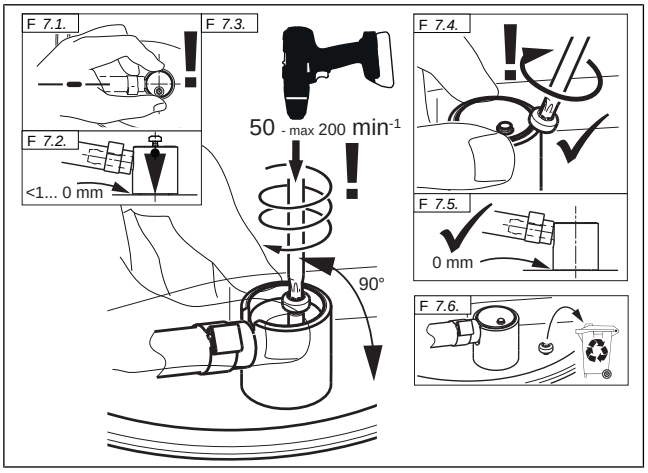


Fig. 54

DANGER

Risk of fire and explosion due to leaking fuel and escaping fuel vapours.

Work step F8

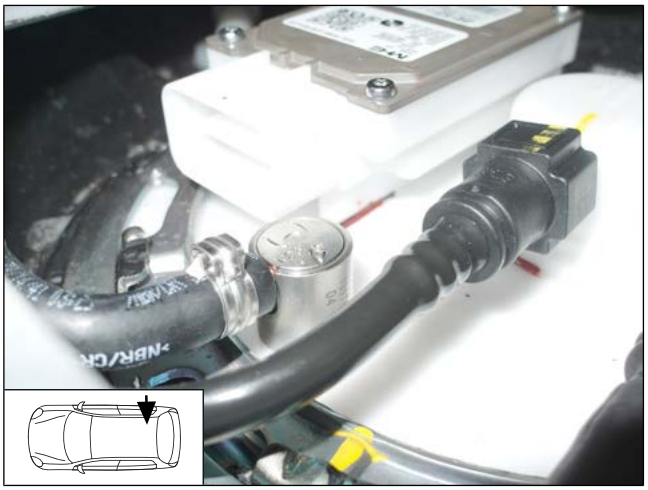


Fig. 55

Securing fuel line

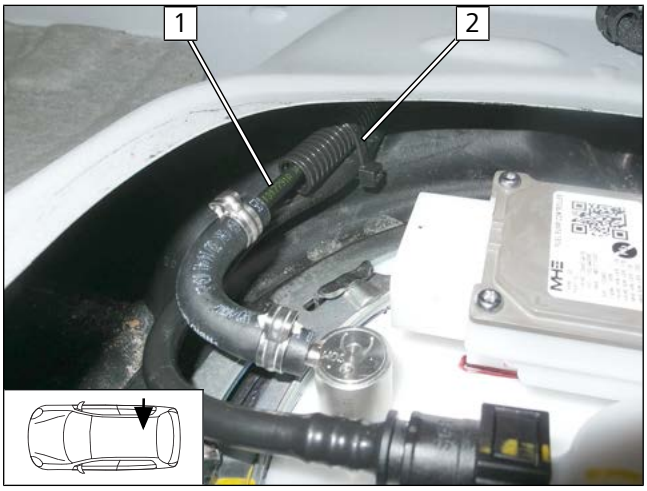


Fig. 56

▶ Insert fuel line 1 into corrugated tube and secure using cable tie 2 for tension relief.

9.4 Fuel pump connection

Connecting fuel line of FuelFix

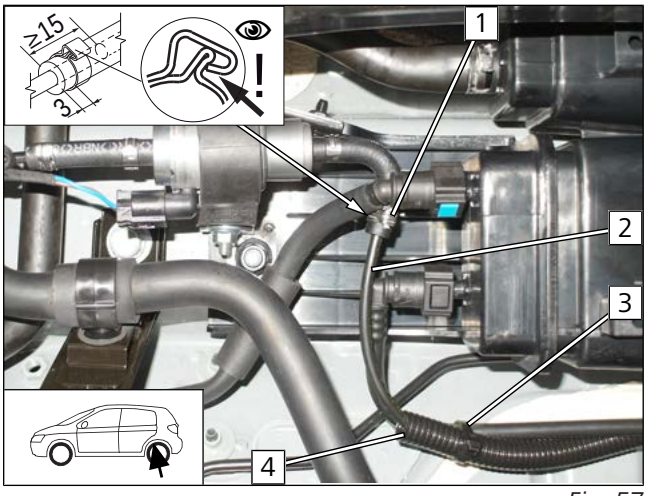


Fig. 57

1 Ø10 clamp
2 Fuel line of FuelFix
3 Cable tie
4 FuelFix fuel line in corrugated tube

10 Coolant

10.1 Preliminary Work

Removing original vehicle clip

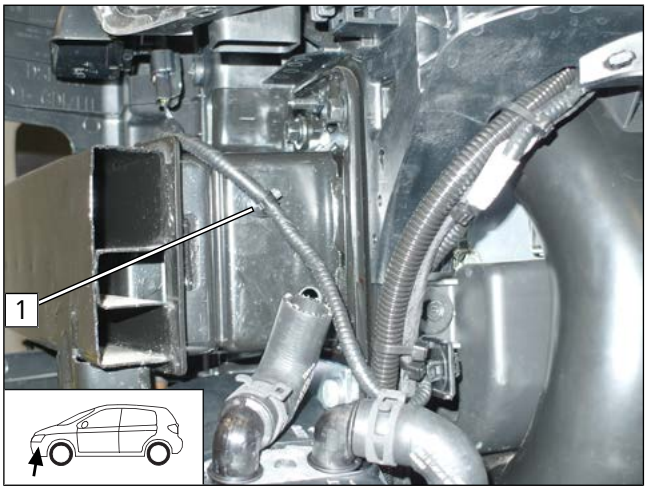


Fig. 58

1 Original vehicle clip

Inserting rivet nut

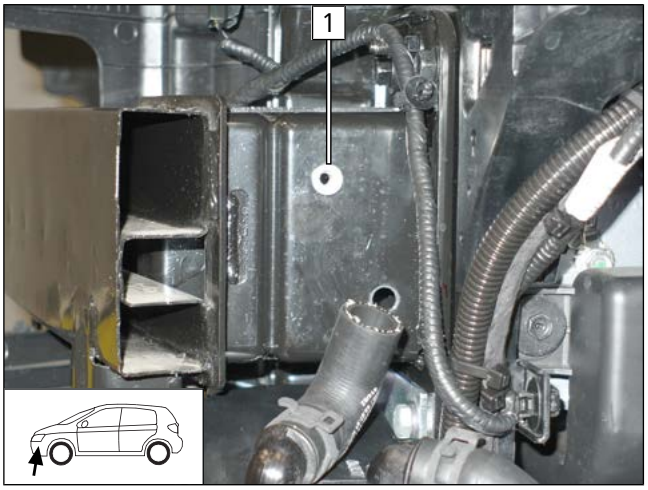


Fig. 59

1 Rivet nut

Preparing coolant pump perforated bracket

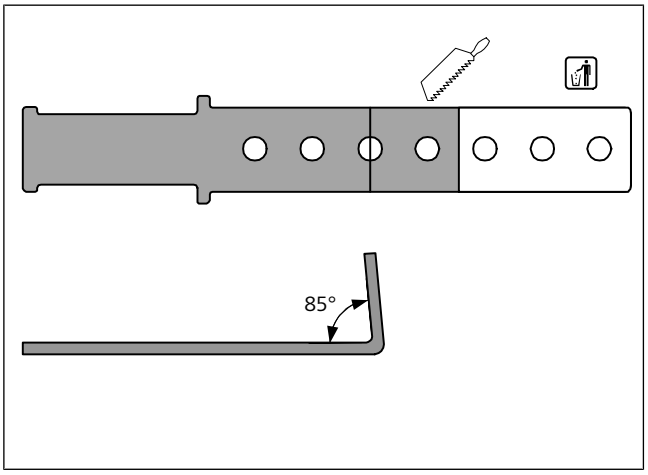


Fig. 60

Mounting coolant pump perforated bracket

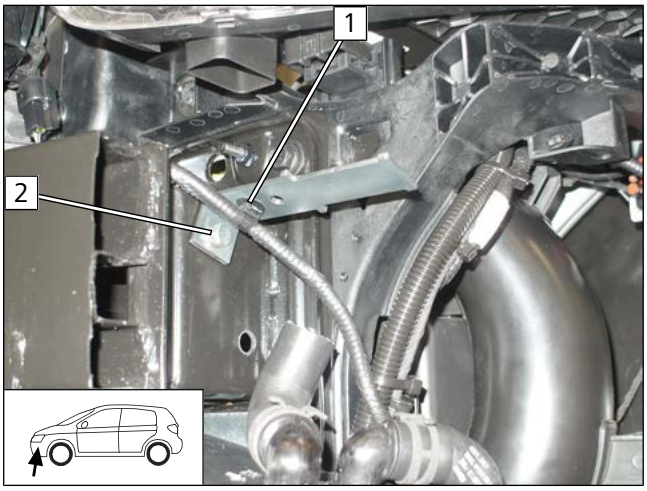


Fig. 61

▶ Fasten original vehicle clip **1** as shown.

2 M6x20 bolt, spring lock washer, coolant pump perforated bracket, rivet nut

Premounting coolant pump

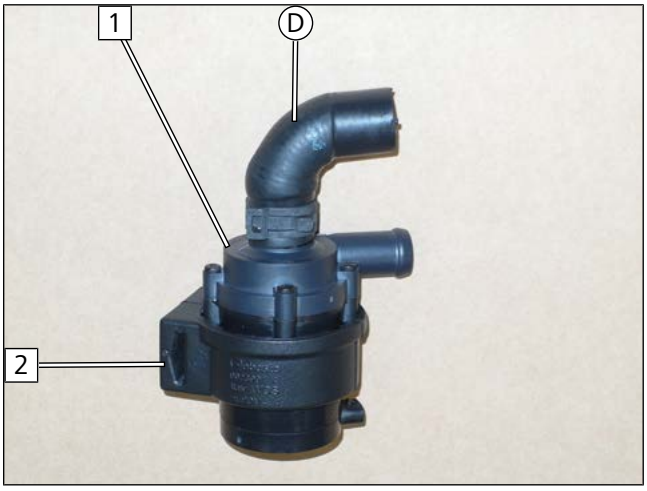


Fig. 62

All spring clips Ø25

1 Coolant pump

2 Coolant pump mount

Mounting coolant pump

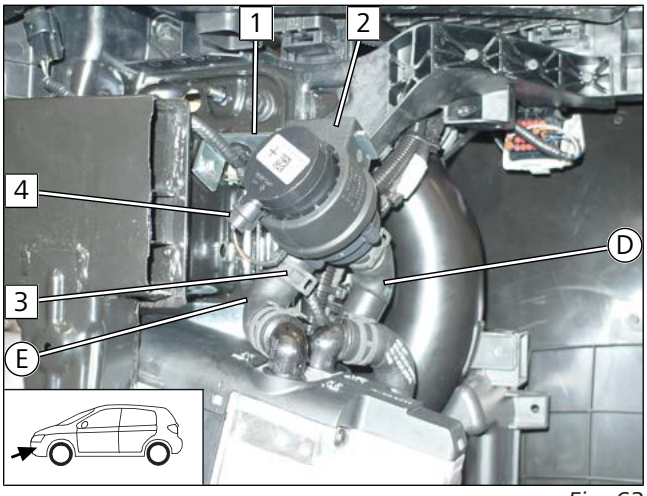


Fig. 63

1 Coolant pump perforated bracket

2 Coolant pump mount

3 Ø25 spring clip

4 Coolant pump wiring harness connector

Cutting heat shrink plastic tubing to length

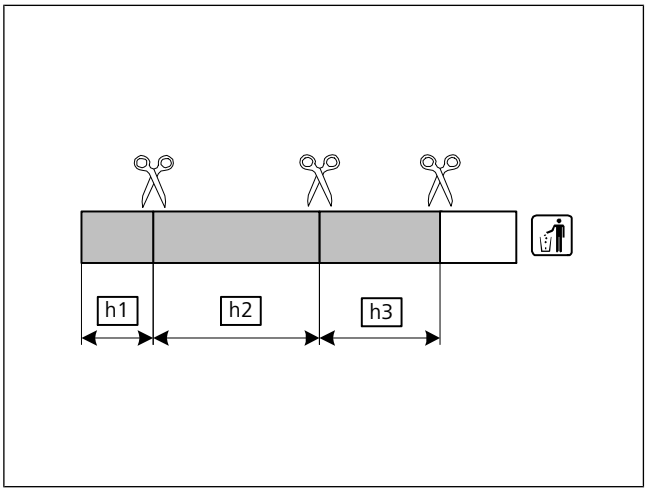


Fig. 64

	73 kW	103 kW
h1	90	90
h2	350	500
h3	200	200

Creating hose group

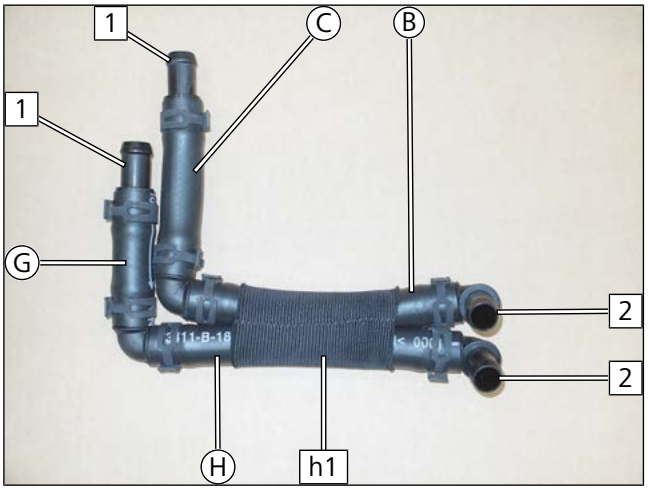


Fig. 65

All spring clips Ø25

▶ After pre-assembling, shrink heat shrink plastic tubing **h1**.

1 18x18 connecting pipe
2 90°, 18x18 connecting pipe

Mounting hose group

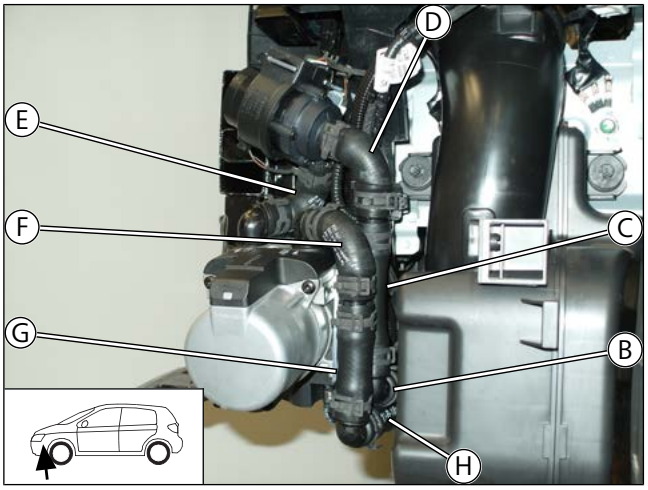


Fig. 66

Preparing perforated bracket

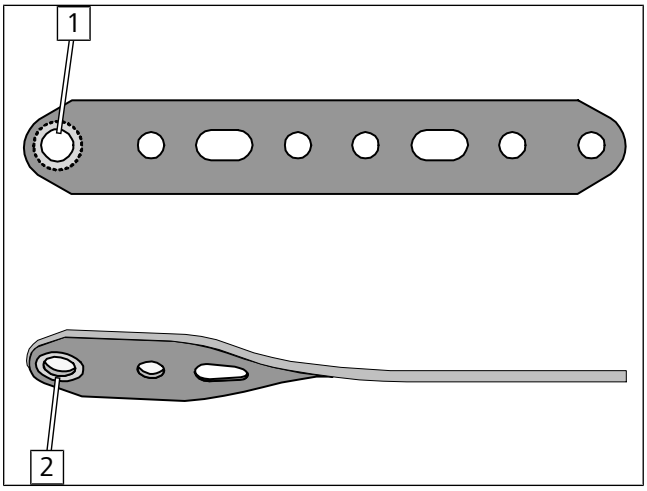


Fig. 67

▶ Enlarge hole in perforated bracket at position **1** to Ø8 and countersink with a Ø12 drill bit on the back side.

2 Countersunk Ø8 hole

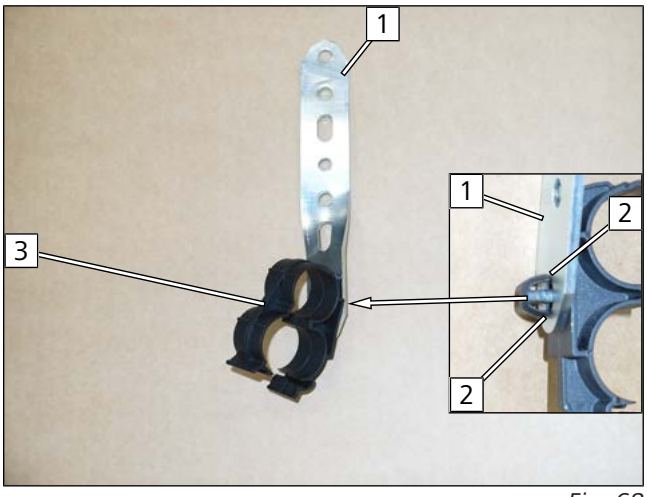


Fig. 68

Ensure correct assembly of hose bracket **3** at position **2**.

1 Prepared perforated bracket

10.2 Hose routing diagram

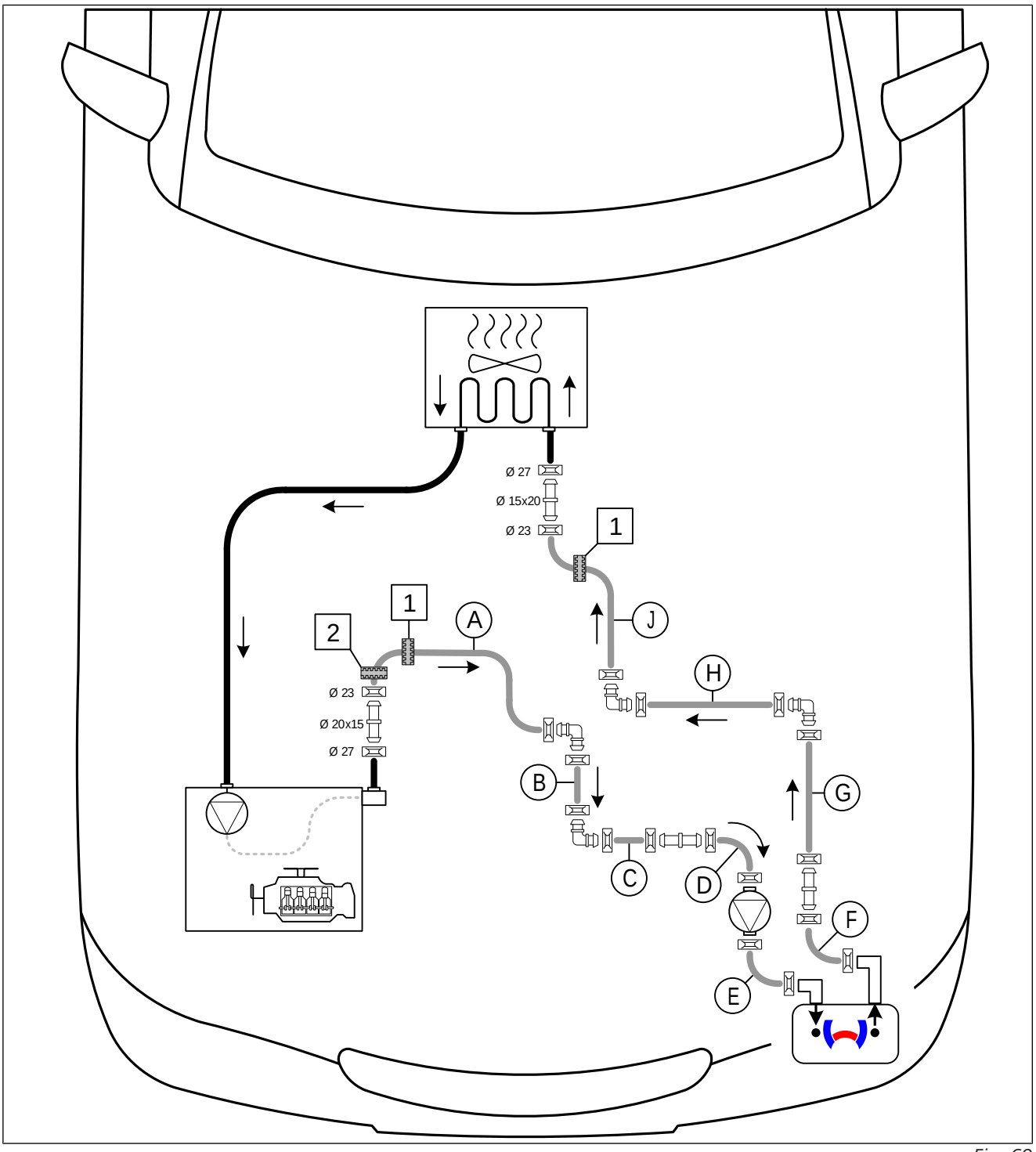


Fig. 69

All spring clips without a specific designation = Ø25

All connecting pipes without a specific designation and = 18x18

1 Black (sw) rubber isolator (103 kW only), 2 Black (sw) rubber isolator (73 kW only)

10.3 Coolant circuit installation for 73 kW

Installing perforated bracket

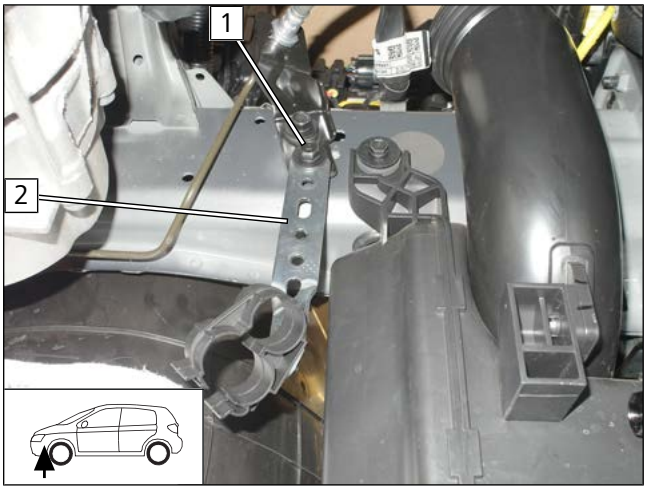


Fig. 70

1 Original vehicle bolt
2 Premounted perforated bracket

Installing cable tie

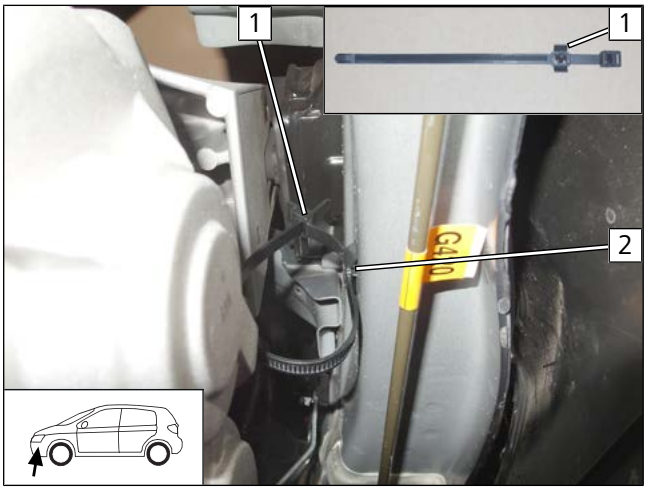


Fig. 71

1 Eyelet cable tie
2 Original vehicle hole

Premounting perforated bracket

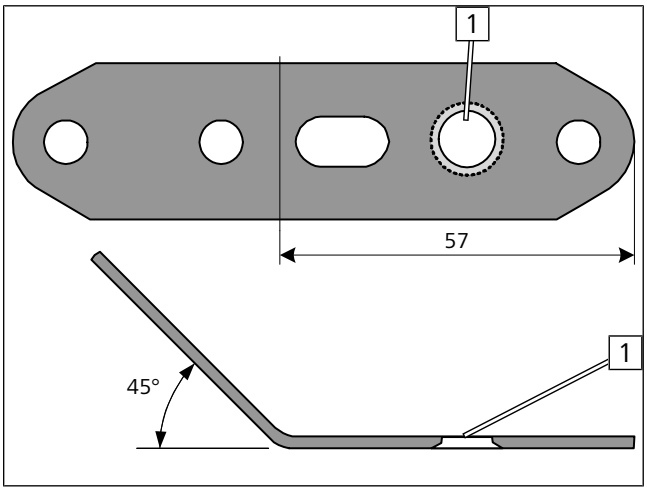


Fig. 72

▶ Enlarge hole **1** to Ø8 and countersink using a Ø12 drill bit.

Installing perforated bracket

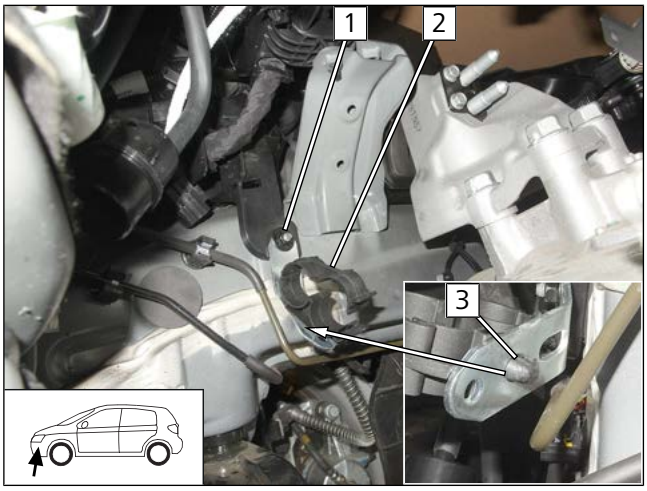


Fig. 73

Ensure correct assembly of hose bracket **2** at position **3**.

1 Available stud bolt with flanged nut

Premounting hoses Ⓐ and Ⓙ

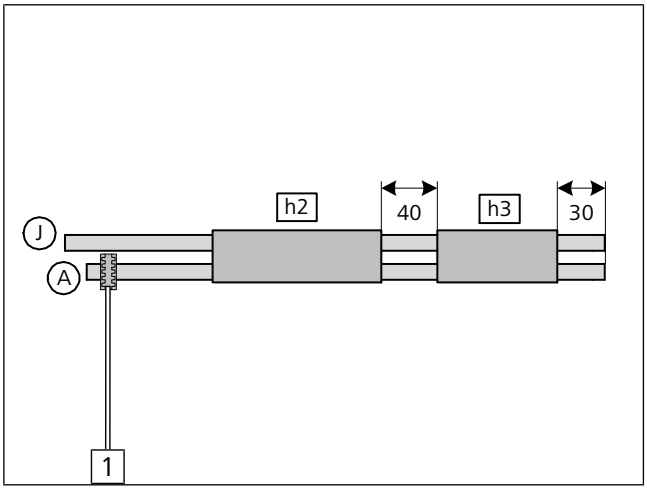


Fig. 74

▶ Slide on heat shrink plastic tubings **h2** and **h3** as shown and shrink.

1 Position black (sw) rubber isolator

Mounting hose group

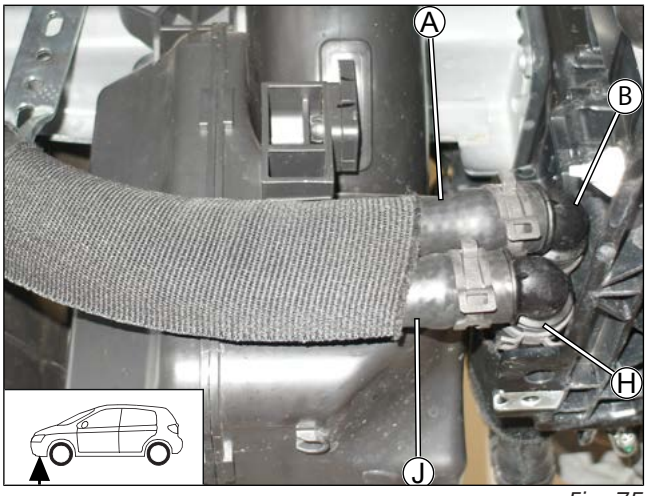


Fig. 75

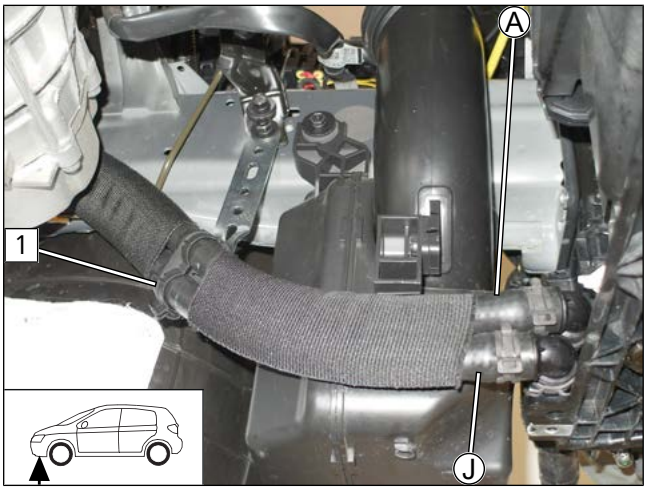


Fig. 76

▶ Close hose bracket **1**.

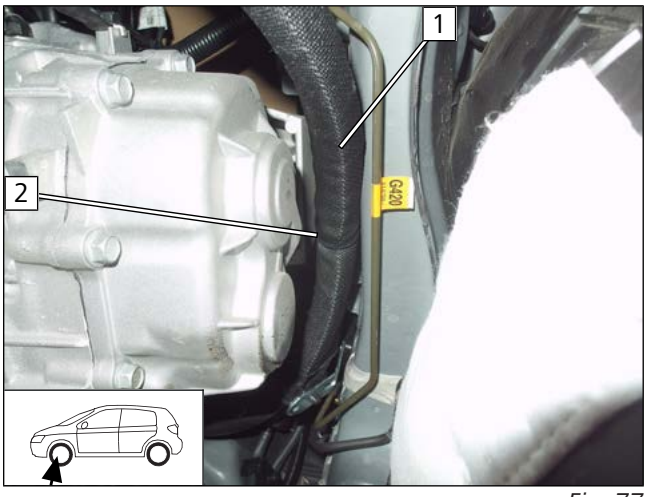


Fig. 77

1 Hose group
2 Tighten cable tie

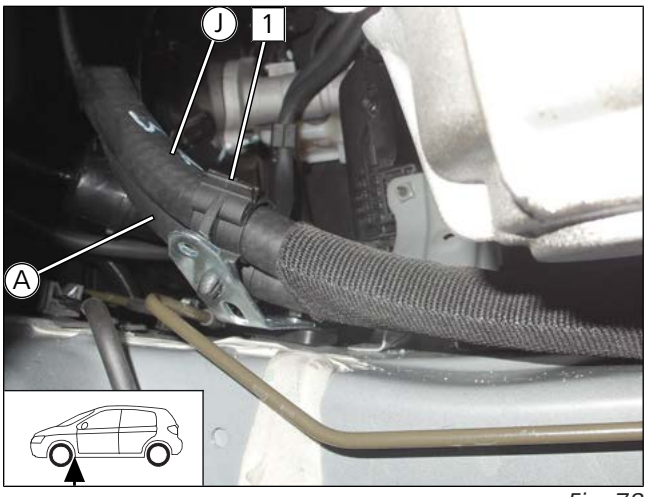


Fig. 78

▶ Close hose bracket **1**.

Cutting point

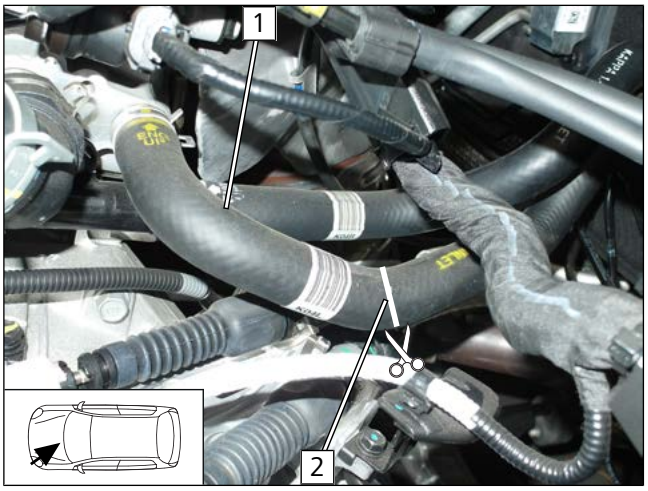


Fig. 79

▶ Cut engine outlet / heat exchanger inlet hose 1 at position 2 as shown.

2 Cutting point

Heat exchanger inlet connection

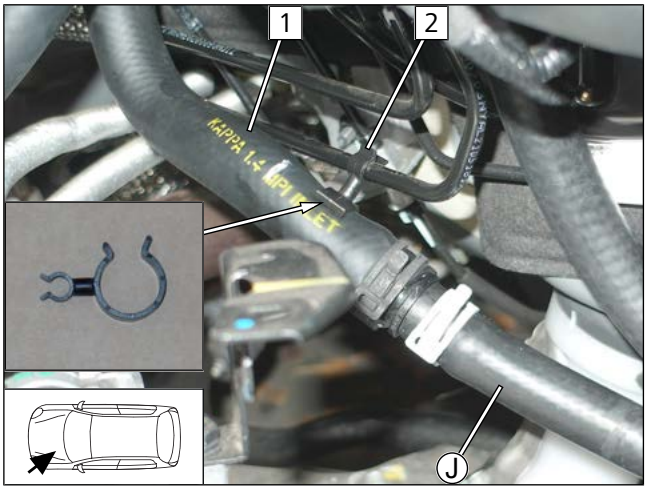


Fig. 80

1 Heat exchanger inlet hose section

2 9x22 hose bracket

Engine outlet connection

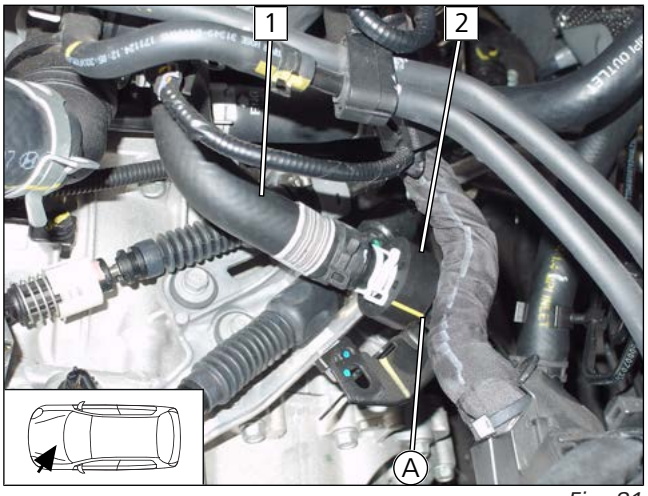


Fig. 81

1 Engine outlet hose section

2 Position black (sw) rubber isolator

Fastening hoses

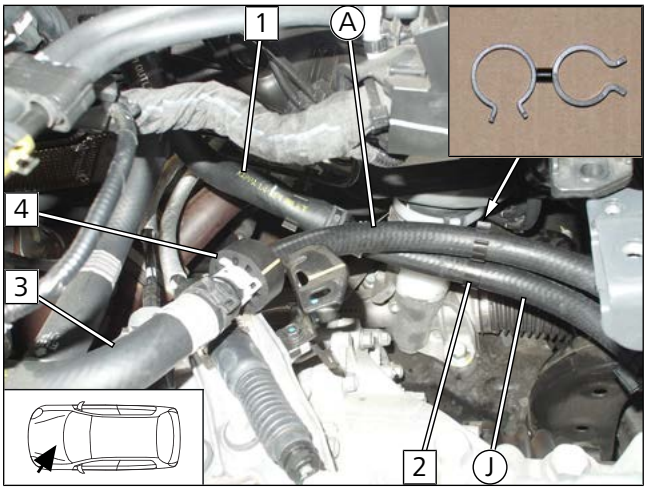


Fig. 82

Danger of damage to components

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

1 Heat exchanger inlet hose section
2 25x25 hose bracket
3 Engine outlet hose section
4 Position black (sw) rubber isolator

10.4 Coolant circuit installation for 103 kW

Installing perforated bracket

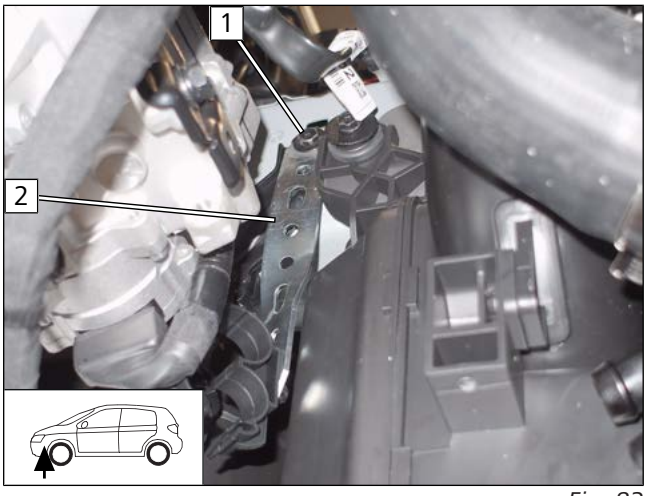


Fig. 83

1 Original vehicle bolt
2 Premounted perforated bracket

Premounting hoses Ⓐ and Ⓙ

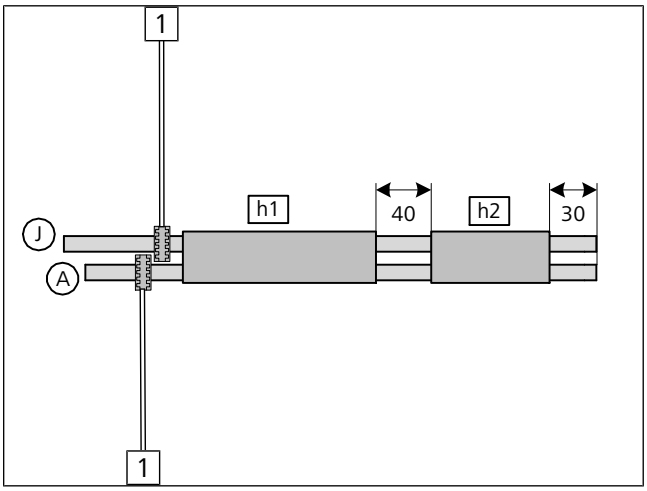


Fig. 84

▶ Slide on heat shrink plastic tubings **h2** and **h3** as shown and shrink.

1 Position black (sw) rubber isolator

Mounting hose group

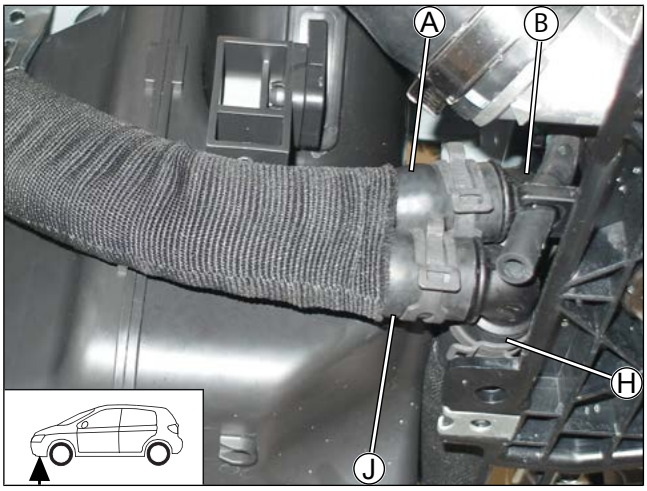


Fig. 85

Routing hose group

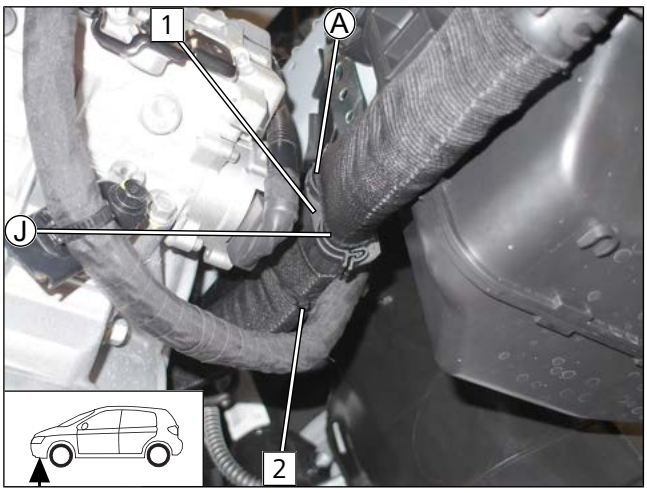


Fig. 86

▶ Close hose bracket **1**.

1 Cable tie around hose group and original vehicle wiring harness

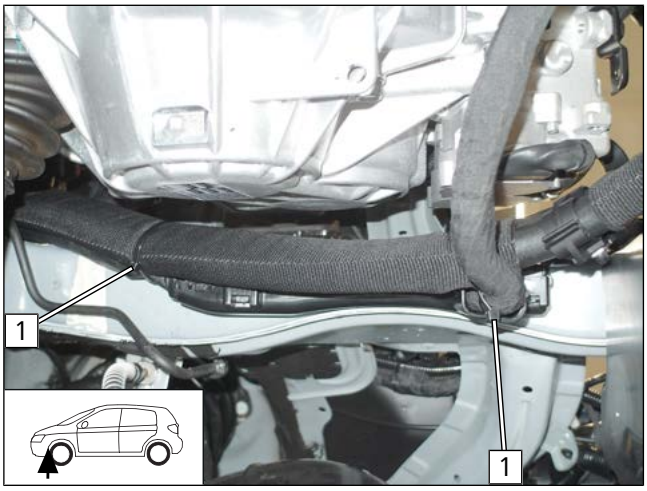


Fig. 87

1 Cable tie around hose group and original vehicle wiring harness

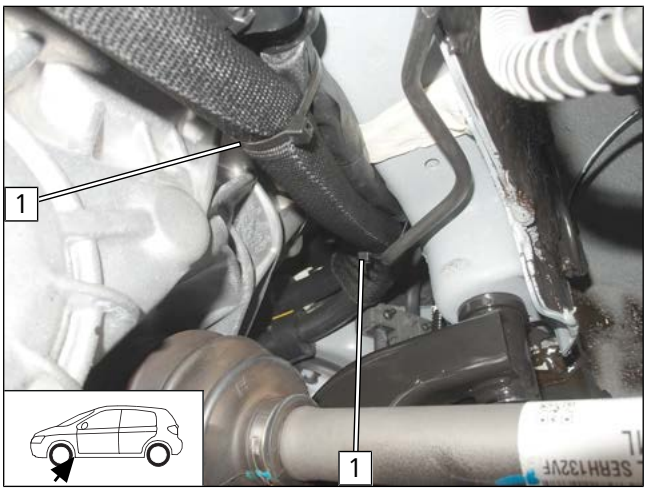


Fig. 88

1 Cable tie around hose group and original vehicle wiring harness

Removing engine outlet / heat exchanger inlet hose

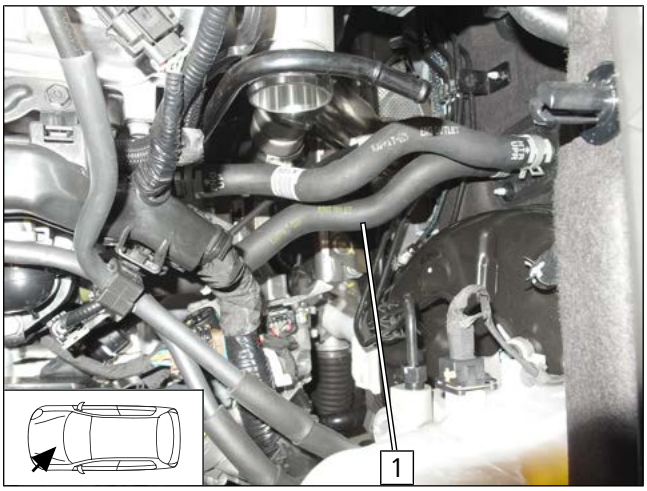


Fig. 89

- ▶ Disconnect engine outlet / heat exchanger inlet hose 1.
- ▶ Original vehicle spring clips will be reused.

Cutting point

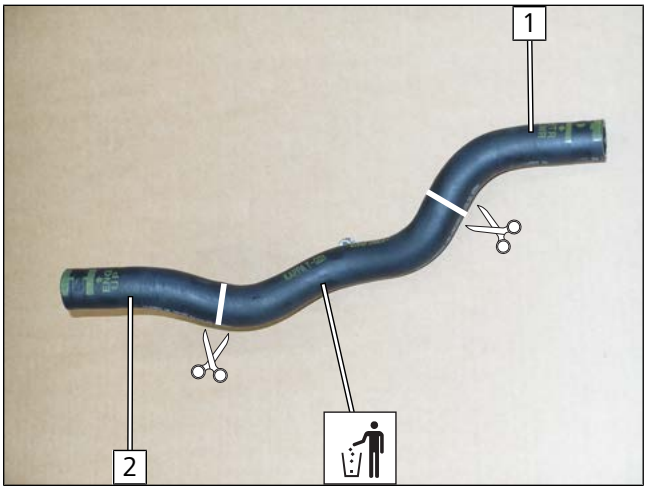


Fig. 90

1 Heat exchanger inlet hose section
2 Engine outlet hose section

Mounting hoses

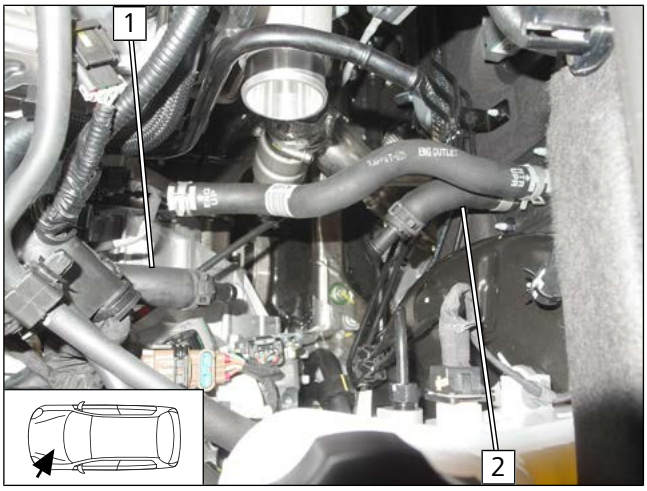


Fig. 91

1 Engine outlet hose section
2 Heat exchanger inlet hose section

Heat exchanger inlet connection

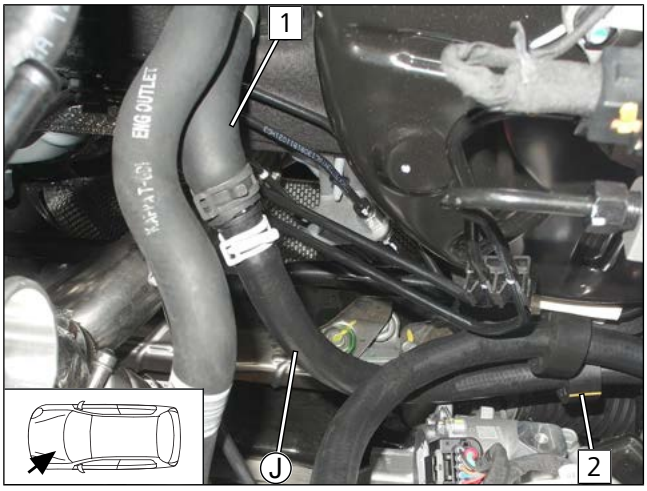


Fig. 92

1 Heat exchanger inlet hose section
2 Black (sw) rubber isolator

Engine outlet connection

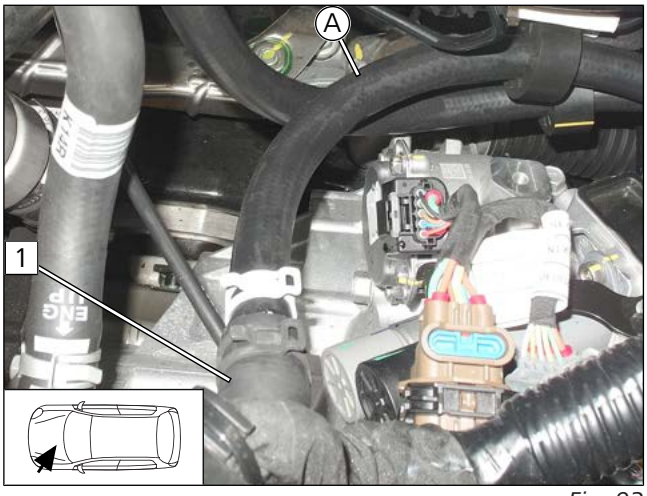


Fig. 93

1 Engine outlet hose section

Fastening hoses

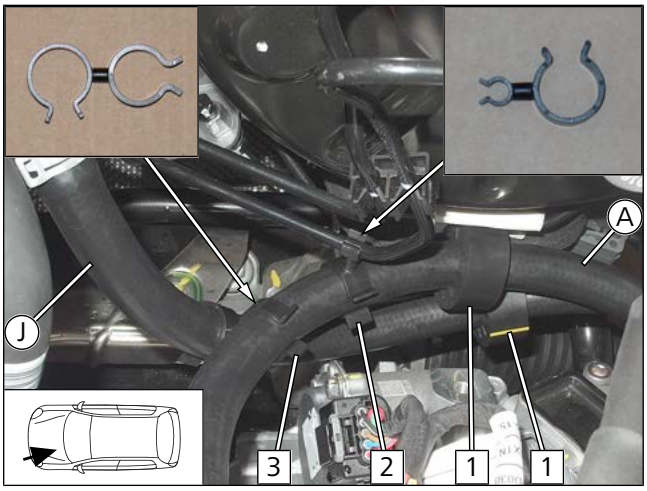


Fig. 94

Danger of damage to components

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

1 Position black (sw) rubber isolator
2 9x22 hose bracket
3 25x25 hose bracket

11 Combustion air

Drilling hole

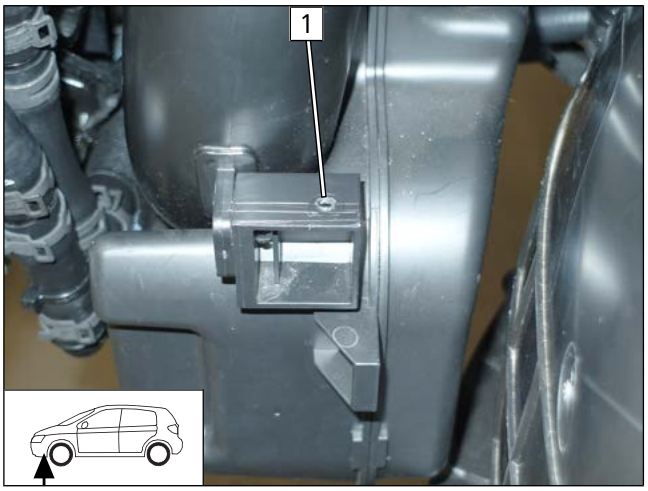


Fig. 95

1 Ø5.5 hole

Mounting combustion air intake pipe s1

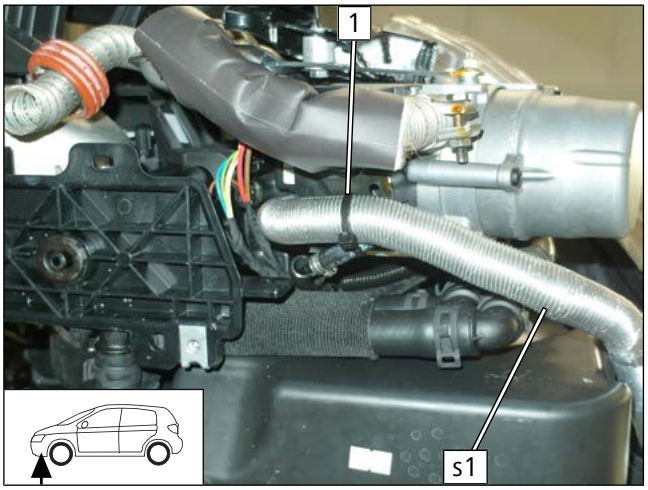


Fig. 96

Observe the installation instructions of the combustion air intake silencer.

1 Cable tie

Mounting combustion air intake silencer

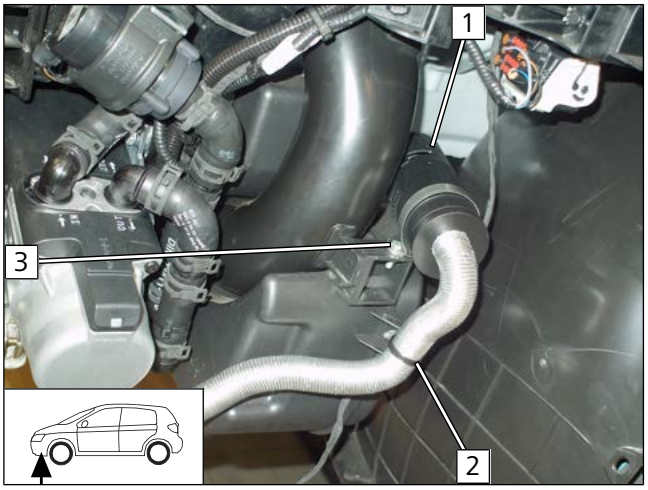


Fig. 97

1 Combustion air intake silencer
2 Cable tie
3 M5x16 bolt, Ø51 clamp, drilled hole, flanged nut

12 Exhaust

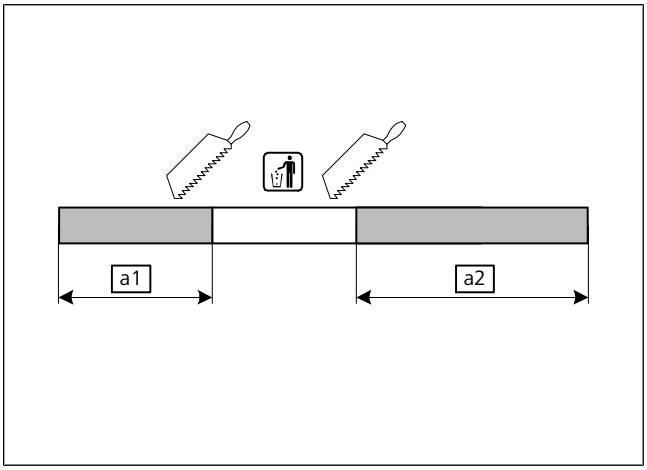


Fig. 98

a1 220
a2 400

Mounting exhaust pipe **a1**

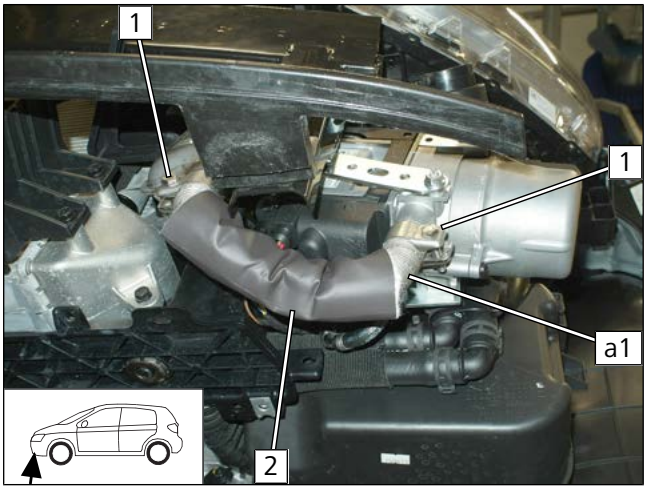


Fig. 99

▶ Push heat protection **2** onto exhaust pipe **a1** before the installation.

1 Hose clamp

Mounting exhaust pipe **a2**

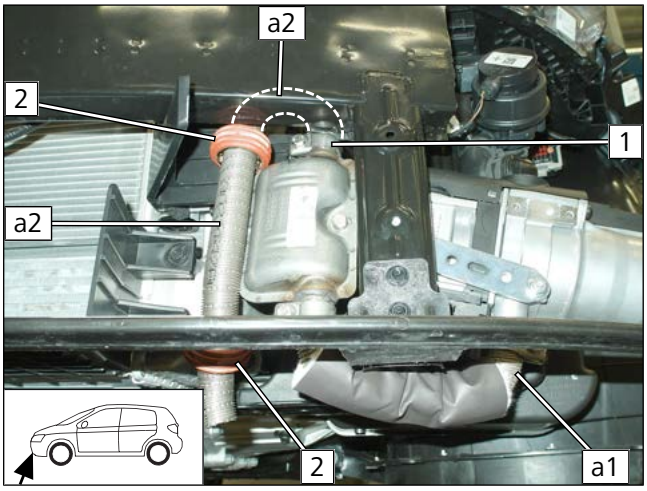


Fig. 100

1 Hose clamp
2 Position ASH

Preparing EFIX

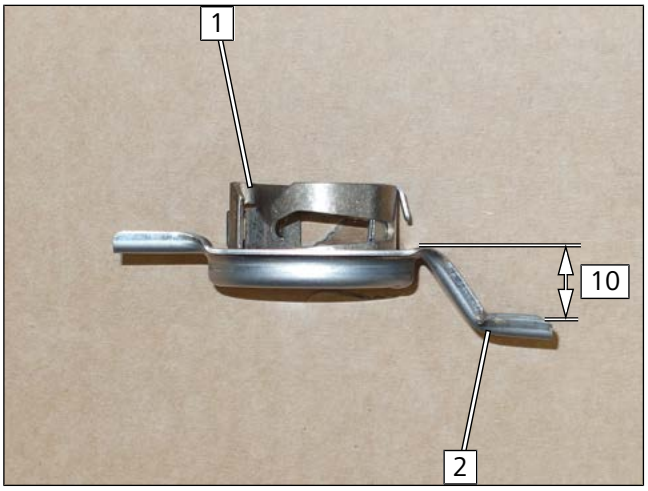


Fig. 101

▶ Bend tab 2 as shown.

1 EFIX

Work step E1

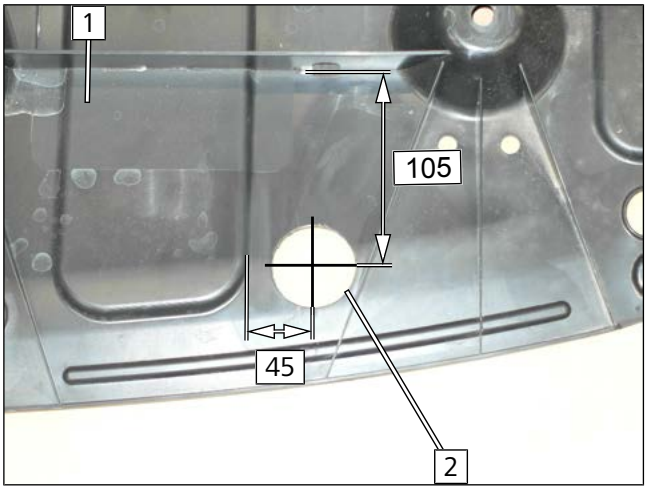


Fig. 102

Observe the EFIX installation instructions.

▶ Mounting exhaust end fastener

1 Underride protection

2 Copy hole pattern, hole

Work steps E3 and E4

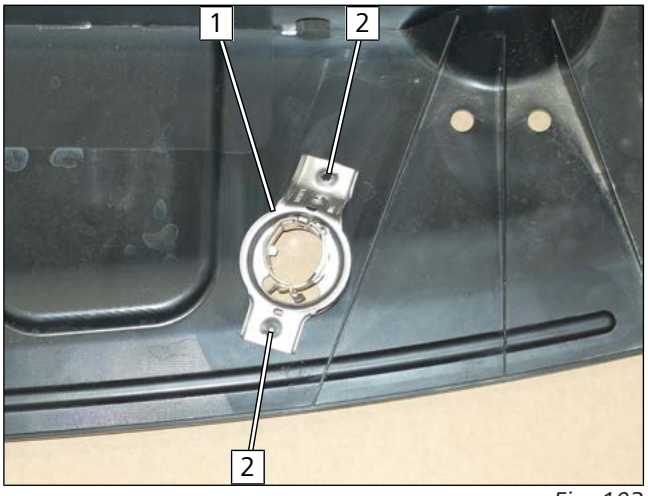


Fig. 103

▶ Position EFIX 1 in the middle of the drilled hole as shown.

2 Copy hole pattern, hole

Work step E5

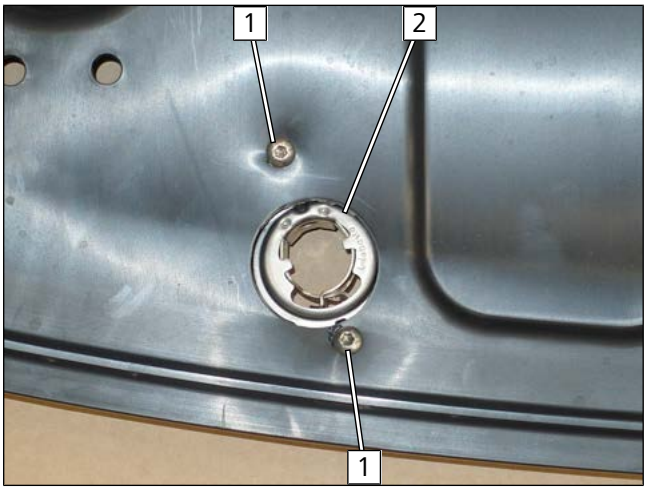


Fig. 104

▶ Mount EFIX **2**.

1 5x13 self-tapping screw

Work steps E6-E8

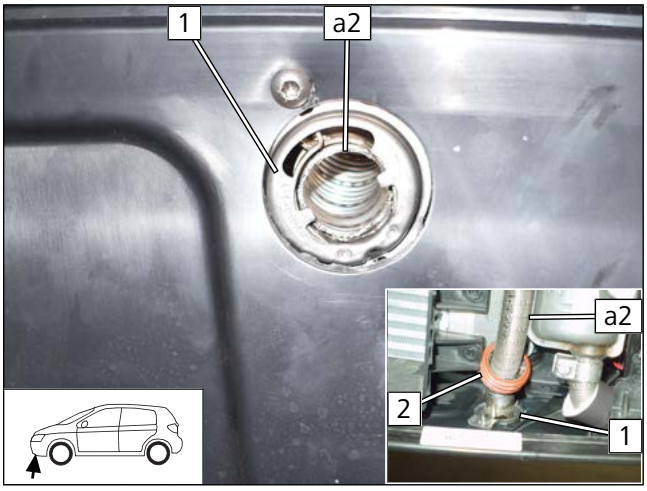


Fig. 105

▶ Mount underride protection.

▶ Mount **a2**

1 EFIX

2 Position ASH

13 Electrical system of passenger compartment

13.1 Mounting cold start system

Integrate the cold start system as per the separate installation documentation 'Cold start for Kia Ceed'.

13.2 Electrical system preparation

Assigning wires

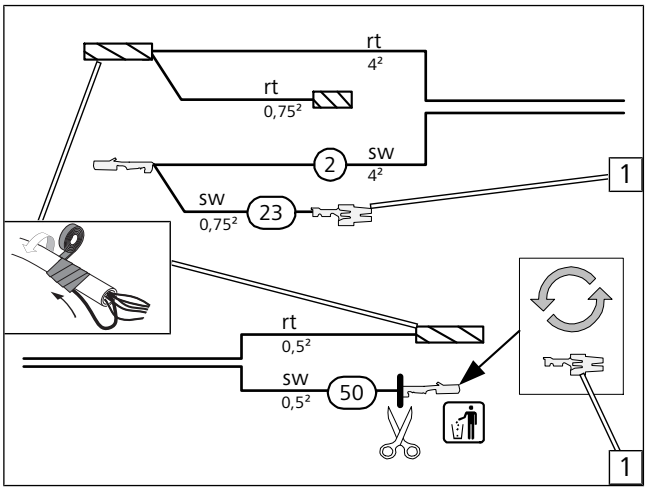


Fig. 106

Wire sections retain their numbering in the entire document.

1 Flat spring contact
2 Black (sw) wire of fan wiring harness
50 Black (sw) wire of power supply wiring harness

Connecting wires to RSH

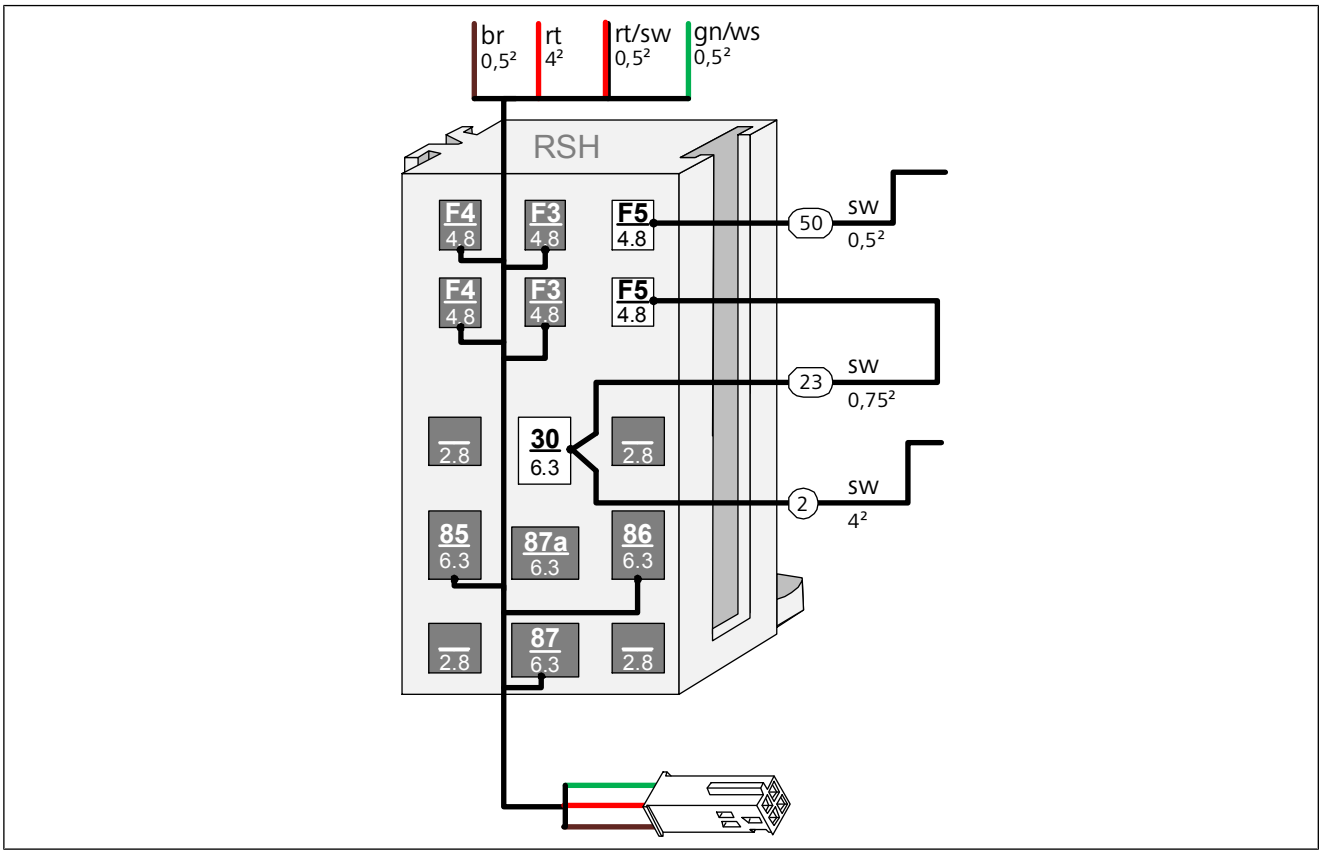


Fig. 107

Removing original vehicle trim piece

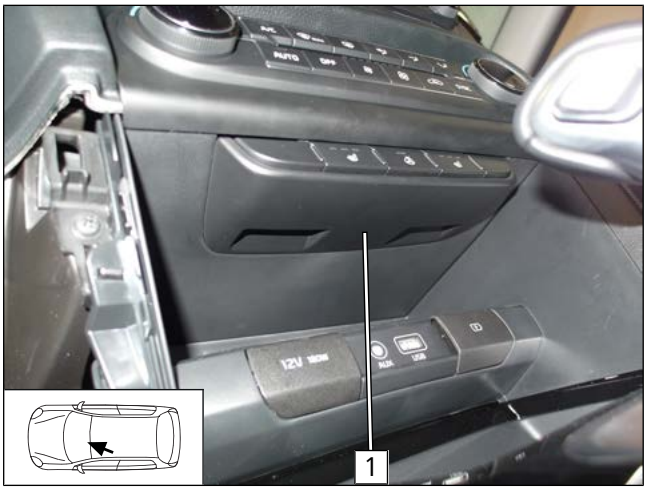


Fig. 108

1 Original vehicle trim piece

Remove the A/C control panel

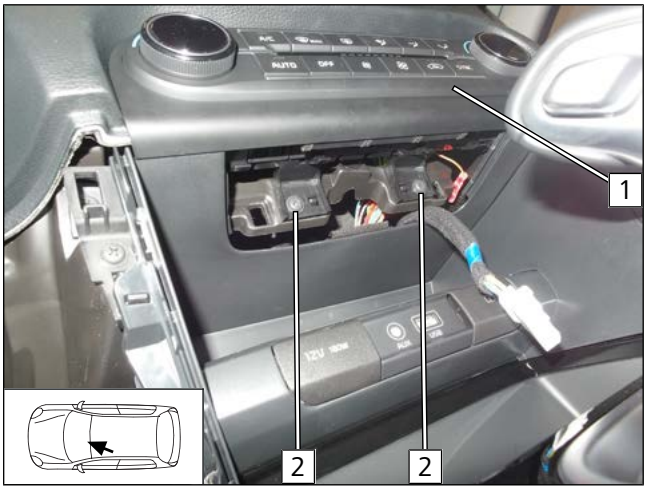


Fig. 109

1 A/C control panel
2 Original vehicle bolt

Adapting glove box

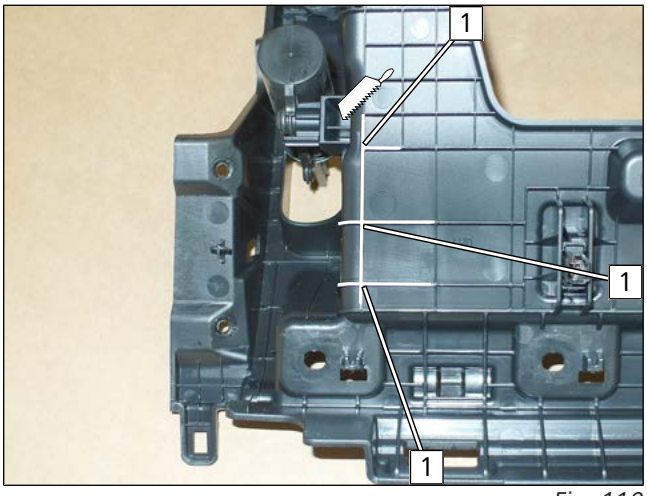


Fig. 110

▶ Remove plastic ribs 1 as shown.

13.3 Wiring diagram

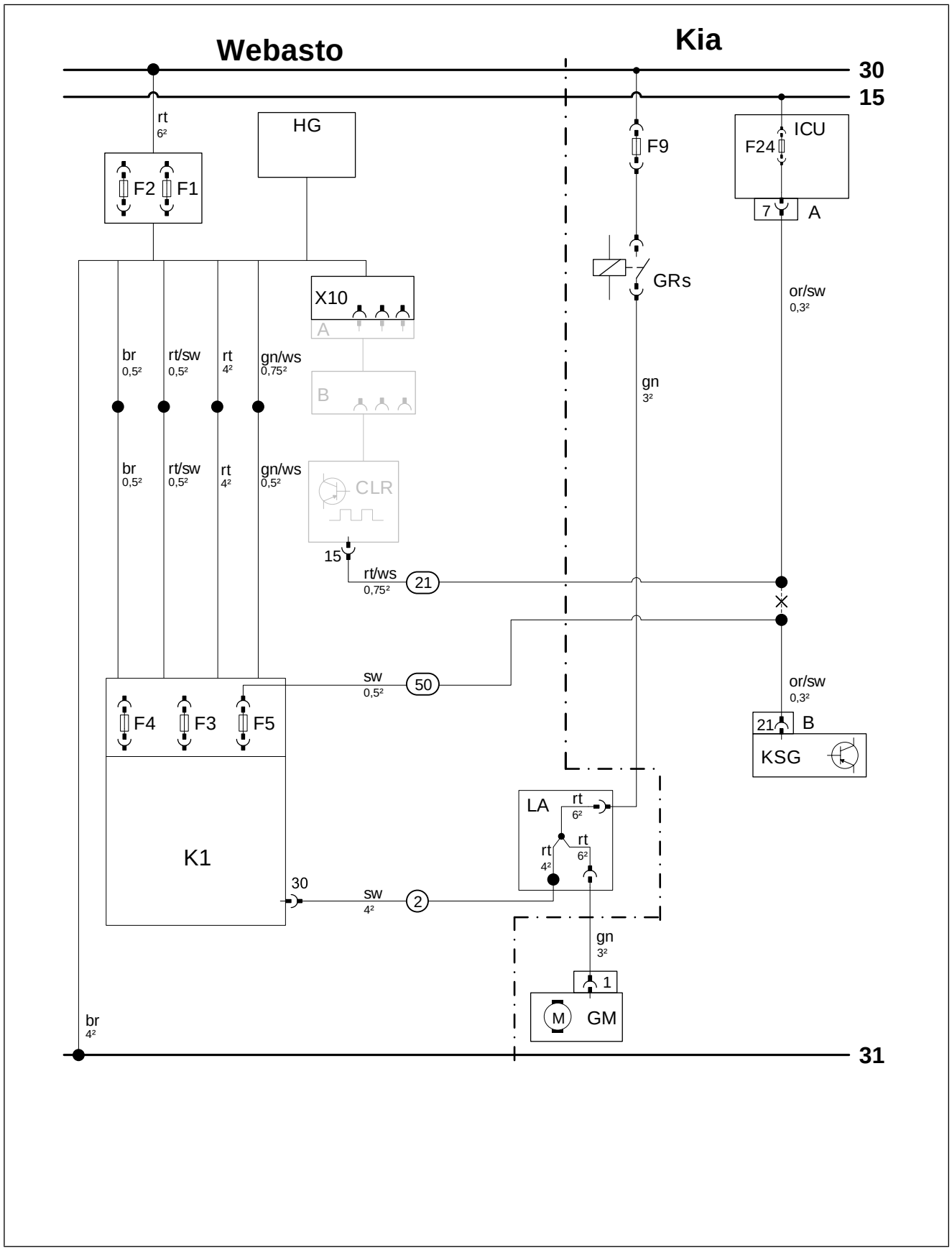


Fig. 111

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	Explanation
ICU	Passenger compartment central electrical box	X	Cutting point
F24	Fuse 7.5A		
A	ICU connector		
F9	Fuse 40A		
GRs	Fan relay		
KSG	Air-conditioning control unit		
B	40-pin KSG connector		
GM	Fan motor		

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	CAN CAN LIN Gateway	gn	green
CL GW	CAN LIN Gateway	gr	grey
CLR	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		
PWM GW	Pulse width modulator gateway		
RSH	Relay and fuse holder of passenger compartment		
RTD	Temperature sensor		
X10	Female plug for control element		

13.4 Fan controller

Mounting RSH

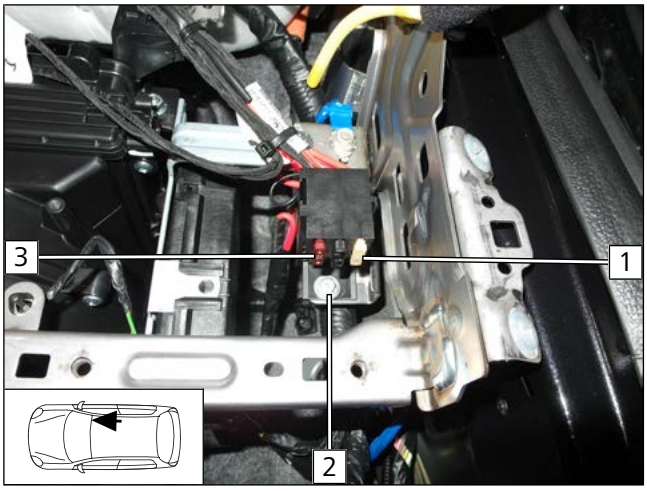


Fig. 112

1 Fuse F4: 25A
2 M5x16 bolt, large diameter washer, RSH, original vehicle hole, large diameter washer, nut
3 Fuse F5: 7.5A

Mounting relay K1

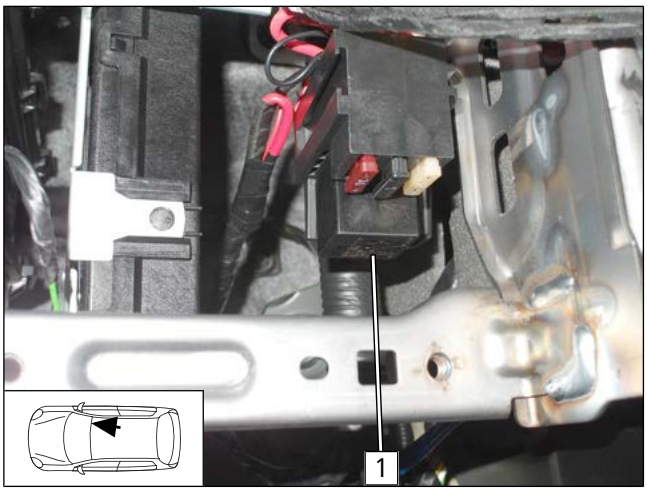


Fig. 113

1 Relay K1

Connecting same colour wires of wiring harnesses

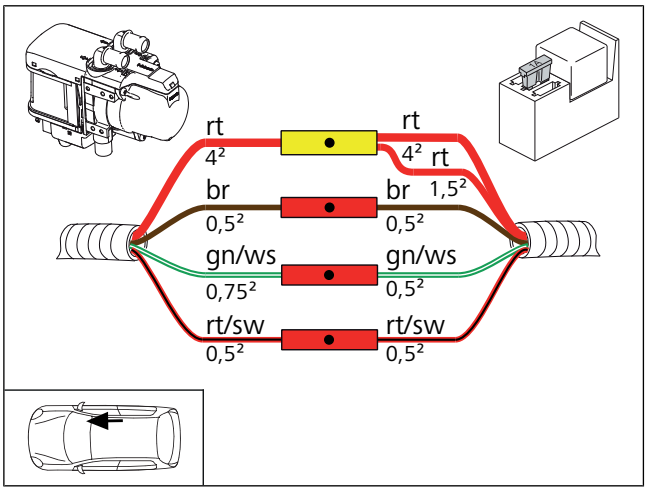


Fig. 114

Fan motor connection

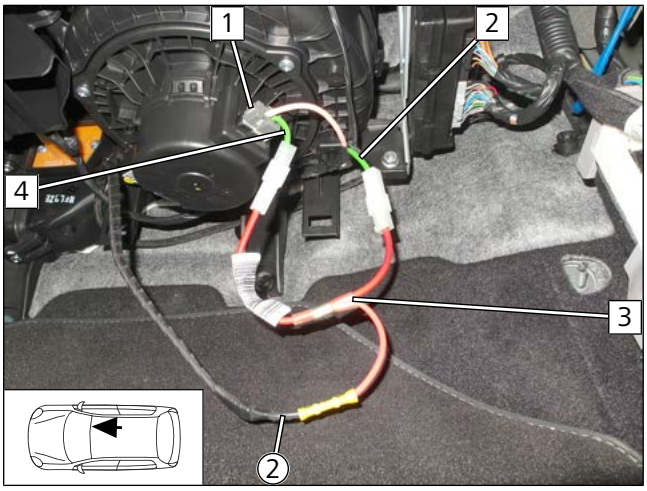


Fig. 115

1 2-pin connector of GM
2 Green (gn) wire of GRs
3 Green (gn) wire of 2-pin GM connector/ pin 1
4 Power adapter LA
(2) Black (sw) wire of fan wiring harness

Connecting air-conditioning control unit

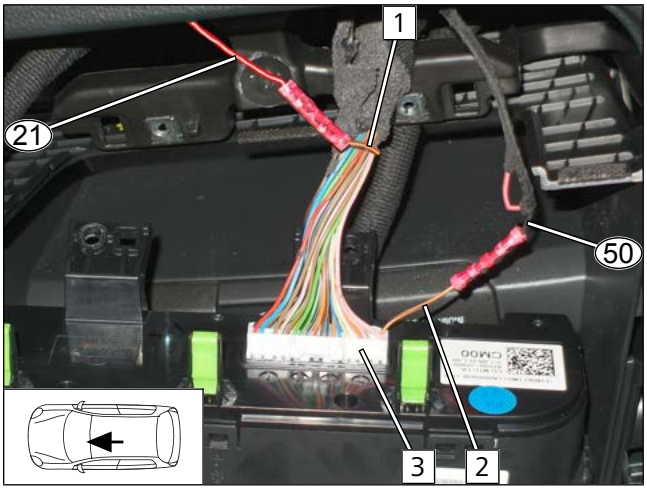


Fig. 116

1 Orange/black (or/sw) wire of connector A, pin 7
2 Orange/black (or/sw) wire of connector B, pin 21
3 40-pin connector B
(21) Red/white (rt/ws) wire of CLR module
(50) Black (sw) wire of power supply wiring harness

14 Electrical system of control elements

14.1 MultiControl CAR option

Mounting MultiControl CAR

Fig. 117

Observe the MultiControl CAR installation documentation.

14.2 Telestart option

Mounting receiver

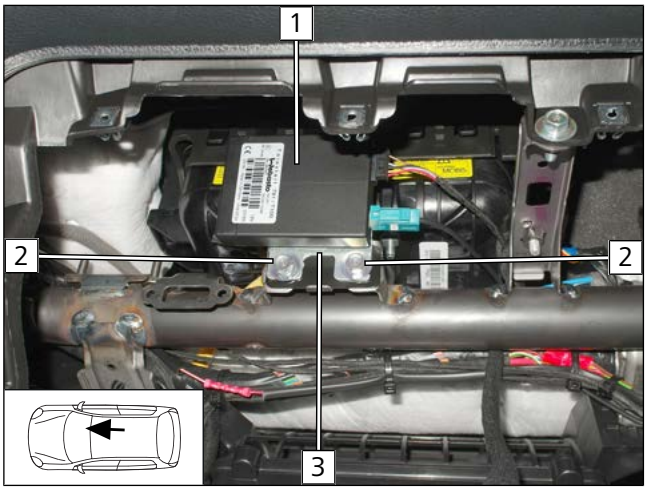


Fig. 118

Observe the Telestart installation documentation.

▶ Enlarge hole in Telestart bracket 3 at pos. 2 to Ø7.

1 Receiver
2 Original vehicle bolt

Mounting temperature sensor, only in case of T100 HTM

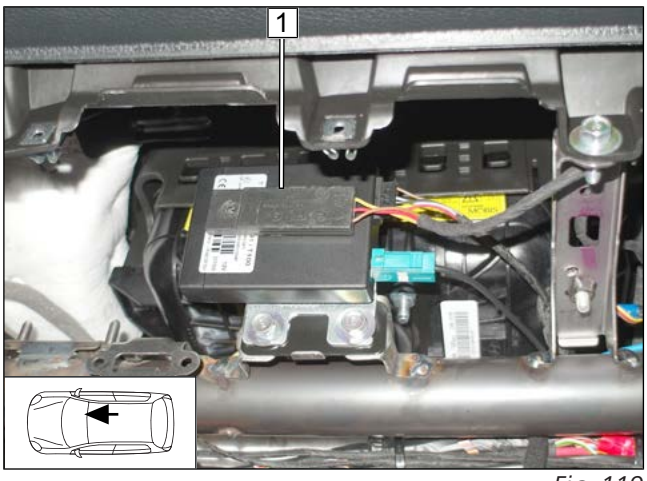


Fig. 119

▶ Fasten temperature sensor 1 using double-sided adhesive tape.

Mounting aerial

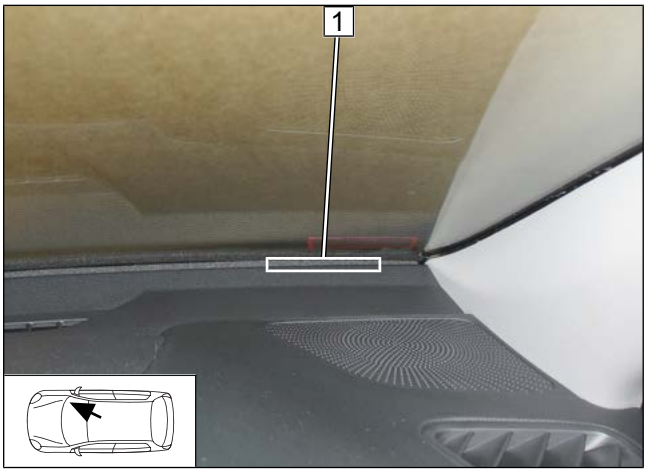


Fig. 120

1 Aerial

14.3 ThermoCall option

Mounting receiver

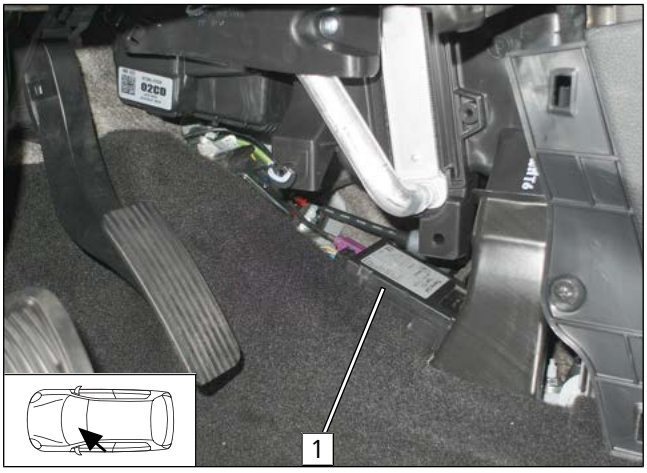


Fig. 121

Observe the ThermoCall installation documentation.

▶ Fasten ThermoCall 1 using double-sided adhesive tape.

Mounting aerial (optional)

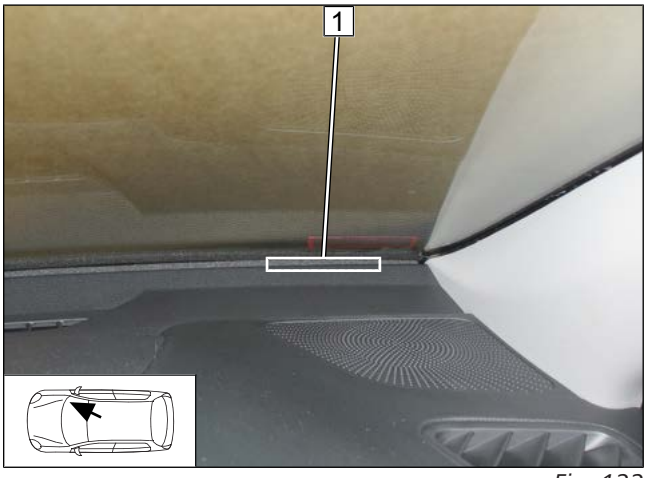


Fig. 122

1 Aerial

15 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.

▶ Program MultiControl CAR, teach Telestart transmitter

▶ Make settings on A/C control panel according to the 'Operating Instructions'.

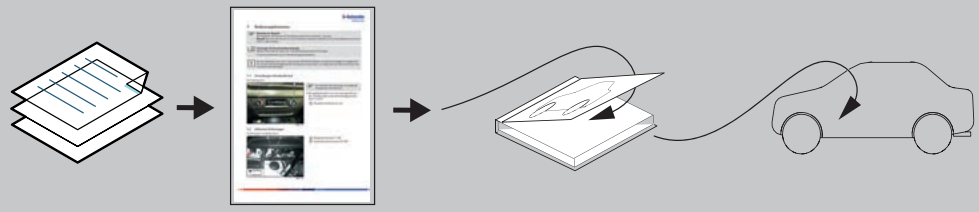
▶ Initial operation and functional test

▶ Affix 'Switch off parking heater before refueling' caution label in area of filler neck

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.

Webasto Thermo & Comfort SE
Postfach 1410
82199 Gilching
Germany

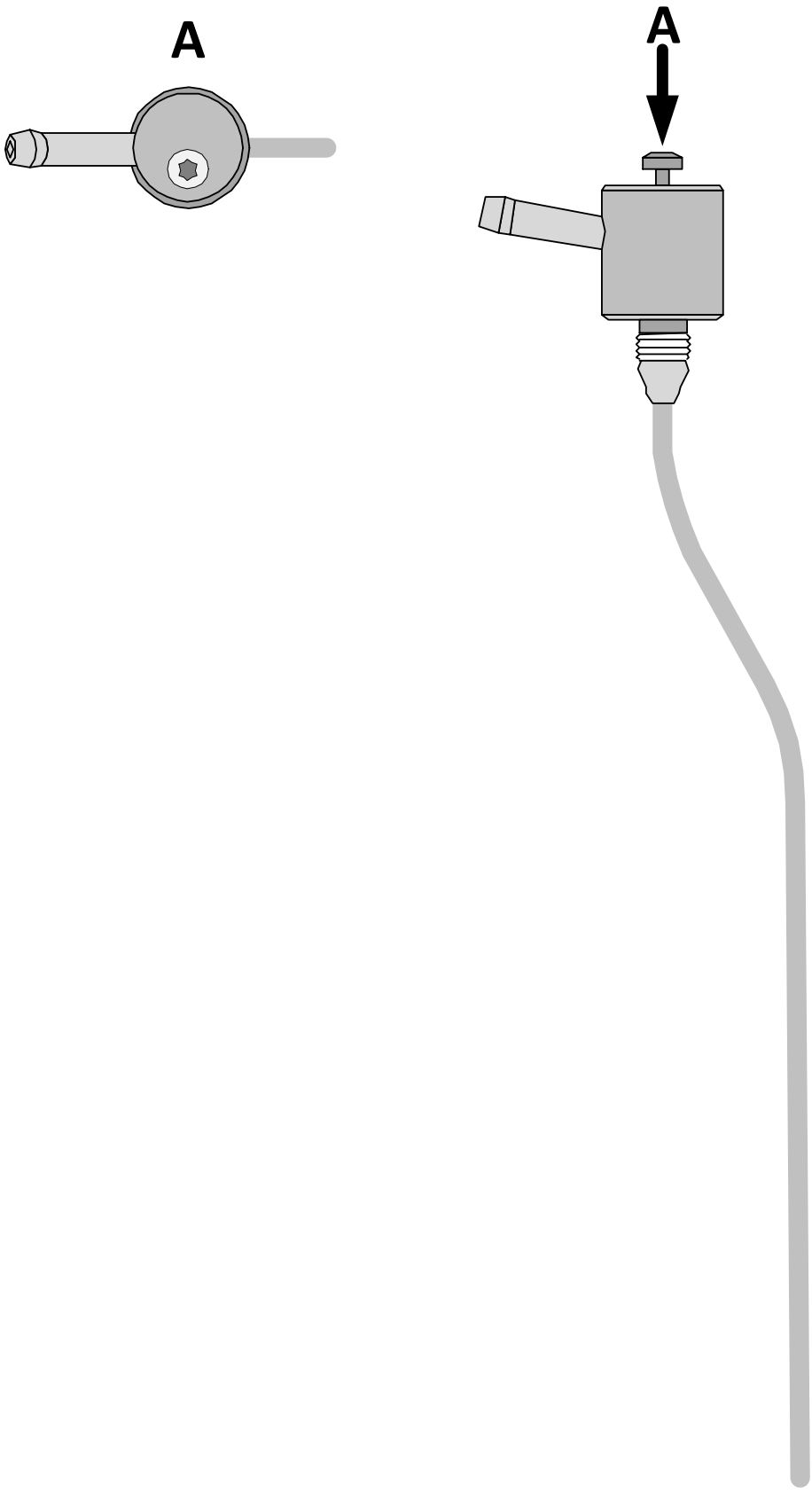
Company address:
Friedrichshafener Str. 9
82205 Gilching
Germany

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

CE

WWW.WEBASTO.COM

16 FuelFix template



100mm

Scale 1:1
Compare size of printout with dimension lines.
Maximum permitted tolerance 2%.
Set the printer settings to no 'margin' or 'minimise margins' and 100% of the normal size.

0

100mm

17 Operating instructions for manual air-conditioning

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.

Vehicles with passenger compartment monitoring:

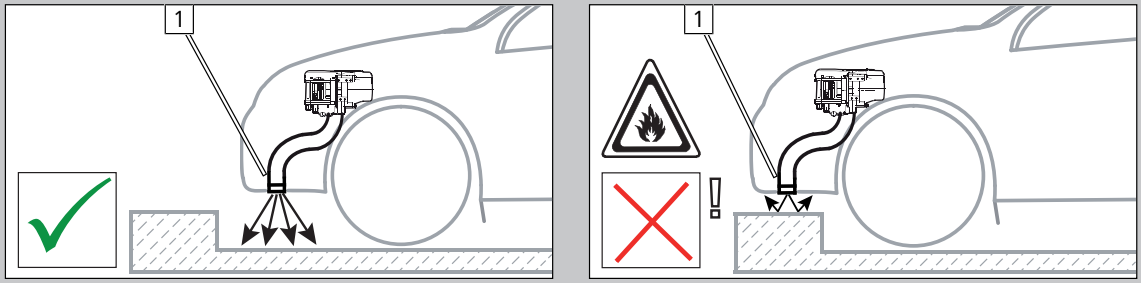
Further information can be found in the vehicle operating instructions.

▶ Deactivate passenger compartment monitoring for the heating operation

Note for parking heater function

Your vehicle is equipped with a passenger compartment and engine preheating unit.

Notes on parking heater exhaust outlet 1



17.1 A/C control panel settings

Manual air-conditioning control panel

Fig. 123

Before parking the vehicle, make the following settings:

1 Set fan to level '1', max. '2'
2 Air outlet to windscreen
3 Set temperature to 'max.'

17.2 Installation location of fuses

Fuses in engine compartment

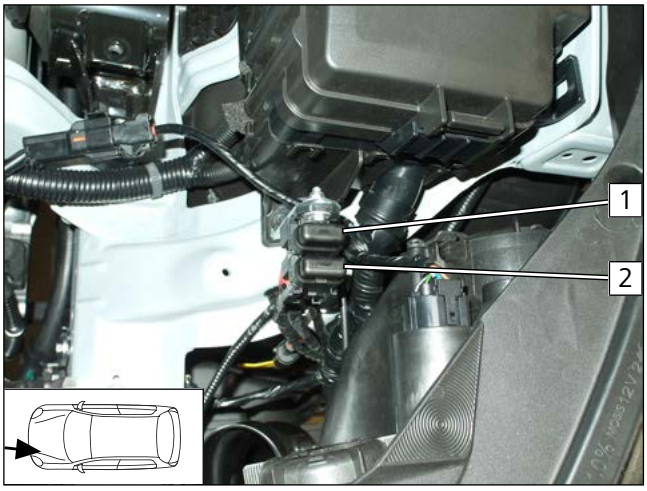


Fig. 124

1 F2 - 30A passenger compartment fan controller main fuse

2 F1 - 20A heater main fuse

Fuses in passenger compartment

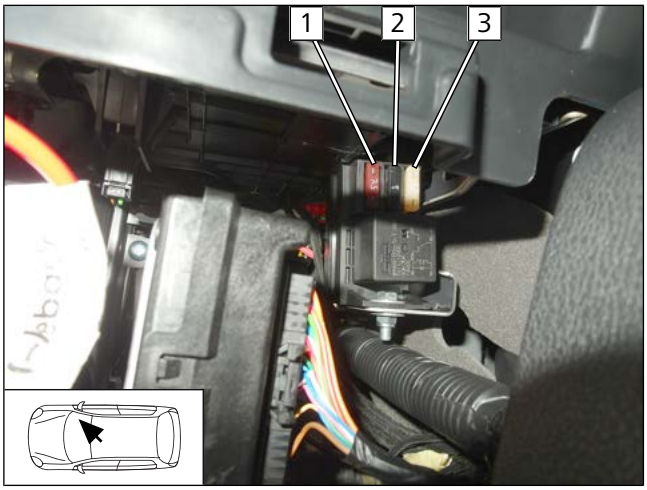


Fig. 125

1 F5 - 7.5A fan fuse

2 F3 - 1A control element fuse

3 F4 - 25A fan controller fuse

18 Operating instructions for automatic air-conditioning

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.

Vehicles with passenger compartment monitoring:

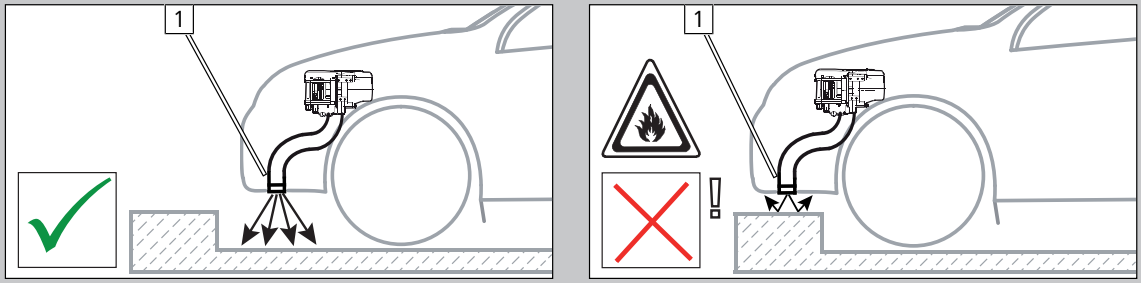
Further information can be found in the vehicle operating instructions.

▶ Deactivate passenger compartment monitoring for the heating operation

Note for parking heater function

Your vehicle is equipped with a passenger compartment and engine preheating unit.

Notes on parking heater exhaust outlet 1



18.1 A/C control panel settings

Automatic A/C control panel

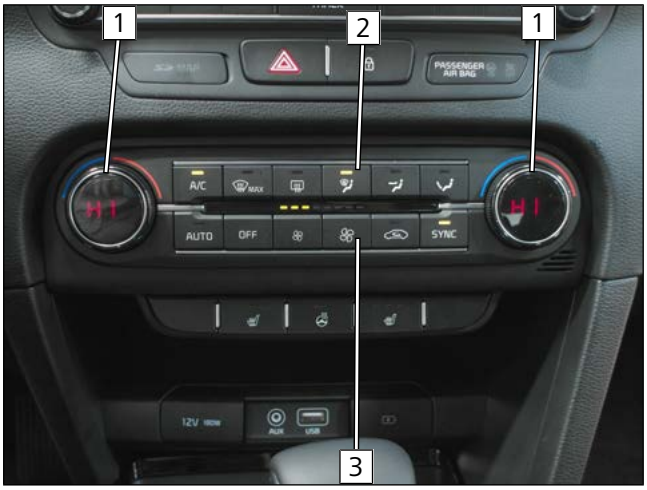


Fig. 126

Before parking the vehicle, make the following settings:

1 Temperature on both sides to 'HI'
2 Air outlet to windscreen
3 Set fan to level '2', max. '3'

18.2 Installation location of fuses

Fuses in engine compartment

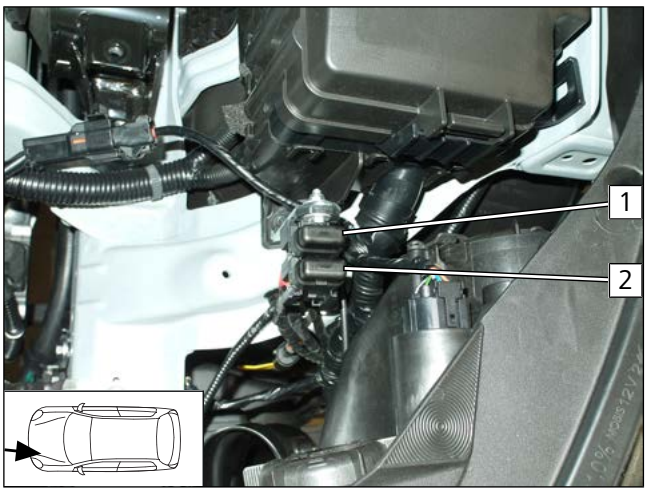


Fig. 127

1 F2 - 30A passenger compartment fan controller main fuse

2 F1 - 20A heater main fuse

Fuses in passenger compartment

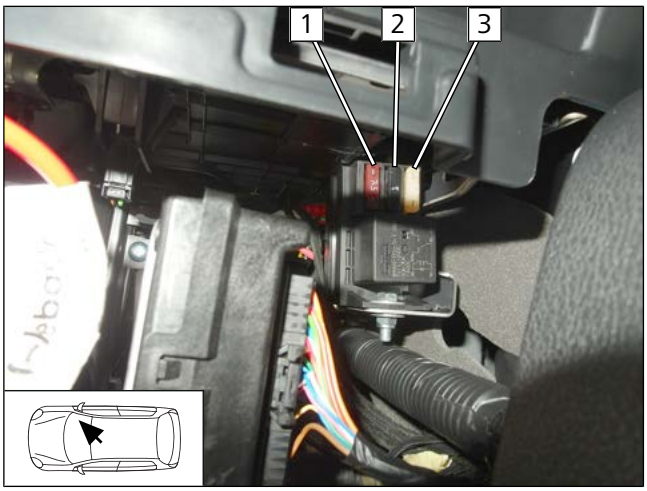


Fig. 128

1 F5 - 7.5A fan fuse

2 F3 - 1A control element fuse

3 F4 - 25A fan controller fuse