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Installation documentation

for water heater Thermo Top Evo

'Island' coolant circuit without engine preheating

Mazda 3 / CX-30

Left-hand drive vehicle

Manufacturer	Model	Type	Model year	EG-BE-No. / ABE	VIN
Mazda	3	BP	from 2018	e13* 2007/46* 1972*…	JMZBP******1000001 - ZZZZZZ
Mazda	3	BPE	from 2018	e13* 2007/46* 2249*…	JM4BP******1000001 - ZZZZZZ

Motorisation	Fuel	Emission standard	Transmission type	Output [kW]	Displace-ment [cm³]	Engine code
2.0P	Petrol	EURO6;WLTP;BG;…	6-speed SG	90	1998	PE
2.0P	Petrol	EURO6;WLTP;BG;…	6-speed AG	90	1998	PE
2.0P	Petrol	EURO6;WLTP;BG;…	6-speed SG	110	1998	PE
2.0P	Petrol	EURO6;WLTP;BG;…	6-speed AG	110	1998	PE

Manufacturer	Model	Type	Model year	EG-BE-No. / ABE	VIN
Mazda	CX-30	DM	from 2019	e13* 2007/46* 2041*…	JMZDM******100001 - ZZZZZZ
Mazda	CX-30	DM	from 2019	e13* 2007/46* 2041*…	3MVDM******100001 - ZZZZZZ

Motorisation	Fuel	Emission standard	Transmission type	Output [kW]	Displace-ment [cm³]	Engine code
2.0P	Petrol	EURO6;WLTP;AP;…	6-speed SG	90	1998	PE
2.0P	Petrol	EURO6;WLTP;AP;…	6-speed AG	90	1998	PE
2.0P	Petrol	EURO6;WLTP;AP;…	6-speed SG	110	1998	PE
2.0P	Petrol	EURO6;WLTP;AP;…	6-speed AG	110	1998	PE

Validity	Equipment variants	Model	
		3	CX-30
Verified equipment variants	Automatic air-conditioning	x	x
	LED main headlights	x	x
	Engine Start - Stop push button	x	x
	Alarm system without passenger compartment monitoring	x	x
	Automatic Keyless Go	x	x
	Start-Stop (i-Stop)	x	x
	i-Eloop (regenerative braking system)	x	x
	2 WD	x	x
	4 WD	x	x

Total installation time	Note
8.5 hours	

Contents

1 List of abbreviations

AG	Automatic transmission
CCV	Coolant control valve
DP	Fuel pump
EFIX	Exhaust end fastener
EPT	Telestart receiver
FF	FuelFix (tank extracting device)
HG	Heater
RSH	Relay and fuse holder of passenger compartment
SG	Manual transmission
SH2	Engine compartment fuse holder for F1/F2
UP	Coolant pump

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. However, installation according to this installation documentation may be possible.

2.2 Components used

Designation	Order number
Basic delivery scope of Thermo Top Evo 4 Petrol	4100-78-807
Installation kit for Mazda 3 petrol MY 2018 / CX-30 petrol MY 2019	4100-78-836
Adapter cable for CAN integration (CCL / F6 wiring harness)	4100-78-837
In case of Telestart, control element, as well as indicator lamp in consultation with end customer	MAZDA ACCESSORY BASE

2.3 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

We recommend:

– installing a Thermo Top Evo 4. The heater is integrated into the coolant circuit as an ‘island’ and heats up the vehicle passenger compartment. There is no engine pre-heating.

2.4 Information on Total Installation Time

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

3 About this document

3.1 Purpose of the document

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

Thermo Top Evo heater

3.2 Warranty and liability

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

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

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

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

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

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

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

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

3.2.1 Statutory regulations governing installation

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

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

3.3 Safety

Qualifications of installation personnel

The installation personnel must have the following qualifications:

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

Regulations and legal requirements

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

3.3.1 Safety information on installation

Danger posed by live parts

- ▶ Prior to installation, disconnect the vehicle from the voltage supply.
- ▶ Make sure the electrical system is earthed correctly.
- ▶ Always comply with legal requirements.
- ▶ Observe data on type label.

Danger of fire and leaking toxic gases due to improper installation

- ▶ Vehicle parts in the vicinity of the heater must be protected against excessive heating by the following measures:
  - ⇨ Maintain minimum safety distances.
  - ⇨ Ensure adequate ventilation.
  - ⇨ Use fire-resistant materials or heat shields.

Danger due to sharp edges

- Lacerations
- Short circuit due to electrical wire damage

- ▶ Fit protectors on sharp edges.

3.4 Using this document

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

3.4.1 Explanatory Notes on the Document

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

Generally valid Webasto documentation	
Vehicle-specific installation documentation	
Vehicle-specific installation documentation of the cold start kit	
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

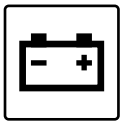
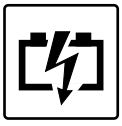
▶ Actions to protect yourself against risks.

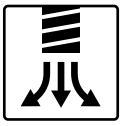
Reference to the vehicle manufacturer's specific documents.

Note on a special technical feature

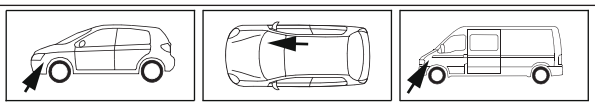
3.4.3 Work step identification marks

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 mm^2
- Crimping pliers for cable lugs 0.5 – 10 mm^2
- Crimping pliers for male connector 0.14 – 6 mm^2
- Crimping pliers for connector 0.25 – 6 mm^2
- Torque wrench for 2.0 - 10 Nm
- Deep-hole marker
- Metric thread-setter kit
- Webasto Thermo Test Diagnosis with current software

5 Preparations

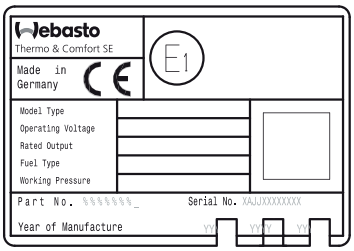
5.1 Heater preparation

Placing duplicate label

Fig. 1

Observe the general installation instructions of the heater.

- ▶ Remove years that do not apply from the type and duplicate label.
- ▶ Attach the duplicate label (type label) [1] in a clearly visible position on the B-pillar of the front passenger's side.



5.2 Applying sticker

Fig. 2

- ▶ Apply the 'Switch off parking heater before refuelling' sticker [1] to the area of the filler point.

5.3 Before installing the heater

DANGER

The incorrect execution of electrical connections can cause a fire.

Attention

- The Mazda 3 / CX-30 uses a special battery for the i-Stop system (STOP+START).
  Check the battery before installing the heater. Check the battery status according to the workshop manual (acid level check for each battery cell).
  If the battery acid level lies below the specification, replace the battery with an original battery.
  Observe the following table:

Battery acid level	Result	Comments
> 1.25 g/cm³	OK	
1.17 - 1.24 g/cm³	Charge battery	If the battery acid level is < 1.25 g/cm³ after charging, replace the battery with an original battery.
< 1.17 g/cm³	Replace battery	Replace the battery with an original battery

5.4 Vehicle preparation

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

- Open the fuel tank cap
- Ventilate the fuel tank
- Close the fuel tank cap again
- Depressurise the cooling system. See MGSS "COOLING SYSTEM SERVICE WARNINGS"
- Disconnect the battery and remove it completely with the carrier. See MGSS ‘BATTERY REMOVAL/ INSTALLATION’
- Remove the upper engine cover. See MGSS ‘PLUG HOLE PLATE REMOVAL/INSTALLATION’.
- Remove the water drain chamber cover. See MGSS ‘COWL GRILLE REMOVAL/INSTALLATION’
- Remove the heat shield plate on the bulkhead.
- Remove the lower engine cover. See MGSS ‘FRONT UNDER COVER No.1 REMOVAL/INSTALLATION’
- Remove the front underbody trim on the driver's side. See MGSS ‘FLOOR UNDER COVER No.1 REMOVAL/INSTALLATION’
- Remove the back underbody trim on the driver's side. See MGSS. 'FLOOR UNDER COVER No.2 REMOVAL/INSTALLATION'
- Remove the lower footwell trim on front passenger's side. See MGSS. ‘FRONT SIDE TRIM REMOVAL/INSTALLATION'
- Remove the glove box with frame. See MGSS ‘GLOVE COMPARTMENT REMOVAL/INSTALLATION’
- Remove the rear bench seat. See MGSS ‘REAR SEAT CUSHION REMOVAL/INSTALLATION’
- Open the left tank fitting service lid. See MGSS ‘FUEL PUMP UNIT REMOVAL/INSTALLATION’

6 Installation overview

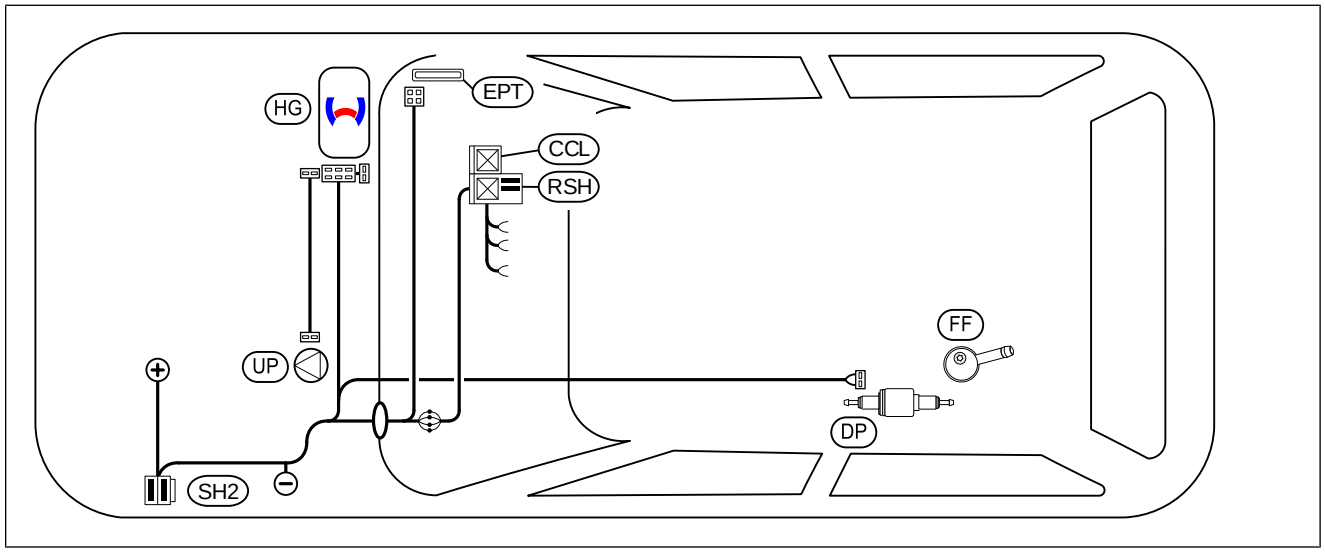


Fig. 3

Legend to installation overview

Abbreviation	Component
CCL	CCL Gateway
DP	Fuel pump
EPT	Telestart receiver
FF	FuelFix
HG	Heater
RSH	Relay and fuse holder of passenger compartment
SH2	Engine compartment fuse holder for F1/F2
UP	Coolant pump

Heater installation location

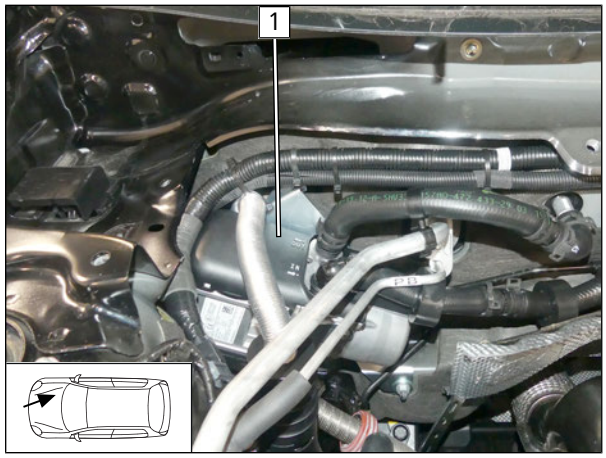


Fig. 4

1 Heater

7 Electrical system of engine compartment

7.1 Premounting wiring harness

Cutting fuel line to length

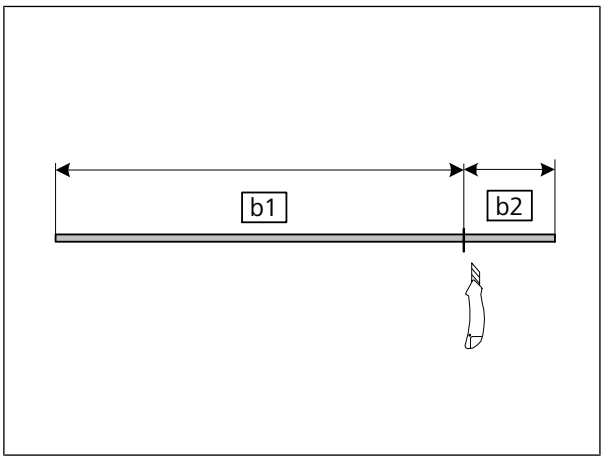


Fig. 5

	Length	Used for
b1	4300	Connection between heater and fuel pump
b2	700	Connection between fuel pump and tank extracting device

Cutting to length and assigning corrugated tubes

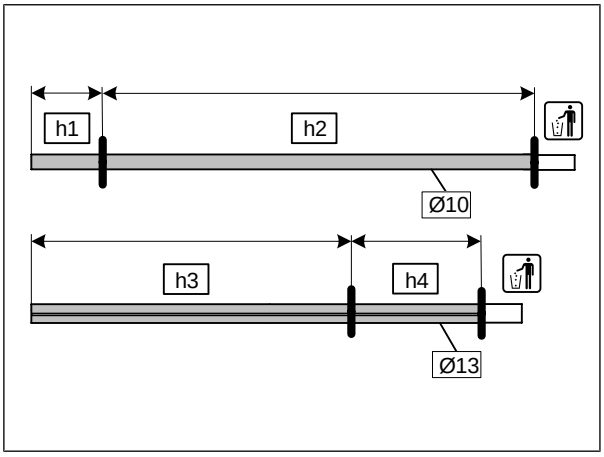


Fig. 6

	Length	Used for
h1	400	Red (rt) wire of battery +
h2	2100	Fuel line **b1** from heater, fuel pump wiring harness
h3	1800	Fuel line **b1**, heater and coolant pump wiring harnesses
h4	350	Coolant pump wiring harness

General view of wiring harnesses

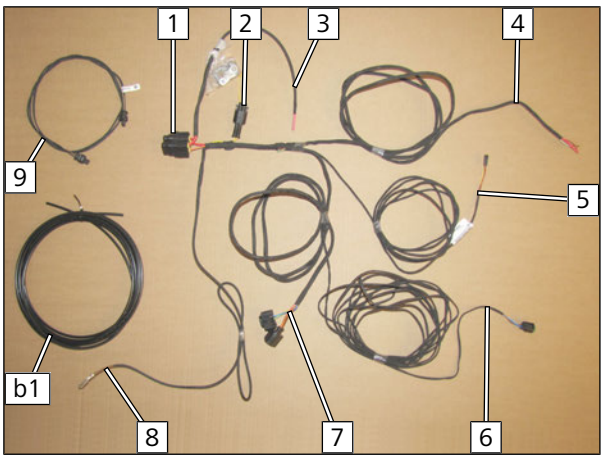


Fig. 7

1 Fuse holder of engine compartment SH2
2 Diagnostic connectors X8 and X9
3 Red (rt) wire from B+
4 Passenger compartment wiring harness
5 Control element wiring harness with connector X10
6 Fuel pump wiring harness with connector X7
7 Heater wiring harness with (6-pin) connector X1 and (2-pin) connector X2
8 Earth wire
9 Coolant pump wiring harness with connectors X4 and X16
b1 Fuel line

Dismantling fuel pump connector X7

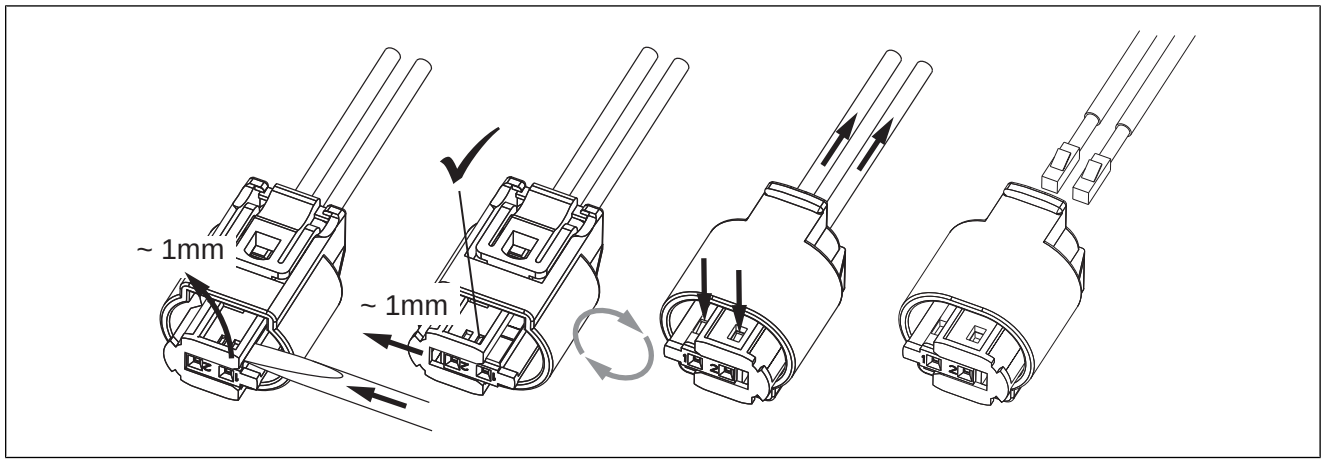


Fig. 8

Premounting wiring harness

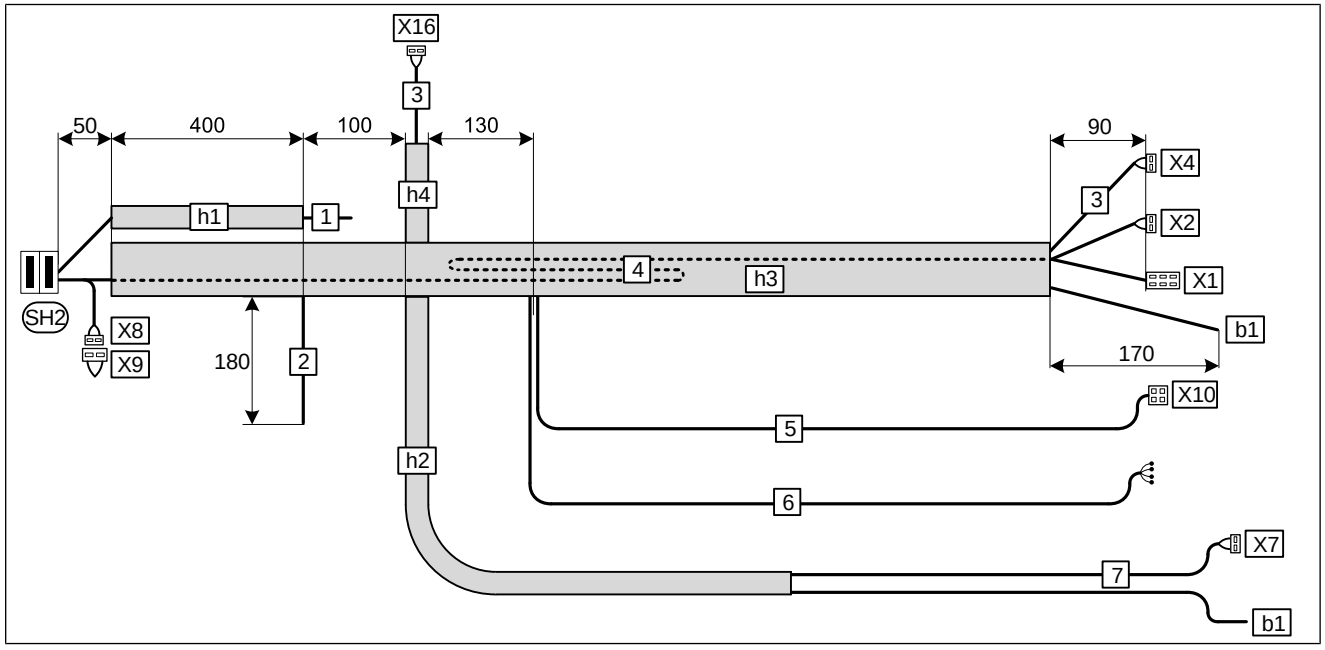


Fig. 9

Legend

Abbr. / No.	Designation	Abbr. / No.	Designation
b1	Fuel line (4300)	X1	6-pin heater connector
1	Red (rt) wire from B+	X2	2-pin heater connector
2	Earth wire	X4	2-pin connector of coolant pump wiring harness
3	Coolant pump wiring harness with connectors X4 and X16	X7	2-pin connector of fuel pump wiring harness
4	Heater wiring harness with connectors X1 and X2 looped inside corrugated tube h3	X8	2-pin diagnostics connector
5	Control element wiring harness with connector X10	X9	2-pin blind female connector
6	Passenger compartment wiring harness	X10	4-pin connector of control element
7	Fuel pump wiring harness with connector X7	X16	2-pin connector of coolant pump wiring harness
SH2	Engine compartment fuse holder		

Assembling fuel pump connector X7

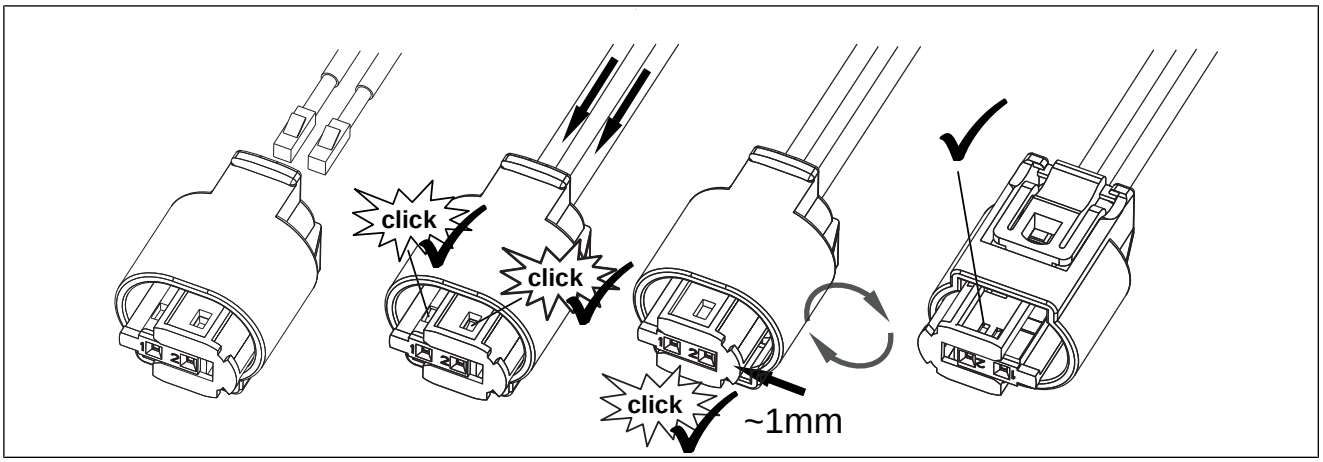


Fig. 10

Preparing wiring harness and fuel line

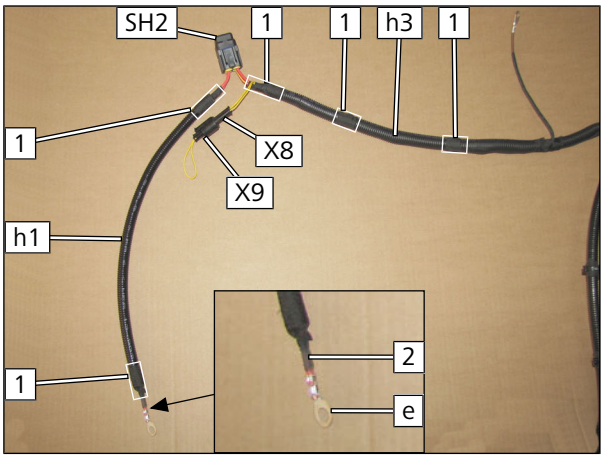


Fig. 11

▶ Mount cable lug **e** onto red (rt) wire from B+ **2** as shown in next Fig.

▶ Wrap insulating tape around Ø13 corrugated tube **h3** (1800, slit) and Ø10 corrugated tube **h1** (400, unslit) at position **1** as shown.

Cable lug fitting instructions

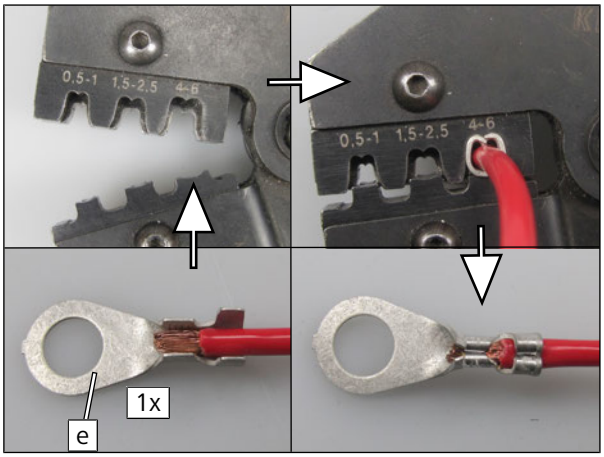


Fig. 12

Observe the next figures

e Ø8 cable lug for
4.0 - 6.0mm² wire cross-section

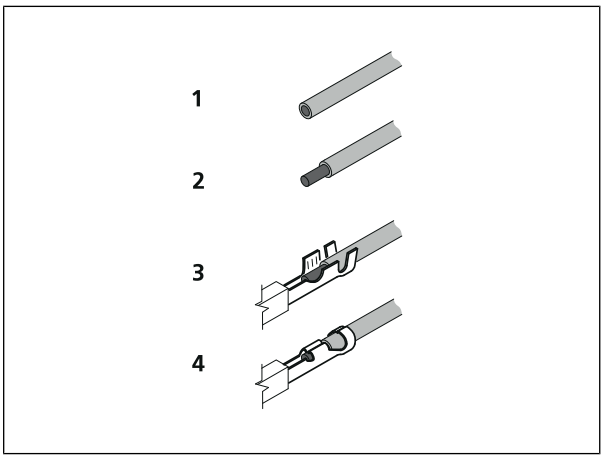


Fig. 13

Preparing wiring harness and fuel line

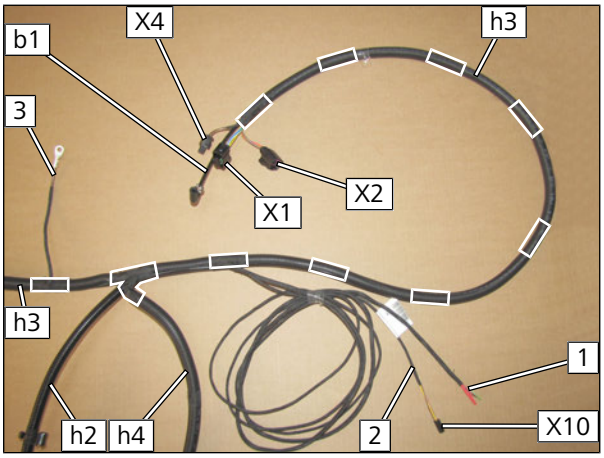


Fig. 14

▶ Wrap insulating tape around Ø13 corrugated tube **h3** (slit) at the markings as shown.

1 Passenger compartment wiring harness
2 Control element wiring harness
3 Earth wire

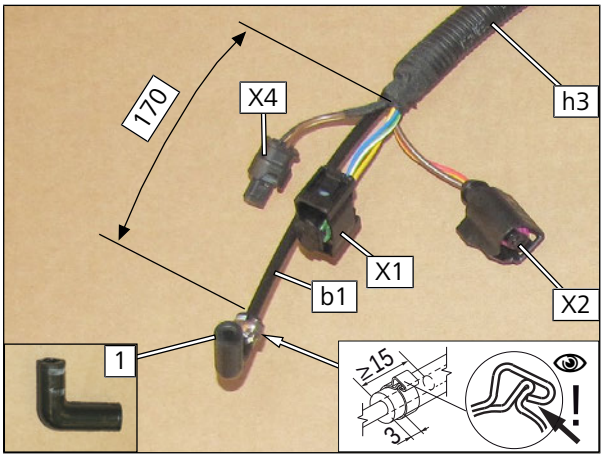


Fig. 15

1 90° moulded hose (long side on fuel line **b1**), Ø10 clamp

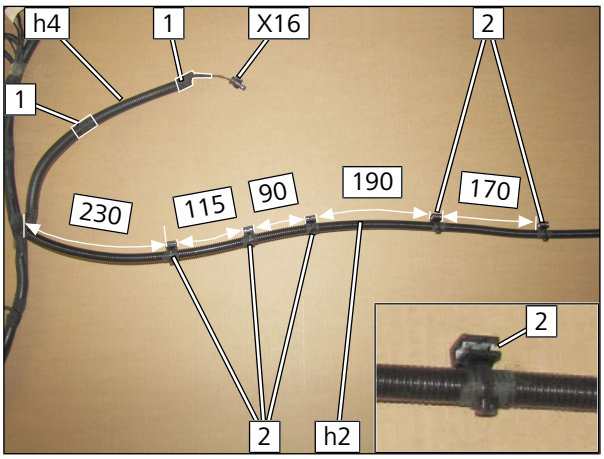


Fig. 16

▶ Wrap insulating tape around corrugated tubes **h2** (2100) and **h4** (350) at position **1** as shown.

2 Edge clip cable tie

Bending perforated bracket

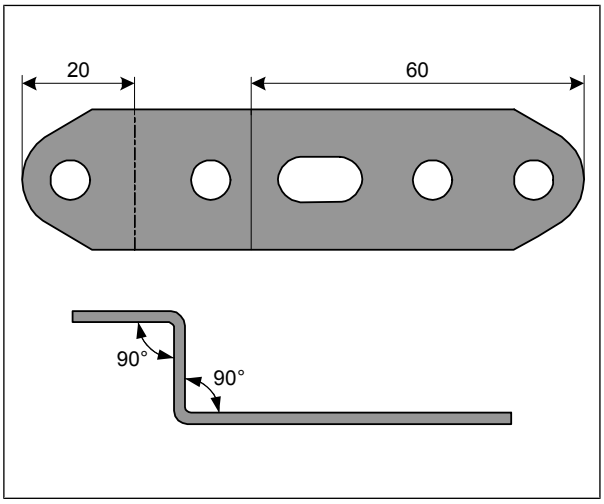


Fig. 17

Premounting retaining plate of SH2

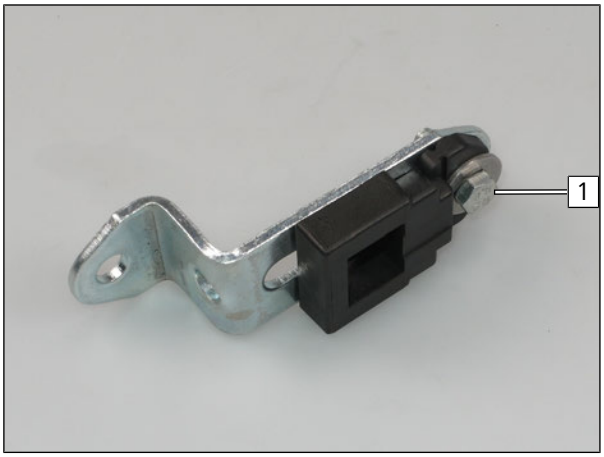


Fig. 18

1 M5 bolt, large diameter washer, retaining plate of SH2, prepared perforated bracket, large diameter washer, nut

7.2 Electrical system, installation in engine compartment

Installing perforated bracket

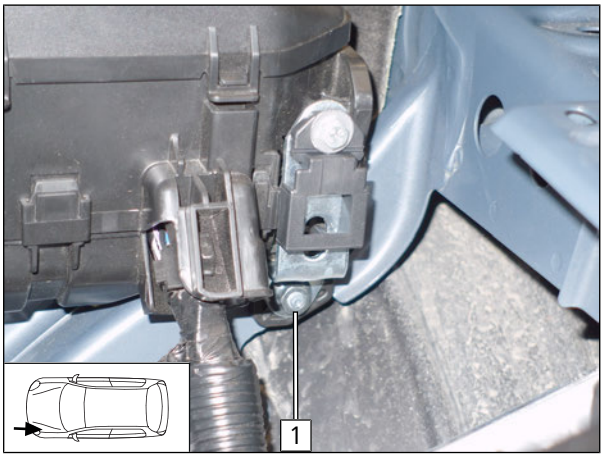


Fig. 19

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

Premounting cable tie

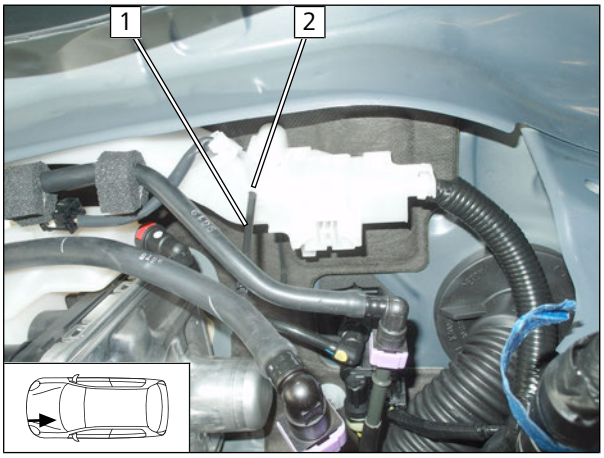


Fig. 20

1 Cable tie
2 Original vehicle hole

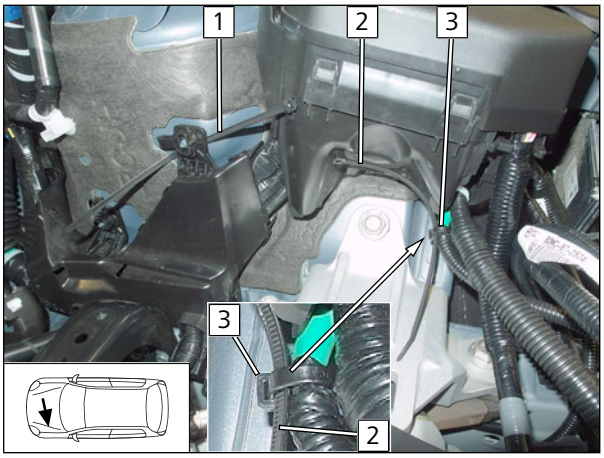


Fig. 21

1 Cable tie behind original vehicle plastic strip
2 Cable tie
3 Cable tie around original vehicle wiring harness

Installing SH2

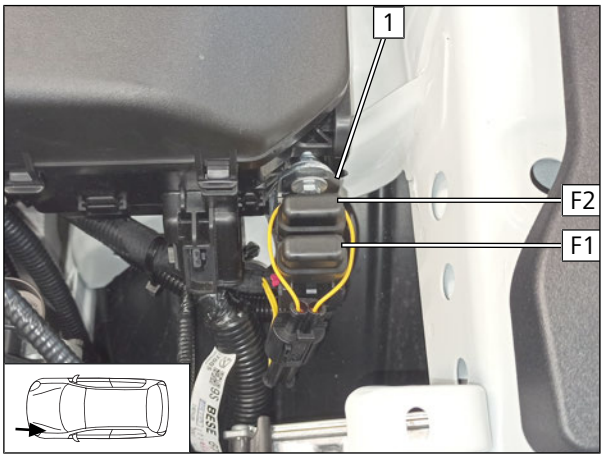


Fig. 22

1 Retaining plate SH2

Routing corrugated tubes

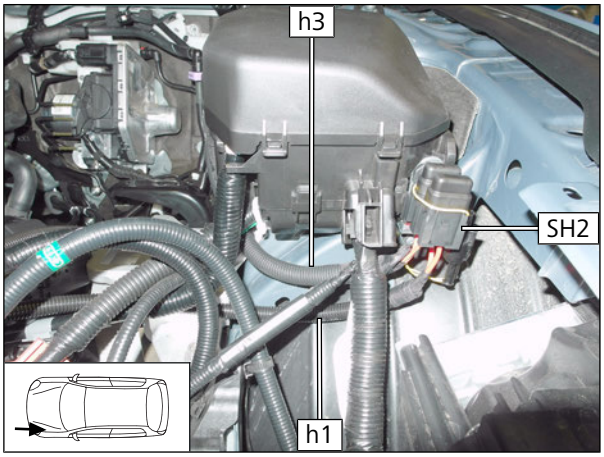


Fig. 23

▶ Route corrugated tube **h3** to firewall and corrugated tube **h1** in the direction of the installation location of the battery.

Routing and fastening corrugated tube h3

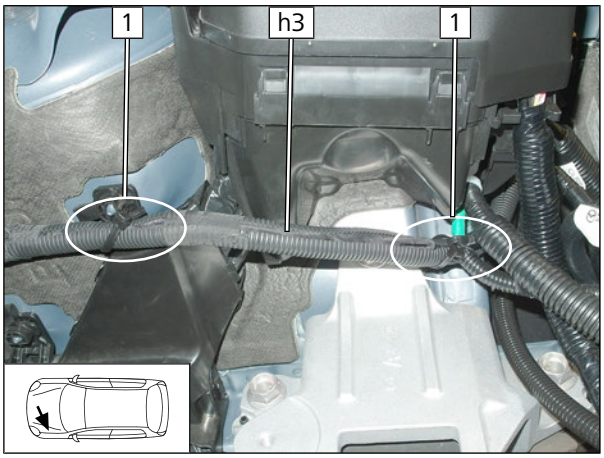


Fig. 24

1 Close cable tie

Preparing wiring harness pass through

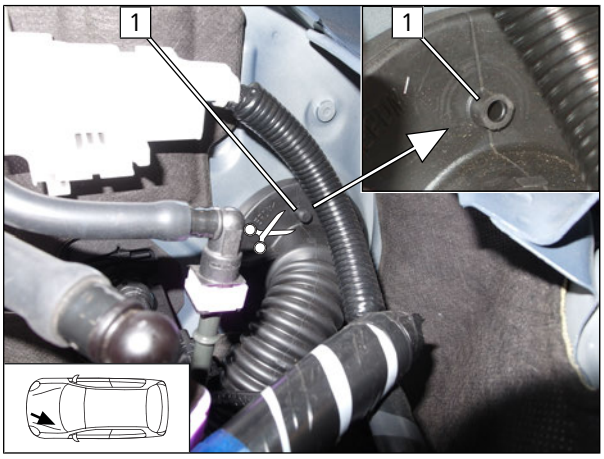


Fig. 25

▶ Carefully cut blind plug **1** of the wiring harness pass through at the perforation.

Routing corrugated tube **h3** and feeding passenger compartment and control element wiring harnesses into passenger compartment

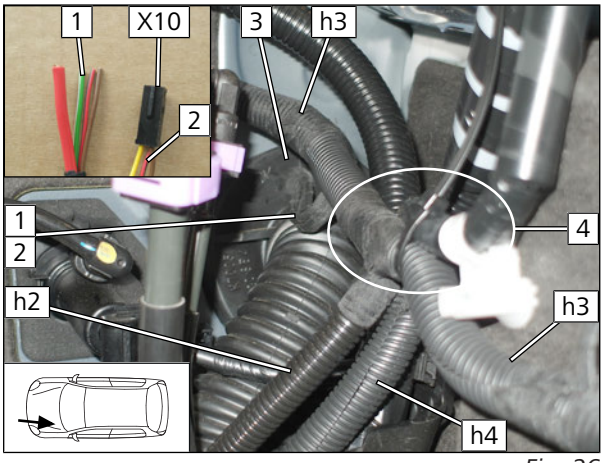


Fig. 26

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

▶ Route corrugated tube **h3** to the firewall as shown.

1 Passenger compartment wiring harness
2 Control element wiring harness
3 Passenger compartment pass through
4 Cable tie

Routing and fastening corrugated tube **h3**

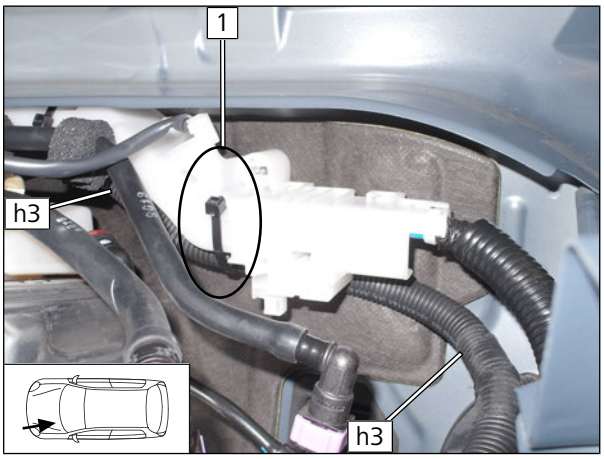


Fig. 27

1 Cable tie

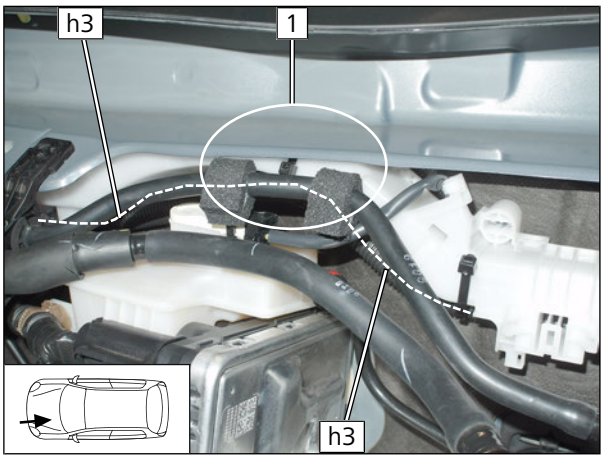


Fig. 28

1 Cable tie

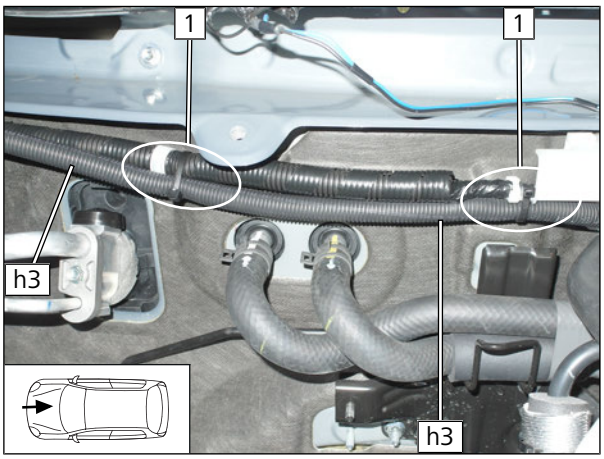


Fig. 29

1 Cable tie

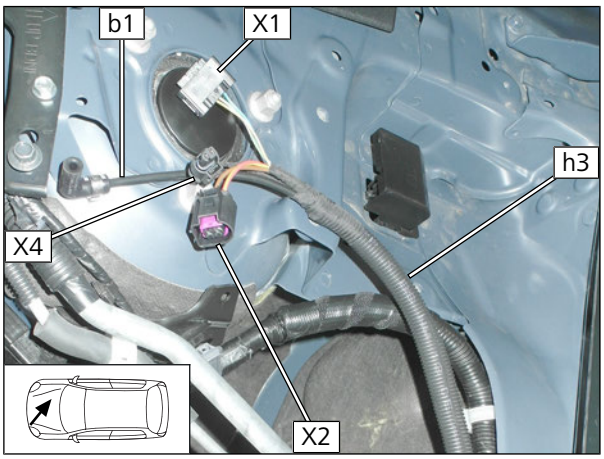


Fig. 30

X1 6-pin heater connector
X2 2-pin heater connector
X4 2-pin connector of coolant pump wiring harness

Earth wire connection

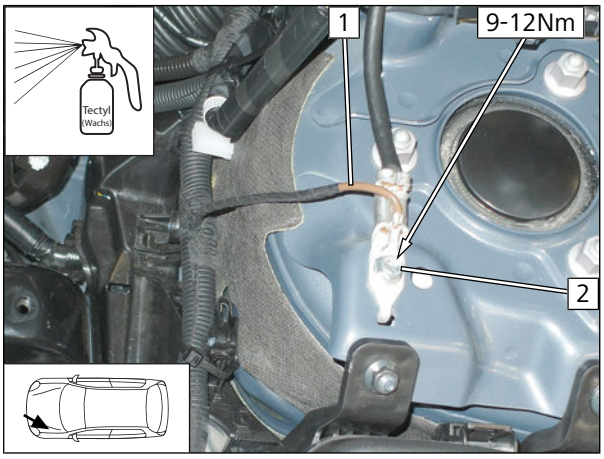


Fig. 31

DANGER

Observe tightening torque

1 Earth wire at earth support point

2 Original vehicle bolt at earth support point

8 Mechanical system

8.1 Preparing installation location

Loosening original vehicle wiring harness

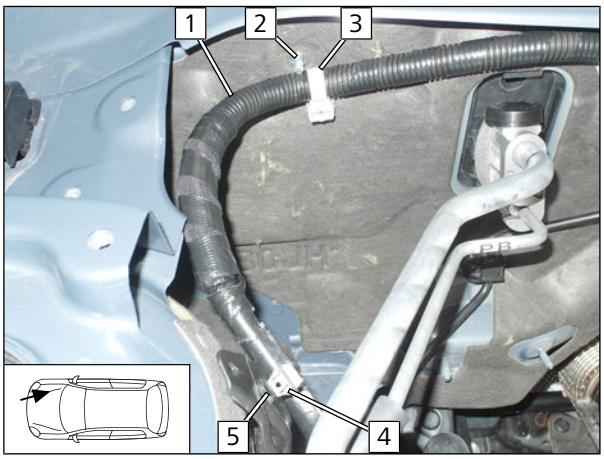


Fig. 32

- ▶ Original vehicle wiring harness [1] at positions [2] and [5].
- ▶ Remove and discard clip-type cable tie [3].

[4] Clip-type cable tie

Cutting self-adhesive foam in half

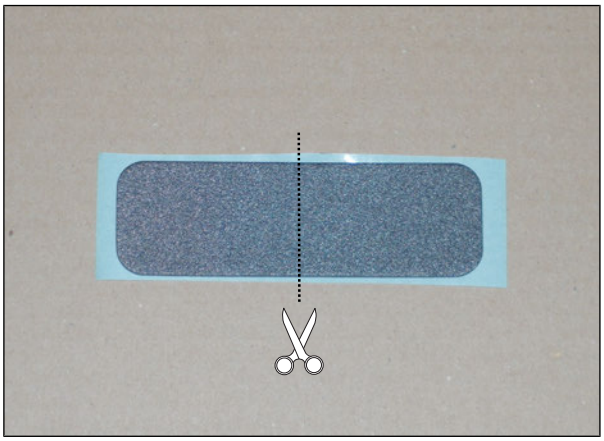


Fig. 33

Gluing self-adhesive foam around original vehicle wiring harness

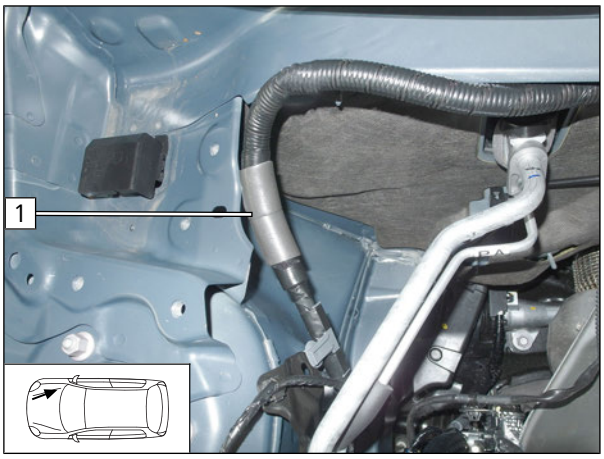


Fig. 34

[1] Self-adhesive foam [2x]

Removing original vehicle nut

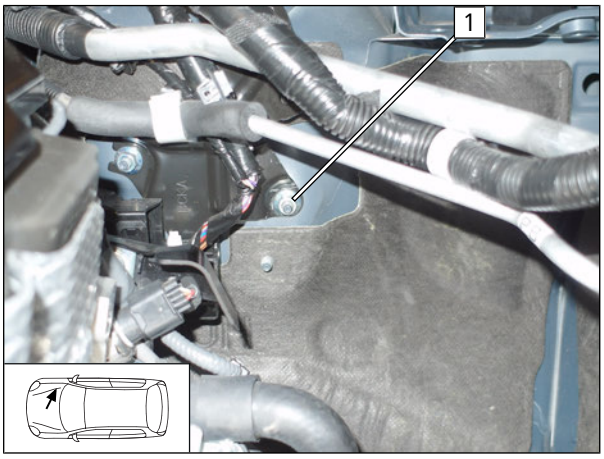


Fig. 35

[1] Original vehicle nut (will be reused)

Positioning spacer

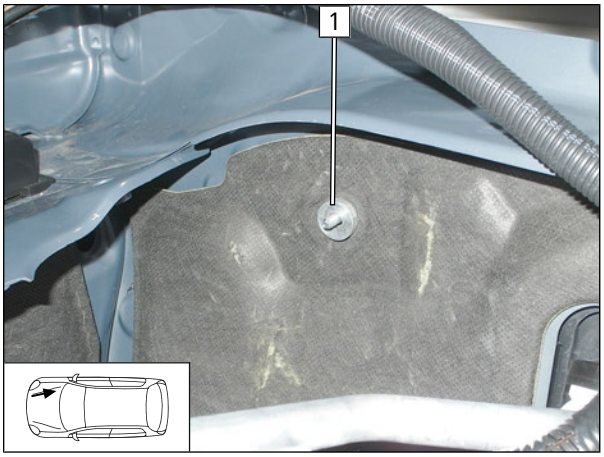


Fig. 36

[1] Original vehicle stud bolt, spacer (5)

8.2 Premounting heater

Mounting, aligning and fastening with 7Nm water connection piece with sealing ring and retaining plate

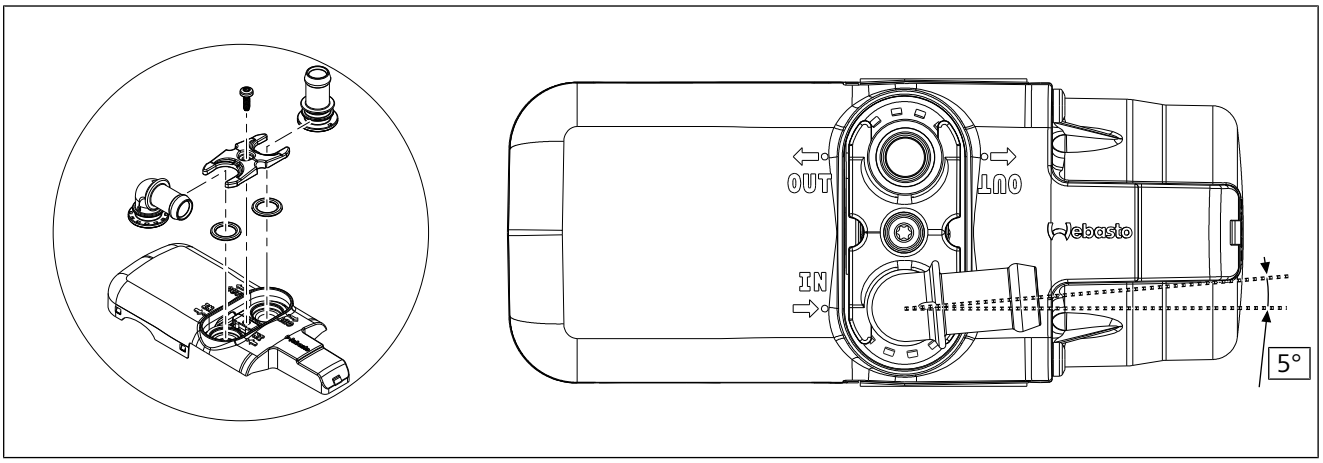


Fig. 37

Installing exhaust elbow

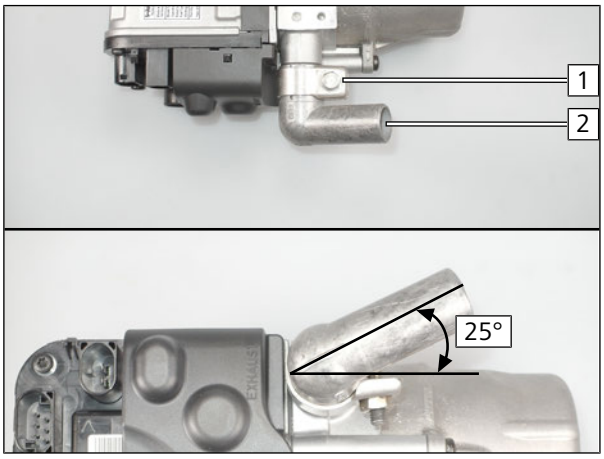


Fig. 38

▶ Align exhaust elbow **2** before fastening it.

1 Hose clamp (8-10Nm)

Mounting bracket

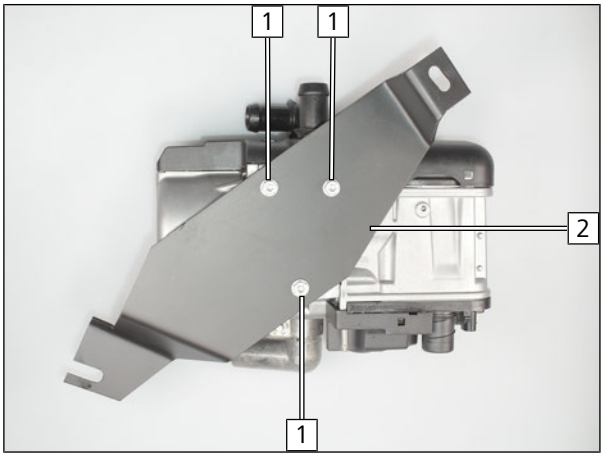


Fig. 39

1 5x13 self-tapping bolts (8Nm)

2 Bracket

Assigning combustion air intake line

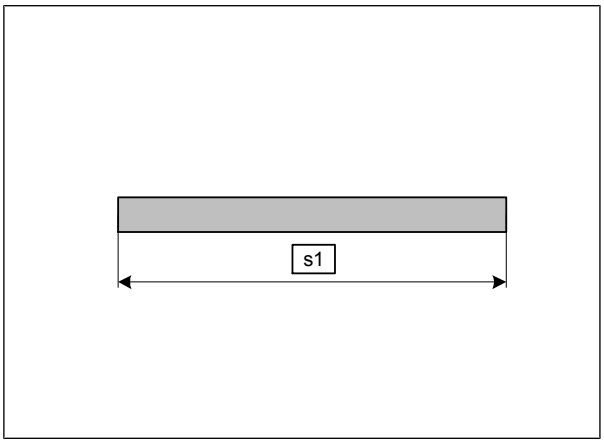


Fig. 40

s1 400

Mounting combustion air intake pipe **s1**

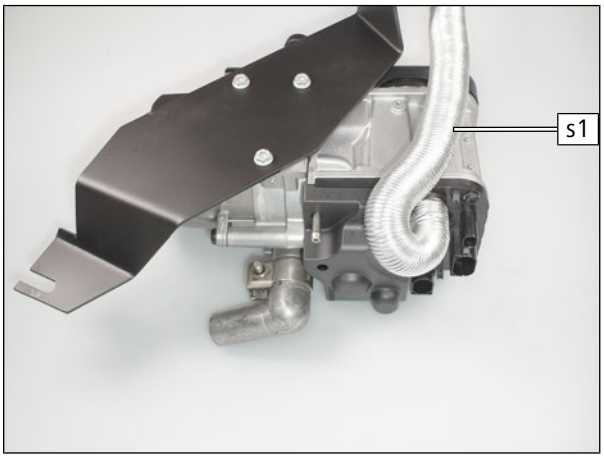


Fig. 41

Observe the installation instructions of the combustion air intake silencer.

8.3 Mounting heater

Mounting wiring harness connectors

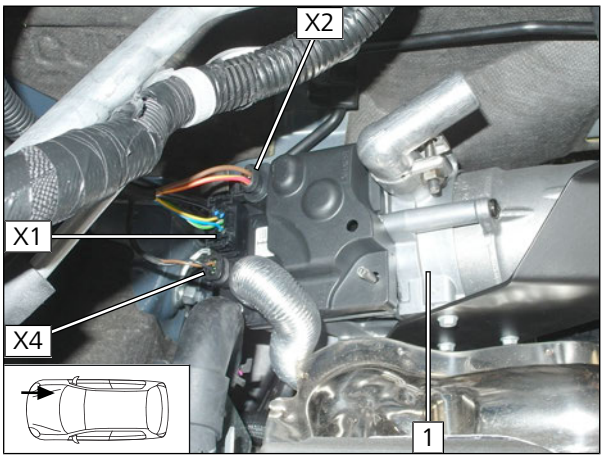


Fig. 42

▶ Place premounted heater **1** in engine compartment as shown. Mount heater wiring harness connectors **X1** / **X2** and coolant pump wiring harness connector **X4**.

Mounting fuel line

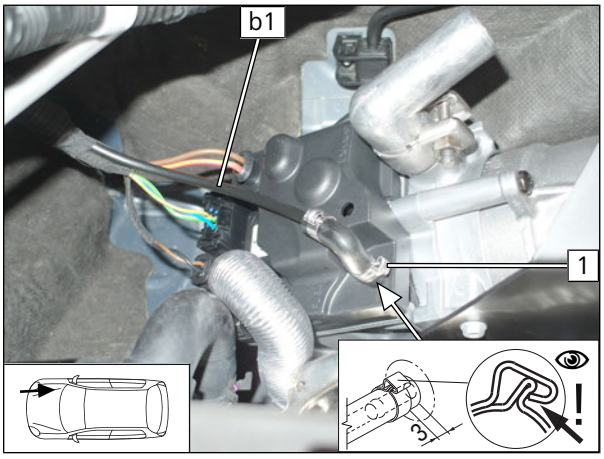


Fig. 43

1 Premounted 90° moulded hose, Ø10 clamp

Positioning heater at installation location

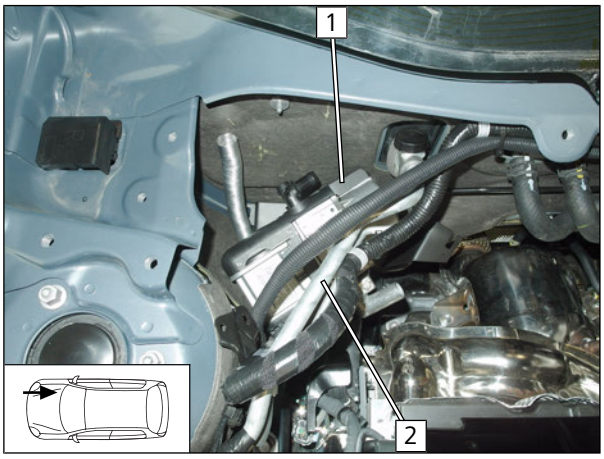


Fig. 44

▶ Position heater [1] under A/C line [2] and lead original vehicle wiring harnesses to the installation location.

Mounting heater

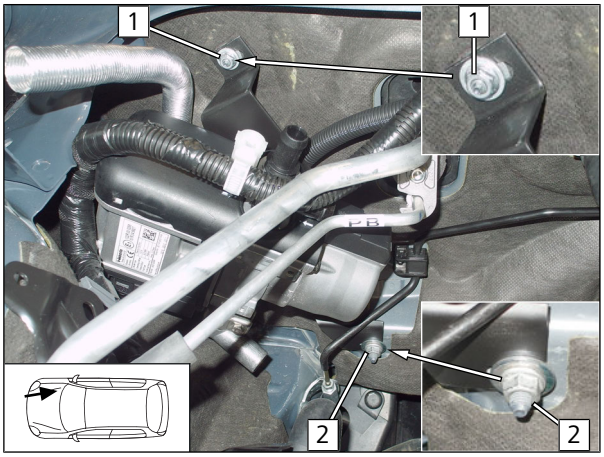


Fig. 45

[1] Original vehicle stud bolt, spacer (5), heater bracket, large diameter washer, flanged nut (8-10Nm)

[2] Original vehicle stud bolt, heater bracket, large diameter washer, flanged nut (15-20Nm)

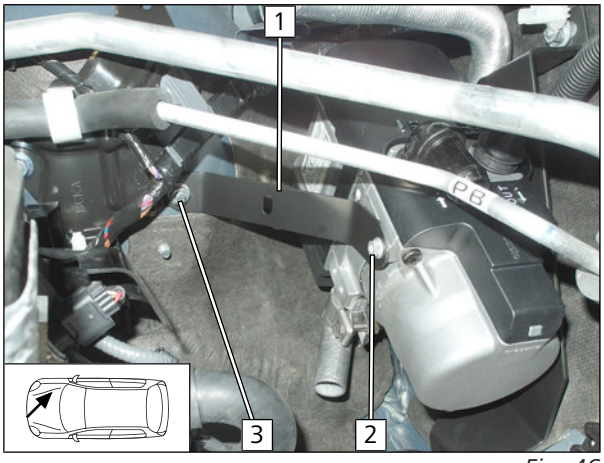


Fig. 46

[1] Strut

[2] 5x13 self-tapping bolt [8Nm]

[3] Original vehicle stud bolt, strut, original vehicle nut (8-10Nm)

Preparing clip-type cable tie

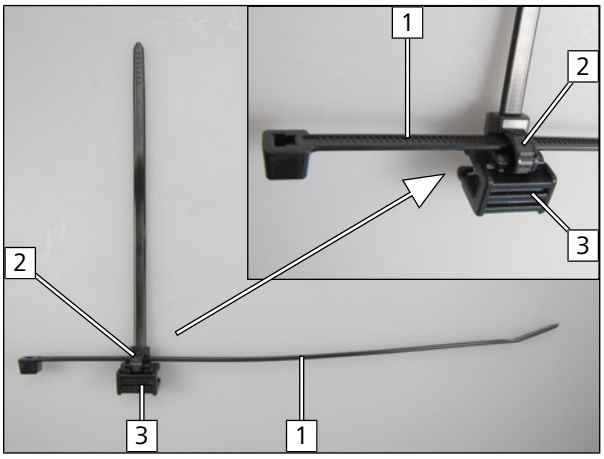


Fig. 47

▶ First loop cable tie **2** and then tighten it after inserting another cable tie **1** in longitudinal direction.

3 Clip-type cable tie

Fastening original vehicle wiring harness

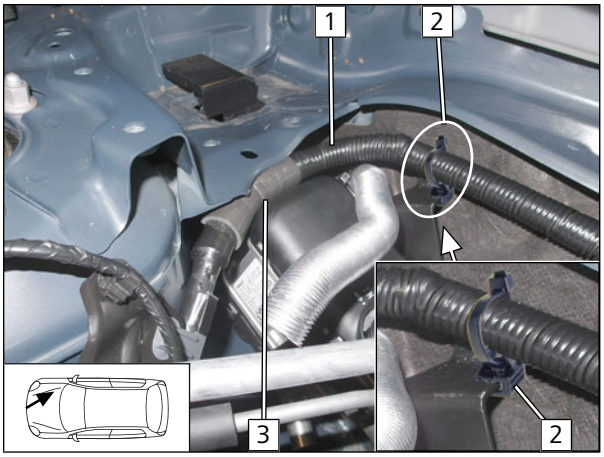


Fig. 48

▶ Mount clip-type cable tie **2** on heater bracket.

1 Original vehicle wiring harness

3 Self-adhesive foam

9 Combustion air

Mounting and fastening combustion air intake pipe **s1** on combustion air intake silencer

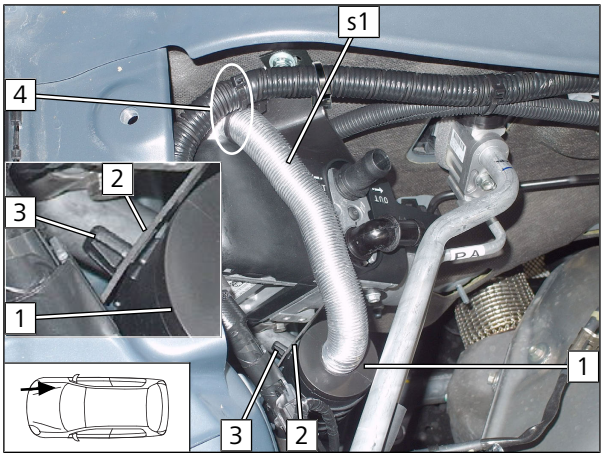


Fig. 49

Observe the installation instructions of the combustion air intake silencer.

▶ Fasten combustion air intake pipe **s1** at position **4** using two interlaced cable ties.

1 Combustion air intake silencer

2 Strut

3 Combustion air intake silencer clip

10 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

10.1 Routing fuel line

Routing and fastening fuel line

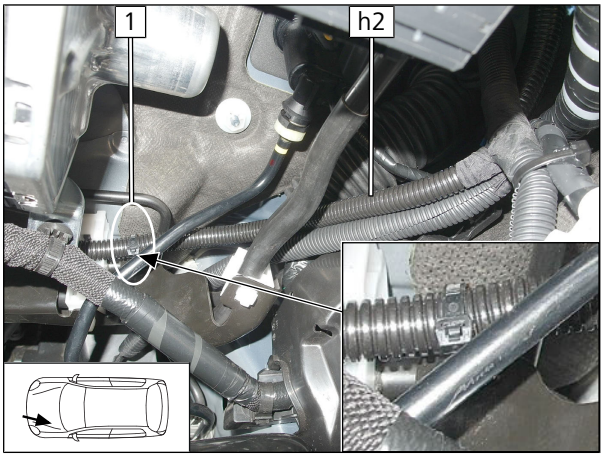


Fig. 50

▶ Route corrugated tube **h2** to the underbody as shown.

1 Edge clip cable tie

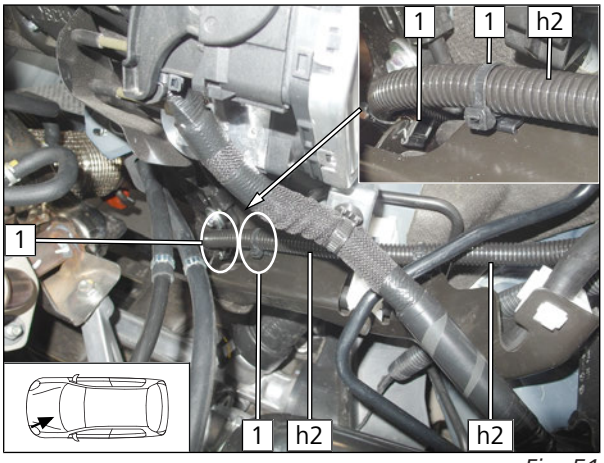


Fig. 51

▶ Route corrugated tube **h2** along original vehicle fuel lines.

1 Edge clip cable tie

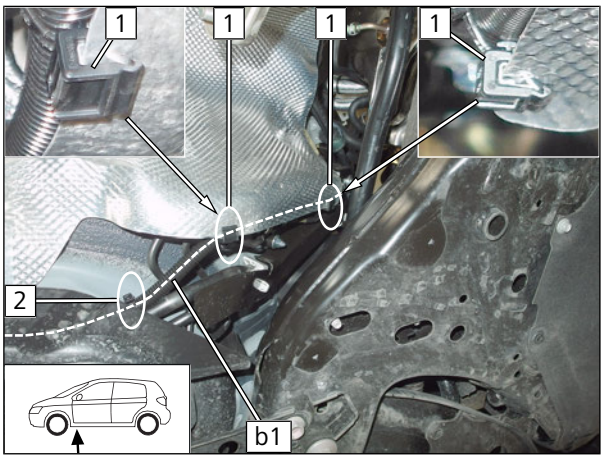


Fig. 52

▶ Route corrugated tube **h2** along original vehicle fuel lines.

1 Edge clip cable tie

2 Cable tie

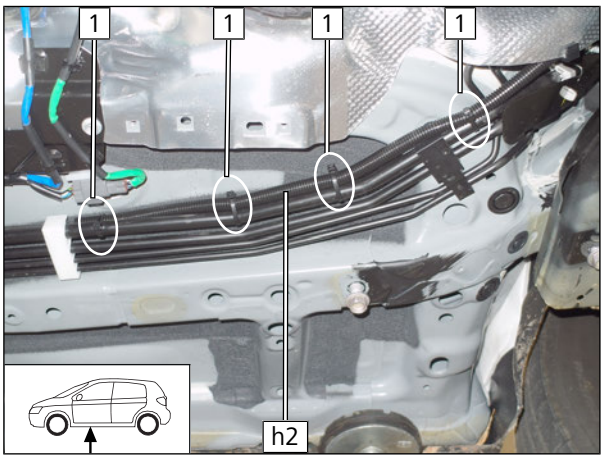


Fig. 53

▶ Route corrugated tube **h2** along original vehicle fuel lines.

1 Cable tie

Fastening fuel line **b1** and fuel pump wiring harness

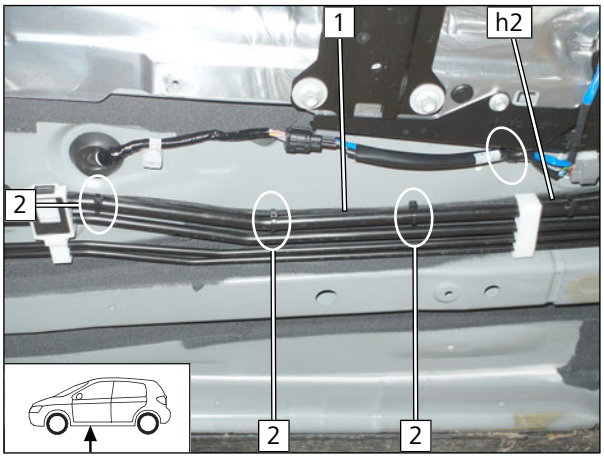


Fig. 54

1 Fuel line **b1** and fuel pump wiring harness

2 Cable tie

Premounting fuel pump

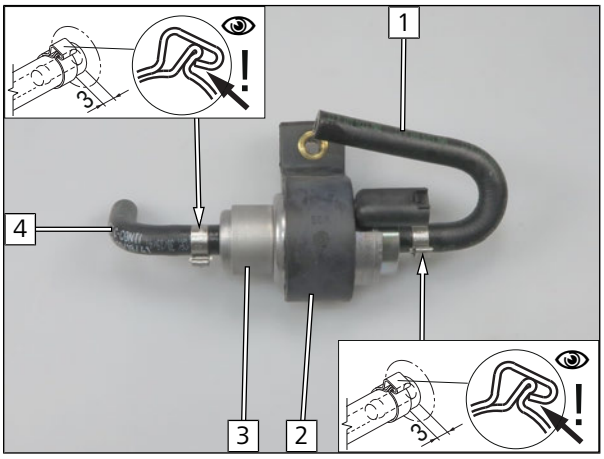


Fig. 55

1 180° moulded hose, Ø10 clamp
2 Fuel pump mount
3 Fuel pump
4 90° moulded hose, Ø10 clamp

Preparing perforated bracket

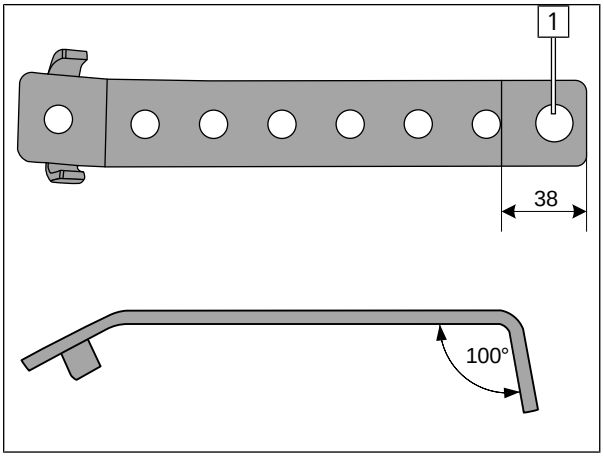


Fig. 56

▶ Drill out hole **1** to Ø 8.5.

Mounting perforated bracket

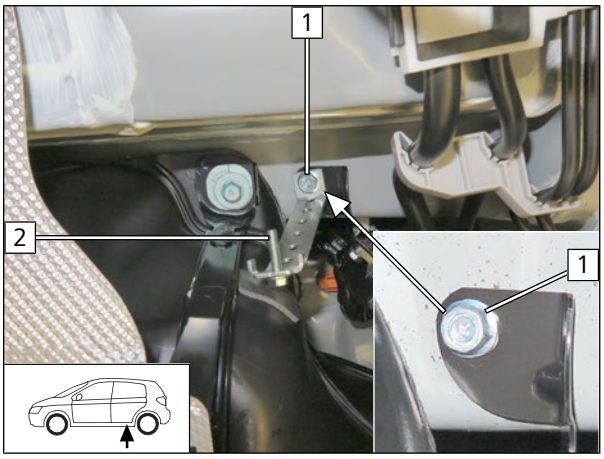


Fig. 57

1 Original vehicle bolt, perforated bracket (8-10Nm)
2 Position M6x25 bolt

Cutting self-adhesive foam in half

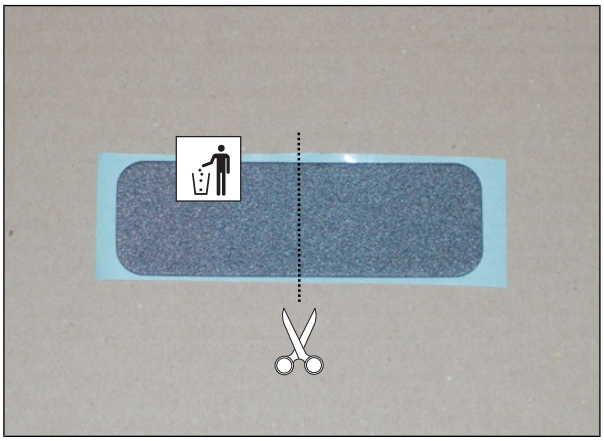


Fig. 58

Gluing self-adhesive foam

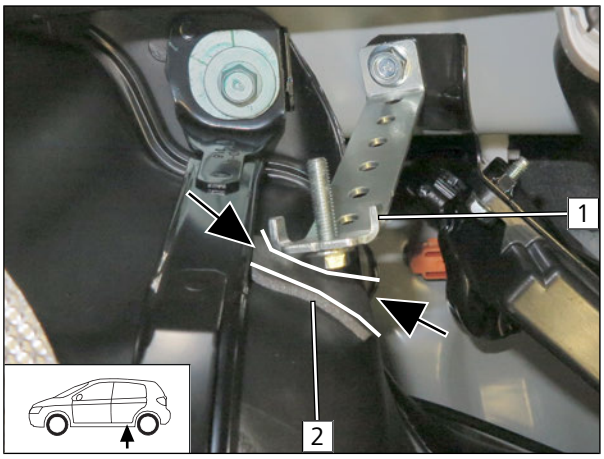
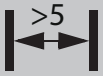


Fig. 59

Ensure sufficient distance between perforated bracket and tank, correct if necessary.



▶ Glue one half of self-adhesive foam [2], opposite mounted perforated bracket [1], on the tank as shown.

Mounting fuel pump

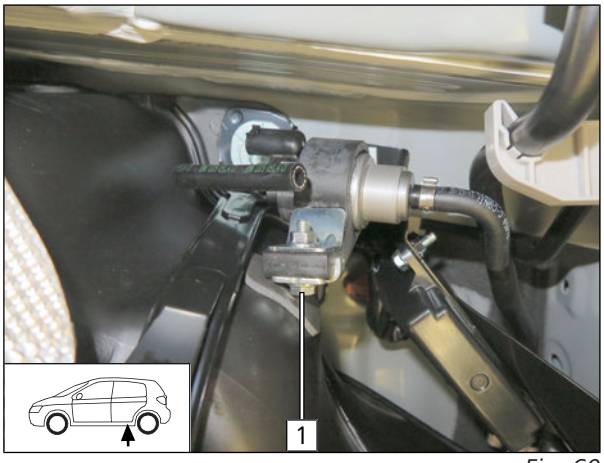


Fig. 60

[1] M6x25 bolt, premounted perforated bracket, fuel pump mount, support angle bracket, flanged nut (8-10Nm)

Fuel pump connection

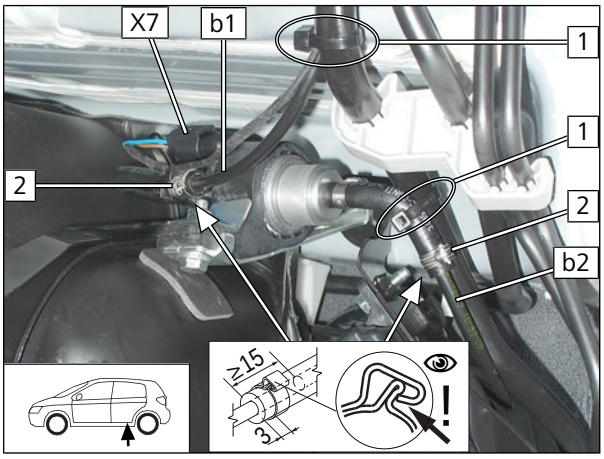


Fig. 61

1 Cable tie
2 Ø10 clamp
b1 Heater fuel line

▶ Route fuel line **b2** to tank fitting.

Routing and fastening wiring harness

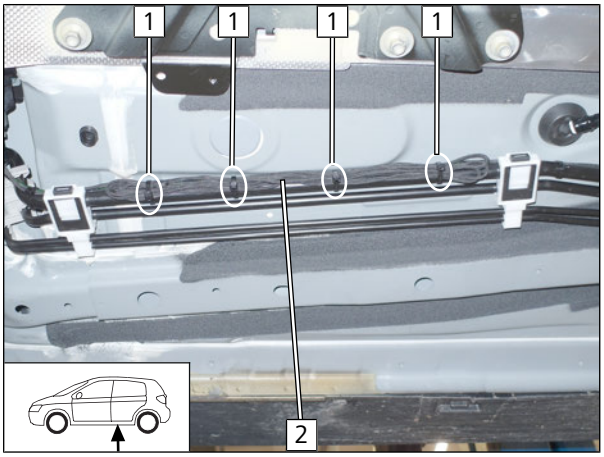


Fig. 62

▶ Attach excess wire length **2** to original vehicle fuel lines.

1 Cable tie

10.2 Installing FuelFix

Work steps F1, F2

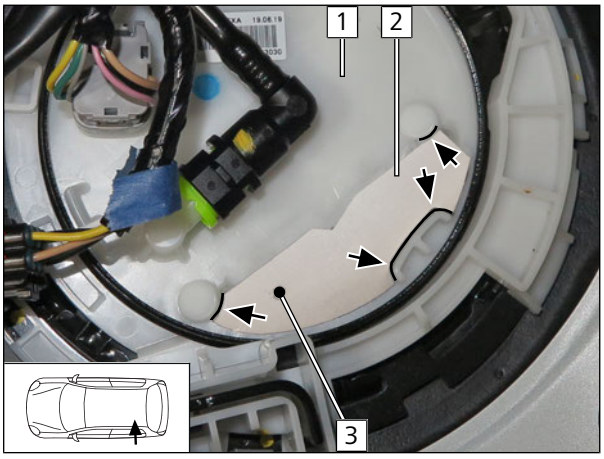


Fig. 63

Observe the installation instructions of the tank extracting device.

▶ Cut out drilling template **2** and position as shown.

▶ Copy hole pattern **3**.

1 Tank fitting

Work step F3

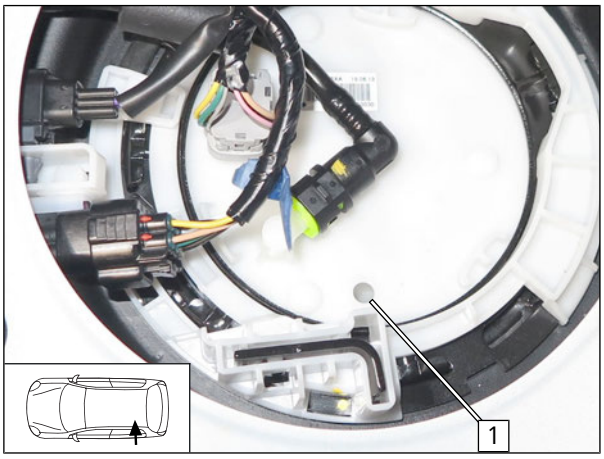


Fig. 64

DANGER

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

[1] Hole made with provided drill

Work steps F4, F5.1, F5.2

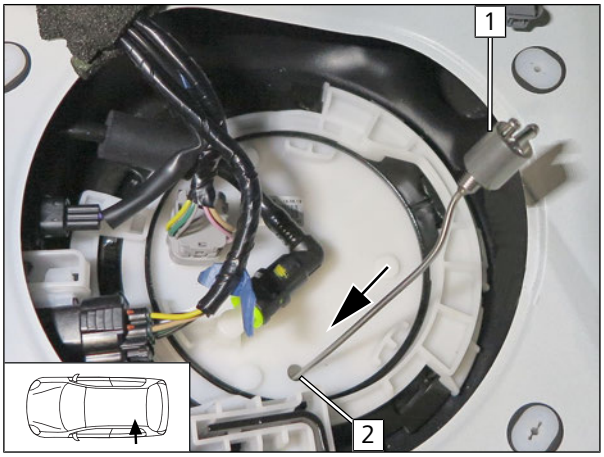


Fig. 65

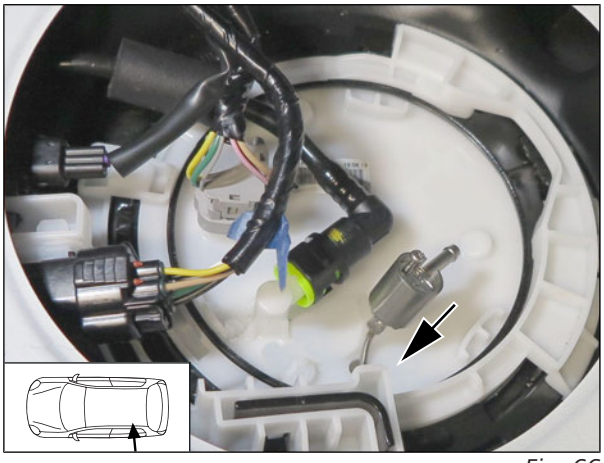


Fig. 66

- ▶ Bend FuelFix [1] according to template and cut to length.
- ▶ Insert FuelFix in hole [2] as shown.

Work steps F5.3, F5.4

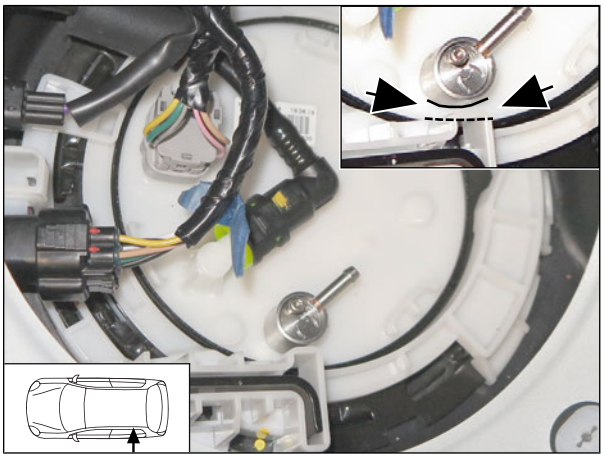


Fig. 67

Ensure sufficient distance between Fuelfix and tank fitting retaining ring.

▶ Align FuelFix as shown.

Work step F6.1

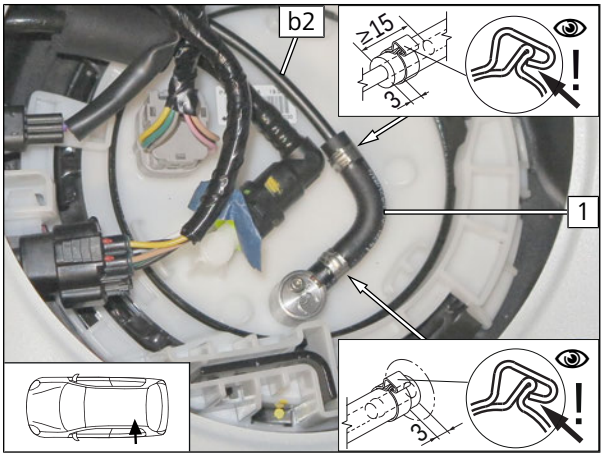


Fig. 68

1 90° moulded hose, Ø10 clamp

b2 Fuel line (700)

Work step F7

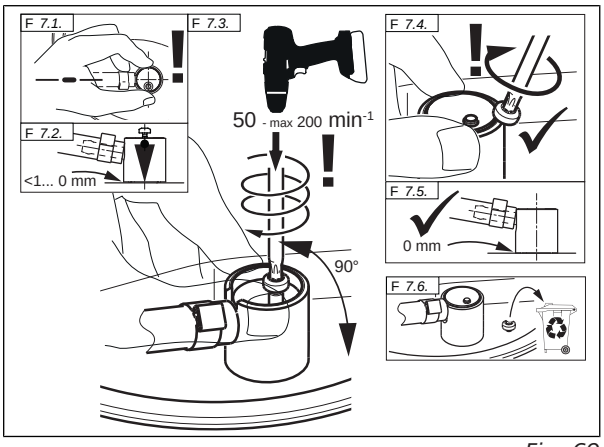


Fig. 69

DANGER

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

▶ Mount FuelFix.

Work step F8

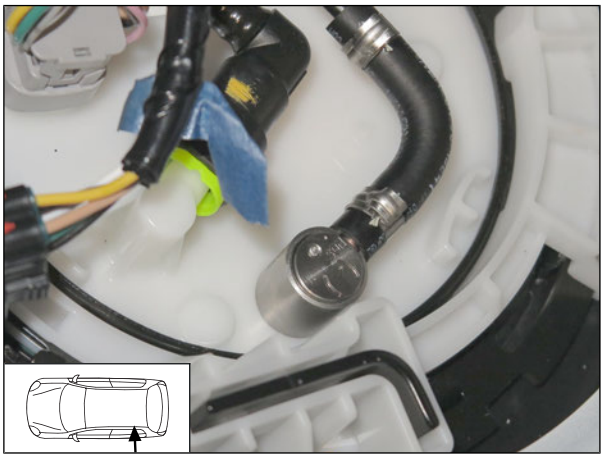


Fig. 70

DANGER

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

- ▶ Check for leakage after filling up the vehicle fuel tank.

- ▶ Check if the FuelFix is firmly mounted.

Securing fuel line **b2**.

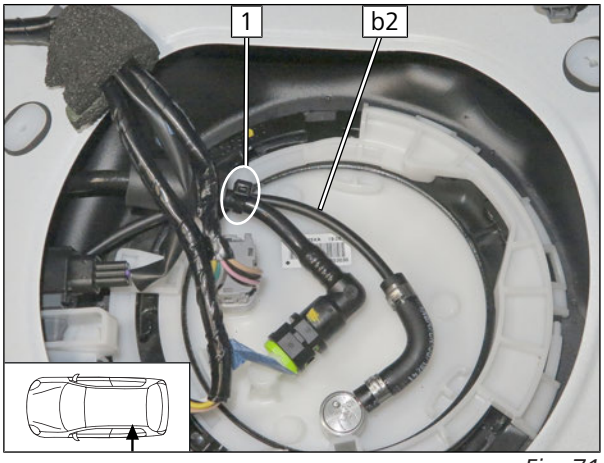


Fig. 71

1 Cable tie for tension relief

11 Coolant

11.1 Hose routing diagram

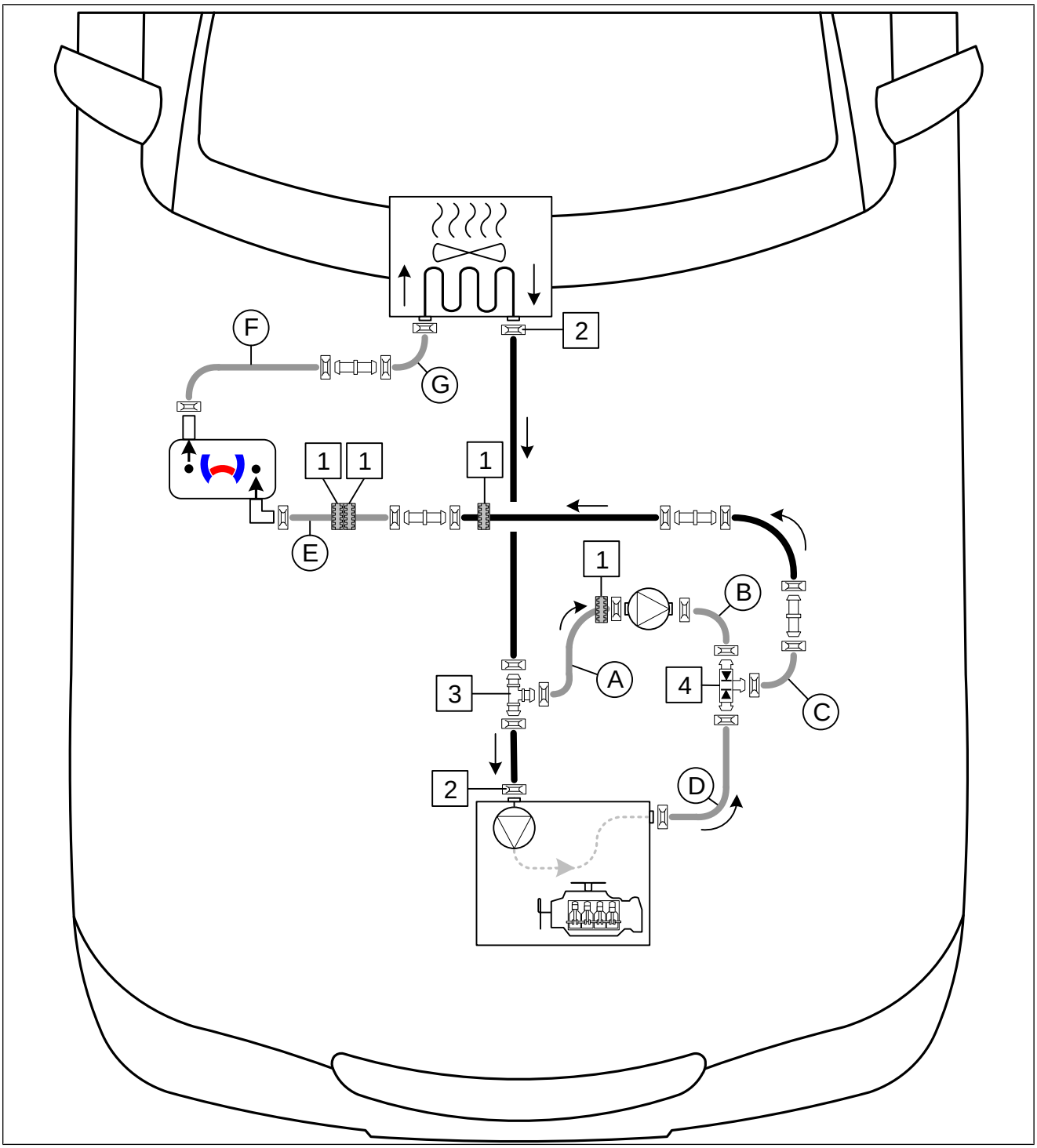


Fig. 72

All spring clips = Ø25; All connecting pipes = Ø18x18

[1] Black rubber isolator; [2] Original vehicle spring clip; [3] T-piece 3x Ø18; [4] Double non-return valve = 3x Ø18

11.2 Coolant circuit installation

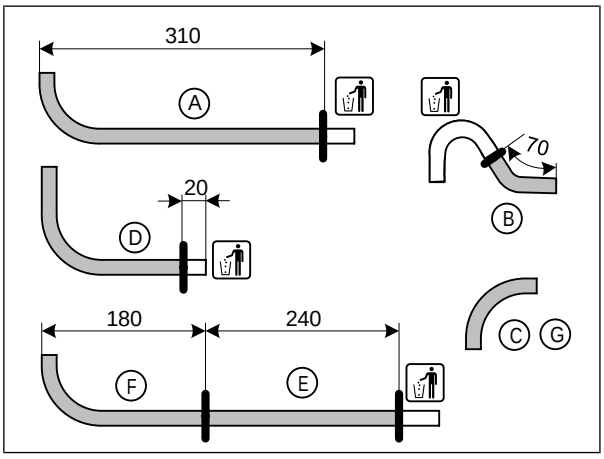


Fig. 73

- Ⓐ Ø18x18 moulded hose
- Ⓑ Ø18x18 moulded hose
- Ⓒ Short 90°, Ø18x18, moulded hose
- Ⓓ Long, 90°, Ø18x18 moulded hose
- Ⓔ Ø18x18 section from moulded hose
- Ⓕ Ø18x18 moulded hose
- Ⓖ Short 90°, Ø18x18, moulded hose

Cutting hoses

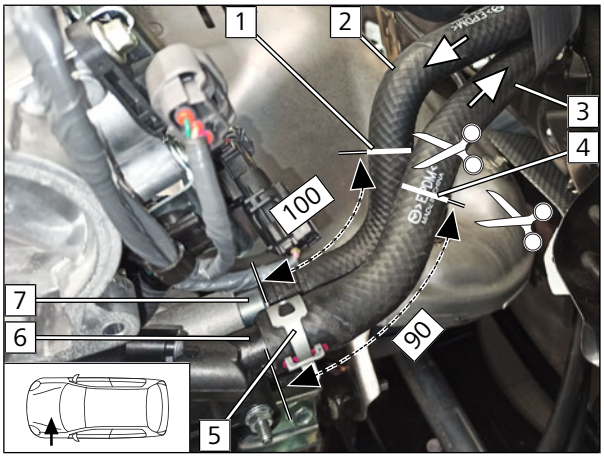


Fig. 74

- ▶ Cut heat exchanger outlet/engine inlet hose [2] at position [1] as shown.
- ▶ Cut heat exchanger inlet/engine outlet hose [3] at position [4] as shown and detach from engine outlet connection piece (CCV) [6].
- ▶ Detach and discard spring clip [5].

[7] Engine inlet connection piece

Mounting T-piece

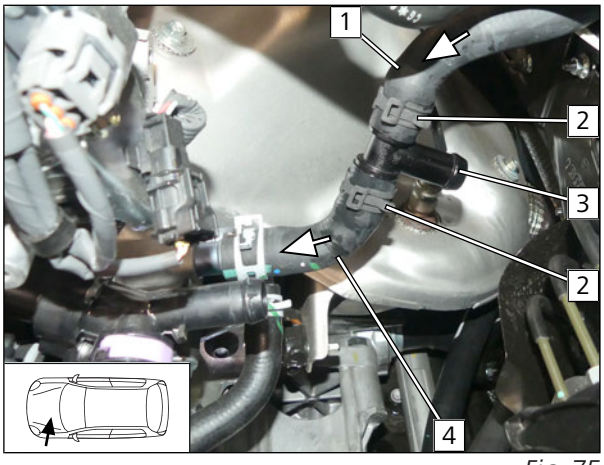


Fig. 75

- [1] Heat exchanger outlet hose section
- [2] Ø25 spring clip
- [3] T piece
- [4] Engine inlet hose section

Mounting heat exchanger inlet/engine outlet hose section

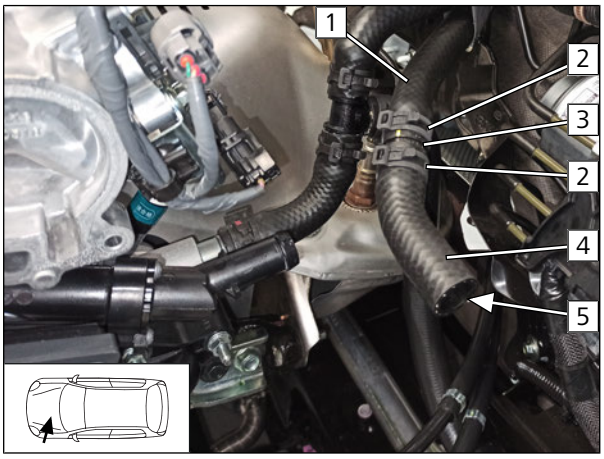


Fig. 76

▶ Turn hose section [4], cut off from heat exchanger inlet hose [1], by 180° and mount again as shown.

- [2] Ø25 spring clip
- [3] 18x18 connecting pipe
- [5] Side of the cut

Shortening perforated bracket

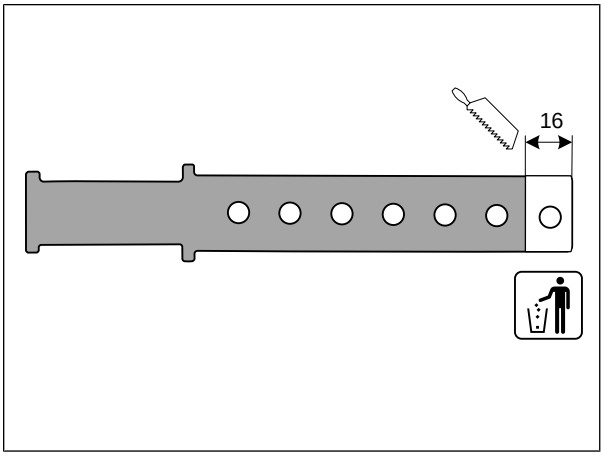


Fig. 77

Premounting coolant pump

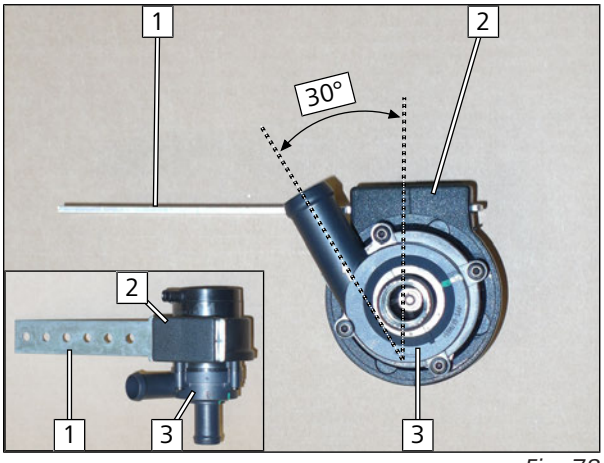


Fig. 78

▶ Mount coolant pump mount [2] and align as shown.

- [1] Perforated bracket
- [3] Coolant pump

Premounting hose Ⓐ

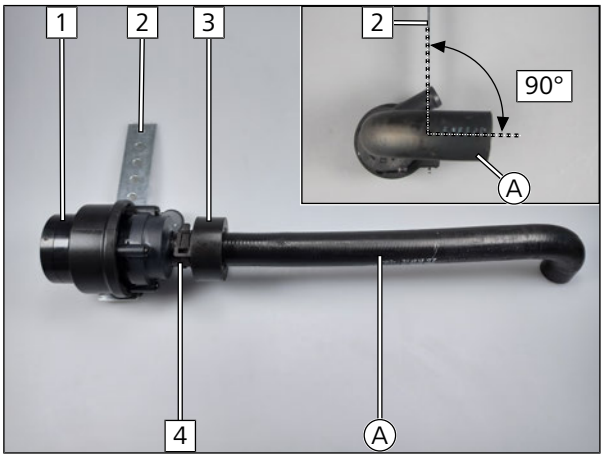


Fig. 79

1 Coolant pump
2 Perforated bracket
3 Black rubber isolator
4 Ø25 spring clip

Preparing coolant pump installation location

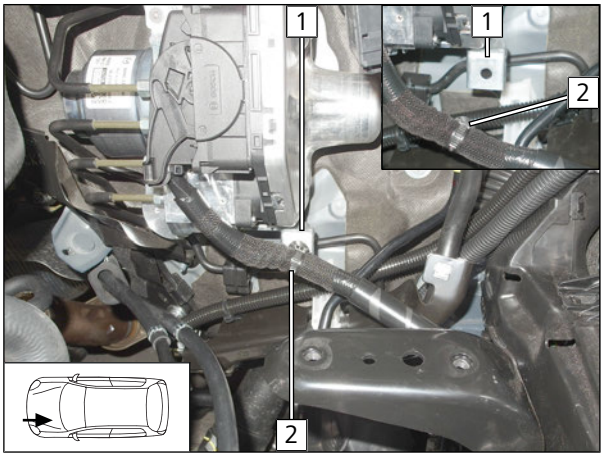


Fig. 80

▶ Cut original vehicle clip-type cable tie 2 from original vehicle bracket 1.

Mounting coolant pump

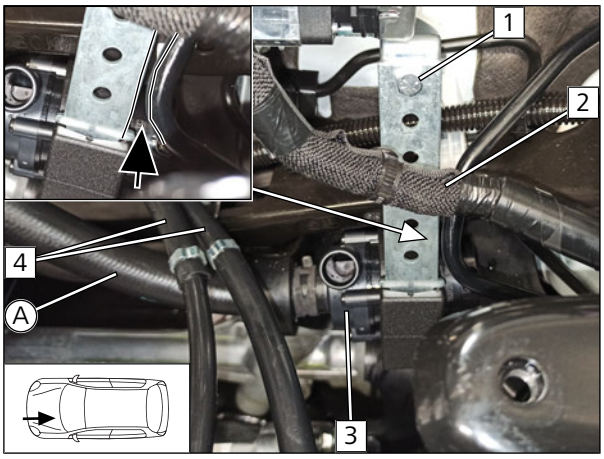
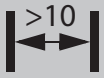


Fig. 81

Fig. shows vehicle with manual transmission

Ensure sufficient distance between original vehicle metal pipe and perforated bracket, correct if necessary.



▶ Route hose Ⓐ under original vehicle wiring harness 2 and gearshift cable 4 as shown.

1 M6x20 bolt, premounted perforated bracket, original vehicle bracket, flanged nut (8-10Nm)
3 Coolant pump

Mounting original vehicle wiring harness

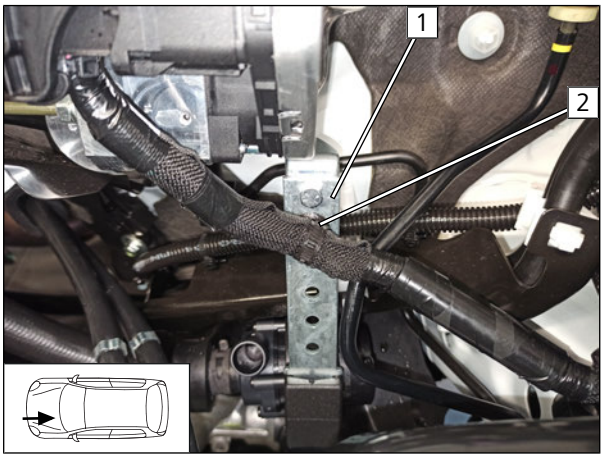


Fig. 82

▶ Attach clip-type cable tie **2** of original vehicle wiring harness using top free hole of mounted perforated bracket **1** as shown.

Connecting hose Ⓐ

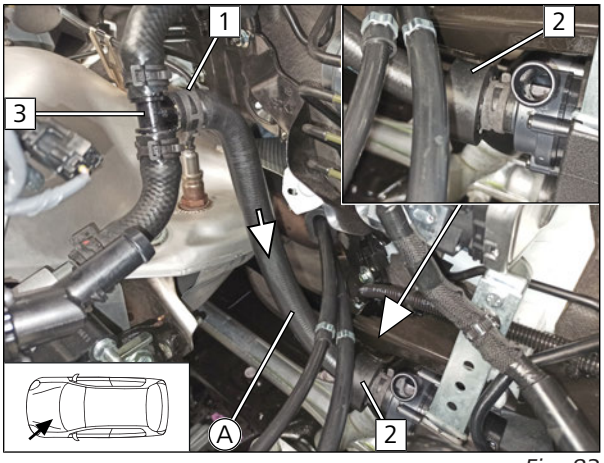


Fig. 83

▶ Align rubber isolator **2** with gearshift cable.

1 Ø25 spring clip

3 T piece

Mounting coolant pump wiring harness connector

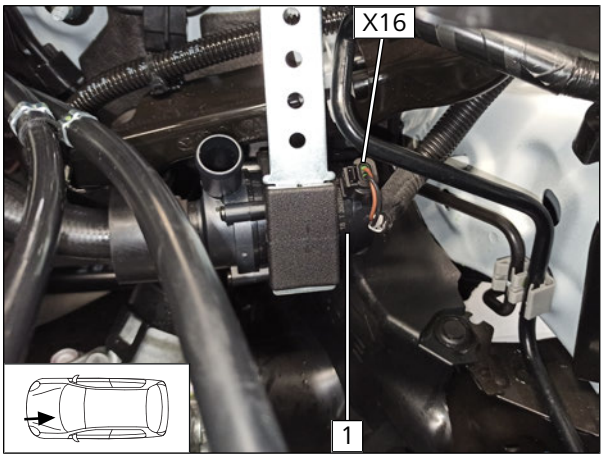


Fig. 84

1 Coolant pump

X16 Coolant pump wiring harness connector

Premounting double non-return valve

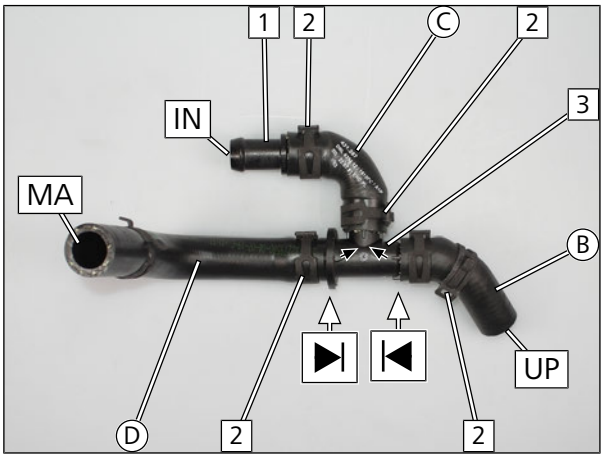


Fig. 85

Mount hose (D) with short side on double non-return valve.

- 1 18x18 connecting pipe
- 2 Ø25 spring clip
- 3 Double non-return valve
- MA Connection in direction of engine outlet (CCV)
- IN Connection in direction of heater inlet
- UP Connection in direction of coolant pump outlet

Aligning hoses

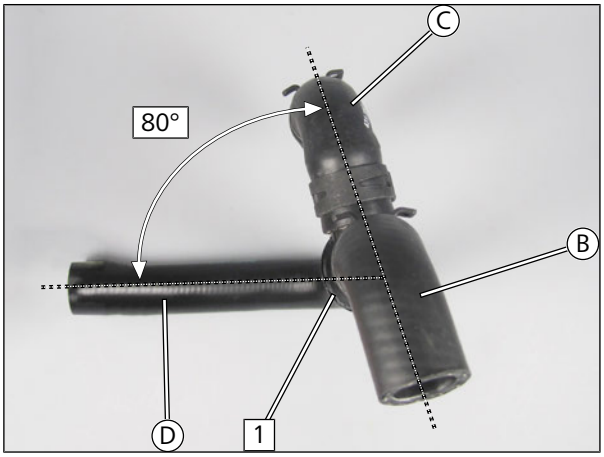


Fig. 86

- 1 Double non-return valve

Mounting double non-return valve

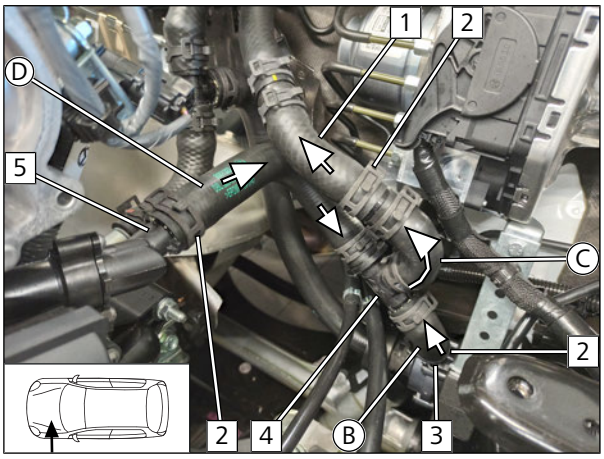


Fig. 87

- 1 Heat exchanger inlet hose section
- 2 Ø25 spring clip
- 3 Coolant pump outlet connection piece
- 4 Double non-return valve
- 5 Engine outlet connection piece (CCV)

Fastening hoses

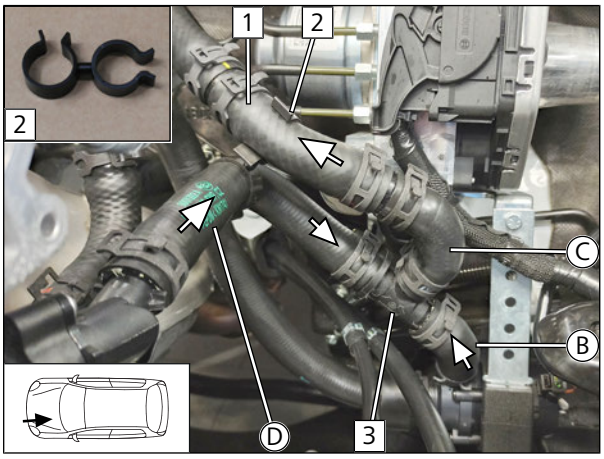


Fig. 88

2 25x25 hose bracket between heat exchanger inlet/ engine outlet hose section 1 and hose (D)

3 Double non-return valve

Checking distance

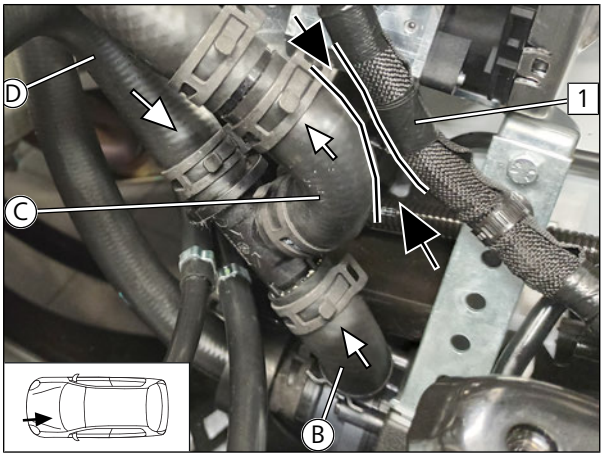


Fig. 89

Ensure sufficient distance between hose (C) and original vehicle wiring harness 1, correct if necessary.

>10

Fastening hose (A)

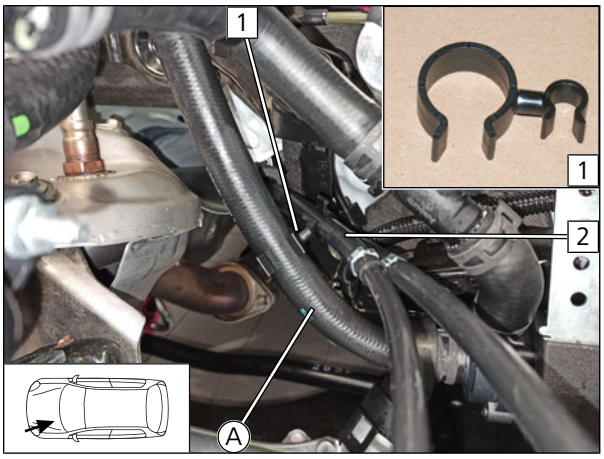


Fig. 90

Fig. shows vehicle with manual transmission

1 25x9 hose bracket between hose (A) and original vehicle gearshift cable 2

Adapting and pulling off heat exchanger inlet hose

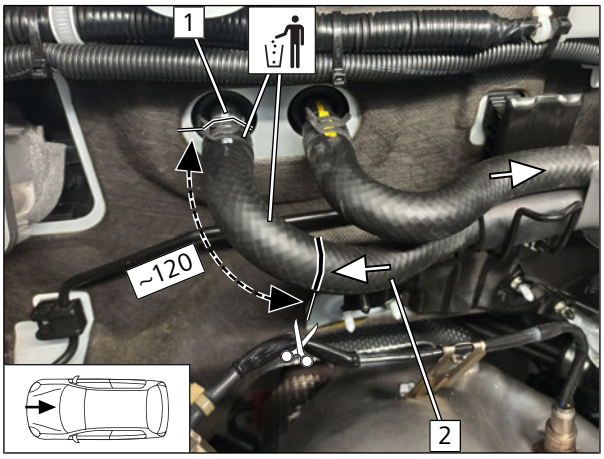


Fig. 91

▶ Cut heat exchanger inlet hose [2] as shown. Remove and discard hose section and spring clip [1].

Mounting hose (E)

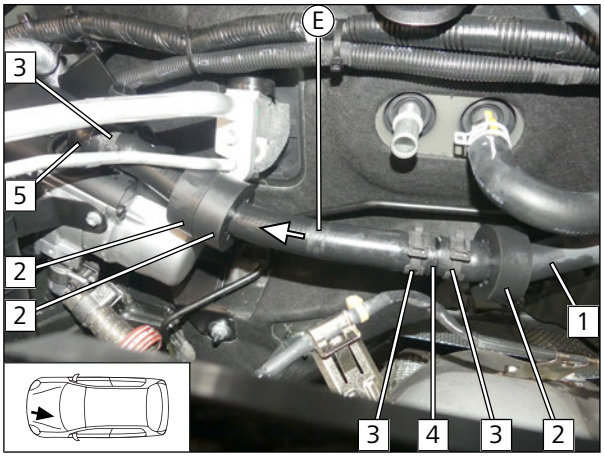


Fig. 92

[1] Engine outlet hose section
[2] Black (sw) rubber isolator
[3] Ø25 spring clip
[4] 18x18 connecting pipe
[5] Heater inlet connection piece

Aligning rubber isolators

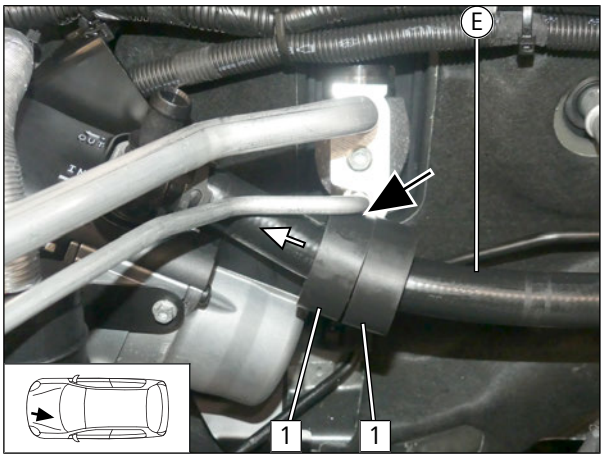


Fig. 93

▶ Align rubber isolators [1] of hose (E) with A/C line as shown.

Mounting hoses Ⓕ and Ⓖ

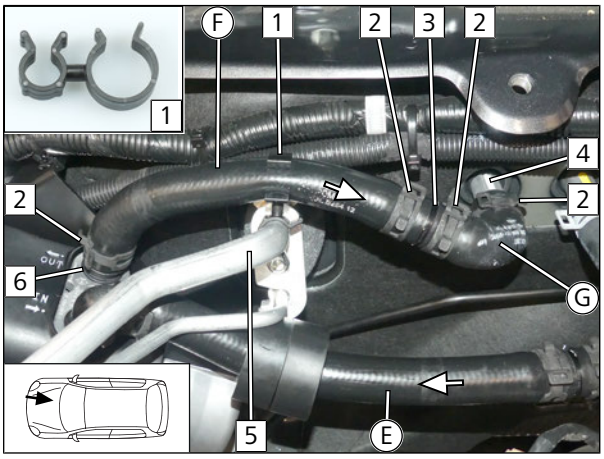


Fig. 94

1 13x25 hose bracket between hose Ⓕ and original vehicle A/C line
2 Ø25 spring clip
3 18x18 connecting pipe
4 Heat exchanger inlet connection piece
5 A/C line
6 Heater outlet connection piece

Mounting hose bracket

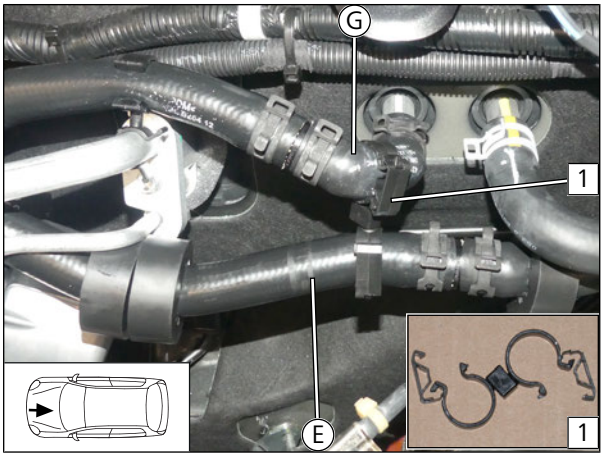


Fig. 95

▶ Mount hose bracket 1 between hose Ⓔ and hose Ⓖ as shown.

12 Exhaust

Preparing exhaust pipe

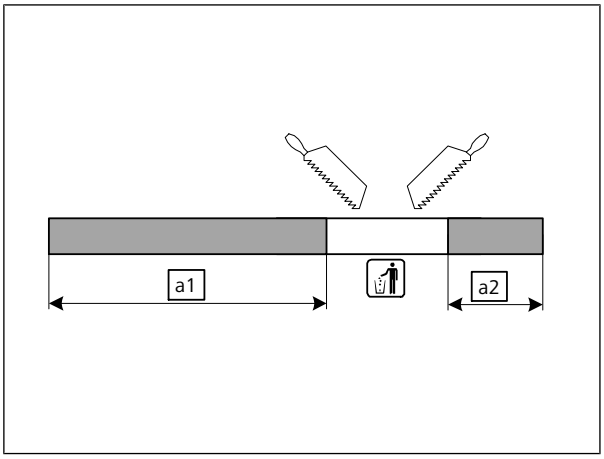


Fig. 96

a1 510

a2 135

Premounting exhaust silencer

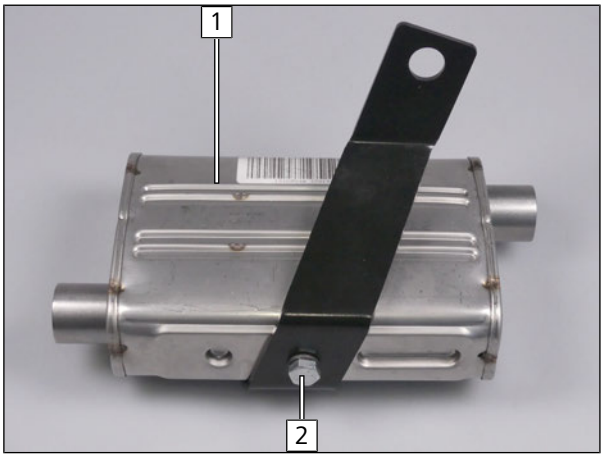


Fig. 97

1 Exhaust silencer

2 M6x16 bolt, spring lock washer, bracket (8-10Nm)

Premounting exhaust pipe **a1**

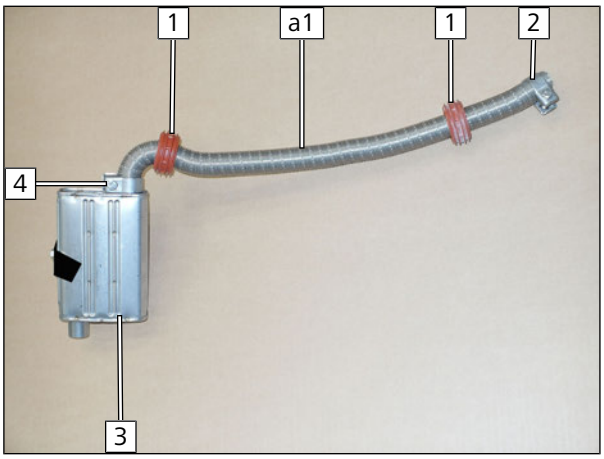


Fig. 98

▶ Mount spacer bracket **1** as shown.

▶ Mount hose clamp **2** loosely.

3 Exhaust silencer

4 Hose clamp

Mounting exhaust pipe **a2**

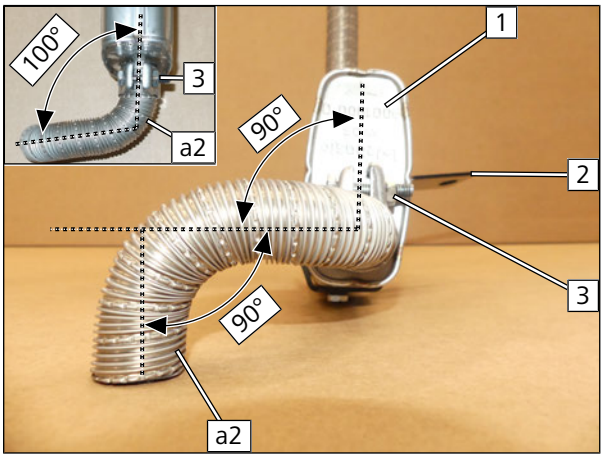


Fig. 99

▶ Bend exhaust pipe **a2** as shown.

1 Exhaust silencer
2 Premounted bracket
3 Hose clamp

Bending perforated bracket

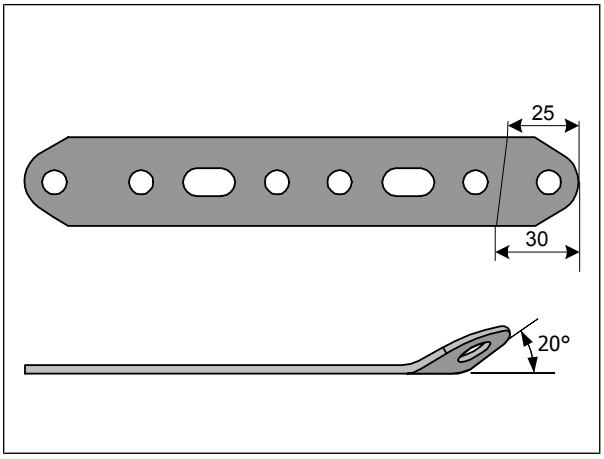


Fig. 100

Installing perforated bracket

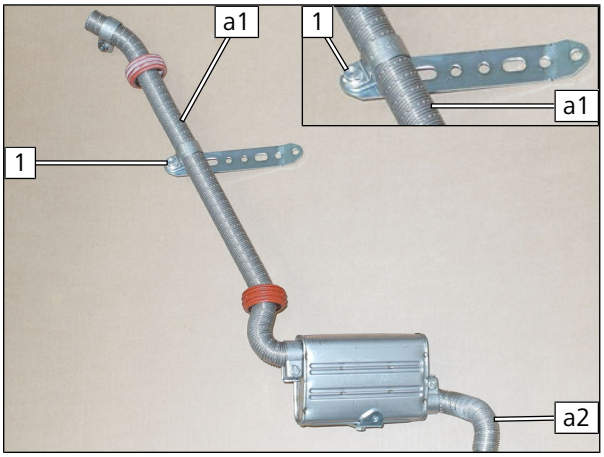


Fig. 101

1 Mount M6x16 bolt, perforated bracket, pipe clamp, flanged nut loosely

Removing original vehicle clip

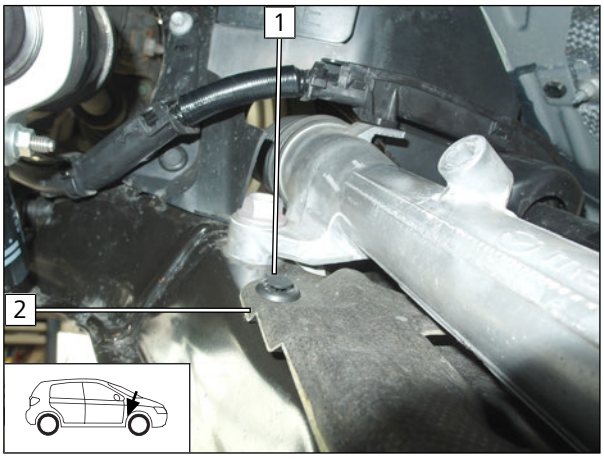


Fig. 102

- ▶ Discard original vehicle clip 1.
- ▶ Fold back insulation mat 2 (if present).

Inserting rivet nut

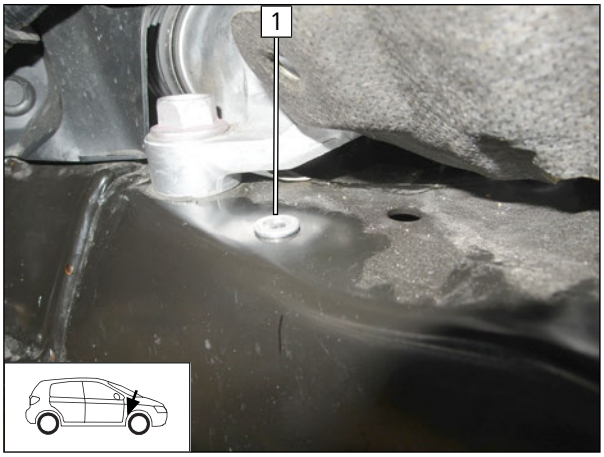


Fig. 103

1 Rivet nut

Mounting exhaust silencer

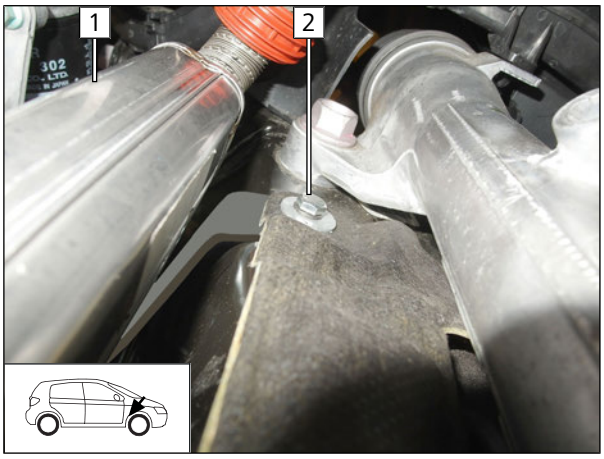


Fig. 104

1 M6x20 bolt, spring lock washer, large diameter washer, original vehicle insulation mat, premounted bracket, rivet nut (8-10Nm)

Mounting exhaust pipe **a1**

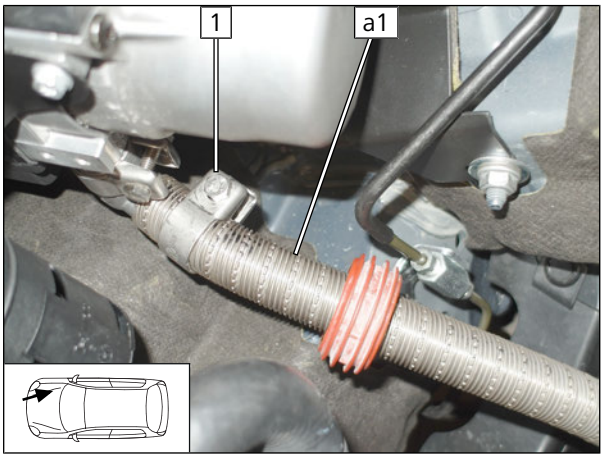


Fig. 105

1 Tighten hose clamp

Mounting heat shield plate

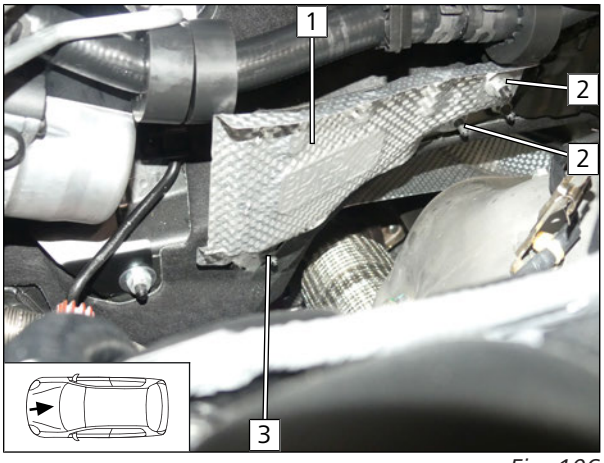


Fig. 106

▶ Position heat shield plate **1** on original vehicle stud bolts **2** and **3** and fix with the original vehicle nuts at position **2** (8-10Nm).

Installing perforated bracket

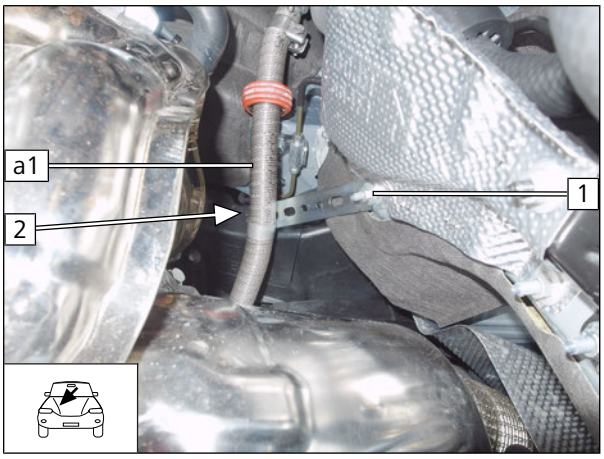


Fig. 107

1 Original vehicle stud bolt, premounted heat shield plate, premounted perforated bracket, flanged nut (8-10Nm)

▶ Tighten loose screw connection on pipe clamp **2** (8-10Nm).

Aligning spacer bracket

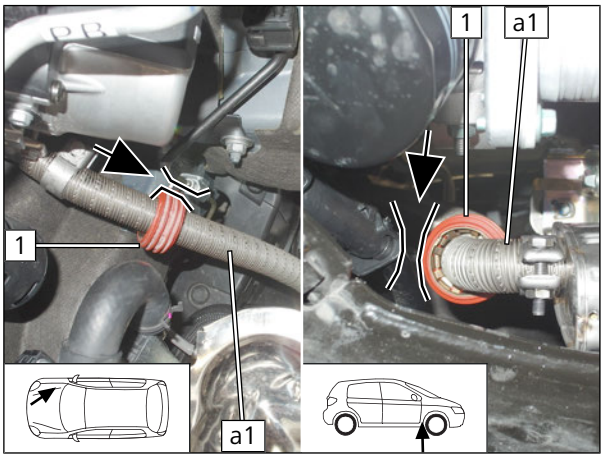


Fig. 108

Ensure sufficient distance around exhaust pipe **a1**, correct if necessary.

>15

Aligning exhaust pipe **a2**

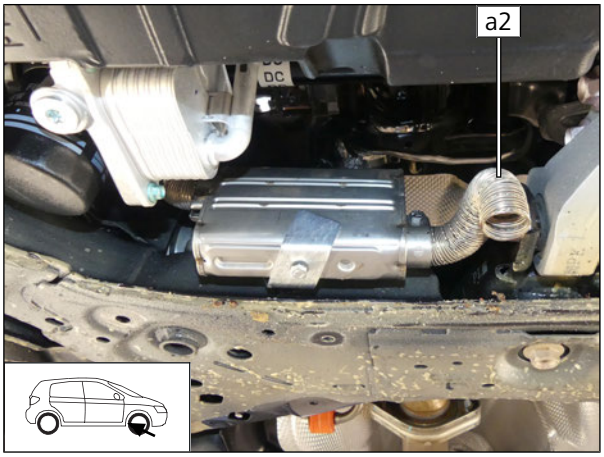


Fig. 109

▶ Align exhaust pipe **a2** as shown.

12.1 Exhaust end fastener

Work step E1.1

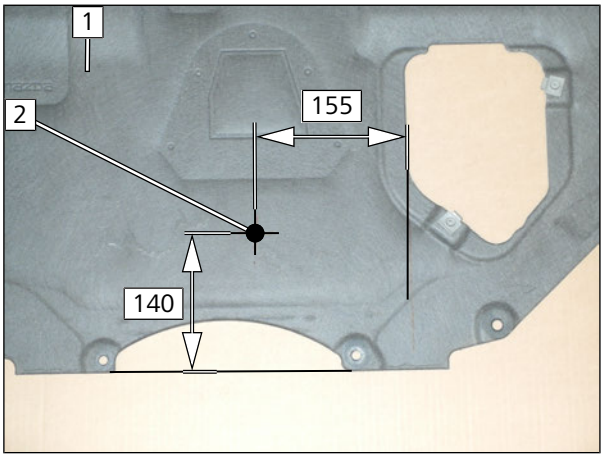


Fig. 110

Observe the EFIX installation instructions.

▶ Copy hole pattern **2**.

1 Underride protection

Work step E1.2

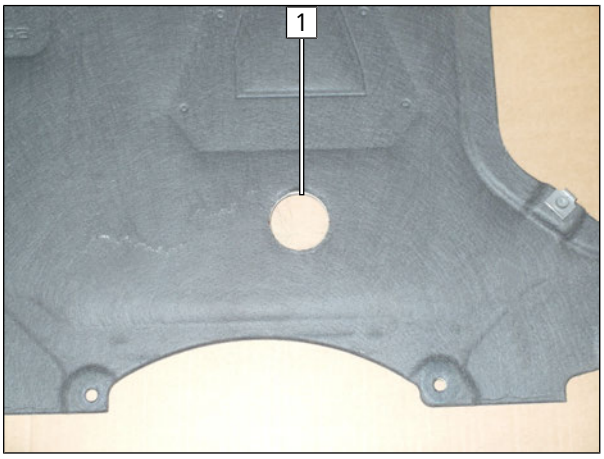


Fig. 111

1 Ø42 hole

Work step E3

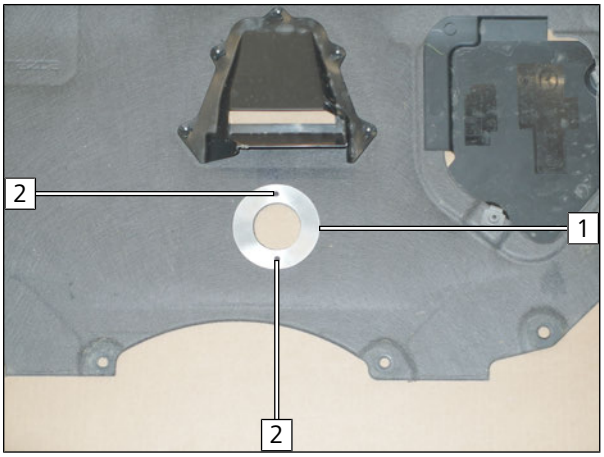


Fig. 112

▶ Position washer **1** as shown.

2 Copy hole pattern

Work step E4

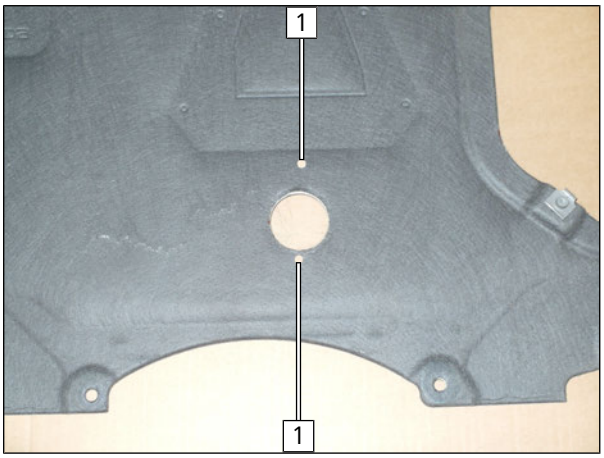


Fig. 113

2 Ø5.5 hole

Work step E5

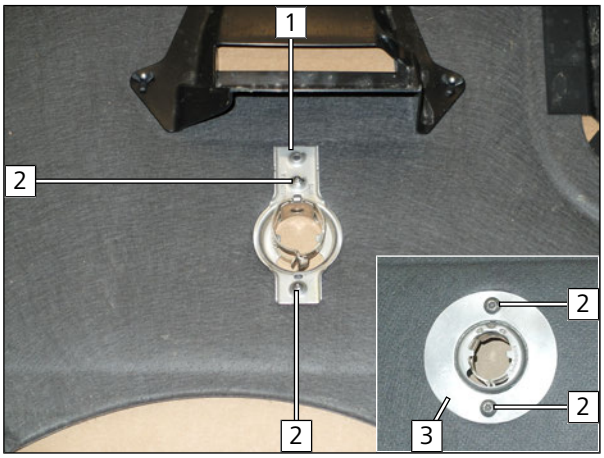


Fig. 114

1 EFIX
2 5x13 self-tapping screw, washer (3Nm)
3 Washer

Work steps E6-8

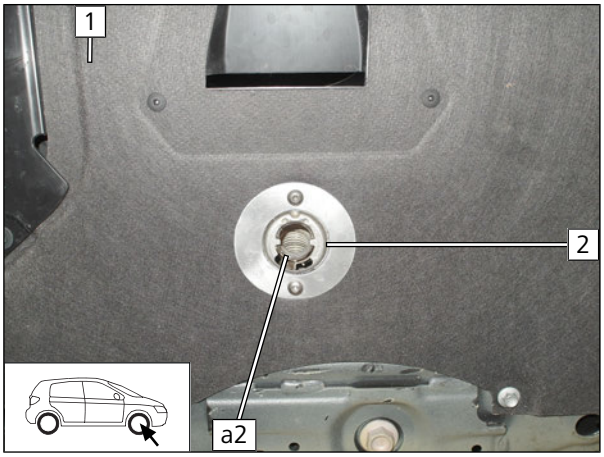


Fig. 115

Ensure sufficient distance around exhaust pipe **a2**, correct if necessary.

- ▶ Mount underride protection **1**.
- ▶ Mount exhaust pipe **a2** in premounted EFIX **2**.

13 Electrical system of passenger compartment

13.1 Preparing electrical system

Assigning wires

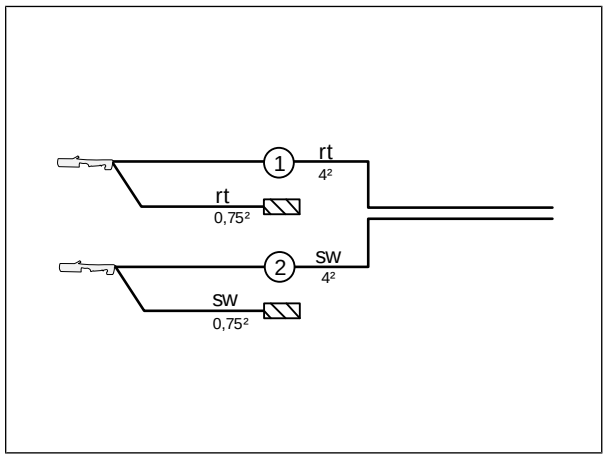


Fig. 116

Wire sections retain their numbering in the entire document.

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

① Red (rt) wire of fan wiring harness
② Black (sw) wire of fan wiring harness

View of CCL / F6 adapter wiring harness

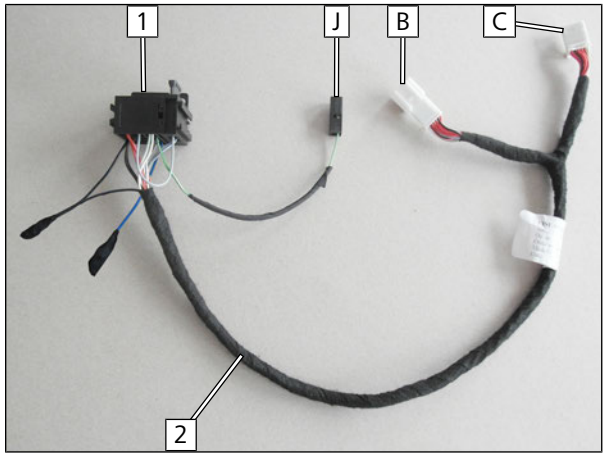


Fig. 117

1 CCL socket
2 CCL / F6 adapter wiring harness (Mazda ID.: 4100-78-837)

J 4-pin male plug **J**
B 12-pin male plug **B**
C 12-pin female plug **C**

View of male and female connectors

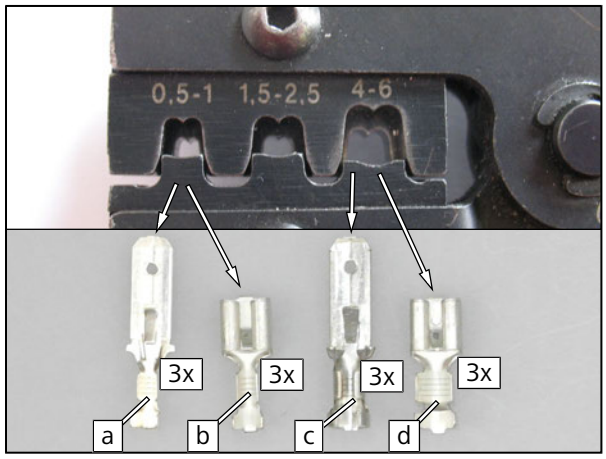


Fig. 118

a 6.3 male connector for 0.5 – 1 mm² wire cross-section
b 6.3 female connector for 0.5 – 1 mm² wire cross-section
c 6.3 male connector for 4 – 6 mm² wire cross-section
d 6.3 female connector for 4 – 6 mm² wire cross-section

Instructions for connecting the contacts

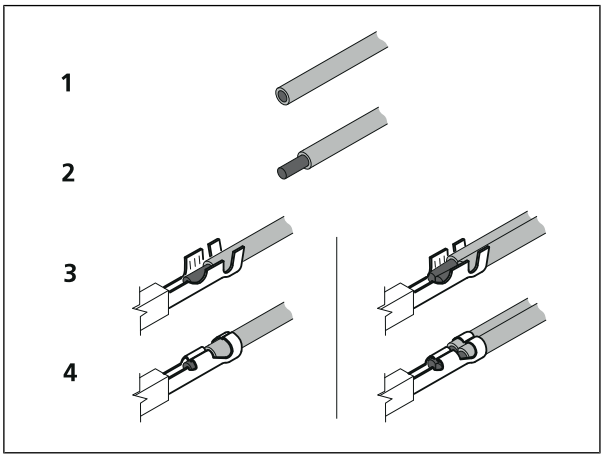


Fig. 119

The instructions apply to all the next contact connections.

Preparing passenger compartment relay and fuse holder (RSH)

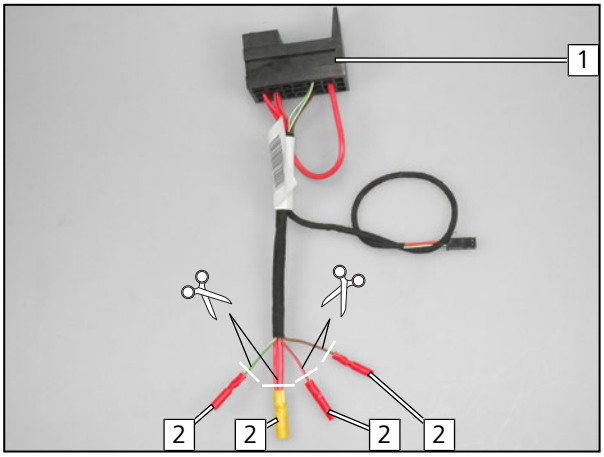


Fig. 120

▶ Cut the butt connectors 2 [4x] from the wires at the markings.

[1] RSH

Installing male connector

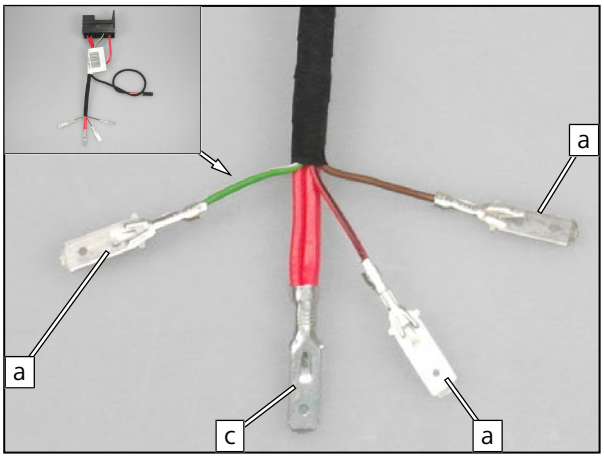


Fig. 121

Install as shown in the next figure

▶ Male connector [a] to:

⇨ Red/black (rt/sw) wire (0.5mm²)

⇨ Green/white (gn/ws) wire (0.5mm²)

⇨ Brown (br) wire (0.5mm²)

▶ Male connector [c] to:

⇨ Red (rt) wire (4.0mm²) together with red (rt) wire (1.5mm²)

Mounting connector housing

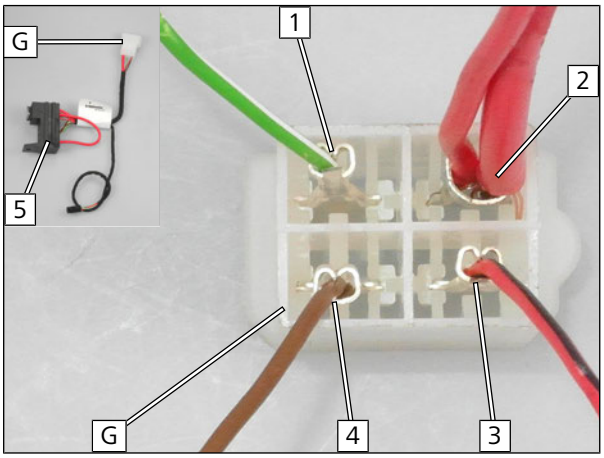
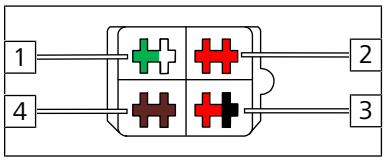


Fig. 122

1 Green/white (gn/ws) wire (0.5mm²)
2 Red (rt) wire (4.0mm²) and red (rt) wire (1.5mm²)
3 Red/black (rt/sw) wire (0.5mm²)
4 Brown (br) wire (0.5mm²)
5 RSH

G 4-pin connector housing

Wire-side view:



13.2 Preparing RSH and CCL

Assembling RSH socket and CCL/F6 wiring harness socket, connecting wires, connecting male and female connectors

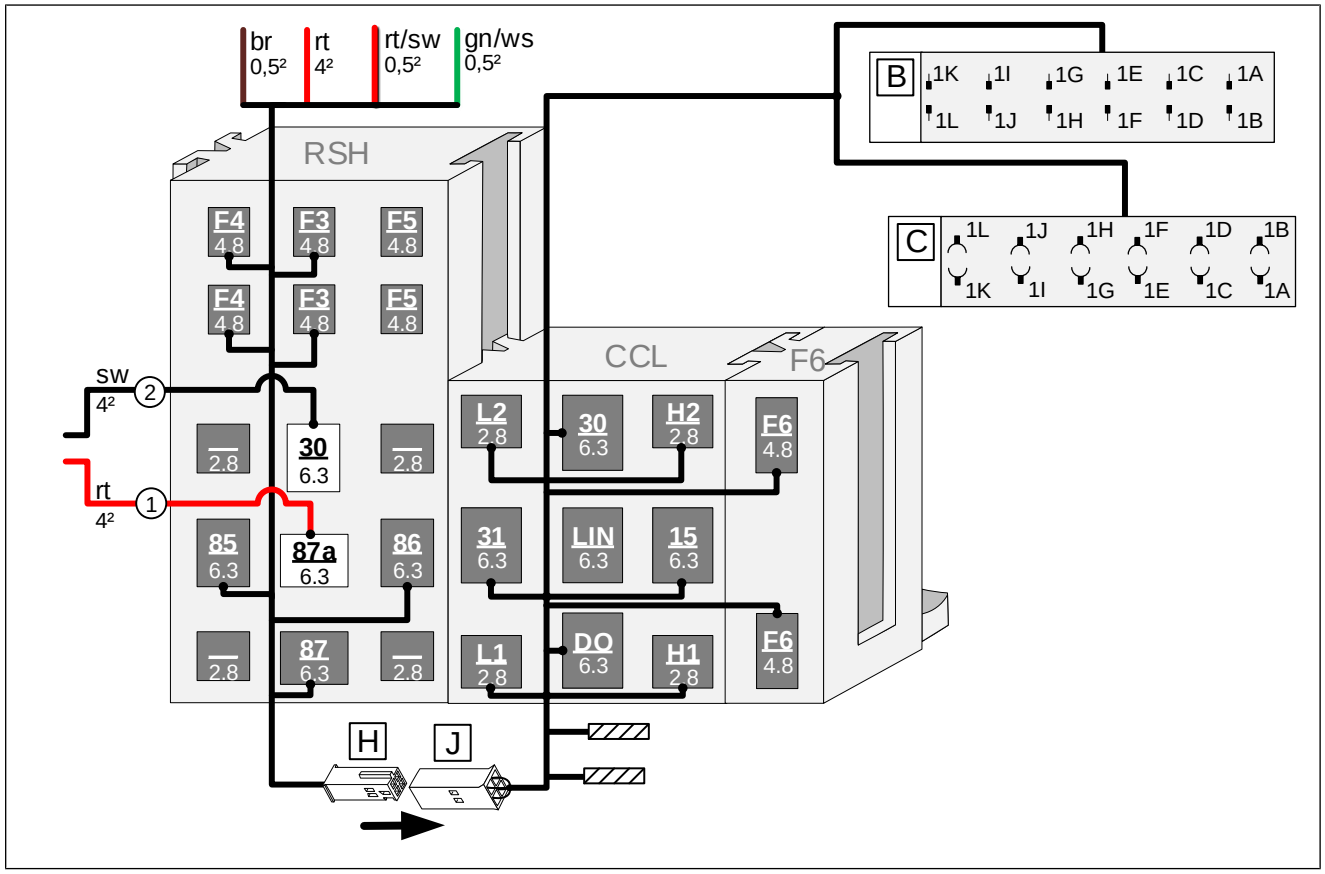


Fig. 123

Premounting RSH, CCL/F6 wiring harness socket

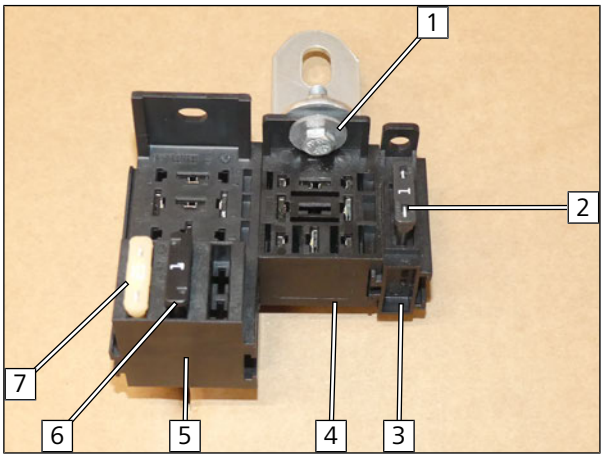


Fig. 124

1 M5x16 bolt, large diameter washer, CCL socket, angle bracket, large diameter washer, nut (5-6Nm)
2 6A fuse F1
3 F6 socket
4 CCL socket
5 RSH
6 1A fuse F3
7 25A fuse F4

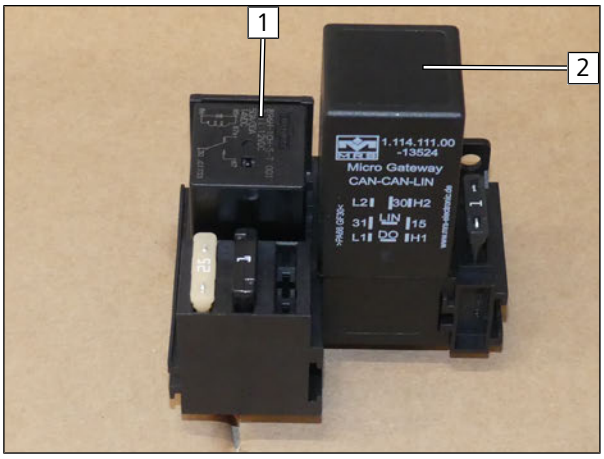


Fig. 125

WARNING

Risk of mix-up

- ▶ Mount relay K1 1 onto RSH socket.
- ▶ Mount CCL module 2 onto CCL socket.

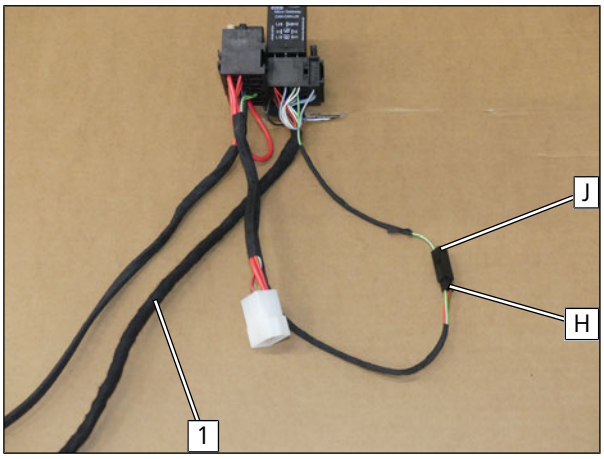


Fig. 126

▶ Connect male plug J with female plug H.

1 CCL/F6 wiring harness

13.3 Preparing fan wiring harness

Cutting wiring harness to length

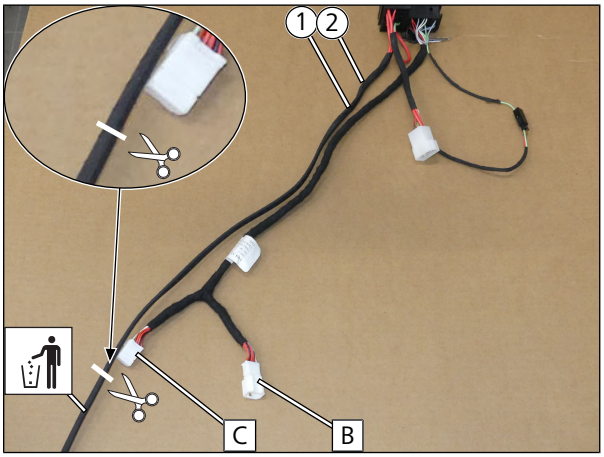


Fig. 127

▶ Shorten wiring harnesses ① and ② as shown.

B 12-pin male plug B of CCL/F6 wiring harness

C 12-pin female plug C of CCL/F6 wiring harness

Preparing wiring harness

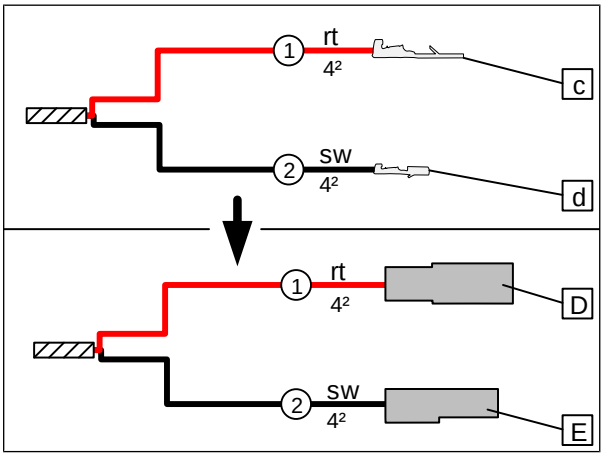


Fig. 128

▶ Male connector c to:

⇨ ① Red (rt) wire (4.0mm²)

▶ Female connector d to:

⇨ ② Black (sw) wire (4.0mm²)

D Male connector housing

E Female connector housing

13.4 Preparing RSH installation location

Loosening original vehicle wiring harness

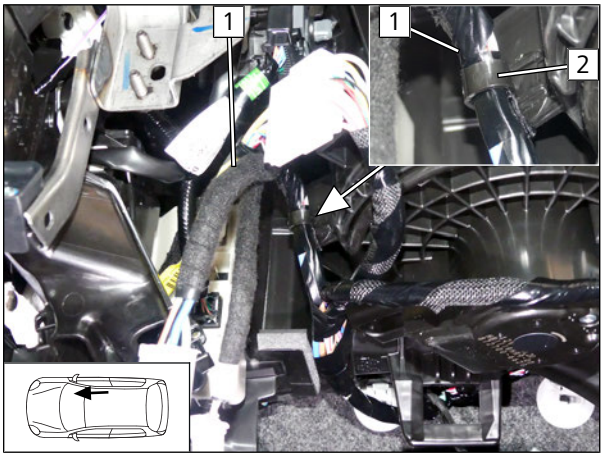


Fig. 129

▶ Detach original vehicle wiring harness bracket 2 from clip.

1 Original vehicle wiring harness

Disconnecting original vehicle connector

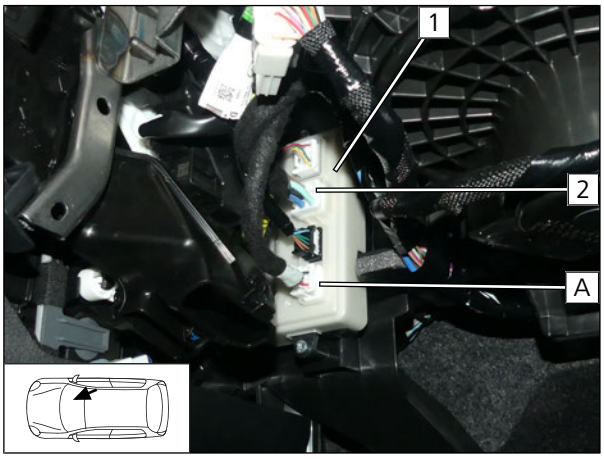
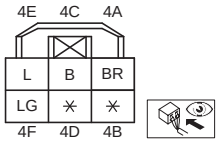


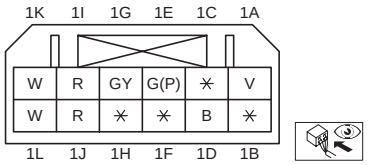
Fig. 130

1 DASH_ESU

2 6-pin connector 0940-103D:



A 12-pin connector 0940-103A:



Mounting bolt

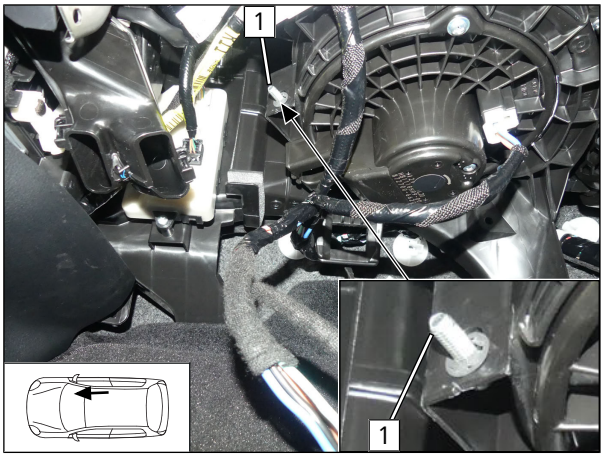


Fig. 131

1 M6x16 bolt, original vehicle hole, lock washer

13.5 Routing and premounting wiring harnesses in passenger compartment

Routing wiring harnesses

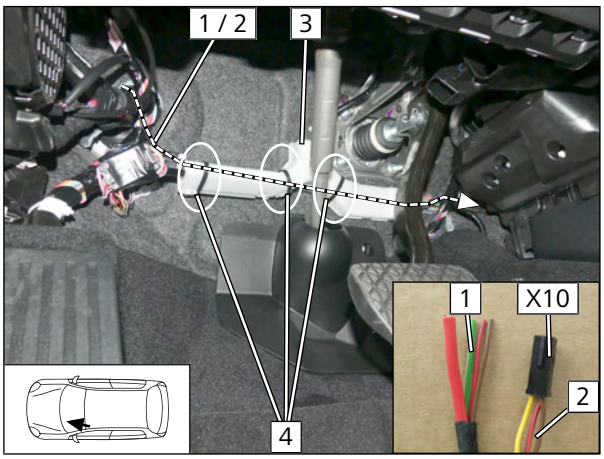


Fig. 132

▶ Route passenger compartment wiring harness 1 and control element wiring harness 2 along line duct 3 to the front passenger's side.

4 Cable tie

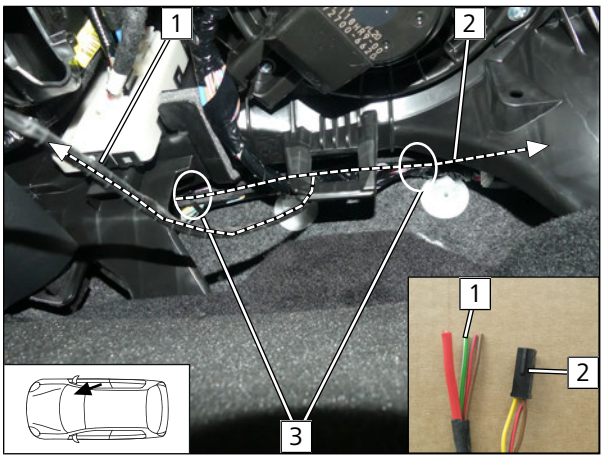


Fig. 133

▶ Route control element wiring harness **2** to front passenger's side A-pillar.

1 Fan wiring harness

3 Cable tie

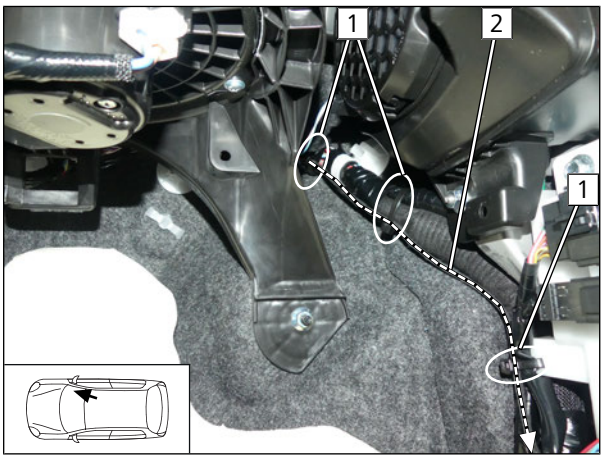


Fig. 134

1 Cable tie

2 Control element wiring harness

Mounting contacts

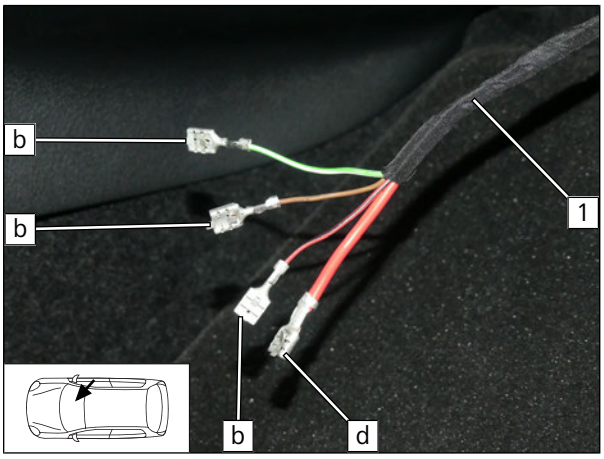


Fig. 135

Install as shown in the next figure

▶ Female connector **b** to:

⇨ Red/black (rt/sw) wire (0.5mm²)

⇨ Green/white (gn/ws) wire (0.75mm²)

⇨ Brown (br) wire (0.5mm²)

▶ Female connector **d** to:

⇨ Red (rt) wire (4.0mm²)

1 Passenger compartment wiring harness

Mounting female connector housing on passenger compartment wiring harness

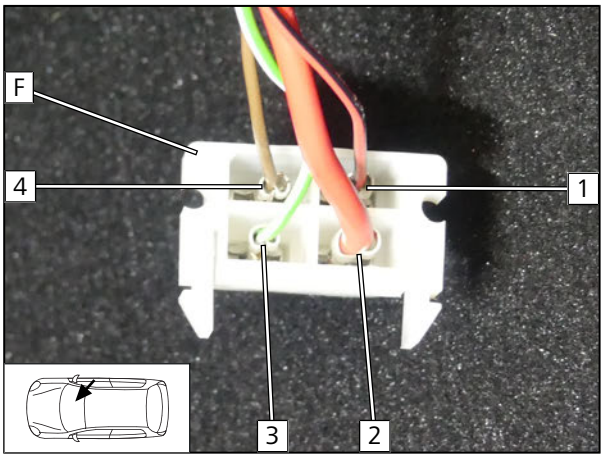
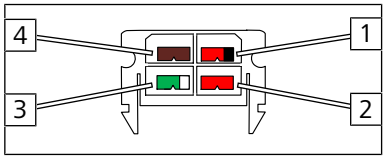


Fig. 136

1 Red/black (rt/sw) wire (0.5mm²)
2 Red (rt) wire (4.0mm²)
3 Green/white (gn/ws) wire (0.75mm²)
4 Brown (br) wire (0.5mm²)

F 4-pin connector female housing

Wire-side view:



13.6 Wiring diagram

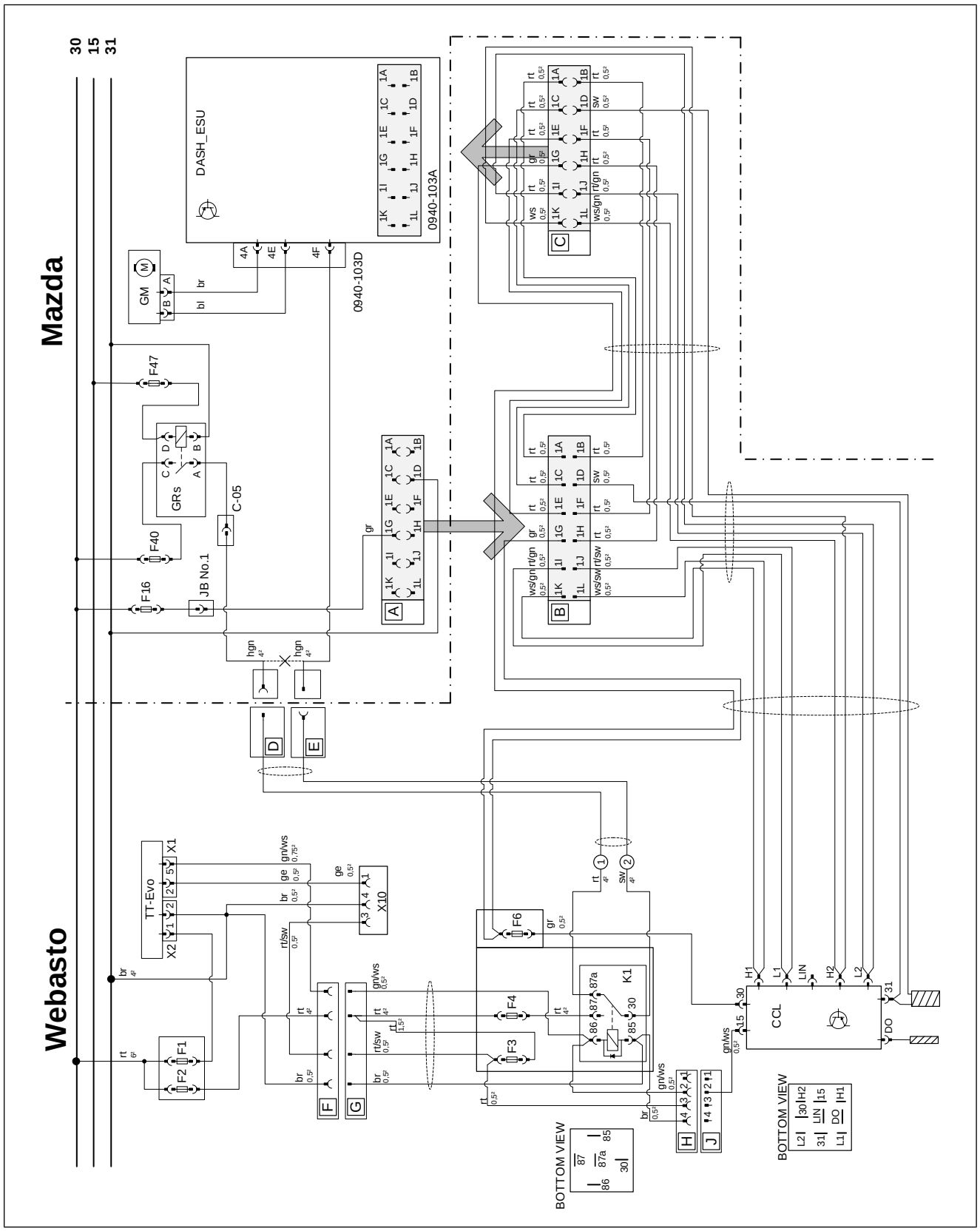


Fig. 137

Legend to wiring diagram

Vehicle components		Symbols	
Abbreviation	Component	Abbreviation	Colour
A	Vehicle female housing, detached from DASH_ESU male housing 0940-103A	X	Cutting point
F-16	Fuse 15A		
F-40	Fuse 40A		
F-47	Fuse 15A		
GRs	Fan relay		
GM	Fan motor		
JB No.1	Plug connection		
C-05	Plug connection		
DASH_ESU	DASH ELECTRICAL SUPPLY UNIT (DASH_ESU)		
0940-103A	12-pin DASH_ESU connector		
0940-103D	6-pin DASH_ESU connector		

Webasto components and CCL/F6 wiring harness		Cable colours	
Abbreviation	Component	Abbreviation	Colour
B	12-pin CCL/F6 wiring harness male plug	bg	beige
C	12-pin CCL/F6 wiring harness female plug	bl	blue
D	1-pin plug connection to relay K1	br	brown
E	1-pin plug connection to relay K1	dbl	dark blue
F	4-pin heater wiring harness female plug	dgn	dark green
G	4-pin RSH male plug	ge	yellow
H	4-pin RSH female plug	gn	green
J	4-pin CCL male plug	gr	grey
F1	Heater main fuse	hbl	light blue
F2	Passenger compartment fan controller main fuse	hgn	light green
F3	Control element fuse	la	salmon
F4	Fan controller fuse	or	orange
F6	CCL GW additional fuse	pk	pink
HG	Heater TT-Evo	ro	Pink
K1	Fan controller relay K1	rt	red
RSH	Relay and fuse holder of passenger compartment	sw	black
X10	Female plug for control element	vi	violet
		ws	white

13.7 Fan controller

Stripping and preparing wire

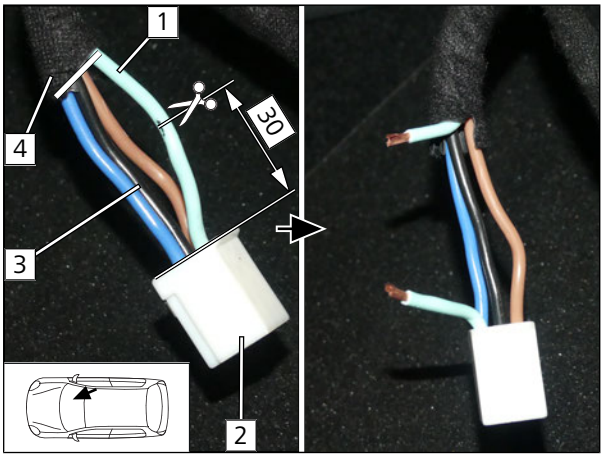


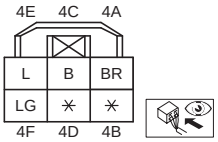
Fig. 138

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

▶ Strip insulation 4 around original vehicle wiring harness 3 as shown. Cut and strip wire 1 as shown.

1 Light green (hgn) wire of connector 0940-103D/ pin 4F

2 6-pin connector 0940-103D:



Installing male connector and female connector

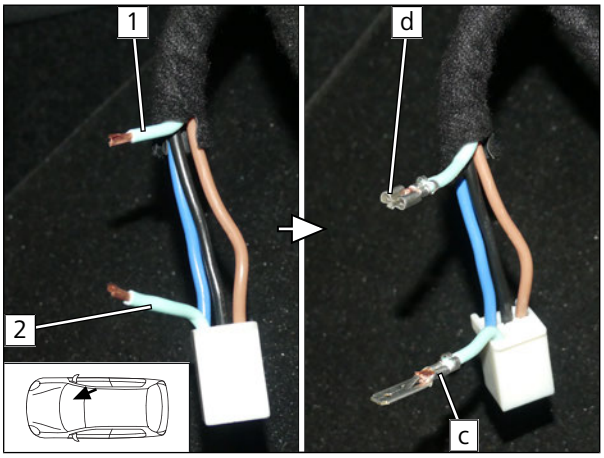


Fig. 139

1 Female connector d on light green (hgn) wire to fan relay

2 Male connector c on light green (hgn) wire to connector 0940-103D/ pin 4F

Mounting connector housing

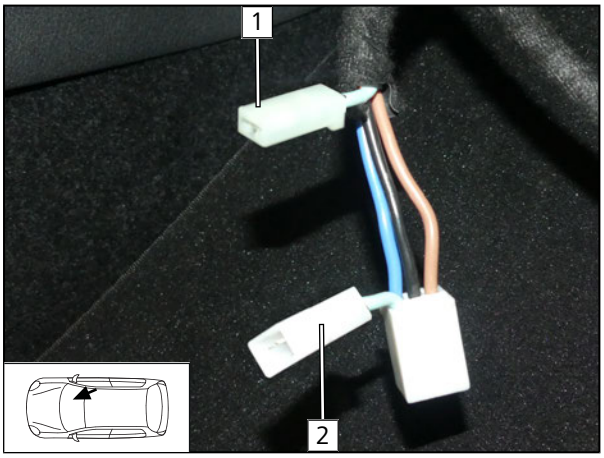


Fig. 140

1 Female connector housing

2 Male connector housing

Connecting red (rt) wire ① and black (sw) wire ② of fan wiring harness

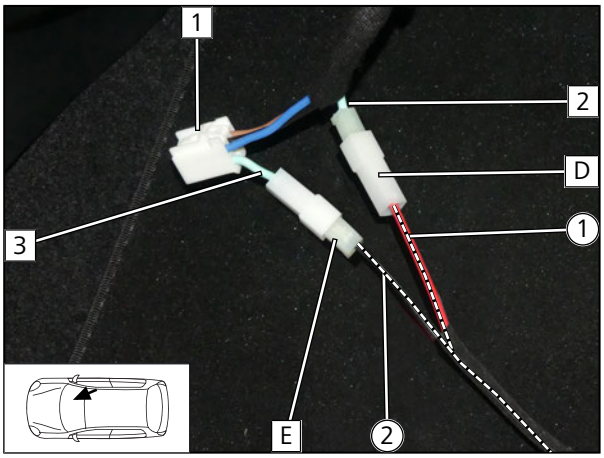


Fig. 141

Connect connectors D and E as shown in system wiring diagram.

1 6-pin connector 0940-103D
2 Light green (hgn) wire / fan relay
3 Light green (hgn) wire of connector
① Red (rt) wire / K1/87a
② Black (sw) wire / K1/30

Connecting passenger compartment and RSH wiring harnesses

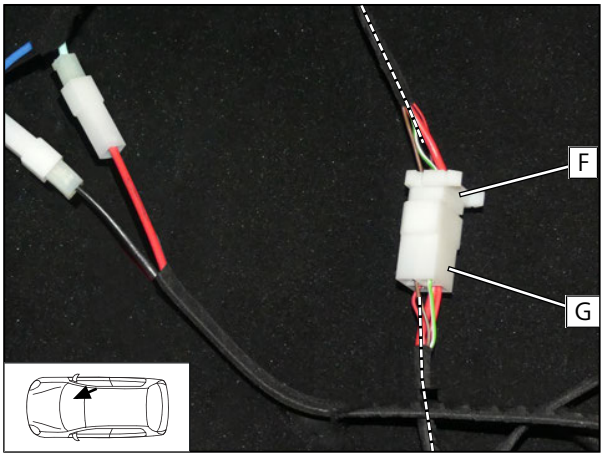


Fig. 142

Connect connectors F and G as shown in system wiring diagram.

F Passenger compartment wiring harness female connector housing
G Connector male housing of RSH wiring harness

Mounting CCL/F6 wiring harness

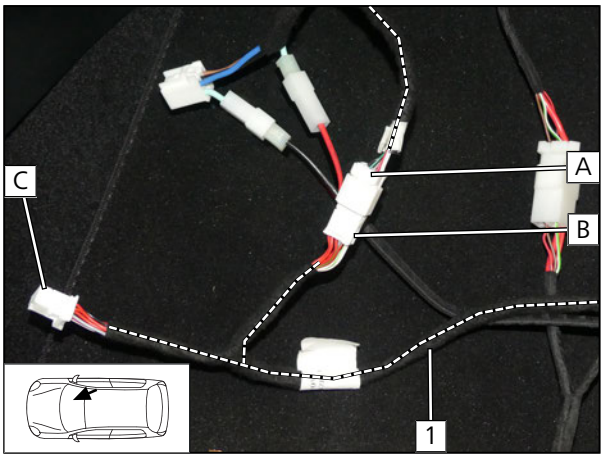


Fig. 143

Connect connectors A and B as shown in system wiring diagram.

1 CCL/F6 wiring harness

A 12-pin connector 0940-103A
B 12-pin CCL/F6 wiring harness connector
C 12-pin CCL/F6 wiring harness connector

Mounting DASH_ESU connector

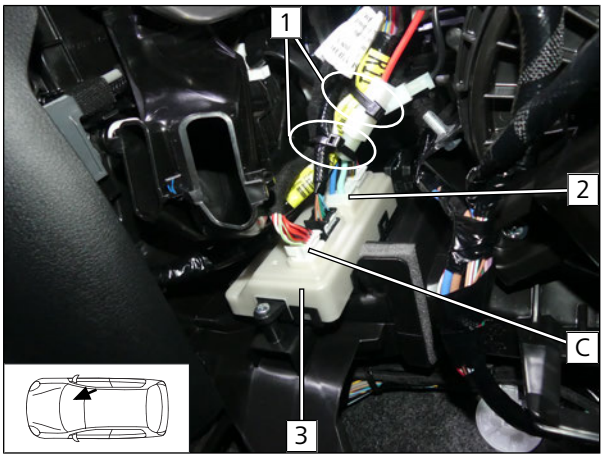


Fig. 144

Connect connector C as shown in system wiring diagram.

1 Cable tie
2 6-pin connector 0940-103D
3 DASH_ESU

C 12-pin CCL/F6 wiring harness connector

Mounting RSH

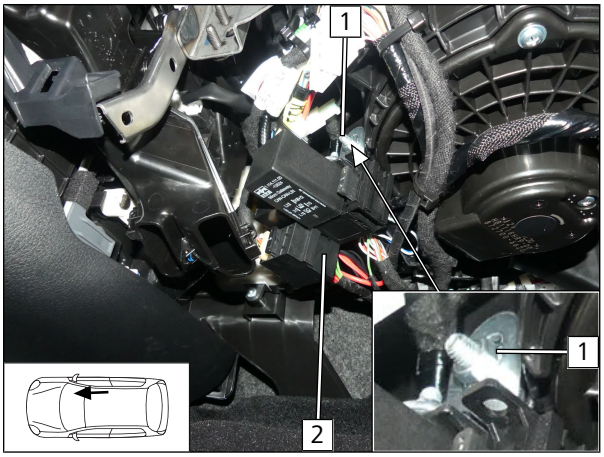


Fig. 145

1 Angle bracket, flanged nut
2 RSH, premounted

Binding wiring harnesses together

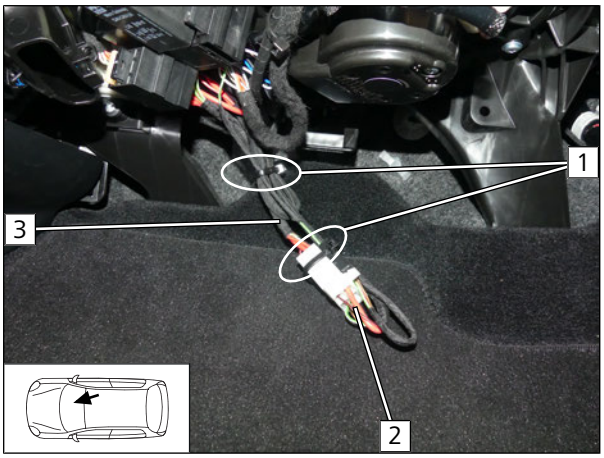


Fig. 146

1 Cable tie
2 Passenger compartment wiring harness
3 RSH wiring harness

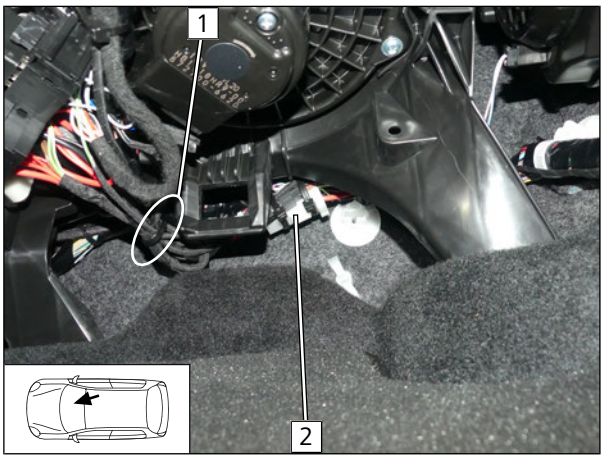


Fig. 147

1 Cable tie

2 Passenger compartment wiring harness connector / RSH wiring harness connector F/G

14 Electrical system of control elements

14.1 Telestart installation

Attention: for the following Telestart installation, there are two possible situations.
Variant 1: there is **no** original vehicle control unit at the receiver installation location.
Variant 2: there is an original vehicle control unit at the receiver installation location.

Preparing bracket, variant 1

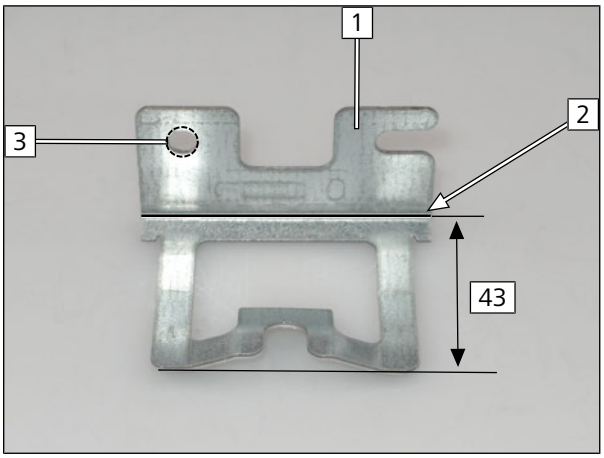


Fig. 148

- ▶ Bend the upper part of the receiver bracket [1] at the marked bending edge [2] by 90° as shown.
- ▶ Drill out hole [3] to Ø 6.5.

Mounting receiver

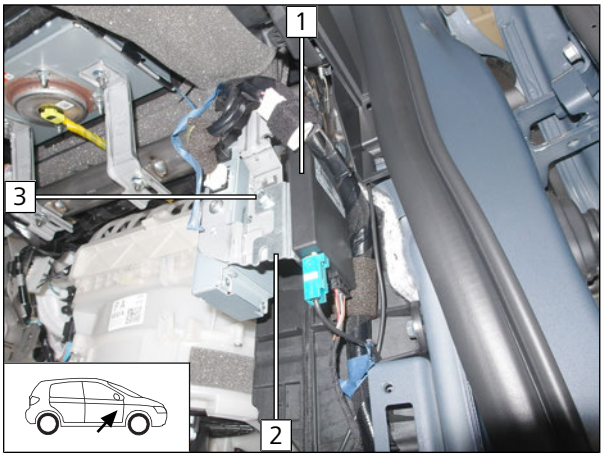


Fig. 149

Observe the Telestart installation documentation.

[1] Receiver mounted
[2] Bracket
[3] Original vehicle bolt (8-10Nm)

Preparing bracket, variant 2

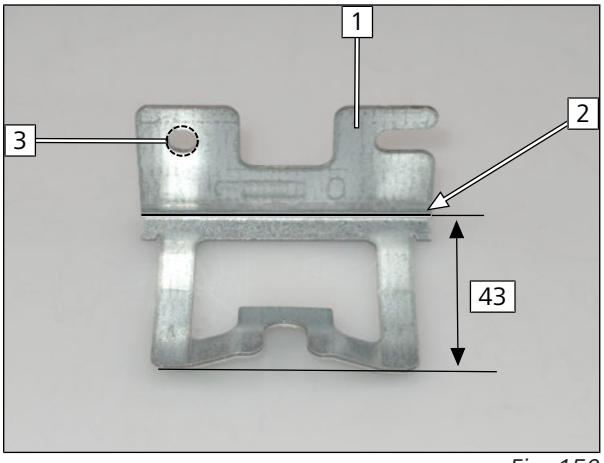


Fig. 150

- ▶ Bend receiver bracket [1] by 90° at position [2] as shown.
- ▶ Drill out hole [3] to Ø 6.5.

Mounting perforated bracket

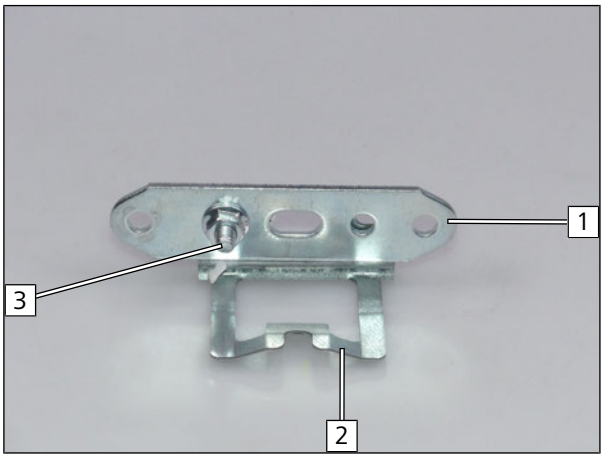


Fig. 151

[1] Perforated bracket

[2] Bracket

[3] M6x16 bolt, bracket [2], perforated bracket [1], flanged nut

Mounting receiver

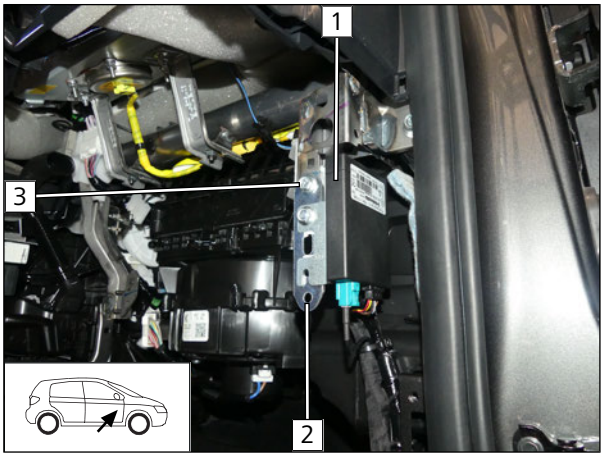


Fig. 152

Observe the Telestart installation documentation.

[1] Receiver mounted

[2] Bracket

[3] M6x16 bolt, original vehicle threaded hole

Removing module

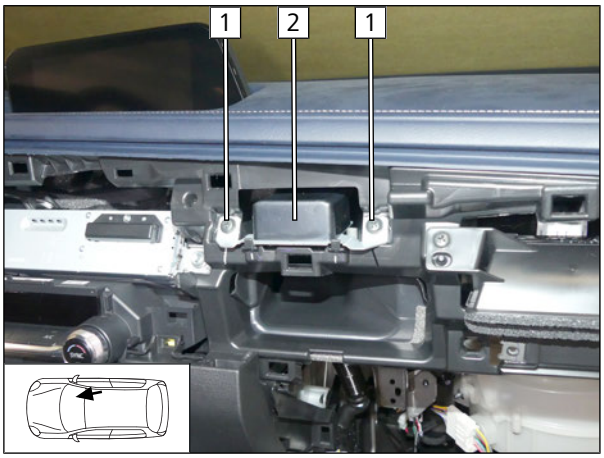


Fig. 153

▶ Remove bolts [1], pull out original vehicle GPS module [2] and put it aside.

Routing line

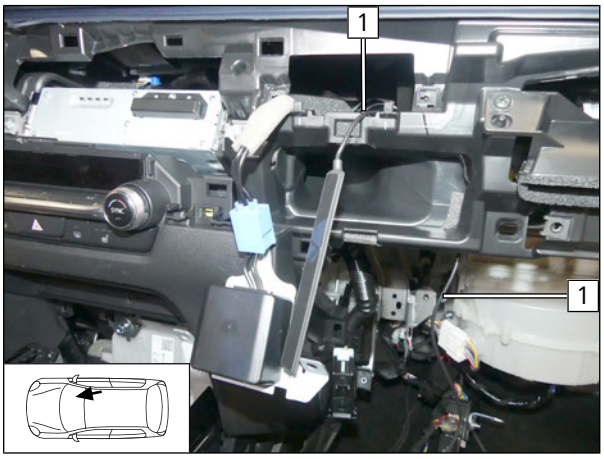


Fig. 154

Clean the aerial installation location in the instrument panel using suitable means.

▶ Pull aerial wire **1** through the opening in the footwell as shown.

Preparing aerial installation

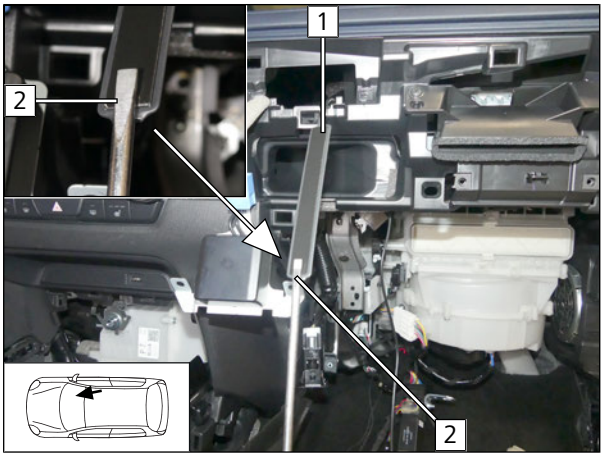


Fig. 155

▶ Stick installation aid **2** (e.g. a screwdriver) at the end of aerial **1**.

Mounting aerial

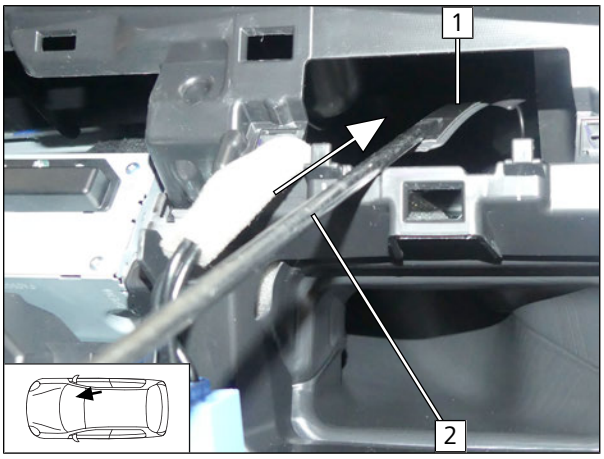


Fig. 156

▶ Insert aerial **1** into the opening in the instrument panel as shown.

2 Installation aid

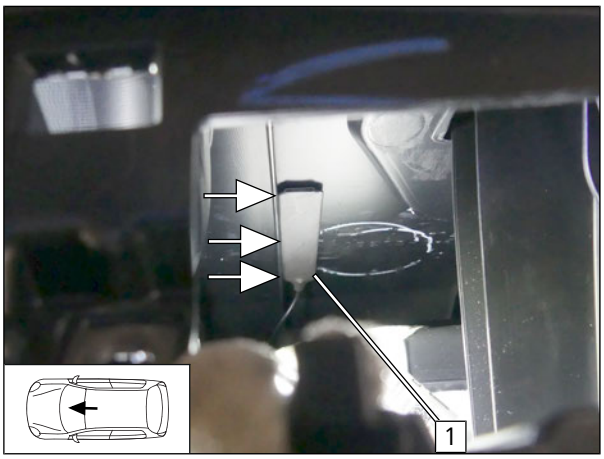


Fig. 157

▶ Position aerial 1 parallel to the available instrument panel side as shown and press it firmly over the entire contact surface.

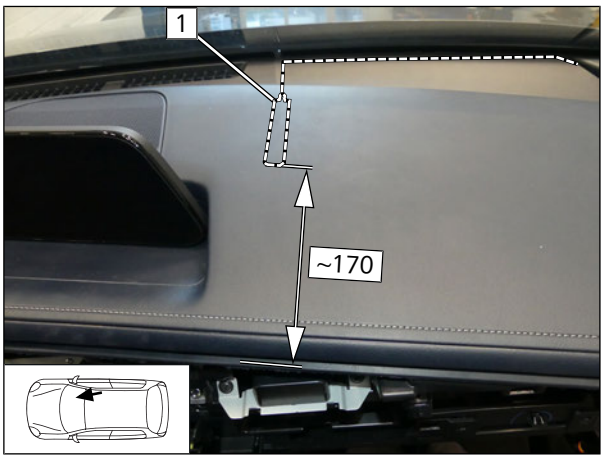


Fig. 158

1 Position the aerial behind the instrument panel

Fastening Telestart wiring harness and aerial line

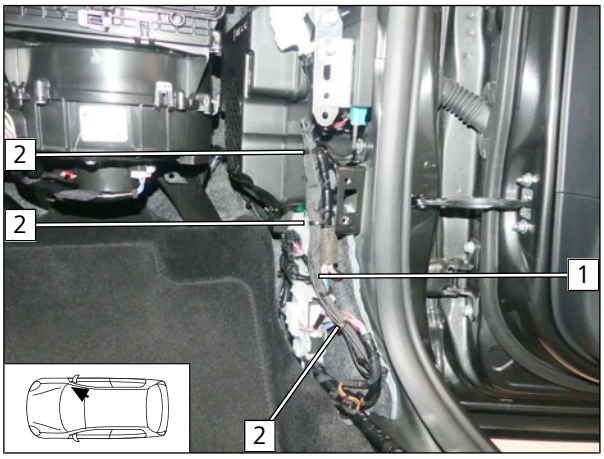


Fig. 159

Observe the Telestart installation documentation.

1 Telestart and aerial line wiring harness
2 Cable tie

15 Final work in engine compartment

Connection to positive battery terminal

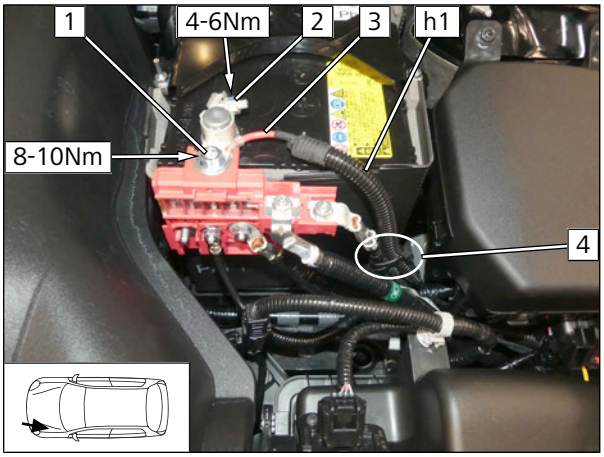


Fig. 160

DANGER

Observe tightening torque

▶ Mounting battery.

- **1** Original vehicle flanged nut
- **2** Original vehicle bolt, positive battery terminal
- **3** Connect red (rt) wire to positive battery terminal, insulate
- **4** Cable tie

Adapting cover

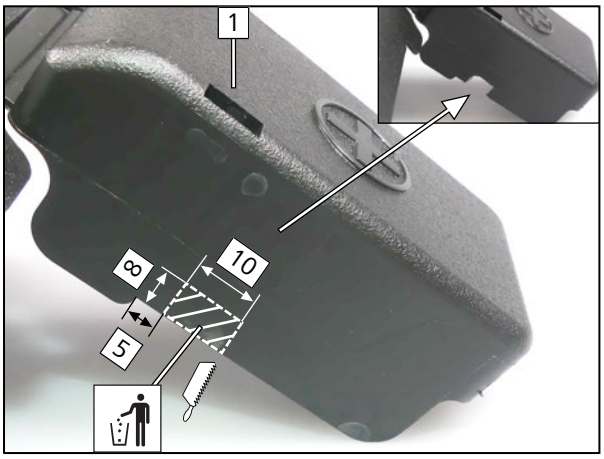


Fig. 161

▶ Adapt positive battery terminal cover **1** as shown.

Mounting cover

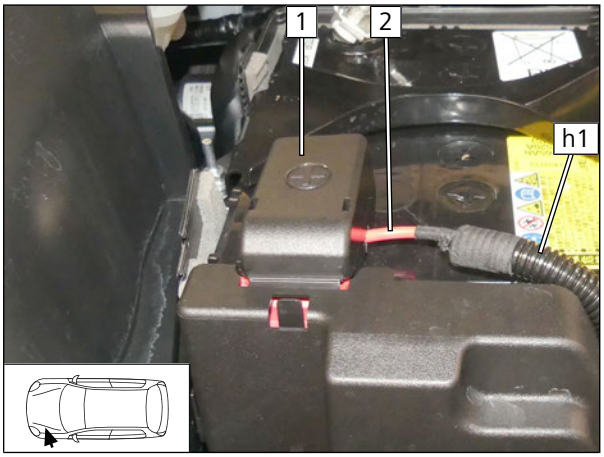


Fig. 162

- **1** Cover of positive battery terminal
- **2** Insulated red (rt) wire on positive battery terminal
- **h1** Positive wire in Ø10 corrugated tube

Distance check

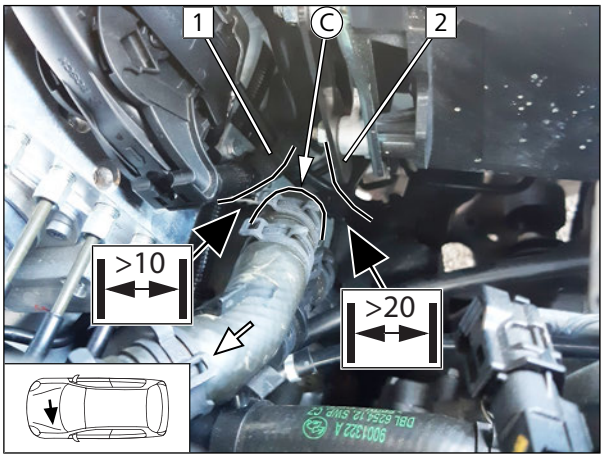


Fig. 163

Ensure sufficient distance between hose Ⓒ and original vehicle wiring harness 1 as well as control unit bracket on battery box as shown, correct if necessary.

16 General final work

Further information can be found in the vehicle manufacturer's technical documentation (MGSS and MESI).

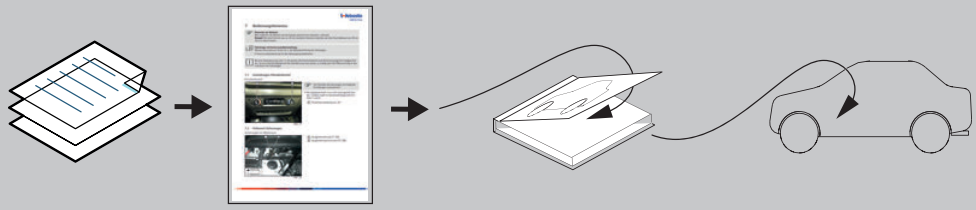
- ▶ Observe after service precaution.
- ▶ Mount removed parts in reverse order
- ▶ Mount instrument panel trim
- ▶ Connect the battery by performing/observing the required actions as per MGSS and MESI BATTERY REMOVAL/INSTALLATION '[BATTERY REMOVAL/INSTALLATION" & BATTERY CONDITION INITIALIZATION SETTING (i-stop SETTING)]'

Only use vehicle manufacturer-approved coolant (FL22).

- ▶ 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.

- ▶ Teach Telestart transmitter
- ▶ Make settings on A/C control panel according to the 'Operating Instructions'
- ▶ Initial start-up and function check



- ▶ 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 (Mazda anti-corrosion wax)

Check of blower function

- ▶ Ignition OFF
- ▶ Start the TT-Evo with Thermo Test Diagnosis, Mazda order no.: 4100-77-725* (software version V3.4 and higher; free update and support via: https://dealers.webasto.com)
- ▶ Observe the TT-Evo status up to 'Full-Load'
  - ⇨ When the TT-Evo reach coolant temperature 40°C (TT-Evo 4 kW) or 55°C (TT-Evo 5 kW) the blower control is active
- ▶ Please check in vehicle:
  - ⇨ Blower speed has to be about 1/3 of max. speed
  - ⇨ Warm air outlet at the windscreen and legroom

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

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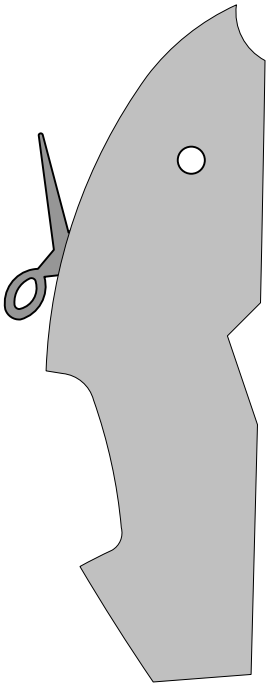
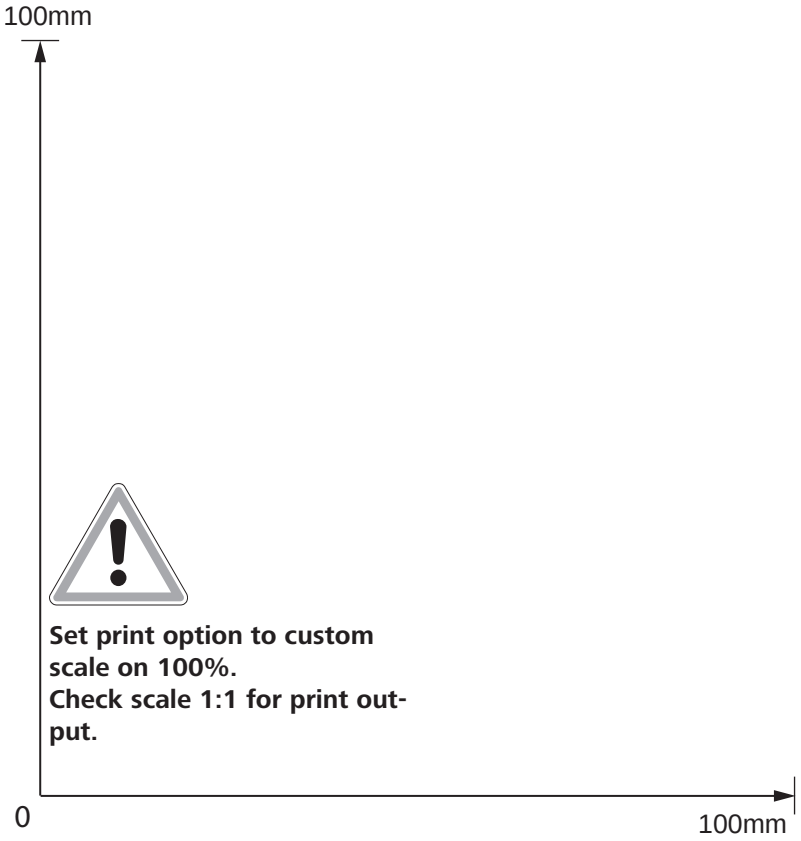
CE

WWW.WEBASTO.COM

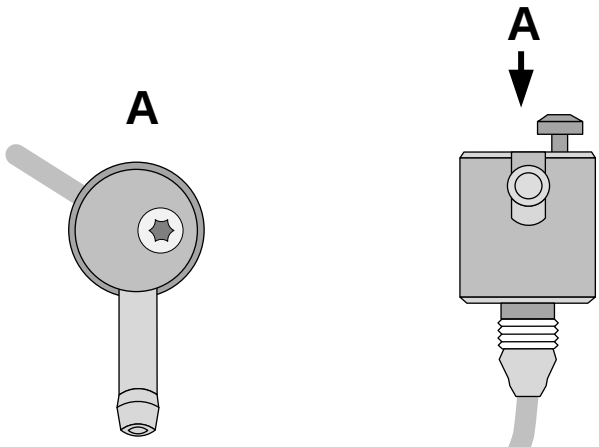
17 Tank fitting drilling template for M3 / CX-30 petrol

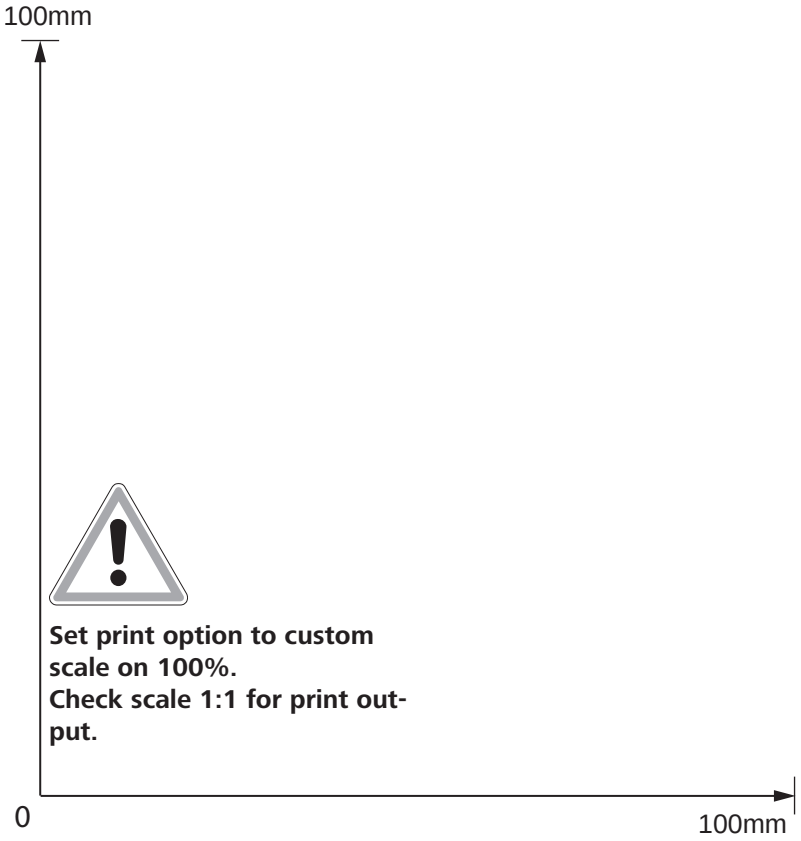




Set print option to custom scale on 100%.
Check scale 1:1 for print output.

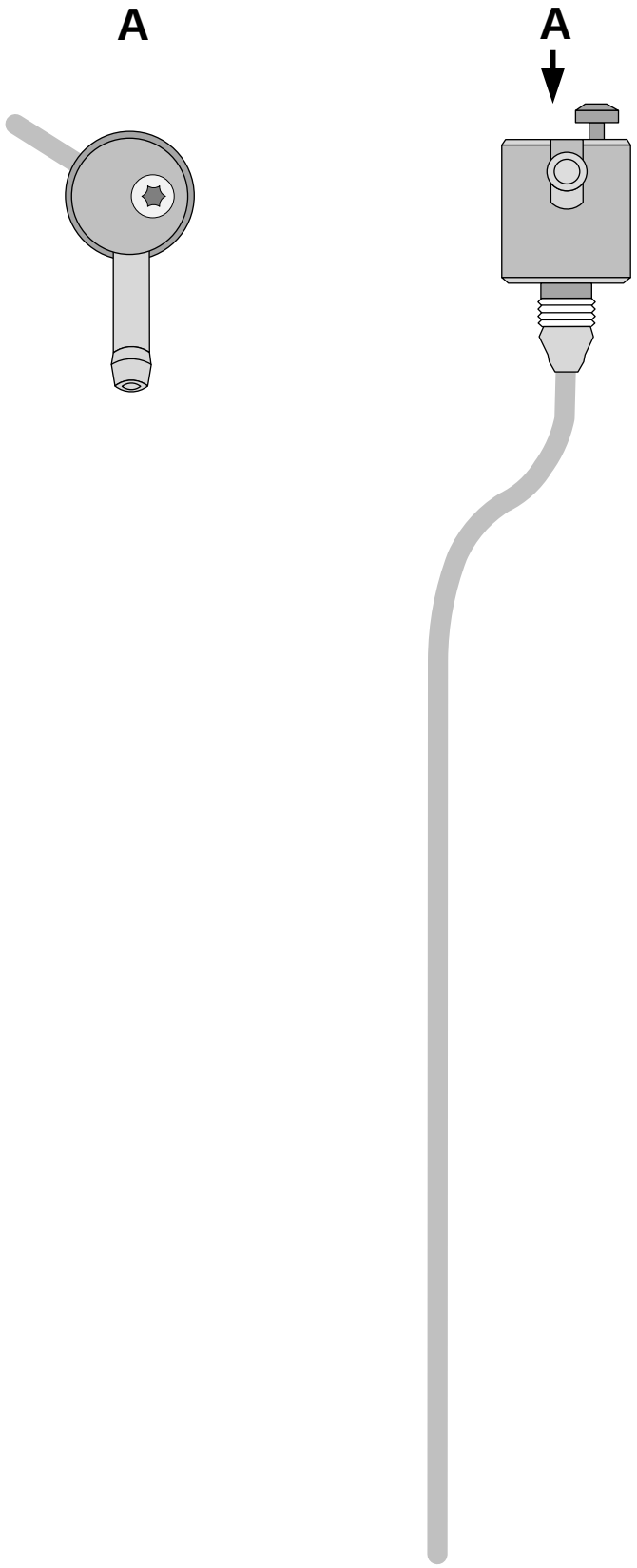
18 FuelFix template for Mazda 3 petrol

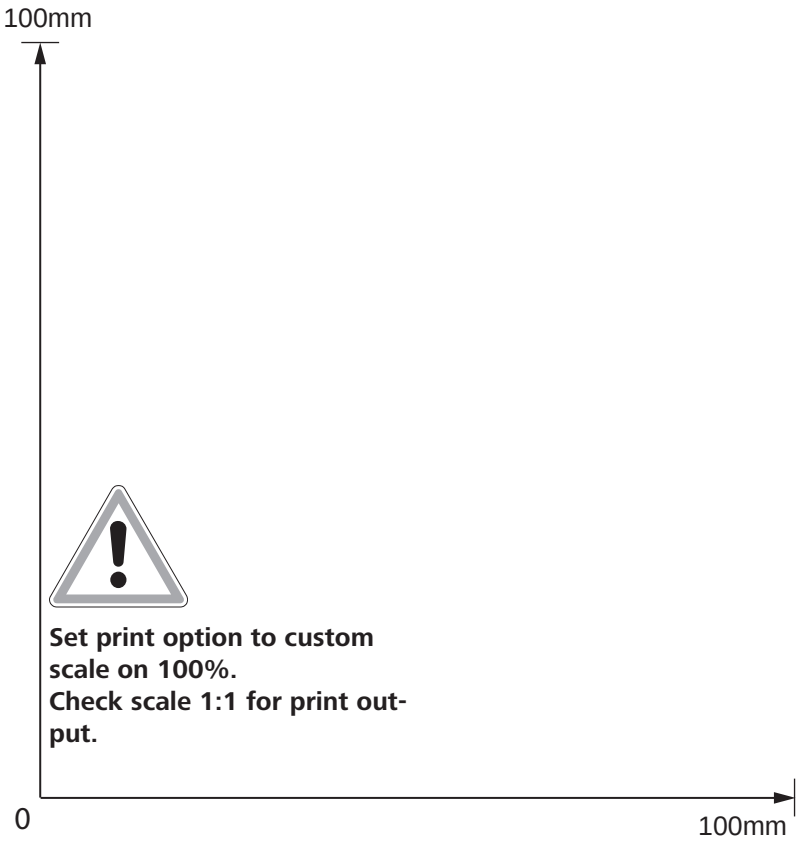




Set print option to custom scale on 100%.
Check scale 1:1 for print out-put.

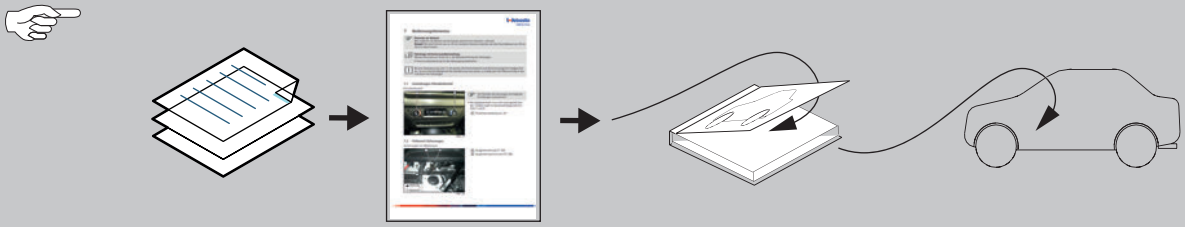
19 FuelFix template for Mazda CX-30 petrol





Set print option to custom scale on 100%.
Check scale 1:1 for print output.

20 Operating instructions for automatic air-conditioning



The heater works independently of the engine in conjunction with the original vehicle heating and ventilation system and should only be used when the engine is switched off and cold. The heater is supplied with fuel from the vehicle fuel tank. As a result, the maximum range displayed by the instrument cluster may be different before and after operation of the heater. To protect the vehicle battery, we recommend that the heater is not operated several times in succession without the battery having the opportunity to recharge during driving mode.

Information on i-stop:

The i-stop function is disabled if battery power is low. As a result, the time until automatic switch-off function of the engine may be longer according to parking heater operation. This is not a malfunction. Depending on the vehicle use, it may be necessary to charge the vehicle battery occasionally.

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.

Note for parking heater function

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

Notes about the A/C control panel presettings

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

20.1 Installation location of fuses

Fuses in engine compartment

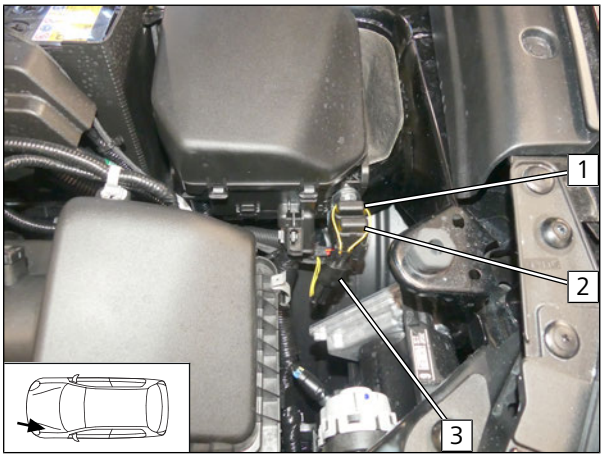


Fig. 166

1 F2 - 30A main fuse of passenger compartment
2 F1 – 20A heater main fuse
3 Heater diagnosis connection

Fuses in passenger compartment

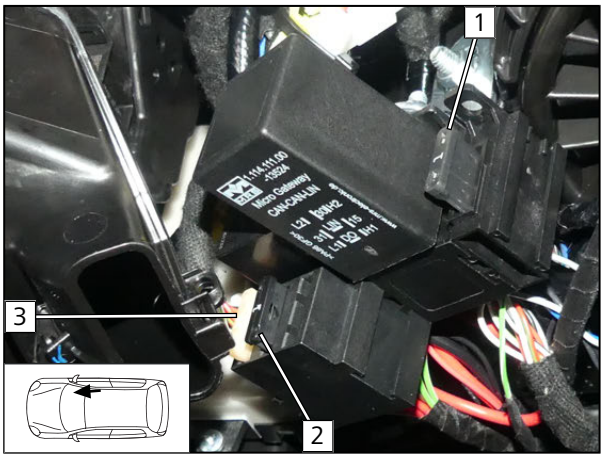


Fig. 167

1 F6 - 1A CCL fuse
2 F3 – 1A control element fuse
3 F4 - 25A fan controller fuse