# Water Heater

## Thermo Top Evo Parking Heater

E1
00 0258

### With FuelFix

# Installation Documentation
# Hyundai i40

## Validity

| Manufacturer | Model | Type | EG-BE No. / ABE |
|---|---|---|---|
| Hyundai | i40 | VF | e4 * 2007 / 46 * 0263 * ... |

| Motorisation | Fuel | Transmission type | Output in kW | Displacement in cm³ | Engine code |
|---|---|---|---|---|---|
| 1.6 GDI | Petrol | SG | 99 | 1591 | G4FD |

SG = manual transmission

**From model year 2011**
**Left-hand drive vehicle**

**Verified equipment variants:** Manual / automatic air-conditioning system
Front fog lights
Xenon with headlight washer system
Keyless Entry with Start button

**Not verified:** Passenger compartment monitoring

**Total installation time:** approx. 7.5 hours

## Hyundai i40

## Table of Contents


| | | | |
|---|---|---|---|
| Validity | 1 | Preparing Bracket | 15 |
| Necessary Components | 2 | Preparing Installation Location | 16 |
| Installation Overview | 2 | Preparing Heater | 18 |
| Information on Total Installation Time | 2 | Installing Heater | 19 |
| Information on Operating and Installation Instructions | 3 | Fuel | 21 |
| Information on Validity | 4 | Installing FuelFix | 22 |
| Technical Information | 4 | Exhaust Gas | 26 |
| Explanatory Notes on Document | 4 | Coolant Circuit | 29 |
| Preliminary Work | 5 | Combustion Air | 33 |
| Heater Installation Location | 5 | Final Work | 34 |
| Preparing Electrical System | 6 | Drilling Template for Fuel Tank Sending Unit from MY 2015 | 35 |
| Electrical System | 7 | FuelFix Template for All Models | 36 |
| Fan Controller for Manual Air-Conditioning | 9 | Operating Instructions for Manual A/C | 37 |
| Fan Controller for Automatic Air-Conditioning | 11 | Operating Instructions for Automatic A/C | 38 |
| MultiControl CAR Option | 13 | | |
| Remote Option (Telestart) | 13 | | |
| Thermo Call Option | 14 | | |


## Necessary Components

- Basic delivery scope of Thermo Top Evo based on price list
- Installation kit with FuelFix for Hyundai i40 2011 Petrol: **1318234C**
- Heater control in accordance with price list and upon consultation with end customer
- In case of Telestart, indicator lamp in accordance with price list and in consultation with end customer

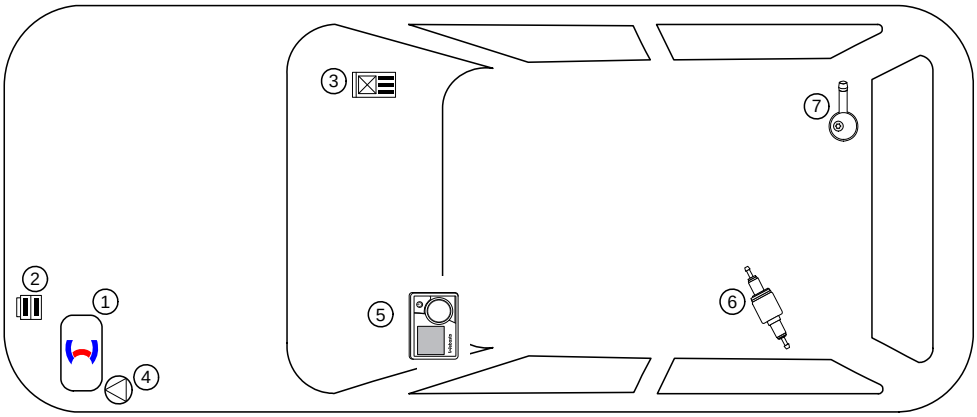
## Installation instructions:

- Arrange for the vehicle to be delivered with the tank only about ¼ full.
- The installation location of the push button in case of Telestart or Thermo Call should be confirmed with the end customer.
- Depending on the space required and the vehicle manufacturer's instructions, we recommend the use of a vehicle battery with a higher electrical capacity.

## Installation Overview

**Legend:**

**1**. Heater
**2**. Engine compartment fuse holder
**3**. Passenger compartment relay and fuse holder
**4**. Circulating pump
**5**. MultiControl CAR
**6**. Metering pump
**7**. FuelFix




## Information on Total Installation Time

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

# Information on Operating and Installation Instructions

## 1 Important information (not complete)

### 1.1 Installation and repair

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

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

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

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

### 1.2 Operation

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

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

Always switch off the heater before refuelling.

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

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

### 1.3 Please note

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

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

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

**Important**

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

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

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

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

**Sharp edges should be fitted with rub protection. Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K).**

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

**The initial startup is to be executed with the Webasto Thermo Test Diagnosis.**

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

## 2 Statutory regulations governing installation

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

**Note**

The regulations of these guidelines are binding in the scope of the Directive 70/156/EEC and/or 2007/46/EC (for new vehicle models from 29/04/2009) and should also be observed in countries in which there are no special regulations.

**Important**

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

**Note**

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

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

Beginning of excerpt.

**ANNEX VII**

**REQUIREMENTS FOR COMBUSTION HEATERS AND THEIR INSTALLATION**

**1. GENERAL REQUIREMENTS**

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

**2. VEHICLE INSTALLATION REQUIREMENTS**

**2.1. Scope**

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

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

**2.2. Positioning of heater**

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

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

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

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

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

**2.3. Fuel supply**

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

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

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

**2.4. Exhaust system**

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

**2.5. Combustion air inlet**

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

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

**2.6. Heating air inlet**

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

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

**2.7. Heating air outlet**

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

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

End of excerpt.

In multilingual versions the German language is binding.

## Hyundai i40

## Information on Validity

This installation documentation applies to Hyundai i40 Petrol vehicles - for validity, see page 1 - from model year 2011 and later, assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Depending on the vehicle version and equipment, modifications may be necessary during installation with respect to this ‘installation documentation’.

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

## Technical Information

**Special Tools**
- Hose clamp pliers for auto-tightening hose clamps
- Hose clamp pliers for Clic hose clamps of type W
- Automatic wire stripper 0.2 - 6mm²
- Crimping pliers for cable lug / tab connector 0.5 - 6mm²
- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers
- Metric thread-setter kit
- Deep-hole marker
- Webasto Thermo Test Diagnosis with current software

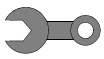
**Dimensions**
- All dimensions are in mm.

**Tightening torque values**
- Tightening torque values of 5x13 heater bolts and 5x11 heater stud bolts = 8Nm.
- Tightening torque value of 5x15 water connection piece retaining plate bolt = 7Nm.
- Tighten other bolt connections in accordance with manufacturer's instructions or in accordance with state-of-the-art-technology.

## Explanatory Notes on Document

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

**Mechanical System**



**Electrical System**

**Coolant Circuit**

**Combustion Air**

**Fuel**

**Exhaust Gas**

**Software**

Special features are highlighted using the following symbols:

**Specific risk of damage to components.**

**Specific risk due to electrical voltage.**

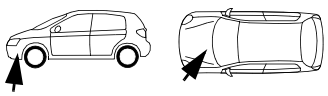
**Specific risk of injury or fatal accidents.**

**Specific risk of fire or explosion.**

**Reference to the manufacturer's vehicle-specific documents or to the general installation instructions of Webasto components.**

**Reference to a special technical feature.**

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



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

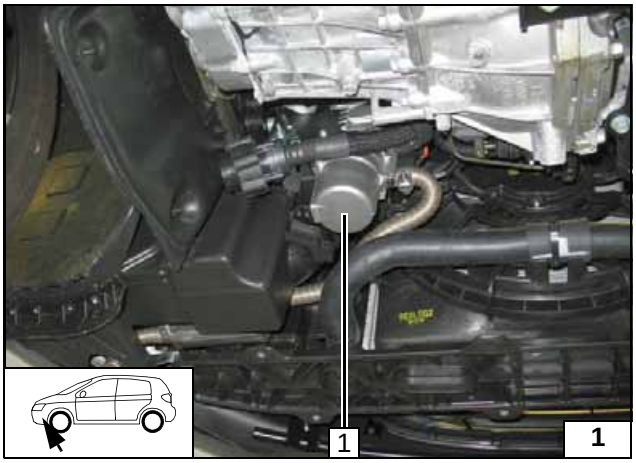
## Preliminary Work

### Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Disconnect and completely remove the battery together with the carrier.
- Remove the engine cover.
- Remove the entire air filter.
- Remove the wheel well trim on the left-hand side.
- Remove the resonator.
- Remove the cover of the fuel line on the left.
- Remove the footwell trim on the front passenger's side.
- Remove the A-pillar trim on the front passenger's side (only in case of Telestart and Thermo Call).
- Remove the glove box and the trim behind.
- Remove the A/C control panel according to the manufacturer's instructions.
- Open the tank fitting service lid in the car boot.

### Heater

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




## Heater Installation Location

**1** Heater

**Installation location**

## Preparing Electrical System

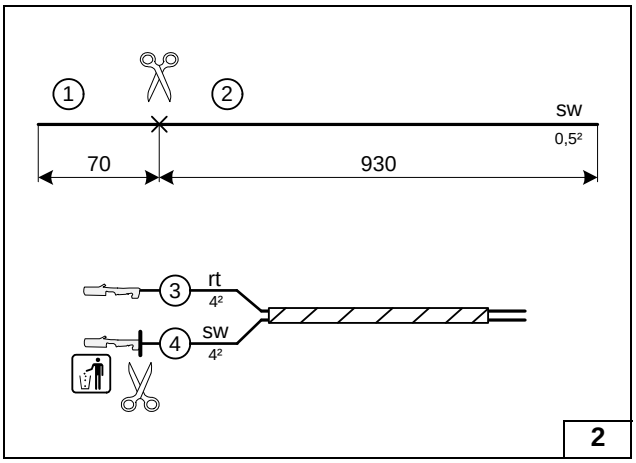
Wire sections retain their numbering in the entire document.

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

Pull wire section ② into provided protective sleeving.

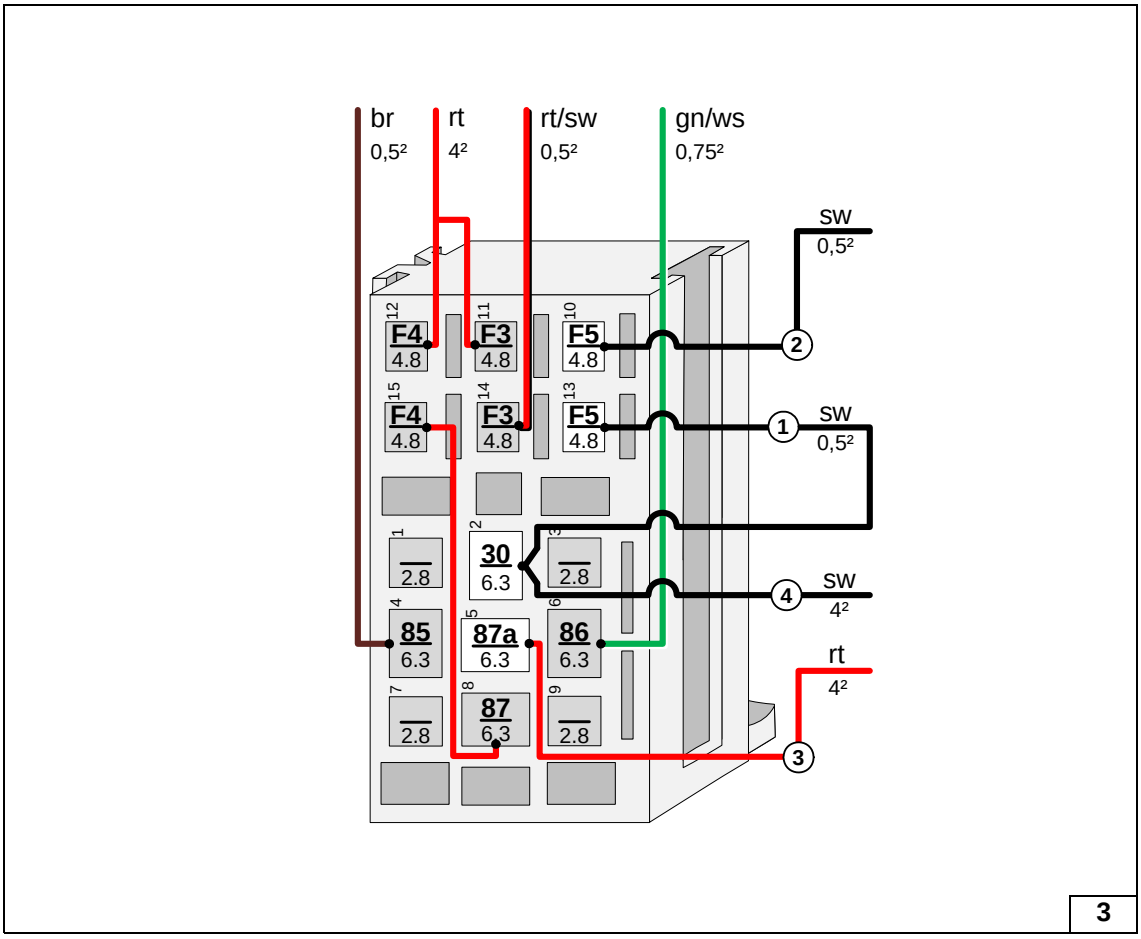
③ Red (rt) wire of fan wiring harness
④ Black (sw) wire of fan wiring harness

**Cutting to length / assigning wires**



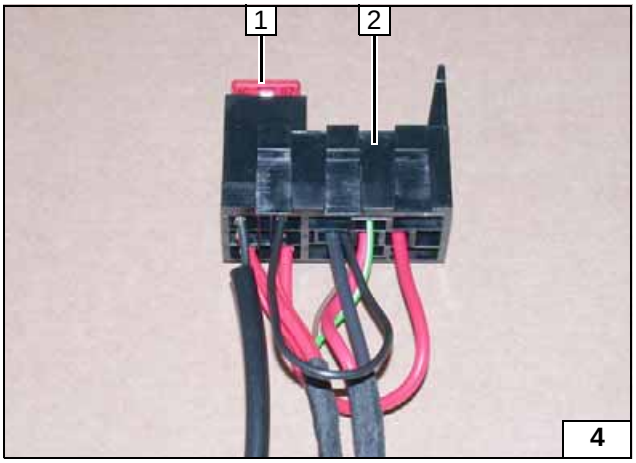

2

**Connecting wires to socket of passenger compartment relay and fuse holder**




3

**Inserting fuses F4 and F5**




4

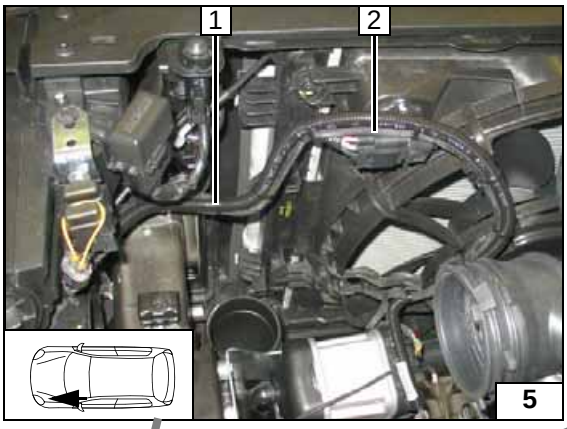
Insert 25A fuse F4 and 10A fuse F5 **1**.

**2** Passenger compartment relay and fuse holder

## Electrical System

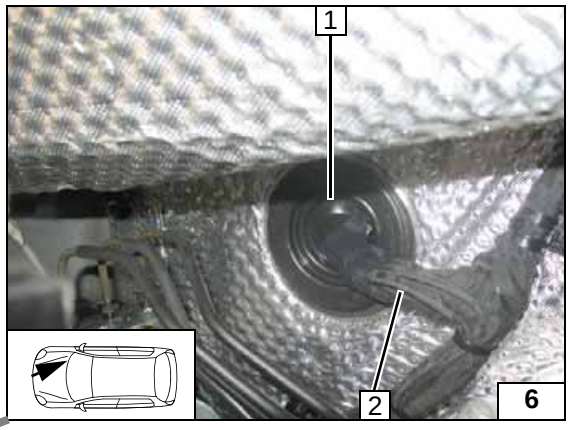
### Wiring harness routing

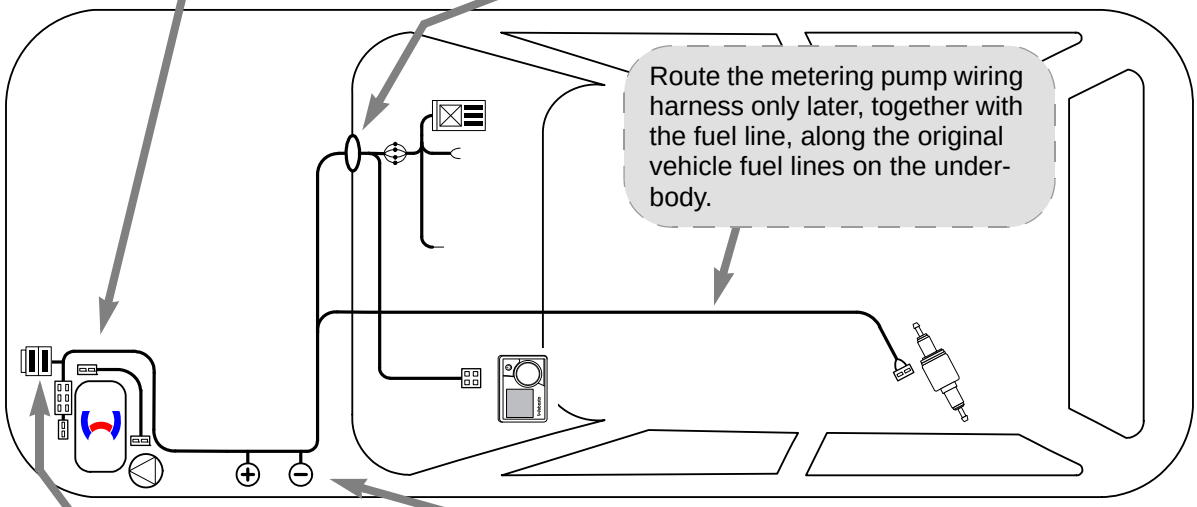
**1** Wiring harness of metering pump and fuel line in 10 mm dia. corrugated tube
**2** Wiring harnesses of heater



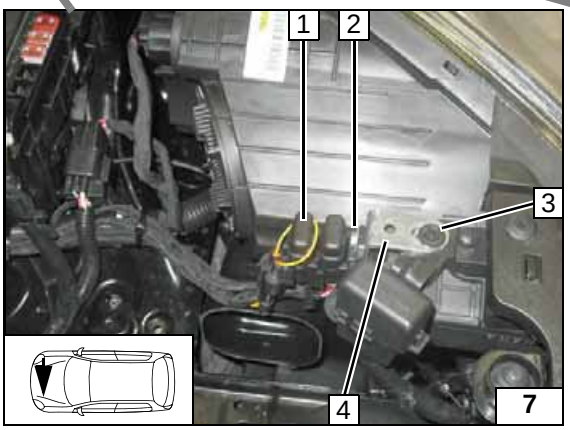

### Wiring harness pass through

**1** Protective rubber plug
**2** Wiring harnesses of heater, heater control



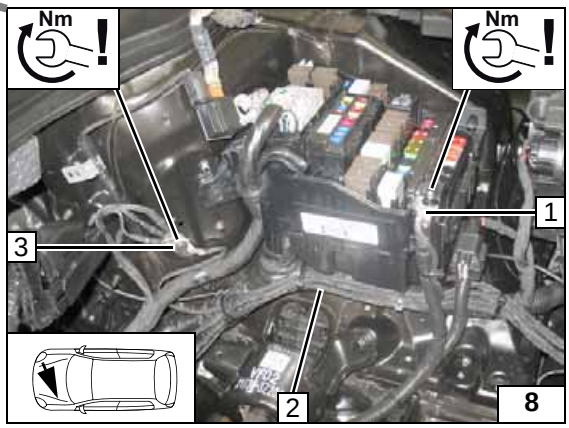




**Wiring harness routing diagram**




### Engine compartment fuse holder

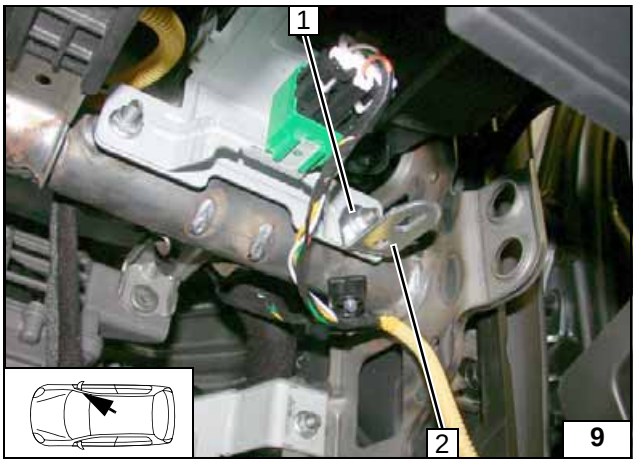
**1** Fuses F1-2
**2** M5x16 bolt, washer [2x], retaining plate of fuse holder, nut
**3** Original vehicle bolt
**4** Angle bracket




### Positive and earth wire

**1** Positive wire on original vehicle positive support point
**2** Fasten wiring harness of heater with cable tie.
**3** Earth wire on original vehicle earth support point

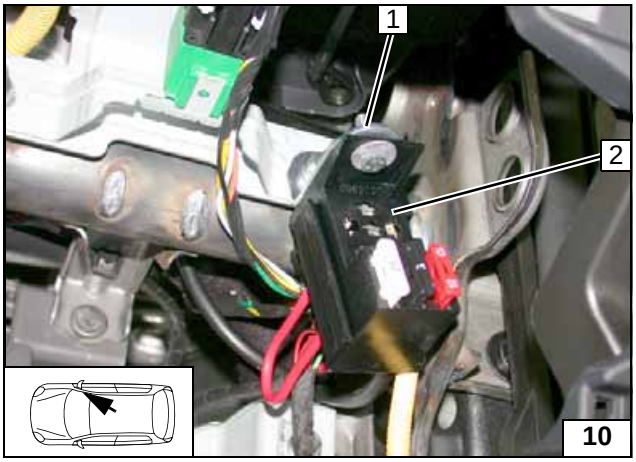
  




**Installing passenger compartment relay and fuse holder**

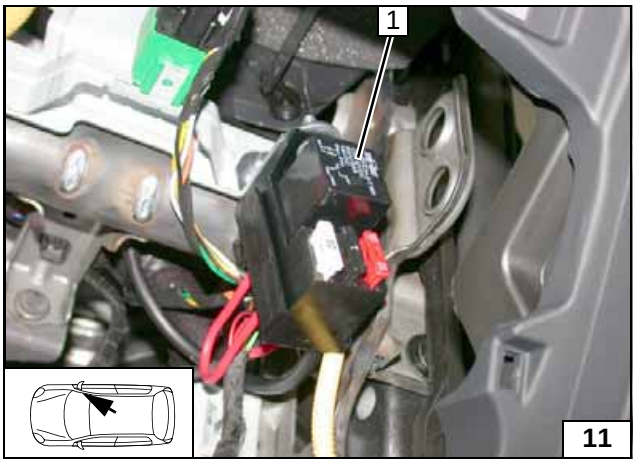
**1** Original vehicle bolt, original vehicle nut
**2** Angle bracket

**Installing angle bracket**



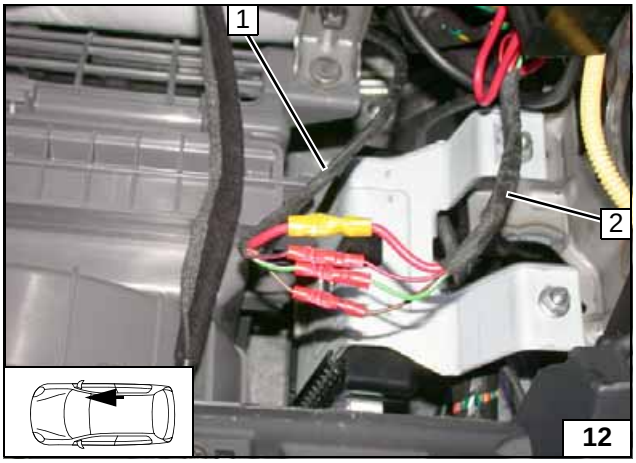

**1** M5x16 bolt, large diameter washer [2x], nut
**2** Passenger compartment relay and fuse holder

**Installing passenger compartment relay and fuse holder**




**1** K1 relay

**Attaching K1 relay**



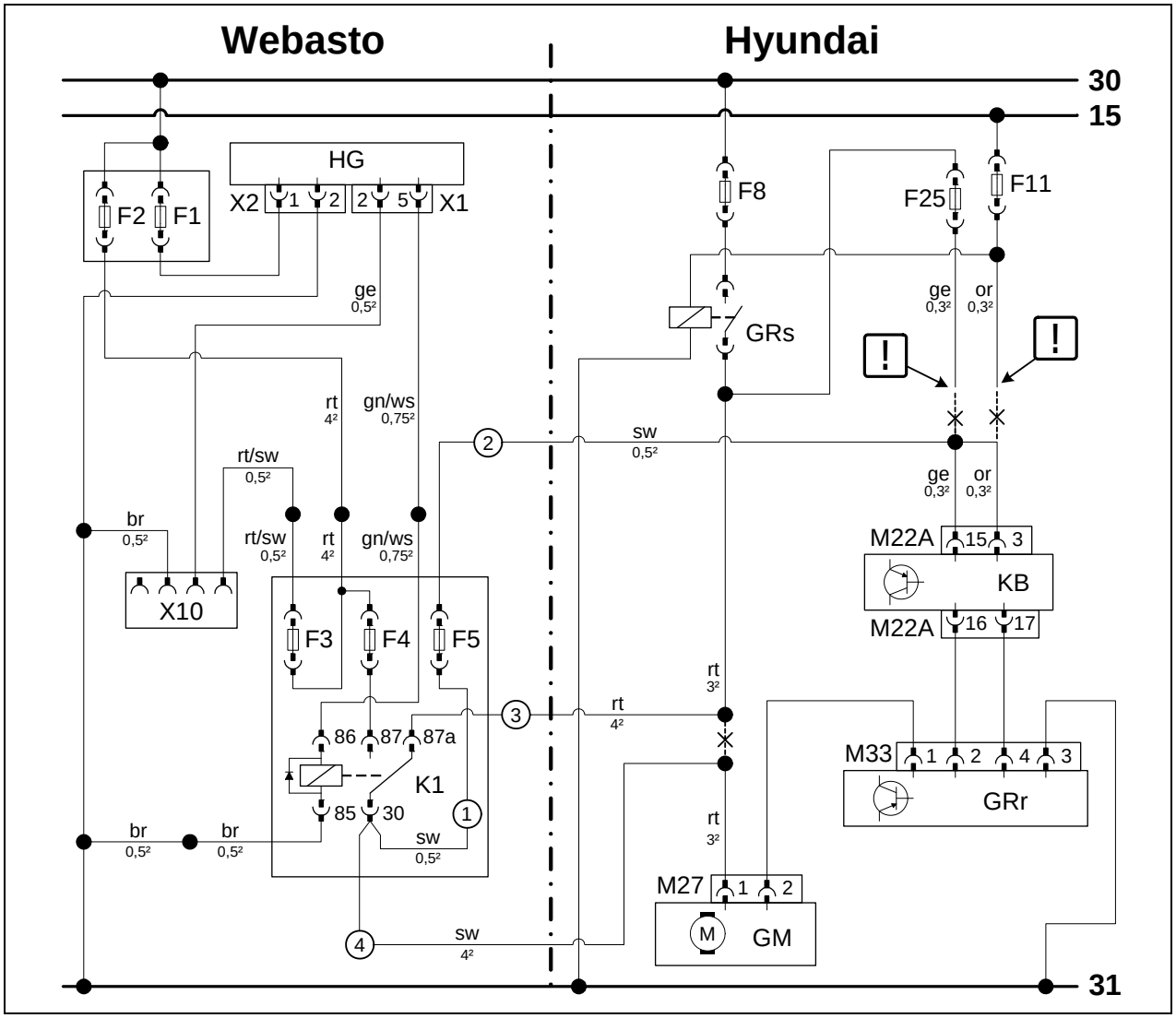

**1** Wiring harness of heater
**2** Wiring harness of passenger compartment relay and fuse holder

**Connecting same colour wires of wiring harnesses**

## Fan Controller for Manual Air-Conditioning

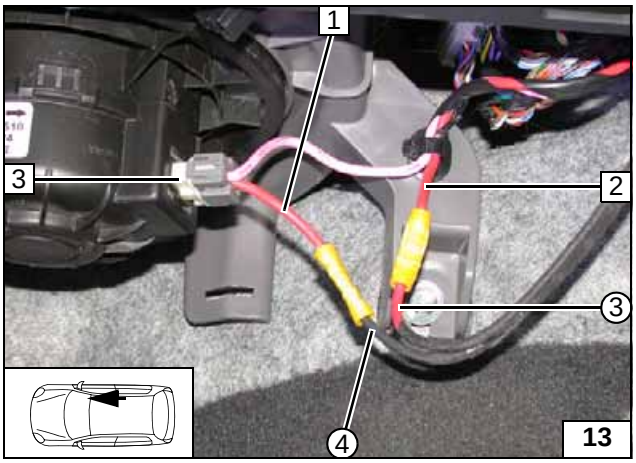
Wiring diagram




| Webasto components | | Vehicle components | | Colours and symbols | |
|---|---|---|---|---|---|
| HG | TT-Evo heater | F11 | 7.5A fuse | rt | red |
| X1 | 6-pin heater connector | F8 | 40A fuse | sw | black |
| X2 | 2-pin heater connector | F25 | 10A fuse | ge | yellow |
| F1 | 20A fuse | GRs | Fan relay | gn | green |
| F2 | 30A fuse | KB | A/C control panel | or | orange |
| X10 | 4-pin connector of heater control | M22A | 26-pin connector of KB | ws | white |
| | | GRr | Fan controller | br | brown |
| F3 | 1A fuse | M33 | 4-pin connector of GRr | | |
| F4 | 25A fuse | GM | Fan motor | | |
| F5 | 10A fuse | M27 | 2-pin connector of GM | | |
| K1 | Fan relay | | | | |
| | | | | ! | Insulate wire end and tie back |
| | | | | **X** | Cutting point |
| | | | | Wiring colours may vary. | |

Legend

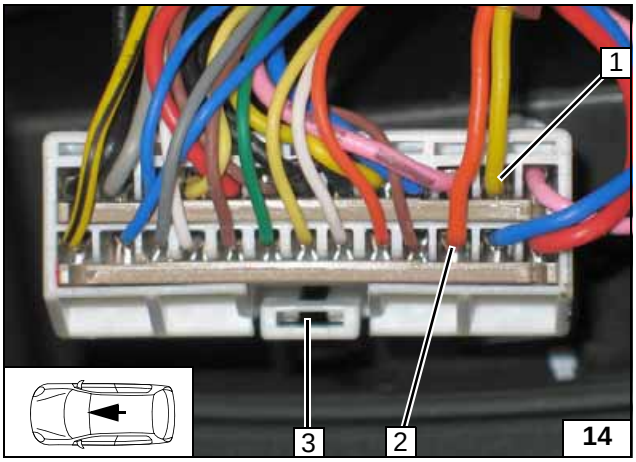
  




Connection to 2-pin connector **3** M27 from the fan motor.

**1** Red (rt) wire of connector, GM M27
**2** Red (rt) wire of fan relay
③ Red (rt) wire of K1/87a, fan wiring harness
④ Black (sw) wire of K1/30, fan wiring harness

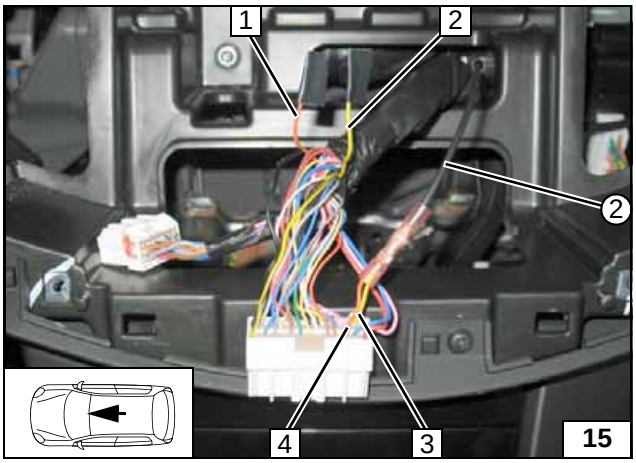
**Connecting fan motor**




Connection to 26-pin connector **3** M22A from A/C control unit.

**1** Yellow (ge) wire of 26-pin connector, pin 15
**2** Orange (or) wire of 26-pin connector, pin 3

**Connecting A/C control unit**



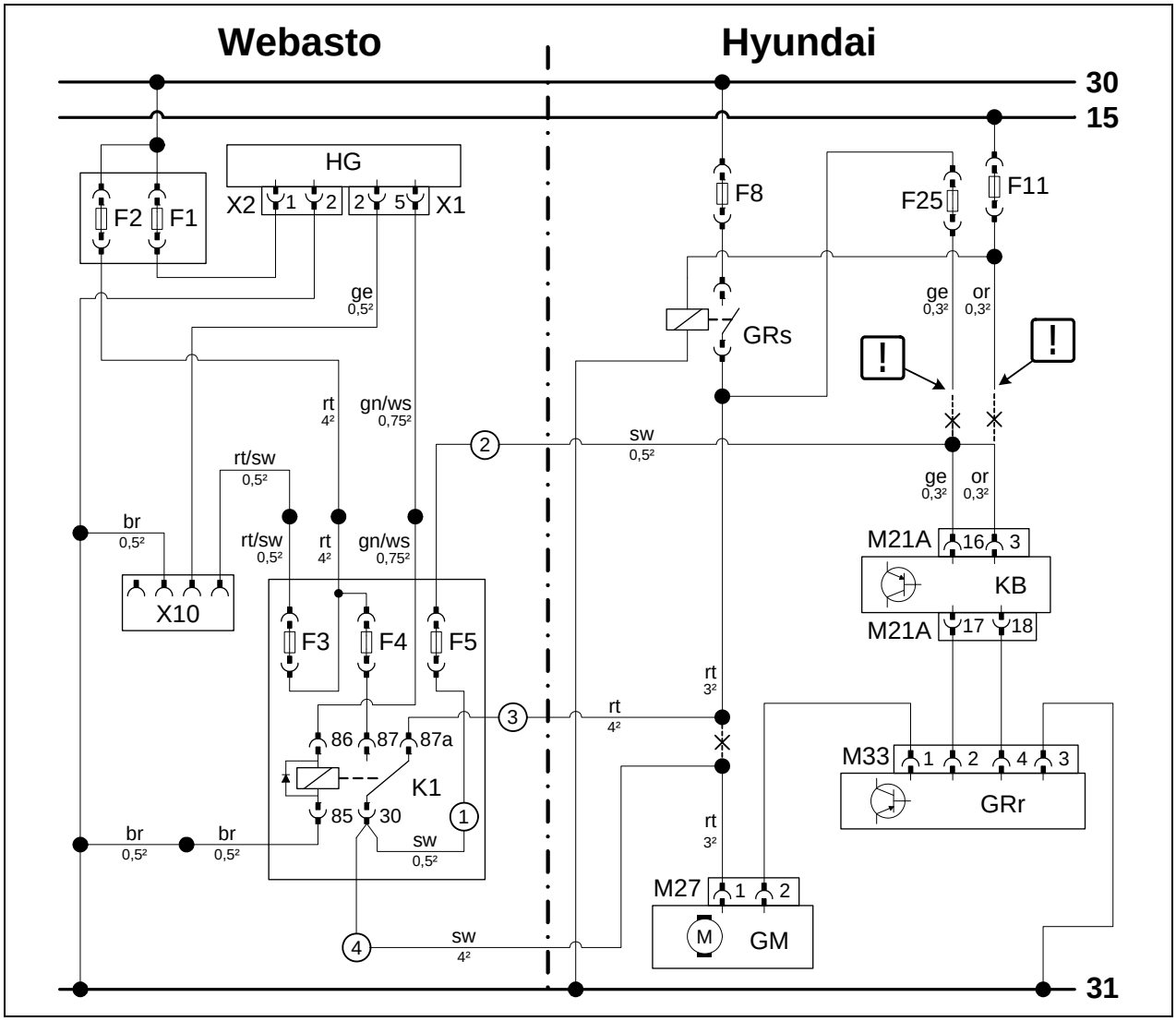

Insulate and tie back orange (or) **1** and yellow (ge) **2** wires.

**3** Yellow (ge) wire of 26-pin connector, pin 15
**4** Orange (or) wire of 26-pin connector, pin 3
② Black (sw) wire of fuse F5

**Connecting A/C control unit**

## Fan Controller for Automatic Air-Conditioning

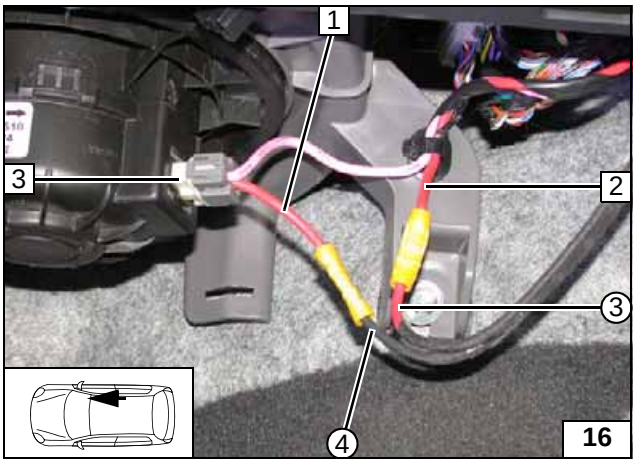



| Webasto components | | Vehicle components | | Colours and symbols | |
|---|---|---|---|---|---|
| HG | TT-Evo heater | F11 | 7.5A fuse | rt | red |
| X1 | 6-pin heater connector | F8 | 40A fuse | sw | black |
| X2 | 2-pin heater connector | F25 | 10A fuse | ge | yellow |
| F1 | 20A fuse | GRs | Fan relay | gn | green |
| F2 | 30A fuse | KB | A/C control panel | or | orange |
| X10 | 4-pin connector of heater control | M21A | 26-pin connector of KB | ws | white |
| | | GRr | Fan controller | br | brown |
| F3 | 1A fuse | M33 | 4-pin connector of GRr | | |
| F4 | 25A fuse | GM | Fan motor | | |
| F5 | 10A fuse | M27 | 2-pin connector of GM | | |
| K1 | Fan relay | | | | |
| | | | | ! | Insulate wire end and tie back |
| | | | | **X** | Cutting point |
| | | | | Wiring colours may vary. | |

**Wiring diagram**

**Legend**

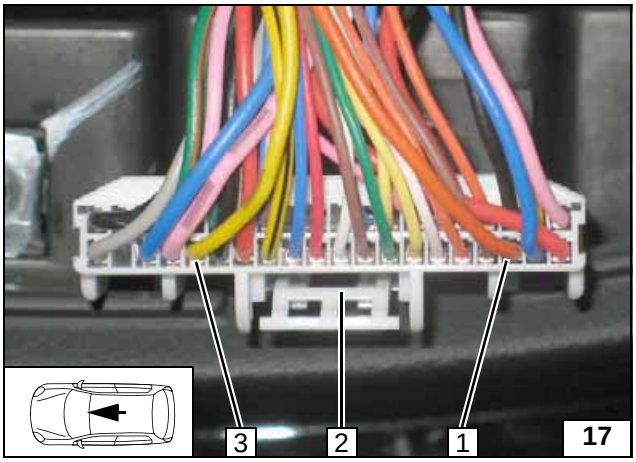
  




Connection to 2-pin connector **3** M27 from the fan motor.

**1** Red (rt) wire of connector, GM M27
**2** Red (rt) wire of fan relay
③ Red (rt) wire of K1/87a, fan wiring harness
④ Black (sw) wire of K1/30, fan wiring harness

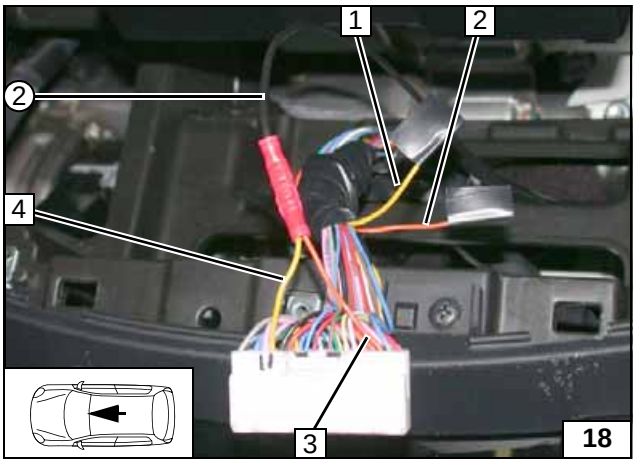
**Connecting fan motor**




Connection to 40-pin connector **2** M21A from A/C control unit.

**1** Orange (or) wire of 40-pin connector, pin 3
**3** Yellow (ge) wire of 40-pin connector, pin 16

**Connecting A/C control unit**

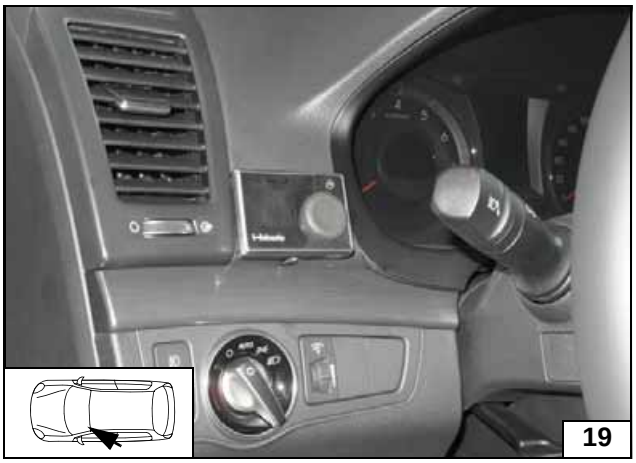



Insulate and tie back yellow (ge) **1** and orange (or) **2** wires.

**3** Orange (or) wire of 40-pin connector, pin 3
**4** Yellow (ge) wire of 40-pin connector, pin 16
② Black (sw) wire of fuse F5

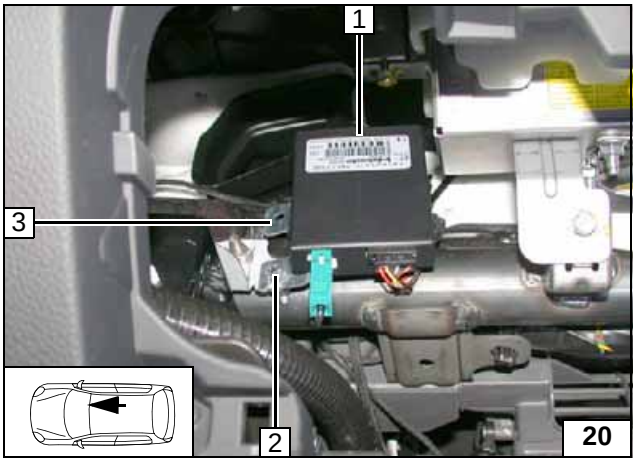
**Connecting A/C control unit**




## MultiControl CAR Option

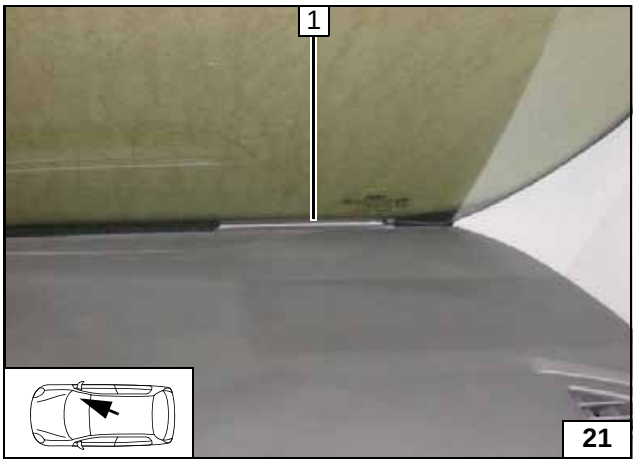
Installing MultiControl CAR




## Remote Option (Telestart)

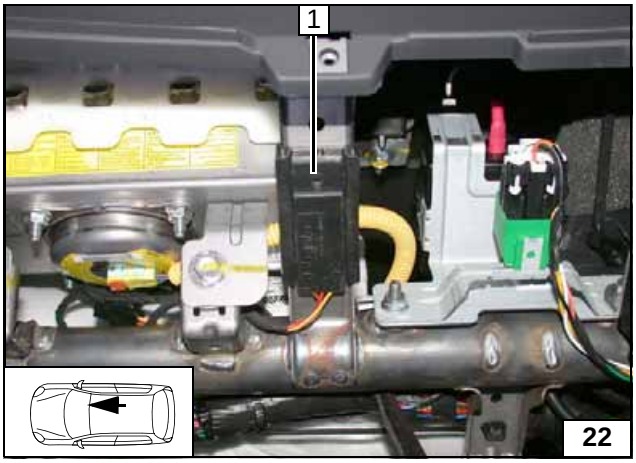
**1** Receiver
**2** M6x20 bolt, flanged nut, existing hole
**3** Align bracket

Installing receiver




**1** Aerial

Installing aerial

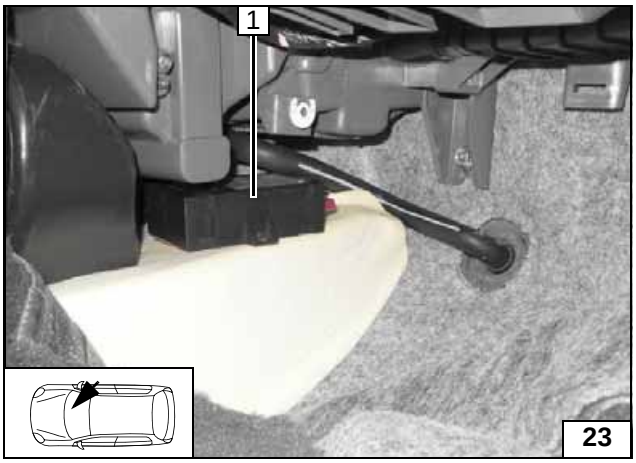


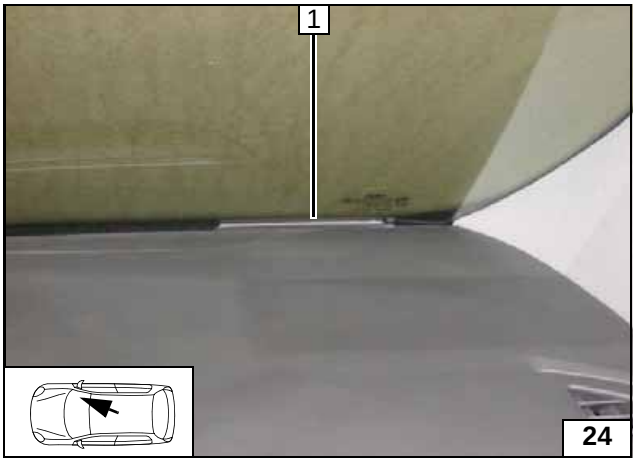

**Temperature sensor T100 HTM**

Fasten temperature sensor **1** with adhesive tape.

Installing temperature sensor




## Thermo Call Option

Fold back the floor covering for the installation. Fasten receiver **1** with adhesive tape.

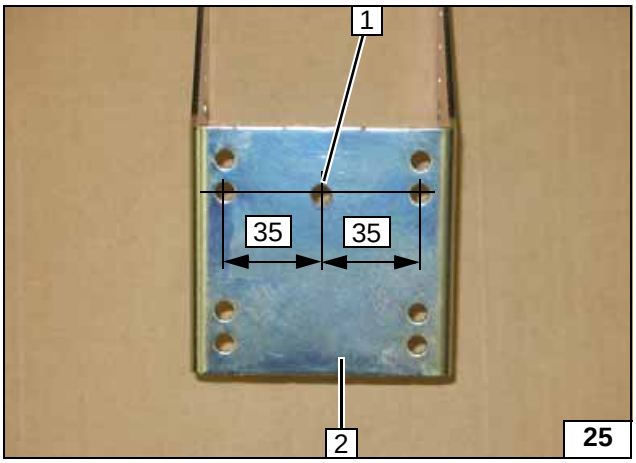
**1** Aerial

**Installing receiver**

**Installing aerial**

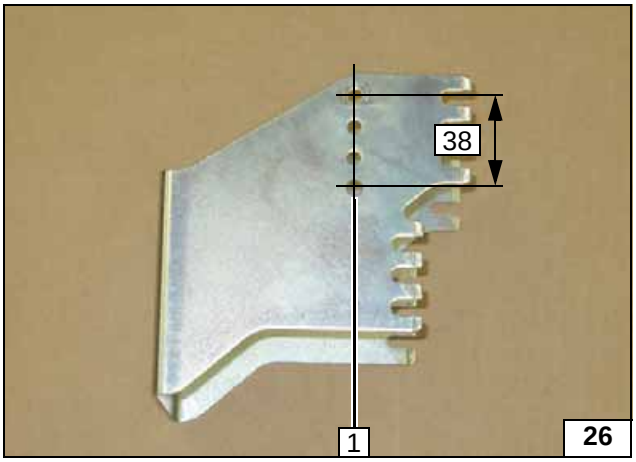
  

## Preparing Bracket



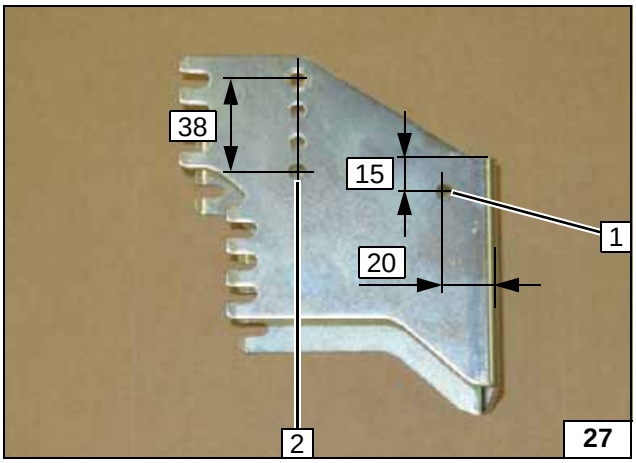

**1** 7 mm dia. hole
**2** Heater bracket

**Hole in bracket**



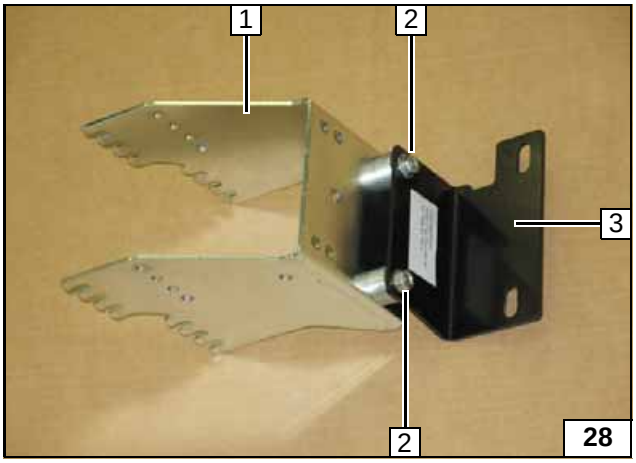

**1** 6.5 mm dia. hole

**Hole in bracket**




**1** 7 mm dia. hole
**2** 6.5 mm dia. hole

**Holes in bracket**




Only use the depicted part for the additional bracket.
Discard unused bracket part.

**1** Heater bracket
**2** M6x20 bolt, 10mm shim, flanged nut [2x each]
**3** Additional bracket

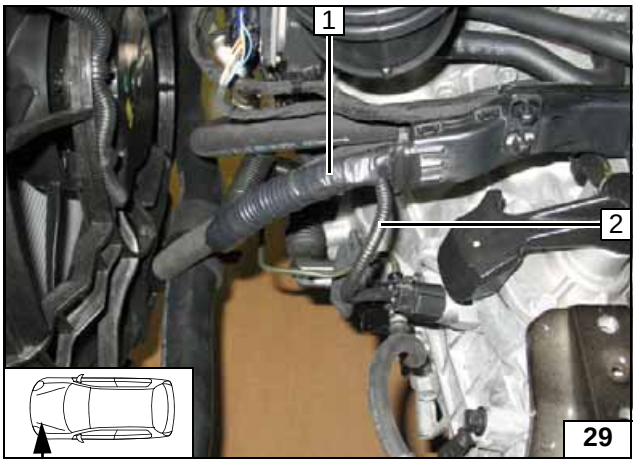
**Premounting bracket**

## Preparing Installation Location

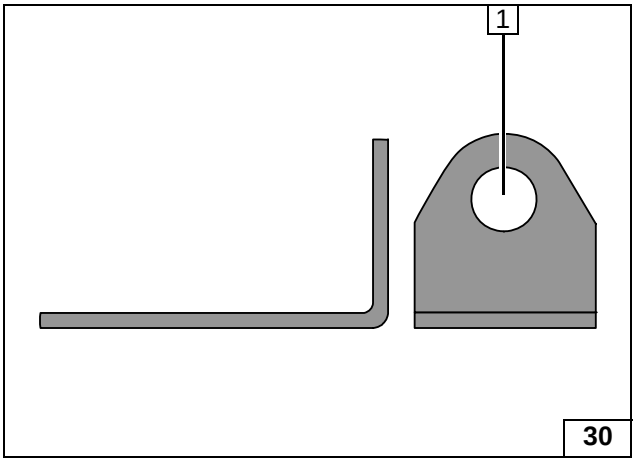
Remove insulation from original vehicle wiring harness **1**. Route wiring harness **2** as shown and wrap it with insulating tape.

**Routing wiring harness**




**1** Drill out hole to 8.5 mm dia.

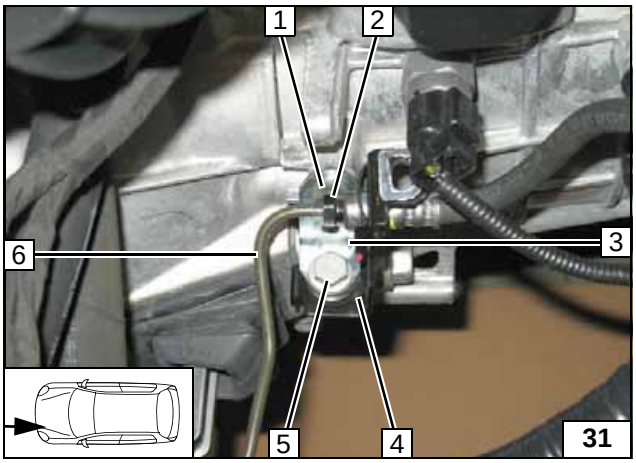
**Preparing angle bracket**




Untighten coupling line bolt **2** slightly if needed. If need be, vent coupling line **6** at coupling cylinder.

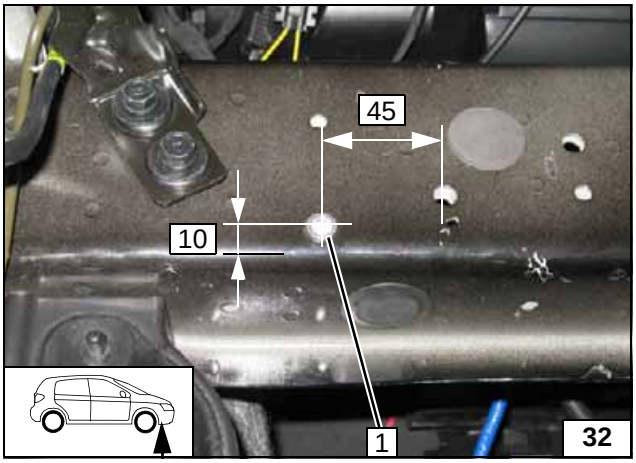
**1** M8x20 bolt, spring lockwasher, washer, existing threased hole
**3** Angle bracket
**4** Coupling line bracket
**5** Original vehicle M8 bolt, flanged nut

**Repositioning bracket of coupling line**

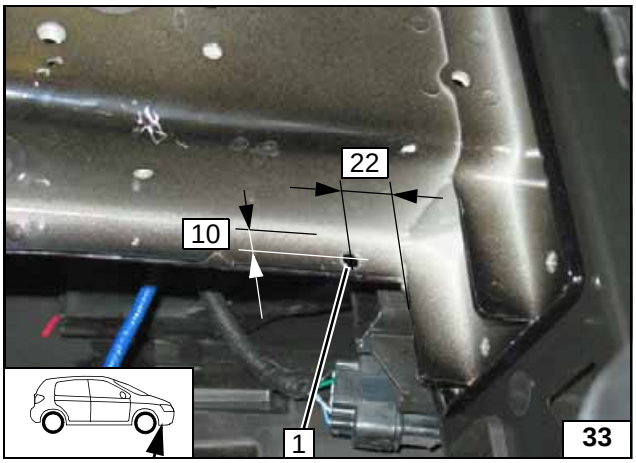



**1** 9.1mm dia. hole; rivet nut

**Installing rivet nut**

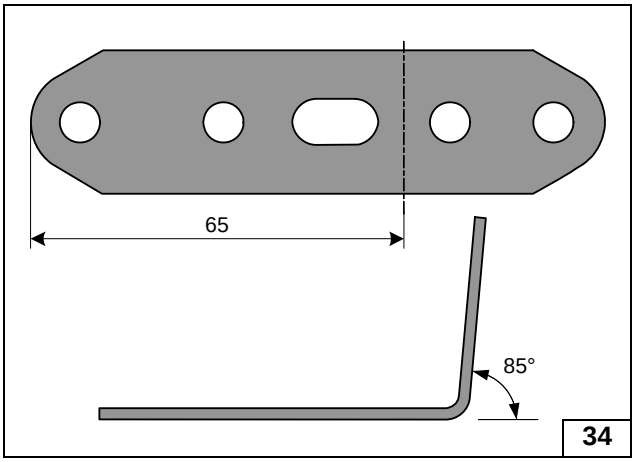


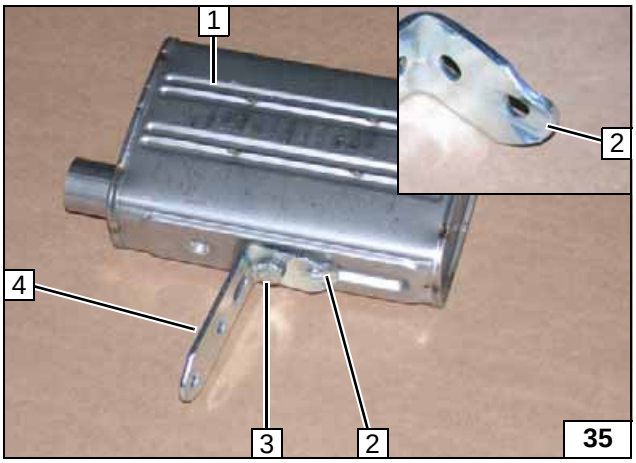



**1** 7 mm dia. hole

**Hole in frame side member**



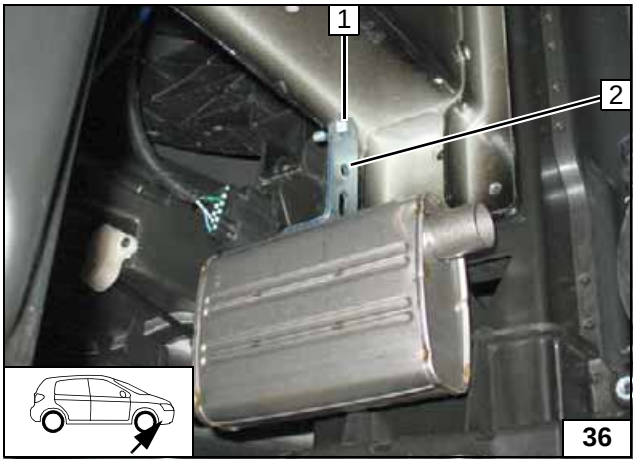

**Angling down perforated bracket**




Mould beading in perforated bracket **4** at position **2** as twist protection.

**1** Exhaust silencer
**3** M6x16 bolt, spring lockwasher

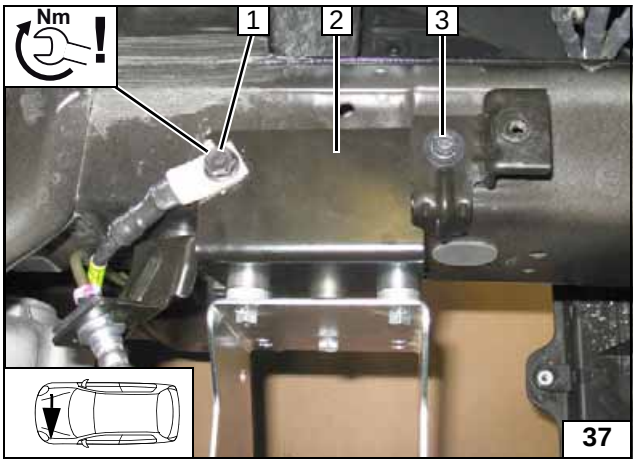
**Premounting silencer**




**1** M6x20 bolt, flanged nut
**2** Perforated bracket

**Installing silencer**

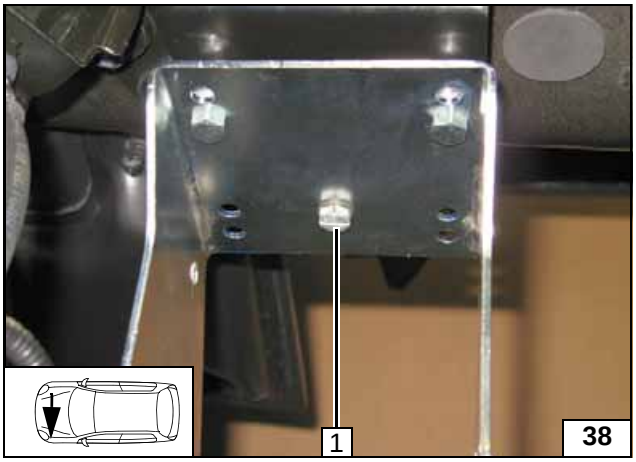
  




Remove coating from bracket at position **1** (earth connection).

**1** Original vehicle bolt, earth wire
**2** Bracket
**3** Original vehicle bolt, bracket of air filter fastening

**Installing bracket**

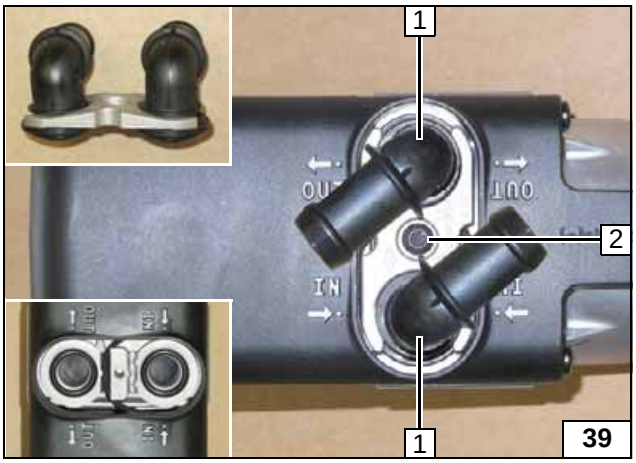



Insert 30 mm shim between bracket and frame side member.

**1** M6x50 bolt; spring lockwasher, 30mm shim

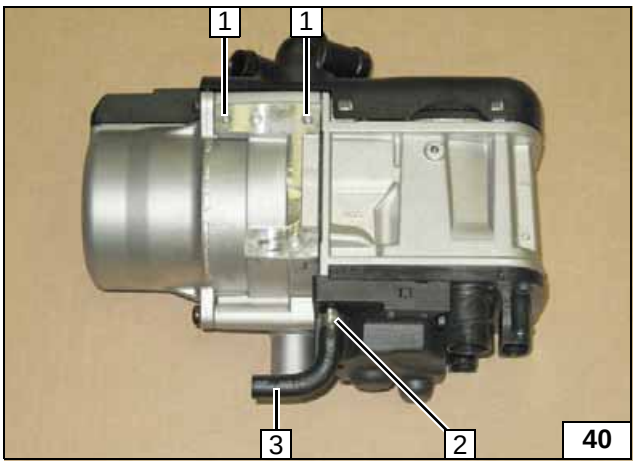
**Installing bracket**

## Preparing Heater




**1** Water connection piece, sealing ring [2x each]
**2** 5x15 self-tapping bolt, retaining plate of water connection piece

**Installing water connection piece**

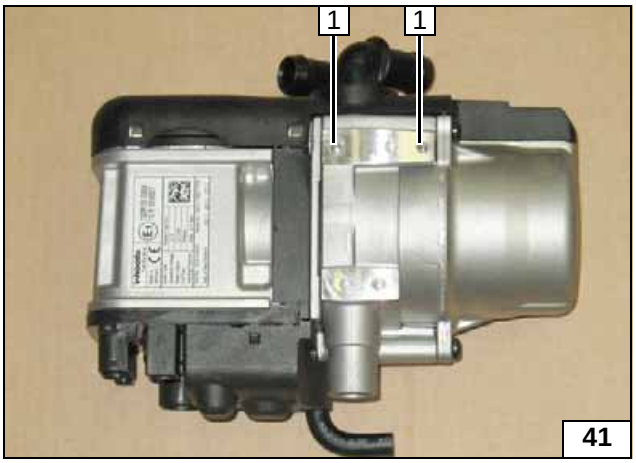



Precut thread with 5x13 self-tapping bolt at position **1** [2x].

**2** 10 mm dia. clamp
**3** 90° moulded hose

**Mounting moulded hose**

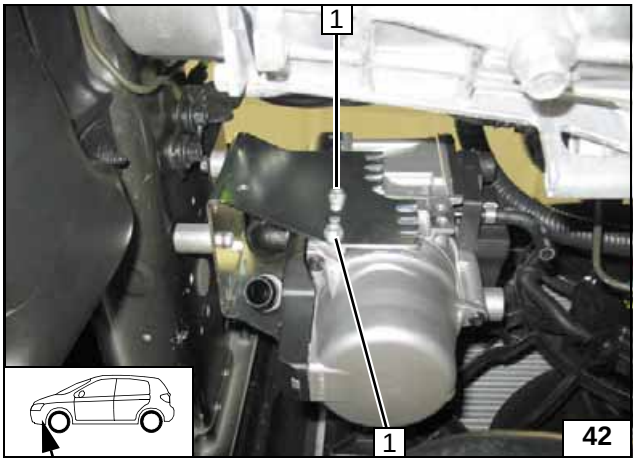
  




Precut thread with 5x13 self-tapping bolt at position **1** [2x].

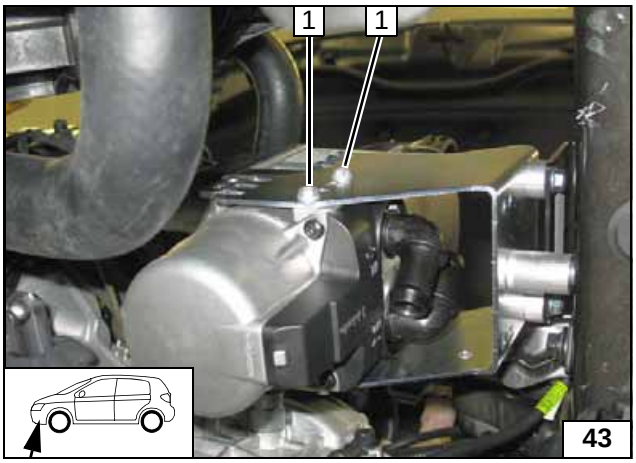
**Precutting threads**

## Installing Heater



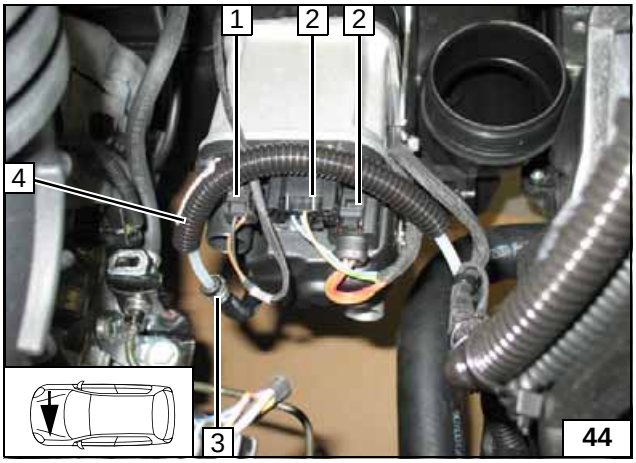

**1** 5x13 self-tapping bolt [2x]

**Installing heater**




**1** 5x13 self-tapping bolt [2x]

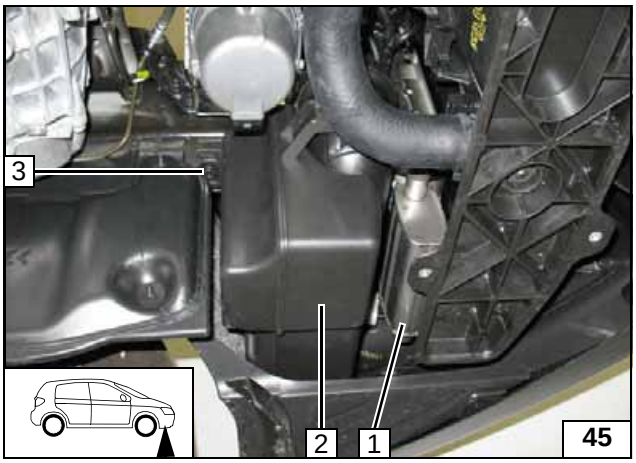
**Installing heater**




Route the wiring harness of the circulating pump to the installation location of the circulating pump.

**1** Connector of circulating pump wiring harness
**2** Heater wiring harness connector [2x]
**3** 10 mm dia. clamp
**4** Fuel line in 10mm dia. corrugated tube (100mm long)

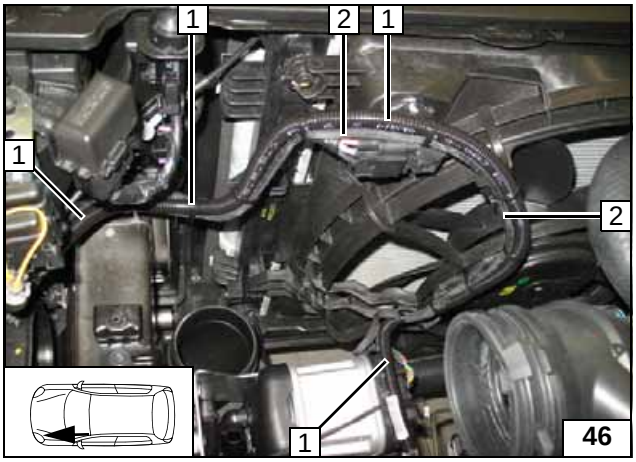
**Connecting wiring harnesses**




Ensure sufficient distance between resonator **2**, exhaust silencer **1** and radiator carrier, correct if necessary.

**3** Original vehicle bolt

**Installing resonator**




**1** Fuel line and wiring harness of metering pump in 10mm dia. corrugated tube
**2** Wiring harness of heater

**Routing wiring harnesses**

## Fuel

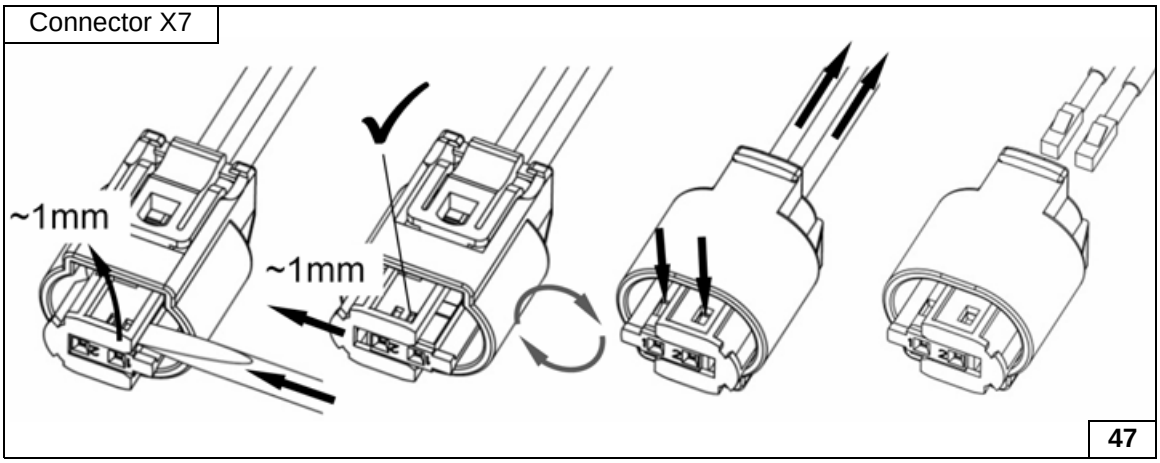
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

Catch any fuel running off in an appropriate container.

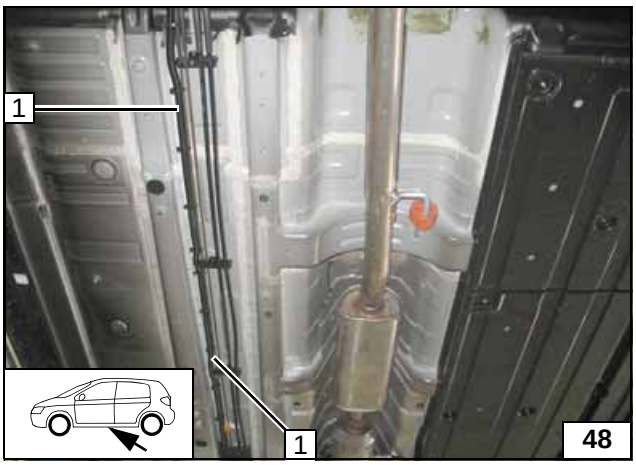
Route fuel line and metering pump wiring harness so that they are protected against stone impact.
Unless specified otherwise, always fasten using cable ties.
Provide rub protection for fuel line and wiring harness in areas where there are sharp edges.

The fuel line and wiring harness are routed to the metering pump as shown in the wiring harness routing diagram.

**Dismantling metering pump connector**

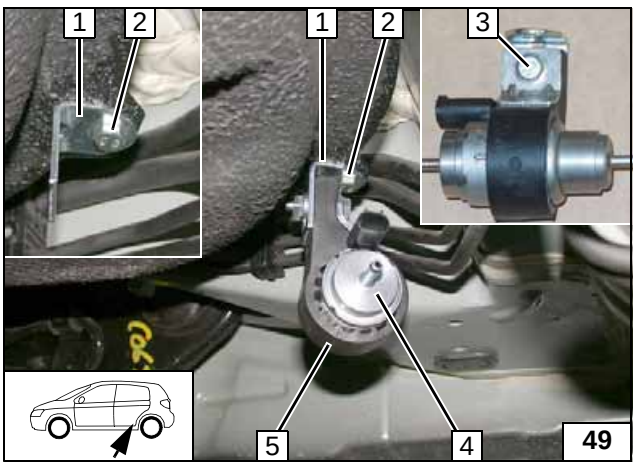



**Routing lines**

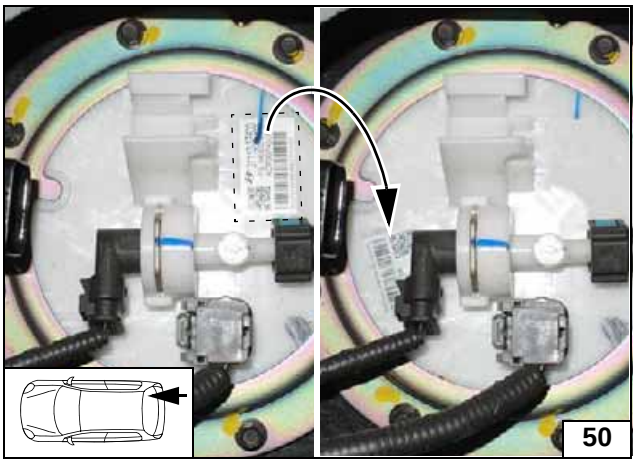



**1** Fuel line and wiring harness of metering pump in 10mm dia. corrugated tube

**Installing metering pump**




**1** Angle bracket
**2** M6x20 bolt, flanged nut, existing hole
**3** M6x25 bolt, support angle bracket, flanged nut
**4** Metering pump
**5** Metering pump mount

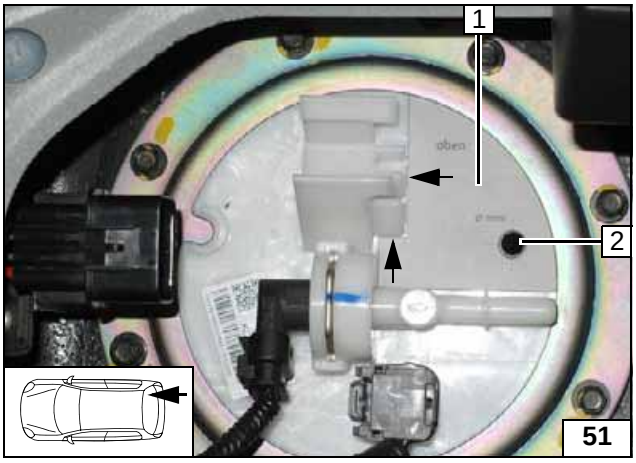



## Installing FuelFix

**From model year 2015**

Work step F1.

**Moving sticker**

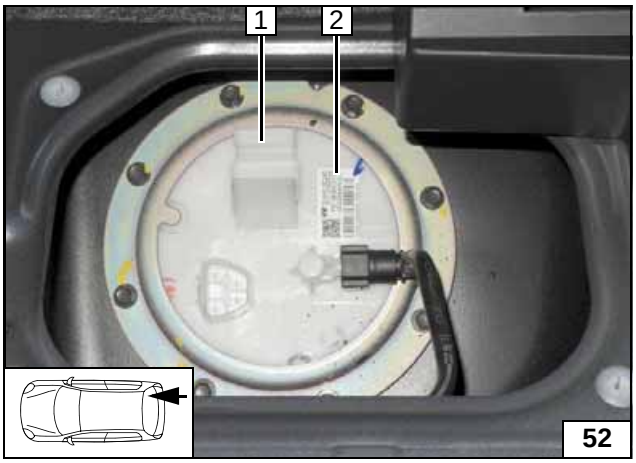



Work steps F2 and F3.

**1** Cut out template and position as shown.
**2** Copy hole pattern, hole made with provided drill

**Hole for FuelFix**

**This will be continued with work step F4 in section:**
**'Up to model year 2014'**

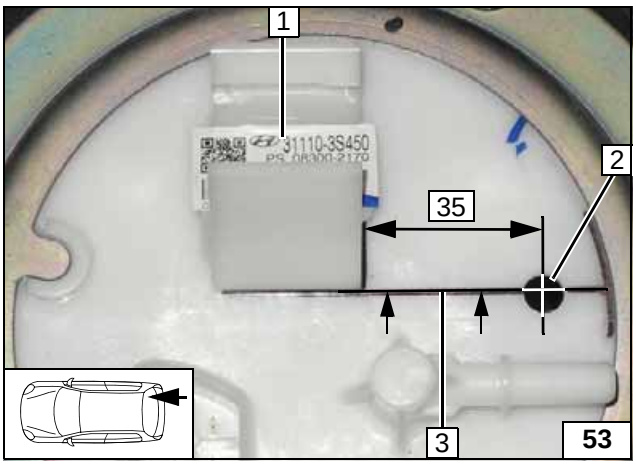



**Up to model year 2014**

Work step F1.

**1** Fuel tank sending unit
**2** Remove the sticker carefully, will be reapplied later

**Moving sticker**



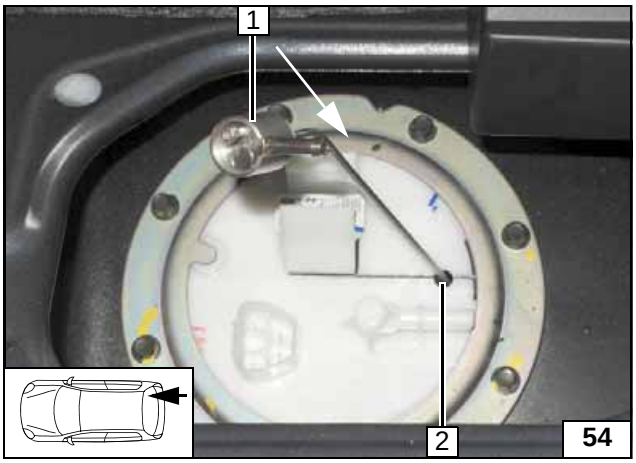

Work steps F2 and F3.

Copy hole pattern onto fuel tank sending unit at marking **3** (existing line).

**1** Reposition sticker
**2** Hole made with provided drill

**Hole for FuelFix**

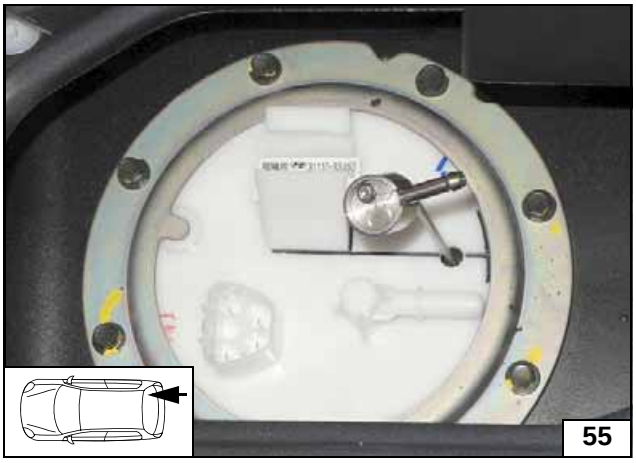



Work steps F4 and F5.

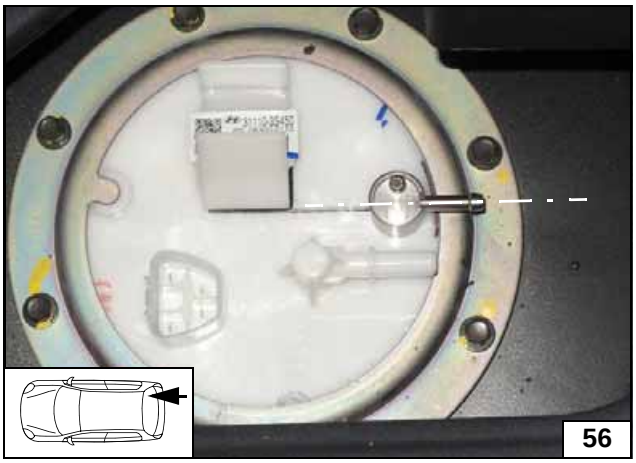
Bend FuelFix **1** according to template and cut to length.

**2** Hole

**Inserting FuelFix**

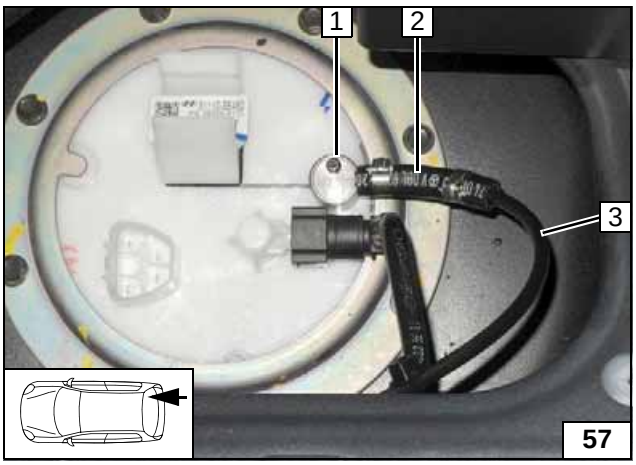



**Inserting FuelFix**




Work steps F5.3 and F5.4.

**Aligning FuelFix**




Work step F6.

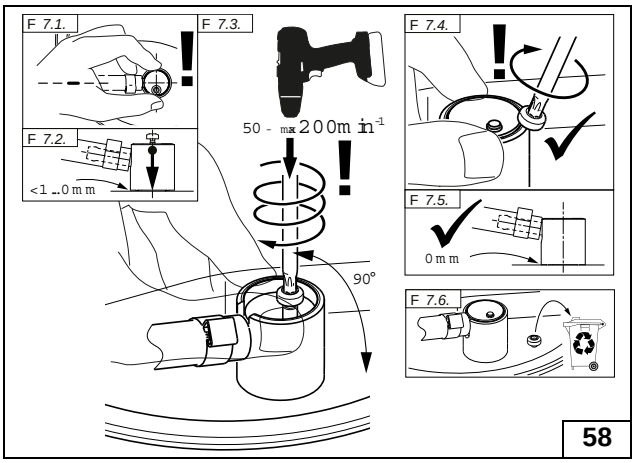
Install original vehicle fuel line.

**1** FuelFix
**2** Hose section, 10mm dia. clamp [2x]
**3** Fuel line

**Connecting fuel line**

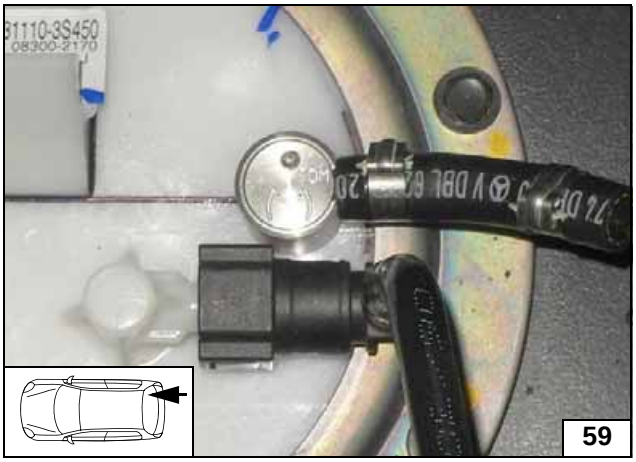
  

## Mounting FuelFix



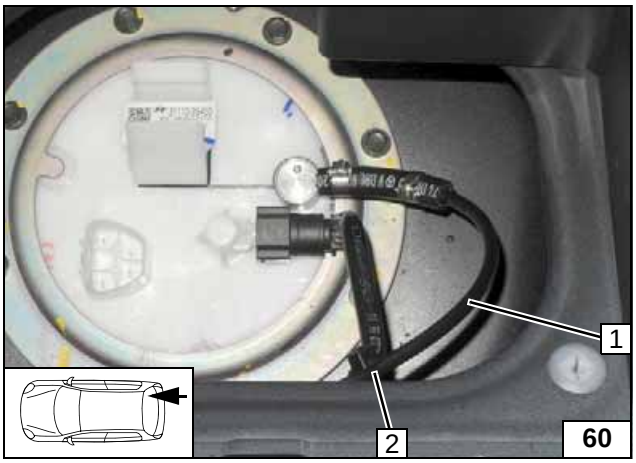

Work step F7.

## Checking final position




Work step F8.

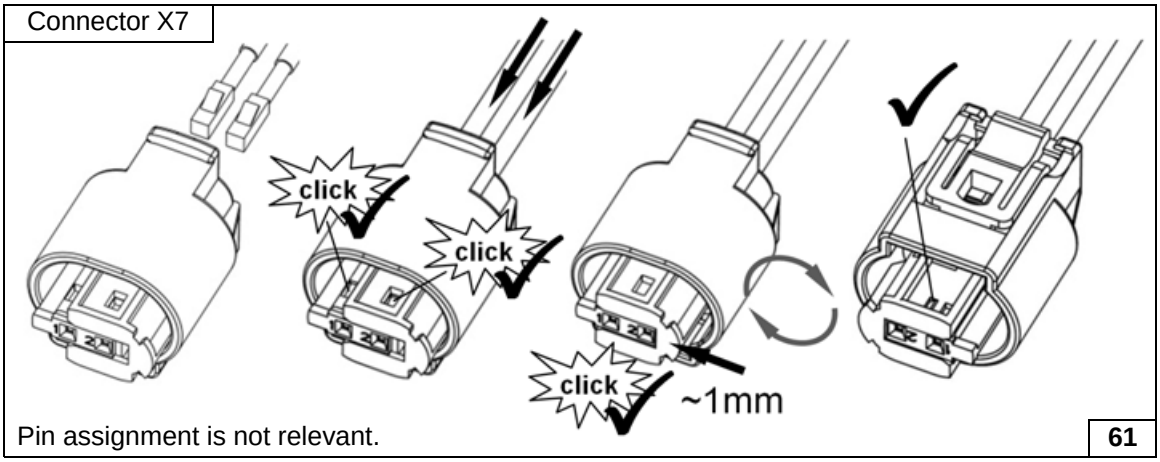
## Securing fuel line



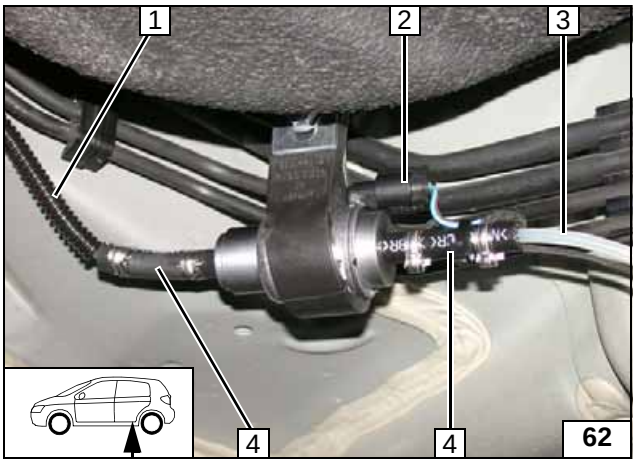

Work step F8.

**1** Fuel line of FuelFix
**2** Cable tie as tension relief

## Completing metering pump connector



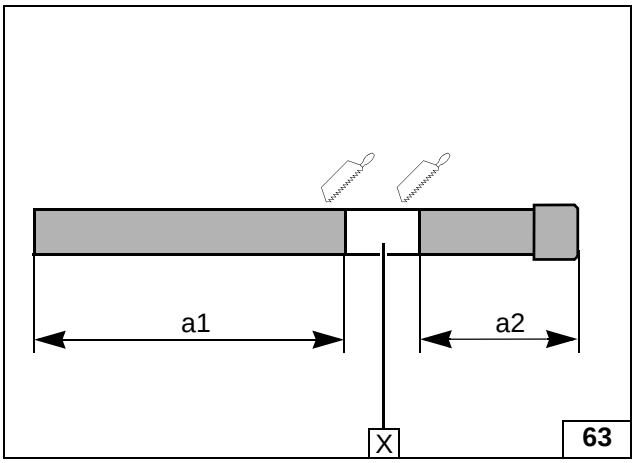



Slide 10mm dia. corrugated tube **1** onto fuel line of FuelFix. Ensure sufficient distance from neighbouring components, correct if necessary.

**2** Wiring harness of metering pump, connector X7 mounted
**3** Fuel line of heater
**4** Hose section [2x], 10mm dia. clamp [4x]

**Installing metering pump**

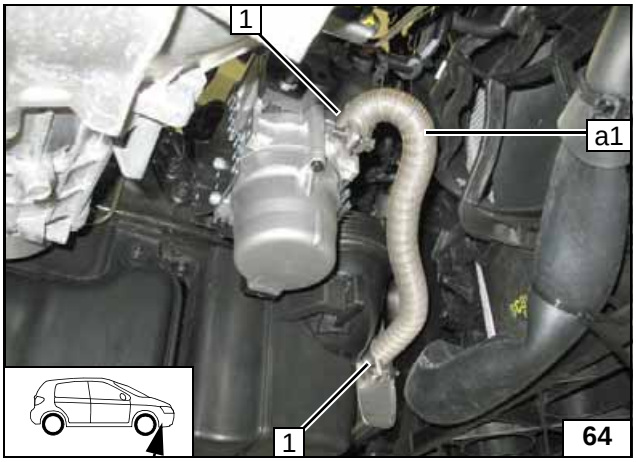



## Exhaust Gas

**a1** = 380
**a2** = 135

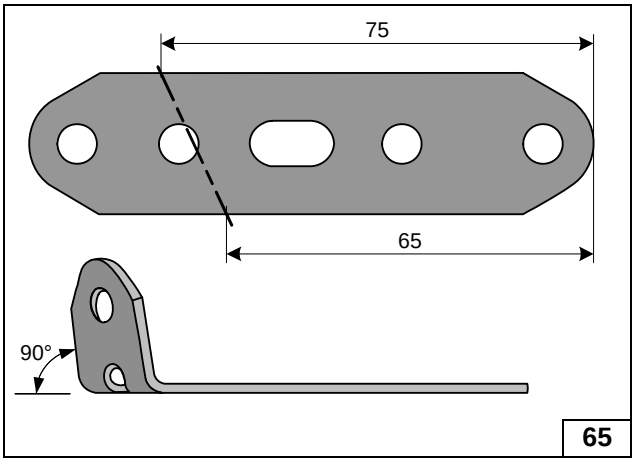
**X** =

**Preparing / assigning exhaust pipe**

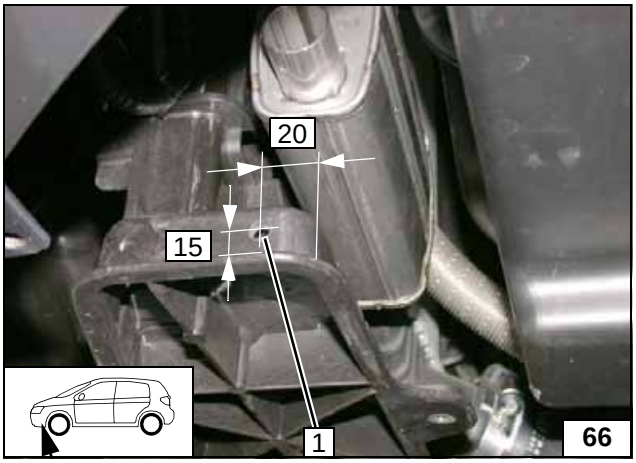



**1** Hose clamp [2x]

**Installing exhaust pipe a1**



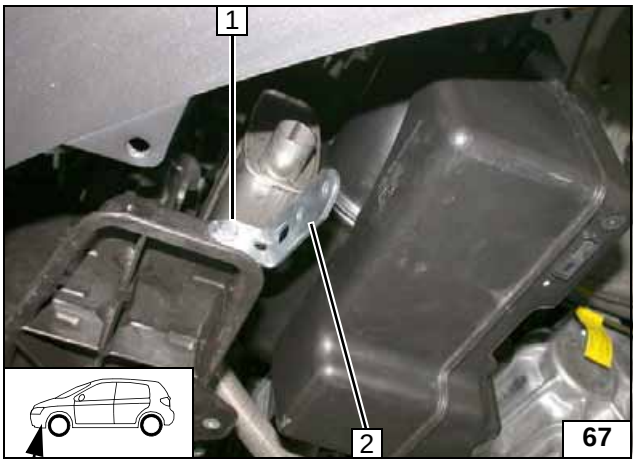

**Angling down perforated bracket**




**1** 7 mm dia. hole

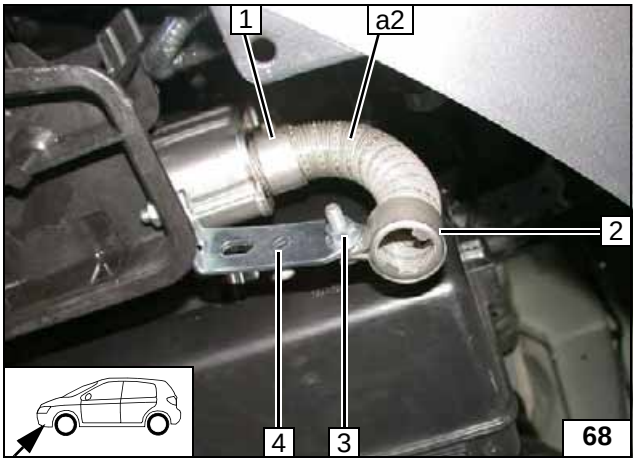
**Hole in cross member**



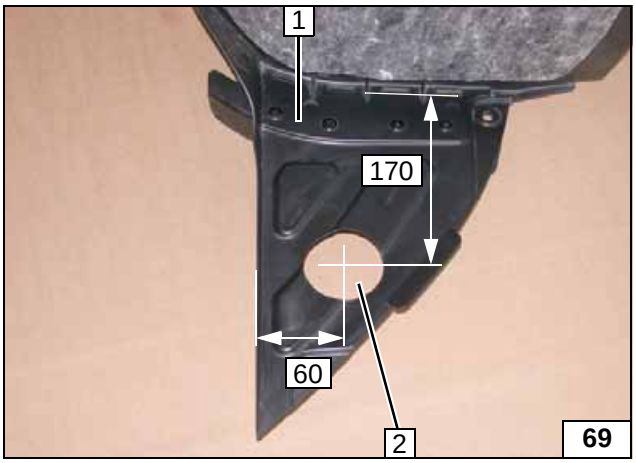

**1** M6x20 bolt, flanged nut
**2** Perforated bracket

**Installing perforated bracket**




**1** Hose clamp
**2** P-clamp
**3** M6x20 bolt, flanged nut
**4** Perforated bracket

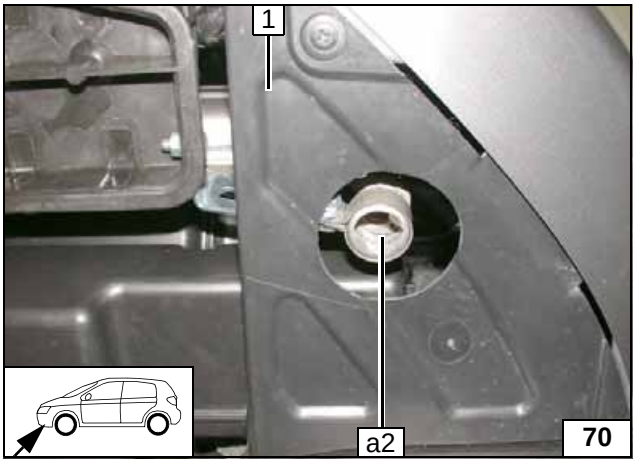
**Installing exhaust pipe a2**




**Up to model year 2014**

**1** Wheel well trim
**2** 60 mm dia. hole

**Cutting out wheel well trim**

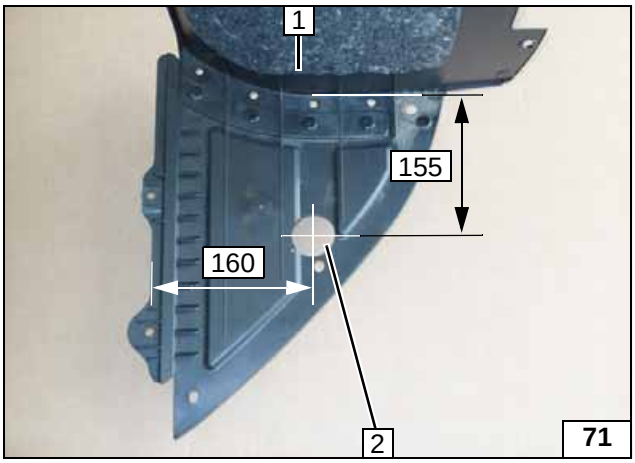



Align exhaust pipe **a2** with the centre of the hole. Ensure sufficient distance from neighbouring components, correct if necessary.

**1** Install wheel well trim

**Aligning exhaust pipe a2**

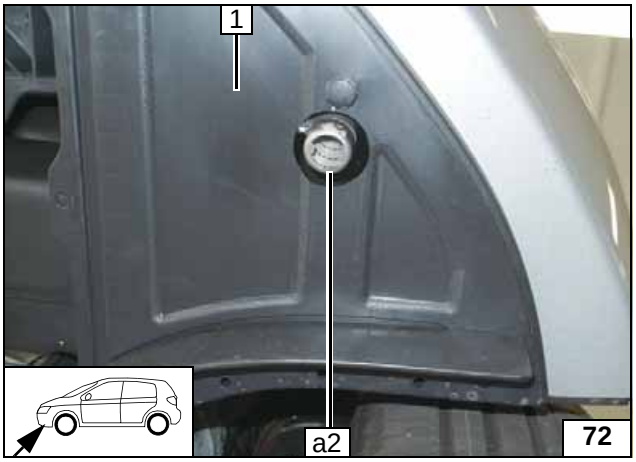
  




**From model year 2015**

**1** Wheel well trim
**2** 45mm dia. hole

**Cutting out wheel well trim**




Align exhaust pipe **2** with the centre of the hole. Ensure sufficient distance from neighbouring components, correct if necessary.

**1** Install wheel well trim

**Aligning exhaust pipe a2**

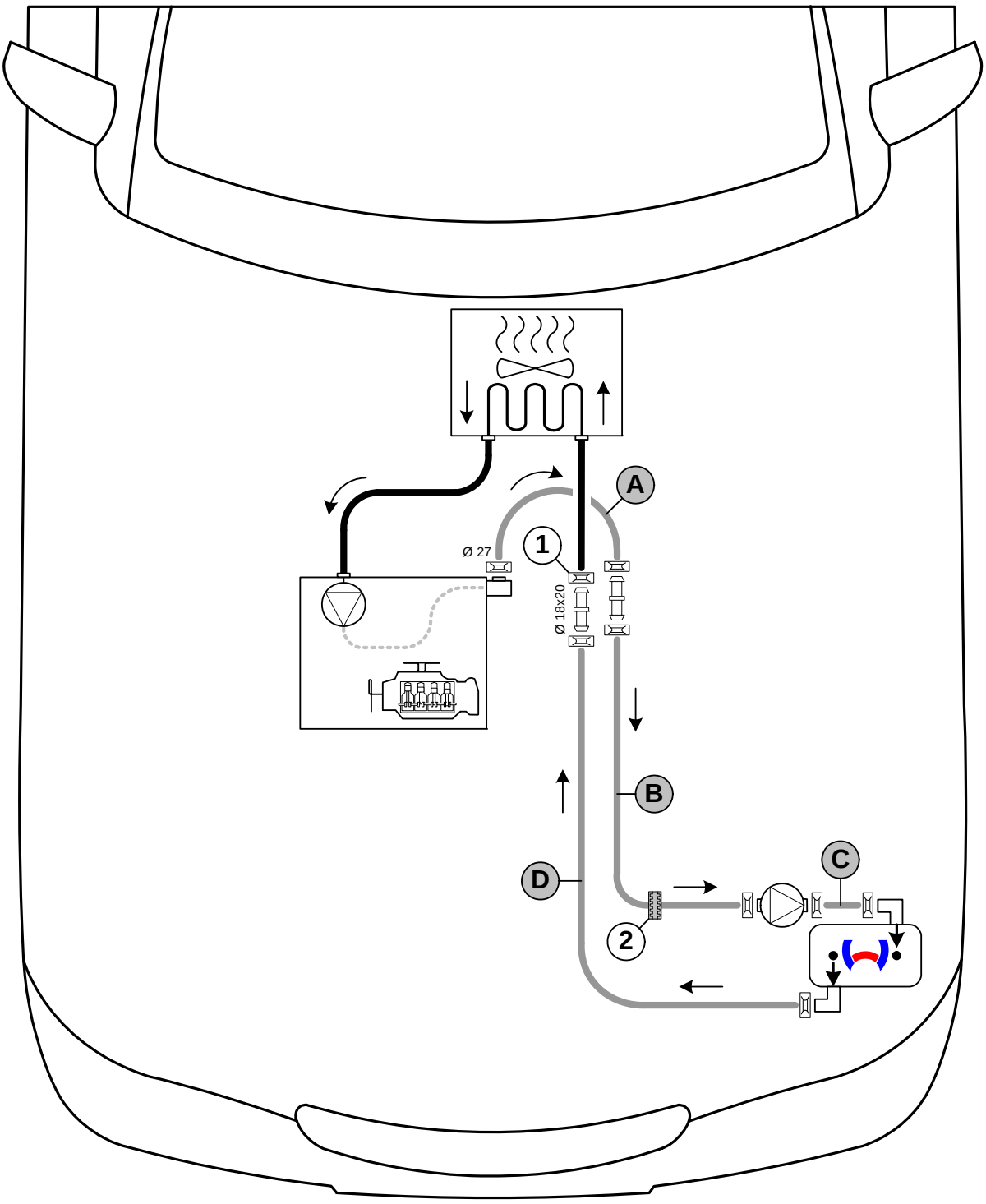
  

## Coolant Circuit

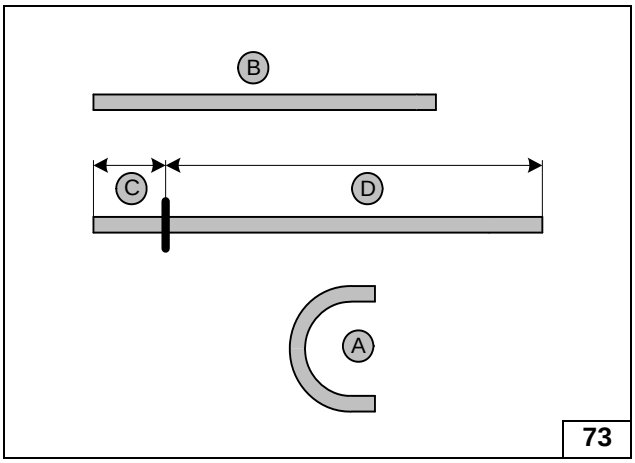
Any coolant running off should be collected in an appropriate container. Route hoses kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the hoses.

The connection should be modelled on an ‘inline’ circuit and based on the following diagram:

**Hose routing diagram**



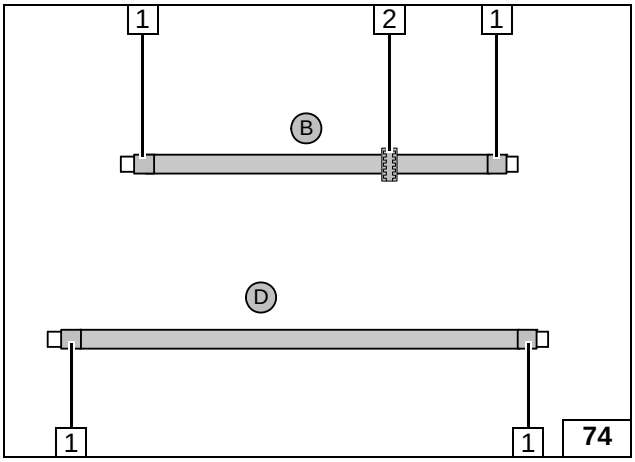

All spring clips without a specific designation = 25 mm dia.
All connecting pipes without a specific designation = 18x18mm dia.
**1** = Original vehicle spring clip .
**2** = Black (sw) rubber isolator




**A** = 180°, 18mm dia.

**B** = 600
**C** = 80
**D** = 720

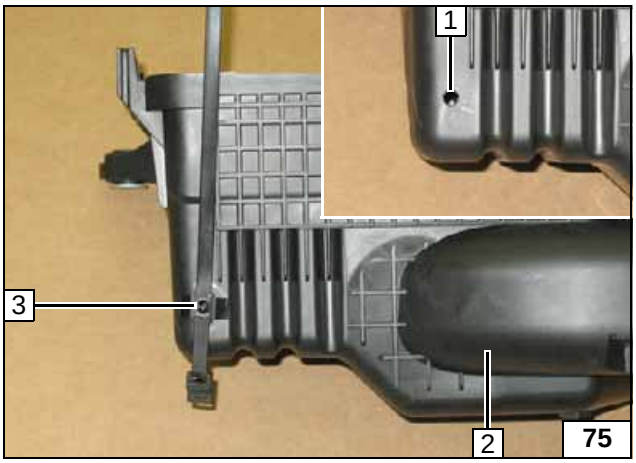
**Cutting hoses to length**




Slide braided protection hoses over hoses **B** and **D** and cut to length.
Cut heat shrink plastic tubing to size.

**1** 50 mm long heat shrink plastic tubing [4x]
**2** Rubber isolator

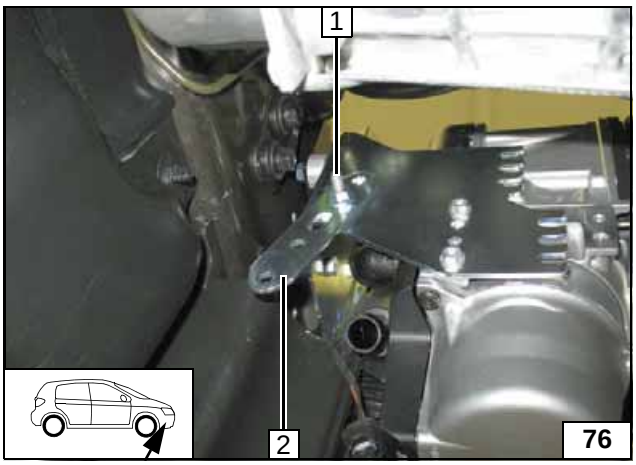
**Preparing hoses**




6mm dia. hole **1** in air filter box **2**.

**3** Clip-type cable tie, existing hole

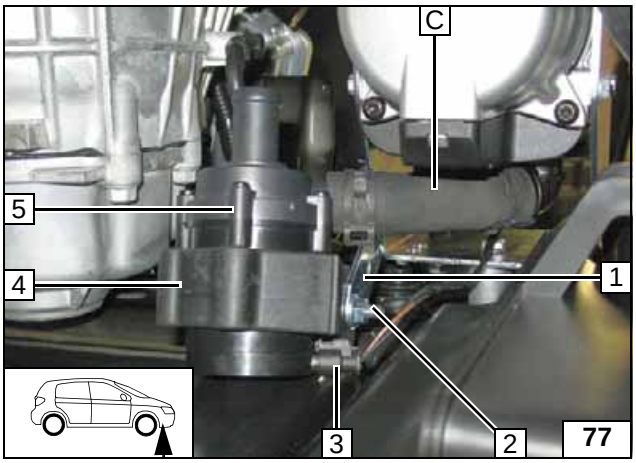
**Preparing air filter box**




**1** M6x20 bolt, flanged nut, prepared hole
**2** Perforated bracket

**Installing perforated bracket loosely**

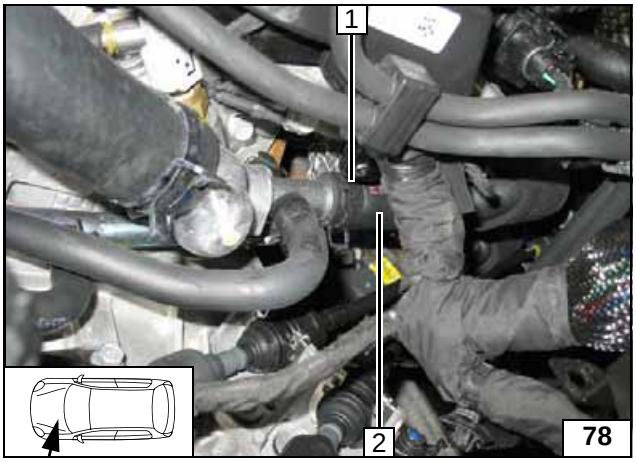
  




Hose **C** on heater inlet. Align circulating pump and tighten all bolts!

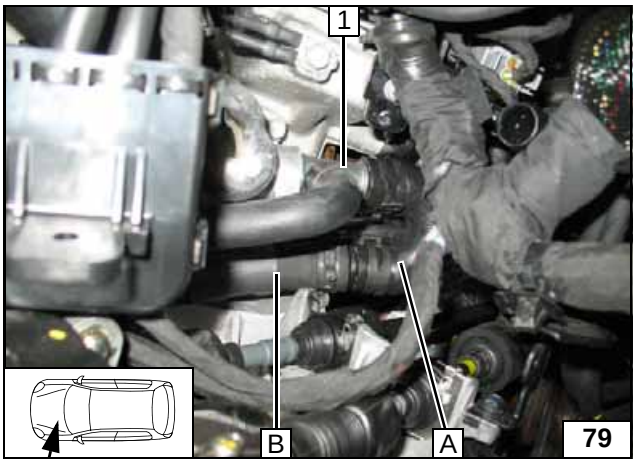
**1** Perforated bracket
**2** M6x25 bolt, flanged nut
**3** Connector of circulating pump wiring harness
**4** Circulating pump mount
**5** Circulating pump

**Installing circulating pump**



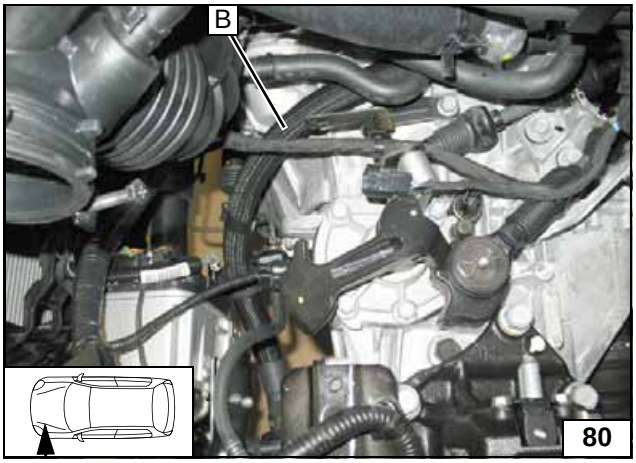

Disconnect hose of engine outlet/heat exchanger inlet **2** from connection piece. Original vehicle spring clip **1** will be reused.

**Cutting point**



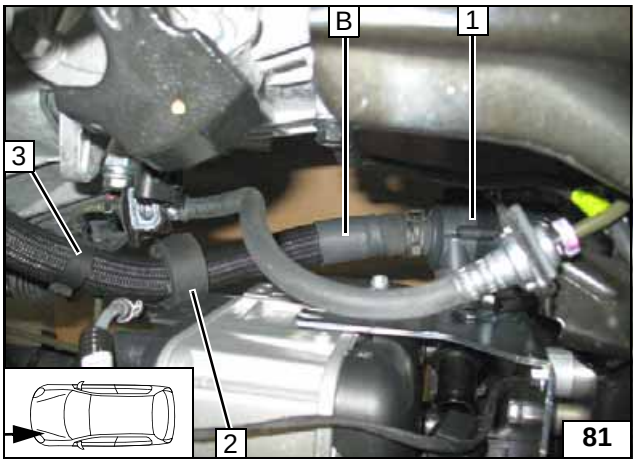

**1** Connection piece of engine outlet

**Connecting engine outlet**




**Routing in engine compartment**

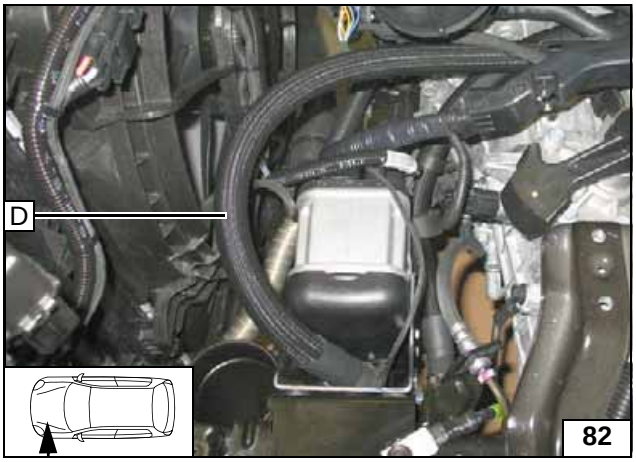
  



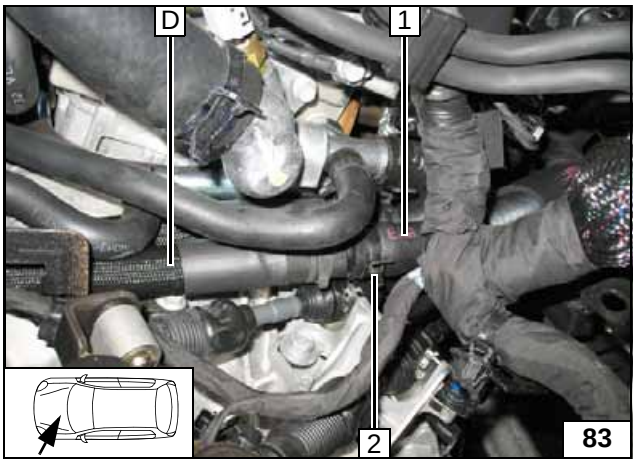

Align black (sw) rubber isolator **2** with coupling line bracket.

**1** Circulating pump
**3** Hose bracket on coupling line

**Connecting circulating pump**

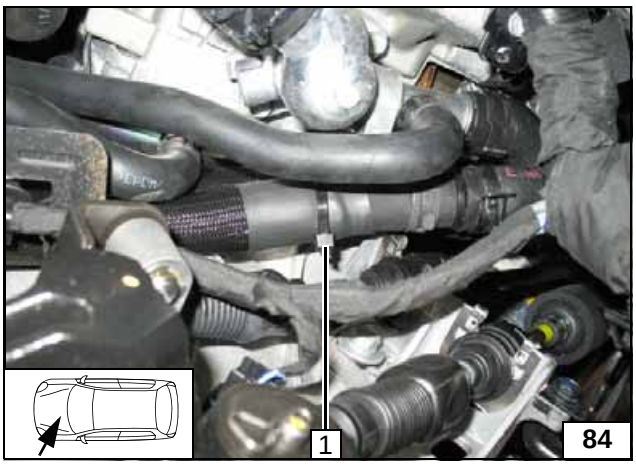



**Connecting heater outlet**




**1** Hose of heat exchanger inlet
**2** Original vehicle spring clip

**Connecting heat exchanger inlet**



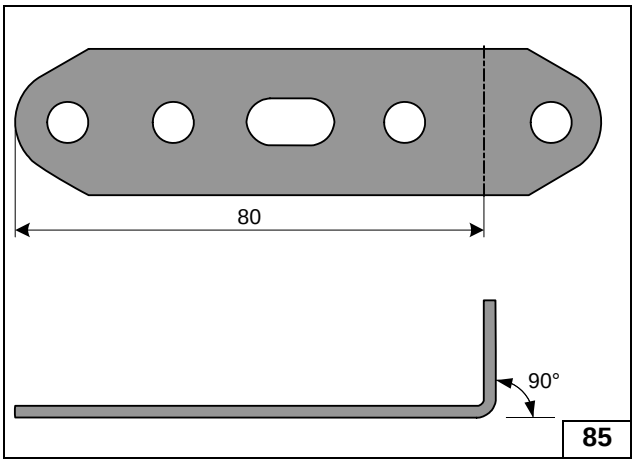

Ensure sufficient distance from neighbouring components, correct if necessary.

**1** Cable tie around hoses **B** and **D**

**Aligning hoses**

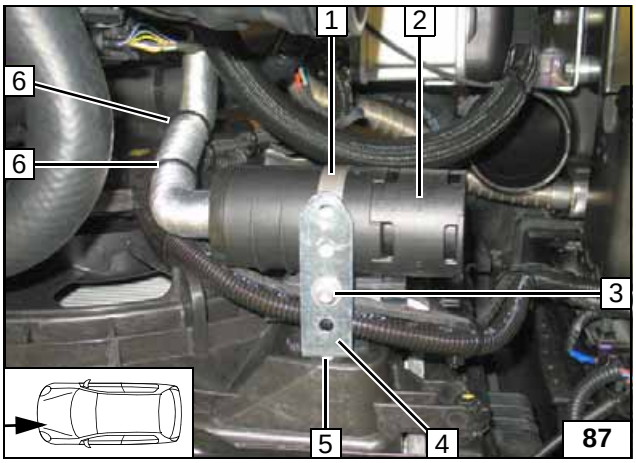
## Combustion Air




**Angling down perforated bracket**


**1** Combustion air pipe

**Installing combustion air pipe**




Attach combustion air pipe to corrugated tube using cable tie **6**.

**1** 51mm dia. clamp
**2** Silencer
**3** M5x12 bolt, large diameter washer [2x], flanged nut
**4** Perforated bracket
**5** Original vehicle bolt of radiator trim (hidden by perforated bracket)

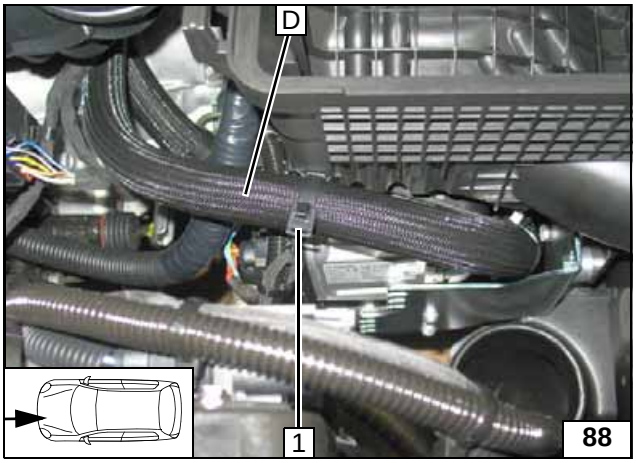
**Installing silencer**

## Final Work

Reassemble the components in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate and tie back all loose lines.
Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K).

- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.**
- **Program MultiControl CAR, teach Telestart transmitter.**
- **Make settings on A/C control panel according to the 'Operating Instructions for End Customer'.**
- **Place the 'Switch off parking heater before refuelling' caution label near the filler neck.**
- **For initial startup and function check, please see installation instructions.**



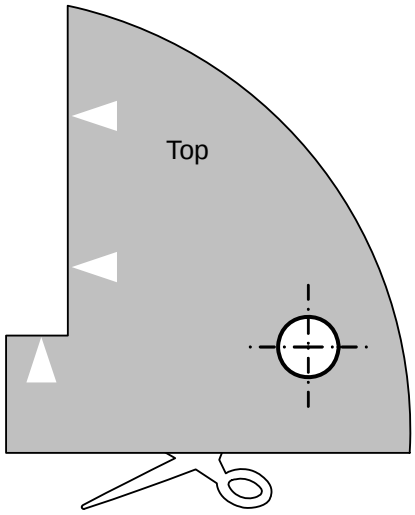

Combustion air silencer removed due to documentation purposes.

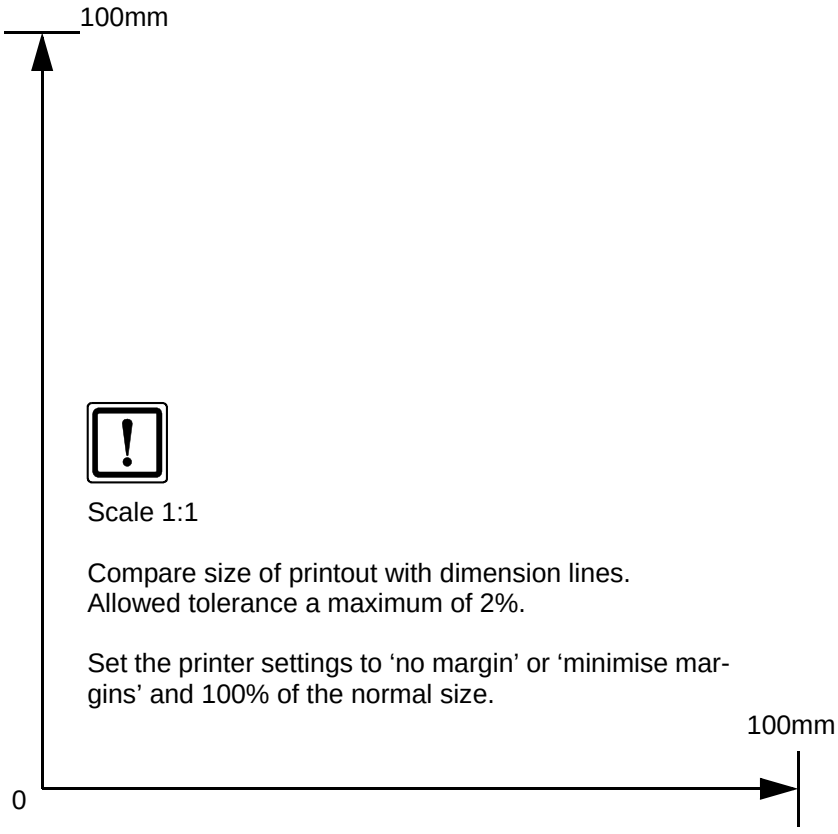
**1** Close clip-type cable tie

**Attaching hose D**

Webasto Thermo & Comfort SE
Postfach 1410
82199 Gilching
Germany
Internet: www.webasto.com
Technical Extranet:
http://dealers.webasto.com

## Drilling Template for Fuel Tank Sending Unit from MY 2015

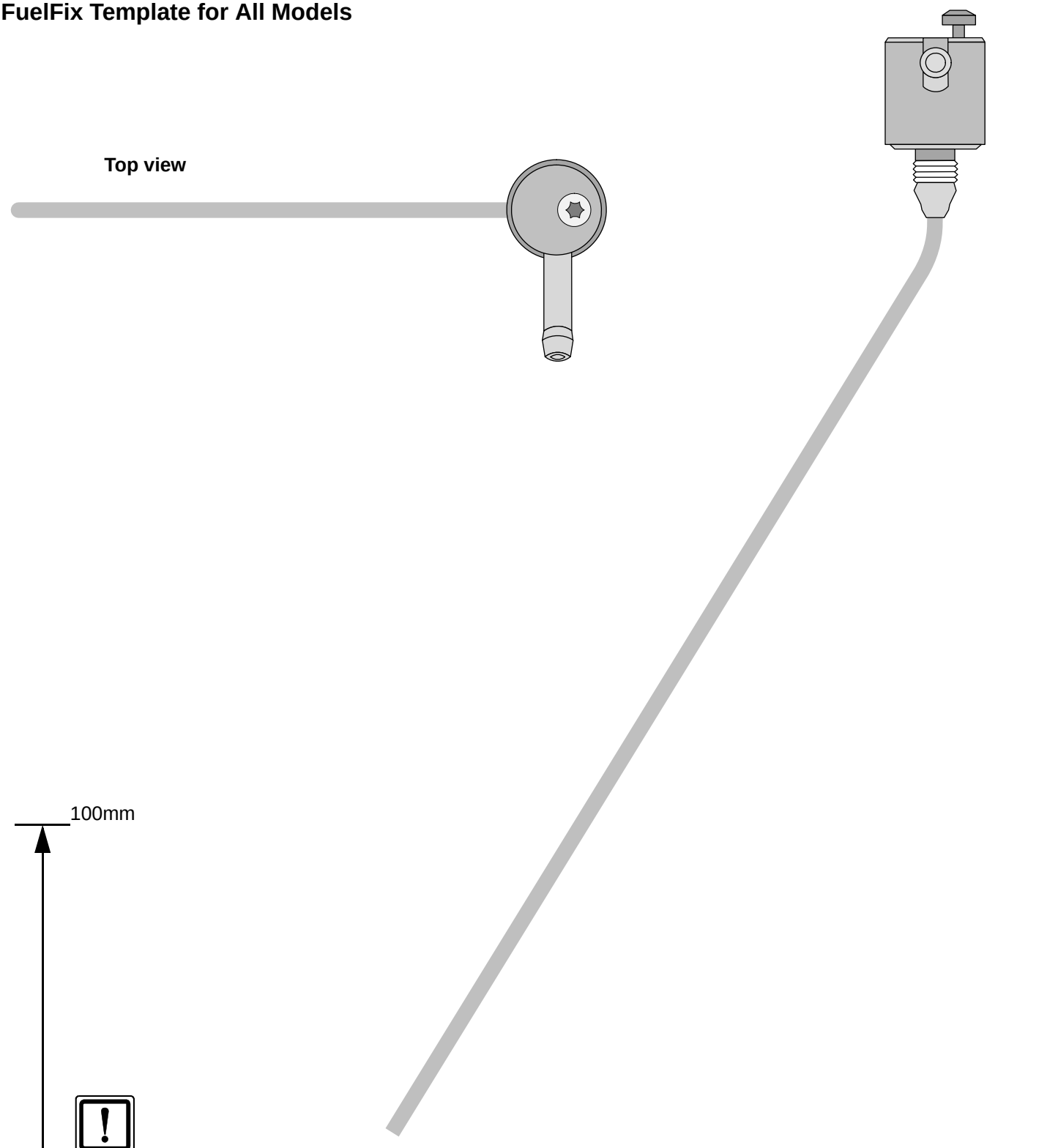


## FuelFix Template for All Models

**Top view**



100mm

Scale 1:1

Compare size of printout with dimension lines.
Allowed tolerance a maximum of 2%.

Set the printer settings to ‘no margin’ or ‘minimise margins’ and 100% of the normal size.

100mm

0

## Operating Instructions for Manual A/C

Please remove page and add to the vehicle operating instructions.

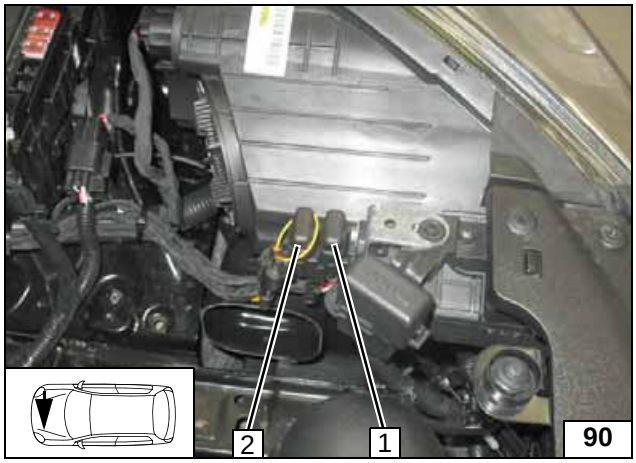
**Note:**
We recommend matching the heating time to the driving time.
Heating time = driving time
**Example:**
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:

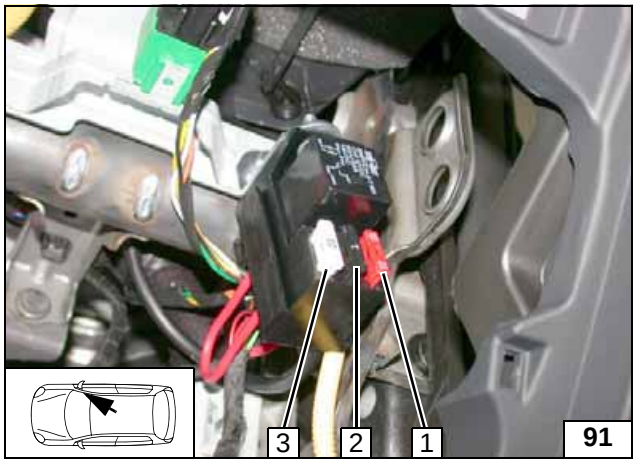

**1** Set fan to level ‘2’, or max. ‘3’
**2** Air outlet to windscreen/ footwell.
**3** Set temperature to ‘max.’

**A/C control panel**




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

**Engine compartment fuses**




**1** 10A additional fuse F5
**2** 1A fuse F3 of heater control
**3** 25A fan fuse F4

**Passenger compartment fuses**

## Operating Instructions for Automatic A/C

Please remove page and add to the vehicle operating instructions.

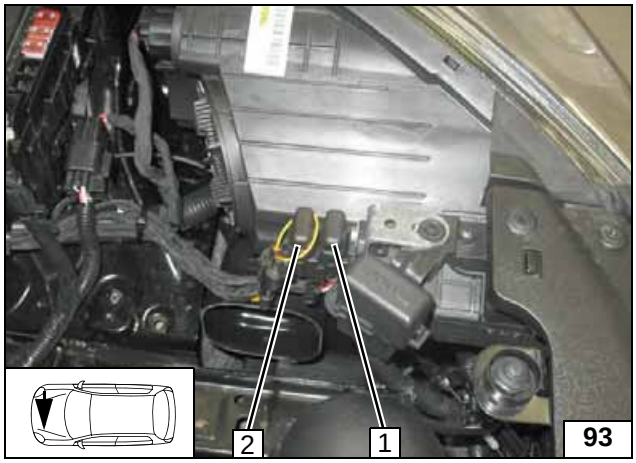
**Note:**
We recommend matching the heating time to the driving time.
Heating time = driving time
**Example:**
For a driving time of approx. 20 min. (in one direction), we recommend not exceeding a switch-on time of 20 min.

Passenger compartment monitoring, if installed, must be deactivated in addition to the vehicle settings for the heating operation.
For instructions on deactivation, please refer to the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:

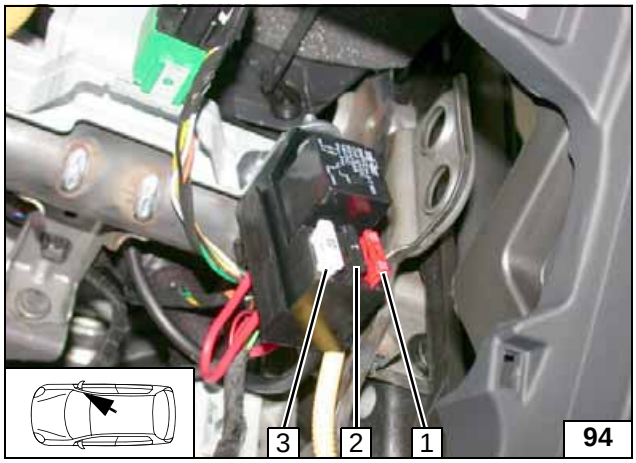

**1** Air outlet to windscreen
**2** Set temperature on both sides to ‘HI’
**3** Set fan to level ‘1’, or max. ‘2’

**A/C control panel**




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

**Engine compartment fuses**




**1** 10A additional fuse F5
**2** 1A fuse F3 of heater control
**3** 25A fan fuse F4

**Passenger compartment fuses**