

Water Heater

Thermo Top Evo Parking Heater



Installation Documentation

Nissan Qashqai / Qashqai +2

Validity

Manufacturer	Model	Type	EG-BE-No. / ABE
Nissan	Qashqai / Qashqai +2	J10 / JJ10	e11* 2001 / 116 * 0295 * ...

Motorisation	Fuel	Transmission type	Output in kW	Displacement in cm ³	Engine code
1.6 D	Diesel	6-gear SG	96	1598	R9M

SG = Manual transmission

From Model Year 2012
Left-hand drive vehicle

Verified equipment variants: Manual / automatic air-conditioning system

Front fog light
 Xenon with headlight washer system
 2WD / 4WD
 Emission standard: Euro 5
 Start-Stop function

Not verified: Passenger compartment monitoring

Total installation time: about 11 hours

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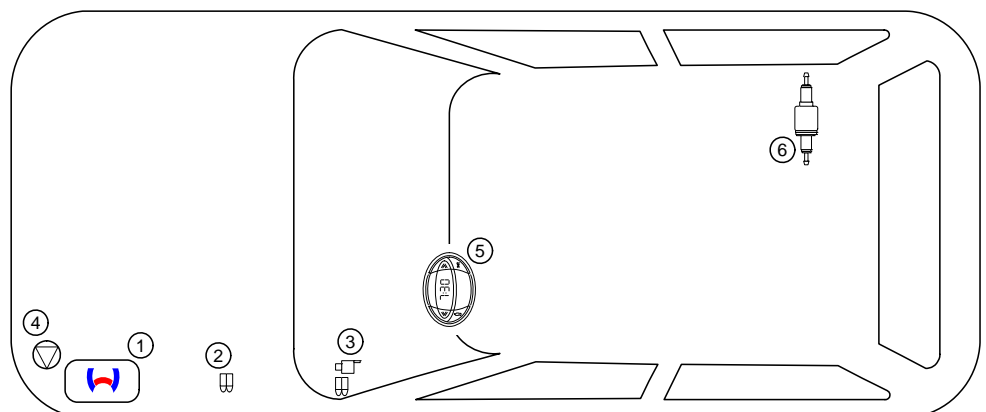
Necessary Components

- Basic delivery scope *Thermo Top Evobased* on price list
- Installation kit for Nissan Qashqai / Qashqai +2 2012 1.6 Diesel: **1317863A**
- Sealing for fuel-tank sending unit to be ordered additionally:
Nissan Order No.: **17342-5M303**
- 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 Overview

Legend:

1. Heater
2. Fuse holder of engine compartment
3. Fuse holder of passenger compartment
4. Circulating pump
5. Digital timer
6. Metering pump



Notes 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 227).

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 must audibly snap into place during assembly.

Sharp edges should be fitted with rub protection. Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).

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 an IPCU, the corresponding settings must be checked or adjusted before the installation.

2 Statutory regulations governing installation

Guidelines	Thermo Top Evo
Heating Directive ECE R122	E1 00 0258
EMC Directive ECE R10	E1 03 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

For vehicles with an EU permit, no entry in accordance with § 19 Sub-Section 4 of Annex VIII b to the Road Traffic Act is required.

2.1 Excerpt from the directive 2001/56/EC Appendix VII 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.

Notes on Validity

This installation documentation is applicable to Nissan Qashqai / Qashqai +2 1.6 Diesel vehicles - for validity see page 1 - from model year 2012 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 Instructions

Special tools

- Hose clamp pliers for self-clamping 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
- Angle drill
- 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 of the bolt of 5x15 water connection piece retaining plate = 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.

Special features are highlighted using the following symbols:

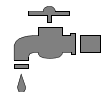
Mechanical system



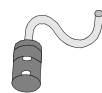
Electrical system



Coolant circuit



Combustion air



Fuel



Exhaust gas



Software



Specific risk of injury or fatal accidents



Specific risk of damage to components



Specific risk of fire and explosion



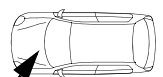
Reference to general installation instructions of the Webasto components or to the manufacturer's vehicle-specific documents.



Reference to a special technical feature



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



Nissan Qashqai / Qashqai +2

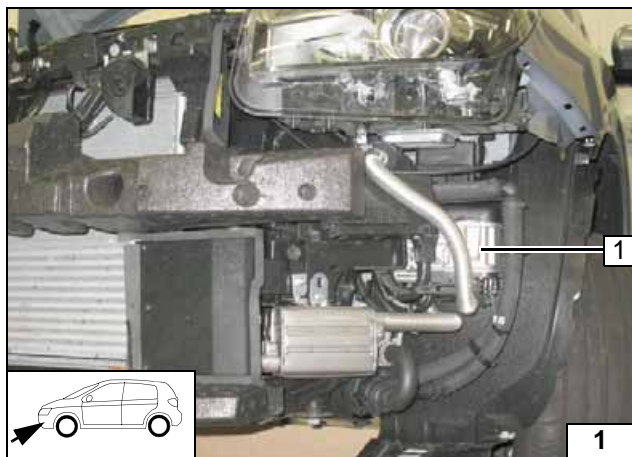
Preliminary Work

Vehicle

- Open the fuel tank cap.
- Ventilate the fuel tank.
- Close the fuel tank cap again.
- Depressurise the cooling system.
- Remove the battery completely.
- Remove the air filter fully.
- Remove the underride protection.
- Detach the wheel well trim on the right and left.
- Remove the bumper.
- Remove the left headlight (only vehicles with Xenon).
- Remove the underbody trim on the right-hand side.
- Remove the entrance protection strip on the driver's side.
- Remove the lower A-pillar trim on the left.
- Remove the lower cover of the instrument panel on the left.
- Detach the fuse carrier on the left in the passenger compartment.
- Remove the fuse carrier bracket.
- Remove the rear bench seat on the right-hand side.
- Open the right-hand tank-fitting service lid.
- Remove the A/C control panel (only with automatic air-conditioning).

Heater

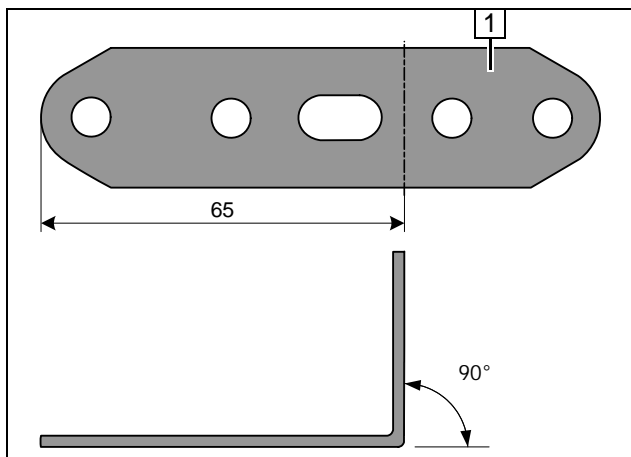
- Remove years that do not apply from the type and duplicate label.
- Attach the duplicate label (type label) in the appropriate place inside the engine compartment.



Heater Installation Location

- 1 Heater

Installation location



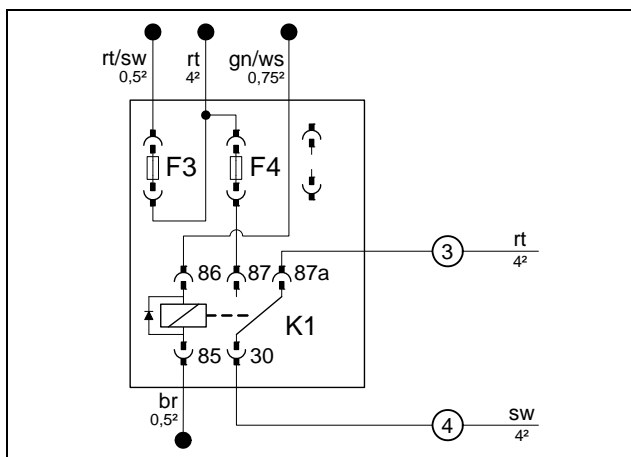
Preparing Electrical System

The wire sections retain their numbering in the entire document.

- 1 Perforated bracket



Angling down perforated bracket

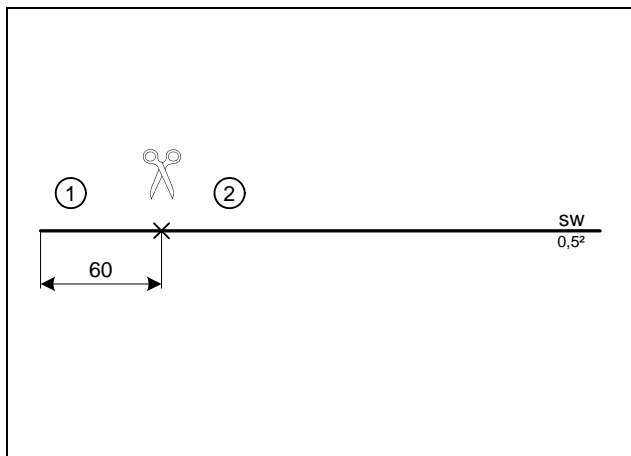


Manual air-conditioning

Produce connections as shown in wiring diagram. K1-Relay will be inserted after installing the fuse holder



Inserting F4, preparing K1 relay

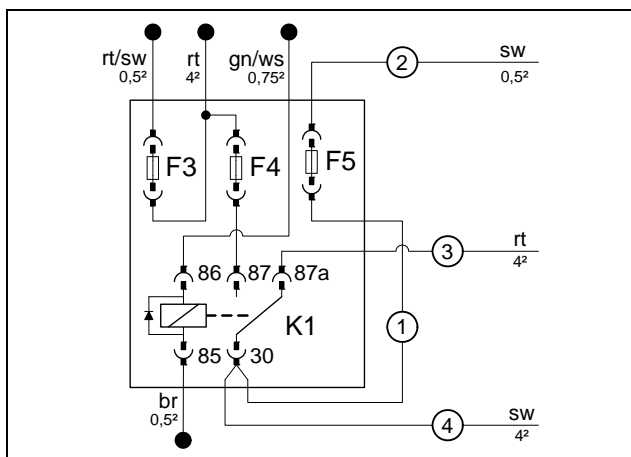


Automatic air-conditioning

Pull wire section ② into provided protective sleeving.



Cutting wires to length



Produce connections as shown in wiring diagram. K1-Relay will be inserted after installing the fuse holder



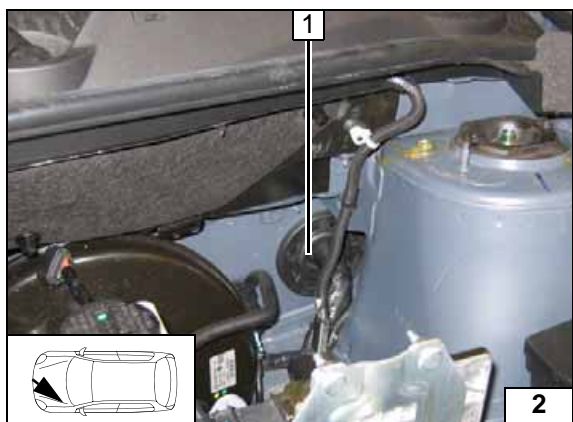
Inserting F4 and F5, preparing K1 relay



Electrical System

Wiring harness pass through

- 1 Protective rubber plug



Digital timer

- 1 Digital timer

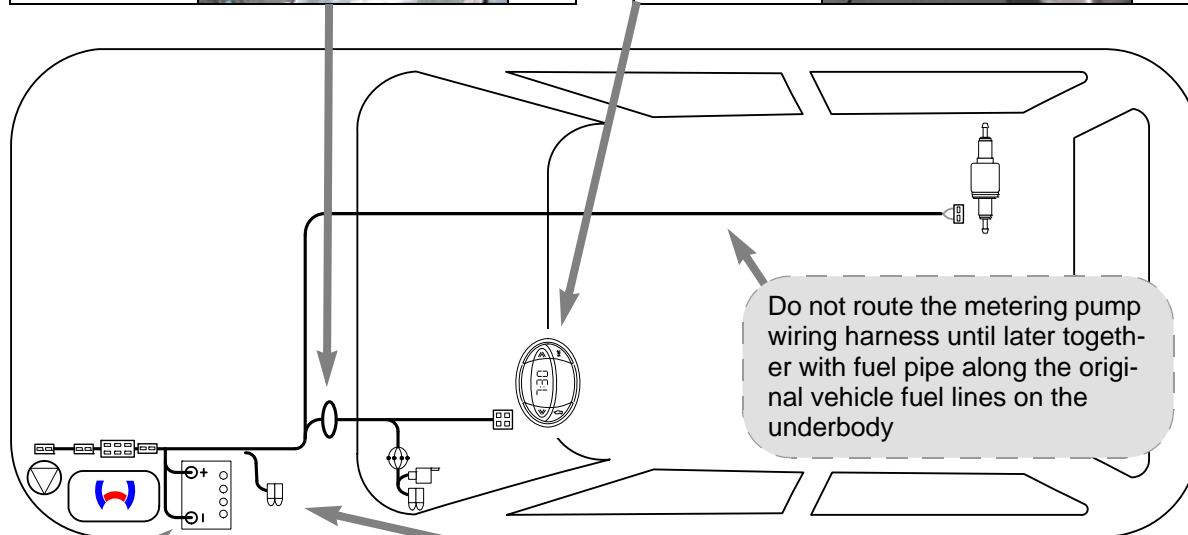
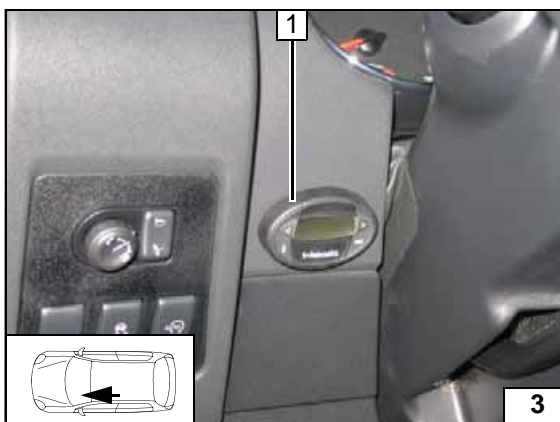
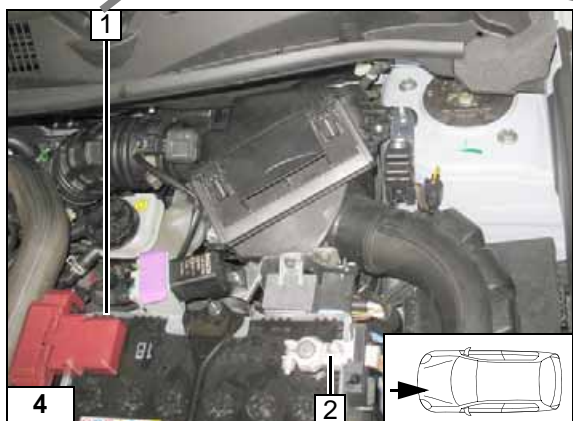
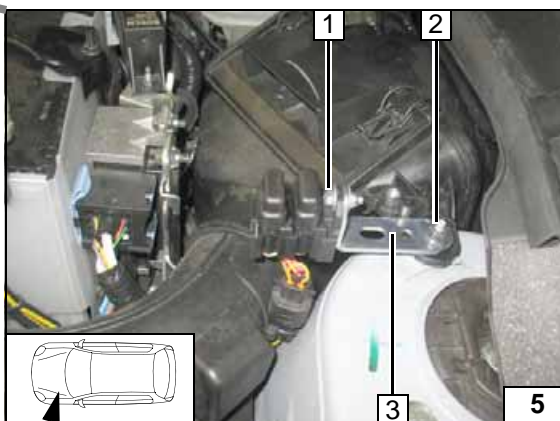


Diagram of wiring harness routing



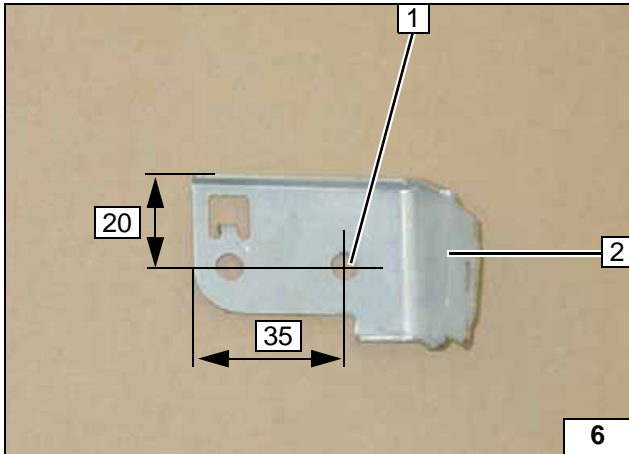
Heater power supply

- 1 Positive wire to positive battery terminal
- 2 Earth wire on negative battery terminal



Fuse holder of engine compartment

- 1 Retaining plate of fuse holder, M5x16 bolt, washer [2x], nut
- 2 Original vehicle stud bolt, original vehicle nut
- 3 Perforated bracket

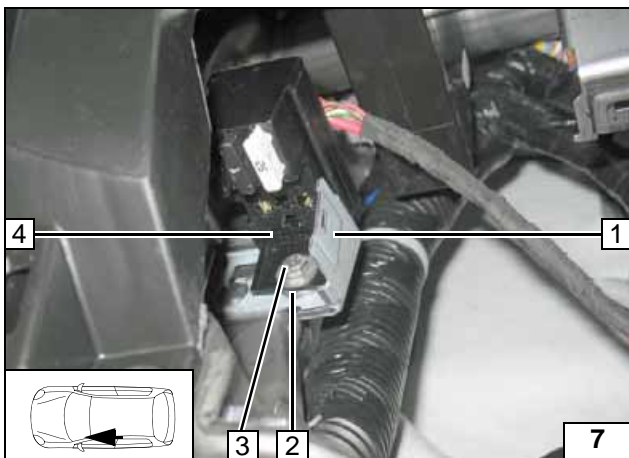


Copy 7.0mm dia. hole pattern 1 and drill.

2 Bracket of fuse carrier



**Process-
ing bracket
of fuse car-
rier**



Install bracket of fuse carrier 1.

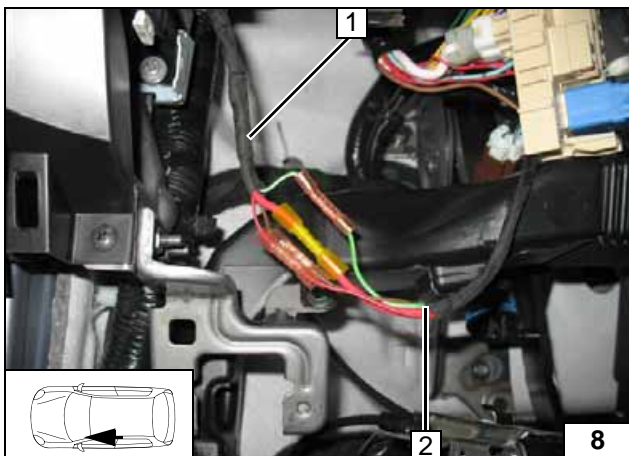
Large diameter washers [3x] between fuse holder 4 and bracket of fuse carrier 1 at position 2.

Relay K1 will be attached after installation.

3 M5x16 bolt, large diameter washers [3x], nut



**Preparing
fuse holder
of passen-
ger com-
partment**



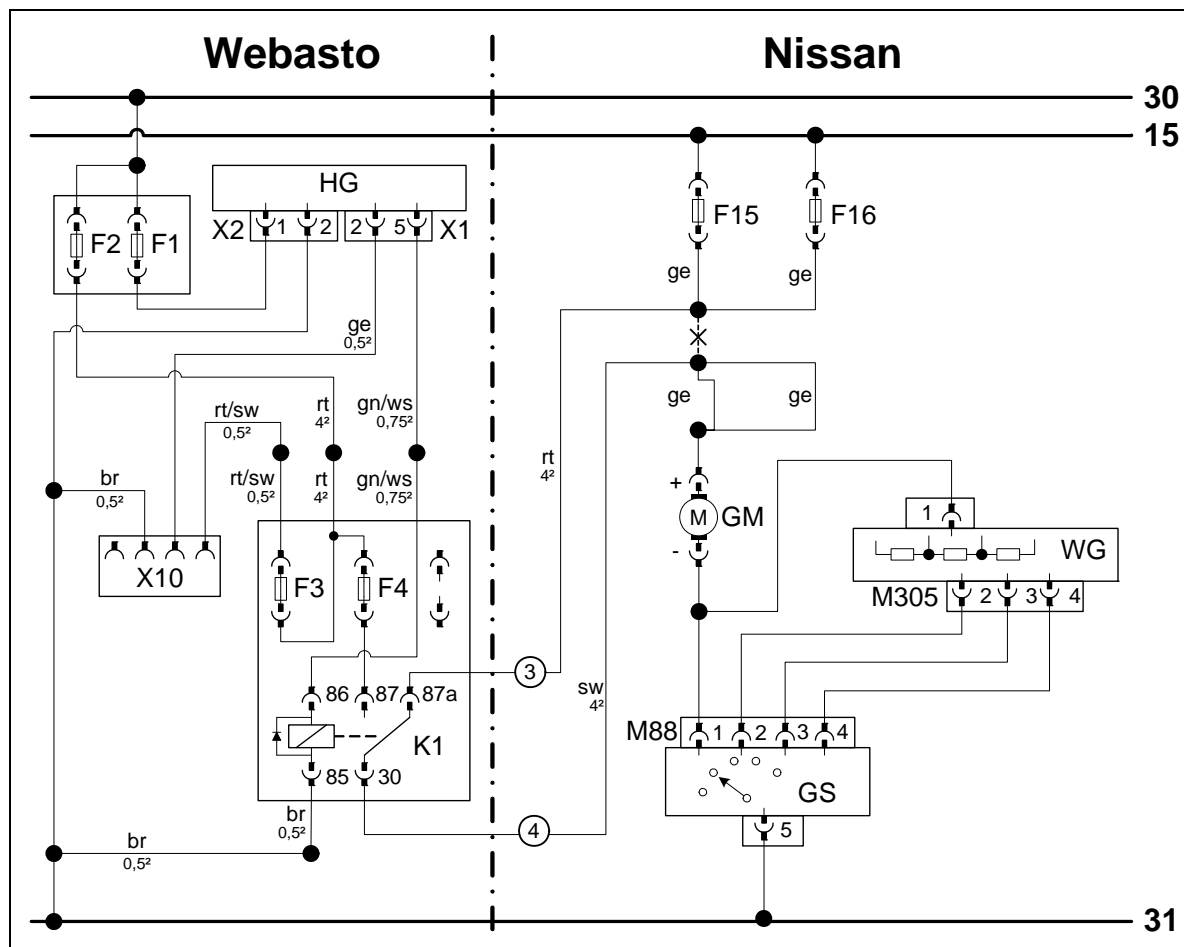
Connect fuse holder of passenger compartment 1 to wiring harness of heater 2 according to wiring diagram, with same colour wires connected to each other.



**Connect-
ing wiring
harnesses**



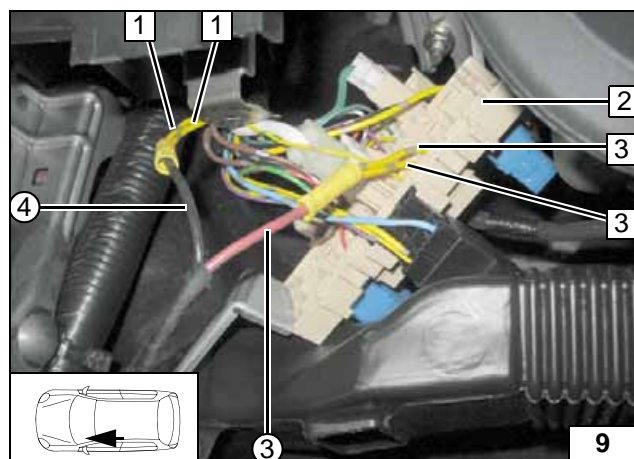
Manual Air-Conditioning Fan Controller



Wiring diagram

Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	F15	15A fuse	rt	red
X1	6-pin heater connector	F16	15A fuse	ws	white
X2	2-pin heater connector	GM	Fan motor	sw	black
X10	4-pin connector of Heater control	WG	Resistor group	gn	green
		M305	4-pin connector	ge	yellow
K1	Fan relay	M88	8-pin connector		
F1	20A fuse	GS	Fan switch		
F2	30A fuse				
F3	1A fuse			X	Cutting point
F4	25 A fuse			Wiring colours may vary.	

Legend



Connection on central electrical box 2 on driver's side.
Produce connections as shown in wiring diagram.



- 1 Yellow (ge) wire [2x] to fan motor
- ③ Red (rt) wire from K1/87a relay
- ④ Black (sw) wire from K1/30 relay
- 3 Yellow (ge) wire [2x] for fuse F15 and F16

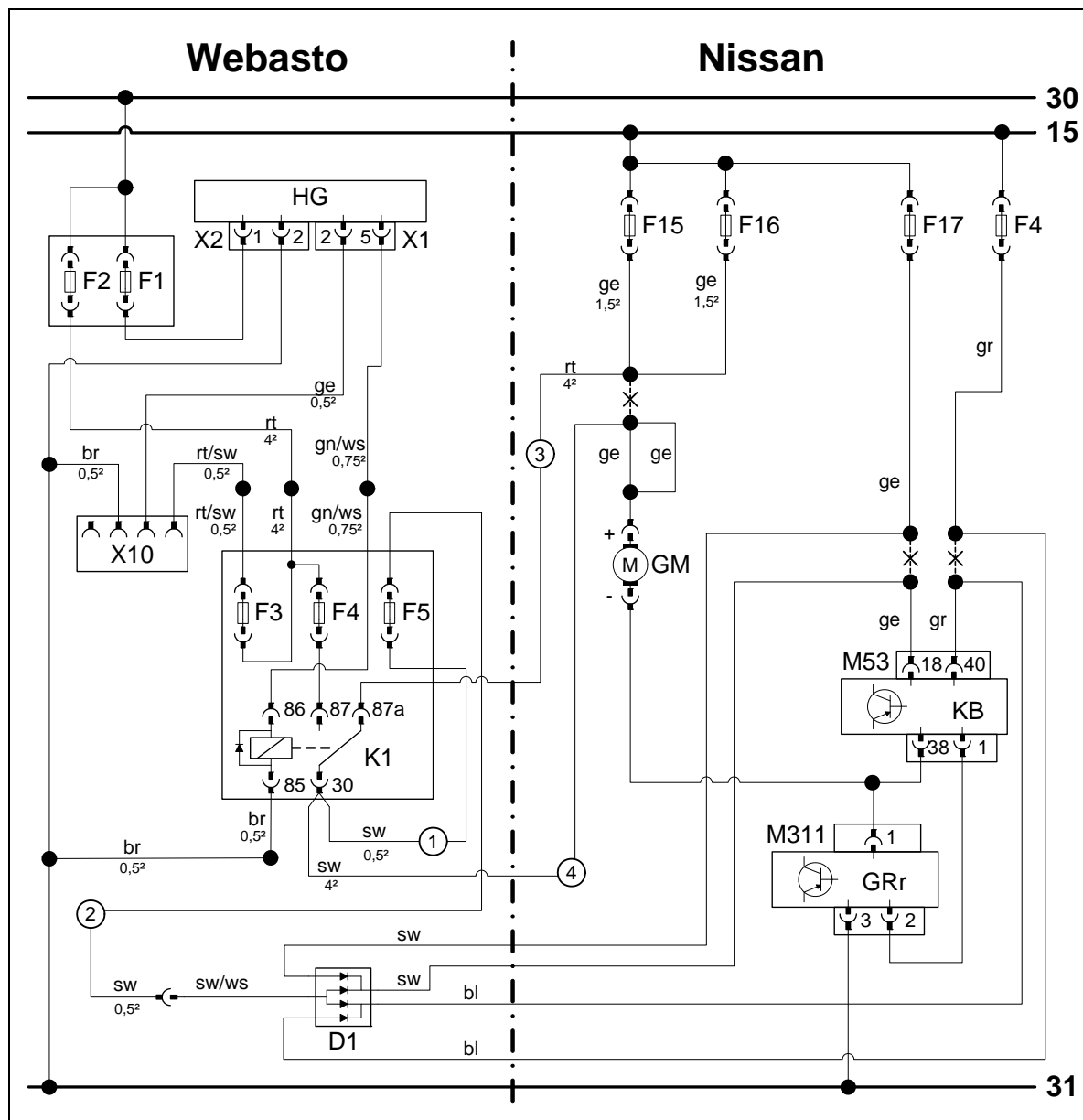
Connecting fan-motor



Automatic Air-Conditioning Fan Controller

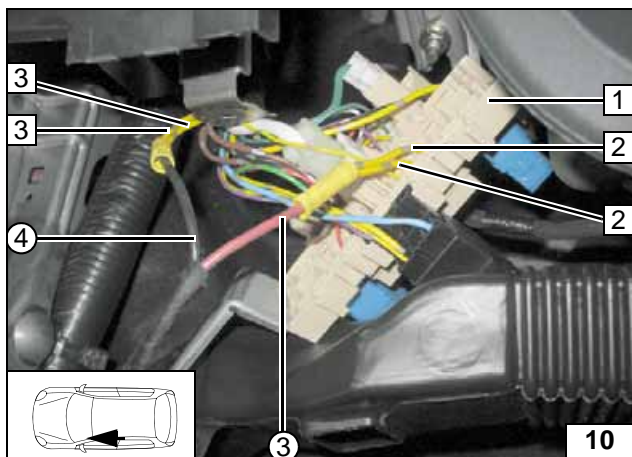


Wiring diagram



Webasto components		Vehicle components		Colours and symbols	
HG	TT-Evo heater	F15	15A fuse	rt	red
X1	6-pin heater connector	F16	15A fuse	sw	black
X2	2-pin heater connector	F17	Fuse	ge	yellow
X10	4-pin connector of Heater control	F4	Fuse	gn	green
K1	Fan relay	GM	Fan motor	bl	blue
F1	20A fuse	M53	40-pin connector KB	ws	white
F2	30A fuse	KB	A/C control panel	br	brown
F3	1A fuse	M311	4-pin connector, GRr	gr	grey
F4	25 A fuse	GRr	Fan controller		
F5	1A fuse				
D1	Diode group				
					Insulate wire end and tie back
				X	Cutting point
				Wiring colours may vary.	

Legend

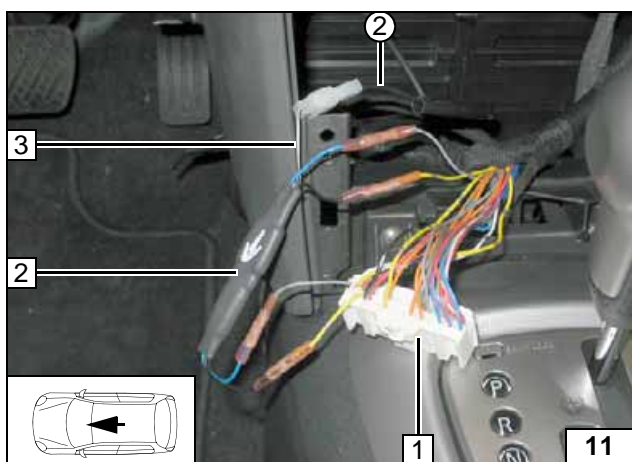


Connection to central electrical box 1 on the driver's side. Produce connection as shown in wiring diagram.



- 2 Yellow (ge) wire [2x] for fuse F15 and F16
- ③ Red (rt) wire from K1/87a relay
- ④ Black (sw) wire from K1/30 relay
- 3 Yellow (ge) wire [2x] to fan motor

**Connect-
ing fan-mo-
tor**



Connection to 40-pin connector M53 1 from A/C control panel.

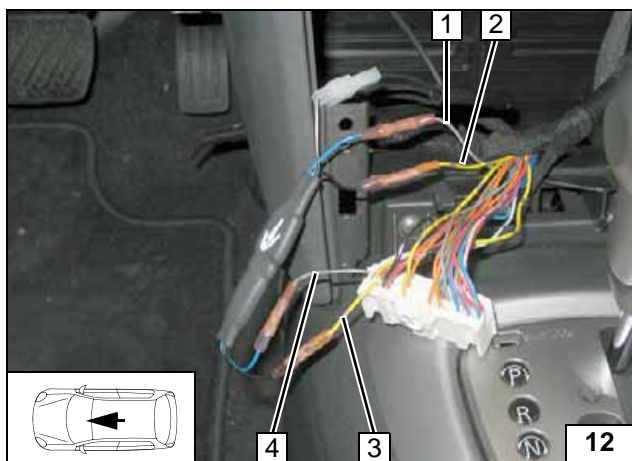


Produce connections as shown in wiring diagram.

Watch direction of flow of diode group D1 2.

- ② Black (sw) wire of F5
- 3 White/black (ws/sw) wire of D1

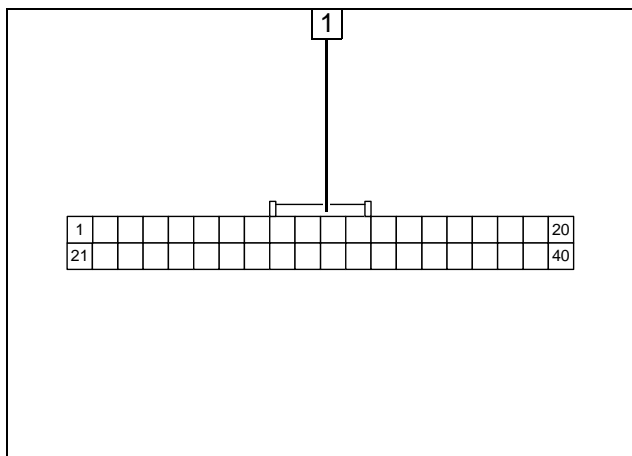
**Connec-
tion to A/C
control unit**



Produce connections as shown in wiring diagram.

- 1 Grey (gr) wire of F4
- 2 Yellow (ge) wire of F17
- 3 Yellow (ge) wire of connector M53, Pin 18
- 4 Grey (gr) wire of connector M53, Pin 40

**Connec-
tion to A/C
control unit**

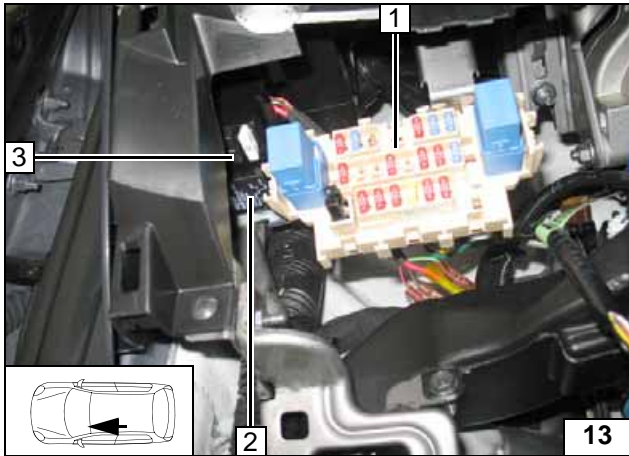


Connector imprint may differ from wiring diagram.



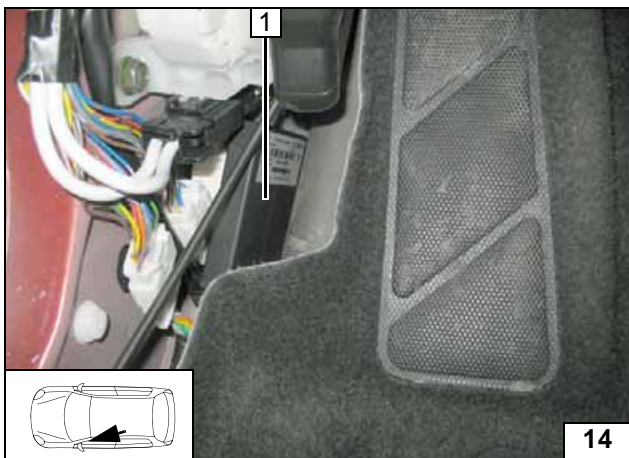
- 1 Connector M53 on line side

**View of
connector
M53**



- 1 Original vehicle fuse carrier installed
- 2 K1 relay
- 3 Fuse holder

K1 relay

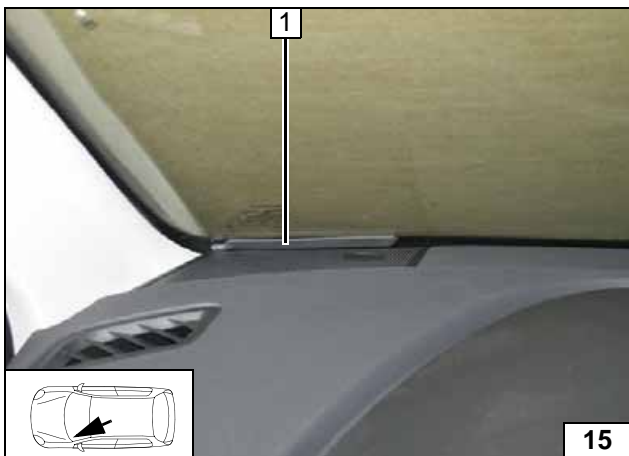


Remote Option (Telestart)

Fasten receiver 1 with adhesive tape.

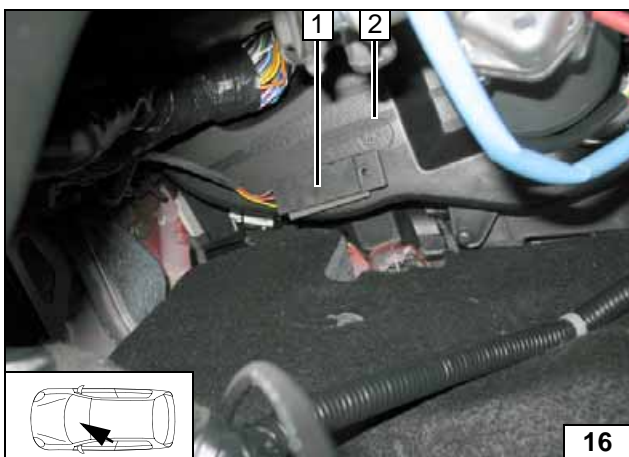


Mounting receiver



- 1 Antenna

Mounting antenna



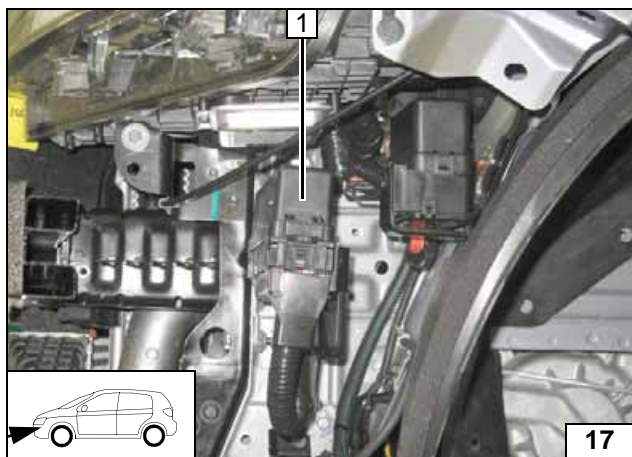
Temperature sensor T100 HTM

Fasten temperature sensor 1 with adhesive tape.

- 2 Air duct on driver's side



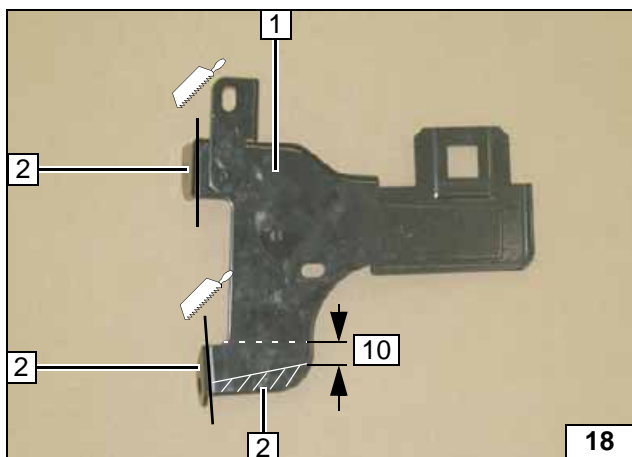
Mounting temperature sensor



Preparing Installation Location

- 1 Remove bracket of relay box

Relay box

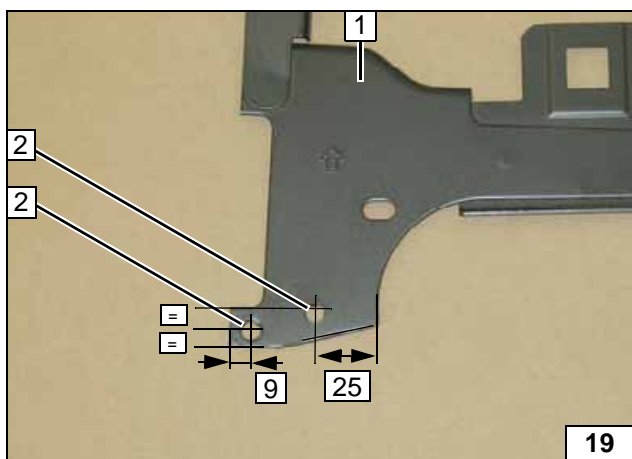


Discard sections 2 [3x]

- 1 Bracket of relay box



Preparing bracket

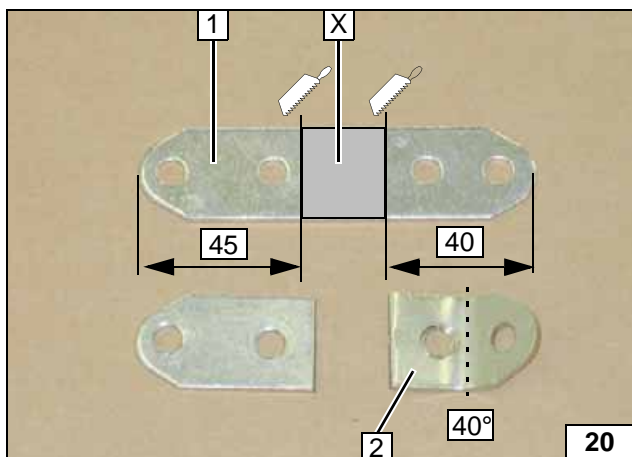


Copy hole pattern 2 [2x] for 7.0mm dia. hole and drill.

- 1 Bracket of relay box



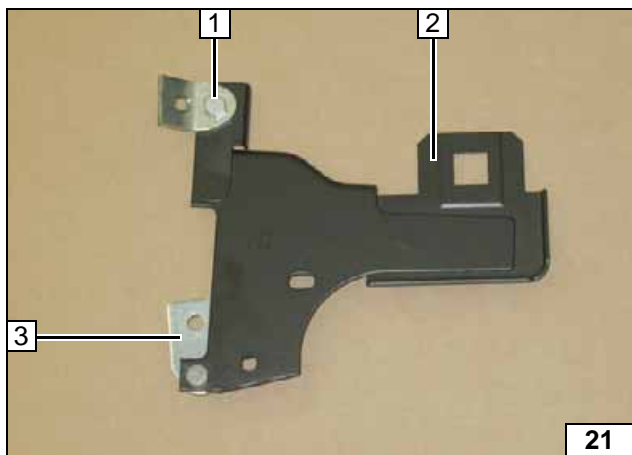
Preparing bracket



Cut perforated bracket 1 to size as shown, discard section X, bend section 2.

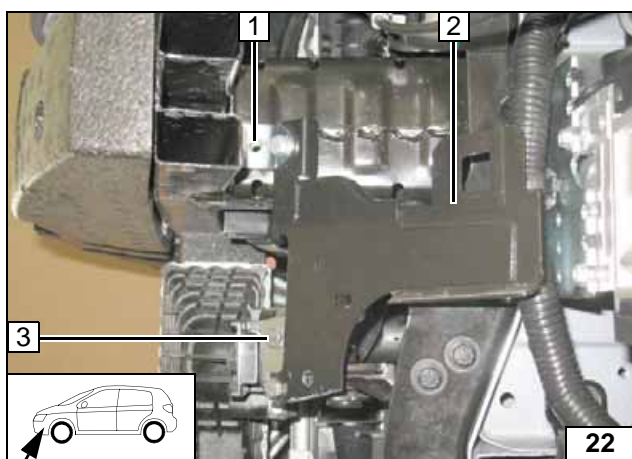


Preparing perforated bracket



- 1 Part of perforated bracket angled, M6x12 bolt, flanged nut
- 2 Bracket of relay box
- 3 Part of perforated bracket, M6x12 bolt, flanged nut

Preparing bracket

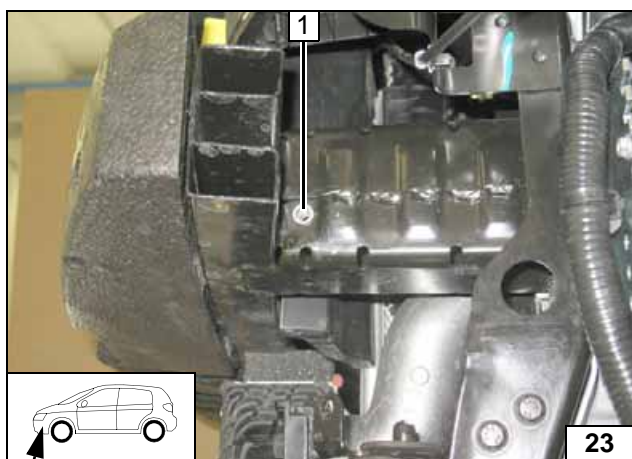


Loosely install bracket 2 at position 3. Copy hole pattern 1 for 9.1mm dia. hole and drill.



- 3 M6x20 bolt, flanged nut

Copying hole pattern for bracket

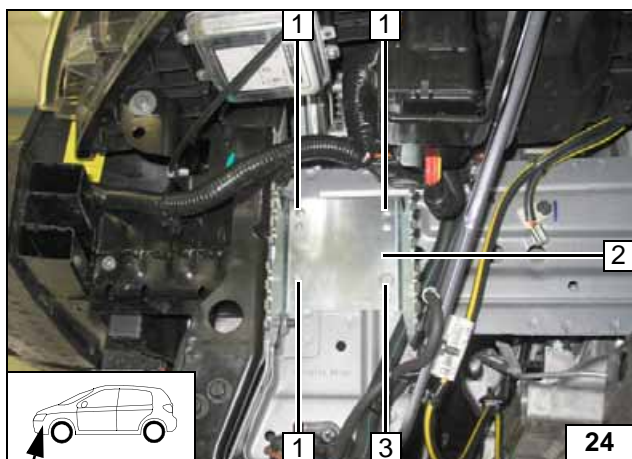


Remove bracket.



- 1 9.1mm dia hole, rivet nut

Installing rivet nut

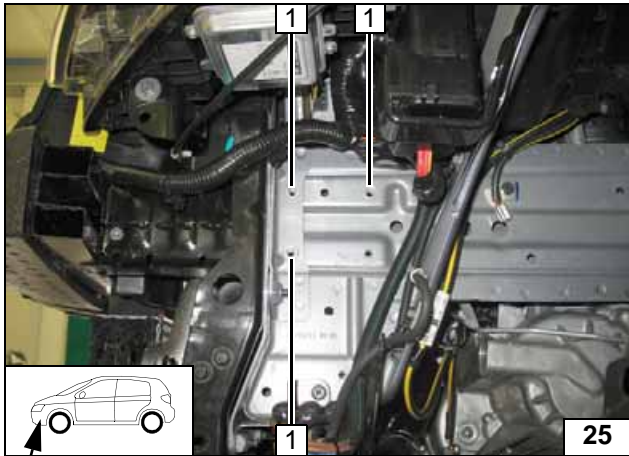


Install and align bracket 2 at position 3. Copy hole pattern 1 [3x] for 9.1mm dia. hole.



- 3 M6x20 bolt, 5mm shim, original vehicle threaded insert

Hole pattern for heater bracket

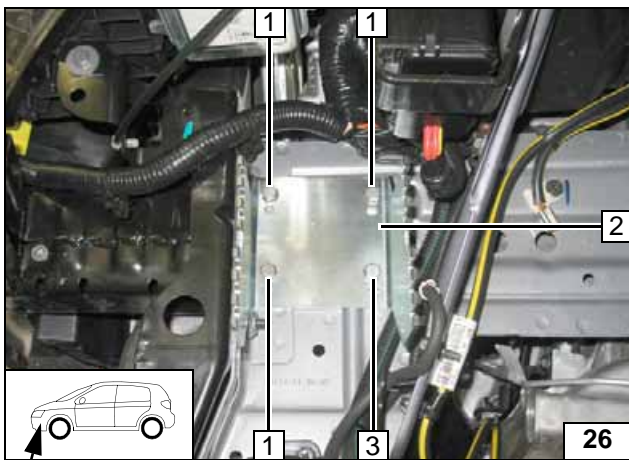


Remove bracket.

- 1 9.1 mm dia. hole; M6 rivet nut [3x each]

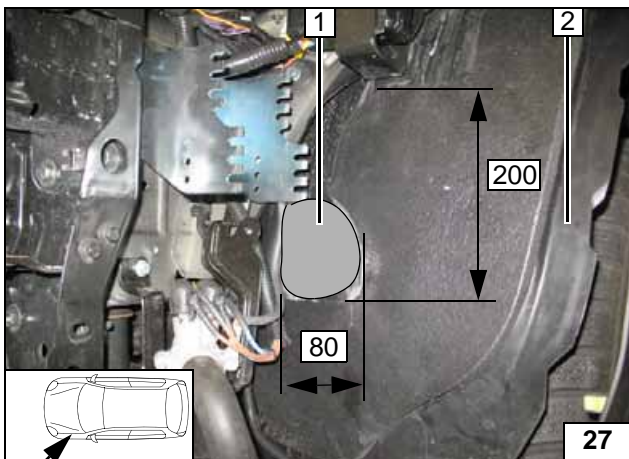


Installing rivet nuts



- 1 M6x20 bolt, spring lockwasher, rivet nut
- 2 Bracket of heater
- 3 M6x20 bolt, spring lockwasher, 5mm shim, original vehicle threaded insert

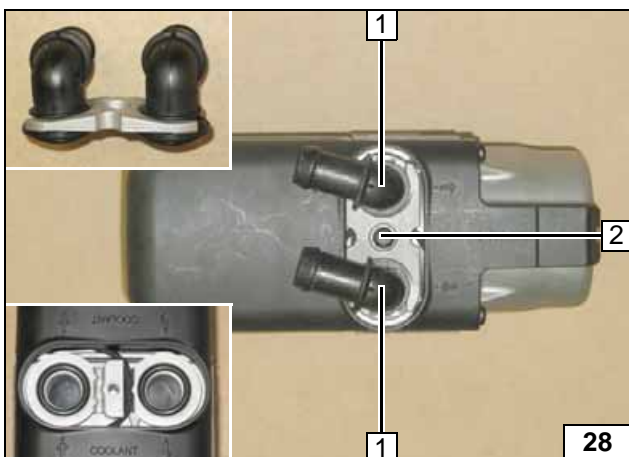
Installing bracket of heater



Remove sound insulation mats in area 1 of wheel well trim 2.



Cutting out insulation of wheel well trim

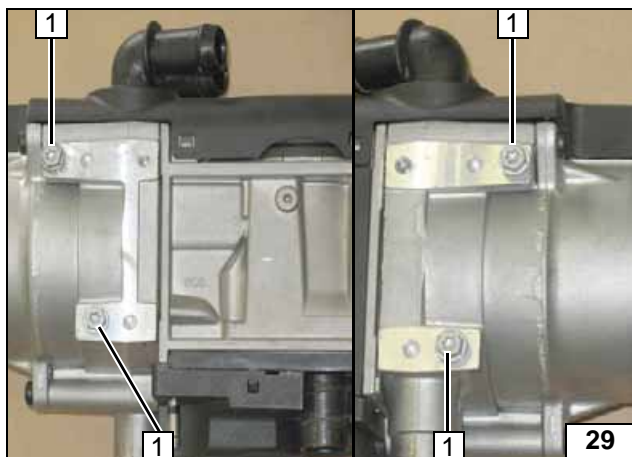


Preparing Heater

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



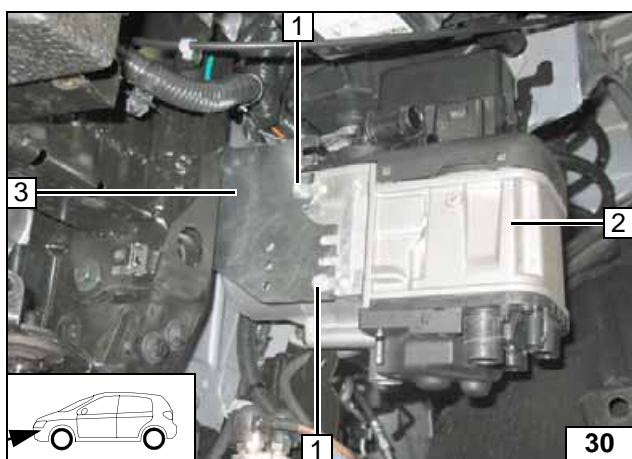
Installing water connection piece



Cut thread with 5x13 self-tapping screw **1** [4x] and install loosely (turn max. 3 threads).



Premounting bolts loosely



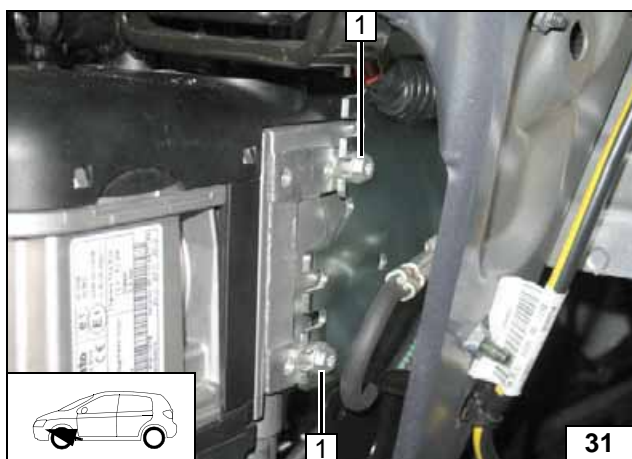
Installing Heater

Insert heater **2** into bracket **3**.



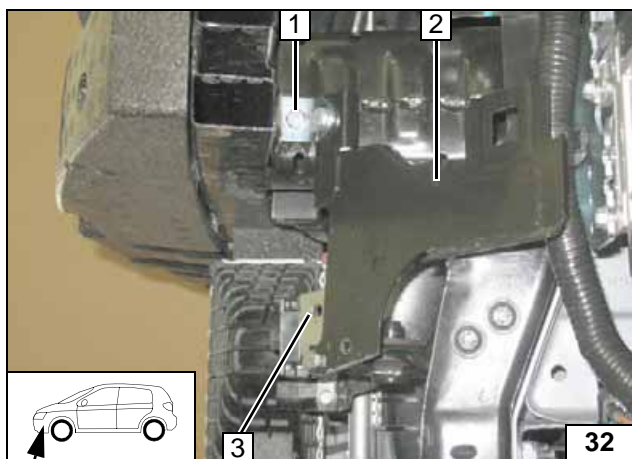
- 1** Tighten 5x13 self-tapping bolt [2x]

Mounting heater



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

Mounting heater

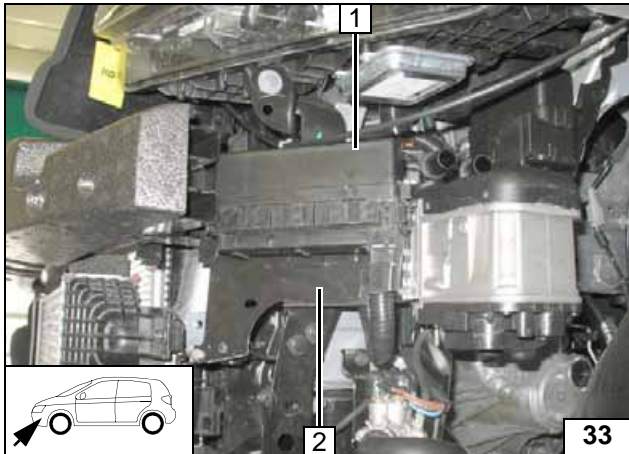


Screw fitting at position **3** is handled later together with original vehicle trim.



- 1** M6x20 bolt, spring lockwasher
- 2** Bracket

Mounting bracket



- 1 Relay box
- 2 Bracket of relay box

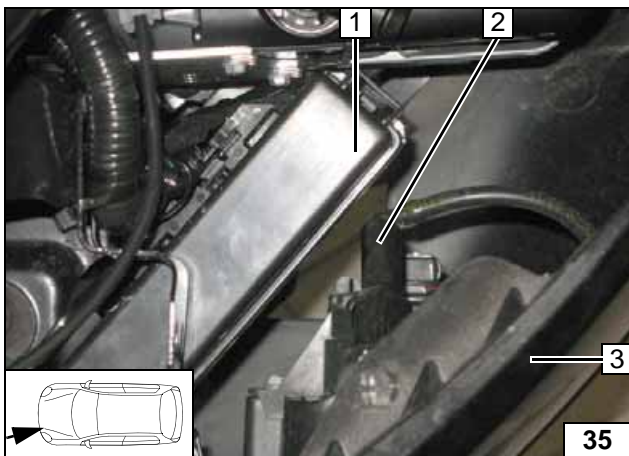
Mounting relay box



Install connector 1 [2x] of heater wiring harness.



Wiring harness of heater



Position bumper 3, check distance between relay box 1 and SWR 2. Remove bumper 3 again after checking is completed, install headlight (only in case of Xenon).



Checking distance from SWR to relay box



Fuel

CAUTION!

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

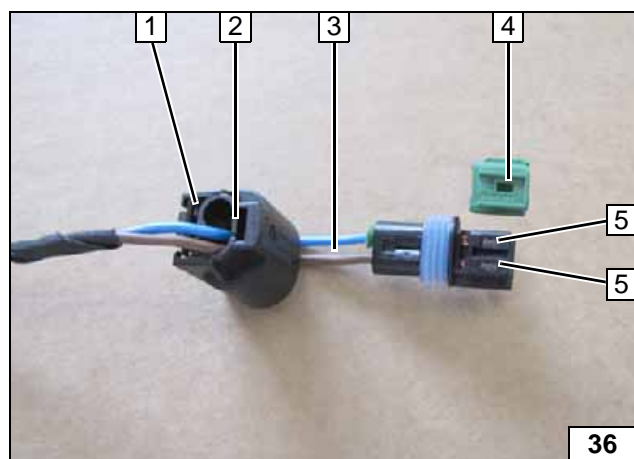
Catch any fuel running off in an appropriate container.

Install fuel line and metering pump wiring harness so that they are protected against stone impact. Unless specified otherwise, always fasten using cable ties.

Mount the fuel line and wiring harness with rub protection on sharp edges.

WARNING!

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

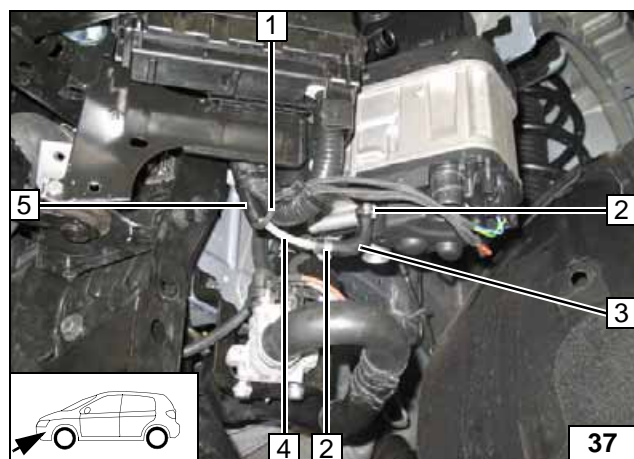


Complete connector of metering pump again after routing. Pin assignment is not relevant.

- 1 Connector housing
- 2 Lock
- 3 Blue/brown (bl / br) wires
- 4 Coding
- 5 Timer lock



Dismantling connector

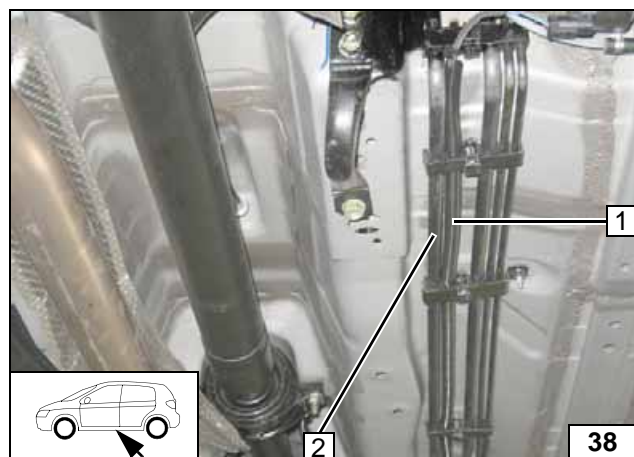


Route wiring harness of metering pump 1 and fuel line 4 in 10mm dia., 2x 2100mm long corrugated tube 5 to the right side of the engine compartment firewall and from there to the vehicle underbody and the metering pump installation location along original vehicle fuel lines.

- 2 10 mm dia. clamp [2x]
- 3 90° moulded hose



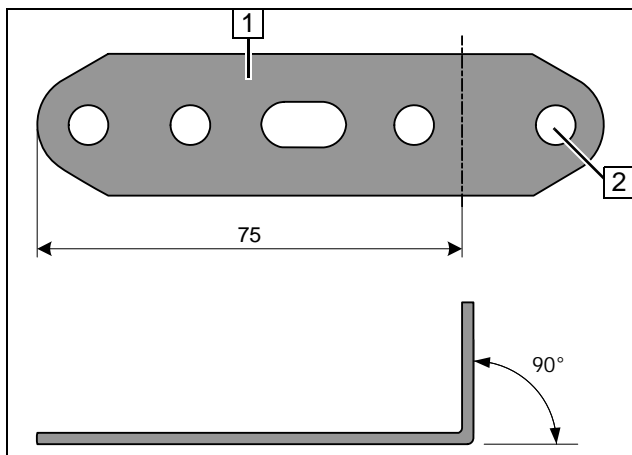
Connecting heater



Route fuel line, wiring harness of metering pump in 10mm dia. corrugated tube 1 to the underbody along original vehicle fuel line 2 and secure using cable ties.



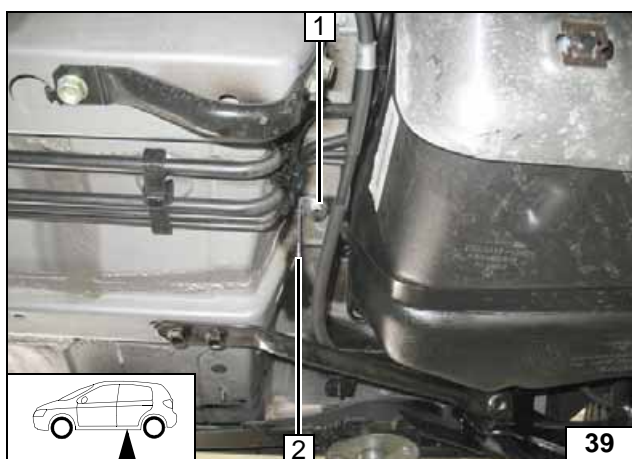
Routing lines



Bend perforated bracket **1** as shown in the image, enlarge hole **2** to 10.5mm dia.

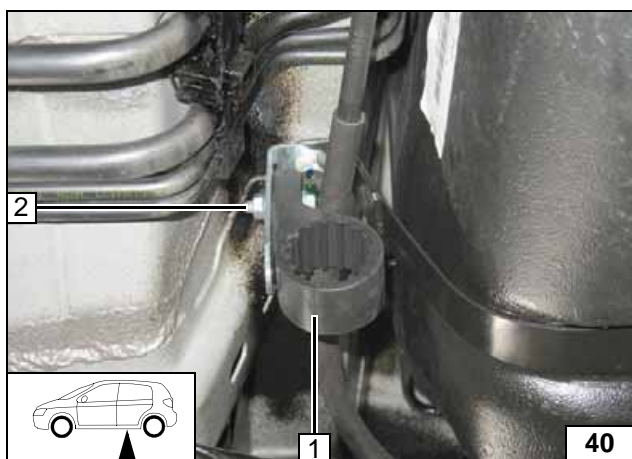


Preparing perforated bracket



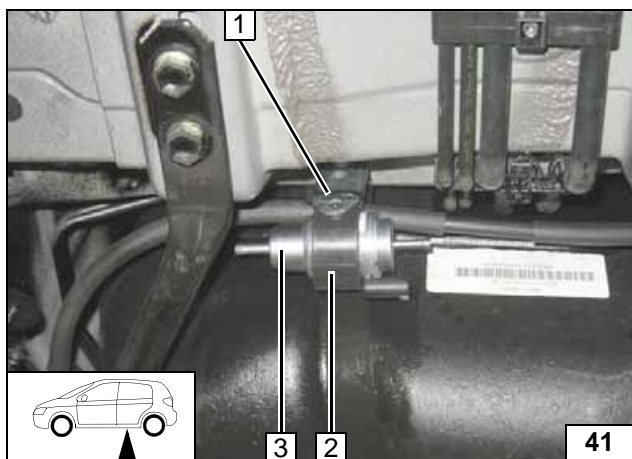
- 1 Original vehicle bolt
- 2 Perforated bracket

Installing perforated bracket



- 1 Metering pump intake
- 2 M6x25 bolt, support angle, flanged nut

Installing metering pump mount



Check the position of the components; adjust if necessary. Check that they have freedom of movement.



- 1 Cable tie
- 2 Metering pump intake
- 3 Metering pump

Installing metering pump



**Connect-
ing meter-
ing pump**



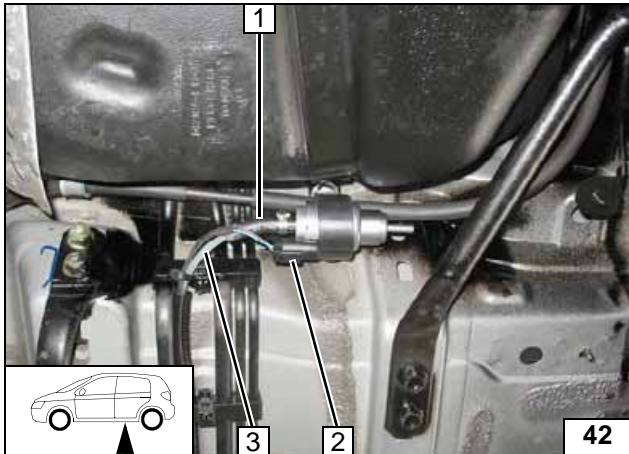
**Fuel ex-
traction**



**Hole for
fuel stand-
pipe**

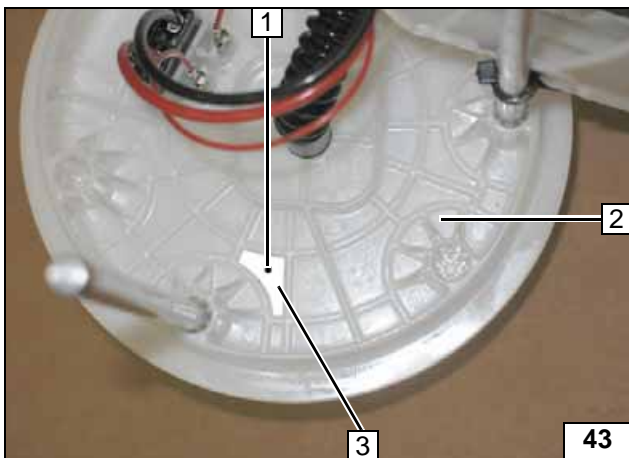


**Preparing
large diam-
eter washer**



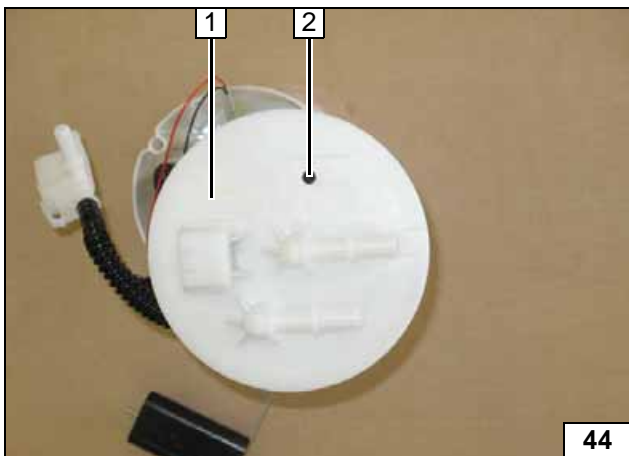
Check the position of the components; adjust if necessary. Check that they have freedom of movement.

- 1 Hose section, 10mm dia. clamp [2x]
- 2 Wiring harness of metering pump, connector mounted
- 3 Fuel line



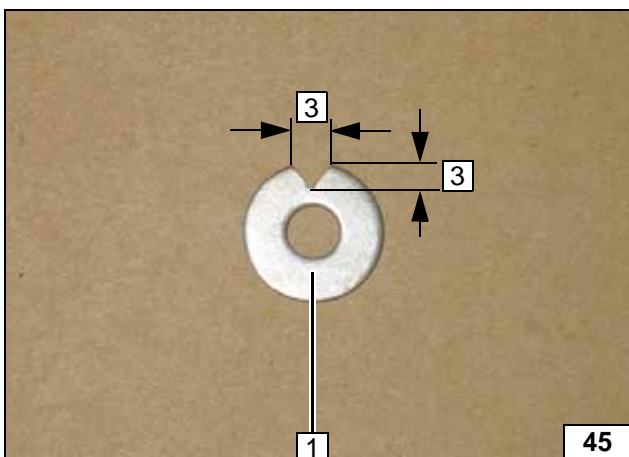
Remove fuel-tank sending unit 2 according to manufacturer's instructions. Cut out template of fuel-tank sending unit 3 and place it as shown in the image.

- 1 Hole pattern for 2.0mm dia. hole

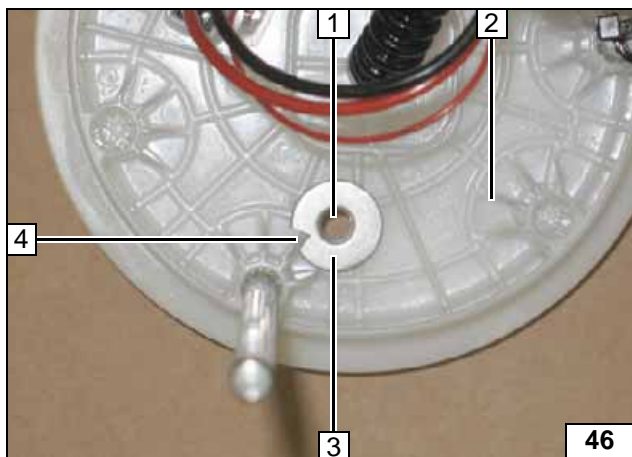


Drill 6mm dia. hole 2 from above through existing 2.0mm dia. hole.

- 1 Fuel-tank sending unit



Process large diameter washer 1, outer dia. $d_a = 18\text{mm}$, as shown.

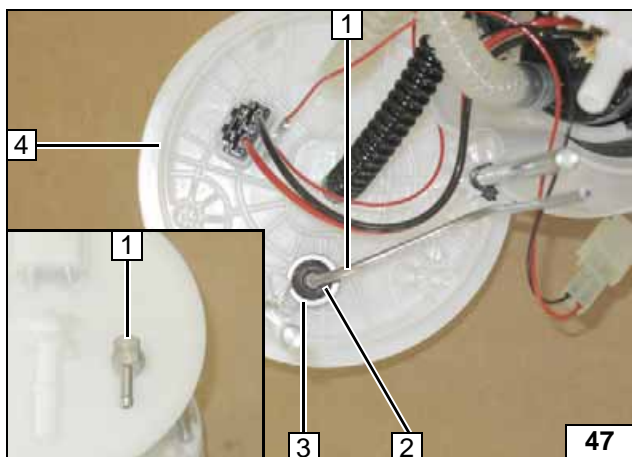


6.0mm dia. hole **1** has to correspond to large diameter washer hole **3**, possibly rework large diameter washer at position **4**.

2 Fuel-tank sending unit



Inserting large diameter washer

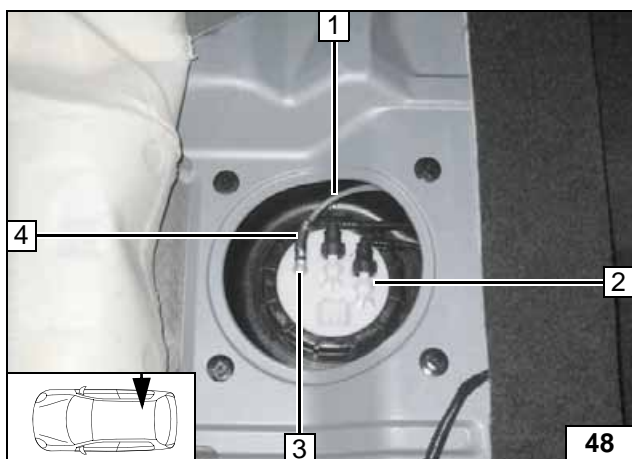


Shape fuel standpipe **1** according to template, cut to length and install.

- 2** Flanged nut, self-locking
- 3** Large diameter washer
- 4** Fuel-tank sending unit



Installing fuel stand-pipe

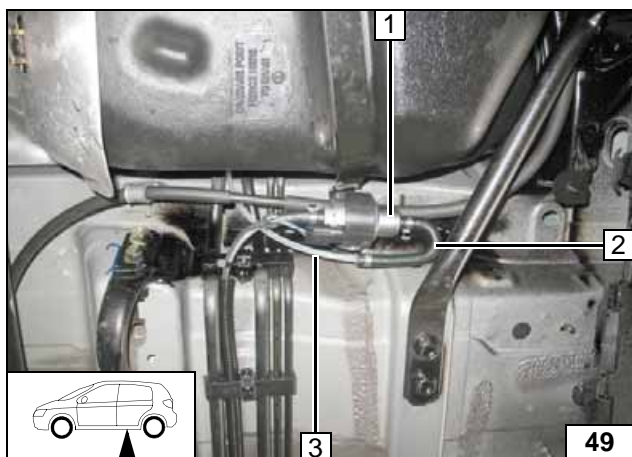


Install fuel-tank sending unit **2** in accordance with manufacturer's instructions. Use new seal with Nissan order number: 17342-5M303.

- 1** Route fuel line to underbody
- 3** Fuel standpipe
- 4** Hose section, 10 mm dia. clamp [2x]



Connect-ing fuel line

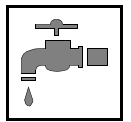


Check the position of the components; adjust if necessary. Check that they have freedom of movement.

- 1** Metering pump
- 2** 180° moulded hose, 10 mm dia. clamp [2x]
- 3** Fuel line



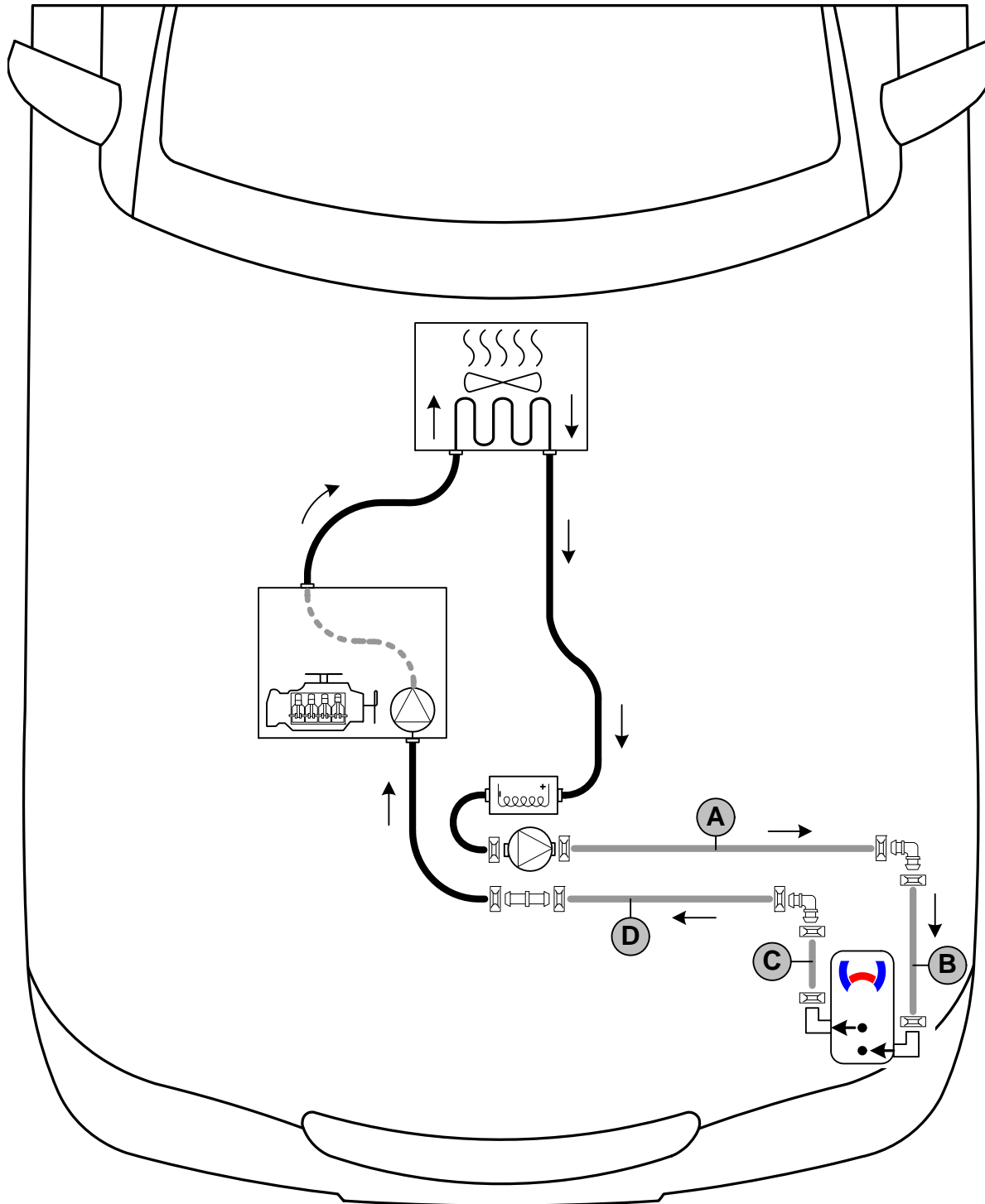
Connect-ing meter-ing pump






Coolant Circuit

WARNING!

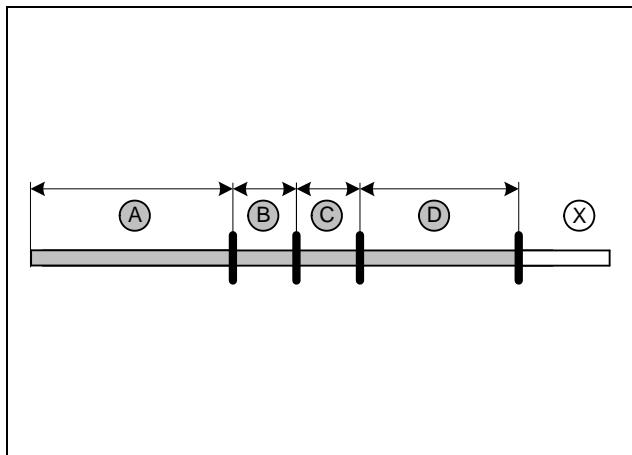
Any coolant running off should be collected in an appropriate container. Route hoses so that they are kink-free. Unless specified otherwise, always fasten using cable ties. Position clamps so that other hoses cannot be damaged. The heater must be filled with coolant when installing the coolant hose. The connection should be "inline" based on the following diagram:



Hose routing diagram

All connecting pipes without a specific designation  = 25 mm dia.
 All connecting pipes  and  = 18x18mm dia.



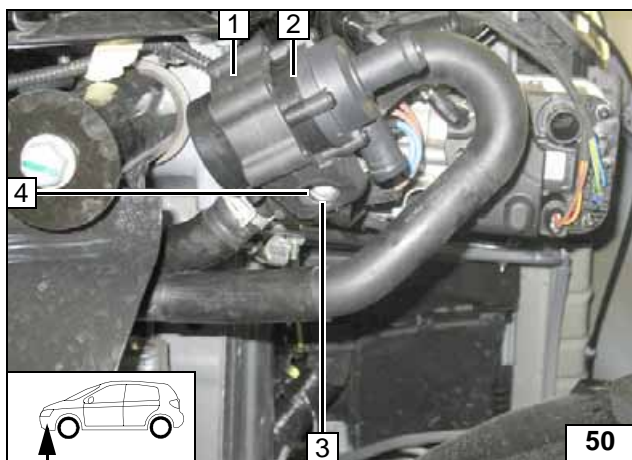


Discard section X

- A = 390
- B = 120
- C = 120
- D = 340



Cutting hoses to length

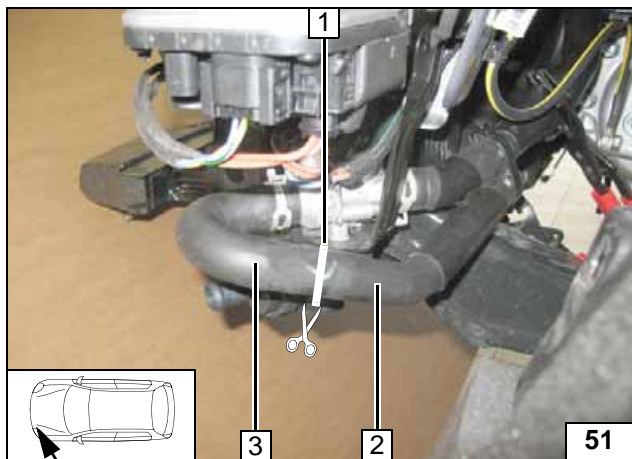


Remove original vehicle bolt at position 3.

- 1 Circulating pump intake
- 2 Circulating pump
- 4 M6x25 bolt

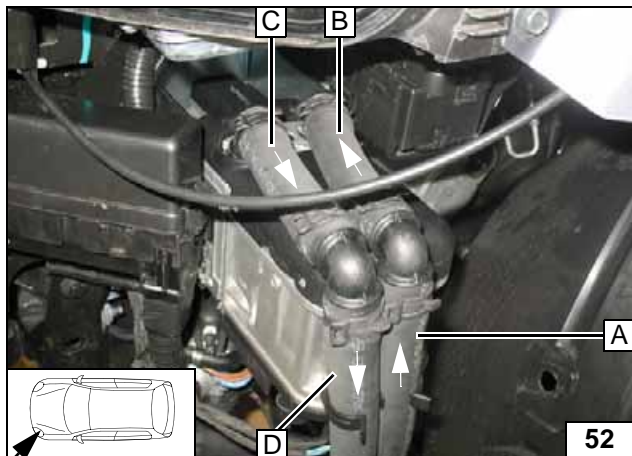


Installing circulating pump

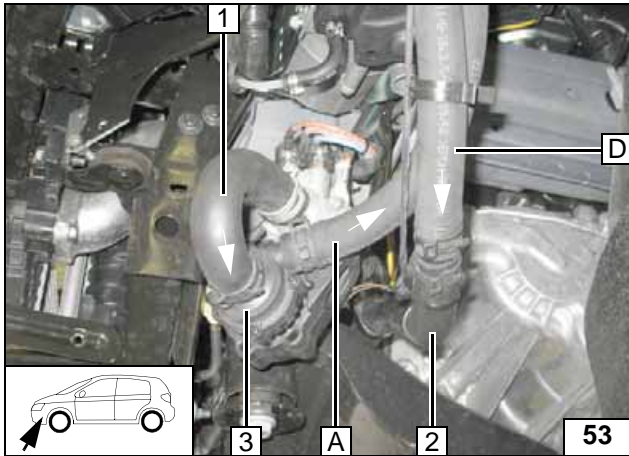


- 1 Cutting point
- 2 Hose section of engine inlet
- 3 Hose section on heat exchanger outlet

Cutting point

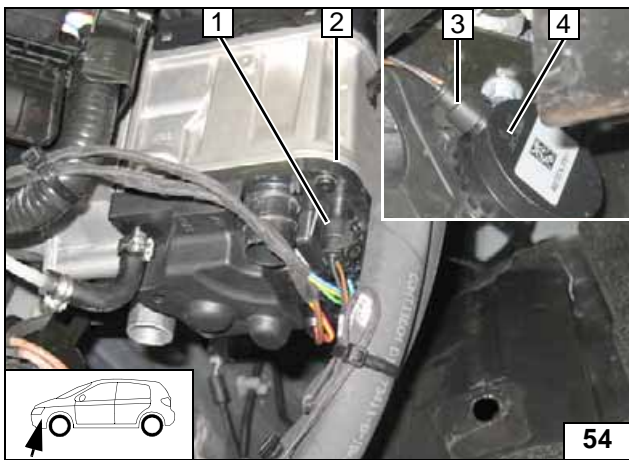


Connecting heater



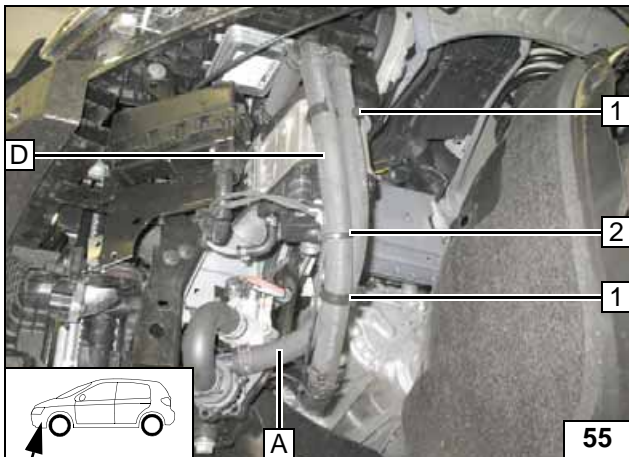
- 1 Hose section on heat exchanger outlet
- 2 Hose section of engine inlet
- 3 Circulating pump

Conne-
ction of hose
A and D



- 1 Connector of circulating pump wiring har-
ness
- 2 Heater
- 3 Connector of circulating pump wiring har-
ness
- 4 Circulating pump

Conne-
ction of cir-
culating
pump wir-
ing har-
ness

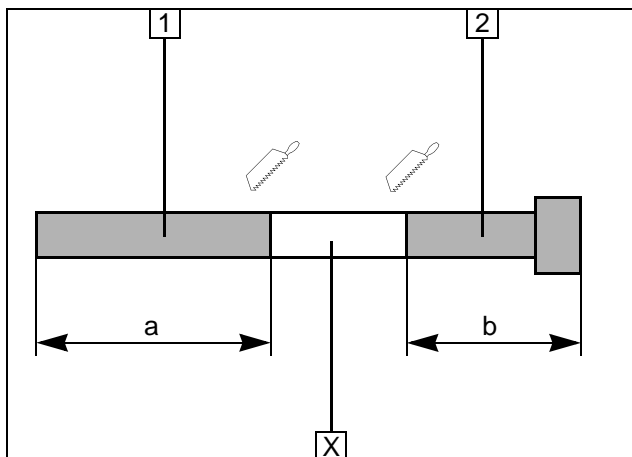
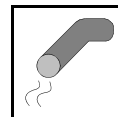


Fasten wiring harness of heater and wiring harness of circulating pump using cable tie 2.



- 1 Hose bracket [2x]

Hose rout-
ing



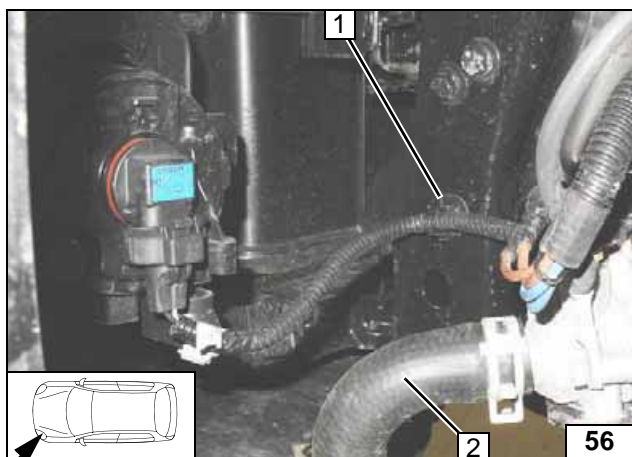
Exhaust Gas

Discard section X

- 1 Exhaust pipe
a = 270
- 2 Exhaust end section
b = 230

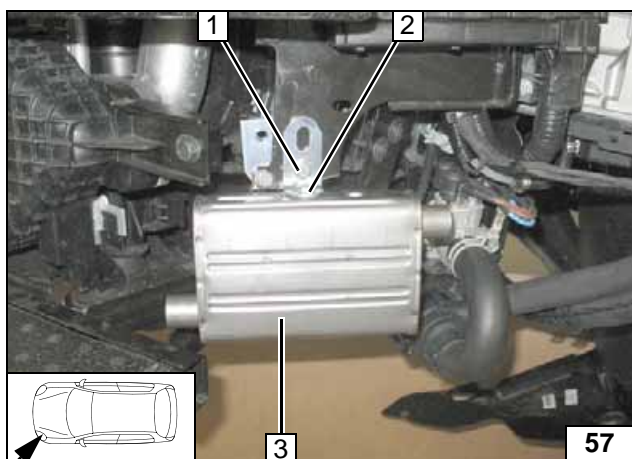


Preparing exhaust pipe



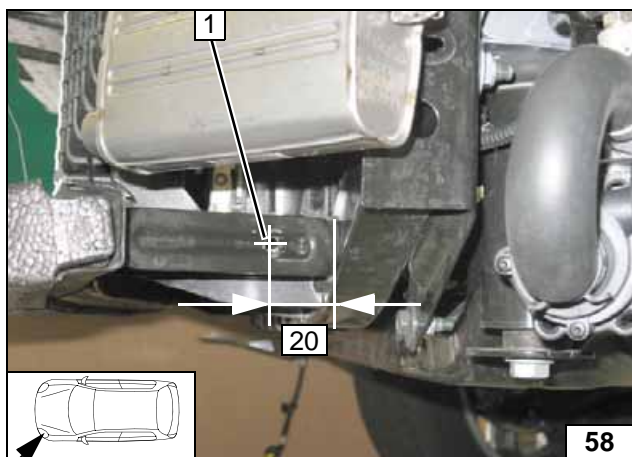
In case of front fog light option, loosen front fog light wiring harness at point 1, remove the clip and discard it (bumper mounted to improve presentation). Fasten wiring harness to the hose section of heat exchanger outlet 2 later during the "Final Work" steps.

Preparing installation location



- 1 Angle bracket, M6x20 bolt, flanged nut, hole for relay carrier
- 2 M6x16 bolt, spring lockwasher
- 3 Exhaust silencer

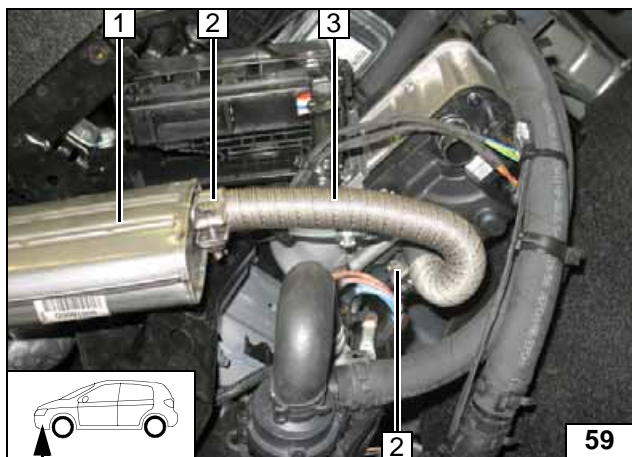
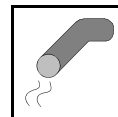
Mounting silencer



Copy hole pattern 1 for 7.0mm dia. hole and drill.

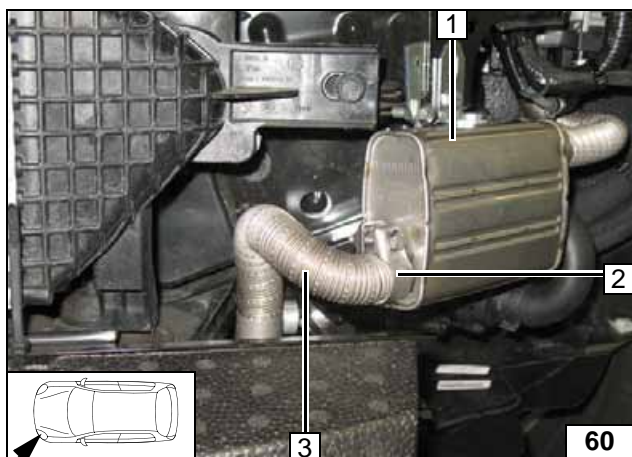


Hole for exhaust end section



- 1 Exhaust silencer
- 2 Hose clamp [2x]
- 3 Exhaust pipe

Mounting exhaust pipe

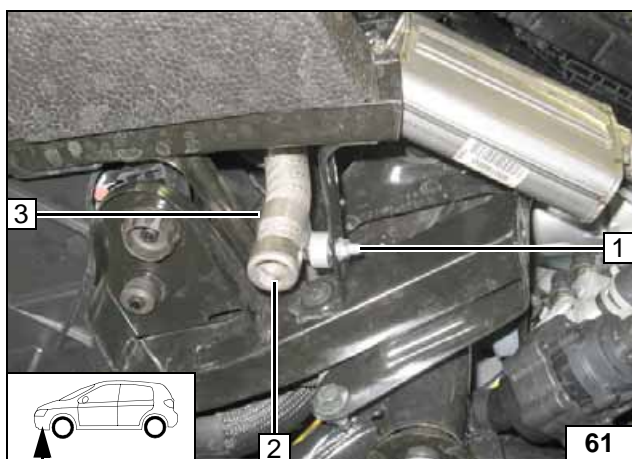


Ensure sufficient distance from neighbouring components.



- 1 Exhaust silencer
- 2 Hose clamp
- 3 Exhaust end section

Installing exhaust end section

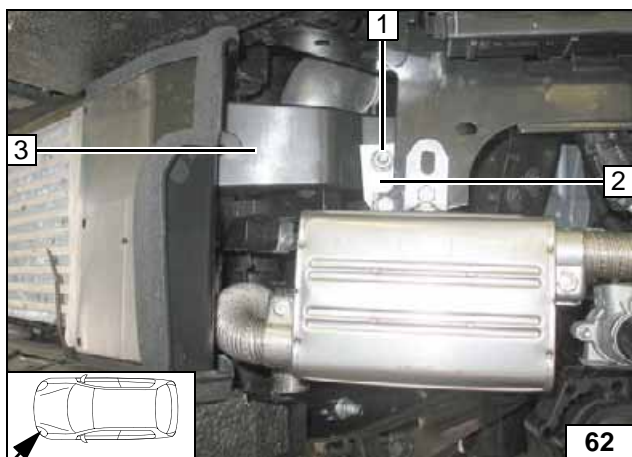


Ensure sufficient distance from neighbouring components.



- 1 M6x30 bolt, 10mm shim, flanged nut, 7.0mm dia. hole
- 2 Exhaust end section
- 3 P-clamp

Installing exhaust end section

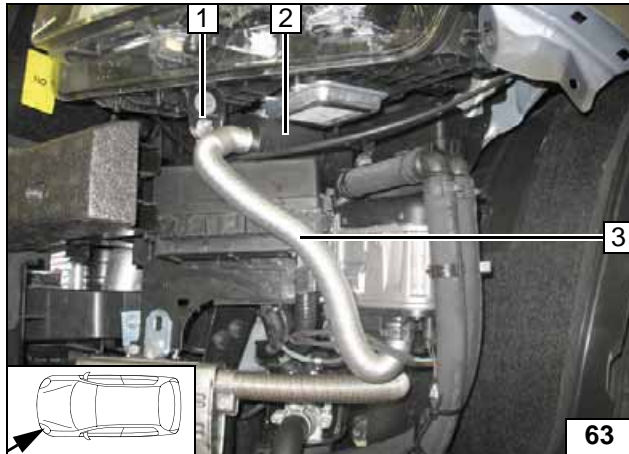
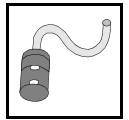


Install trim 3 on section 2 of perforated bracket (bracket of relay box).



- 1 M6x20 bolt, large diameter washer, washer as material compensation for trim, flanged nut

Mounting trim piece

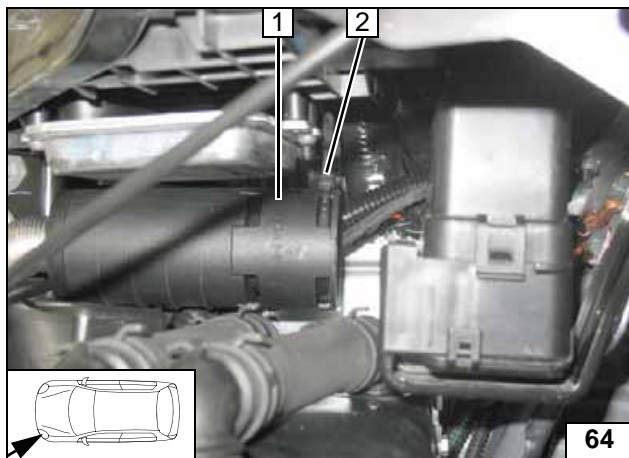


Combustion Air

- 1 P-clamp, M6x20 bolt
Large diameter washer, flanged nut, original vehicle hole
- 2 Intake silencer
- 3 Intake pipe



Installing combustion air pipe and silencer



Fasten intake silencer 1 to the wiring harness located behind using cable tie 2.



Fastening silencer

Final Work

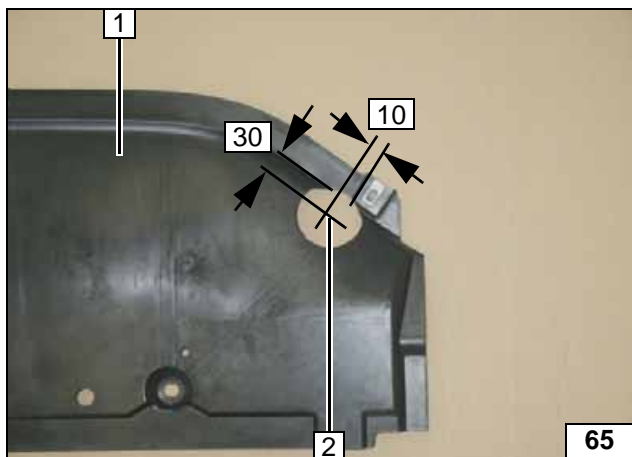
WARNING!

Mount removed parts in reverse order. Check all hoses, clamps and all electrical connections for firm seating. Insulate all loose lines and tie back.

Only use manufacturer-approved coolant. Spray the heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

- **Connect the battery.**
- **Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.**
- **Adjust digital timer, teach Telestart transmitter**
- **Make settings on A/C control panel according to the "Operating Instructions for End Customer".**
- **Apply the signboard "Switch off parking heater before refilling" in the area of the filler neck**
- **See installation instructions for initial start-up and function check**



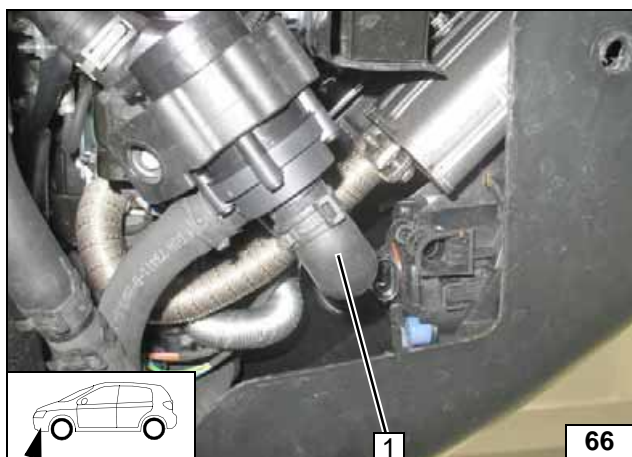


Cut out insulation in area of the hole.

- 1 Underride protection
- 2 60 mm dia. hole



**Cutting out
underride
protection**

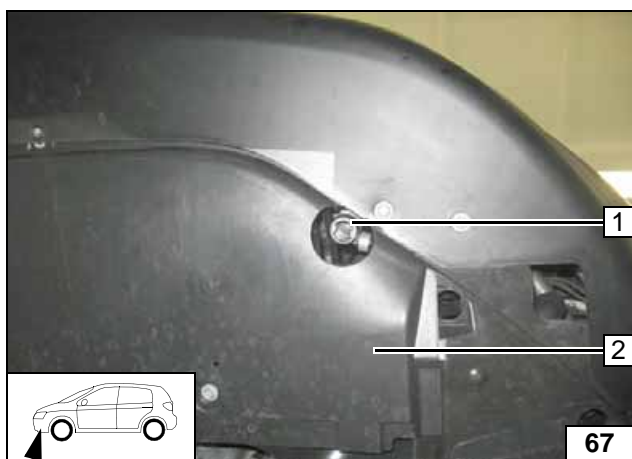


Check minimum distance of 20mm between the components and the exhaust system, correct if necessary.

In case of front fog light option, fasten wiring harness of front fog light to the hose section of heat exchanger outlet 1 using cable ties.



**Aligning
exhaust
system**

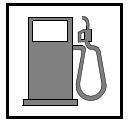


Align exhaust end section 1 flush on under-ride protection 2.

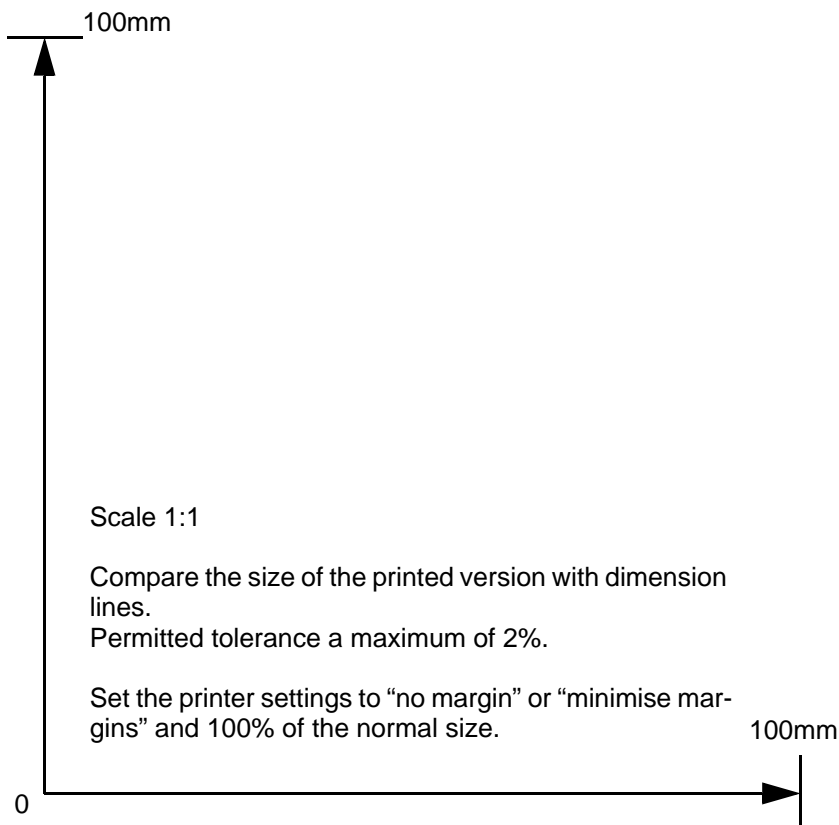
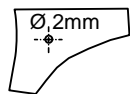
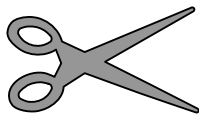
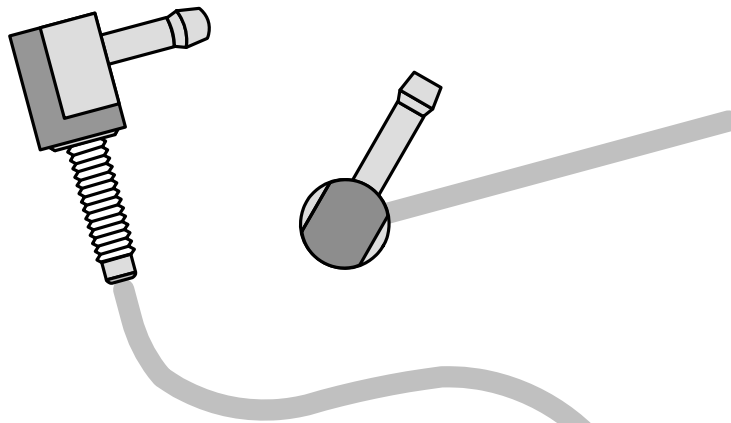


**Aligning
exhaust
end section**

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



Template for Fuel-Tank Sending Unit / Fuel Standpipe



Operating Instructions for Manual Air-Conditioning

Please remove page in case of manual air-conditioning and add it 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 cycle.

Deactivation instructions can be taken from the operating instructions of the vehicle.

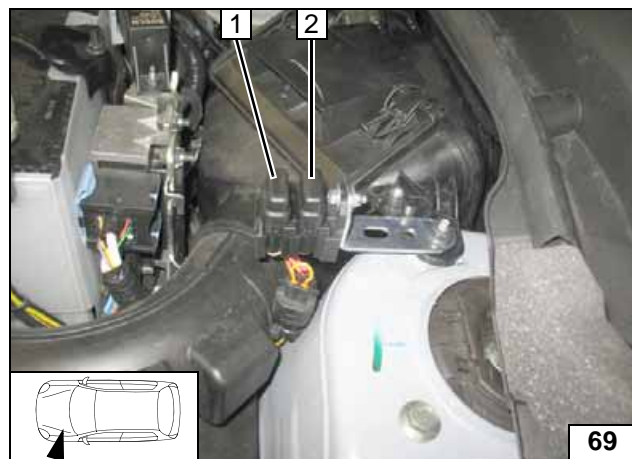
Before parking the vehicle, make the following settings:



- 1 Air outlet to windscreen
- 2 Set temperature to "max."
- 3 Set fan to level "1" or max. "2"

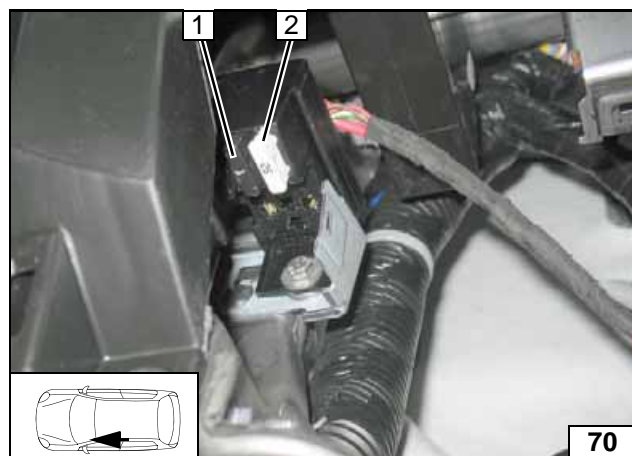


A/C control panel



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

Fuses of engine compartment



- 1 1A fuse F3 of heater control
- 2 25A fan fuse F4

Fuses of passenger compartment



Operating Instructions for Automatic Air-Conditioning

Please remove page in case of automatic air-conditioning and add it 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 cycle.

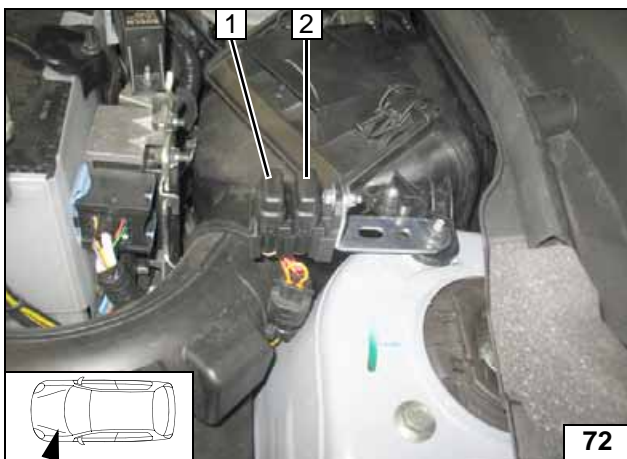
Deactivation instructions can be taken from the operating instructions of the vehicle.

Before parking the vehicle, make the following settings:



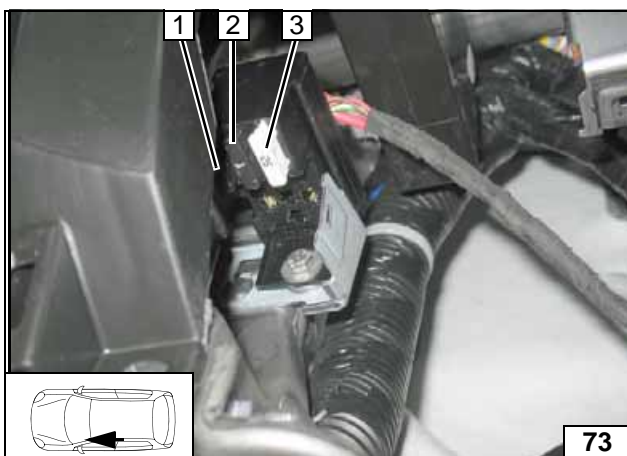
- 1 Air outlet to windscreen
- 2 Set fan to level "2" to "3"
- 3 Set temperature to "HI"

A/C control panel



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

Fuses of engine compartment



- 1 1A fuse F5 of A/C control panel
- 2 1A fuse F3 of heater control
- 3 25A fan fuse F4

Fuses of passenger compartment

