

Installation instructions

Ford S-MAX / Galaxy (CD 34*) from Model 2006

Ford Mondeo (CD 34*) from Model 2007

Diesel

Left-hand drive vehicle

Automatic air-conditioning



WARNING!

Hazard warning:

Incorrect installation or repair of Webasto heating systems may cause a fire or result in the emission of carbon monoxide, which can be fatal. Serious or fatal injuries can be caused as a result.



Specialist company training, technical documentation, specialised tools and equipment are required to install and repair Webasto heating and cooling systems. Only original Webasto parts must be used. For this, also see the catalog of air and water heater accessories from Webasto.

NEVER attempt to install or repair Webasto heating or cooling systems if you have not successfully completed the company training and thereby acquired the required technical skills, or if you do not have access to the required technical documentation, tools and equipment needed to carry out correct installation and repairs.

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

Webasto does not accept any liability for defects and damage that are attributable to installation by untrained staff.

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Validity

Manufacturer	Model	Type	EG-BE No./ ABE
Ford (D)	S-MAX	WA 6	e13 * 2001/116 * 0185 * ...
Ford (D)	Galaxy	WA 6	e13 * 2001/116 * 0185 * ...
Ford (D)	Mondeo	BA 7	e13 * 2001/116 * 0249 * ...

S-MAX

Engine type	Engine model	Output in kW	Displacement in cm ³
AZ	Diesel	96	1997
QX	Diesel	103	1997

Galaxy

Engine type	Engine model	Output in kW	Displacement in cm ³
AZ	Diesel	96	1997
QX	Diesel	103	1997
Q4	Diesel	129	2179

Mondeo

Engine type	Engine model	Output in kW	Displacement in cm ³
AZ	Diesel	96	1997
QX	Diesel	103	1997

The installation location of a digital timer or push button should be confirmed with the end customer before installation.

Heater / delivery scope

Delivery scope:

Quantity	Description	Order No.
1	Delivery scope of Ford S-Max/Galaxy/Mondeo Diesel without control element	1311401C

Required additionally for vehicles with automatic air conditioning:

Quantity	Description	Order No.
1	Kit for Automatic Air-Conditioning	1311421A

Optional heater control either:

Quantity	Description	Order No.
1	Digital timer	9010869A
1	Telestart T80	9010870A
1	Telestart T91	9016028A
1	Thermo Call II	9016027A

Required additionally when using Thermo Call and Telestart

Quantity	Description	Order No.
1	Y-Cable	9001505A

Foreword

These installation instructions apply to diesel vehicles **Ford S-MAX / Galaxy** from model year **2006** and **Ford Mondeo** vehicles from model year **2007** - for validity, see page 2 - assuming technical modifications to the vehicle do not affect installation, any liability claims excluded. Vehicle and engine types, equipment variants and national specifications not listed in these installation instructions have not been tested. The installation must be according to these "installation instructions" - Changes are not allowed.

The corresponding rules of technology and any information from the vehicle manufacturer should be observed during the installation work.

However, where this is the case the stipulations in these "installation instructions" and "operating instructions" for the *Thermo Top V* should be observed.

A fault may have been stored in the fault memory "Heating, ventilation and air conditioning" by the operation of the parking heater. This must be deleted in accordance with the manufacturer's specifications.



General instructions

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.

Sharp edges must be provided with rub protection (cut-open fuel hose)!

Spray unfinished body areas, e.g. drilled holes, with anti-corrosion wax (Tectyl 100K, Order No. 111329).

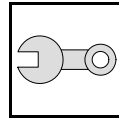
Special tools

- Torque wrench for 2.0 - 10 Nm
- Hose clamping pliers
- Metric thread-setter kit
- Unlocking tool, Ford No.: GV 3301 (4x)

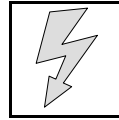
Explanatory notes on document

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

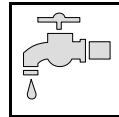
Mechanical system



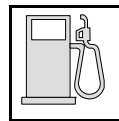
Electrical system



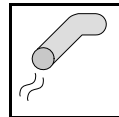
Water



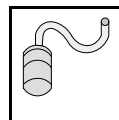
Fuel



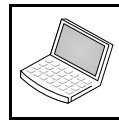
Exhaust gas



Combustion air



Software



Special features are highlighted using the following symbols:



Specific risk of injury or fatal accidents.



Specific risk of damage to components.



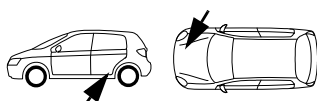
Specific risk of fire or explosion.



Reference to these, the general installation instructions of the Webasto operating elements and to vehicle-specific documents of the manufacturer



Reference to a special technical feature.



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

All dimensions are in mm! Install fuel connections without impacts.

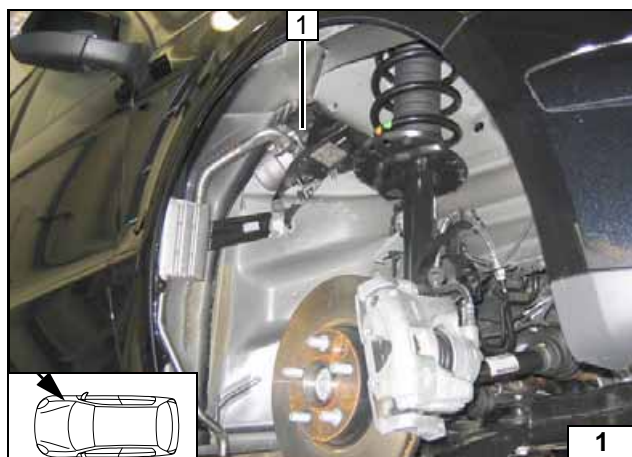
Tightening torque of 5x13 heater bolts = 7Nm!

Tightening torque of 5x15 bolt of water connection piece retaining plate = 7Nm!

Preliminary work

WARNING!

- Open the fuel tank cap and vent the fuel tank.
- Close the tank cap again.
- Disconnect the battery "earth" or "ground" connection.
- Depressurize the cooling system.
- Copy the factory number from the original type label to the duplicate type label.
- Remove years that do not apply from the duplicate label.
- Attach the duplicate label (type label) in the appropriate place.
- Mount the information sign on the cover of the diagnosis connection.
- Remove the engine design cover.
- Remove the battery and the battery carrier.
- Remove the air filter box.
- Remove the windshield wipers (S-MAX and Galaxy only).
- Remove the coolant reservoir cap (S-MAX and Galaxy only).
- Remove the coolant reservoir trim in the engine compartment (S-MAX and Galaxy only).
- Remove the bracket of the coolant hoses (S-MAX and Galaxy only).
- Remove the right front wheel.
- Remove the wheel well trim on the right.
- Remove the lower engine cover.
- Remove the cover of the fuel line under the vehicle.
- Remove the switch or trim strip above the A/C control panel/radio or A/C/navigation control unit [clipped in] (S-MAX and Galaxy only).
- Remove the cover of the center console/shift lever cover.
- Remove the A/C control panel/radio or A/C/navigation control unit.
- Remove the glove compartment.
- Remove the cover of the A-pillar trim on the right (S-MAX and Galaxy only).
- Remove the lower instrument panel trim on the front passenger side (Mondeo only).
- Detach the fuse box [SJB] and fold it down.



Heater installation location

1 Heater

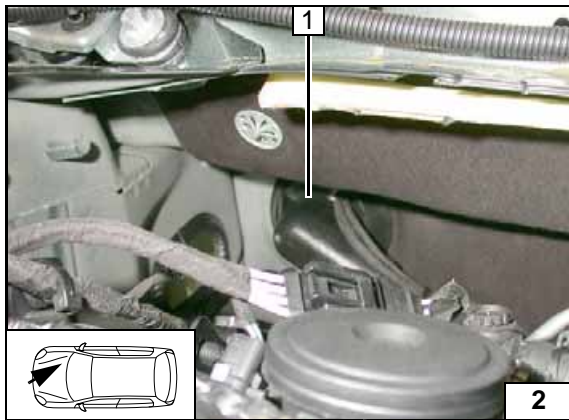
Installation location



Electrical system

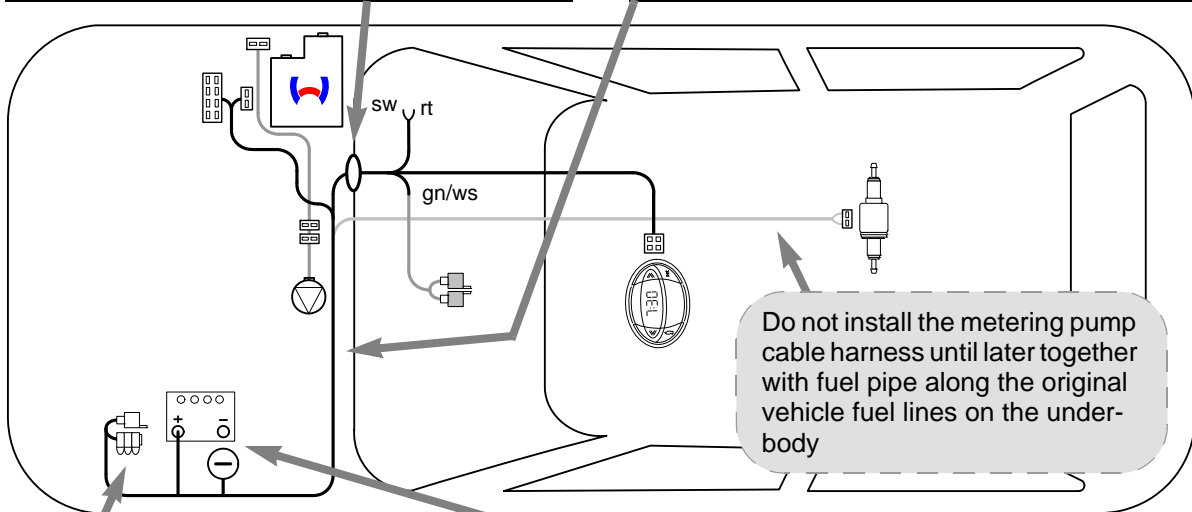
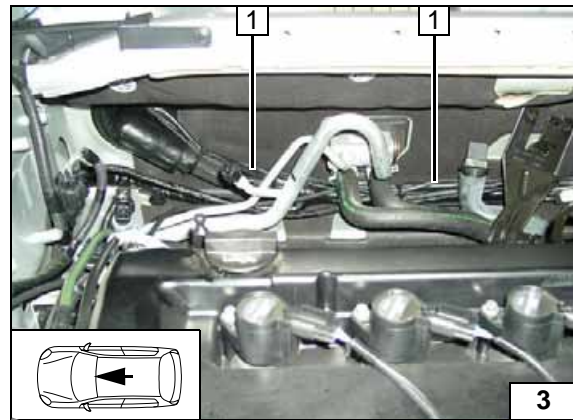
Wiring harness pass through

1 Protective rubber plug

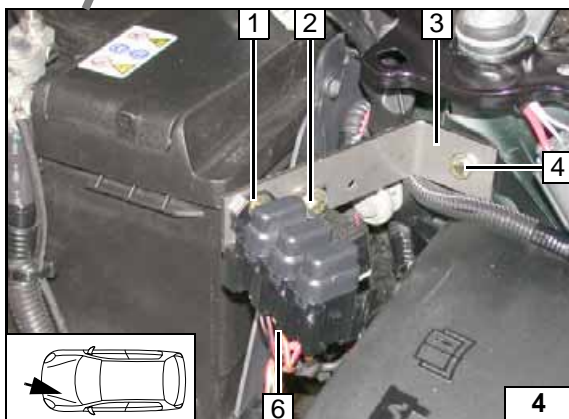


Routing in engine compartment

1 Wiring harness of heater



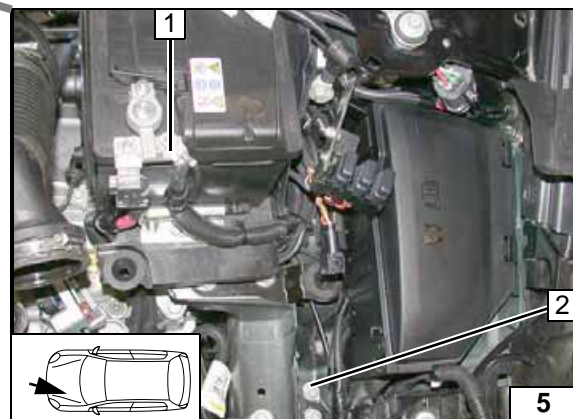
Wiring harness installation diagram



Fuse holder, K3 relay

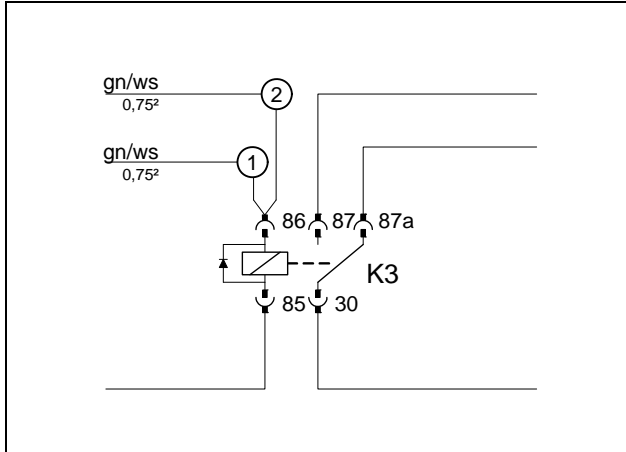
Drill out hole at position 1 to 5.5 mm dia.

- 1 Retaining plate of fuse holder, M5x16 bolt, washers, nut
- 2 K3 relay, M5x16 bolt, washers, nut
- 3 Fuse holder
- 4 M6x12 bolt, original vehicle hole, M6 flanged nut



Power supply for wiring harness of heater

- 1 Connection of positive battery terminal
- 2 Original vehicle ground point

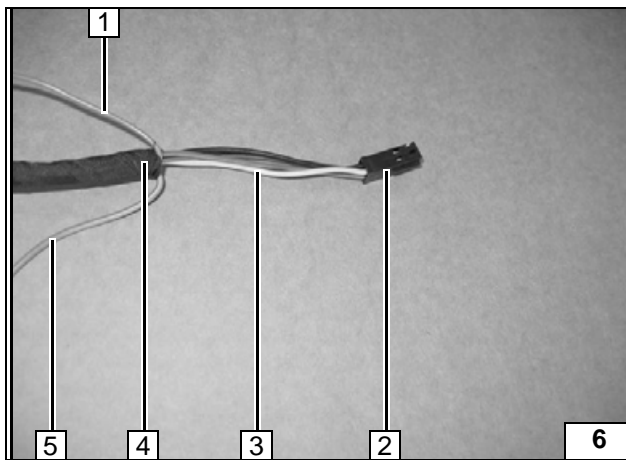


Preparing electrical system

Install 2,500 mm green/white (gn/ws) wire section **1** in included protective sleeving.



Premounting wiring harness



Preparing wiring harness

Mount yellow (ge) wire **3** in free socket of 4-pin connector **2**.



- 1** Insulate brown (br) wire and tie back
- 4** Wiring harness of heater
- 5** Insulate violet (vi) wire and tie back

Preparing wiring harness



Route wiring harness of heater **1** along original vehicle wiring harness and secure with cable ties.

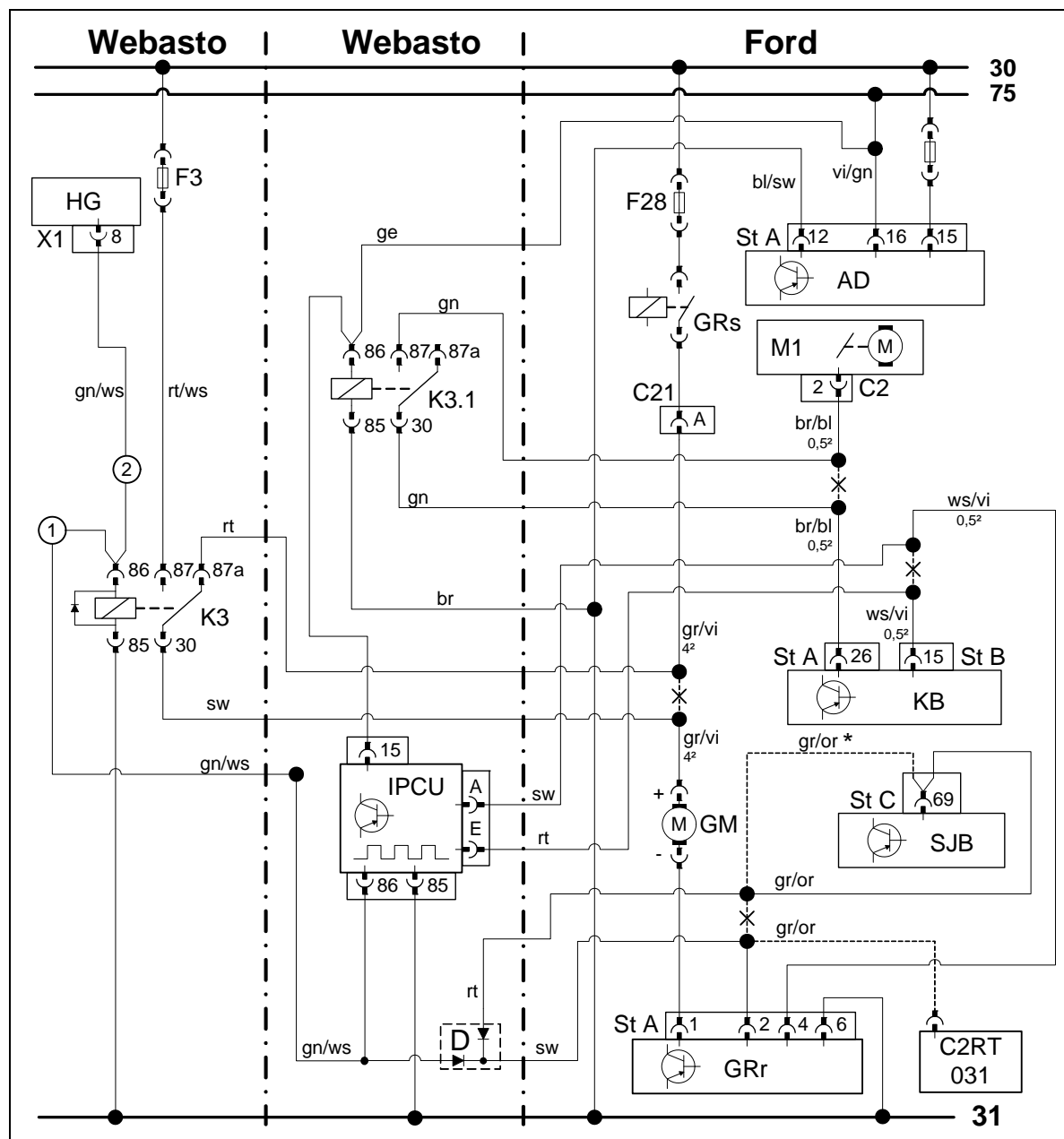


Routing in engine compartment



Control of automatic air-conditioning version A

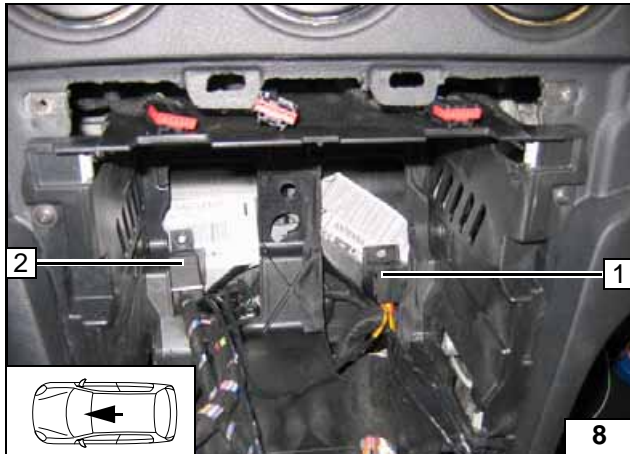
Vehicle equipment if violet/green (vi/gn) wire is present on radio connector A, PIN 16.



Wiring diagram

Webasto components		Vehicle components		Colours and symbols	
HG	TT-V heater	GM	Fan motor	rt	red
X1	8-pin connector	GRs	Fan relay	ws	white
F3	Fuse 25A	GRr	Fan controller	sw	black
K3	Fan relay	KB	A/C control panel	br	brown
K3.1	Additional relay	F28	Fan fuse	gn	green
IPCU	Pulse width modulator	M1	Positioning motor of air flap	bl	blue
D	Diodes integrated in wiring harness	SJB	Smart Junction Box	ge	yellow
IPCU adjustment values		C21	Black connector	vi	violet
Voltage: 10 V		AD	Radio	gr	gray
Frequency: 400 Hz		C2T031	Receiver WFS		
Duty cycle: 37 %		*	depending on equipment		
Function: Low-side				X	Cutting point
				Wiring colours may vary.	

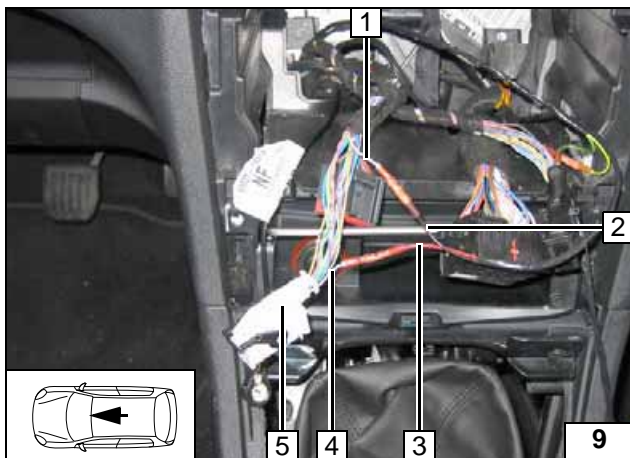
Legends



Cut dual lock 1x in centre.
Fasten relay K3.1 **2** and IPCU **1** with dual lock as shown.
Watch space requirement of A/C control unit or radio and their wiring harnesses.



Installing IPCU and K3.1 relay

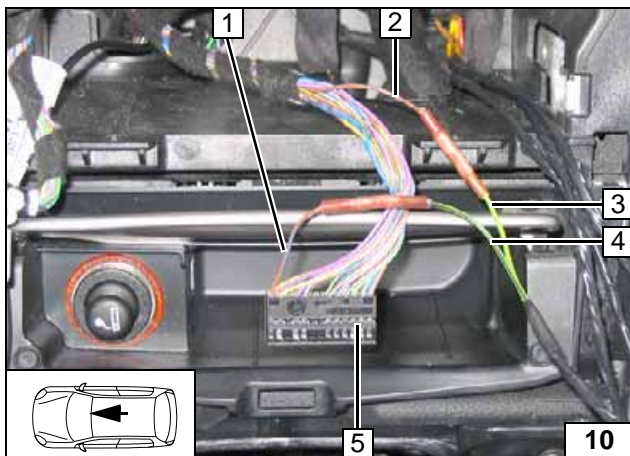


Connection on white (ws) connector **B 5** from A/C control panel, Pin 15.
Make connections as shown in wiring diagram with existing connectors.



Connection of A/C control panel / IPCU

- 1** White/violet (ws/vi) wire to fan controller
- 2** Black (sw) wire from IPCU/A
- 3** Red (rt) wire from IPCU/E
- 4** White/violet (ws/vi) wire from connector of A/C control panel

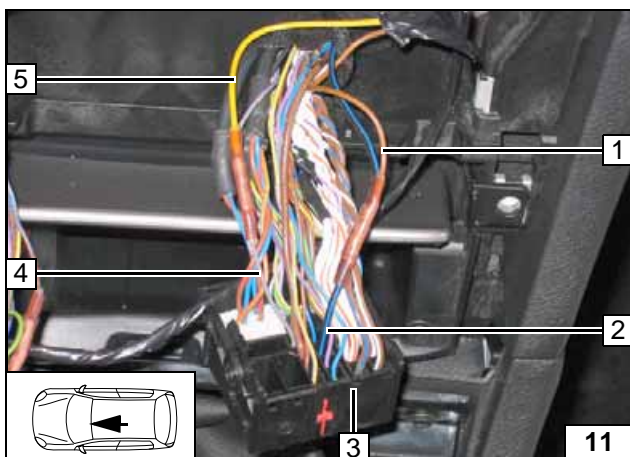


Connection on black (sw) connector **A 5** from A/C control panel, Pin 26.
Make connections as shown in wiring diagram with existing connectors.



Connection of A/C control panel / K3.1 relay

- 1** Brown/blue (br/bl) wire from connector of A/C control panel
- 2** Brown/blue (br/bl) wire to flap positioning motor
- 3** Green (gn) wire from K3.1/87
- 4** Green (gn) wire from K3.1/30

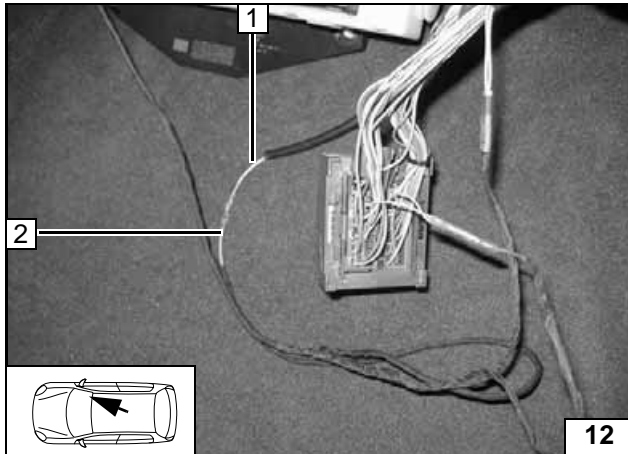


Connection on connector **3** from radio.
Make connections as shown in wiring diagram with existing connectors.



Connection of K3.1 to radio

- 1** Brown (br) wire from K3.1/85
- 2** Black/blue (sw/bl) wire (ground)
- 4** Violet/green (vi/gn) wire (Terminal 75)
- 5** Yellow (ge) wire from K3.1/86

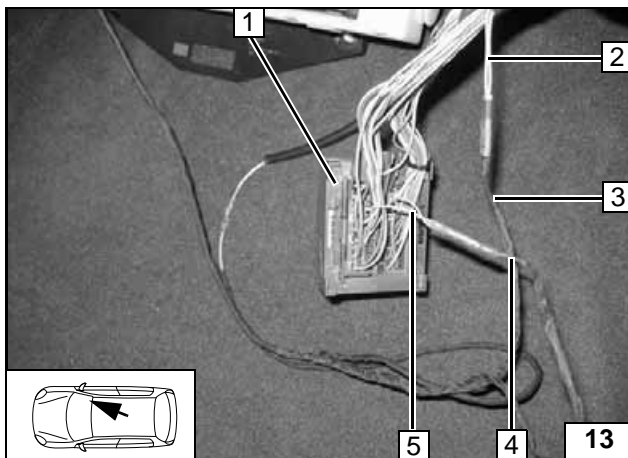


Produce connections as shown in wiring diagram.

- 1 Green/white (gn/ws) wire from K3/86
- 2 Green/white (gn/ws) wire



**Connec-
tion of
green/whit
e (gn/ws)
wire from
K3/86**



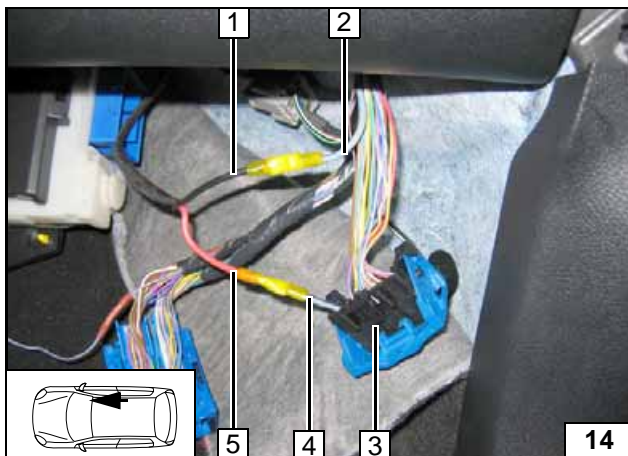
Connection on blue (bl) connector 1, Pin 69. Produce connections as shown in wiring diagram.

Depending on vehicle equipment, two cables may be present on Pin 69.

- 2 Gray/orange (gr/or) wire to fan controller (see wiring diagram)
- 3 Black (sw) wire
- 4 Red (rt) wire
- 5 Gray/orange (gr/or) wire to SJB connector (see wiring diagram)



**Connec-
tion of SJB
connector**



Connection on black (sw) connector 3. Produce connections as shown in wiring diagram.

- 1 Black (sw) wire from relay K3/30
- 2 Gray/violet (gr/vi) to fan motor
- 4 Gray/violet (gr/vi) wire
- 5 Red (rt) wire from relay K3/87a

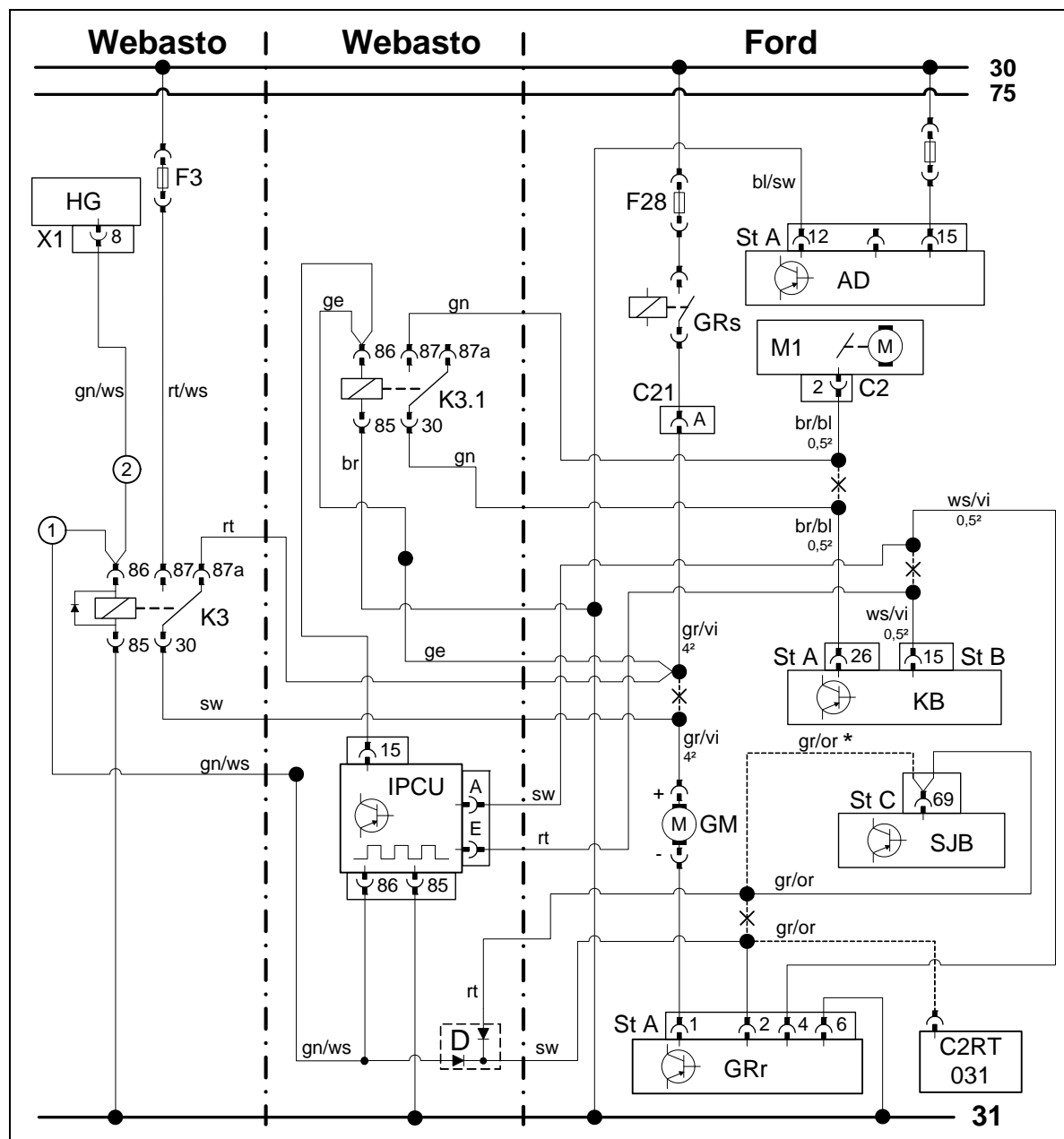


**Connec-
ting fan mo-
tor**



Control of automatic air-conditioning version B

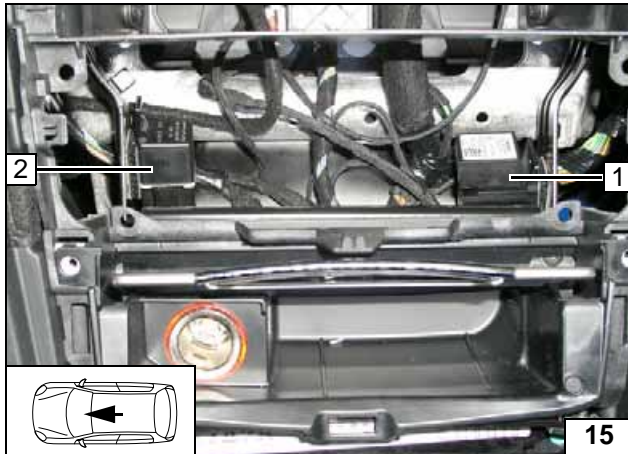
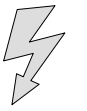
Vehicle equipment if violet/green (vi/gn) wire is not present on radio connector A, PIN 16.



Wiring diagram

Webasto components		Vehicle components		Colours and symbols	
HG	TT-V heater	GM	Fan motor	rt	red
X1	8-pin connector	GRs	Fan relay	ws	white
F3	Fuse 25A	GRr	Fan controller	sw	black
K3	Fan relay	KB	A/C control panel	br	brown
K3.1	Additional relay	F28	Fan fuse	gn	green
IPCU	Pulse width modulator	M1	Positioning motor of air flap	bl	blue
D	Diodes integrated in wiring harness	SJB	Smart Junction Box	ge	yellow
IPCU adjustment values		C21	Black connector	vi	violet
Voltage: 10 V		AD	Radio	gr	gray
Frequency: 400 Hz		C2T031	Receiver WFS		
Duty cycle: 37 %		*	depending on equipment		
Function: Low-side				X	Cutting point
				Wiring colours may vary.	

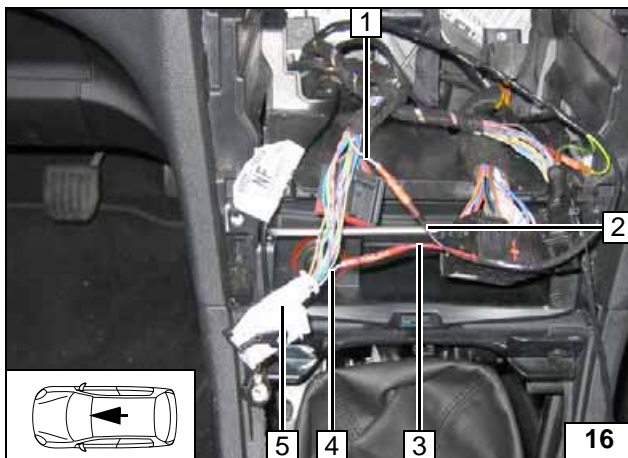
Legends



Cut dual lock 1x in centre.
Fasten relay K3.1 2 and IPCU 1 with dual lock as shown.
Watch space requirement of A/C control unit or radio and their wiring harnesses.



Installing IPCU and K3.1 relay

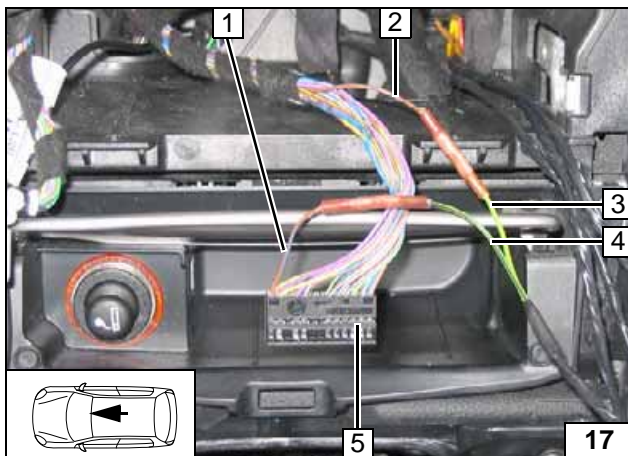


Connection on white (ws) connector B 5 from A/C control panel, Pin 15.
Produce connections as shown in wiring diagram.



Connection of A/C control panel / IPCU

- 1 White/violet (ws/vi) wire to fan controller
- 2 Black (sw) wire from IPCU/A
- 3 Red (rt) wire from IPCU/E
- 4 White/violet (ws/vi) wire from connector of A/C control panel

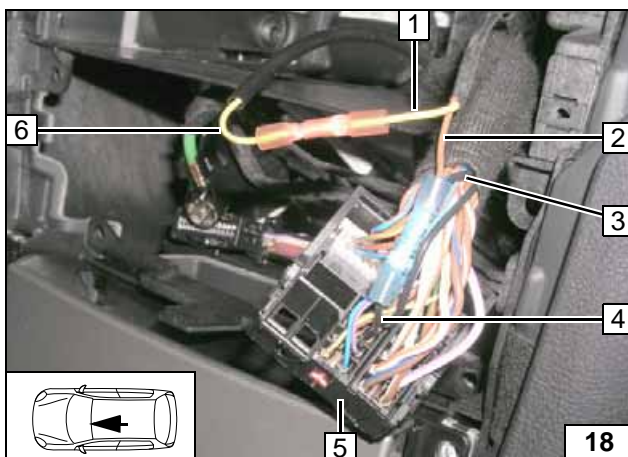


Connection on black (sw) connector A 5 from A/C control panel, Pin 26.
Produce connections as shown in wiring diagram.



Connection of A/C control panel / K3.1 relay

- 1 Brown/blue (br/bl) wire from connector of A/C control panel
- 2 Brown/blue (br/bl) wire to flap positioning motor
- 3 Green (gn) wire from K3.1/87
- 4 Green (gn) wire from K3.1/30



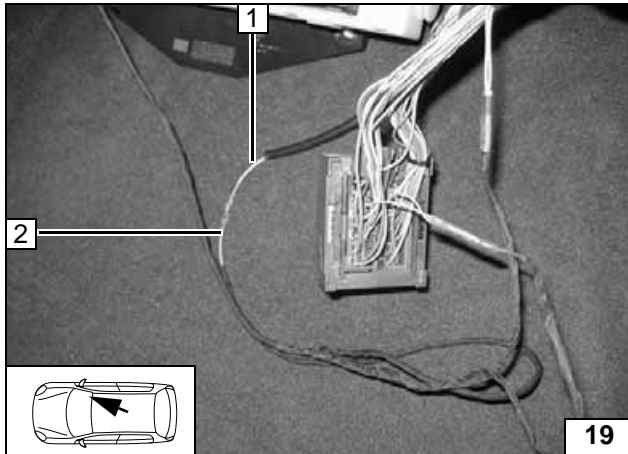
Connection on connector 5 from radio.
Produce connections as shown in wiring diagram.



Connection of K3.1/85 on radio

Connect yellow (ge) wire 1 from K3.1/86 to yellow (ge) wire 6 and route in protective sleeving into footwell on front passenger side.

- 2 Brown (br) wire from K3.1/85
- 3 Black/blue (sw/bl) wire (ground)
- 4 Black/blue (sw/bl) wire (ground) from connector Pin 12

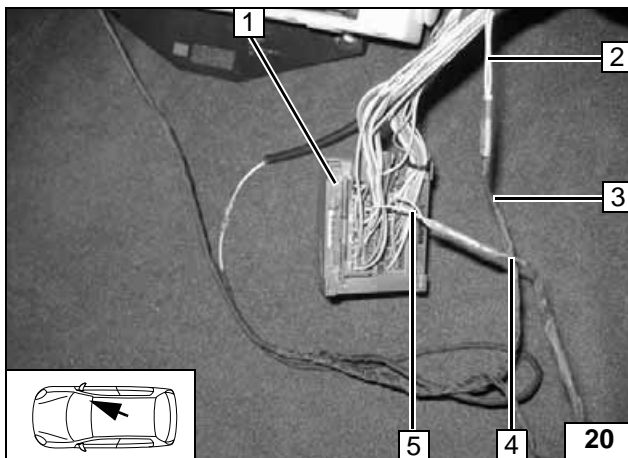


Produce connections as shown in wiring diagram.

- 1 Green/white (gn/ws) wire from K3/86
- 2 Green/white (gn/ws) wire



**Connec-
tion of
green/whit
e (gn/ws)
wire from
K3/86**



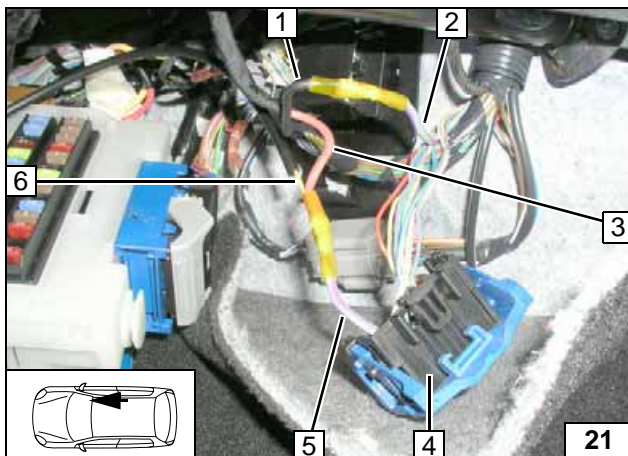
Connection on blue (bl) connector 1, Pin 69. Produce connections as shown in wiring diagram.

Depending on vehicle equipment, two cables may be present on Pin 69.

- 2 Gray/orange (gr/or) wire to fan controller (see wiring diagram)
- 3 Black (sw) wire
- 4 Red (rt) wire
- 5 Gray/orange (gr/or) wire to SJB connector (see wiring diagram)



**Connec-
tion of SJB
connector**



Connection on black (sw) connector 4. Produce connections as shown in wiring diagram.

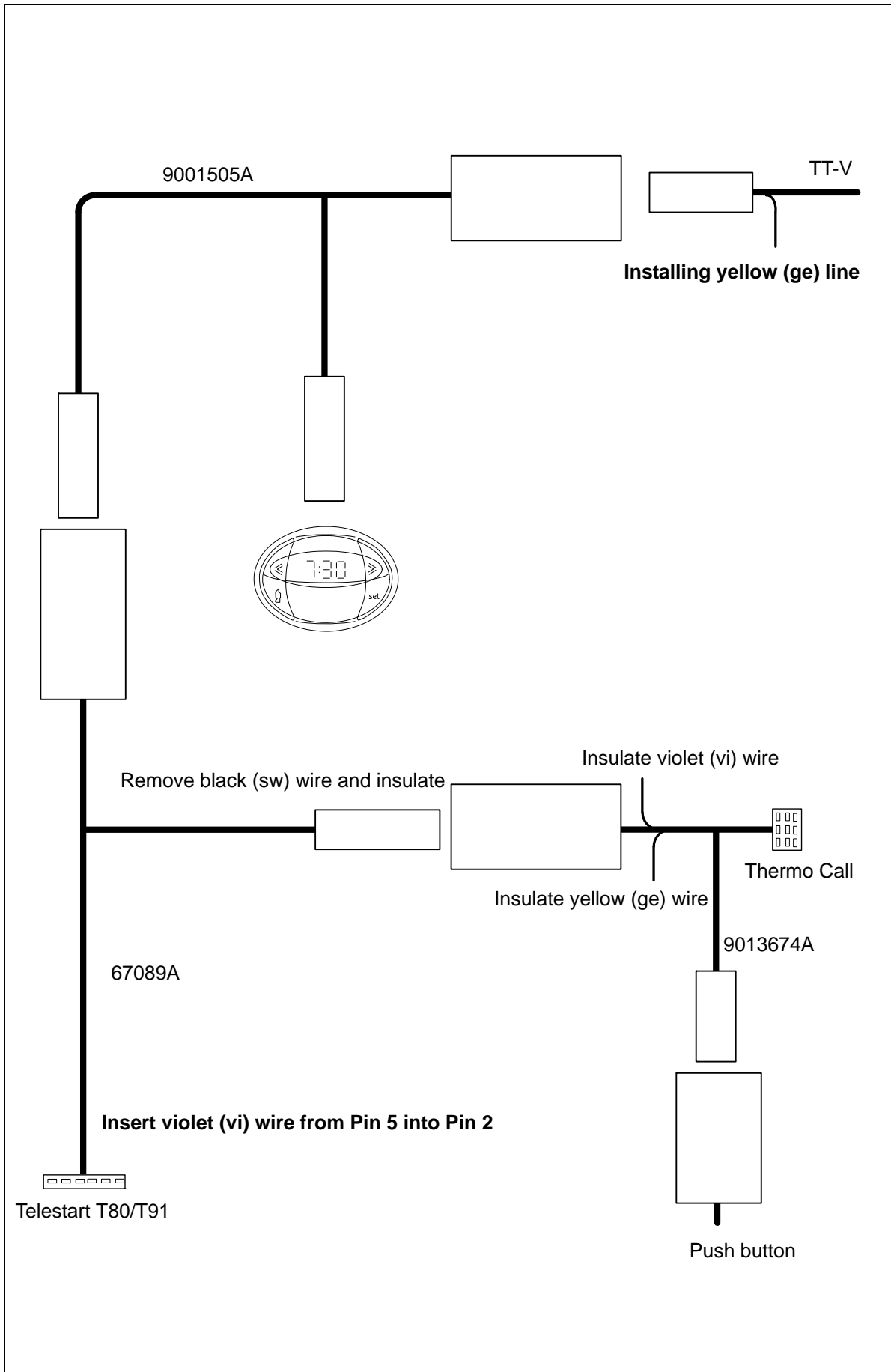
- 1 Black (sw) wire from relay K3/30
- 2 Gray/violet (gr/vi) to fan motor
- 3 Red (rt) wire from relay K3/87a
- 5 Gray/violet (gr/vi) from connector
- 6 Yellow (ge) wire from relay K3.1/86

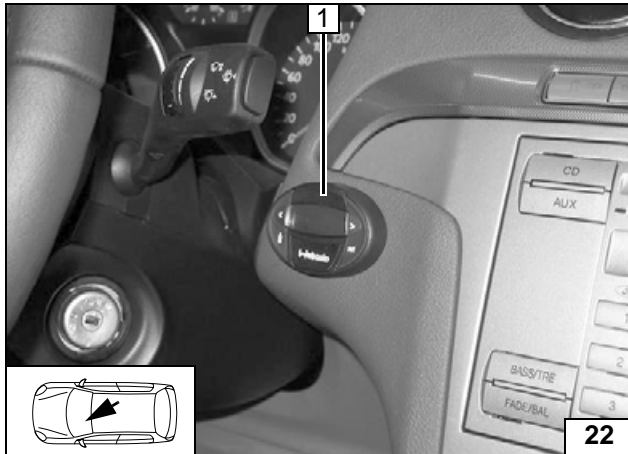


**Connect-
ing fan mo-
tor**



Connection diagram for heater control



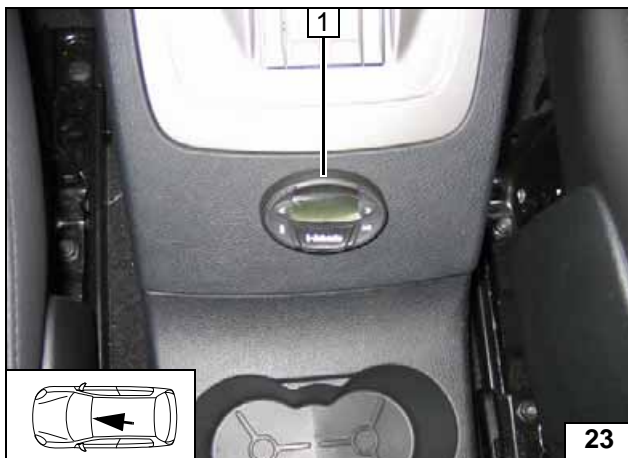


Digital timer

S-MAX / Galaxy Version A

1 Digital timer

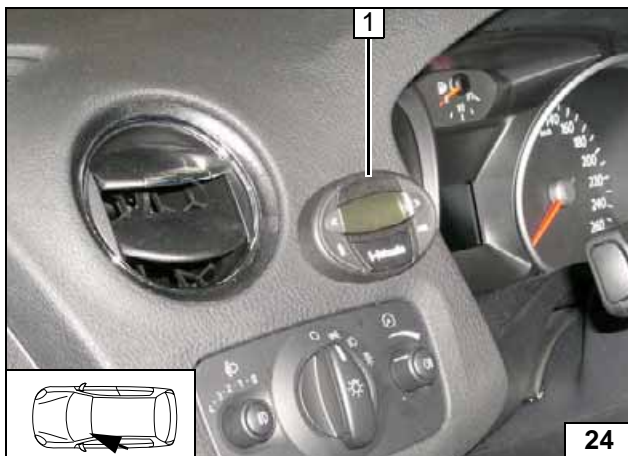
Installing digital timer



S-MAX / Galaxy Version B

1 Digital timer

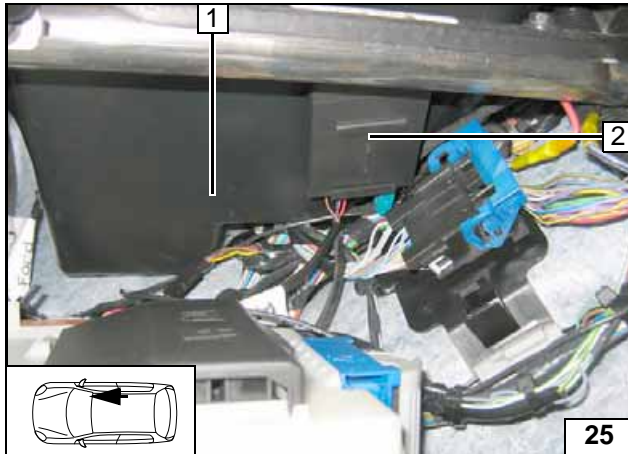
Installing digital timer



Mondeo

1 Digital timer

Installing digital timer



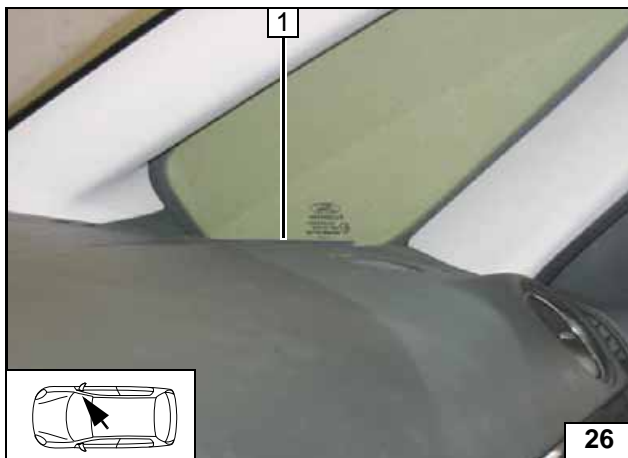
Remote option (Telestart)

S-MAX / Galaxy

- 1 Underside of glove compartment
- 2 Telestart receiver, dual lock



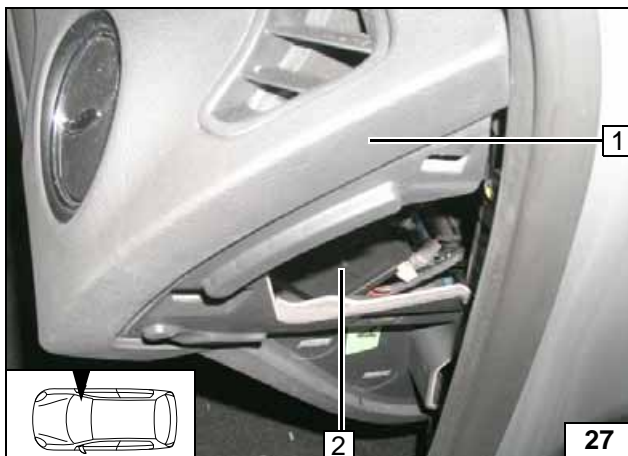
Installing receiver



- 1 Antenna



Installing antenna

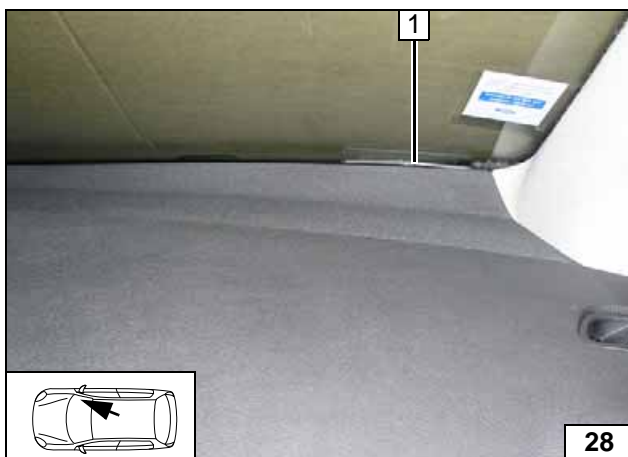


Mondeo

- 1 Instrument panel on front passenger side
- 2 Telestart receiver, dual lock



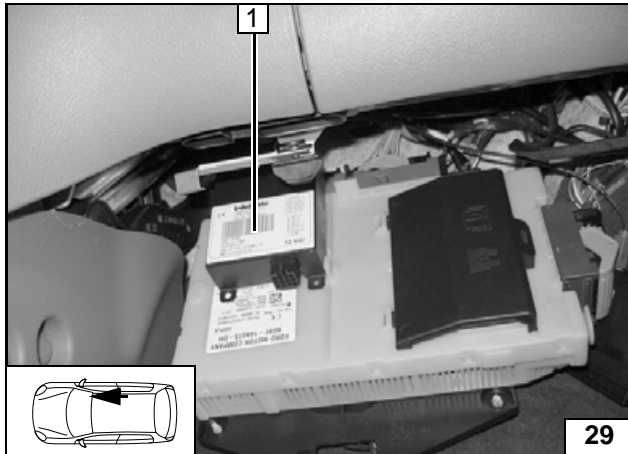
Installing receiver



- 1 Antenna



Installing antenna



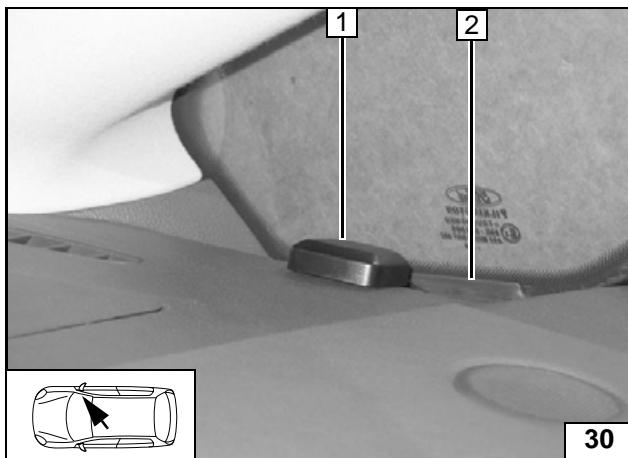
Thermo Call option

S-MAX and Galaxy

- 1 Thermo Call, dual lock



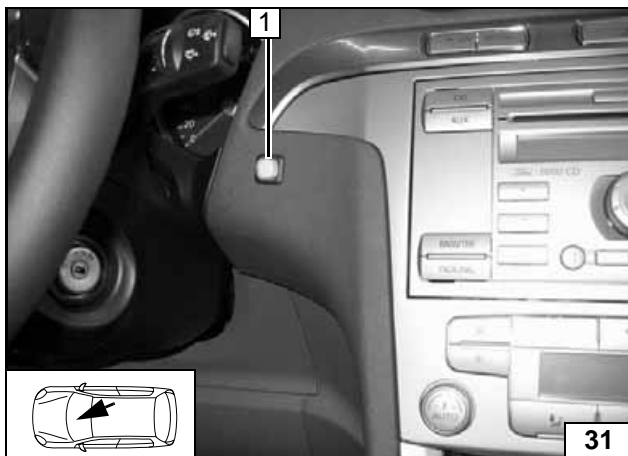
Installing receiver



- 1 GPS antenna (Thermo Call Locate only)
- 2 GSM antenna



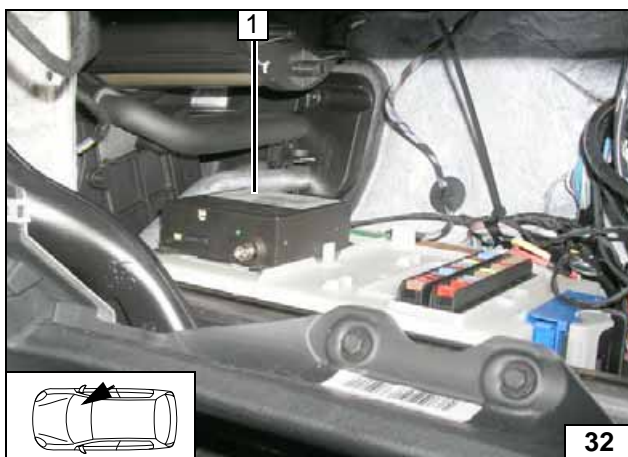
Installing antenna



- 1 Push button



Installing push button

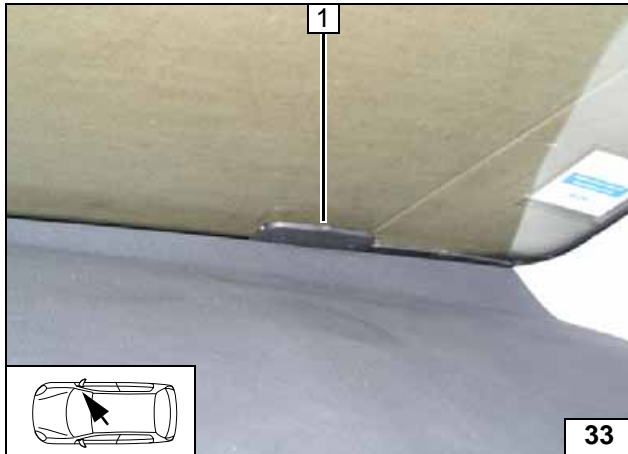


Mondeo

- 1 Thermo Call, dual lock



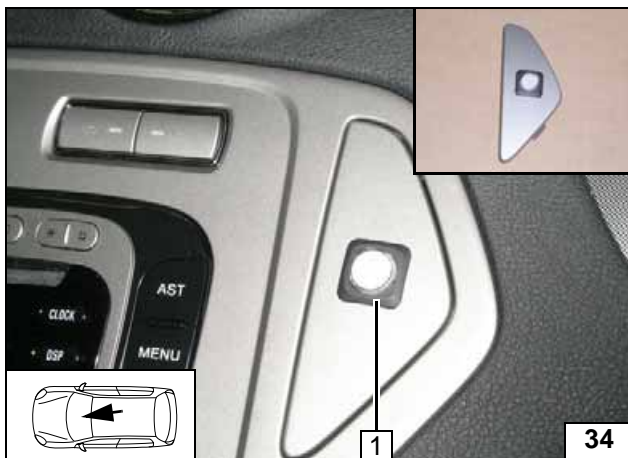
Installing receiver



1 Antenna



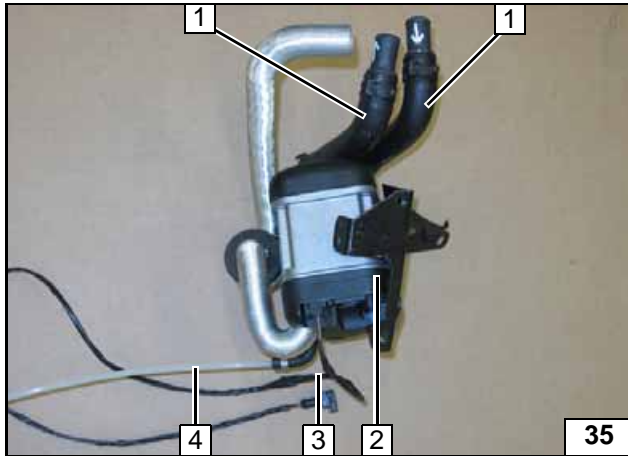
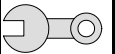
Installing antenna



1 Push button



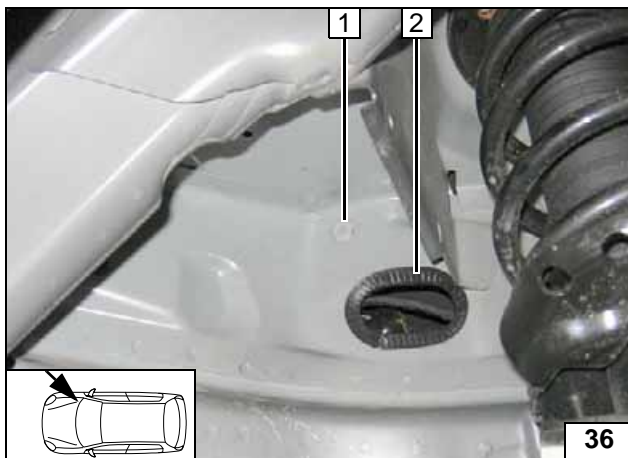
Installing push button



Premounting heater

Mark premounted coolant hoses **1** [2x] in accordance with direction of flow and connect adapter wiring harness of circulating pump **3**.

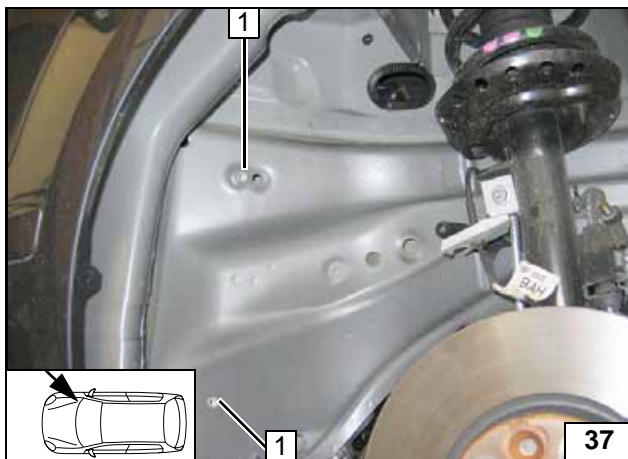
- 2** Heater
- 4** Fuel line, moulded hose, 10 mm dia. hose clamp



Install cable grommet **1** and edge protection section **2**.



Preparing installation location



Mount M6 rivet nuts **1** [2x] in existing holes as shown.



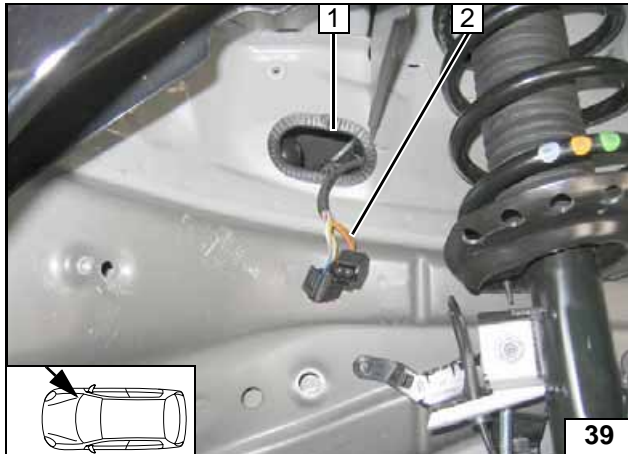
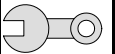
Installing rivet nuts



Remove water drain **1** from wheel arch.

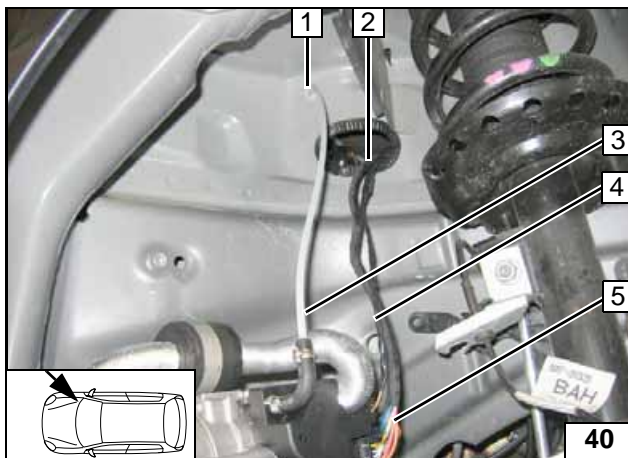


Preparing exhaust pipe



- 1 Pass through
- 2 Wiring harness of heater

Installing wiring harness of heater

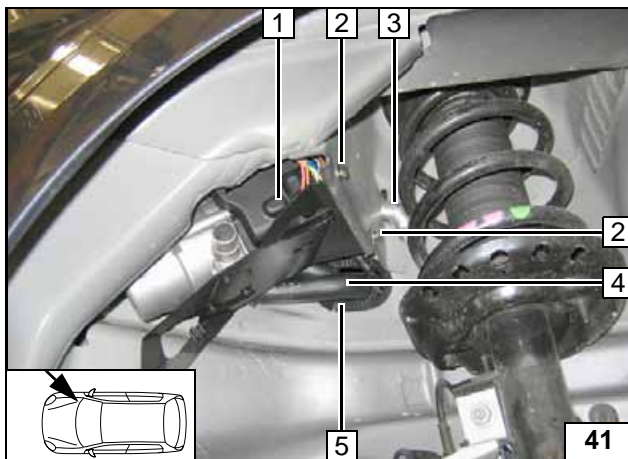


Installing heater

Guide fuel line 3 through grommet 1 into engine compartment.
Route adapter cable of circulating pump 4 through pass through 2 into engine compartment.
Connect wiring harness of heater to heater 5.



Installing heater

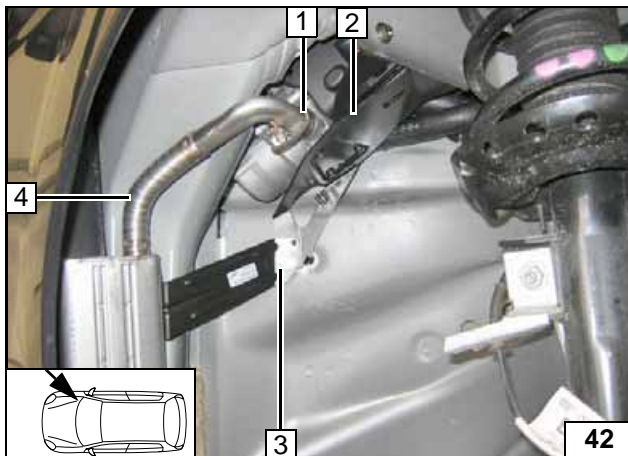


Loosely mount heater 1 as shown.

- 2 M6x20 bolt [2x], spring lockwasher [2x], large diameter washer [2x]
- 3 Combustion air pipe
- 4 Coolant hoses
- 5 Pass through



Installing heater



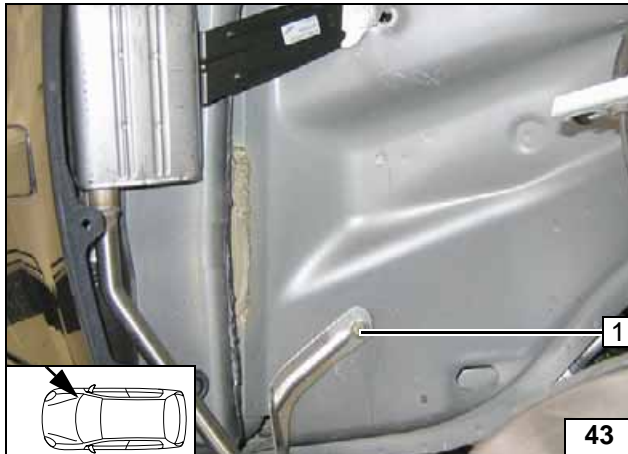
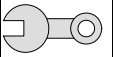
Installing exhaust system

Install exhaust system 4 on heater 2 as shown.
Ensure sufficient distance to neighbouring components.

- 1 Hose clamp
- 3 M6x20 screw, spring lock washer, washer

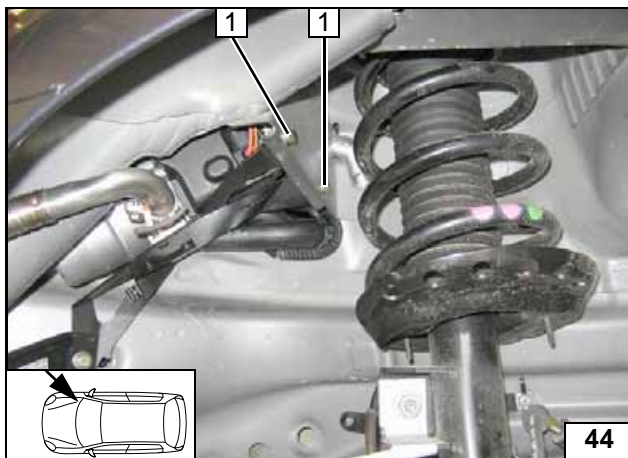


Installing exhaust pipe



1 M6x20 screw, spring lock washer, washer

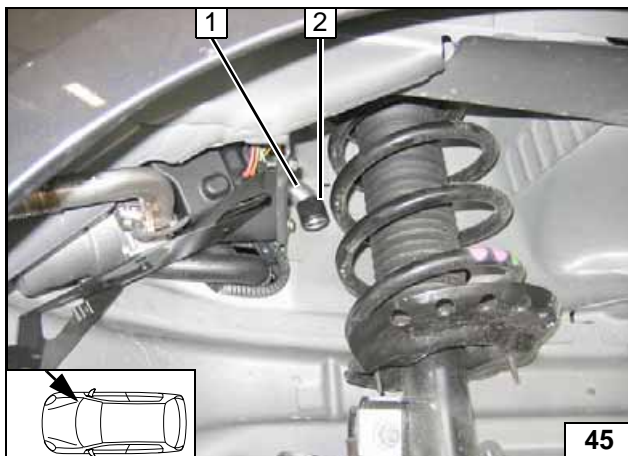
Installing exhaust pipe



Tighten M6 bolt 1 [2x].



Installing heater



Screw protective cap 2 onto intake hose 1.



Installing protective cap on combustion air pipe



Fuel

CAUTION!

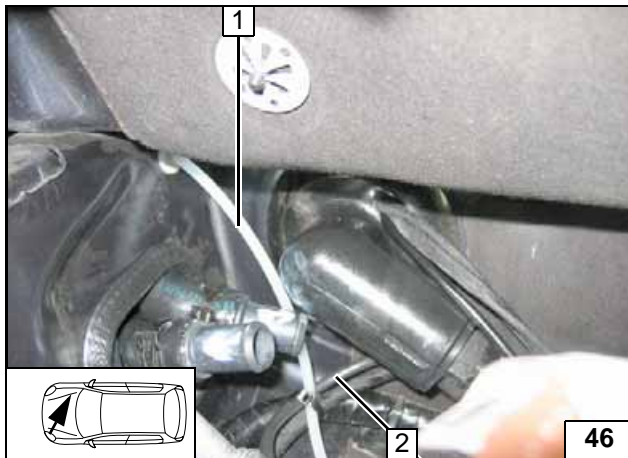
Open the vehicle's fuel tank cap, ventilate the tank and then re-close the tank lock.

Catch any fuel running off with 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.

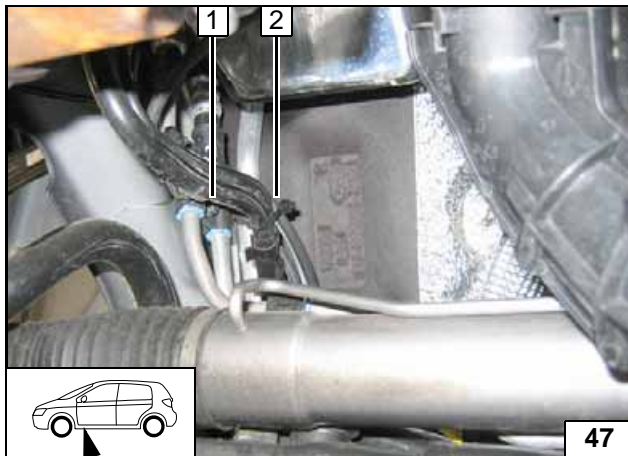
WARNING!

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



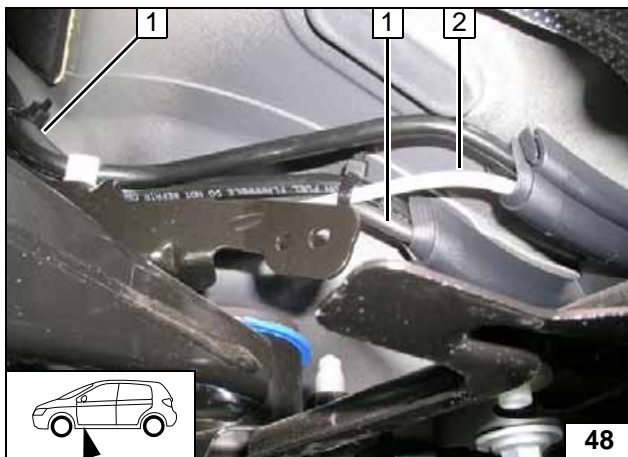
Route fuel line 1 and metering-pump wiring harness 2 to underbody and secure on original vehicle lines with cable ties.

Routing lines



Route fuel line and metering-pump wiring harness 2 to underbody and secure on original vehicle 1 with cable ties.

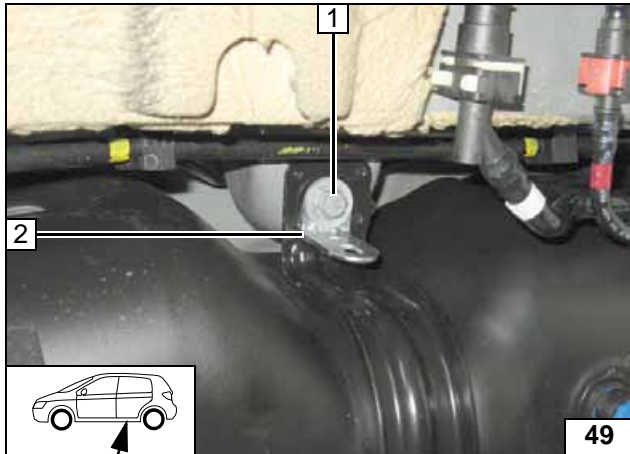
Routing lines



Secure lines with cable ties.

- 1 Metering pump wiring harness
- 2 Fuel line

Routing lines



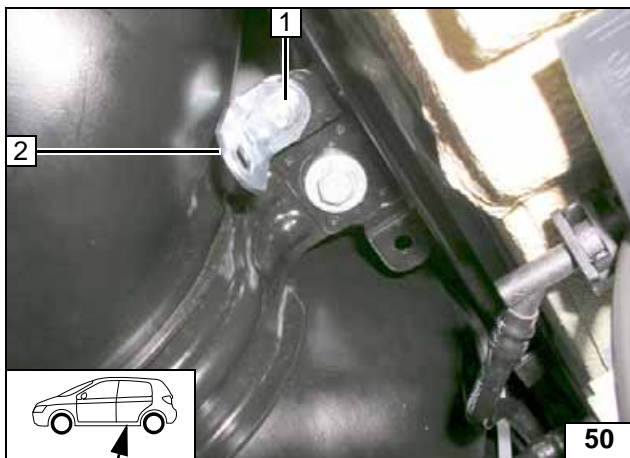
Version 1

Drill out angle bracket **2** to 8 mm dia. at position **1**.

- 1** Original vehicle M8 bolt



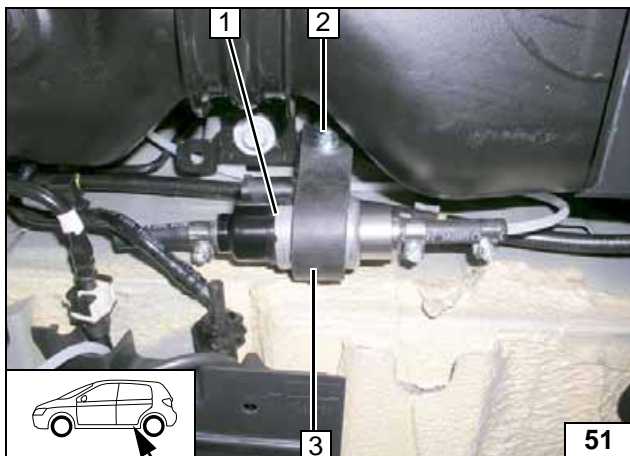
Installing metering pump



Version 2

- 1** M6x20 bolt, large diameter washer, flanged nut
- 2** Angle bracket

Installing metering pump

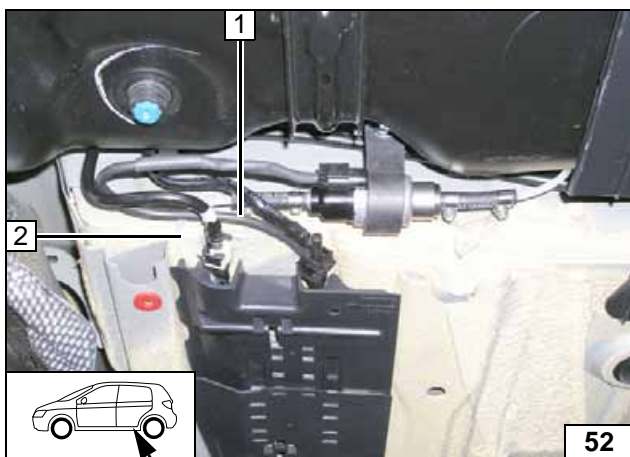


Check the position of the components; adjust if necessary. Check that they have free clearance.

- 1** Metering pump
- 2** M6x20 bolt, washer, flanged nut
- 3** Metering pump bracket



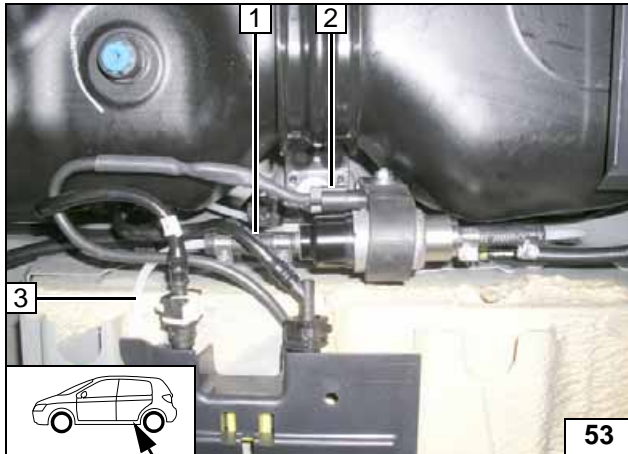
Installing metering pump



Route fuel line **1** and wiring harness of metering pump **2** along original vehicle fuel line and secure with cable ties.



Routing lines

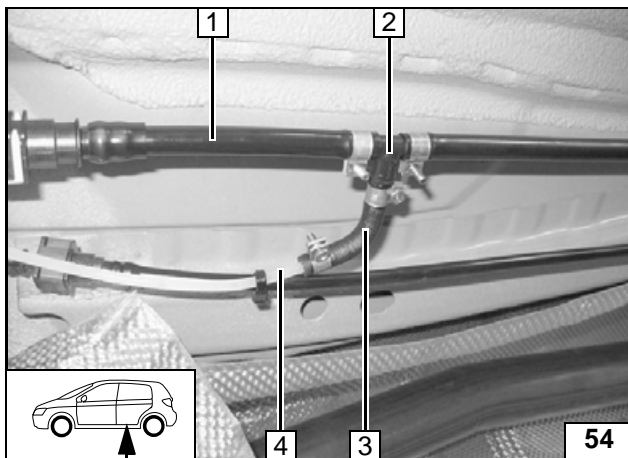


Fuel line from heater **3** on pressure side of metering pump.
Check the position of the components; adjust if necessary. Check that they have free clearance.
Remount cover of fuel lines.

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



**Connect-
ing meter-
ing pump**

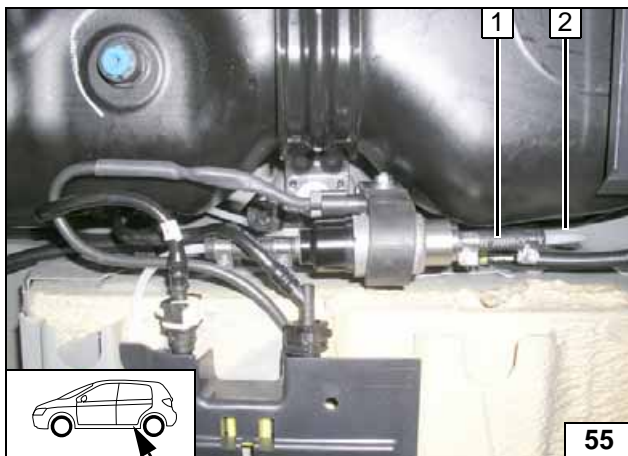


Separate fuel return line **1** approx. 70 mm before coupling.

- 2** 10x5x10 fuel standpipe, 12 mm dia. hose clamp [2x]
- 3** 90° moulded hose, hose clamp 10mm dia. [2x]
- 4** Fuel line



**Removing
fuel**

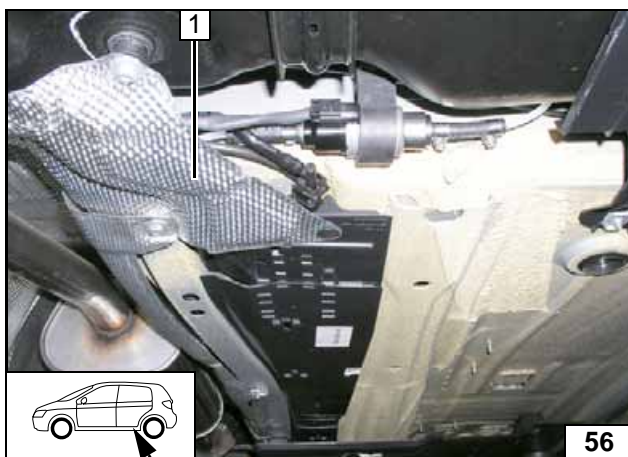


Fuel line from fuel standpipe **2** on intake side of metering pump.
Check the position of the components; adjust if necessary. Check that they have free clearance.

- 1** Hose section, 10 mm dia. hose clamp [2x]



**Connect-
ing meter-
ing pump**



- 1** Cover



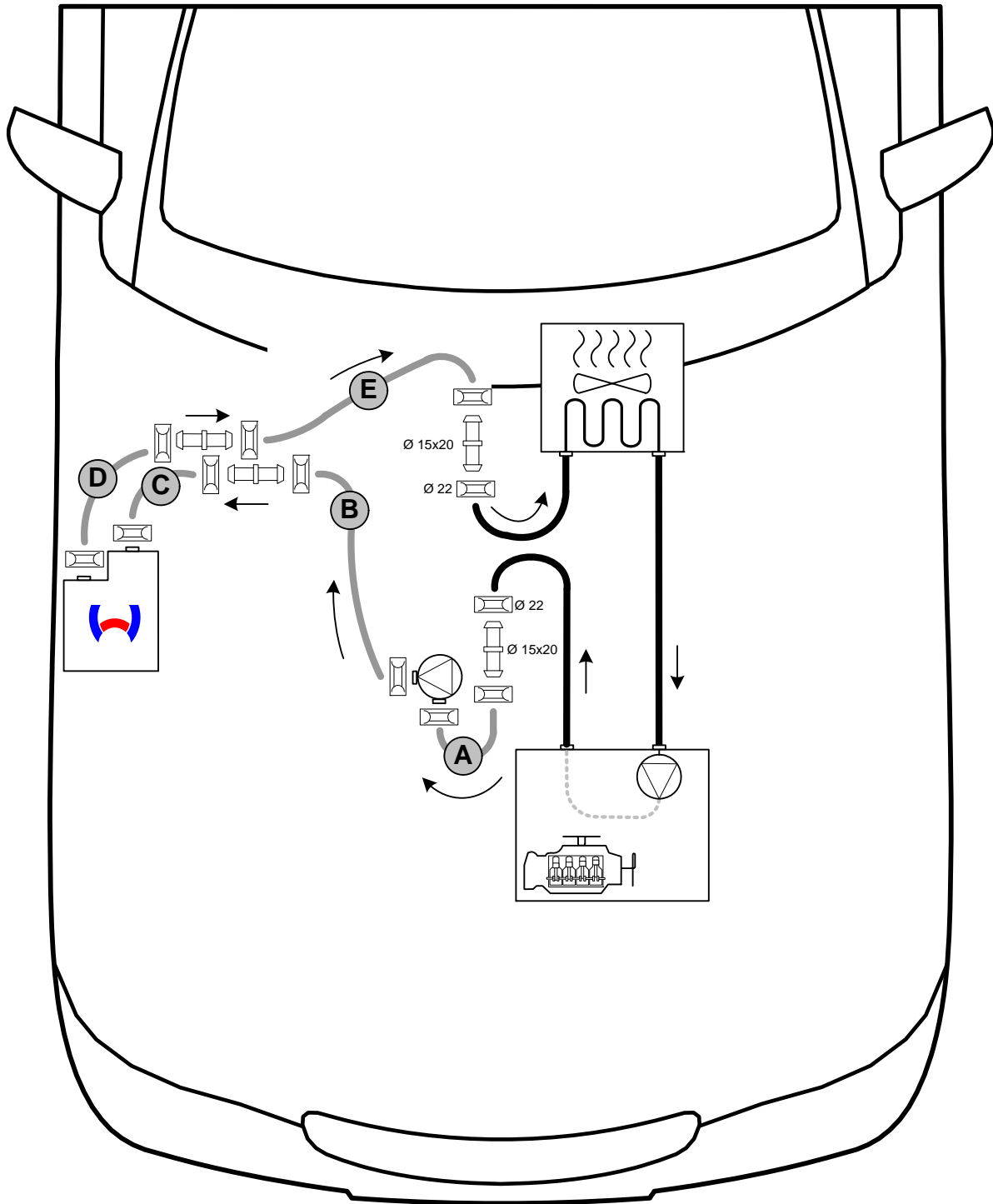
**Installing
cover**



Coolant circuit 2.0 I

WARNING!

Any coolant running off should be collected using an appropriate container!
 Route coolant hoses kink-free! Unless specified otherwise, always fasten using cable ties. Position hose clamps and spring band clamps so that no other hose can be damaged.
 The connection should be "inline" based on the following diagram:



Hose routing diagram

All clamps without a specific designation = 27 mm dia. spring clips.
 All connecting pipes without a specific designation = 20x20mm dia.



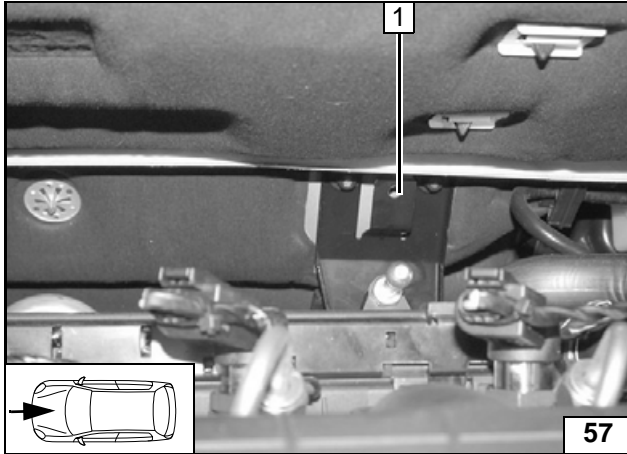
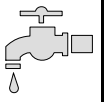
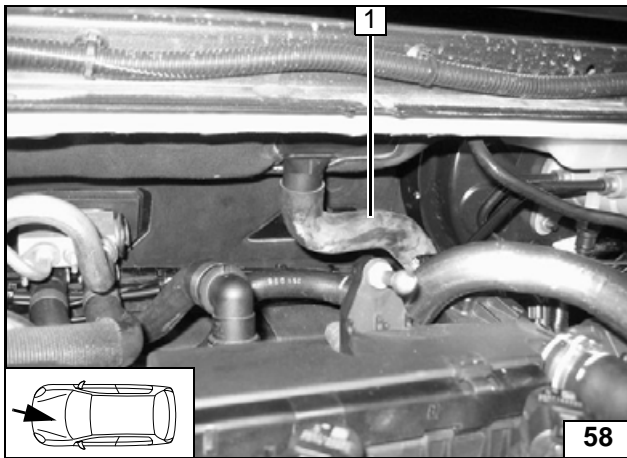


Photo shows S-MAX/Galaxy.
Remove hose bracket 1; will be reused.



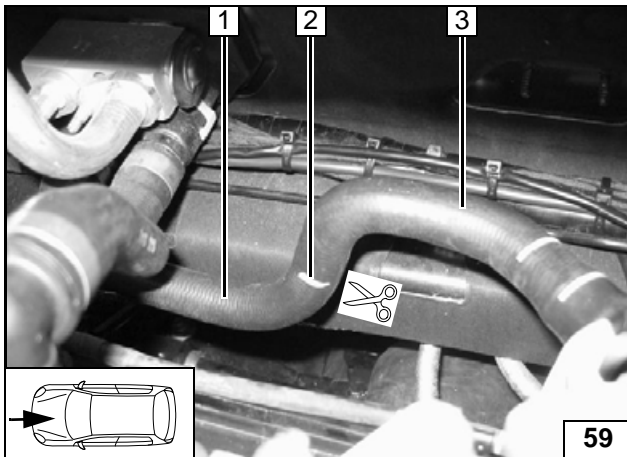
Preliminary work



Unclip water drain hose 1; will be reused.

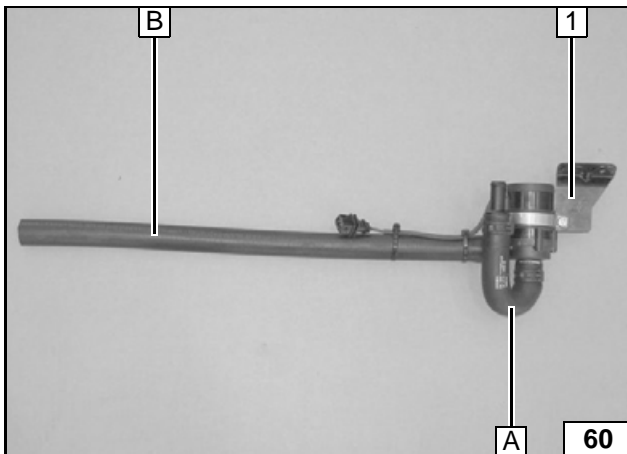


Preliminary work



- 1 Hose section of heat exchanger inlet
- 2 Cutting point
- 3 Engine outlet hose section

Cutting point

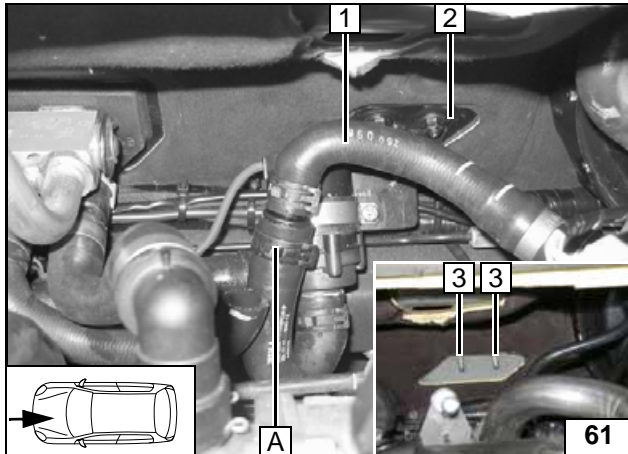
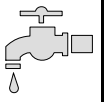


Install moulded hose A.

- 1 Premount circulating pump



Premounting circulating pump

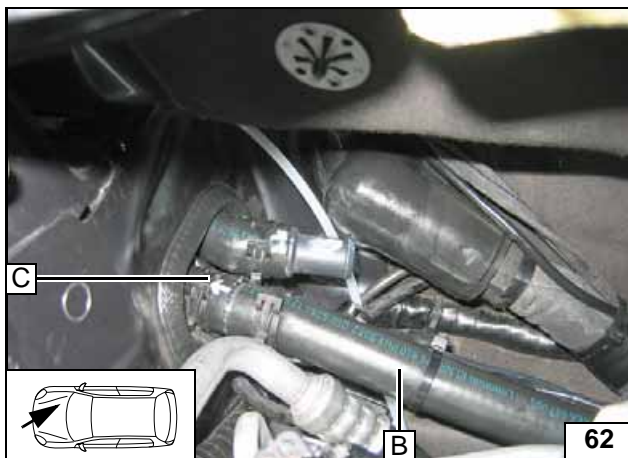


See coolant connection diagram.
Installation is carried out on original vehicle stud bolt **3** [2x]!

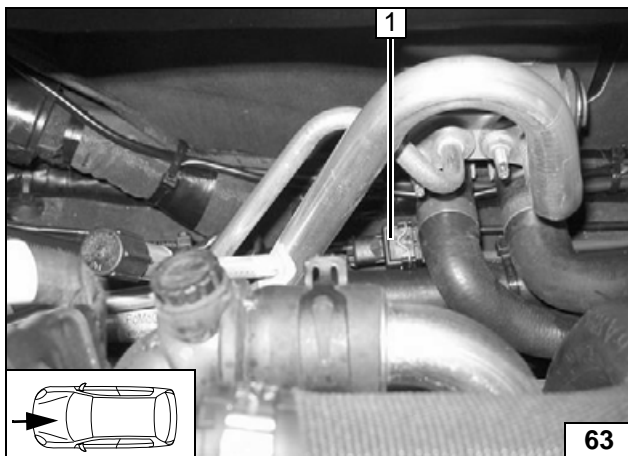
- 1** Hose section on engine outlet
- 2** Bracket of circulating pump, plastic nuts [2x]



**Connec-
tion to en-
gine outlet**



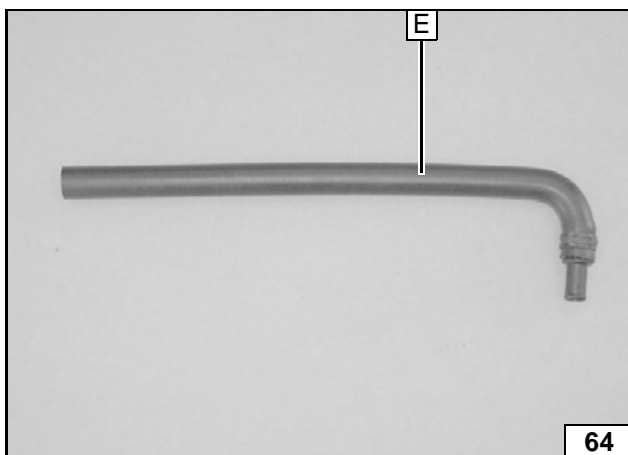
**Connec-
tion of
heater inlet**



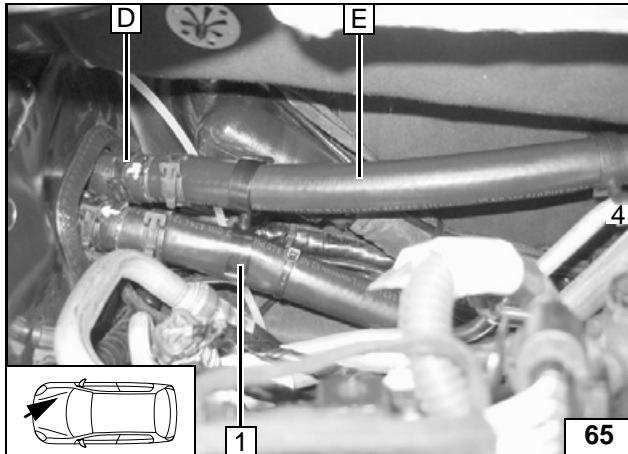
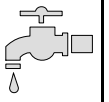
- 1** Adapter wiring harness of circulating pump, cable of circulating pump



**Connect-
ing adapter
wiring har-
ness of cir-
culating
pump**



**Moulded
hose E**

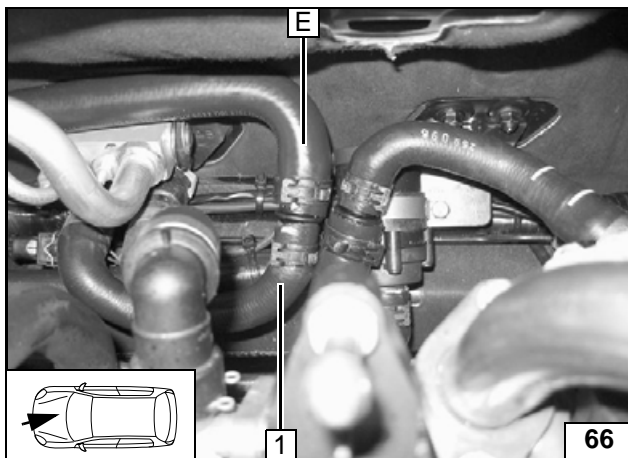


See coolant connection diagram.

1 Hose bracket



Con-
nection of
heater out-
let

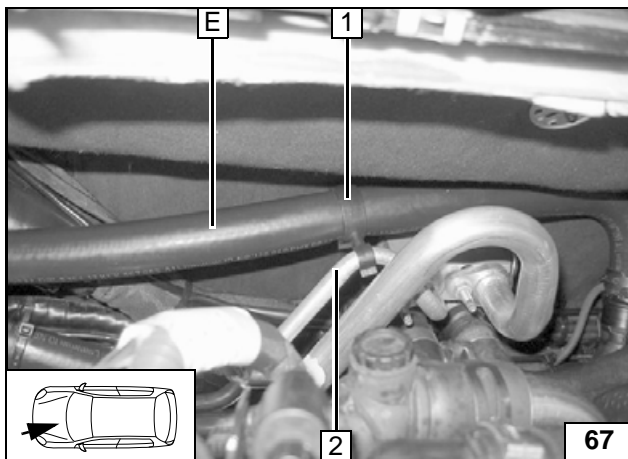


Before connecting, fill the coolant hoses with coolant.

1 Hose section on heat exchanger inlet



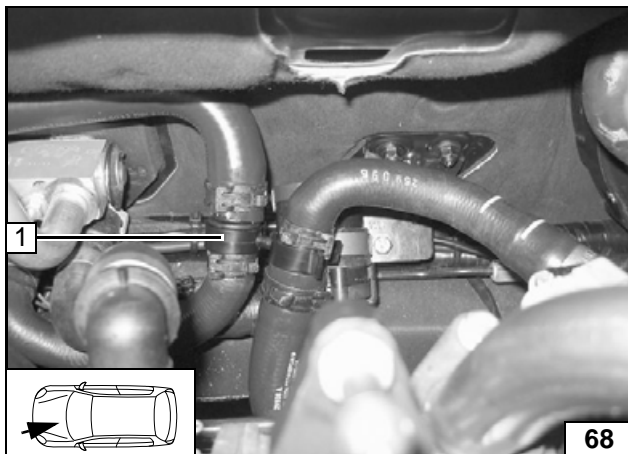
Con-
nection to heat
exchanger
inlet



Install hose bracket 1 between hose E and A/C line 2.



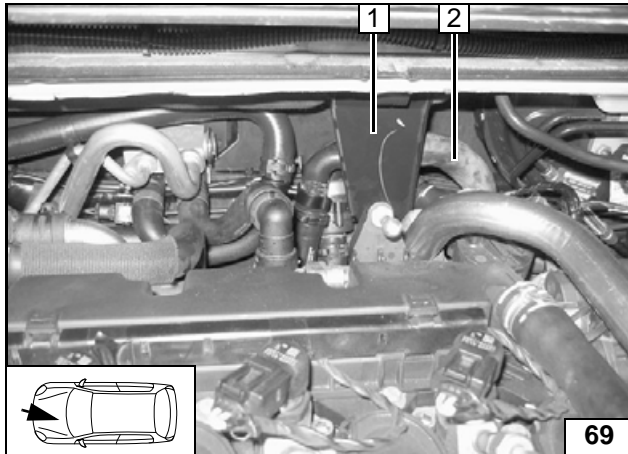
Install-
ing
hose
bracket



Mount hose bracket 1 as shown.



Install-
ing
hose
bracket



- 1 Hose bracket
- 2 Water drain hose

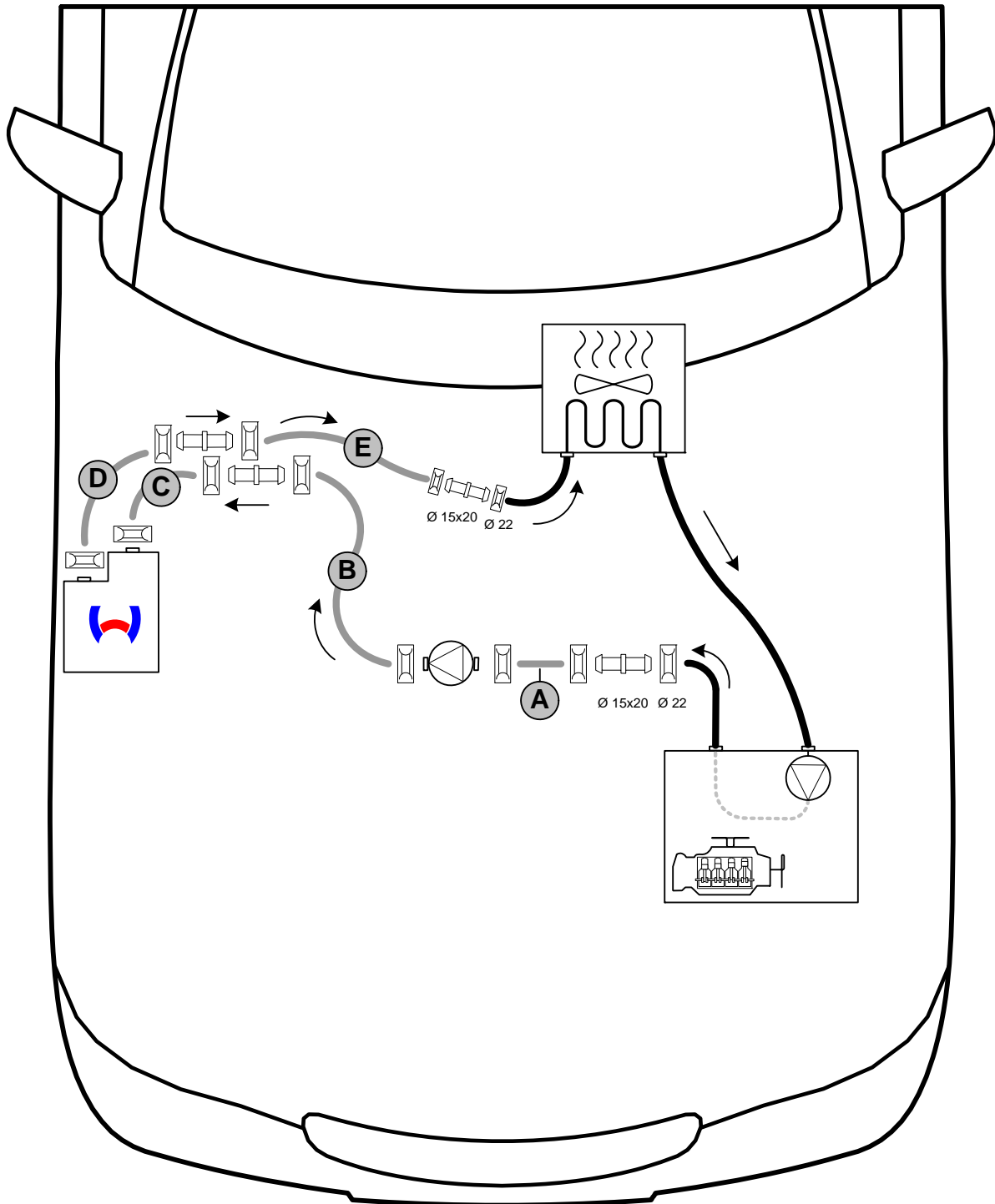
**Installing
hose
bracket
and water
drain**



Coolant circuit 2.2 l

WARNING!

Any coolant running off should be collected using an appropriate container!
Route coolant hoses kink-free! Unless specified otherwise, always fasten using cable ties. Position hose clamps and spring band clamps so that no other hose can be damaged.
The connection should be "inline" based on the following diagram:



Hose routing diagram

All clamps without a specific designation = 27 mm dia. spring clips.
All connecting pipes without a specific designation = 20x20mm dia.



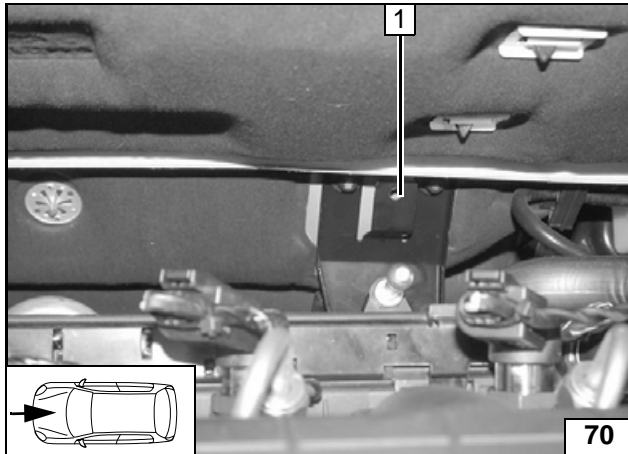
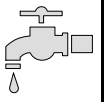
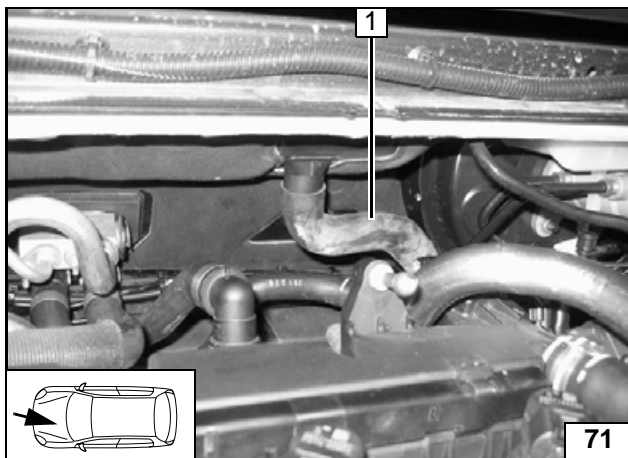


Photo shows S-MAX/Galaxy. Remove hose bracket 1; will be reused. [if present]



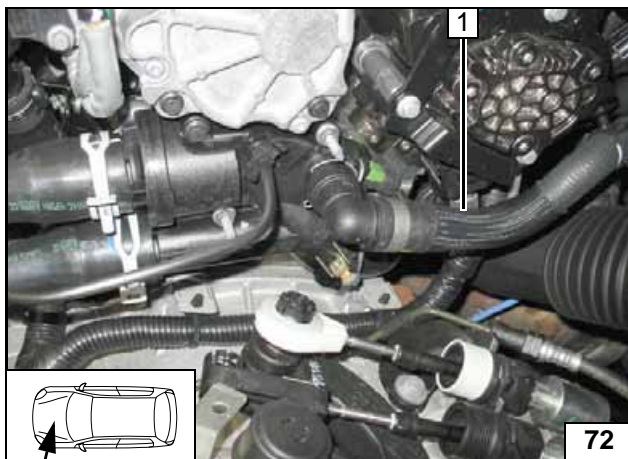
Preliminary work



Unclip water drain hose 1; will be reused.



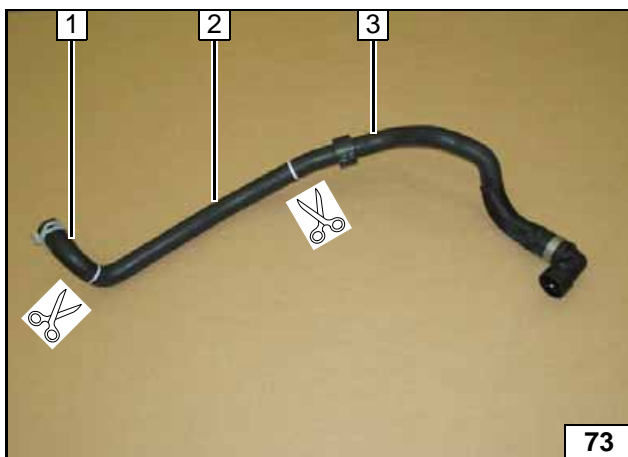
Preliminary work



Remove hose 1 from engine outlet to heat exchanger inlet.

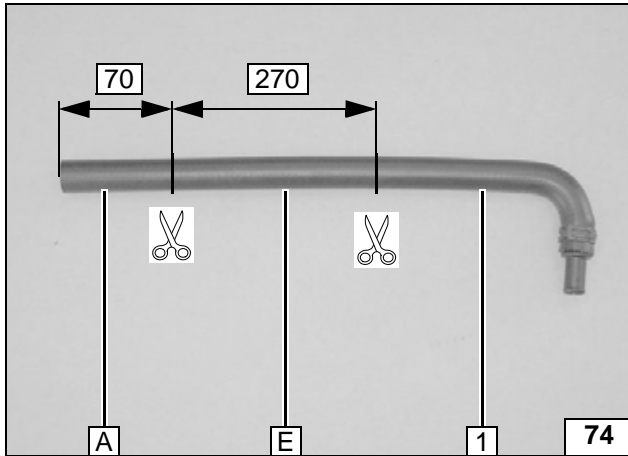


Removing hose



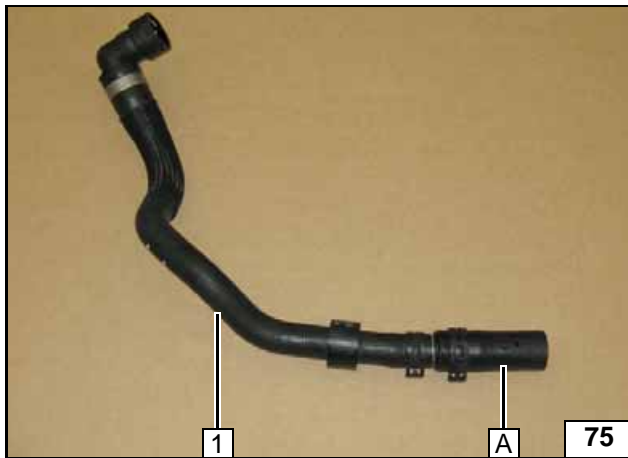
- 1 Hose section of heat exchanger inlet
- 2 Discard hose section
- 3 Engine outlet hose section

Separating hose



1 Discard hose section

Cutting moulded hose to length



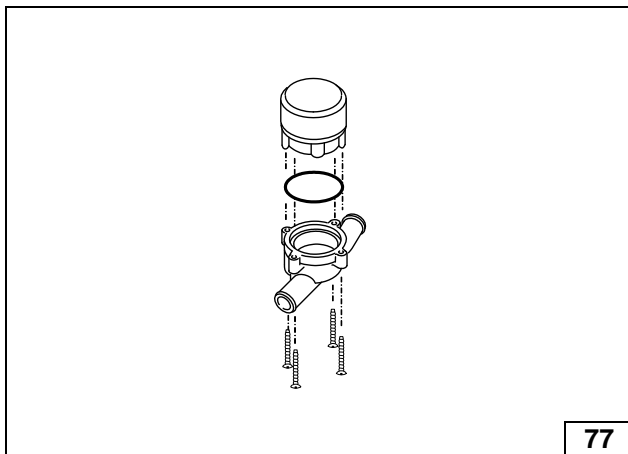
1 Engine outlet hose section

Preparing hose section



1 Hose section of heat exchanger inlet

Preparing hose section



Replace axial cover of circulating pump with 193° cover.

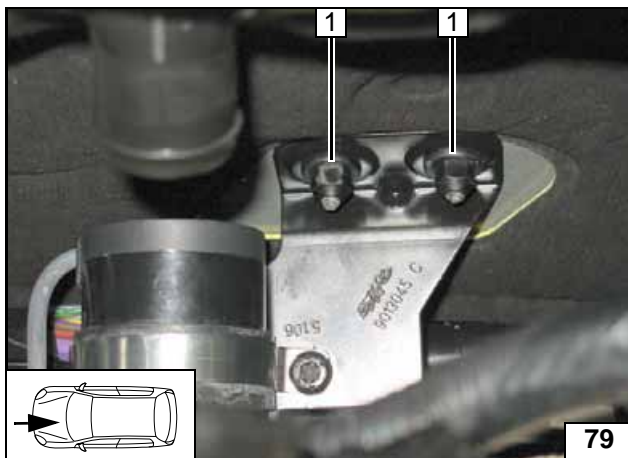
Replacing circulating pump cover



1 Pre-mount circulating pump



Premounting circulating pump

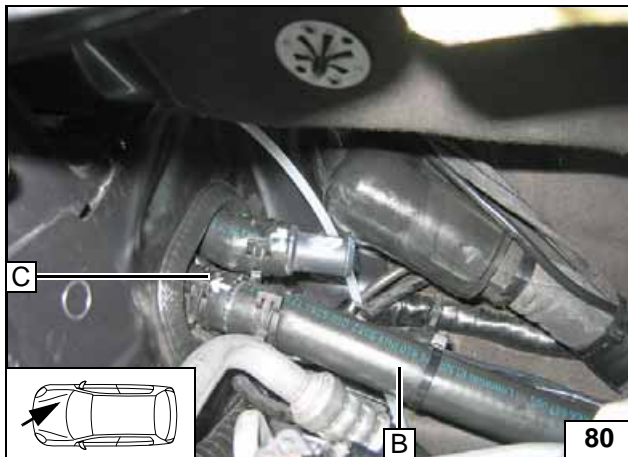


See coolant connection diagram. Installation is carried out on original vehicle stud bolt 1 [2x].

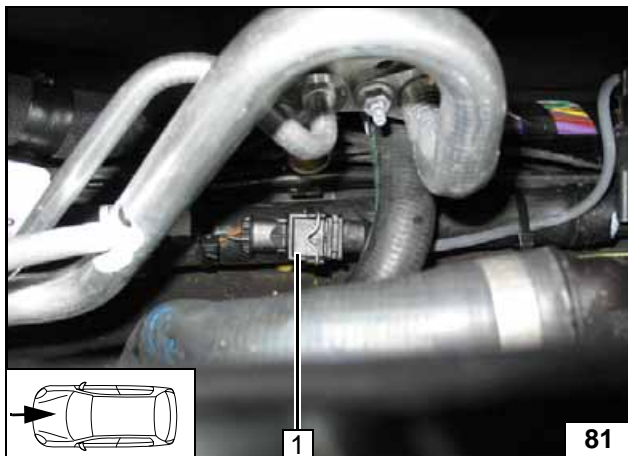


1 Bracket of circulating pump, plastic nuts [2x]

Installing circulating pump

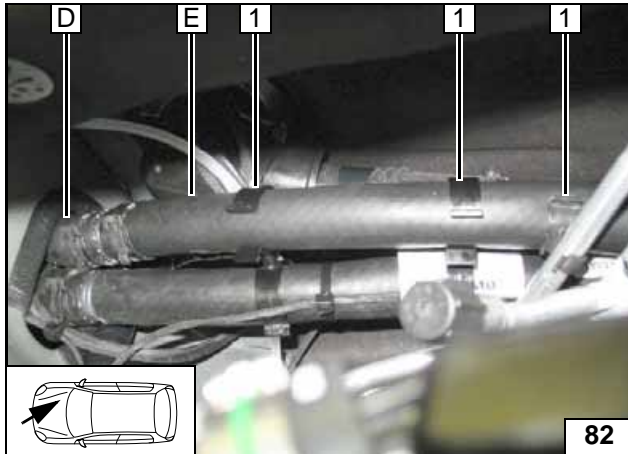
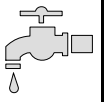


Connection of heater inlet



1 Adapter wiring harness of circulating pump, cable of circulating pump

Connecting adapter wiring harness of circulating pump

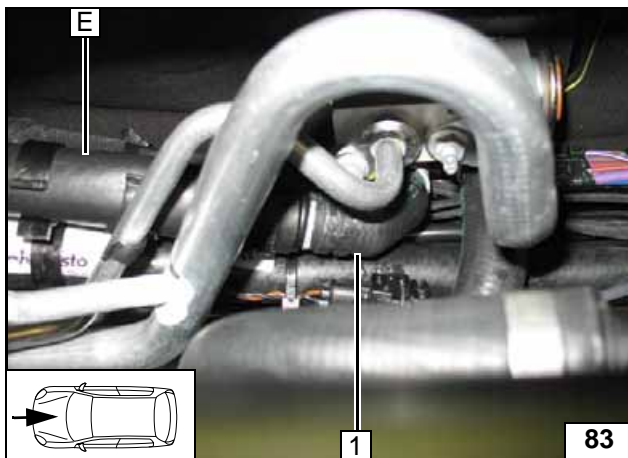


See coolant connection diagram.

1 Hose bracket [3x]

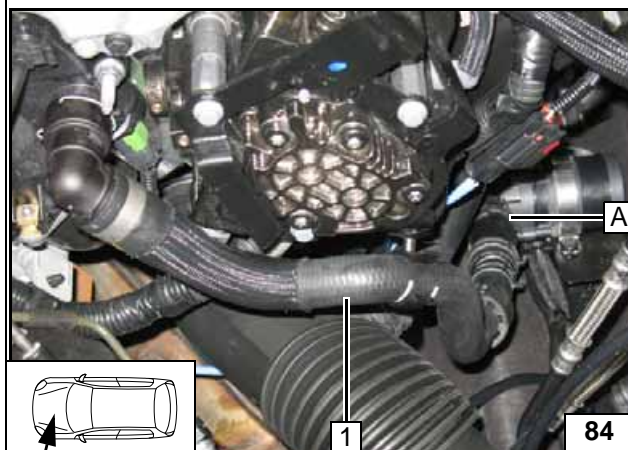


Con-
nection
of
heater out-
let



1 Hose section of heat exchanger inlet

Connect-
ing heat
exchanger
inlet

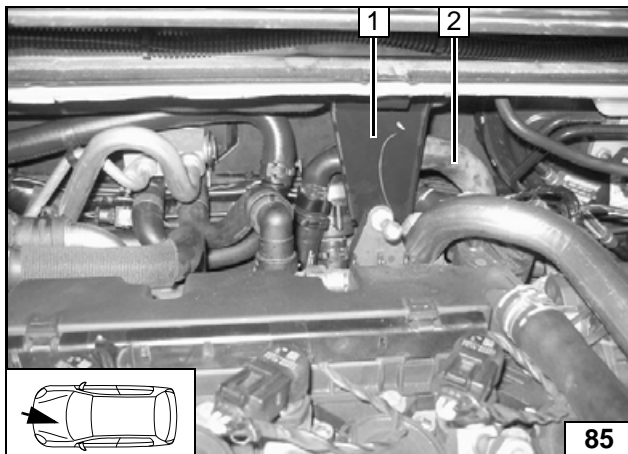


Before connecting, fill the coolant hoses with coolant.

1 Engine outlet hose section

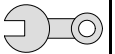


Con-
nection to en-
gine outlet



1 Hose bracket
2 Water drain hose

Install-
ing
hose
bracket
and water
drain

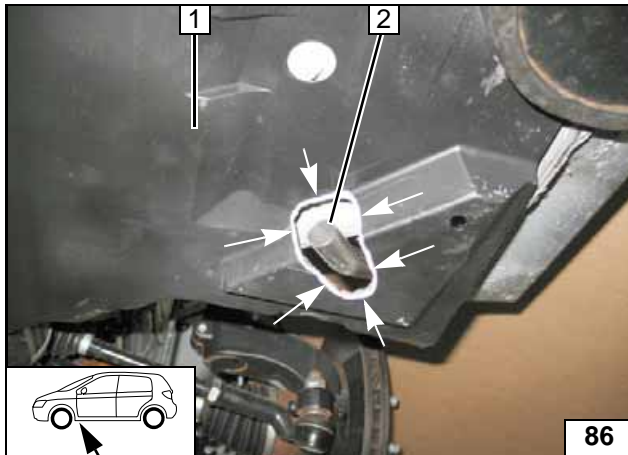


Final Work

WARNING!

Mount removed parts in reverse order.
 Check all hoses, clamps and all electrical connections for firm seating.
 Secure all loose cables using cable ties.
 Only use manufacturer-approved coolant.
 Spray heater components with anti-corrosion wax (Tectyl 100K, Order No. 111329).

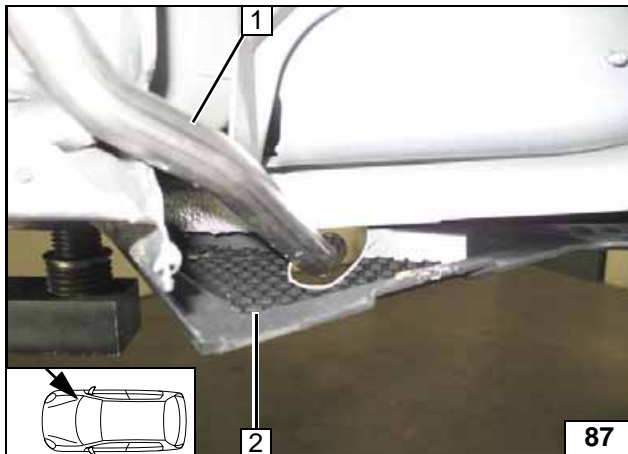
- Connect the battery.
- Fill and bleed the coolant circuit according to the vehicle manufacturer's specifications.
- Bleed the fuel system according to the manufacturer's instructions.
- Set the digital timer.
- Make A/C control panel adjustments according to "operating instructions"
- Check the proper operation of the parking heater, see the "operating instructions".
- Place signboard "Switch off parking heater before refuelling" in the area of the filling connecting piece
- Decode the radio according to the manufacturer's instructions



Cut out at marking in lower trim **1** (if installed) in area of exhaust outlet **2**.



**Cutting out
underride
protection**



Ensure sufficient distance to neighbouring components.

- 1** Exhaust outlet
- 2** Lower trim



**Exhaust
outlet**



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