MEGANE

6 Air conditioning

61A HEATING

62A AIR CONDITIONING

62B REGULATED AIR CONDITIONING

62C NON-REGULATED AIR CONDITIONING

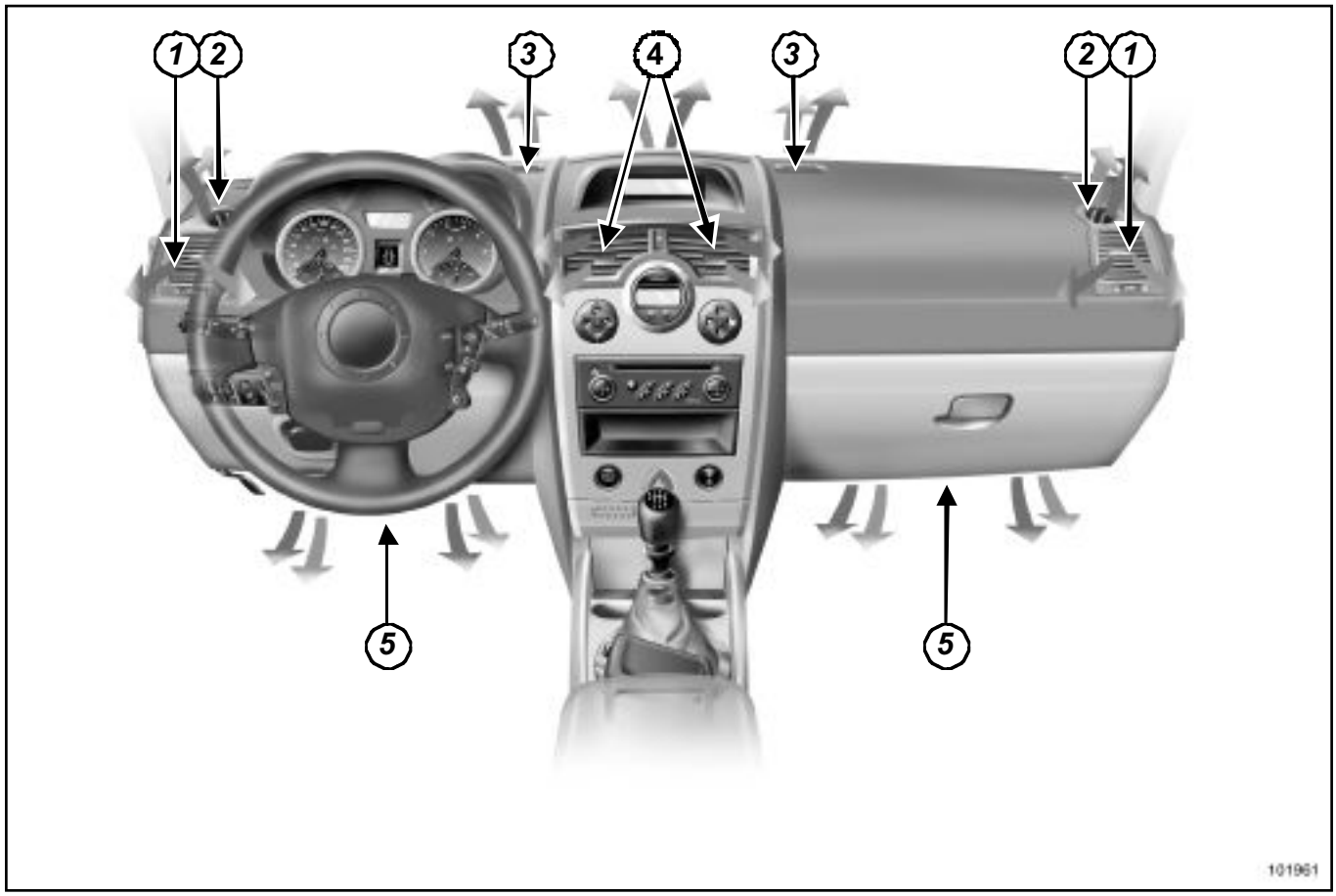
X84, and B84 or C84 or G84 or S84

77 11 318 082 **MARCH 2003** **Edition Anglaise**

Mégane II / Section 6

Contents

Contents



101961

(**1**) Side vents

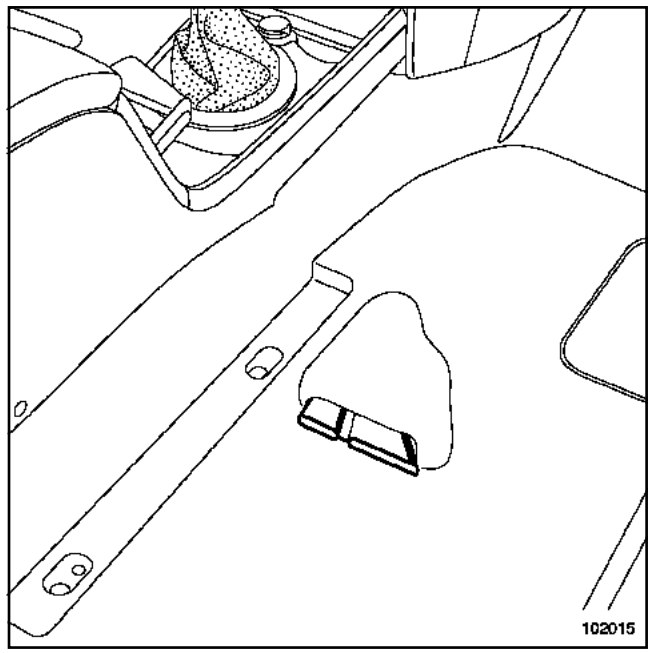
(**2**) Side window demisting vents

(**3**) Windscreen demisting vents

(**4**) Centre air vents

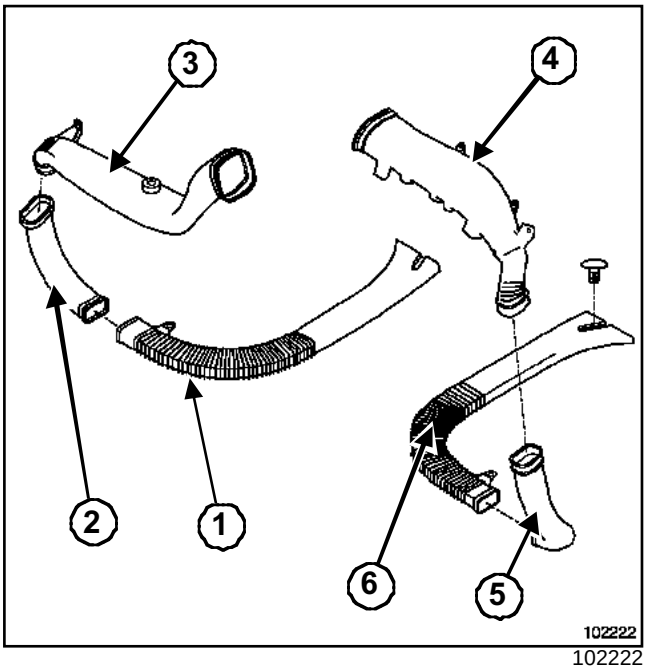
(**5**) Footwell heater outlet

Rear seat footwell heater vent



102015

Air distribution ducts



102222

(**1**) Right rear-hand footwell air duct

(**2**) Right intermediate duct

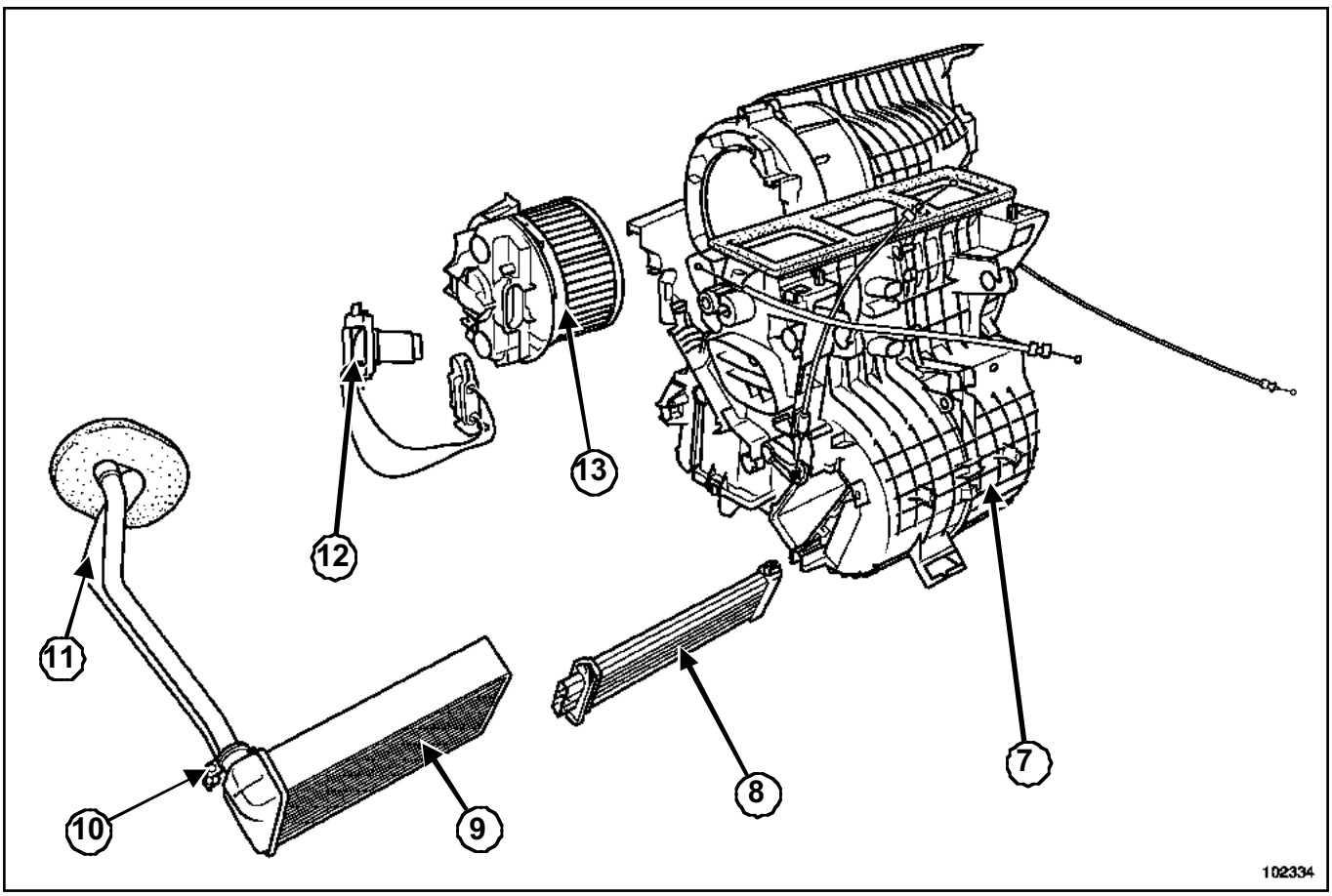
(**3**) Right-hand front footwell air duct

(**4**) Left-hand front footwell air duct

(**5**) Left intermediate duct

(**6**) Right rear footwell air duct

Heating unit



102334

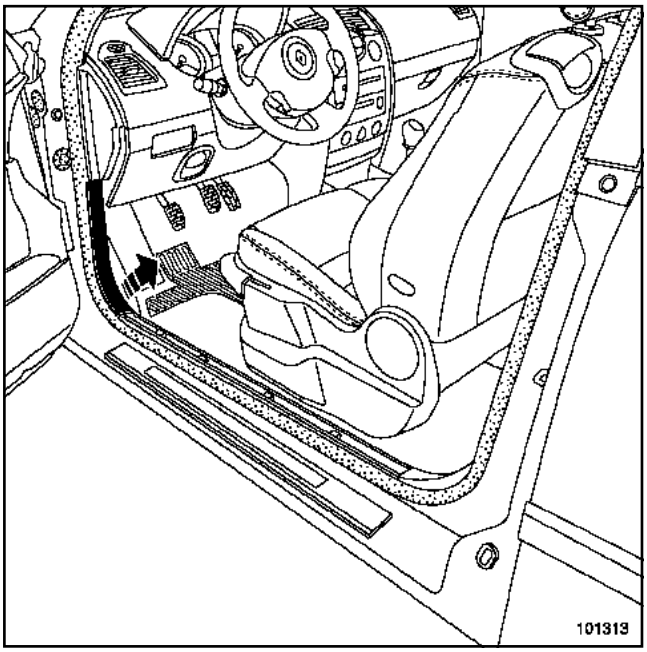
(**7**)	Air distribution unit
(**8**)	Heating resistor unit
(**9**)	Heater radiator
(**10**)	Heater radiator clip
(**11**)	Heater radiator pipes
(**12**)	Passenger compartment fan unit resistor unit
(**13**)	Passenger compartment fan

LEFT-HAND DRIVE

Tightening torques ▽	
battery cover bolts to a torque of	**0.4 daNm**

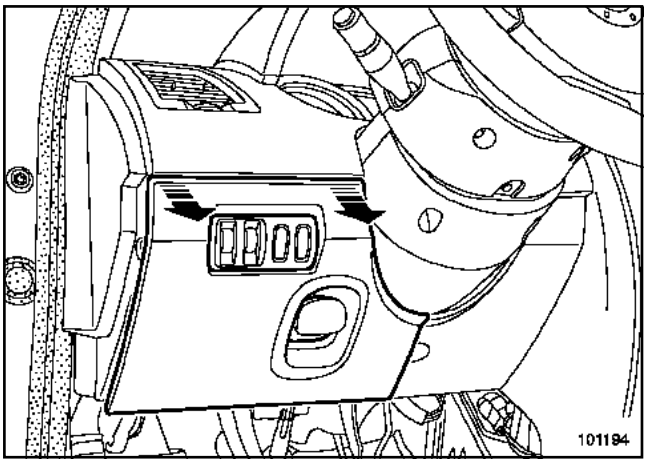
REMOVAL

Disconnect the battery starting with the negative terminal.



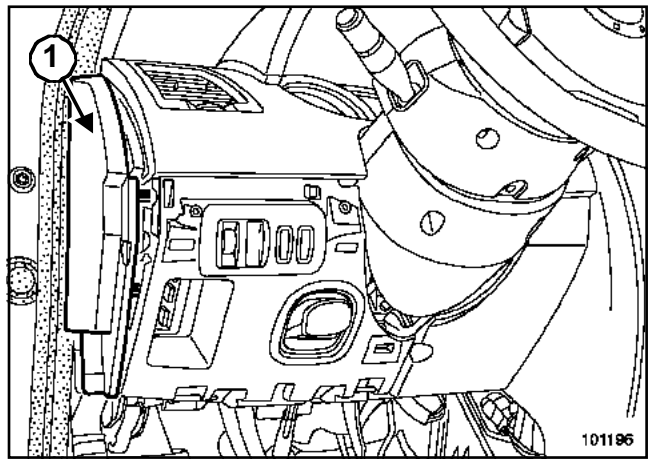
101313

Remove the front door sill lining (upper section) (Section **Body interior trim**).



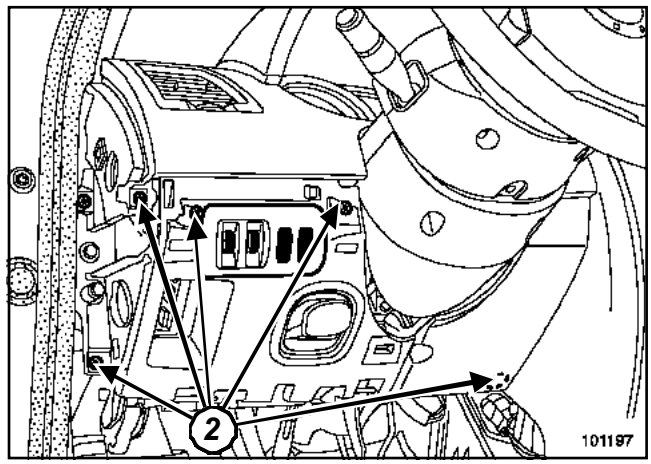
101194

Unclip the lower housing access flap.



101196

Unclip the side panel (**1**).



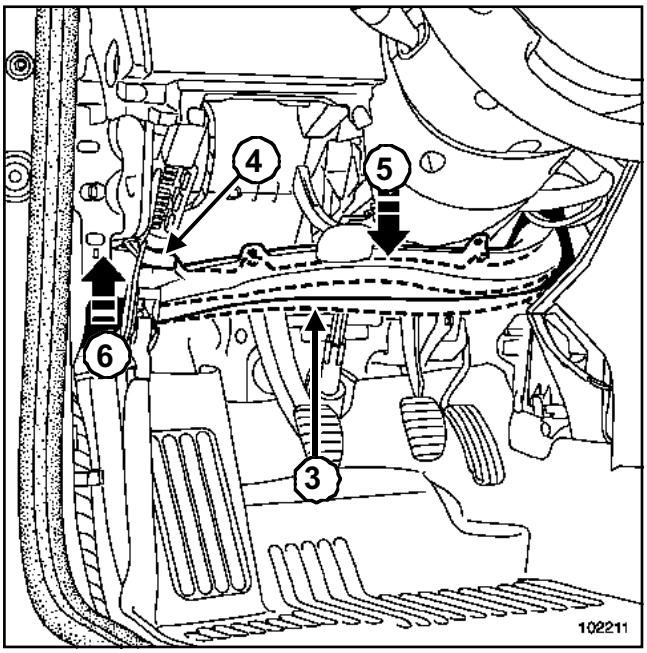
101197

Remove the mounting bolts (**2**).

Disconnect the headlight adjustment control connectors.

Remove the assembly.

LEFT-HAND DRIVE



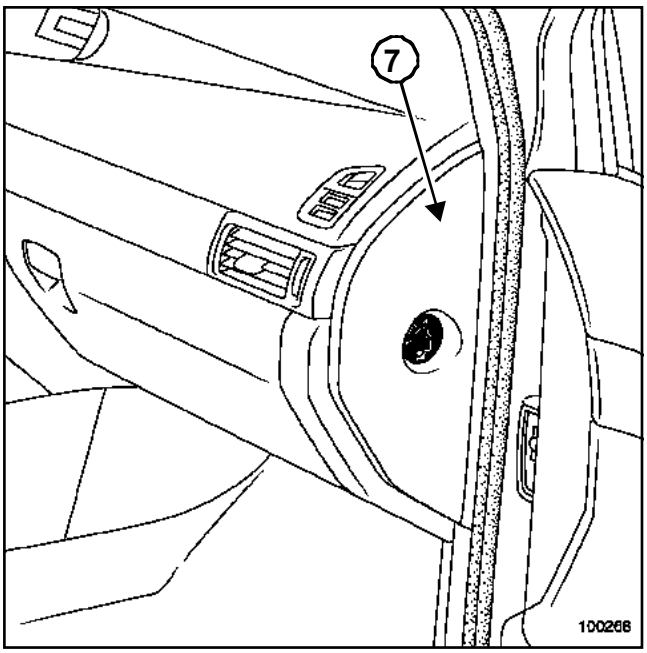
102211

Remove the air duct (**3**).

Unclip the air duct (**3**) at (**4**).

Bend the air duct (**3**) downwards (**5**).

Lift the air duct at (**6**).

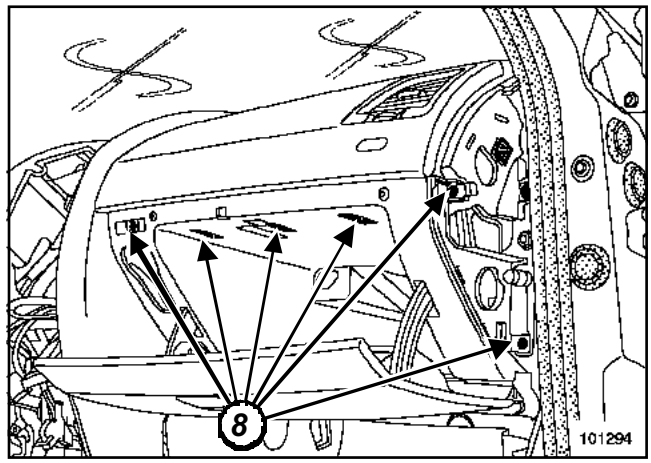


100268

Remove:

- the front door sill lining (upper section) (Section **Body interior trim**),
- the dashboard side panel.

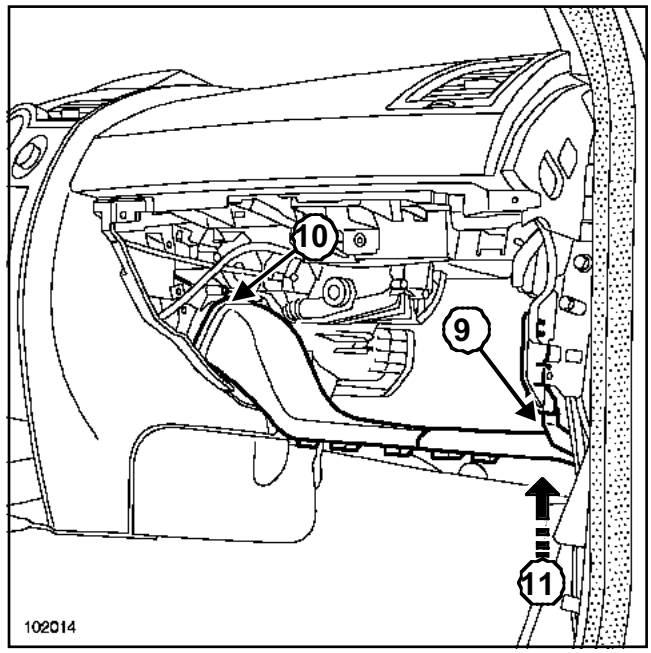
Unclip the passenger airbag inhibitor switch.



101294

Remove:

- the glove compartment mounting bolts (**8**),
- the glove compartment.



102014

Disconnect:

- the air duct at (**9**),
- the air duct at (**10**).

Lift the air duct at (**11**).

REFITTING

To refit, proceed in the reverse order of removal.

When refitting the air ducts, reshape them using a small screwdriver if they have been deformed or bent

LEFT-HAND DRIVE

(insert the screwdriver into the air outlet holes, and unfold it by tightening it by hand).

WARNING
Connect the battery; carry out the necessary programming (Section **Battery**).

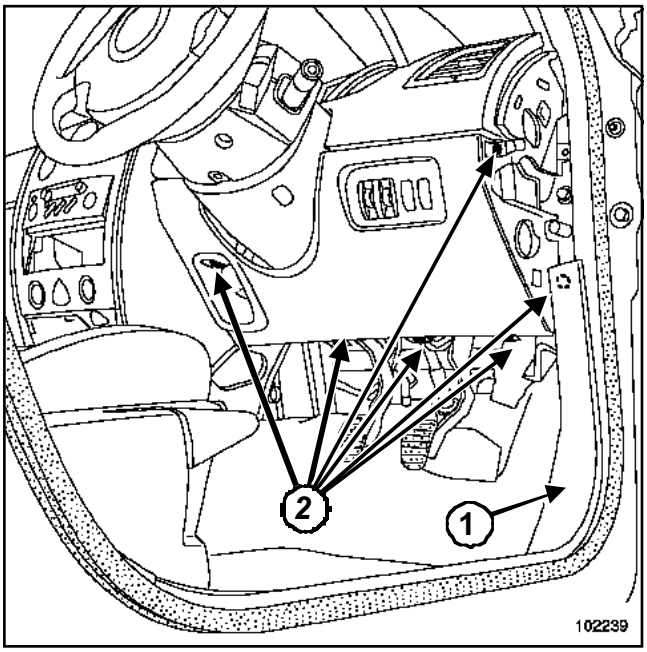
Tighten the **battery cover bolts to a torque of (0.4 daNm)**.

RIGHT-HAND DRIVE

Tightening torques ▽	
battery cover bolts to a torque of	**0.4 daNm**

REMOVAL

Disconnect the battery starting with the negative terminal.



102239

Remove the front door sill lining (**1**) (upper section) (Section **Body interior trim**).

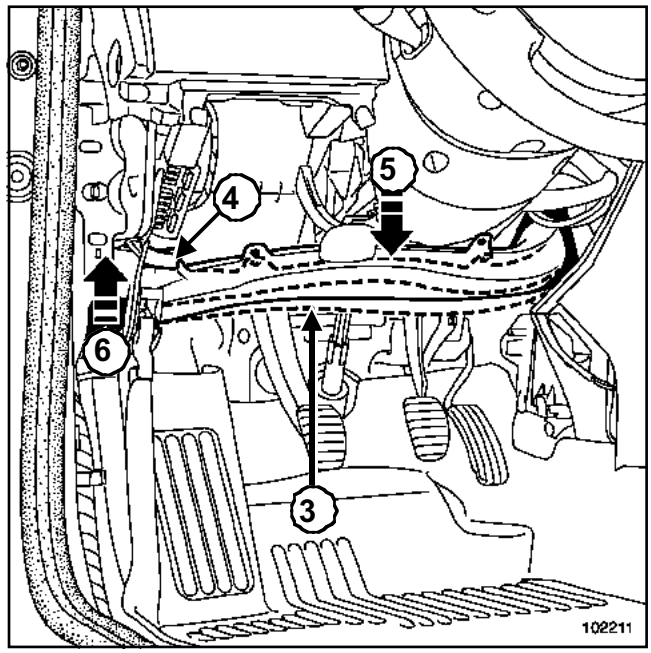
Unclip the passenger airbag inhibitor switch.

Unclip the side panel.

Disconnect the headlight adjustment control connectors.

Remove the mounting bolts.

Remove the assembly.



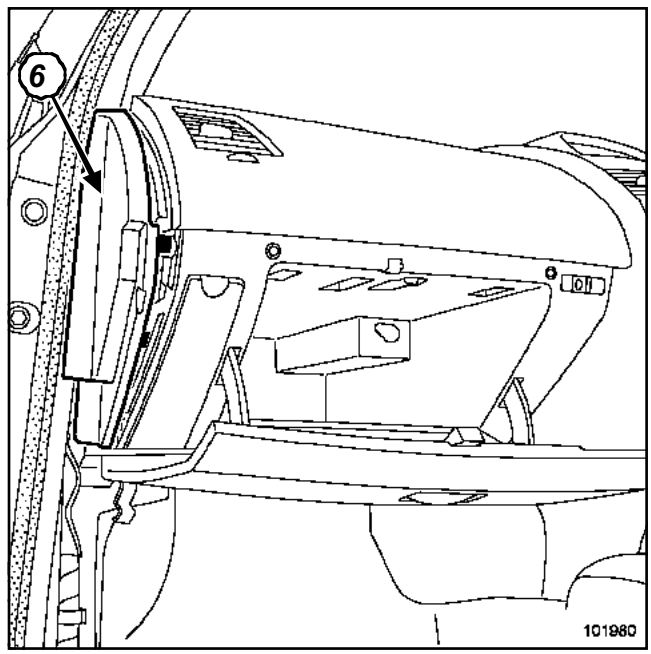
102211

Remove the air duct (**3**).

Unclip the air duct (**3**) at (**4**)

Fold the air duct (**3**) down at (**5**).

Lift the air duct (**3**) at (**6**).

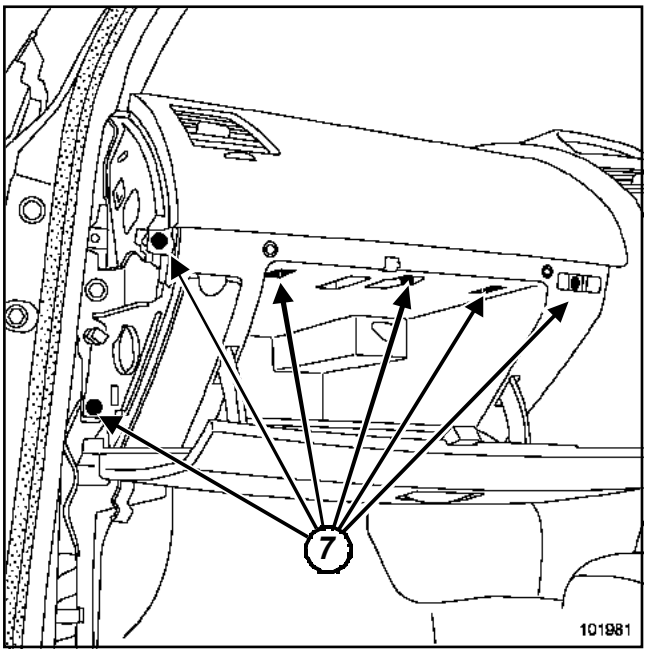


101980

Remove:

- the front door sill lining (upper section) (Section **Body interior trim**),
- the dashboard side panel (**6**).

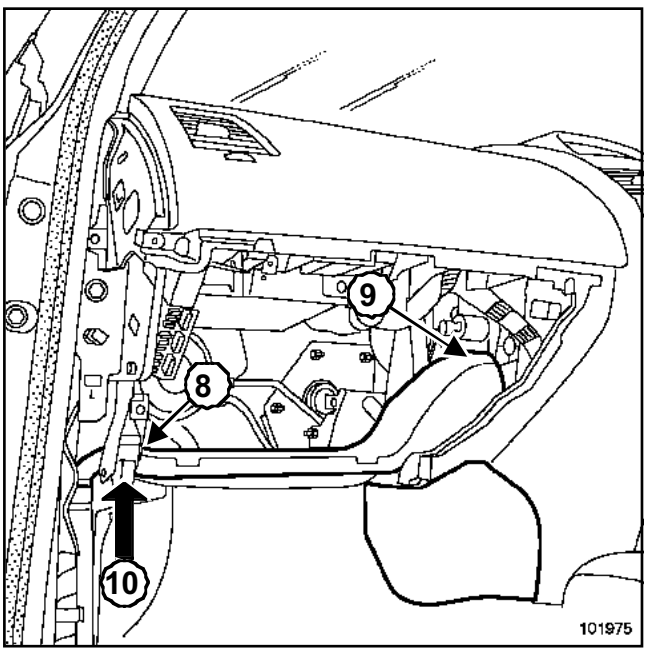
RIGHT-HAND DRIVE



101981

Remove:

- the glove compartment mounting bolts (**7**),
- the glove compartment.



101975

Disconnect:

- the air duct at (**8**),
- the air duct at (**9**).

Lift the air duct at (**10**).

REFITTING

To refit, proceed in the reverse order of removal.

When refitting the air ducts, reshape them using a small screwdriver if they have been deformed or bent (insert the screwdriver into the air outlet holes, and unfold it by tightening it by hand).

WARNING
Connect the battery; carry out the necessary programming (Section **Battery**).

Tighten the **battery cover bolts to a torque of (0.4 daNm)**.

Tightening torques ▽	
battery cover bolts to a torque of	**0.4 daNm**

Operations are the same for both sides of the vehicle.

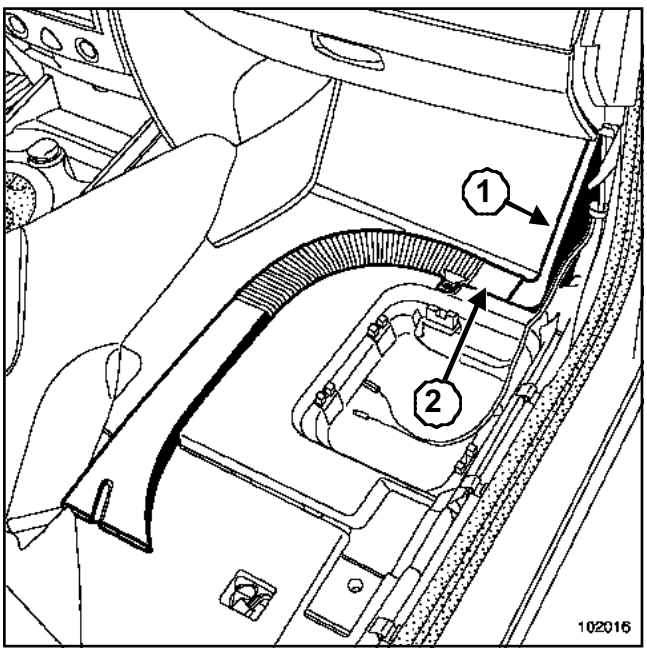
REMOVAL

Disconnect the battery starting with the negative terminal.

Remove:

- the front air distribution duct (Section Heating, Front air distribution duct, page **61A-4**),

- the carpet (partially).



102016

Remove the intermediary air distribution duct (**1**) from the rear air distribution duct (**2**) by tilting it towards the interior.

REFITTING

Proceed in the reverse order to removal.

WARNING
Connect the battery; carry out the necessary programming (Section **Battery**).

Tighten the **battery cover bolts to a torque of (0.4 daNm)**.

Essential equipment
diagnostic tool

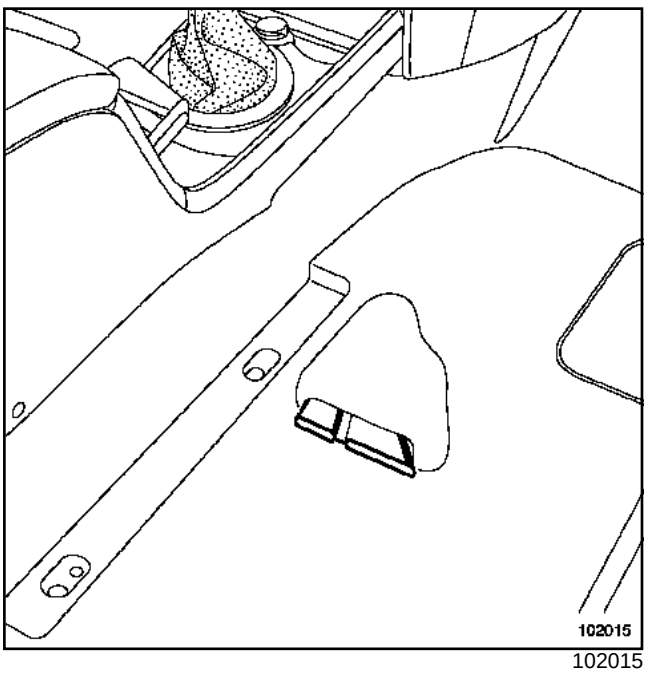
Tightening torques ▽	
battery cover bolts to a torque of	**0.4 daNm**

Operations are identical on both sides of the vehicle.

WARNING
Before any operation on the airbag system, the airbag computer must be locked using the diagnostic tool**diagnostic tool** (Section **Airbag and Pretensioners**).

REMOVAL

Disconnect the battery starting with the negative terminal.

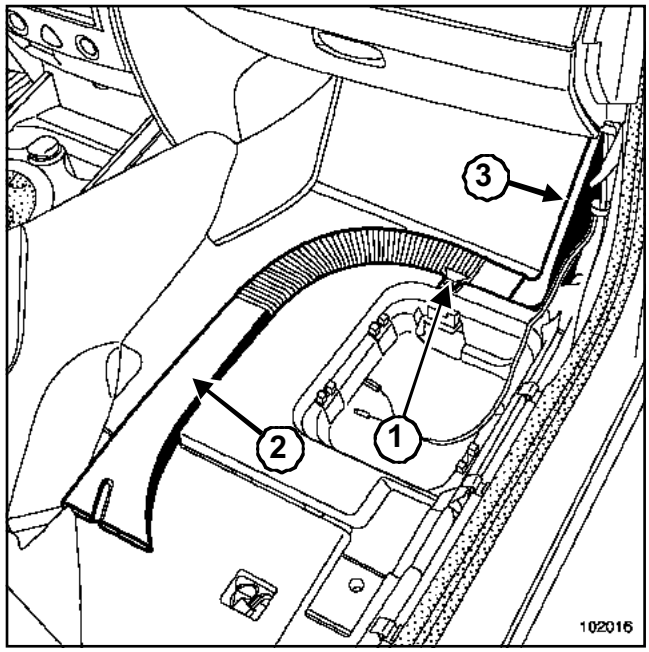


102015

Remove:

- the front seat concerned (Section **Front seat frames and runners**),
- the front door sill lining (upper section) concerned (Section **General information**),
- the front door sill lining (front section) concerned (Section **General information**).

Partially remove the front carpet.



102016

Remove the attachment (**1**).

Lift the rear air duct (**2**).

Remove the rear air duct (**2**) from the intermediate duct (**3**).

REFITTING

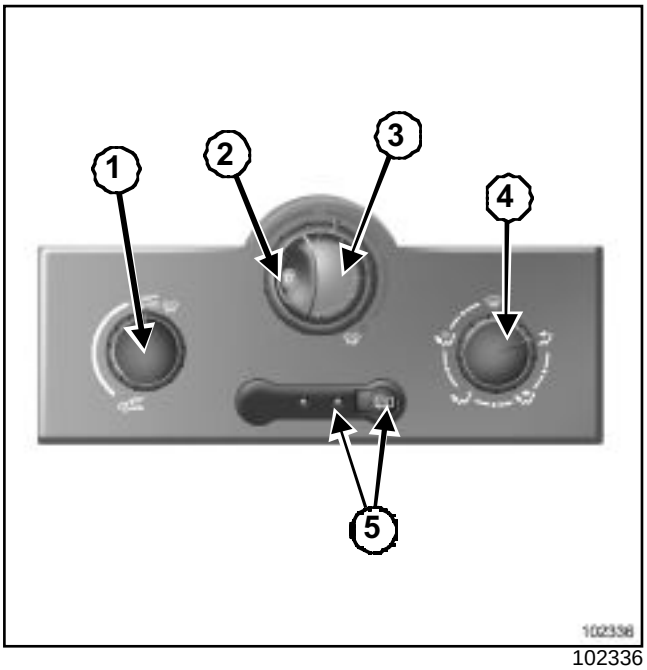
To refit, proceed in the reverse order of removal.

IMPORTANT
Restart the airbag computer using**diagnostic tool** (Section **Airbag and Pretensioners**).

WARNING
Connect the battery; carry out the necessary programming (Section **Battery**).

Tighten the **battery cover bolts to a torque of (0.4 daNm)**.

I - DESCRIPTION



102336

(**1**) Air recirculation control

(**2**) Air temperature adjustment

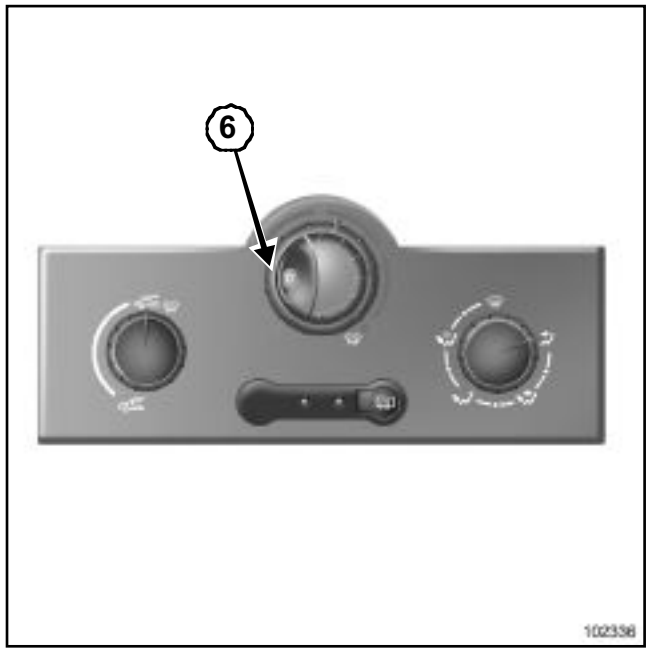
(**3**) Blower speed adjustment

(**4**) Adjustment of air distribution in the passenger compartment

(**5**) De-icer and rear screen demisting and de-icing of heated door mirrors (if installed) control and indicator light)

II - OPERATING PRINCIPLE

1 - Air temperature adjustment



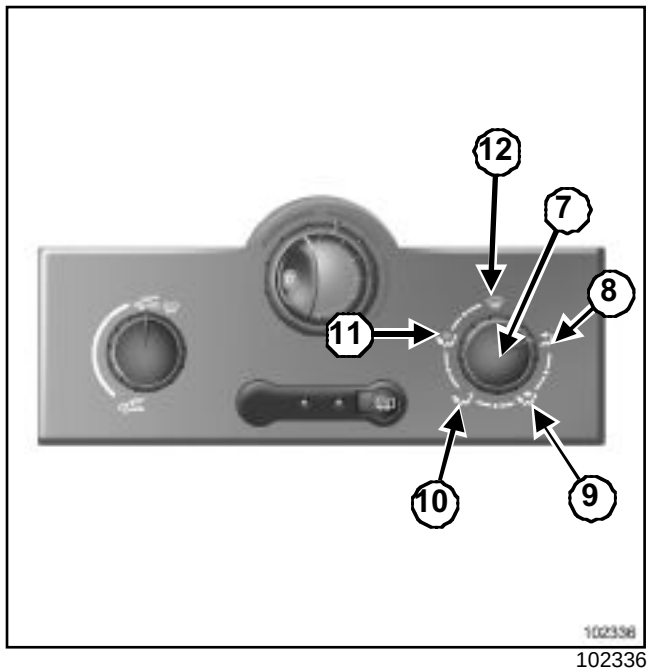
102336

Turn the control (**6**) to the desired temperature.

Note:

The farther the cursor is in the red, the higher the temperature.

2 - Distribution of air in the passenger compartment



102336

- Move control (**7**) to position the cursor opposite marked settings:

Setting (**8**) :

• the air flow is directed only to all the vents,

Setting (**9**) :

• The air flow is directed towards the air and foot vents (this position is advisable for improved comfort in warm weather conditions),

Setting (**10**) :

• the air flow is directed only to the footwells,

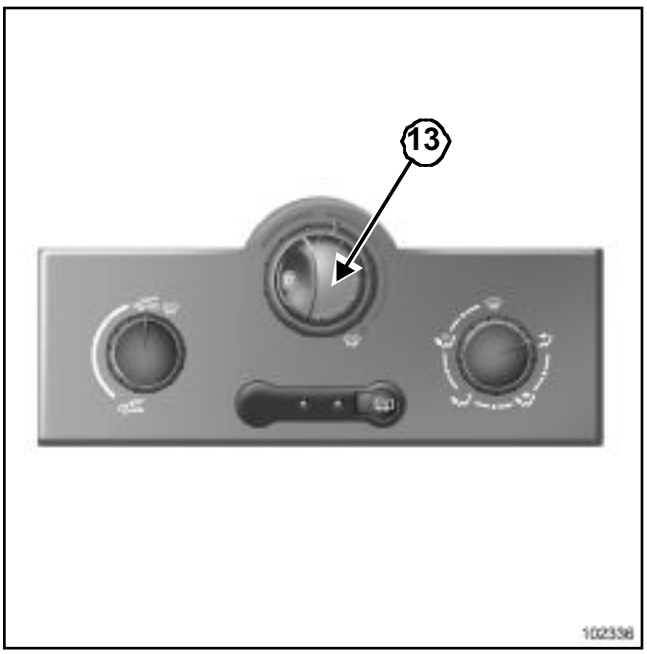
Setting (**11**) :

• the air flow is distributed between the windscreen demisting vents, the side window vents and the footwell vents (this position is advisable for improved comfort in cold weather conditions),

Setting (**12**) :

• the air flow is directed to the windscreen and side-window demisting vents.

3 - Blower speed adjustment



102336

Normal use:

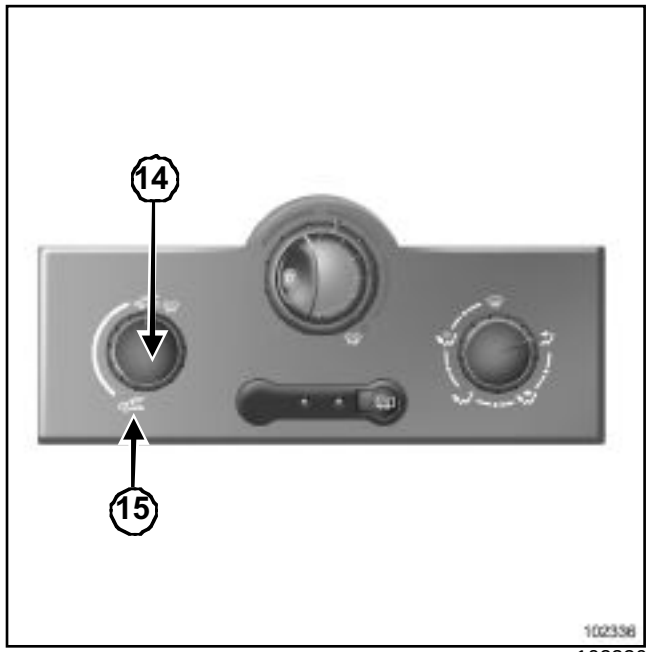
- Turn the control (**13**) to one of the four settings to turn on the ventilation and adjust the output,

- Select 1 for minimum and 4 for maximum ventilation.

Setting 0:

- In this setting, no air is blown into the passenger compartment. Nonetheless, there is a slight flow of air when the vehicle is moving. This setting should be avoided during normal use.

4 - Selection of air recirculation (with passenger-compartment isolation)



102336

Turn control(**14**) towards air recirculation symbol (**15**). The air blown into the passenger compartment is recirculated without drawing in air from the outside.

Recirculation can:

- isolate the passenger compartment from the external atmosphere (e.g. when driving in polluted areas, etc.),

- reach the desired temperature in the passenger compartment more quickly.

Note:

- Prolonged use of this setting may lead to the formation of condensation on the windows and odours due to the air not being renewed.

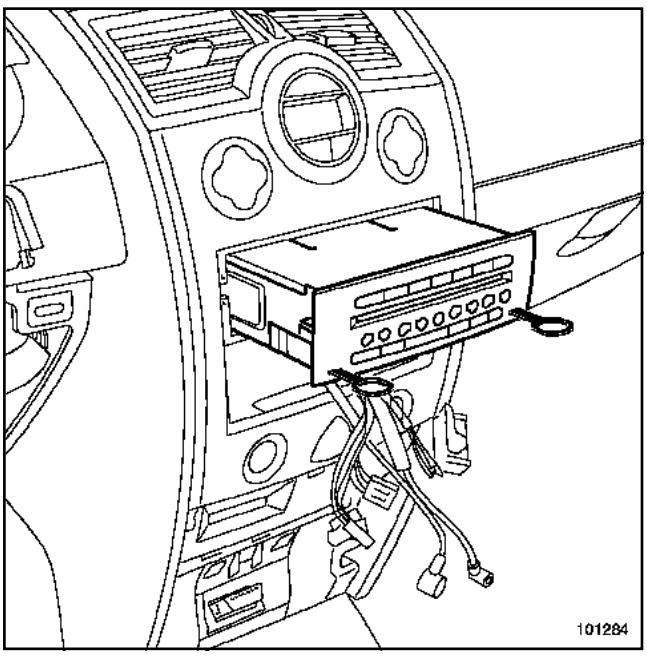
- Return quickly to normal operation (external air) by turning the control again (**14**).

Essential special tooling	
Ms. 1544	Tool for removing Carminat Becker radio
Ms. 1373	Philips radio removal tool
Ms. 1639	Tool for removing radio - CD player
Car. 1597	Lever for removing rear grab handle clips

Tightening torques ▽	
battery cover bolts to a torque of	**0.4 daNm**

REMOVAL

Disconnect the battery starting with the negative terminal.

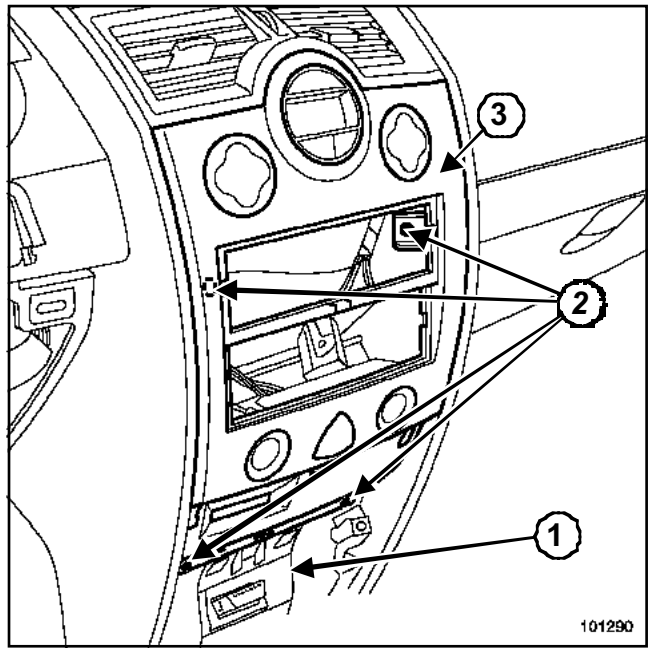


101284

Remove:

- the centre glovebox (if the vehicle has one),
- the Carminat system with tools (Ms. 1544) and (Ms. 1373) (if fitted),
- the radio using tool (Ms. 1373), (if fitted),
- the CD changer with tool (Ms. 1639) (if the vehicle has one).

Disconnect the connectors.



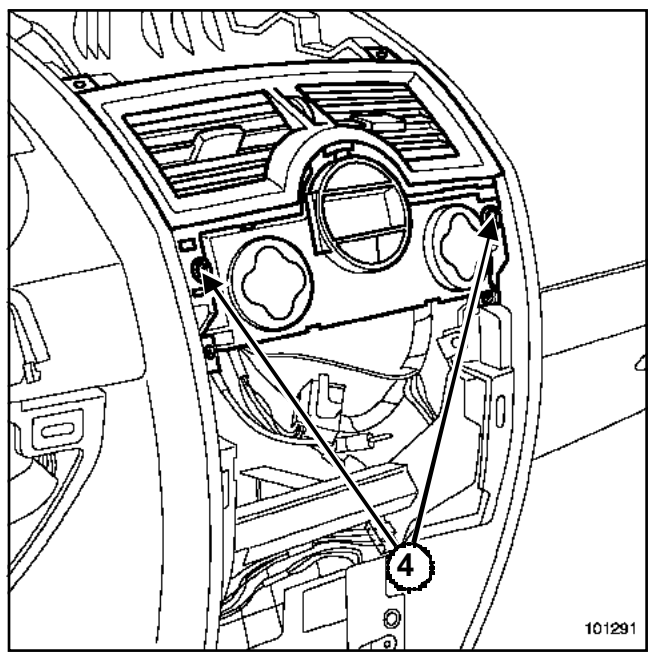
101290

Remove:

- the lower centre front panel (**1**),
- the four mounting bolts (**2**) on the centre front panel,
- the centre front panel (**3**).

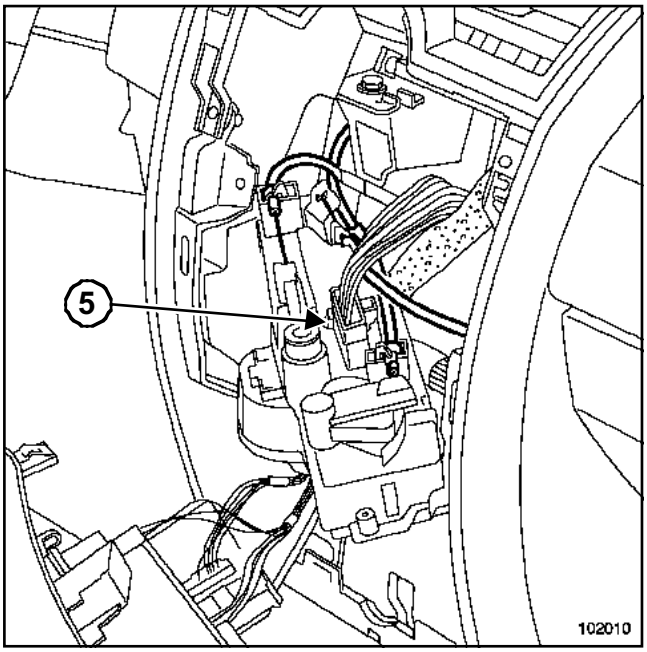
Unclip the card reader mounting with tool (Car. 1597).

Disconnect the centre front panel connectors.



101291

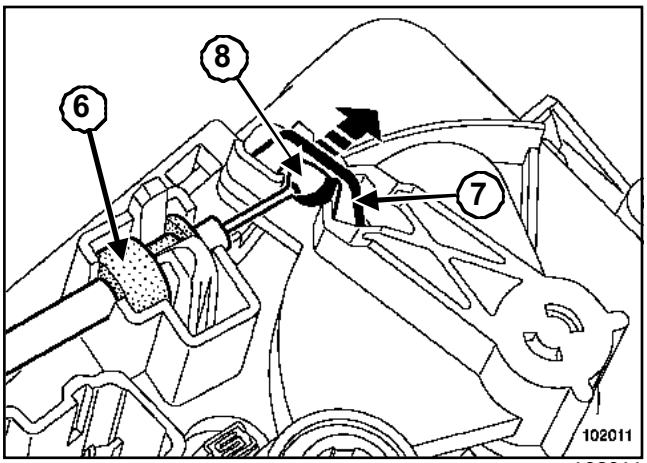
Remove the two heater control panel mounting screws (**4**).



102010

Remove the heating control panel by tilting it towards the inside of the dashboard.

Disconnect the heater control panel connector (**5**).



102011

Remove the heater control panel cables.

Disconnect at (**6**).

Remove bracket (**7**).

Remove ball joint (**8**).

REFITTING

To refit, proceed in the order of removal.

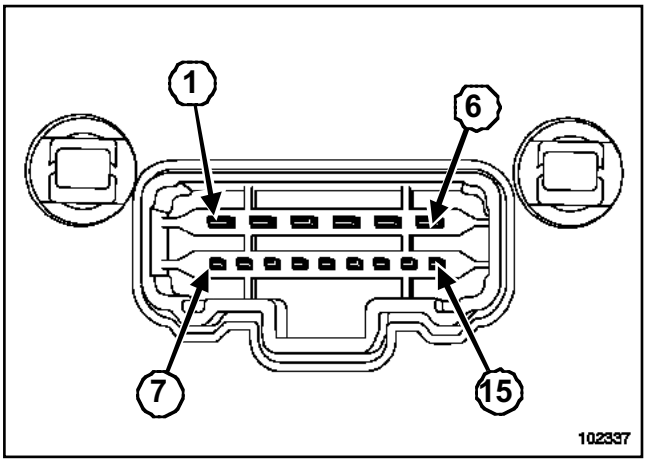
WARNING

- Do not damage the control cables during these operations.
- Connect the battery; carry out the necessary programming (Section **Battery**).

Note:

- the recirculation control cable is black,
- the distribution control cable is white,
- the mixing control cable is grey.
- the heater control panel control cables do not need to be adjusted.

Tighten the **battery cover bolts to a torque of (0.4 daNm)**.



102337

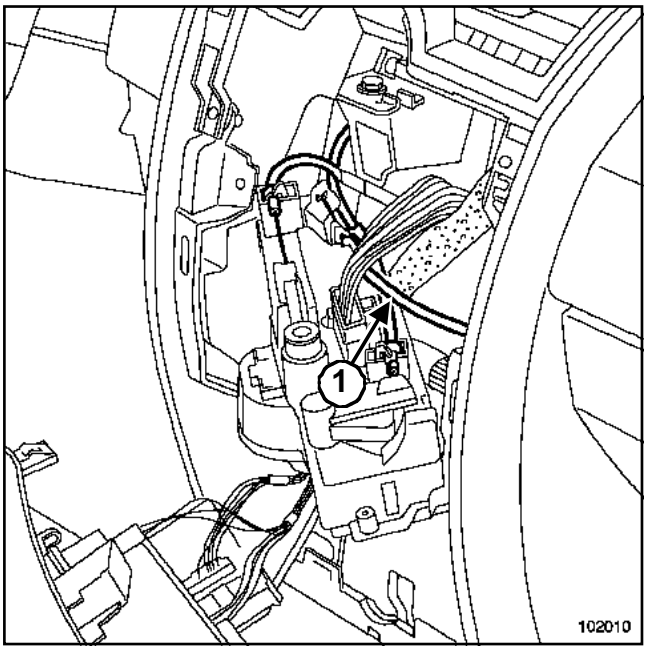
Control panel track	Allocation	Actuator sensor track
1	Earth	
2	Speed 1 control	Resistor unit track 1 connector A
3	Speed 2 control	Resistor unit track 2 connector A
4	Speed 3 control	Resistor unit track 3 connector A
5	Speed 4 control	Resistor unit track 4 connector A
6	Not used	
7	Fan assembly speed signal 0	UCH
8	+ after ignition feed	
9	Rear screen de-icer operation request	UCH
10	Rear screen de-icing control indicator light	UCH
11	Earth	
12	Air conditioning indicator light return	UCH
13	Air conditioning request	UCH
14	+ after ignition feed	
15	+ side light	Lighting dimmer

LEFT-HAND DRIVE

Tightening torques ▽	
battery cover bolts to a torque of	**0.4 daNm**

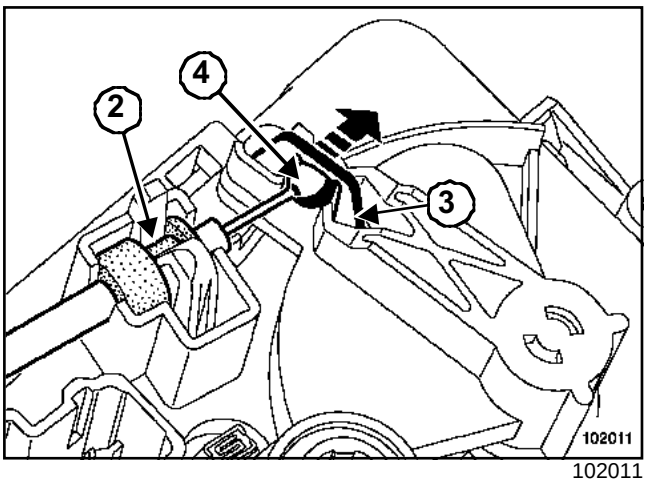
REMOVAL

Disconnect the battery starting with the negative terminal.



102010

Remove the heating control panel by tilting it towards the inside of the dashboard.



102011

Remove the recirculation cable at (**2**).

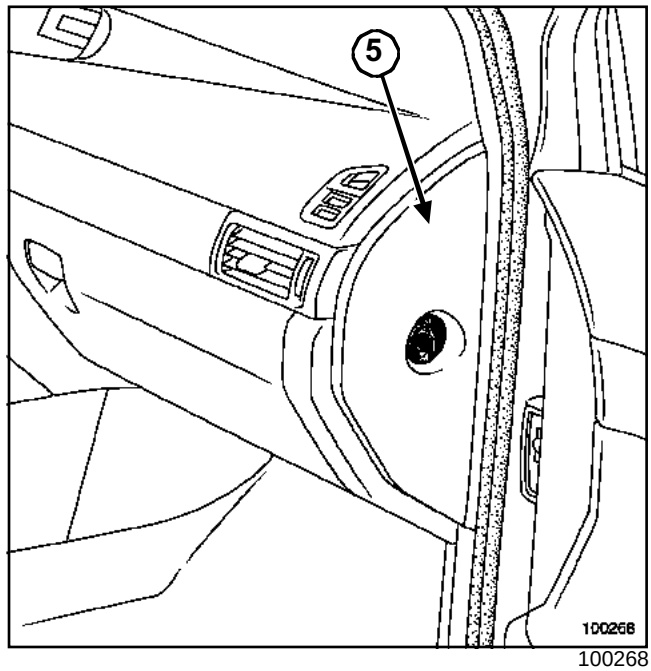
Withdraw bracket (**3**).

Remove the ball joint (**4**).

Remove the recirculation cable ***(1)*** attached to the heater control panel.

Note:

The recirculation control cable is black.



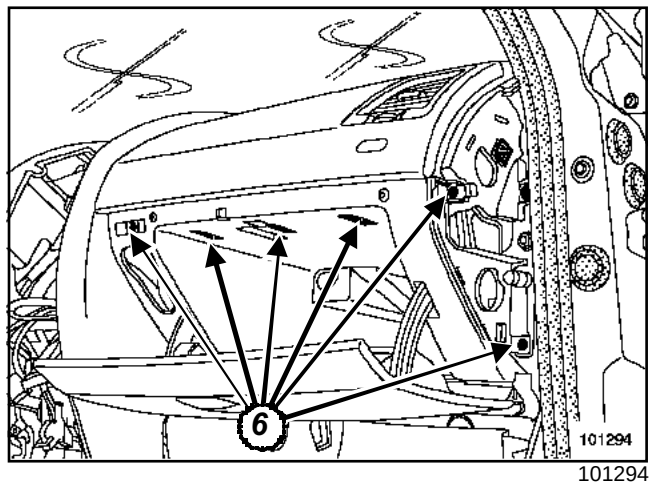
100268

Remove:

- the front door sill lining (upper section) (Section **Body interior trim**),

- the dashboard side panel (**5**).

Unclip the passenger airbag deactivation switch.



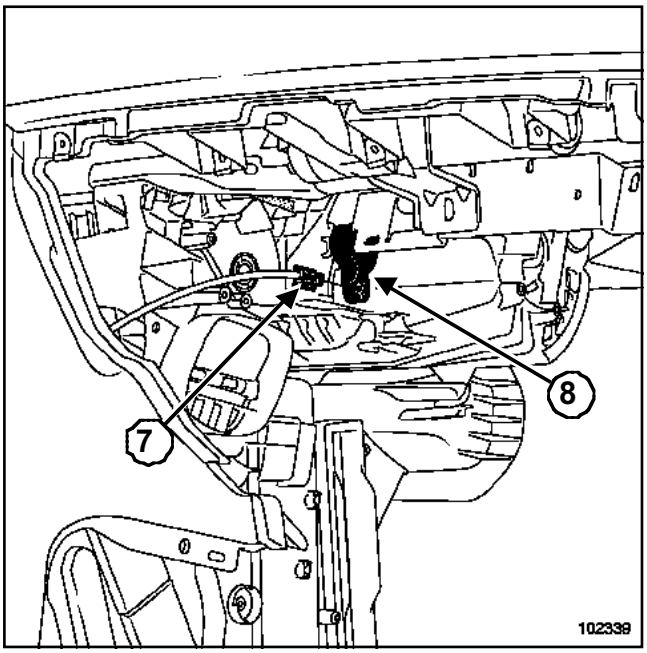
101294

Remove:

- the glove compartment mounting bolts (**6**),

- the glove compartment.

LEFT-HAND DRIVE



102339

Press the clip (**7**).

Remove the clip.

Remove the ball joint from the cable attached to the control lever (**8**).

REFITTING

To refit, proceed in the reverse order of removal.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Note:

The cable needs no adjustment.

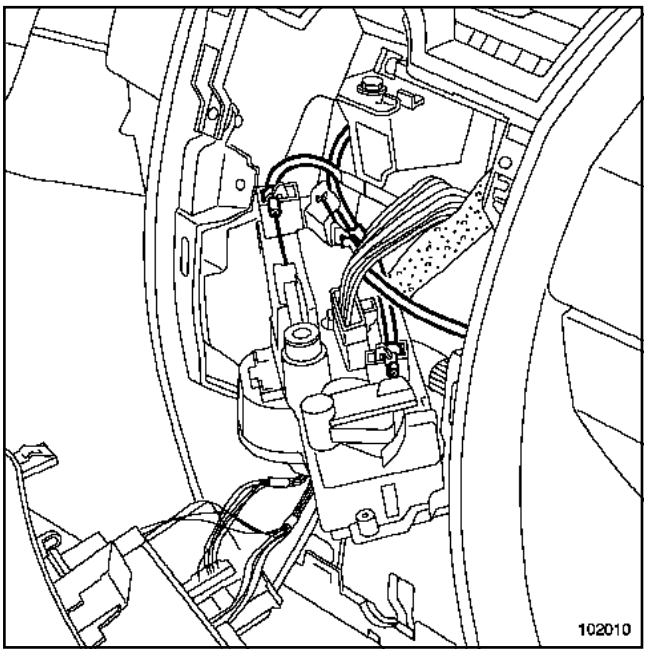
Tighten the **battery cover bolts to a torque of (0.4 daNm)**.

RIGHT-HAND DRIVE

Tightening torques ▽	
beam reinforcement panel mounting bolts to torque	**2.1 daNm**
battery cover bolts	**0.4 daNm**

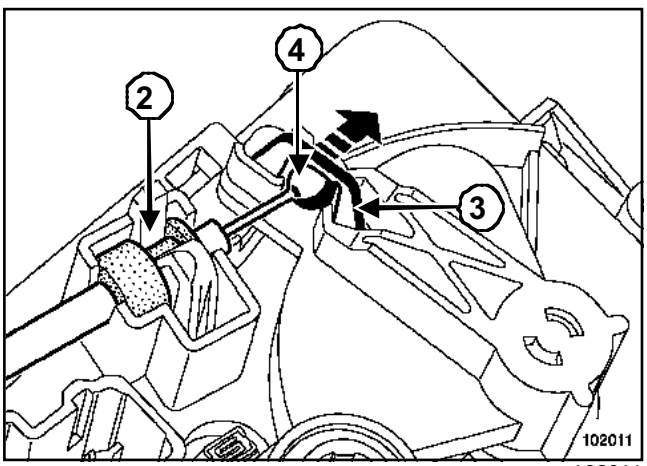
REMOVAL

Disconnect the battery starting with the negative terminal.



102010

Remove the heater control panel by tilting it towards the inside of the dashboard.



102011

Pull out (**2**) the recirculation cable.

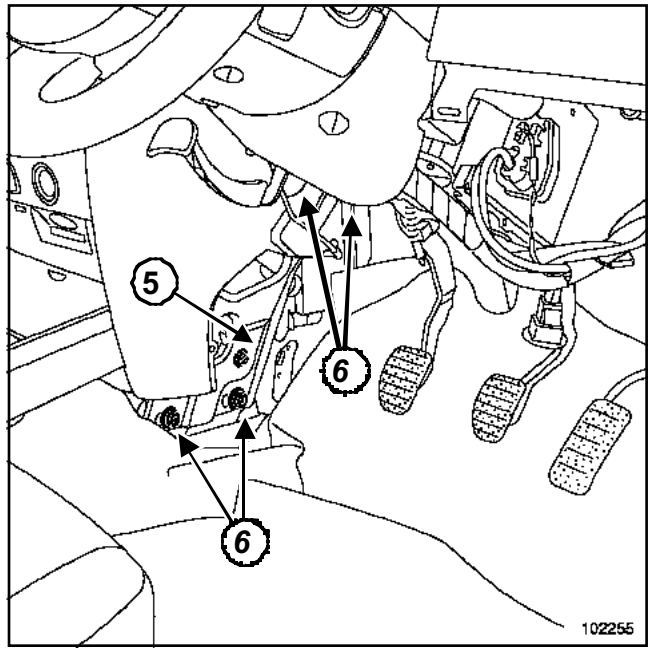
Withdraw the bracket (**3**).

Remove the ball joint (**4**).

Remove the recirculation cable ***(1)*** attached to the heater control panel.

Note:

The recirculation control cable is black.



102255

Remove:

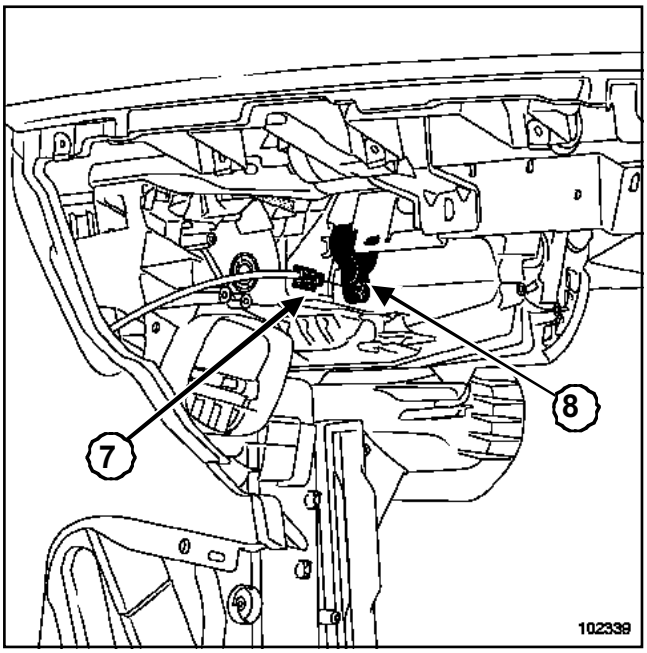
- the front air distribution duct (Section Heating, Front air distribution duct, page **61A-4**),
- the beam reinforcement panel cover.

Detach the electrical wiring harness that is fixed to the beam reinforcement panel.

Remove:

- the four retaining bolts (**6**) on the beam reinforcement panel,
- the beam reinforcement (**5**).

RIGHT-HAND DRIVE



102339

Press clip (**7**).

Withdraw the clip.

Remove the ball joint from the cable attached to the control lever (**8**).

REFITTING

To refit, proceed in the reverse order of removal.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Note:

The cable needs no adjustment.

Tighten to torque:

- the **beam reinforcement panel mounting bolts to torque (2.1 daNm)**,
- the **battery cover bolts (0.4 daNm)**.

LEFT-HAND DRIVE

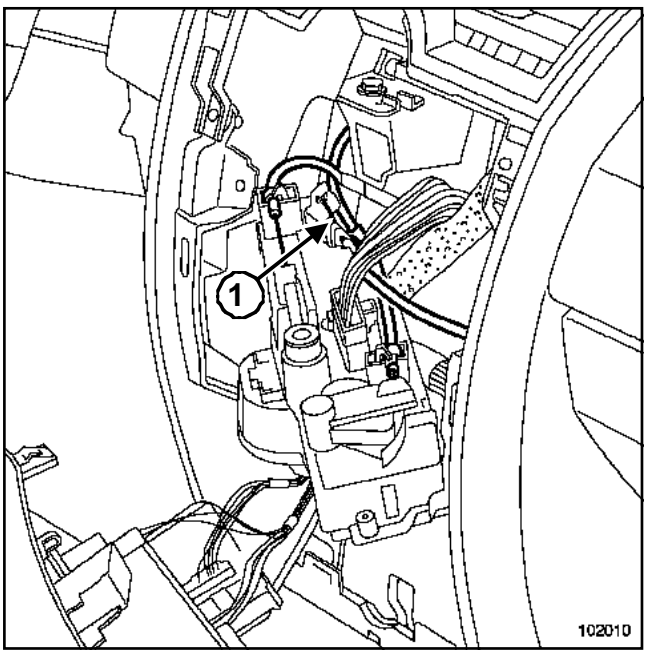
Tightening torques ▽	
beam reinforcement panel mounting bolts	**2.1 daNm**
elastic stud mounting bolt to torque	**0.2 daNm**
battery cover bolts to a torque of	**0.4 daNm**

REMOVAL

Note:

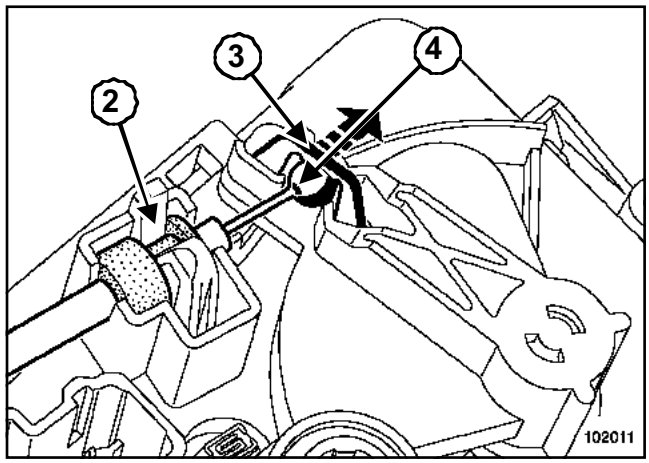
The air distribution control cable is white.

Disconnect the battery starting with the negative terminal.



102010

Remove the heater control panel by tilting it towards the inside of the dashboard.



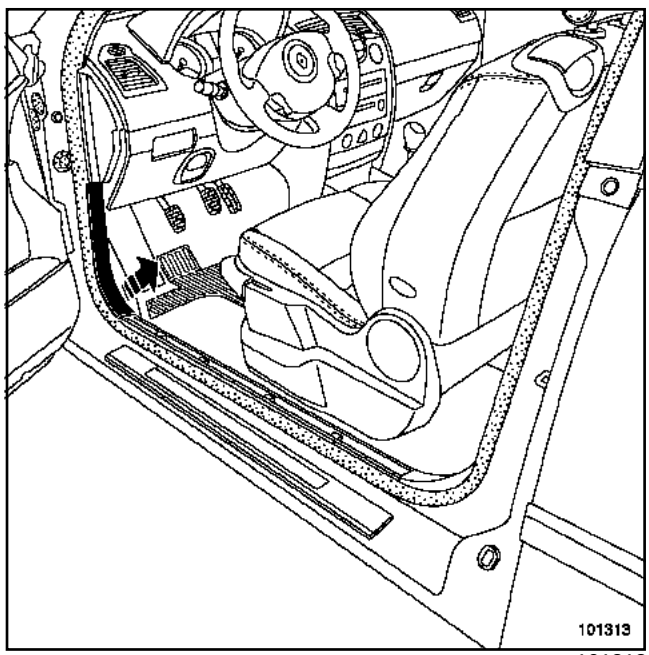
102011

Disconnect at (**2**).

Withdraw the bracket (**3**).

Remove the ball joint (**4**).

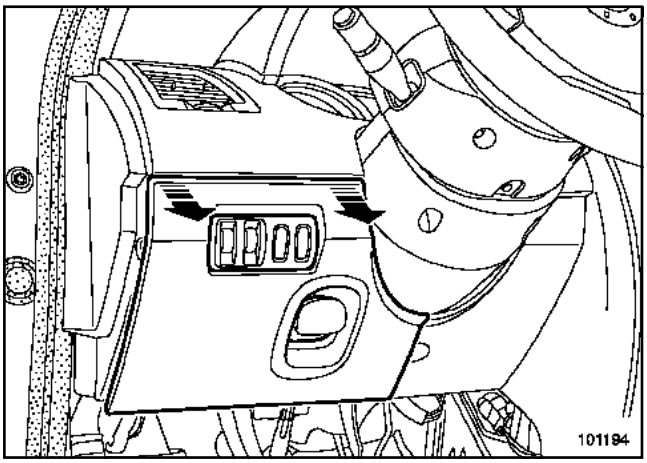
Remove the air recirculation cable ***(1)*** from the heating control panel.



101313

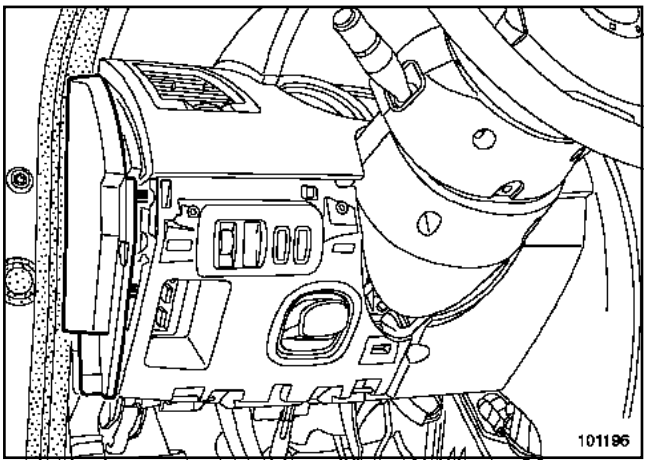
Remove the front door sill lining (front section).

LEFT-HAND DRIVE



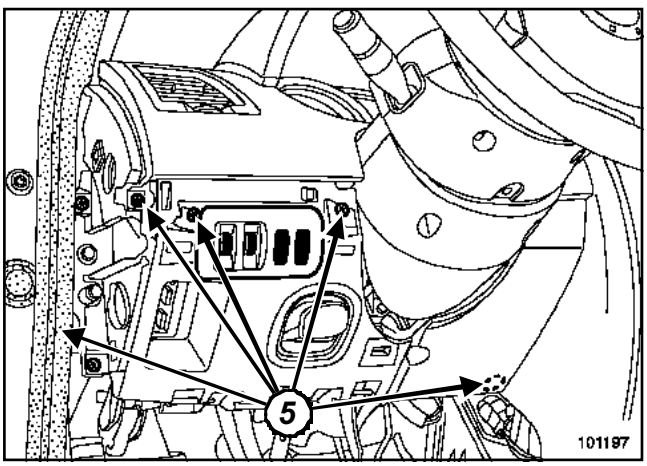
101194

Unclip the lower housing access flap.



101196

Unclip the side panel.



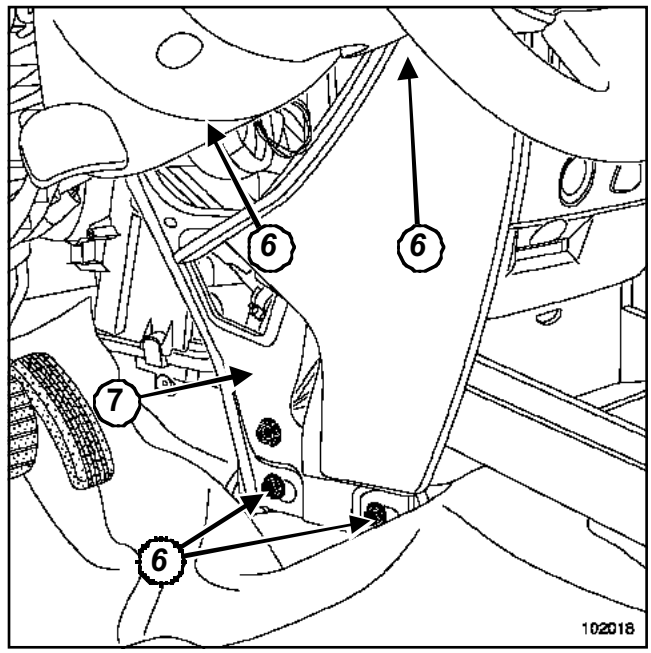
101197

Remove the bolts(**5**).

Remove the assembly.

Remove:

- the headlight adjustment control unit connections,
- the front air distribution duct (Section Heating, Front air distribution duct, page **61A-4**).



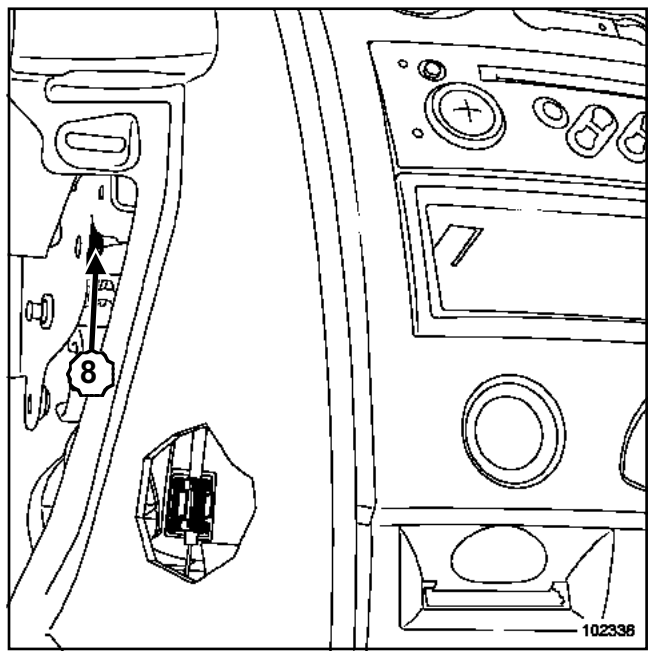
102018

Remove the electrical wiring harness attached to the beam reinforcement panel (**7**).

Slacken the flexible mounting pad mounting bolt at the joint between the unit and the beam stiffener plate.

Remove:

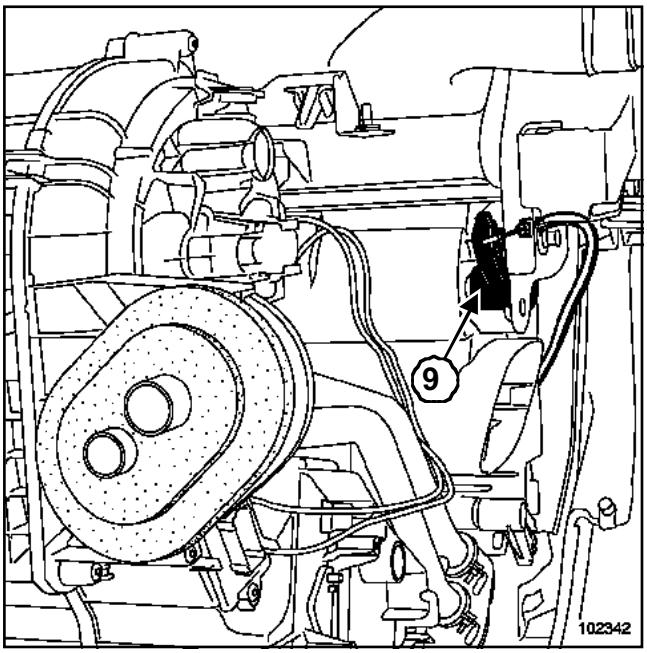
- the four beam reinforcement plate retaining bolts (**6**),
- the beam reinforcement (**7**).



102338

LEFT-HAND DRIVE

Remove the distribution control cable mounting clip (**8**) with a small screwdriver.



102342

Press tab (**9**) to remove the distribution cable ball joint.

Remove the end of the cable from the control lever.

REFITTING

Tighten to torque:

- the **beam reinforcement panel mounting bolts (2.1 daNm)**,
- the **elastic stud mounting bolt to torque (0.2 daNm)**.

To refit, proceed in the reverse order of removal.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Note:

The cable needs no adjustment.

Tighten the **battery cover bolts to a torque of (0.4 daNm)**.

RIGHT-HAND DRIVE

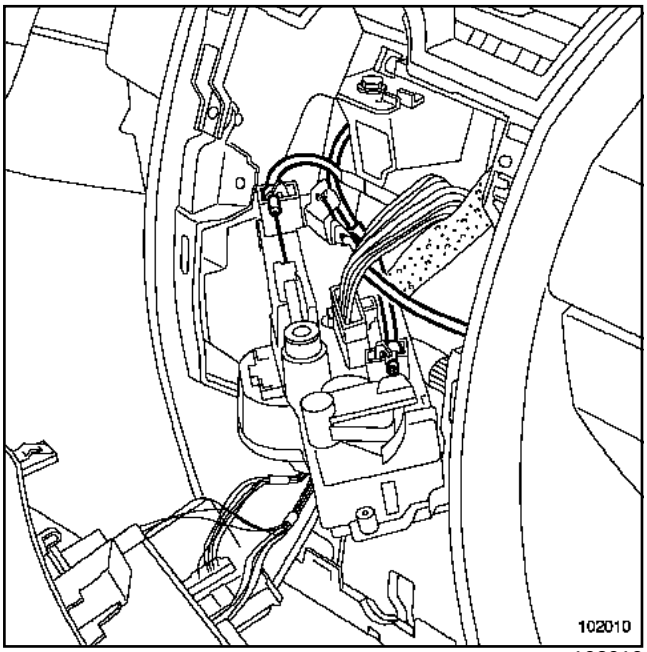
Tightening torques ▽	
battery cover bolts to a torque of	**0.4 daNm**

REMOVAL

Note:

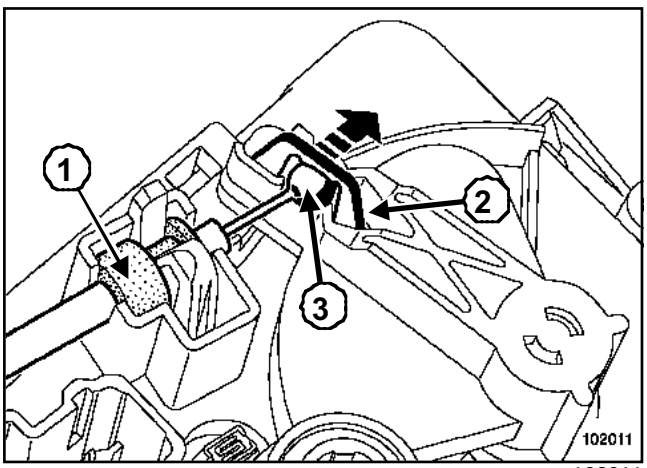
The distribution control cable is white.

Disconnect the battery starting with the negative terminal.



102010

Remove the heater control panel by tilting it towards the inside of the dashboard.



102011

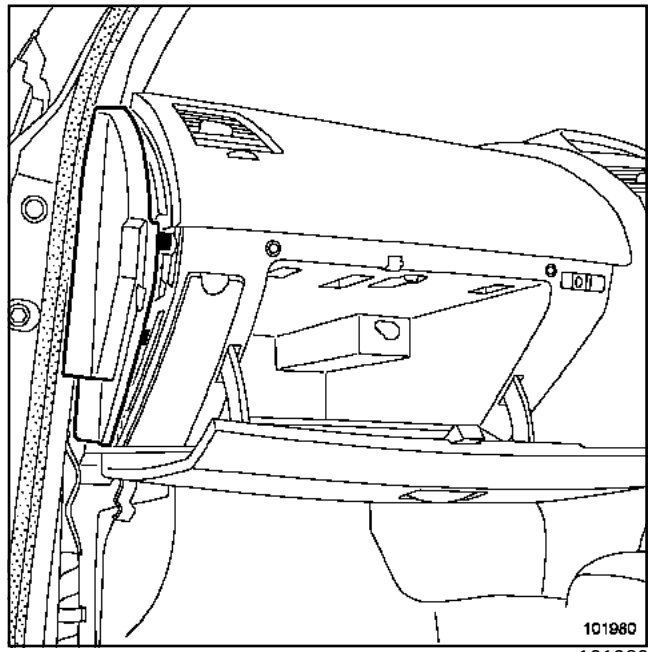
Disconnect at (**1**).

Pull back lug (**2**).

Extract the ball joint (**3**).

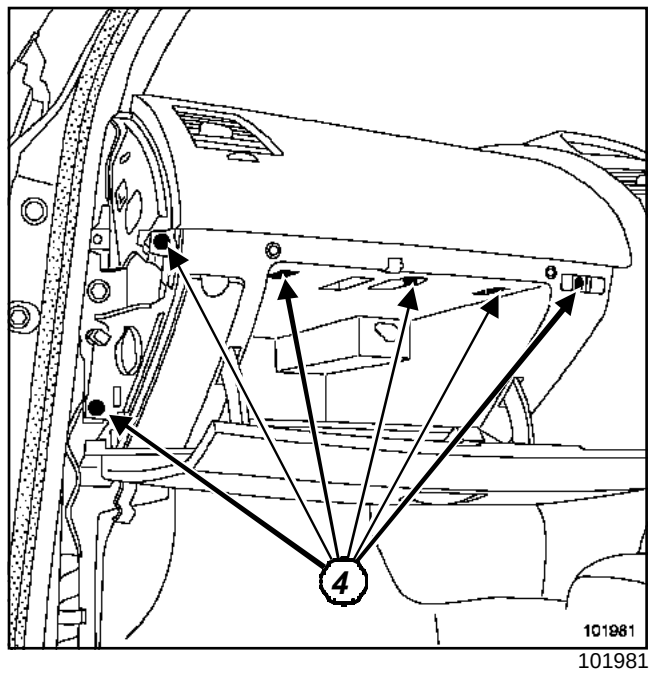
Remove the distribution control cable attached to the heater control panel.

Remove the front door sill lining (front section) (see **Front door sill lining**).



101980

Unclip the side panel.

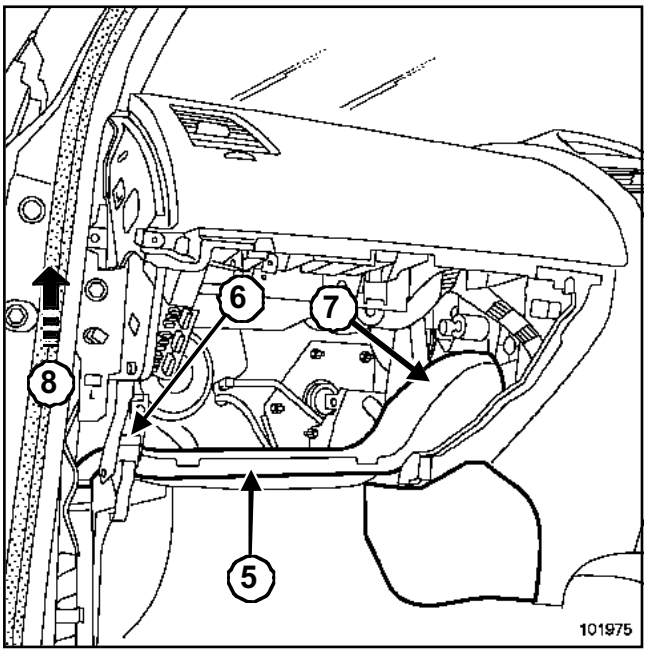


101981

Remove:

- the bolts (**4**),
- the glove compartment.

RIGHT-HAND DRIVE



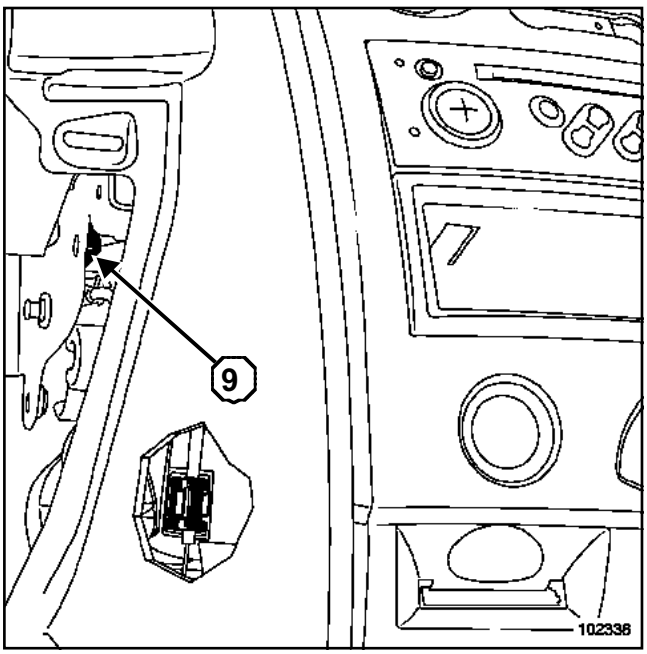
101975

Unfasten the clip (**6**) behind the bonnet release lever mounting.

Disconnect the air duct (**5**) at (**7**).

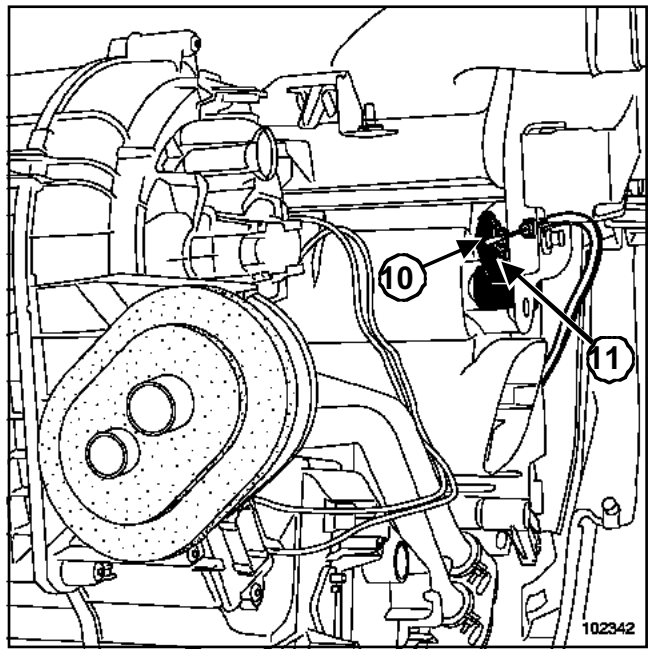
Raise the air duct (**5**) at (**8**).

Remove the left-hand front foootwell air duct (**5**).



102338

Unfasten clip (**9**), using a small screwdriver.



102342

Press tab (**10**) to remove the distribution cable ball joint.

Release the end of the cable from its control lever (**11**).

REFITTING

To refit, proceed in the reverse order of removal.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Note:

The cable needs no adjustment.

Tighten the **battery cover bolts to a torque of (0.4 daNm)**.

LEFT-HAND DRIVE

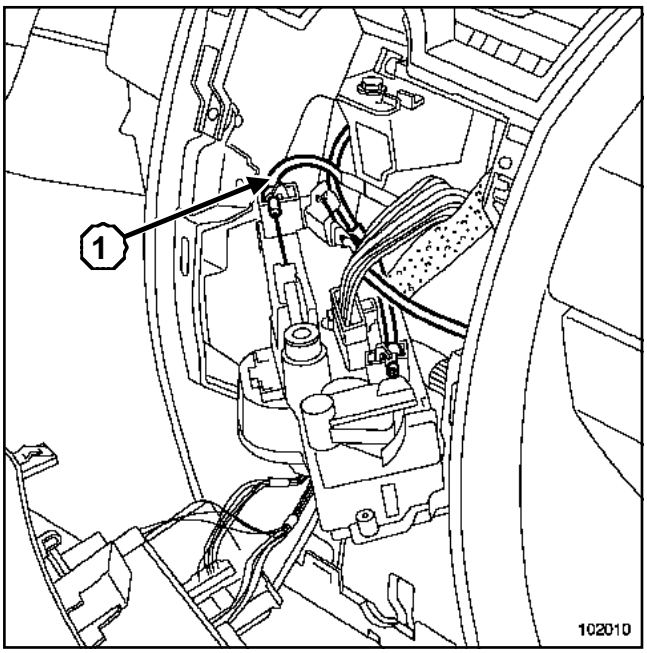
Tightening torques ▽	
beam reinforcement panel mounting bolts	**2.1 daNm**
flexible mounting pad mounting bolt	**0.2 daNm**
battery cover bolts	**0.4 daNm**

REMOVAL

Note:

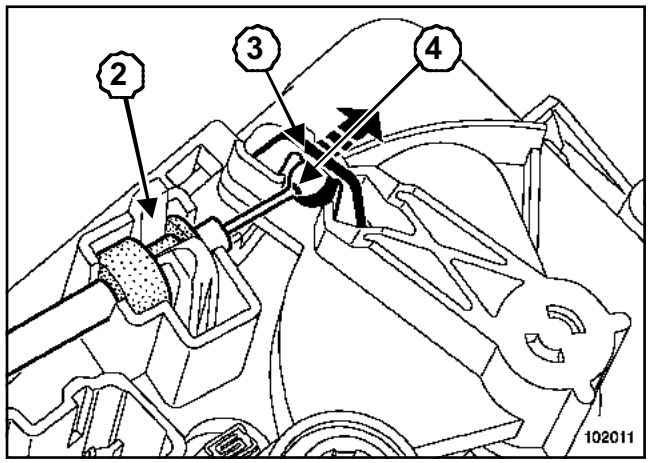
The air mixer control cable is grey.

Disconnect the battery starting with the negative terminal.



102010

Remove the heater control panel by tilting it towards the inside of the dashboard.



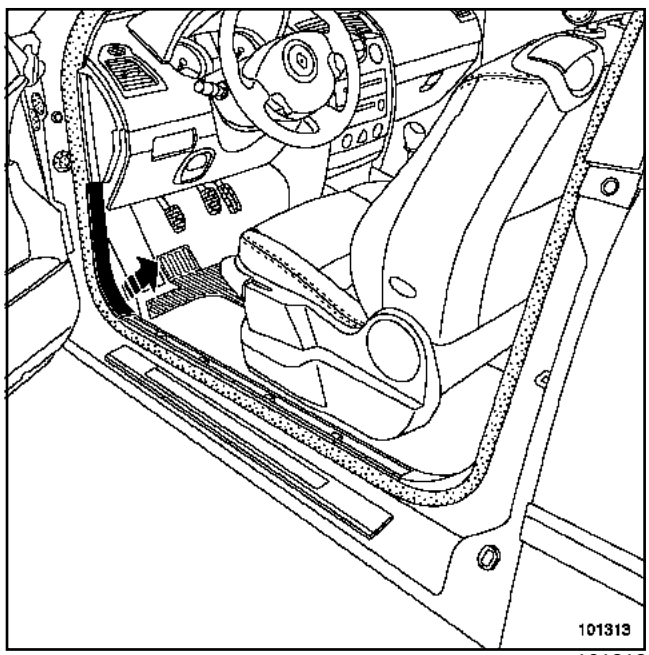
102011

Disconnect at (**2**).

Move the bracket aside(**3**).

Remove the ball joint (**4**).

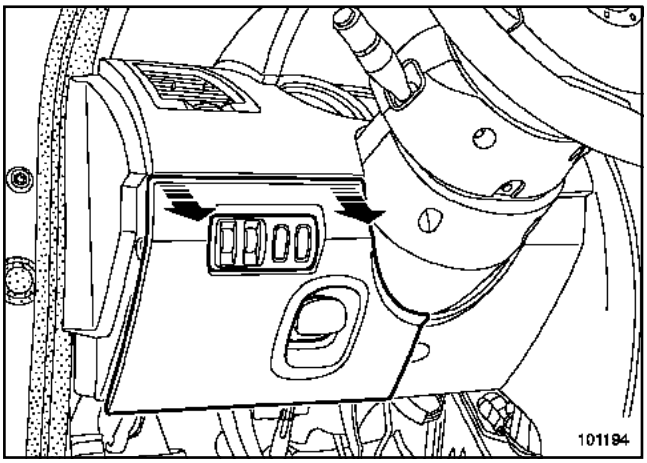
Remove the air mixer cable ***(1)*** from the heating control panel.



101313

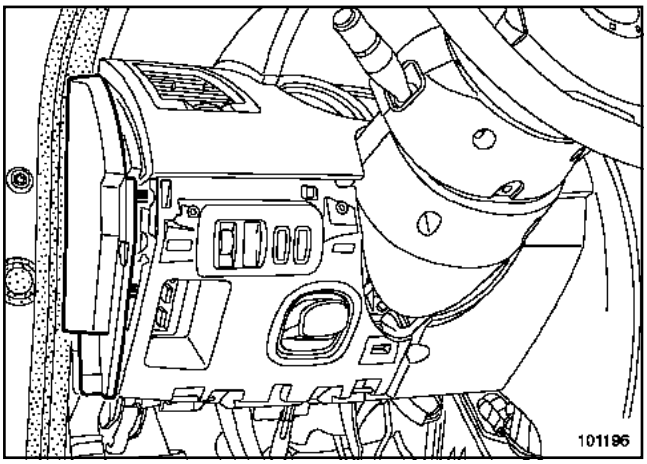
Remove the front door sill lining (front section).

LEFT-HAND DRIVE



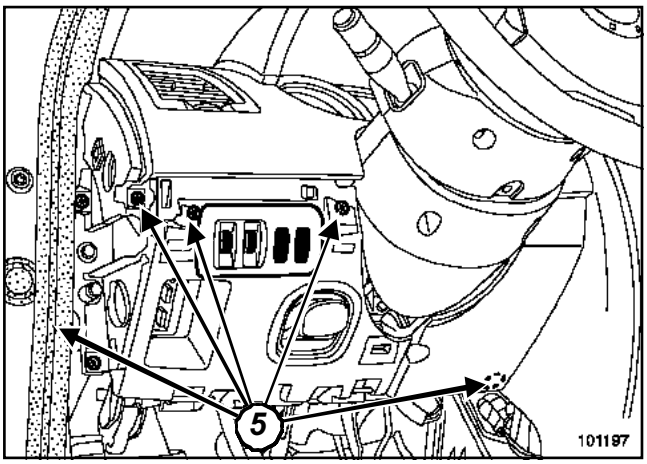
101194

Unclip the lower housing access flap.



101196

Unclip the side panel.



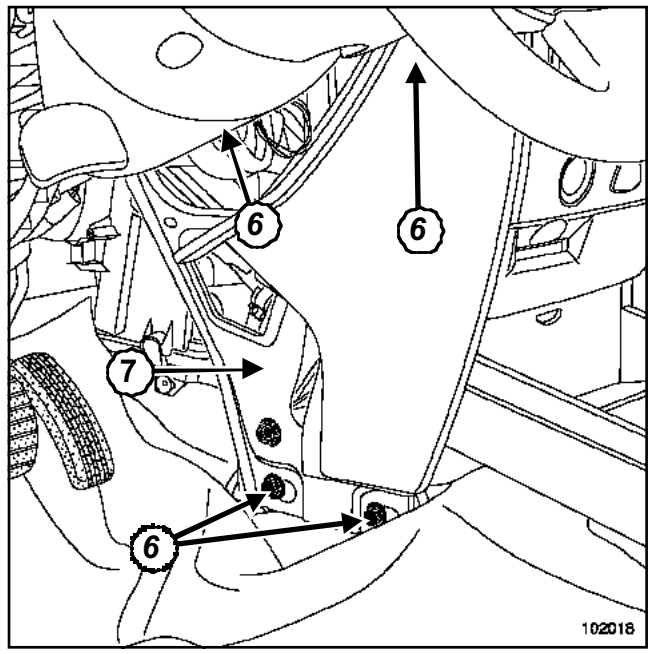
101197

Remove the bolts(**5**).

Remove the assembly.

Remove:

- the headlight adjustment control unit connections,
- the front air distribution duct (Section Heating, Front air distribution duct, page **61A-4**).



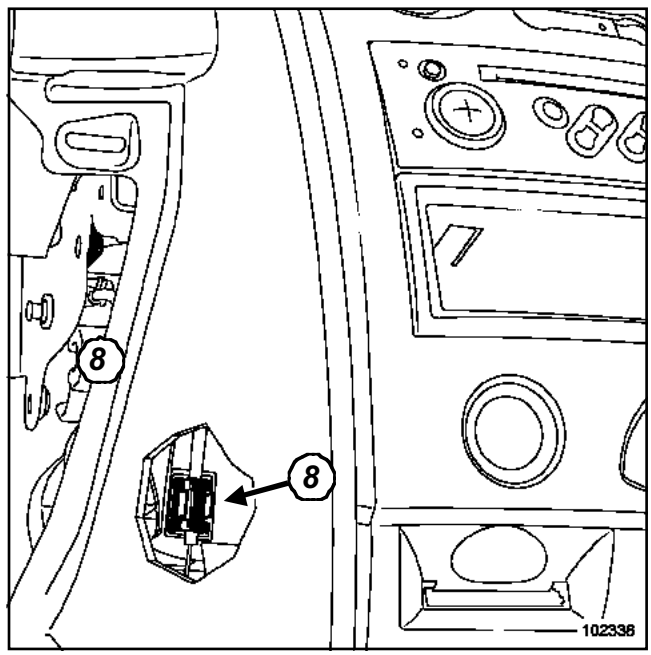
102018

Remove the electrical wiring harness attached to the beam reinforcement panel (**7**).

Slacken the flexible mounting pad mounting bolt at the joint between the unit and the beam reinforcement plate.

Remove:

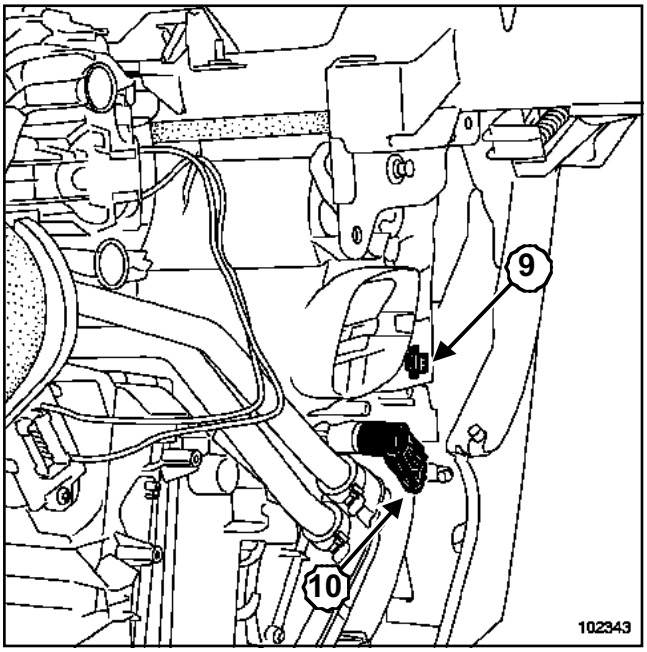
- the four beam reinforcement plate retaining bolts (**6**),
- the beam reinforcement (**7**).



102338

LEFT-HAND DRIVE

Squeeze the clip (**8**) and remove it.



102343

Press tab (**10**) to extract the mixer cable ball joint.

Remove the end of the faulty cable from the control lever.

REFITTING

To refit, proceed in the reverse order of removal.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Note:

The cable needs no adjustment.

Tighten to torque:

- the **beam reinforcement panel mounting bolts (2.1 daNm)**,
- the **flexible mounting pad mounting bolt (0.2 daNm)**.
- the **battery cover bolts (0.4 daNm)**.

RIGHT-HAND DRIVE

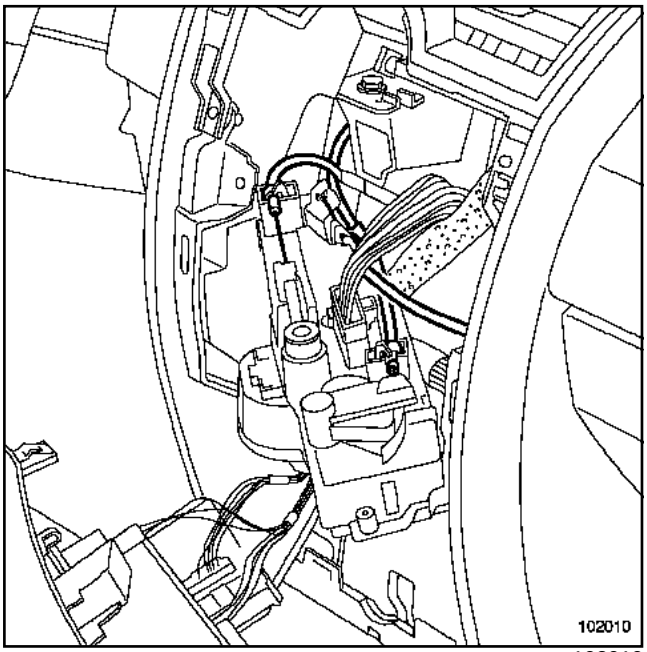
Tightening torques ▽	
battery cover bolts to a torque of	**0.4 daNm**

REMOVAL

Note:

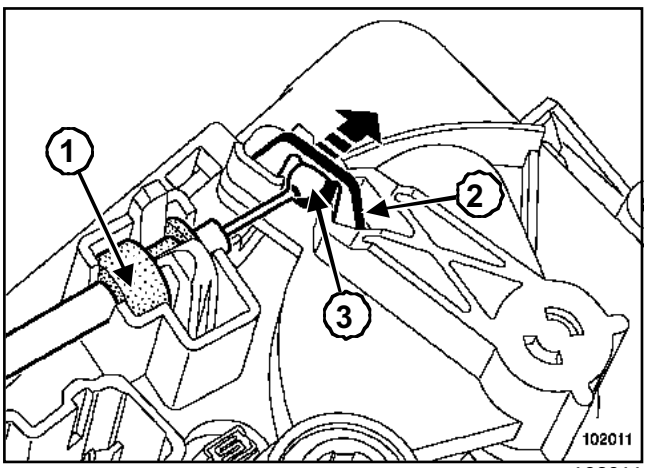
The mixing control cable is grey.

Disconnect the battery starting with the negative terminal.



102010

Remove the heater control panel by tilting it towards the inside of the dashboard.



102011

Disconnect at (**1**).

Pull back lug (**2**).

Remove ball joint (**3**).

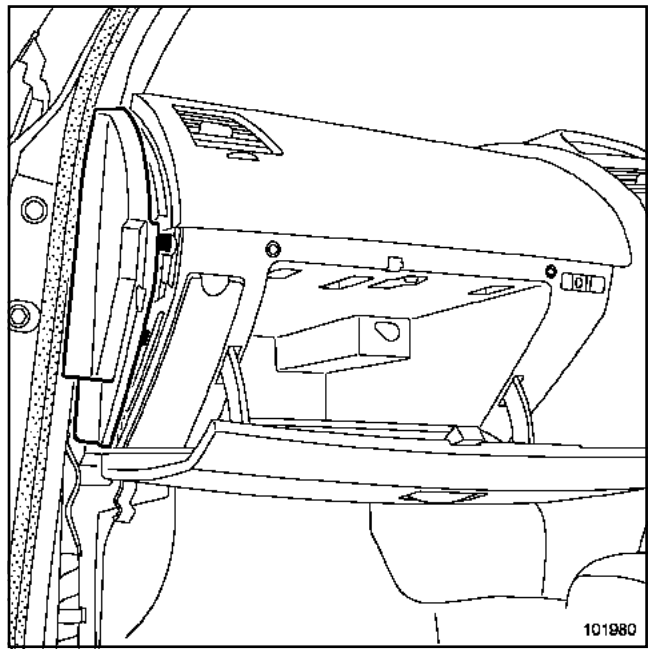
Remove the distribution control cable attached to the heater control panel.

Note:

In vehicles with manual heating or air conditioning, set the air temperature control to maximum heat (turn as far to the right as possible).

This lowers the control lever underneath the heater matrix as far as possible.

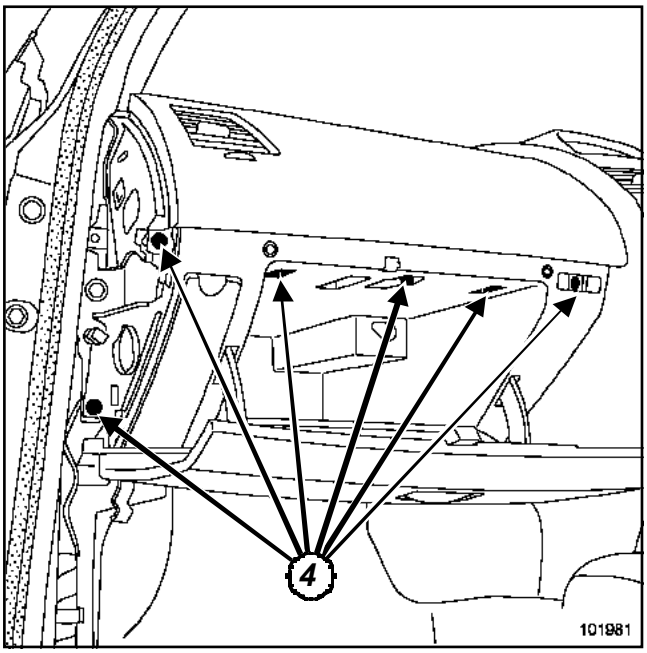
Remove the front door sill lining (front section) (see **Front door sill lining**).



101980

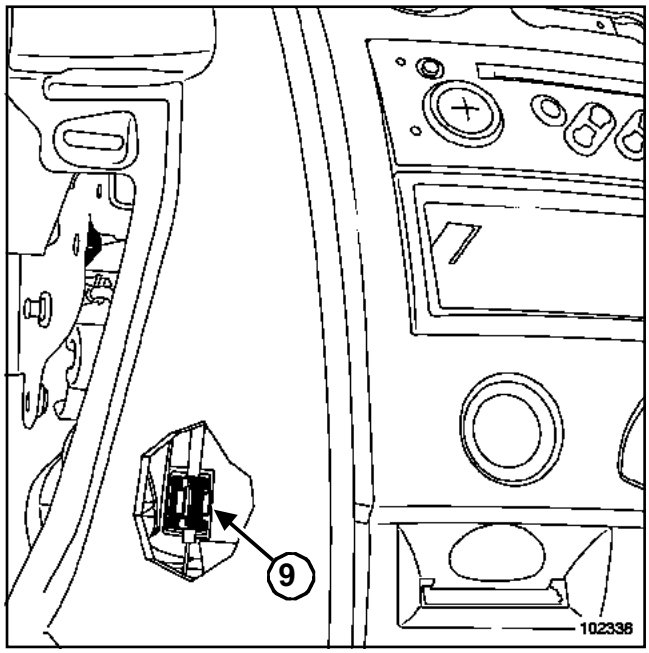
Unclip the side panel.

RIGHT-HAND DRIVE



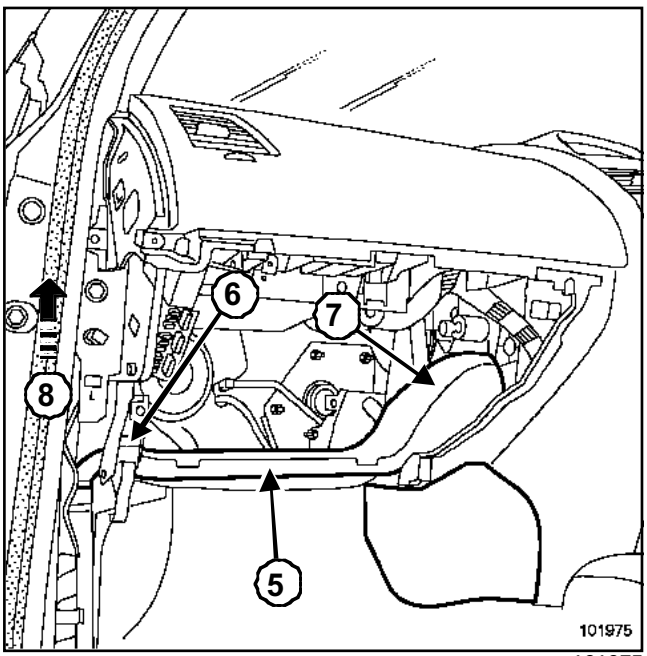
101981

Remove the bolts(**4**).



102338

Unfasten clip (**9**), using a small screwdriver.



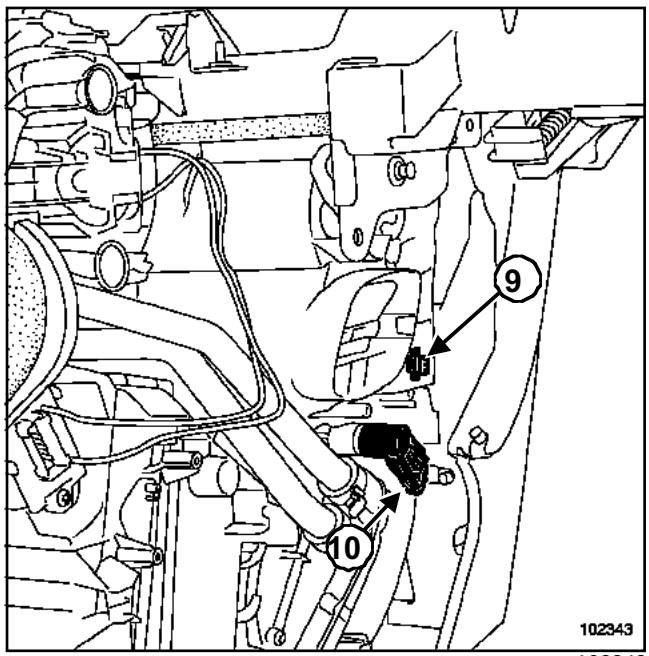
101975

Unfasten the clip (**6**) behind the bonnet release lever mounting.

Disconnect the air duct (**5**) at (**7**).

Lift the air duct (**5**) at (**8**).

Remove the left-hand front foootwell air duct (**5**).



102343

Press the tab to remove the distribution cable ball joint.

Remove the end of the faulty cable from its control lever (**10**).

RIGHT-HAND DRIVE

REFITTING

To refit, proceed in the reverse order of removal.

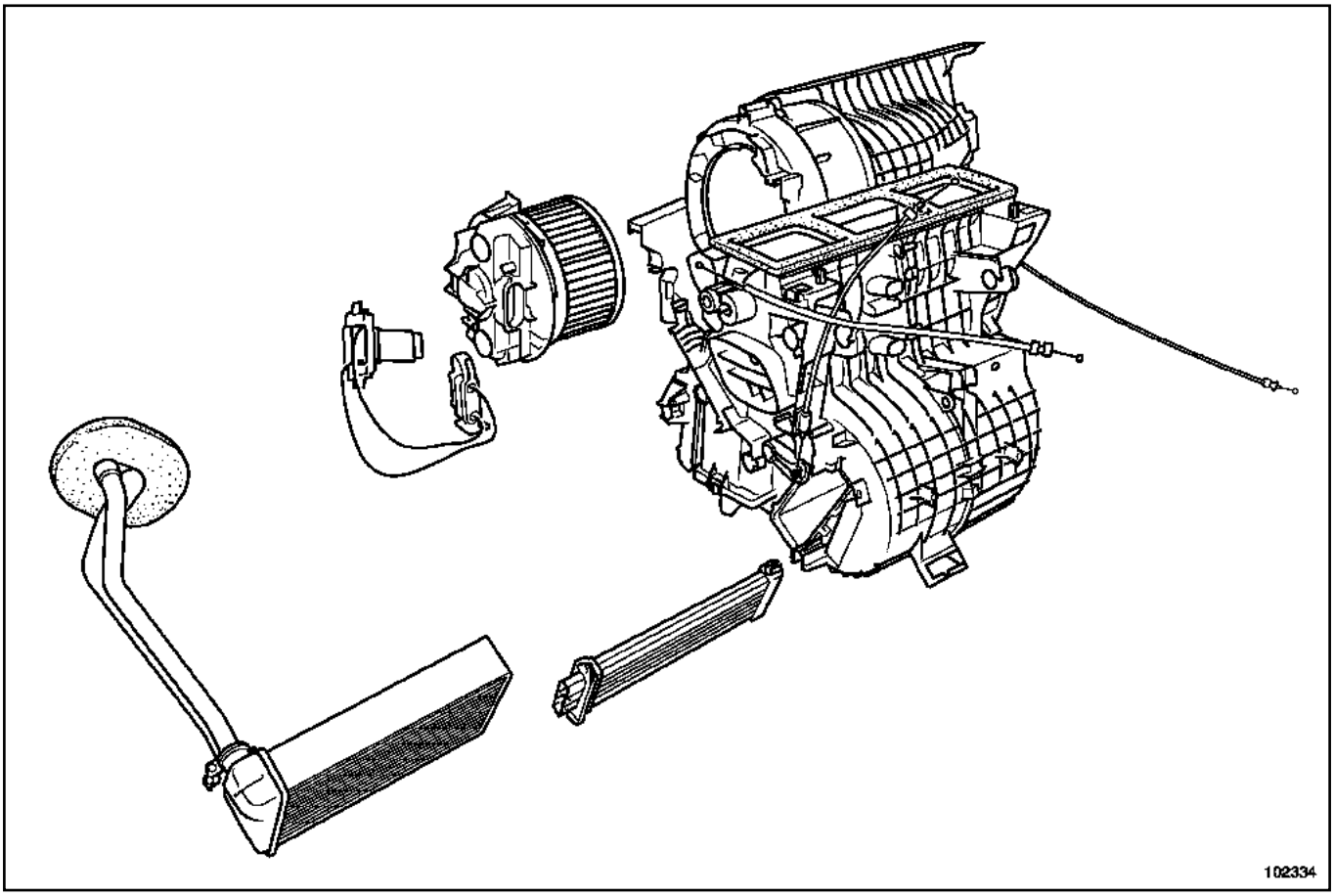
WARNING
Connect the battery; carry out the necessary programming (Section **Battery**).

Note:

The cable needs no adjustment.

Tighten the **battery cover bolts to a torque of (0.4 daNm)**.

Essential equipment
diagnostic tool



102334

IMPORTANT

Lock the computer using the **diagnostic tool** (Section **Airbag and Pretensioners**), before starting any operation on the airbag system.

REMOVAL

Remove:

- the dashboard (see **Dashboard**),
- the passenger compartment reinforcement cross member,
- the evaporator housing,
- the air distribution unit.

REFITTING

To refit, proceed in the reverse order to removal.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

IMPORTANT

Restart the airbag computer using the **diagnostic tool** (Section **Airbag and Pretensioners**).

LEFT-HAND DRIVE

Essential special tooling	
Ms. 554-07	Equipment for checking coolant circuit and expansion bottle valve

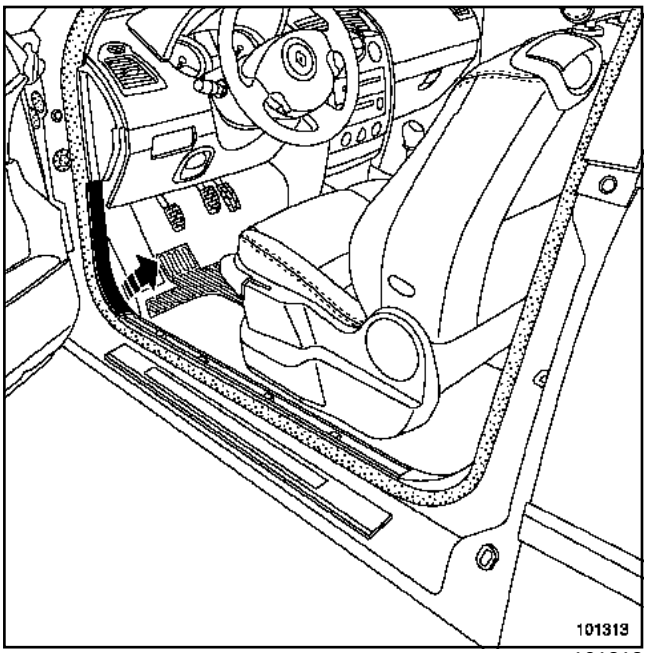
Tightening torques ▽	
beam reinforcement panel mounting bolts	**2.1 daNm**
flexible mounting bolt	**0.2 daNm**
battery cover bolts to a torque of	**0.4 daNm**

REMOVAL

Disconnect the battery starting with the negative terminal.

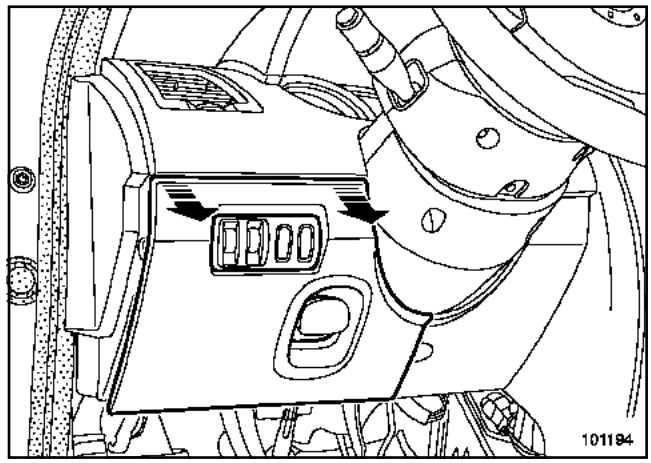
Place a set of 2 hose clamps on each water hose at the bulkhead outlet in the engine compartment.

In the passenger compartment



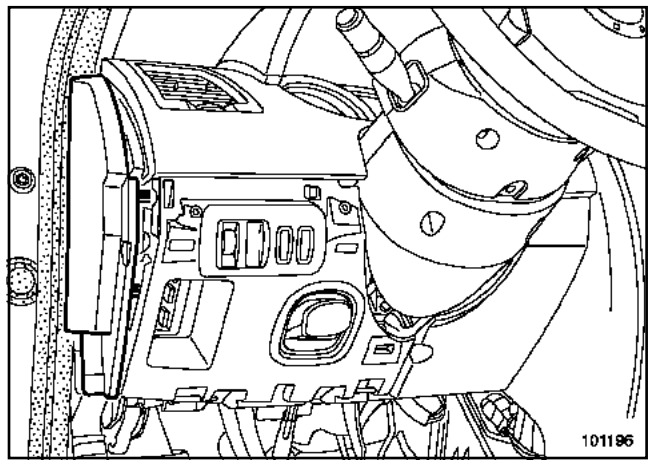
101313

Remove the front door sill lining (front section).



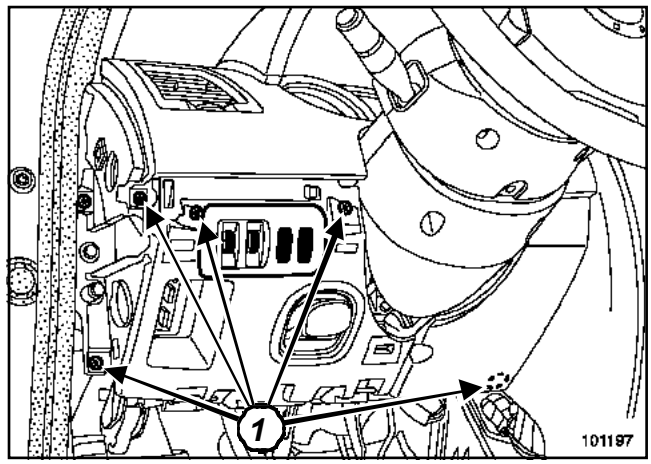
101194

Unclip the sump access flap.



101196

Unclip the side panel.



101197

Remove the screws (**1**).

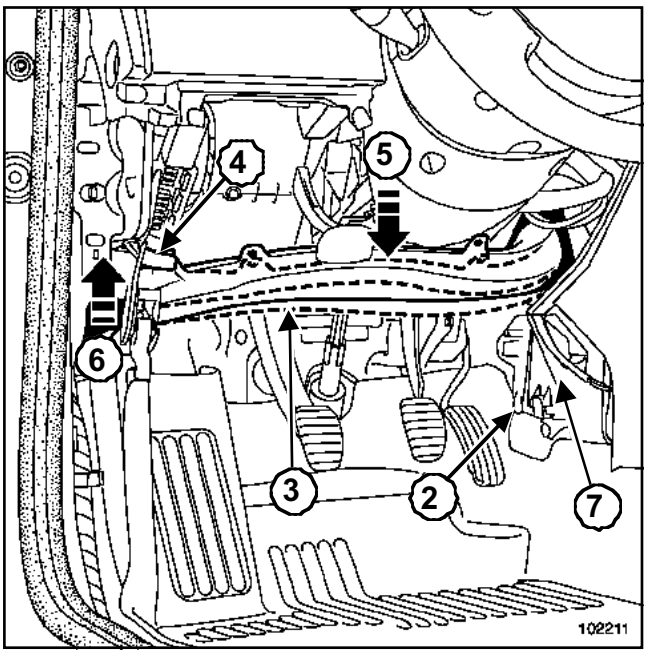
Remove the assembly.

LEFT-HAND DRIVE

Remove the main beam headlight adjustment unit connector.

Note:

In vehicles with manual heating or air conditioning, set the air temperature control to maximum cold (turn as far to the left as possible). This raises the control lever on top of the heater matrix as far as possible.



102211

Remove cover (**2**).

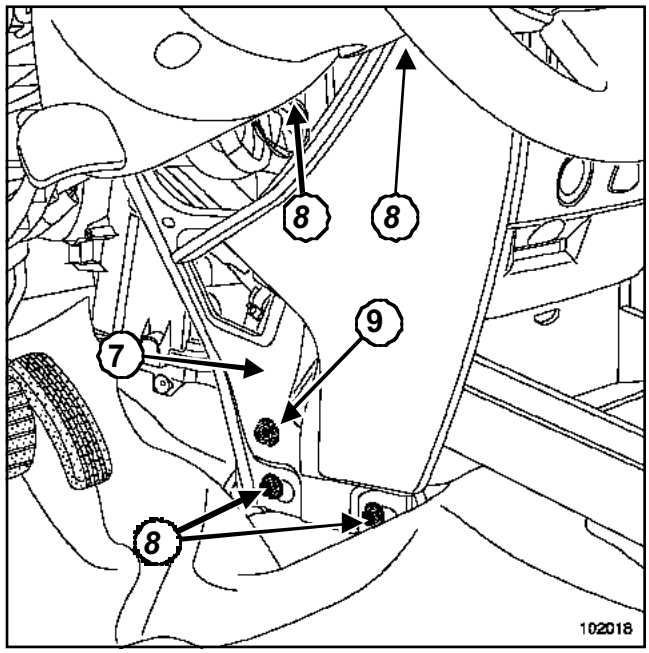
Unclip the air duct at (**3**) and (**4**).

Bend the air duct (**3**) down (**5**).

Lift the air duct at (**6**).

Remove front air distribution duct (**3**).

Detach the electric wiring harness fixed on the dashboard cross member reinforcement panel (**7**).



102018

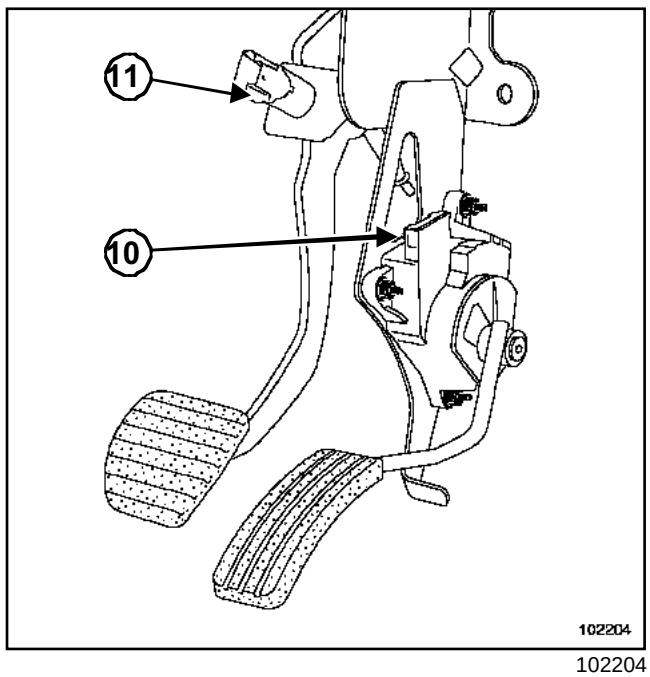
Remove:

- the lower casing covering the dashboard cross member reinforcement panel,
- the carpet (partially).

Unlock the elastic connecting stud (**9**) between the housing and the dashboard cross member reinforcement panel.

Remove four bolts (**8**) on the dashboard cross member reinforcement panel.

Remove beam reinforcement (**7**) by sliding it towards the front of the vehicle.

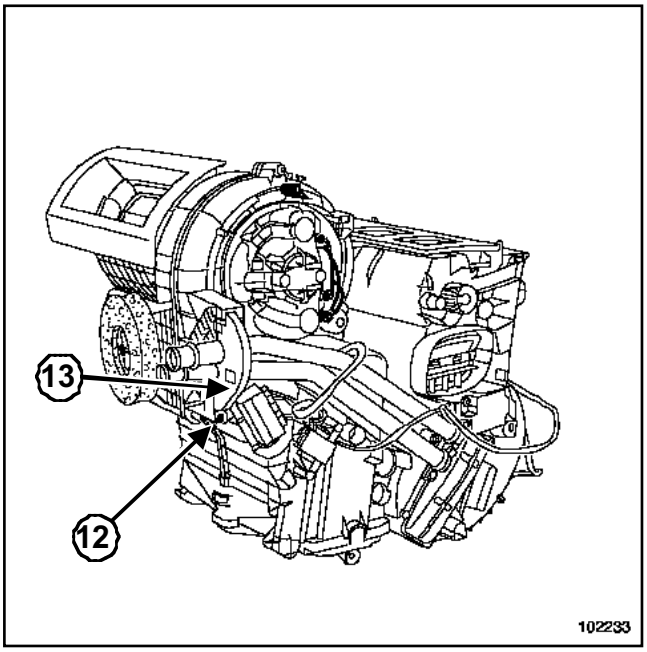


102204

LEFT-HAND DRIVE

Remove:

- the accelerator pedal housing connector at (**10**),
- the brake pedal sensor at (**11**).



102233

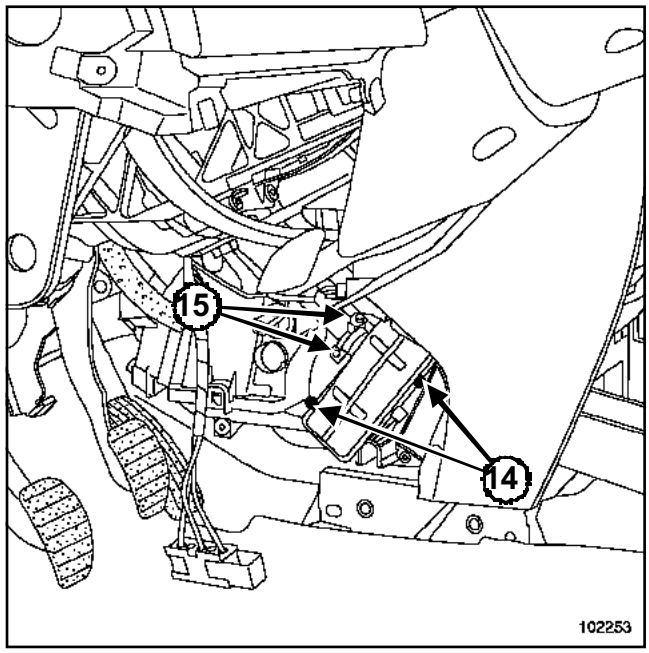
Remove bolt (**12**) from the passenger compartment heater radiator (heater matrix) pipe bracket.

Remove the passenger compartment heater radiator (heater matrix) pipe bracket (**13**).

Note:

Unlock bracket (**13**), then lift it to take it out of the heater unit.

Put a protective cover on the carpet.



102253

Remove:

- the two heater radiator mounting bolts (**14**).
- the two heater radiator connection collar bolts (**15**).

Put a container in place to collect the coolant.

Separate the heater radiator with its pipes.

Separate the heater radiator collars.

Remove:

- the heater radiator ducts by pulling them towards the front of the vehicle,
- the heater radiator.

REFITTING

When replacing the radiator, it is essential to replace the gaskets.

To refit, proceed in the reverse order to removal.

Reshape the air duct through the air outlet holes and by applying pressure perpendicular to the fold by hand.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Tighten to torque:

- the **beam reinforcement panel mounting bolts (2.1 daNm)**,
- the **flexible mounting bolt (0.2 daNm)**.

LEFT-HAND DRIVE

Perform the following operations:

- fill the cooling circuit,
- bleed the cooling circuit Section **Cooling system**.

Tighten the **battery cover bolts to a torque of (0.4 daNm)**.

Check the sealing of the cooling circuit using tool (Ms. 554-07).

RIGHT-HAND DRIVE

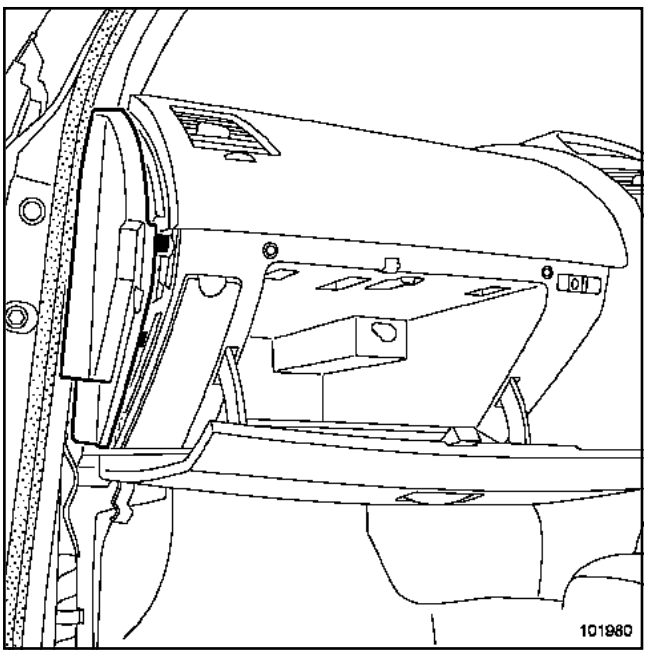
Essential special tooling	
Ms. 554-07	Equipment for checking coolant circuit and expansion bottle valve

Tightening torques ▽	
mounting bolts on the beam reinforcement panel	**2.1 daNm**
battery cover bolts to a torque of	**0.4 daNm**

REMOVAL

Disconnect the battery starting with the negative terminal.

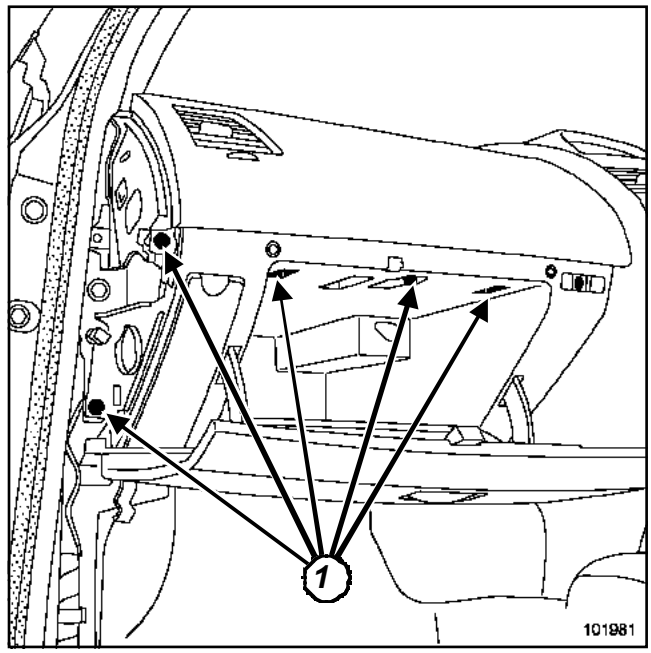
Place a set of 2 hose clamps on each water hose at the bulkhead outlet in the engine compartment.



101980

Remove the front door sill lining (front section).

Unclip the side panel.



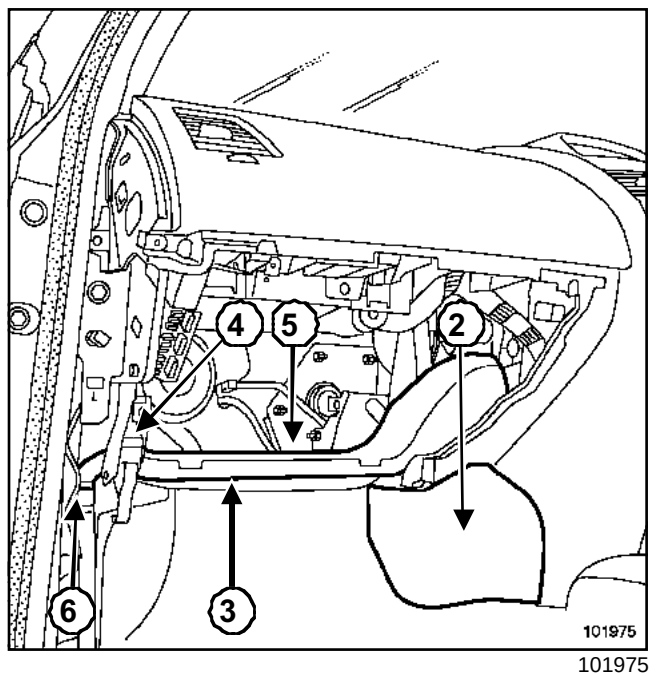
101981

Remove the screws (**1**).

Remove the glove compartment.

Note:

In vehicles with manual heating or air conditioning, set the air temperature control to maximum cold (turn as far to the left as possible). This raises the control lever on top of the heater matrix as far as possible.



101975

Remove cover (**2**).

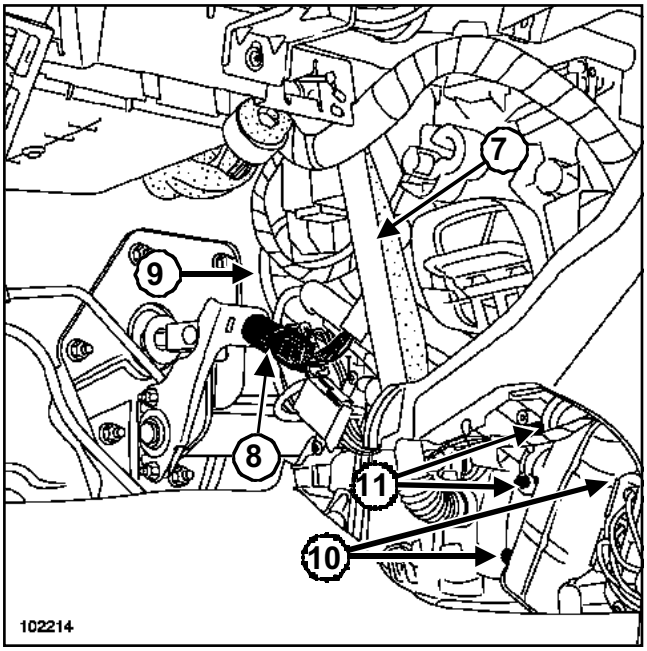
Unclip the air duct (**3**) at (**4**).

RIGHT-HAND DRIVE

Bend the air duct (**3**) down (**5**).

Lift the air duct (**3**) at (**6**).

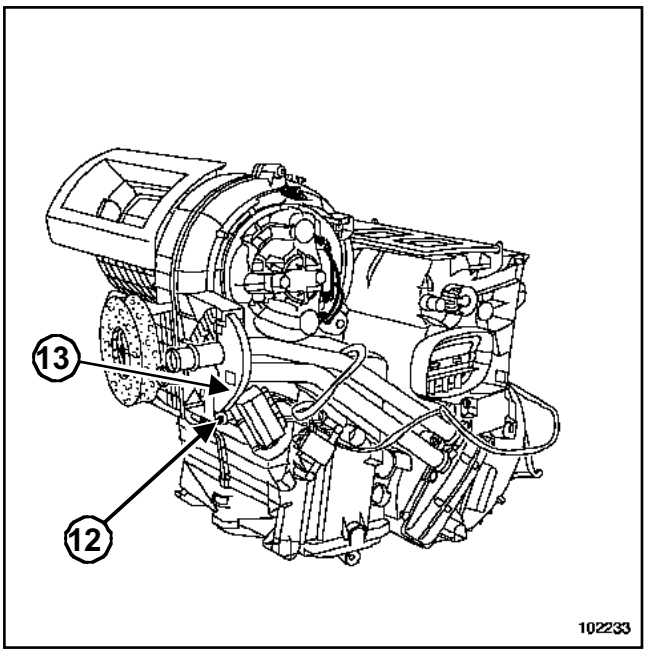
Remove the front left-hand air duct (**3**).



102214

Remove:

- the glove compartment fresh air duct (**7**) ,
- the pedal position sensor (**8**).



102233

Remove bolt (**12**) from the passenger compartment heater radiator (heater matrix) pipe bracket.

Remove passenger compartment heater radiator (heater matrix) pipe bracket (**13**).

Note:

Unlock bracket (**13**), then lift it to take it out of the heater unit.

Remove the resistor unit or power module harness.

Put a protective cover on the carpet.

Remove:

- the two heater matrix mounting screws ***(10)***,
- the two heater radiator collar bolts ***(11)***.

Separate the heater radiator with its pipes.

Put a container in place to collect the coolant.

Separate the heater radiator collars.

Remove:

- the heater radiator ducts by pulling them towards the front of the vehicle,
- the heater radiator.

REFITTING

To refit, proceed in the reverse order to removal.

Reshape the air duct through the air outlet holes and by applying hand pressure perpendicular to the fold.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Tighten to torque the **mounting bolts on the beam reinforcement panel (2.1 daNm)**,

Perform the following operations:

- fill the cooling circuit,
- bleed the cooling circuit Section **Cooling system**.

Tighten the **battery cover bolts to a torque of (0.4 daNm)**.

Check the sealing of the cooling circuit using tool (Ms. 554-07).

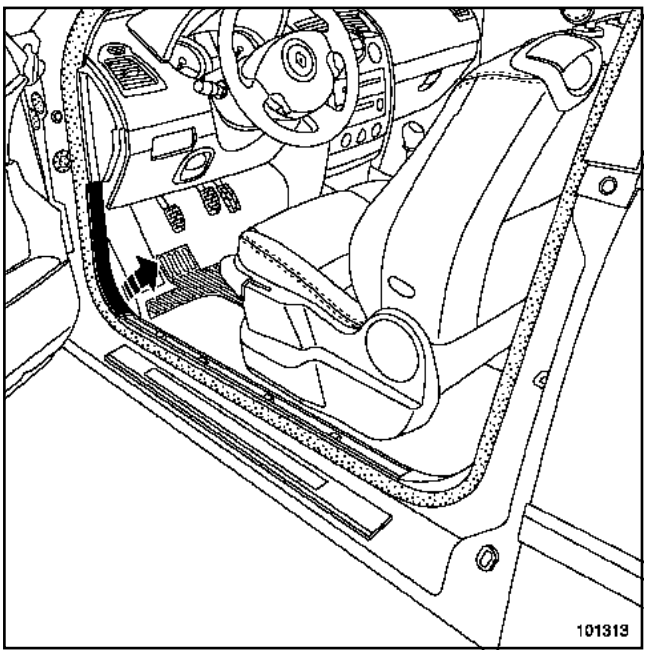
LEFT-HAND DRIVE

Tightening torques ▽	
beam reinforcement panel mounting bolts	**2.1 daNm**
flexible mounting pad mounting bolt	**0.2 daNm**
battery cover bolts	**0.4 daNm**

The passenger compartment fan assembly can be accessed from beneath the dashboard.

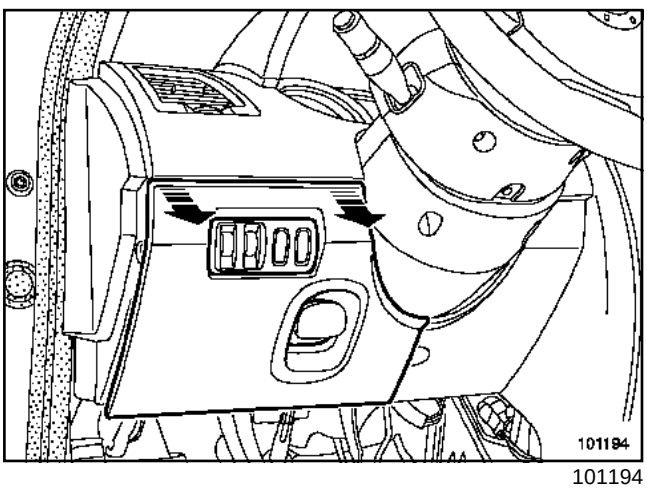
REMOVAL

Disconnect the battery starting with the negative terminal.



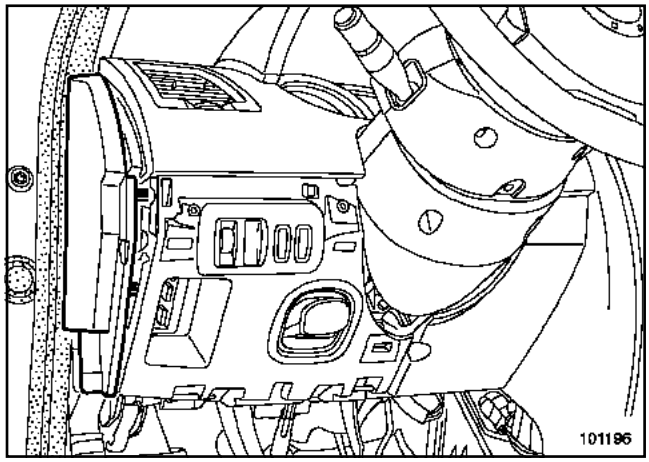
101313

Remove the front door sill lining (front section).



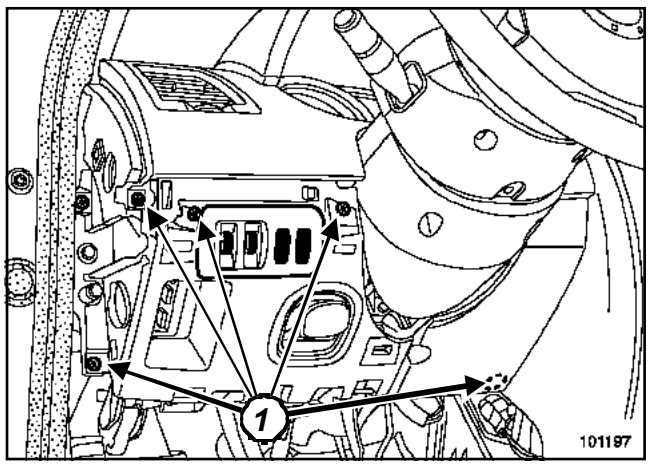
101194

Unclip the sump access flap.



101196

Unclip the side panel.



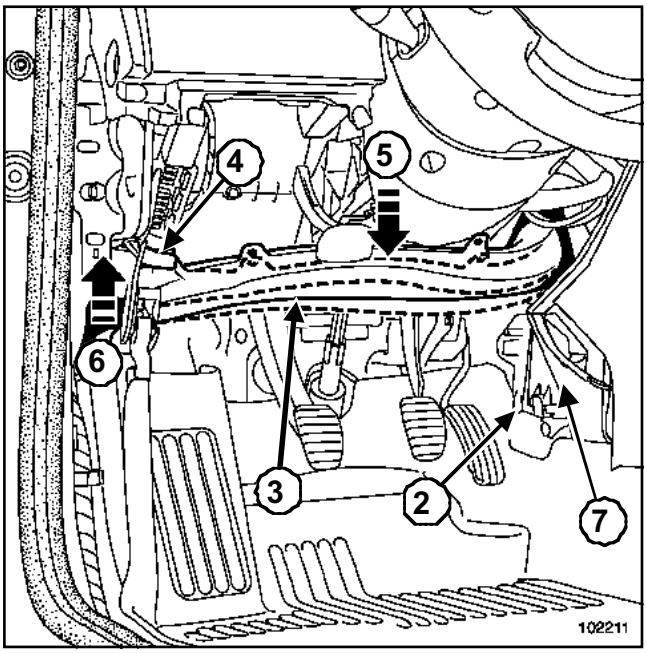
101197

Remove the screws (**1**).

Remove the assembly.

Remove the main beam headlight control unit connections.

LEFT-HAND DRIVE



102211

Remove cover (**2**).

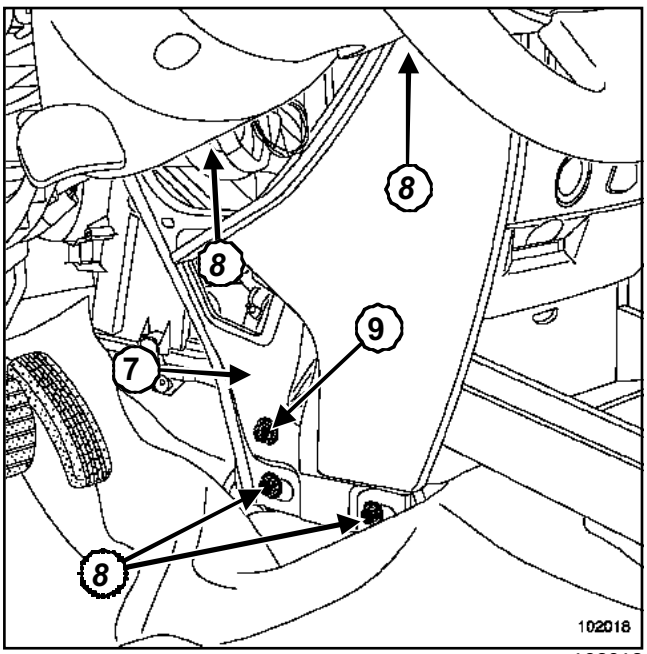
Unclip the air duct (**3**) at (**4**).

Fold the air duct (**3**) down(**5**).

Lift the air duct at (**6**).

Remove the front air distribution duct (**3**).

Detach the electrical wiring harness that is fixed to the beam reinforcement panel (**7**).



102018

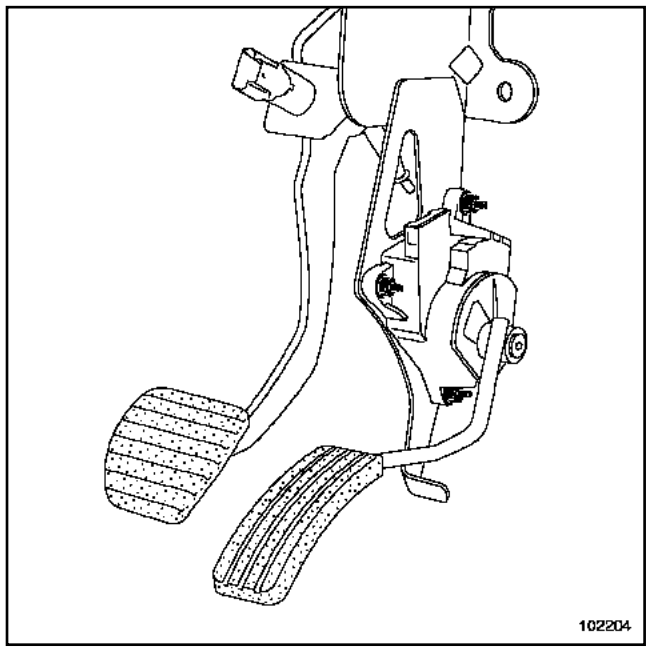
Remove:

- the lower casing covering the beam reinforcing doubler panel,
- the carpet (partially).

Undo the connecting flexible mounting pad (**9**) between the unit and beam reinforcement panel.

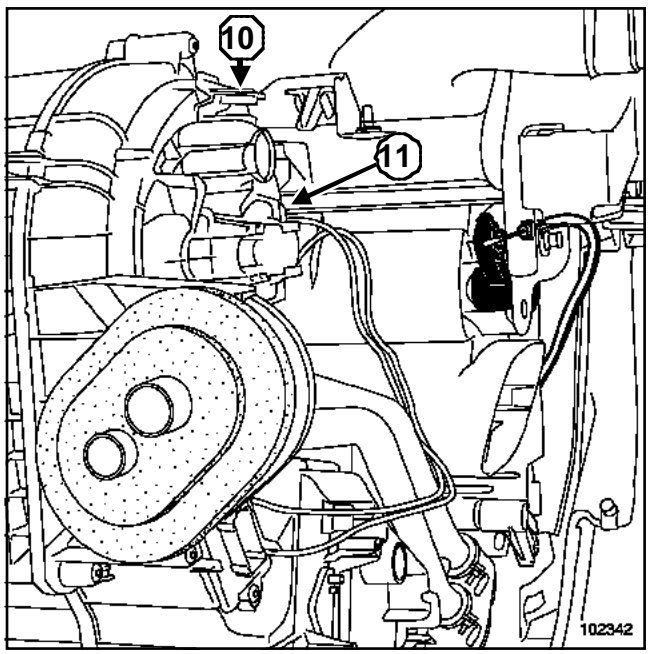
Remove the four bolts (**8**) on the beam reinforcement panel.

Remove beam reinforcement panel (**7**) by sliding it towards the front of the vehicle.



102204

Remove the « brake pedal accelerator» assembly (Section **Mechanical element controls**).



102342

Remove the heating resistor relay housing on the fan (Section **Heating**).

LEFT-HAND DRIVE

Lower fan assembly lug (**10**) to release it.

Twist the fan assembly anticlockwise to remove it from the heating and ventilation unit.

Remove the fan assembly from its position.

Disconnect the connector (**11**).

Pull out the fan assembly towards the back by turning it around the pushrod on the brake servo.

REFITTING

To refit, proceed in the reverse order to removal.

Reshape the air duct through the air outlet holes and by applying hand pressure perpendicular to the fold.

Remove the « brake pedal accelerator » assembly (Section **Mechanical element controls**).

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Tighten to torque:

- the **beam reinforcement panel mounting bolts (2.1 daNm)**,
- the **flexible mounting pad mounting bolt (0.2 daNm)**.
- the **battery cover bolts (0.4 daNm)**.

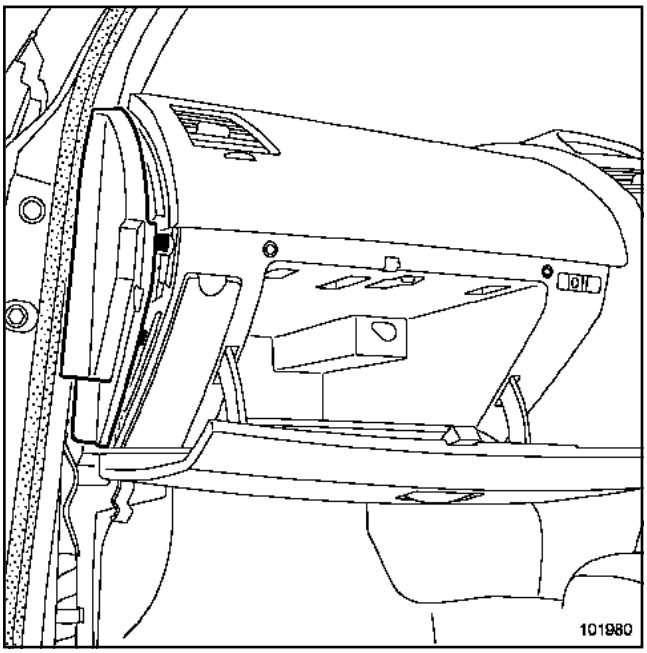
RIGHT-HAND DRIVE

Tightening torques ▽	
brake mounting plate securing nuts	**2.1 daNm**
battery cover bolts	**0.4 daNm**

The passenger compartment fan assembly can be accessed from beneath the dashboard.

REMOVAL

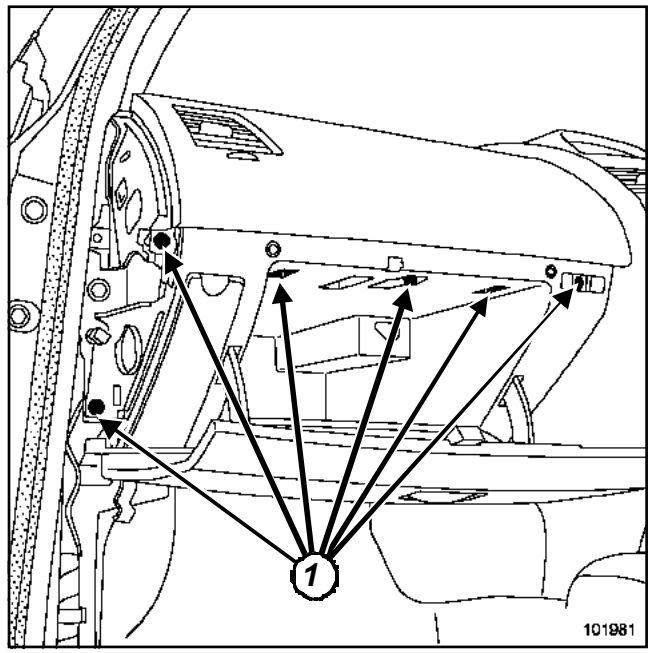
Disconnect the battery starting with the negative terminal.



101980

Remove the front door sill lining (front section).

Unclip the side panel.

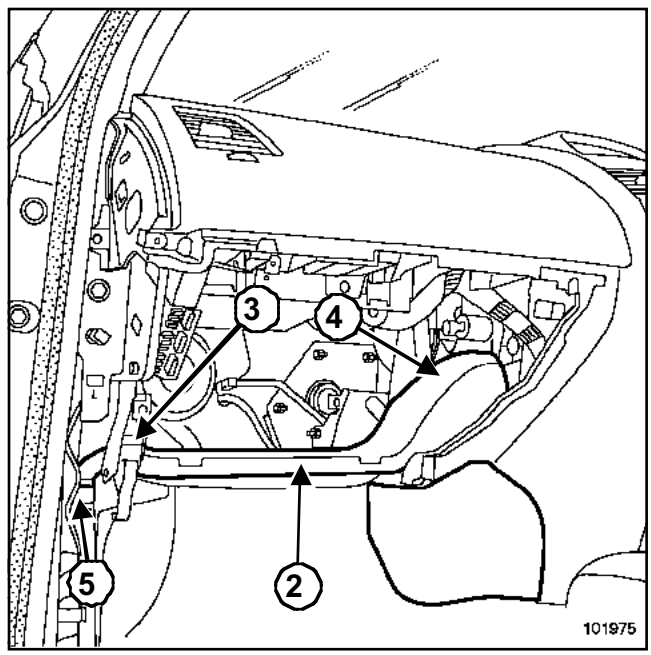


101981

Remove:

- the bolts (**1**),
- the glove compartment.

Disconnect the glove compartment connector.



101975

Remove the front left-hand air duct(**2**).

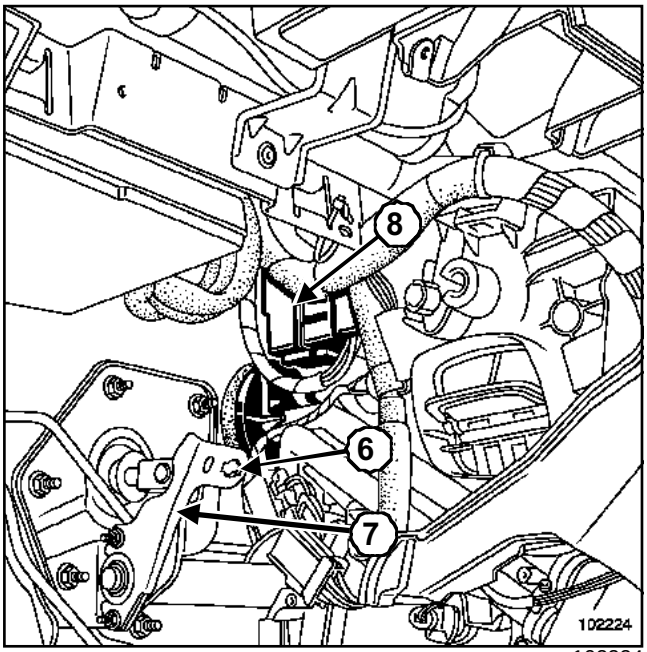
> Note:
>
> Remove clip (**3**) behind the bonnet release handle mounting.

Unclip the air duct (**2**) at (**3**) and (**4**).

RIGHT-HAND DRIVE

Fold down the air duct (**2**) .

Lift the air duct at (**5**).

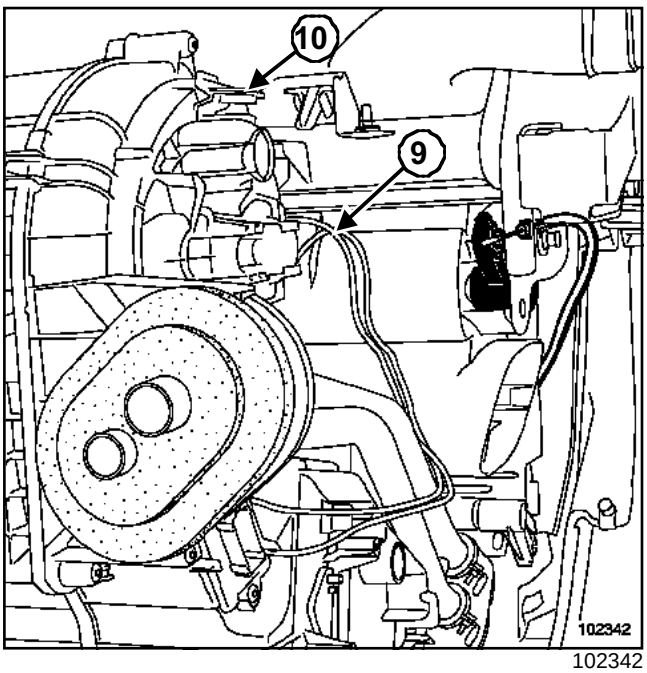


102224

Remove:

- the pedal switch at (**6**),
- the pedal switch mounting (**7**),
- the UCH.

Remove the relay box (Section **Heating**).



102342

Disconnect the electrical connector from the fan assembly at (**9**).

Lower fan assembly lug (**10**) to release it.

Twist the fan assembly anticlockwise to remove it from the heating and ventilation unit.

Pull out the fan assembly towards the back by turning it around the pushrod on the brake servo.

REFITTING

To refit, proceed in the reverse order to removal.

Reshape the air duct through the air outlet holes and by applying pressure perpendicular to the fold by hand.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Tighten to torque:

- the two **brake mounting plate securing nuts (2.1 daNm)**,
- the **battery cover bolts (0.4 daNm)**.

Tightening torques ▽	
battery cover bolts to a torque of	**0.4 daNm**

The passenger compartment fan assembly computer (electronic control) can be accessed from beneath the dashboard.

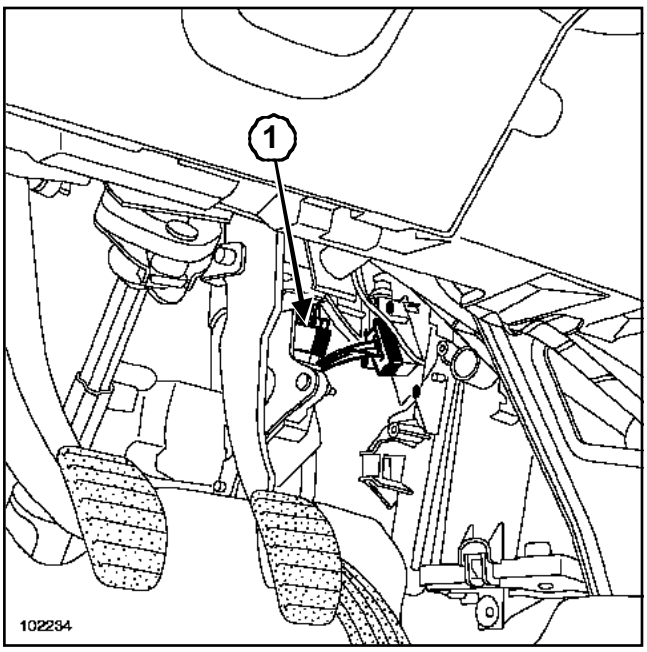
REMOVAL

Disconnect the battery starting with the negative terminal.

Remove:

- the relay mounting to access the passenger compartment fan assembly computer (Section Heating, Heating resistor unit, page **61A-46**) if the vehicle is fitted with a heating resistor unit,
- the front left-hand air duct (Section Heating, Front air distribution duct, page **61A-4**).

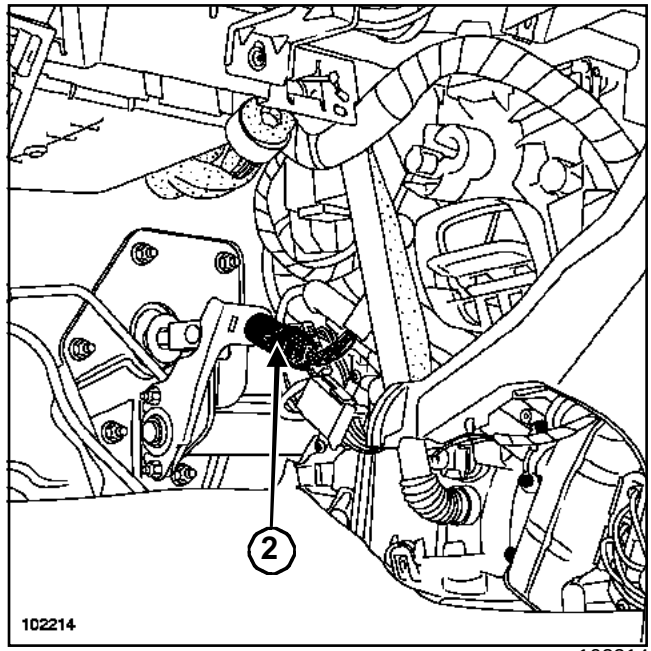
LEFT-HAND DRIVE



102234

Disconnect the accelerator pedal connector (**1**).

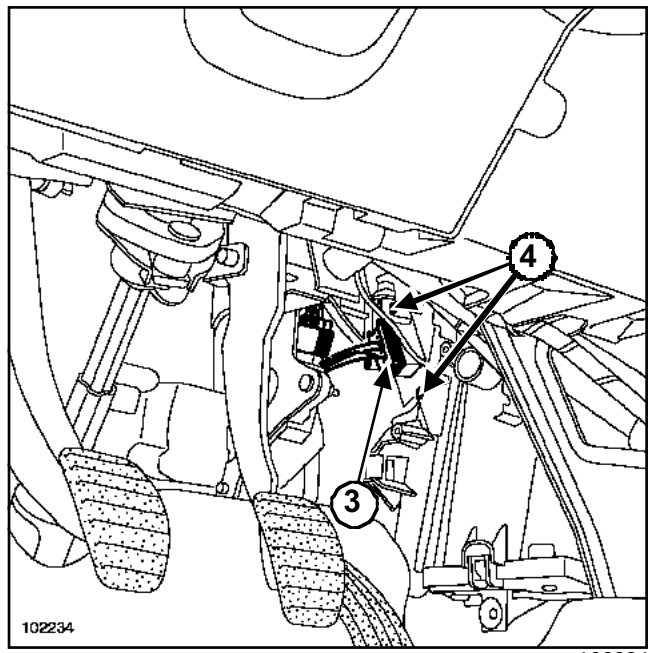
RIGHT-HAND DRIVE



102214

Remove the brake pedal setting switch (**2**) by turning it a quarter of a turn.

Example on a left-hand drive vehicle



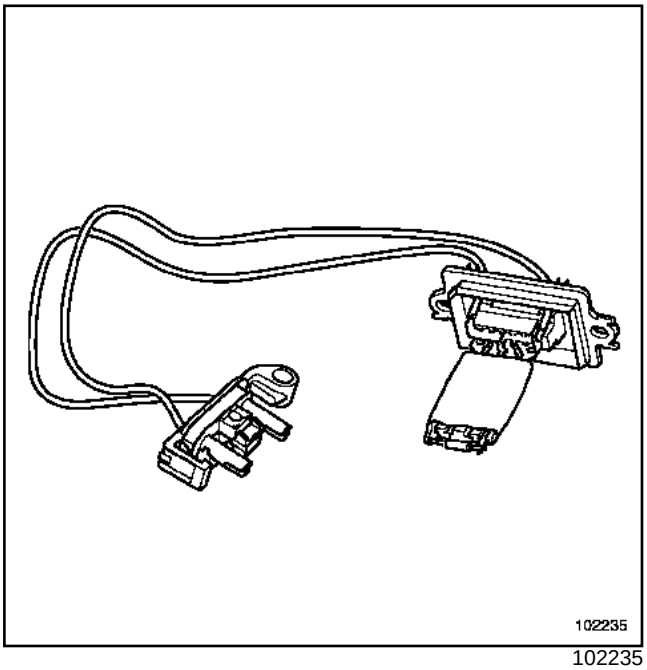
102234

Disconnect the connector (**3**) from the passenger compartment fan assembly computer.

Remove the two mounting bolts (**4**) from the passenger compartment fan assembly computer.

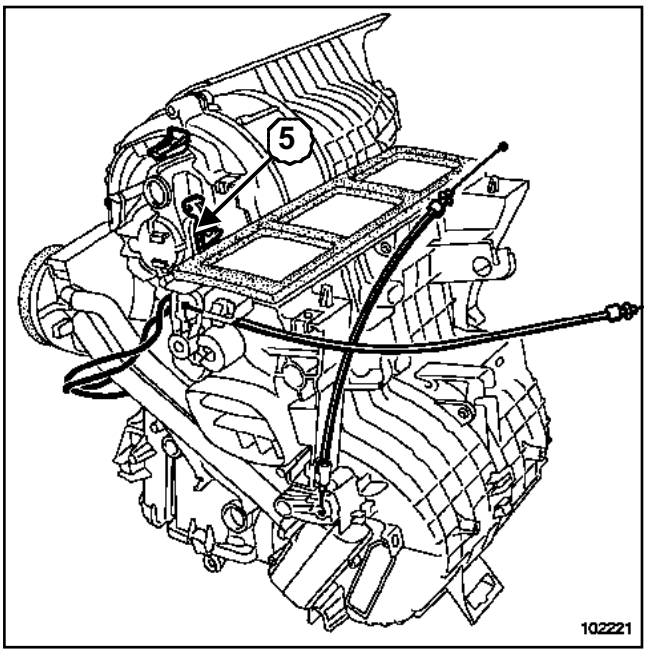
Gently remove the computer mounting brackets.

WARNING
Move the computer mounting brackets with caution.



102235

Remove the passenger compartment fan assembly computer.

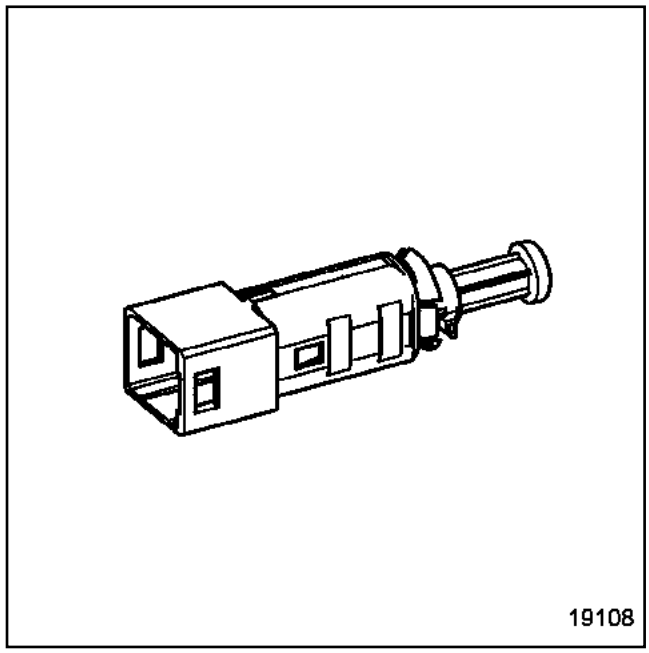


102221

Remove the passenger compartment fan assembly connector (**5**).

REFITTING

RIGHT-HAND DRIVE



19108

WARNING
The moving part of the switch must be moved to its lowest point by pulling the piston.

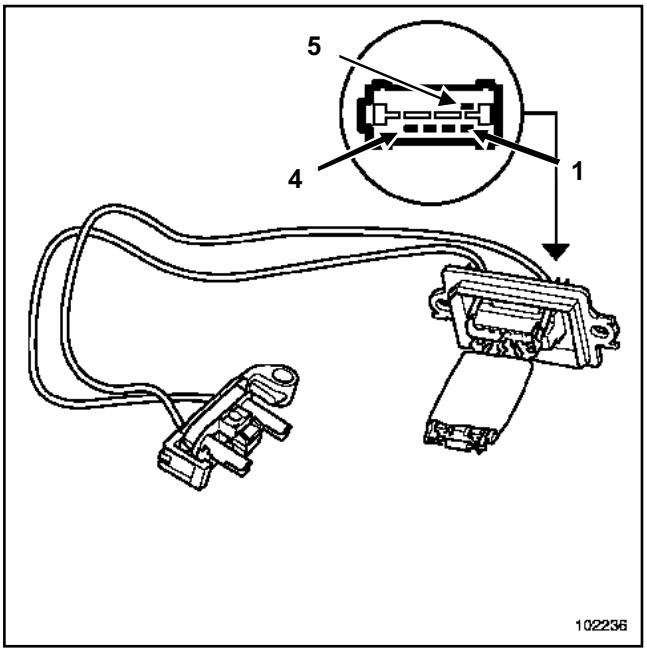
Position the brake pedal setting switch in its place.

Turn the brake pedal setting switch a quarter of a turn clockwise.

To refit, proceed in the reverse order to removal.

WARNING
Connect the battery; carry out the necessary programming (Section **Battery**).

Tighten the **battery cover bolts to a torque of (0.4 daNm)**.



102236

Track	Description
1	Speed 1 control
2	Speed 2 control
3	Speed 3 control
4	Earth
5	Feed

Track resistance:

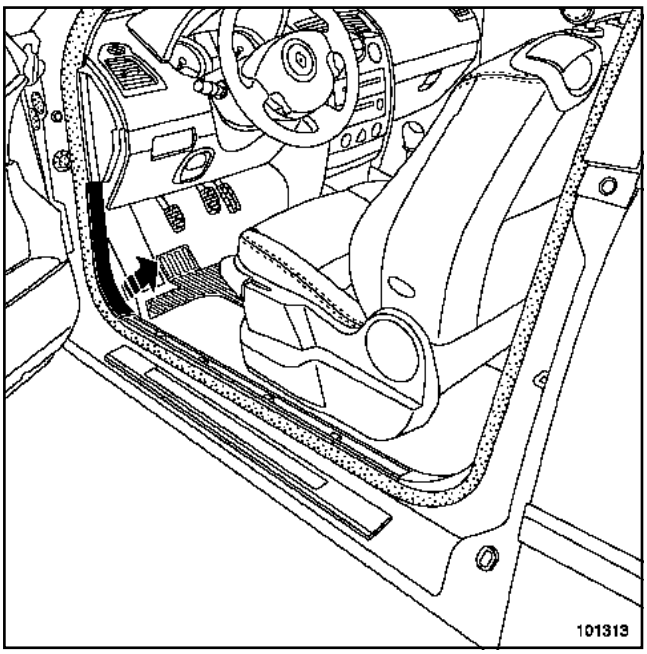
Selected speed	Connection between the tracks	Resistance in Ω
speed 1	1 / 4	5.2 +/- 0.5
Speed 2	2 / 4	3.2 +/- 0.5
Speed 3	3 / 4	2 +/- 0.5

LEFT-HAND DRIVE

Tightening torques ▽	
beam reinforcement panel mounting bolts	**2.1 daNm**
heating resistor unit mounting bolts	**0.2 daNm**
rubber mounting pad bolts	**0.2 daNm**
battery cover bolts	**0.4 daNm**

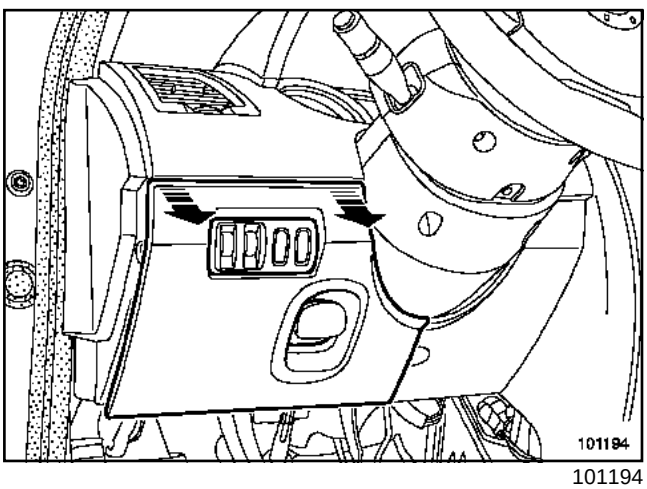
REMOVAL

Disconnect the battery starting with the negative terminal.



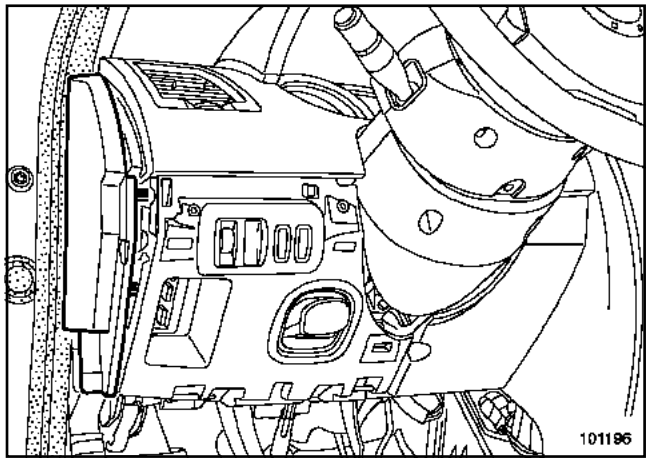
101313

Remove the front door sill lining (front section).



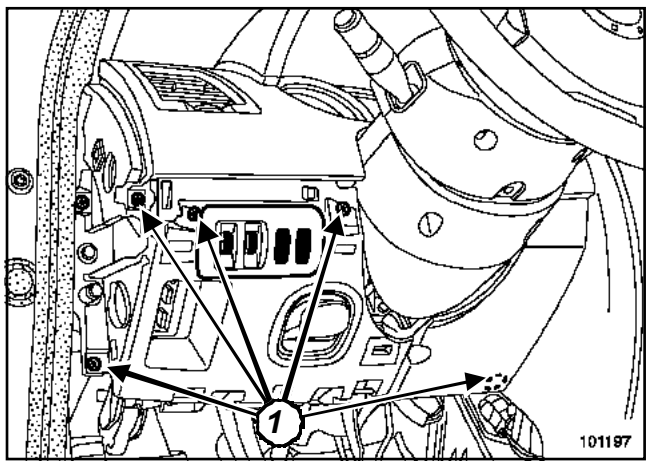
101194

Unclip the sump access flap.



101196

Unclip the side panel.

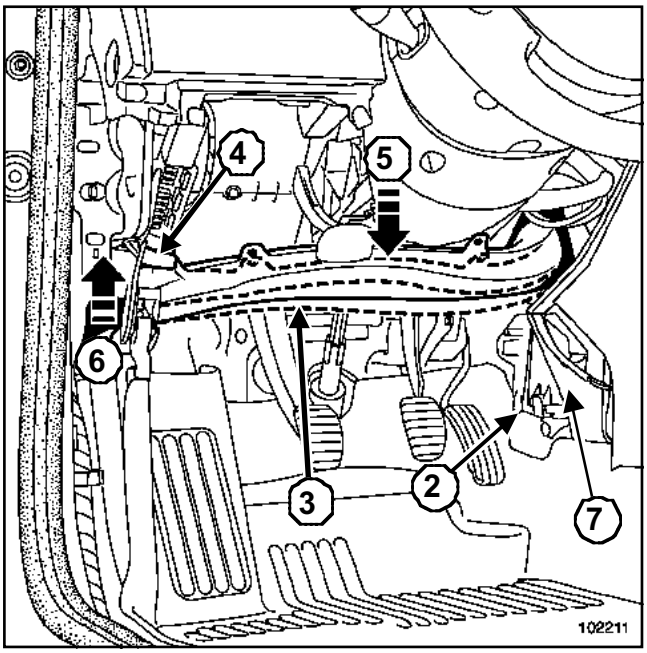


101197

Unclip the headlight adjustment control.

Remove the screws (**1**).

LEFT-HAND DRIVE



102211

Remove the cover (**2**).

Remove the air duct (**3**).

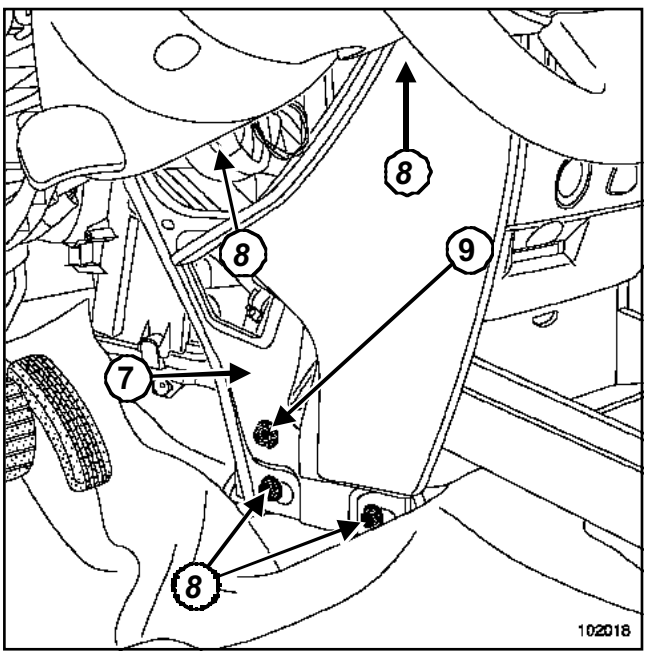
Unclip the air duct (**3**) and (**4**).

Fold the air duct (**3**) down (**5**).

Lift the air duct at (**6**).

Remove the front air distribution duct (**3**).

Separate the electrical harness secured to the beam reinforcement panel (**7**).

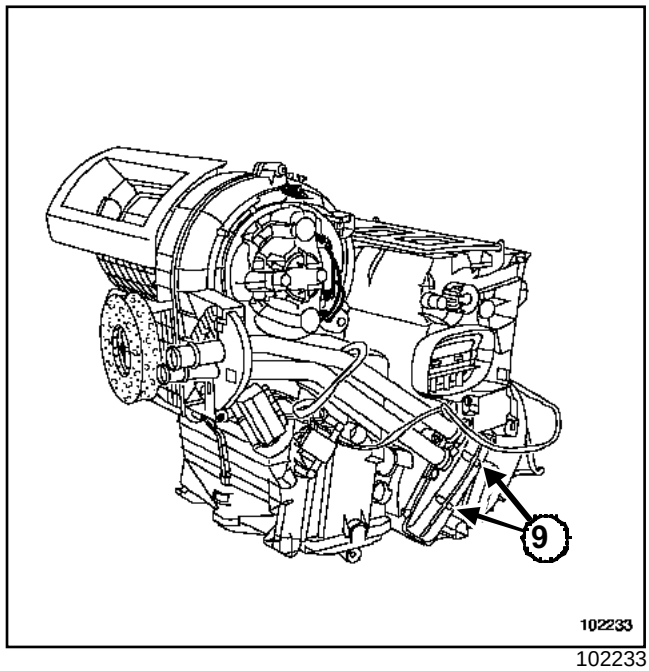


102018

Undo the connecting rubber mounting pad (**9**) between the unit and beam reinforcement panel.

Remove the four bolts (**8**) on the beam reinforcement panel.

Remove the beam reinforcement panel (**7**).

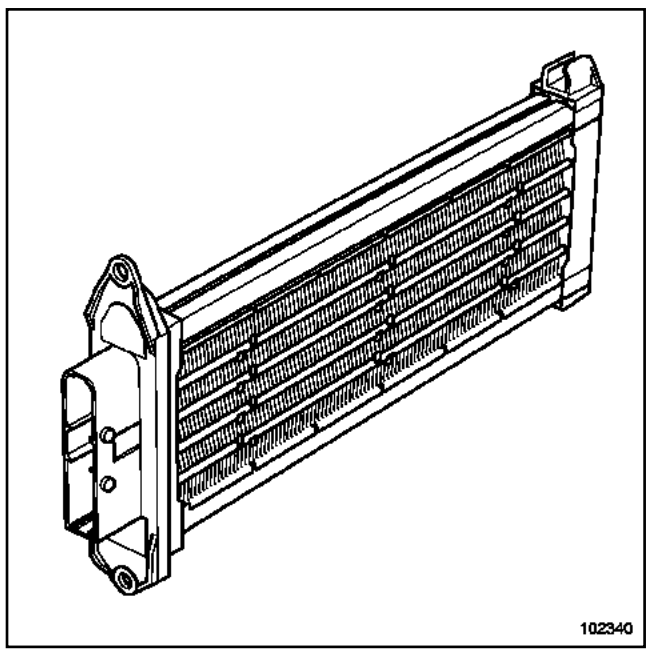


102233

Remove:

- the heating resistor unit connector,

- the two mounting bolts (**9**)



102340

Remove the heating resistor unit.

REFITTING

To refit, proceed in the reverse order to removal.

LEFT-HAND DRIVE

Reshape the air duct through the air outlet holes and by applying pressure by hand perpendicular to the fold.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Tighten to torque:

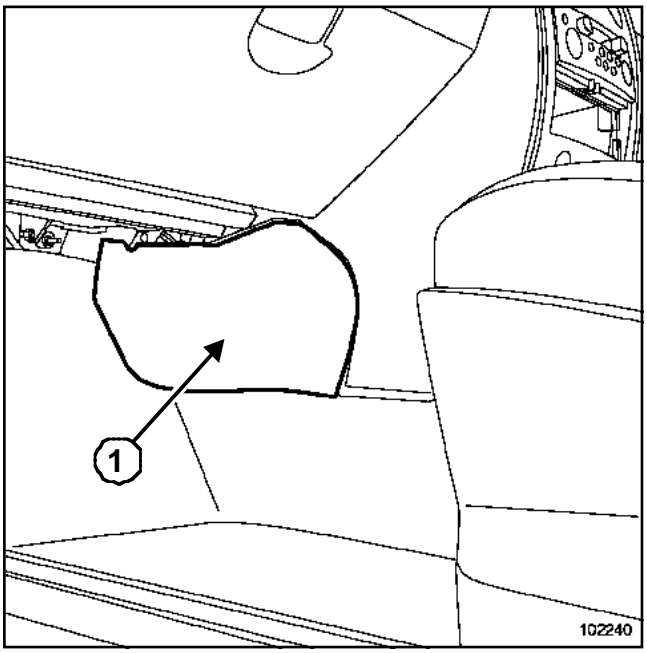
- the **beam reinforcement panel mounting bolts (2.1 daNm)**,
- the **heating resistor unit mounting bolts (0.2 daNm)**,
- the **rubber mounting pad bolts (0.2 daNm)**,
- the **battery cover bolts (0.4 daNm)**.

RIGHT-HAND DRIVE

Tightening torques ▽	
heating resistor unit mounting bolts	**0.2 daNm**
battery cover bolts	**0.4 daNm**

REMOVAL

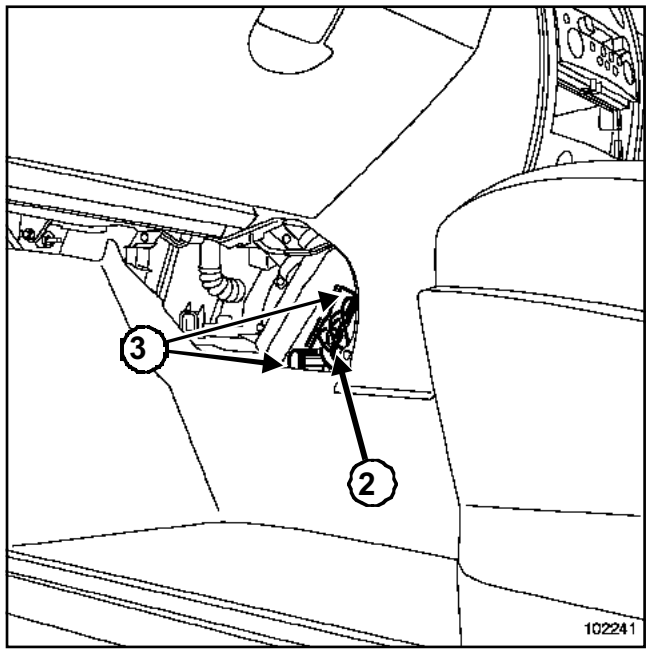
Disconnect the battery starting with the negative terminal.



102240

Remove the cover (**1**).

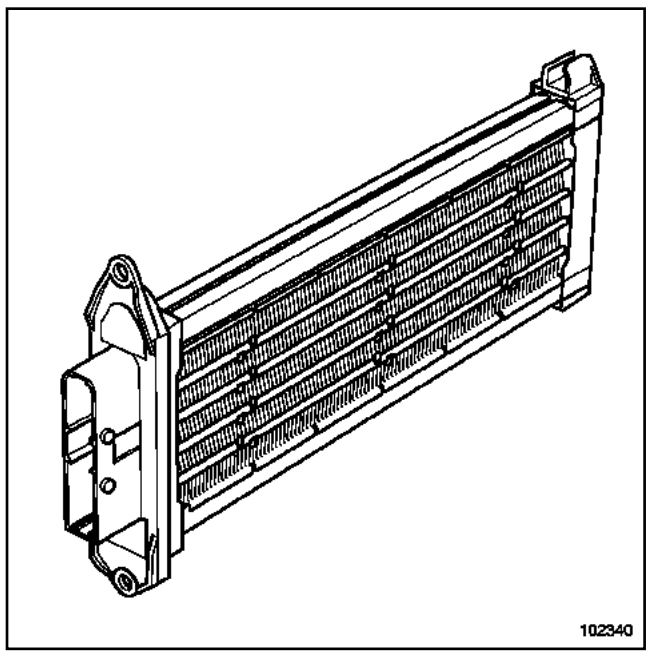
Gently fold back the carpet to access the heating resistor unit mounting bolts.



102241

Remove:

- the heating resistor unit connector (**2**),
- the two bolts on (**3**) the heating resistor unit.



102340

Remove the heating resistor unit.

REFITTING

To refit, proceed in the reverse order to removal.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

RIGHT-HAND DRIVE

Tighten to torque:

- the **heating resistor unit mounting bolts (0.2 daNm)**,
- the **battery cover bolts (0.4 daNm)**.

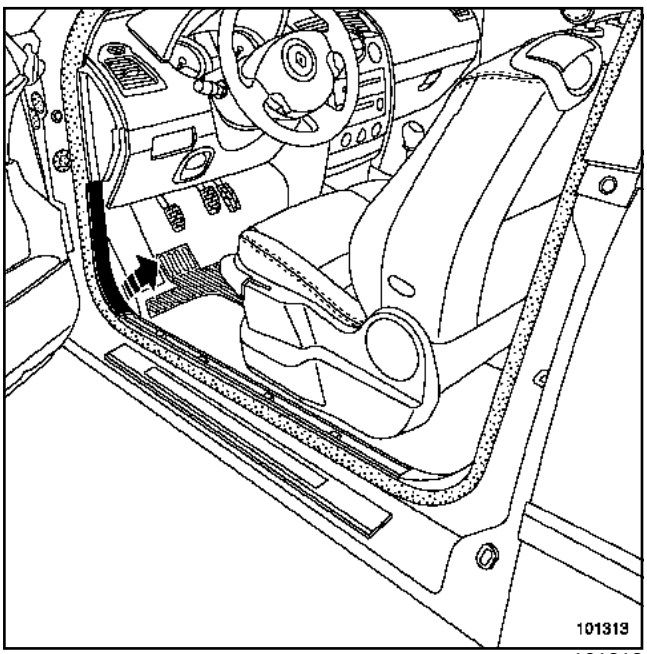
LEFT-HAND DRIVE

Tightening torques ▽	
beam reinforcement panel mounting bolts	**2.1 daNm**
engine cover bolts	**0.4 daNm**

The heating resistors can be accessed from underneath the dashboard.

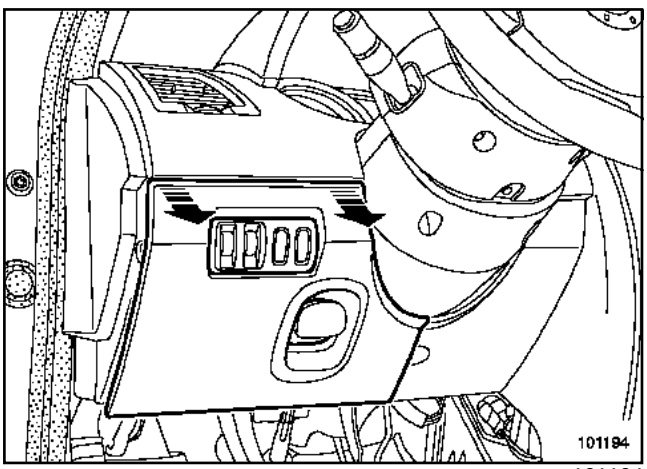
REMOVAL

Disconnect the battery starting with the negative terminal.



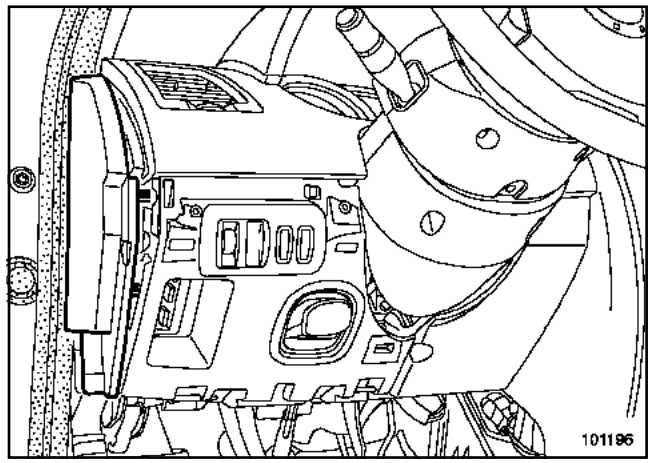
101313

Remove the front door sill lining (front section).



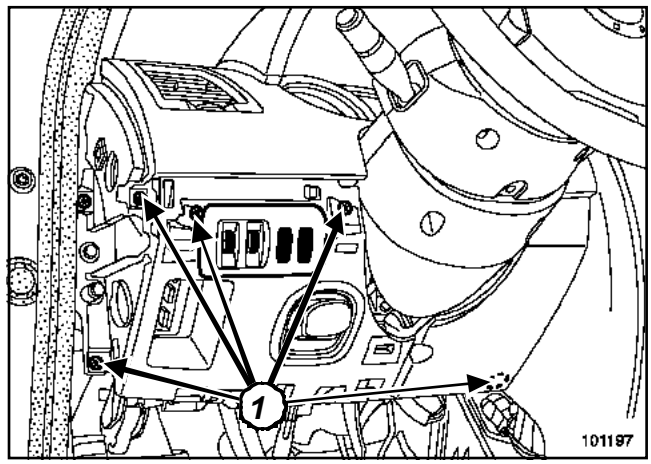
101194

Unclip the sump access flap.



101196

Unclip the side panel.



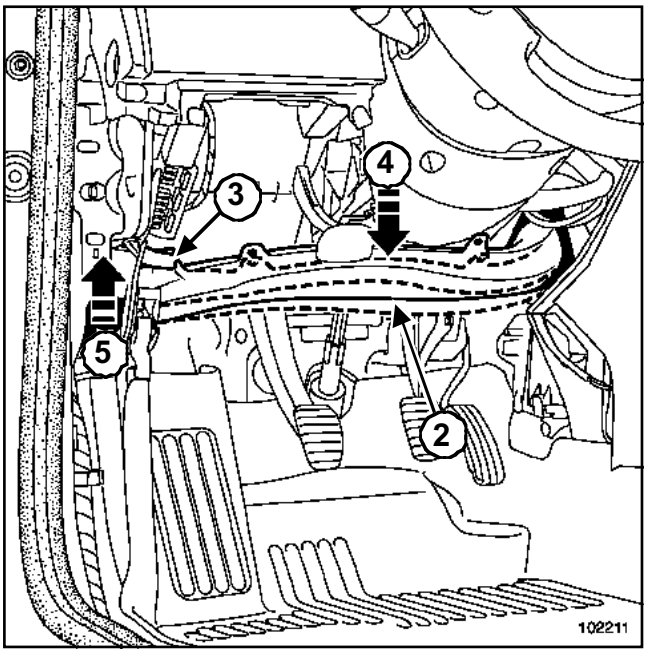
101197

Unclip the main beam headlight setting control.

Remove:

- the bolts (**1**),
- the main beam headlight adjustment unit connector.

LEFT-HAND DRIVE



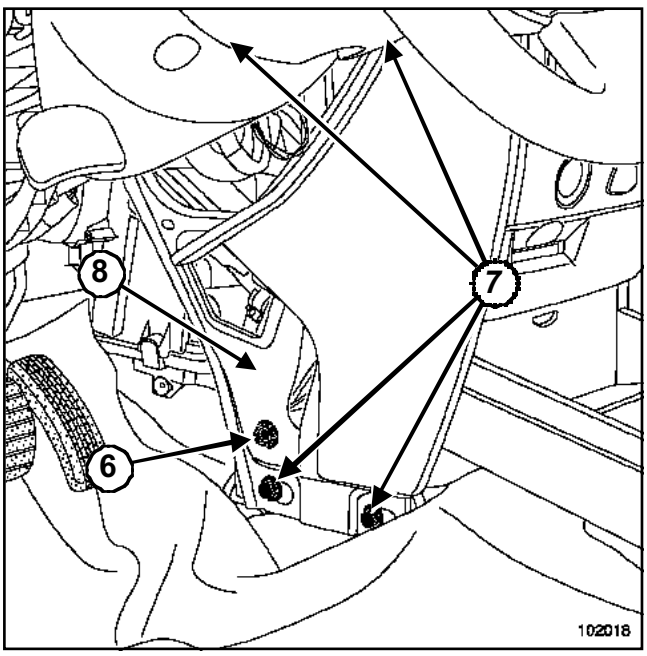
102211

Remove the left-hand front footwell air duct (**2**).

Unclip the air duct (**2**) at (**3**).

Fold the air duct (**2**) down at (**4**).

Lift the air duct (**2**).



102018

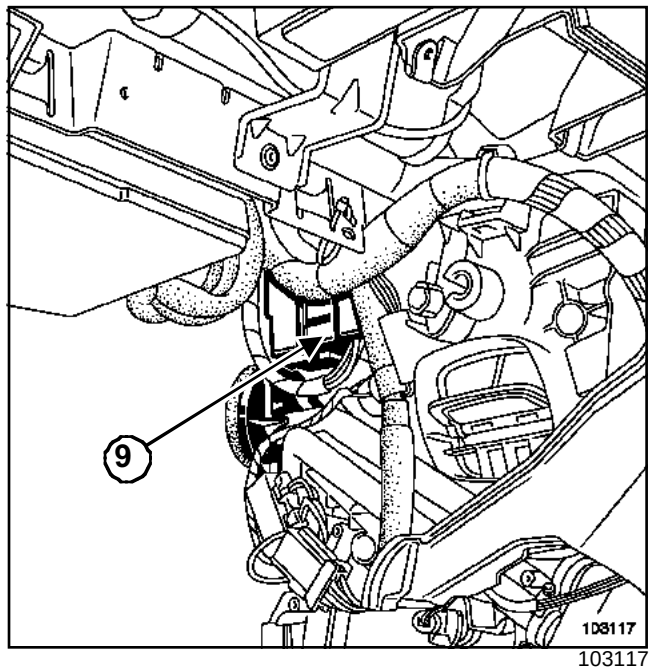
Remove:

- the lower casing covering the beam reinforcement panel,
- the carpet (partially).

Unfasten the rubber mounting pad (**6**) between the distribution unit and the beam reinforcement panel.

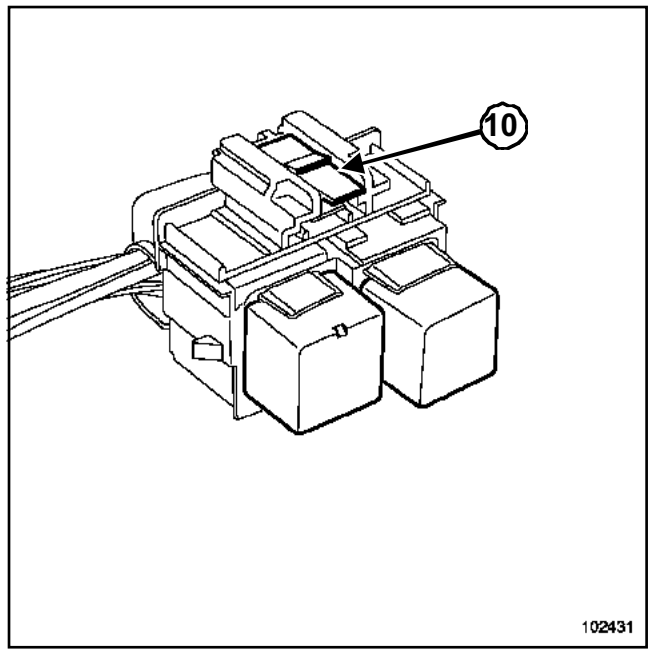
Remove:

- the four beam reinforcement panel mounting bolts (**7**),
- the beam reinforcement panel (**8**) by sliding it towards the front of the vehicle.



103117

The relay unit (**9**) (heating resistor relays) is mounted on the fan assembly.



102431

Press on bracket (**10**), then pull the unit towards the front of the vehicle.

Remove the heating resistor relay unit.

LEFT-HAND DRIVE

REFITTING

To refit, proceed in the reverse order to removal.

Reshape the air circuit by working through the air outlet holes and applying pressure perpendicular to the fold by hand.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Tighten to torque:

- the **beam reinforcement panel mounting bolts (2.1 daNm)**,
- the **engine cover bolts (0.4 daNm)**.

RIGHT-HAND DRIVE

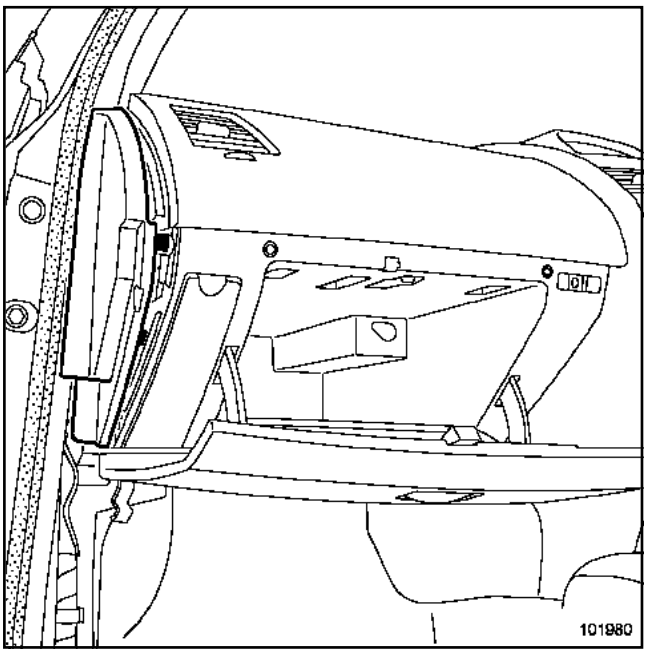
Tightening torques ▽	
battery cover bolts to a torque of	**0.4 daNm**

The heating resistor relays can be accessed from underneath the dashboard.

REMOVAL

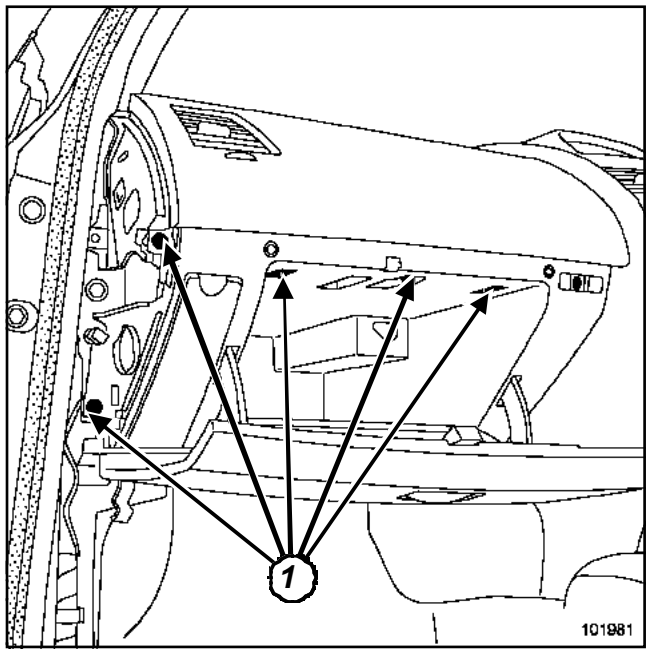
Disconnect the battery starting with the negative terminal.

Remove the front door sill lining (front section) Section **Body interior trim**.



101980

Unclip the side panel.

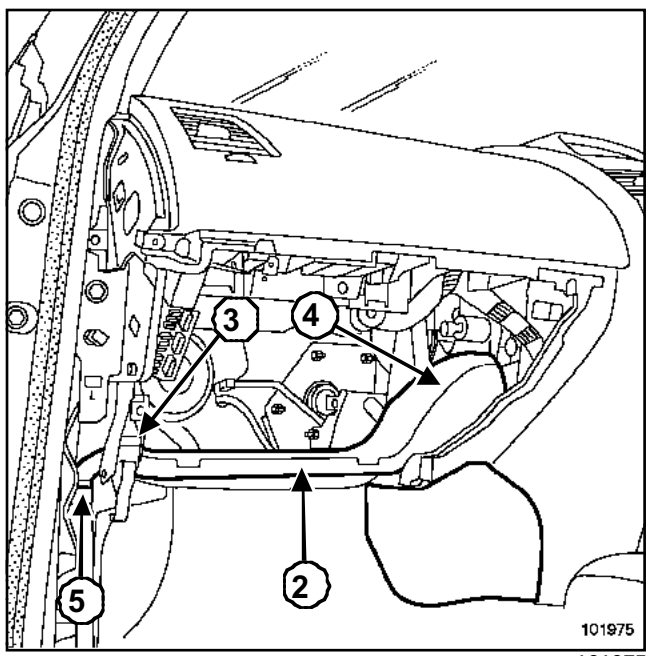


101981

Remove the bolts(**1**).

Remove the glove compartment.

Disconnect the glove compartment connector.



101975

Remove the front left-hand air vent (**2**).

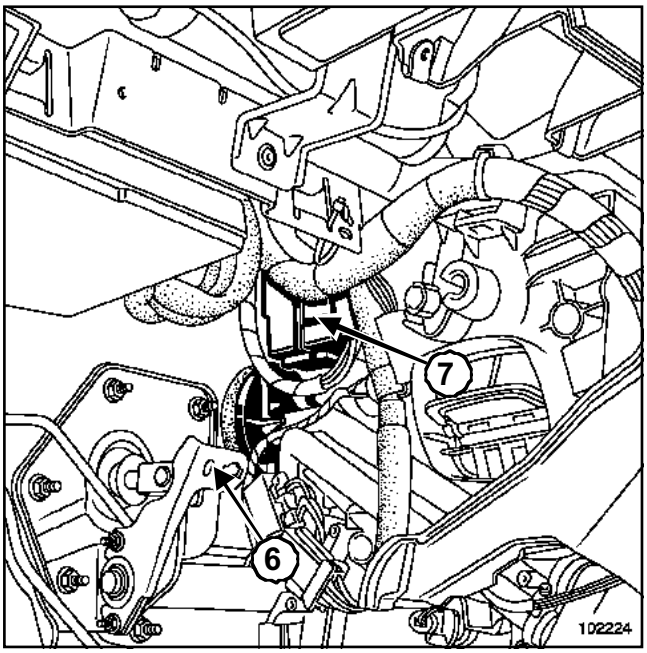
Unclip the air duct (**2**) at (**4**).

Fold the air duct (**2**) down at (**5**).

Lift the air duct (**2**).

Remove the clip (**3**) behind the bonnet release handle mounting.

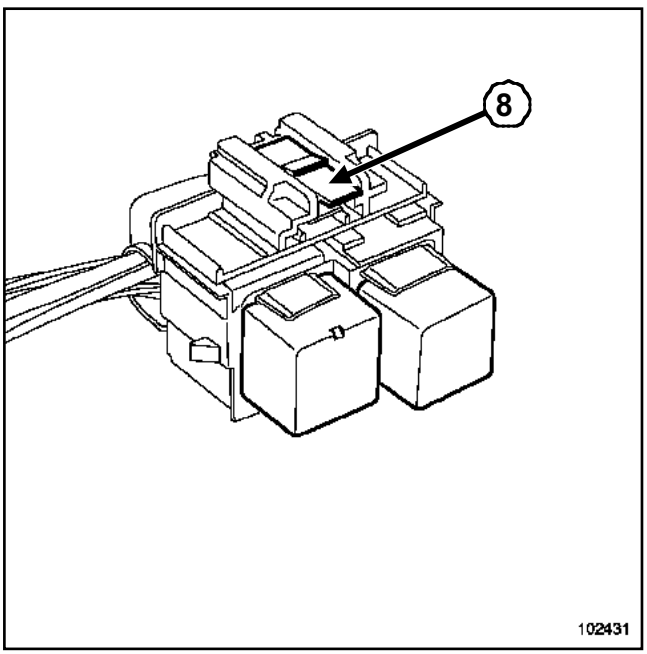
RIGHT-HAND DRIVE



102224

For vehicles fitted with heating resistors, remove the heating resistor relay housing mounted on the fan assembly in order to remove the fan assembly control (Section **Heating**).

Remove the pedal sensor located at (**6**).

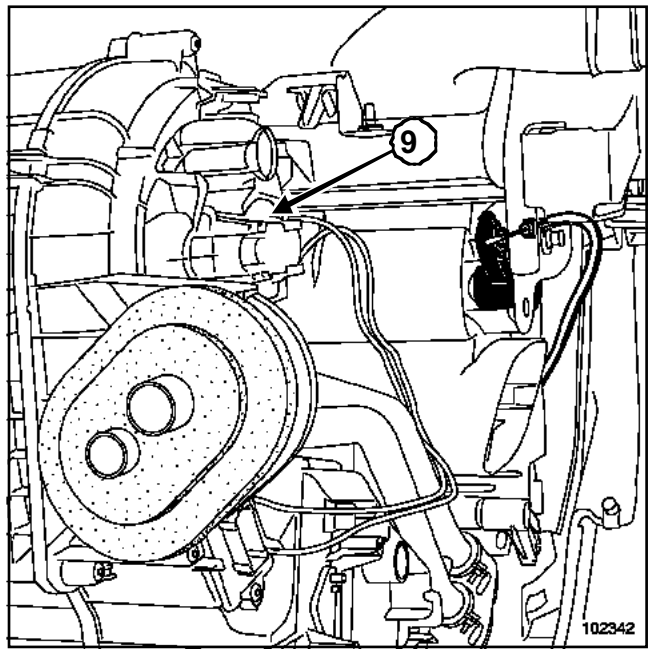


102431

Remove the relay unit at (**7**) (heating resistor relays).

Release the heating resistor relay unit.

Press bracket (**8**) then pull the unit towards the front of the vehicle to withdraw the fan assembly.



102342

Extract the resistor relay unit downwards.

Remove the relay concerned.

REFITTING

To refit, proceed in the reverse order of removal.

Reshape the air duct through the air outlet holes and by applying hand pressure perpendicular to the fold.

WARNING

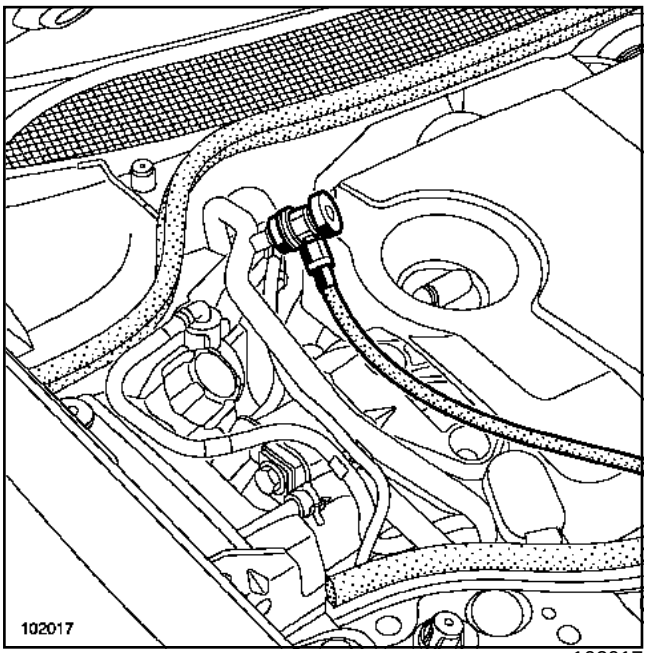
Connect the battery; carry out the necessary programming (Section **Battery**).

Tighten the **battery cover bolts to a torque of (0.4 daNm)**.

I - INFORMATION ON THE FLUID

A label in the engine compartment shows the specifications of the refrigerant fluid (see the « Air conditioning » technical note.

II - USING A FILLING STATION



102017

For retrieval, vacuum extraction and refilling the **R134A** gas, only use the high-pressure hose from the filling station.

Note:

- Plugs must be fitted to the disconnected air conditioning hoses to prevent moisture from entering the system.
- Do not remove the plugs from the replacement parts until last.
- Perform a leak test with the engine running and air conditioning and blower at maximum, and check with a leak detector within five minutes of the filling operation.
- The advice for topping up the oil level must be followed closely (refer to Section **Air conditioning**) when working on the air conditioning circuit components.
- When replacing the valves, observe the tightening torque **0.8 daNm**.

It is recommended every year:

- to clean and blow the engine cooling condenser and the radiator,
- to ensure that the cold-air blower unit's coolant condensation drain is not blocked.

It is advisable to check the refrigerant fluid load every four years, see refrigerant fluid recovery.

WARNING

Safety instructions must be adhered to when carrying out work on the cold loop (see **Safety instructions**).

I - ANTI-BACTERIAL CLEANER FOR THE AIR CONDITIONING SYSTEM

Note:

Treat the air conditioning system with a special cleaner after each winter period or extended period of non-usage to prevent odour when the system is in operation.

Spray the entire aerosol of cleaner, fitted with a nozzle, through the cabin filter duct.

WARNING

It is prohibited to spray the cleaner through the air intake, since this may damage the heating/ventilation fan (blower).

Leave to work for **15 minutes**.

Operate the ventilation fan very slowly for **5 minutes**.

II - REFRIGERANT RECOVERY:

Note:

- The air-conditioning circuit is fitted with a single refill valve; some filling equipment will not require the use of a high-pressure hose (see the filling equipment instructions).
- Depending on the case, run the system for a few minutes before recovering the refrigerant to improve drainage.

IMPORTANT

It is essential to follow these procedures to prevent:

- gas escaping when the circuit is opened,
- damaging the environment by releasing gas into the atmosphere when the circuit is opened or when vacuum extracting.

There are three possible cases to consider when recovering refrigerant or checking the refrigerant load:

- the engine is running and the air conditioning is in operation (A),
- the engine is running but the air conditioning is not in operation (B),
- the engine is not running nor is the air conditioning in operation (C).

Case A:

- Operate the air conditioning until the cooling motor-driven fan unit is triggered twice,
- Turn the engine off,
- drain for the first time (note down the original value),
- wait **15 min**,
- Check that the relative pressure is less than or equal to **0 bar**.
- begin the cycles again, as long as the relative pressure is not less than or equal to **0 bar**.
- add the values of the various draining operations, the load is confirmed correct if the amount of refrigerant is **+35g** or **-100g** compared to the load specified.

Case B:

- Run the engine until the cooling motor-driven fan unit is triggered twice,
- Turn the engine off,
- drain for the first time (note down the value),
- wait **15 min**,
- run the engine until the cooling motor-driven fan unit is triggered twice,
- drain for the second time (note down the value),
- begin the cycles again, as long as the relative pressure is not less than or equal to **0 bar**.

- add the values of the various draining operations, the load is confirmed correct if the amount of refrigerant is **+35g** or **-100g** compared to the load specified.

Case C:

- Drain for the first time (note down the value),

- wait **2 hours**,

- begin the cycles again, as long as the relative pressure is not less than or equal to **0 bar**.

- add the values of the various draining operations, the load is confirmed correct if the amount of refrigerant is **+35g** or **-100g** compared to the load specified.

III - CREATING A VACUUM

It is essential to carry out vacuum extraction correctly before loading, otherwise the air conditioning will not work properly.

Two cases must be taken into consideration:

- vacuum extraction occurs immediately after discharging (case A),

- vacuum extraction occurs after a break of several hours or days (case B).

Case A:

- vacuum extraction lasts **20 mins**.

Case B:

- vacuum extraction lasts **45 mins** to remove any residual moisture.

test the sealing at the end of vacuum extraction (some stations do this automatically).

IV - FILLING

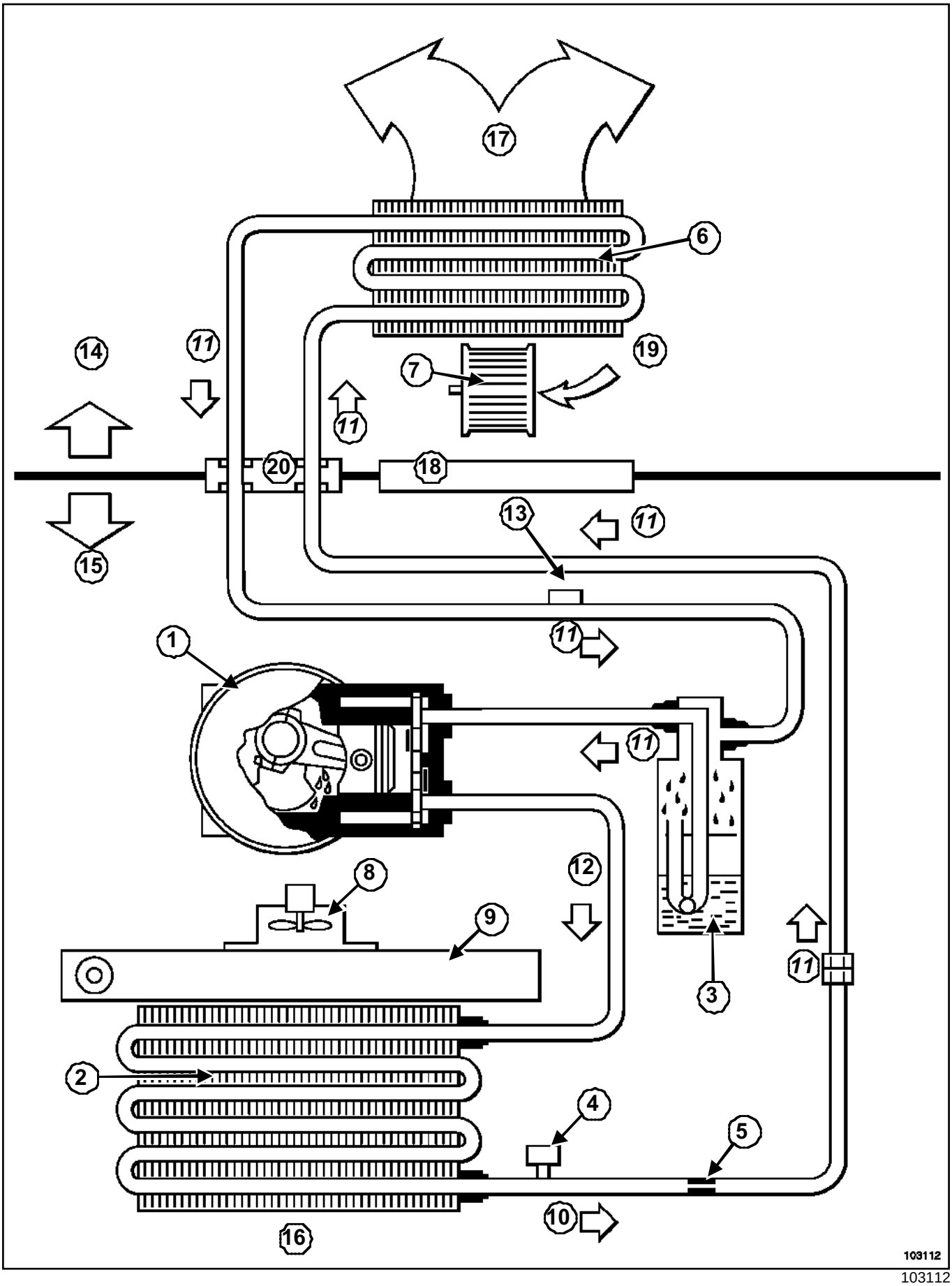
Top up the oil with the recommended type and quantity of oil, depending on the work carried out.

Start refilling.

Empty the filling equipment hoses.

Check that the system is operating correctly.

Check for leaks



103112

(**1**)	Compressor
(**2**)	Condenser
(**3**)	Dehydration canister
(**4**)	Pressure sensor
(**5**)	Sized port pressure relief valve
(**6**)	Evaporator
(**7**)	Passenger compartment fan
(**8**)	Engine cooling fan
(**9**)	Engine radiator
(**10**)	High-pressure fluid
(**11**)	Low-pressure vapour
(**12**)	High-pressure vapour
(**13**)	Filler valve
(**14**)	Passenger compartment
(**15**)	Engine compartment
(**16**)	External air
(**17**)	Towards air mixing unit
(**18**)	Scuttle panel
(**19**)	External or recirculated air
(**20**)	Hose bracket on the scuttle panel

Table of refrigerant capacities for vehicles according to their engines and various specifications (see also the Adjustment value booklets for further information).

Engine	Refrigerant capacity (g)	Type of compressor	Type of oil	Quantity of oil (ml)
K4J engine	550	Delphi 6 CVC 135	PLANETELF PAG 488	150
K4M engine				
F4R engine				
K9K engine				
F9Q engine				

Table of quantities of oil to add when replacing components:

Operation on the air-conditioning circuit	Quantity of oil (ml or cm^3)
Circuit oil change	Measure the quantity recovered and add the same quantity of new oil
Split hose or other rapid leak	100
Replacement of a condenser	Quantity recovered +30
Replacement of an evaporator	Quantity recovered +30
Replacement of the dehydration canister	Quantity recovered +15
Replacement of a hose	Quantity recovered +10
Removing / refitting a compressor	Quantity recovered
Replacement of a compressor	None added

IMPORTANT

When handling refrigerant, the following must be worn:

- gloves,
- protective eyewear (with side shields where possible).

- In the event of refrigerant fluid coming into contact with the eyes, rinse thoroughly with clean water for **15 minutes**.
- It is recommended that an eye bath be kept at hand.
- If refrigerant gets into your eyes, consult a doctor immediately. Inform the doctor that the burns were caused by refrigerant **R134A**.

If the fluid comes into contact with other unprotected parts of the body (even though the safety instructions were followed), rinse thoroughly with clean water for **15 minutes**.

IMPORTANT

- Any work involving refrigerant fluid must be carried out in a well-ventilated area.
- The refrigerant must not be stored in a well, a pit, a hermetically sealed room, etc.
- Refrigerant fluids are colourless and odourless.

The density of refrigerant fluid is greater than that of air, causing it to fall to the ground. To avoid the risk of asphyxia when carrying out work on the system, therefore, make sure that there are no pits, air duct wells, etc. at a distance of less than **5 m** and operate the gas extraction systems.

At temperatures above **100˚C**, caused by a hot spot for example, the refrigerant fluid decomposes and produces a highly irritant gas.

IMPORTANT

It is forbidden to carry out welding or brazing on:

- components of the air conditioning system when these are in place,
- the vehicle, due to the risk of overheating a component of the air conditioning system.

It is possible to place components in the drying oven after painting or to carry out work near the system if the temperature does not exceed **80˚C**.

IMPORTANT

- Repairing any faulty components of the air conditioning system is strictly prohibited.
- All faulty components must be replaced.

The correct routing of the pipes must be observed.

Make sure that the refrigerant fluid pipes are sufficiently secured to prevent any contact with the metallic components of the engine compartment.

IMPORTANT

Smoking is strictly prohibited in the vicinity of a refrigerant fluid circuit.

AIR CONDITIONING or CLIMATE CONTROL

Leak screening table

Component	Detection area	Part to be replaced after first check	Part to be replaced after filling and second check
Condenser	Inlet or outlet	Pipes	Condenser
Evaporator	Connection flange	Pipes	Connection flange and/or evaporator
Compressor	Inlet or outlet	Pipes	Compressor
Dehydration canister	Inlet or outlet	Pipes	Dehydration canister

There are two types of device for detecting leaks:

- electronic sensors,

- tracer detectors.

Note:

Use the electronic detector and then the tracer detector to check for leaks.

I - ELECTRONIC DETECTORS

WARNING

Always refer to user instructions for the device before carrying out any work.

This device is used to measure variations in the quantity of refrigerant in the air: it emits an audible signal depending on the extent of the variation.

The device must be initialised before the check is carried out. To do this:

- immobilise the device,

- calibrate the device at one point in the compartment.

This point then acts as a scale for detecting rates of contamination.

This device is highly sensitive: when a leak is detected, only follow the line of the circuit as closely as possible to limit variations due to other gases.

This device only detects relatively substantial leaks.

WARNING

Make sure that the sensor at the end of the rod is perfectly clean and in good condition.

II - TRACER DETECTORS

Detecting leaks using a tracer involves adding a dye to the refrigerant fluid and locating the points of fluid loss using an ultraviolet light .

IMPORTANT

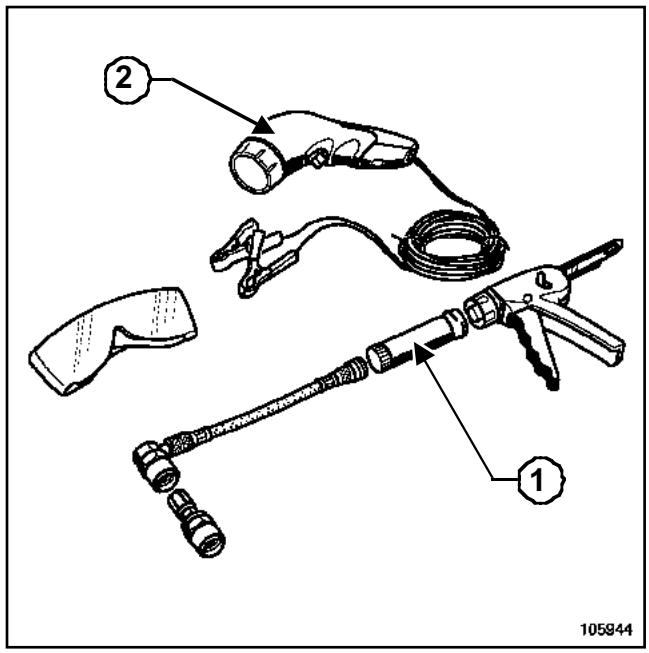
Safety instructions must be adhered to when carrying out work on the cold loop (Section Air conditioning, Safety instructions, page **62A-7**).

WARNING

The procedure described must be followed.

Note:

This leak-detection procedure should only be used as a last resort for « leaks that cannot be found ».



105944

The refrigerant fluid leak-detection procedure is based on the use of a dye available in the form of a

throwaway capsule (**1**): leak traces are revealed using an ultraviolet light (**2**).

The dye remains in the air conditioning system.

It is possible to check the condition of the cold loop using an ultraviolet light without adding a new capsule.

If there is nothing to indicate that dye has been used previously (label, etc.):

- place a cloth,
- release a small jet of refrigerant through the two valves,
- shine the ultraviolet light inside the valves,
- check for fluorescent traces.

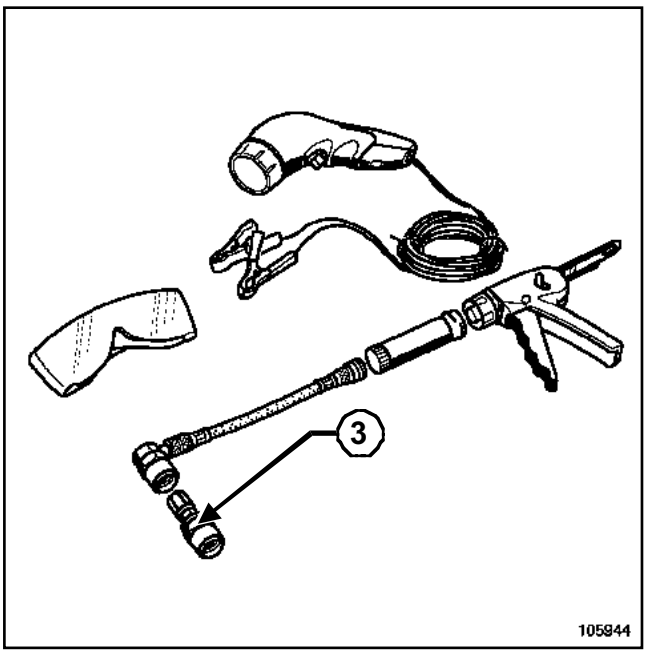
WARNING
It is forbidden to add dye to the cold loop if fluorescent traces are present.

Add a quantity of detection dye in the absence of fluorescent traces or an identifying label.

Affix a label.

Record the date on which the dye was added.

1 - Adding dye to the circuit



105944

Fit the system for adding the dye on the low-pressure valve using connection (**3**) for vehicles with a single valve.

Add the dye to the circuit.

Run the air conditioning for approximately **15 minutes**.

2 - leak-detection procedure

Carry out an initial check (with the engine stopped) by sweeping the circuit with an ultraviolet light.

Note:

Use an adjustable mirror wherever access is difficult.

If no leak can be detected:

- carefully clean the exterior of the refrigerant circuit,
- Run the air conditioning until the leak can be detected (if no leak is detected, check the condition of the evaporator).

WARNING
After the dye has been used in the refrigerant fluid, it is essential that the reason for using the dye and the date of the operation are marked on a label (provided with the dye capsule). The label must be placed near the cold loop filling valves (shock absorber turret) where it is visible.

AIR CONDITIONING or CLIMATE CONTROL

Essential equipment
diagnostic tool

Fault finding

Components	Symptoms		
	No cold air	Air too cold	Inefficient operation
Fuses	1	-	-
Air distribution	1	1	-
Air flow	1	-	1
Recirculation flap	-	-	1
Passenger compartment blower	-	-	1
Lack of refrigerant	1	-	2
Compressor belt (condition or tension)	2	-	2
Wiring harness assembly	3	-	2
Sensor signal	4	2	3
Pressure sensor	4	3	4
Cooling fan	-	-	4
Compressor clutch relay	5	-	-
Compressor clutch	5	-	-
Compressor	5	-	5
Calibrated opening	5	-	5
Dehydration canister	-	-	5
Control panel	6	4	6

IMPORTANT
It is essential to follow the safety instructions (Section Air conditioning, Safety instructions, page **62A-7**).

WARNING
It is essential to follow the cleanliness instructions (see **Precautions**).

The fault detection table covers all climate control systems (automatic or not) and should not be used as a guide because some of the components listed are not to be found on all models (see the specific Workshop Repair Manuals).

AIR CONDITIONING or CLIMATE CONTROL

The figures indicate the most common causes of faults (repeated where there is more than one cause):

PRELIMINARY CHECK

Check:

- the battery voltage (Section **Battery**),
- the condition of the cabin filter (Section Air conditioning, Passenger compartment filter, page **62A-12**).

CHECK THE EFFICIENCY OF THE AIR CONDITIONING SYSTEM

Start the engine.

Switch on the air conditioning control or supply the compressor clutch directly.

Turn the cold control to its maximum setting.

Switch the air distribution control to the centre and side vents setting and activate air recirculation mode.

Close all of the vents except one side vent.

Switch on the highest blower speed.

Note:

The air vent outlet temperature must be below **10 °C** for approximately **1 min** for an exterior temperature of 20°C.

IDENTIFYING THE SYSTEM

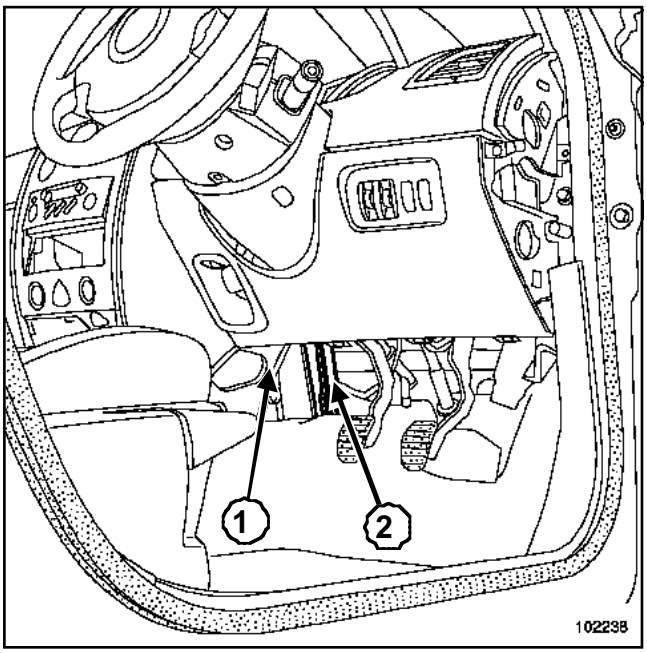
Identify the air conditioning system fitted to the vehicle (read the family, program number, etc.), using the **diagnostic tool**.

Refer to the fault finding document for the system identified.

RIGHT-HAND DRIVE

Fitted in front of the external air intake, it filters the air and ensures that the air is totally clean before it is fed into the passenger compartment.

REMOVAL



102238

Remove the trim at (**1**).

Remove the cabin filter (**2**).

> Note:
>
> The stiff sections of the filter must be broken to take out the filter.

REFITTING

To refit, proceed in the reverse order to removal.

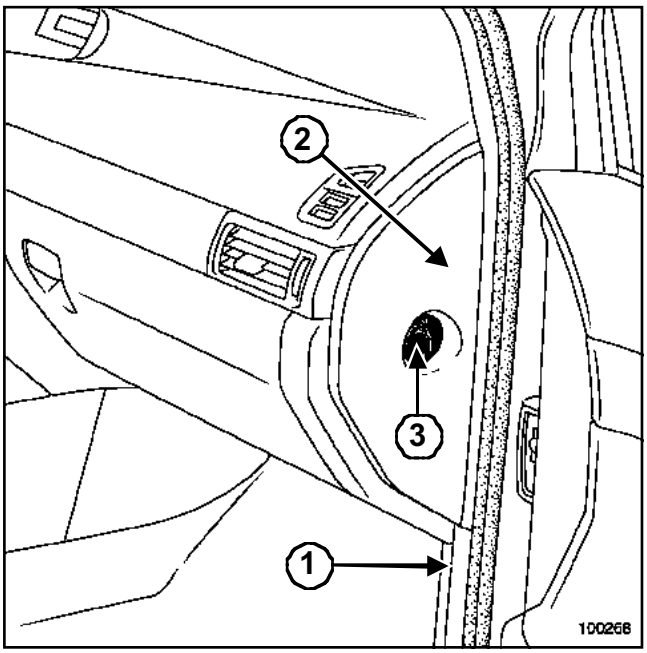
> Note:
>
> - The stiff sections of the filter must be broken to make fitting it easier.
> - Be sure not to damage the filtering section.

LEFT-HAND DRIVE

Fitted in front of the external air intake, it filters the air and ensures that the air is totally clean before it is fed into the passenger compartment.

REMOVAL

Disconnect the battery starting with the negative terminal.

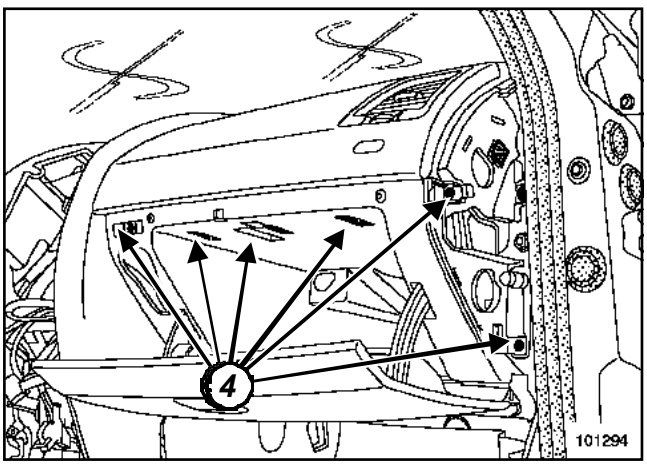


100268

Remove:

- the front lower sill lining (1),
- the dashboard side panel (2).

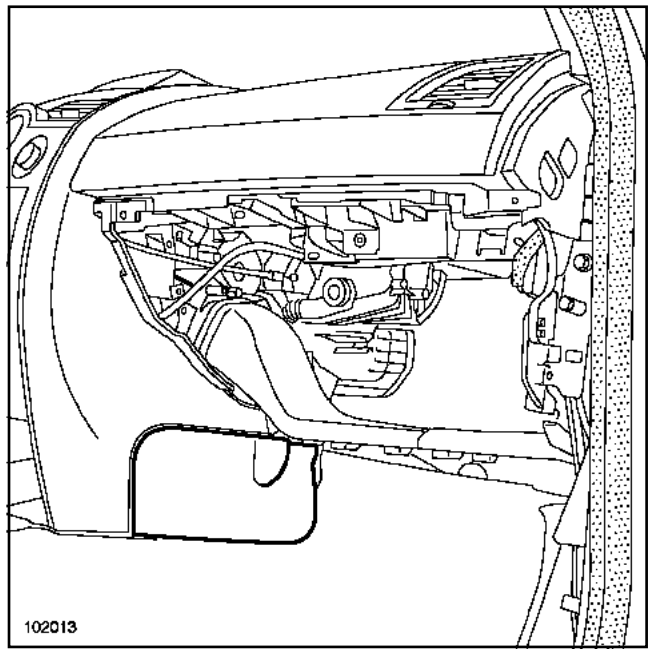
Unclip the passenger airbag inhibitor switch (3).



101294

Remove the glove compartment mounting bolts (4).

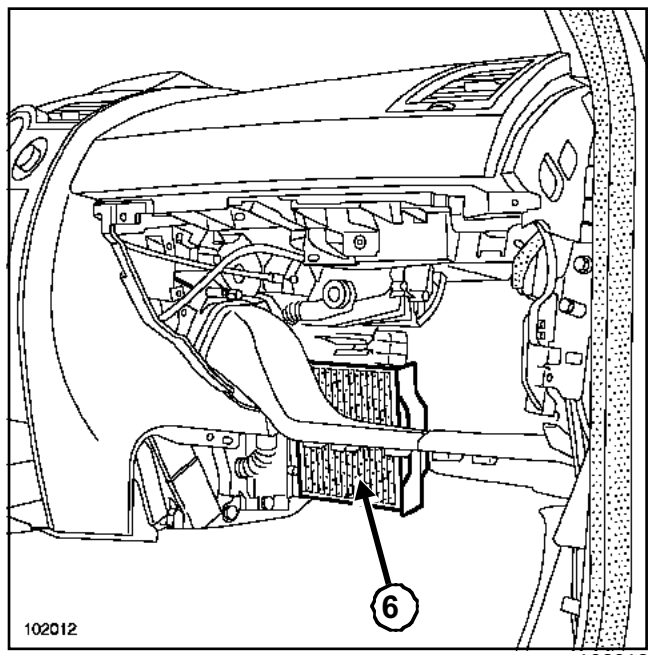
Release the storage compartment.



102013

Remove:

- the trim (5),
- the two cabin filter bolts.



102012

Withdraw the cabin filter (6).

REFITTING

To refit, proceed in the reverse order to removal.

WARNING

Connect the battery; carry out the necessary programming (Section **Electrical equipment**

Essential equipment
filling station

Tightening torques ▽	
pipe union mounting bolts	**1 daNm**
battery cover mounting bolts	**0.4 daNm**

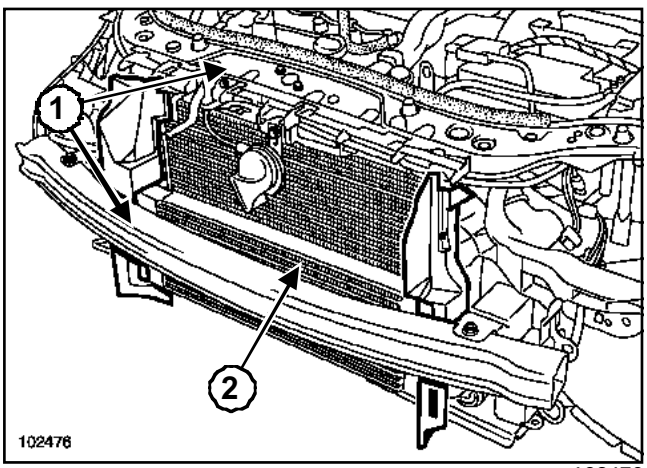
REMOVAL

Put the vehicle on a two-post lift.

Disconnect the battery starting with the negative terminal.

Drain the refrigerant circuit using tool **filling station**.

Remove the front bumper (see **Front bumper**).



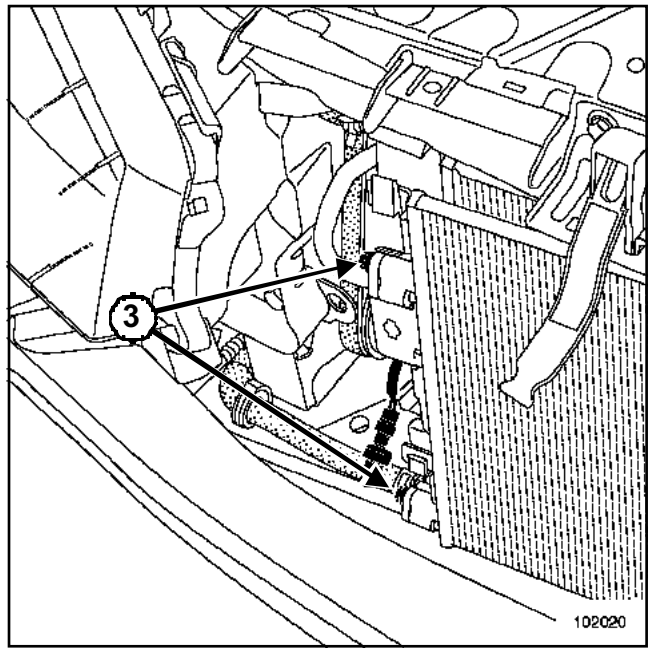
102476

Remove the front panel (**1**) (Section **Engine and lower engine assembly**).

F9Q or K9K

Remove the air hoses on the air-to-air intercooler ***(2)***.

Remove the two air hoses.



102020

Unscrew the pipe unions (**3**) from the condenser.

Disconnect the pipes.

Fit plugs into the openings.

Remove the condenser.

REFITTING

To refit, proceed in the reverse order to removal.

Check that the condenser is correctly secured.

Replace the seals.

Lubricate with the recommended air conditioning oil to aid fitting.

WARNING
If there are any damaged seals, the piping must be replaced.

Torque tighten the **pipe union mounting bolts (1 daNm)**.

Note:
When replacing the condenser, add **30 ml** of approved oil to the quantity recovered.

Fill the refrigerant circuit using the tool **filling station**.

WARNING
Connect the battery; carry out the necessary programming (Section **Battery**).

Note:

- Make sure the air conditioning is working properly by running the fan at maximum speed.
- Check for leaks (Section **Air conditioning**).

Torque-tighten the **battery cover mounting bolts (0.4 daNm)**

Essential equipment
filling station

Tightening torques ▽	
pipe union mounting bolts	**1 daNm**
battery cover bolts	**0.4 daNm**

REMOVAL

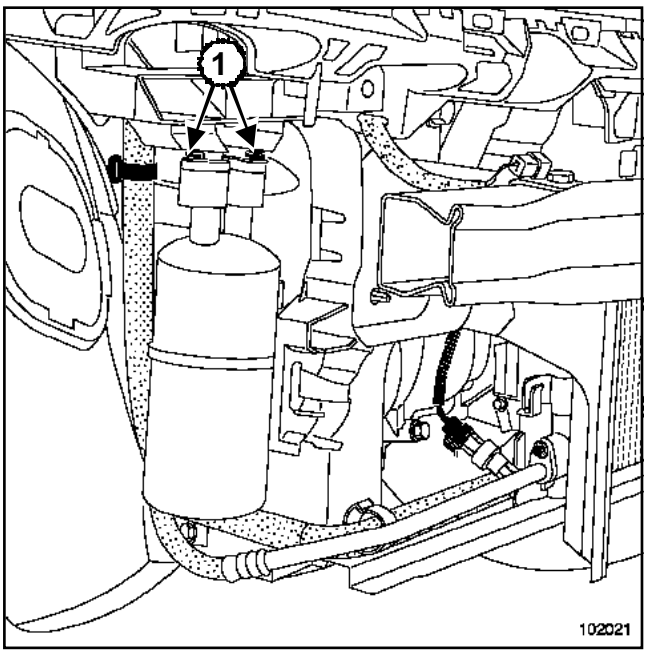
Put the vehicle on a two-post lift.

Disconnect the battery starting with the negative terminal.

Drain the refrigerant circuit using tool **filling station**.

Remove:

- the front bumper (Section **Exterior protection**),
- the front panel (Section **Engine and lower engine assembly**).



102021

Unscrew the pipe unions (**1**) from the canister.

Disconnect the pipes.

Fit plugs into the openings.

Extract the canister by lifting it.

REFITTING

To refit, proceed in the reverse order to removal.

Note:

When replacing a canister, add **15 ml** of approved oil to the recovered quantity.

Replace the seals.

Lubricate with the recommended air conditioning oil to aid fitting.

WARNING

If there are any damaged seals, the piping must be replaced.

Tighten to torque the **pipe union mounting bolts (1 daNm)**.

Fill the refrigerant circuit using the tool **filling station**.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Note:

- Make sure the air conditioning is working properly by running the fan at maximum speed.
- Check for leaks (Section **Air conditioning**).

Torque tighten the **battery cover bolts (0.4 daNm)**.

K4J or K4M or K9K

Essential equipment
filling station

Tightening torques ▽	
compressor mounting bolts	**2.5 daNm**
reinforcement plate mounting bolts	**2.1 daNm**
pipe union mounting bolts	**1 daNm**
battery cover bolts	**0.4 daNm**

REMOVAL

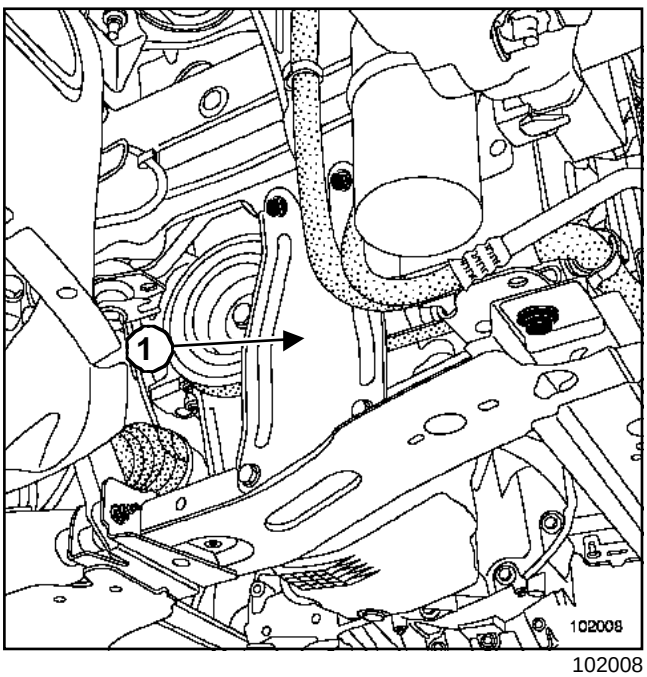
Put the vehicle on a two-post lift.

Disconnect the battery starting with the negative terminal.

Drain the refrigerant circuit using tool **filling station**.

Remove:

- the engine undertray,
- the front right-hand wheel,
- the mudguard,
- the front bumper (see **Front bumper**).

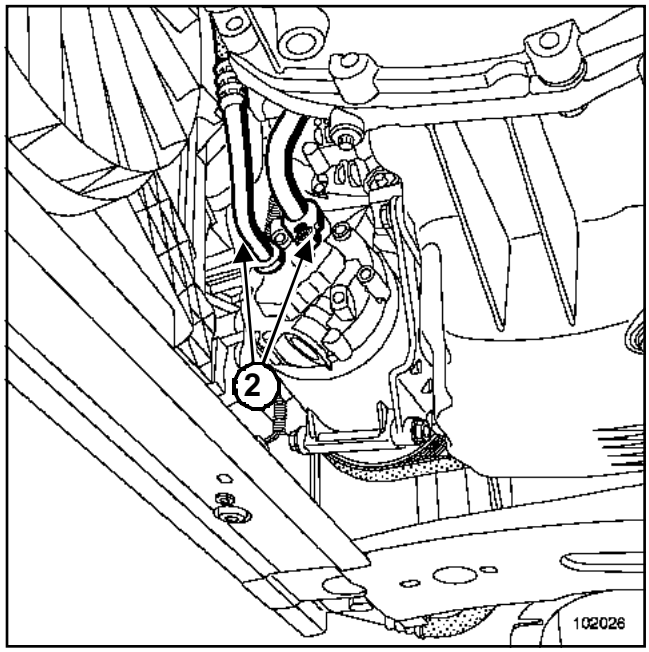


102008

Remove:

- the reinforcement plate (**1**),
- the accessories belt (see **Accessories belt**).

WARNING
A belt which has been removed must be replaced.

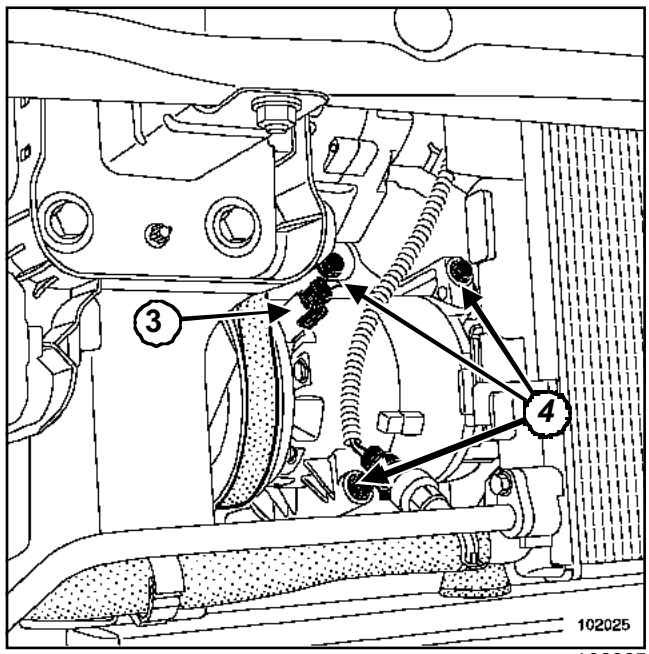


102026

Unscrew the pipe unions (**2**) from the compressor.

Uncouple the pipes.

Fit plugs into the openings.



102025

Disconnect the compressor connector (**3**).

K4J or K4M or K9K

Remove:

- the three compressor mounting bolts (**4**),
- the compressor.

REFITTING

To refit, proceed in the reverse order to removal.

Note:

- When replacing a compressor, do not add oil.
- The information on adding oil must be strictly adhered to when work is being carried out on air conditioning circuit components (Section **Air conditioning**).

Replace the seals.

Lubricate with the recommended air conditioning oil to aid fitting.

WARNING

If there are any damaged seals, the piping must be replaced.

Tighten to torque:

- the **compressor mounting bolts (2.5 daNm)**,
- the **reinforcement plate mounting bolts (2.1 daNm)**,
- the **pipe union mounting bolts (1 daNm)**,
- the **battery cover bolts (0.4 daNm)**.

Fill the refrigerant circuit using the tool **filling station**.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Note:

- Make sure the air conditioning is working properly by running the fan at maximum speed.
- Check for leaks (Section **Air conditioning**).

F4R or F9Q

Essential equipment
filling station

Tightening torques ▽	
compressor mounting bolts	**2.5 daNm**
reinforcement plate mounting bolts	**2.1 daNm**
pipe union mounting bolts	**0.8 daNm**
front radiator cross member mounting bolts	**10.5 daNm**
radiator cross member rear mounting bolts	**2.1 daNm**
battery cover bolts	**0.4 daNm**

REMOVAL

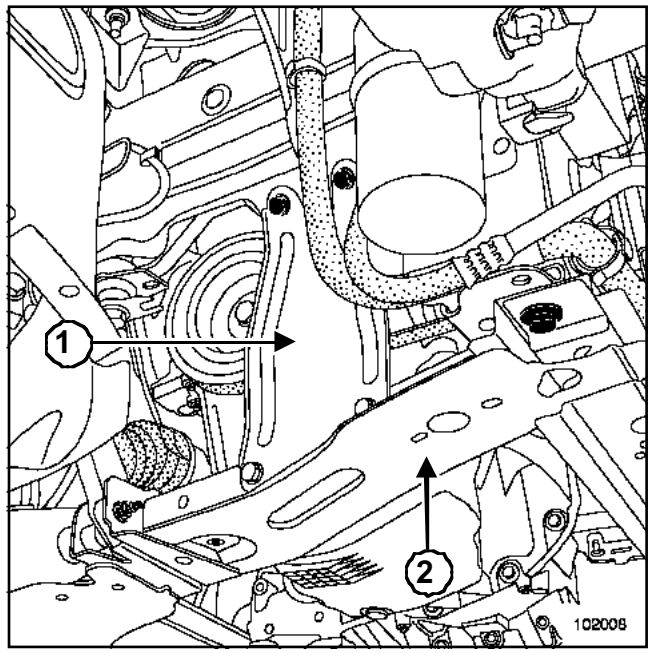
Put the vehicle on a two-post lift.

Disconnect the battery starting with the negative terminal.

Drain the refrigerant circuit using tool **filling station**.

Remove:

- the engine undertray,
- the front right-hand wheel,
- the mud guard,
- the front bumper (see **Front bumper**).

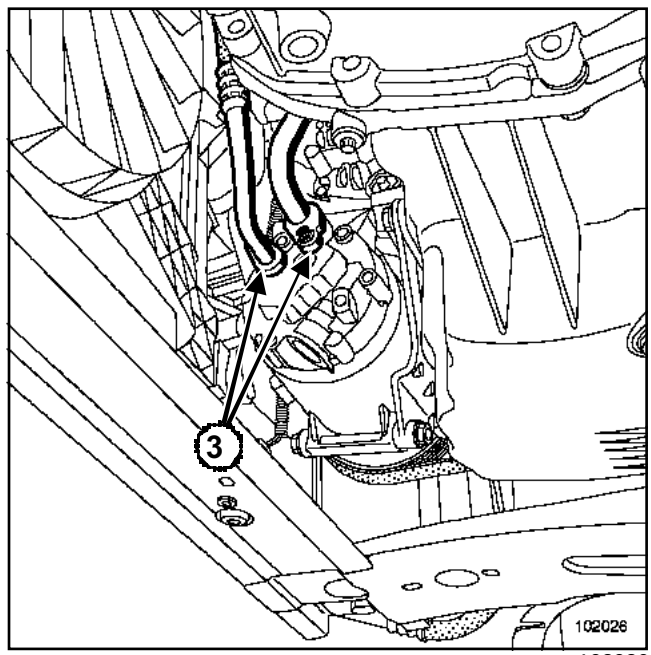


102008

Remove:

- the reinforcement plate (**1**),
- the radiator cross member (**2**),
- the accessories belt (see **Accessories belt**).

WARNING
If a belt is removed it must be replaced.

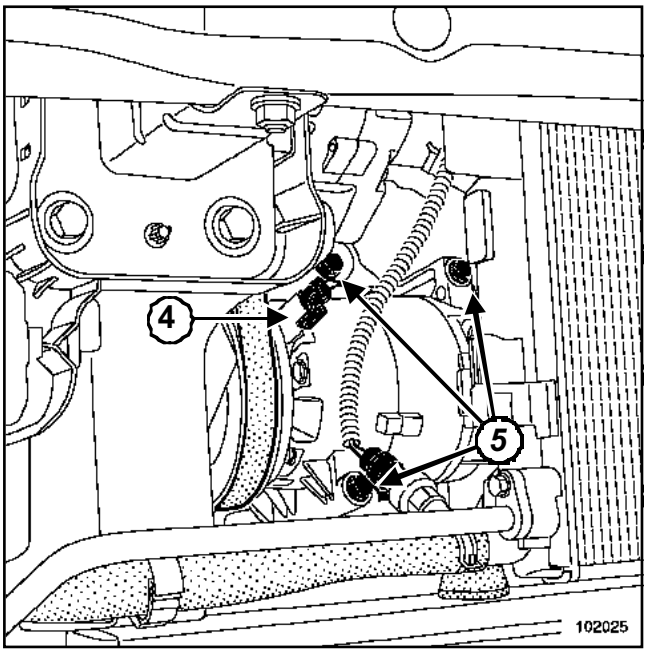


102026

Unscrew the pipe unions (**3**) from the compressor.

Uncouple the pipes.

Fit plugs into the openings.



102025

Disconnect the compressor connector (**4**).

Remove:

- the three compressor mounting bolts (**5**),
- the compressor.

REFITTING

To refit, proceed in the reverse order to removal.

Note:

- When replacing a compressor, do not add oil.
- The information on adding oil must be strictly adhered to when work is being carried out on air conditioning circuit components (Section **Air conditioning**).

Replace the seals.

Lubricate with the recommended air conditioning oil to aid fitting.

WARNING

If there are any damaged seals, the piping must be replaced.

Tighten to torque:

- the **compressor mounting bolts (2.5 daNm)**,
- the **reinforcement plate mounting bolts (2.1 daNm)**,
- the **pipe union mounting bolts (0.8 daNm)**,
- the **front radiator cross member mounting bolts (10.5 daNm)**,
- the **radiator cross member rear mounting bolts (2.1 daNm)**,
- the **battery cover bolts (0.4 daNm)**.

Fill the refrigerant circuit using the tool **filling station**.

WARNING

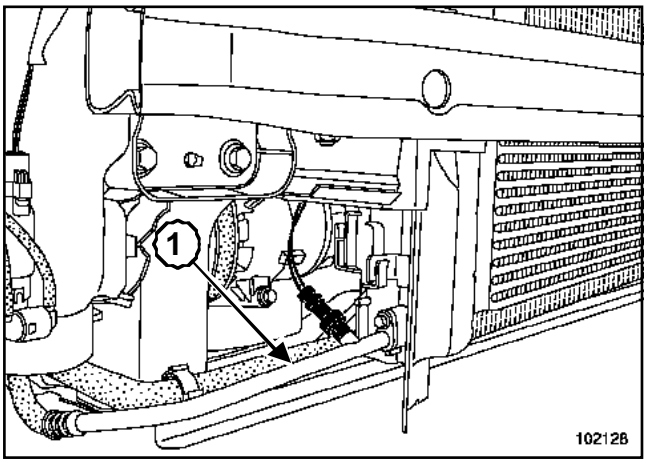
Connect the battery; carry out the necessary programming (Section **Battery**).

Note:

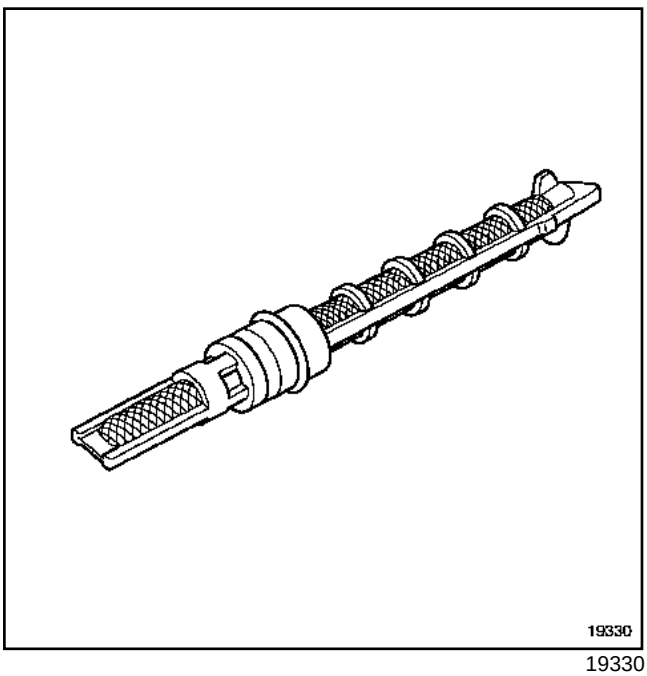
- Make sure the air conditioning is working properly by running the fan at maximum speed.
- Check for leaks (Section **Air conditioning**).

Note:

- The calibrated choke (**1**) is designed as a non-replacable component.
- Replace the pipe connecting the condenser to the evaporator if the calibrated choke is faulty.



102128



19330

Section **Air conditioning**

Essential equipment
filling station

Tightening torques ▽	
connection bracket mounting bolt	**0.8 daNm**
pipe union mounting bolt	**0.8 daNm**
battery cover bolts	**0.4 daNm**

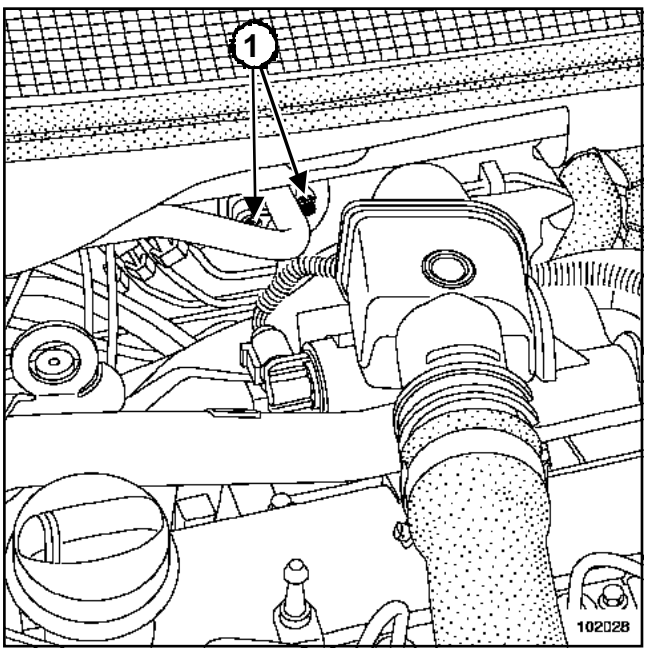
REMOVAL

Disconnect the battery starting with the negative terminal.

Remove the engine covers.

Drain the refrigerant circuit using a **filling station**.

F9Q or K4M or K9K



102028

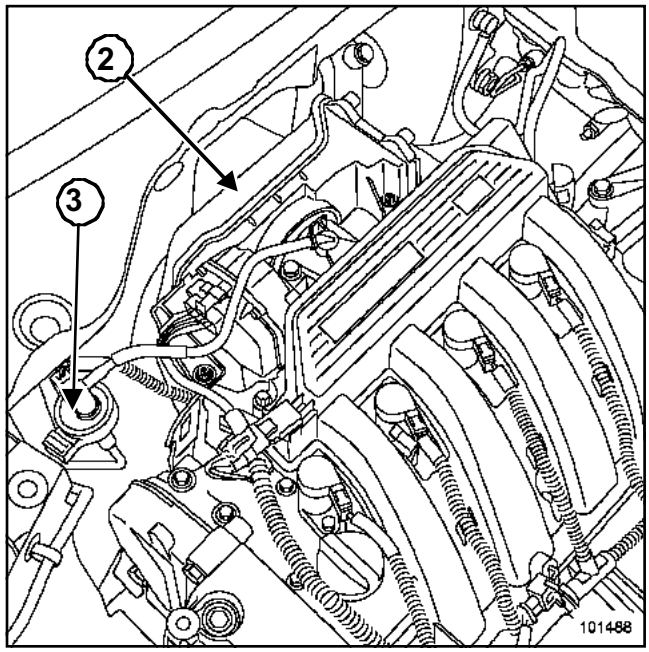
Unclip the bulkhead soundproofing.

Unscrew the pipe unions (**1**) from the connection bracket.

Disconnect the pipes.

Fit plugs into the ports.

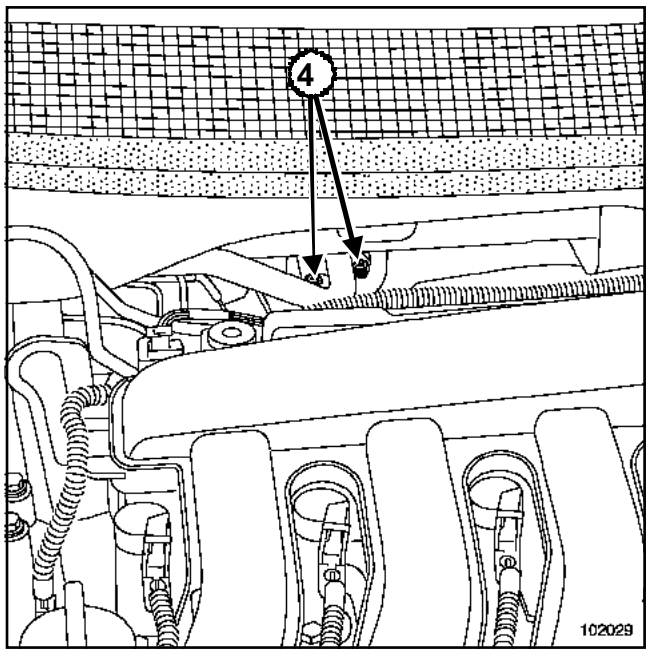
K4J



101488

Remove the air unit (**2**) (Section **Fuel mixture**).

Remove the fuel cut-out solenoid valve (**3**).



102029

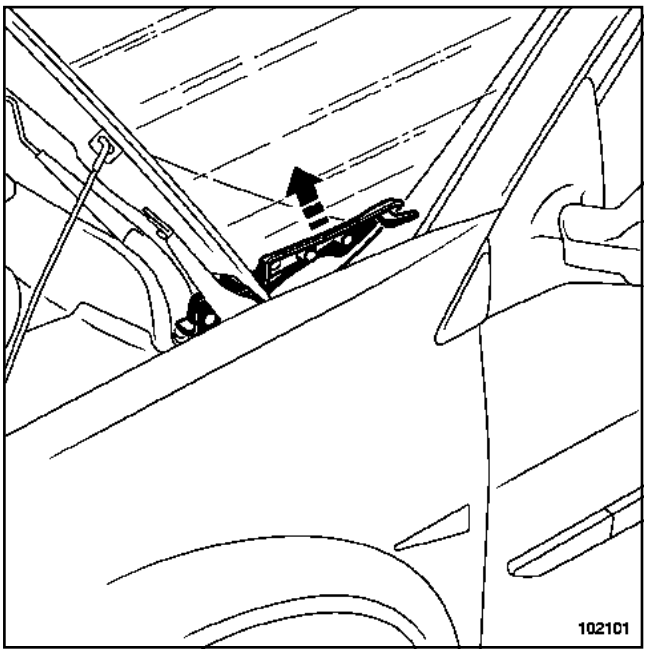
Unclip the bulkhead soundproofing.

Unscrew the pipe unions (**4**) from the connection bracket.

Disconnect the pipes.

Fit plugs into the ports.

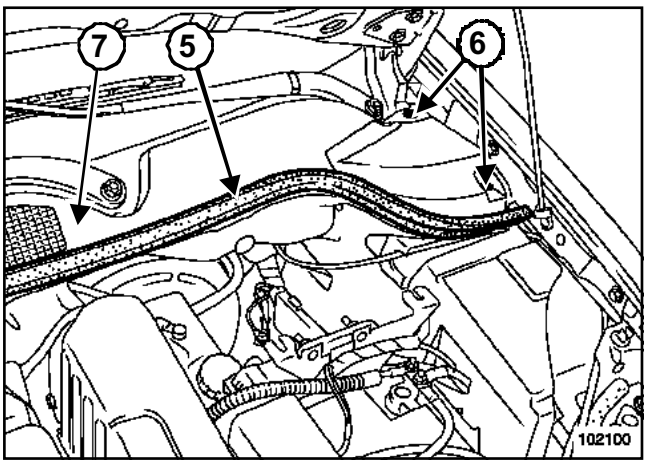
F4R



102101

Remove:

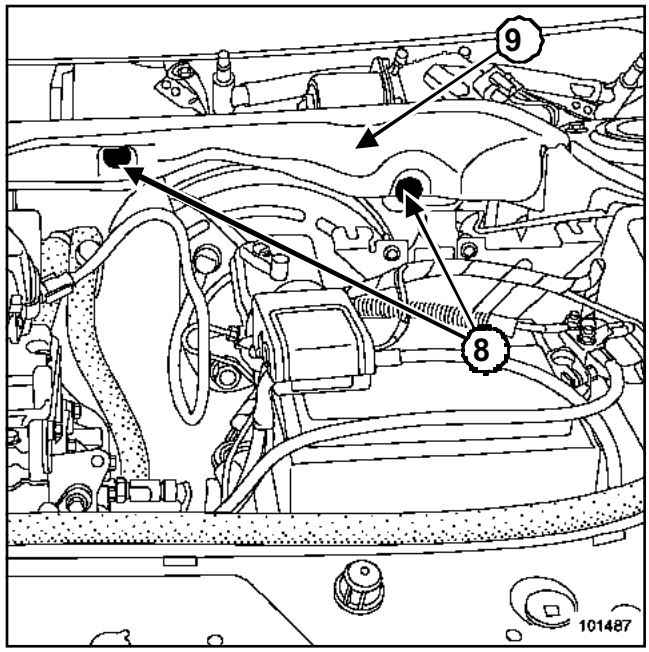
- the windscreen wipers,
- the left and right-hand fittings.



102100

Remove:

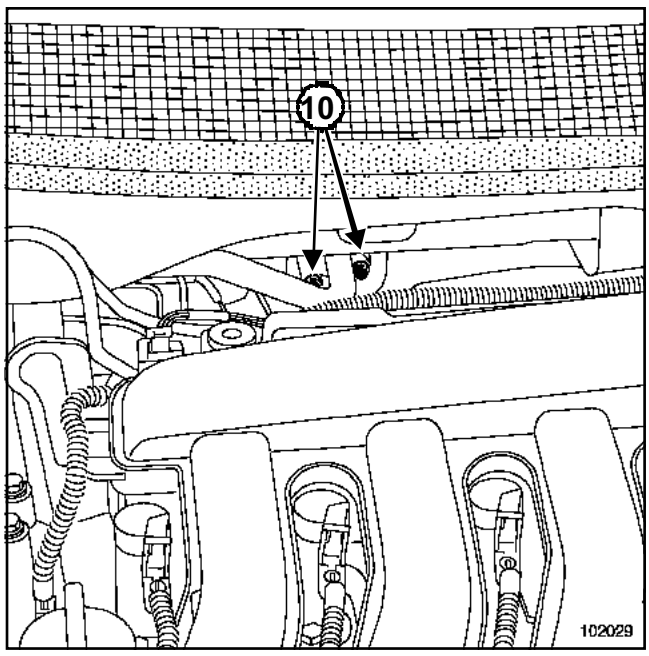
- the bulkhead seal (**5**),
- the plastic rivets (**6**),
- the scuttle grille (**7**).



101487

Remove:

- the radiator tank housing mountings (**8**),
- the radiator tank housing (**9**),
- the soundproofing screen mountings.

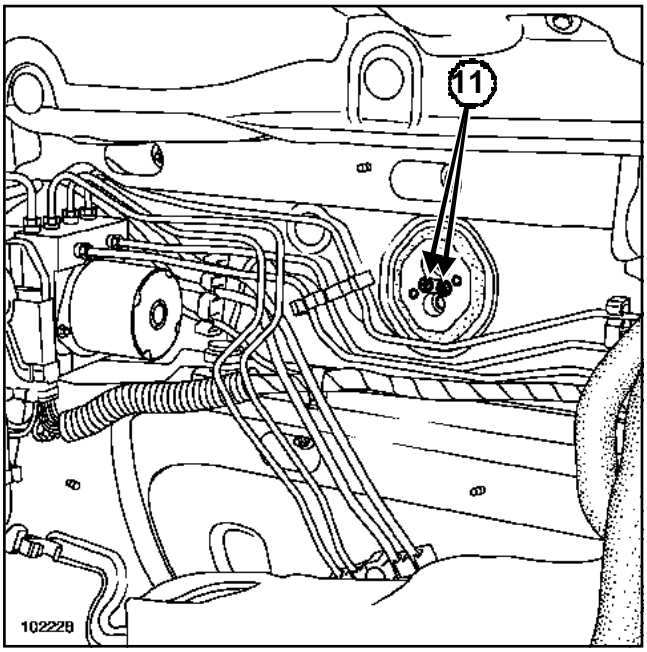


102029

Unscrew the pipe unions (**10**) on the connection bracket.

Disconnect the pipes.

Fit plugs into the ports.



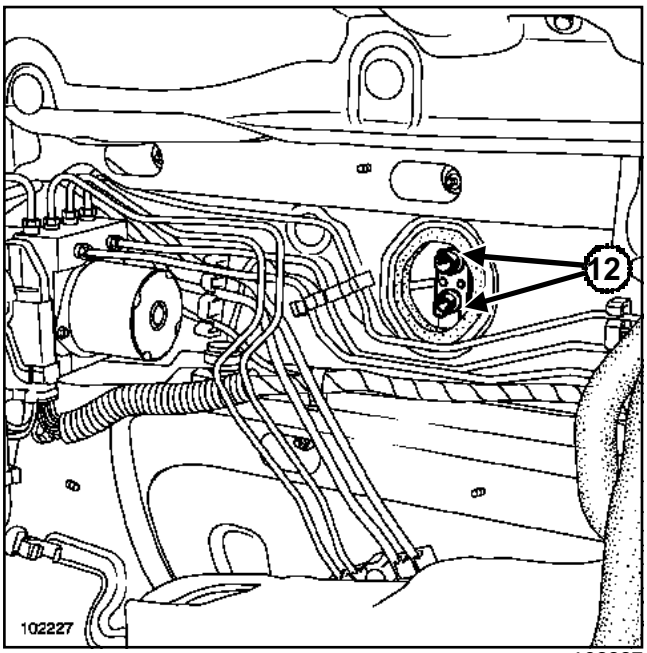
102228

Remove the two mounting bolts (**11**) from the connection bracket.

Refit one pipe union bolt to remove the connection bracket.

Remove the evaporator pipe O-rings.

REFITTING



102227

Refit the O-rings to the pipes (**12**).

To refit, proceed in the reverse order of removal.

Gradually retighten the two connection flange mounting bolts so that the connection flange is uniformly sleeved on the pipes.

Check that the sealing surfaces on the connection bracket and the seals are in good condition.

Replace the seals.

Lubricate with the recommended air conditioning oil to aid fitting.

> Note:
>
> If there are any damaged seals, the piping must be replaced.

Tighten to torque:

- the **connection bracket mounting bolt (0.8 daNm)**,
- the **pipe union mounting bolt (0.8 daNm)**.
- the **battery cover bolts (0.4 daNm)**.

> **WARNING**
>
> Connect the battery; carry out the necessary programming (Section **Battery**).

Fill the refrigerant circuit using a **filling station**.

> Note:
>
> - Make sure the air conditioning is working properly by running the fan at maximum speed.
> - Check for leaks (Section **Air conditioning**).

> Note:
>
> When replacing a pipe, add **10 ml** of recommended oil to the quantity of oil recovered.

Essential equipment
diagnostic tool
filling station

Tightening torques ▽	
evaporator unit mounting bolts	**0.65 daNm**
pipe union mounting bolts	**1 daNm**
flexible mounting pad mounting bolt	**0.2 daNm**
battery cover bolts	**0.4 daNm**

Note:

The evaporator is supplied mounted in its housing.

REMOVAL

IMPORTANT
Before starting any work on the airbag system, lock the computer using the **diagnostic tool**; (Section **Airbag and Pretensioners**).

Drain the refrigerant circuit using the **filling station** tool.

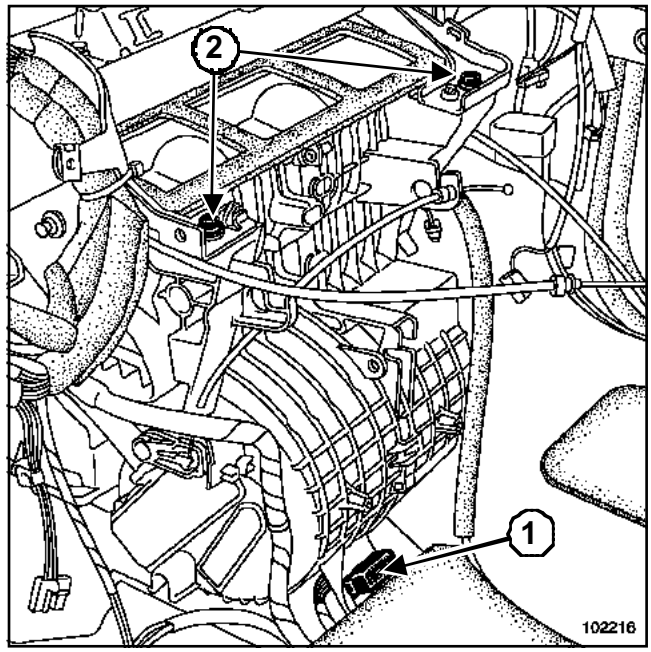
Disconnect the battery starting with the negative terminal.

Remove both pipes attached to the connecting flange (Section **Air conditioning**).

Fit plugs into the ports.

Attach the hose clamps to the cooling circuit heater matrix pipes at the bulkhead.

Remove the dashboard (Section **Interior accessories**).

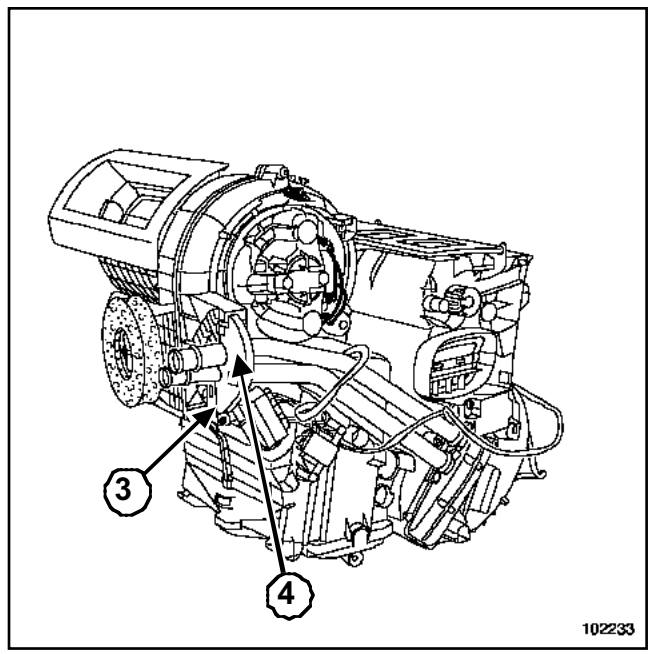


102216

Disconnect socket (**1**).

Remove the three bolts (**2**) from the distribution unit.

Remove the dashboard cross member (Section **Upper front structure**).



102233

Remove the bolt (**3**) from the heater matrix pipe bracket.

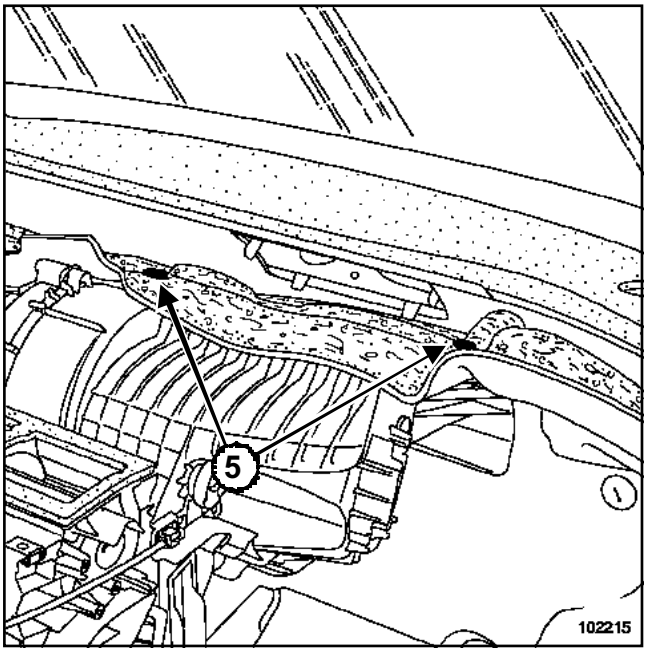
Unscrew bracket (**4**).

Lift the bracket to extract the evaporator unit.

Put a container in place to collect the coolant.

Remove the two heater matrix pipe mounting clips.

Remove the pipes from their guide on the distributor unit.



102215

Unfasten the sound-proofing material mounting clips (**5**) on the evaporator unit.

Take out the air conditioning unit.

Remove the condensation evacuation pipe.

From the air conditioning unit, take out:

- the cabin filter,
- the control cables (if the vehicle has them),
- the mixing motor (if the vehicle has one),
- the timing motor (if the vehicle has one),
- the recycling motor (if the vehicle has one),
- the fan assembly,
- the heater matrix,
- the electronics casing (electrical resistance) or power module,
- the heating resistor unit and electrical harness.

REFITTING

Refit all the components to the new evaporator housing.

Refit the condensation evacuation pipe.

Replace the seals.

Oil the pipe seals with the approved oil.

To refit, proceed in the reverse order of removal.

Tighten to torque:

- the **evaporator unit mounting bolts (0.65 daNm)**,
- the **pipe union mounting bolts (1 daNm)**,
- the **flexible mounting pad mounting bolt (0.2 daNm)**.
- the **battery cover bolts (0.4 daNm)**.

Reshape the air duct by working through the air outlet holes and applying pressure perpendicular to the fold by hand.

Note:

It is essential to refit the electrical harness correctly to avoid any possible damage.

Fill the refrigerant circuit using the tool **filling station**.

WARNING

Connect the battery and carry out any necessary programming (Section **Battery**).

Note:

- Make sure the air conditioning is working properly by running the fan at maximum speed.
- Check for leaks (Section **Air conditioning**).

Note:

When replacing the evaporator, add **30 ml** of approved oil to the quantity recovered.

Essential equipment
filling station

Tightening torques ▽	
pipe union mounting bolts	**1 daNm**
battery cover bolts	**0.4 daNm**

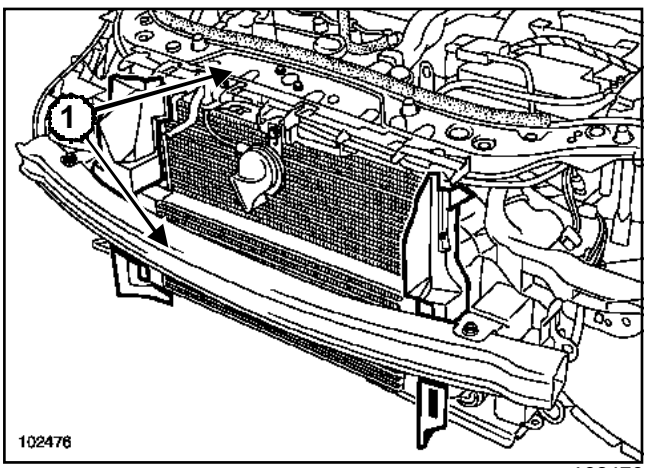
REMOVAL

Put the vehicle on a two-post lift.

Disconnect the battery starting with the negative terminal.

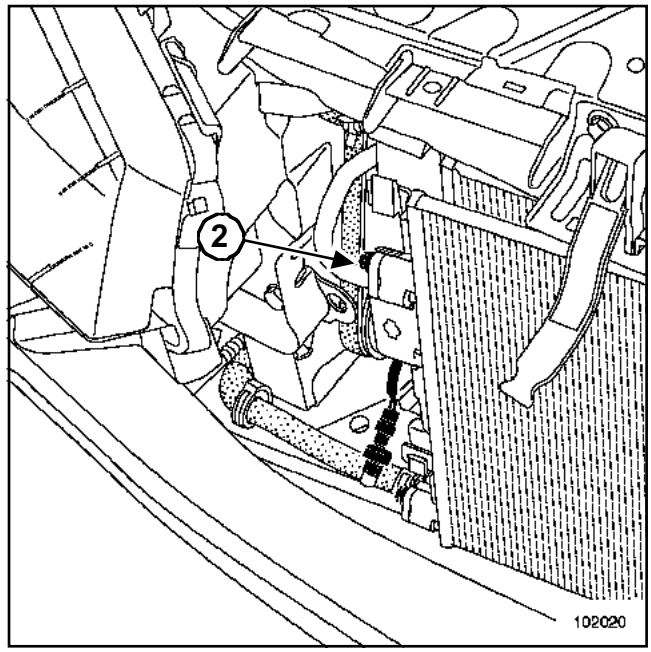
Drain the refrigerant circuit using the **filling station** tool.

Remove the front bumper (see **Front bumper**).



102476

Remove the front of the vehicle (**1**)(see **Engine/ gearbox assembly**).

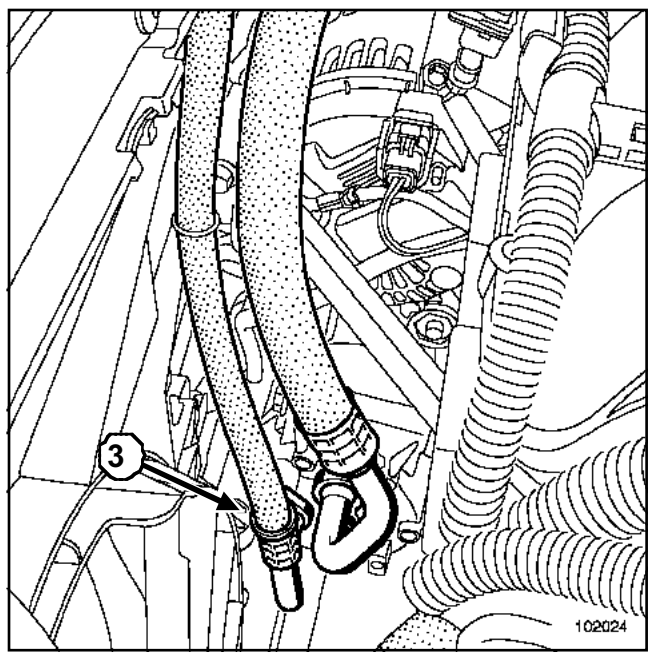


102020

Unscrew the pipe union (**2**) from the condenser.

Disconnect the pipe.

Fit a plug over the port.



102024

Unscrew the pipe union (**3**) from the compressor.

Disconnect the pipe.

Fit a plug over the port.

Remove the pipe connecting the compressor to the condenser.

REFITTING

To refit, proceed in the reverse order to removal.

Replace the seals.

Lubricate with the recommended air conditioning oil to aid fitting.

Tighten to torque:

- the **pipe union mounting bolts (1 daNm)**,
- the **battery cover bolts (0.4 daNm)**.

Note:

When replacing a pipe, add **10 ml** of recommended oil to the recovered oil.

Fill the refrigerant circuit using the tool **filling station**.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Note:

- Make sure the air conditioning is working properly by running the fan at maximum speed.
- Check for leaks (Section **Air conditioning**).

Essential equipment
filling station

Tightening torques ▽	
pipe union mounting bolts	**0.8 daNm**
reinforcement plate mounting bolts	**2.1 daNm**
battery cover bolts	**0.4 daNm**

REMOVAL

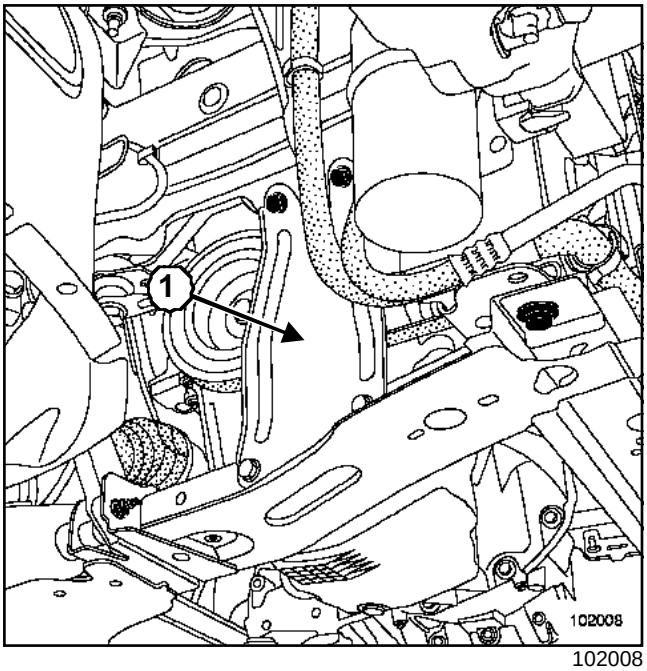
Put the vehicle on a two-post lift.

Disconnect the battery starting with the negative terminal.

Drain the refrigerant circuit using the **filling station** tool.

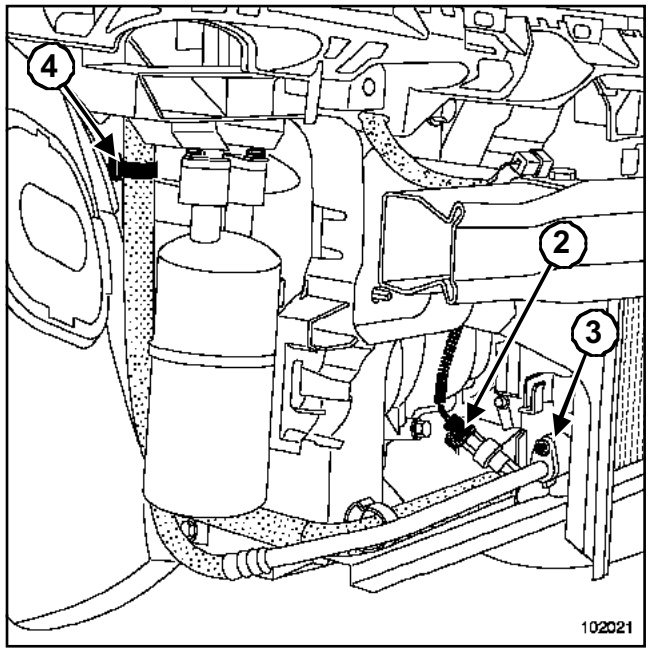
Remove:

- the front right-hand wheel,
- the wheel arch liner,
- the front bumper (see **Front bumper**).



102008

Remove the stiffener plate (**1**).



102021

Disconnect the pressure switch (**2**).

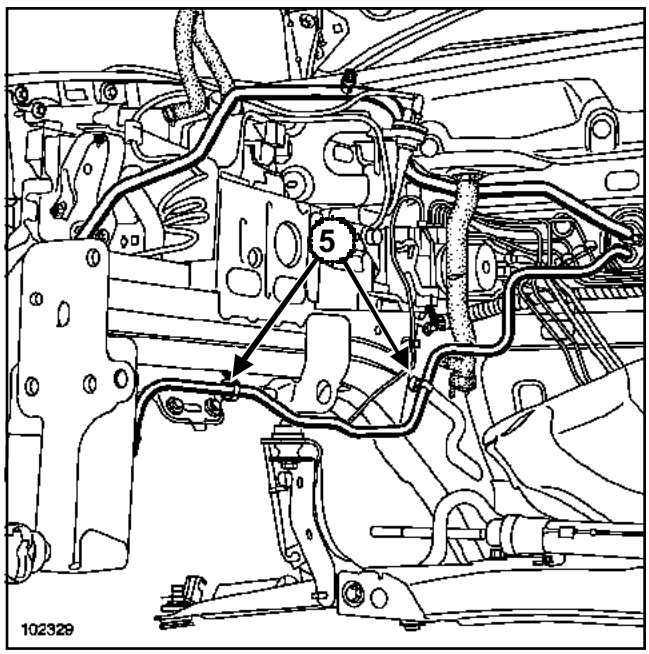
Remove the pressure switch.

Unscrew the pipe union (**3**) from the condenser.

Disconnect the pipe.

Fit a plug over the port.

Remove the pipe from the retaining bracket (**4**).

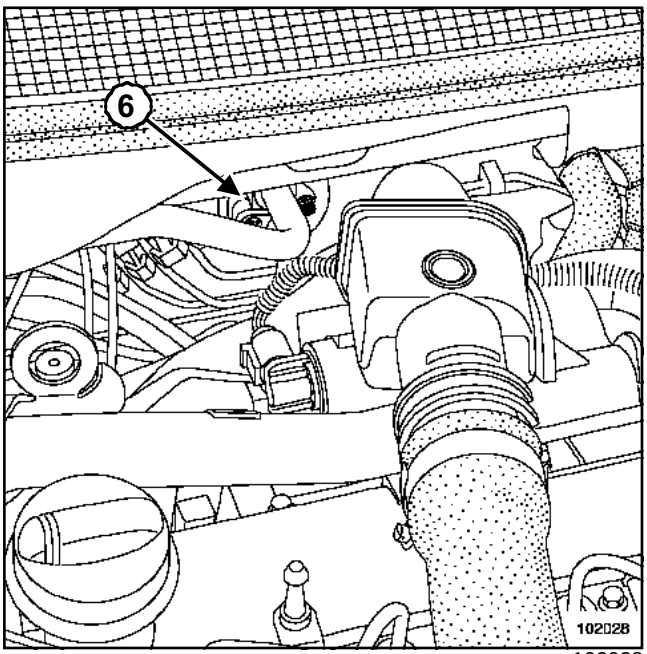


102329

Unclip the pipe from the retaining brackets (**5**).

F9Q or K4M or K9K

Unclip the bulkhead soundproofing.



102028

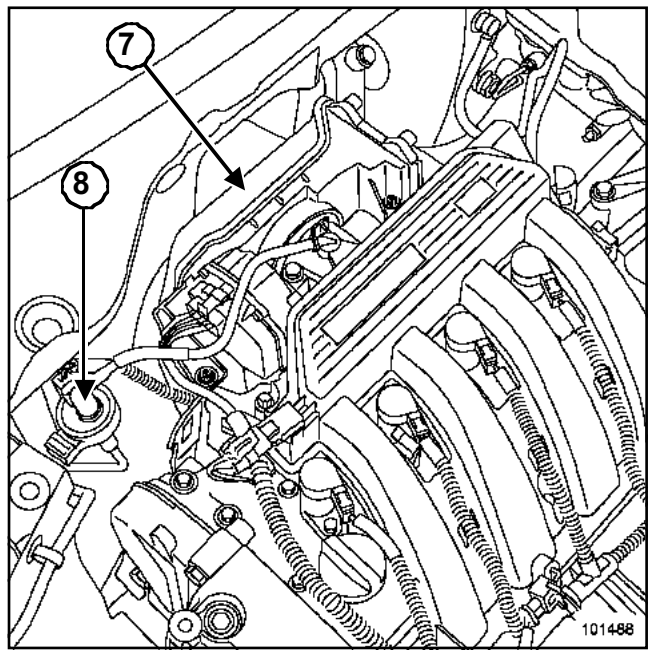
Unscrew the pipe union (**6**) from the connection bracket.

Disconnect the pipe.

Fit a plug over the port.

Remove the pipe connecting the condenser to the evaporator.

K4J

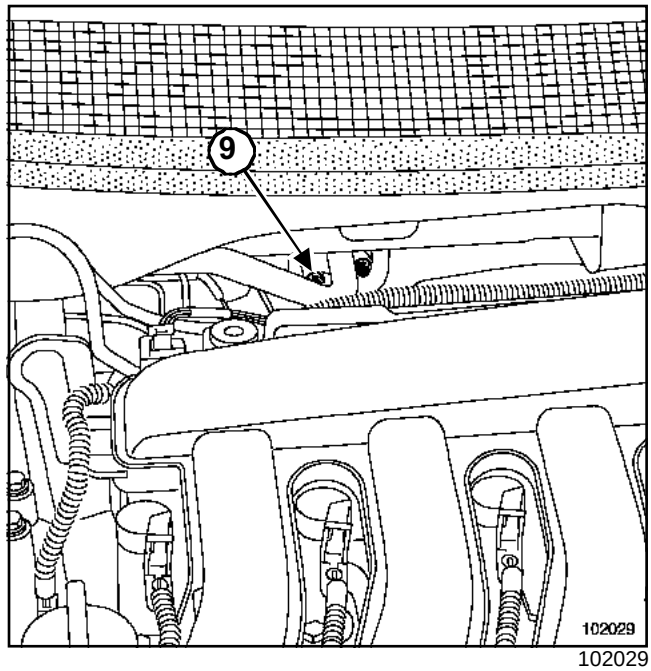


101488

Remove the air unit (**7**) (Section **Fuel mixture**).

Remove the fuel cut-out solenoid valve (**8**).

Unclip the bulkhead soundproofing.



102029

Unscrew the pipe union (**9**) from the connection bracket.

Disconnect the pipe.

Fit a plug over the port.

Remove the pipe connecting the condenser to the evaporator.

REFITTING

To refit, proceed in the reverse order to removal.

Replace the seals.

Lubricate with the recommended air conditioning oil to aid fitting.

Tighten to torque:

- the **pipe union mounting bolts (0.8 daNm)**,
- the **reinforcement plate mounting bolts (2.1 daNm)**,
- the **battery cover bolts (0.4 daNm)**.

Note:

When replacing a pipe, add **10 ml** of recommended oil to the recovered oil.

Fill the refrigerant circuit using the tool **filling station**.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Note:

- Make sure the air conditioning is working properly by running the fan at maximum speed.
- Check for leaks (Section **Air conditioning**).

Essential equipment
filling station

Tightening torques ▽	
pipe union mounting bolts	**1 daNm**
battery cover bolts	**0.4 daNm**

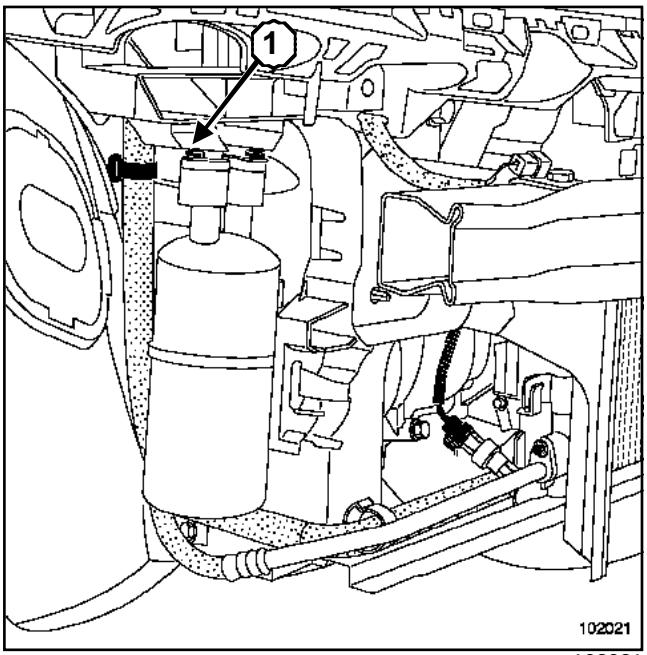
REMOVAL

Put the vehicle on a two-post lift.

Disconnect the battery starting with the negative terminal.

Drain the refrigerant circuit using the **filling station** tool.

Remove the front bumper (see **Front bumper**).

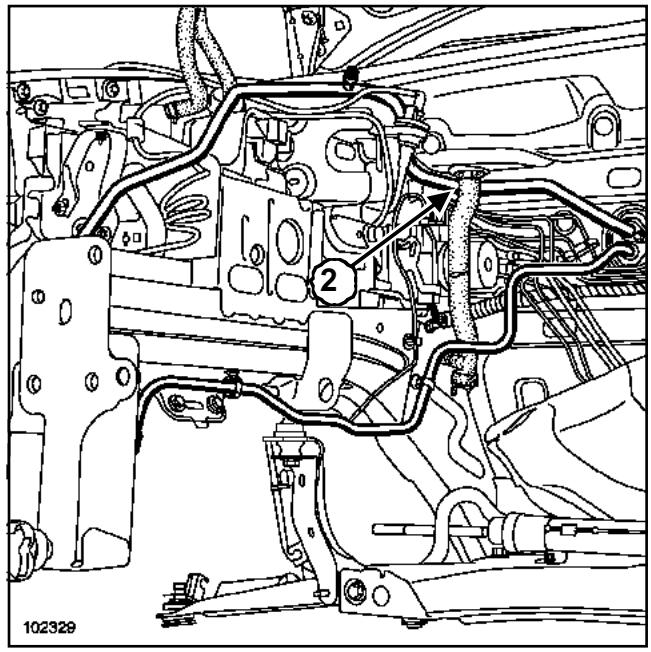


102021

Unscrew the pipe union (**1**) from the canister.

Disconnect the pipe.

Fit a plug over the port.

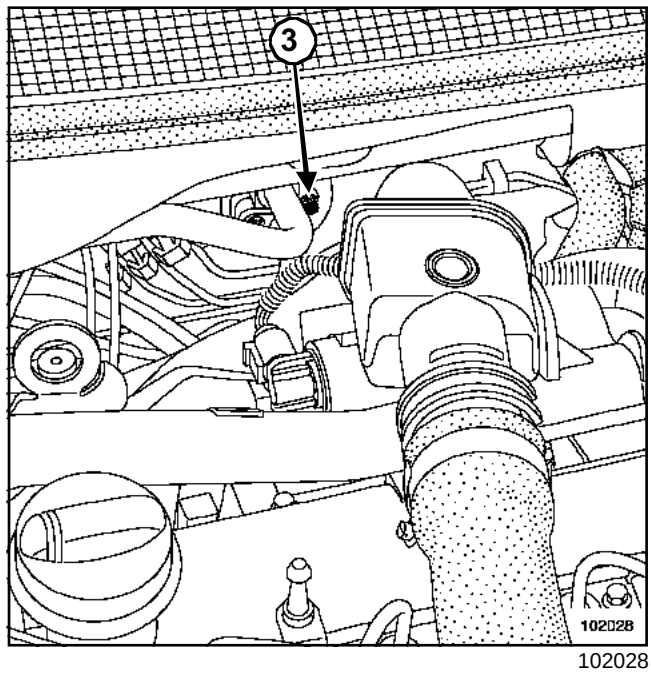


102329

Remove the water drain hose (**2**).

F9Q or K4M or K9K

Unclip the bulkhead soundproofing.



102028

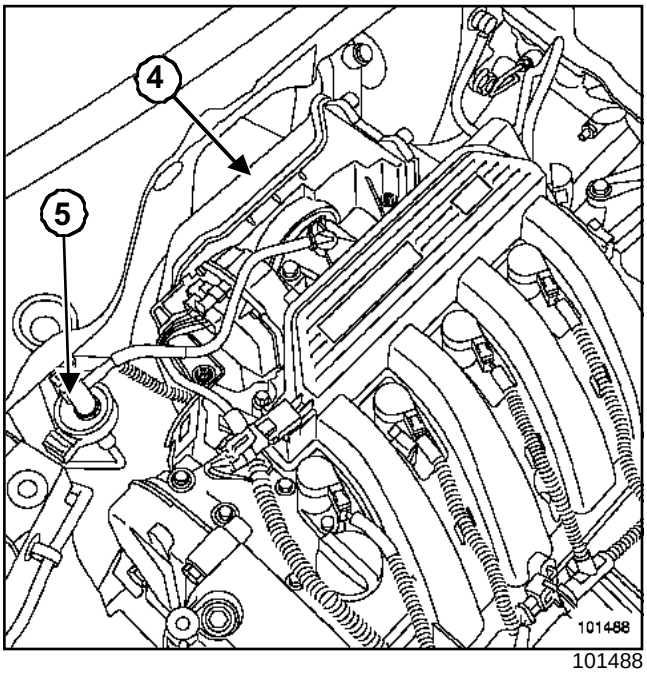
Unscrew the pipe union (**3**) from the connection bracket.

Disconnect the pipe.

Fit a plug over the port.

Remove the pipe connecting the condenser to the evaporator.

K4J

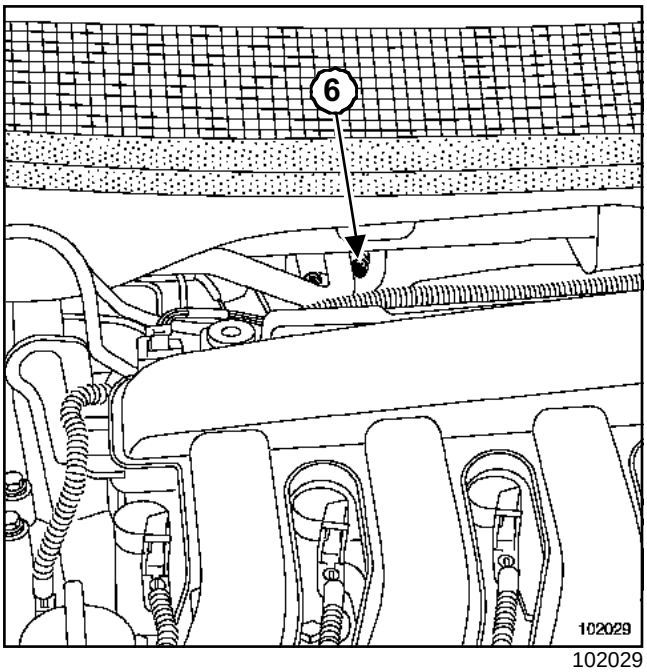


101488

Remove the air unit (**4**) (Section **Fuel mixture**).

Remove the fuel cut-out solenoid valve (**5**).

Unclip the bulkhead soundproofing.



102029

Unscrew the pipe union (**6**) from the connection bracket.

Disconnect the pipe.

Fit a plug over the port.

Remove the pipe connecting the condenser to the evaporator.

REFITTING

To refit, proceed in the reverse order to removal.

Correctly refit the water drain hose.

Replace the seals.

Lubricate with the recommended air conditioning oil to aid fitting.

Tighten to torque:

- the **pipe union mounting bolts (1 daNm)**,
- the **battery cover bolts (0.4 daNm)**.

Note:

When replacing a pipe, add **10 ml** of recommended oil to the quantity of oil recovered.

Fill the refrigerant circuit using the **filling station** tool.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Note:

- Make sure that the air conditioning is working properly by running the fan at maximum speed.
- Check for leaks (Section **Air conditioning**).

Essential equipment
filling station

Tightening torques ▽	
pipe union mounting bolts	**1 daNm**
battery cover bolts	**0.4 daNm**

REMOVAL

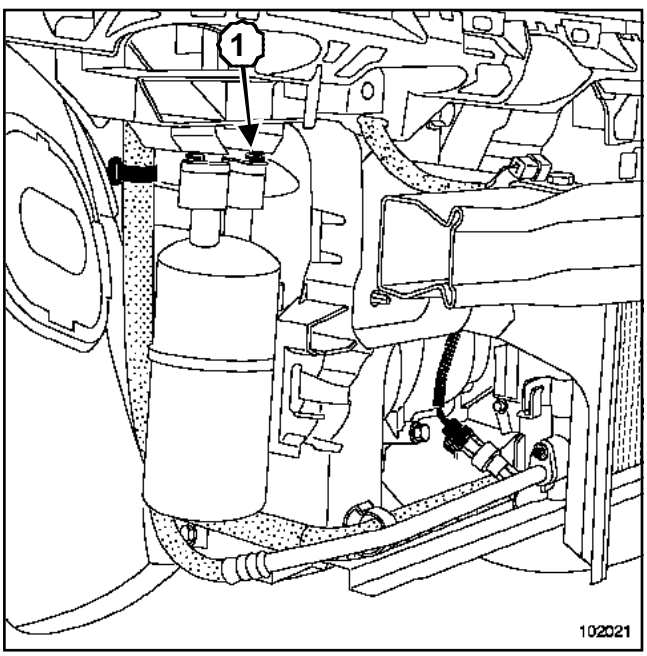
Put the vehicle on a two-post lift.

Disconnect the battery starting with the negative terminal.

Drain the refrigerant circuit using the **filling station** tool.

Remove:

- the front bumper (see **Front bumper**).
- the front of the vehicle (see **Engine/gearbox assembly**).

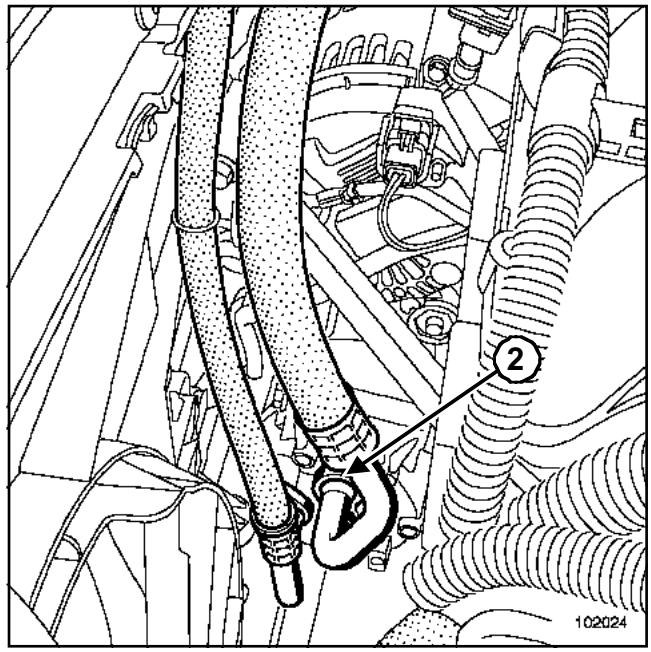


102021

Unscrew the pipe union (**1**) from the canister.

Disconnect the pipe.

Fit a plug over the port.



102024

Unscrew the pipe union (**2**) from the compressor.

Disconnect the pipe.

Fit a plug over the port.

Remove the pipe connecting the canister to the compressor.

REFITTING

To refit, proceed in the reverse order of removal.

Replace the seals.

Lubricate with the recommended oil to aid fitting.

Tighten to torque:

- the **pipe union mounting bolts (1 daNm)**,
- the **battery cover bolts (0.4 daNm)**.

Note:

When replacing a pipe, add **10 ml** of recommended oil to the quantity of oil recovered.

Fill the refrigerant circuit using the tool **filling station**.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Note:

- Make sure the air conditioning is working properly by running the fan at maximum speed.
- If there is no cold air, check for leaks in the system (Section **Air conditioning**).

Essential special tooling	
Mot. 1608	Torque screwdriver

Tightening torques ▽	
pressure sensor	**0.9 daNm**
battery cover bolts	**0.4 daNm**
valve	**0.8 daNm**

REMOVAL

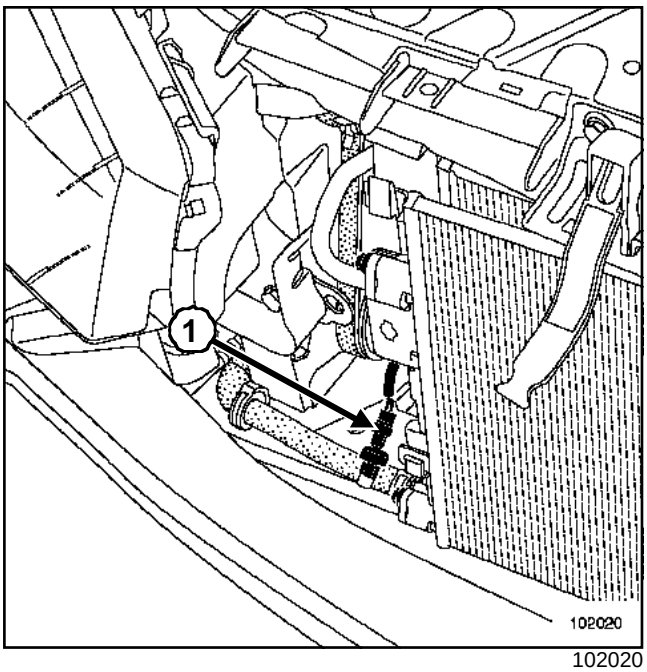
Put the vehicle on a two-post lift.

Disconnect the battery starting with the negative terminal.

Note:

An automatic closure valve isolates the circuit during removal; there is no need to drain the refrigerant from the circuit.

Remove the front bumper (see **Front bumper**).



102020

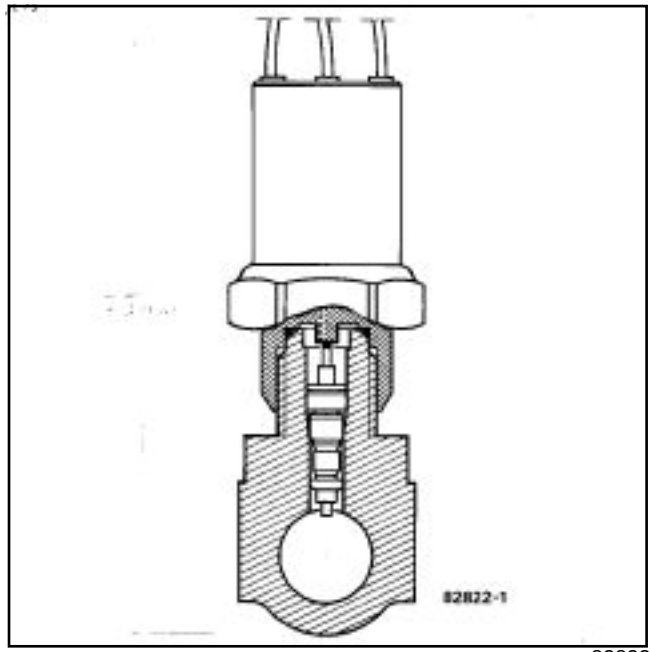
Disconnect the pressure sensor (**1**)

Remove the pressure sensor.

The trifunction-type pressure sensor installed at the capacitor outlet protects the refrigerant circuit:

- low-pressure cut off: **2 bar**,
- high-pressure cut-off: **27 bar**.

It keeps the injection computer informed of the refrigerant circuit pressure.



82822

The injection computer controls the engine cooling fans depending on the high pressure in the refrigerant circuit and vehicle speed.

REFITTING

To refit, proceed in the reverse order of removal.

Check the condition of the O-ring.

Tighten to torque:

- the **pressure sensor (0.9 daNm)**,
- the **battery cover bolts (0.4 daNm)**.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Note:

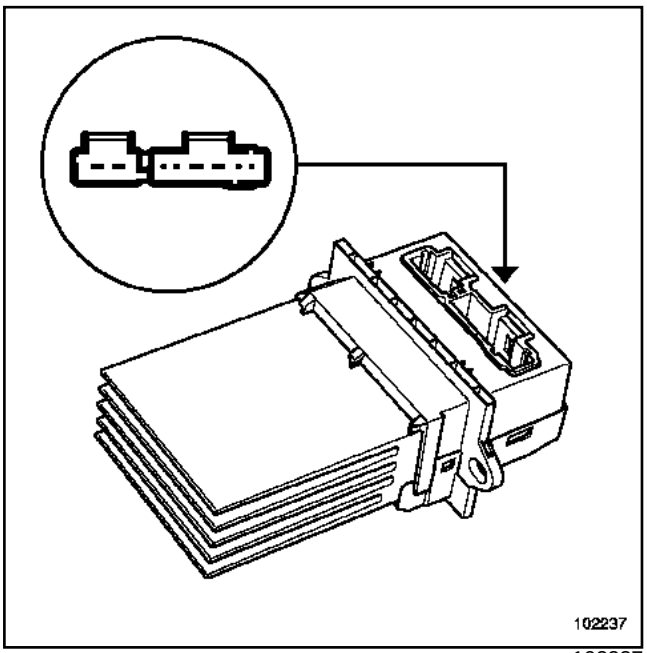
- When replacing a valve torque tighten the **valve (0.8 daNm)**, à using tool (Mot. 1608)
- Make sure the air conditioning is working properly by running the fan at maximum speed.
- Look for any leaks (Section **Air conditioning**).

Only special features of climate control are described in this section .

For any topic not dealt with in this section; Section **Air conditioning** and Section **Non-regulated air conditioning**.

I - POWER MODULE

In automatic climate control, there are eight ventilation speeds.



102237

The fan assembly power module is controlled by a voltage modulated by the climate control computer.

This control voltage is always **12 V**, it is the control signal (square signal) which varies:

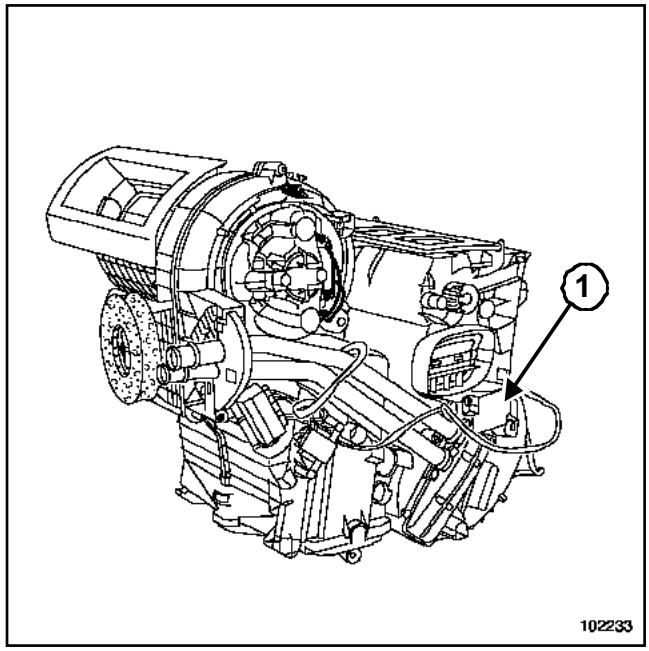
- the amplitude and frequency do not change,

- while the cyclic ratio changes.

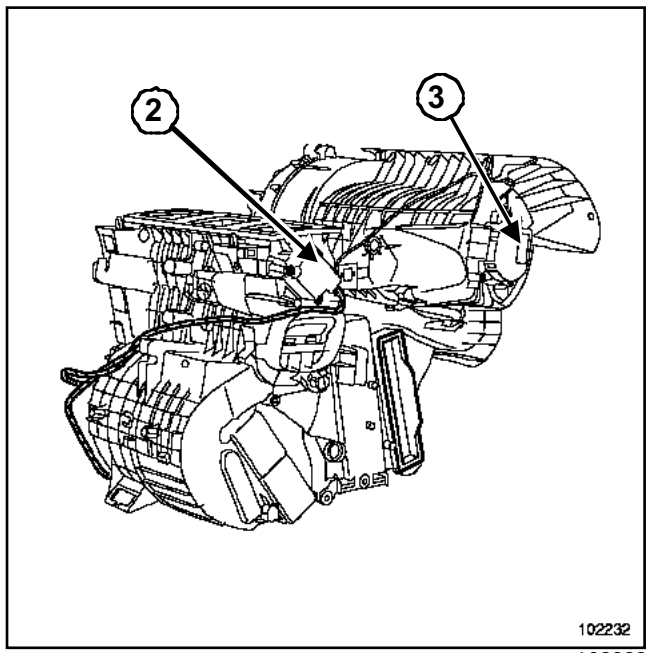
Note:

The power module can be accessed without removing the fan assembly.

II - FLAP CONTROL MOTORS



102233



102232

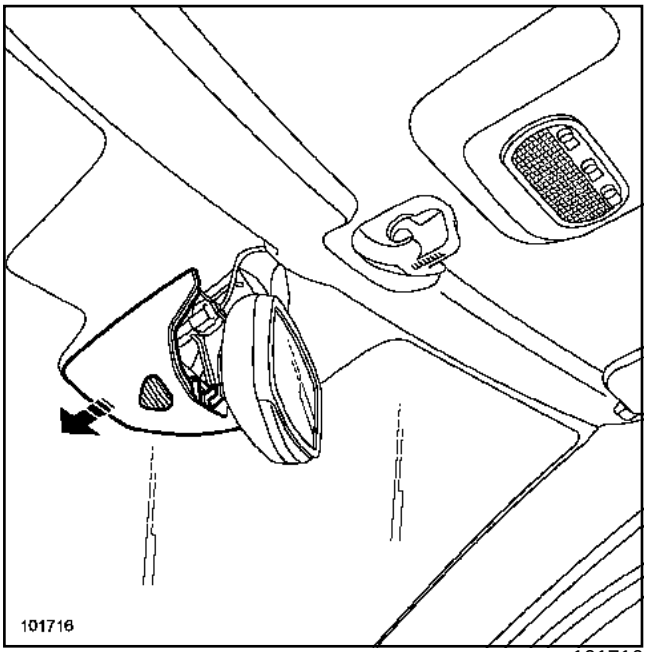
These motors are located in the climate control unit and act on different flaps to direct the flow according to certain criteria:

- the mixing motor (**1**): allows hot air and cool air to mix to reach comfort level

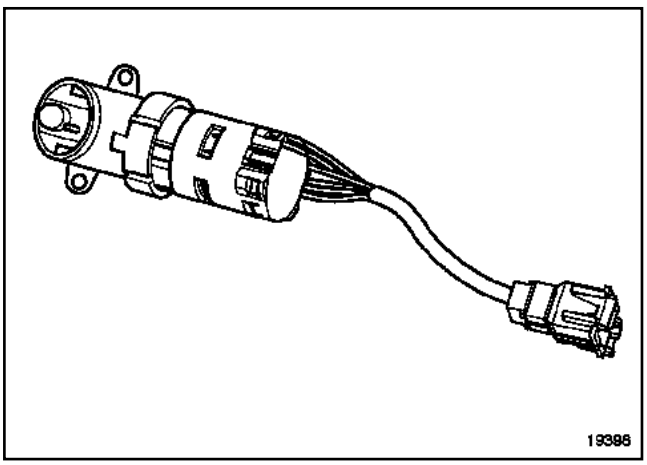
- the distribution motor (**2**) : allows the air flow in the passenger compartment to be directed through the air vents,

- the recirculation motor (**3**): allows the air in the passenger compartment to be recycled by isolating it from outside air.

III - PASSENGER COMPARTMENT TEMPERATURE SENSOR



101716



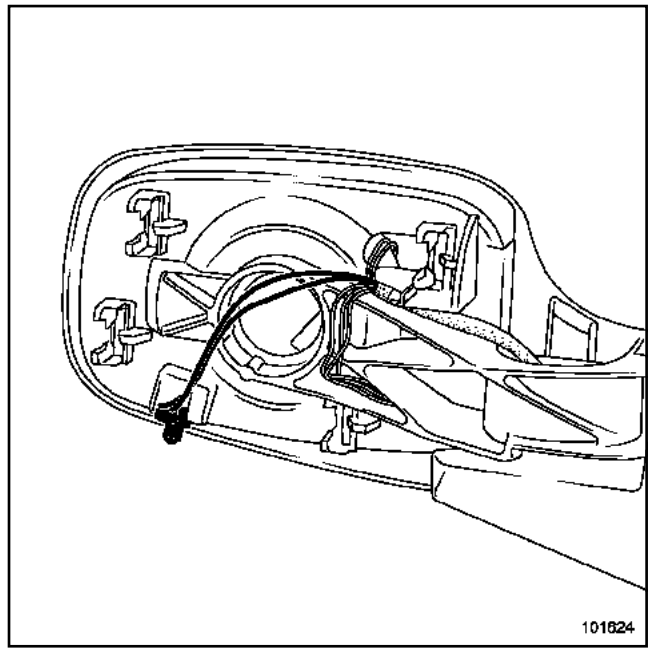
19398

This sensor supplies information on the interior temperature.

It is a negative temperature coefficient thermistor located behind the rear-view mirror.

IV - EXTERIOR TEMPERATURE SENSOR

This sensor supplies information about the outside temperature.

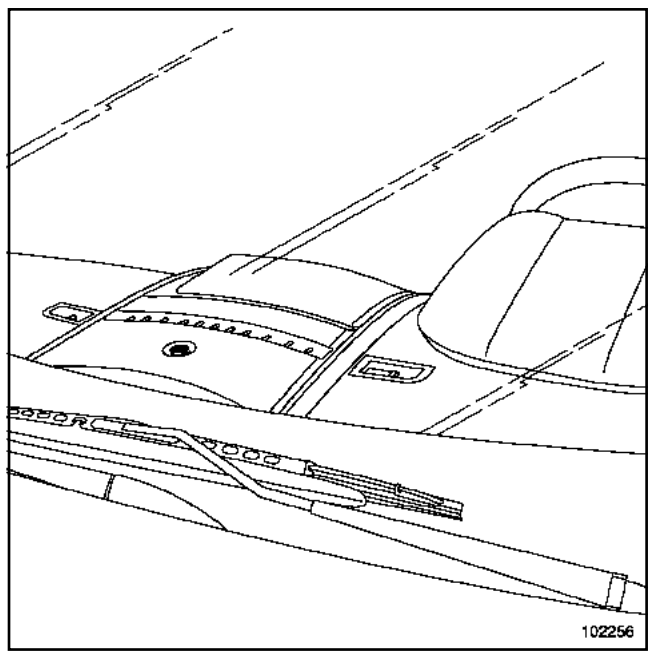


101624

It is a negative temperature thermistor located in the right-hand door mirror.

V - INSOLATION SENSOR

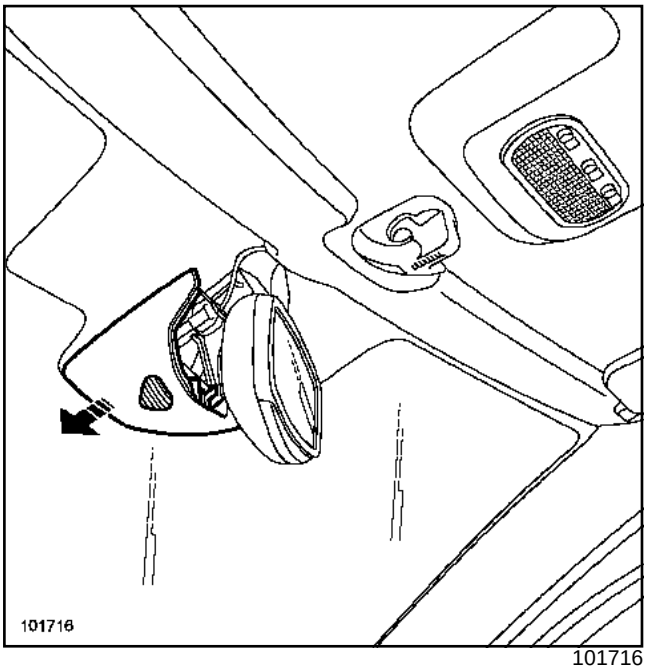
This sensor informs the computer of the intensity of sunlight to correct the air flow to the air vents.



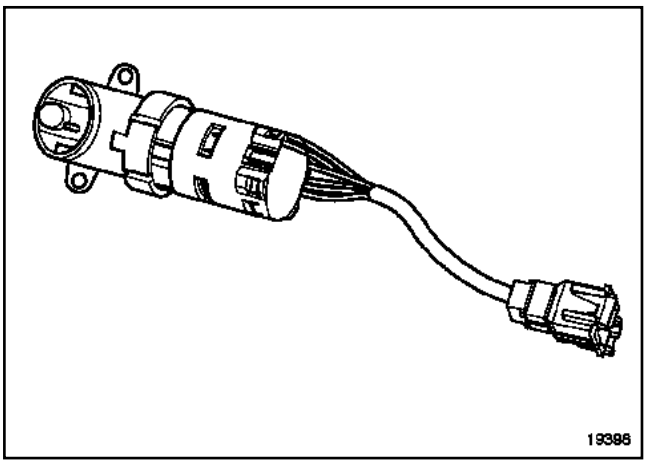
102256

It is located in the centre of the dashboard.

VI - HUMIDITY SENSOR



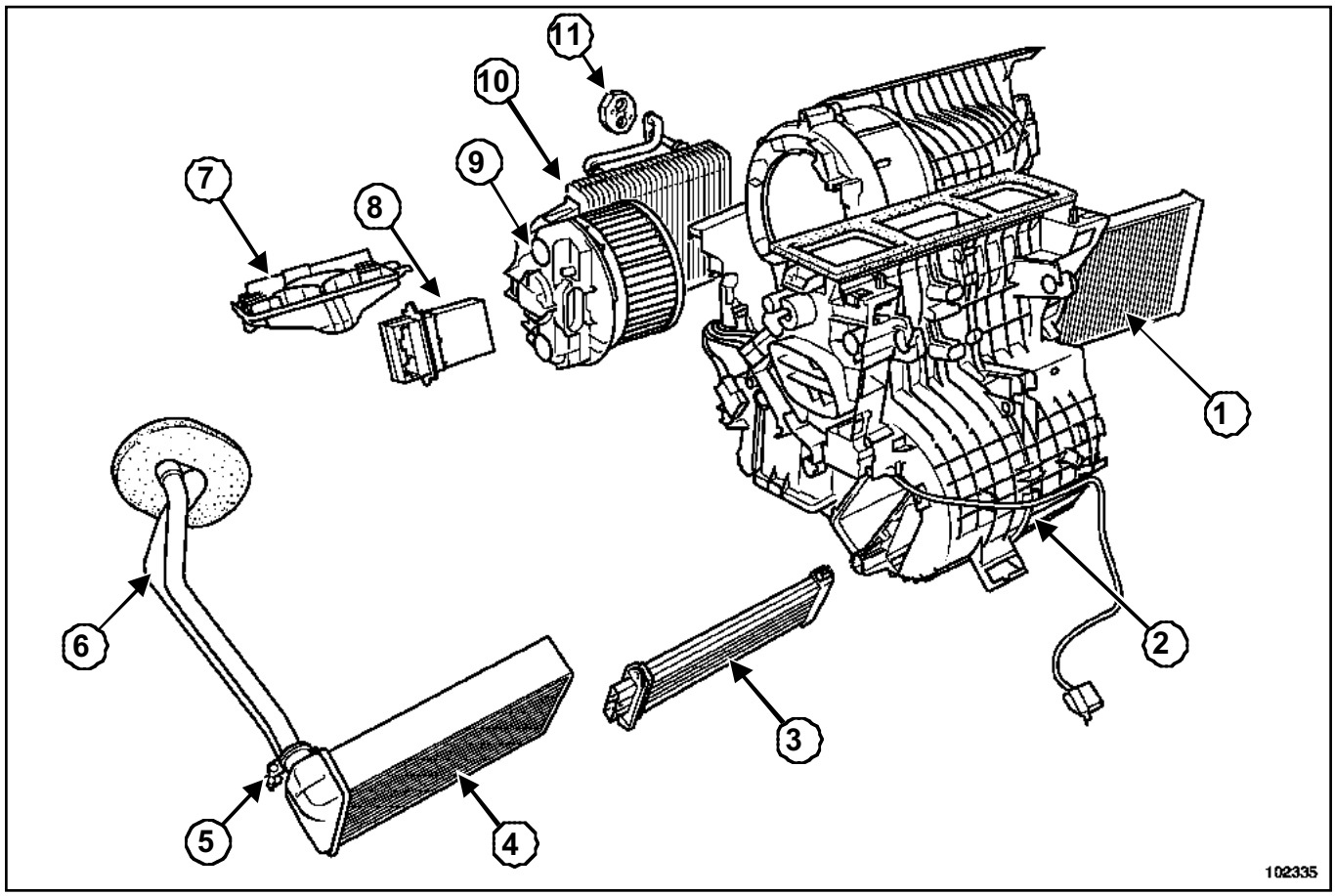
101716



19398

This sensor informs the computer of the humidity level in the passenger compartment to modify the comfort level in the passenger compartment.

AUTOMATIC CLIMATE CONTROL UNIT



102335

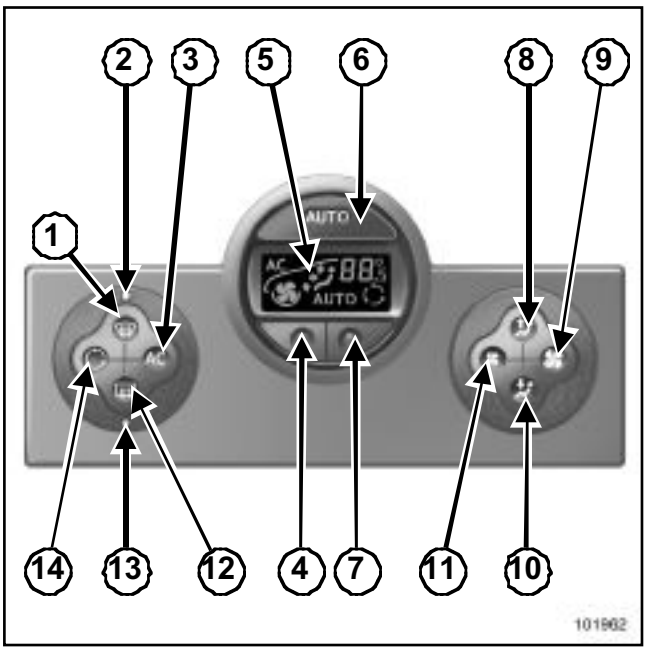
(**1**)	Passenger compartment filter
(**2**)	Air distribution unit
(**3**)	Heating resistor unit
(**4**)	Heater radiator
(**5**)	Heater radiator
(**6**)	Heater radiator
(**7**)	Evaporator cover
(**8**)	Power module
(**9**)	Passenger compartment fan
(**10**)	Evaporator
(**11**)	Evaporator flange

I - DESCRIPTION

The aim of automatic control is to provide users with constant and effective heating regardless of external conditions and the conditions under which the vehicle is being used.

In addition, it ensures good visibility through the vehicle windows.

This automatic control is managed electronically by a computer integrated into the control panel.

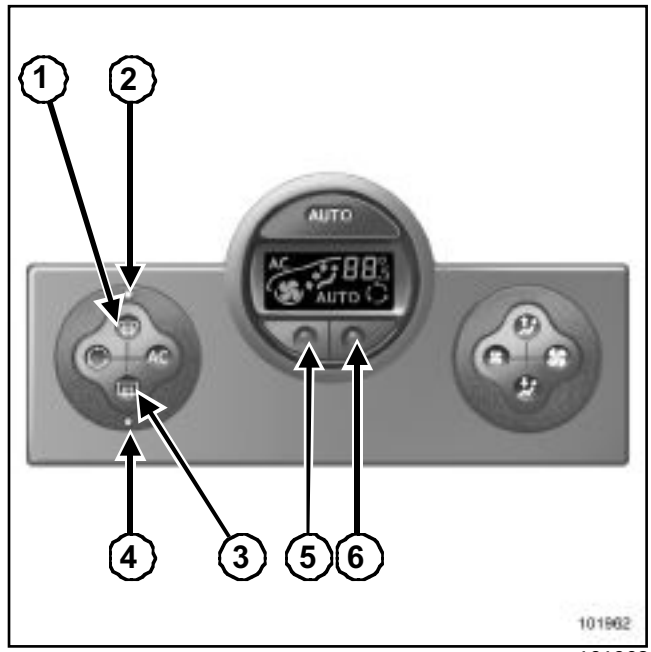


101962

(**1**)	Clear View button to demist and de-ice the windows
(**2**)	Indicator light associated with the Clear View function
(**3**)	Air conditioning on/off
(**4**)	Air temperature adjustment
(**5**)	Display
(**6**)	Automatic mode on/off
(**7**)	Air temperature adjustment
(**8**)	Adjustment of air distribution in the passenger compartment
(**9**)	Adjustment of ventilation speed
(**10**)	Adjustment of air distribution in the passenger compartment
(**11**)	Adjustment of ventilation speed
(**12**)	Heated rear screen and door mirrors (if the vehicle is fitted with them)
(**13**)	Indicator light associated with rear screen de-icing
(**14**)	Air recirculation control

II - OPERATING PRINCIPLE

Ambient comfort: automatic mode



101962

Note:

The (**1**) and (**3**) buttons are accompanied by indicator lights (**2**) and (**4**):

- indicator light on means that the function is on,
- if the light is off, the function is off.

Climate control is a system that guarantees (except in extreme cases) comfort in the passenger compartment and maintenance of clear visibility.

Only the temperature and the « AUTO » symbol are displayed.

The functions managed by automatic mode are not displayed.

Press button (**6**) to increase the temperature.

Press button (**5**) to reduce the temperature.

Note:

- In automatic mode (the « AUTO » indicator lights up on the display), all the air conditioning functions are controlled by the system.
- When a function parameter is changed, it is only the modified function which is no longer controlled by automatic mode, but the « AUTO » indicator goes out.

To attain and maintain the selected comfort level and ensure clear visibility, the system uses:

- the ventilation speed;
- the air distribution,
- management of air recirculation,
- turning the air conditioning on or off,
- the air temperature.

Note:

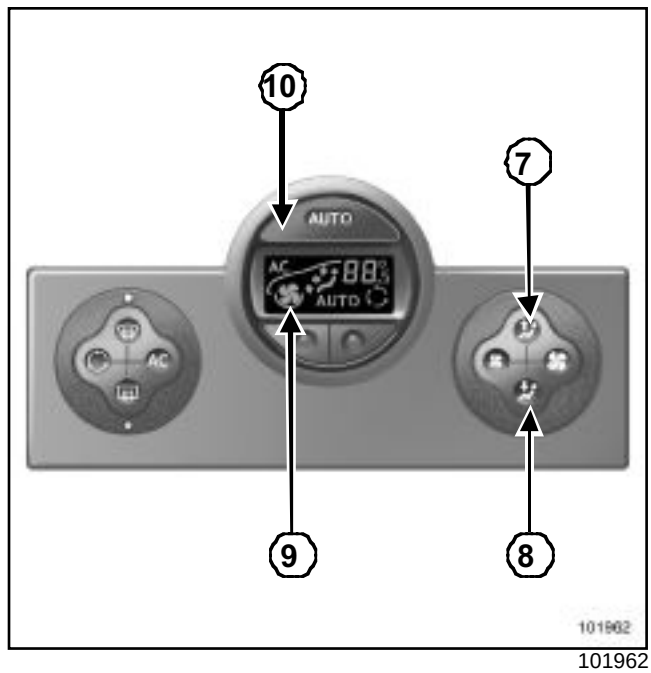
- The temperatures displayed reflect a comfort level.
- When the vehicle is started in hot or cold weather, increasing or reducing the displayed value does not achieve the desired comfort level any faster; whatever the comfort level indicated, the system optimises the rise or fall in temperature (the air blower does not start immediately at maximum speed: it increases progressively until the engine temperature is high enough, which could take from a few seconds to several minutes).
- In general, except in special circumstances, the dashboard vents should always be left open.

Automatic mode adjustment

101962

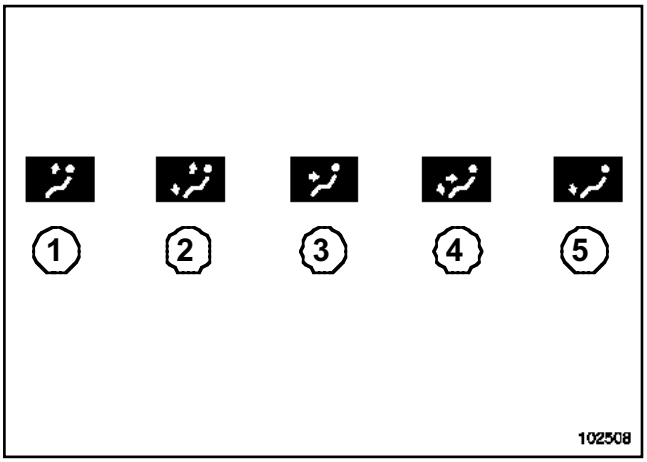
The system normally operates in automatic mode, but the choice imposed by the system can be adjusted (example: air distribution).

Distribution of air in the passenger compartment



101962

Five air distribution combinations are possible, these are obtained by successive presses on the (**7**) and (**8**) buttons.



102508

The direction arrows in the display (**9**) indicate the selected option:

- Position 1

  All the air flow is directed to the windscreen and side window demisting vents.

- Position 2

  The air flow is directed to the windscreen and side-window demisting vents and the occupants' feet.

- Position 3

  The air flow is directed to all the vents only.

- Position 4

  The air flow is directed to all the vents and to the feet.

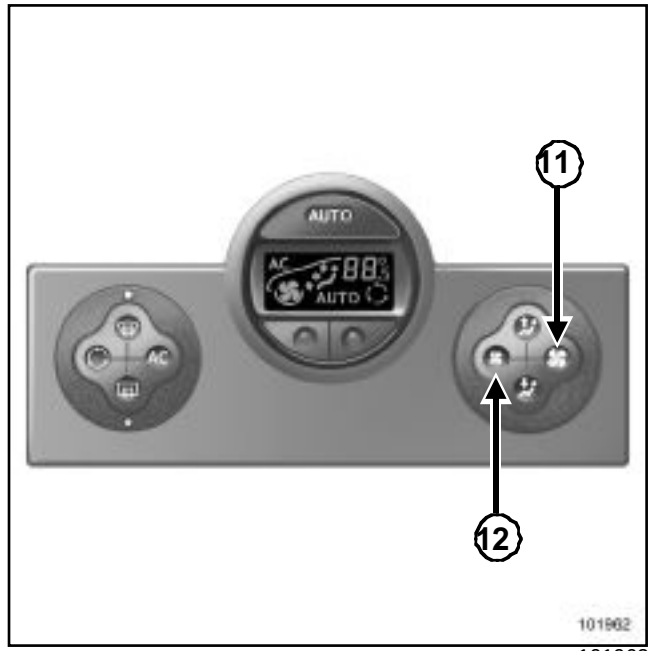
- Position 5

  The air flow is directed only to the feet of the occupants.

Note:

- Choosing manual air distribution turns off the automatic mode indicator light on the display ***(9)*** (automatic mode) but it is only the air distribution function which is no longer controlled automatically by the system.
- To retum to automatic mode, press button ***(10)***.

Adjustment of blower speed



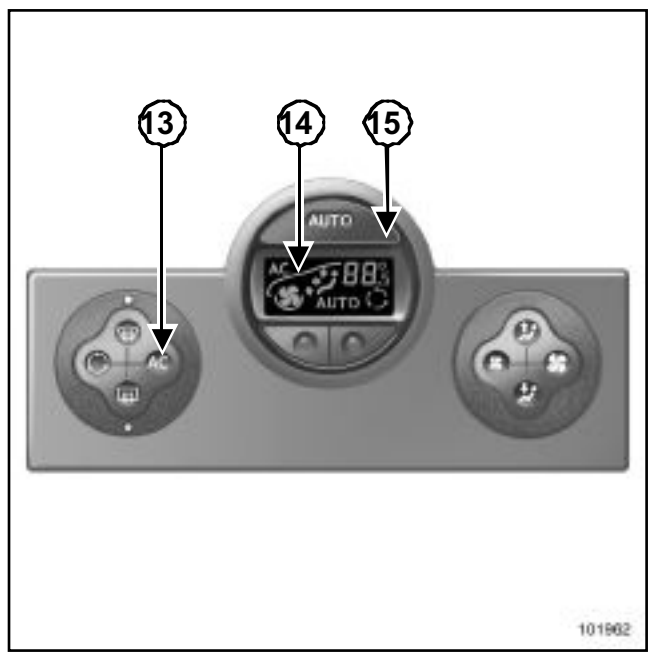
101962

In automatic mode, the system sets the most suitable ventilation speed for attaining and maintaining comfort.

Pressing the (**11**) and (**12**) buttons turns off automatic mode.

These buttons are used to increase or decrease the air blower speed.

Air conditioning on/off



101962

In automatic mode, the system switches the air conditioning on or off according to external climatic conditions.

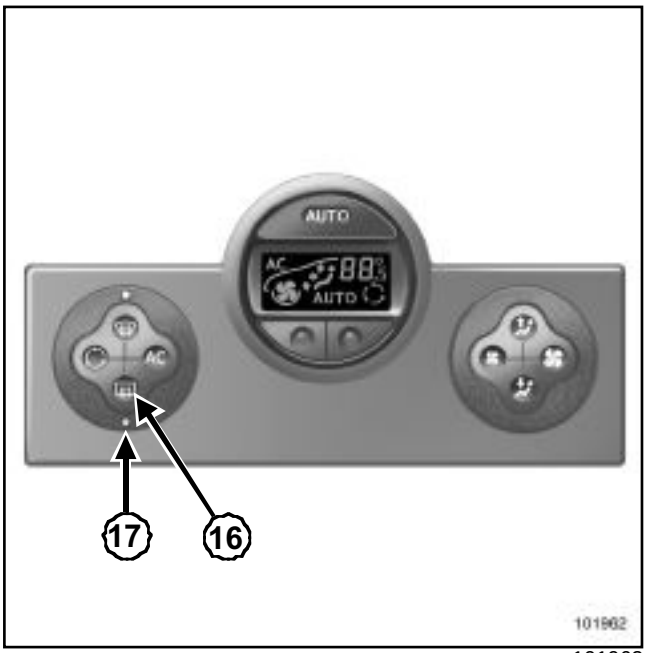
Press button (**13**) to turn off automatic mode: the « AUTO » indicator on the display (**14**) goes out.

The (**13**) switches on (indicator on) or switches off (indicator off) the air conditioning function.

Note:

- The « Clear View » function automatically turns on the air conditioning (indicator on).
- To return to automatic mode, press button (**15**).
- In automatic mode, in cold weather, the blower does not start straight away at maximum speed. It increases until the engine temperature is sufficient to heat the air in the passenger compartment. This may take from a few seconds to several minutes.

Rear screen de-icing / demisting



101962

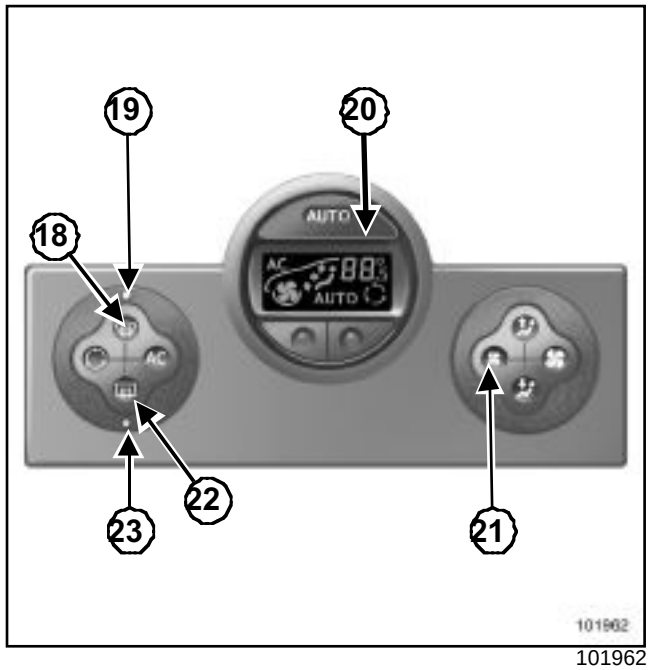
Press button (**16**), the indicator light (**17**) comes on.

This function rapidly demists the rear screen and the electric de-icing rear view mirrors (if the vehicle is fitted with them).

Note:

To turn it off, press button (**16**) again. Otherwise, demisting switches off automatically.

« Clear View » function



101962

Press button (**18**), the indicator lamp (**19**) comes on.

The « AUTO » indicator (in the display) goes out.

This function (if the vehicle is fitted with it) rapidly deices and demists the windscreen, the front side windows and the door mirrors.

It automatically turns on the air conditioning, turns recirculation off, and turns rear screen de-icing on (buttons (**22**) and (**23**)).

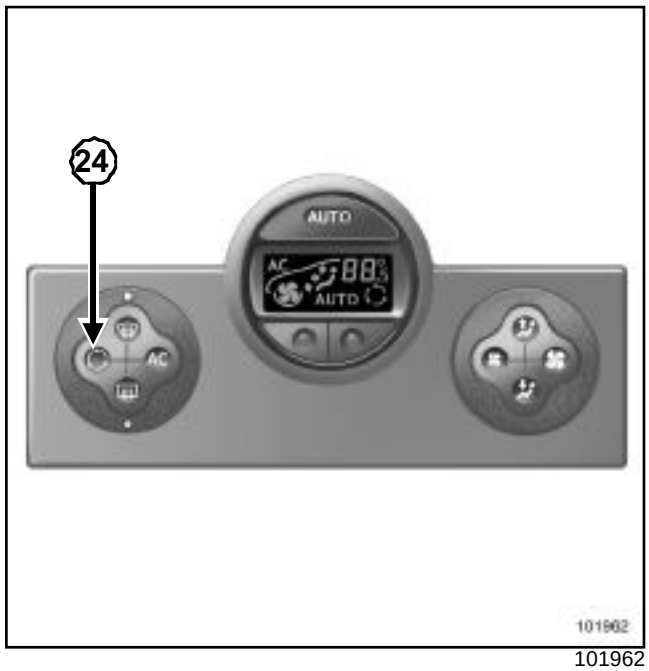
Press button (**22**), the heated rear screen is switched off and the indicator (**23**) goes out.

Note:

To reduce the air flow (which can produce some noise in the passenger compartment), press button (**21**); to switch the « Clear View » function off, press:

- button (**18**) again, or
- button (**20**) (the « AUTO » indicator comes on in the display).

Using air recirculation



101962

Press button (**24**)to turn on air recirculation (the symbol lights up on the display).

With recirculation turned on, the air in the passenger compartment is recycled and no external air is admitted.

Air recirculation allows the passenger compartment to be isolated from the external environment (for example, when driving in a polluted area, heavy traffic, etc.).

Prolonged use of the air recirculation mode may cause the windows to mist up or lead to odours, as the air is not renewed.

To prevent this, change to normal operation (outside air or automatic recirculation) by pressing button (**24**) again as soon as air recirculation is no longer necessary.

Note:

After prolonged use of air conditioning, the presence of water of condensation under the vehicle is normal.

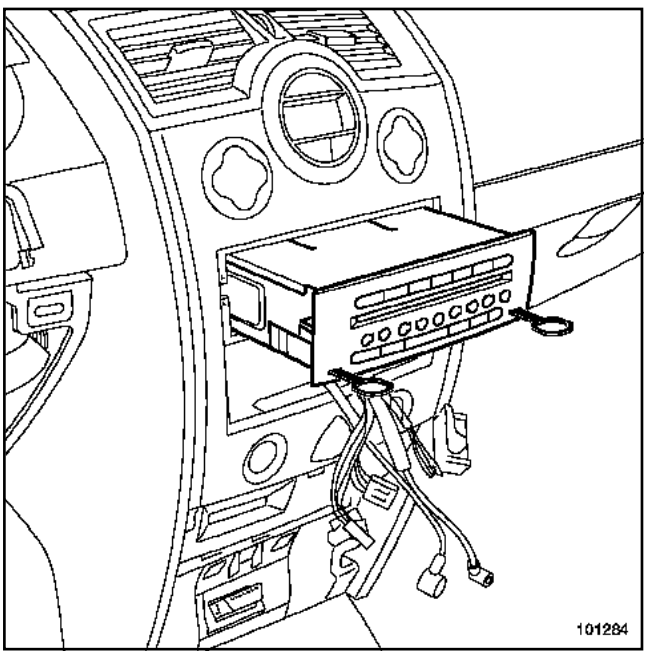
WARNING

- If cold air is not being produced, check the condition of the fuses and that the controls are working properly.
- When air conditioning is in use, an increase in fuel consumption (especially urban driving) is normal.
- During the winter, you should turn the air conditioning on from time to time to keep the system functioning properly.
- Inefficient de-icing, demisting or air conditioning: check for clogging of the cabin filter cartridge.

Essential special tooling	
Ms. 1544	Tool for removing Carminat Becker radio
Ms. 1373	Philips radio removal tool
Ms. 1639	Tool for removing radio - CD player
Car. 1597	Lever for removing rear grab handle clips

Tightening torques ▽	
climate control panel mounting bolt	**0.2 daNm**
battery cover bolts	**0.4 daNm**

REMOVAL

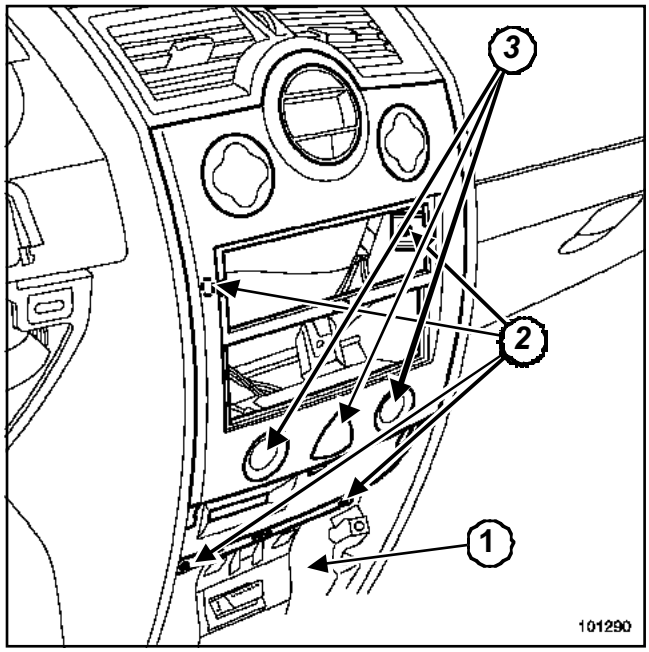


101284

Disconnect the battery starting with the negative terminal.

Remove:

- the centre glovebox (if the vehicle has one),
- Carminat using tool (Ms. 1544) or (Ms. 1373) (if fitted),
- the CD changer using tool (Ms. 1639) (if fitted),
- the radio using tool (Ms. 1373) (if the vehicle has one).



101290

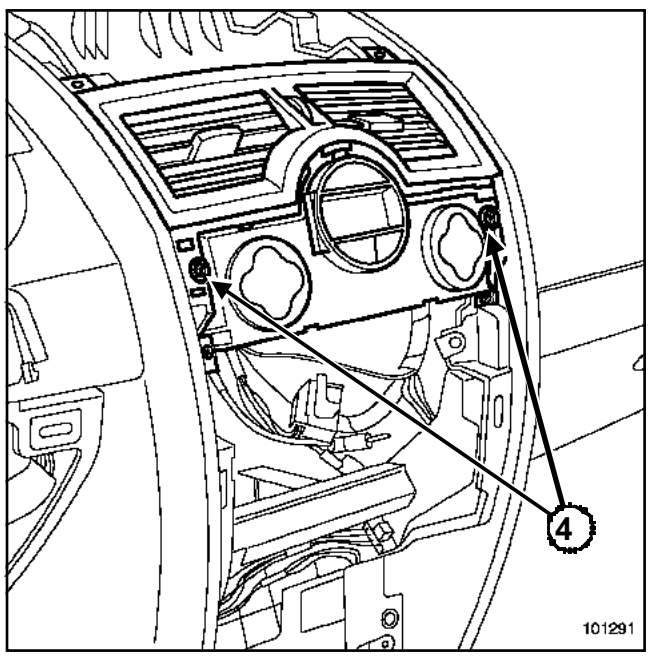
Disconnect the connectors.

Remove:

- the central lower front panel at (**1**),
- the four bolts (**2**) from the central front panel (**3**).

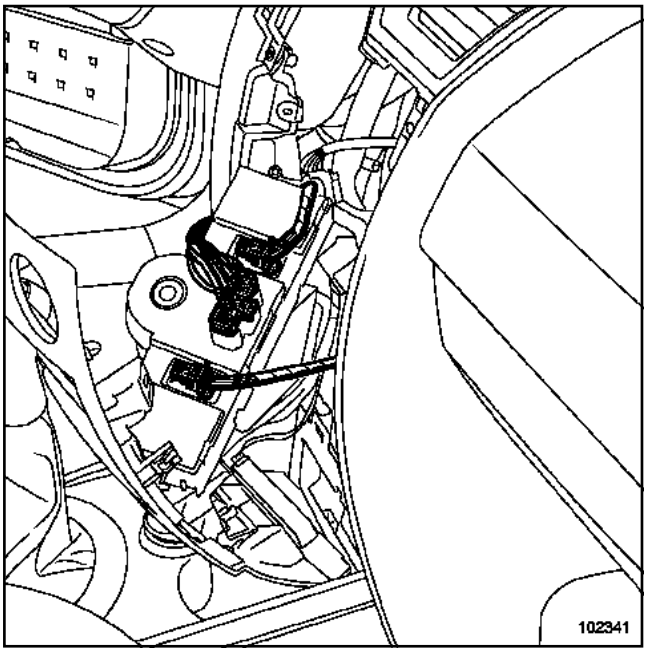
Unclip the card reader bracket using tool (Car. 1597).

Disconnect the connectors from the central front panel (**3**).



101291

Remove the two mounting bolts (**4**) from the control panel.



102341

Remove the heating control panel by tilting it inwards towards the dashboard.

Disconnect the connectors from the control panel.

REFITTING

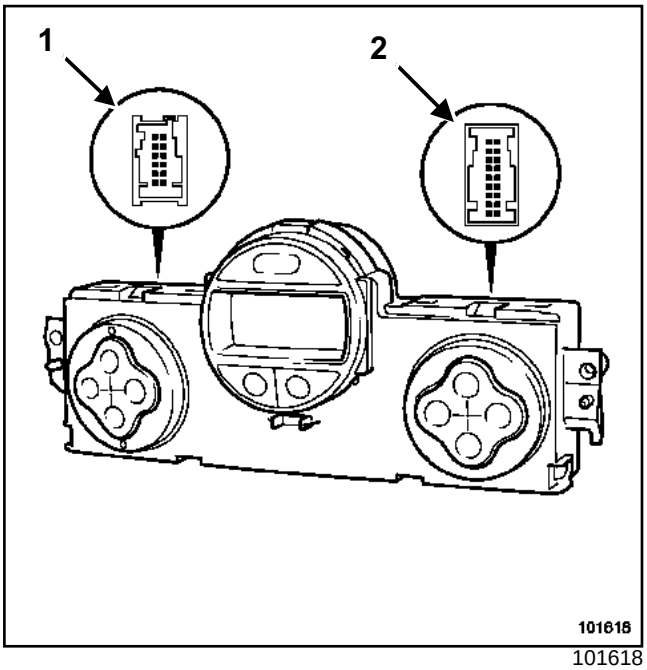
To refit, proceed in the reverse order of removal.

WARNING
Connect the battery; carry out the necessary programming (Section **Battery**).

Tighten to torque:

- the **climate control panel mounting bolt (0.2 daNm)**,
- the **battery cover bolts (0.4 daNm)**.

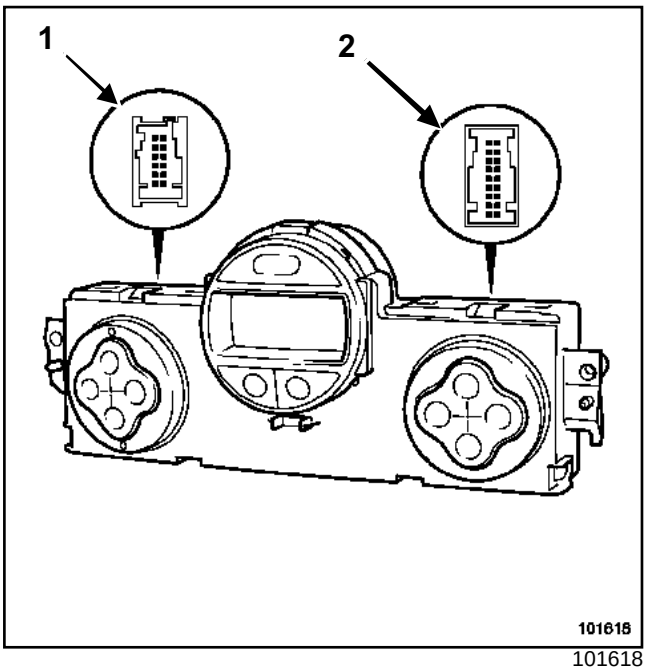
CONTROL PANELI



101618

Control panel tracks, connector 1	Allocation	Sensor or actuator track
1	CAN L	-
2	Not used	-
3	Not used	-
4	Insolation sensor supply	Track 2 of the insolation sensor
5	Interior temperature sensor supply	Track 4 of the interior temperature sensor
6	Computer earth	-
7	CAN H	-
8	Not used	-
9	**+ 12 V** side lights	Protection and switching unit left-hand side lights fuse (**7.5 A**)
10	**+ 12 V** accessories	Passenger compartment fuse (**15 A**)
11	**+ 12 V** before ignition	Passenger compartment fuse (**20 A**)
12	**0 V** sensor supply (insolation and interior temperature)	Track 1 of the insolation sensor and track 5 of the interior temperature sensor

AUTOMATIC CONTROL PANEL



101618

Control panel tracks, connector 2	Allocation	Sensor or actuator track
1	Recirculation motor control	Track 5 of the recirculation motor
2	Not used	-
3	Not used	-
4	Not used	-
5	Not used	-
6	Not used	-
7	Fan module control	Track 6 of the passenger compartment fan module 6-track connector
8	Mixing and distribution motors supply **12 V**	Track 2 of the mixing and distribution motors
9	Not used	-
10	Recirculation motor control	Track 6 of the recirculation motor
11	Distribution flaps	Track 1 of the distribution motor (coil B2)
12	Distribution motor control	Track 6 of the distribution motor (coil A2)
13	Distribution motor control	Track 3 of the distribution motor
14	Distribution motor control	Track 4 of the distribution motor
15	Mixing motor control	Track 1 of the mixing motor

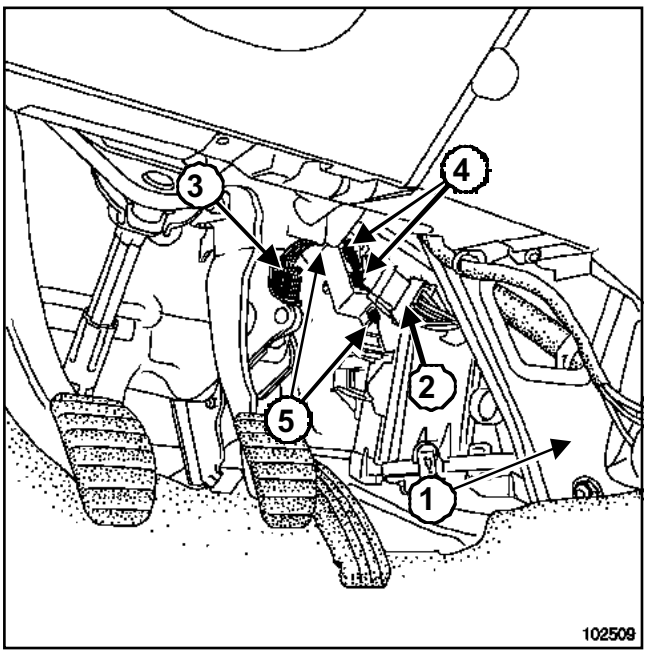
Control panel tracks, connector 2	Allocation	Sensor or actuator track
16	Mixing motor control	Track 6 of the mixing motor (coil A2)
17	Mixing motor control	Track 3 of the mixing motor
18	Mixing motor control	Track 4 of the mixing motor (coil A1)

LEFT-HAND DRIVE

Tightening torques ▽	
battery cover bolts	**0.4 daNm**

The power module controls the speed of the blower depending on the requirements determined by the automatic control.

It can be accessed from underneath the instrument panel.



102509

REMOVAL

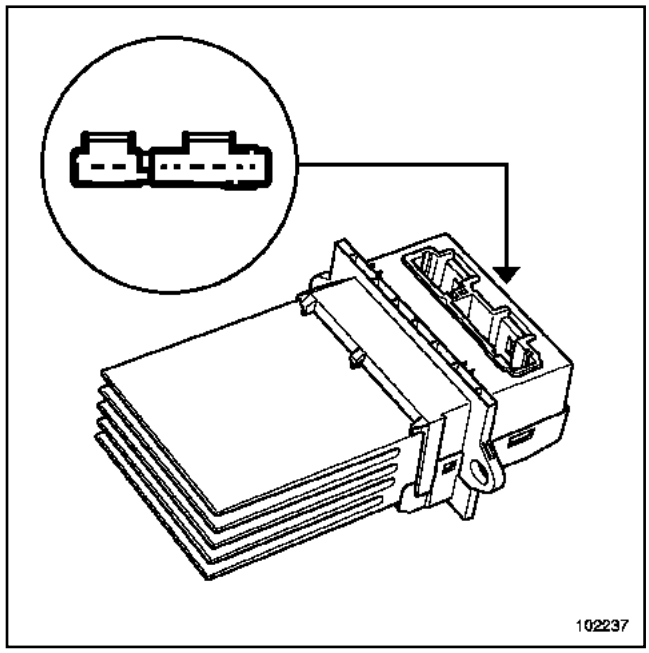
Disconnect the battery starting with the negative terminal.

Remove the trim at ***(1)***.

Remove the electrical connection ***(2)***.

Remove:

- The accelerator pedal connector ***(3)***,
- the two power module connectors ***(4)***,
- the power module bolt ***(5)***.



102237

Take out the power module (held in place by lugs).

REFITTING

Connect the power module connectors.

To refit, proceed in the reverse order to removal.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Tighten to torque the **battery cover bolts (0.4 daNm)**.

RIGHT-HAND DRIVE

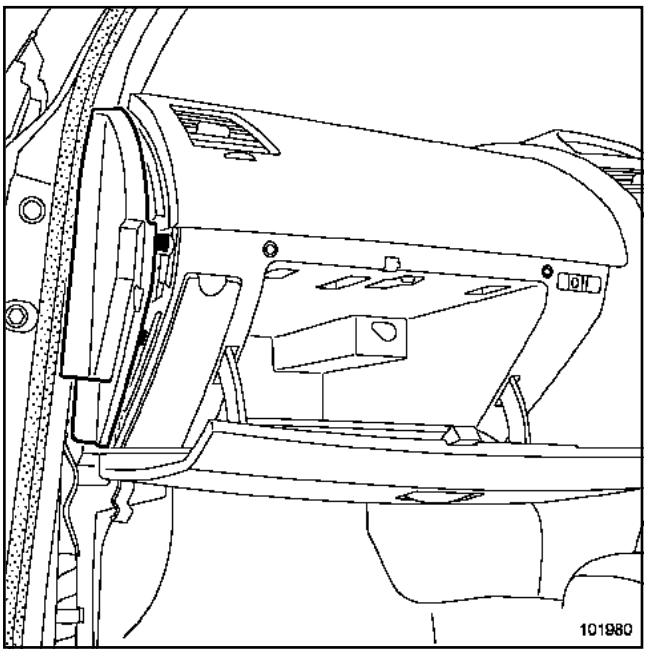
Tightening torques ▽	
battery cover bolts	**0.4 daNm**

The power module controls the speed of the blower depending on the requirements determined by the automatic control.

REMOVAL

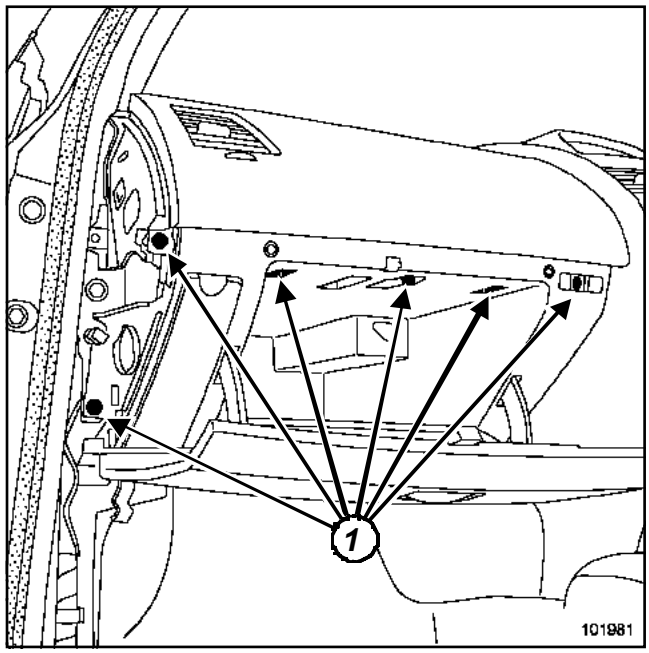
Disconnect the battery starting with the negative terminal.

Remove the front door sill lining on the passenger side (upper section).



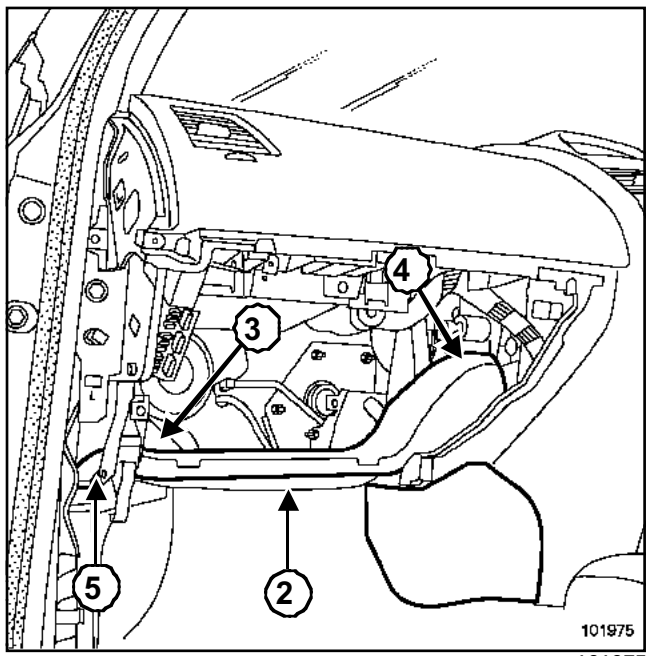
101980

Remove the dashboard side panel on the passenger side.



101981

Remove the bolts(**1**).



101975

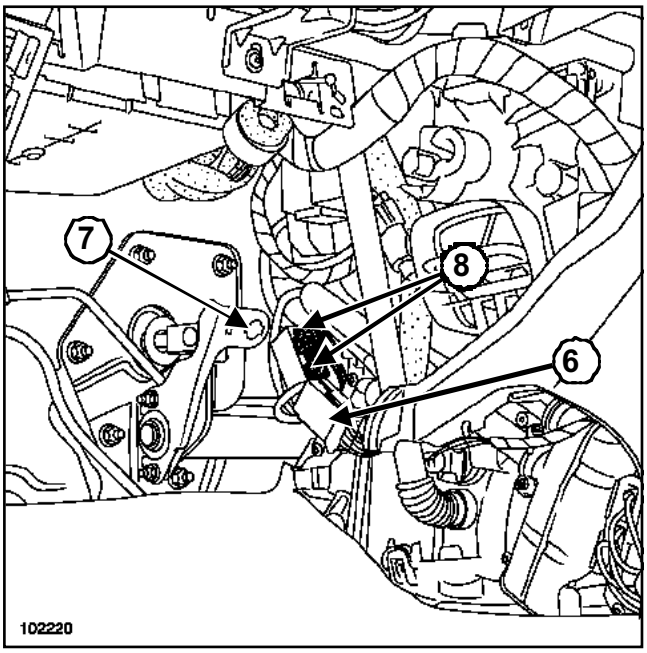
Remove the clip (**3**) behind the bonnet release catch mounting.

Disconnect the duct (**4**).

Raise the duct (**5**).

Remove the air distribution duct.

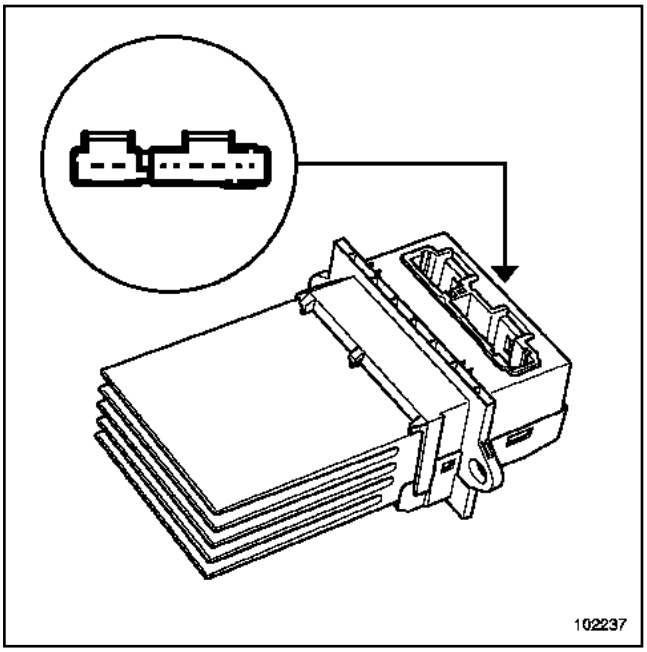
RIGHT-HAND DRIVE



102220

Remove:

- the brake pedal switch at (**7**),
- the connection bolts (**6**),
- the two power module connectors (**8**),
- the power module bolt.



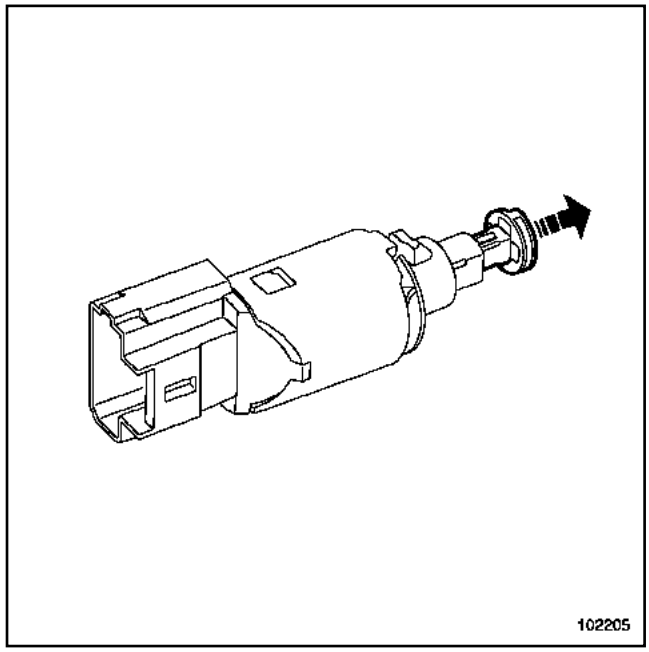
102237

Take out the power module (held in place by lugs).

REFITTING

Note:

- The brake pedal switch has automatic adjustment which adapts according to the pedal position.
- Before refitting the switch, set it to maximum by pulling the piston.
- Put the sensor in its housing and turn it one quarter turn clockwise.



102205

Reconnect the power module connectors.

To refit, proceed in the reverse order to removal.

Reshape the air duct by working through the air outlet holes and applying hand pressure at right angles to the bend.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Tighten to torque the **battery cover bolts (0.4 daNm)**.

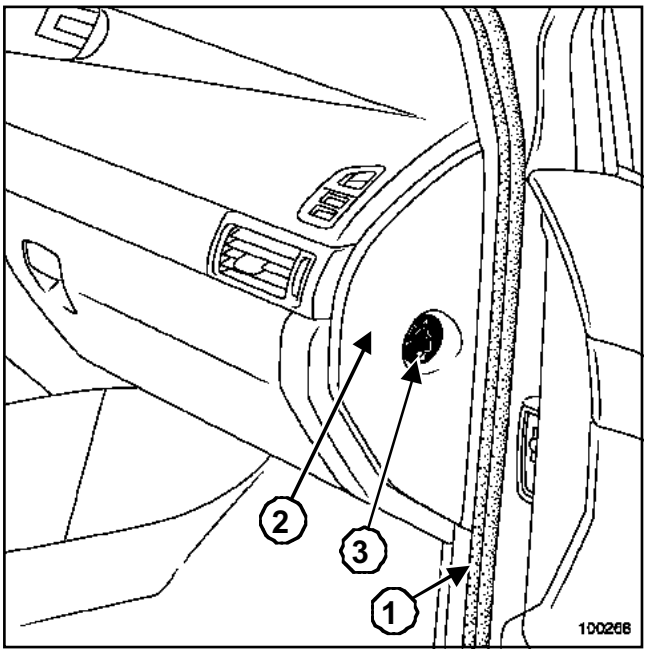
LEFT-HAND DRIVE

Tightening torques ▽	
battery cover bolts	**0.4 daNm**

REMOVAL

Disconnect the battery starting with the negative terminal.

> Note:
>
> The recirculation motor is located above and to the right of the air conditioning unit.

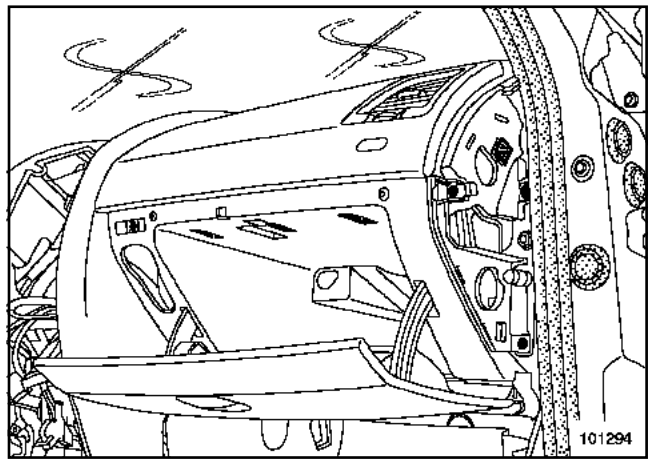


100268

Remove:

- the front door sill lining (**1**) (upper section),
- the side panel (**2**) of the dashboard.

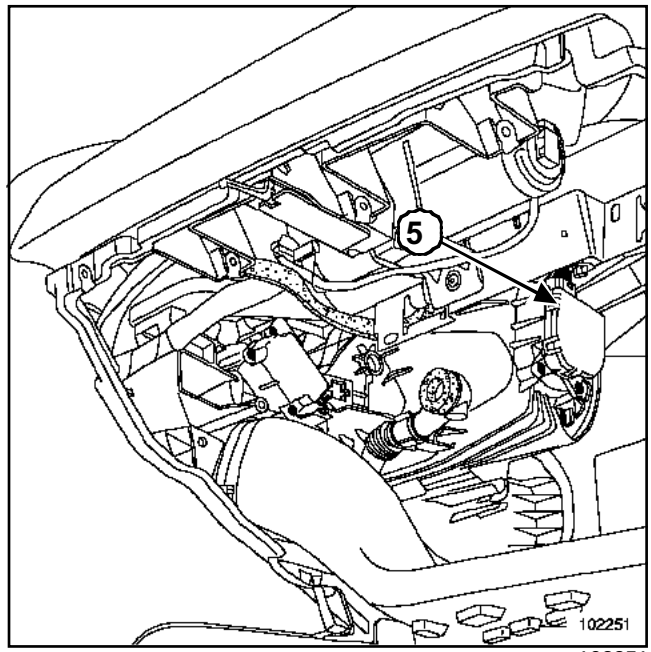
Unclip the passenger airbag deactivation switch (**3**).



101294

Remove the glove compartment fixing screws (**4**).

Remove the glove compartment.



102251

Disconnect the motor (**5**)

Remove:

- the three motor mounting bolts, then remove the motor (**5**),
- the recirculation motor (**5**).

REFITTING

To refit, proceed in the reverse order to removal.

LEFT-HAND DRIVE

Turn the flap spindle with a suitable screwdriver until the mark on it is aligned with that on the motor.

WARNING
Connect the battery; carry out the necessary programming (Section **Battery**).

Torque-tighten the **battery cover bolts (0.4 daNm)**.

RIGHT-HAND DRIVE

Tightening torques ▽	
battery cover bolts	**0.4 daNm**

REMOVAL

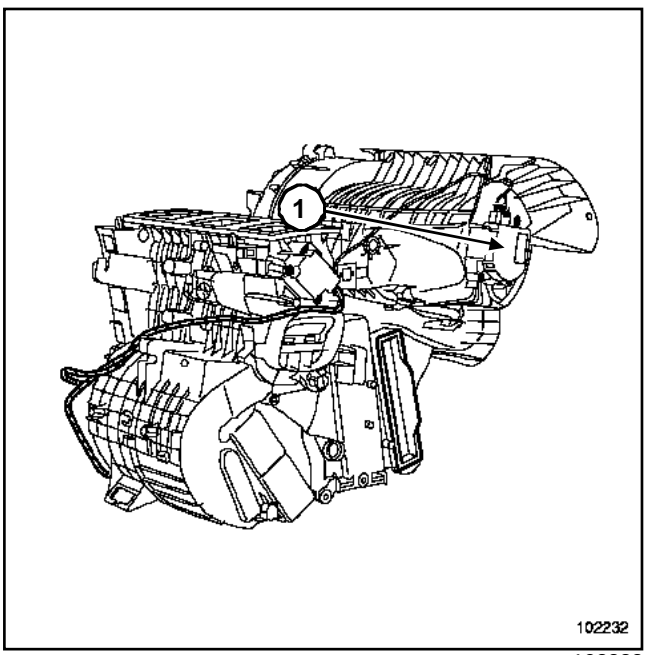
Disconnect the battery starting with the negative terminal.

Note:

The recirculation motor is located above and to the right of the air conditioning unit.

In the passenger compartment:

- remove the dashboard (Section **Interior accessories**),
- remove the reinforcement cross member (Section **Upper front structure**)



102232

Disconnect the motor (**1**)

Remove:

- the three motor mounting bolts (**1**),
- the motor (**1**).

REFITTING

To refit, proceed in the reverse order to removal.

Turn the flap spindle with a suitable screwdriver until the mark on it is aligned with that on the motor.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Torque-tighten the **battery cover bolts (0.4 daNm)**.

RIGHT-HAND DRIVE

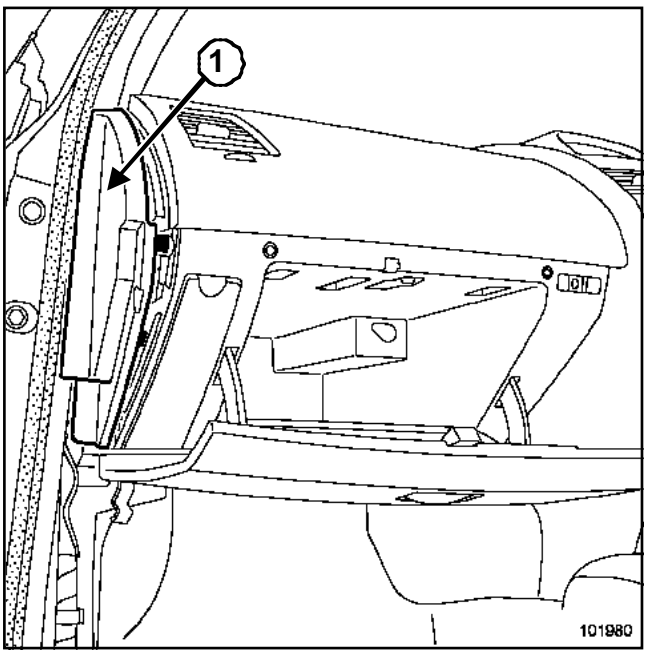
Tightening torques ▽	
battery cover bolts	**(0.4 daNm)**

REMOVAL

Note:

The mixer motor is behind and to the left of the air conditioning unit.

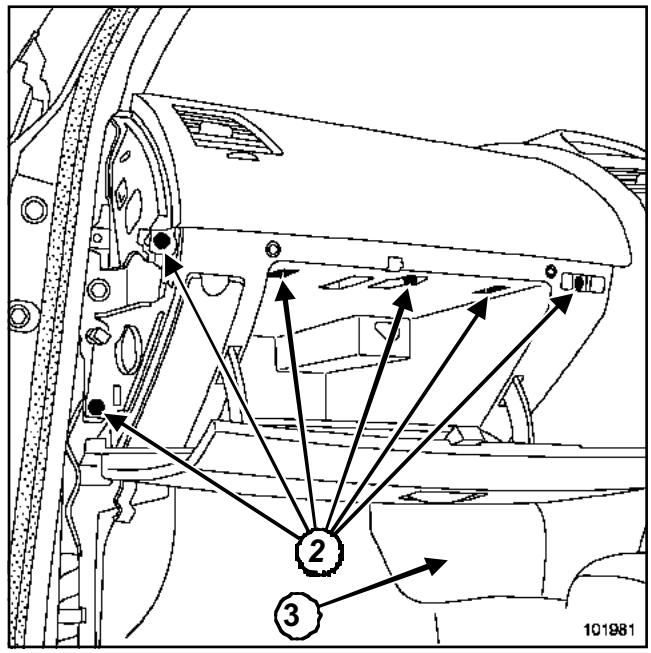
Disconnect the battery starting with the negative terminal.



101980

Remove:

- the front door sill lining (upper section),
- the dashboard side panel (**1**) on the front-passenger side.

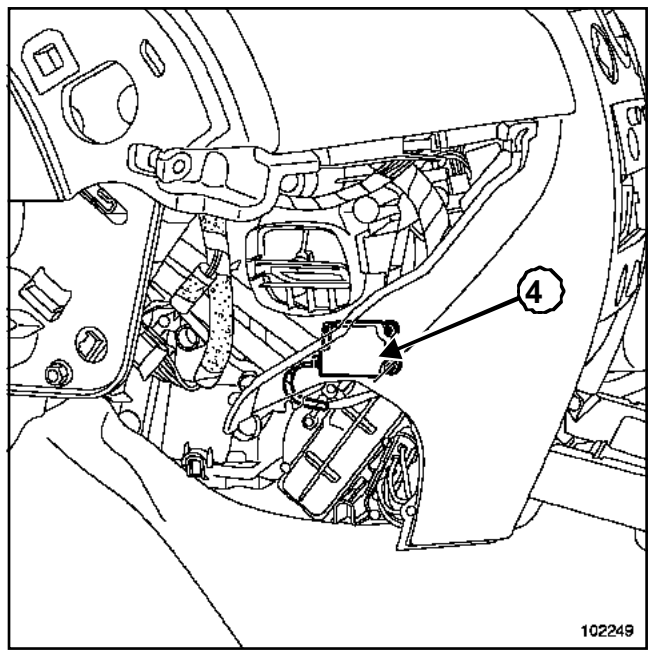


101981

Remove the mounting bolts (**2**) from the glove compartment.

Remove:

- the glove compartment,
- the trim (**3**).



102249

Disconnect the motor (**4**).

Remove the three mounting bolts from the motor (**4**).

Remove the motor (**4**).

RIGHT-HAND DRIVE

REFITTING

To refit, proceed in the reverse order to removal.

Turn the flap spindle with a suitable screwdriver until the mark on it is aligned with that on the motor.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Torque-tighten the **battery cover bolts ((0.4 daNm))**.

LEFT-HAND DRIVE

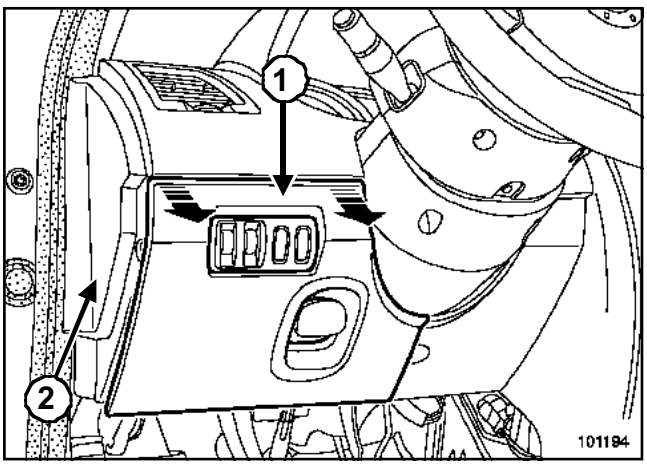
Tightening torques ▽	
cross member reinforcing plate mounting bolts	**2.1 daNm**
flexible mounting pad mounting bolts	**0.2 daNm**
battery cover bolts	**0.4 daNm**

REMOVAL

Disconnect the battery starting with the negative terminal.

Note:

The mixer motor is behind and to the left of the air conditioning unit.

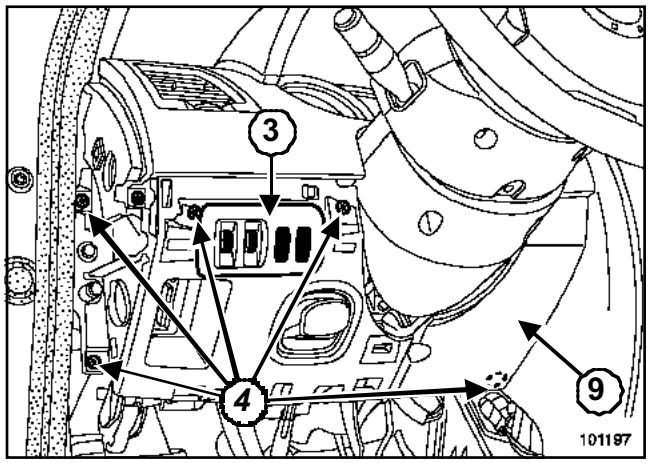


101194

Remove the front door sill lining (upper section).

Unclip:

- the lower casing (**1**),
- the dashboard side panel (**2**).

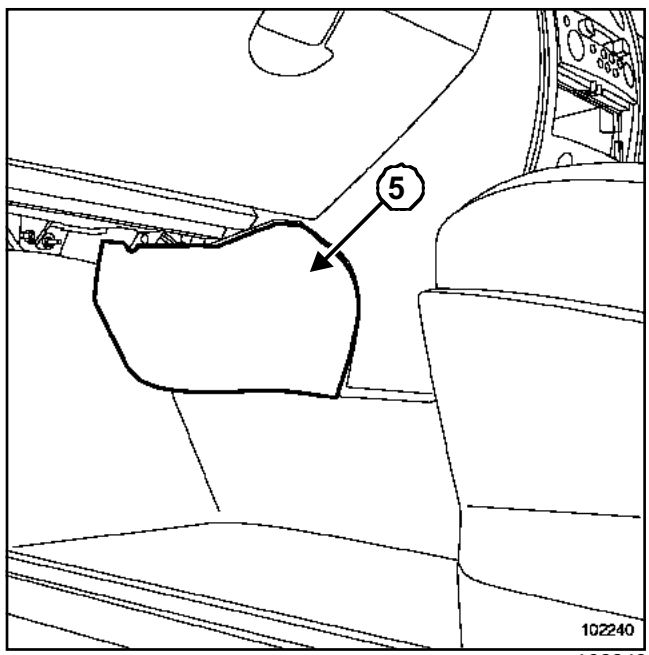


101197

Disconnect the headlight adjustment control unit (**3**).

Remove:

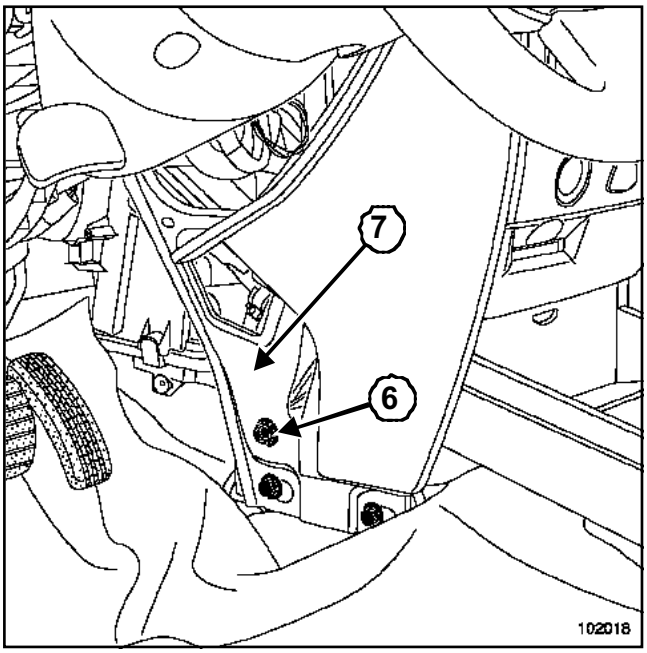
- the control unit,
- the trim mounting bolts (**4**),
- the lining (**9**).



102240

Remove the lining (**5**).

LEFT-HAND DRIVE



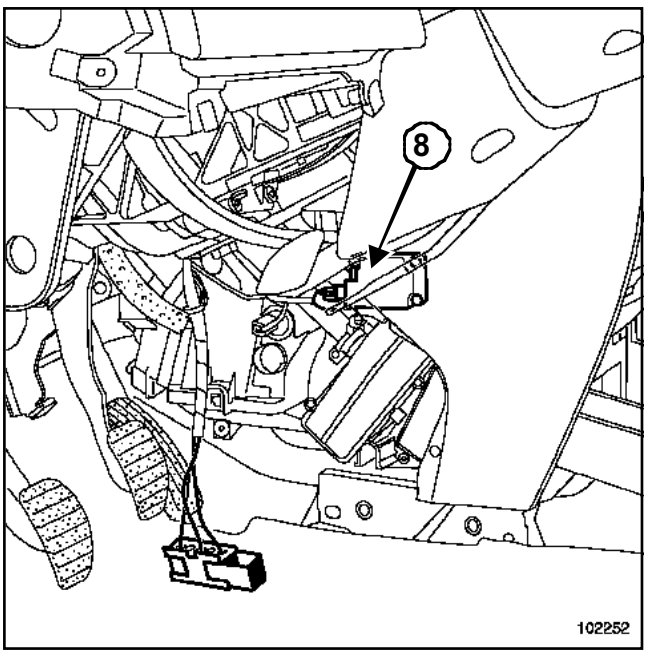
102018

Release the connecting plastic mounting pad (**6**) between the unit and the cross member reinforcing plate.

Disconnect the heating resistors.

Unclip the harness from the cross member reinforcing plate (**7**).

Remove the cross member reinforcing plate.



102252

Disconnect the motor (**8**).

Remove:

- the three motor mounting bolts (**8**),
- the motor(**8**).

REFITTING

To refit, proceed in the reverse order to removal.

Turn the flap spindle with a suitable screwdriver until the mark on it is aligned with that on the motor.

Tighten to torque:

- the **cross member reinforcing plate mounting bolts (2.1 daNm)**,
- the **flexible mounting pad mounting bolts (0.2 daNm)**.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Torque-tighten the **battery cover bolts (0.4 daNm)**.

LEFT-HAND DRIVE

Tightening torques ▽	
battery cover bolts	**0.4 daNm**

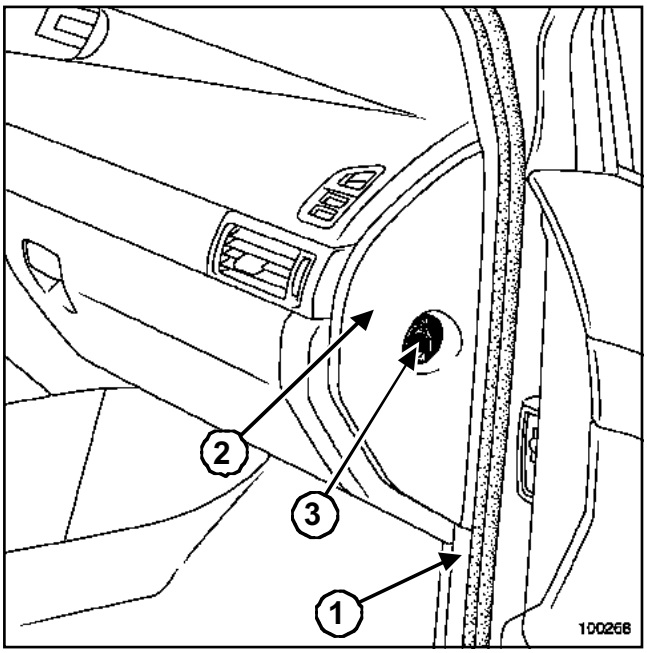
REMOVAL

Disconnect the battery starting with the negative terminal.

Note:

The distribution motor is in the middle and to the right of the air conditioning unit.

PASSENGER COMPARTMENT

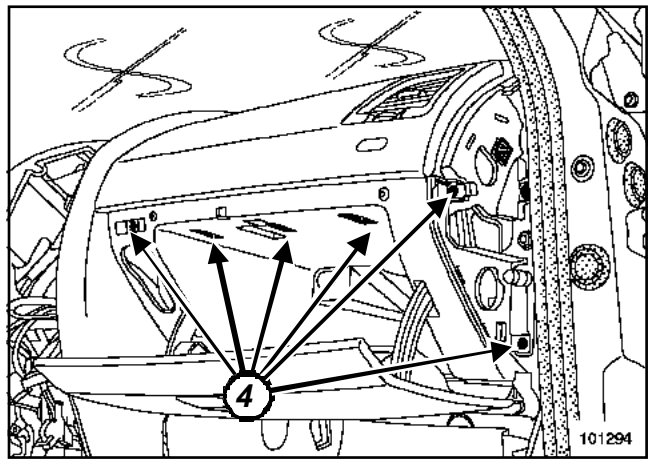


100268

Remove:

- the front door sill lining (upper section) (**1**).
- the dashboard side panel (**2**).

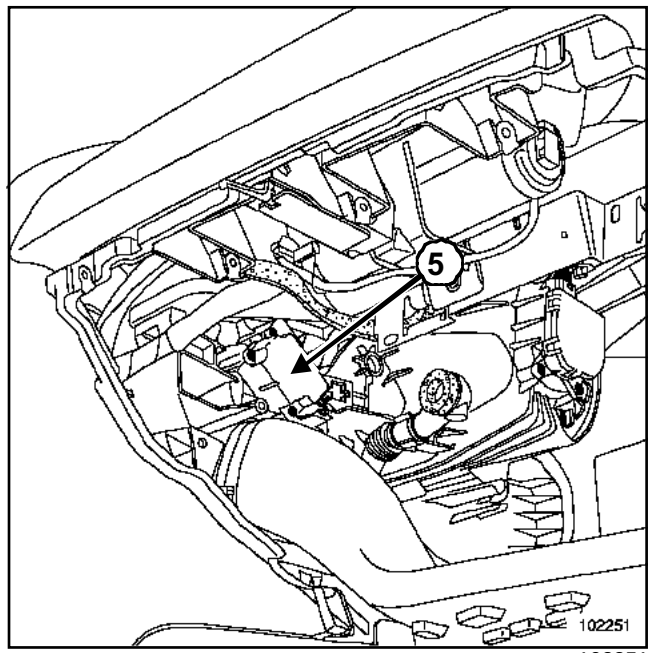
Unclip the passenger airbag inhibitor switch (**3**).



101294

Remove the mounting bolts (**4**) from the glove compartment.

Remove the glove compartment.



102251

Disconnect the motor (**5**).

Remove:

- the three motor mounting bolts (**5**),
- the motor (**5**).

REFITTING

To refit, proceed in the reverse order to removal.

LEFT-HAND DRIVE

Turn the flap spindle with a suitable screwdriver until the mark on it is aligned with that on the motor.

WARNING
Connect the battery; carry out the necessary programming (Section **Battery**).

Torque-tighten the **battery cover bolts (0.4 daNm)**.

RIGHT-HAND DRIVE

Tightening torques ▽	
battery cover bolts	**0.4 daNm**

REMOVAL

Disconnect the battery starting with the negative terminal.

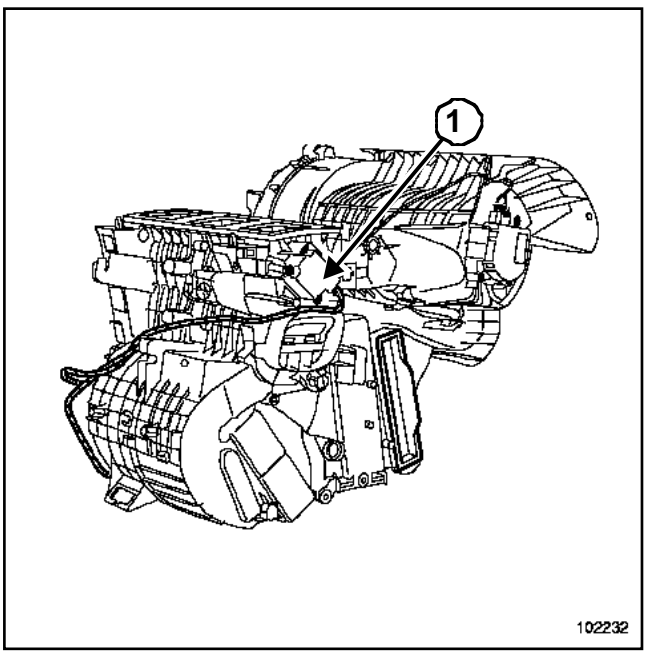
Note:

The distribution motor is in the middle and to the right of the heating and ventilation unit.

PASSENGER COMPARTMENT

Remove:

- the dashboard (Section **Mechanisms and accessories**),
- the cross member reinforcing plate (Section **Upper front structure**).



102232

Disconnect the motor (**1**).

Remove:

- the three motor mounting bolts,
- the motor (**1**).

REFITTING

To refit, proceed in the reverse order to removal.

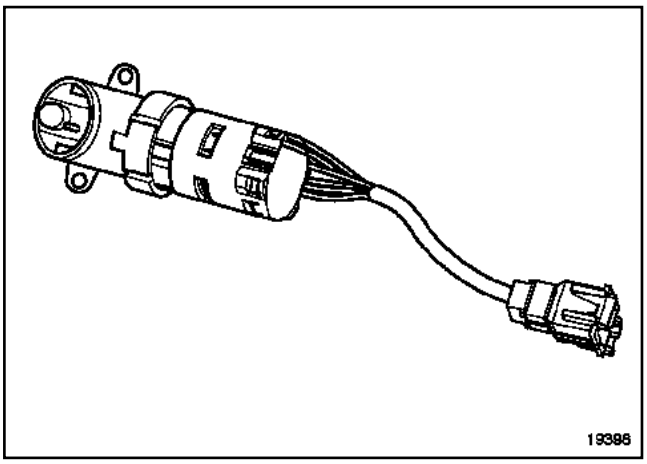
Turn the flap spindle with a suitable screwdriver until the mark on it is aligned with that on the motor.

WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Torque-tighten the **battery cover bolts (0.4 daNm)**.

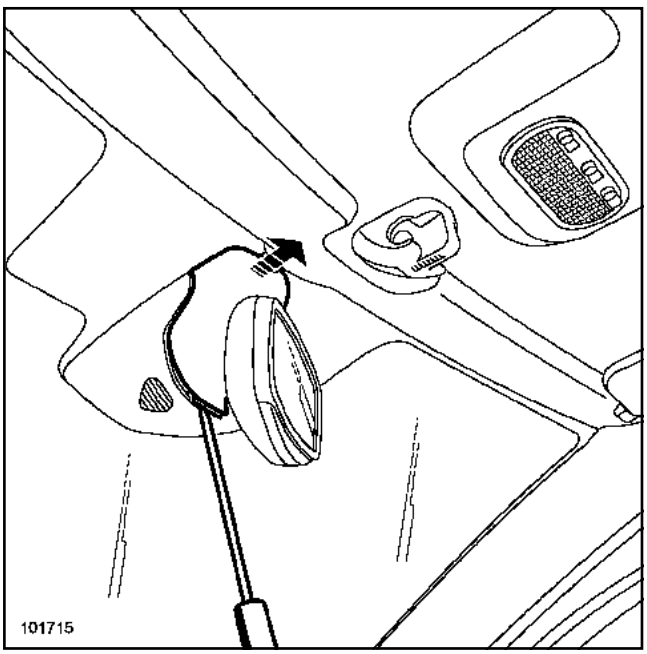
Location



19398

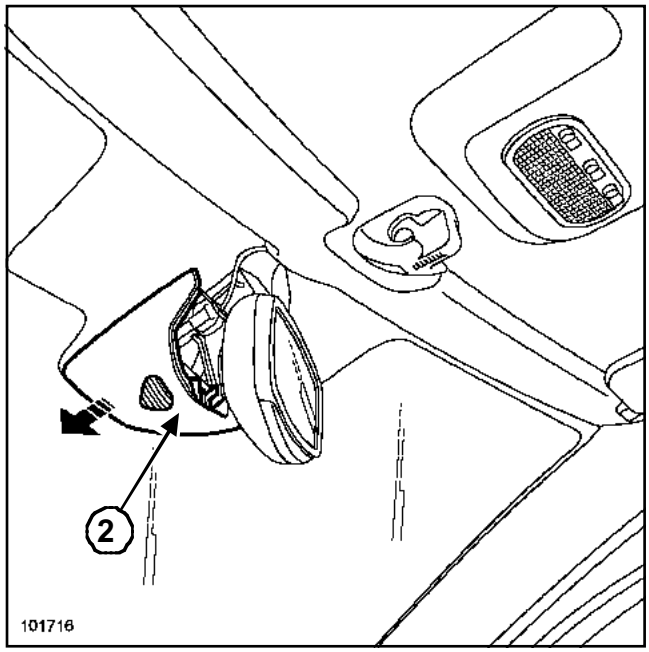
The passenger compartment sensor is in the lower shell of the interior rear-view mirror.

REMOVAL



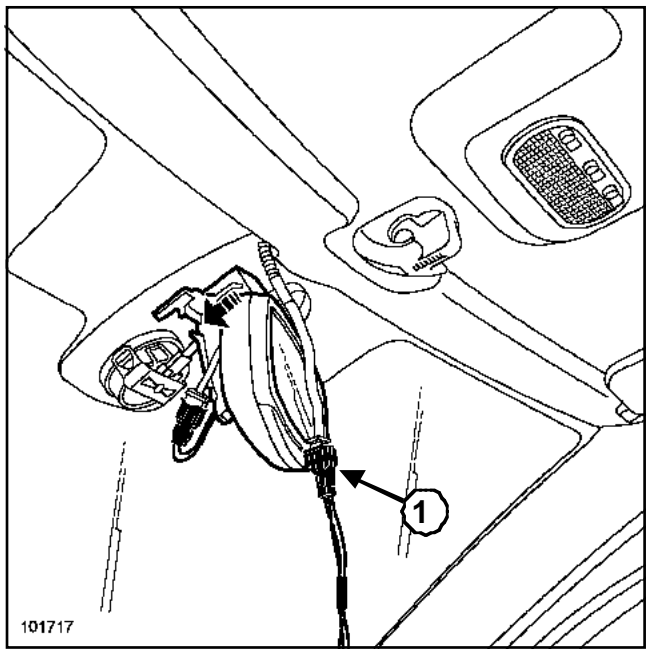
101715

Unclip the upper shell.



101716

Unclip the lower shell.



101717

Disconnect the passenger compartment temperature sensor connector (**1**).

Remove:

- the two mounting bolts from the « temperature sensor - humidity detector » assembly located inside the shell ***(2)***,
- the « temperature sensor - humidity detector » assembly.

REFITTING

To refit, proceed in the reverse order to removal.

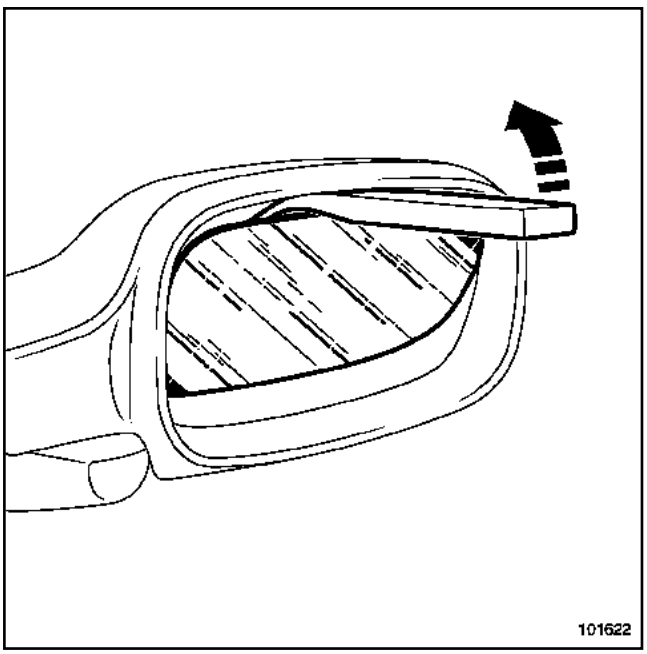
Essential special tooling	
Car. 1363	Rear-view mirror glass remover

The external temperature sensor is located in the door mirror on the right-hand side.

Check the resistance of the temperature sensor

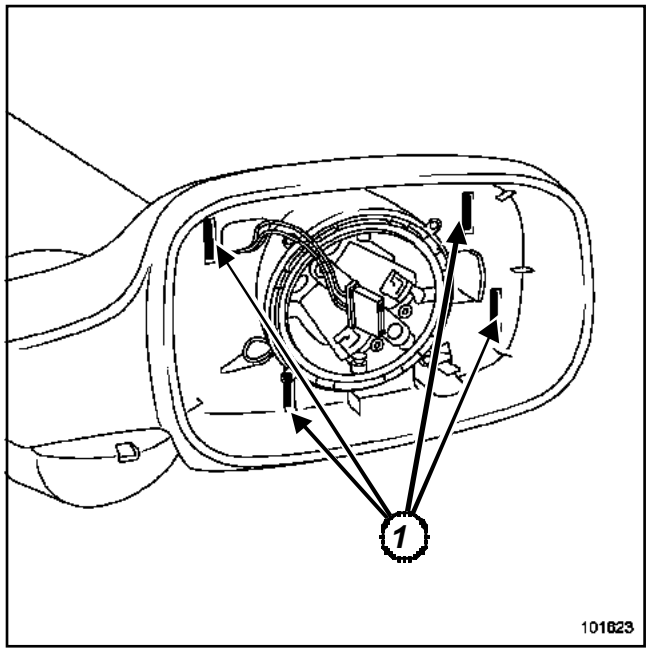
Approximate temperature (˚C)	Sensor resistance (W)
Between 0 and 5	Between 5400 and 6200
Between 6 and 10	Between 4400 and 5400
between 11 and 15	Between 3700 and 4400
Between 16 and 20	Between 3000 and 3700
Between 21 and 25	between 2500 and 3000
Between 26 and 30	Between 2100 and 2500
Between 31 and 35	Between 1700 and 2100
Between 36 and 40	Between 1450 and 1700

REMOVAL



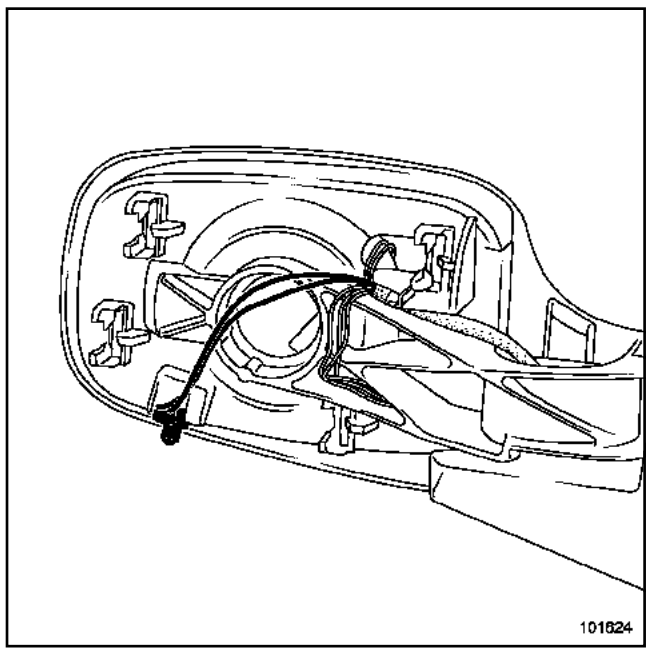
101622

Remove the mirror glass using tool (Car. 1363).



101623

Remove the door mirror shell by pressing the lugs (**1**).



101624

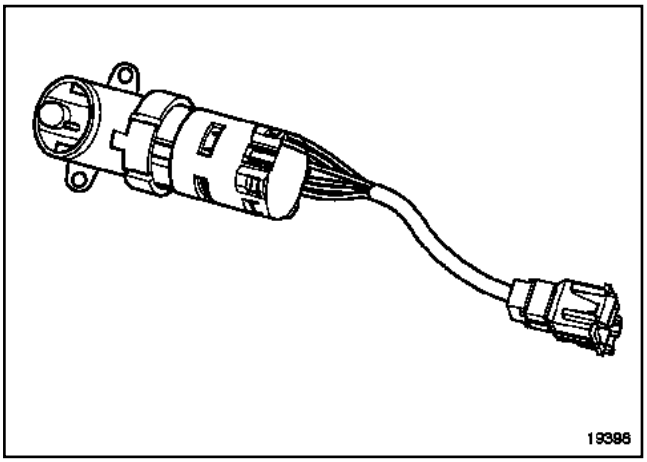
Unclip the sensor from its mounting.

Cut the wires.

REFITTING

Solder both temperature sensor wires and insulate them with heat-shrink sleeves.

Refit the shell and mirror glass.

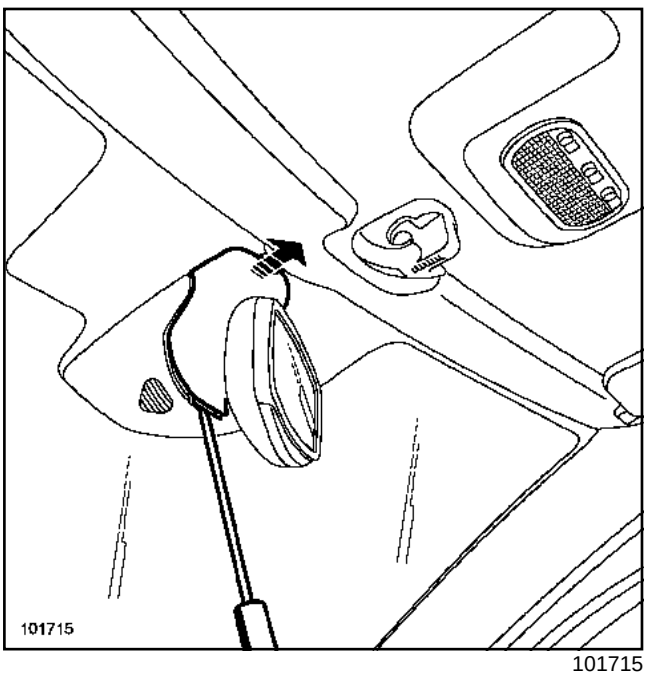


19398

Note:

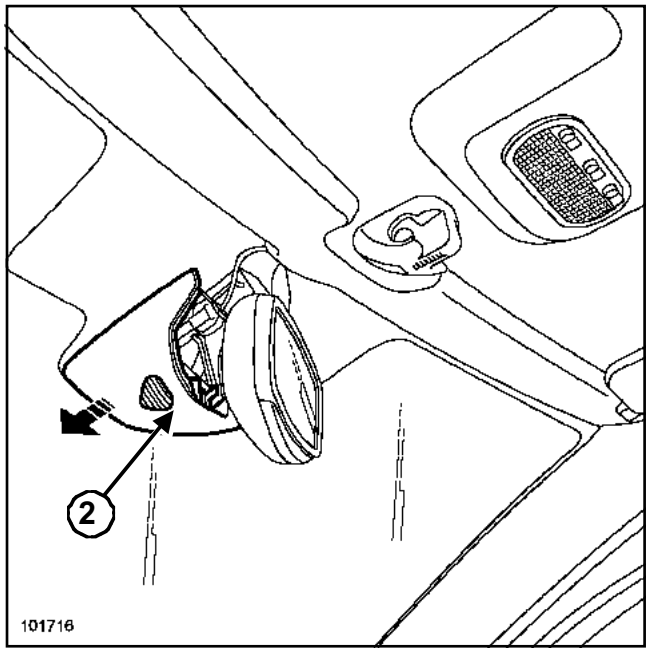
The humidity sensor is located inside the micro-turbine in the upper section of the interior rear-view mirror.

REMOVAL



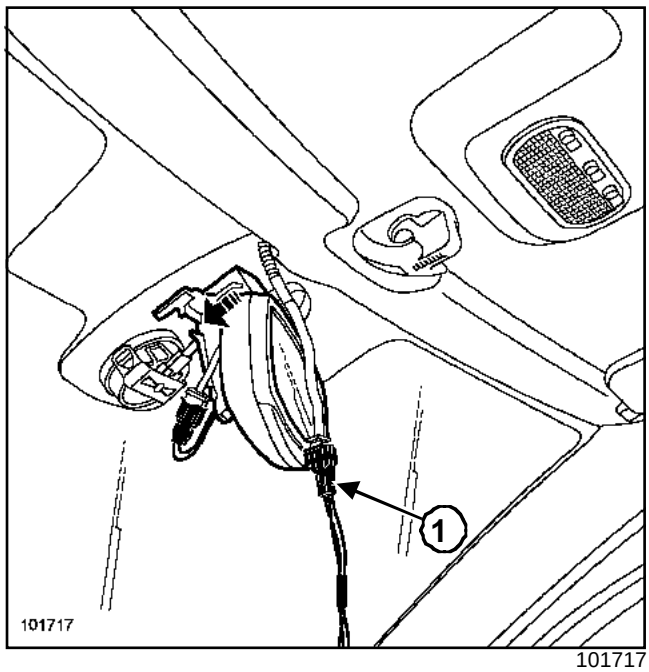
101715

Unclip the upper casing.



101716

Unclip the lower casing.



101717

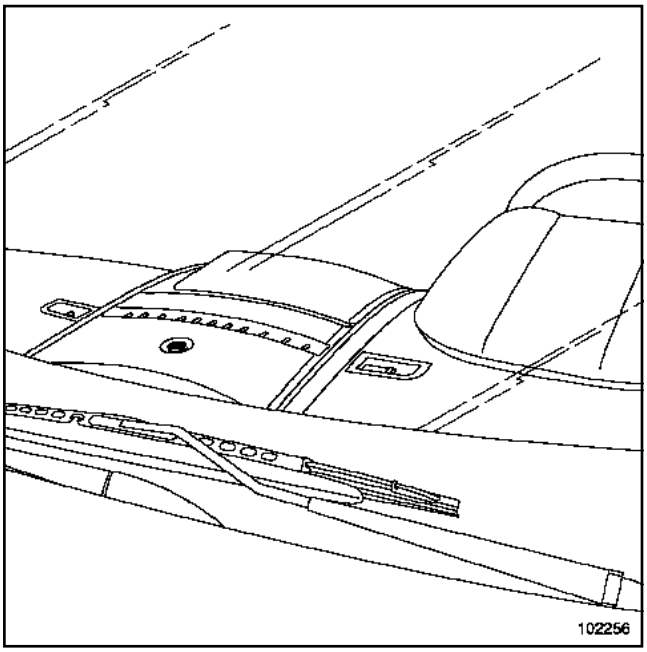
Disconnect the humidity sensor connector (**1**).

Remove:

- both mounting bolts from the « temperature sensor / humidity detector » assembly, located inside the casing ***(2)***,
- The « temperature sensor / humidity detector ».

REFITTING

To refit, proceed in the reverse order to removal.



102256

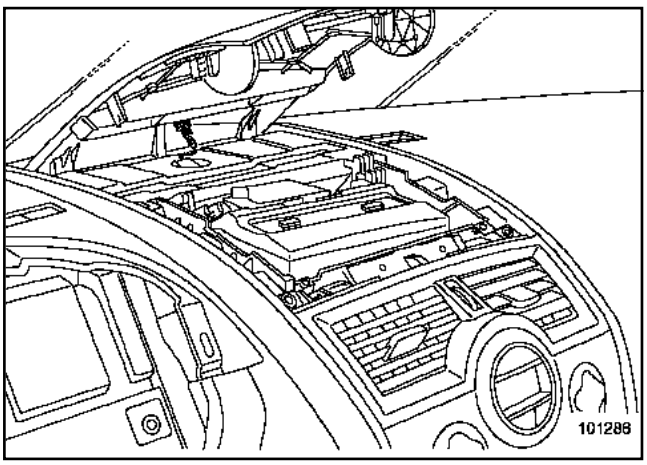
Note:

The sensor is located in the centre of the dashboard.

REMOVAL

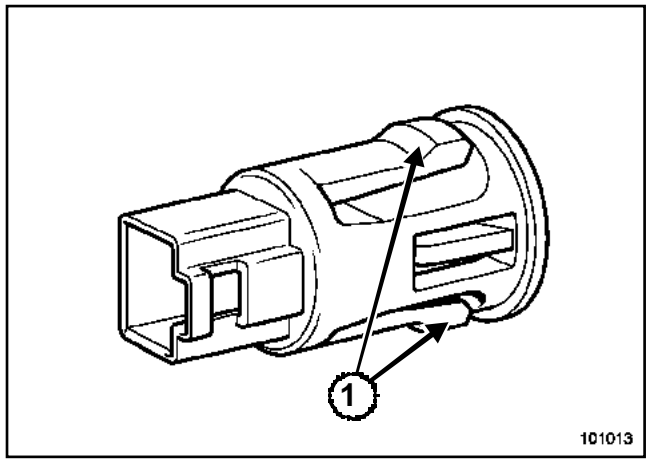
WARNING

- Do not unclip the insolation sensor directly from above.
- The insolation sensor is accessible after the top of the dashboard has been removed.



101286

Remove the upper section of the dashboard (Section **Interior accessories**).



101013

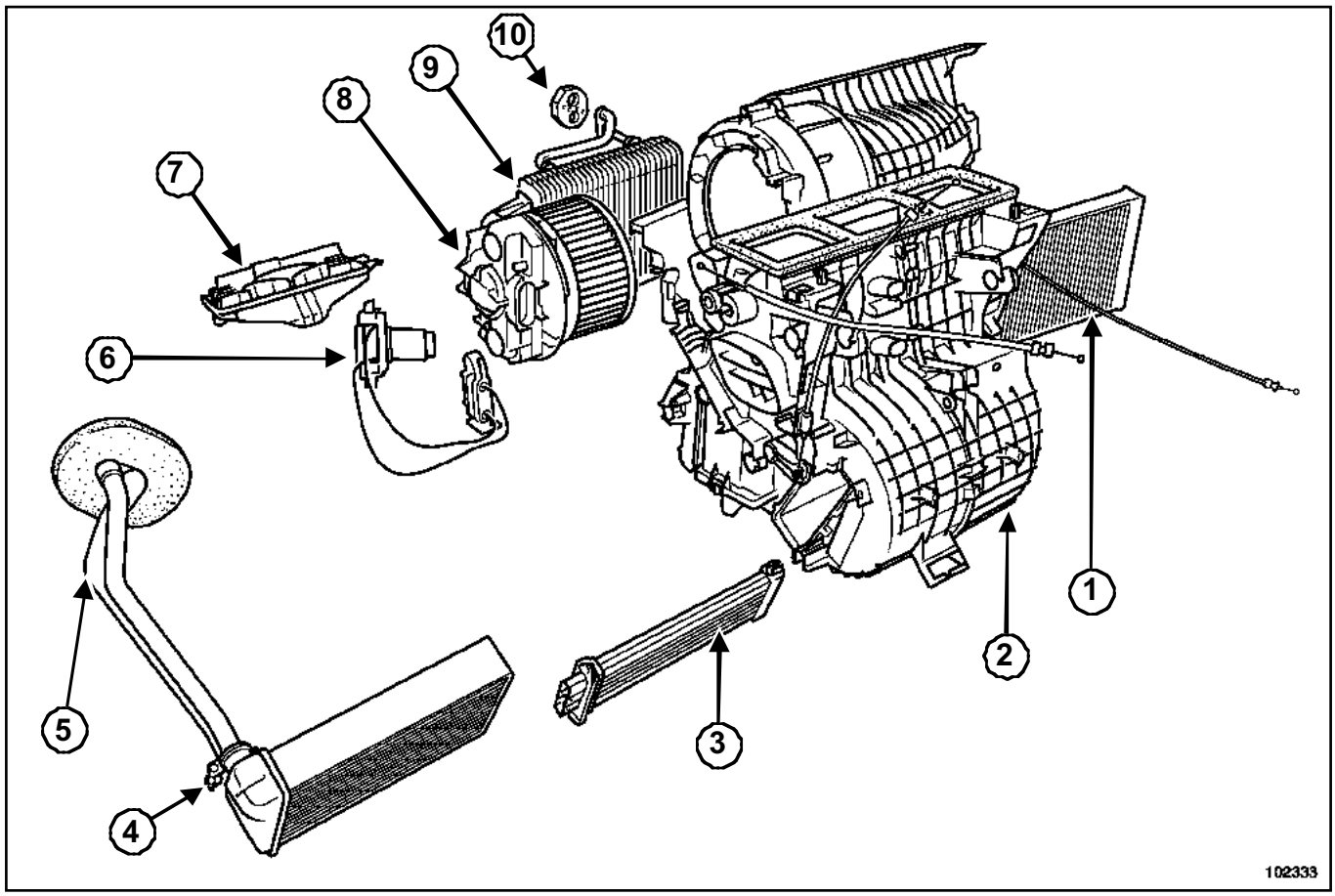
Remove:

- the insolation sensor connector,
- the insolation sensor (press the two lugs (**1**)).

REFITTING

To refit, proceed in the reverse order to removal.

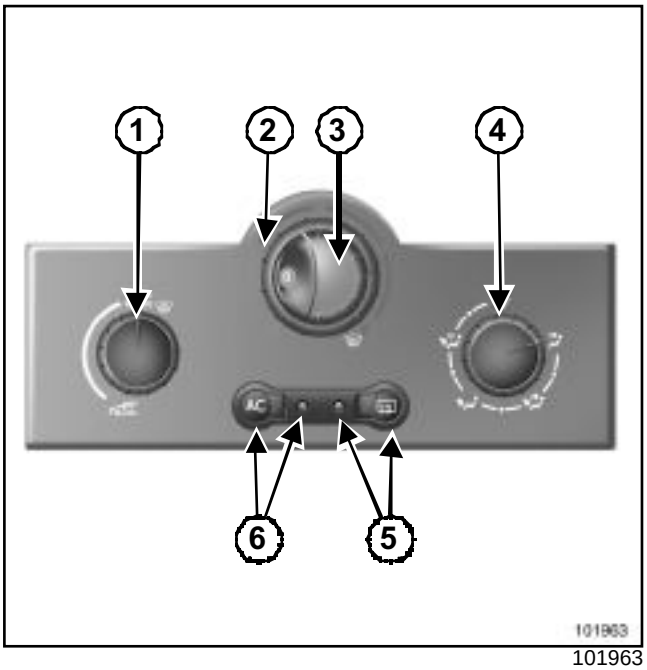
CLIMATE CONTROL UNIT



102333

(**1**)	Cabin filter
(**2**)	Distribution unit
(**3**)	Heating resistor unit
(**4**)	Heating radiator clips
(**5**)	Heating radiator pipes
(**6**)	Computer
(**7**)	Evaporator cover
(**8**)	Passenger compartment fan
(**9**)	Evaporator
(**10**)	Evaporator flange

I - DESCRIPTION



101963

(**1**) Air recirculation control

(**2**) Air temperature adjustment

(**3**) Blower speed adjustment

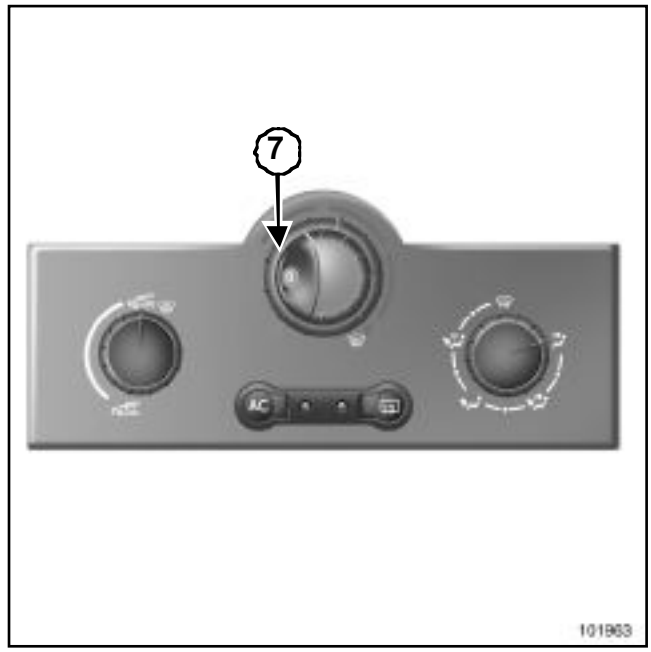
(**4**) Adjustment of air distribution in the passenger compartment

(**5**) Heated rear window and heated door mirror indicator light and control (if fitted to the vehicle)

(**6**) Air conditioning control and operating indicator light

II - OPERATING PRINCIPLE

Air temperature adjustment



101963

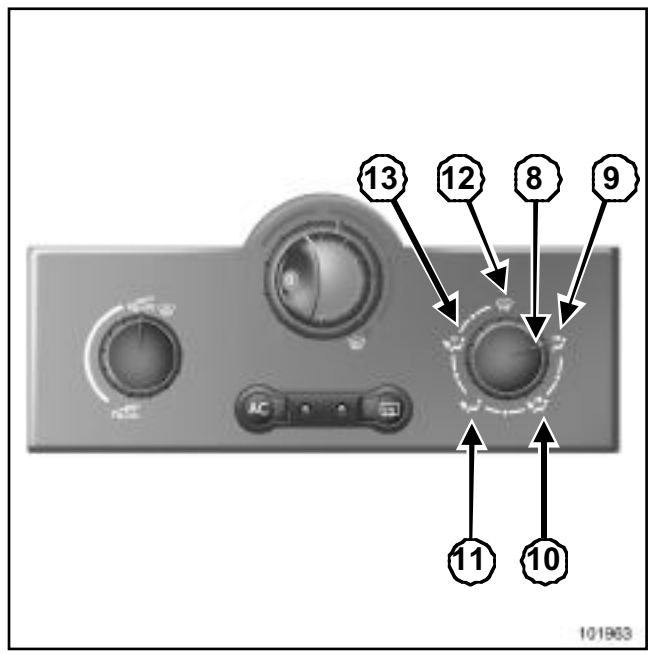
Turn the control (**7**) to the desired temperature.

The more the cursor is in the red, the higher the temperature.

Prolonged use of the air conditioning may make it feel chilly.

This can be fixed by adding warm air (turn control (**7**) to the right).

Air distribution in the passenger compartment



101963

Move control (**8**) to position the cursor opposite the settings marked:

- Setting (**9**)

  The air flow is directed to all the vents only.

- Setting (**10**)

  The air flow is directed to all the vents and to the feet.

  This setting is recommended for greater comfort during hot weather.

- Setting (**11**)

  The air flow is directed to the feet.

- Setting (**13**)

  The air flow is shared between the windscreen and side window demisting vents and the footwells.

  This setting is recommended for greater comfort during cold weather.

- Setting (**12**)

  All the air flow is directed to the windscreen and side-window demisting vents.

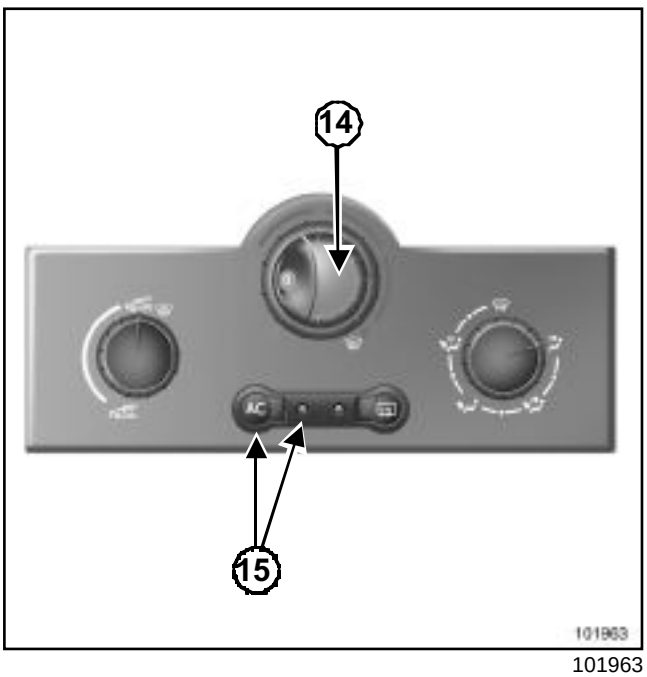
Note:

For quick demisting, use the following settings:

- outside air,
- maximum temperature,
- demisting.

Use of the air conditioning speeds up demisting.

Adjustment of blower speed



101963

- Normal use

  Turn the knob ***(14)*** to one of the four settings to turn on the blower and control its output.

  Turn the knob to setting 1 for minimum ventilation and setting 4 for maximum ventilation.

- Setting 0

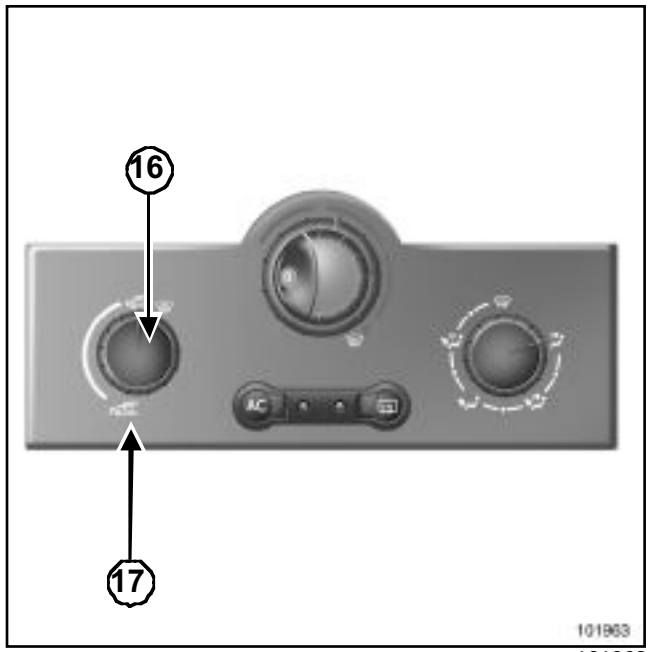
  In this position:

  - the air conditioning shuts off automatically even if the button ***(15)*** is activated (light goes out),
  - the blower speed of the air in the passenger compartment is zero.

  Nonetheless, there is a slight flow of air when the vehicle is moving.

  This setting should be avoided during normal use.

Selection of air recirculation (with passenger-compartment isolation)



101963

Turn the knob (**16**) towards the air recirculation symbol (**17**).

When this function is switched on, the air from the passenger compartment is recirculated and no external air is admitted.

Air recirculation enables you to:

- isolate the passenger compartment from the external atmosphere (e.g. when driving in polluted areas, etc.),

- reach the desired passenger compartment temperature quickly.

WARNING

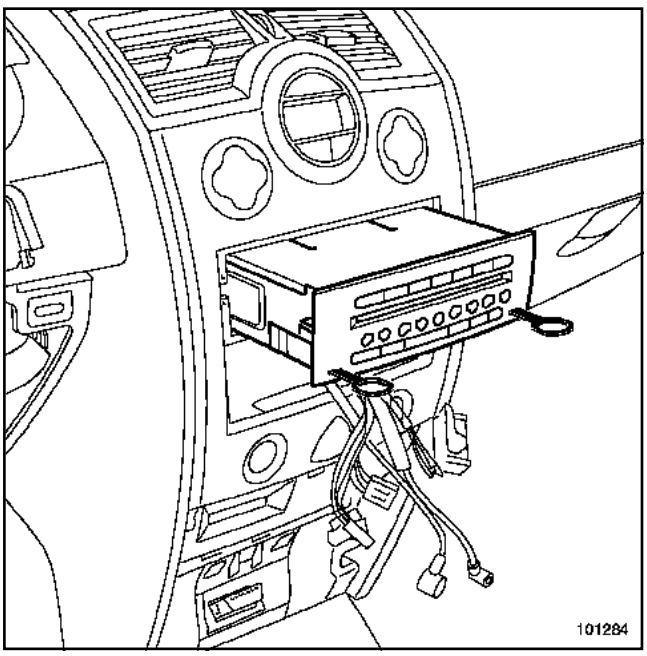
- Prolonged use of this setting can result in mist forming on the side windows and windscreen and unpleasantness due to stale air in the passenger compartment.
- You should therefore switch to normal operation (external air) as soon as possible by turning knob (**16**) again.

Essential special tooling	
Ms. 1544	Tool for removing Carminat Becker radio
Ms. 1373	Philips radio removal tool
Ms. 1639	Tool for removing radio - CD player
Car. 1597	Lever for removing rear grab handle clips

Tightening torques ▽	
climate control panel mounting bolt	**0.2 daNm**
battery cover bolts	**0.4 daNm**

REMOVAL

Disconnect the battery starting with the negative terminal.

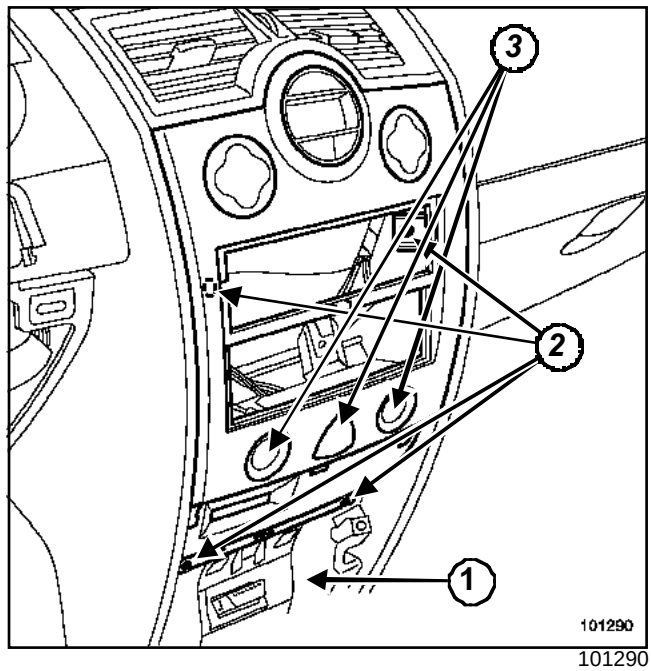


101284

Remove:

- the centre glovebox (if the vehicle has one),
- Carminat using tool (Ms. 1544) or (Ms. 1373) (if fitted),
- the CD changer using tool (Ms. 1639) (if fitted),
- the radio using tool (Ms. 1373) (if the vehicle has one).

Disconnect the connectors.



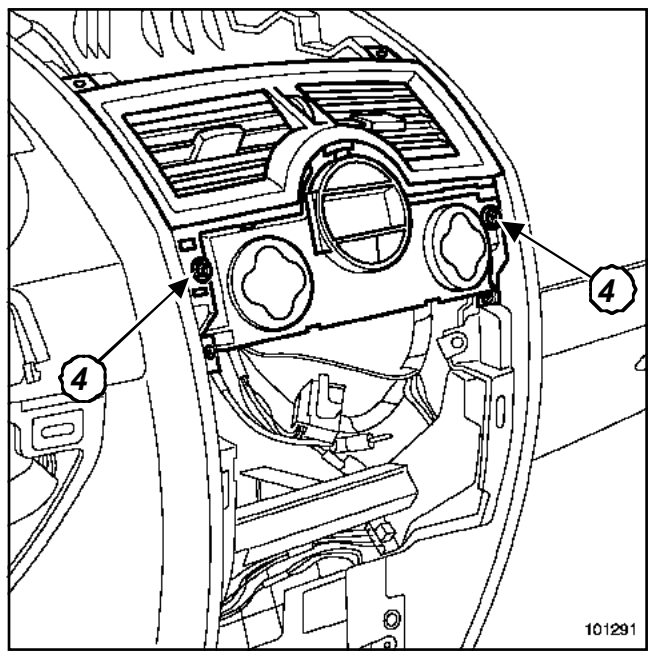
101290

Remove:

- the lower middle front panel at (**1**),
- the four bolts (**2**) for the middle front panel (**3**).

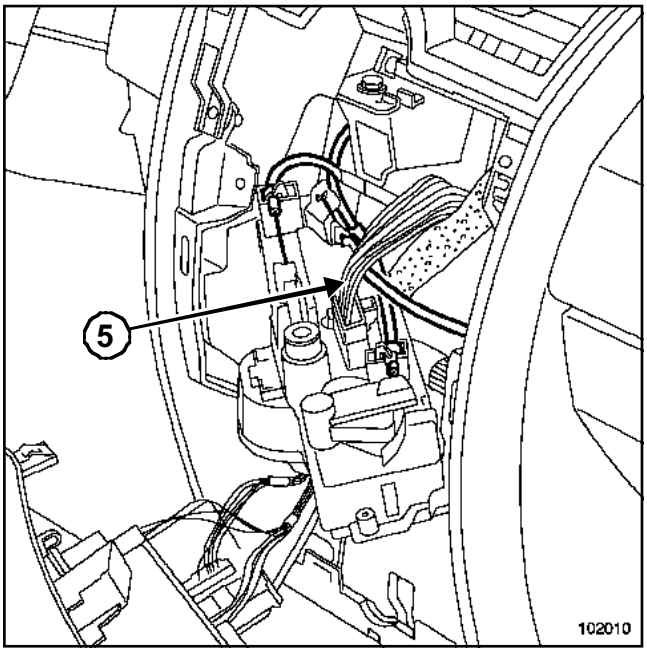
Unclip the card reader mounting with tool (Car. 1597).

Disconnect the middle front panel connectors (**3**).



101291

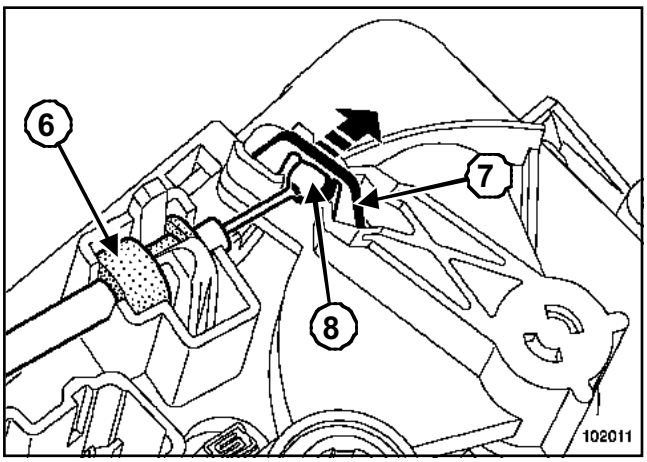
Remove the two heater control panel mounting bolts (**4**).



102010

Remove the heating control panel by tilting it inwards towards the dashboard.

(**5**)Disconnect the connector from the control panel.



102011

Remove the climate control panel cables.

Disconnect at (**6**).

Remove lug (**7**).

Remove the ball joint (**8**).

REFITTING

To refit, proceed in the reverse order of removal.

WARNING

Do not damage the control cables during these operations.

Note:

- The recirculation control cable is black.
- The distribution control cable is white.
- The mixing control cable is grey.
- The cables require no adjustment.

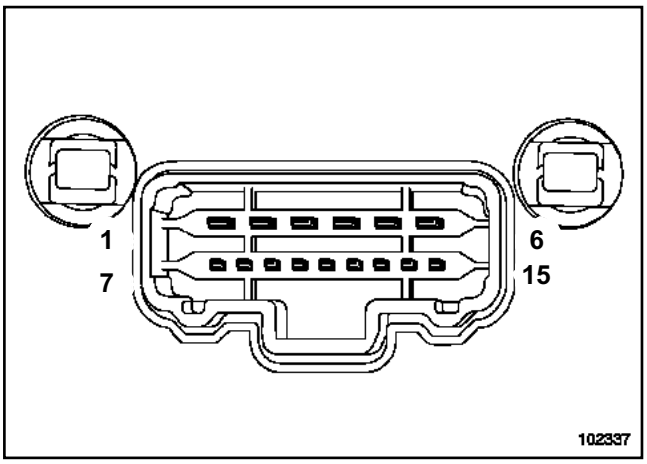
WARNING

Connect the battery; carry out the necessary programming (Section **Battery**).

Tighten to torque:

- the **climate control panel mounting bolt (0.2 daNm)**,
- the **battery cover bolts (0.4 daNm)**.

CONTROL PANEL



102337

Control panel tracks	Allocation	Sensor or actuator track
1	earth	-
2	speed 1 control	resistor unit track 1 connector A
3	speed 2 control	resistor unit track 2 connector A
4	speed 3 control	resistor unit track 3 connector A
5	speed 4 control	resistor unit track 4 connector A
6	Not used	-
7	fan assembly speed 0 signal	UCH
8	+ after ignition	-
9	rear screen de-icer ON request	UCH
10	rear screen de-icing control indicator light	UCH
11	earth	-
12	air conditioning indicator light return	UCH
13	air conditioning request	UCH
14	+ before ignition	-
15	+ side lights	lighting dimmer