

# RENAULT

## 6 Air conditioning

61A HEATING

62A AIR CONDITIONING

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X45

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FEBRUARY 2008

Edition Anglaise

"The repair methods given by the manufacturer in this document are based on the technical specifications current when it was prepared.

The methods may be modified as a result of changes introduced by the manufacturer in the production of the various component units and accessories from which his vehicles are constructed."

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# KOLEOS - Section 6

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## 62A

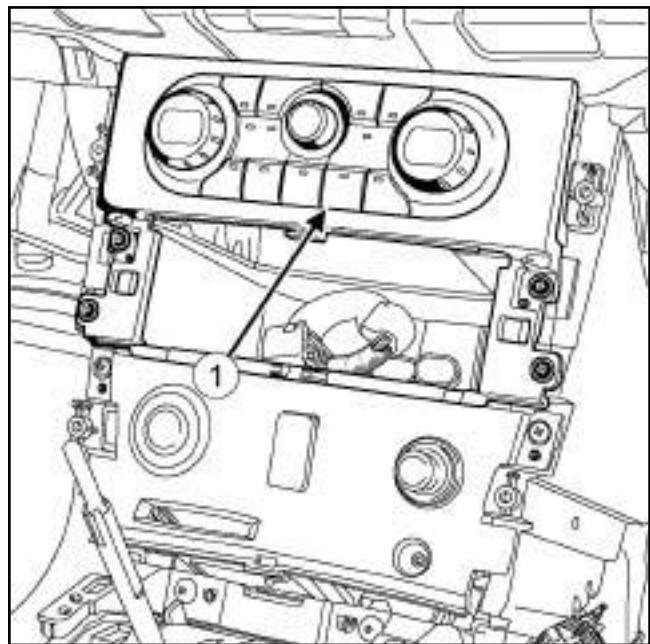
### AIR CONDITIONING

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Expansion valve: Removal -	
Refitting	62A-24
Evaporator: Removal -	
Refitting	62A-27
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LEFT-HAND DRIVE

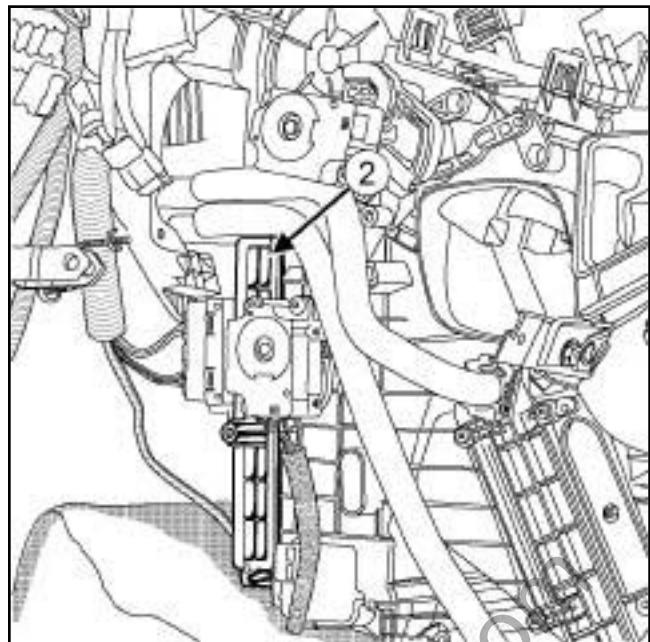
No.	Description
(1)	Control panel
(2)	Cabin filter
(3)	Rear air distribution duct
(4)	Recirculation motor
(5)	Air mixing motor (front passenger side)
(6)	Air mixing motor (driver's side)
(7)	Air distribution motor
(8)	Air distribution unit
(9)	Heater matrix
(10)	Motor-driven fan assembly
(11)	Heater resistance
(12)	Passenger compartment fan assembly control unit (front and rear)
(13)	Front side air distribution duct
(14)	Glove box air duct
(15)	A-pillar air distribution duct
(16)	Front central air distribution duct
(17)	Rear fan assembly

1 - Control Panel



132552

2 - Cabin filter

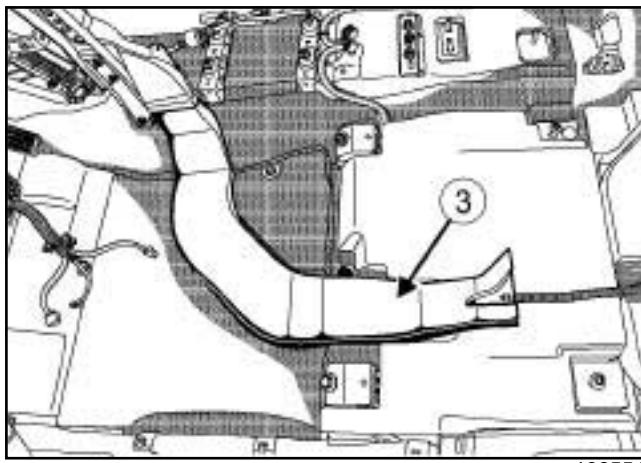


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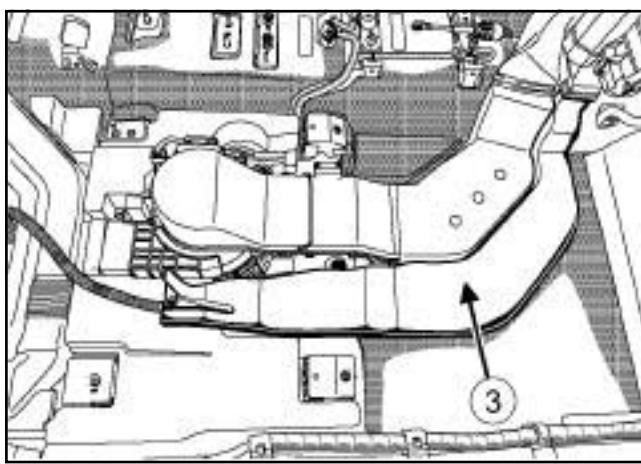
## Heating: List and location of components

LEFT-HAND DRIVE

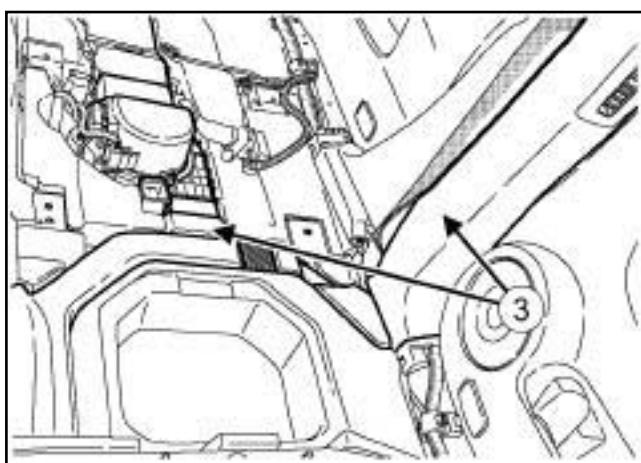
## 3 - Rear air distribution duct



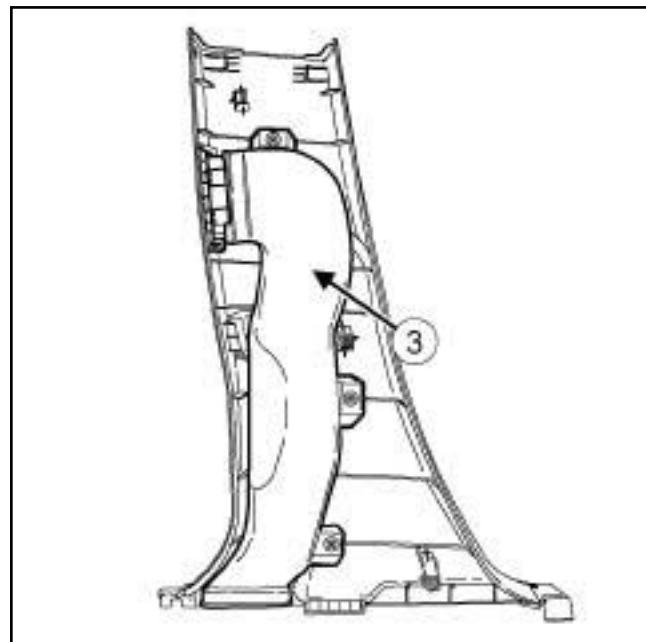
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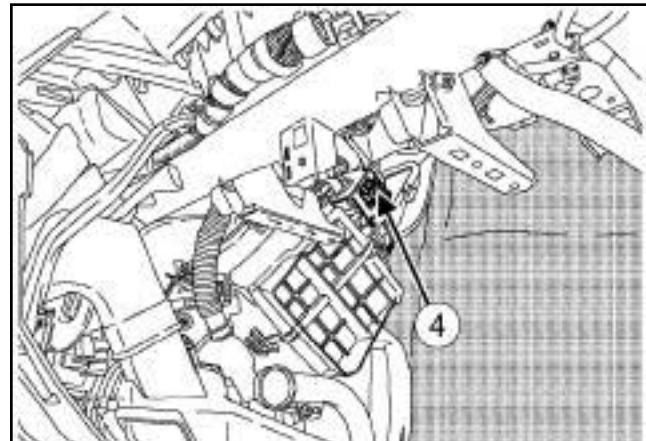


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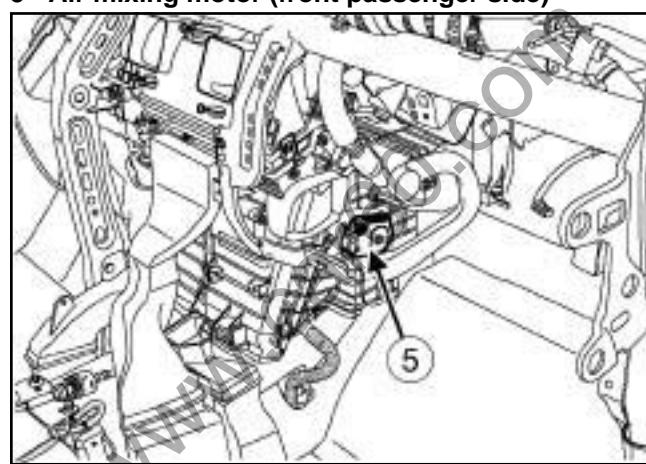
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## 4 - Air recirculation flap motor



132558

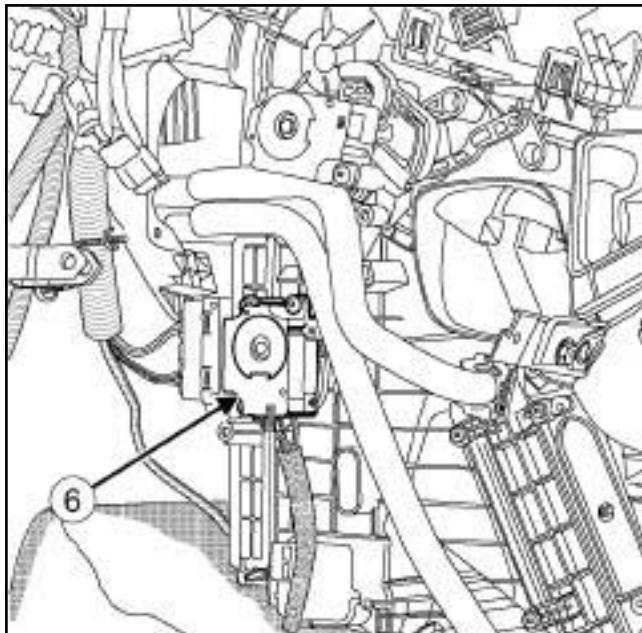
## 5 - Air mixing motor (front passenger side)



132559

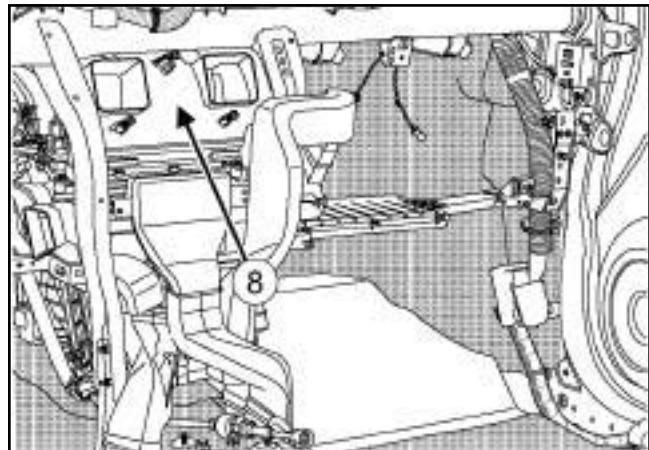
### LEFT-HAND DRIVE

6 - Air mixing motor (driver's side)



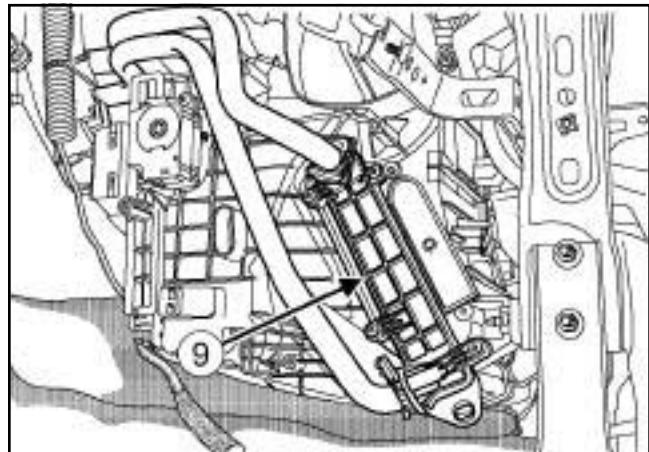
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8 - Air distribution unit



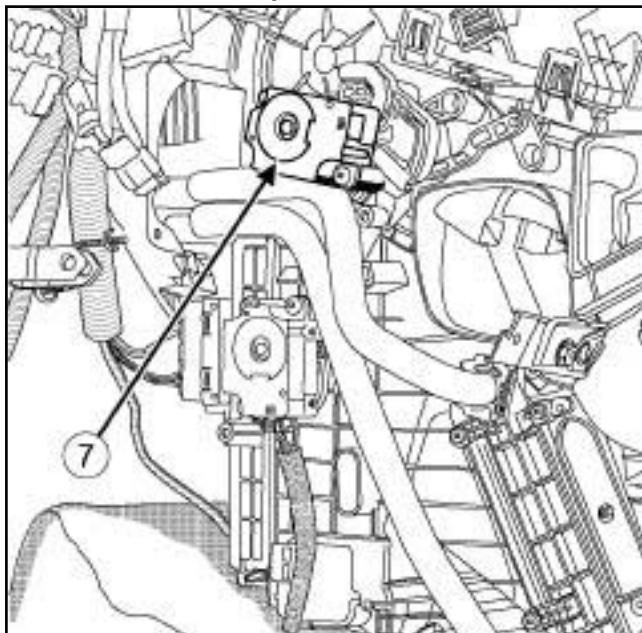
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9 - Heater matrix



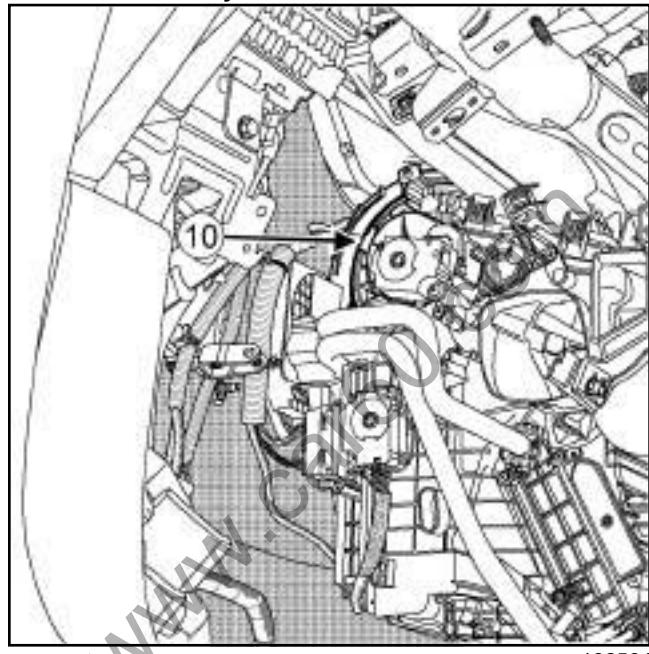
132563

7 - Air distribution flap motor



132561

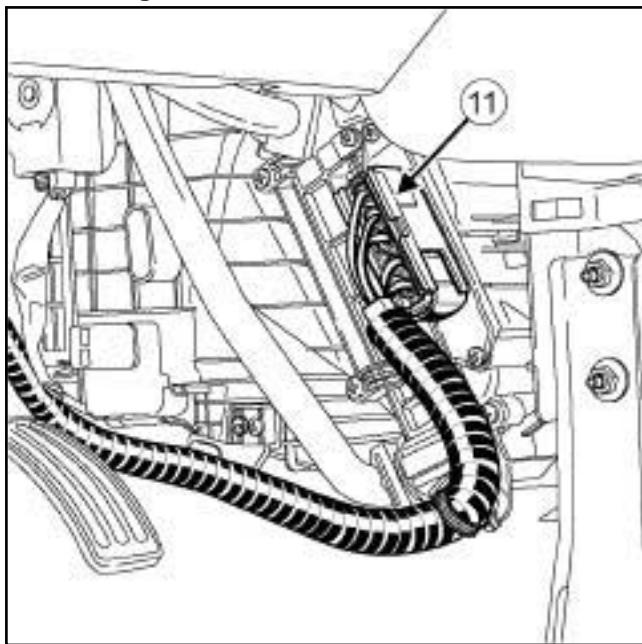
10 - Fan assembly



132564

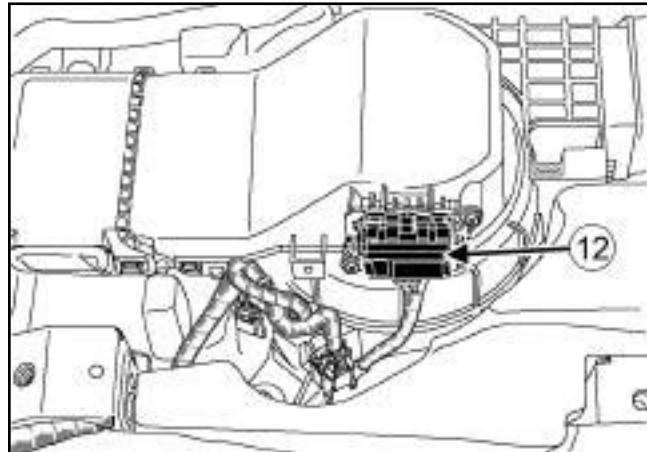
### LEFT-HAND DRIVE

11 - Heating resistor



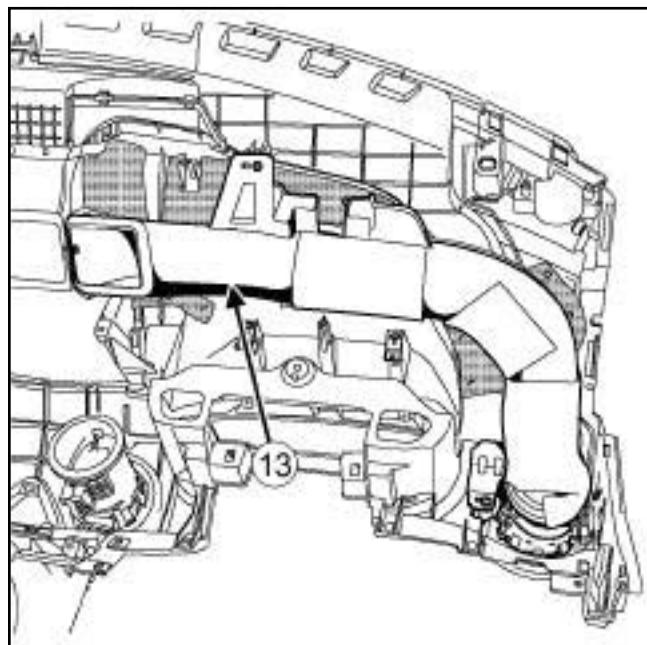
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12 - Passenger compartment fan assembly control unit (rear side)



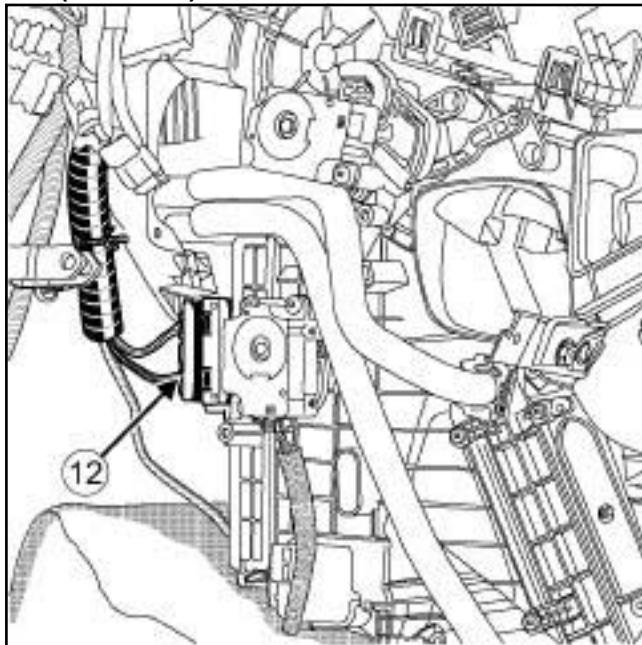
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13 - Front side air distribution duct



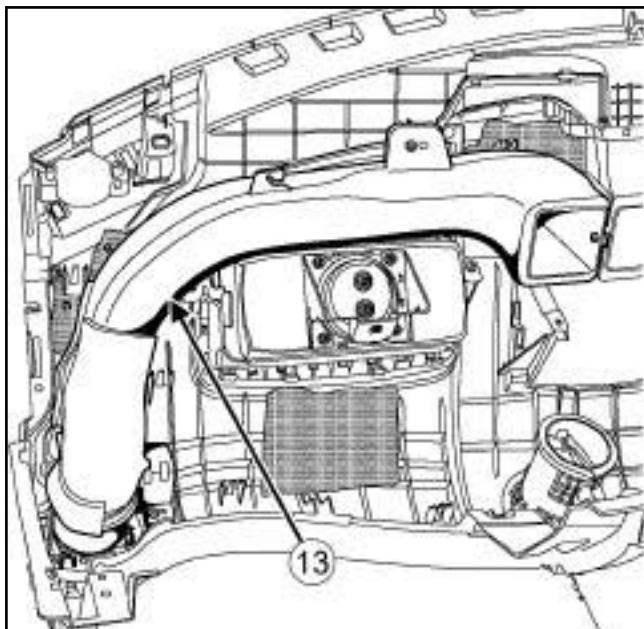
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12 - Passenger compartment fan assembly control unit (front side)

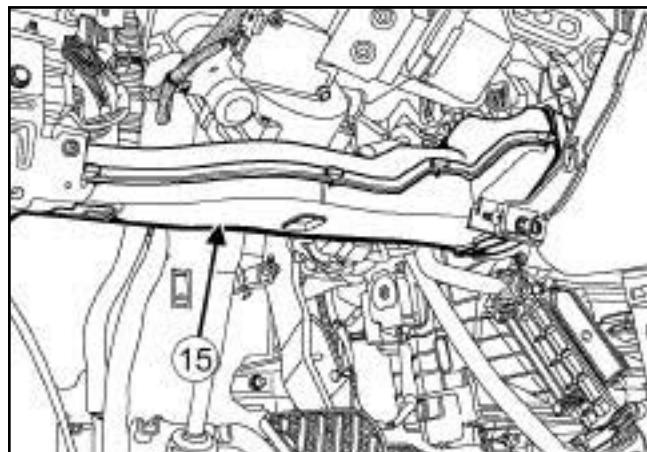


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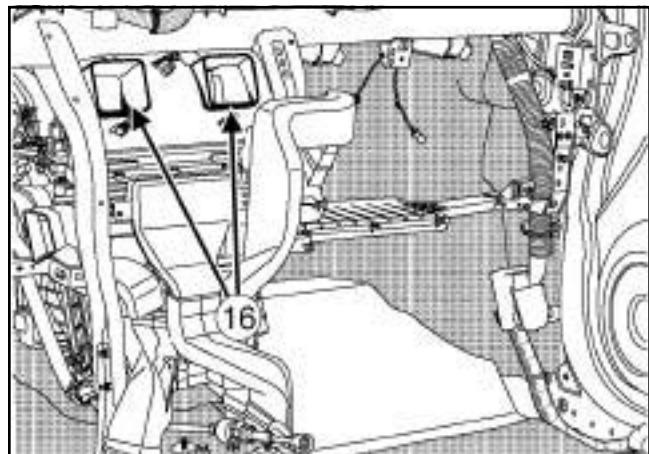
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**LEFT-HAND DRIVE**

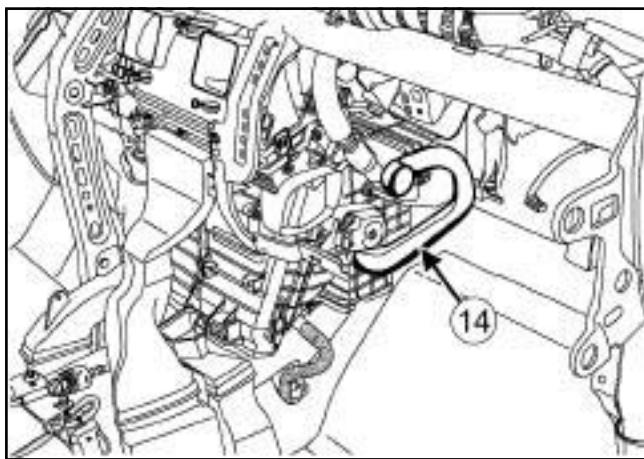
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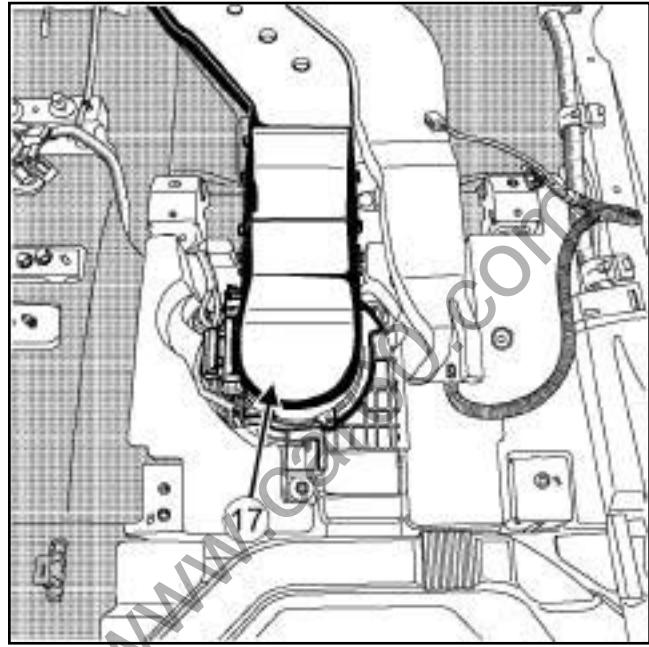
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**16 - Front central air distribution duct**

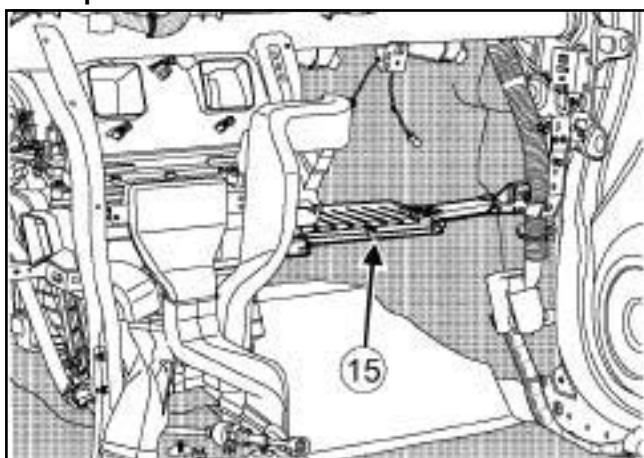
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**14 - Glove box air duct**

132570

**17 - Rear fan assembly**

132574

**15 - A-pillar air distribution duct**

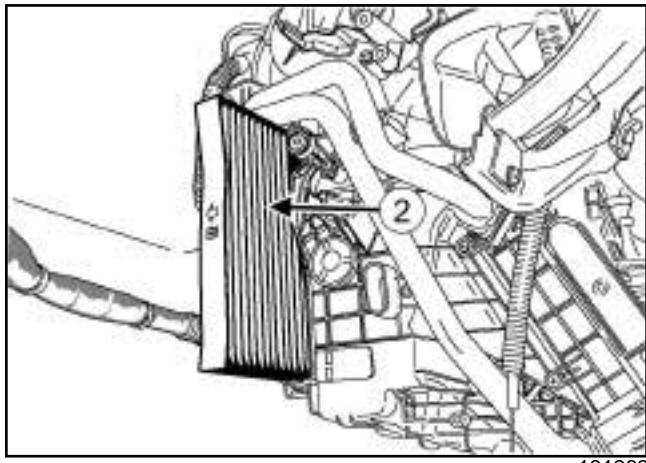
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## Heating: List and location of components

RIGHT-HAND DRIVE

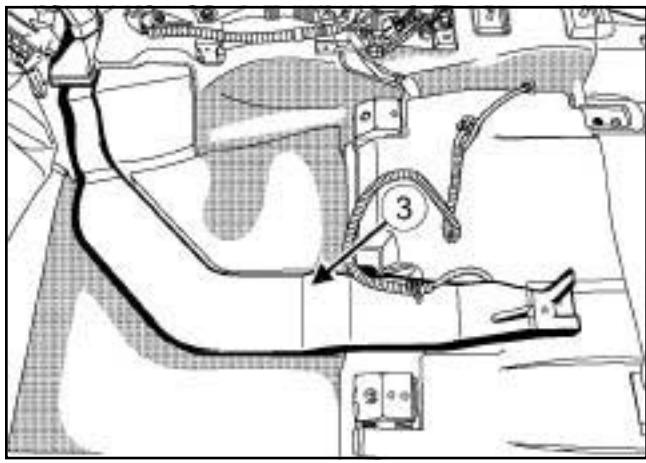
No.	Description
(1)	Control panel
(2)	Passenger compartment filter
(3)	Rear air distribution duct
(4)	Recirculation motor
(5)	Air mixer motor (front passenger side)
(6)	Air mixer motor (driver's side)
(7)	Air distribution motor
(8)	Air distribution unit
(9)	Heater matrix
(10)	Motor-driven fan assembly
(11)	Heater resistance
(12)	Passenger compartment fan assembly control unit (front and rear)
(13)	Front side air distribution duct
(14)	Glove box air duct
(15)	A-pillar air distribution duct
(16)	Front central air distribution duct
(17)	Rear fan assembly

## 2 - Passenger compartment filter



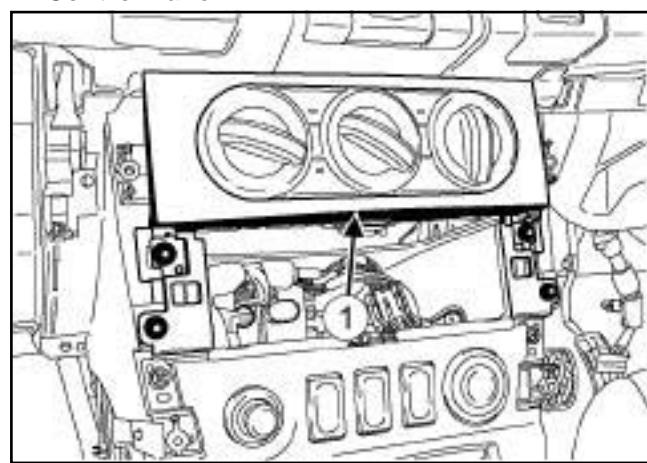
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## 3 - Rear air distribution duct

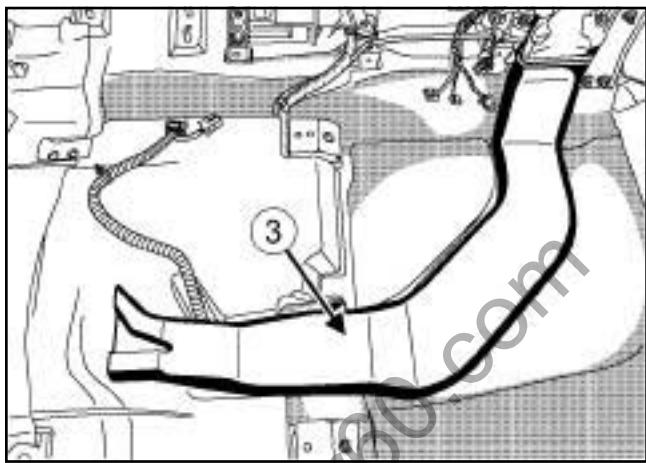


132577

## 1 - Control Panel

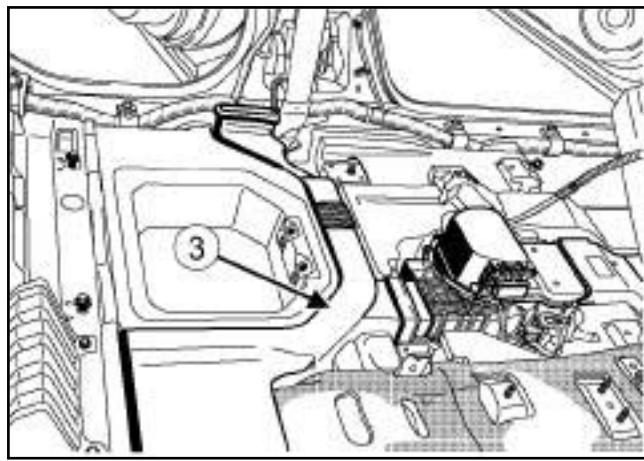


131715



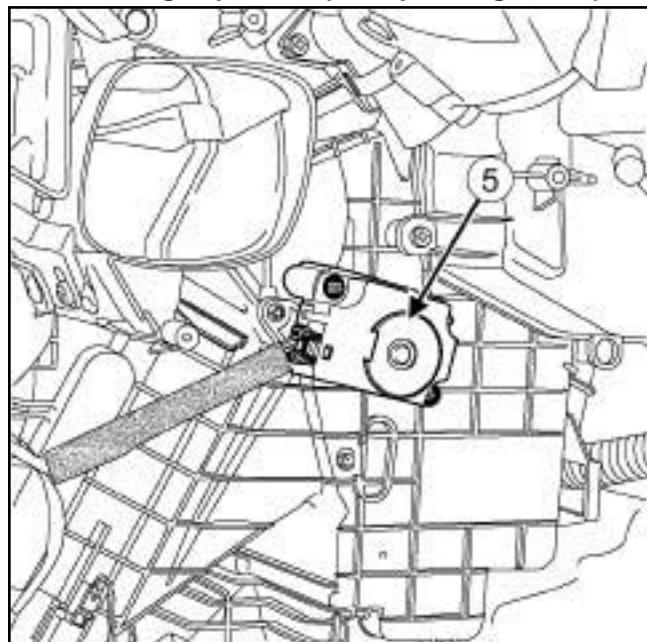
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RIGHT-HAND DRIVE



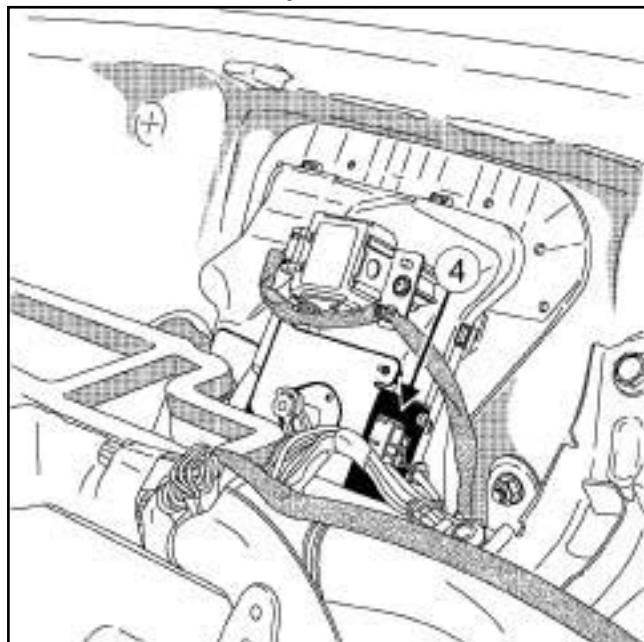
132579

5 - Air mixing flap motor (front passenger side)



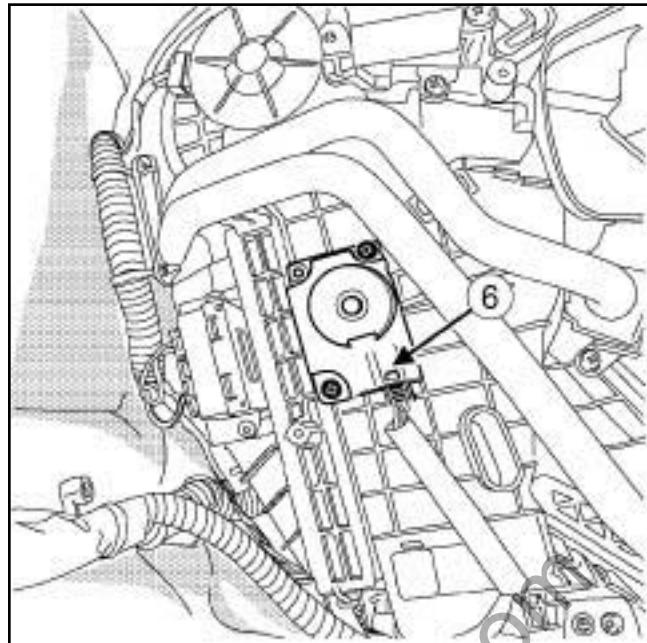
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4 - Air recirculation flap motor

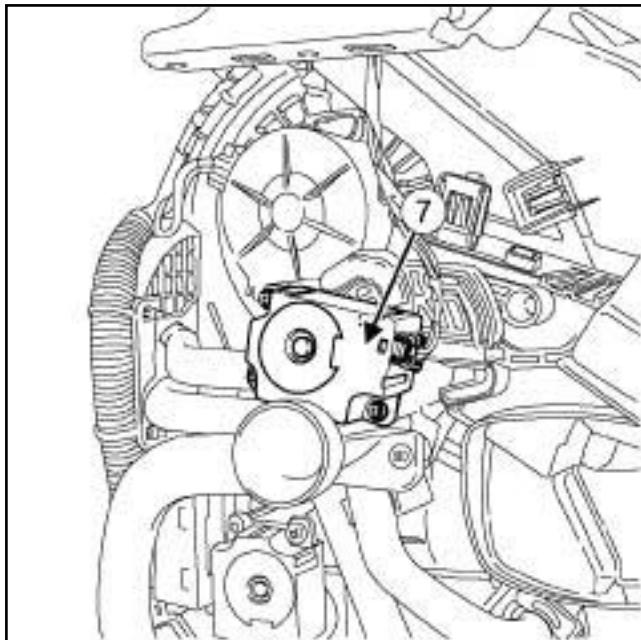


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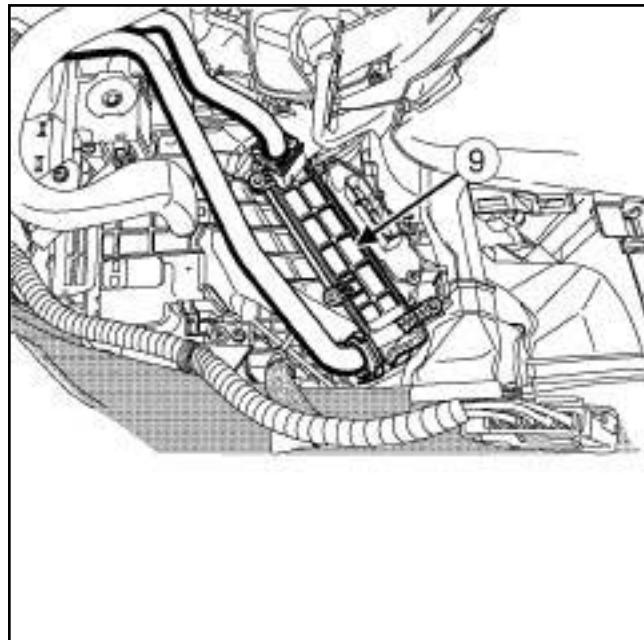
6 - Air mixing flap motor (driver's side)



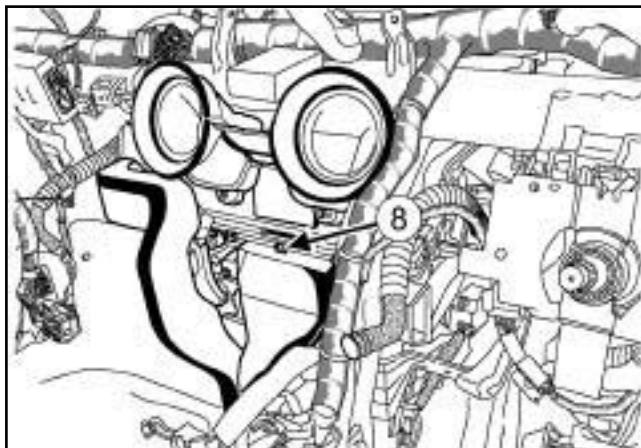
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**Heating: List and location of components****RIGHT-HAND DRIVE****7 - Air distribution flap motor**

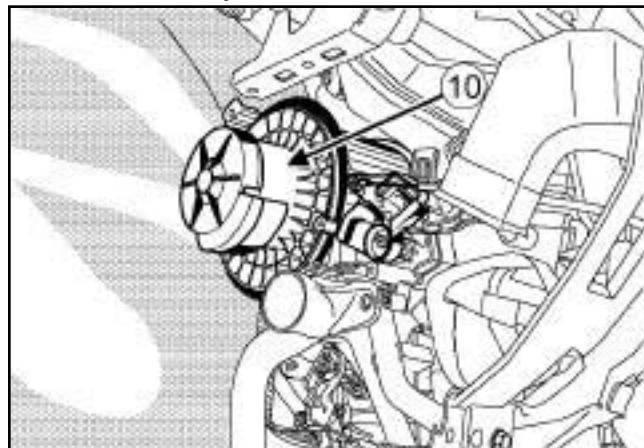
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**9 - Heater matrix**

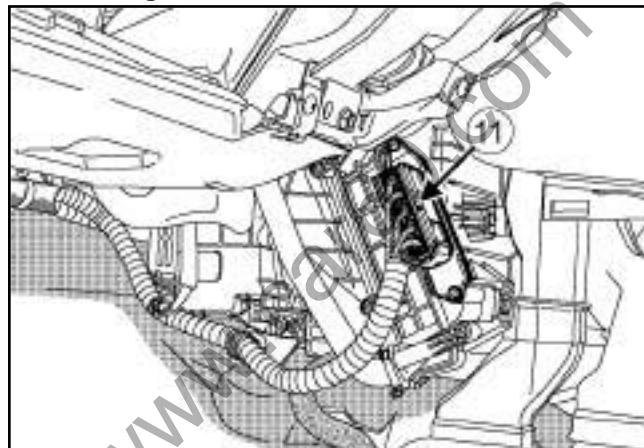
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**8 - Air distribution unit**

132584

**10 - Fan assembly**

132586

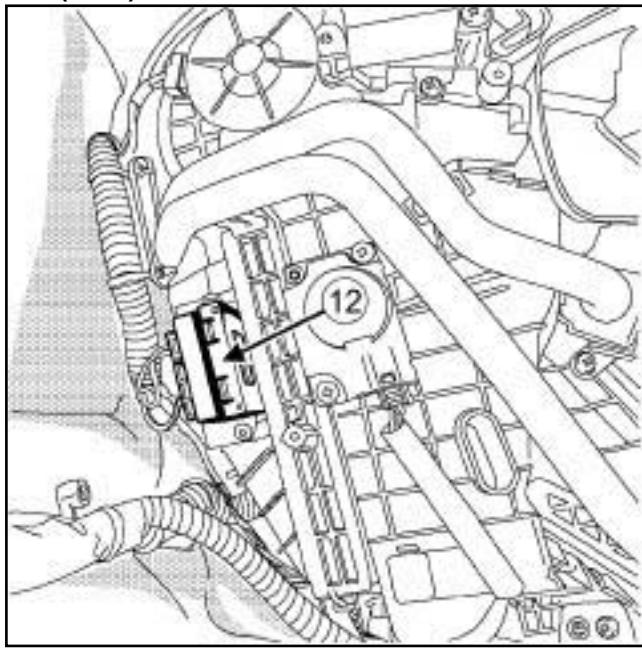
**11 - Heating resistor**

132587

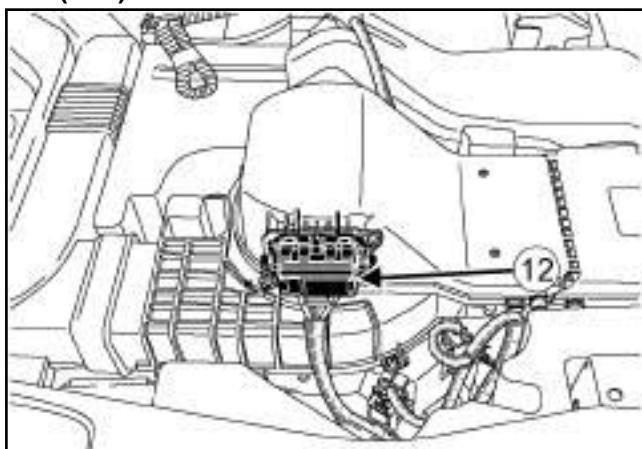
## Heating: List and location of components

RIGHT-HAND DRIVE

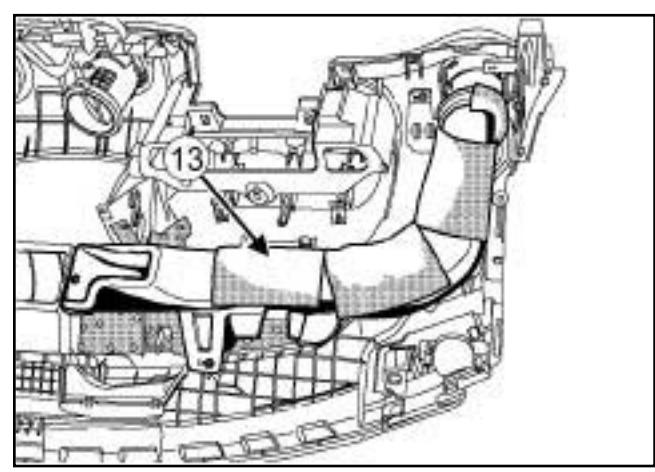
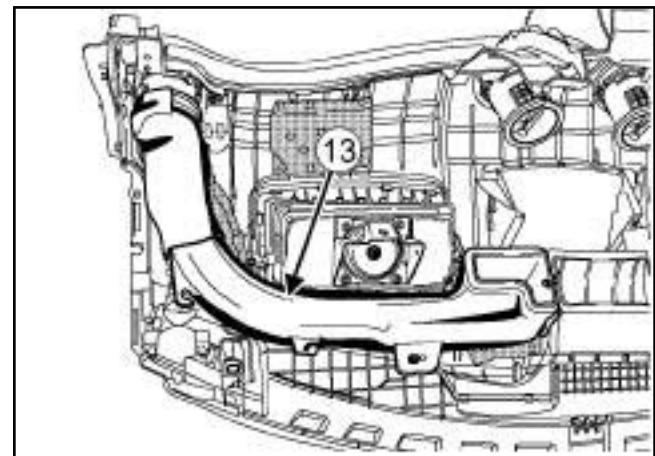
12 - Passenger compartment fan assembly control unit (front)



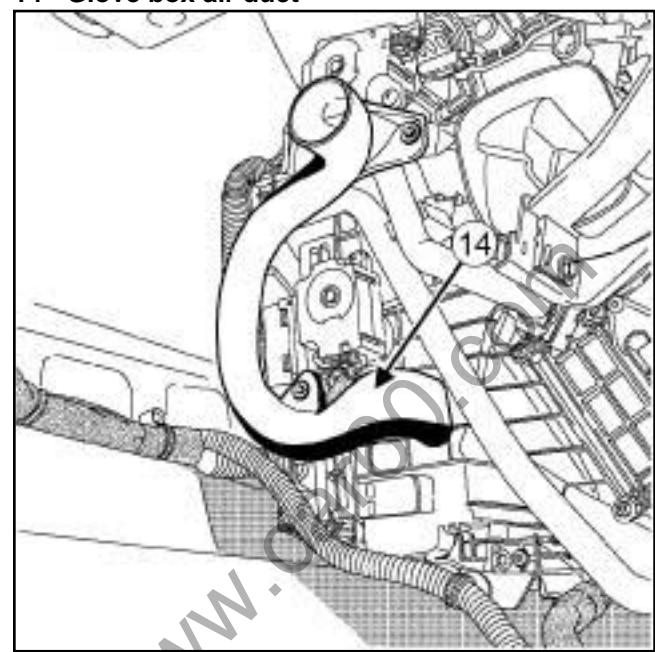
12 - Passenger compartment fan assembly control unit (rear)

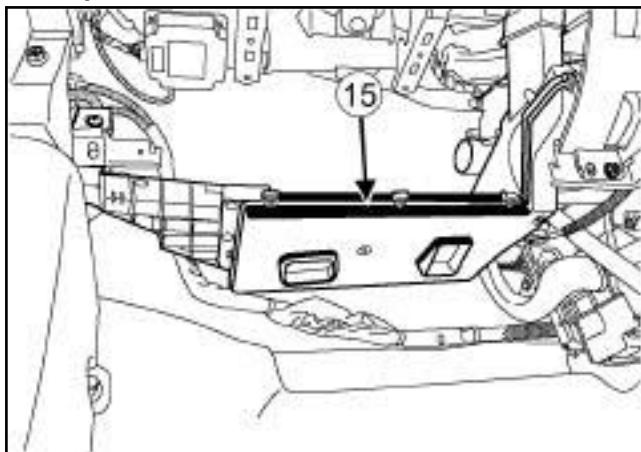


13 - Front air distribution duct

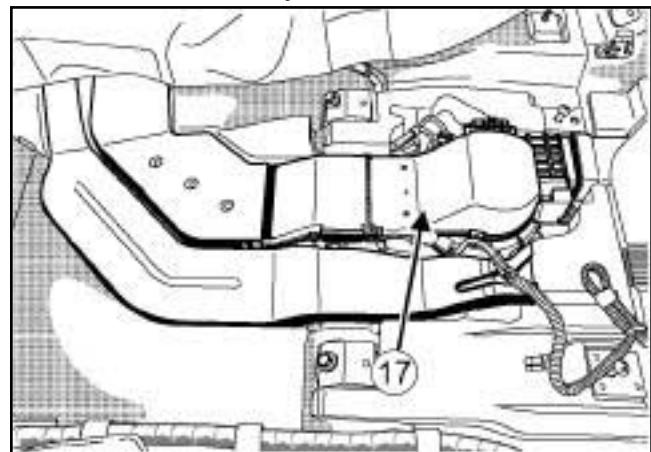


14 - Glove box air duct

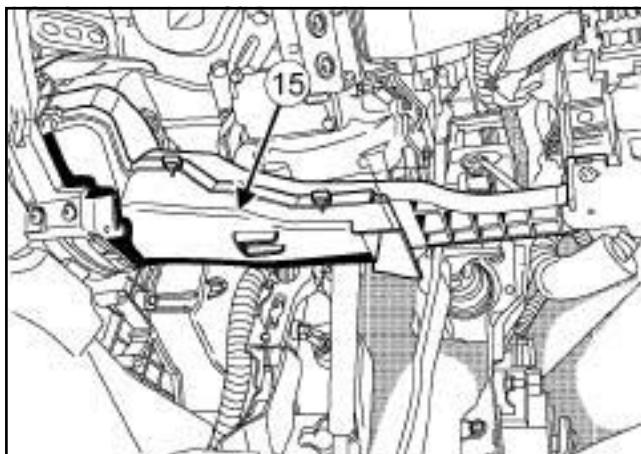


**Heating: List and location of components****RIGHT-HAND DRIVE****15 - A-pillar air distribution duct**

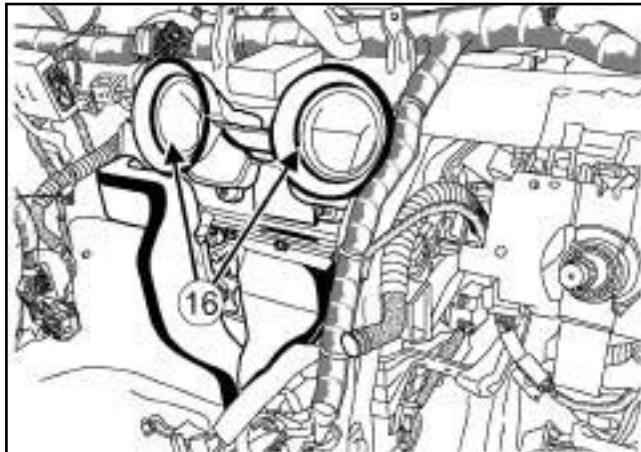
132593

**17 - Rear fan assembly**

132595



132594

**16 - Front central air distribution duct**

132584

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LEFT-HAND DRIVE

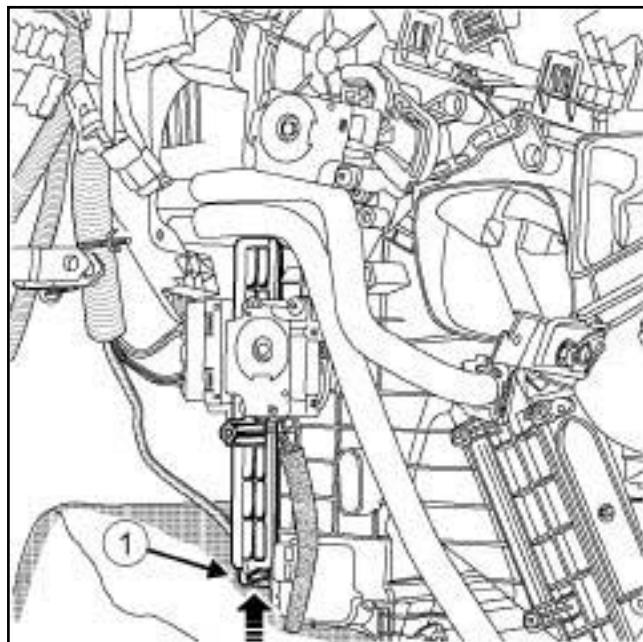
## REMOVAL

## I - REMOVAL PREPARATION OPERATION

 Remove:

- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting** (57A, Interior equipment)),
- the driver's side A-pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**)
- ,
- the lower cover on the left-hand side of the centre panel (see **Dashboard: Removal - Refitting** (57A, Interior equipment)).

## II - OPERATION FOR REMOVAL OF PART CONCERNED



131258

 Unclip the retaining clip (1) .

## Note:

Foreign bodies (leaves, insects etc.) are likely to accumulate in the passenger compartment filter.

Remove the passenger compartment filter with care to prevent foreign bodies getting into the evaporator.

 Remove:

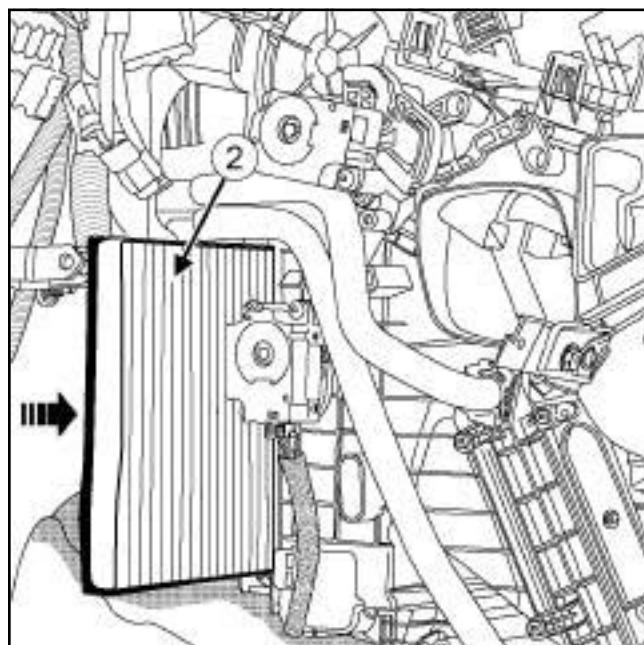
- the cabin filter cover,
- the passenger compartment filter.

## REFITTING

## I - REFITTING PREPARATION OPERATION

 Check for foreign bodies in the passenger compartment filter housing, and clean thoroughly if necessary.

## II - REFITTING OPERATION FOR PART CONCERNED



131259

 Refit:

- the cabin filter (2) ,
- the passenger compartment filter cover.

 Clip on the retaining clip.

## III - FINAL OPERATION.

 Refit:

- the lower cover on the left-hand side of the centre panel (see **Dashboard: Removal - Refitting** (57A, Interior equipment)),
- the driver's side A-pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**)
- ,
- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting** (57A, Interior equipment)).

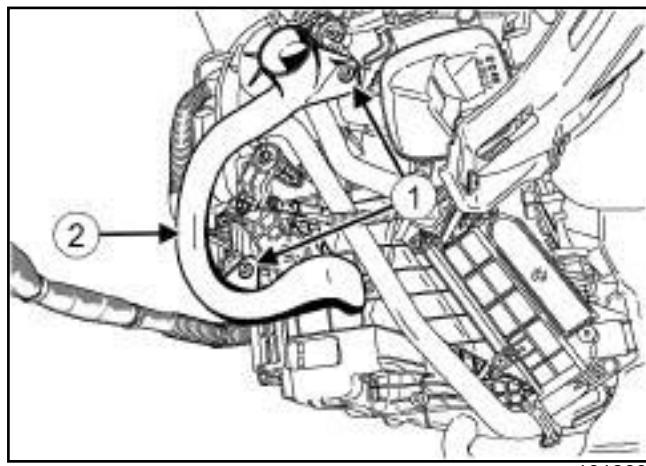
RIGHT-HAND DRIVE

## REMOVAL

## I - REMOVAL PREPARATION OPERATION

Remove:

- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment),
- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the A-pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**).

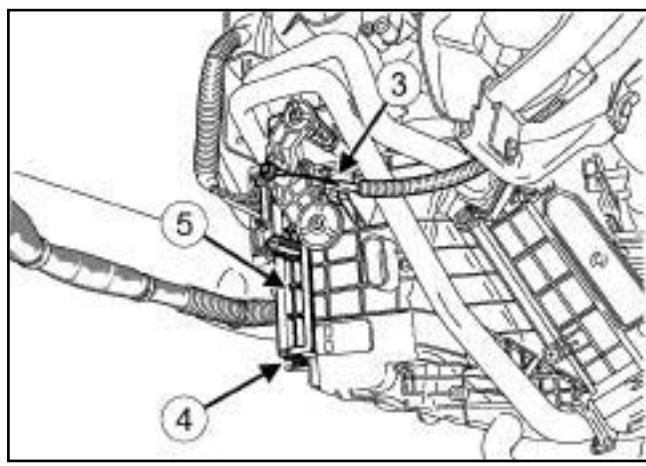


131260

Remove:

- the bolts (1),
- the glove box air duct (2).

## II - OPERATION FOR REMOVAL OF PART CONCERNED



131261

Remove the air mixing control cable (3).

Unclip the retaining clip (4).

## Note:

Foreign bodies (leaves, insects etc.) are likely to accumulate in the passenger compartment filter.

Remove the passenger compartment filter with care to prevent foreign bodies getting into the evaporator.

Remove:

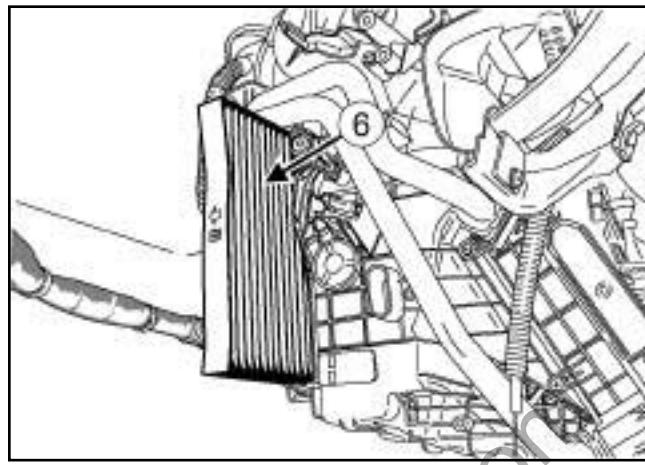
- the passenger compartment filter cover (5),
- the passenger compartment filter.

## REFITTING

## I - REFITTING PREPARATION OPERATION

Check for foreign bodies in the passenger compartment filter housing, and clean thoroughly if necessary.

## II - REFITTING OPERATION FOR PART CONCERNED



131262

Refit:

- the cabin filter (6),
- the passenger compartment filter cover.

Clip on the retaining clip (4).

Refit:

- the air mixing control cable,
- the glove box air duct,
- the air duct screws.

RIGHT-HAND DRIVE

### III - FINAL OPERATION.

Refit:

- the driver's side A pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**)
- ,
- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment).

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## REMOVAL

## I - REMOVAL PREPARATION OPERATION

## 1 - Rear left-hand air distribution duct

Remove:

- the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
- the driver's seat (see **Complete front seat: Removal - Refitting**) (75A, Front seat frames and seat runners),
- the floor carpet on the driver's side (see **Floor carpet: Removal - Refitting**) (71A, Bodywork interior trim).

## 2 - Rear right-hand air distribution duct

Remove:

- the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
- the front passenger seat (see **Complete front seat: Removal - Refitting**) (75A, Front seat frames and seat runners),
- the floor carpet on the passenger side (see **Floor carpet: Removal - Refitting**) (71A, Bodywork interior trim).

## 3 - Rear air distribution duct

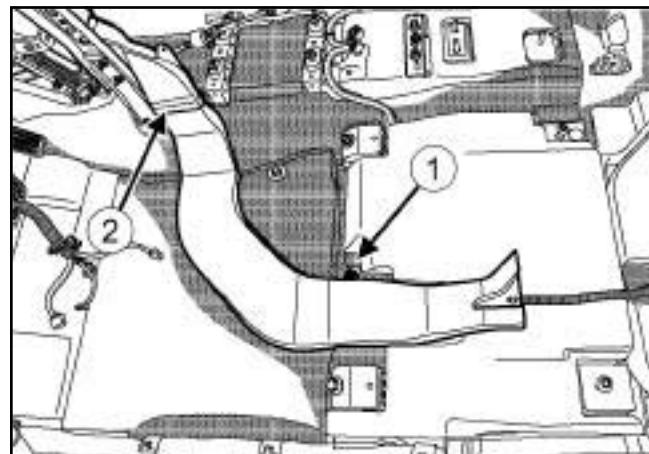
Remove:

- the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the cab floor lining (see **Cab floor lining: Removal - Refitting**) (71A, Body internal trim),
- the front door sill lining (see **Front door sill lining: Removal - Refitting**) (71A, Body internal trim),
- the rear inner sill trim (see **Rear door sill lining: Removal - Refitting**) (71A, Body internal trim),
- the B-pillar trim (see **B-pillar trim: Removal - Refitting**) (71A, Body internal trim),
- the front seats (see **Complete front seat: Removal - Refitting**) (75A, Front seat frames and seat runners),
- the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
- the rear seat (see **Complete rear seat: Removal - Refitting**) (76A, Rear seat frames and seat runners),

- the floor carpet (see **Floor carpet: Removal - Refitting**) (71A, Body internal trim).

## II - OPERATION FOR REMOVAL OF PART CONCERNED

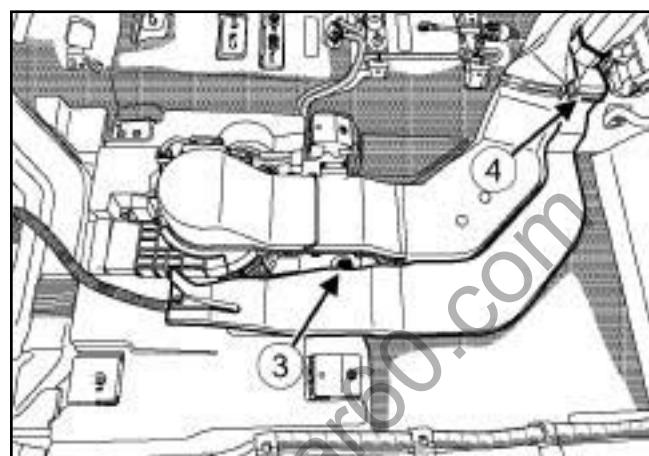
## 1 - Rear left-hand air distribution duct



131263

- Unclip the retaining clip (1) for the rear left-hand air distribution duct.
- Disconnect the rear left-hand air distribution duct at (2).
- Remove the rear left-hand air distribution duct.

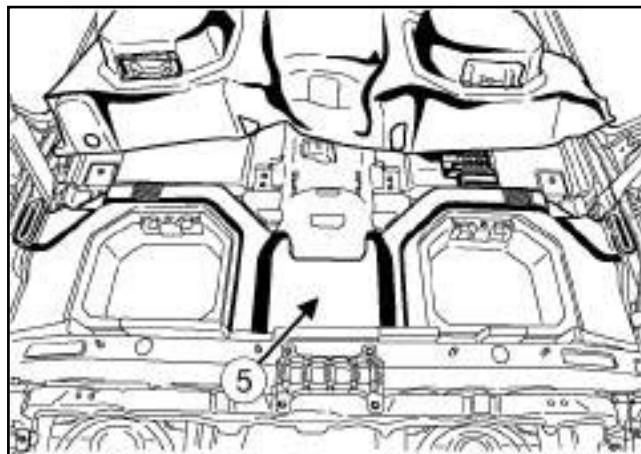
## 2 - Rear right-hand air distribution duct



131264

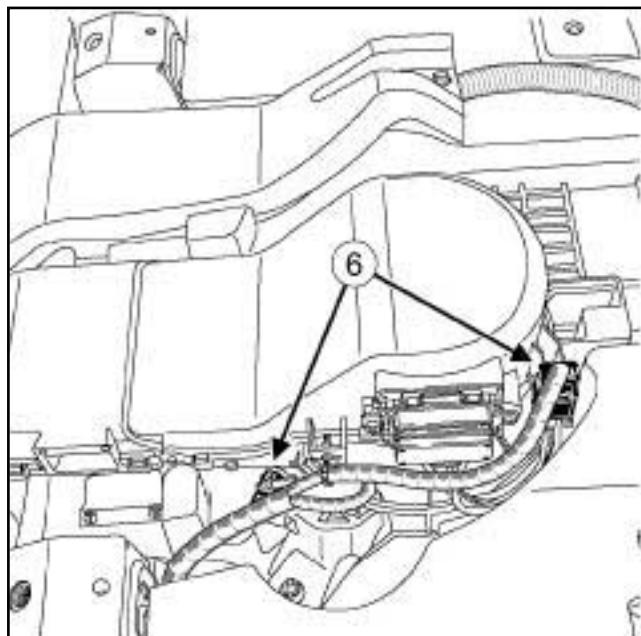
- Unclip the retaining clip (3) for the rear right-hand air distribution duct.
- Disconnect the rear right-hand air distribution duct at (4).
- Remove the rear right-hand air distribution duct.

## 3 - Rear air distribution duct



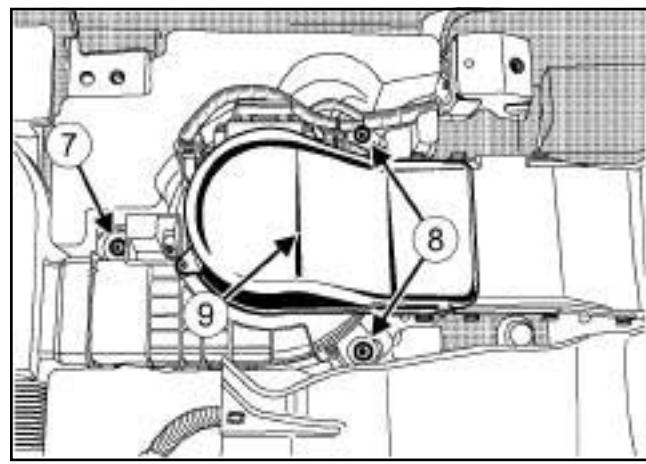
131265

Remove the rear section of the rear air distribution duct (5) .



131266

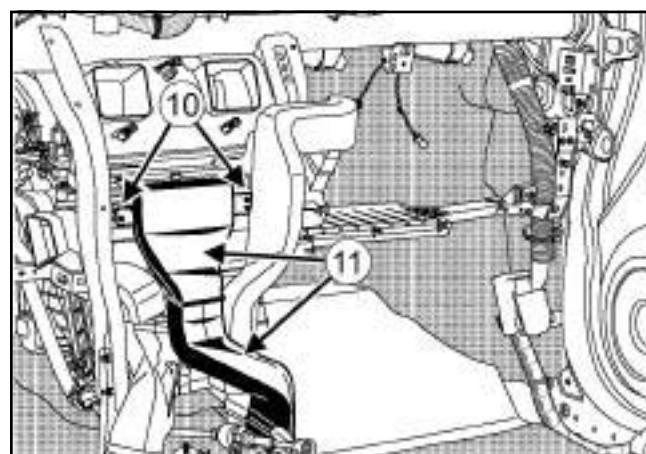
Disconnect the connectors (6) .



131267

Remove:

- the bolt (7) ,
- the nuts (8) ,
- the rear blower unit (9) .



131268

Remove:

- the bolts (10) ,
- the front section of the rear air distribution duct (11) .

## REFITTING

### I - REFITTING OPERATION FOR PART CONCERNED

#### 1 - Rear left-hand air distribution duct

Refit:

- the rear left-hand air distribution duct,
- the retaining clip on the rear left-hand air distribution duct.

**2 - Rear right-hand air distribution duct** Refit:

- the rear right-hand air distribution duct,
- the retaining clip on the rear right-hand air distribution duct.

**3 - Rear air distribution duct** Refit:

- the front section of the rear air distribution duct,
- the screws for the front section of the rear air distribution duct,
- the rear fan assembly,
- the nuts for the rear fan assembly,
- the screw for the rear fan assembly.

 Connect the connectors (6). Refit the rear section of the rear air distribution duct.

- the rear seat (see **Complete rear seat: Removal - Refitting**) (76A, Rear seat frames and seat runners),

- the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),

- the front seats (see **Complete front seat: Removal - Refitting**) (75A, Front seat frames and seat runners),

- the B-pillar trim (see **B-pillar trim: Removal - Refitting**) (71A, Body internal trim),

- the rear inner sill trim (see **Rear door sill lining: Removal - Refitting**) (71A, Body internal trim),

- the front door sill lining (see **Front door sill lining: Removal - Refitting**) (71A, Body internal trim),

- the cab floor lining (see **Cab floor lining: Removal - Refitting**) (71A, Body internal trim),

- the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

**II - FINAL OPERATION.****1 - Rear left-hand air distribution duct** Refit:

- the floor carpet on the driver's side (see **Floor carpet: Removal - Refitting**) (71A, Bodywork interior trim),
- the driver's seat (see **Complete front seat: Removal - Refitting**) (75A, Front seat frames and seat runners),
- the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment).

**2 - Rear right-hand air distribution duct** Refit:

- the floor carpet on the passenger side (see **Floor carpet: Removal - Refitting**) (71A, Bodywork interior trim),
- the front passenger seat (see **Complete front seat: Removal - Refitting**) (75A, Front seat frames and seat runners),
- the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment).

**3 - Rear air distribution duct** Refit:

- the floor carpet (see **Floor carpet: Removal - Refitting**) (71A, Body internal trim),

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LEFT-HAND DRIVE

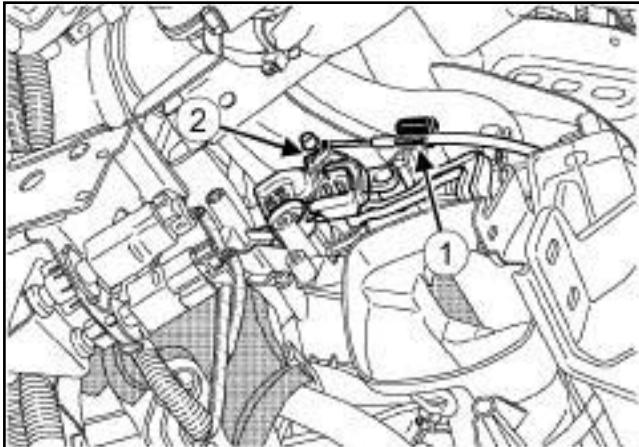
## REMOVAL

## I - REMOVAL PREPARATION OPERATION

Remove:

- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the driver's side A-pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**) ,
- the CD changer (see **CD changer: Removal - Refitting**) (86A, Radio),
- the radio (see **Car radio: Removal - Refitting**) (86A, Radio),
- the left-hand side trim on the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

## II - OPERATION FOR REMOVAL OF PART CONCERNED



131151

Unclip the air distribution unit cable sleeve stop (1) .

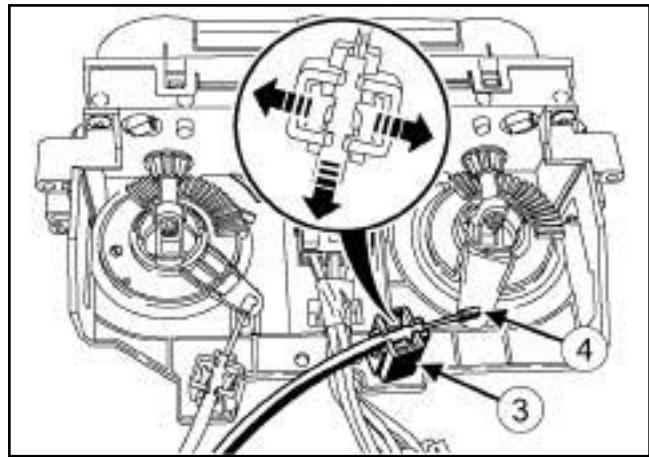
Remove:

- the air distribution flap seal (2) ,
- the air distribution control cable on the air distribution unit.

## Note:

Note the route of the air distribution control cable.

Remove the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-48) .



131152

Unclip the sleeve stop at (3) .

Remove the seal (4) .

Remove the air distribution control cable on the control panel.

## REFITTING

## I - REFITTING OPERATION FOR PART CONCERNED

Refit the air distribution control cable on the control panel.

Refit the seal (4) .

Clip the sleeve stop at (3) .

Refit:

- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-48) ,
- the air distribution control cable to the air distribution unit,
- the seal to the air distribution flap.

Clip the sleeve stop onto the distribution unit.

## II - FINAL OPERATION.

Refit:

- the left-hand side trim on the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the radio (see **Car radio: Removal - Refitting**) (86A, Radio),
- the CD changer (see **CD changer: Removal - Refitting**) (86A, Radio),

**LEFT-HAND DRIVE**

- the driver's side A-pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**)

,

- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

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RIGHT-HAND DRIVE

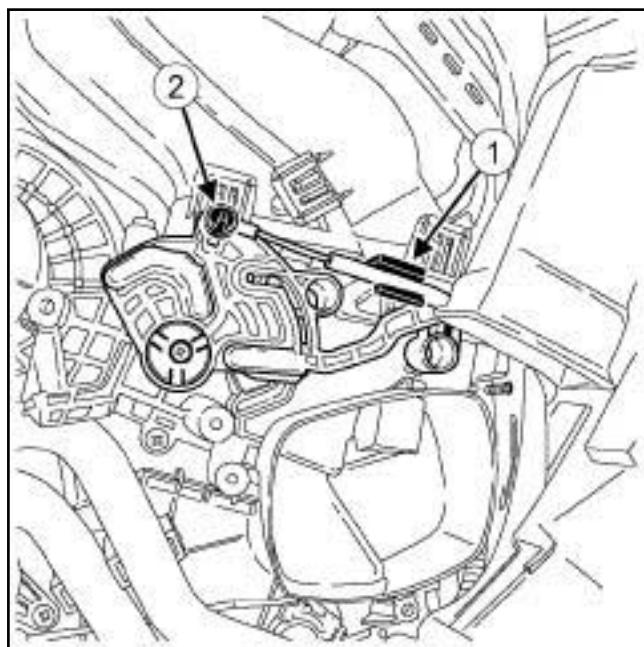
## REMOVAL

## I - REMOVAL PREPARATION OPERATION

 Remove:

- the glovebox (see **Glovebox: Removal - Refitting** ( 57A, Interior equipment),
- the A-pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**),
- the CD changer (see **CD changer: Removal - Refitting** (86A, Radio),
- the radio (see **Car radio: Removal - Refitting** (86A, Radio),
- the right-hand side trim on the centre panel (see **Dashboard: Removal - Refitting** (57A, Interior equipment).

## II - OPERATION FOR REMOVAL OF PART CONCERNED



131153

Unclip the cable sleeve stop (1) from the distribution unit.

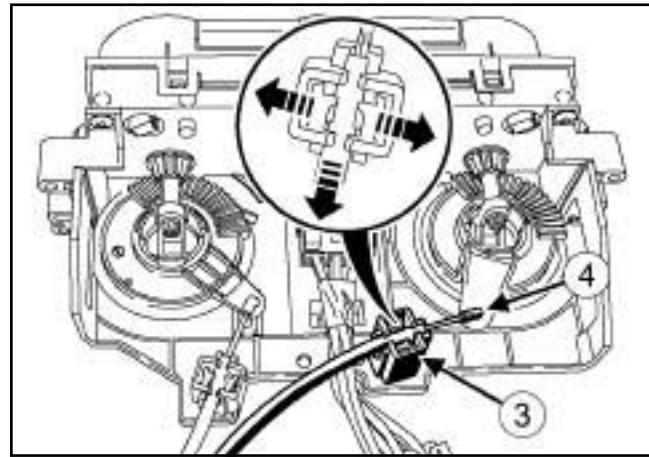
 Remove:

- the air distribution flap seal (2),
- the air distribution control cable on the air distribution unit.

## Note:

Take note of the routing of the air distribution control cable.

Remove the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page **61A-48**).



131152

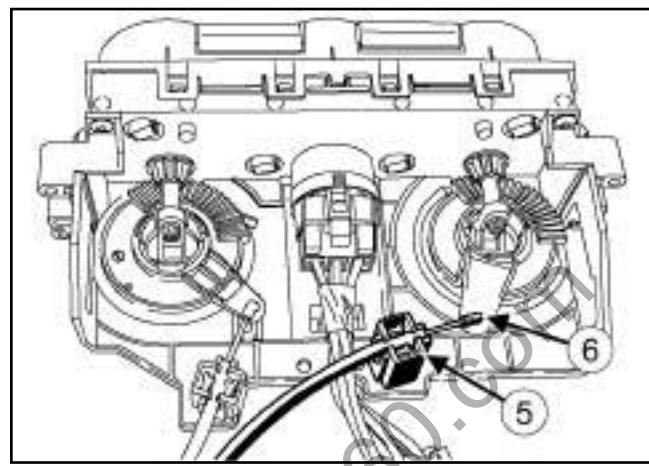
Unclip the sheath stop (3).

Remove the seal (4).

Remove the air distribution control cable on the control panel.

## REFITTING

## I - REFITTING OPERATION FOR PART CONCERNED



131154

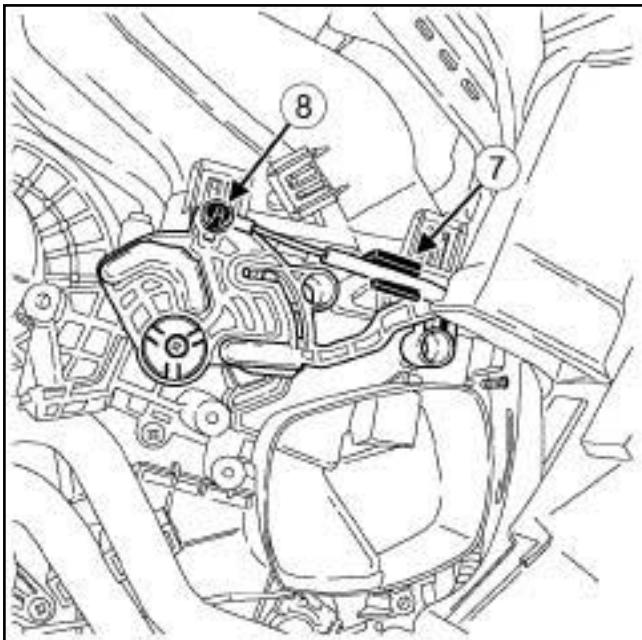
Refit the air distribution control cable on the control panel.

Refit the seal (6).

Clip the sleeve stop at (5).

Refit the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page **61A-48**).

RIGHT-HAND DRIVE



131153

 Refit:

- the air distribution control cable on the air distribution unit,
- the seal (8) to the air distribution flap.

 Clip the sleeve stop (7) onto the distribution unit.**II - FINAL OPERATION** Refit:

- the right-hand side trim on the centre panel (see **Dashboard: Removal - Refitting** (57A, Interior equipment)),
- the radio (see **Car radio: Removal - Refitting** (86A, Radio)),
- the CD changer (see **CD changer: Removal - Refitting** (86A, Radio)),
- the A-pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**),
- the glovebox (see **Glovebox: Removal - Refitting** (57A, Interior equipment)).

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LEFT-HAND DRIVE

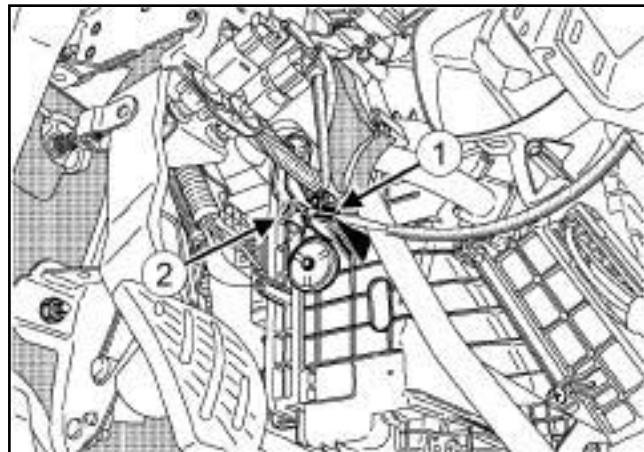
## REMOVAL

## I - REMOVAL PREPARATION OPERATION

Remove:

- the bottom cover (see **Dashboard: Removal - Refitting** (57A, Interior equipment)),
- the dashboard lower cover (see **Dashboard: Removal - Refitting** (57A, Interior equipment)),
- the A pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**),
- the CD changer (see **CD changer: Removal - Refitting** (86A, Radio)),
- the radio (see **Car radio: Removal - Refitting** (86A, Radio)),
- the front panel side trim (see **Dashboard: Removal - Refitting** (57A, Interior equipment)).

## II - OPERATION FOR REMOVAL OF PART CONCERNED



131155

Unclip the cable sleeve stop (1) from the distribution unit.

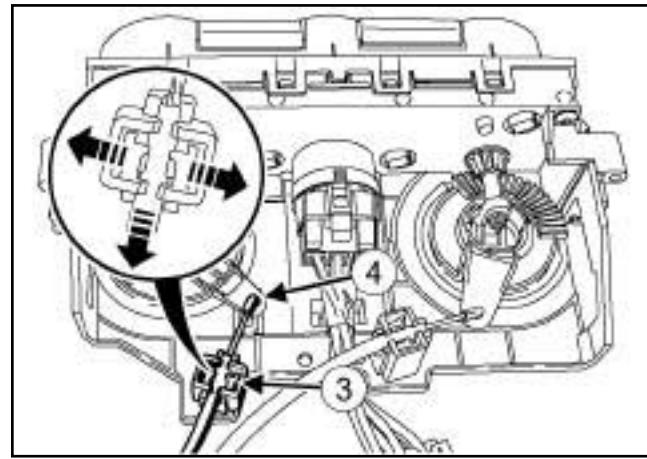
Remove:

- the mixer flap seal (2),
- the air mixer flap control cable on the air distribution unit.

## Note:

Note the route of the air mixing control cable.

Remove the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-48).



131156

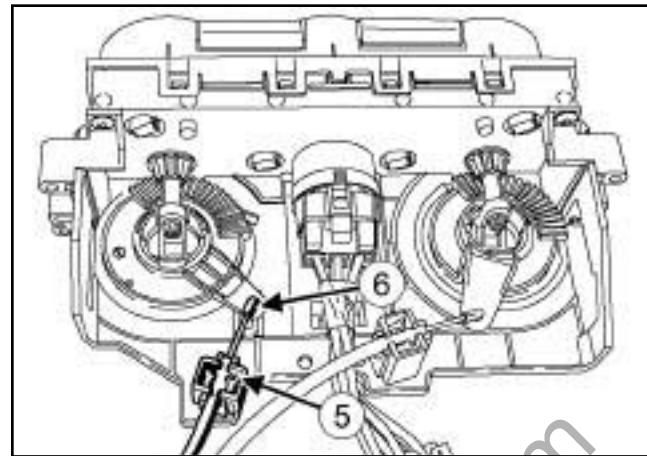
Unclip the sheath stop (3).

Remove the seal (4).

Remove the air mixing control cable on the control panel.

## REFITTING

## I - REFITTING OPERATION FOR PART CONCERNED



131157

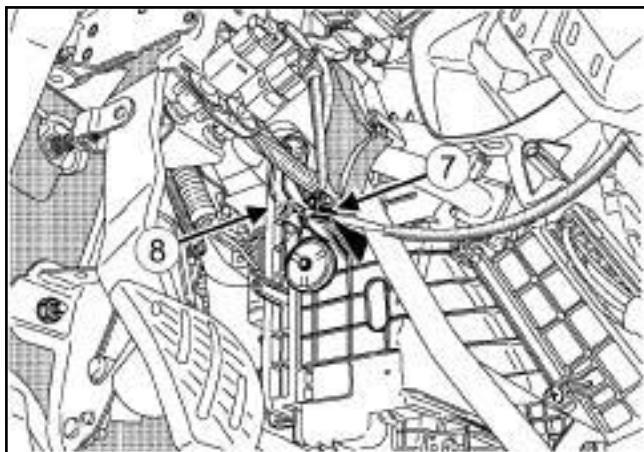
Refit the air mixing control cable to the control panel.

Refit the seal (6).

Clip the sleeve stop at (5).

Refit the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-48).

LEFT-HAND DRIVE



- Refit:
  - the air mixing control cable to the air distribution unit,
  - the seal (8) to the air mixer flap.
- Clip the sleeve stop (7) onto the distribution unit.

## II - FINAL OPERATION.

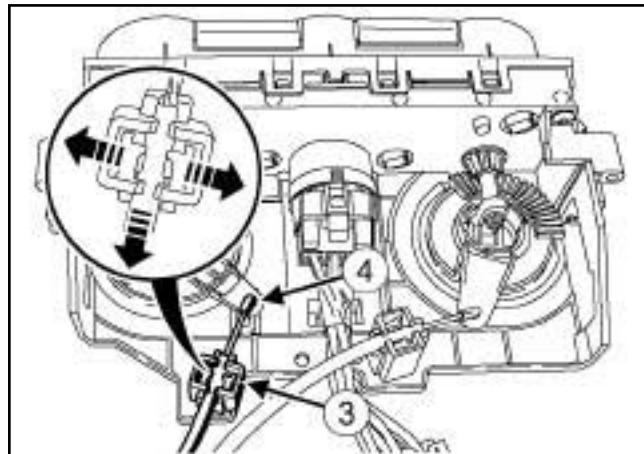
- Remove:
  - the front panel side trim (see **Dashboard: Removal - Refitting** (57A, Interior equipment),
  - the radio (see **Car radio: Removal - Refitting** (86A, Radio),
  - the CD changer (see **CD changer: Removal - Refitting** (86A, Radio),
  - the A pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**),
  - the dashboard lower cover (see **Dashboard: Removal - Refitting** (57A, Interior equipment),
  - the bottom cover (see **Dashboard: Removal - Refitting** (57A, Interior equipment).

RIGHT-HAND DRIVE

## REMOVAL

## I - REMOVAL PREPARATION OPERATION

- Remove:
  - the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment),
  - the right-hand lower cover on the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
  - the A-pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**),
  - the CD changer (see **CD changer: Removal - Refitting**) (86A, Radio),
  - the radio (see **Car radio: Removal - Refitting**) (86A, Radio),
  - the right-hand side trim of the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

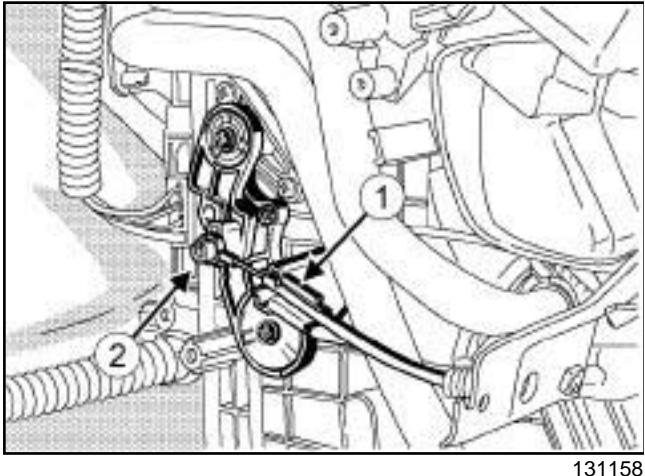


131156

- Unclip the sheath stop (3).
- Remove the seal (4).
- Remove the air mixing control cable on the control panel.

## REFITTING

## I - REFITTING OPERATION FOR PART CONCERNED

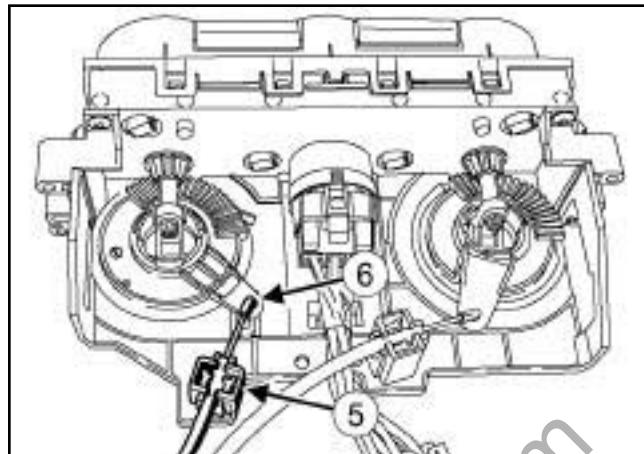


131158

- Unclip the cable sleeve stop (1) from the distribution unit.
- Remove:
  - the mixing flap seal (2),
  - the air mixing control cable on the air distribution unit.

## Note:

Note the route of the air mixing control cable.

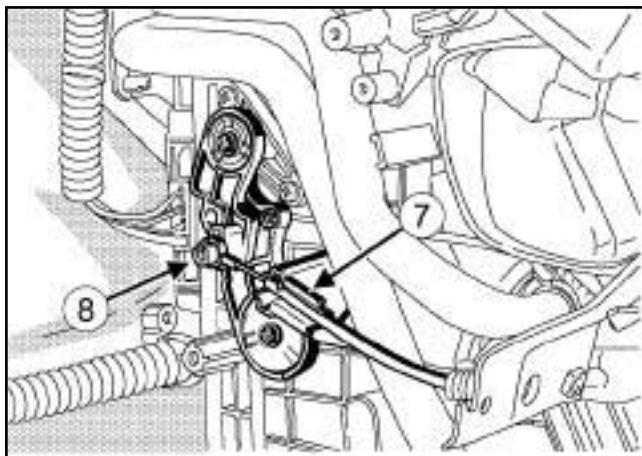


131157

- Refit the air mixing control cable to the control panel.
- Refit the seal (6).
- Clip the sleeve stop at (5).
- Refit the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-48).

- Remove the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-48).

RIGHT-HAND DRIVE



131158

 Refit:

- the air mixing control cable to the air distribution unit,
- the seal (8) to the air mixing flap.

 Clip the sleeve stop (7) onto the distribution unit.**II - FINAL OPERATION** Refit:

- the right-hand side trim on the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the radio (see **Car radio: Removal - Refitting**) (86A, Radio),
- the CD changer (see **CD changer: Removal - Refitting**) (86A, Radio),
- the A-pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**),
- the right-hand lower cover on the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment).

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Essential special tooling	
Hose clamp pliers.	
Ms. 583	Hose clamp pliers.
Essential equipment	
refrigerant charging station	
Tightening torques 	
pipe union bolt	4 N.m

**IMPORTANT**

Consult the safety and cleanliness advice and operation recommendations before carrying out any repair (see **62A, Air conditioning, Air conditioning: Precautions for repair**, page **62A-1**).

**WARNING**

To prevent moisture from entering the system, place plugs on the cold loop components which are open to the air.

**REMOVAL****I - REMOVAL PREPARATION OPERATION**

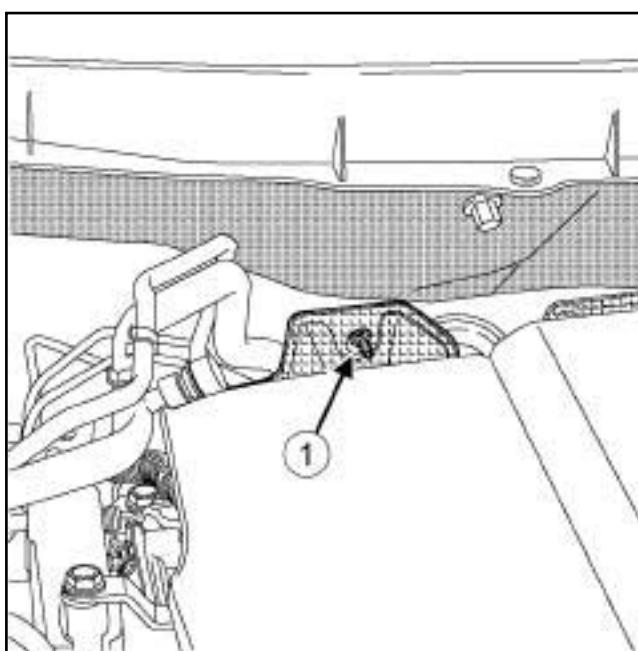
- Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).
- Drain the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page **62A-11**).

**IMPORTANT**

To prevent the pyrotechnic components from being permanently deactivated or triggered (airbags or pretensioners), wait for at least **3 minutes** after disconnecting the battery.

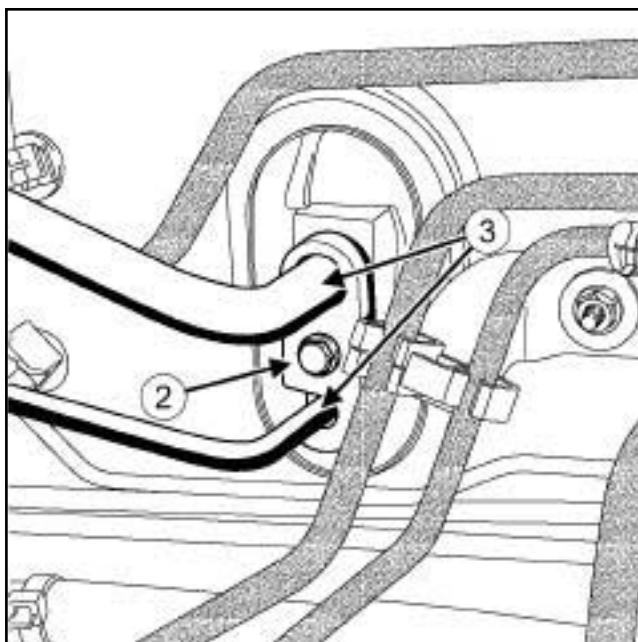
- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- Remove:
  - the driver's front airbag (see **Driver's front airbag: Removal - Refitting**) (88C, Airbags and pretensioners),
  - the steering wheel (see **Steering wheel: Removal - Refitting**) (36A, Steering assembly),

- the rotary switch (see **Rotary switch: Removal - Refitting**) (84A, Control - Signal),
- the steering column switch assembly (see **Steering wheel controls assembly: Removal - Refitting**) (84A, Controls - Signalling),
- the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),
- the solar radiation detector (see **61A, Heating, Insolation sensor: Removal - Refitting**, page **61A-76**),
- the tweeter (see **Tweeter: Removal - Refitting**) (86A, Radio),
- the front speaker (see **Front speakers: Removal - Refitting**) (86A, Radio),
- the display (see **Display: Removal - Refitting**) (86A, Radio),
- the navigation screen (see **Navigation screen: Removal - Refitting**) (83C, On-board telematics system),
- the CD changer (see **CD changer: Removal - Refitting**) (86A, Radio),
- the radio (see **Car radio: Removal - Refitting**) (86A, Radio),
- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page **61A-48**),
- the starter control panel (see **Card reader: Removal - Refitting**) (82A, Immobiliser),
- the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
- the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the dashboard cross member (see **Dashboard cross member: Removal - Refitting**) (42A, Upper front structure).



131159

- Remove the nut (1) .
- Lift the bulkhead insulation.



131337

- Remove:
  - the bolt (2) of the pipe union,
  - the expansion valve pipe union.

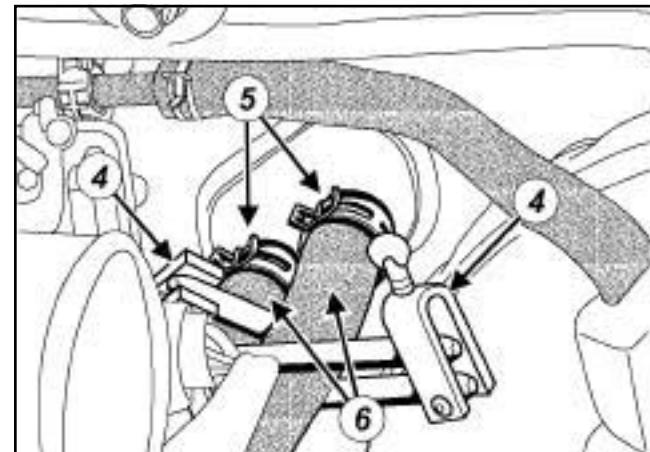
**WARNING**

In order to avoid any refrigerant leaks, do not damage (deform, twist, etc.) the pipe.

- Disconnect the expansion valve connection pipes (3) .

- Fit plugs into the openings.

- Remove the air filter housing (see **Air filter unit: Removal - Refitting**) (12A, Fuel mixture).



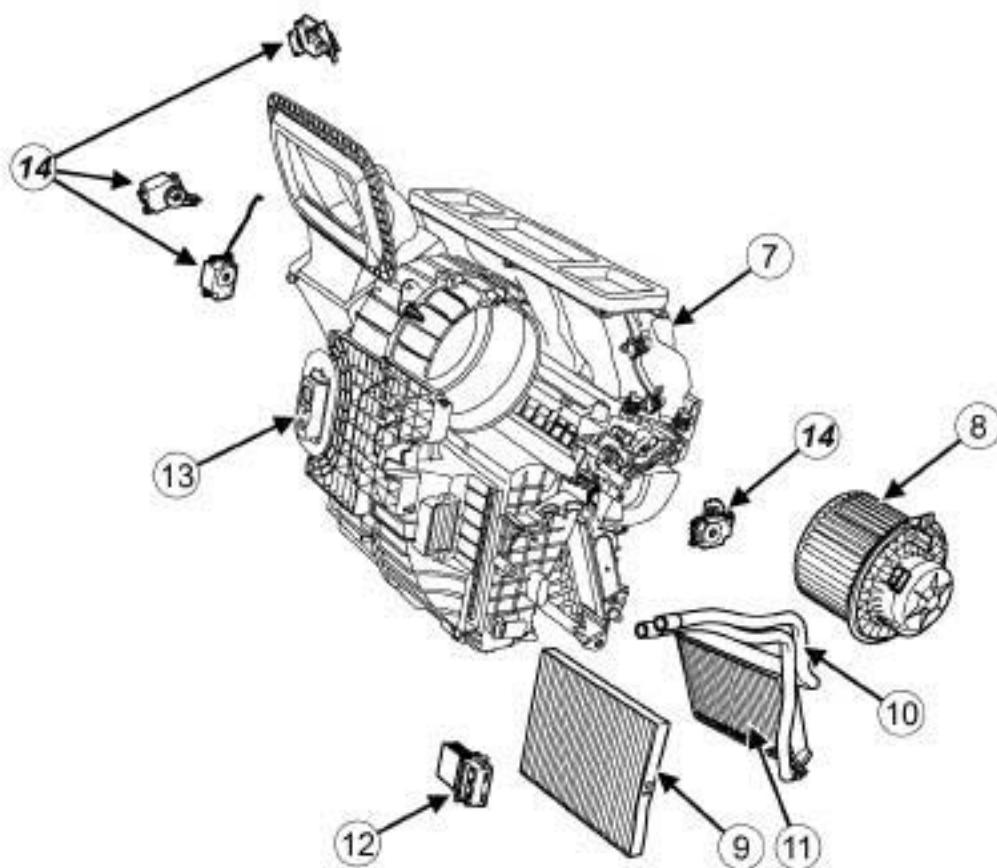
135208

- Fit the hose clamps (Ms. 583) (4) on the heater matrix inlet and outlet hoses.
- Remove the clips (5) from the heater matrix hoses.
- Disconnect the heater matrix hoses (6) .
- Remove the bracket for the heater matrix pipes (see **61A, Heating, Heater matrix: Removal - Refitting**, page 61A-29) .

**II - OPERATION FOR REMOVAL OF PART CONCERNED**

- Remove the air distribution unit.

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131162

Remove the following air distribution unit components (7) :

- the fan assembly (8) ,
- the cabin filter (9) ,
- the heater matrix pipes (10) ,
- the heater matrix (11) ,
- the heating resistor (if the vehicle is fitted with one),
- the fan assembly control unit (12) ,
- the expansion valve (13) ,
- the control cables (if the vehicle is fitted with them),
- the motors (14) (if the vehicle is fitted with them).

## REFITTING

### I - REFITTING PREPARATION OPERATION

Check that the parts are in good condition and if necessary, replace any defective parts.

Refit the following components to the air distribution unit:

- the motors (if the vehicle is fitted with them),

- the control cables (if the vehicle is fitted with them),
- the expansion valve,
- the fan assembly control unit,
- the heating resistor (if the vehicle is fitted with one),
- the heater matrix,
- the heater matrix pipes,
- the cabin filter,
- the fan assembly.

### II - REFITTING OPERATION FOR PART CONCERNED

Refit the air distribution unit.

### III - FINAL OPERATION

Refit the bracket for the heater matrix pipes (see **61A, Heating, Heater matrix: Removal - Refitting**, page **61A-29**).

Connect the heater matrix hoses.

Refit the clips on the heater matrix hoses.

Remove the hose clamps (**Ms. 583**).

Refit the air filter housing (see **Air filter unit: Removal - Refitting**) (12A, Fuel mixture).

**WARNING**

Do not remove the blanking plugs from each component until the last moment.

Also, do not remove the components from their packaging until they are to be fitted to the vehicle.

Remove the plugs from the openings.

Connect the connecting pipes to the expansion valve.

Refit:

- the pipe union to the expansion valve,
- the bolt to the pipe union.

Torque tighten the **pipe union bolt (4 N.m)**.

Refit:

- the bulkhead insulation in its original position,
- the nut of the bulkhead insulation,
- the dashboard cross member (see **Dashboard cross member: Removal - Refitting**) (42A, Upper front structure),
- the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
- the starter control panel (see **Card reader: Removal - Refitting**) (82A, Immobiliser),
- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-48),
- the radio (see **Car radio: Removal - Refitting**) (86A, Radio),
- the CD changer (see **CD changer: Removal - Refitting**) (86A, Radio),
- the navigation screen (see **Navigation screen: Removal - Refitting**) (83C, On-board telematics system),
- the display (see **Display: Removal - Refitting**) (86A, Radio),
- the front speaker (see **Front speakers: Removal - Refitting**) (86A, Radio),
- the tweeter (see **Tweeter: Removal - Refitting**) (86A, Radio),
- the solar radiation detector (see **61A, Heating, Insolation sensor: Removal - Refitting**, page 61A-76),

- the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),

- the steering column switch assembly (see **Steering wheel controls assembly: Removal - Refitting**) (84A, Controls - Signalling),

- the rotary switch (see **Rotary switch: Removal - Refitting**) (84A, Control - Signal),

- the steering wheel (see **Steering wheel: Removal - Refitting**) (36A, Steering assembly),

- the driver's front airbag (see **Driver's front airbag: Removal - Refitting**) (88C, Airbags and pretensioners).

Connect the battery (see **Battery : Removal - Refitting**) (80A, Battery).

Perform the following operations:

- fill the cooling system (see **Cooling circuit: Draining - Refilling**) (19A, Cooling),

- bleed the cooling system (see **Cooling circuit: Draining - Refilling**) (19A, Cooling),

- check the cooling system (see **Engine cooling circuit: check**) (19A, Cooling),

- fill the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page 62A-11) .

Check:

- that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page 62A-6) ,

- that there are no leaks (see **62A, Air conditioning, Air conditioning: Check**, page 62A-6) .

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RIGHT-HAND DRIVE

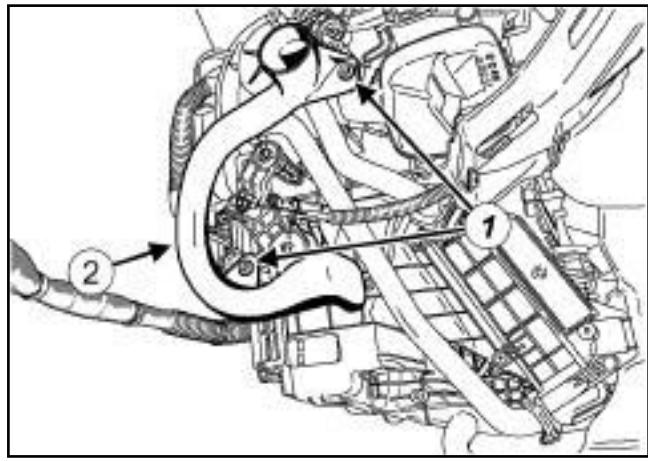
Essential special tooling	Essential special tooling	Essential special tooling
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Ms. 583	Hose clamp pliers.
---------	--------------------

## REMOVAL

### I - REMOVAL PREPARATION OPERATION

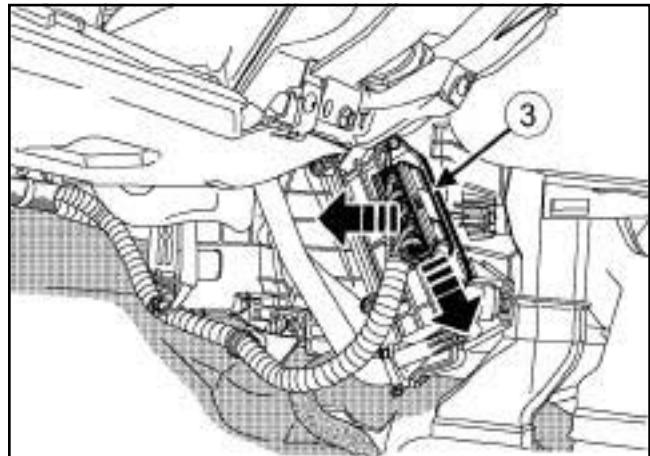
- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- Remove:
  - the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment),
  - the left-hand cover on the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
  - the A-pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**).



131260

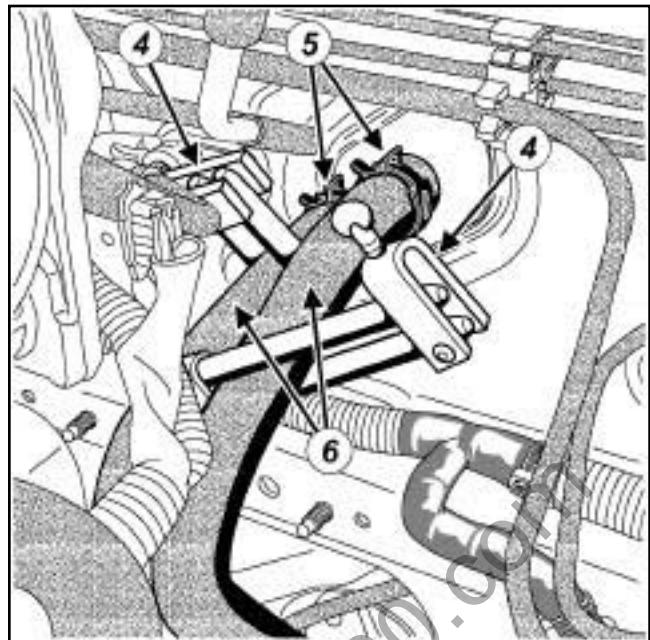
- Remove:
  - the bolts (1) ,
  - the glove box air duct (2) ,
  - the air mixing cable (see **61A, Heating, Air mixing cable: Removal - Refitting**, page 61A-21) .

M9R



131291

- Disconnect the connector (3) from the heating resistor.
- Remove the air filter unit (see **Air filter unit: Removal - Refitting**) (12A, Fuel mixture).

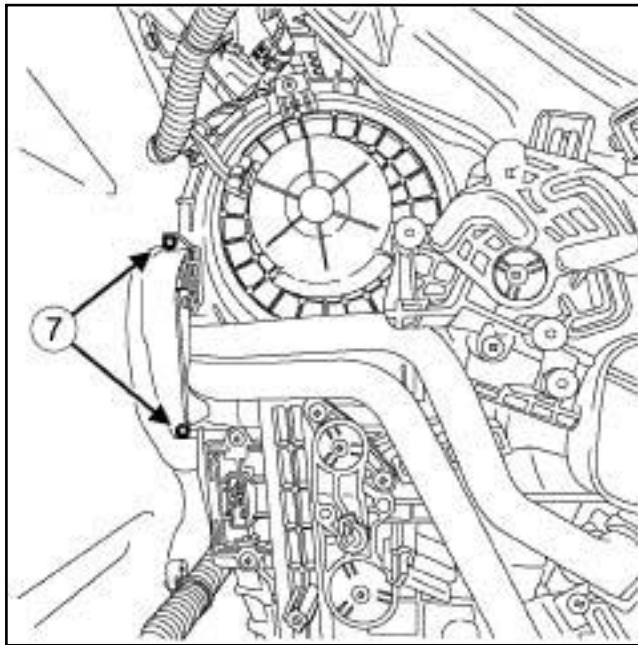


135209

- Fit the hose clamps (Ms. 583) (4) on the heater matrix inlet and outlet hoses.
- Remove the clips (5) from the heater matrix hoses.
- Disconnect the heater matrix hoses (6) .

## RIGHT-HAND DRIVE

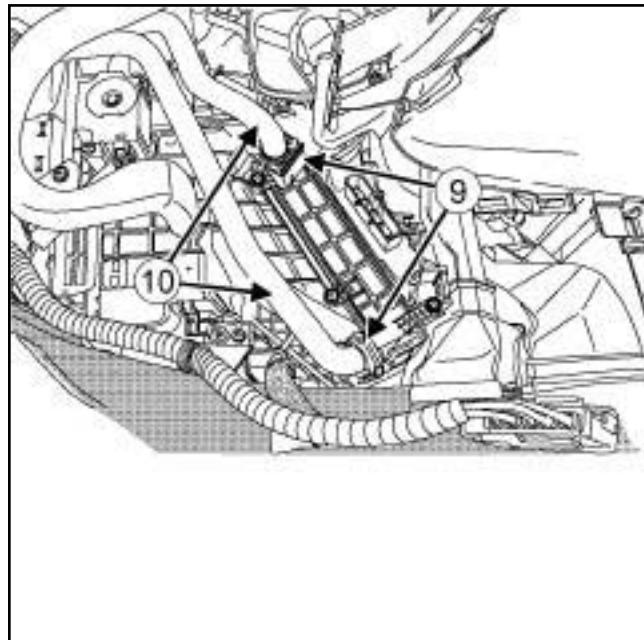
## II - OPERATION FOR REMOVAL OF PART CONCERNED



132350

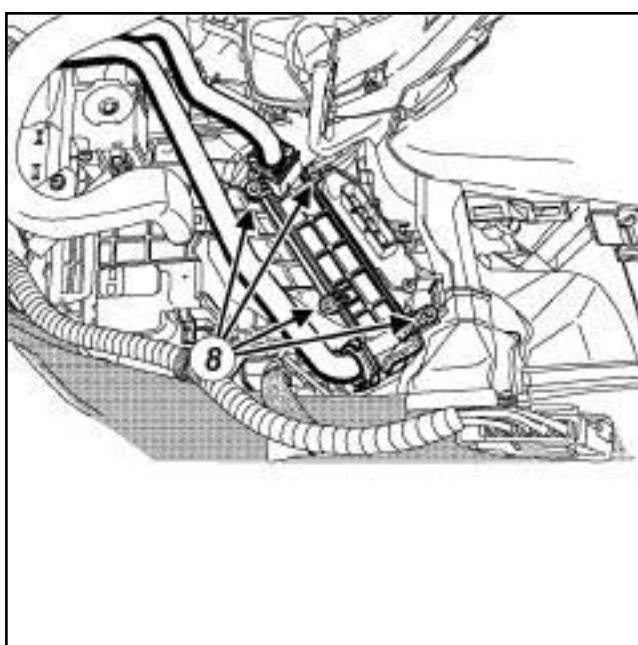
 Remove:

- the bolts (7) for the heater matrix pipe bracket,
- the heater matrix pipe bracket.



132352

- Unclip the retaining clips (9) .
- Disconnect the heater matrix pipes (10) from the heater matrix.
- Remove the heater matrix.



132351

 Remove:

- the heater matrix cover bolts (8) ,
- the heater matrix cover.

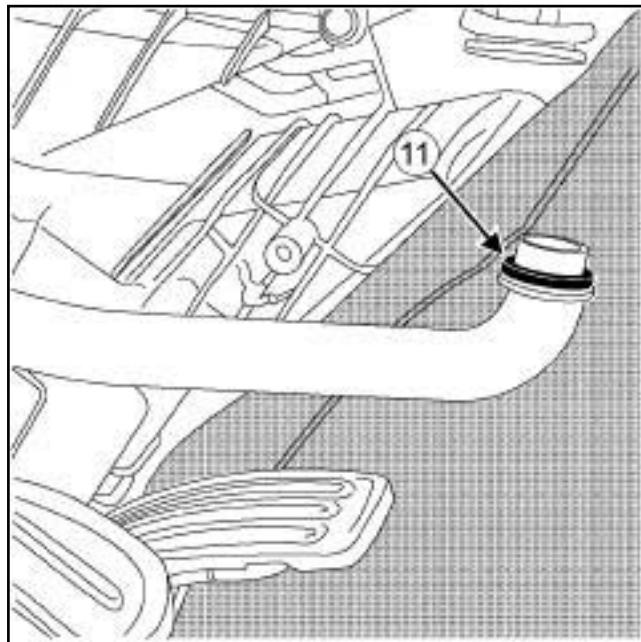
 Place a container underneath the heater matrix to collect the coolant.

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RIGHT-HAND DRIVE

## REFITTING

## I - REFITTING PREPARATION OPERATION



131273

- Always replace the seals (11) between the pipes and the heater matrix.

## WARNING

To avoid any leaks, check that the pipe surface is sound before positioning the new seal. The surface must be clean and scratch free.

## II - REFITTING OPERATION FOR PART CONCERNED

- Refit the new seals between the pipes and the heater matrix.
- Remove the container placed underneath the heater matrix.
- Refit the heater matrix.
- Connect the heater matrix pipes to the heater matrix.
- Refit the pipe clips.
- Refit:
  - the heater matrix cover,
  - the heater matrix cover bolts,
  - the heat matrix pipe bracket,
  - the heater matrix pipe bracket bolts.

## III - FINAL OPERATION

- Connect the heater matrix hoses.
- Refit the clips on the heater matrix hoses.
- Remove the hose clamps (Ms. 583).
- Refit the air filter housing (see **Air filter unit: Removal - Refitting** (12A, Fuel mixture)).

M9R

- Connect the heating resistor connector.

- Refit:

- the air mixing cable (see **61A, Heating, Air mixing cable: Removal - Refitting**, page 61A-21) .
- the glove box air duct,
- the glove box air duct bolts,
- the A-pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**),
- the left-hand cover on the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment).

- Connect the battery (see **Battery : Removal - Refitting**) (80A, Battery).

- Perform the following operations:

- fill the cooling system (see **Cooling circuit: Draining - Refilling**) (19A, Cooling),
- bleed the cooling system (see **Cooling circuit: Draining - Refilling**) (19A, Cooling).

- Check the cooling circuit (see **Engine cooling circuit: check**) (19A, Cooling).

LEFT-HAND DRIVE

Essential special tooling	Essential special tooling	Essential special tooling
---------------------------	---------------------------	---------------------------

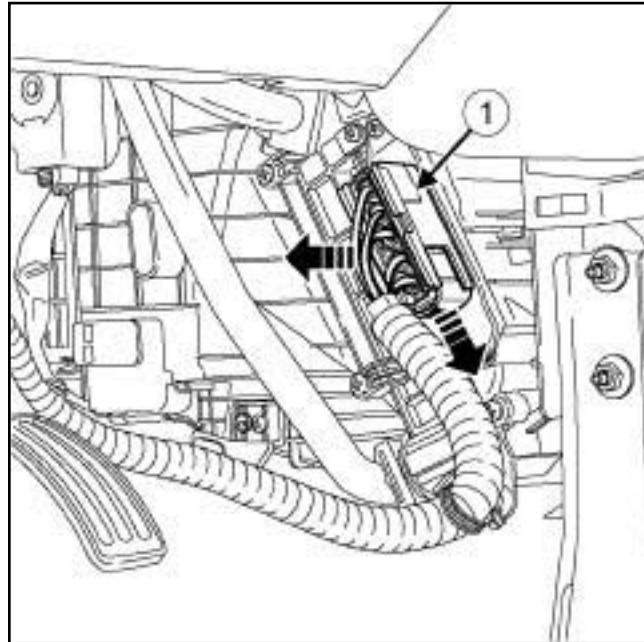
Ms. 583	Hose clamp pliers.
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## REMOVAL

### I - REMOVAL PREPARATION OPERATION

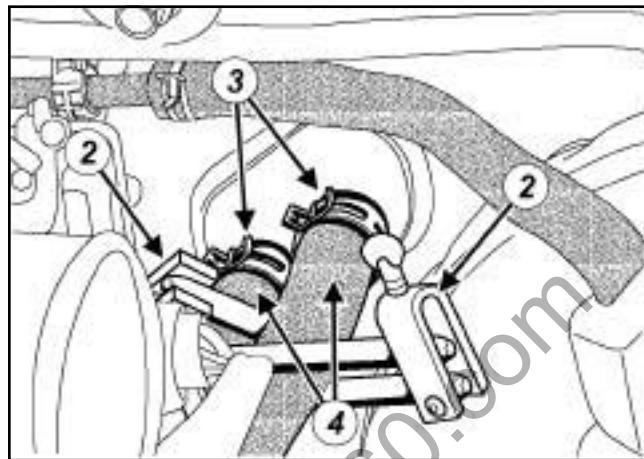
- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- Remove:
  - the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
  - the lower cover on the left-hand side of the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
  - the driver's side A pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**) ,
  - the air mixing cable (see **61A, Heating, Air mixing cable: Removal - Refitting**, page 61A-21) .

M9R



131274

- Disconnect the connector (1) from the heating resistor.
- Remove the air filter unit (see **Air filter unit: Removal - Refitting**) (12A, Fuel mixture).

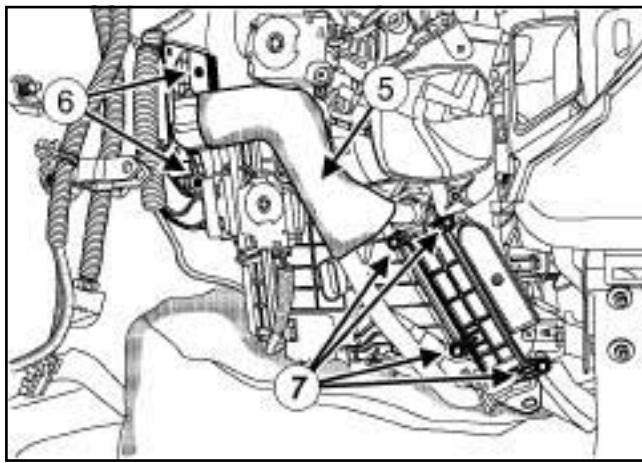


135208

- Fit the hose clamps (Ms. 583) (2) on the heater matrix inlet and outlet hoses.
- Remove the clips (3) from the heater matrix hoses.
- Disconnect the heater matrix hoses (4) .

## LEFT-HAND DRIVE

## II - OPERATION FOR REMOVAL OF PART CONCERNED



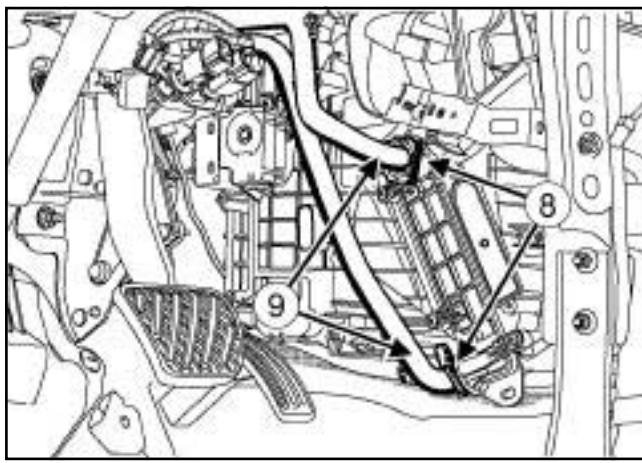
131271

 Remove:

- the sheath (5) of the heater matrix pipes,
- the bolts (6) for the heater matrix pipe bracket,
- the heater matrix pipe bracket,
- the heater matrix cover bolts (7) ,
- the heater matrix cover.

**WARNING**

Prepare for the flow of fluid, and protect the surrounding components.

 Place a container underneath the heater matrix to collect the coolant.

131275

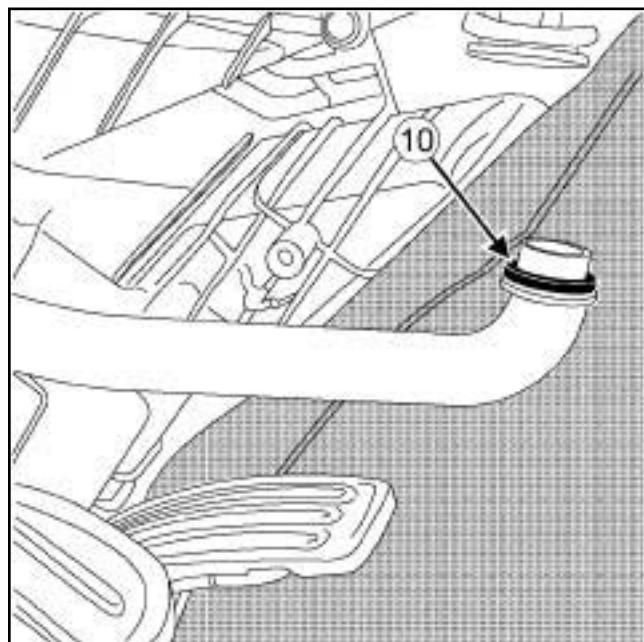
 Unclip the retaining clips (8) . Disconnect the heater matrix pipes (9) from the heater matrix. Remove the heater matrix.

## REFITTING

## I - REFITTING PREPARATION OPERATION

**WARNING**

To avoid any leaks, check that the pipe surface is sound before positioning the new seal. The surface must be clean and scratch free.



131273

 Always replace the seals (10) between the pipes and the heater matrix.

## II - REFITTING OPERATION FOR PART CONCERNED

- Refit the new seals between the pipes and the heater matrix.
- Remove the container placed underneath the heater matrix.
- Refit the heater matrix.
- Connect the heater matrix pipes to the heater matrix.
- Refit the retaining clips.
- Refit:
  - the heater matrix cover,
  - the heater matrix cover bolts,
  - the heater matrix pipe bracket,
  - the heater matrix pipe bracket bolts.
  - the heater matrix pipe sheath.

## LEFT-HAND DRIVE

## III - FINAL OPERATION

- Connect the heater matrix hoses.
- Refit the clips on the heater matrix hoses.
- Remove the hose clamps (**Ms. 583**).
- Refit the air filter housing (see **Air filter unit: Removal - Refitting**) (12A, Fuel mixture).

## M9R

- Connect the heating resistor connector.

- Refit:
  - the air mixing cable (see **61A, Heating, Air mixing cable: Removal - Refitting**, page 61A-21).
  - the A-pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**),
  - the lower cover on the left-hand side of the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
  - the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- Connect the battery (see **Battery : Removal - Refitting**) (80A, Battery).
- Perform the following operations:
  - fill the cooling system (see **Cooling circuit: Draining - Refilling**) (19A, Cooling),
  - bleed the cooling system (see **Cooling circuit: Draining - Refilling**) (19A, Cooling).
- Check the cooling circuit (see **Engine cooling circuit: check**) (19A, Cooling).

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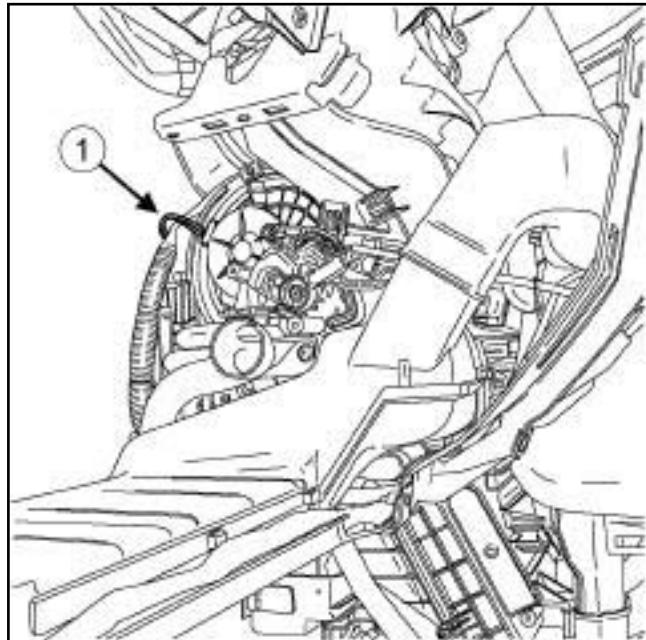
RIGHT-HAND DRIVE

## REMOVAL

## I - REMOVAL PREPARATION OPERATION

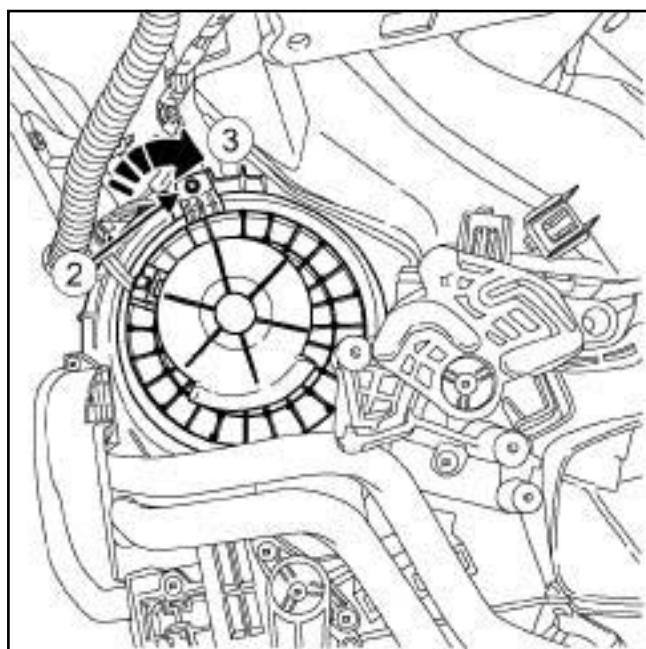
- Remove the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment).

## II - OPERATION FOR REMOVAL OF PART CONCERNED



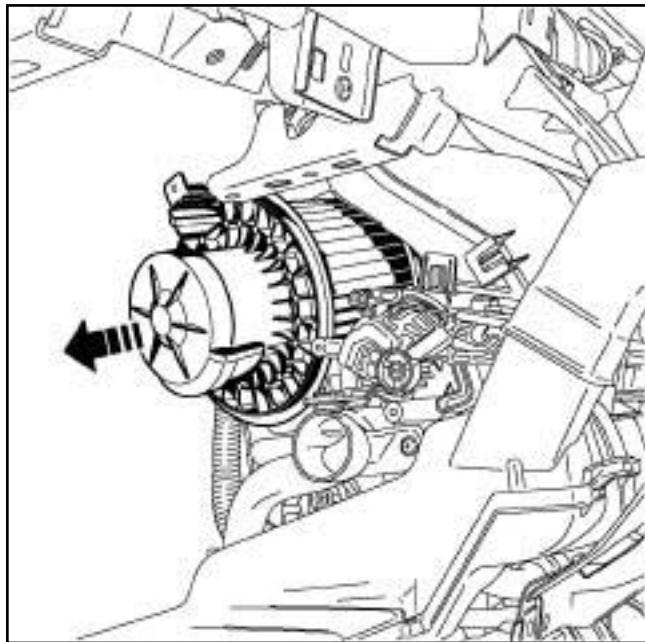
131283

- Disconnect the fan assembly connector (1).

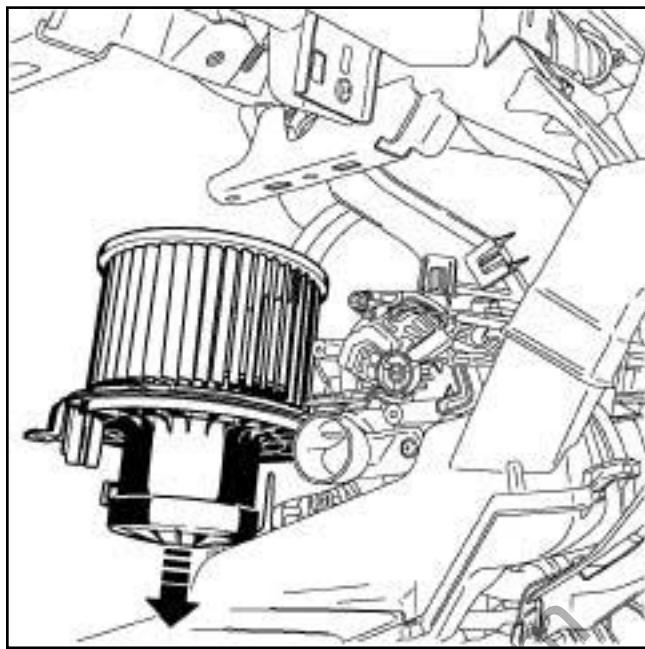


131284

- Remove the fan assembly bolt (2).
- Turn the fan assembly clockwise (3).



131285



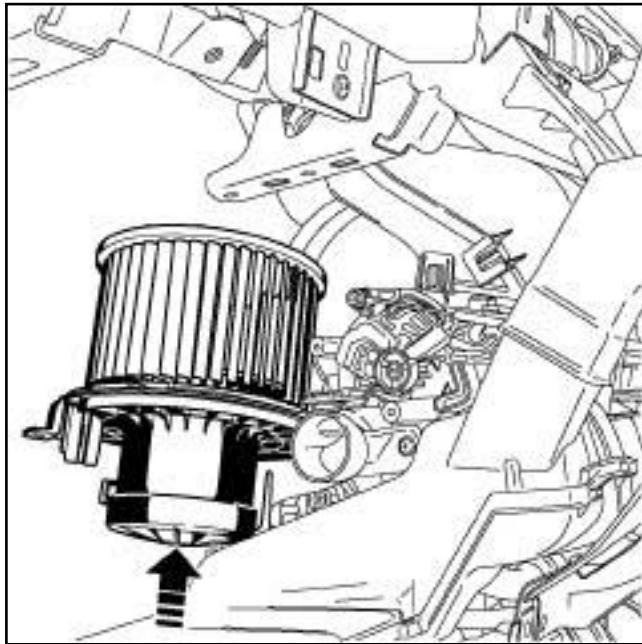
131286

- Remove the fan assembly.

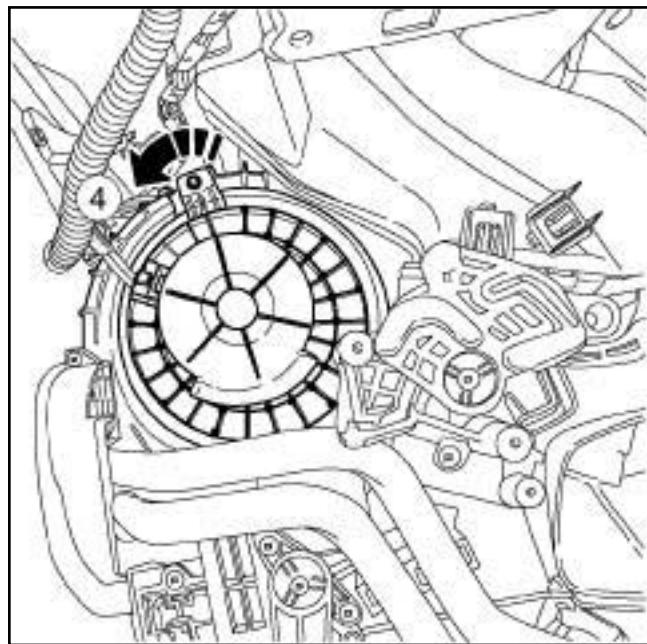
RIGHT-HAND DRIVE

## REFITTING

## I - REFITTING OPERATION FOR PART CONCERNED

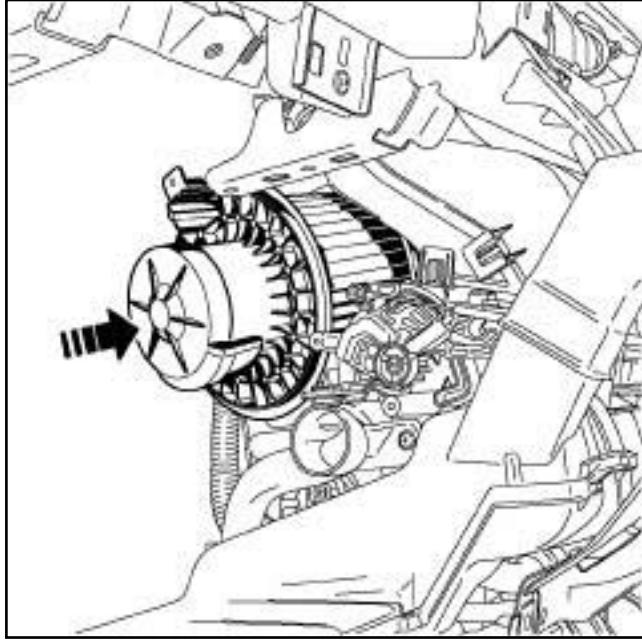


131287



131289

- Turn the fan assembly anti-clockwise (4) .
- Refit the fan assembly bolt.
- Connect the fan assembly connector.



131288

- Refit the fan assembly.

## II - FINAL OPERATION.

- Refit the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment).

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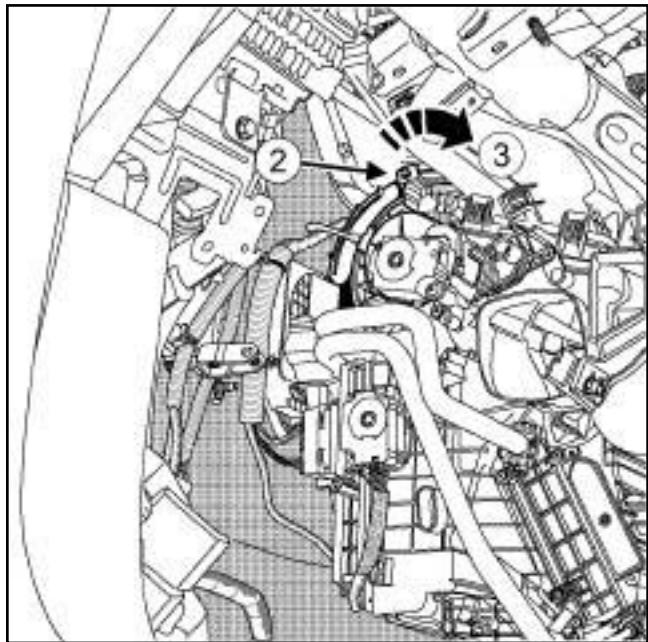
LEFT-HAND DRIVE

## REMOVAL

## I - REMOVAL PREPARATION OPERATION

 Remove:

- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the lower cover on the left-hand side of the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the driver's side A pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**)
- ,
- the brake and accelerator pedal assembly (see **Accelerator/brake pedal assembly: Removal - Refitting**) (37A, Mechanical component controls).



131277

## II - OPERATION FOR REMOVAL OF PART CONCERNED



131276

Remove the fan assembly connector (1) .

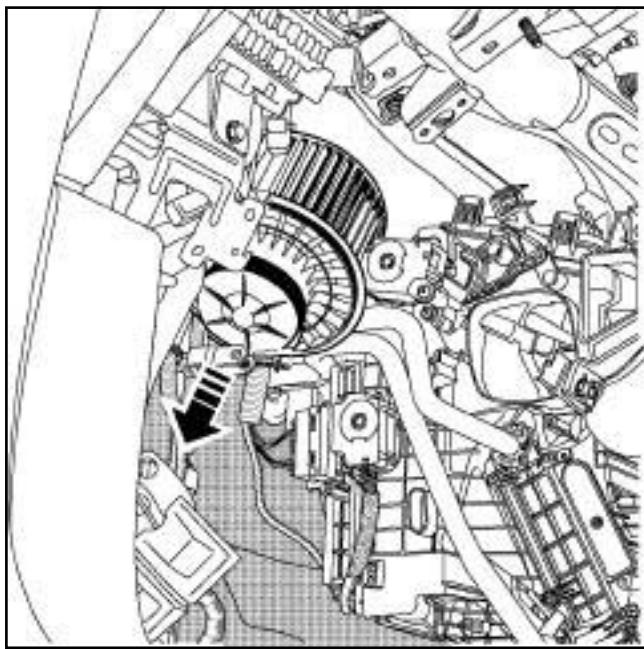
Remove the fan assembly bolt (2) .  
 Turn the fan assembly clockwise (3) .

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LEFT-HAND DRIVE



131278

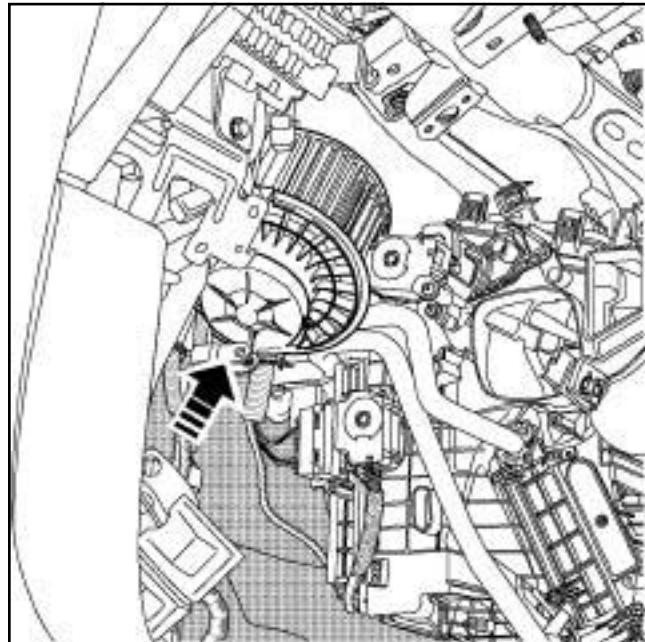


131279

Remove the fan assembly.

## REFITTING

## I - REFITTING OPERATION FOR PART CONCERNED



131280



131281

Refit the fan assembly.

LEFT-HAND DRIVE



- Turn the fan assembly anti-clockwise (4) .
- Refit the fan assembly bolt.
- Connect the fan assembly connector.

## II - FINAL OPERATION.

### □ Refit:

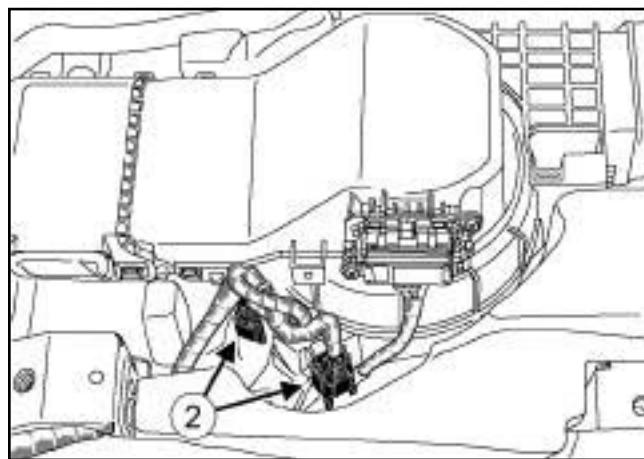
- the brake and accelerator pedal assembly (see **Accelerator/brake pedal assembly: Removal - Refitting**) (37A, Mechanical component controls),
- the driver's side A pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**) ,
- the lower cover on the left-hand side of the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

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## REMOVAL

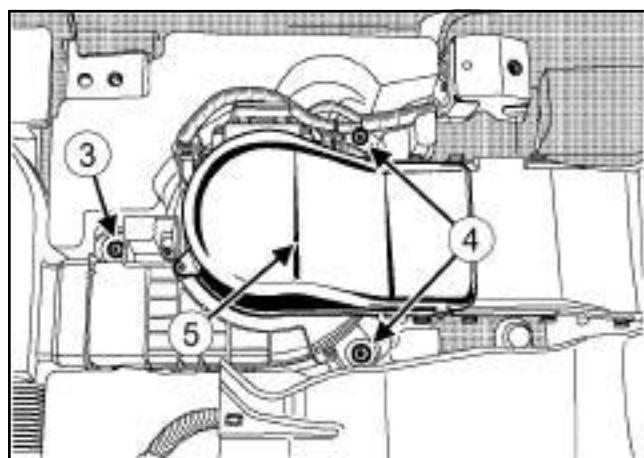
## I - REMOVAL PREPARATION OPERATION

- Disconnect the battery (see **Battery: Removal - Refitting** (80A, Battery)).
- Remove:
  - the cab floor panel trim (see **Cab floor lining: Removal - Refitting** (71A, Bodywork interior trim)),
  - the front door sill lining (see **Front door sill lining: Removal - Refitting** (71A, Body internal trim)),
  - the rear inner sill trim (see **Rear door sill lining: Removal - Refitting** (71A, Body internal trim)),
  - the B-pillar trim (see **B-pillar trim: Removal - Refitting** (71A, Body internal trim)),
  - the front seat (see **Complete front seat: Removal - Refitting** (75A, Front seat frames and runners)),
  - the central console (see **Centre console: Removal - Refitting** (57A, Interior equipment)),
  - the rear seat (see **Complete rear seat: Removal - Refitting** (76A, Rear seat frames and seat runners),)
  - the floor carpet (see **Floor carpet: Removal - Refitting** (71A, Body internal trim)).



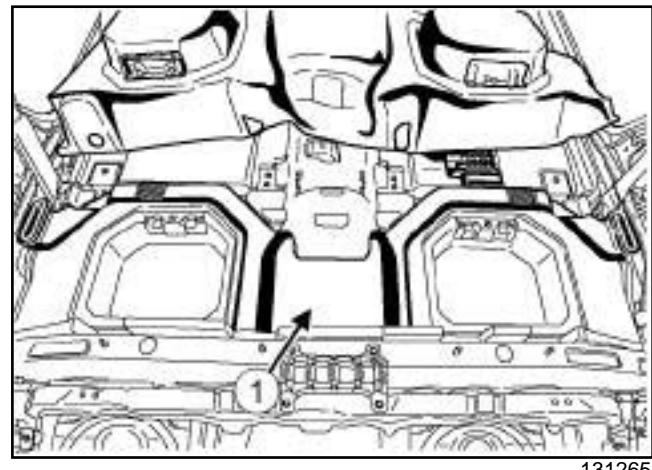
132597

- Disconnect the connectors (2).



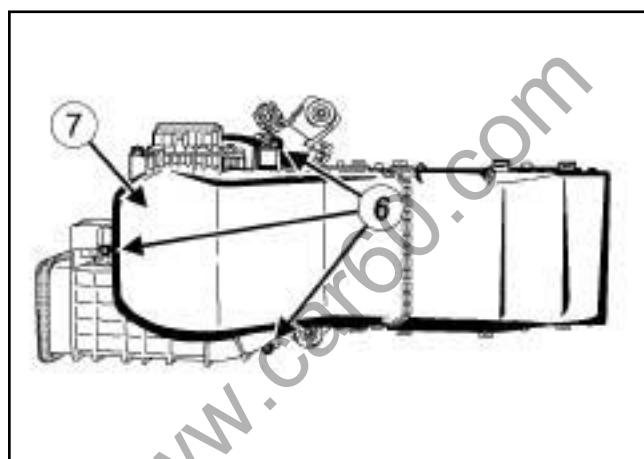
132598

- Remove:
  - the bolt (3),
  - the nuts (4),
  - the rear fan assembly (5).



131265

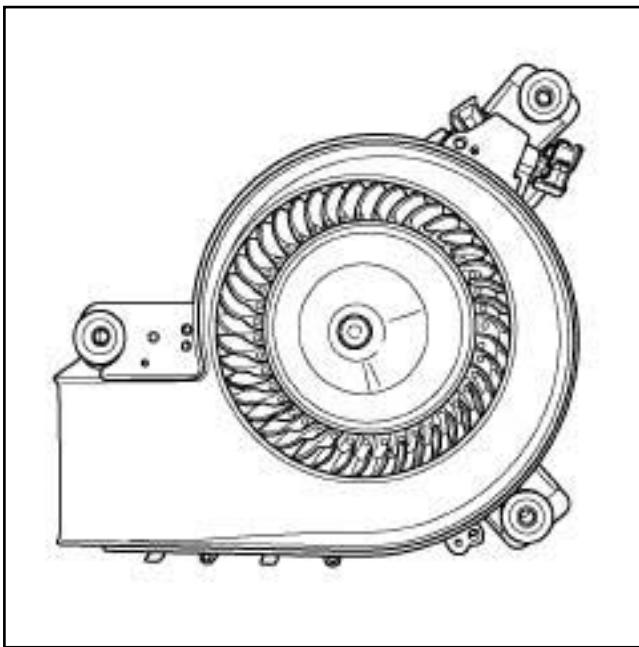
- Remove the rear air distribution duct (1).



132599

- Remove:
  - the bolts (6),

- the rear fan assembly rear air distribution duct (7) .



132600

- Remove the rear fan assembly.

## REFITTING

### I - REFITTING OPERATION FOR PART CONCERNED

- Refit:

- the rear air distribution duct to the rear fan assembly,
- the rear air distribution duct bolts,
- the rear fan assembly,
- the rear fan assembly nuts,
- the rear fan assembly bolts.

- Connect the rear fan assembly connectors.

- Refit the rear air distribution duct.

### II - FINAL OPERATION.

- Refit:

- the floor carpet (see **Floor carpet: Removal - Refitting**) (71A, Body internal trim),
- the rear seat (see **Complete rear seat: Removal - Refitting**) (76A, Rear seat frames and seat runners,)
- the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
- the front seat (see **Complete front seat: Removal - Refitting**) (75A, Front seat frames and runners),

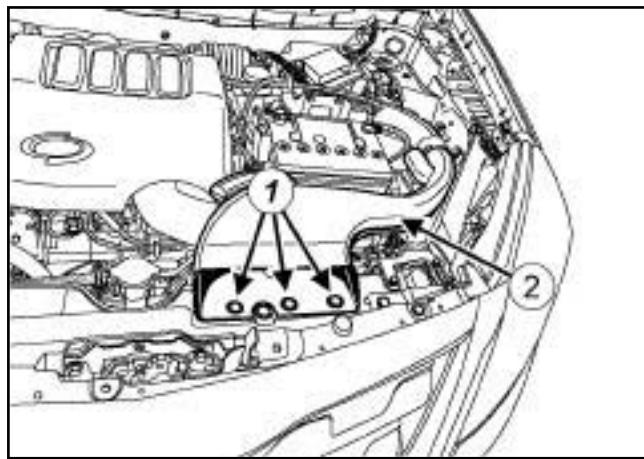
- the B-pillar trim (see **B-pillar trim: Removal - Refitting**) (71A, Body internal trim),
- the rear inner sill trim (see **Rear door sill lining: Removal - Refitting**) (71A, Body internal trim),
- the front door sill lining (see **Front door sill lining: Removal - Refitting**) (71A, Body internal trim),
- the cab floor panel trim (see **Cab floor lining: Removal - Refitting**) (71A, Bodywork interior trim).

- Connect the battery (see **Battery : Removal - Refitting**) (80A, Battery).

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## REMOVAL

## REMOVAL PREPARATION OPERATION



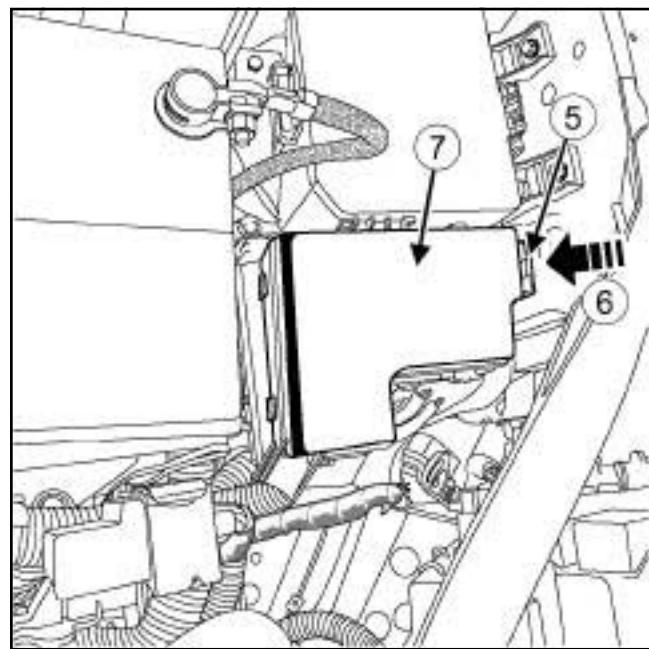
131708

- Remove clips (1) .
- Remove the air inlet sleeve (2) .



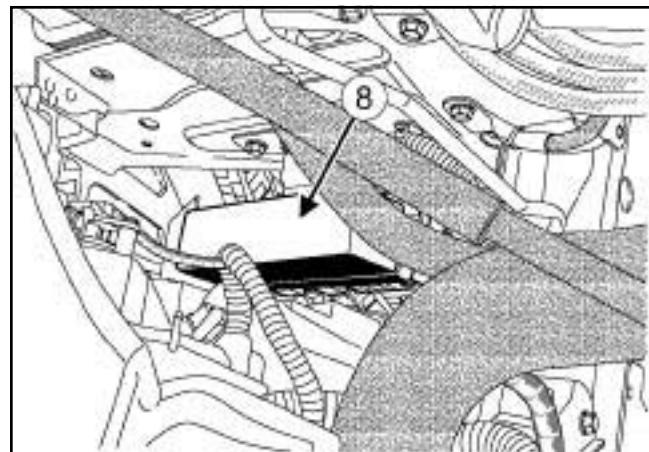
132650

- Remove:
  - the clip (3) ,
  - the screen washer bottle filler neck (4) .



131709

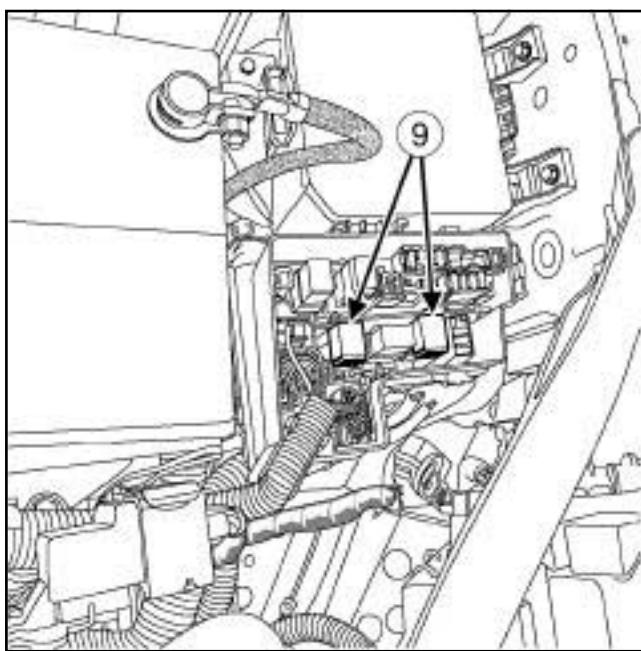
- Unclip the relay unit cover at (5) in the direction of the arrow (6) .
- Remove the relay unit cover (7) .



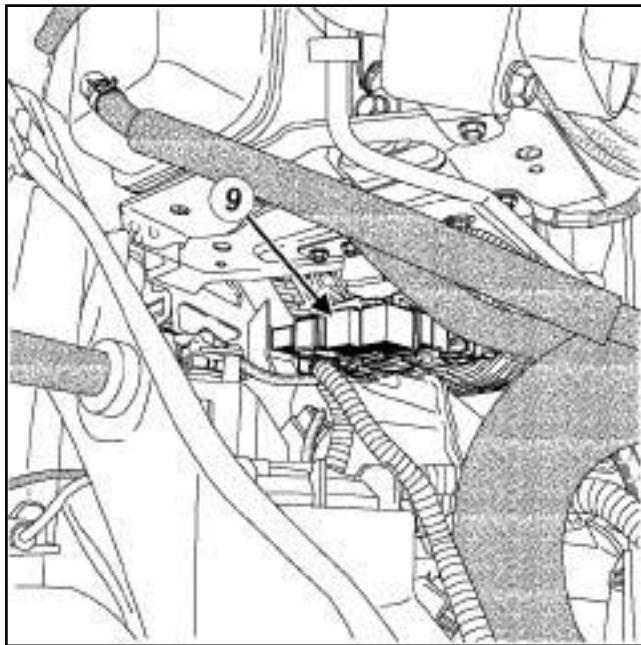
132651

- Remove the relay unit cover (8) .

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131710



132652

Remove the heating resistor relays (9) .

## REFITTING

### I - REFITTING OPERATION FOR PART CONCERNED

Refit:

- the heater resistor relays,
- the relay unit covers.

Clip the relay unit cover on at (5) .

### II - FINAL OPERATION.

Refit:

- the screen washer bottle filler neck,
- the clip (3) ,
- the air inlet sleeve.

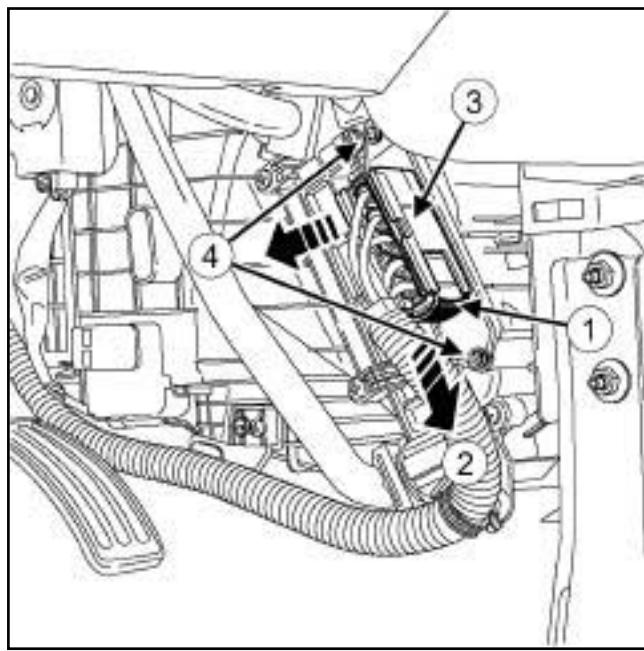
Refit the air inlet sleeve clips.

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LEFT-HAND DRIVE

**REMOVAL****I - REMOVAL PREPARATION OPERATION**

- Remove the lower left-hand cover on the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

**II - OPERATION FOR REMOVAL OF PART CONCERNED**

- Unclip the heater resistor connector clip (1) in the direction of the arrow (2) .
- Disconnect the connector (3) .
- Remove:
  - the bolts (4) ,
  - the heating resistor.

**REFITTING****I - REFITTING OPERATION FOR PART CONCERNED**

- Refit:
  - the heating resistor,
  - the heating resistor bolts.
- Connect the heating resistor connector.
- Clip on the heater resistor connector clip.

**II - FINAL OPERATION.**

- Remove the lower left-hand cover on the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

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RIGHT-HAND DRIVE

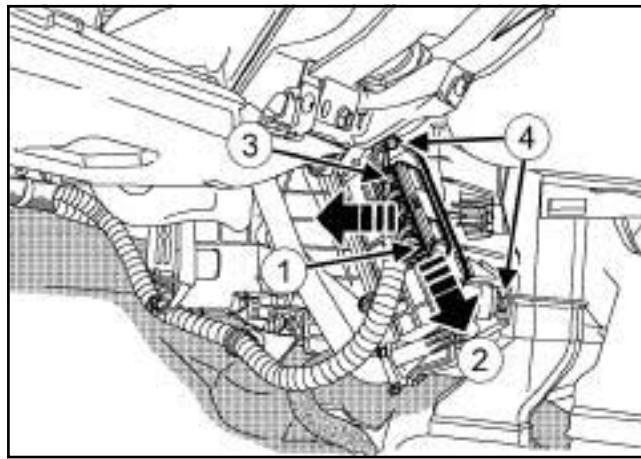
## REMOVAL

## I - REMOVAL PREPARATION OPERATION

 Remove:

- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment),
- the lower cover on the right-hand side of the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the driver's side A pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**)
- .

## II - OPERATION FOR REMOVAL OF PART CONCERNED



131291

- Unclip the heater resistor connector clip (1) in the direction of the arrow (2) .
- Disconnect the connector (3) .
- Remove:
  - the bolts (4) ,
  - the heating resistor.

## REFITTING

## I - REFITTING OPERATION FOR PART CONCERNED

 Refit:

- the heating resistor,
- the heating resistor bolts.
- Connect the heating resistor connector.
- Clip on the heater resistor connector clip.

## II - FINAL OPERATION

 Refit:

- the driver's side A pillar air distribution duct (see **Front air distribution duct: Removal - Refitting**) ,
- the lower cover on the right-hand side of the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment).

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## REMOVAL

## I - REMOVAL PREPARATION OPERATION

## 1 - At the fan assembly end

Remove:

- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the centre panel lower left-hand cover,
- the driver's side A pillar air distribution duct (see **61A, Heating, A-pillar air distribution duct: Removal - Refitting**, page 61A-64) ,
- the brake and accelerator pedal assembly (see **Accelerator/brake pedal assembly: Removal - Refitting**) (37A, Mechanical component controls).

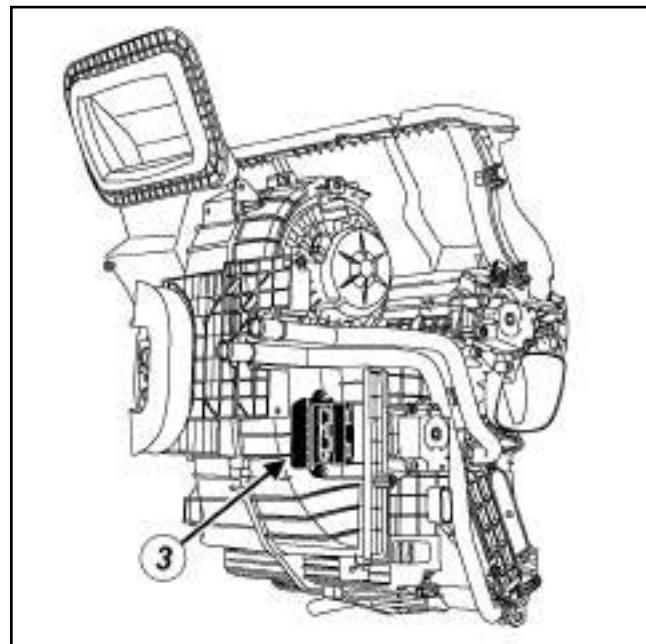
## 2 - At the rear fan assembly end

Remove:

- the cab floor panel trim (see **Cab floor lining: Removal - Refitting**) (71A, Bodywork interior trim),
- the front door sill lining (see **Front door sill lining: Removal - Refitting**) (71A, Body internal trim),
- the rear inner sill trim (see **Rear door sill lining: Removal - Refitting**) (71A, Body internal trim),
- the B-pillar trim (see **B-pillar trim: Removal - Refitting**) (71A, Bodywork interior trim),
- the front seat (see **Complete front seat: Removal - Refitting**) (75A, Front seat frames and seat runners),
- the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
- the rear seat (see **Complete rear seat: Removal - Refitting**) (76A, Rear seat frames and seat runners),
- the floor carpet (see **Floor carpet: Removal - Refitting**) (71A, Body internal trim).

## II - OPERATION FOR REMOVAL OF PART CONCERNED

## 1 - At the fan assembly end



132761



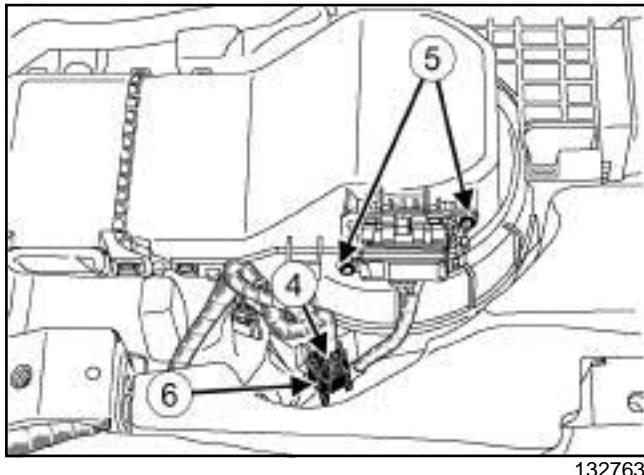
132762

Disconnect the connectors (1).

Remove:

- the bolts (2) ,
- the fan assembly control unit (3) .

## 2 - At the rear fan assembly end



132763

Disconnect the connector (4) .

Remove:

- the bolts (5) ,
- the retaining clip (6) ,
- the rear fan assembly control unit.

## REFITTING

## I - REFITTING OPERATION FOR PART CONCERNED

## 1 - At the fan assembly end

Refit:

- the fan assembly control unit,
- the bolts to the fan assembly control unit.

Connect the fan assembly control unit connectors.

## 2 - At the rear fan assembly end

Refit:

- the rear fan assembly control unit,
- the retaining clip,
- the bolts to the rear fan assembly control unit.

Connect the fan assembly control unit connector.

## II - FINAL OPERATION.

## 1 - At the fan assembly end

Remove:

- the brake and accelerator pedal assembly (see **Accelerator/brake pedal assembly: Removal - Refitting**) (37A, Mechanical component controls),
- the driver's side A pillar air distribution duct (see **61A, Heating, A-pillar air distribution duct: Removal - Refitting**, page 61A-64) ,
- the centre panel lower left-hand cover,
- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

## 2 - At the rear fan assembly end

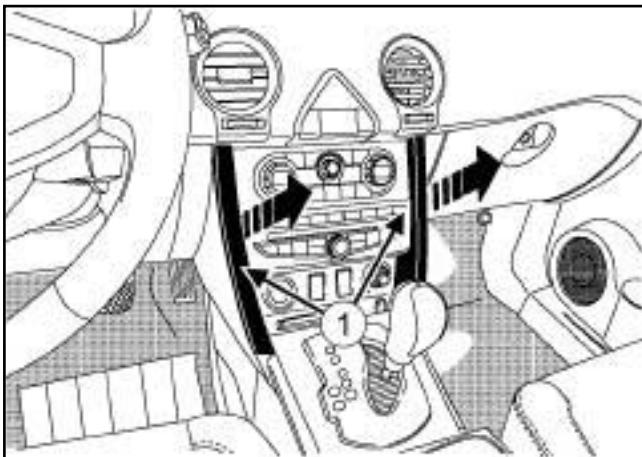
Remove:

- the floor carpet (see **Floor carpet: Removal - Refitting**) (71A, Body internal trim),
- the rear seat (see **Complete rear seat: Removal - Refitting**) (76A, Rear seat frames and seat runners),
- the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
- the front seat (see **Complete front seat: Removal - Refitting**) (75A, Front seat frames and seat runners),
- the B-pillar trim (see **B-pillar trim: Removal - Refitting**) (71A, Bodywork interior trim),
- the rear inner sill trim (see **Rear door sill lining: Removal - Refitting**) (71A, Body internal trim),
- the front door sill lining (see **Front door sill lining: Removal - Refitting**) (71A, Body internal trim),
- the cab floor panel trim (see **Cab floor lining: Removal - Refitting**) (71A, Bodywork interior trim).

AIR CON 02

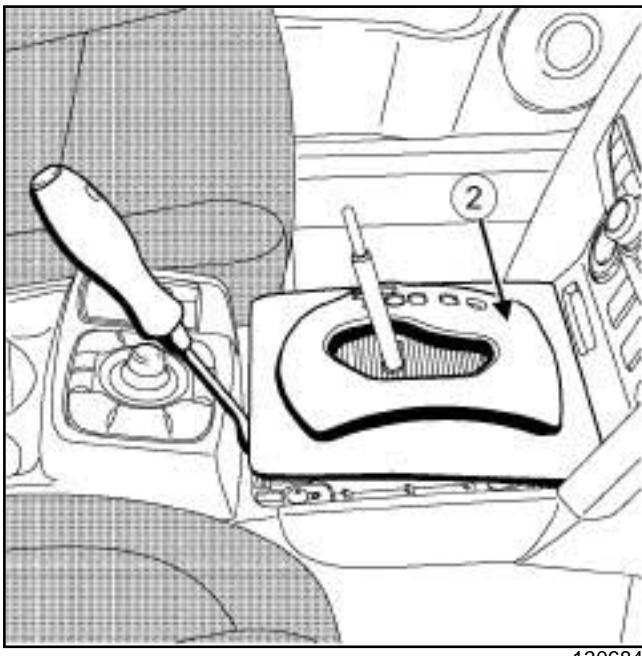
## REMOVAL

## I - REMOVAL PREPARATION OPERATION



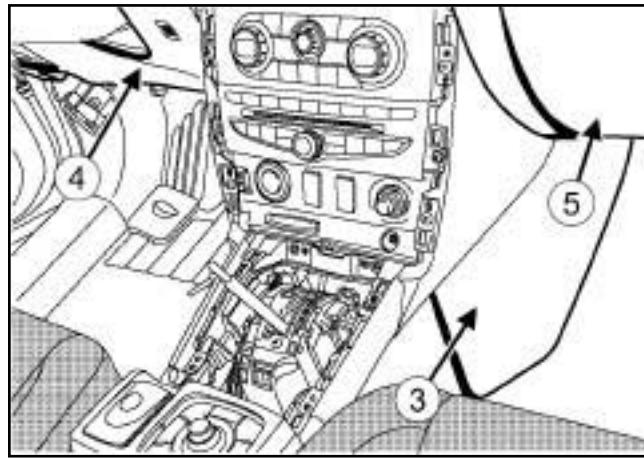
130317

Remove the side trims (1) from the centre panel.



130684

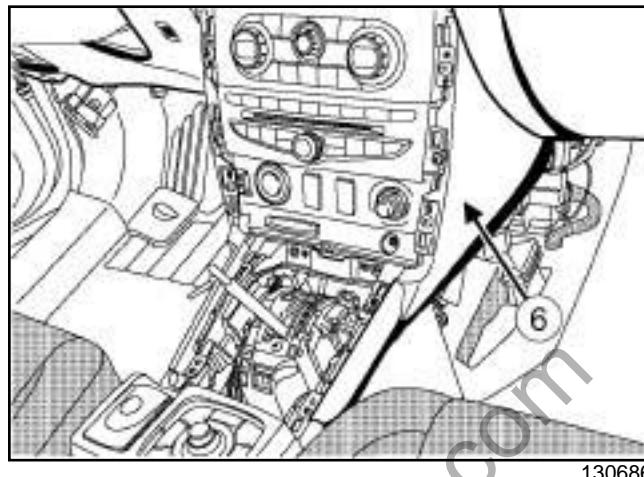
Remove the plate (2) from the gear lever (see **Centre console: Removal - Refitting**) (57A, Interior equipment).



130685

Remove:

- the lower covers (3) from the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the dashboard lower cover (4) on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the glovebox (5) (see **Glovebox: Removal - Refitting**) (57A, Interior equipment).



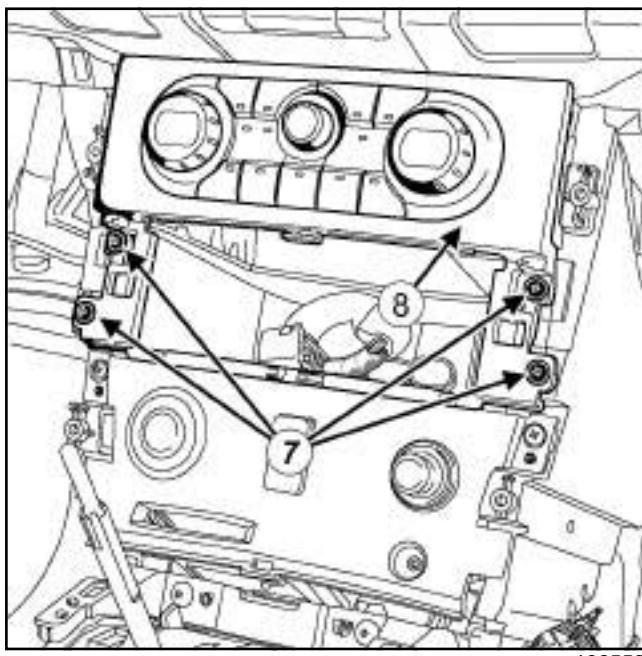
130686

Remove:

- the side trims (6) from the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the CD changer (see **CD changer: Removal - Refitting**) (86A, Radio),
- the radio (see **Car radio: Removal - Refitting**) (86A, Radio).

## AIR CON 02

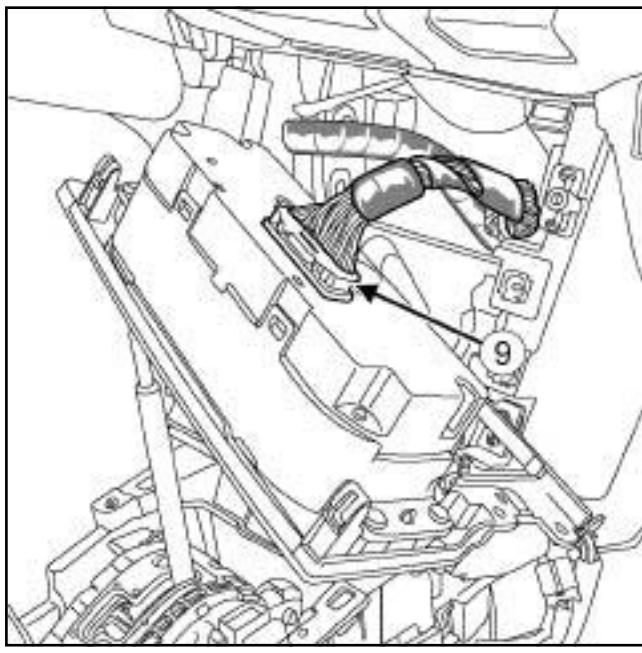
## II - OPERATION FOR REMOVAL OF PART CONCERNED



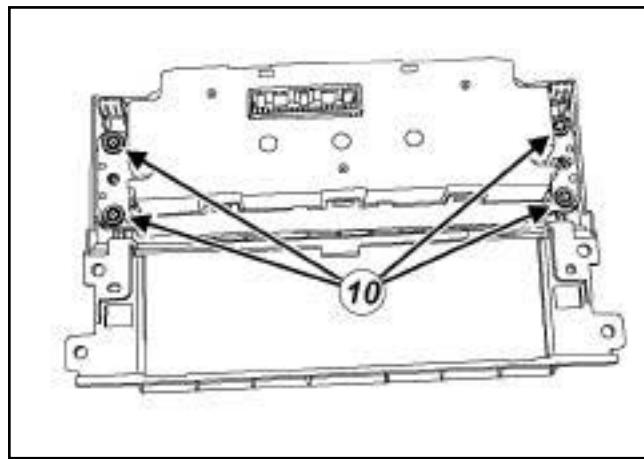
132552

 Remove:

- the bolts (7) ,
- the air conditioning control panel (8) .



131719

 Disconnect the connector (9) .

131722

 Remove:

- the control panel bolts (10) ,
- the control panel.

## REFITTING

## I - REFITTING OPERATION FOR PART CONCERNED

 Refit the control panel bolts. Connect the control panel connector. Refit:

- the control panel,
- the bolts (7) .

## II - FINAL OPERATION.

 Refit:

- the radio (see **Car radio: Removal - Refitting** (86A, Radio),
- the CD changer (see **CD changer: Removal - Refitting** (86A, Radio),
- the side centre panel side trims (see **Dashboard: Removal - Refitting** (57A, Interior equipment),
- the glovebox (see **Glovebox: Removal - Refitting** (57A, Interior equipment),
- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting** (57A, Interior equipment),
- the lower covers to the centre panel (see **Dashboard: Removal - Refitting** (57A, Interior equipment),
- the gear lever plate (see **Centre console: Removal - Refitting** (57A, Interior equipment),

**AIR CON 02**

- the centre panel side trims.

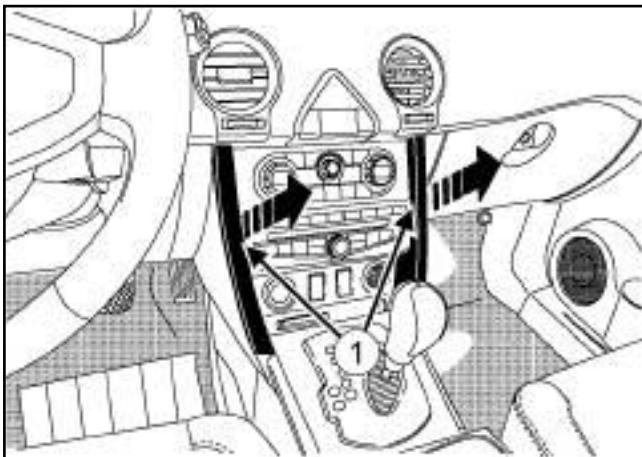
|

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AIR CON 01 or BASIC HEATING

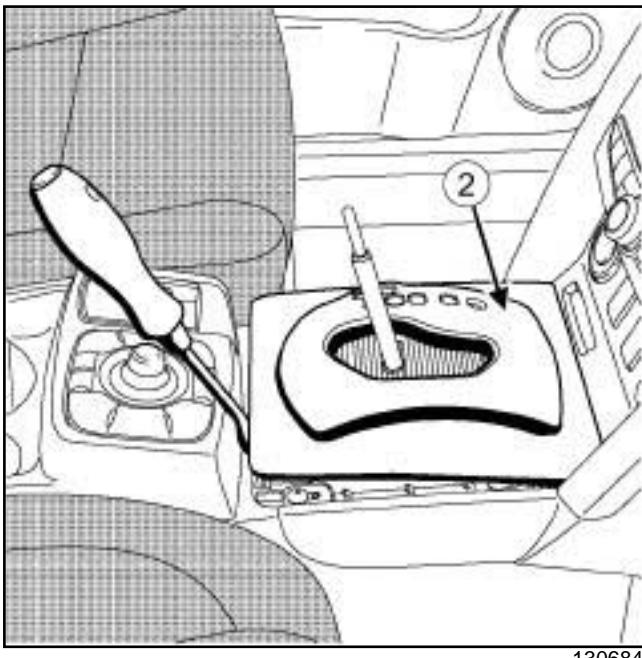
## REMOVAL

## I - REMOVAL PREPARATION OPERATION



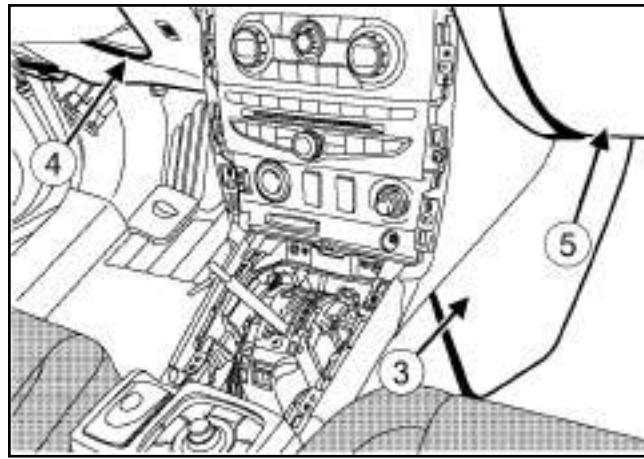
130317

□ Remove the side trims (1) from the centre panel.



130684

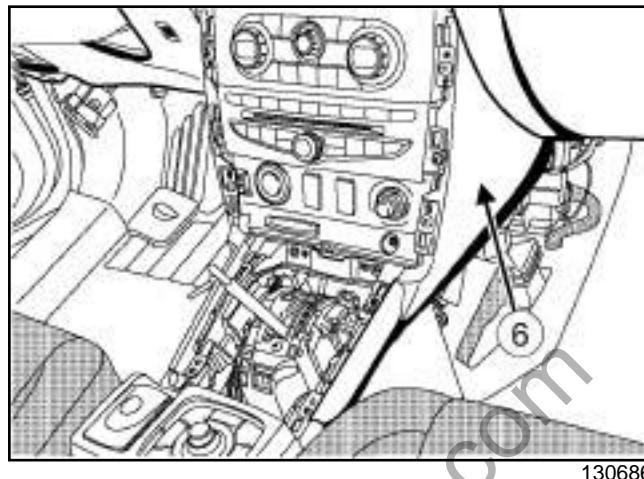
□ Remove the plate (2) from the gear lever (see **Centre console: Removal - Refitting**) (57A, Interior equipment).



130685

□ Remove:

- the lower covers (3) from the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the dashboard lower cover (4) on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the glovebox (5) (see **Glovebox: Removal - Refitting**) (57A, Interior equipment).

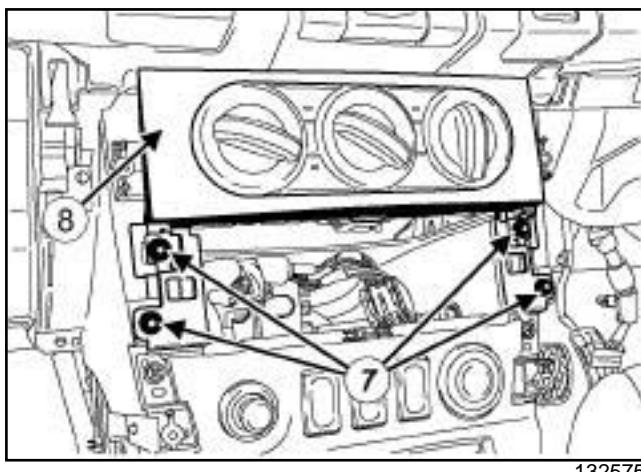


130686

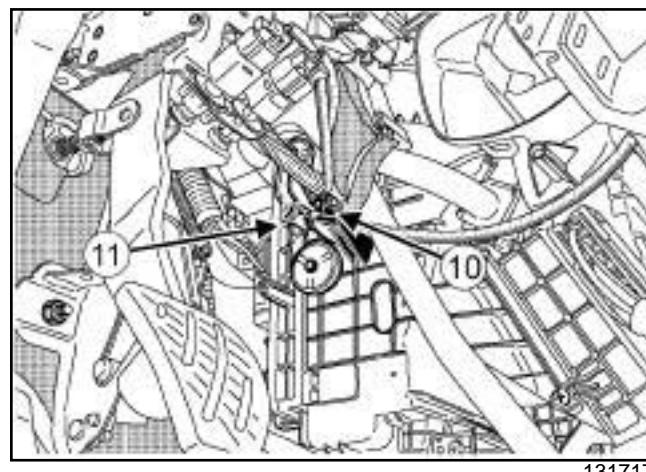
□ Remove:

- the side trims (6) from the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the CD changer (see **CD changer: Removal - Refitting**) (86A, Radio),
- the radio (see **Car radio: Removal - Refitting**) (86A, Radio).

## AIR CON 01 or BASIC HEATING



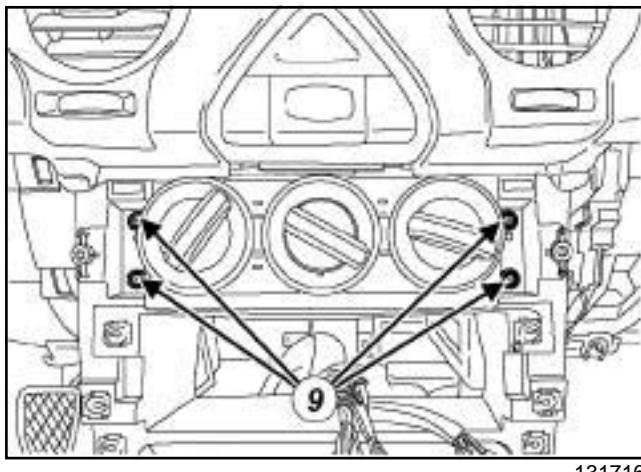
132575



131717

 Remove:

- the bolts (7) ,
- the cover (8) .

**II - OPERATION FOR REMOVAL OF PART CONCERNED**

131716

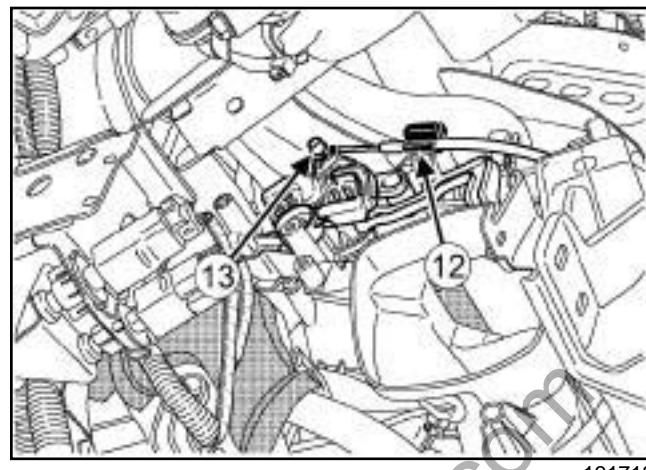
 Remove the bolts (9) .

## Note:

Mark the routing of the air distribution cable.

 Remove:

- the air mixer wiring from the sleeve stop (10) ,
- the retaining ring (11) ,
- the air mixing cable.



131718

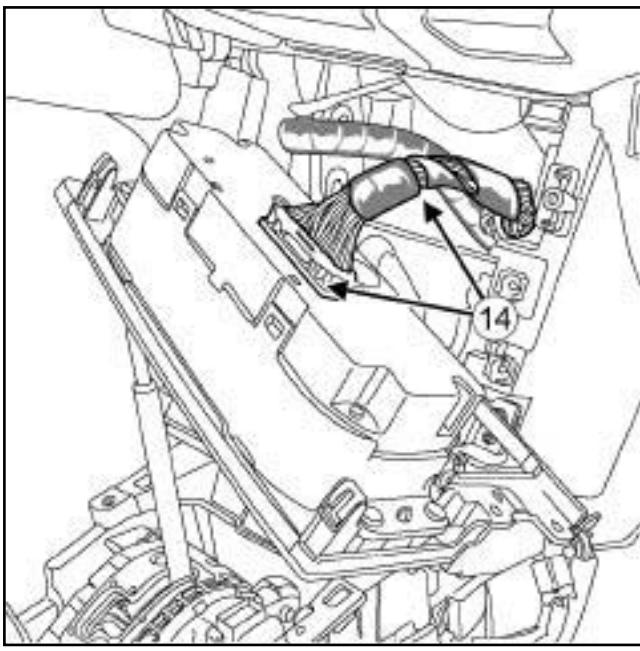
## Note:

Note the routing of the air distribution cable.

 Remove:

- the air distribution cable from the sleeve stop (12) ,
- the retaining ring (13) ,
- the air distribution cable.

## AIR CON 01 or BASIC HEATING



131719

- the side centre panel side trims (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment),
- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the lower covers (3) from the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the gear lever plate (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
- the centre panel side trims.

Disconnect the connectors (14) .

Remove the control panel.

## REFITTING

## I - REFITTING OPERATION FOR PART CONCERNED

Refit the control panel.

Connect the connectors (14) .

Refit:

- the air distribution cable,
- the air distribution cable to the sleeve stop,
- the retaining ring,
- the air mixer cable,
- the air mixer cable to the sleeve stop,
- the retaining ring,
- the bolts (9) .

## II - FINAL OPERATION.

Refit:

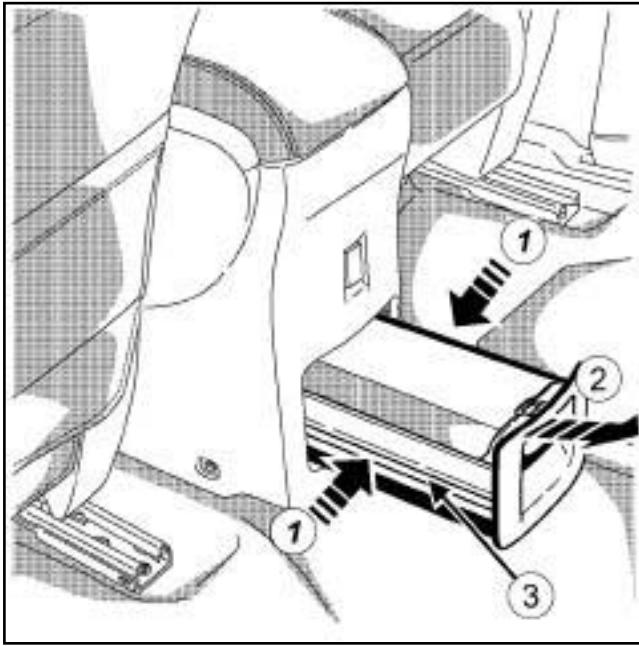
- the cover (8) ,
- the bolts (7) ,
- the radio (see **Car radio: Removal - Refitting**) (86A, Radio),
- the CD changer (see **CD changer: Removal - Refitting**) (86A, Radio),

## REAR SEATS AIR DUCT

## REMOVAL

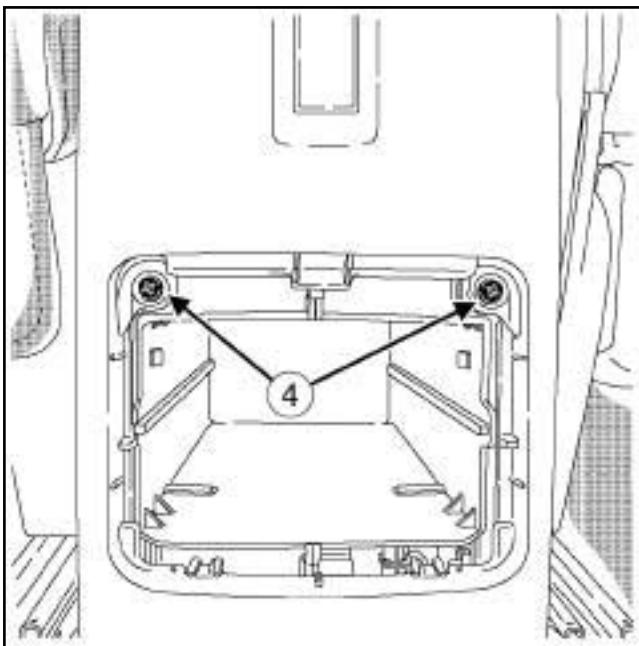
## I - REMOVAL PREPARATION OPERATION

- Remove the rear seat (see **Complete rear seat: Removal - Refitting**) (76A, Rear seat frames and seat runners).



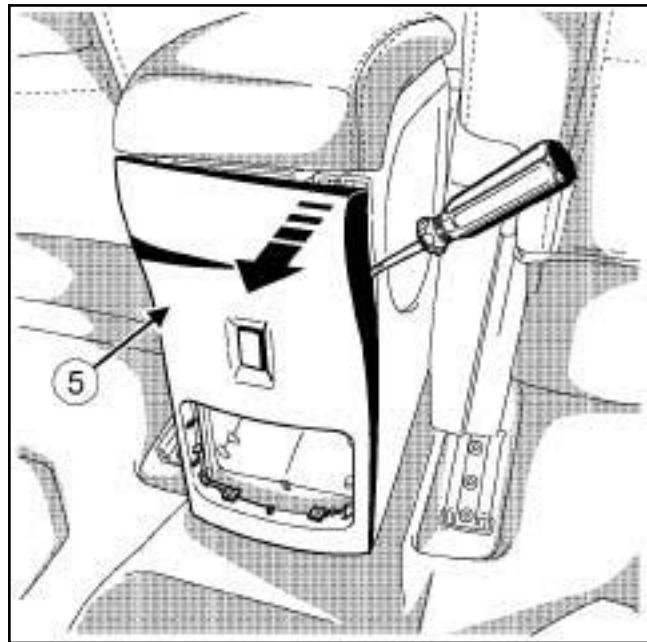
132797

- Remove the rear storage compartment from the centre console (3) in the direction of (2) by pushing at (1) .



132798

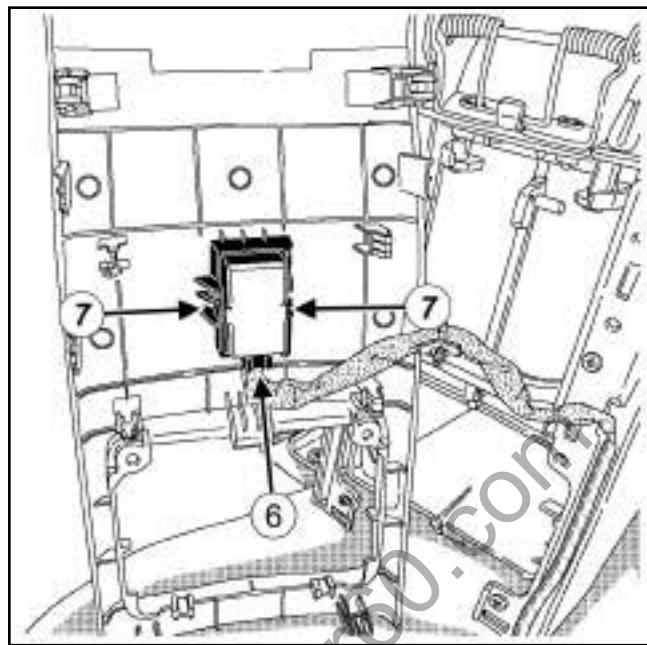
- Remove the bolts (4) .



132799

- Remove the rear cover (5) from the centre console using a flat-blade screwdriver.

## II - OPERATION FOR REMOVAL OF PART CONCERNED



132800

- Disconnect the connector (6) .
- Unclip the clips (7) .
- Remove the rear control panel.

## REAR SEATS AIR DUCT

## REFITTING

## I - REFITTING OPERATION FOR PART CONCERNED

- Refit the rear control panel.
- Attach the clips.
- Connect the connector.

## II - FINAL OPERATION.

- Refit:
  - the centre console rear cover,
  - the bolts (4) ,
  - the centre console rear storage compartment,
  - the rear seat (see **Complete rear seat: Removal - Refitting**) (76A, Rear seat frames and seat runners).

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RIGHT-HAND DRIVE

## REMOVAL

## I - REMOVAL PREPARATION OPERATION



## IMPORTANT

To prevent the pyrotechnic components from being permanently deactivated or triggered (airbags or pretensioners), wait for at least **3 min** after disconnecting the battery.

Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).

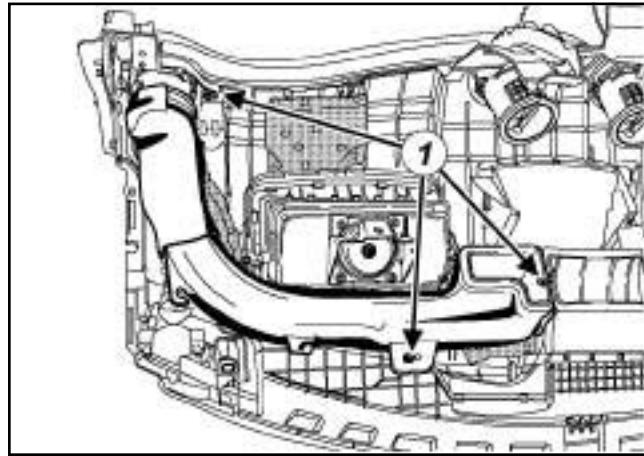
Remove:

- the driver's front airbag (see **Driver's front airbag: Removal - Refitting**) (88C, Airbags and pretensioners),
- the steering wheel (see **Steering wheel: Removal - Refitting**) (36A, Steering assembly),
- the radio control satellite (see **Radio control satellite: Removal - Refitting**) (86A, Radio),
- the half cowlings (see **Steering column: Removal - Refitting**) (36A, Steering assembly),
- the rotary switch (see **Rotary switch: Removal - Refitting**) (84A, Controls - Signalling),
- the steering column switch assembly (see **Steering wheel controls assembly: Removal - Refitting**) (84A, Controls - Signalling),
- the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),
- the front speaker (see **Front speakers: Removal - Refitting**) (86A, Radio),
- the display (see **Display: Removal - Refitting**) (86A, Radio),
- the tweeter (see **Tweeter: Removal - Refitting**) (86A, Radio),
- the solar radiation detector (see **61A, Heating, Insolation sensor: Removal - Refitting**, page 61A-76),
- the CD changer (see **CD changer: Removal - Refitting**) (86A, Radio),
- the radio (see **Car radio: Removal - Refitting**) (86A, Radio),
- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-48),
- the starter control panel (see **Card reader: Removal - Refitting**) (82A, Immobiliser),

- the glovebox (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
- the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

## II - OPERATION FOR REMOVAL OF PART CONCERNED

## 1 - Front left-hand air distribution duct

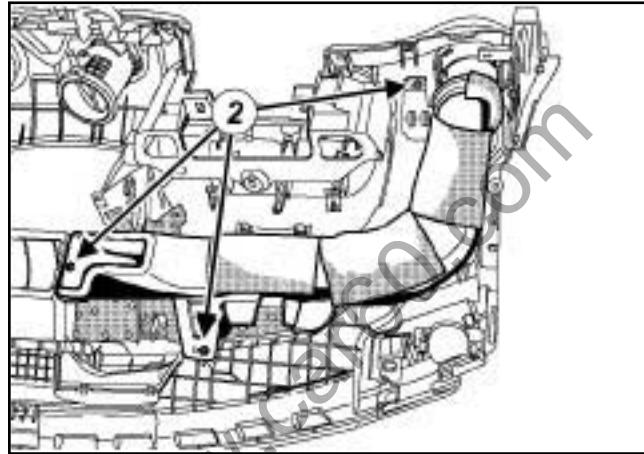


131294

Remove:

- the bolts (1) ,
- the front left-hand air distribution duct.

## 2 - Front right-hand air distribution duct



131295

Remove:

- the bolts (2) ,
- the front right-hand air distribution duct.

RIGHT-HAND DRIVE

## REFITTING

## I - REFITTING OPERATION FOR PART CONCERNED

## 1 - Front left-hand air distribution duct

 Refit:

- the front left-hand air distribution duct,
- the front left-hand air distribution duct bolts.

## 2 - Front right-hand air distribution duct

 Refit:

- the front right-hand air distribution duct,
- the front right-hand air distribution duct bolts.

## II - FINAL OPERATION.

 Refit:

- the dashboard (see **Dashboard: Removal - Refitting** (57A, Interior equipment),
- the central console (see **Centre console: Removal - Refitting** (57A, Interior equipment),
- the glovebox (see **Dashboard: Removal - Refitting** (57A, Interior equipment),
- the starter control panel (see **Card reader: Removal - Refitting** (82A, Immobiliser),
- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-48) ,
- the radio (see **Car radio: Removal - Refitting** (86A, Radio),
- the CD changer (see **CD changer: Removal - Refitting** (86A, Radio),
- the solar radiation detector (see **61A, Heating, Insolation sensor: Removal - Refitting**, page 61A-76) ,
- the tweeter (see **Tweeter: Removal - Refitting** (86A, Radio),
- the display (see **Display: Removal - Refitting** (86A, Radio),
- the front speaker (see **Front speakers: Removal - Refitting** (86A, Radio),
- the instrument panel (see **Instrument panel: Removal - Refitting** (83A, Instrument panel),
- the steering column switch assembly (see **Steering wheel controls assembly: Removal - Refitting** (84A, Controls - Signalling),

- the rotary switch (see **Rotary switch: Removal - Refitting** (84A, Controls - Signalling),
- the half cowlings (see **Steering column: Removal - Refitting** (36A, Steering assembly),
- the radio control satellite (see **Radio control satellite: Removal - Refitting** (86A, Radio),
- the steering wheel (see **Steering wheel: Removal - Refitting** (36A, Steering assembly),
- the driver's front airbag (see **Driver's front airbag: Removal - Refitting** (88C, Airbags and pretensioners).

 Connect the battery (see **Battery : Removal - Refitting** (80A, Battery).

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## Front side air distribution duct: Removal - Refitting

LEFT-HAND DRIVE

## REMOVAL

## I - REMOVAL PREPARATION OPERATION

## IMPORTANT

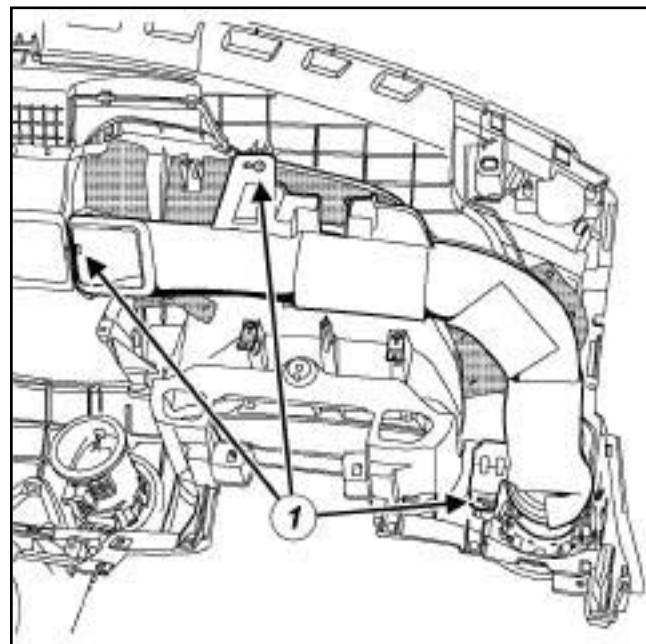
To prevent the pyrotechnic components from being permanently deactivated or triggered (airbags or pretensioners), wait for at least **3 minutes** after disconnecting the battery.

- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- Remove:
  - the driver's front airbag (see **Driver's front airbag: Removal - Refitting**) (88C, Airbags and pretensioners),
  - the steering wheel (see **Steering wheel: Removal - Refitting**) (36A, Steering assembly),
  - the rotary switch (see **Rotary switch: Removal - Refitting**) (84A, Controls - Signalling),
  - the steering column switch assembly (see **Steering wheel controls assembly: Removal - Refitting**) (84A, Controls - Signalling),
  - the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),
  - the solar radiation detector (see **61A, Heating, Insolation sensor: Removal - Refitting**, page 61A-76),
  - the tweeter (see **Tweeter: Removal - Refitting**) (86A, Radio),
  - the front speaker (see **Front speakers: Removal - Refitting**) (86A, Radio),
  - the display (see **Display: Removal - Refitting**) (86A, Radio),
  - the navigation screen (see **Navigation screen: Removal - Refitting**) (83C, Onboard telematics system),
  - the CD changer (see **CD changer: Removal - Refitting**) (86A, Radio),
  - the radio (see **Car radio: Removal - Refitting**) (86A, Radio),
  - the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-48),
  - the starter control panel (see **Card reader: Removal - Refitting**) (82A, Immobiliser),
  - the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),

- the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

## II - OPERATION FOR REMOVAL OF PART CONCERNED

## 1 - Front left-hand air distribution duct



131292

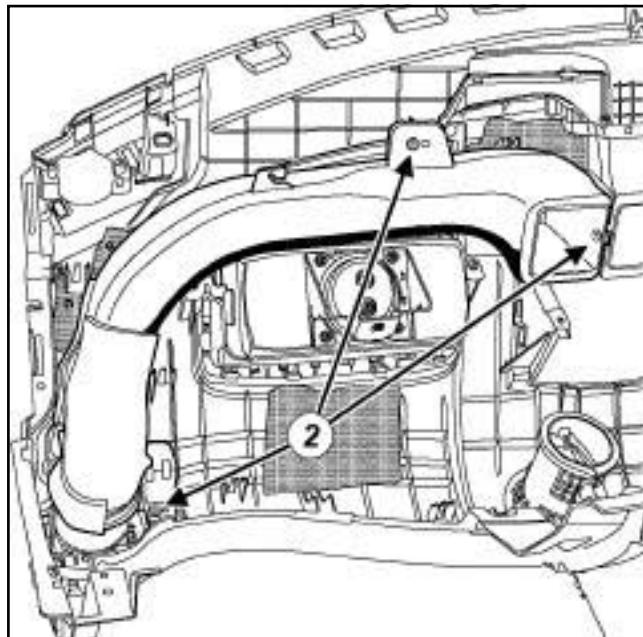
Remove:

- the bolts (1),
- the front left-hand air distribution duct.

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## LEFT-HAND DRIVE

## 2 - Front right-hand air distribution duct



131293

 Remove:

- the bolts (2) ,
- the front right-hand air distribution duct.

## REFITTING

## I - REFITTING OPERATION FOR PART CONCERNED

## 1 - Front left-hand air distribution duct

 Remove:

- the front left-hand air distribution duct,
- the front left-hand air distribution duct bolts.

## 2 - Front right-hand air distribution duct

 Remove:

- the front right-hand air distribution duct,
- the front right-hand air distribution duct bolts.

## II - FINAL OPERATION.

 Refit:

- the dashboard (see **Dashboard: Removal - Refitting** (57A, Interior equipment),
- the central console (see **Centre console: Removal - Refitting** (57A, Interior equipment),

- the starter control panel (see **Card reader: Removal - Refitting** (82A, Immobiliser),
- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-48)
- the radio (see **Car radio: Removal - Refitting** (86A, Radio),
- the CD changer (see **CD changer: Removal - Refitting** (86A, Radio),
- the navigation screen (see **Navigation screen: Removal - Refitting** (83C, Onboard telematics system),
- the display (see **Display: Removal - Refitting** (86A, Radio),
- the front speaker (see **Front speakers: Removal - Refitting** (86A, Radio),
- the tweeter (see **Tweeter: Removal - Refitting** (86A, Radio),
- the solar radiation detector (see **61A, Heating, Insolation sensor: Removal - Refitting**, page 61A-76) ,
- the instrument panel (see **Instrument panel: Removal - Refitting** (83A, Instrument panel),
- the steering column switch assembly (see **Steering wheel controls assembly: Removal - Refitting** (84A, Controls - Signalling),
- the rotary switch (see **Rotary switch: Removal - Refitting** (84A, Controls - Signalling),
- the steering wheel (see **Steering wheel: Removal - Refitting** (36A, Steering assembly),
- the driver's front airbag (see **Driver's front airbag: Removal - Refitting** (88C, Airbags and pretensioners).

Connect the battery (see **Battery : Removal - Refitting** (80A, Battery).

RIGHT-HAND DRIVE

## REMOVAL

## I - REMOVAL PREPARATION OPERATION



## IMPORTANT

To prevent the pyrotechnic components from being permanently deactivated or triggered (airbags or pretensioners), wait for at least **3 min** after disconnecting the battery.

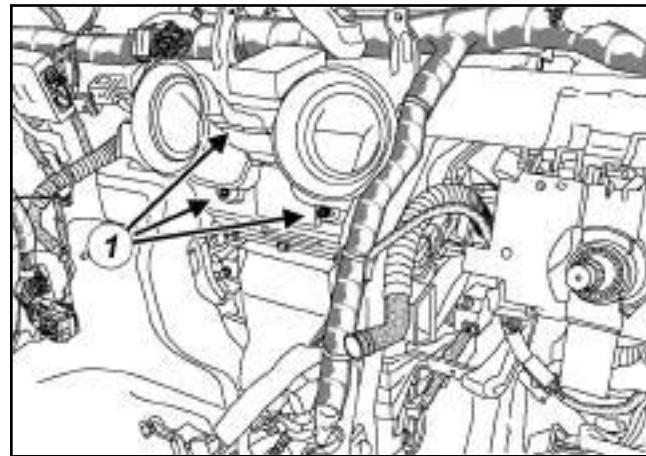
Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).

Remove:

- the driver's front airbag (see **Driver's front airbag: Removal - Refitting**) (88C, Airbags and pretensioners),
- the steering wheel (see **Steering wheel: Removal - Refitting**) (36A, Steering assembly),
- the radio control satellite (see **Radio control satellite: Removal - Refitting**) (86A, Radio),
- the half cowlings (see **Steering column: Removal - Refitting**) (36A, Steering assembly),
- the rotary switch (see **Rotary switch: Removal - Refitting**) (84A, Controls - Signalling),
- the steering column switch assembly (see **Steering wheel controls assembly: Removal - Refitting**) (84A, Controls - Signalling),
- the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),
- the front speaker (see **Front speakers: Removal - Refitting**) (86A, Radio),
- the display (see **Display: Removal - Refitting**) (86A, Radio),
- the tweeter (see **Tweeter: Removal - Refitting**) (86A, Radio),
- the solar radiation detector (see **61A, Heating, Insolation sensor: Removal - Refitting**, page 61A-76),
- the CD changer (see **CD changer: Removal - Refitting**) (86A, Radio),
- the radio (see **Car radio: Removal - Refitting**) (86A, Radio),
- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-48),
- the starter control panel (see **Card reader: Removal - Refitting**) (82A, Immobiliser),

- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment),
- the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
- the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

## II - OPERATION FOR REMOVAL OF PART CONCERNED



131297

Remove:

- the bolts (1) ,
- the front centre air distribution duct.

## III - REFITTING OPERATION FOR PART CONCERNED

Refit:

- the front centre air distribution duct.
- the screws for the front central air distribution duct.

## IV - FINAL OPERATION.

Refit:

- the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment),
- the starter control panel (see **Card reader: Removal - Refitting**) (82A, Immobiliser),
- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-48),
- the radio (see **Car radio: Removal - Refitting**) (86A, Radio),

### RIGHT-HAND DRIVE

- the CD changer (see **CD changer: Removal - Refitting** (86A, Radio),
- the solar radiation detector (see **61A, Heating, Insolation sensor: Removal - Refitting**, page 61A-76),
- the tweeter (see **Tweeter: Removal - Refitting** (86A, Radio),
- the display (see **Display: Removal - Refitting** (86A, Radio),
- the front speaker (see **Front speakers: Removal - Refitting** (86A, Radio),
- the instrument panel (see **Instrument panel: Removal - Refitting** (83A, Instrument panel),
- the steering column switch assembly (see **Steering wheel controls assembly: Removal - Refitting** (84A, Controls - Signalling),
- the rotary switch (see **Rotary switch: Removal - Refitting** (84A, Controls - Signalling),
- the half cowlings (see **Steering column: Removal - Refitting** (36A, Steering assembly),
- the radio control satellite (see **Radio control satellite: Removal - Refitting** (86A, Radio),
- the steering wheel (see **Steering wheel: Removal - Refitting** (36A, Steering assembly),
- the driver's front airbag (see **Driver's front airbag: Removal - Refitting** (88C, Airbags and pretensioners).

Connect the battery (see **Battery : Removal - Refitting** (80A, Battery).

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LEFT-HAND DRIVE

## REMOVAL

## I - REMOVAL PREPARATION OPERATION

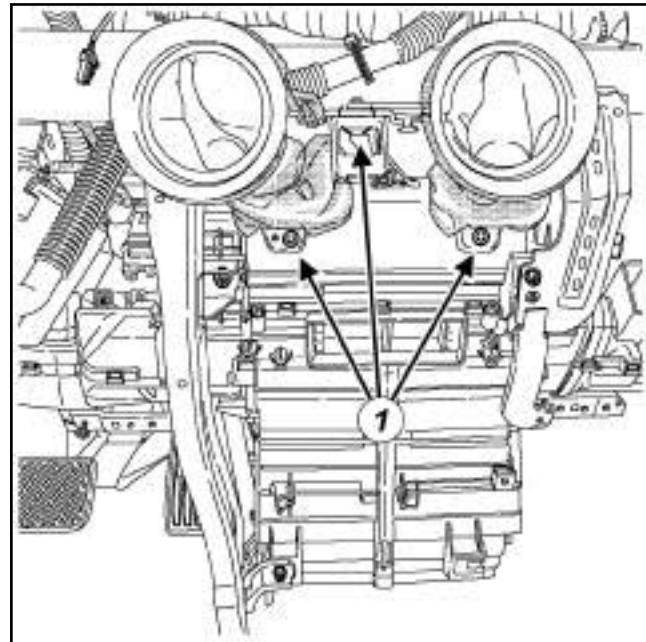
## IMPORTANT

To prevent the pyrotechnic components from being permanently deactivated or triggered (airbags or pretensioners), wait for at least **3 min** after disconnecting the battery.

- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, **Battery**).
- Remove:
  - the driver's front airbag (see **Driver's front airbag: Removal - Refitting**) (88C, **Airbags and pretensioners**),
  - the steering wheel (see **Steering wheel: Removal - Refitting**) (36A, **Steering assembly**),
  - the rotary switch (see **Rotary switch: Removal - Refitting**) (84A, **Controls - Signalling**),
  - the steering column switch assembly (see **Steering wheel controls assembly: Removal - Refitting**) (84A, **Controls - Signalling**),
  - the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, **Instrument panel**),
  - the solar radiation detector (see **61A, Heating, Insolation sensor: Removal - Refitting**, page **61A-76**),
  - the tweeter (see **Tweeter: Removal - Refitting**) (86A, **Radio**),
  - the front speaker (see **Front speakers: Removal - Refitting**) (86A, **Radio**),
  - the display (see **Display: Removal - Refitting**) (86A, **Radio**),
  - the navigation screen (see **Navigation screen: Removal - Refitting**) (83C, **On-board telematics system**),
  - the CD changer (see **CD changer: Removal - Refitting**) (86A, **Radio**),
  - the radio (see **Car radio: Removal - Refitting**) (86A, **Radio**),
  - the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page **61A-48**),
  - the starter control panel (see **Card reader: Removal - Refitting**) (82A, **Immobiliser**),
  - the central console (see **Centre console: Removal - Refitting**) (57A, **Interior equipment**),

- the dashboard (see **Dashboard: Removal - Refitting**) (57A, **Interior equipment**).

## II - OPERATION FOR REMOVAL OF PART CONCERNED



131296

- Remove:

- the bolts (1) from the front centre air distribution duct,
- the front centre air distribution duct.

## REFITTING

## I - REFITTING OPERATION FOR PART CONCERNED

- Refit:

- the front centre air distribution duct.
- the bolts for the front central air distribution duct.

## II - FINAL OPERATION.

- Refit:

- the dashboard (see **Dashboard: Removal - Refitting**) (57A, **Interior equipment**),
- the central console (see **Centre console: Removal - Refitting**) (57A, **Interior equipment**),
- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page **61A-48**),
- the starter control panel (see **Card reader: Removal - Refitting**) (82A, **Immobiliser**),

## LEFT-HAND DRIVE

- the radio (see **Car radio: Removal - Refitting**) (86A, Radio),
- the CD changer (see **CD changer: Removal - Refitting**) (86A, Radio),
- the navigation screen (see **Navigation screen: Removal - Refitting**) (83C, On-board telematics system),
- the display (see **Display: Removal - Refitting**) (86A, Radio),
- the front speaker (see **Front speakers: Removal - Refitting**) (86A, Radio),
- the tweeter (see **Tweeter: Removal - Refitting**) (86A, Radio),
- the solar radiation detector (see **61A, Heating, Insolation sensor: Removal - Refitting**, page 61A-76),
- the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),
- the steering column switch assembly (see **Steering wheel controls assembly: Removal - Refitting**) (84A, Controls - Signalling),
- the rotary switch (see **Rotary switch: Removal - Refitting**) (84A, Controls - Signalling),
- the steering wheel (see **Steering wheel: Removal - Refitting**) (36A, Steering assembly),
- the driver's front airbag (see **Driver's front airbag: Removal - Refitting**) (88C, Airbags and pretensioners).

Connect the battery (see **Battery : Removal - Refitting**) (80A, Battery).

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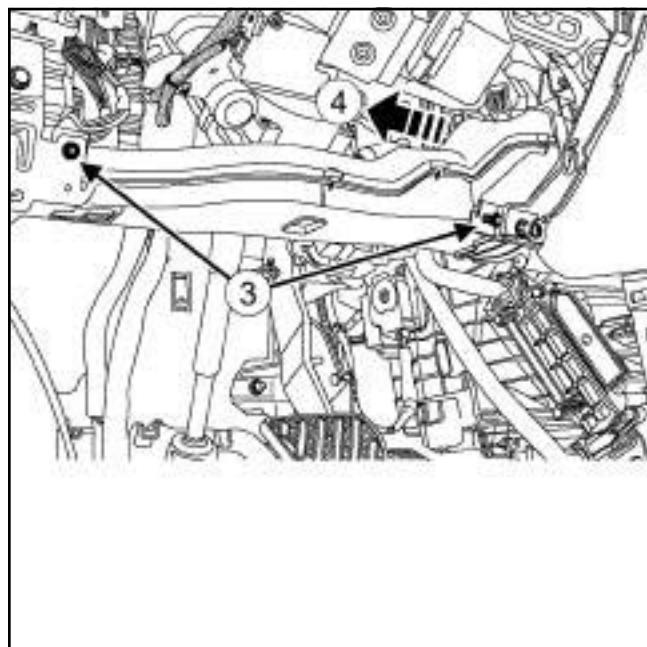
## REMOVAL

## I - REFITTING PREPARATION OPERATION

## 1 - Driver's side

Remove:

- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the lower cover on the left-hand side of the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).



132357

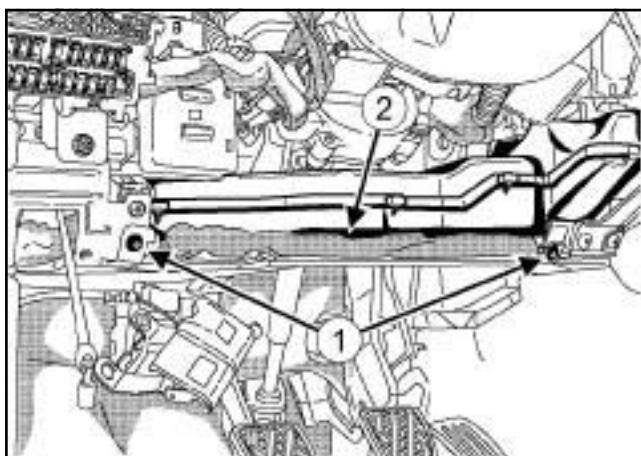
## 2 - Front passenger side

Remove:

- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment),
- the lower cover on the right-hand side of the centre panel (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

## II - OPERATION FOR REMOVAL OF PART CONCERNED

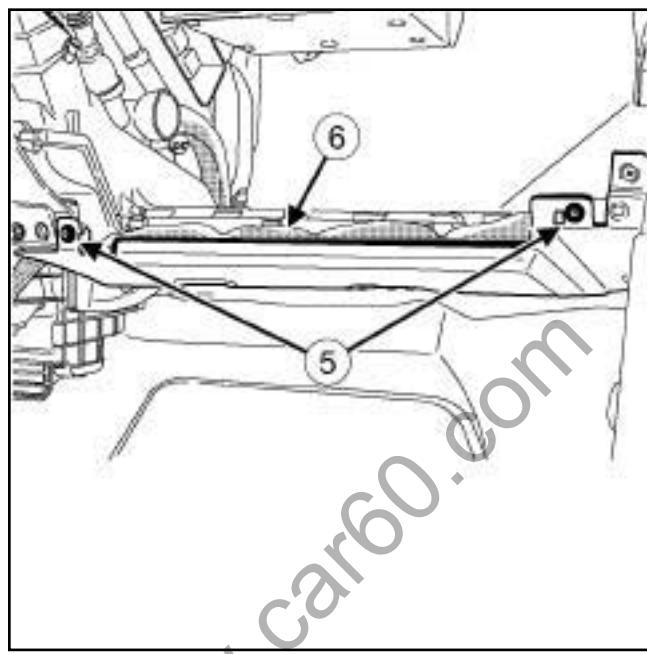
## 1 - Driver's side



132356

Remove:

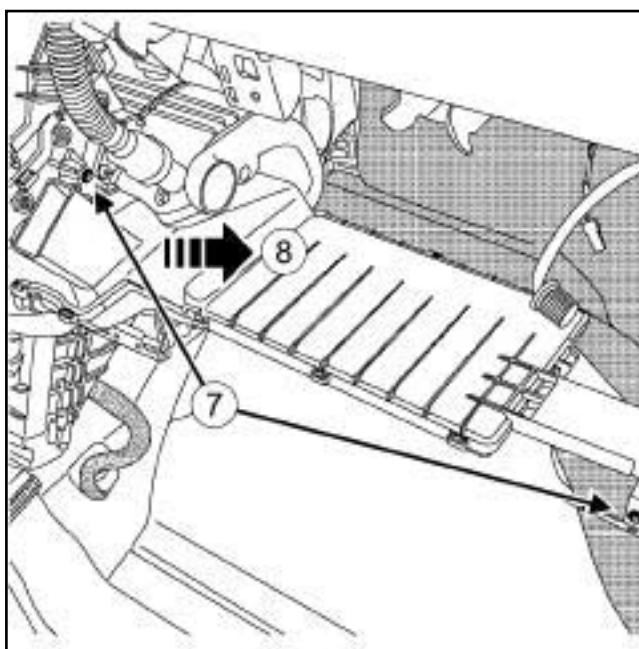
- the bolts (1) ,
- the driver's side lower dashboard trim (2) .



132358

Remove:

- the bolts (5) ,
- the passenger side lower dashboard trim.



132359

**II - FINAL OPERATION.****1 - Driver's side** Refit:

- the lower cover on the left-hand side of the centre panel (see **Dashboard: Removal - Refitting** (57A, Interior equipment),
- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting** (57A, Interior equipment)).

**2 - Front passenger side** Remove:

- the lower cover on the right-hand side of the centre panel (see **Dashboard: Removal - Refitting** (57A, Interior equipment),
- the glovebox (see **Glovebox: Removal - Refitting** (57A, Interior equipment)).

 Remove:

- the bolts (7),
- the passenger side A pillar air distribution duct in the direction of the arrow (8).

**REFITTING****I - REFITTING OPERATION FOR PART CONCERNED****1 - Driver's side** Refit:

- the driver's side A pillar air distribution duct,
- the bolts for the A pillar air distribution duct on the driver's side,
- the driver's side lower dashboard trim,
- the dashboard lower trim bolts on the driver's side.

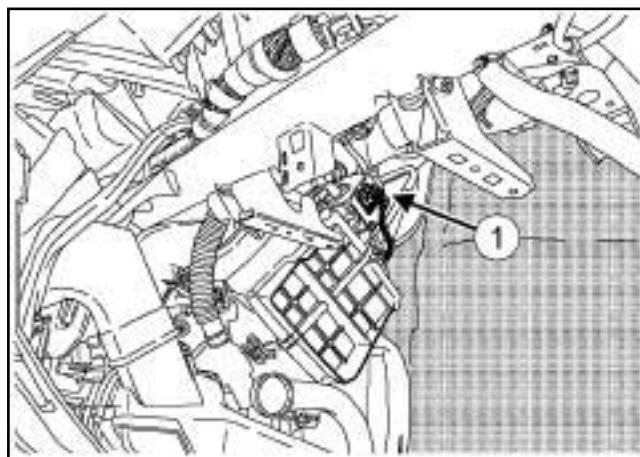
**2 - Front passenger side** Refit:

- the passenger side A pillar air distribution duct,
- the bolts for the A pillar air distribution duct on the passenger side,
- the passenger side lower dashboard trim,
- the dashboard lower trim bolts on the passenger side.

LEFT-HAND DRIVE, and AIR CON 02

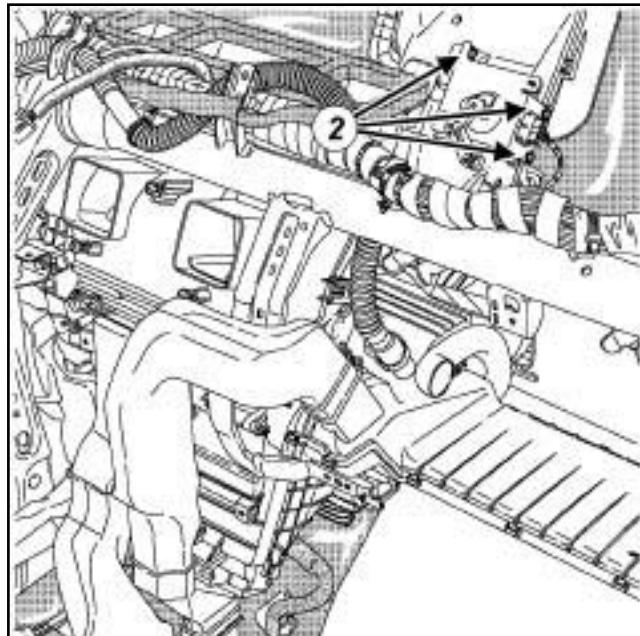
**REMOVAL****I - REMOVAL PREPARATION OPERATION**

Remove the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment).

**II - OPERATION FOR REMOVAL OF PART CONCERNED**

131298

Disconnect the connector (1).



131299

Remove:

- the bolts (2),
- the recirculation motor.

**REFITTING****I - REFITTING OPERATION FOR PART CONCERNED**

Refit:

- the recirculation motor,
- the recirculation motor bolts.

Connect the recirculation motor connector.

**II - FINAL OPERATION.**

Refit the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment).

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RIGHT-HAND DRIVE, and AIR CON 02

**REMOVAL****I - REMOVAL PREPARATION OPERATION****IMPORTANT**

To prevent the pyrotechnic components from being permanently deactivated or triggered (airbags or pretensioners), wait for at least **3 minutes** after disconnecting the battery.

Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).

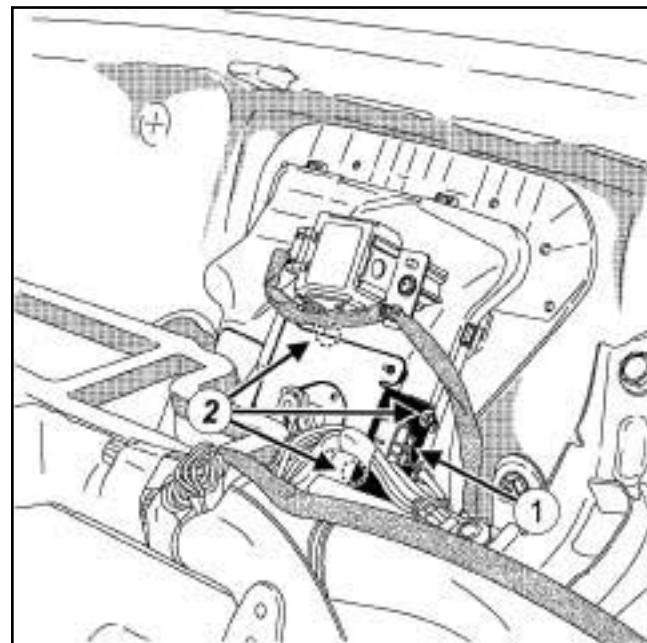
Remove:

- the driver's front airbag (see **Driver's front airbag: Removal - Refitting**) (88C, Airbags and pretensioners),
- the steering wheel (see **Steering wheel: Removal - Refitting**) (36A, Steering assembly),
- the radio control satellite (see **Radio control satellite: Removal - Refitting**) (86A, Radio),
- the half cowlings (see **Steering column: Removal - Refitting**) (36A, Steering assembly),
- the rotary switch (see **Rotary switch: Removal - Refitting**) (84A, Controls - Signalling),
- the steering column switch assembly (see **Steering wheel controls assembly: Removal - Refitting**) (84A, Control - Signals),
- the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),
- the front speaker (see **Front speakers: Removal - Refitting**) (86A, Radio),
- the display (see **Display: Removal - Refitting**) (86A, Radio),
- the tweeter (see **Tweeter: Removal - Refitting**) (86A, Radio),
- the solar radiation detector (see **61A, Heating, Insolation sensor: Removal - Refitting**, page 61A-76),
- the CD changer (see **CD changer: Removal - Refitting**) (86A, Radio),
- the radio (see **Car radio: Removal - Refitting**) (86A, Radio),
- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-48)
- the starter control panel (see **Card reader: Removal - Refitting**) (82A, Immobiliser),

- the glovebox (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

- the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),

- the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

**II - OPERATION FOR REMOVAL OF PART CONCERNED**

131300

Disconnect the connector (1) .

Remove:

- the bolts (2) ,
- the recirculation motor.

**REFITTING****I - REFITTING OPERATION FOR PART CONCERNED**

Refit:

- the recirculation motor,
- the recirculation motor bolts,

Connect the connector.

**II - FINAL OPERATION.**

Refit:

- the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),

RIGHT-HAND DRIVE, and AIR CON 02

- the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
- the glovebox (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).
- the starter control panel (see **Card reader: Removal - Refitting**) (82A, Immobiliser),
- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-48)
- the radio (see **Car radio: Removal - Refitting**) (86A, Radio),
- the CD changer (see **CD changer: Removal - Refitting**) (86A, Radio),
- the solar radiation detector (see **61A, Heating, Insolation sensor: Removal - Refitting**, page 61A-76) ,
- the tweeter (see **Tweeter: Removal - Refitting**) (86A, Radio),
- the display (see **Display: Removal - Refitting**) (86A, Radio),
- the front speaker (see **Front speakers: Removal - Refitting**) (86A, Radio),
- the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),
- the steering column switch assembly (see **Steering wheel controls assembly: Removal - Refitting**) (84A, Control - Signals),
- the rotary switch (see **Rotary switch: Removal - Refitting**) (84A, Controls - Signalling),
- the half cowlings (see **Steering column: Removal - Refitting**) (36A, Steering assembly),
- the radio control satellite (see **Radio control satellite: Removal - Refitting**) (86A, Radio),
- the steering wheel (see **Steering wheel: Removal - Refitting**) (36A, Steering assembly),
- the driver's front airbag (see **Driver's front airbag: Removal - Refitting**) (88C, Airbags and pretensioners).

Connect the battery (see **Battery : Removal - Refitting**) (80A, Battery).

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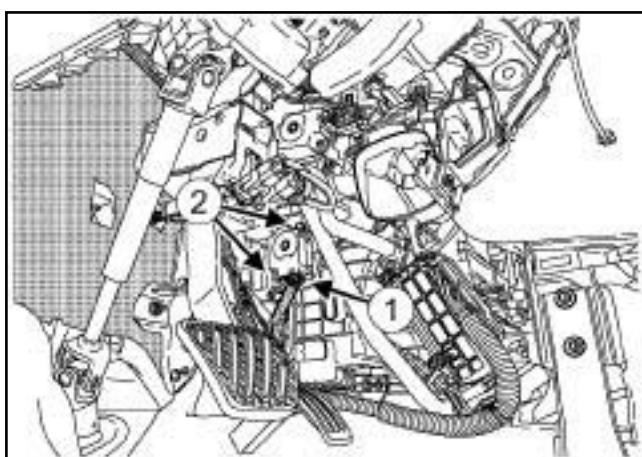
LEFT-HAND DRIVE, and AIR CON 02

**REMOVAL****I - REMOVAL PREPARATION OPERATION****1 - Left-hand mixer motor** Remove:

- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting** (57A, Interior equipment)),
- the centre panel lower left-hand cover,
- the A pillar air distribution duct (see **61A, Heating, A-pillar air distribution duct: Removal - Refitting**, page **61A-64**).

**2 - Right-hand mixer motor** Remove:

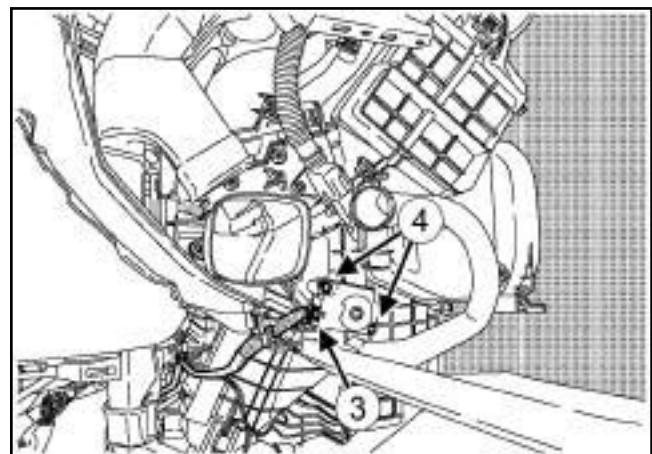
- the glovebox (see **Glovebox: Removal - Refitting** ( 57A, Interior equipment)),
- the centre panel lower left-hand cover
- the A pillar air distribution duct (see **61A, Heating, A-pillar air distribution duct: Removal - Refitting**, page **61A-64**).

**II - OPERATION FOR REMOVAL OF PART CONCERNED****1 - Left-hand mixer motor**

132801

 Disconnect the connector (1). Remove:

- the bolts (2),
- the left-hand mixer motor.

**2 - Right-hand mixer motor**

132802

 Disconnect the connector (3). Remove:

- the bolts (4),
- the right-hand mixer motor.

**REFITTING****I - REFITTING OPERATION FOR PART CONCERNED** Refit:

- the air mixing motor,
- the air mixing motor bolts.

 Connect the air mixing motor connector.**II - FINAL OPERATION.****1 - Left-hand mixer motor** Refit:

- the A pillar air distribution duct (see **61A, Heating, A-pillar air distribution duct: Removal - Refitting**, page **61A-64**).
- the centre panel lower left-hand cover,
- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting** (57A, Interior equipment)).

**2 - Right-hand mixer motor** Refit:

- the A pillar air distribution duct (see **61A, Heating, A-pillar air distribution duct: Removal - Refitting**, page **61A-64**).

LEFT-HAND DRIVE, and AIR CON 02

- the centre panel lower left-hand cover,
- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment).

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RIGHT-HAND DRIVE, and AIR CON 02

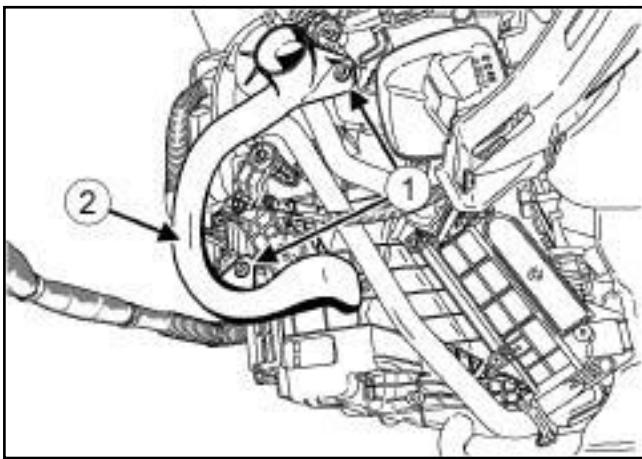
## REMOVAL

## I - REMOVAL PREPARATION OPERATION

## 1 - Left-hand mixer motor

 Remove:

- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment),
- the centre panel lower left-hand cover,
- the A pillar air distribution duct (see **61A, Heating, A-pillar air distribution duct: Removal - Refitting**, page 61A-64) .



131260

 Remove:

- the bolts (1) ,
- the glove box air duct (2) .

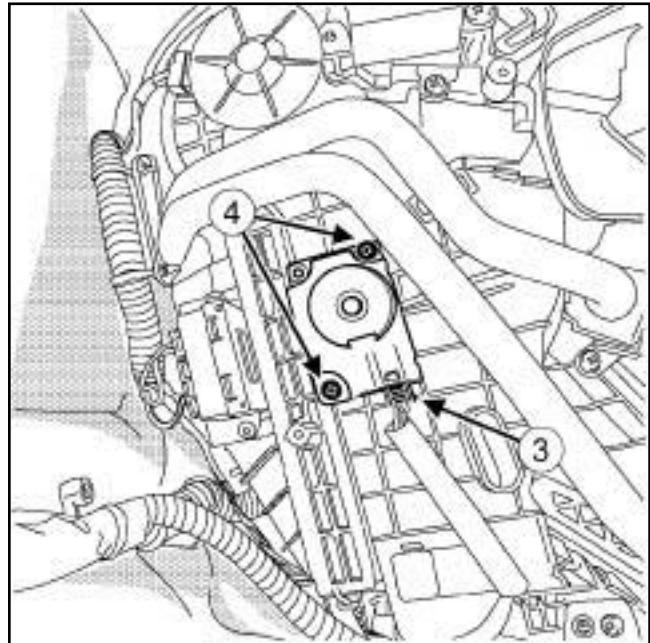
## 2 - Right-hand mixer motor

 Remove:

- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the centre panel lower left-hand cover
- the A pillar air distribution duct (see **61A, Heating, A-pillar air distribution duct: Removal - Refitting**, page 61A-64) .

## II - OPERATION FOR REMOVAL OF PART CONCERNED

## 1 - Left-hand mixer motor

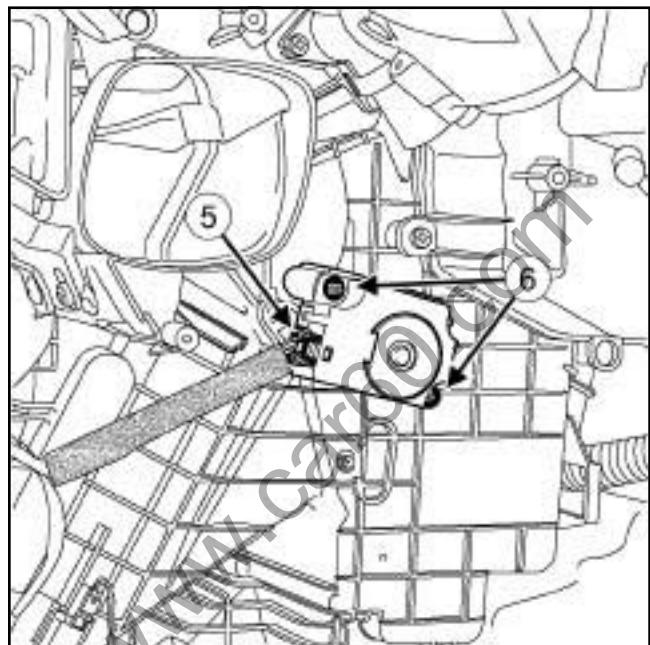


132804

 Disconnect the connector (3) . Remove:

- the bolts (4) ,
- the left-hand mixer motor.

## 2 - Right-hand mixer motor



132805

 Disconnect the connector (5) .

## RIGHT-HAND DRIVE, and AIR CON 02

 Remove:

- the bolts **(6)**,
- the right-hand mixer motor.

**REFITTING****I - REFITTING OPERATION FOR PART CONCERNED** Refit:

- the air mixing motor,
- the air mixing motor bolts.

Connect the air mixing motor connector.

**II - FINAL OPERATION****1 - Left-hand mixer motor** Remove:

- the glove box air duct,
- the bolts,
- the A pillar air distribution duct (see **61A, Heating, A-pillar air distribution duct: Removal - Refitting**, page **61A-64**).
- the centre panel lower left-hand cover,
- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment).

**2 - Right-hand mixer motor** Remove:

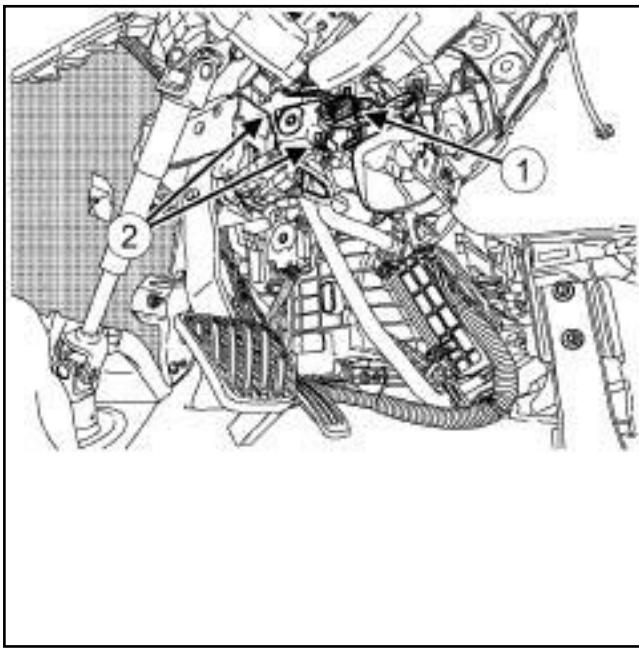
- the A pillar air distribution duct (see **61A, Heating, A-pillar air distribution duct: Removal - Refitting**, page **61A-64**).
- the centre panel lower left-hand cover
- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

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AIR CON 02

**REMOVAL****I - REMOVAL PREPARATION OPERATION** Remove:

- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting** (57A, Interior equipment)),
- the lower cover on the left-hand side of the centre panel (see **Dashboard: Removal - Refitting** (57A, Interior equipment)),
- the A pillar air distribution duct (see **61A, Heating, A-pillar air distribution duct: Removal - Refitting**, page **61A-64**).

**II - OPERATION FOR REMOVAL OF PART CONCERNED**

131301

 Disconnect the connector (1). Remove:

- the bolts (2),
- the distribution motor.

**REFITTING****I - REFITTING OPERATION FOR PART CONCERNED** Refit:

- the distribution motor,
- the distribution motor bolts.

 Connect the connector.**II - FINAL OPERATION.** Refit:

- the A pillar air distribution duct (see **61A, Heating, A-pillar air distribution duct: Removal - Refitting**, page **61A-64**).
- the lower cover on the left-hand side of the centre panel (see **Dashboard: Removal - Refitting** (57A, Interior equipment)),
- the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting** (57A, Interior equipment)).

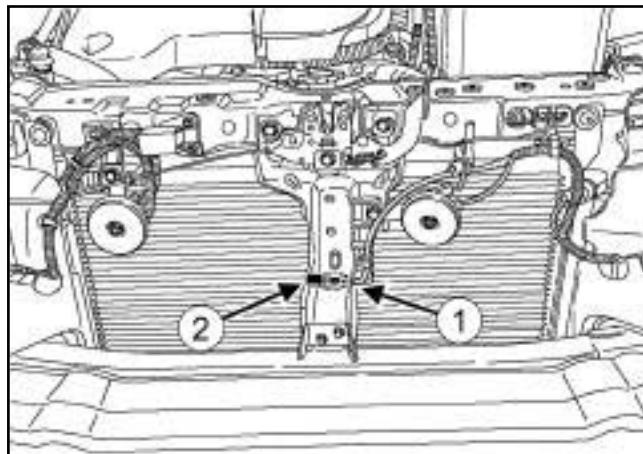
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## REMOVAL

### I - REMOVAL PREPARATION OPERATION

- the radiator grille (see **Radiator grille: Removal - Refitting**) (56A, Exterior equipment).

### II - OPERATION FOR REMOVAL OF PART CONCERNED



131309

- Disconnect the connector (1) .
- Unclip the external temperature sensor (2) using a flat-blade screwdriver.

## REFITTING

### I - REFITTING OPERATION FOR PART CONCERNED

- Refit the external temperature sensor.
- Connect the connector.

### II - FINAL OPERATION.

- Refit the radiator grille (see **Radiator grille: Removal - Refitting**) (56A, Exterior equipment).

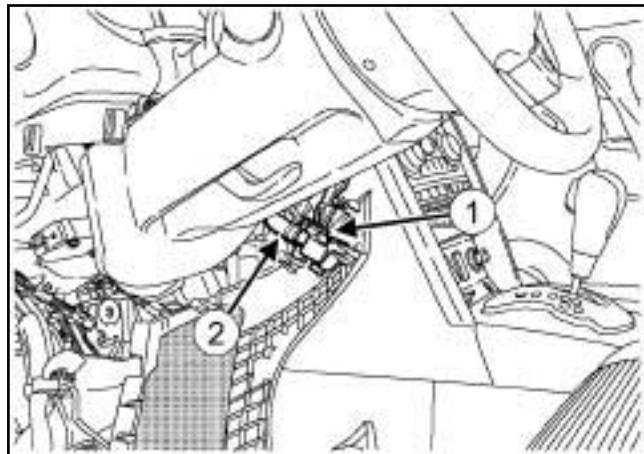
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## REMOVAL

## I - REMOVAL PREPARATION OPERATION

Remove the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

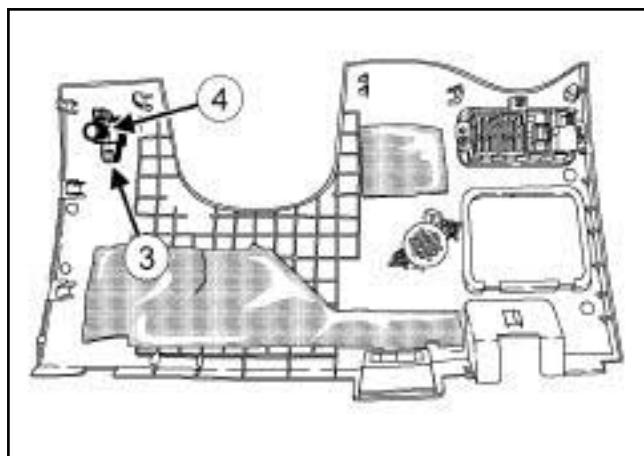
## II - OPERATION FOR REMOVAL OF PART CONCERNED



131302

Disconnect:

- the connector (1) ,
- the pipe (2) from the sensor.



131303

Remove:

- the bolt (3) ,
- the passenger compartment temperature sensor (4) .

## REFITTING

## I - REFITTING OPERATION FOR PART CONCERNED

Refit:

- the passenger compartment temperature sensor,
- the passenger compartment temperature sensor bolt.

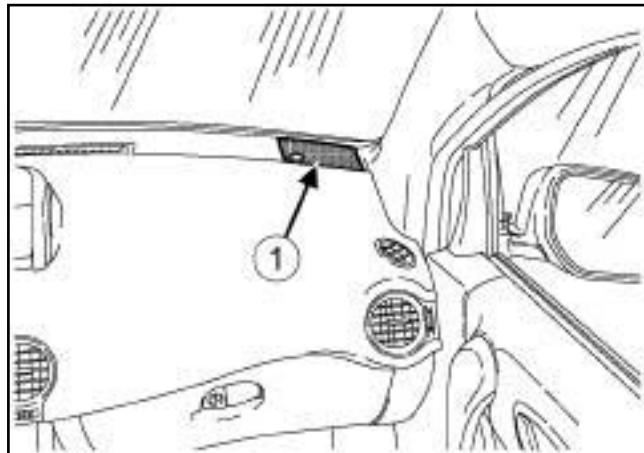
Connect:

- the pipe to the sensor,
- the connector.

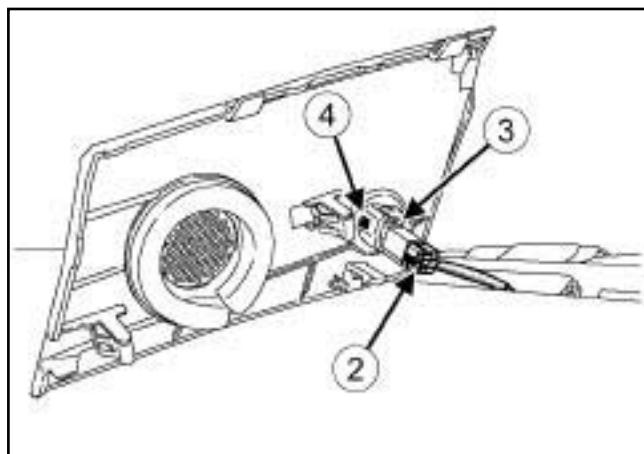
## II - FINAL OPERATION.

Refit the dashboard lower cover on the driver's side (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

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**REMOVAL****I - REMOVAL PREPARATION OPERATION**

- Remove the grille (1) .

**II - OPERATION FOR REMOVAL OF PART CONCERNED**

- Disconnect the connector (2) .
- Unclip the solar radiation sensor (3) at (4) .

**REFITTING****I - REFITTING OPERATION FOR PART CONCERNED**

- Refit the solar radiation sensor.
- Connect the solar radiation sensor connector.

**II - FINAL OPERATION.**

- Refit the grille.

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**I - SAFETY**

**IMPORTANT**

The following must be worn when handling refrigerant:

- gloves,
- protective goggles (with side shields if possible).

In the event of refrigerant fluid coming into contact with the eyes, rinse well with clean water continuously for **15 minutes**. If possible, have an eye rinse unit available.

If refrigerant comes into contact with your eyes, consult a doctor immediately. Inform the doctor that the burns were caused by **R134A** refrigerant.

In the event of contact with other unprotected parts of the body (event though the safety advice has been observed), rinse well with clean water continuously for **15 minutes**.

**IMPORTANT**

Work requiring the use of refrigerant must be carried out in a well-ventilated area.

The refrigerant must not be stored in a shaft, a pit, a hermetically sealed room, etc.

Refrigerants are colourless and odourless fluids.

Refrigerant is heavier than air.

As a result, there is a danger of asphyxiation for those working close to the ground and less than **5 m** away from the working area (pit, wells, air vent, etc.).

Switch on gas extraction systems.

At temperatures above **100°C**, the refrigerant will decompose and produce a highly irritant gas.

**IMPORTANT**

It is forbidden to smoke close to an open refrigerant circuit.

**IMPORTANT**

To prevent refrigerant from leaking, never repair a faulty air conditioning circuit component.

Replace all faulty components.

It is essential to follow the routing of the connecting pipes.

Ensure that the refrigerant connecting pipes are correctly fitted so that they will not come into contact with metal parts in the engine compartment.

**WARNING**

In order to avoid any refrigerant leaks, do not damage (deform, twist, etc.) the pipe.

**WARNING**

To prevent moisture from entering the system, place plugs on the cold loop components which are open to the air.

**WARNING**

To avoid any leaks, check that the pipe surface is sound before positioning the new seal. The surface must be clean and scratch free.

**WARNING**

Lubricants are not mutually compatible: always observe the type and quantity of oil recommended for each compressor even when topping up as this could damage the cold loop components.

Always close the oil cans again after use to keep moisture out and never use oil contained in a can that has been open for a long time (viscous appearance).

**II - GENERAL RECOMMENDATIONS**

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**.

For the part numbers of the oils (see **Vehicle: Parts and ingredients for the repairwork**) (04B, Consumables - Products).

**Table of vehicle refrigerant capacities according to their engines and various features.**

Engine	Refrigerant capacity (g)	Type of compressor	Type of oil	Quantity of oil (ml)
2TR	550 ± 50	Valeo DKS-17 D	SANDEN SP10	120
M9R				

**Table of quantities of oil to add when replacing components:**

Operation on the air-conditioning circuit	Quantity of oil (ml or cc)
Circuit oil change	Measure the quantity recovered and add the same quantity of new oil
Burst pipe or other rapid leak	<b>100</b>
Replacing a hose	Quantity recovered <b>+10</b>
Replacement of a condenser	Quantity recovered <b>+35</b>
Replacement of an evaporator	Quantity recovered <b>+75</b>
Removing / refitting a compressor	Quantity recovered
Replacement of a compressor	None added

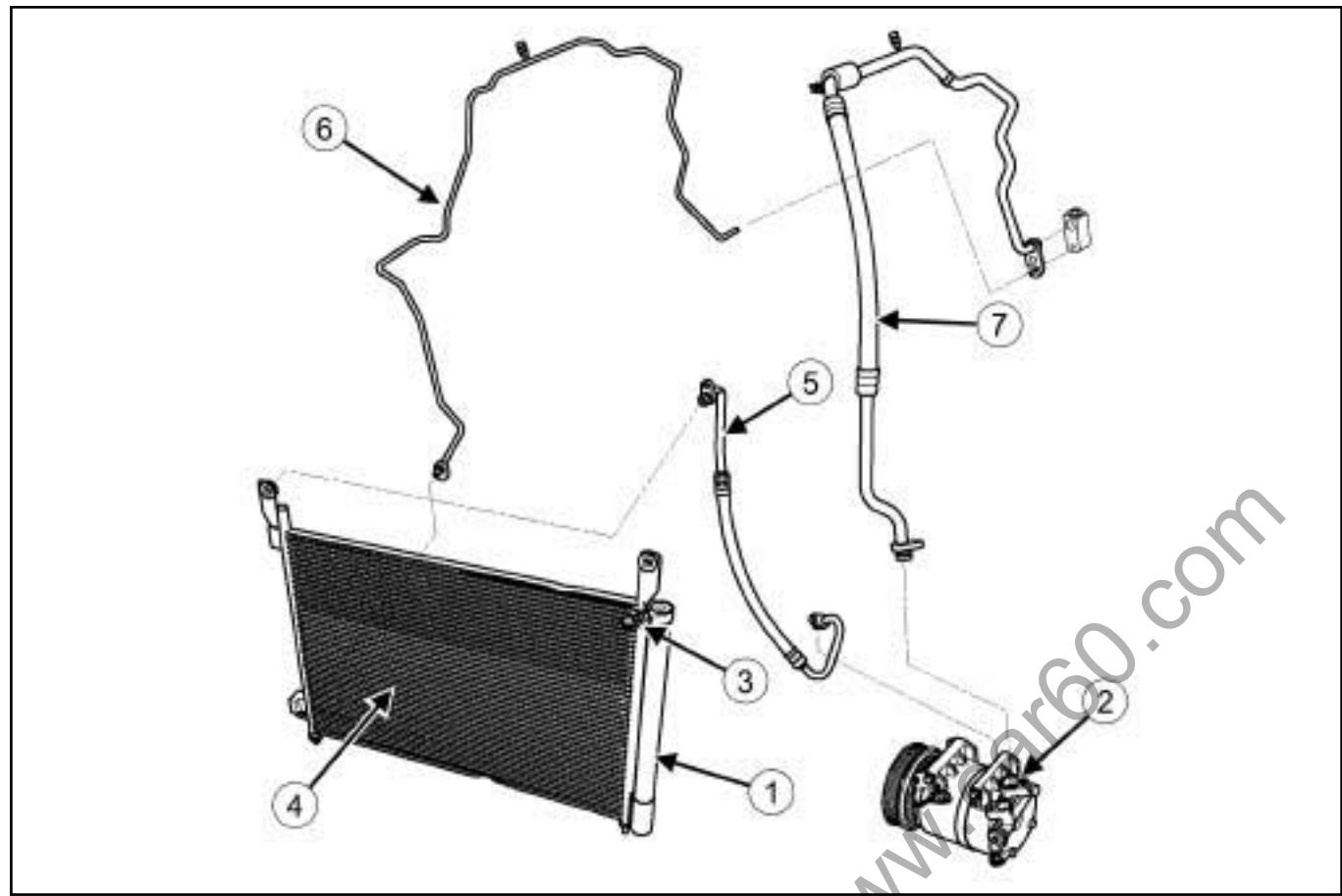
## Air conditioning: List and location of components

AIR CON 01 or AIR CON 02

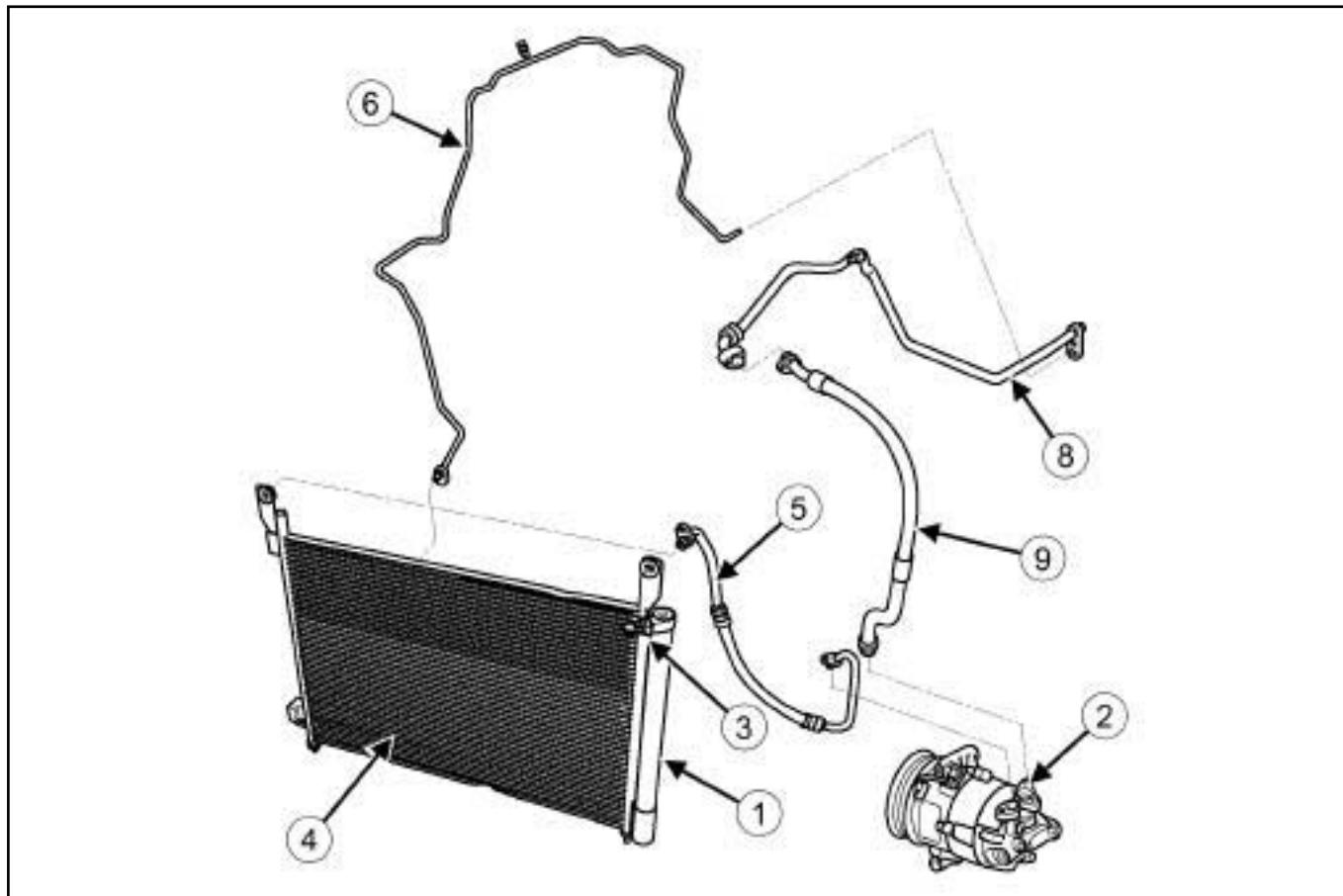
No.	Description
(1)	Dehydrator reservoir
(2)	Compressor
(3)	Pressure sensor
(4)	Condenser
(5)	Condenser - compressor connecting pipe
(6)	Expansion valve - condenser connecting pipe
(7)	Compressor - expansion valve connecting pipe
(8)	Intermediate pipe - expansion valve connecting pipe

No.	Description
(9)	Intermediate pipe - compressor connecting pipe
(10)	Expansion valve
(11)	Evaporator
(12)	External temperature sensor
(13)	Passenger compartment temperature sensor
(14)	Solar radiation sensor

2TR

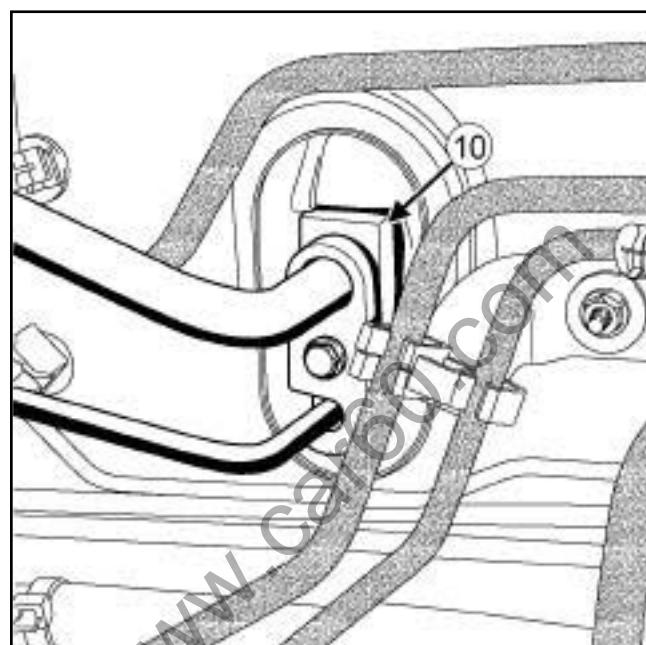


131305

**Air conditioning: List and location of components****AIR CON 01 or AIR CON 02****M9R**

131306

All the components shown in the diagram are located in the engine compartment.

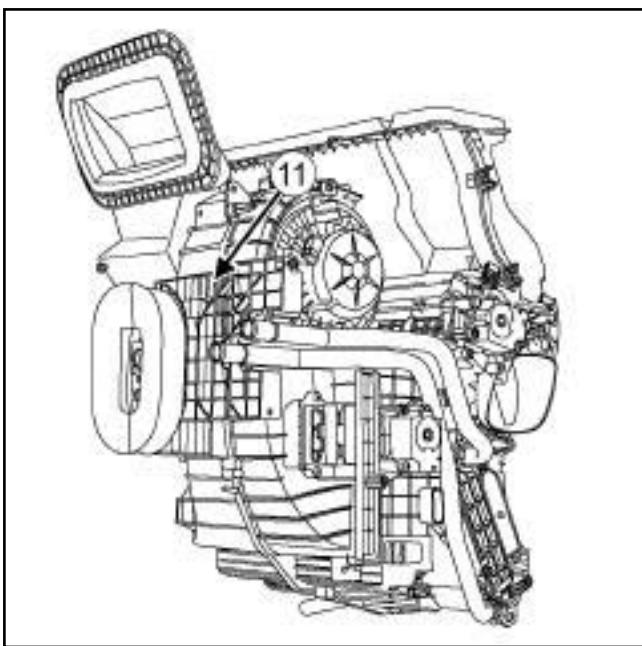


131307

To access the expansion valve (10), remove the pipe union.

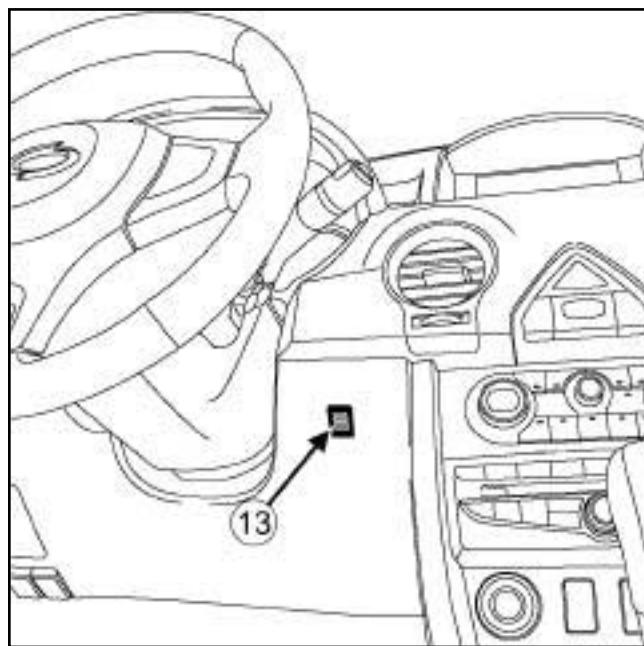
## Air conditioning: List and location of components

AIR CON 01 or AIR CON 02



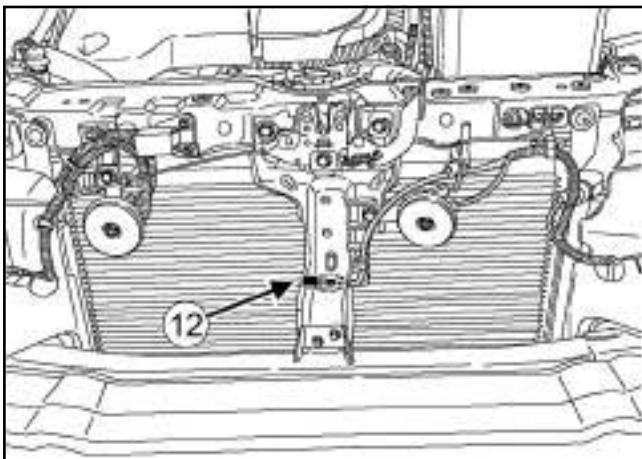
131308

The evaporator (11) cannot be separated from the distribution unit.



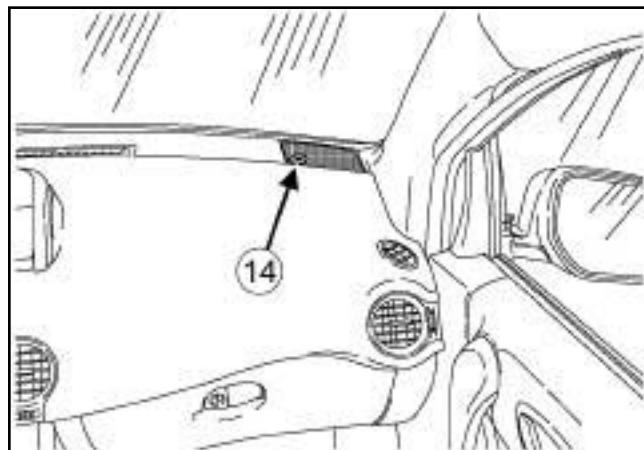
131310

The passenger compartment temperature sensor (13) is located on the lower cover of the dashboard on the driver's side.



131309

The external temperature sensor is located in front of the radiator.



131311

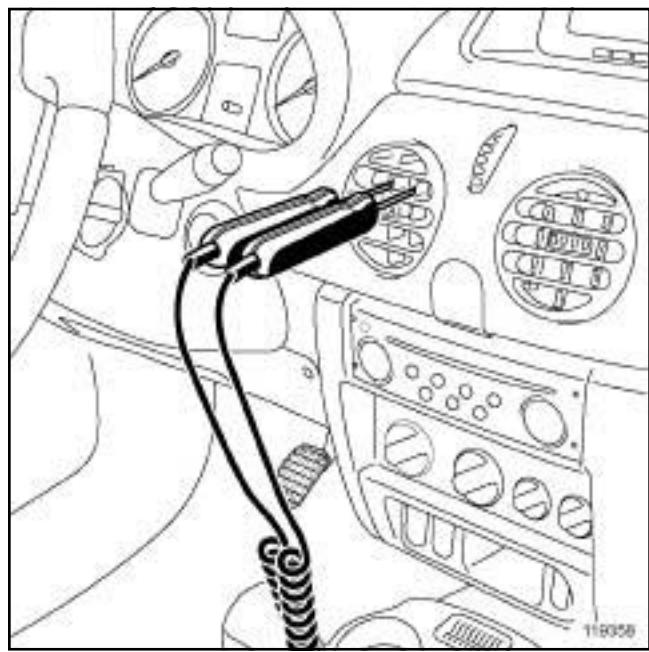
The solar radiation sensor is located on the dashboard tweeter grille.

**Equipment required**

Dual sensor temperature measuring device

**Note:**

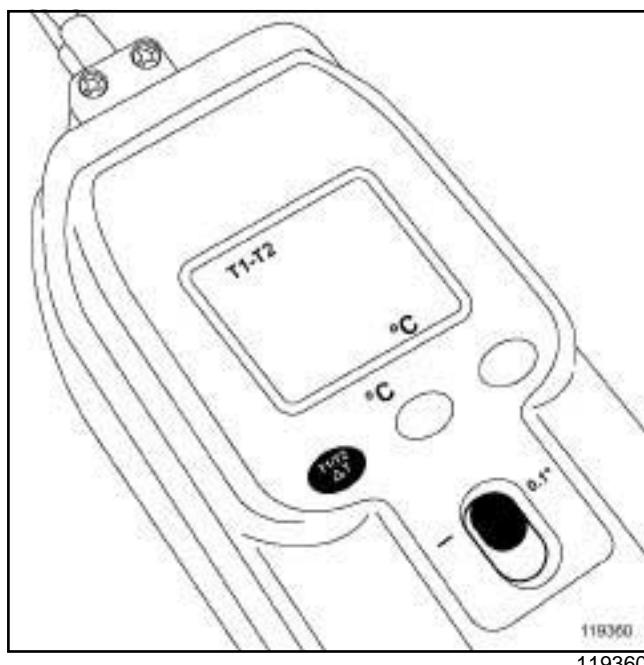
For Renault maintenance, check the air conditioning system at the end of the vehicle maintenance program, to ensure that the engine is as cold as possible.



119358

**I - MEASURING DEVICE PREPARATION  
OPERATION**

- Check that the **dual temperature sensor measuring device** operates correctly (refer to the instruction manual for the device).
- Adjust the unit of the value displayed in °C.
- Adjust the reading accuracy of the device to **0.1°C**.



- Adjust the reading mode to  $(\Delta T) = (T1 - T2)$

- Check the two sensors T1 and T2 in order to calculate the correction ( $\Delta$ ) to be applied to the measurement  $(\Delta T) = (T1 - T2)$ . The two sensors must indicate the same measurement under the same conditions. Check the sensors:

- bring the two ends of the sensors together until they touch,
- place them in the air flow of an air vent,
- set the passenger compartment blower unit to maximum speed,
- wait for the value to stabilise,
- note the correction value ( $\Delta$ ).

**Note:**

It is not necessary to start the vehicle. The device display is in mode  $(\Delta T) = (T1 - T2)$ .

**WARNING**

Note the difference and sign as soon as the temperature becomes stable. Calculate the correction  $(\Delta) = - (T1 - T2)$  to be applied to the measurement  $(\Delta T)$ .

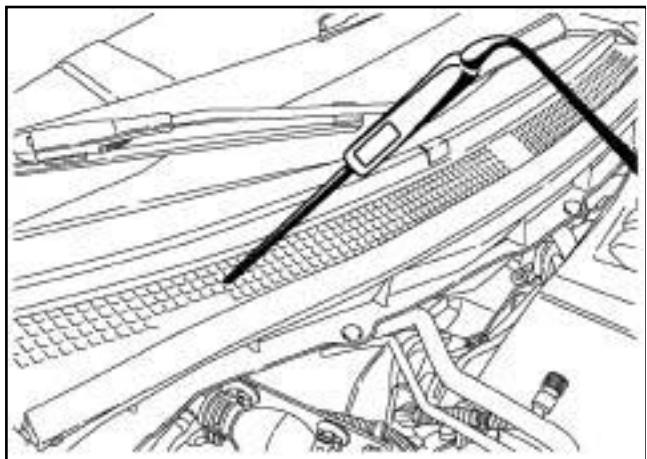
**Examples:**

- If  $(T1 - T2) = -0.3^\circ\text{C}$ , correct the measurement  $(\Delta T)$  by  $(\Delta) +0.3^\circ\text{C}$ ,
- If  $(T1 - T2) = +0.3^\circ\text{C}$ , correct the measurement  $(\Delta T)$  by  $(\Delta) -0.3^\circ\text{C}$ .

### II - VEHICLE PREPARATION OPERATION

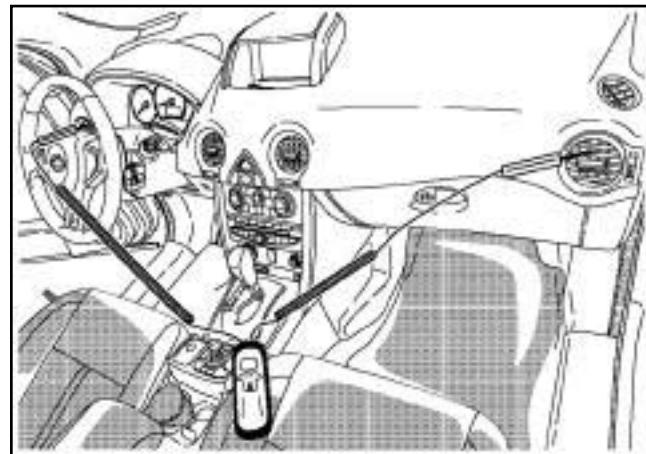
- Position the vehicle away from direct sunlight in an area with a stable ambient temperature greater than or equal to at least **15°C**.
- Close the bonnet.
- Open the front windows.
- Run the engine at idle speed.
- Set the heating and ventilation controls as follows:
  - recirculation mode in the external position,
  - air distribution in "face" mode,
  - temperature adjustment control in maximum cold position in the front (and the rear if equipped),
  - passenger compartment blower unit speed in maximum position (cut off the rear control if equipped),
  - front centre and side air vents open, with vanes set to neutral position,
  - the air conditioning system must be activated (indicator light on).
- Wait **5 minutes** with the engine idling before taking any measurements.

### III - MEASUREMENT



131314

- Record the air temperature at the scuttle panel grille (T3).
  - Depending on the vehicle, open the bonnet to access the scuttle panel grille.
  - Place the sensor where air is drawn through the scuttle panel grille.
  - Wait for the value to stabilise.
  - Note the value of temperature (T3).
  - Close the bonnet if it was opened.



131315

- Record the air temperature at the left-hand air vent (T1), and the air temperature at the right-hand air vent (T2).
  - Fit sensor T1 in the left-hand air vent.
  - Fit sensor T2 in the right-hand air vent.
- Note the temperature differences, once the value ( $\Delta T$ ) has stabilised:
  - Between T3 and the higher of values T1 or T2, (T3 - highest value).
  - Note this temperature difference.
  - Between T1 and T2 (read the value ( $\Delta T$ ) in the reading display mode (T1 - T2)).
  - Note the temperature difference ( $\Delta T$ ) according to the correction ( $\Delta$ ) to be applied to the measurement.
- If the measurement ( $\Delta T$ ) = (T1 - T2) is unstable, carry out the following procedure:

#### Note:

Depending on the vehicle's air conditioning system programming, this check method may not be applicable because the engine cooling fan assembly has been activated. Its operation renders the ( $\Delta T$ ) value between T1 and T2 unstable. To eliminate this, the fan assembly must be activated for the entire period over which temperature measurements T1 and T2 are recorded.

- Force operation of the engine cooling fan by adjusting the engine speed.
  - Stabilise the engine speed at **2000 rpm** while T1 and T2 temperature measurements are being recorded.
  - Check that the engine cooling fan assembly is operating.

- Record the temperatures by following the instructions given in the MEASUREMENTS paragraph.

**IV - FAULT FINDING**

- It is essential to observe the following two conditions:
  - The difference between T3 and the highest value of T1 or T2 should be greater than or equal to **5°C**,
  - The difference between T1 and T2 must be less than or equal to **2°C**.

**Note:**

If one of these two conditions is not met, then the air conditioning system is not working properly. In this case, refer to the fault finding procedure for the air conditioning system of the vehicle concerned.

**IMPORTANT**

To avoid all risk of damage to the systems, apply the safety and cleanliness instructions and operation recommendations before carrying out any repair (see **62A, Air conditioning, Air conditioning: Precautions for repair**, page **62A-1**).

**Fault finding for detecting leaks:**

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

**I - ELECTRONIC DETECTORS**



**Note:**

Check for leaks using the electronic detector first before using the trace detector.

- This device measures variations in the quantity of refrigerant in the air and beeps accordingly.
- The device must be initialised before checking.

To do this:

- immobilise the device,
- calibrate the device in the engine compartment,
- do not start the engine.

This point is then used as standard for detecting the contamination rate.

This device is highly sensitive: during the detection process, only follow the line of the circuit as closely as possible to limit variations caused by other gases.

This device only detects relatively substantial leaks.

**Note:**

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

**II - TRACE DETECTORS**



**WARNING**

After injecting dye into the refrigerant, be sure to indicate this on a label (supplied with the dye capsule), and the date of the operation.

Position the label so it is visible near to the cold loop filler valve.

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

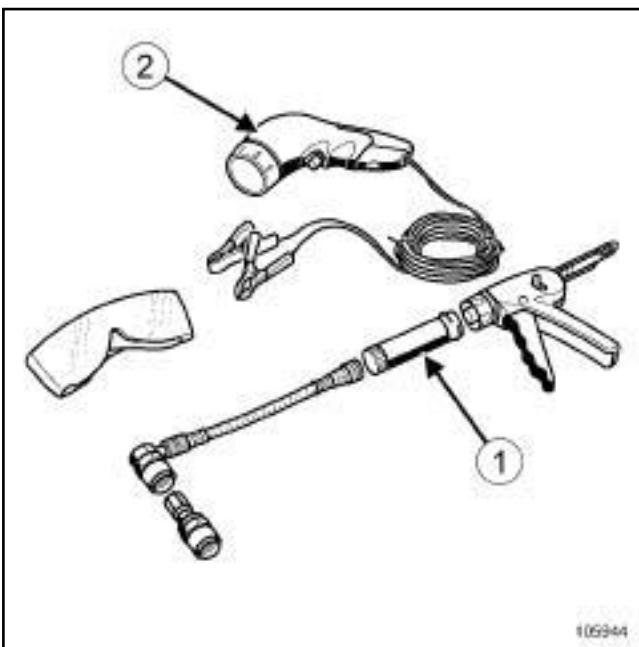
**Note:**

The procedure described must be observed.

**Note:**

Use this leak detection method as a last resort for leaks that cannot be located.

**1 - Injecting dye into the circuit**



105944



105944

- The procedure for detecting refrigerant leaks uses a dye which is available as a single-use capsule (1) : traces of fluid are detected using an ultraviolet lamp (2) .
- The dye remains in the air conditioning system.
- It is possible to check the status of the cold loop using the ultraviolet lamp, without injecting the dye again.

**WARNING**

To avoid damaging the cold loop components (corrosions, etc.), do not use dye if the traces reveal that some product has already been injected.

- If there is nothing to indicate that dye has been used previously (label, etc.):
  - position a cloth,
  - release a small jet of refrigerant through the two valves,
  - light up the valve interior using the ultraviolet lamp,
  - check for fluorescent traces.
- Add a dose of detection dye if there are no fluorescent traces or label.
- Affix a label.
- Record the date when the dye was added.

- For vehicles with a single valve, set up the dye injection system on the low pressure valve by following the circulation direction of the product and using the union (3) .
- Inject the dye into the circuit.
- Run the air conditioning system 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 is apparent:

- carefully clean the coolant circuit on the outside,
- run the air conditioning system until the leak is detected (failing this, check the condition of the evaporator).

**WARNING**

After injecting dye into the refrigerant, be sure to indicate this on a label (supplied with the dye capsule), and the date of the operation.

Position the label so it is visible near to the cold loop filler valve.

# AIR CONDITIONING

## Coolant circuit Draining - Refilling

62A

AIR CON 01 or AIR CON 02

### Essential equipment

refrigerant charging station

### IMPORTANT

To avoid any risk of damaging the systems, apply the safety and cleanliness instructions and the operation recommendations before carrying out the repair (see **62A, Air conditioning, Air conditioning: Precautions for repair**, page **62A-1**).

### IMPORTANT

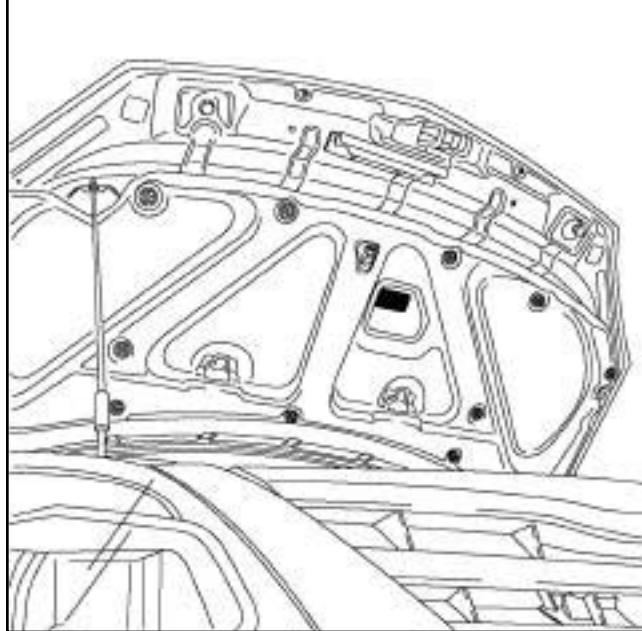
The following must be worn when handling refrigerant:

- gloves,
- protective goggles (with side shields if possible).

In the event of refrigerant fluid coming into contact with the eyes, rinse well with clean water continuously for **15 minutes**. If possible, have an eye rinse unit available.

If refrigerant comes into contact with your eyes, consult a doctor immediately. Inform the doctor that the burns were caused by **R134A** refrigerant.

In the event of contact with other unprotected parts of the body (event though the safety advice has been observed), rinse well with clean water continuously for **15 minutes**.



131317

- ❑ **R134A** refrigerant is colourless in its liquid state and odourless and invisible in its gaseous state.
- ❑ A summary table indicates the quantities of refrigerant in the circuit depending on the engine type (see **62A, Air conditioning, Air conditioning: Parts and consumables for the repair work**, page **62A-2**).

### II - OIL

- ❑ The cold loop contains a special oil to lubricate the compressor.
- ❑ Fill up with the same quantity of oil as was drained.
- ❑ When replacing a component of the heating and air conditioning system, top up the oil level if necessary (see **62A, Air conditioning, Air conditioning: Parts and consumables for the repair work**, page **62A-2**) and (see **Vehicle: Parts and ingredients for the repairwork**) (04B, Consumables - Products).

#### Note:

All vehicles using **R134A** have a label in the engine compartment specifying its use.

#### Note:

Lubricants are not mutually compatible: always observe the types and quantities of oil required for each compressor even when topping up as this could damage the cold loop components.

Always close the oil cans after use to prevent moisture getting inside and never reuse oil contained in a can that has been open for a long time (viscous appearance).

# AIR CONDITIONING

## Coolant circuit Draining - Refilling

62A

AIR CON 01 or AIR CON 02

### III - RECOVERING REFRIGERANT

#### Note:

The air conditioning circuit is fitted with a single filler valve, some filling equipment requires only the use of the high pressure pipe (refer to the **filling station instructions**).

Depending on the situation, run the system for a few minutes before recovering the coolant to improve drainage.

#### Note:

These procedures must be followed in order to avoid:

- gas escaping when the circuit is opened,
- damage to the environment by releasing gas into the atmosphere when opening the circuit or creating a vacuum.

When draining or checking the refrigerant fill load, three scenarios are to be taken into account:

- the engine and air conditioning are operating (scenario A),
- the engine is operating but not the air conditioning (scenario B),
- neither the engine nor the air conditioning are operating (scenario C).

#### Scenario A :

- let the air conditioning operate until the cooling fan is triggered for the second time,
- switch off the engine,
- wait **15 minutes**,
- check that the relative pressure is less than or equal to 0 bar,
- start the drain cycles again if the relative pressure is above **0 bar**,
- add the values of the various draining operations; the fill is confirmed as being correct if the total is equal to the specified fill **+35 g or -100 g**.

#### Scenario B :

- let the engine operate until the cooling fan is triggered for the second time,
- switch off the engine,
- drain for the first time (note down the value),
- wait **15 minutes**,

- let the engine operate until the cooling fan is triggered for the second time,
- switch off the engine,
- drain for the second time (note down the value),
- start the drain cycles again if the relative pressure is above **0 bar**,
- add the values of the various draining operations; the fill is confirmed as being correct if the total is equal to the specified fill **+35 g or -100 g**.

#### Scenario C :

- drain for the first time (note down the value),
- wait for **2 hours**,
- start the drain cycles again if the relative pressure is above **0 bar**,
- add the values of the various draining operations; the fill is confirmed as being correct if the total is equal to the specified fill **+35 g or -100 g**.

### IV - CREATION OF A VACUUM

A good vacuum must be created before filling, otherwise the air conditioning will not operate correctly.

There are two scenarios to consider:

- the creation of a vacuum will take place immediately after the drain (scenario A):
- the creation of a vacuum will take place after several hours or days (scenario B).

#### Scenario A :

- the creation of a vacuum lasts **20 minutes**,

#### Scenario B :

- the creation of a vacuum lasts **45 minutes** to eliminate any trace of moisture.

Test the seal once the vacuum has been created (some stations do this automatically).

### V - FILLING

Fill the refrigerant circuit using the **refrigerant charging station**.

Add oil and refrigerant depending on the type and quantity of oil recommended, as well as the operation carried out (see **62A, Air conditioning, Air conditioning: Parts and consumables for the repair work**, page **62A-2**) and (see **Vehicle: Parts and ingredients for the repairwork**) (04B, **Consumables - Products**).

**AIR CONDITIONING**  
**Coolant circuit Draining - Refilling**

**62A**

**AIR CON 01 or AIR CON 02**

- Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page **62A-6**).
- Check for leaks (see **62A, Air conditioning, Coolant circuit check**, page **62A-9**).

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# AIR CONDITIONING

## Condenser: Removal - Refitting

62A

AIR CON 01 or AIR CON 02

### Essential equipment

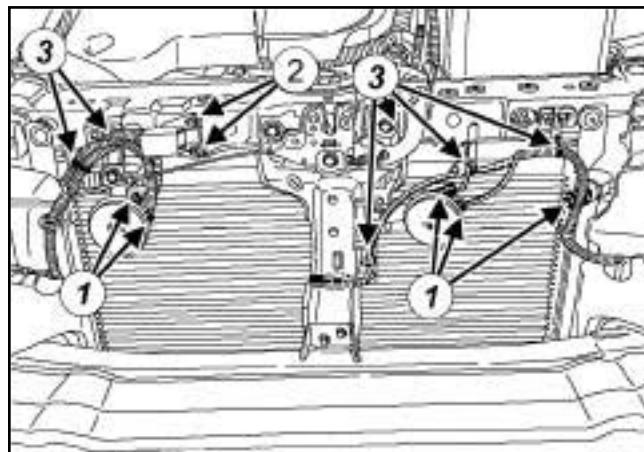
refrigerant charging station

### Tightening torques

bolt of the compressor - condenser connecting pipe union	4 N.m
bolt of the expansion valve - condenser connecting pipe union	4 N.m

### IMPORTANT

To avoid all risk of damage to the systems, apply the safety and cleanliness instructions and operation recommendations before carrying out any repair (see **62A, Air conditioning, Air conditioning: Precautions for repair**, page **62A-1**).



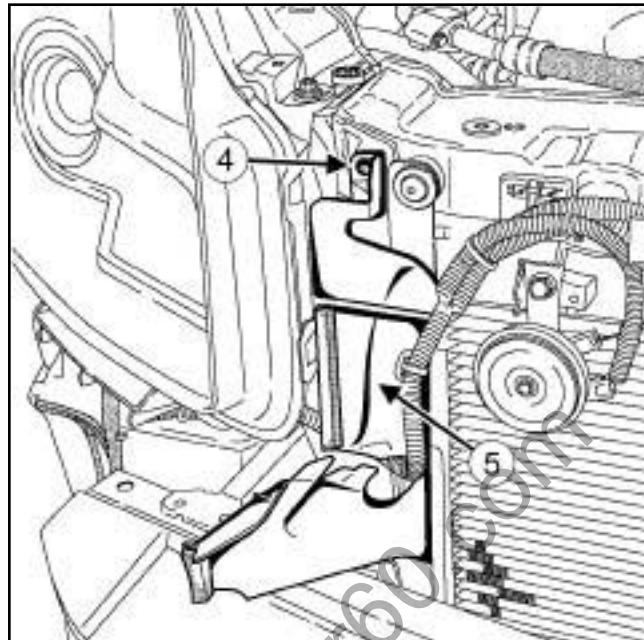
131318

- Disconnect the connectors (1).
- Remove the bolts (2).
- Unclip the wiring clips (3).
- Move aside the wiring.

## REMOVAL

### REMOVAL PREPARATION OPERATION

- Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).
- Drain the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page **62A-11**).
- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- Remove:
  - the engine undertray,
  - the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection),
  - the bonnet catch (see **Bonnet latch: Removal - Refitting**) (52A, Non-side opening element mechanisms),



131319

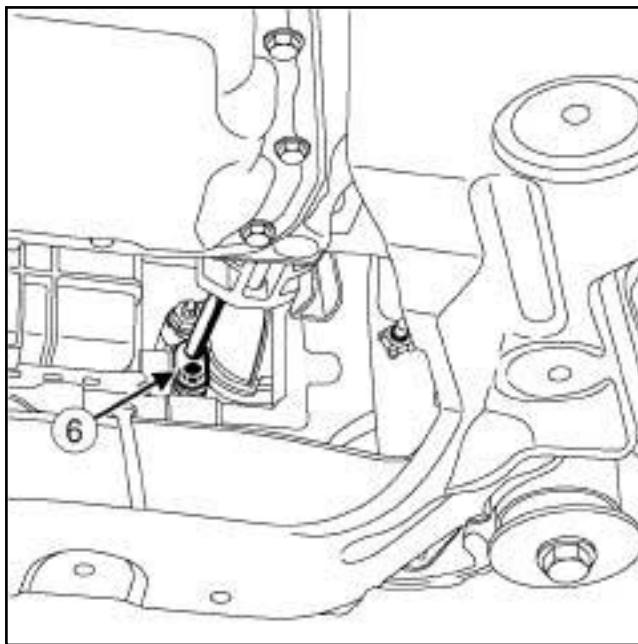
- Remove:
  - the bolt (4),
  - the front air deflector (5).

# AIR CONDITIONING

## Condenser: Removal - Refitting

62A

AIR CON 01 or AIR CON 02



131320

- Remove the bolt (6) from the pipe union.

### WARNING

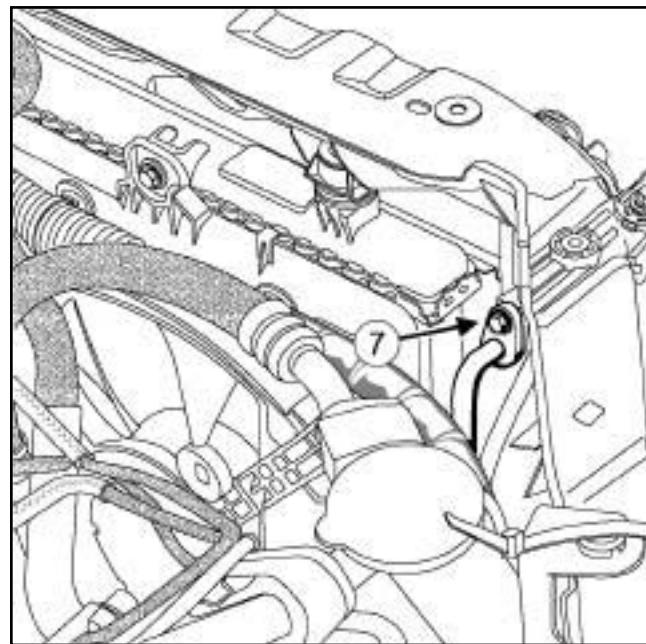
In order to avoid any refrigerant leaks, do not damage (deform, twist, etc.) the pipe.

- Disconnect the expansion valve - condenser connecting pipe from the condenser.

### WARNING

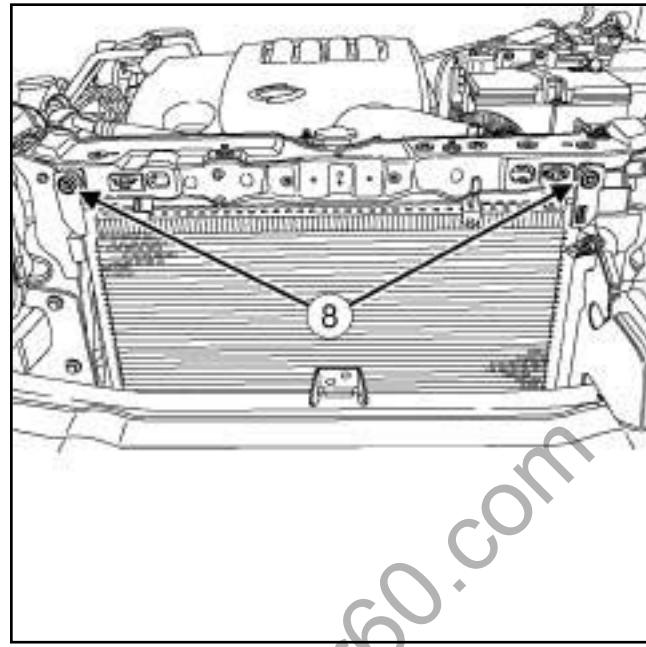
To prevent moisture from entering the system, place plugs on the cold loop components which are open to the air.

- Fit plugs into the openings.



131347

- Remove the bolt (7) from the pipe union.
- Disconnect the compressor - condenser connecting pipe from the condenser.
- Fit plugs into the openings.



131322

- Remove:
  - the bolts (8) from the condenser,
  - the condenser.

# AIR CONDITIONING

## Condenser: Removal - Refitting

62A

AIR CON 01 or AIR CON 02

### REFITTING

#### I - REFITTING PREPARATION OPERATION

- Always replace the seals of the connecting pipes of the condenser.
- Lubricate the seals using recommended air conditioning oil to make fitting easier.

#### II - REFITTING OPERATION FOR PART CONCERNED

- Refit:
  - the condenser,
  - the condenser bolts.

##### WARNING

Do not remove the blanking plugs from each component until the last moment.

Also, do not remove the components from their packaging until they are to be fitted to the vehicle.

- Remove the plugs from the openings.

##### WARNING

To avoid any leaks, check that the pipe surface is sound before positioning the new seal. The surface must be clean and scratch free.

- Fit new seals on the connecting pipes of the condenser.
- Connect the compressor - condenser connecting pipe to the condenser.
- Refit the bolt on the pipe union.
- Torque tighten the **bolt of the compressor - condenser connecting pipe union (4 N.m)**.
- Connect the expansion valve - condenser connecting pipe to the condenser.
- Refit the bolt on the pipe union.
- Torque tighten the **bolt of the expansion valve - condenser connecting pipe union (4 N.m)**.

#### III - FINAL OPERATION

- Refit:
  - the front air deflector,
  - the bolt of the front air deflector.
- Fit the wiring.

- Clip on the wiring clips.
- Refit the bolts.
- Connect the connectors.
- Refit:
  - the bonnet catch (see **Bonnet latch: Removal - Refitting**) (52A, Non-side opening element mechanisms),
  - the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection),
  - the engine undertray.
- Connect the battery (see **Battery : Removal - Refitting**) (80A, Battery).
- Fill the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page **62A-11**).
- Set the control of the passenger compartment blower unit to the maximum speed.
- Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page **62A-6**).
- Check for leaks (see **62A, Air conditioning, Coolant circuit check**, page **62A-9**).

# AIR CONDITIONING

## Dehydration canister: Removal - Refitting

62A

AIR CON 01 or AIR CON 02

### IMPORTANT

To avoid any risk of damaging the systems, apply the safety and cleanliness instructions and the operation recommendations before carrying out the repair (see **62A, Air conditioning, Air conditioning: Precautions for repair**, page 62A-1).

### Note:

The dehydrator reservoir cannot be separated from the condenser.

- For the removal or replacement of the dehydrator reservoir (see **62A, Air conditioning, Condenser: Removal - Refitting**, page 62A-14).

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# AIR CONDITIONING

## Compressor: Removal - Refitting

62A

M9R, and AIR CON 01 or AIR CON 02

### Essential equipment

refrigerant charging station

### Tightening torques

compressor bolts	25 N.m
bolts of the pipe unions	4 N.m

### IMPORTANT

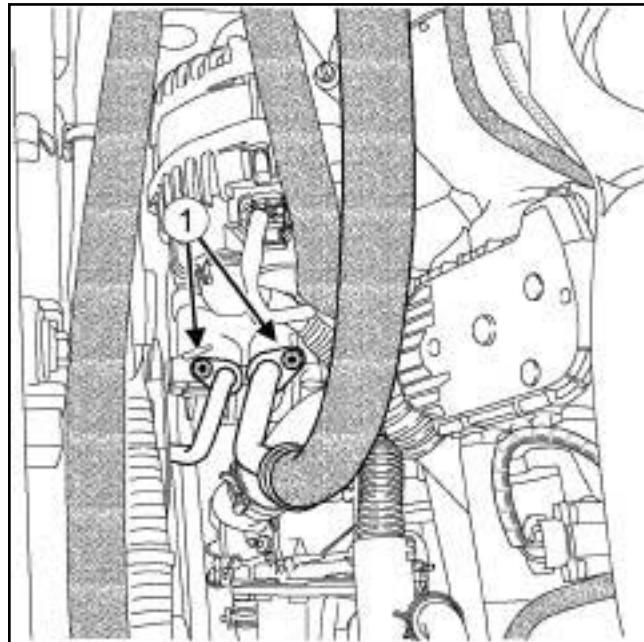
To avoid all risk of damage to the systems, apply the safety and cleanliness instructions and operation recommendations before carrying out any repair (see 62A, **Air conditioning, Air conditioning: Precautions for repair**, page 62A-1).

## REMOVAL

### I - REMOVAL PREPARATION OPERATION

- Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, **Lifting equipment**).
- Drain the refrigerant circuit using the **refrigerant charging station** (see 62A, **Air conditioning, Coolant circuit Draining - Refilling**, page 62A-11).
- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, **Battery**).
- Remove:
  - the engine undertray,
  - the front right-hand wheel (see **Wheel: Removal - Refitting**) (35A, **Wheels and tyres**),
  - the front right-hand wheel arch liner (see **Front wheel arch liner: Removal - Refitting**) (55A, **Exterior protection**),
  - the accessories belt (see **Accessories belt: Removal - Refitting**) (11A, **Top and front of engine**).

### II - OPERATION FOR REMOVAL OF PART CONCERNED



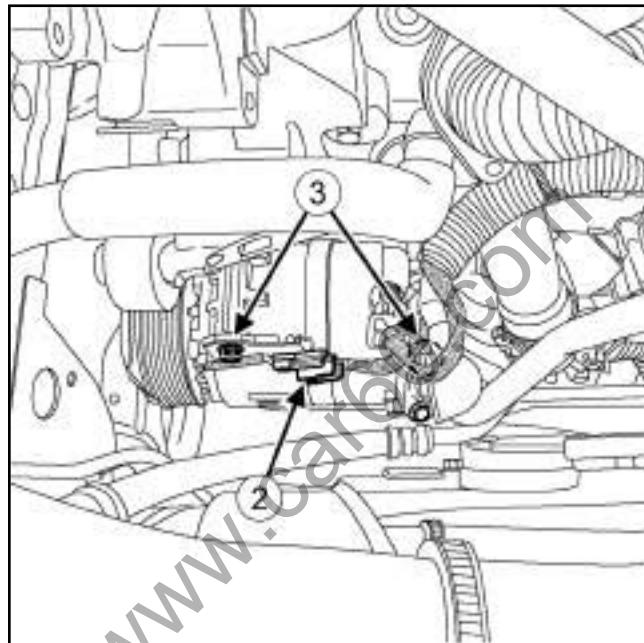
131328

- Remove the bolts (1) from the pipe unions.
- Disconnect the pipes.

### WARNING

To prevent moisture from entering the system, place plugs on the cold loop components which are open to the air.

- Fit plugs into the openings.



131329

- Disconnect the compressor connector (2).

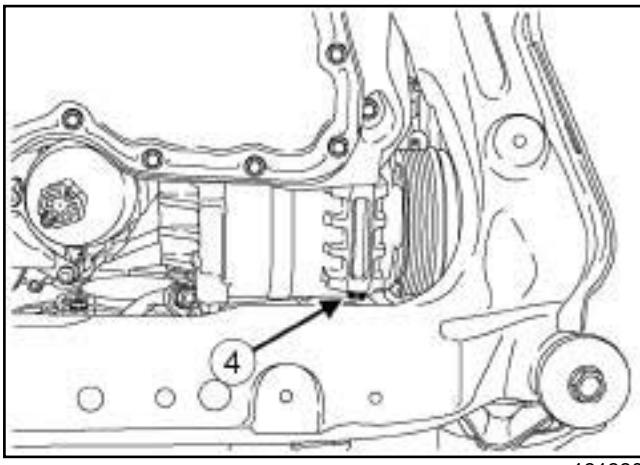
# AIR CONDITIONING

## Compressor: Removal - Refitting

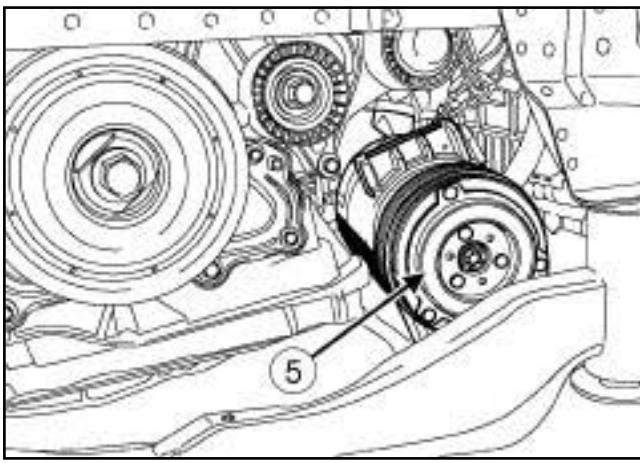
62A

M9R, and AIR CON 01 or AIR CON 02

- Remove the bolts (3) from the compressor.



- Remove the bolt (4) from the compressor.



- Remove the compressor (5) on the right-hand side of the vehicle.

### REFITTING

#### I - REMOVAL PREPARATION OPERATION

- Always replace the seals of the connecting pipes of the compressor.
- Lubricate the seals using recommended air conditioning oil to make fitting easier.

#### II - REFITTING OPERATION FOR PART CONCERNED

- Refit:
  - the compressor,
  - the compressor bolts.
- Torque tighten the **compressor bolts (25 N.m)**.

- Connect the compressor connector.

#### WARNING

Do not remove the blanking plugs from each component until the last moment.

Also, do not remove the components from their packaging until they are to be fitted to the vehicle.

- Remove the plugs from the openings.

#### WARNING

To avoid any leaks, check that the pipe surface is sound before positioning the new seal. The surface must be clean and scratch free.

- Place new seals on the connecting pipes of the compressor.
- Connect the pipes.
- Remove the bolts from the pipe unions.
- Torque tighten the **bolts of the pipe unions (4 N.m)**.

#### III - FINAL OPERATION

- Refit:
  - the accessories belt (see **Accessories belt: Removal - Refitting**) (11A, Top and front of engine),
  - the front right-hand wheel arch liner (see **Front wheel arch liner: Removal - Refitting**) (55A, Exterior protection),
  - the front right-hand wheel (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres),
  - the engine undertray.
- Connect the battery (see **Battery : Removal - Refitting**) (80A, Battery).
- Fill the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page 62A-11) .
- When replacing the compressor, carry out the following operations:
  - Switch on the ignition,
  - Check that the air conditioning is off,
  - Set the temperature setting at minimum,
  - Select the air recirculation position,
  - Start the engine.

# AIR CONDITIONING

## Compressor: Removal - Refitting

62A

M9R, and AIR CON 01 or AIR CON 02

- Run the air conditioning in manual mode (if equipped with a climate control panel),
- Run the engine at idle speed for 3 minutes with air conditioning,
- Switch off the engine.

- These operations are to be carried out when the compressor is removed, refitted or replaced.
- Set the control of the passenger compartment blower unit to the maximum speed.
- Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page **62A-6**).
- Check for leaks (see **62A, Air conditioning, Coolant circuit check**, page **62A-9**).

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# AIR CONDITIONING

## Compressor: Removal - Refitting

62A

2TR, and AIR CON 01 or AIR CON 02

### Essential equipment

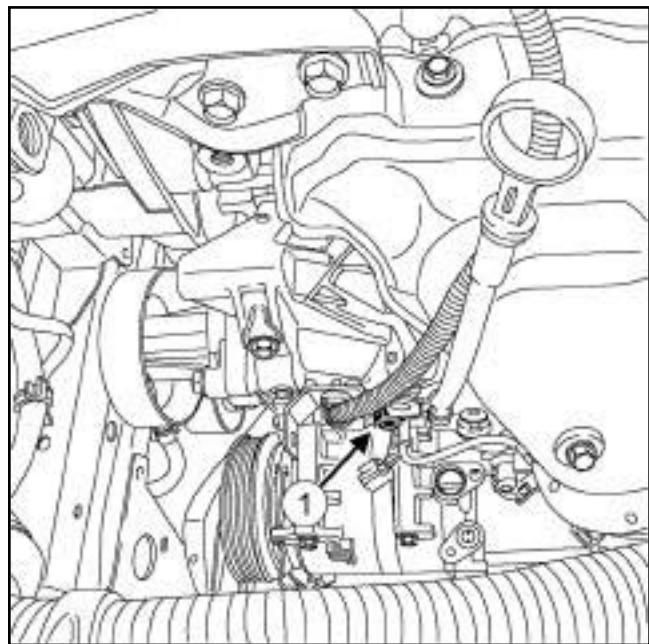
refrigerant charging station

### Tightening torques

compressor bolts	25 N.m
bolt of the compressor - condenser connecting pipe union on the condenser	4 N.m
bolt and nut of the pipe unions on the compressor	4 N.m

### IMPORTANT

To avoid all risk of damage to the systems, apply the safety and cleanliness instructions and operation recommendations before carrying out any repair (see **62A, Air conditioning, Air conditioning: Precautions for repair**, page **62A-1**).



131323

Remove:

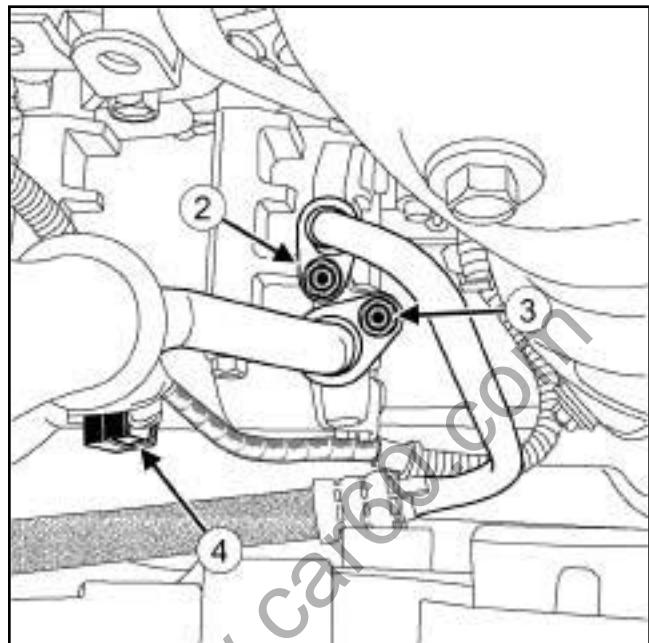
- the dipstick guide tube bolt (1) ,
- the dipstick tube.

### II - OPERATION FOR REMOVAL OF PART CONCERNED

## REMOVAL

### I - REMOVAL PREPARATION OPERATION

- Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).
- Drain the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page **62A-11**).
- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- Remove:
  - the engine undertray,
  - the front right-hand wheel (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres),
  - the front right-hand wheel arch liner (see **Front wheel arch liner: Removal - Refitting**) (55A, Exterior protection),
  - the accessories belt (see **Accessories belt: Removal - Refitting**) (11A, Top and front of engine),
  - the alternator (see **Alternator: Removal - Refitting**) (16A, Starting - Charging).



131324

Remove:

- the bolt (2) from the pipe union,
- the nut (3) from the pipe union.

# AIR CONDITIONING

## Compressor: Removal - Refitting

62A

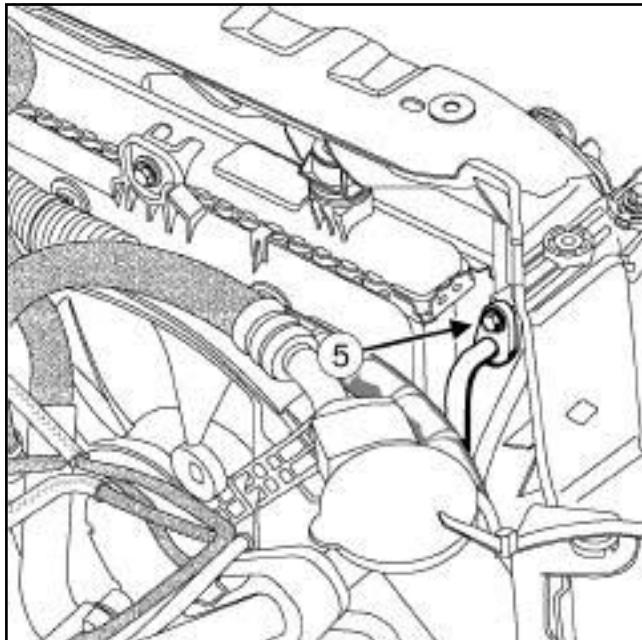
2TR, and AIR CON 01 or AIR CON 02

- Disconnect the pipes from the compressor.

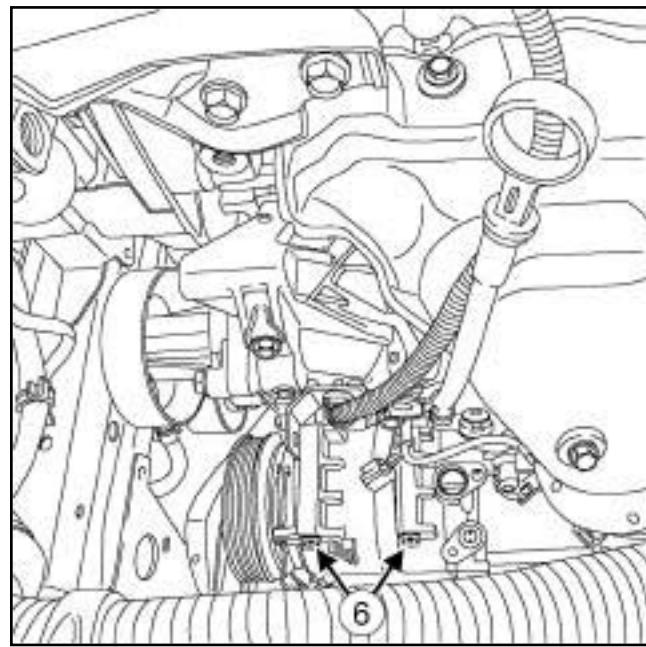
### WARNING

To prevent moisture from entering the system, place plugs on the cold loop components which are open to the air.

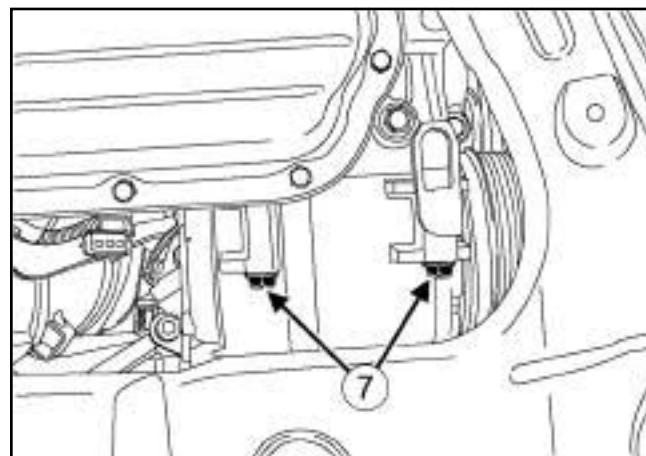
- Fit plugs into the openings.
- Disconnect the connector (4).



- Remove the pipe union bolt (5) on the condenser.
- Disconnect the compressor - condenser connecting pipe from the condenser.
- Fit plugs into the openings.



- Remove the bolts (6) from the compressor.



- Remove:
  - the compressor bolts (7) ,
  - the compressor.

## REFITTING

### I - REMOVAL PREPARATION OPERATION

- Always replace the seals of the connecting pipes of the compressor.
- Lubricate the seals using recommended air conditioning oil to make fitting easier.

# AIR CONDITIONING

## Compressor: Removal - Refitting

62A

2TR, and AIR CON 01 or AIR CON 02

### II - REFITTING OPERATION FOR PART CONCERNED

- Refit:
  - the compressor,
  - the compressor bolts.
- Torque tighten the **compressor bolts (25 N.m)**.

#### WARNING

Do not remove the blanking plugs from each component until the last moment.

Also, do not remove the components from their packaging until they are to be fitted to the vehicle.

- Remove the plugs from the openings.

#### WARNING

To avoid any leaks, check that the pipe surface is sound before positioning the new seal. The surface must be clean and scratch free.

- Place new seals on the connecting pipes of the compressor.
- Connect the compressor - condenser connecting pipe to the condenser.
- Refit the bolt on the pipe union.
- Torque tighten the **bolt of the compressor - condenser connecting pipe union on the condenser (4 N.m)**.
- Connect the connector **(4)**.

#### WARNING

To avoid any leaks, check that the pipe surface is sound before positioning the new seal. The surface must be clean and scratch free.

- Remove the plugs from the openings.
- Connect the pipes to the compressor.
- Refit:
  - the pipe unions on the compressor,
  - the pipe bolt,
  - the pipe nut.
- Torque tighten the **bolt and nut of the pipe unions on the compressor (4 N.m)**.

### III - FINAL OPERATION

- Refit:
  - the dipstick guide,
  - the dipstick guide tube bolt,
  - the alternator (see **Alternator: Removal - Refitting**) (16A, Starting - Charging),
  - the accessories belt (see **Accessories belt: Removal - Refitting**) (11A, Top and front of engine),
  - the front right-hand wheel arch liner (see **Front wheel arch liner: Removal - Refitting**) (55A, Exterior protection),
  - the front right-hand wheel (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres),
  - the engine undertray.
- Connect the battery (see **Battery : Removal - Refitting**) (80A, Battery).
- Fill the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page **62A-11**).
- when replacing the compressor, carry out the following operations:
  - Switch on the ignition,
  - Check that the air conditioning is off,
  - Put the temperature setting at minimum,
  - Select the air recirculation position,
  - Start the engine.
  - Run the air conditioning in manual mode (if equipped with a climate control panel),
  - run the engine at idle speed for 3 minutes with air conditioning,
  - Switch off the engine.
- Set the control of the passenger compartment blower unit to the maximum speed.
- Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page **62A-6**).
- Check for leaks (see **62A, Air conditioning, Coolant circuit check**, page **62A-9**).

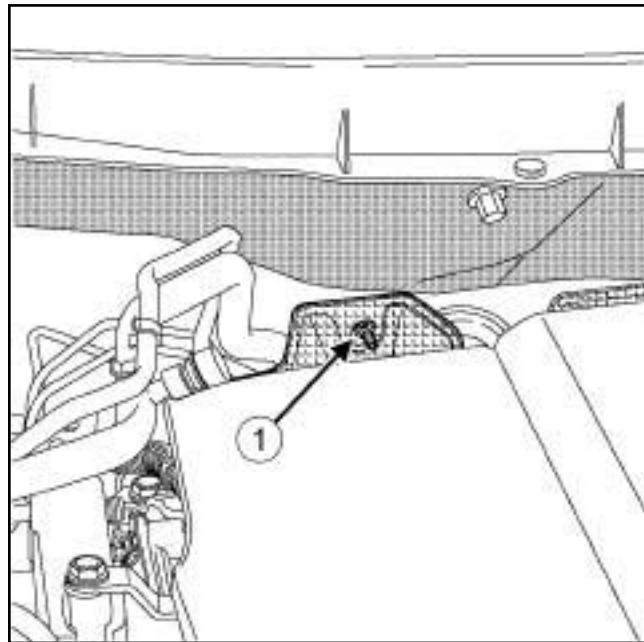
AIR CON 01 or AIR CON 02

**Essential equipment**

refrigerant charging station

**Tightening torques** bolts of the expansion valve **4 N.m**bolt of the pipe union on the expansion valve **4 N.m****IMPORTANT**

To avoid all risk of damage to the systems, apply the safety and cleanliness instructions and operation recommendations before carrying out any repair (see **62A, Air conditioning, Air conditioning: Precautions for repair**, page **62A-1**).



131332

- Remove the nut (1) of the bulkhead insulation.
- Separate the bulkhead insulation.

**REMOVAL****I - REMOVAL PREPARATION OPERATION**

- Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).
- Drain the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page **62A-11**).
- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- Remove:
  - the windscreen wiper arms (see **Windscreen wiper arm: Removal - Refitting**) (85A, Wiping - Washing),
  - the scuttle half-grille (see **Scuttle half-grille: Removal - Refitting**) (56A, Exterior equipment),
  - the windscreen wiper mechanism (see **Windscreen wiper mechanism: Removal - Refitting**) (85A, Wiping - Washing),
  - the scoop under the scuttle panel grille (see **Scoop under scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment).

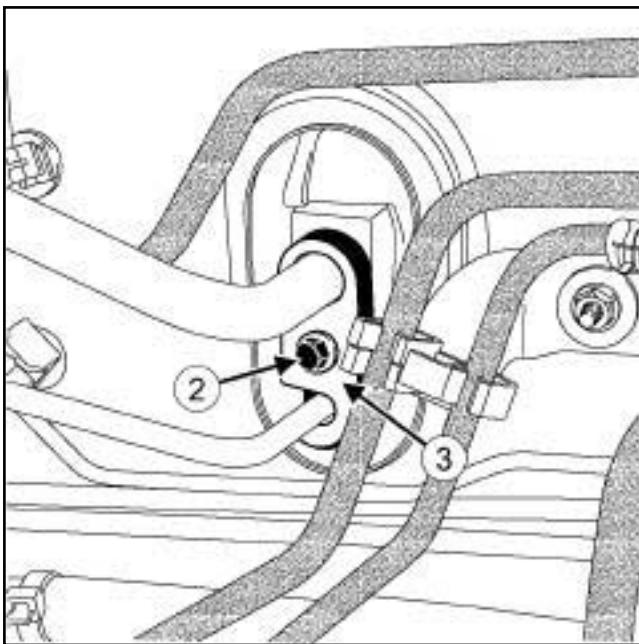
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# AIR CONDITIONING

## Expansion valve: Removal - Refitting

62A

AIR CON 01 or AIR CON 02



- Remove:
  - the bolt (2) of the pipe union,
  - the pipe union (3) .

### WARNING

In order to avoid any refrigerant leaks, do not damage (deform, twist, etc.) the pipe.

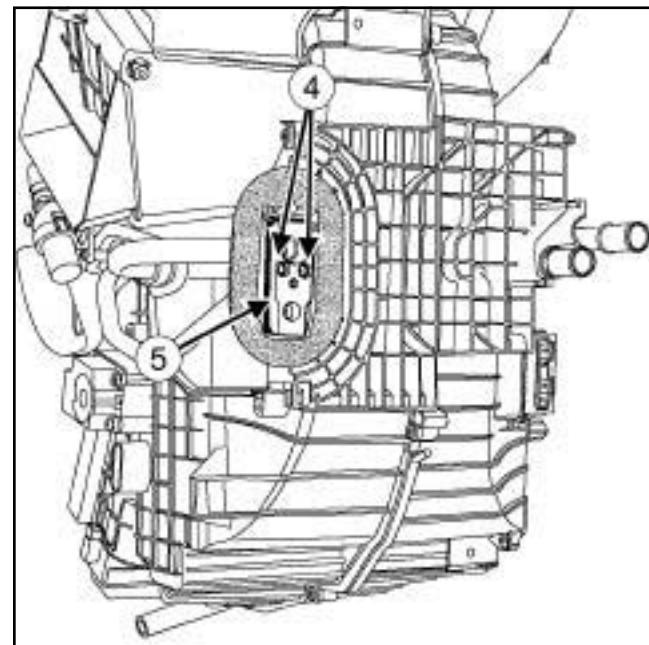
- Disconnect the pipes from the expansion valve.

### WARNING

To prevent moisture from entering the system, place plugs on the cold loop components which are open to the air.

- Fit plugs into the openings.

### II - OPERATION FOR REMOVAL OF PART CONCERNED



- Remove:
  - the bolts (4) from the expansion valve,
  - the expansion valve (5) .

### REFITTING

#### I - REFITTING PREPARATION OPERATION

- Always replace the seals on the refrigerant fluid connecting pipes.
- Lubricate the seals using recommended air conditioning oil to make fitting easier.

#### II - REFITTING OPERATION FOR PART CONCERNED

- Refit:
  - the expansion valve,
  - the expansion valve bolts.

##### Note:

Gradually tighten the bolts of the expansion valve so that the expansion valve is positioned evenly on the distribution unit.

- Torque tighten the **bolts of the expansion valve (4 N.m)**.

# AIR CONDITIONING

## Expansion valve: Removal - Refitting

62A

AIR CON 01 or AIR CON 02

### III - FINAL OPERATION

#### WARNING

Do not remove the blanking plugs from each component until the last moment.

Also, do not remove the components from their packaging until they are to be fitted to the vehicle.

Remove the plugs from the openings.

#### WARNING

To avoid any leaks, check that the pipe surface is sound before positioning the new seal. The surface must be clean and scratch free.

Fit new seals on the refrigerant pipes.

Connect the pipes to the expansion valve.

Refit:

- the pipe union,

- the bolt of the pipe union.

Torque tighten the **bolt of the pipe union on the expansion valve (4 N.m)**.

Fit the bulkhead insulation in its original position.

Refit:

- the nut of the bulkhead insulation,

- the scoop under the scuttle panel grille (see **Scoop under scuttle panel grille: Removal - Refitting** (56A, Exterior equipment),

- the windscreen wiper mechanism (see **Windscreen wiper mechanism: Removal - Refitting** (85A, Wiping - Washing),

- the scuttle half-grille (see **Scuttle half-grille: Removal - Refitting** (56A, Exterior equipment),

- the windscreen wiper arms (see **Windscreen wiper arm: Removal - Refitting** (85A, Wiping - Washing).

Connect the battery (see **Battery : Removal - Refitting** (80A, Battery).

Note:

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

Fill the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page **62A-11**).

Set the control of the passenger compartment blower unit to the maximum speed.

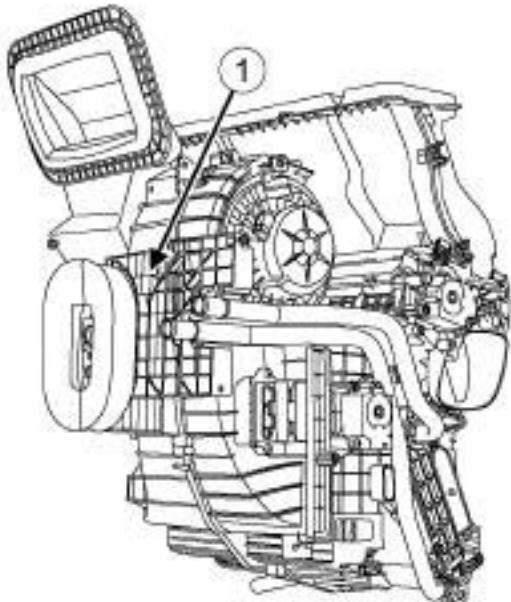
Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page **62A-6**).

Check for leaks (see **62A, Air conditioning, Coolant circuit check**, page **62A-9**).

AIR CON 01 or AIR CON 02

**IMPORTANT**

To avoid any risk of damaging the systems, apply the safety and cleanliness instructions and the operation recommendations before carrying out the repair (see **62A, Air conditioning, Air conditioning: Precautions for repair**, page **62A-1**).



131308



**Note:**

The evaporator cannot be separated from the distribution unit (1).

□ If removing or replacing the evaporator (see **61A, Heating, Air distribution unit: Removal - Refitting**, page **61A-25**).

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## Essential equipment

refrigerant charging station

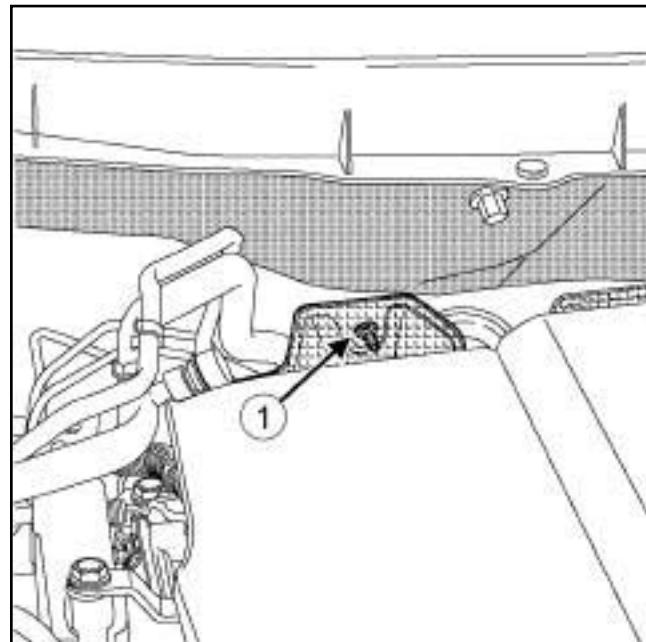
Tightening torques 

bolt of the expansion valve - condenser connecting pipe union on the condenser **4 N.m**

bolt of the pipe union on the expansion valve **4 N.m**

## IMPORTANT

To avoid any risk of damaging the systems, apply the safety and cleanliness instructions and the operation recommendations before carrying out the repair (see **62A, Air conditioning, Air conditioning: Precautions for repair**, page **62A-1**).



130896

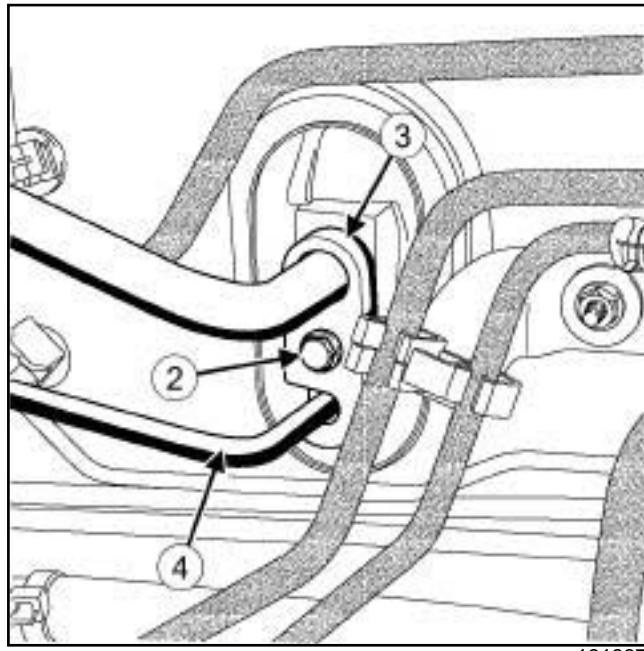
- Remove the nut (1) from the bulkhead insulation.
- Separate the bulkhead insulation.

## REMOVAL

## I - REMOVAL PREPARATION OPERATION

- Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).
- Drain the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page **62A-11**)
- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- Remove:
  - the engine undertray,
  - the windscreen wiper arms (see **Windscreen wiper arm: Removal - Refitting**) (85A, Wiping - Washing),
  - the scuttle panel half-grille (see **Scuttle half-grille: Removal - Refitting**) (56A, Exterior equipment),
  - the windscreen wiper mechanism (see **Windscreen wiper mechanism: Removal - Refitting**) (85A, Wiping - Washing),
  - the scoop under the scuttle panel grille (see **Scoop under scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment).

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**II - OPERATION FOR REMOVAL OF PART CONCERNED**


Remove:

- the bolt (2) of the pipe union,
- the pipe union (3) .

**WARNING**

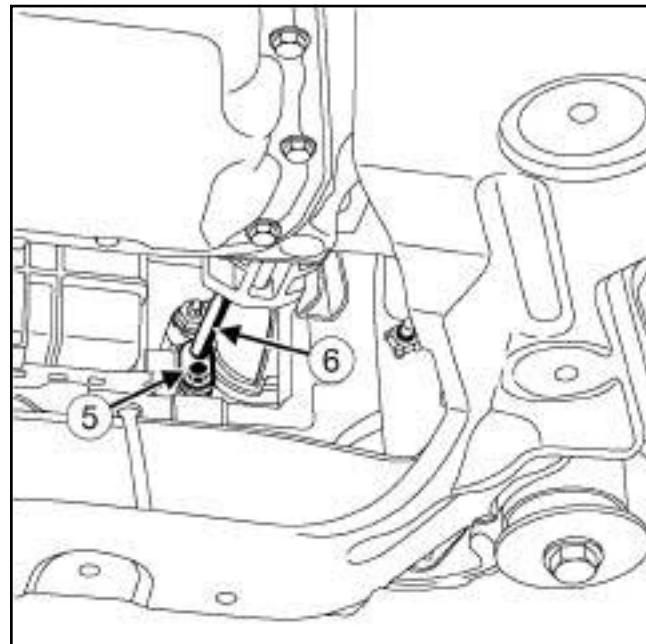
In order to avoid any refrigerant leaks, do not damage (deform, twist, etc.) the pipe.

Disconnect the expansion valve - condenser connecting pipe (4) from the expansion valve.

**WARNING**

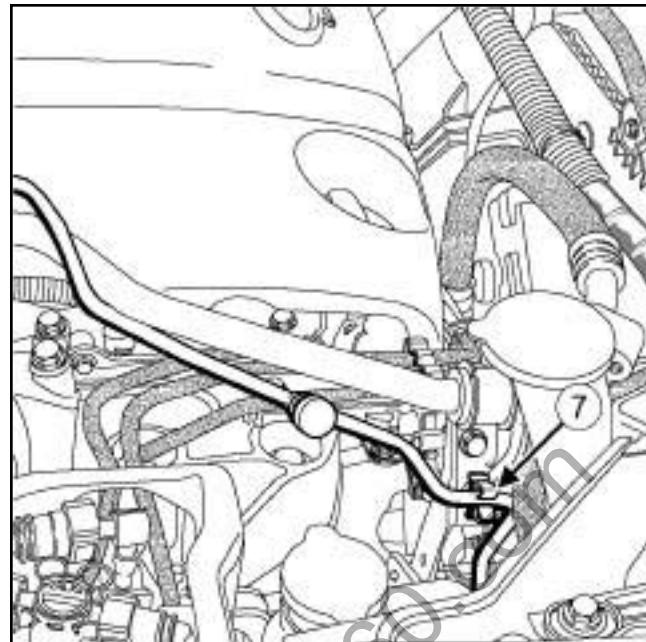
To prevent moisture from entering the system, place plugs on the cold loop components which are open to the air.

Fit plugs into the openings.



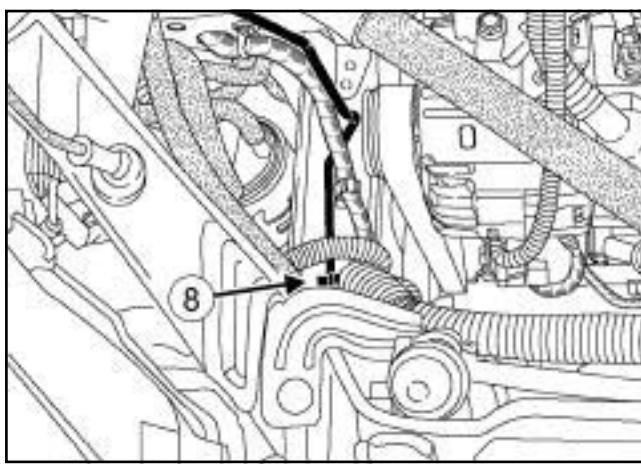
131320

- Remove the bolt (5) from the pipe union.
- Disconnect the expansion valve - condenser connecting pipe (6) from the condenser.
- Fit plugs into the openings.



132522

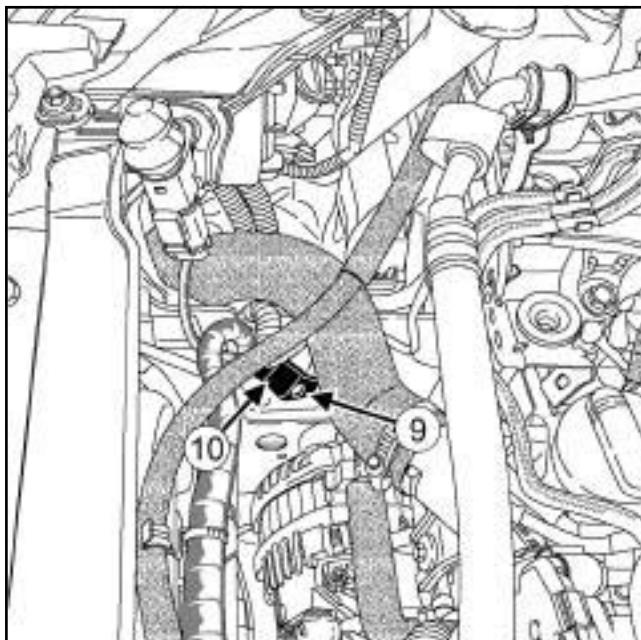
Unclip the expansion valve - condenser connecting pipe at (7) .



132524

Unclip the expansion valve - condenser connecting pipe at (8) .

M9R



132523

Remove:  
- the bolt (9) ,  
- the support (10) .

Remove the expansion valve - condenser connecting pipe.

## REFITTING

### I - REFITTING PREPARATION OPERATION

- Always replace the seals on the refrigerant fluid connecting pipes.
- Lubricate the seals using recommended air conditioning oil to make fitting easier.

### II - REFITTING OPERATION FOR PART CONCERNED

Refit the expansion valve - condenser connecting pipe.

M9R

Refit:  
- the support (10) ,  
- the support bolt.

Clip:

- the expansion valve - condenser connecting pipe at (8) ,
- the expansion valve - condenser connecting pipe at (7) .

#### WARNING

Do not remove the blanking plugs from each component until the last moment.

Also, do not remove the components from their packaging until they are to be fitted to the vehicle.

Remove the opening plugs on the side concerned.

#### WARNING

To avoid any leaks, check that the pipe surface is sound before positioning the new seal. The surface must be clean and scratch free.

- Fit new seals to the refrigerant connecting pipes.
- Connect the expansion valve - condenser connecting pipe on the condenser.
- Refit the bolt of the pipe union.
- Torque tighten the **bolt of the expansion valve - condenser connecting pipe union on the condenser (4 N.m)**.
- Remove the opening plugs on the side concerned.

- Connect the expansion valve - condenser connecting pipe on the expansion valve.
- Refit:
  - the pipe union,
  - the bolt of the pipe union.
- Torque tighten the **bolt of the pipe union on the expansion valve (4 N.m)**.

### III - FINAL OPERATION.

- Fit the bulkhead insulation in its original position.
- Refit:
  - the nut of the bulkhead insulation,
  - the scoop under the scuttle panel grille (see **Scoop under scuttle panel grille: Removal - Refitting** (56A, Exterior equipment)).
  - the windscreen wiper mechanism (see **Windscreen wiper mechanism: Removal - Refitting** (85A, Wiping - Washing)),
  - the scuttle panel half-grille (see **Scuttle half-grille: Removal - Refitting** (56A, Exterior accessories)),
  - the windscreen wiper arms (see **Windscreen wiper arm: Removal - Refitting** (85A, Wiping - Washing)).
- Connect the battery (see **Battery : Removal - Refitting** (80A, Battery)).

**Note:**

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

- Fill the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page **62A-11**)
- Set the control of the passenger compartment blower unit to the maximum speed.
- Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page **62A-6**).
- Check for leaks (see **62A, Air conditioning, Coolant circuit check**, page **62A-9**).

M9R, and AIR CON 01 or AIR CON 02

## Essential equipment

refrigerant charging station

Tightening torques 

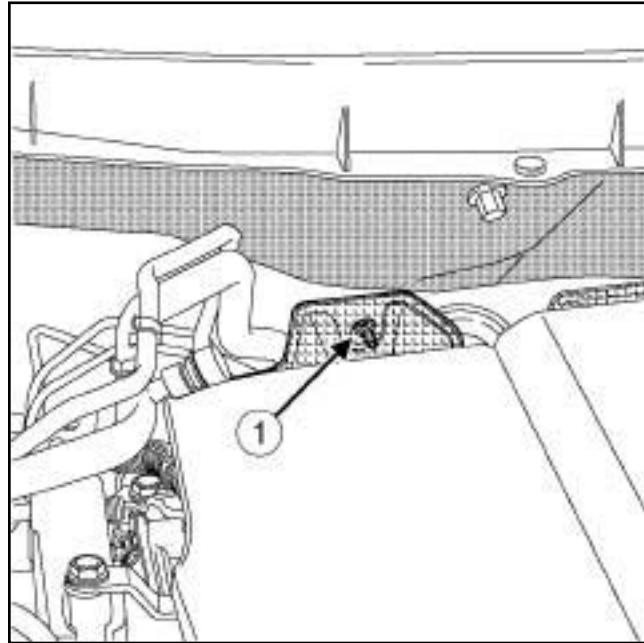
bolt of the compressor - intermediate pipe connecting pipe union on the compressor	4 N.m
bolt of the compressor - intermediate pipe connecting pipe union on the expansion valve - intermediate pipe	connecting pipe 4 N.m
bolt of the pipe union	4 N.m
bolt of the pipe union on the expansion valve	4 N.m

## IMPORTANT

To avoid any risk of damaging the systems, apply the safety and cleanliness instructions and the operation recommendations before carrying out the repair (see **62A, Air conditioning, Air conditioning: Precautions for repair**, page **62A-1**).

- the windscreen wiper mechanism (see **Windscreen wiper mechanism: Removal - Refitting** (85A, Wiping - Washing)),

- the scoop under the scuttle panel grille (see **Scoop under scuttle panel grille: Removal - Refitting** (56A, Exterior equipment)).



131336

- Remove the nut (1) of the bulkhead insulation.
- Separate the bulkhead insulation.

## REMOVAL

## I - REMOVAL PREPARATION OPERATION

- Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).
- Drain the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page **62A-11**).
- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).

## Expansion valve - intermediate pipe connecting pipe

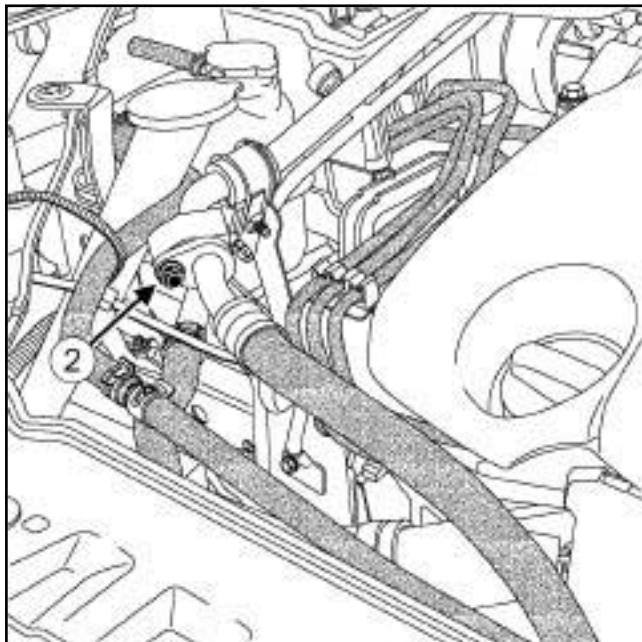
- Remove:

- the windscreen wiper arms (see **Windscreen wiper arm: Removal - Refitting** (85A, Wiping - Washing)),
- the scuttle panel half-grille (see **Scuttle half-grille: Removal - Refitting** (56A, Exterior equipment)),

M9R, and AIR CON 01 or AIR CON 02

### II - OPERATION FOR REMOVAL OF PART CONCERNED

#### 1 - Compressor - intermediate pipe connecting pipe



131340

- Remove the bolt of the pipe union (2) .

#### WARNING

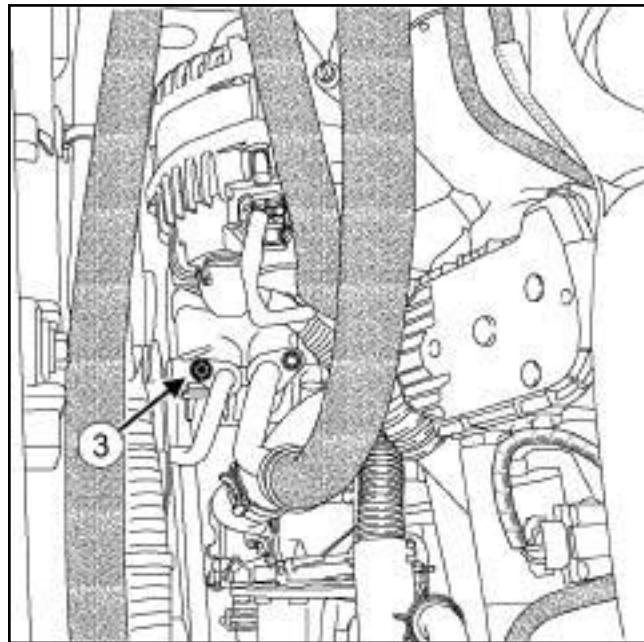
In order to avoid any refrigerant leaks, do not damage (deform, twist, etc.) the pipe.

- Disconnect the compressor - intermediate pipe connecting pipe from the expansion valve - intermediate pipe connecting pipe.

#### WARNING

To prevent moisture from entering the system, place plugs on the cold loop components which are open to the air.

- Fit plugs into the openings.



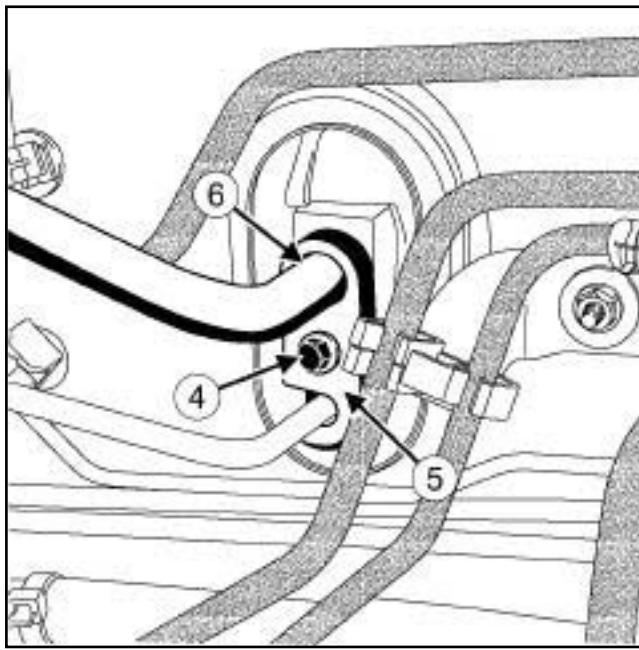
131341

- Remove the bolt from the pipe union (3) .
- Disconnect the compressor - intermediate pipe connecting pipe from the compressor.
- Fit plugs into the openings.

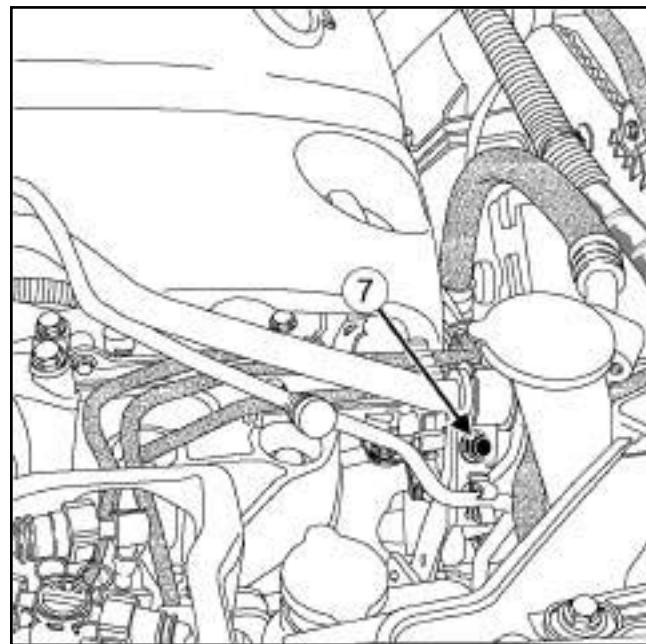
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M9R, and AIR CON 01 or AIR CON 02

## 2 - Expansion valve - intermediate pipe connecting pipe



131342



131343

□ Remove the bolt (7) from the clip.

□ Remove:

- the bolt (4) of the pipe union,
- the pipe union (5) .

**WARNING**

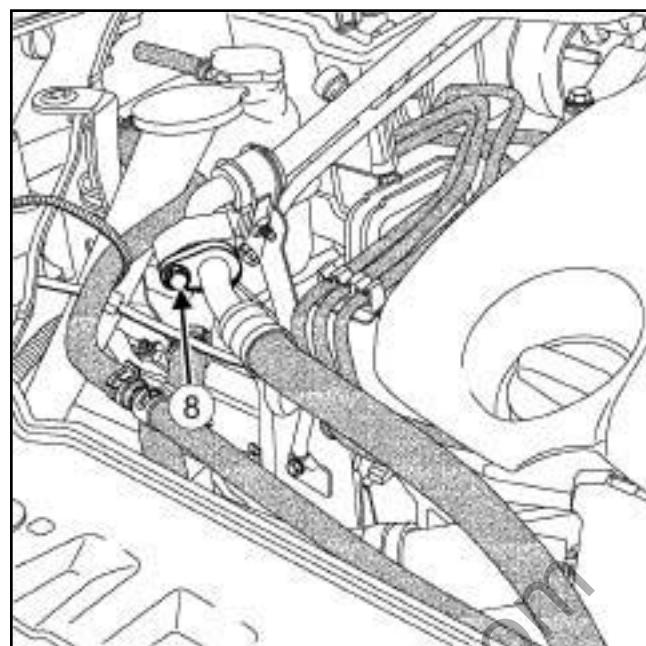
In order to avoid any refrigerant leaks, do not damage (deform, twist, etc.) the pipe.

□ Disconnect the expansion valve - intermediate pipe connecting pipe (6) from the expansion valve.

**WARNING**

To prevent moisture from entering the system, place plugs on the cold loop components which are open to the air.

□ Fit plugs into the openings.



131344

□ Remove the bolt (8) from the pipe union.

□ Disconnect the expansion valve - intermediate pipe connecting pipe from the compressor - intermediate pipe connecting pipe.

□ Fit plugs into the openings.

M9R, and AIR CON 01 or AIR CON 02

## REFITTING

## I - REFITTING PREPARATION OPERATION

- Always replace the seals on the refrigerant connecting pipes.
- Lubricate the seals using recommended air conditioning oil to make fitting easier.

## II - REFITTING OPERATION FOR PART CONCERNED

- 

## WARNING

Do not remove the blanking plugs from each component until the last moment.

Also, do not remove the components from their packaging until they are to be fitted to the vehicle.

## 1 - Compressor - intermediate pipe connecting pipe

- Remove the plugs from the openings on the side concerned.

## WARNING

To avoid any leaks, check that the pipe surface is sound before positioning the new seal. The surface must be clean and scratch free.

- Fit new seals to the refrigerant connecting pipes.
- Connect the compressor - intermediate pipe connecting pipe on the compressor.
- Refit the bolt of the compressor - intermediate pipe connecting pipe union.
- Torque tighten the **bolt of the compressor - intermediate pipe connecting pipe union on the compressor (4 N.m)**.
- Remove the plugs from the openings on the side concerned.
- Refit the bolt of the pipe union.
- Connect the compressor - intermediate pipe connecting pipe on the expansion valve - intermediate pipe connecting pipe.
- Torque tighten the **bolt of the compressor - intermediate pipe connecting pipe union on the expansion valve - intermediate pipe (connecting pipe) (4 N.m)**.

## 2 - Expansion valve - intermediate pipe connecting pipe

- Remove the plugs from the openings on the side concerned.

## WARNING

To avoid any leaks, check that the pipe surface is sound before positioning the new seal. The surface must be clean and scratch free.

- Fit new seals to the refrigerant connecting pipes.
- Connect the expansion valve - intermediate pipe connecting pipe on the compressor - intermediate pipe connecting pipe.
- Remove the bolt from the pipe union.
- Torque tighten the **bolt of the pipe union (4 N.m)**.
- Refit the bolt of the clip.
- Connect the expansion valve - intermediate pipe connecting pipe on the expansion valve.
- Refit:
  - the pipe union,
  - the bolt of the pipe union.
- Torque tighten the **bolt of the pipe union on the expansion valve (4 N.m)**.

## III - FINAL OPERATION.

## Expansion valve - intermediate pipe connecting pipe

- Fit the bulkhead seal in its original position.
- Refit:
  - the nut of the bulkhead insulation,
  - the scoop under the scuttle panel grille (see **Scoop under scuttle panel grille: Removal - Refitting** (56A, Exterior equipment),
  - the windscreen wiper mechanism (see **Windscreen wiper mechanism: Removal - Refitting** (85A, Wiping - Washing)),
  - the scuttle panel half-grille (see **Scuttle half-grille: Removal - Refitting** (56A, Exterior equipment)),
  - the windscreen wiper arms (see **Windscreen wiper arm: Removal - Refitting** (85A, Wiping - Washing)).

# AIR CONDITIONING

## Pressure relief valve - compressor connecting pipe: Removal - Refitting

**62A**

M9R, and AIR CON 01 or AIR CON 02



Connect the battery (see **Battery : Removal - Refitting**) (80A, Battery).

Note:

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

- Fill the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page **62A-11**).
- Set the control of the passenger compartment blower unit to the maximum speed.
- Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page **62A-6**).
- Check for leaks (see **62A, Air conditioning, Coolant circuit check**, page **62A-9**).

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2TR, and AIR CON 01 or AIR CON 02

**Essential equipment**

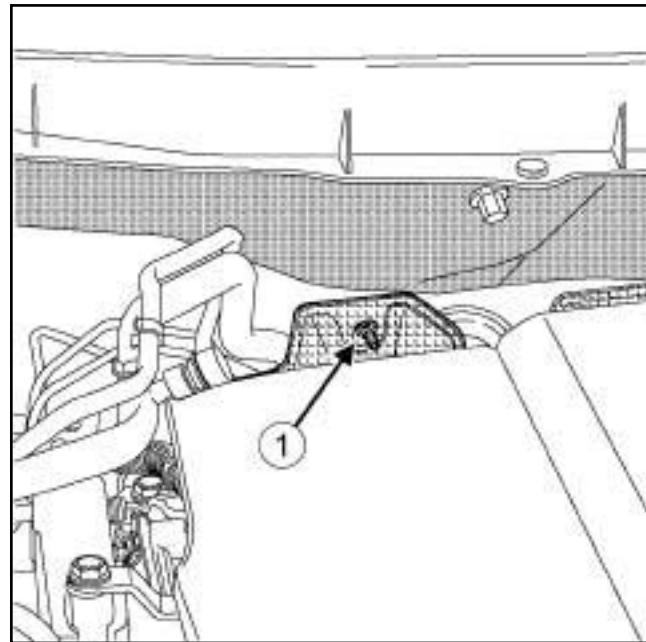
refrigerant charging station

**Tightening torques** 

nut of the expansion valve - compressor connecting pipe union on the compressor	<b>4 N.m</b>
bolt of the pipe union on the expansion valve	<b>4 N.m</b>

**IMPORTANT**

To avoid all risk of damage to the systems, apply the safety and cleanliness instructions and operation recommendations before carrying out any repair (see **62A, Air conditioning, Air conditioning: Precautions for repair**, page **62A-1**).



131336

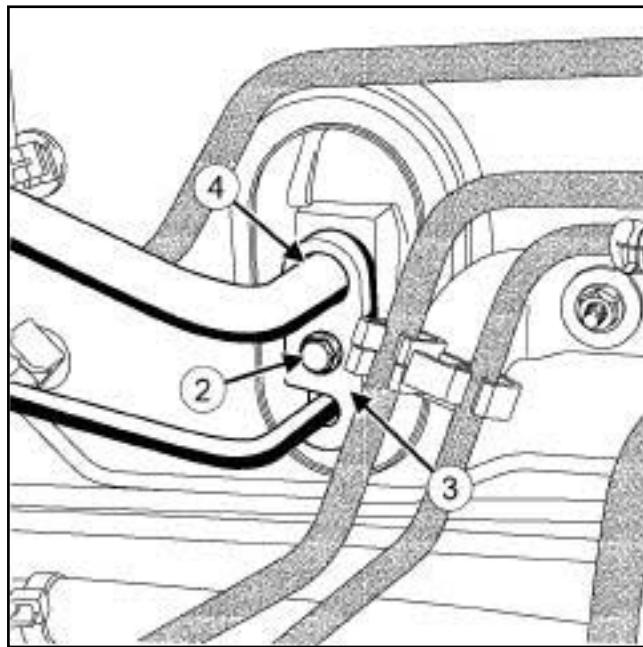
- Remove the nut (1) from the bulkhead insulation.
- Separate the bulkhead insulation.

**REMOVAL****I - REMOVAL PREPARATION OPERATION**

- Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).
- Drain the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page **62A-11**).
- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- Remove:
  - the windscreen wiper arms (see **Windscreen wiper arm: Removal - Refitting**) (85A, Wiping - Washing),
  - the scuttle half-grille (see **Scuttle half-grille: Removal - Refitting**) (56A, Exterior equipment),
  - the windscreen wiper mechanism (see **Windscreen wiper mechanism: Removal - Refitting**) (85A, Wiping - Washing),
  - the scoop under the scuttle panel grille (see **Scoop under scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment).

2TR, and AIR CON 01 or AIR CON 02

## II - OPERATION FOR REMOVAL OF PART CONCERNED



131337

 Remove:

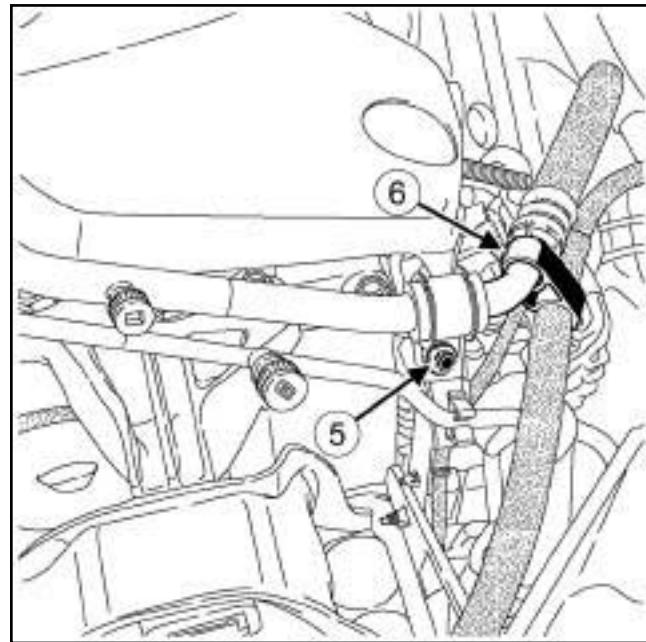
- the bolt (2) of the pipe union,
- the pipe union (3) .

**WARNING**

In order to avoid any refrigerant leaks, do not damage (deform, twist, etc.) the pipe.

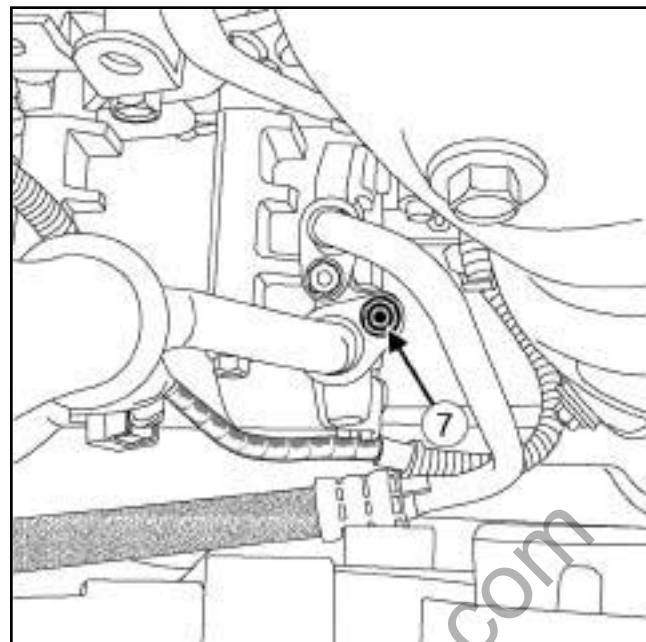
 Disconnect the connecting pipe (4) from the expansion valve.**WARNING**

To prevent moisture from entering the system, place plugs on the cold loop components which are open to the air.

 Fit plugs into the openings.

131338

- Remove the bolt (5) from the connecting pipe clip.
- Unfasten clip (6) .



131339

- Remove the nut (7) from the pipe union.

**WARNING**

In order to avoid any refrigerant leaks, do not damage (deform, twist, etc.) the pipe.

2TR, and AIR CON 01 or AIR CON 02

Disconnect the expansion valve - compressor connecting pipe from the compressor.

#### WARNING

To prevent moisture from entering the system, place plugs on the cold loop components which are open to the air.

Fit plugs into the openings.

## REFITTING

### I - REFITTING PREPARATION OPERATION

Always replace the seals on the refrigerant connecting pipes.

Lubricate the seals using recommended air conditioning oil to make fitting easier.

### II - REFITTING OPERATION FOR PART CONCERNED

#### WARNING

Do not remove the blanking plugs from each component until the last moment.

Also, do not remove the components from their packaging until they are to be fitted to the vehicle.

Remove the plugs from the openings on the side concerned.

#### WARNING

To avoid any leaks, check that the pipe surface is sound before positioning the new seal. The surface must be clean and scratch free.

Fit new seals to the refrigerant connecting pipes.

Connect the expansion valve - compressor connecting pipe to the compressor.

Refit the nut of the pipe union.

Torque tighten the **nut of the expansion valve - compressor connecting pipe union on the compressor (4 N.m)**.

Engage clip (6).

Refit the bolt of the connecting pipe clip.

Remove the opening plugs on the side concerned.

Connect the expansion valve - compressor connecting pipe to the expansion valve.

Refit:

- the pipe union,
- the bolt of the pipe union.

Torque tighten the **bolt of the pipe union on the expansion valve (4 N.m)**.

### III - FINAL OPERATION

Fit the bulkhead insulation in its original position.

Refit:

- the nut of the bulkhead insulation,
- the scoop under the scuttle panel grille (see **Scoop under scuttle panel grille: Removal - Refitting** (56A, Exterior equipment),
- the windscreen wiper mechanism (see **Windscreen wiper mechanism: Removal - Refitting** (85A, Wiping - Washing),
- the scuttle half-grille (see **Scuttle half-grille: Removal - Refitting** (56A, Exterior equipment),
- the windscreen wiper arms (see **Windscreen wiper arm: Removal - Refitting** (85A, Wiping - Washing)).

Connect the battery (see **Battery : Removal - Refitting** (80A, Battery)).

#### Note:

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

Fill the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page 62A-11).

Set the control of the passenger compartment blower unit to the maximum speed.

Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page 62A-6).

Check for leaks (see **62A, Air conditioning, Coolant circuit check**, page 62A-9).

## Essential equipment

refrigerant charging station

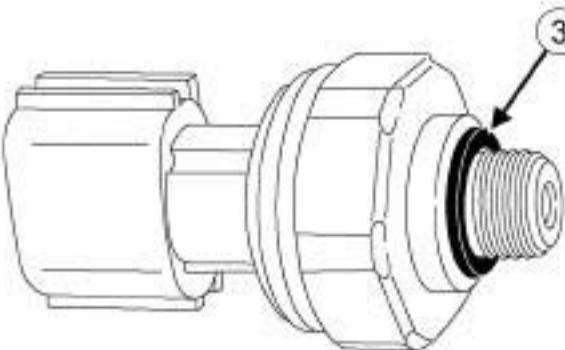
## Tightening torques

pressure sensor nut

11 N.m

## REFITTING

## I - REFITTING PREPARATION OPERATION



131346

Always replace the seal (3) .

## II - REFITTING OPERATION FOR PART CONCERNED

Refit the pressure sensor.

Torque tighten the **pressure sensor nut (11 N.m)**.

Connect the connector (1) .

## III - FINAL OPERATION.

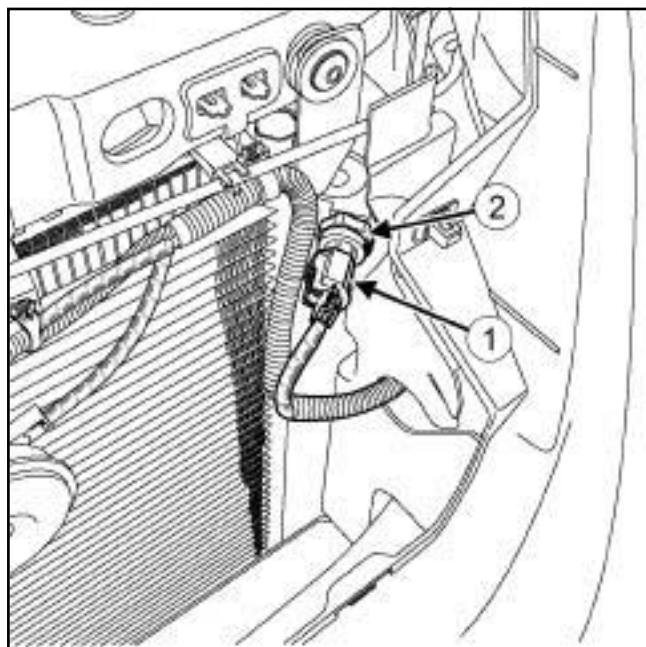
Refit the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection).

Fill the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page **62A-11**) .

Set the control of the passenger compartment blower unit to the maximum speed.

Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page **62A-6** ) .

Check for leaks (see **62A, Air conditioning, Coolant circuit check**, page **62A-9**) .



Disconnect the connector (1) .

Remove the pressure sensor (2) .

AIR CON 01 or AIR CON 02

**Essential equipment**

refrigerant charging station

**Tightening torques** 

bolt of the compressor - condenser connecting pipe union on the compressor **4 N.m**

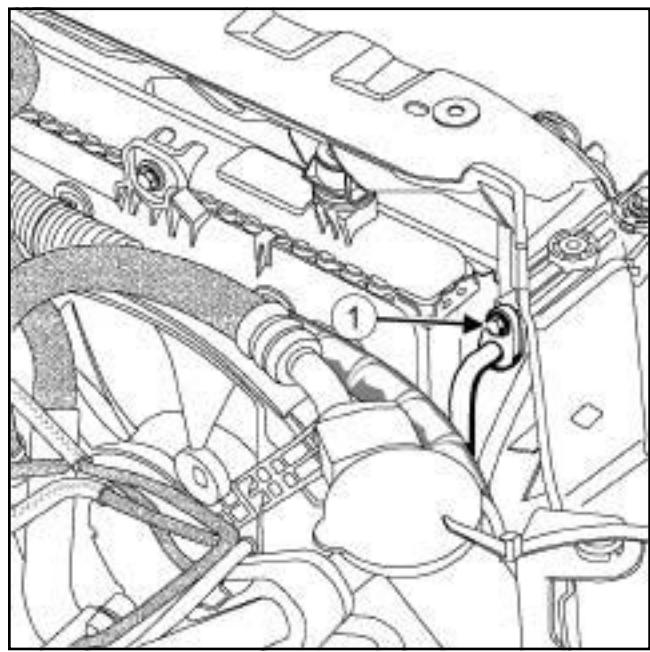
bolt of the compressor - condenser connecting pipe union on the condenser **4 N.m**

**IMPORTANT**

To avoid all risk of damage to the systems, apply the safety and cleanliness instructions and operation recommendations before carrying out any repair (see **62A, Air conditioning, Air conditioning: Precautions for repair**, page **62A-1**).

**REMOVAL****I - REMOVAL PREPARATION OPERATION**

- Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).
- Drain the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page **62A-11**).
- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).

**II - OPERATION FOR REMOVAL OF PART CONCERNED**

131347

- Remove the bolt (1) from the pipe union.

**WARNING**

In order to avoid any refrigerant leaks, do not damage (deform, twist, etc.) the pipe.

- Disconnect the compressor - condenser connecting pipe from the condenser.

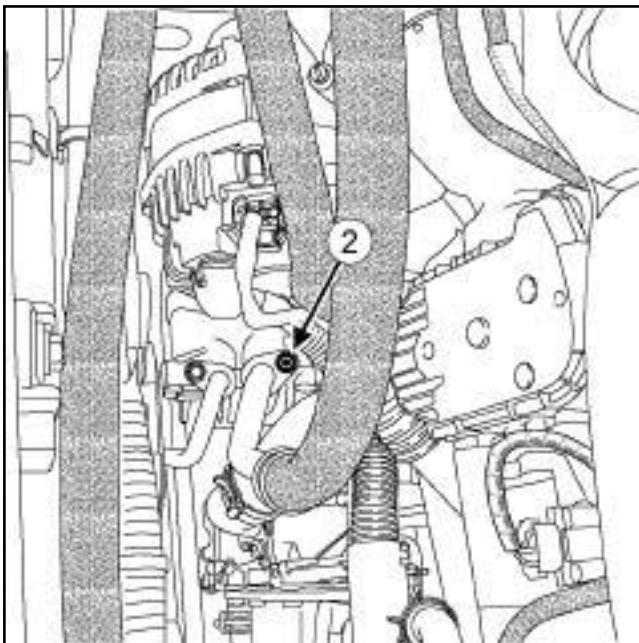
**WARNING**

To prevent moisture from entering the system, place plugs on the cold loop components which are open to the air.

- Fit plugs into the openings.

AIR CON 01 or AIR CON 02

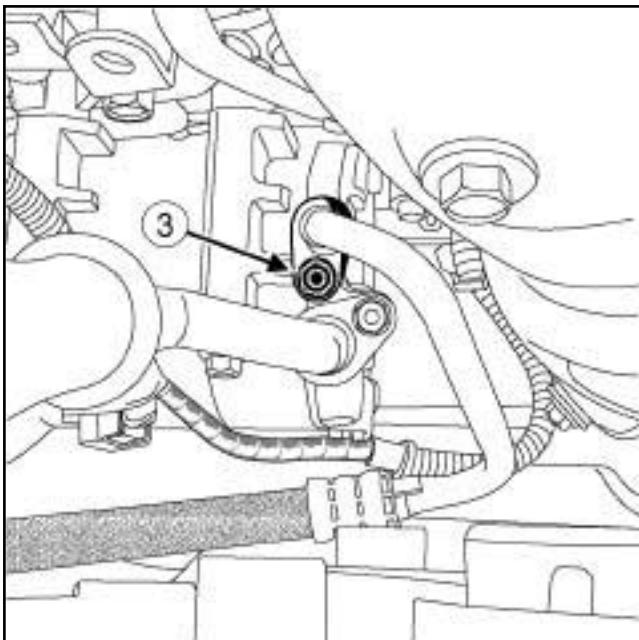
M9R



131348

- Remove the bolt (2) from the pipe union.

2TR



131349

- Remove the bolt (3) from the pipe union.

- Disconnect the compressor - condenser connecting pipe from the compressor.
- Fit plugs into the openings.

## REFITTING

### I - REFITTING PREPARATION OPERATION

- Always replace the seals on the refrigerant fluid connecting pipes.
- Lubricate the seals using recommended air conditioning oil to make fitting easier.

### II - REFITTING OPERATION FOR PART CONCERNED

- 

#### WARNING

Do not remove the blanking plugs from each component until the last moment.

Also, do not remove the components from their packaging until they are to be fitted to the vehicle.

- Remove the plugs from the openings on the side concerned.

#### WARNING

To avoid any leaks, check that the pipe surface is sound before positioning the new seal. The surface must be clean and scratch free.

- Fit new seals to the refrigerant connecting pipes.
- Connect the compressor - condenser connecting pipe on the compressor.
- Refit the bolt of the pipe union.
- Torque tighten the **bolt of the compressor - condenser connecting pipe union on the compressor** (4 N.m).
- Remove the plugs from the openings on the side concerned.
- Fit new seals to the refrigerant connecting pipes.
- Connect the compressor - condenser connecting pipe on the condenser.
- Refit the bolt of the pipe union.
- Torque tighten the **bolt of the compressor - condenser connecting pipe union on the condenser** (4 N.m).

AIR CON 01 or AIR CON 02

### III - FINAL OPERATION

- Connect the battery (see **Battery : Removal - Refitting**) (80A, Battery).

Note:

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

- Fill the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Coolant circuit Draining - Refilling**, page **62A-11**).
- Set the control of the passenger compartment blower unit to the maximum speed.
- Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page **62A-6**).
- Check for leaks (see **62A, Air conditioning, Coolant circuit check**, page **62A-9**).

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