RENAULT

6 Air conditioning

61A HEATING

62A AIR CONDITIONING

X38, and B32 or L38

OCTOBER 2009 **EDITION ANGLAISE**

FLUENCE - MEGANE GENERATION - Section 6

Contents

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EXPORT EQUIPMENT LEVEL ADDITIONAL

I - LIST OF COMPONENTS

The air conditioning system consists of:

- a control panel (see **61A**, **Heating**, **Control panel: Removal - Refitting**, page **61A-30**) ,
- a cabin filter (see **61A**, **Heating**, **Cabin filter: Removal - Refitting**, page **61A-8**) ,
- an expansion valve (see **62A**, **Air conditioning**, **Expansion valve: Removal - Refitting**, page **62A-13**) ,
- a recirculation motor (see **61A**, **Heating**, **Recirculation motor: Removal - Refitting**, page **61A-41**) ,
- a recirculation control cable (see **Recirculation control cable: Removal - Refitting**) ,
- a cooling fan assembly (see **61A**, **Heating**, **Fan assembly: Removal - Refitting**, page **61A-22**) ,
- an evaporator sensor (see **62A**, **Air conditioning**, **Evaporator sensor: Removal - Refitting**, page **62A-27**) .
- a fan assembly control unit (see **Rear passenger compartment fan assembly control unit: Removal - Refitting**) ,
- a heater matrix (see **61A**, **Heating**, **Heater matrix: Removal - Refitting**, page **61A-19**) ,
- heating resistors (see **Heating resistors: Removal - Refitting**) ,
- heater resistor relay (see **61A**, **Heating**, **Heating resistor relays: Removal - Refitting**, page **61A-27**) ,

AIR CONDITIONING

- an air distribution cable (see **61A**, **Heating**, **Air distribution cable: Removal - Refitting**, page **61A-12**) .
- an air mixing cable (see **61A**, **Heating**, **Air mixing cable: Removal - Refitting**, page **61A-13**) ,

CLIMATE CONTROL

- air mixing motors (see **61A**, **Heating**, **Mixing motor: Removal - Refitting**, page **61A-42**) ,
- a distribution motor (see **61A**, **Heating**, **Distribution motor: Removal - Refitting**, page **61A-45**) ,
- a front centre air distribution duct (see **61A**, **Heating**, **Front centre air distribution duct: Removal - Refitting**, page **61A-39**) ,
- a front intermediate side air distribution duct,
- front side air distribution ducts (see **61A**, **Heating**, **Front side air distribution duct: Removal - Refitting**, page **61A-34**) ,
- A-pillar air distribution ducts (see **61A**, **Heating**, **Front footwell air distribution duct: Removal - Refitting**, page **61A-40**) ,
- C-pillar air distribution ducts (see **C-pillar air distribution duct: Removal - Refitting**) ,

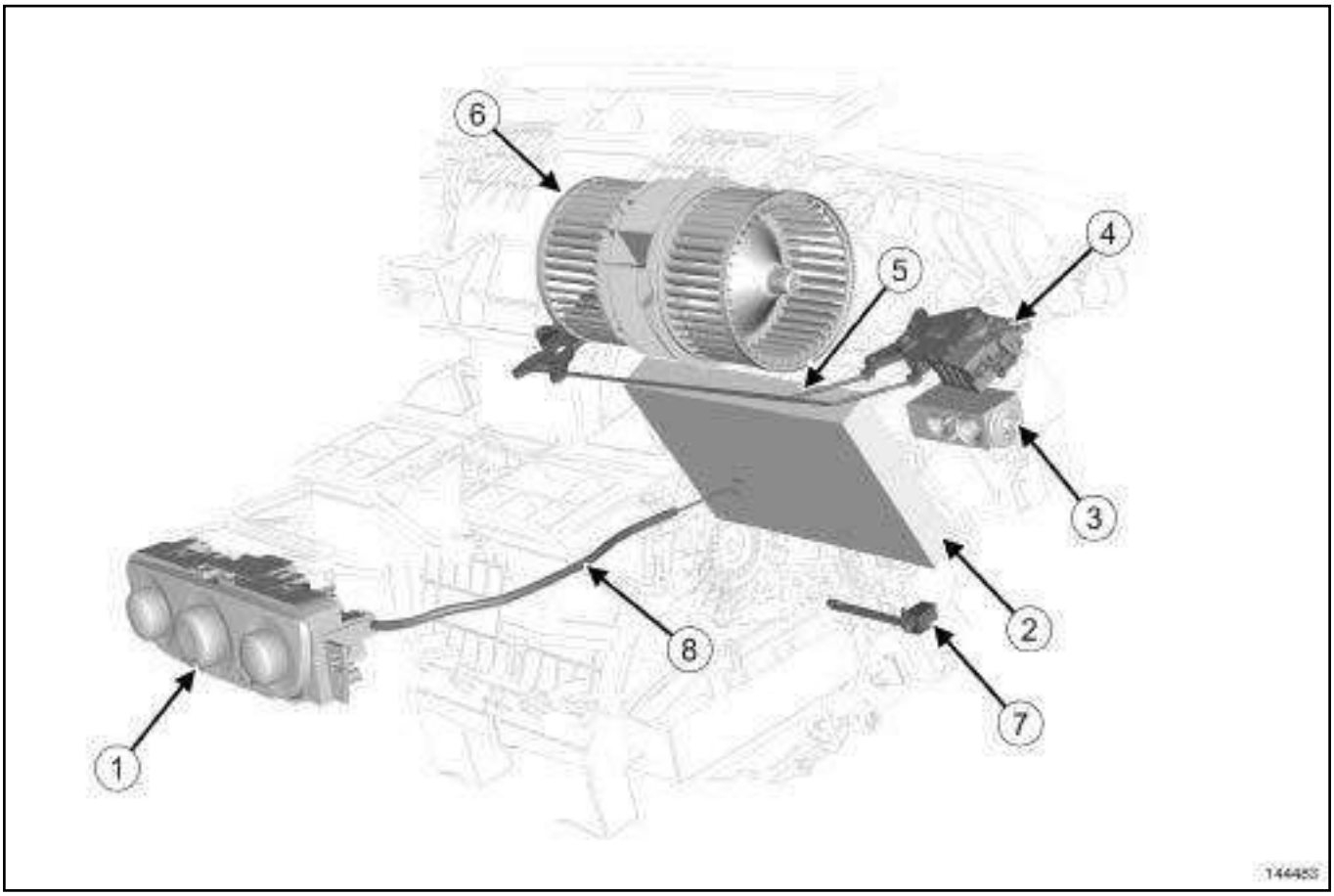
EQUIPMENT LEVEL EA3 or EQUIPMENT LEVEL EA4

- a rear intermediate air distribution duct (see **61A**, **Heating**, **C-pillar intermediate air distribution duct: Removal - Refitting**, page **61A-10**) ,
- a rear air distribution duct (see **61A**, **Heating**, **Rear air distribution duct: Removal - Refitting**, page **61A-11**) .

EXPORT EQUIPMENT LEVEL ADDITIONAL

II - LOCATION OF COMPONENTS

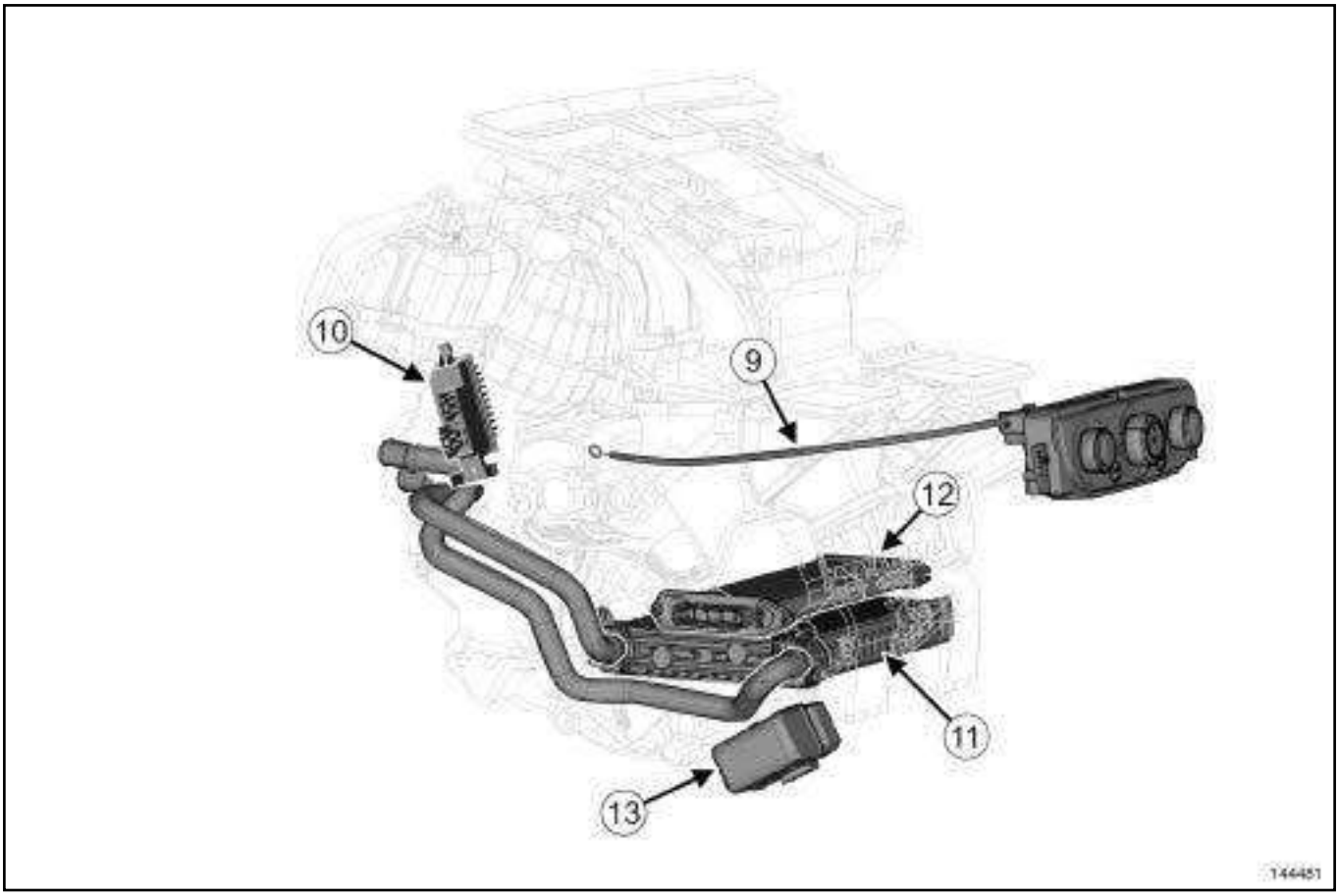
AIR CONDITIONING



144483

(**1**)	Control panel
(**2**)	Passenger compartment filter
(**3**)	Expansion valve
(**4**)	Recirculation motor
(**5**)	Recirculation control cable
(**6**)	Fan assembly
(**7**)	Evaporator sensor
(**8**)	Air distribution cable

EXPORT EQUIPMENT LEVEL ADDITIONAL

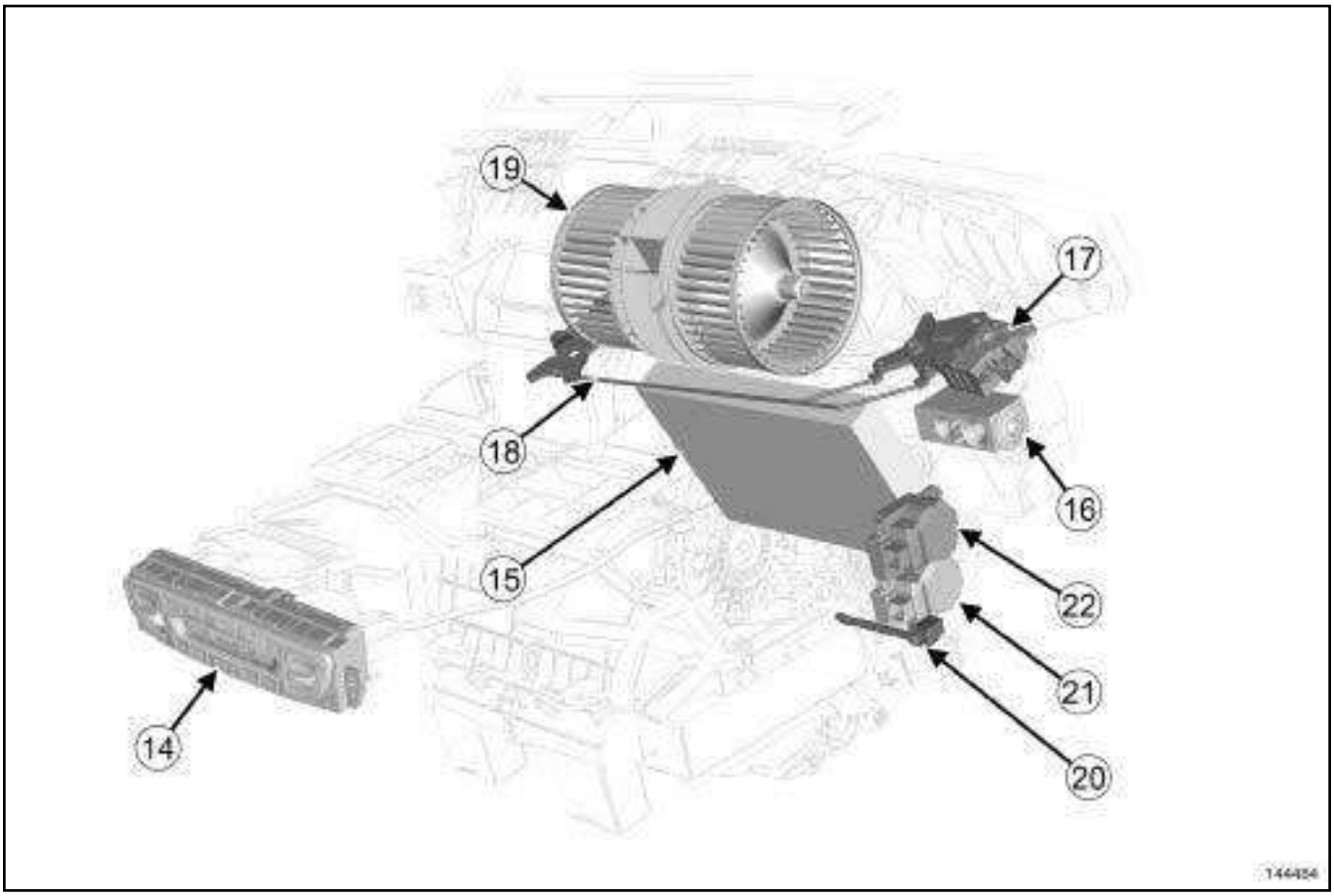


144481

(**9**)	Air mixing cable
(**10**)	Fan assembly control unit
(**11**)	Heater matrix
(**12**)	Heating resistors
(**13**)	Heating resistor relay

EXPORT EQUIPMENT LEVEL ADDITIONAL

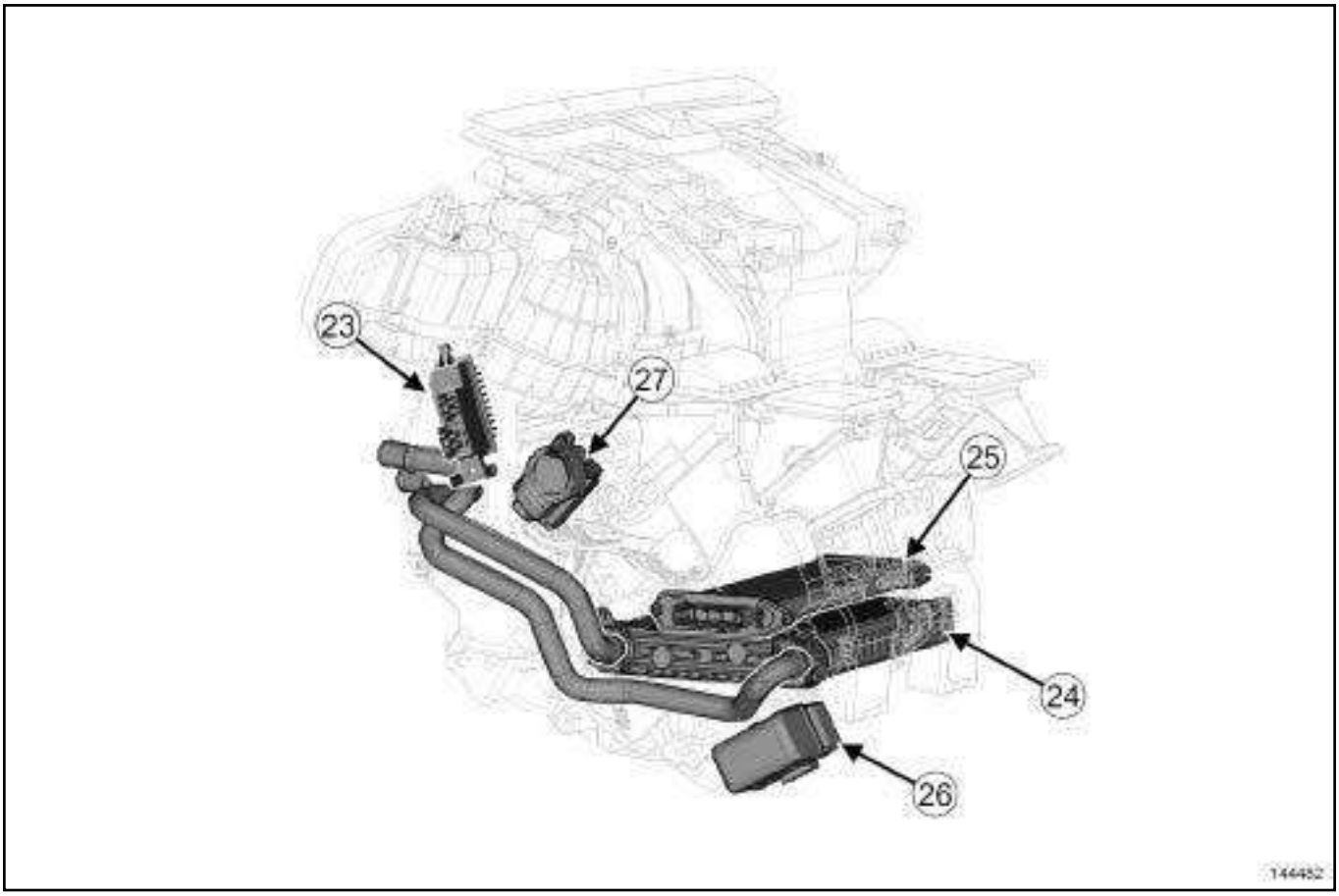
CLIMATE CONTROL



144484

(**14**)	Instrument panel
(**15**)	Passenger compartment filter
(**16**)	Expansion valve
(**17**)	Recirculation motor
(**18**)	Recirculation control cable
(**19**)	Fan assembly
(**20**)	Evaporator sensor
(**21**)	Right-hand air mixing motor
(**22**)	Distribution motor

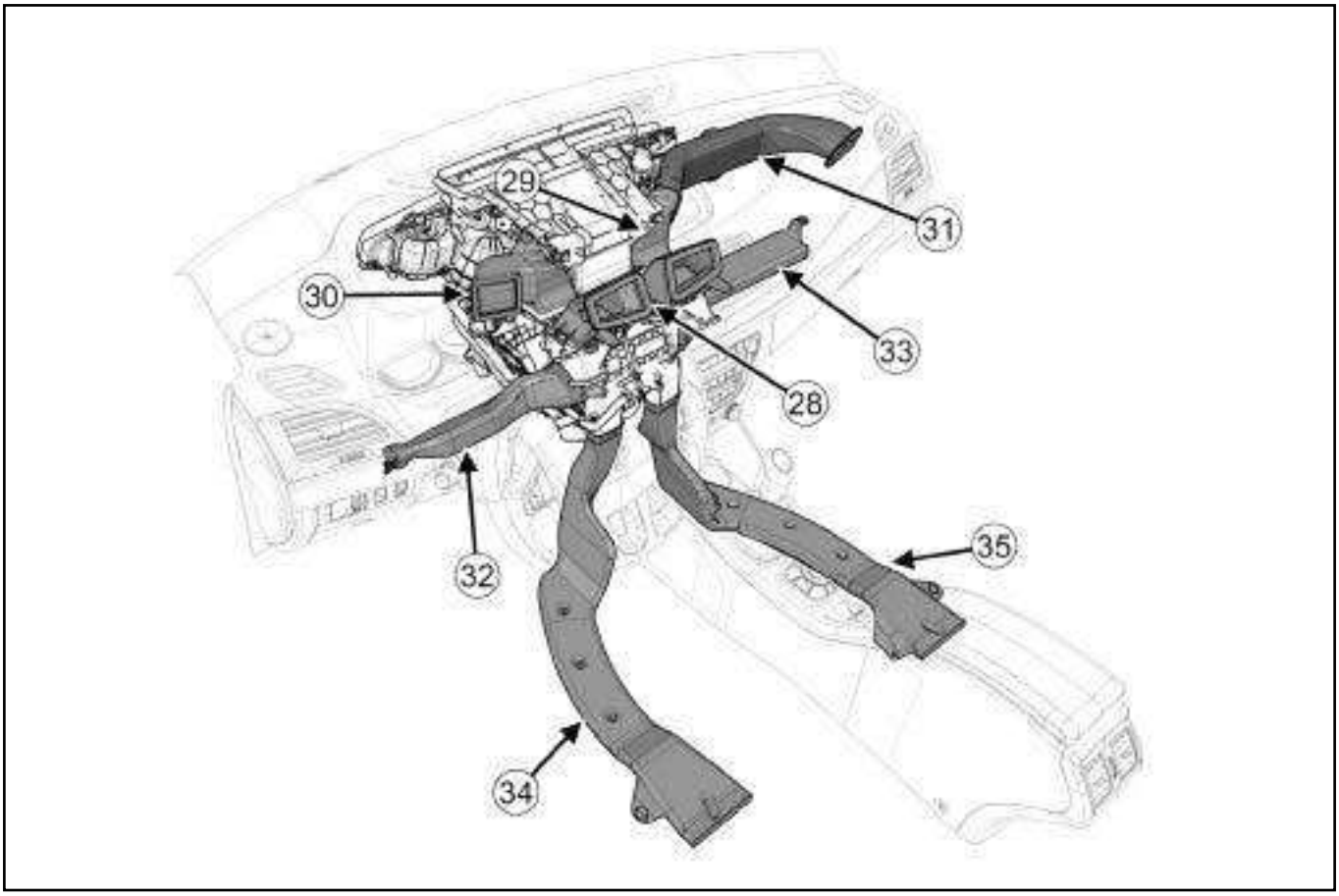
EXPORT EQUIPMENT LEVEL ADDITIONAL



144482

(**23**) Fan assembly control unit
(**24**) Heater matrix
(**25**) Heating resistors
(**26**) Heating resistor relay
(**27**) Left-hand air mixing motor

EXPORT EQUIPMENT LEVEL ADDITIONAL

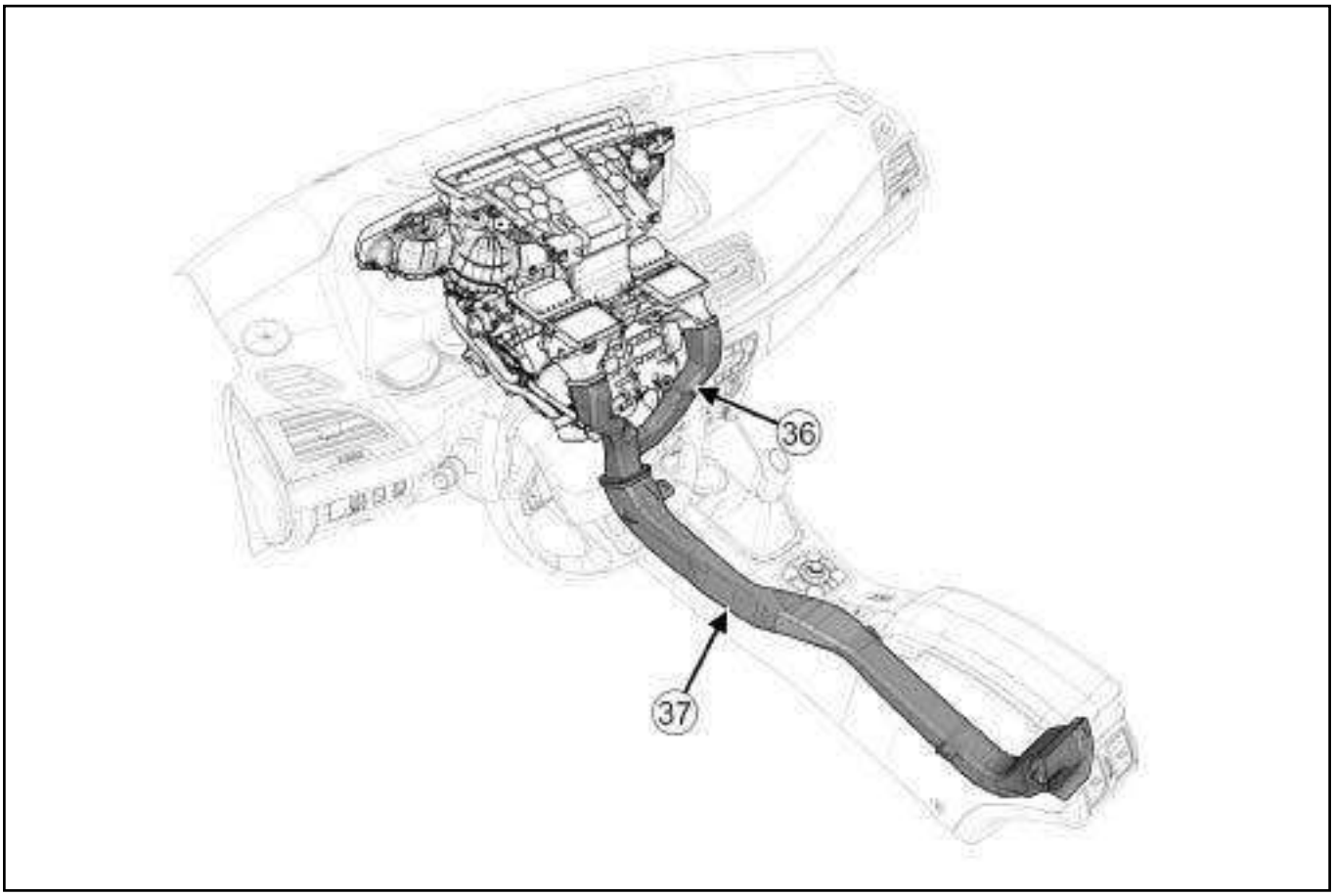


133406

(**28**)	Front central air distribution duct
(**29**)	Front intermediate side air distribution duct
(**30**)	Front left-hand side air distribution duct
(**31**)	Front right-hand side air distribution duct
(**32**)	Front left-hand footwell air distribution duct
(**33**)	Front right-hand footwell air distribution duct
(**34**)	Rear left-hand footwell air distribution duct
(**35**)	Rear right-hand footwell air distribution duct

EXPORT EQUIPMENT LEVEL ADDITIONAL

EQUIPMENT LEVEL EA3 or EQUIPMENT LEVEL EA4



133404

(**36**)	Rear intermediate air distribution duct
(**37**)	Rear air distribution duct

EXPORT EQUIPMENT LEVEL ADDITIONAL

Note:

Foreign bodies (leaves, insects, etc.) are likely to accumulate in the cabin filter. Remove the filter with care so as to prevent foreign bodies getting into the evaporator.

REMOVAL

I - REMOVAL PREPARATION OPERATION

❑

Note:

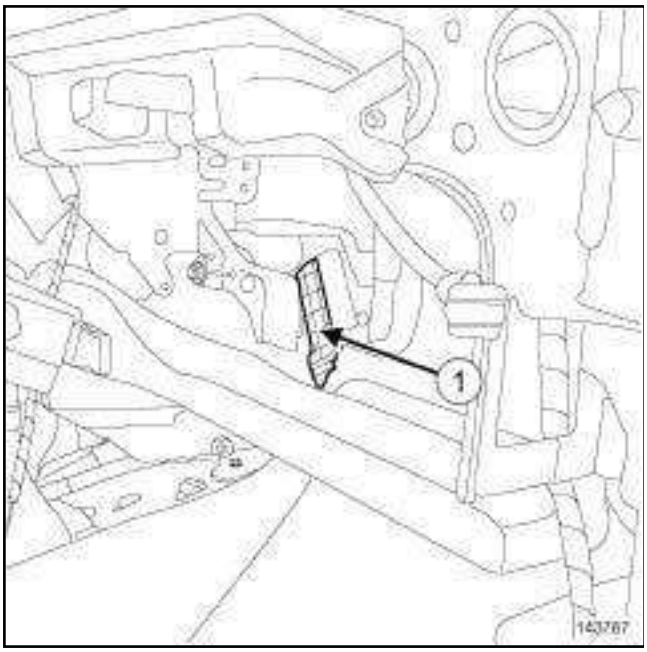
Fold the filter slightly it in its housing in order to remove it.

❑ Remove:

- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment),
- the front right-hand A-pillar air distribution duct (see **61A**, **Heating**, **Front footwell air distribution duct: Removal - Refitting**, page **61A-40**) .

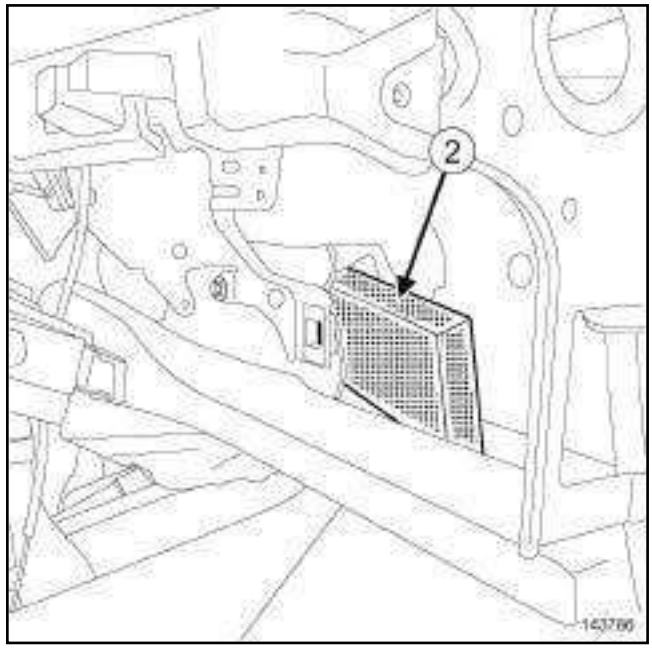
II - REMOVAL OPERATION

AIR CONDITIONING



143787

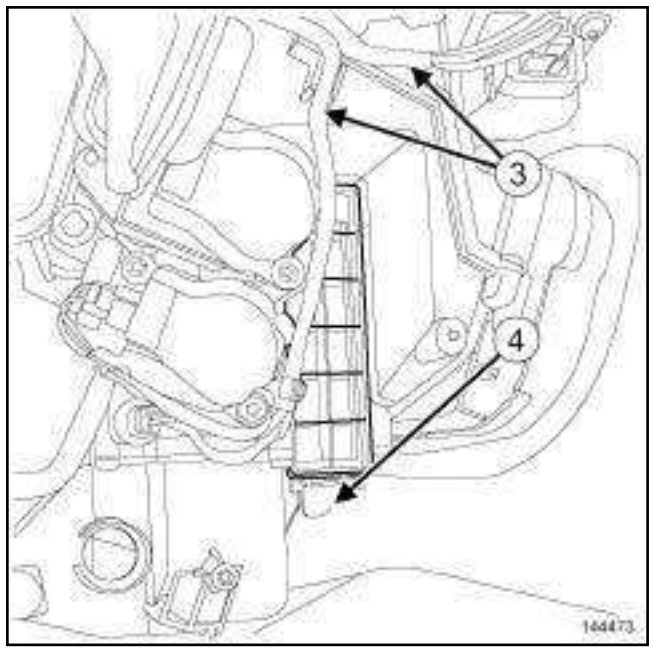
❑ Remove the cabin filter access flap (**1**) .



143786

❑ Remove the cabin filter (**2**) .

CLIMATE CONTROL

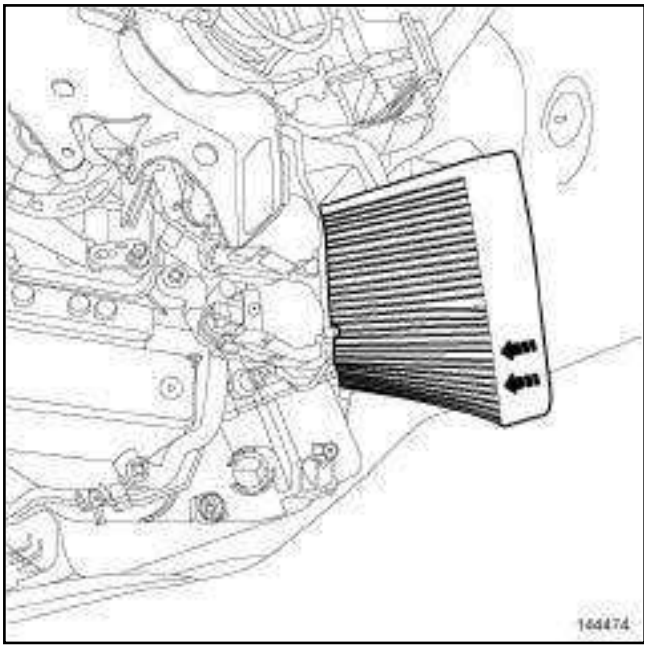


144473

❑ Separate the electrical wiring (**3**) from the cabin filter access flap.

❑ Unclip the cabin filter access flap (**4**) .

EXPORT EQUIPMENT LEVEL ADDITIONAL



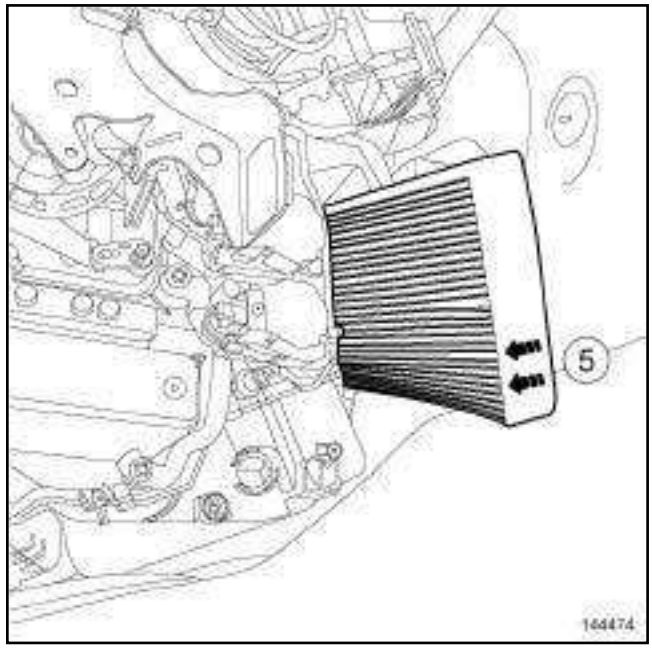
144474

❑ Remove the cabin filter.

REFITTING

REFITTING PREPARATION OPERATION

❑ Check for foreign bodies in the cabin filter housing, and clean thoroughly if necessary.



144474

❑ Refit the cabin filter, observing the position of the arrows (**5**) .

Note:

- Fold the filter slightly it in its housing to make fitting easier.
- Be sure not to damage the filtering section.

❑ Proceed in the reverse order to removal.

Special tooling required	
Car. 1363	Set of trim removal levers.

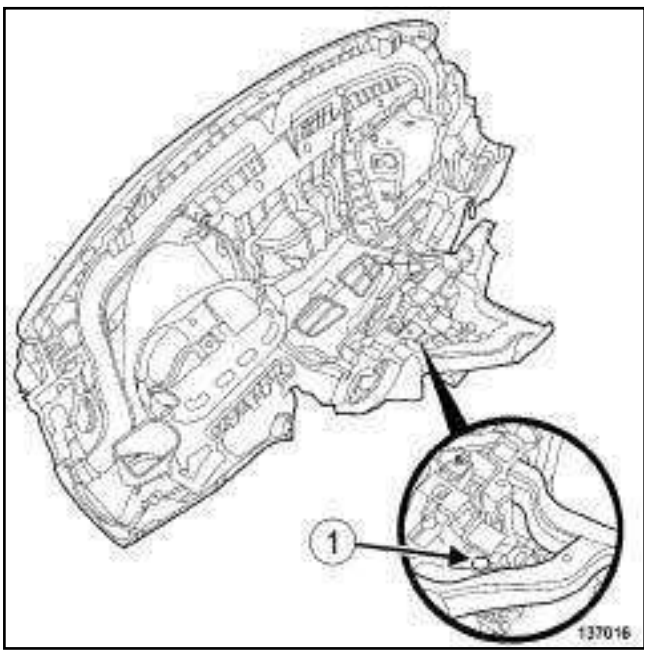
REMOVAL

I - REMOVAL PREPARATION OPERATION

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

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

II - OPERATION FOR REMOVAL OF PART CONCERNED



137016

❏ Remove:

- the clip (**1**) from the C-pillar intermediate air distribution duct using the tool **(Car. 1363)**,
- the C-pillar intermediate air distribution duct.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

❏ Refit:

- the C-pillar intermediate air distribution duct,
- the clip of the C-pillar intermediate air distribution duct.

II - FINAL OPERATION

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

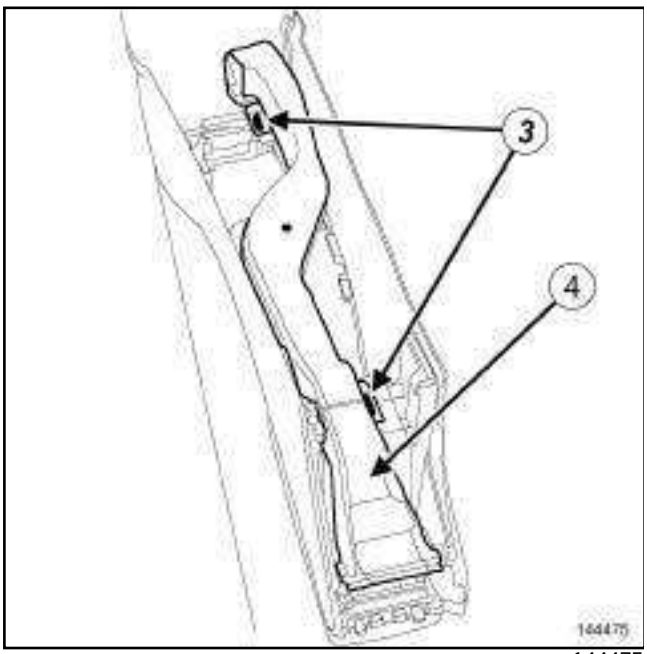
❏ Connect the battery (see **Battery: Removal - Refitting**) (80A, Battery).

REMOVAL

I - REMOVAL PREPARATION OPERATION

❏ Remove the centre console (see **Centre console: Removal - Refitting**) (57A, Interior equipment).

II - OPERATION FOR REMOVAL OF PART CONCERNED



144475

❏ Unclip the rear air distribution duct from the centre console at (**3**) .

❏ Remove the rear air distribution duct from the centre console.

❏ Separate the rear section of the rear air distribution duct from the rear air distribution duct (**4**) .

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

❏ Refit:

- the rear section of the air distribution duct onto the rear air distribution duct,
- the rear air distribution duct on the centre console.

❏ Clip the rear air distribution duct onto the centre console.

II - FINAL OPERATION

❏ Refit the centre console (see **Centre console: Removal - Refitting**) (57A, Interior equipment).

AIR CONDITIONING, and EXPORT EQUIPMENT LEVEL ADDITIONAL

❑

Note:

The air distribution cable cannot be separated from the control panel.

❑ When replacing the air distribution cable, always replace the control panel and recover the air mixing cable (see **61A**, **Heating**, **Control panel: Removal - Refitting**, page **61A-30**) .

❑ If removing the air distribution cable, remove the control panel, air mixing cable and air distribution cable assembly (see **61A**, **Heating**, **Control panel: Removal - Refitting**, page **61A-30**) .

Air mixing cable: Removal - Refitting

AIR CONDITIONING, and EXPORT EQUIPMENT LEVEL ADDITIONAL

❏

Note:

The air mixing cable cannot be separated from the control panel.

❏ When replacing the air mixing cable, always replace the control panel and recover the air distribution cable (see **61A**, **Heating**, **Control panel: Removal - Refitting**, page **61A-30**) .

❏ If removing the air mixing cable, remove the control panel, air mixing cable and air distribution cable assembly (see **61A**, **Heating**, **Control panel: Removal - Refitting**, page **61A-30**) .

EXPORT EQUIPMENT LEVEL ADDITIONAL

Equipment required
refrigerant charging station
compressed air nozzle

❑

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 **Air conditioning: Precautions for the repair**)

Note:

Use fuel blanking plugs with part no. **77 01 208 229** or **77 01 476 857** to plug any openings exposed to the open air. Do not use any which have already been used to plug a fuel circuit

REMOVAL

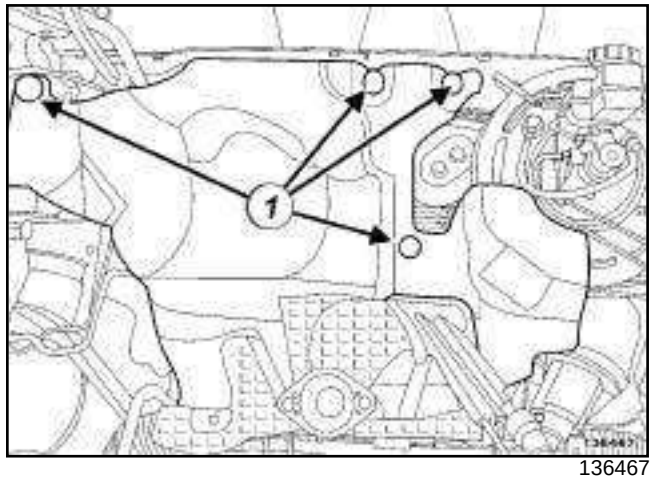
I - REMOVAL PREPARATION OPERATION

❑

WARNING
Consult the device's operating manual to avoid incorrect use.

❑ Drain the refrigerant circuit using the **refrigerant charging station** (see **Refrigerant circuit: Draining - Filling**) .

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



136467

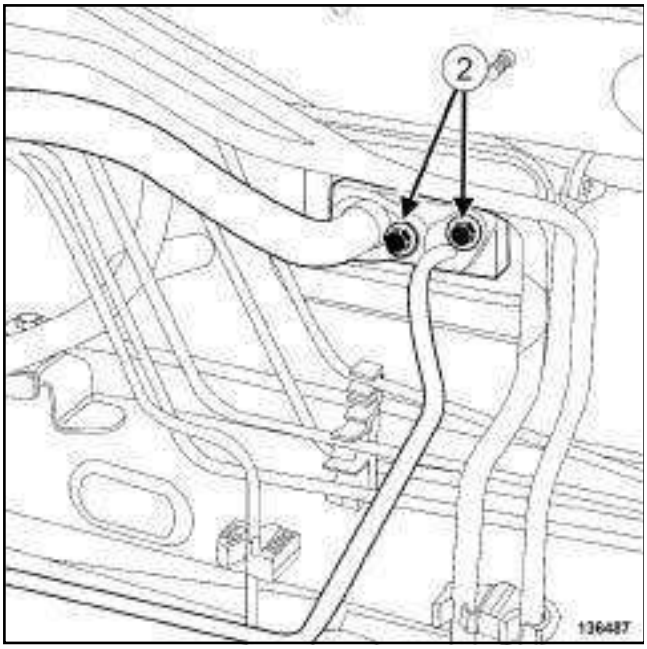
❑ Remove the bulkhead heat shield clips (**1**)

WARNING
To prevent the surrounding components from overheating, do not damage (tear, pierce, bend, etc.) a heat shield.

Any damaged heat shields must be replaced.

❑ Move the bulkhead heat shield to one side.

EXPORT EQUIPMENT LEVEL ADDITIONAL



136487

❏ Remove the bolts (**2**) from the expansion valve connecting pipe brackets.

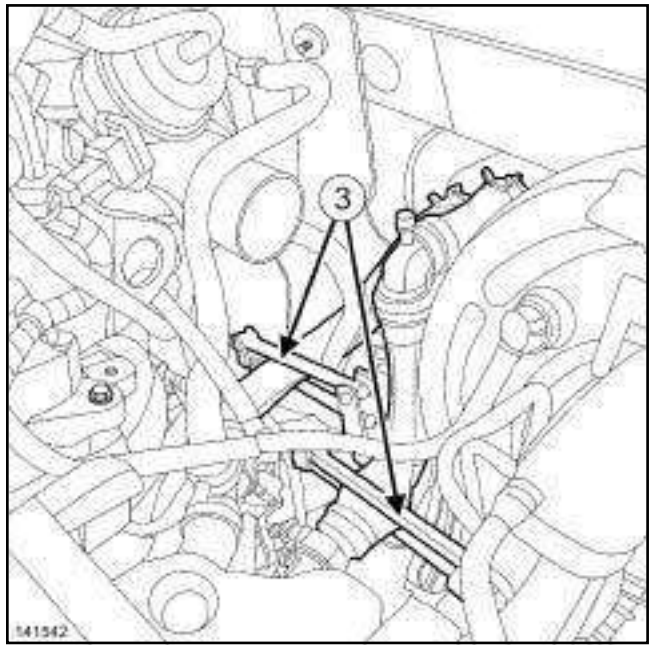
WARNING

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

❏ Uncouple the connecting pipes from the expansion valve.

❏ Move the connecting pipes away from the expansion valve.

❏ Insert the blanking plugs.



141542

❏ Fit the tool (**3**) on the heater matrix hoses.

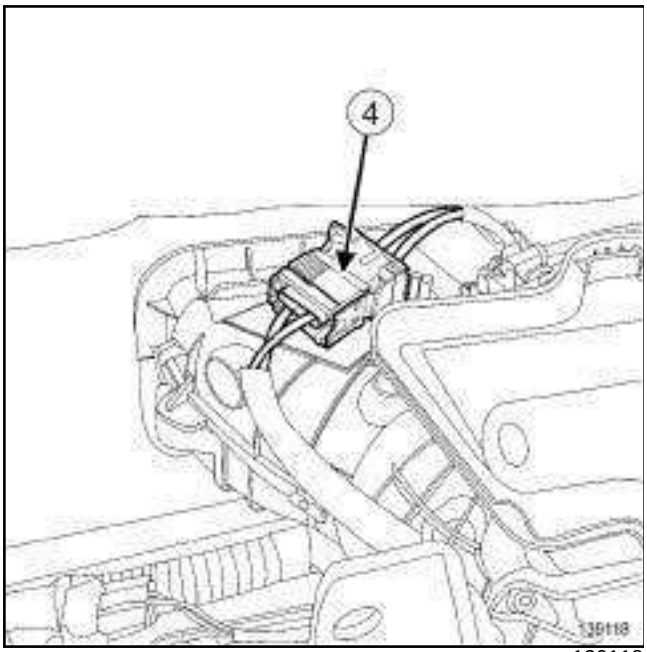
❏ Disconnect the heater matrix hoses.

❏ Remove:

- the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the front side air distribution duct (see **61A**, **Heating**, **Front side air distribution duct: Removal - Refitting**, page **61A-34**) ,
- the dashboard cross member (see **Dashboard cross member: Removal - Refitting**) (42A, Upper front structure).

EXPORT EQUIPMENT LEVEL ADDITIONAL

II - REMOVAL OPERATION



139118

❏ Disconnect the supply connector (**4**) from the distribution unit.

❏ Unclip the electrical wiring from the distribution unit.

❏ Separate the electrical wiring from the distribution unit.

❏ Remove the distribution unit.

Note:

To find the location of components (see **61A**, **Heating**, **Heating: List and location of components**, page **61A-1**) .

AIR CONDITIONING

❏ Remove the following components from the distribution unit:

- the air distribution cable,
- the cabin filter,
- the expansion valve,
- the recirculation motor,
- the air recirculation control cable,
- the fan assembly,
- the fan assembly control unit,
- the evaporator sensor,
- the heater matrix,
- the heater resistor relays,
- the heating resistor,
- the air mixing cable.

CLIMATE CONTROL

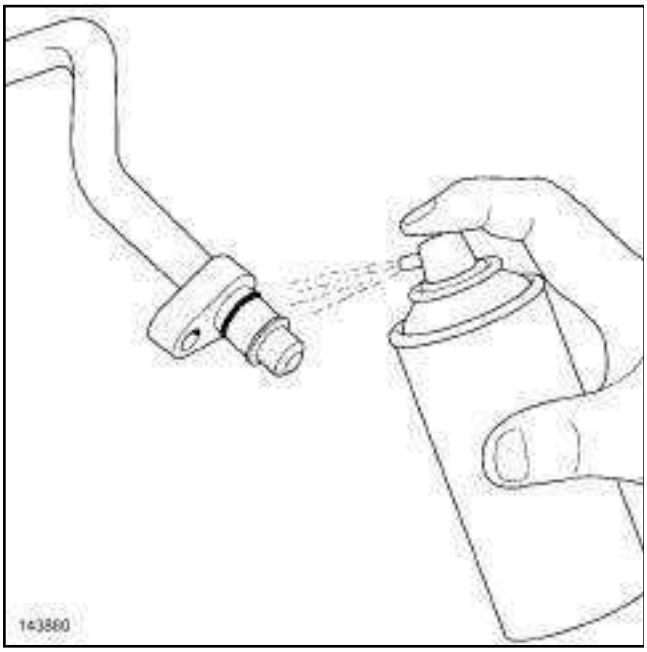
❏ Remove the following components from the distribution unit:

- the left-hand mixer motor,
- the right-hand mixer motor,
- the distribution motor,
- the cabin filter,
- the expansion valve,
- the recirculation motor,
- the air recirculation control cable,
- the fan assembly,
- the evaporator sensor,
- the heater matrix,
- the heater resistor relays,
- the heating resistor.

EXPORT EQUIPMENT LEVEL ADDITIONAL

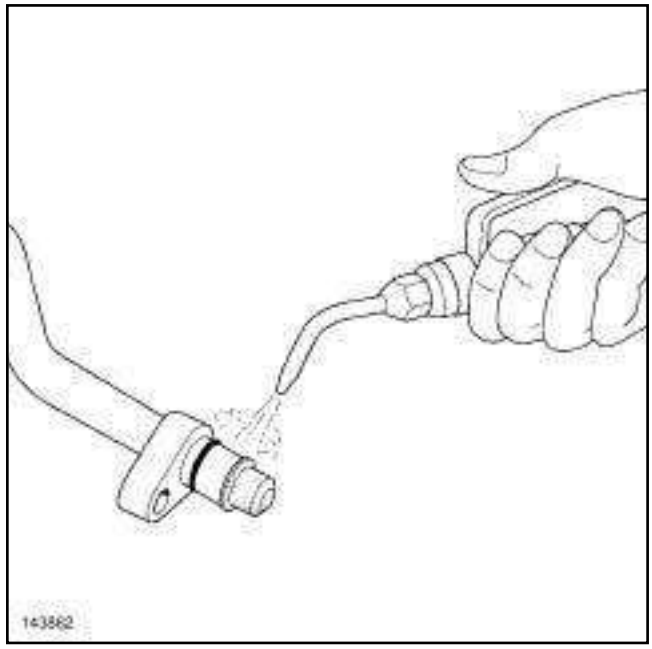
REFITTING

I - REFITTING PREPARATION OPERATION



143880

❑ Clean the surface and seal of the pipe using **ENGINE CLEANER** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products).



143882

❑ Use a **compressed air nozzle** to blow on the surface and the seal of the connecting pipe.

❑ Lubricate the surface of the connecting pipe and the seal with air conditioning oil (see **62A**, **Air conditioning**, **Air conditioning: Parts and consumables for the repair**, page **62A-3**) .

❑

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 blanking plugs.

EXPORT EQUIPMENT LEVEL ADDITIONAL

II - REFITTING OPERATION

❏ Proceed in reverse order to removal.

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

❏ Fill up and bleed the cooling system (see **Cooling system: Draining - Refilling**) (19A, Cooling).

Note:

A summary table gives the quantities of refrigerant in the system according to the engine type (see **62A**, **Air conditioning**, **Air conditioning: Parts and consumables for the repair**, page **62A-3**) .

❏ Perform the following operations:

- fill the refrigerant circuit using the **refrigerant charging station** (see **Refrigerant circuit: Draining - Filling**) .
- check for leaks (see **Refrigerant circuit: Check**) .

❏ Check that the air conditioning system is operating correctly (see **Air conditioning: Check**) .

EXPORT EQUIPMENT LEVEL ADDITIONAL

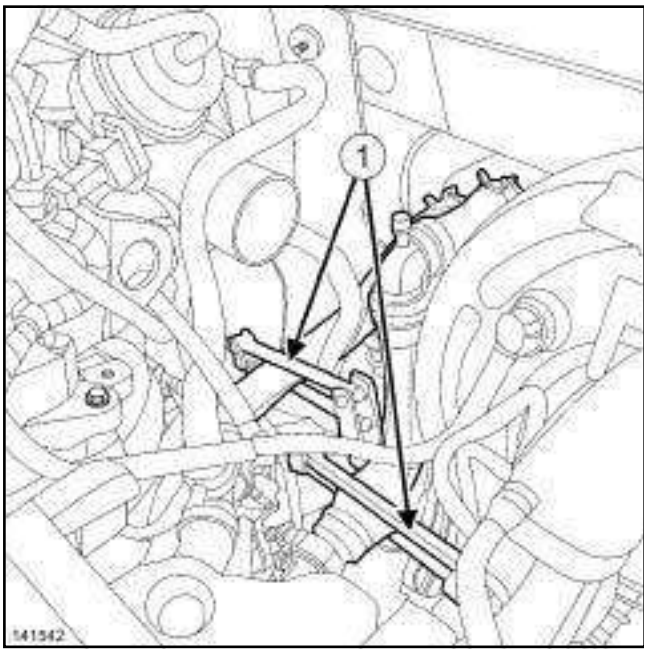
Equipment required
compressed air nozzle

Tightening torques ▽	
upper nuts on the dash-board cross member reinforcement	**21 N.m**
lower bolts on the dash-board cross member reinforcement	**21 N.m**
air filter unit air outlet pipe clips	**6 N.m**

REMOVAL

I - REMOVAL PREPARATION OPERATION

❏ Switch off the ignition.



141542

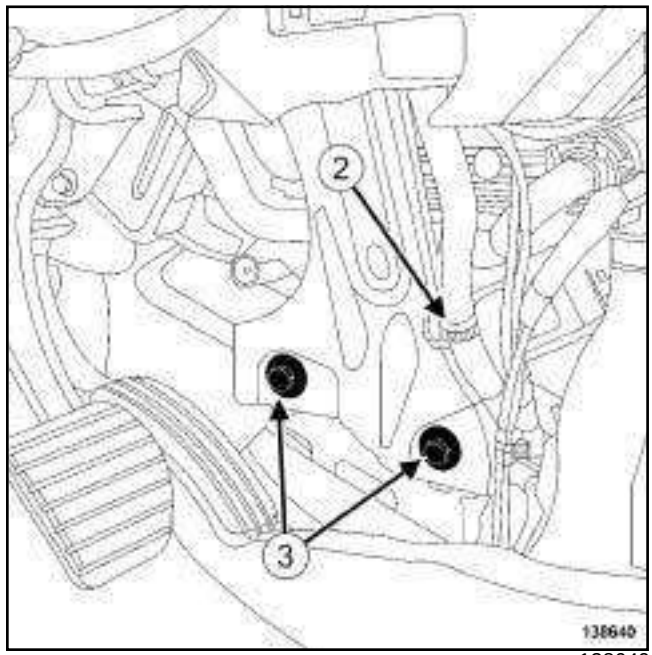
❏ Fit the toolson the heater matrix hoses (**1**) .

❏ Unclip the left-hand centre console trim.

❏ Remove:

- the dashboard lower trim (see **Dashboard lower trim: Removal - Refitting**) (57A, Interior equipment),
- the front left-hand footwell air distribution duct (see **61A**, **Heating**, **Front footwell air distribution duct: Removal - Refitting**, page **61A-40**) .

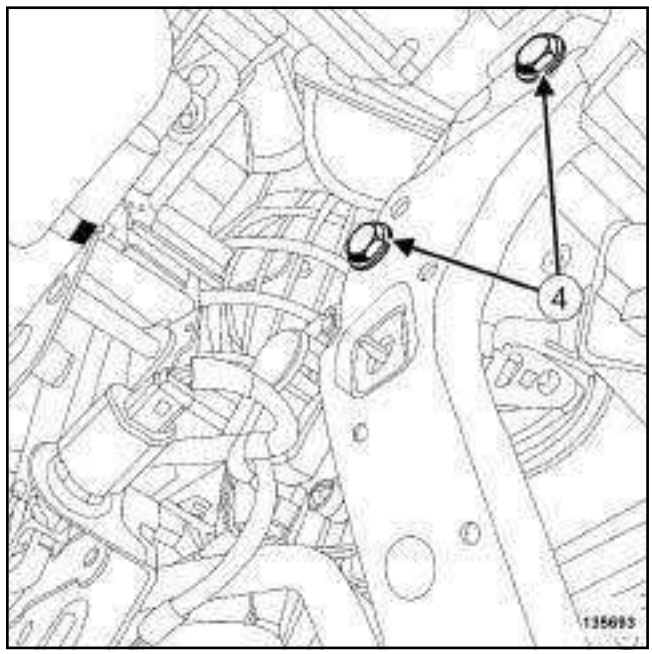
❏ Disconnect the connector from the parking distance control buzzer.



138640

❏ Unclip the wiring from the dashboard cross member reinforcement at (**2**) .

❏ Remove the lower bolts (**3**) from the dashboard cross member reinforcement.



135693

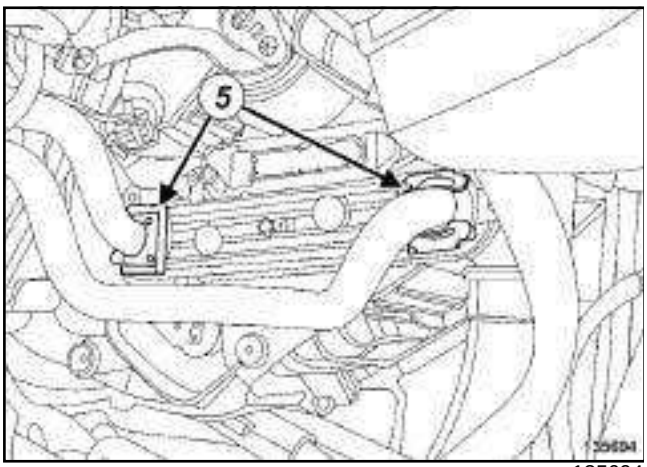
❏ Remove:

- the upper bolts (**4**) from the dashboard cross member reinforcement,

EXPORT EQUIPMENT LEVEL ADDITIONAL

- the dashboard cross member reinforcement.

II - REMOVAL OPERATION



135694

❏ Remove the clips (**5**) from the heater matrix rigid pipes.

WARNING

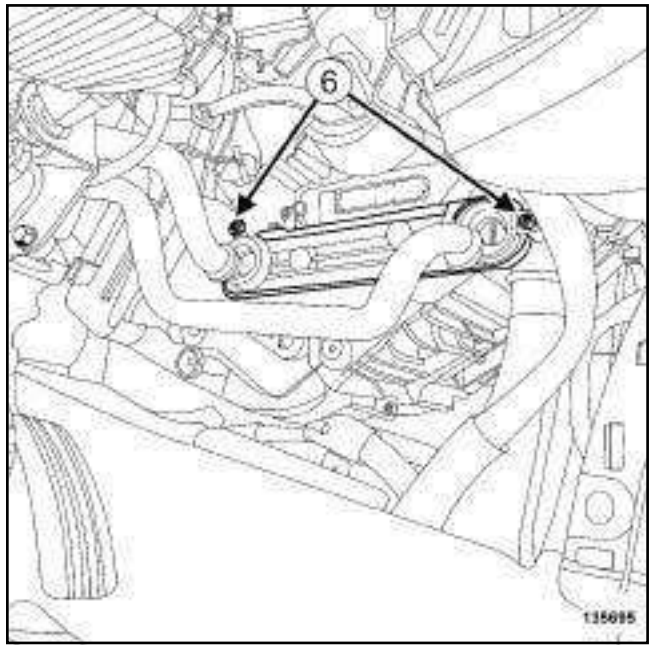
Prepare for the flow of fluid, and protect the surrounding components.

❏ Put a protective cover on the floor carpet.

❏ Position a container to collect the coolant under the rigid pipes.

❏ Move the heater matrix rigid pipes aside.

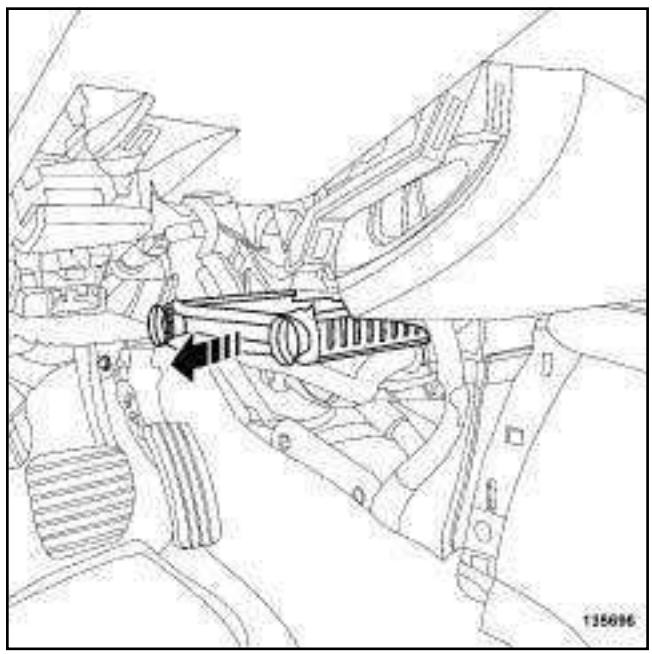
❏ Remove the seals from the heater matrix rigid pipes.



135695

❏ Remove:

- the heater matrix trim bolts (**6**) ,
- the heater matrix trim.



135696

❏ Take the heater matrix out of its housing.

❏ Remove the heater matrix.

EXPORT EQUIPMENT LEVEL ADDITIONAL

REFITTING

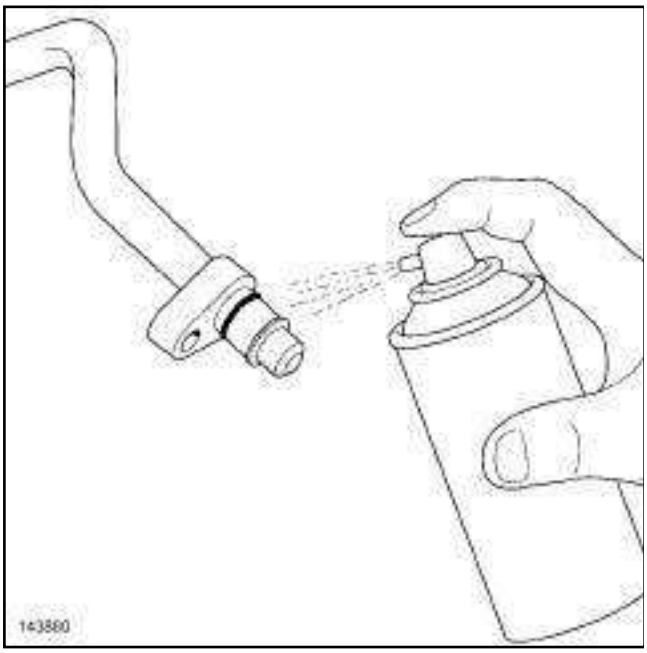
I - REFITTING PREPARATION OPERATION

❑

WARNING

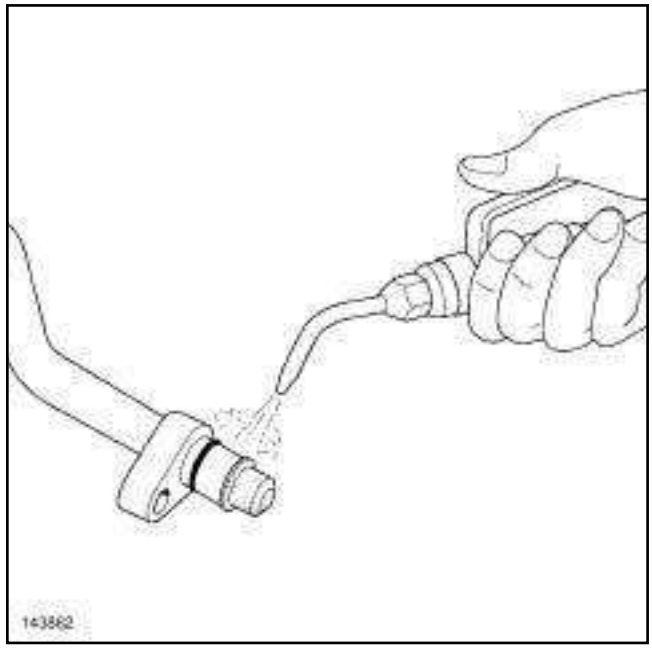
Do not remove the blanking plugs from each component until the last moment.

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



143880

❑ Clean the surface and seal of the pipe using **ENGINE CLEANER** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products).



143882

❑ Use a **compressed air nozzle** to blow on the surface and the seal of the connecting pipe.

❑ Lubricate the surface of the connecting pipe and the seal with air conditioning oil (see **62A**, **Air conditioning**, **Air conditioning: Parts and consumables for the repair**, page **62A-3**) .

❑ Remove the blanking plugs.

II - REFITTING OPERATION

❑ Proceed in the reverse order to removal.

❑ Torque tighten:

- the **upper nuts on the dashboard cross member reinforcement (21 N.m)**,
- the **lower bolts on the dashboard cross member reinforcement (21 N.m)**,
- Torque tighten the **air filter unit air outlet pipe clips (6 N.m)**,

III - FINAL OPERATION

❑ Fill and bleed the cooling system (see **Cooling system: Draining - Refilling**) (19A, Cooling).

EXPORT EQUIPMENT LEVEL ADDITIONAL

REMOVAL

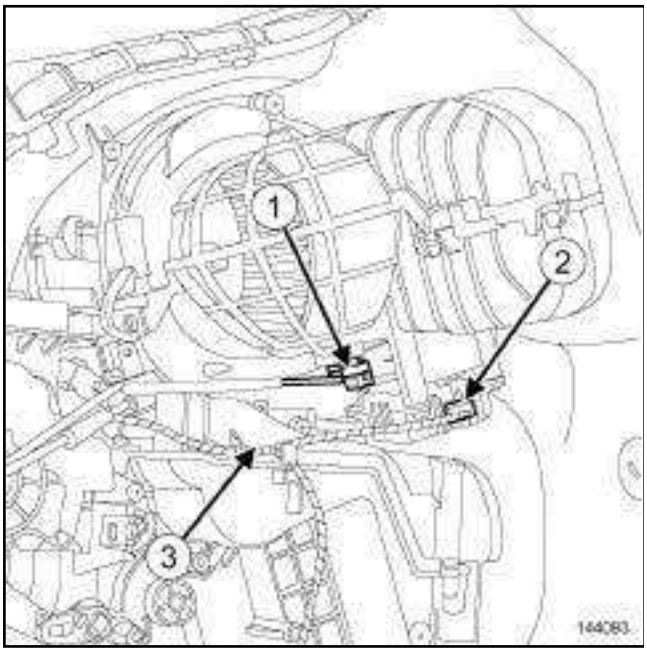
I - REMOVAL PREPARATION OPERATION

❏ Move the seat as far back as possible.

❏ Switch off the ignition.

❏ Remove:

- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment),
- the front footwell air distribution duct (see **61A**, **Heating**, **Front side air distribution duct: Removal - Refitting**, page **61A-34**) ,
- the front right-hand side air distribution duct (see **61A**, **Heating**, **Front side air distribution duct: Removal - Refitting**, page **61A-34**) .



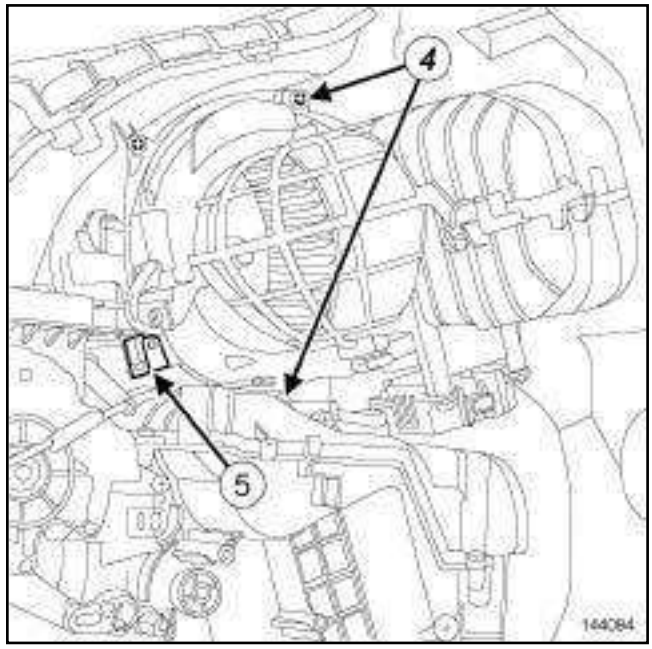
144093

❏ Disconnect the connector (**2**) from the recirculation motor.

❏ Unclip the recirculation control cable (**1**) .

❏ Mark the routing of the recirculation motor wiring (**3**) .

❏ Separate the wiring from the recirculation motor.



144094

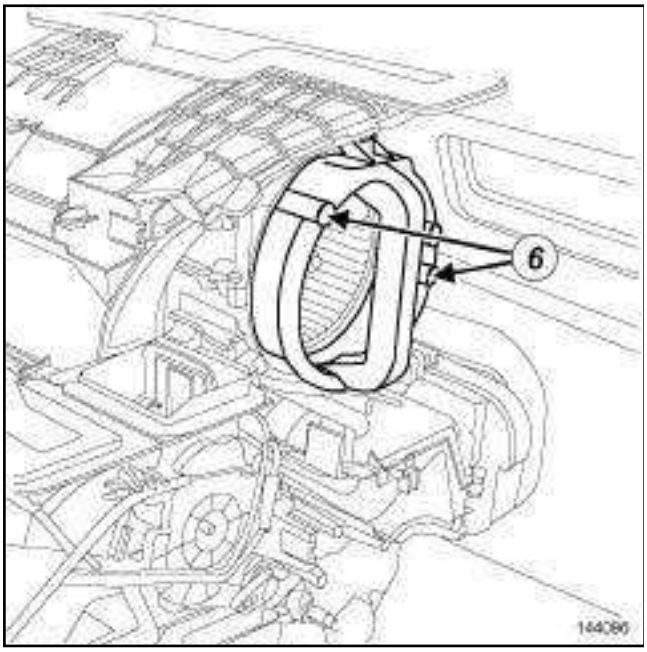
❏ Remove the bolts (**4**) from the air recirculation duct.

❏ Unclip the air recirculation duct at (**5**) .

❏ Remove the air recirculation duct.

EXPORT EQUIPMENT LEVEL ADDITIONAL

II - REMOVAL OPERATION



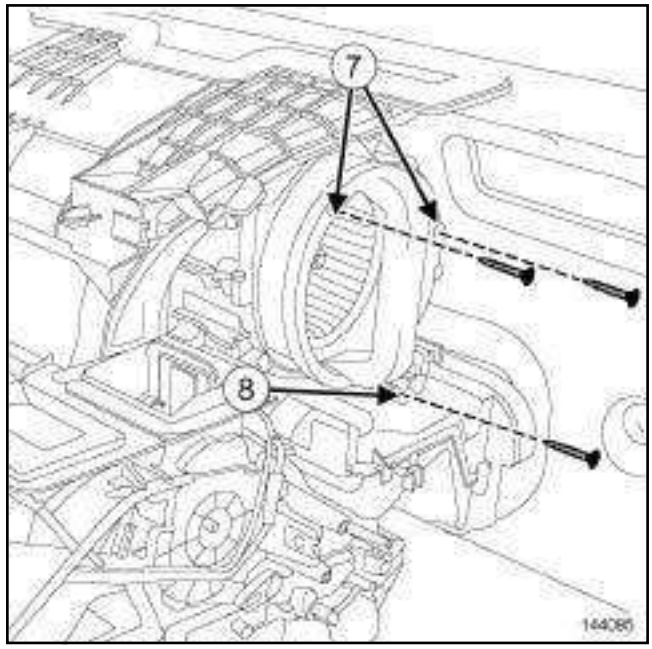
144096

❑

Note:

The tool for removing the fan assembly is supplied in the spare parts kit for the new fan assembly.

❑ Fit the fan assembly removal tool in a vertical position on the turbine so that the openings (**6**) of the tool line up with the turbine upper bolts.

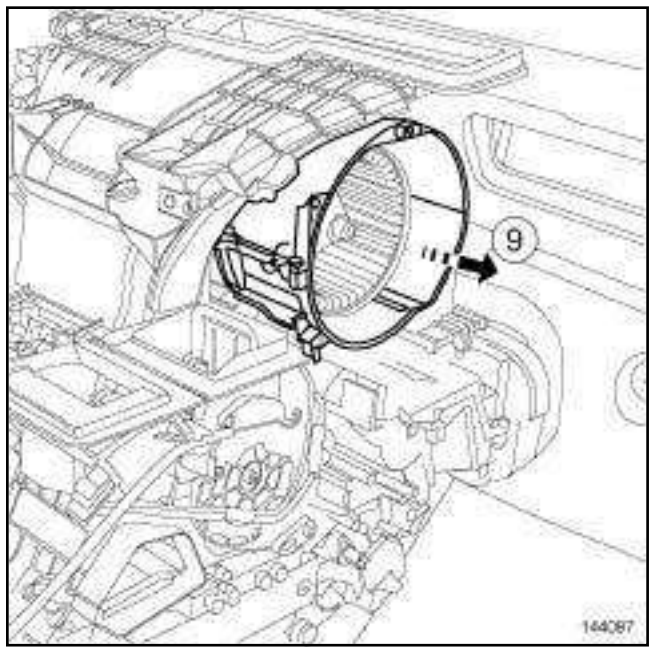


144095

❑ Remove:

- the two turbine bolts (**7**) of the fan assembly,
- the roller unit bolt (**8**) from the fan assembly.

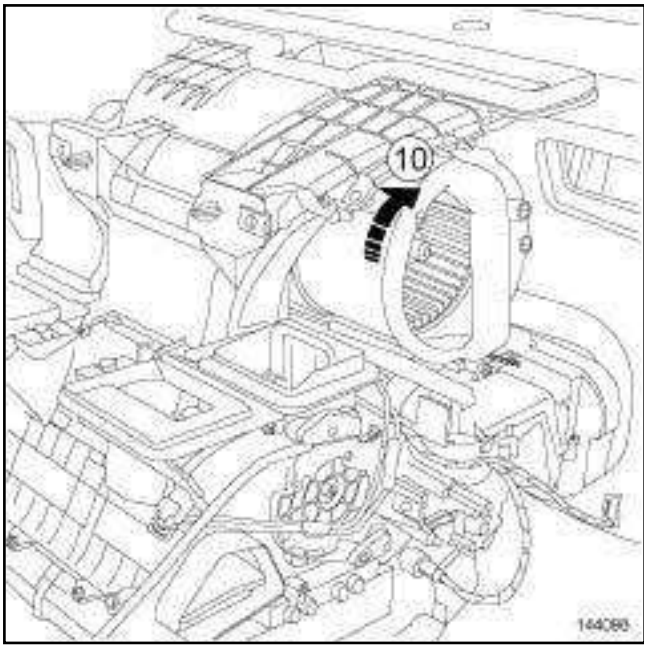
❑ Remove the fan assembly removal tool.



144097

❑ Remove the turbine roller unit from the fan assembly at (**9**)

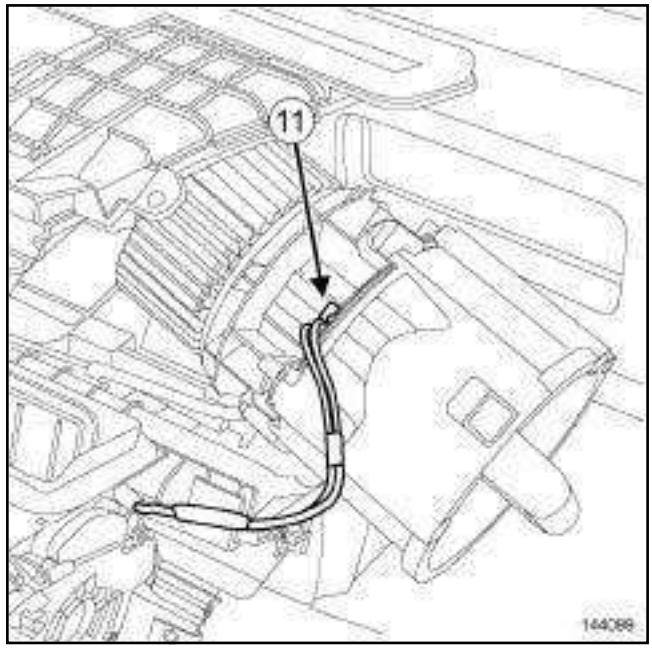
EXPORT EQUIPMENT LEVEL ADDITIONAL



144098

❏ Fit the fan assembly removal tool on the fan assembly in a vertical position.

❏ Push and turn the fan assembly removal tool clockwise to unlock (**10**) the passenger compartment fan assembly.



144099

❏ Remove the fan assembly from its housing while taking care not to damage the turbine.

Note:

To avoid making the fan assembly motor unstable, position the assembly horizontally while protecting it from any impact.

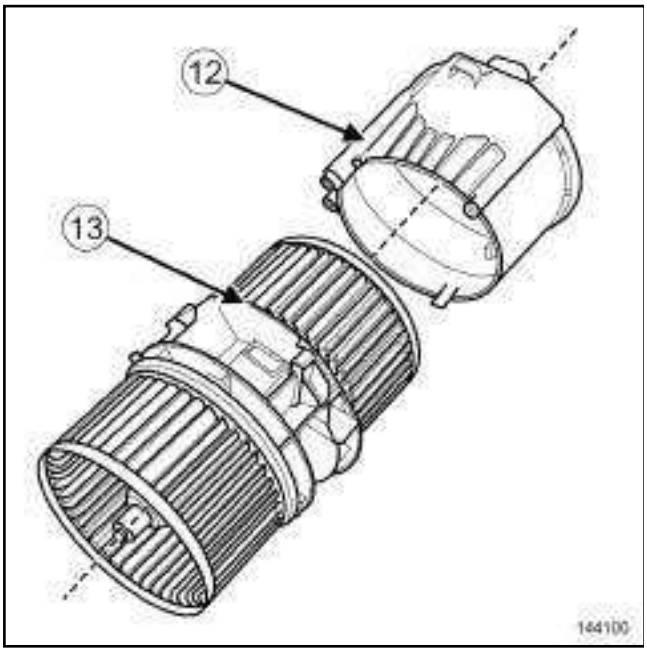
❏ Disconnect the fan assembly connector (**11**)

❏ Remove the fan assembly.

EXPORT EQUIPMENT LEVEL ADDITIONAL

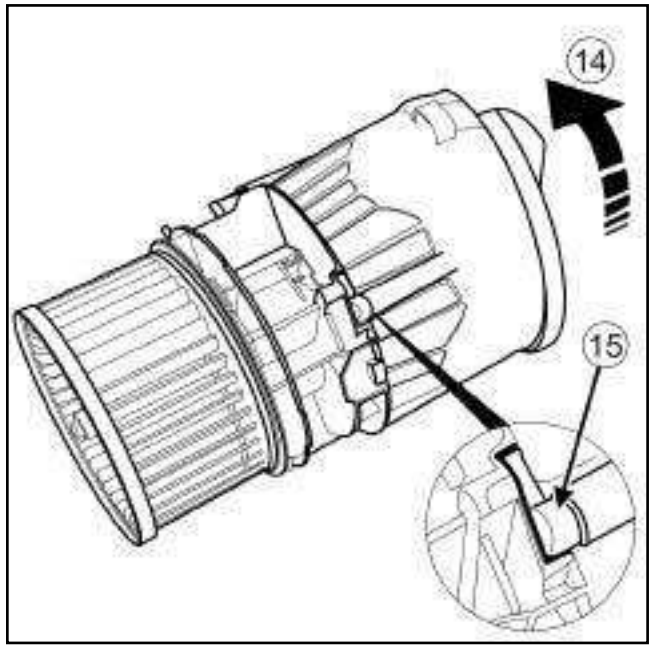
REFITTING

I - REFITTING OPERATION

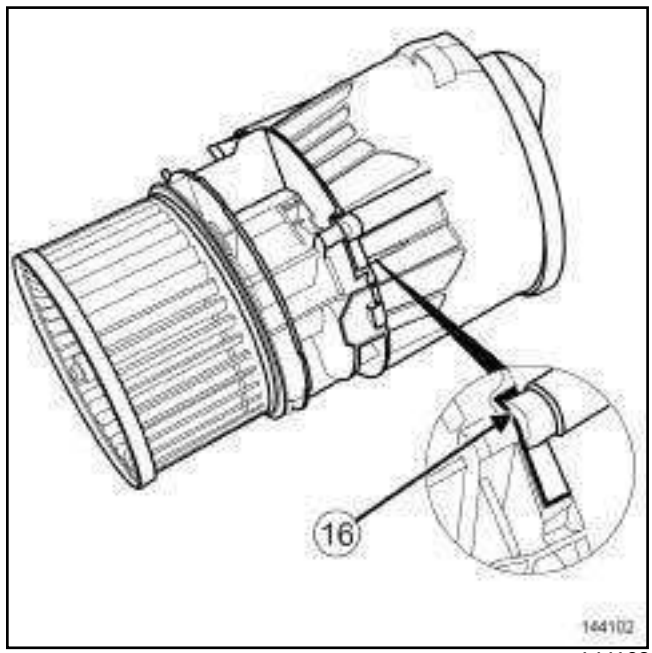


144100

❑ Fit the fan assembly removal tool (**12**) on the fan assembly (**13**) .



144101



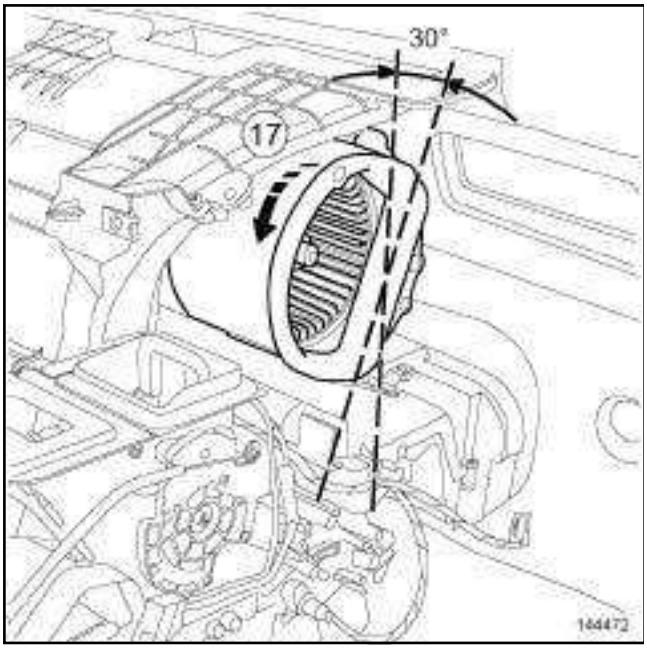
144102

❑ Turn the tool slightly clockwise (**14**) to bring the boss (**15**) to the end of the housing (**16**) .

❑ Ensure that the fan assembly removal tool is positioned correctly in relation to the passenger compartment fan assembly turbine.

❑ Connect the fan assembly connector.

EXPORT EQUIPMENT LEVEL ADDITIONAL



144472

❏ Refit the fan assembly in its housing by turning the tool 30° in relation to the vertical axis.

❏ Push the fan assembly until it is fully inserted in its housing.

❏ Turn the fan assembly removal tool anticlockwise (**17**) to lock the passenger compartment fan assembly.

❏ Remove the fan assembly removal tool.

❏ Refit the fan assembly roller unit.

❏ Fit the fan assembly removal tool so that the openings of the tool line up with the turbine bolts.

❏ Refit the bolts ***(7)*** and ***(8)*** .

❏ Remove the fan assembly removal tool.

II - FINAL OPERATION

❏ Proceed in the reverse order to removal.

REMOVAL

❑

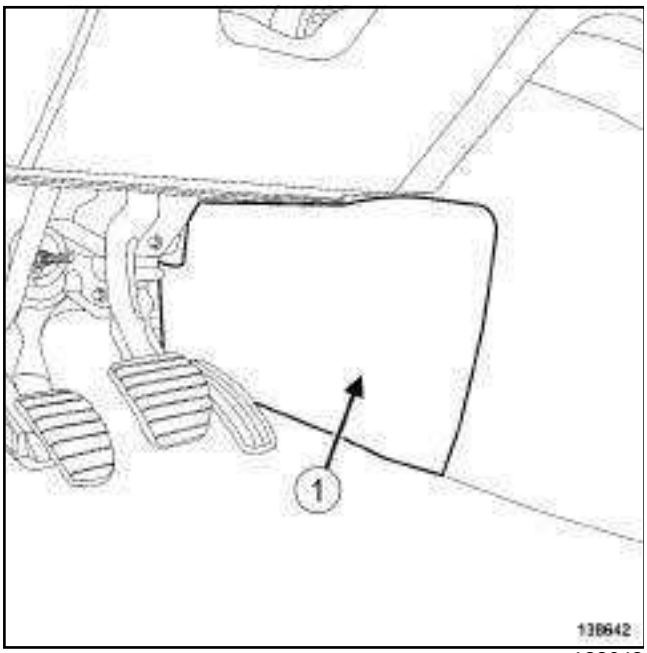
Note:

There are 2 possible fittings for the heating resistor relays:

- **1000 Watt resistor** : 1 relay unit located on the left of the centre console (see **61A**, **Heating**, **Heating: List and location of components**, page **61A-1**) ,

- **1800 Watt resistor** : 2 relay units located on the right and left of the centre console (see **61A**, **Heating**, **Heating: List and location of components**, page **61A-1**) .

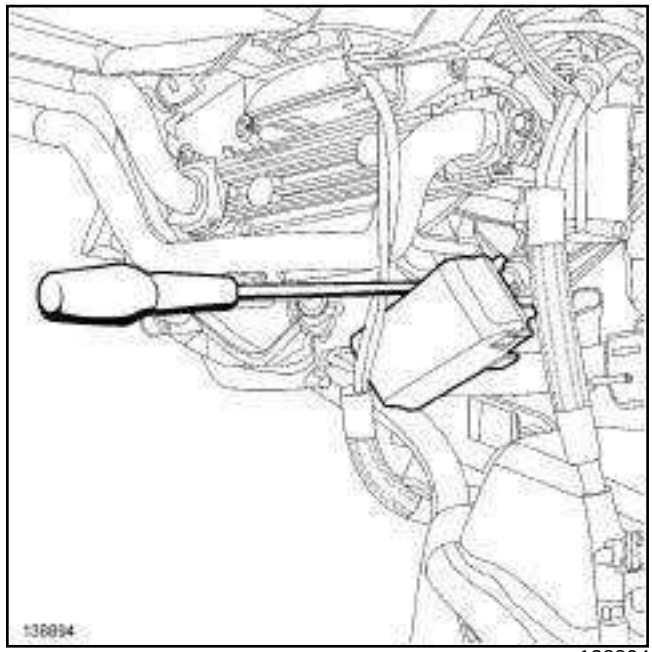
I - REMOVAL PREPARATION OPERATION



138642

❑ Unclip the left-hand or right-hand panel (**1**) of the centre console.

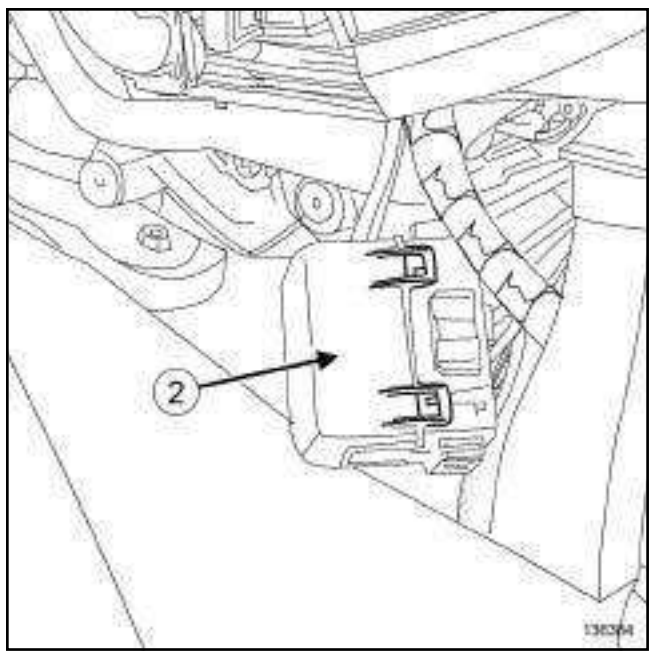
II - OPERATION FOR REMOVAL OF PART CONCERNED



138894

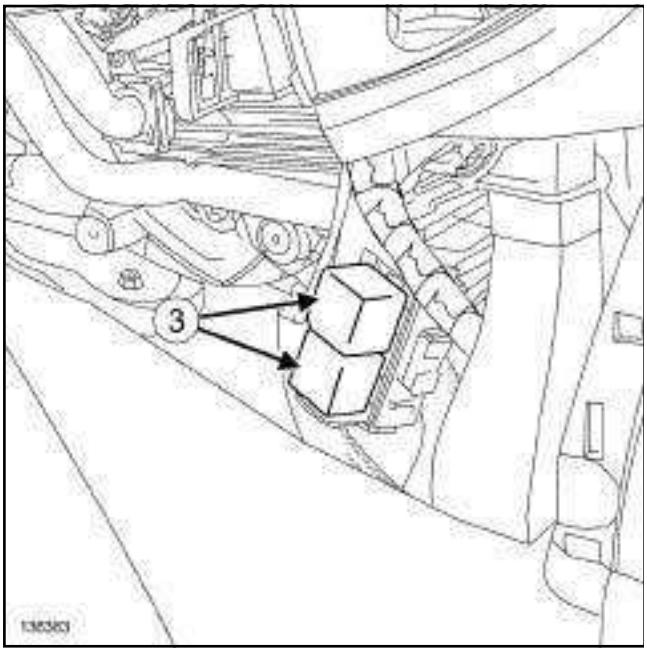
❑ Unclip the heating resistor relay unit from the distribution unit.

❑ Separate the heating resistor relay unit from the distribution unit.



136384

❑ Unclip the cover (**2**) from the heating resistor relay unit.



136383

❑ Remove the heating resistor relays (**3**) .

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

❑ Refit the heating resistor relays.

❑ Clip:

- the cover of the heating resistor relay unit,
- the heating resistor relay unit onto the distribution unit.

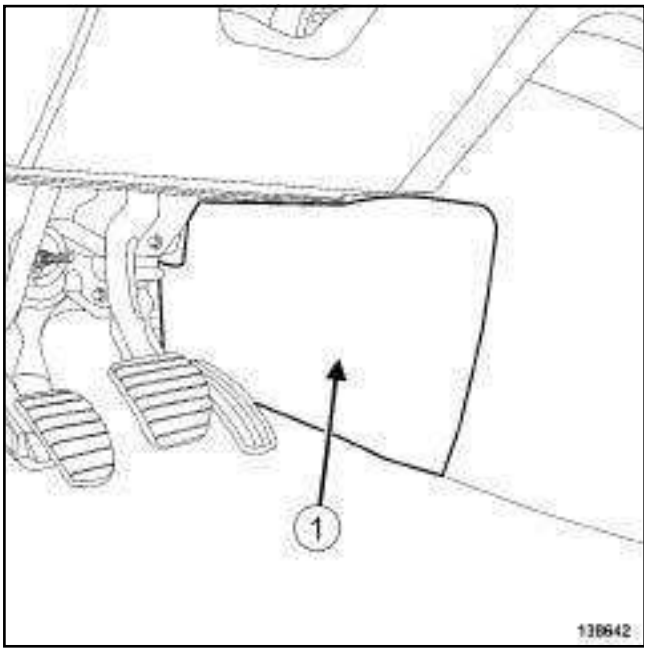
II - FINAL OPERATION

❑ Clip on the left-hand or right-hand panel of the centre console.

EXPORT EQUIPMENT LEVEL ADDITIONAL

REMOVAL

I - REMOVAL PREPARATION OPERATION



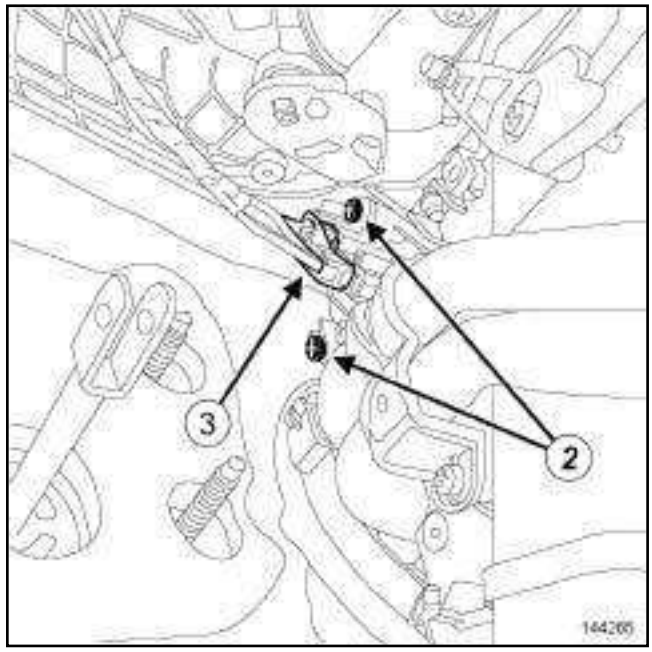
138642

❏ Unclip the left-hand centre console trim (**1**) .

❏ Remove:

- the dashboard lower trim (see **Dashboard lower trim: Removal - Refitting**) (57A, Interior equipment),
- the brake pedal (see **Brake pedal: Removal - Refitting**) (37A, Mechanical component controls).

II - REMOVAL OPERATION



144265

❏ Remove the bolts (**2**) for the passenger compartment fan assembly control unit.

❏ Disconnect the connector (**3**) from the passenger compartment fan assembly control unit.

❏ Remove the passenger compartment fan assembly control unit.

REFITTING

❏ Proceed in the reverse order to removal.

EXPORT EQUIPMENT LEVEL ADDITIONAL

Equipment required
Diagnostic tool

Tightening torques ▽	
dashboard cross member reinforcement upper bolts	**21 N.m**
dashboard cross member reinforcement lower bolts	**21 N.m**

REMOVAL

I - REMOVAL PREPARATION OPERATION

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

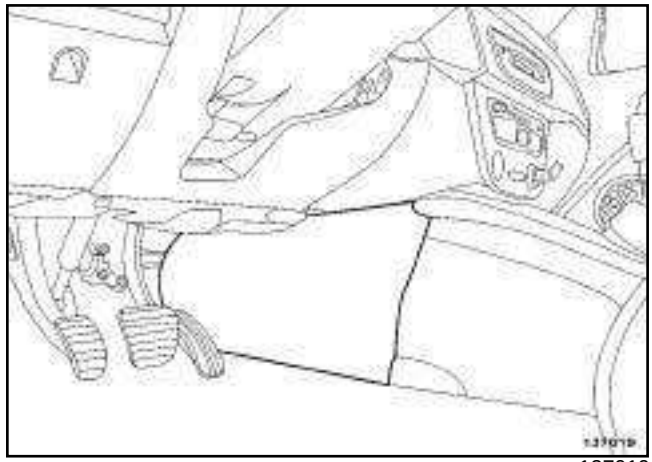
❏ Remove the centre front panel (see **Centre front panel: Removal - Refitting**) (57A, Interior equipment).

RADIO 01A or RADIO 02A or RADIO 03A or RADIO 04A or RADIO 05A or RADIO 10B

❏ Remove the radio (see **Radio: Removal - Refitting**) (86A, Radio).

❏ Remove:

- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment),
- the front right-hand A-pillar air distribution duct (see **61A**, **Heating**, **Front footwell air distribution duct: Removal - Refitting**, page **61A-40**) .

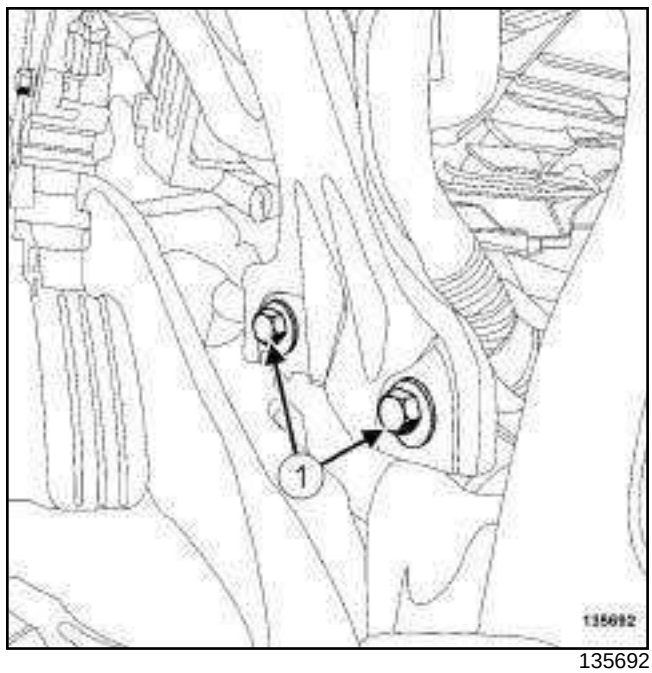

137019

❏ Unclip the left-hand centre console trim.

❏ Remove:

- the dashboard lower trim (see **Dashboard lower trim: Removal - Refitting**) (57A, Interior equipment),
- the front left-hand footwell air distribution duct (see **61A**, **Heating**, **Front footwell air distribution duct: Removal - Refitting**, page **61A-40**) .

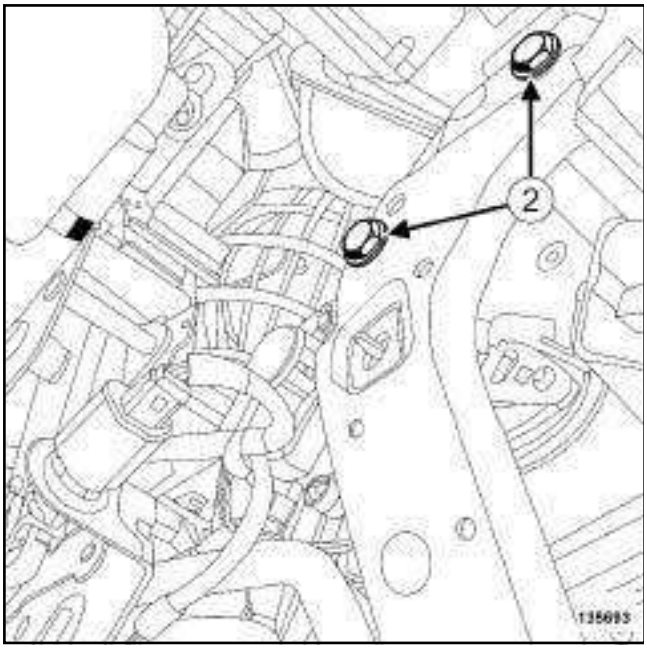
❏ Unclip the wiring from the dashboard cross member reinforcement.



135692

❏ Remove the lower bolts (**1**) from the dashboard cross member reinforcement.

EXPORT EQUIPMENT LEVEL ADDITIONAL

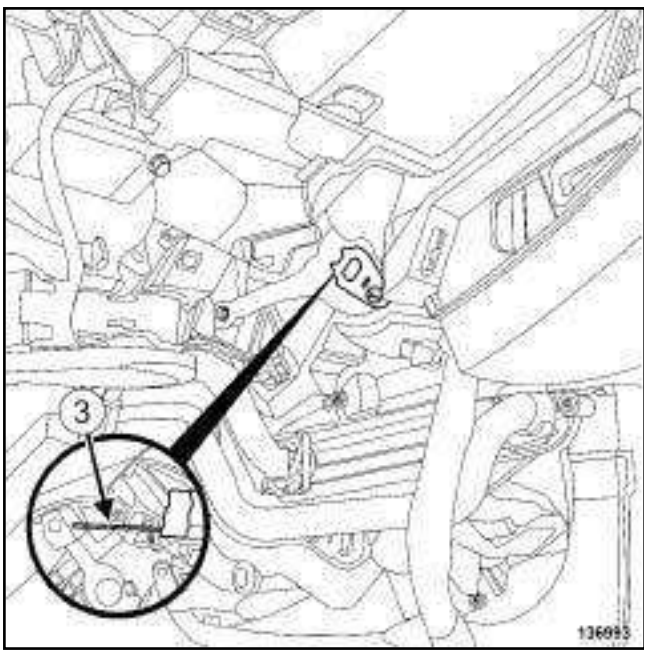


135693

❏ Remove:

- the upper bolts (**2**) from the dashboard cross member reinforcement,
- the dashboard cross member reinforcement.

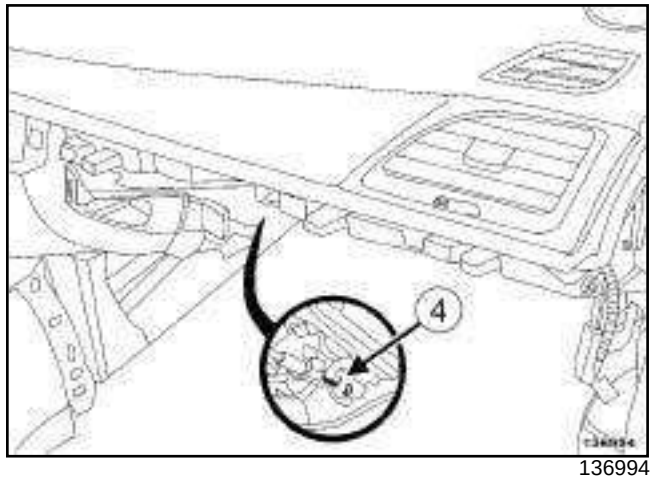
II - OPERATION FOR REMOVAL OF PART CONCERNED



136993

❏ Unclip the air mixing cable (**3**) from the distribution unit.

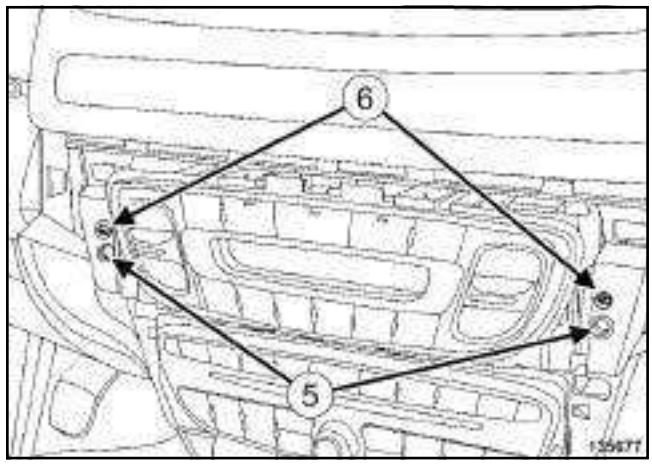
❏ Mark the routing of the air mixing cable.



136994

❏ Unclip the air distribution cable from the distribution unit at (**4**) .

❏ Mark the routing of the air distribution cable.



135677

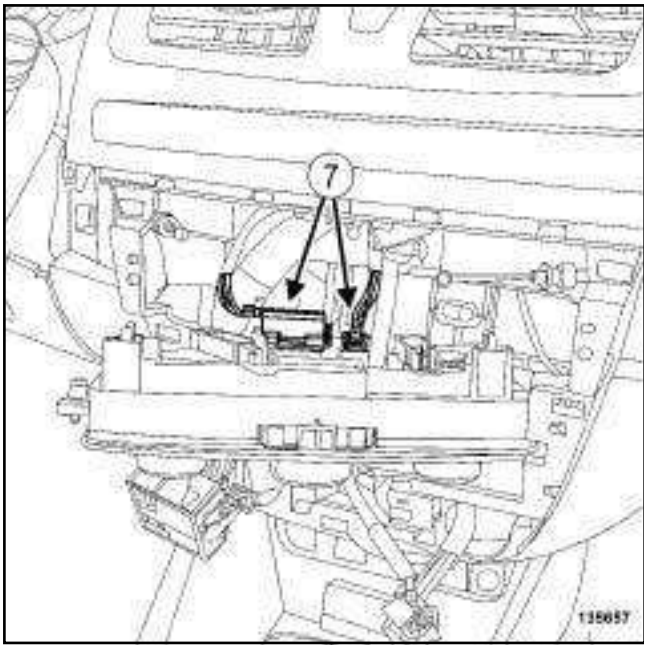
❏ Remove the bolts (**5**) from the control panel.

❏ Squeeze the centring pins (**6**) while pushing the control panel.

AIR CONDITIONING

❏ Tilt the control panel.

EXPORT EQUIPMENT LEVEL ADDITIONAL

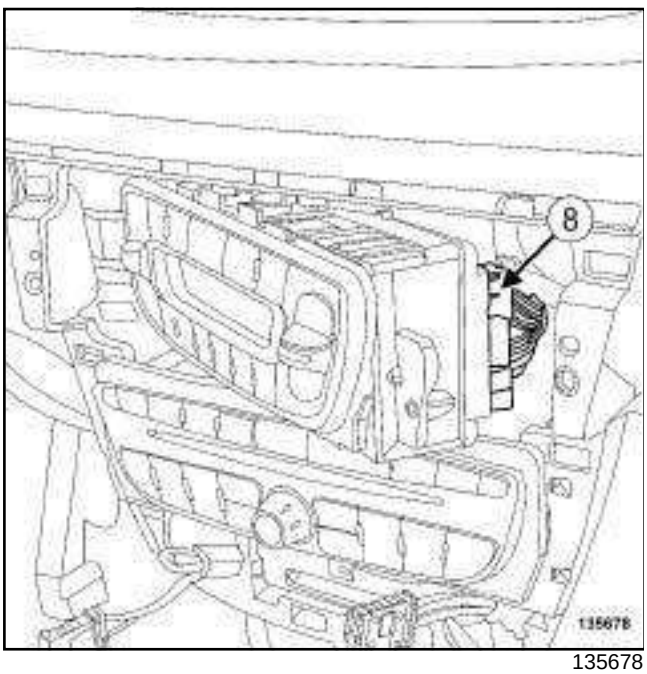


135657

❏ Disconnect the connectors (**7**) from the control panel.

❏ Remove the control panel, air mixing cable and air distribution cable assembly.

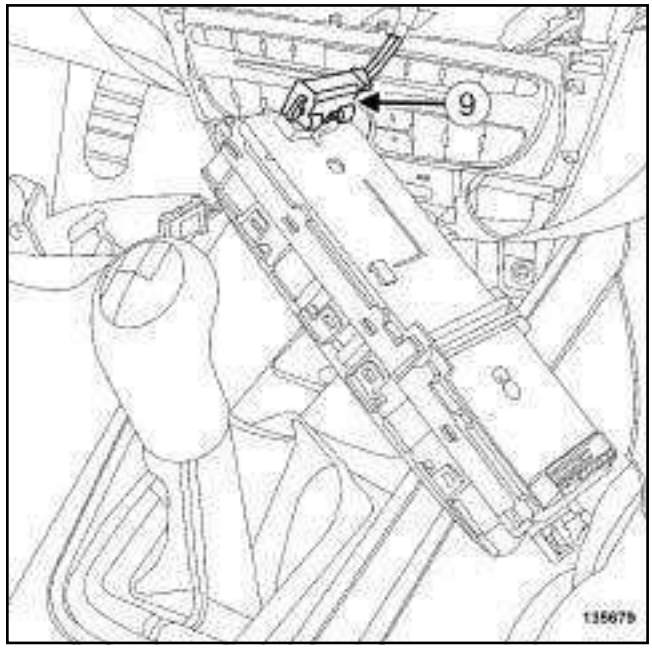
CLIMATE CONTROL



135678

❏ Tilt the control panel.

❏ Disconnect the control panel connector (**8**) .



135679

❏ Move aside the control panel.

❏ Disconnect the control panel connector (**9**) .

❏ Remove the control panel.

REFITTING

I - REFITTING PREPARATION OPERATION

AIR CONDITIONING

1 - When replacing the control panel:

❏ Recover the air mixing cable and the air distribution cable by breaking the mountings of the cables on the control panel.

❏ Remove the air mixing cable and the air distribution cable.

❏ Reposition the air mixing cable and the air distribution cable on the new control panel.

2 - When replacing the air mixing cable or the air distribution cable:

❏ Always replace the control panel, air mixing cable and air distribution cable assembly.

EXPORT EQUIPMENT LEVEL ADDITIONAL

II - REFITTING OPERATION FOR PART CONCERNED

AIR CONDITIONING

❏ Fit the control panel, air mixing cable and air distribution cable assembly in its housing.

❏ Connect the control panel connectors (7).

CLIMATE CONTROL

❏ Connect the control panel connector (9).

❏ Refit the control panel in its housing.

❏ Connect the control panel connector (8).

❏ Clip on the centring pins.

❏ Refit the control panel bolts.

❏ Clip the air distribution cable onto the distribution unit.

❏ Check that the air mixing control can move along its whole stroke.

❏ Clip the air mixing cable onto the distribution unit.

❏ Check that the air distribution control can move along its whole stroke.

❏ Check the correct operation of the control panel.

III - FINAL OPERATION

❏ Proceed in the reverse order to removal.

❏ Torque tighten:

- the **dashboard cross member reinforcement upper bolts (21 N.m)**,
- the **dashboard cross member reinforcement lower bolts (21 N.m)**.

❏ Apply the after repair procedure using the **Diagnostic tool** :

- connect the **Diagnostic tool**,
- select "Climate control computer",
- go to repair mode,
- display the "Before/after repair procedure" for the computer selected,
- carry out the operations described in the "After repair procedure" section.

Tightening torques ▽	
steering column nuts	**21 N.m**

REMOVAL

I - REMOVAL PREPARATION OPERATION

1 - Front right-hand side air distribution duct

❏ Remove the airbag inhibitor switch (see **Inhibitor switch: Removal - Refitting**) (88C, Airbag and pre-tensioners).

LEFT-HAND DRIVE

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

LEFT-HAND DRIVE, and RADIO 04A or RADIO 05A

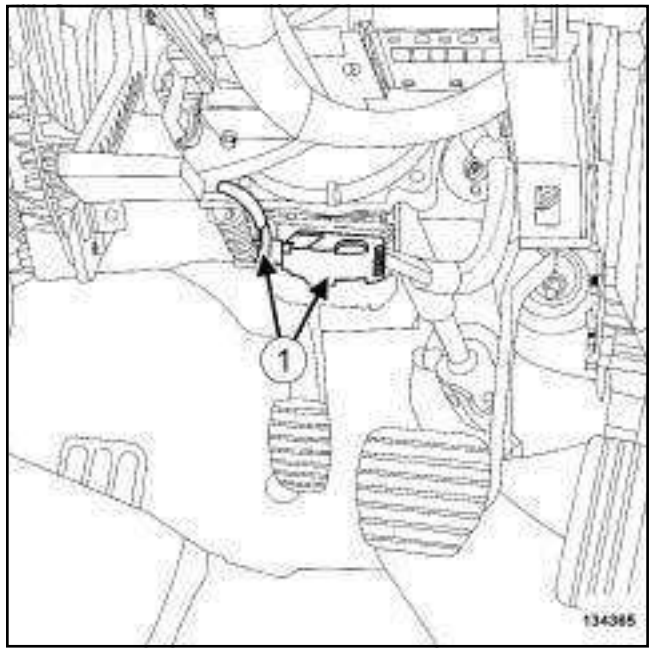
❏ Remove:

- the offset multimedia socket computer (see **Offset multimedia socket computer: Removal - Refitting**) (86A, Radio),
- the offset multimedia socket computer mounting bolts,
- the offset multimedia socket computer mounting.

RIGHT-HAND DRIVE

❏ Remove:

- the dashboard lower trim (see **Dashboard lower trim: Removal - Refitting**) (57A, Interior equipment),
- the cowlings under the steering wheel.



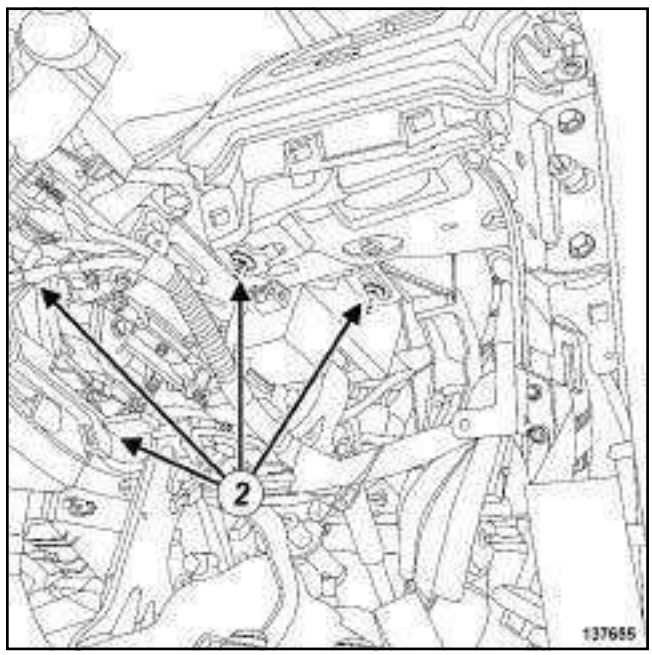
134365

❏ Disconnect:

- the steering column connectors (**1**) ,
- the electric steering column lock,
- the steering column control connectors.

❏ Move the seat as far back as possible.

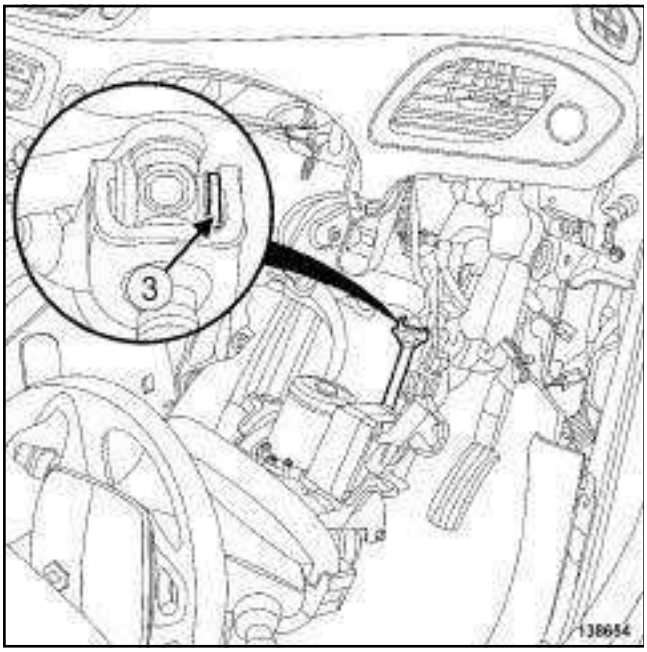
❏ Fit a block of approximately **440 mm** between the steering column and the floor.



137655

❏ Remove the nuts (**2**) from the steering column.

❏ Remove the block between the steering column and the floor.



138654

❏ Lower the steering column in the footwell.

Note:

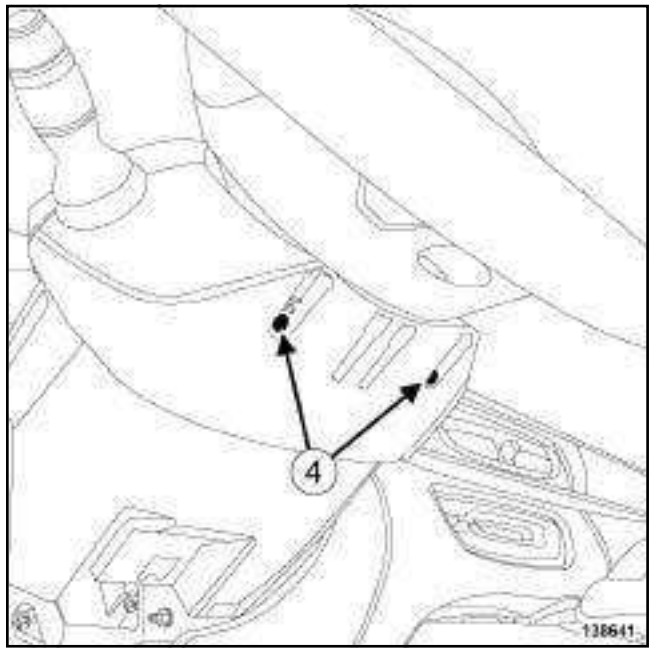
Vertically lower the steering column and do not apply pressure to the universal joints.

❏ Check that the cross piece (**3**) does not leave the bearing.

2 - Front left-hand side air distribution duct:

LEFT-HAND DRIVE

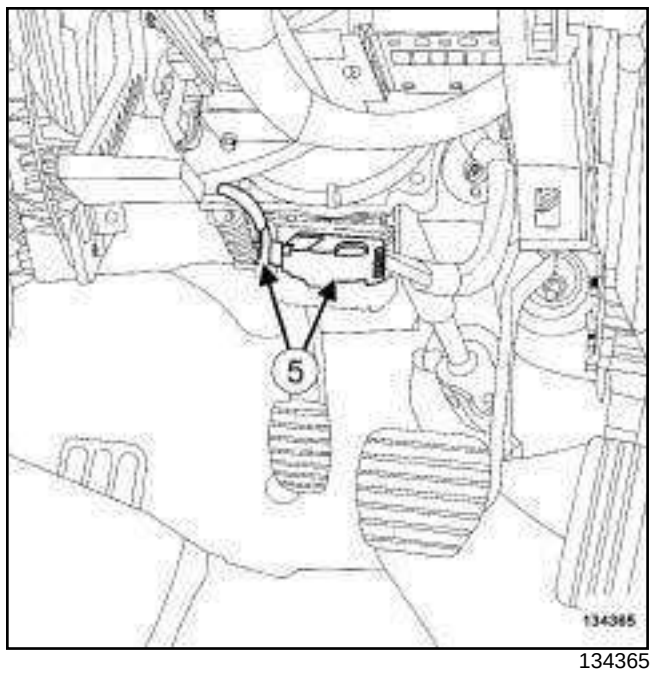
❏ Remove the dashboard lower trim (see **Dashboard lower trim: Removal - Refitting**) (57A, Interior equipment).



138641

❏ Remove:

- the bolts (**4**) of the cowlings under the steering wheel,
- the cowlings under the steering wheel.



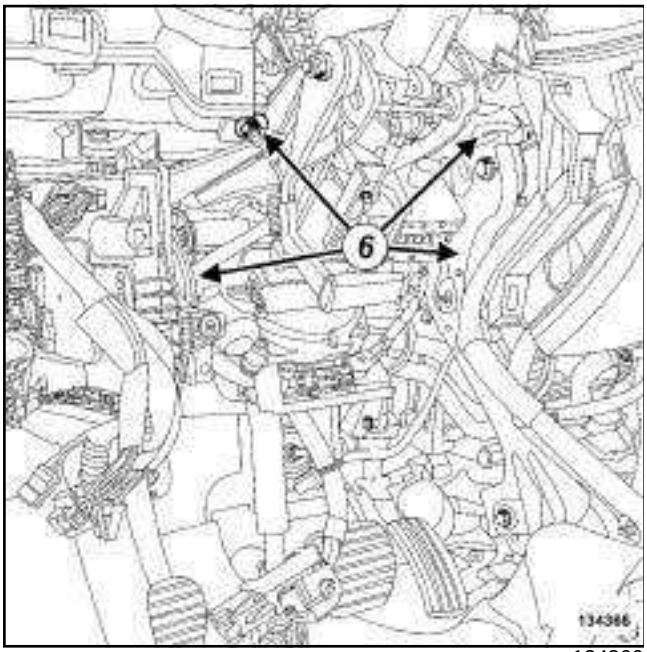
134365

❏ Disconnect:

- the steering column connectors (**5**) ,
- the electric steering column lock,
- the steering column control connectors.

❏ Move the seat as far back as possible.

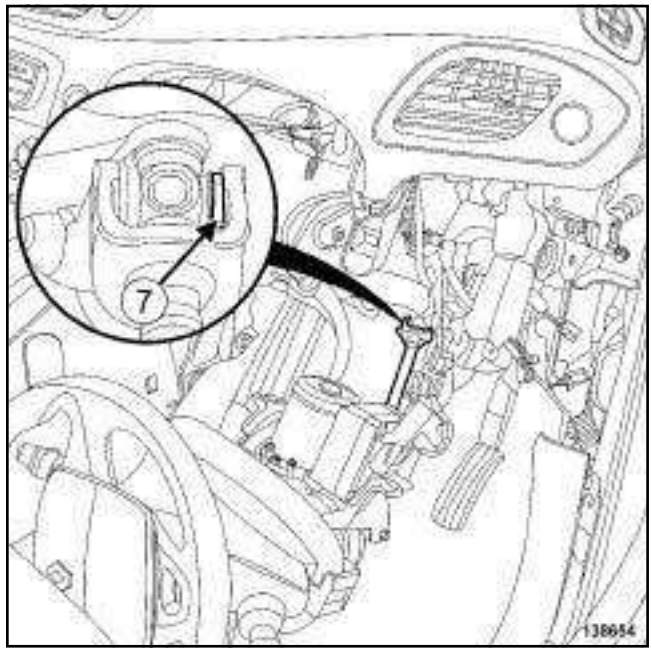
❏ Fit a block of approximately **440 mm** between the steering column and the floor.



134366

❏ Remove the nuts (**6**) from the steering column.

❏ Remove the block between the steering column and the floor.



138654

❏ Lower the steering column in the footwell.

Note:

Vertically lower the steering column and do not apply pressure to the universal joints.

❏ Check that the cross piece (**7**) does not leave the bearing.

RIGHT-HAND DRIVE

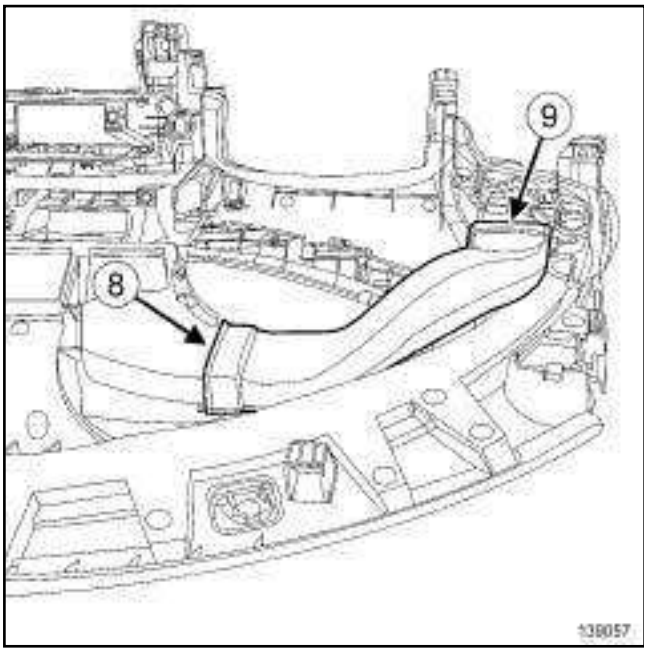
❏ Remove the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment).

RIGHT-HAND DRIVE, and RADIO 04A or RADIO 05A

❏ Remove:

- the offset multimedia socket computer (see **Offset multimedia socket computer: Removal - Refitting**) (86A, Radio),
- the offset multimedia socket computer mounting bolts,
- the offset multimedia socket computer mounting.

II - OPERATION FOR REMOVAL OF PART CONCERNED



139057

❏ Disconnect:

- the front side air distribution duct from the air distribution unit at (**8**) ,
- the front side air distribution duct from the air vent at (**9**) .

❏ Remove the front side air distribution duct.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

❏ Refit the front side air distribution duct.

II - FINAL OPERATION

1 - Front right-hand side air distribution duct:

RIGHT-HAND DRIVE

❏ Refit the steering column.

❏ Fit a block of approximately **440 mm** between the steering column and the floor.

❏ Torque tighten the **steering column nuts (21 N.m)**.

❏ Remove the block between the steering column and the floor.

❏ Connect:

- the steering column connectors,
- the electric steering column lock,
- the steering column control connectors.

❏ Refit:

- the cowlings under the steering wheel,
- the dashboard lower trim (see **Dashboard lower trim: Removal - Refitting**) (57A, Interior equipment).

LEFT-HAND DRIVE, and RADIO 04A or RADIO 05A

❏ Refit:

- the offset multimedia socket computer mounting,
- the offset multimedia socket computer mounting bolts,
- the offset multimedia socket computer (see **Offset multimedia socket computer: Removal - Refitting**) (86A, Radio).

LEFT-HAND DRIVE

❏ Refit:

- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment),
- the airbag inhibitor switch (see **Inhibitor switch: Removal - Refitting**) (88C, Airbag and pretensioners).

2 - Front left-hand side air distribution duct:

RIGHT-HAND DRIVE, and RADIO 04A or RADIO 05A

❏ Refit:

- the offset multimedia socket computer mounting,
- the offset multimedia socket computer (see **Offset multimedia socket computer: Removal - Refitting**) (86A, Radio).

RIGHT-HAND DRIVE

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

LEFT-HAND DRIVE

❏ Refit the steering column.

❏ Fit a block of approximately **440 mm** between the steering column and the floor.

❏ Torque tighten the **steering column nuts (21 N.m)**.

❏ Remove the block between the steering column and the floor.

❏ Connect:

- the steering column connectors,
- the electric steering column lock,
- the steering column control connectors.

❏ Refit:

- the cowlings under the steering wheel,
- the bolts of the cowlings under the steering wheel,
- the dashboard lower trim (see **Dashboard lower trim: Removal - Refitting**) (57A, Interior equipment).

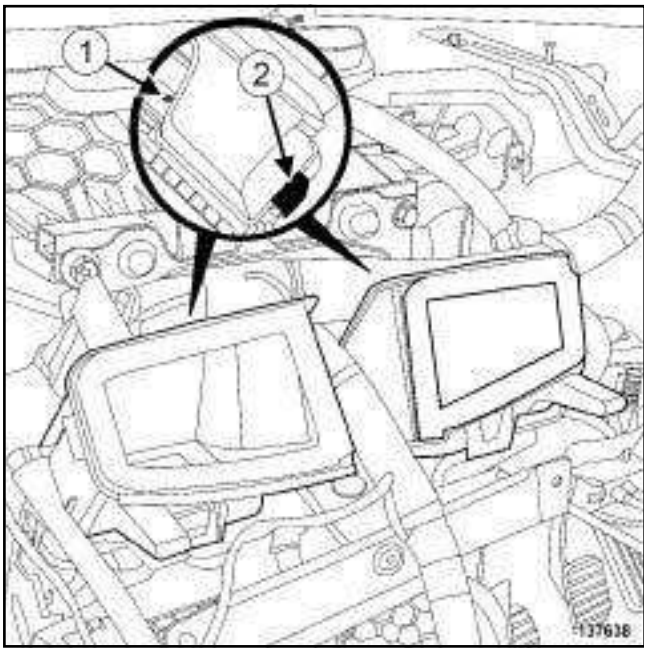
REMOVAL

I - REMOVAL PREPARATION OPERATION

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

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

II - OPERATION FOR REMOVAL OF PART CONCERNED



137638

❏ Remove the front centre air distribution duct bolts (**1**) .

❏ Unclip the front centre air distribution duct at (**2**) .

❏ Remove the front centre air duct.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

❏ Refit the front centre air duct.

❏ Clip on the front centre air duct.

❏ Refit the front centre air duct bolts.

II - FINAL OPERATION

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

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

Special tooling required	
Car. 1363	Set of trim removal levers.

REMOVAL

I - REMOVAL PREPARATION OPERATION

1 - Driver's side

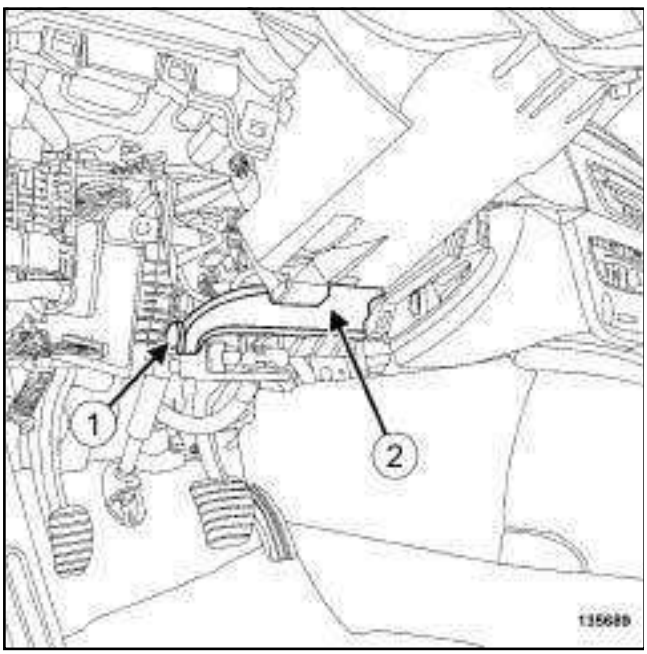
❑ Remove the instrument panel lower trim (see **Dashboard lower trim: Removal - Refitting**) (57A, Interior equipment).

2 - Passenger side

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

II - OPERATION FOR REMOVAL OF PART CONCERNED

1 - Driver's side

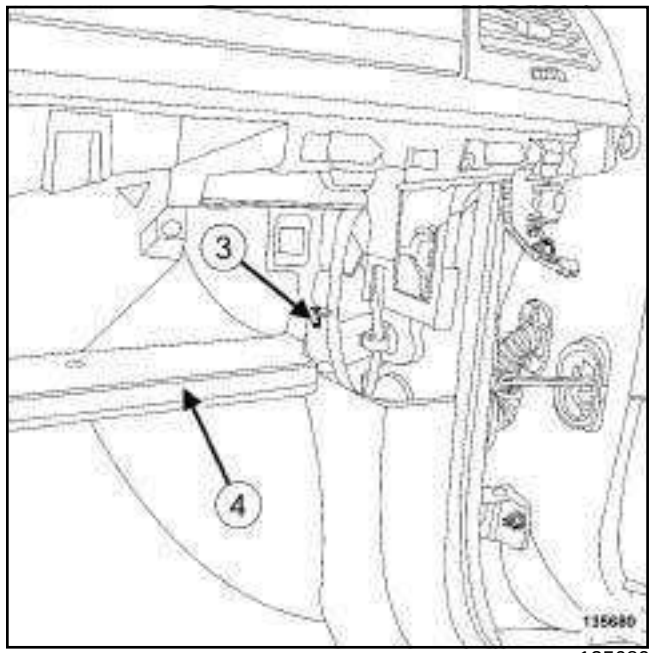


135689

❑ Remove:

- the clip (**1**) from the A-pillar air duct, using the tool **(Car. 1363)**,
- the A-pillar air duct (**2**) .

2 - Passenger side



135680

❑ Remove:

- the clip (**3**) from the A-pillar air duct,
- the A-pillar air duct (**4**) .

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

❑ Refit:

- the A-pillar air duct,
- the A-pillar air duct clip.

II - FINAL OPERATION

1 - Driver's side

❑ Refit the instrument panel lower trim (see **Dashboard lower trim: Removal - Refitting**) (57A, Interior equipment).

2 - Passenger side

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

EXPORT EQUIPMENT LEVEL ADDITIONAL

Equipment required
Diagnostic tool

REMOVAL

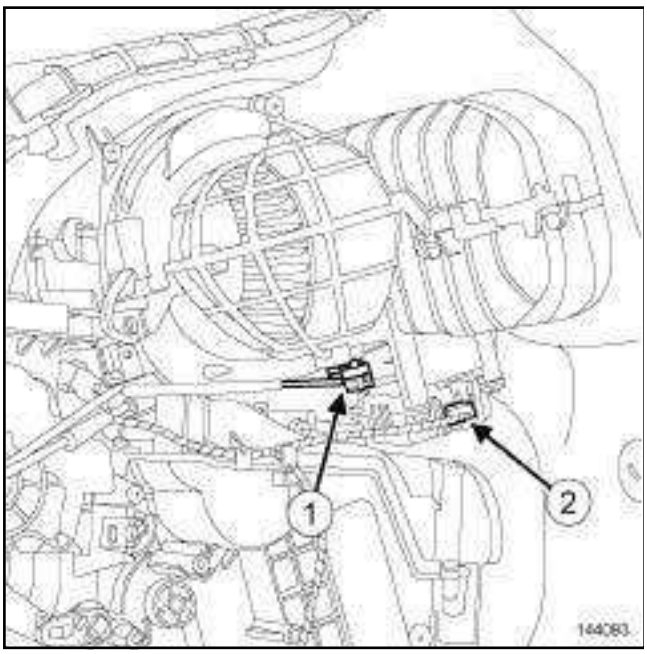
I - REMOVAL PREPARATION OPERATION

❏ Remove:

- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment),
- the front right-hand A-pillar air distribution duct (see **61A**, **Heating**, **Front footwell air distribution duct: Removal - Refitting**, page **61A-40**) .

❏ Remove the offset multimedia socket computer (see **Offset multimedia socket computer: Removal - Refitting**) .

❏ Remove the front side air distribution duct (see **61A**, **Heating**, **Front side air distribution duct: Removal - Refitting**, page **61A-34**) .

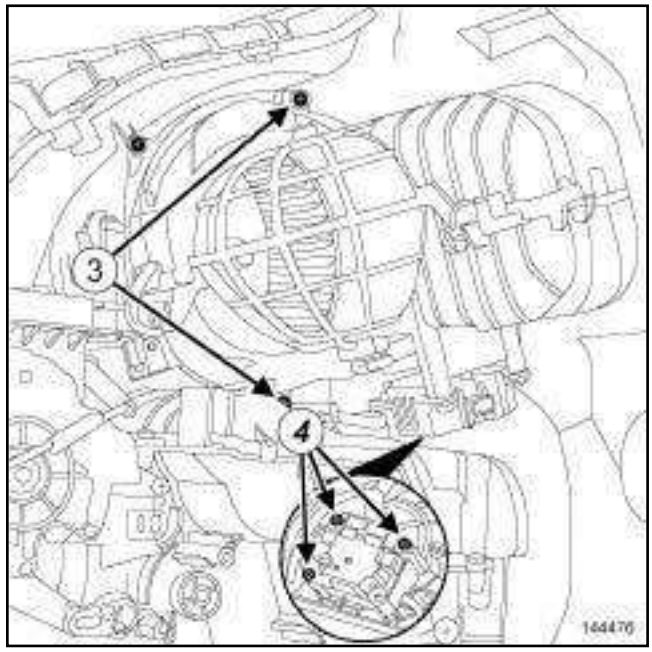


144093

❏ Unclip the recirculation control cable (**1**) .

❏ Disconnect the connector (**2**) from the recirculation motor.

II - REMOVAL OPERATION



144476

❏ Remove:

- the bolts (**3**) from the air recirculation duct,
- the air recirculation duct,
- the bolts (**4**) from the air recirculation motor,
- the air recirculation motor.

REFITTING

❏ Proceed in the reverse order to removal.

❏ Apply the after repair procedure using the **Diagnostic tool**

- connect the **Diagnostic tool**,
- select "Climate control computer",
- go to repair mode,
- display the "Before/after repair procedure" for the computer selected,
- select "air recirculation flap motor" in the "List of components stored by this computer" section,
- carry out the operations described in the "After repair procedure" section.

CLIMATE CONTROL, and EXPORT EQUIPMENT LEVEL ADDITIONAL

Equipment required
Diagnostic tool

REMOVAL

I - REMOVAL PREPARATION OPERATION

1 - Right-hand mixing motor

❑ Remove:

- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment),
- the front right-hand footwell air distribution duct (see **61A**, **Heating**, **Front footwell air distribution duct: Removal - Refitting**, page **61A-40**) .

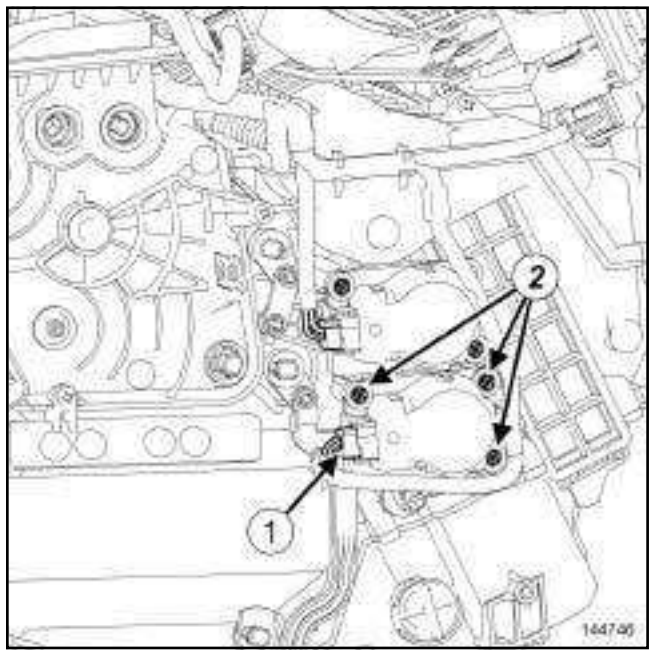
2 - Left-hand mixing motor

❑ Remove:

- the dashboard lower trim (see **Dashboard lower trim: Removal - Refitting**) (57A, Interior equipment),
- the front left-hand footwell air distribution duct (see **61A**, **Heating**, **Front footwell air distribution duct: Removal - Refitting**, page **61A-40**) .
- the « brake pedal - accelerator » assembly (see **Brake pedal: Removal - Refitting**) (37A, Mechanical component control).

II - REMOVAL OPERATION

1 - Right-hand mixing motor



144746

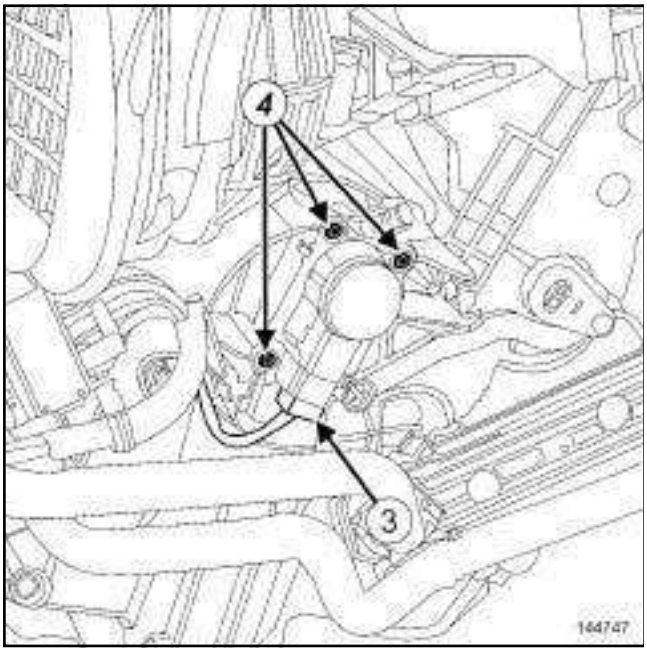
❑ Disconnect the connector (**1**) from the air mixing motor.

❑ Remove:

- the bolts (**2**) from the air mixing motor,
- the air mixing motor.

CLIMATE CONTROL, and EXPORT EQUIPMENT LEVEL ADDITIONAL

2 - Left-hand mixing motor



144747

❏ Disconnect the connector (**3**) from the air mixing motor.

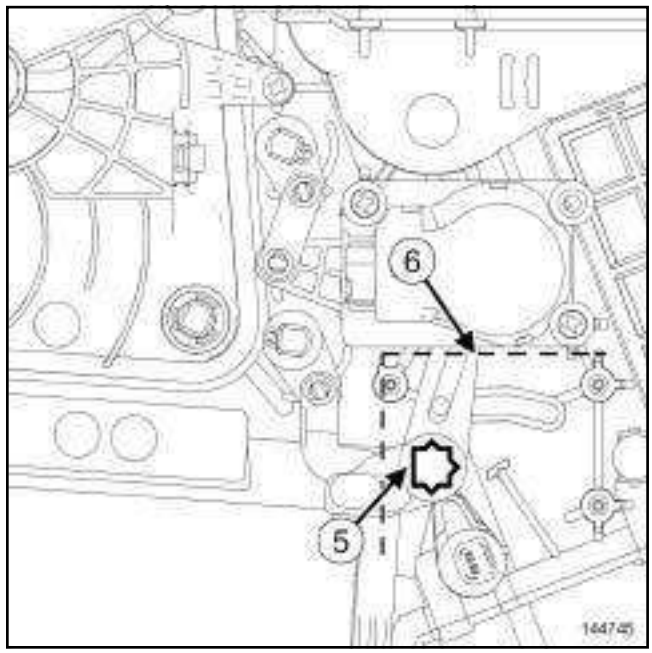
❏ Remove:

- the bolts (**4**) from the air mixing motor,
- the air mixing motor.

REFITTING

I - REFITTING PREPARATION OPERATION

1 - Right-hand mixing motor

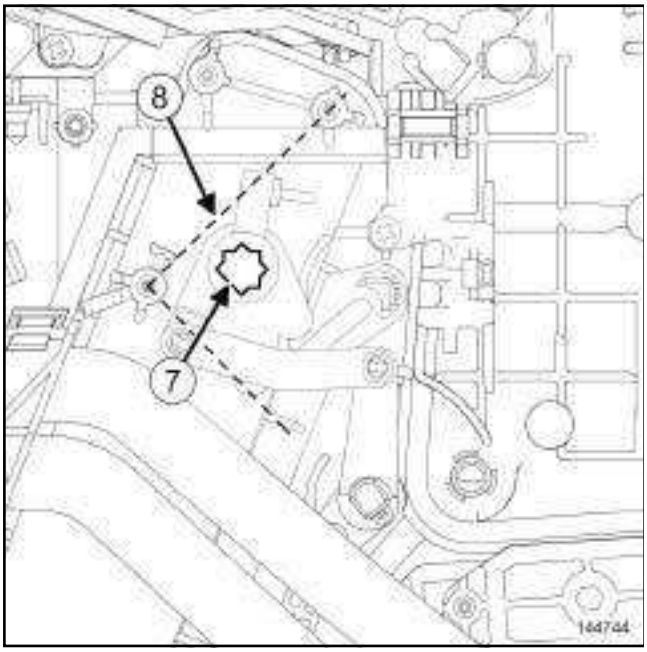


144745

❏ Move the tie rod so that the flat surface (**5**) of the right-hand mixing motor recess is positioned at **90°** in relation to the distribution unit reference axis (**6**) .

CLIMATE CONTROL, and EXPORT EQUIPMENT LEVEL ADDITIONAL

2 - Left-hand mixing motor



144744

❑ Move the tie rod so that the flat surface (**7**) of the left-hand mixing motor recess is positioned at **90°** in relation to the edge of the distribution unit reference axis (**8**) .

II - REFITTING OPERATION

❑ Proceed in the reverse order to removal.

III - FINAL OPERATION

❑ Apply the after repair procedure using the **Diagnostic tool** :

- connect the **Diagnostic tool**,
- select "Climate control computer",
- go to repair mode,
- display the "Before/after repair procedure" for the computer selected,
- select "Left-hand air mixing flap motor or Right-hand air mixing flap motor" in the "List of components stored by this computer" section,
- carry out the operations described in the "After repair procedure" section.

CLIMATE CONTROL, and EXPORT EQUIPMENT LEVEL ADDITIONAL

Equipment required
Diagnostic tool

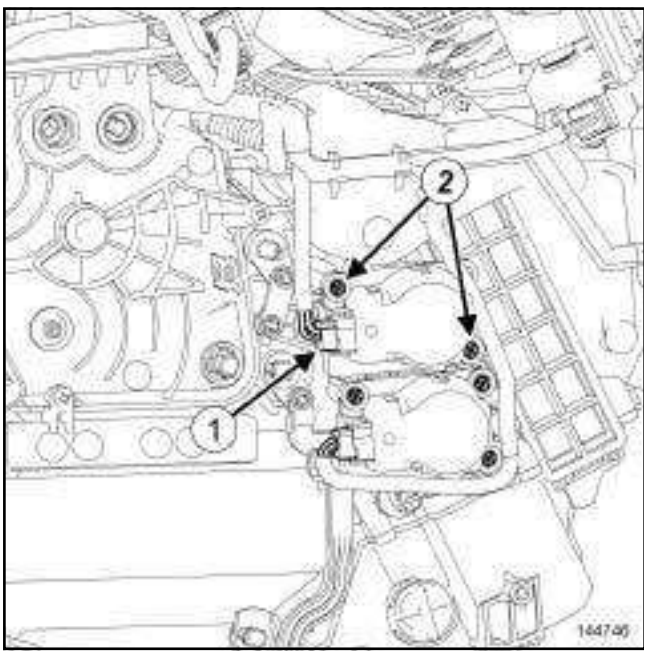
REMOVAL

I - REMOVAL PREPARATION OPERATION

❏ Remove:

- the glovebox (see **Glovebox: Removal - Refitting**) (57A, Interior equipment),
- the front right-hand A-pillar air distribution duct (see **61A**, **Heating**, **Front footwell air distribution duct: Removal - Refitting**, page **61A-40**) .

II - REMOVAL OPERATION



144746

❏ Mark the routing of the distribution motor wiring.

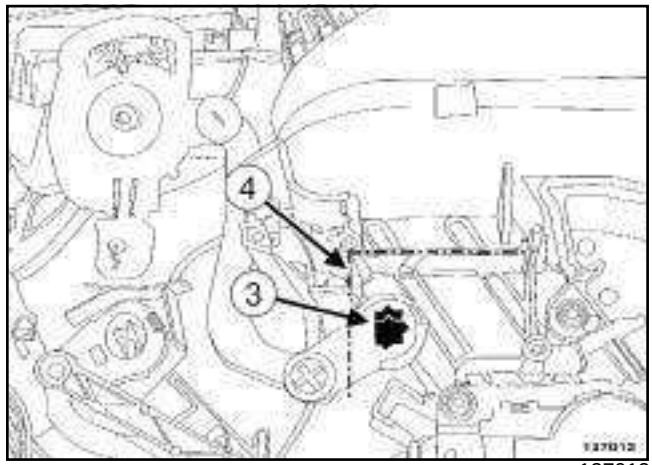
❏ Disconnect the connector (**1**) from the distribution motor.

❏ Remove:

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

REFITTING

I - REFITTING PREPARATION OPERATION



137012

❏ Move the tie rod so that the flat surface (**3**) of the distribution motor recess is positioned at 90° in relation to the distribution unit reference axis (**4**) .

II - REFITTING OPERATION

❏ Refit the distribution motor.

❏ Reconnect the distribution motor connector.

❏ Fit the electrical wiring of the distribution motor.

III - FINAL OPERATION

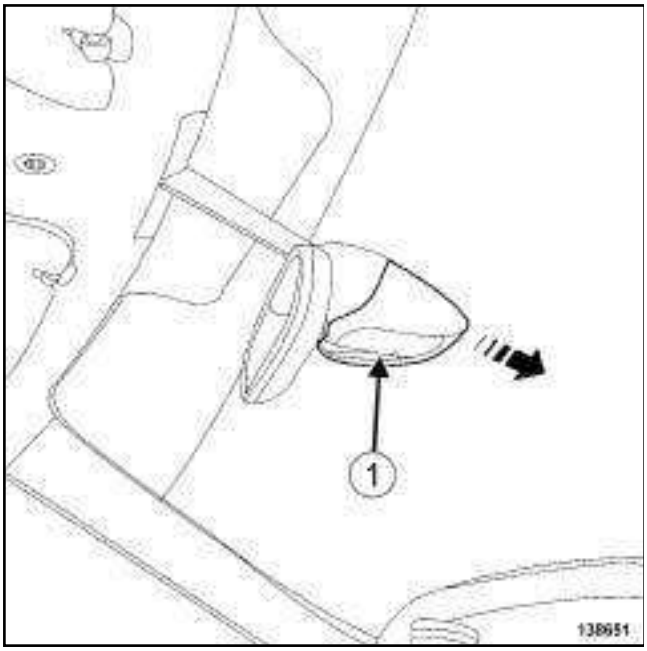
❏ Proceed in the reverse order to removal.

❏ Apply the after repair procedure using the **Diagnostic tool** :

- connect the **Diagnostic tool**,
- select "Climate control computer",
- go to repair mode,
- display the "Before/after repair procedure" for the computer selected,
- select "Footwell air distribution flap motor" in the "List of components controlled by this computer" section,
- carry out the operations described in the "After repair procedure" section.

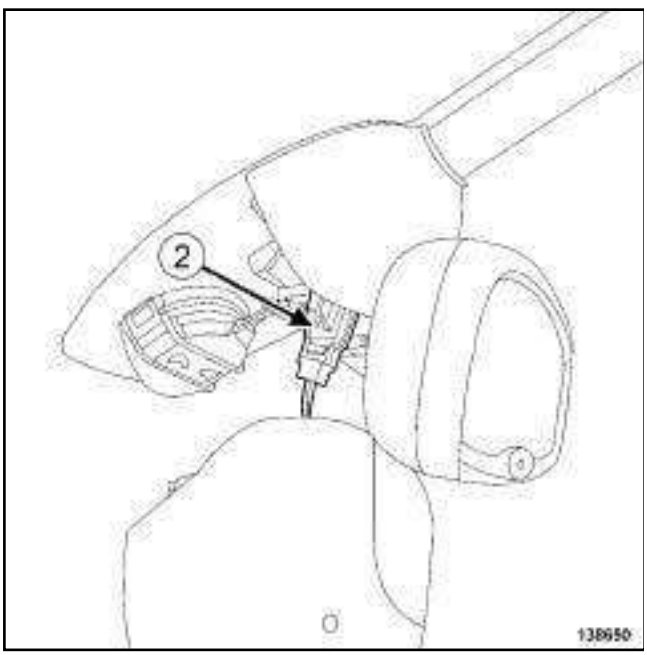
REMOVAL

OPERATION FOR REMOVAL OF PART CONCERNED



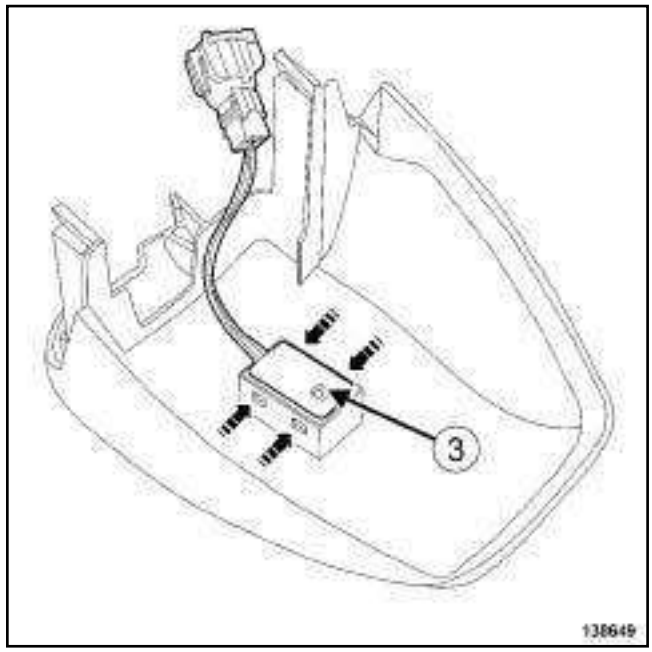
138651

❏ Remove the interior rear view mirror trim (**1**) .



138650

❏ Disconnect the passenger compartment temperature sensor connector (**2**) .



138649

❏ Unclip the passenger compartment temperature sensor (**3**) from the interior rear view mirror trim.

REFITTING

REFITTING OPERATION FOR PART CONCERNED

❏ Clip the passenger compartment temperature sensor onto the interior rear view mirror trim.

❏ Connect the passenger compartment temperature sensor connector.

❏ Refit the interior rear view mirror trim.

Note:

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

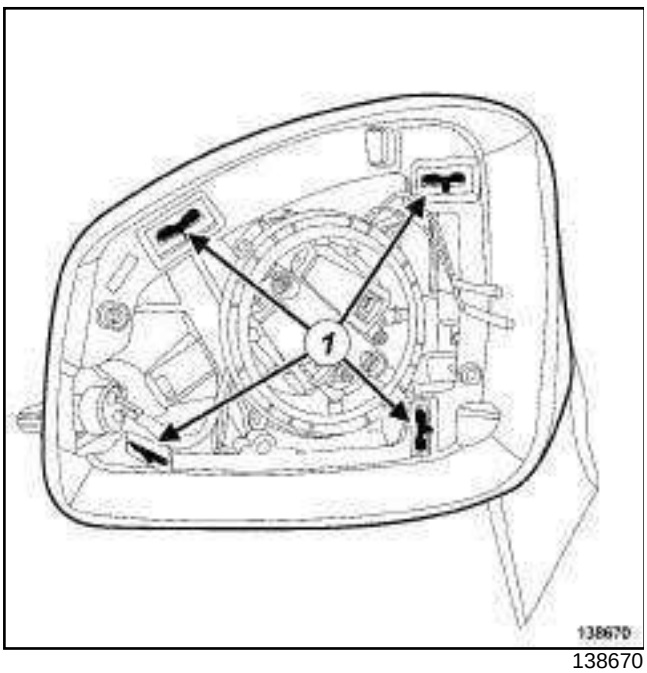
REMOVAL

I - REMOVAL PREPARATION OPERATION

❏ Remove:

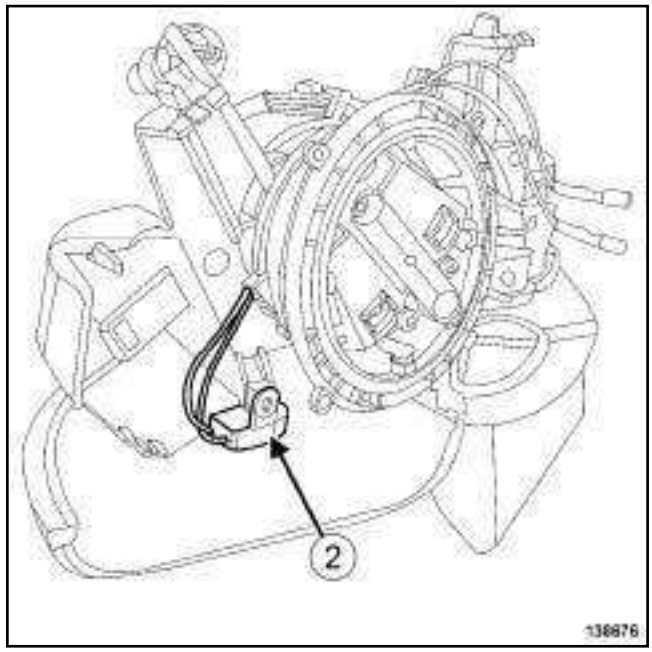
- the right-hand door mirror glass (see **Door mirror glass: Removal - Refitting**) (56A, Exterior equipment),
- the right-hand door mirror casing (see **Door mirror casing: Removal - Refitting**) (56A, Exterior equipment).

II - OPERATION FOR REMOVAL OF PART CONCERNED



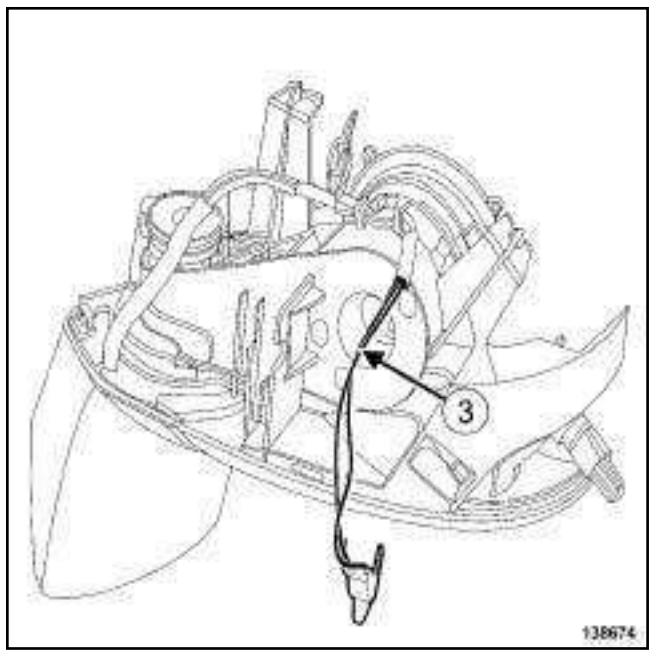
138670

❏ Unclip the right-hand door mirror mounting to remove the sensor by pressing on the clips (**1**) .



138676

❏ Remove the exterior temperature sensor (**2**) from its mounting.



138674

❏ Cut the wires (**3**) of the exterior temperature sensor (see **Wiring: Repair**) (Technical Note 6015A, 88A, Wiring).

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

❏ Solder the wires of the exterior temperature sensor (see **Wiring: Repair**) (Technical Note 6015A, 88A, Wiring).

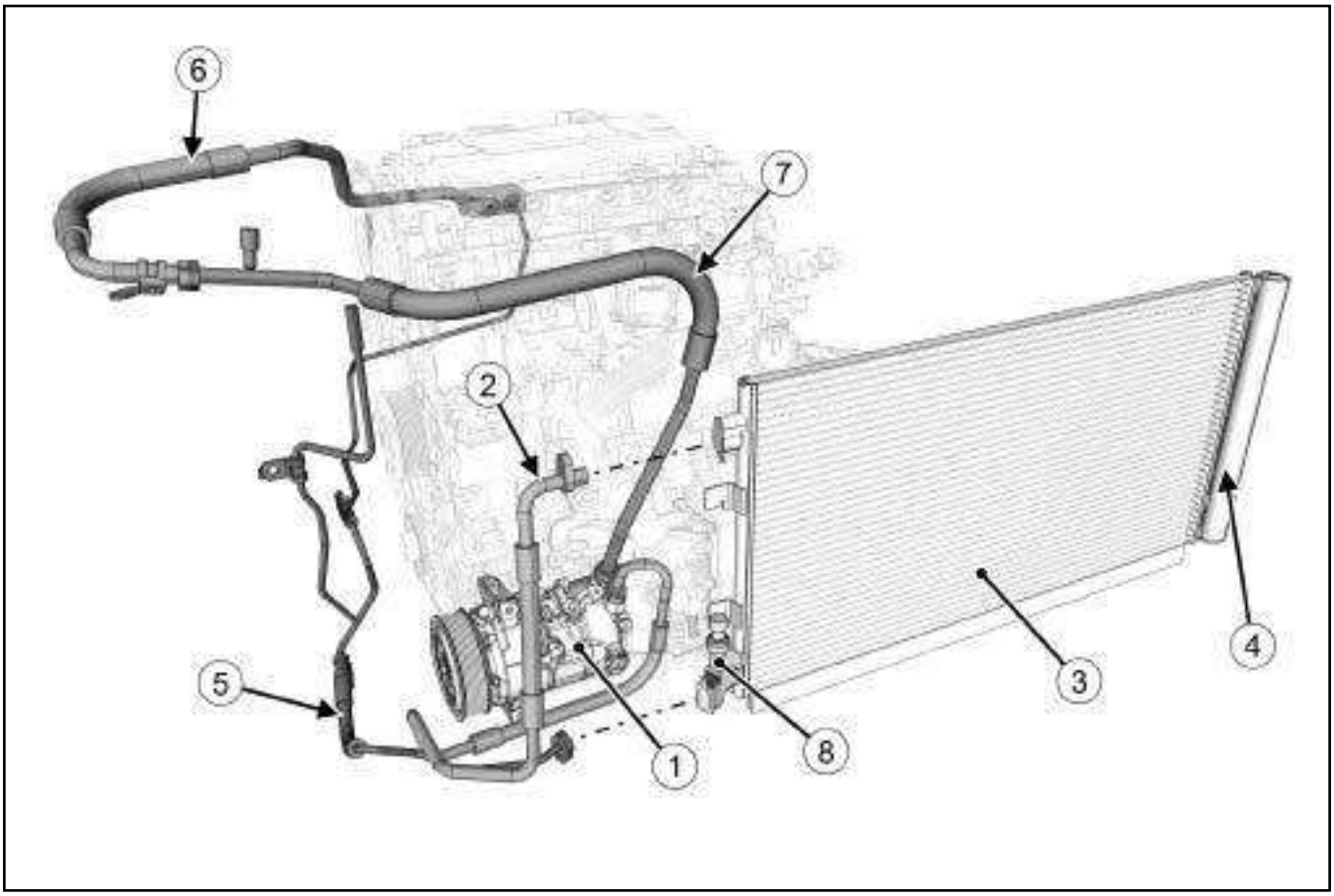
❏ Refit the exterior temperature sensor onto its mounting.

❏ Clip on the right-hand door mirror mounting.

II - FINAL OPERATION

❏ Refit:

- the right-hand door mirror casing (see **Door mirror casing: Removal - Refitting**) (56A, Exterior equipment),
- the right-hand door mirror glass (see **Door mirror glass: Removal - Refitting**) (56A, Exterior equipment).



139042

No.	Description
(1)	Compressor (see **62A**, **Air conditioning**, **Compressor: Removal - Refitting**, page **62A-9**)
(2)	« Compressor - condenser » connecting pipe (see **62A**, **Air conditioning**, **Compressor - condenser connecting pipe: Removal - Refitting**, page **62A-28**)
(3)	Condenser (see **62A**, **Air conditioning**, **Condenser: Removal - Refitting**, page **62A-4**)
(4)	Dehydrator reservoir filter
(5)	« Condenser - expansion valve » connecting pipe (see **62A**, **Air conditioning**, **Condenser - expansion valve connecting pipe: Removal - Refitting**, page **62A-17**)
(6)	« Expansion valve - intermediate pipe » connecting pipe (see **62A**, **Air conditioning**, **Expansion valve - intermediate pipe connecting pipe at the expansion valve outlet: Removal - Refitting**, page **62A-22**)

No.	Description
(7)	« Intermediate pipe - compressor » connecting pipe (see **62A**, **Air conditioning**, **Compressor - intermediate pipe connecting pipe: Removal - Refitting**, page **62A-31**)
(8)	Pressure sensor (see **62A**, **Air conditioning**, **Pressure sensor: Removal - Refitting**, page **62A-25**)

EXPORT EQUIPMENT LEVEL ADDITIONAL

For the oil part number (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products).

Table of vehicle refrigerant capacities according to their engines and various specifications

Engine	Refrigerant capacity (g)	Type of compressor	Type of original oil	Type of After-Sales oil	Quantity of oil (ml)
K4M K9K	433 ± 35	CR12Sc Calsonic	DH-PR	PAG 448	150 ± 10

Table of quantities of oil to add when replacing components:

Operation on the air conditioning circuit	Quantity of oil (ml or cm^3)
Circuit oil change	Measure the volume recovered and add the same quantity of new oil
Split pipe or other rapid leak	**100**
Replacement of a pipe	Quantity recovered **+10**
Replacement of a condenser	Quantity recovered **+30**
Replacement of an evaporator or distribution unit	Quantity recovered **+30**
Replacement of the filter or dehydrator reservoir	Quantity recovered **+15**
Removing - Refitting a compressor	Quantity recovered
Replacement of a compressor	None added
Standard replacement of a compressor	Top up as necessary
Replacement of a compressor and one or more refrigerant circuit component(s)	None added
Standard replacement of a compressor and replacement of one or more refrigerant circuit component(s)	Top up as necessary

EXPORT EQUIPMENT LEVEL ADDITIONAL

Equipment required
refrigerant charging station

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 **Air conditioning: Precautions for the repair**) .

Note:

Use blanking plugs for the fuel circuits with part numbers **77 01 208 229** or **77 01 476 857** to plug any openings exposed to the open air. They must be clean. Do not use any which have already been used to plug a fuel circuit.

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).

WARNING

Consult the device's operating manual to avoid incorrect use.

❏ Drain the refrigerant circuit using the **refrigerant charging station** (see **Refrigerant circuit: Draining - Filling**) .

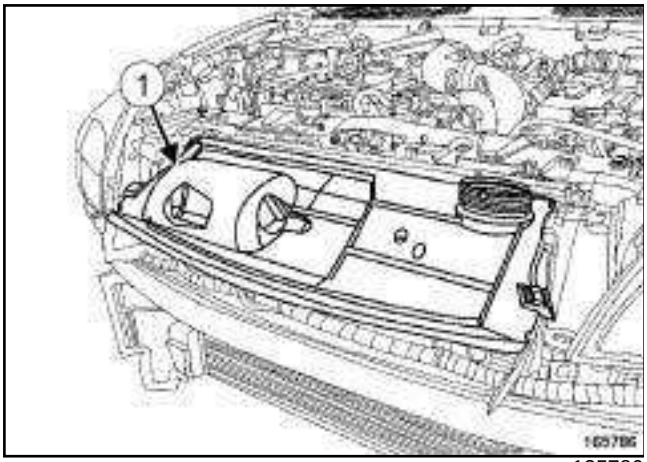
DISCHARGE LAMPS

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

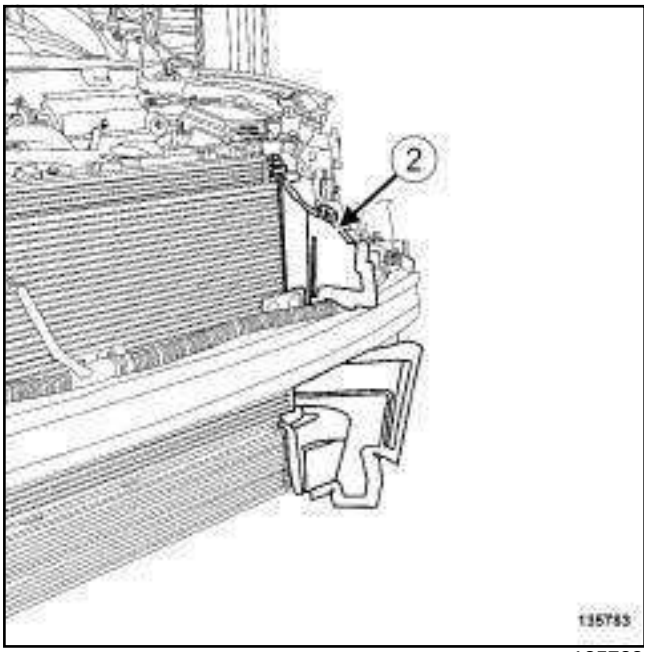
❏ Remove:

- the front wheels (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres),
- the front sections of the front wheel arch liners (see **Front wheel arch liner: Removal - Refitting**) (55A, Exterior protection),
- the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection).

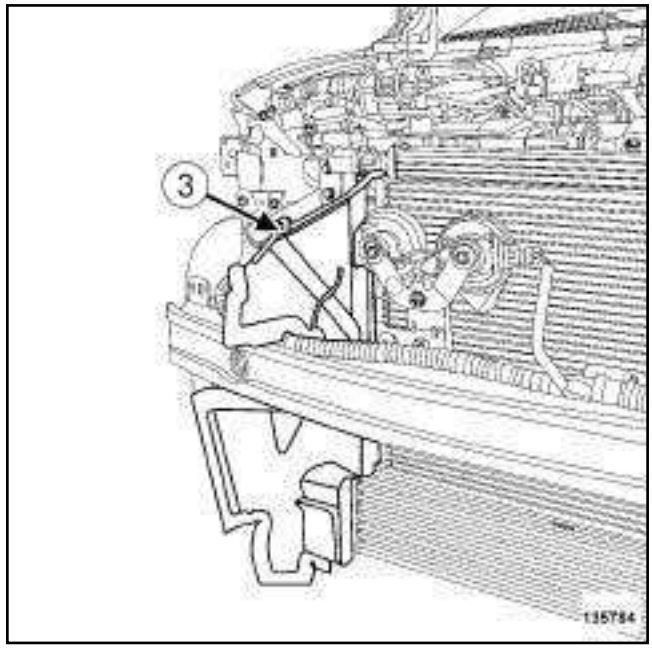
EXPORT EQUIPMENT LEVEL ADDITIONAL



135786



135783



135784

❑ Unclip:

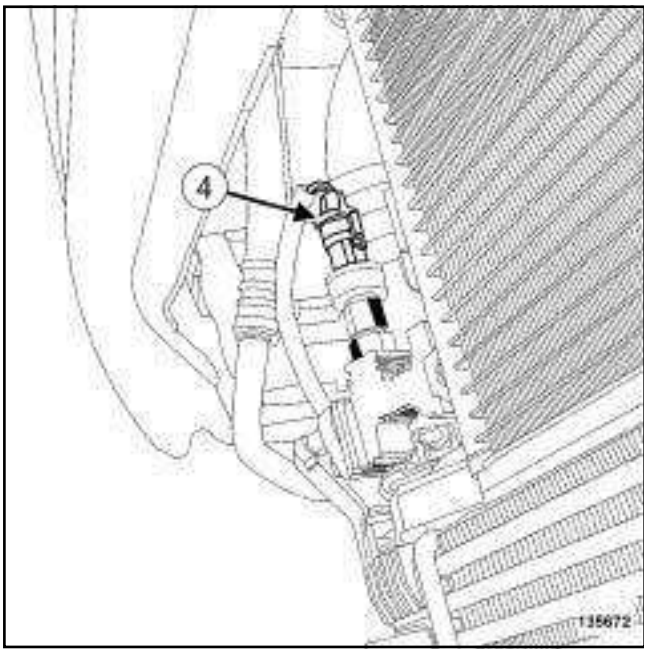
- the central deflector (**1**) ,
- the left-hand side deflector (**2**) ,
- the right-hand side deflector (**3**) .

❑ Remove:

- the audible warning (see **Audible warning: Removal - Refitting**) (82A, Horn),
- the left-hand headlight (see **Headlight: Removal - Refitting**) (80B, Headlights),
- the side support of the left-hand front panel (see **Front end panel side support: Removal - Refitting**) (42A, Upper front structure).

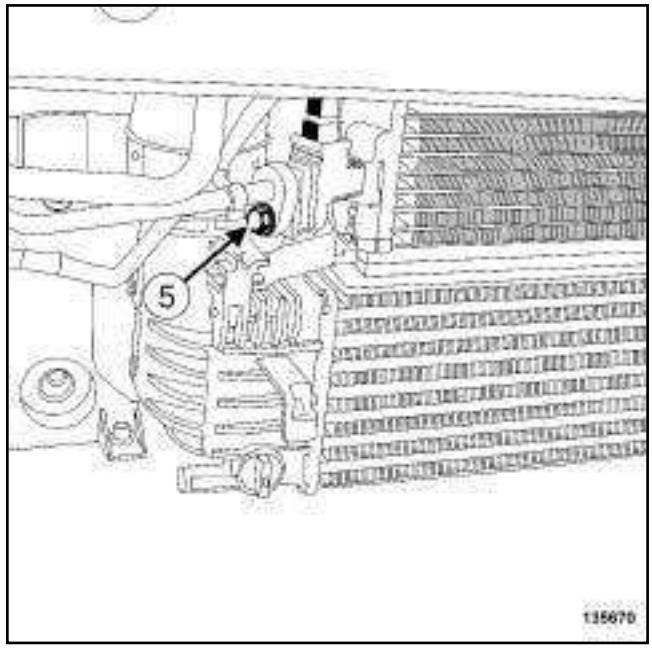
EXPORT EQUIPMENT LEVEL ADDITIONAL

II - OPERATION FOR REMOVAL OF PART CONCERNED



135672

❏ Disconnect the pressure sensor connector (**4**) .



135670

❏ Remove the bolt (**5**) securing the bracket for the « condenser - expansion valve » connecting pipe to the condenser.

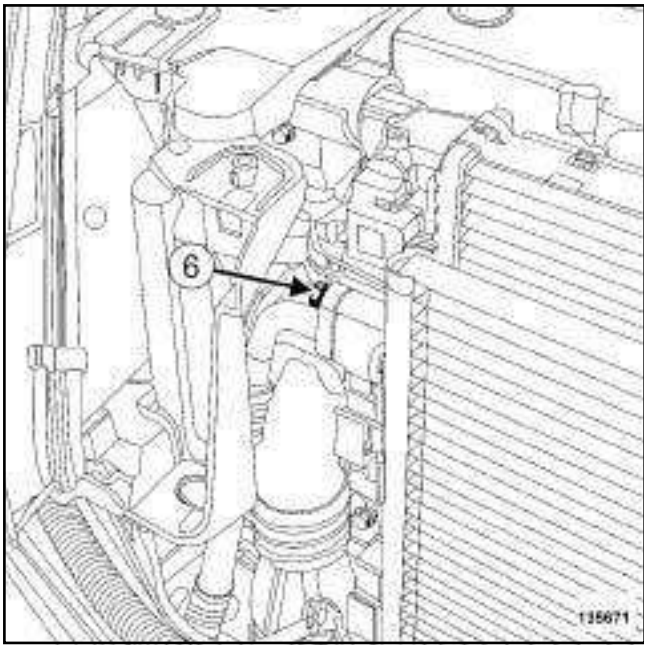
WARNING

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

❏ Disconnect the « condenser - expansion valve » connecting pipe from the condenser.

❏ Insert the blanking plugs.

EXPORT EQUIPMENT LEVEL ADDITIONAL



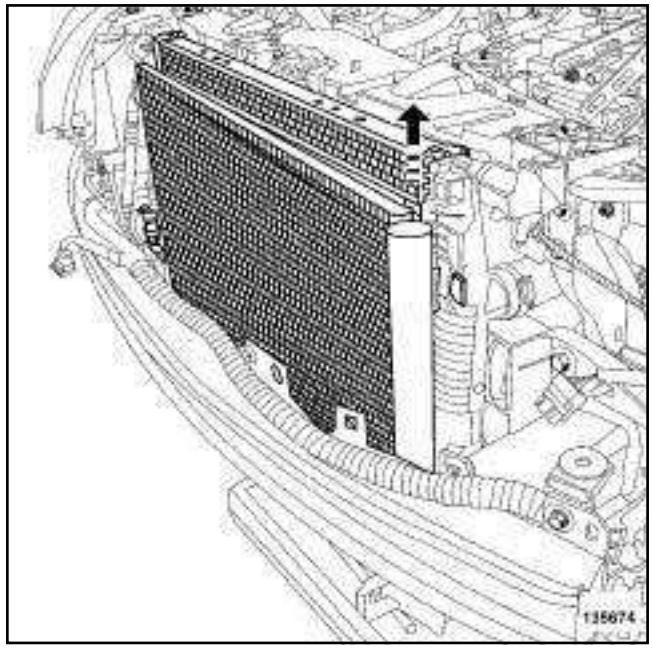
135671

❑ Remove the bolt (**6**) securing the bracket for the « compressor - condenser » connecting pipe from the condenser.

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.

❑ Insert the blanking plugs.



135674

❑ Remove the condenser in accordance with the direction of the arrow.

REFITTING

I - REFITTING PREPARATION 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.

WARNING
To avoid any leaks, check that the seal and the pipe surface are in good condition. The seal and the surface must be clean and scratch free.

❑ Remove the blanking plugs.

II - REFITTING OPERATION FOR PART CONCERNED

❑ Refit:

- the condenser,
- the connecting pipes to the condenser.

❑ Connect the pressure sensor connector.

EXPORT EQUIPMENT LEVEL ADDITIONAL

III - FINAL OPERATION

❑ Refit

- the side support of the left-hand front panel (see **Front end panel side support: Removal - Refitting**) (42A, Upper front structure),
- the left-hand headlight (see **Headlight: Removal - Refitting**) (80B, Headlights),
- the audible warning (see **Audible warning: Removal - Refitting**) (82A, Horn).

❑ Clip:

- the right-hand side deflector,
- the left-hand side deflector,
- the central deflector.

❑ Refit:

- the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection),
- the front sections of the front wheel arch liners (see **Front wheel arch liner: Removal - Refitting**) (55A, Exterior protection),
- the front wheels (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres).

DISCHARGE LAMPS

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

❑

Note:

A summary table gives the quantities of refrigerant in the system according to the engine types (see **62A**, **Air conditioning**, **Air conditioning: Parts and consumables for the repair**, page **62A-3**) .

❑ Fill up the refrigerant circuit using the **refrigerant charging station** (see **Refrigerant circuit: Draining - Filling**) .

❑ Check for leaks (see **Refrigerant circuit: Check**) .

❑ Check the air conditioning system is operating correctly (see **Air conditioning: Check**) .

❑ Adjust the headlights (see **Headlight: Adjustment**) (80B, Headlights).

EXPORT EQUIPMENT LEVEL ADDITIONAL

Equipment required
refrigerant charging station
compressed air nozzle

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 **Air conditioning: Precautions for the repair**) ,
- (see **Vehicle: Precautions for the repair**) (01D, Mechanical introduction).

WARNING

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

Note:

Use blanking plugs for the fuel circuits with part numbers **77 01 208 229** or **77 01 476 857** to plug any openings exposed to the open air. They must be clean. Do not use any which have already been used to plug a fuel circuit.

REMOVAL

I - REMOVAL PREPARATION OPERATION

❑ Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).

WARNING

Consult the device's operating manual to avoid incorrect use.

❑ Drain the refrigerant circuit using the **refrigerant charging station** (see **Refrigerant circuit: Draining - Filling**) .

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

❑ Remove:

- the engine undertray bolts,
- the engine undertray.
- the front wheels (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres),
- the front section of the front wheel arch liners (see **Front wheel arch liner: Removal - Refitting**) (55A, Exterior protection),
- the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection),
- the headlights (see **Headlight: Removal - Refitting**) (80B, Headlights),
- the front bumper supports (see **Front bumper mounting: Removal - Refitting**) (42A, Front upper structure),
- the audible warning (see **Audible warning: Removal - Refitting**) (82B, Horn),
- the front impact cross member (see **Front impact cross member: Removal - Refitting**) (41A, Front lower structure),
- the cooling radiator air deflectors.

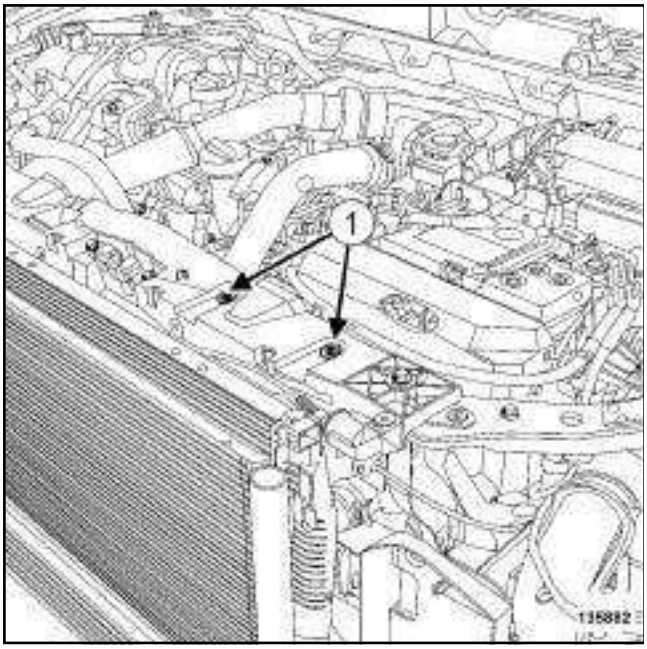
❑ Remove the bonnet lock (see **Bonnet lock: Removal - Refitting**) (52A, Non-side opening element mechanisms).

WARNING

In order to prevent the accessories belt from being prematurely ruptured, do not damage (hit, force with a tool, etc.) the plastic pulley of the compressor.

❑ Remove the accessories belt (see **Accessories belt: Removal - Refitting**) (11A, Top and front of engine).

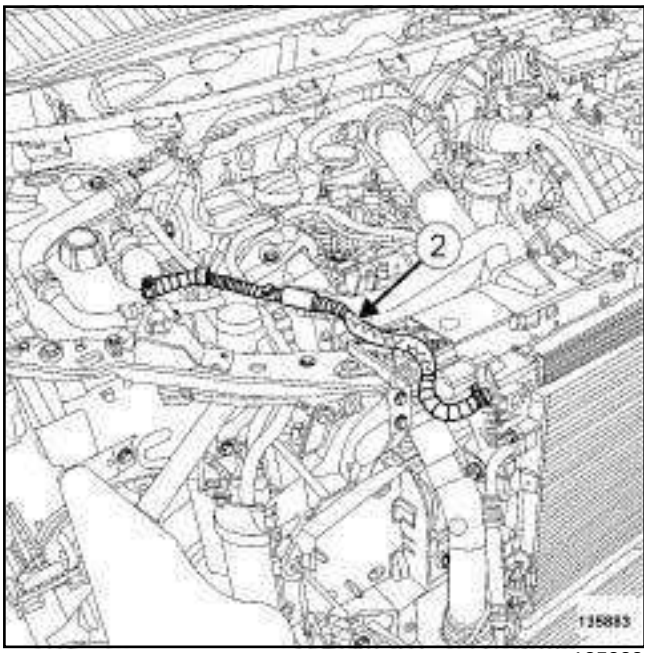
EXPORT EQUIPMENT LEVEL ADDITIONAL



135882

❏ Remove the bolts (**1**) from the engine wiring channel.

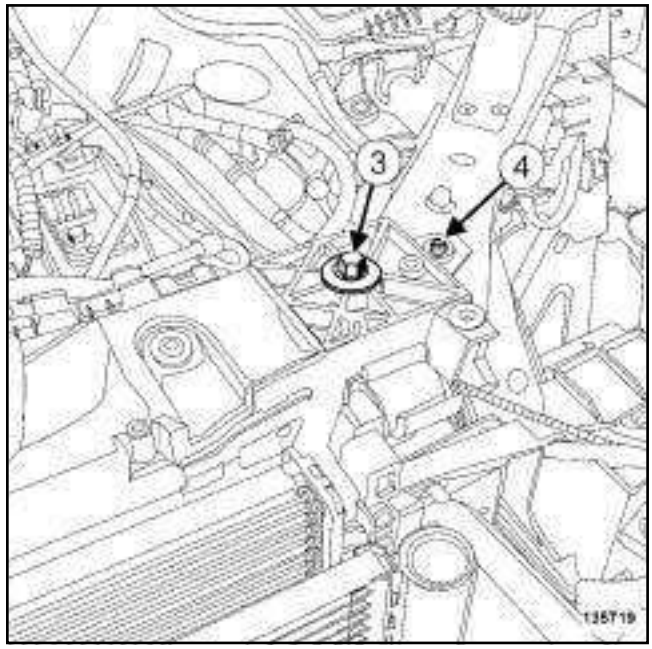
K9K



135883

❏ Unclip the expansion bottle top hose (**2**) from the front end panel.

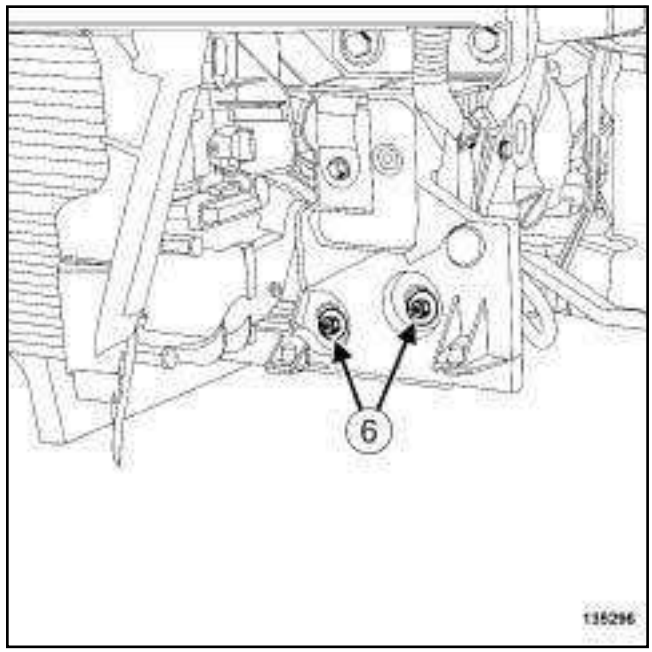
❏ Remove the intercooler air outlet pipe (see **Intercooler air outlet pipe: Removal - Refitting**) (12B, Turbocharging).



135719

❏ Remove:

- the upper bolts (**3**) from the front end panel,
- the front end panel clips (**4**) .

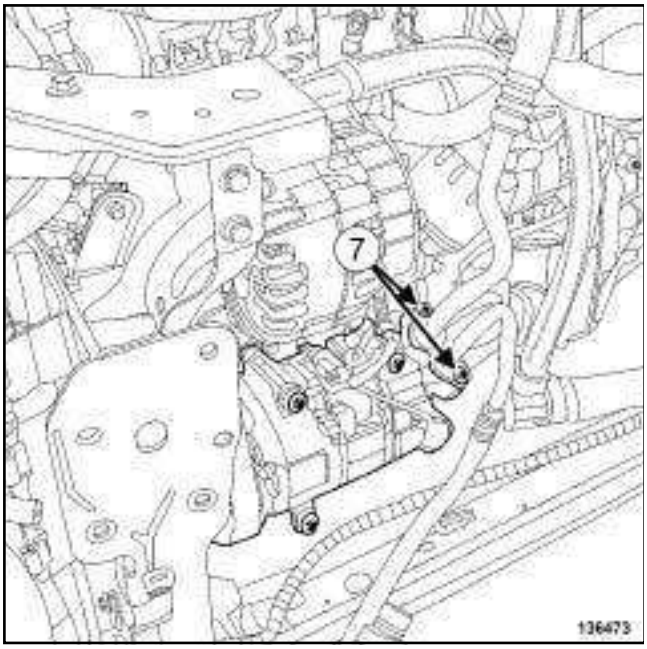


135296

❏ Remove the lower bolts (**6**) from the front end panel.

❏ Tilt the front end panel slightly towards the front of the vehicle.

EXPORT EQUIPMENT LEVEL ADDITIONAL



136473

❏ Remove the connecting pipe bracket bolts (**7**) on the compressor.

WARNING

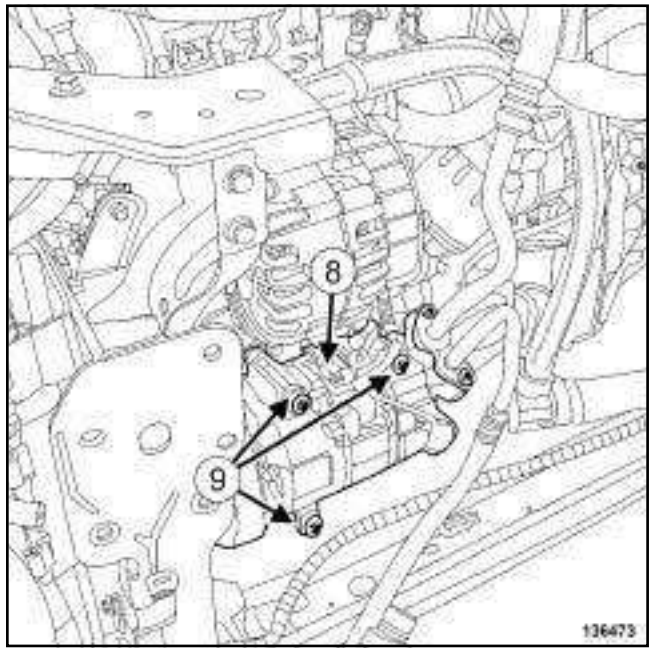
In order to avoid any refrigerant leaks, do not damage (deform, twist, etc.) the pipe.

❏ Uncouple the connecting pipes from the compressor.

❏ Move aside the compressor connecting pipes.

❏ Fit blanking plugs on the openings of the connecting pipes and the compressor.

II - REMOVAL OPERATION



136473

❏ Disconnect the compressor connector (**8**) .

❏ Remove the bolts (**9**) from the compressor.

❏ Move aside the wiring.

❏ Remove the compressor.

REFITTING

I - REFITTING PREPARATION OPERATION

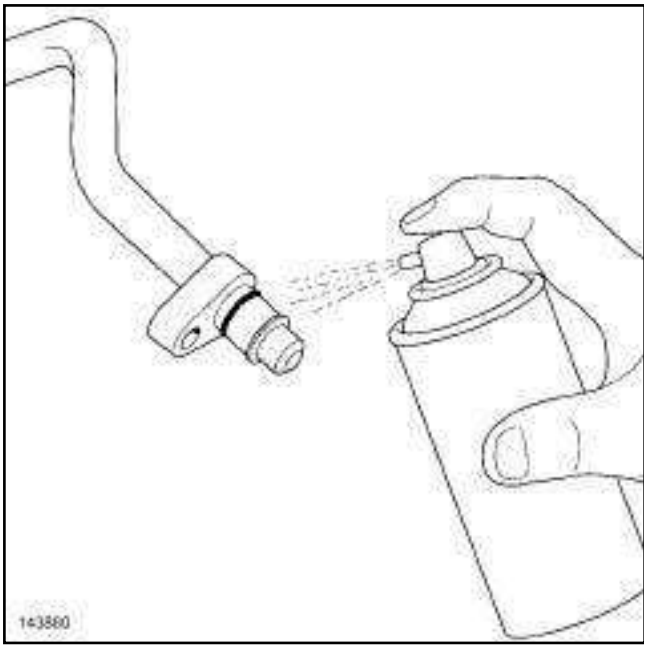
❏

WARNING

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

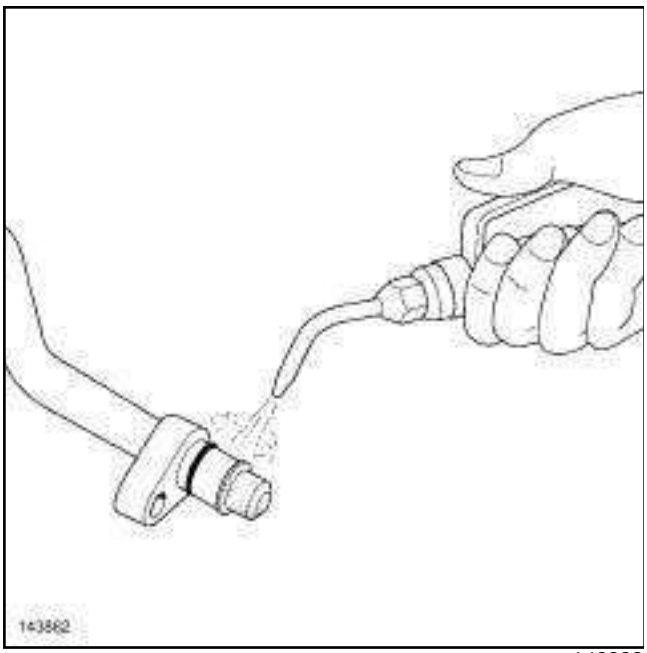
Also, do not remove the components from their packaging until they are to be fitted to the vehicle.

EXPORT EQUIPMENT LEVEL ADDITIONAL



143880

❏ Clean the surface and seal of the pipe using **ENGINE CLEANER** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products).



143882

❏ Use a **compressed air nozzle** to blow on the surface and the seal of the connecting pipe.

❏ Lubricate the surface of the connecting pipe and the seal with air conditioning oil (see **62A**, **Air conditioning**, **Air conditioning: Parts and consumables for the repair**, page **62A-3**) .

❏ Remove the blanking plugs.

II - REFITTING OPERATION

❏ Proceed in the reverse order to removal.

❏

Note:

A summary table gives the quantities of refrigerant in the system according to the engine types (see **62A**, **Air conditioning**, **Air conditioning: Parts and consumables for the repair**, page **62A-3**) .

❏ Fill up the refrigerant circuit using the **refrigerant charging station** (see **Refrigerant circuit: Draining - Filling**) .

❏ In the event of replacement, apply the after repair procedure:

- Switch on the ignition,
- Check that the air conditioning is off,
- Switch the ventilation to speed **2**,
- Put the temperature setting at minimum,
- Select the air recirculation position,
- Start the engine.
- Run the air conditioning in manual mode (in the case of climate control do not press auto),
- Run the engine at idle speed for **3 minutes** with air conditioning,
- Switch off the engine.

❏ Check for leaks (see **Refrigerant circuit: Check**) .

❏ Check that the air conditioning system is operating correctly (see **Air conditioning: Check**) .

❏ Adjust the headlights (see **Headlight: Adjustment**) (80B, Headlights).

EXPORT EQUIPMENT LEVEL ADDITIONAL

Equipment required
refrigerant charging station
compressed air nozzle

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 **Air conditioning: Precautions for the repair**) .

WARNING

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

Note:

Use blanking plugs for the fuel circuits with part numbers **77 01 208 229** or **77 01 476 857** to plug any openings exposed to the open air. They must be clean. Do not use any which have already been used to plug a fuel circuit.

REMOVAL

I - REMOVAL PREPARATION OPERATION

❑

WARNING

Consult the device's operating manual to avoid incorrect use.

❑ Drain the refrigerant circuit using the **refrigerant charging station** (see **Refrigerant circuit: Draining - Filling**) .

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

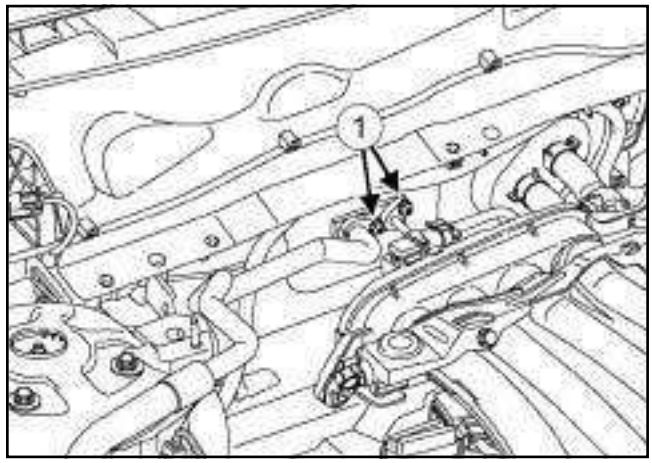
WARNING

To prevent the surrounding components from overheating, do not damage (tear, pierce, bend, etc.) a heat shield.

Any damaged heat shields must be replaced.

❑ Remove the upper clips of the bulkhead heat shield.

❑ Move the bulkhead heat shield to one side.



140168

❑ Remove the bolts (**1**) from the expansion valve connecting pipe bracket.

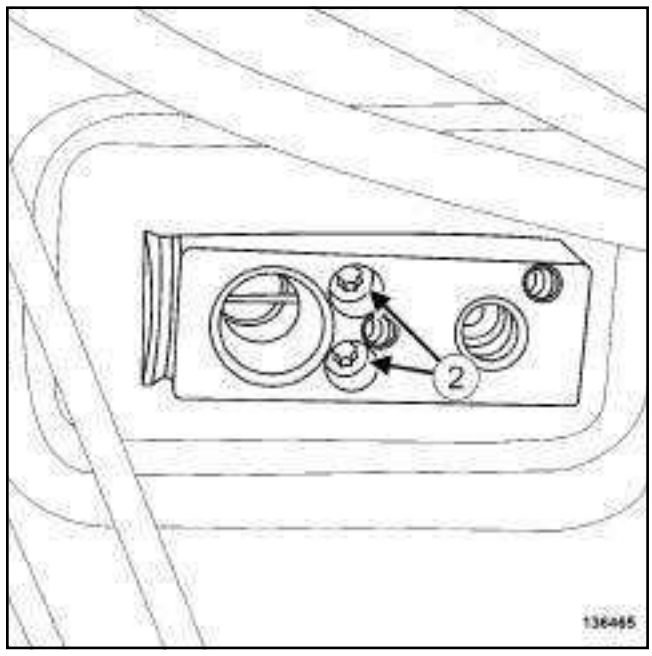
WARNING

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

❑ Uncouple the connecting pipes from the expansion valve.

❑ Fit the blanking plugs on the openings of the connecting pipes and on the expansion valve.

II - REMOVAL OPERATION



136465

❑ Remove:

- the bolts (**2**) from the expansion valve,

EXPORT EQUIPMENT LEVEL ADDITIONAL

- the expansion valve.

REFITTING

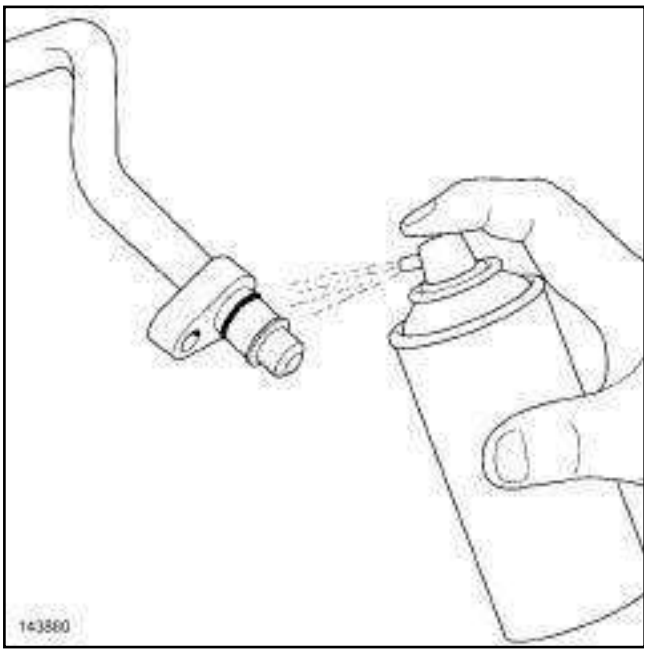
I - REFITTING PREPARATION OPERATION

❑

WARNING

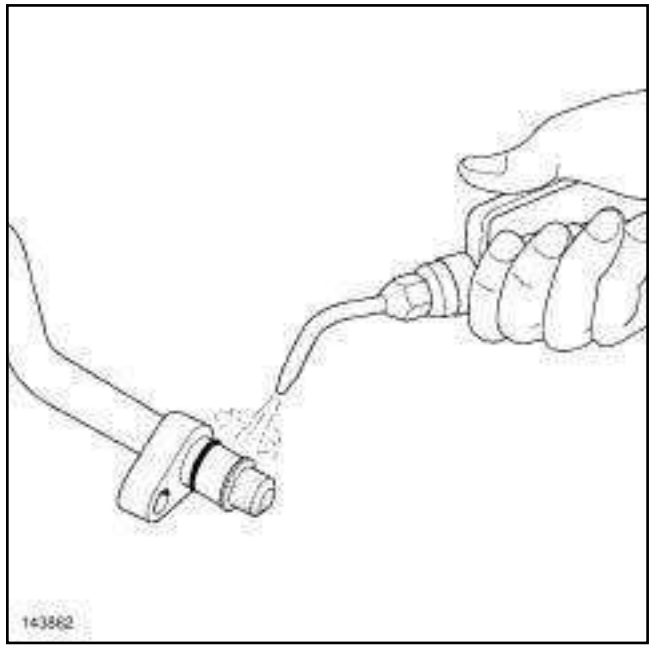
Do not remove the blanking plugs from each component until the last moment.

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



143880

❑ Clean the surface and seal of the pipe using **ENGINE CLEANER** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products).



143882

❑ Use a **compressed air nozzle** to blow on the surface and the seal of the connecting pipe.

❑ Lubricate the surface of the connecting pipe and the seal with air conditioning oil (see **62A**, **Air conditioning**, **Air conditioning: Parts and consumables for the repair**, page **62A-3**) .

❑ Remove the blanking plugs.

II - REFITTING OPERATION

❑ Proceed in the reverse order to removal.

Note:

A summary table gives the quantities of refrigerant in the system according to the engine types (see **62A**, **Air conditioning**, **Air conditioning: Parts and consumables for the repair**, page **62A-3**) .

❑ Perform the following operations:

- refill the refrigerant circuit using the **refrigerant charging station** (see **Refrigerant circuit: Draining - Filling**) ,
- check for leaks (see **Refrigerant circuit: Check**) .

❑ Check that the air conditioning system is operating correctly (see **Air conditioning: Check**) .

LEFT-HAND DRIVE

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 **Air conditioning: Precautions for the repair**) .

CLEANING

- ❑ Remove the cabin filter (see **61A**, **Heating**, **Cabin filter: Removal - Refitting**, page **61A-8**) .
- ❑ Apply the **AIR CONDITIONING CLEANER** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products).
- ❑ Leave the product to work for **15 minutes**.
- ❑ Refit the cabin filter (see **61A**, **Heating**, **Cabin filter: Removal - Refitting**, page **61A-8**) .
- ❑ Activate the low speed motor-driven fan assembly for **5 min**.

RIGHT-HAND DRIVE

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 **Air conditioning: Precautions for the repair**) .

CLEANING

- ❏ Remove the evaporator sensor (see **62A**, **Air conditioning**, **Evaporator sensor: Removal - Refitting**, page **62A-27**) .
- ❏ Apply the **AIR CONDITIONING CLEANER** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products).
- ❏ Leave the product to work for **15 minutes**.
- ❏ Refit the evaporator sensor (see **62A**, **Air conditioning**, **Evaporator sensor: Removal - Refitting**, page **62A-27**) .
- ❏ Activate the low speed motor-driven fan assembly for **5 min**.

Condenser - expansion valve connecting pipe: Removal - Refitting

EXPORT EQUIPMENT LEVEL ADDITIONAL

Equipment required
refrigerant charging station
compressed air nozzle

Tightening torques ▽	
front right-hand side member tie rod bolts	**105 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 **Air conditioning: Precautions for the repair**) .

WARNING

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

Note:

Use blanking plugs for the fuel circuits with part numbers **77 01 208 229** or **77 01 476 857** to plug any openings exposed to the open air. They must be clean. Do not use any which have already been used to plug a fuel circuit.

REMOVAL

I - REMOVAL PREPARATION OPERATION

❏ Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).

WARNING

Consult the device's operating manual to avoid incorrect use.

❏ Drain the refrigerant circuit using the **refrigerant charging station** (see **Refrigerant circuit: Draining - Filling**) .

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

❏ Remove:

- the front wheels (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres),
- the front section of the front wheel arch liners (see **Front wheel arch liner: Removal - Refitting**) (55A, Exterior protection),
- the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection),
- the right-hand headlight (see **Headlight: Removal - Refitting**) (80B, Headlights),
- the front panel support,
- the windscreen washer bottle (see **Windscreen washer reservoir: Removal - Refitting**) (85A, Wiping - Washing),
- the clips from the bulkhead heat shield.

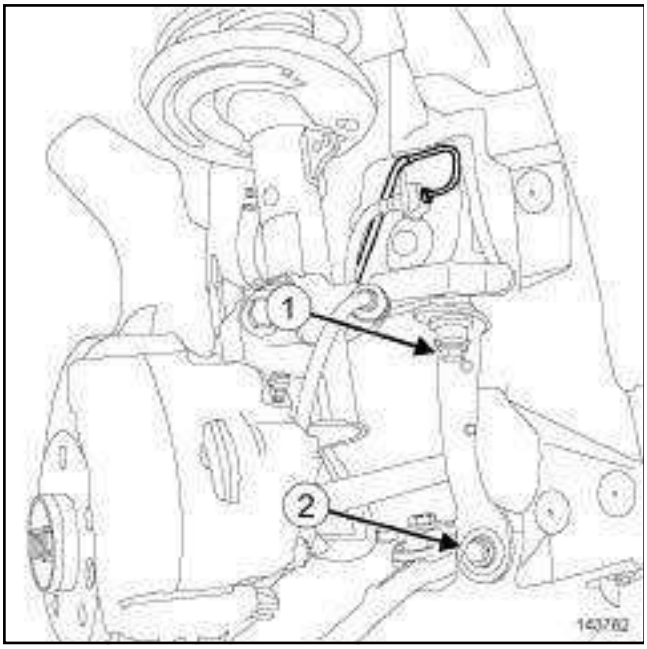
WARNING

To prevent the surrounding components from overheating, do not damage (tear, pierce, bend, etc.) a heat shield.

Any damaged heat shields must be replaced.

❏ Move the bulkhead heat shield to one side.

EXPORT EQUIPMENT LEVEL ADDITIONAL



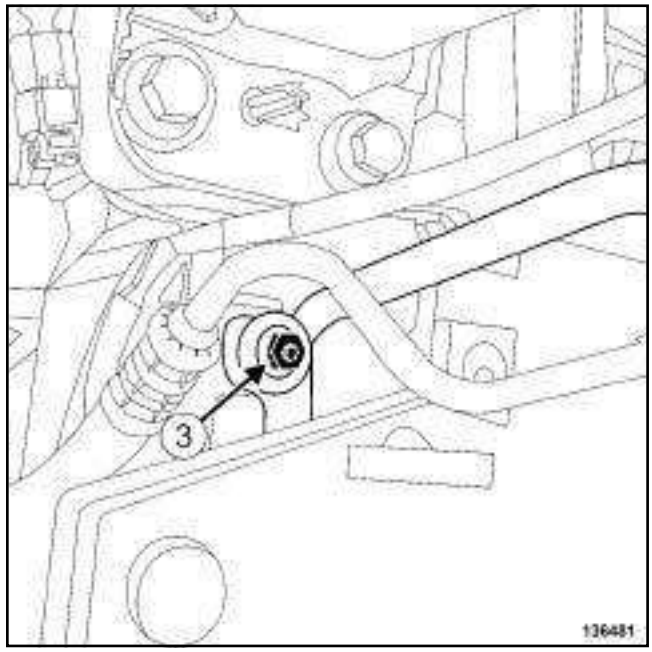
143782

❏ Remove:

- the upper bolt (**1**) of the front right-hand side member tie rod,
- partially the lower bolt (**2**) of the front right-hand side member tie rod.

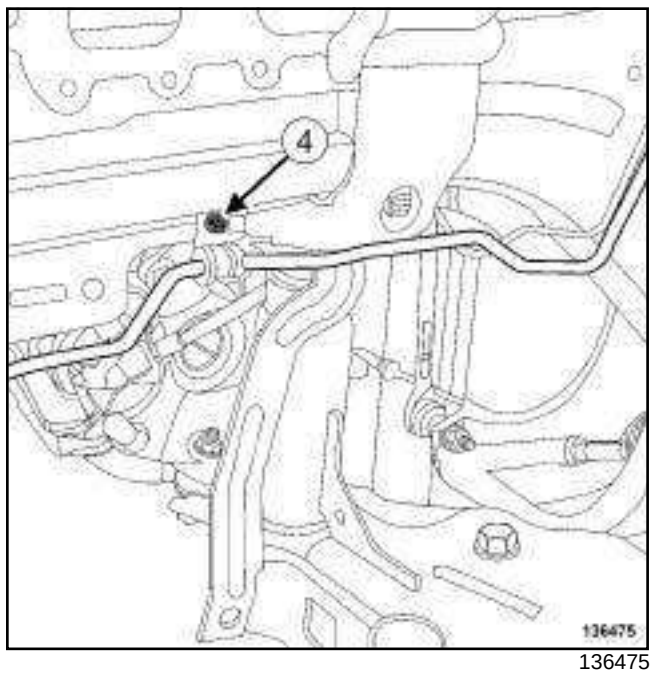
❏ Move the front right-hand side member tie rod towards the wheel arch.

II - REMOVAL OPERATION



136481

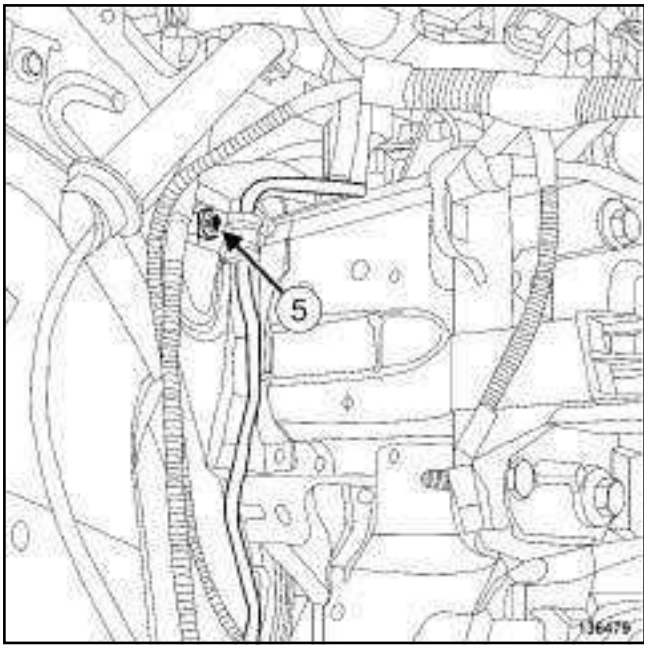
❏ Remove the bolt (**3**) from the support of the "condenser - expansion valve" connecting pipe on the front right-hand panel.



136475

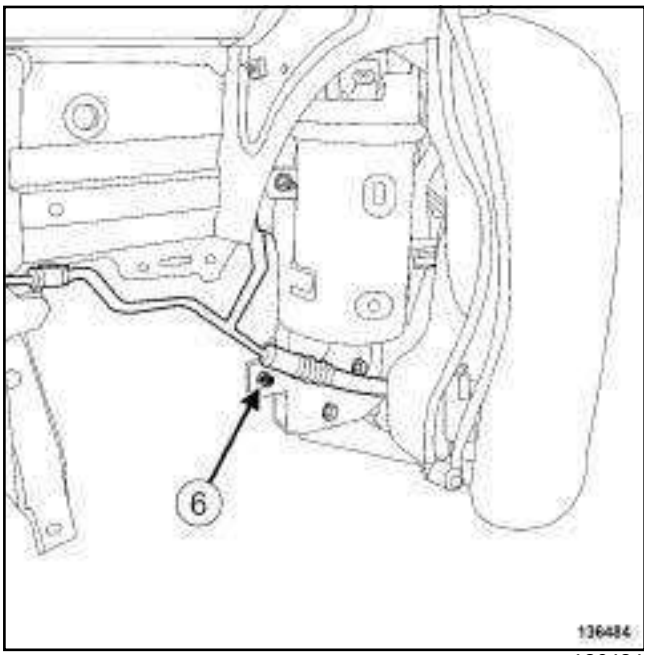
❏ Remove the plastic nut (**4**) from the support of the "condenser - expansion valve" connecting pipe on the front right-hand side member.

EXPORT EQUIPMENT LEVEL ADDITIONAL



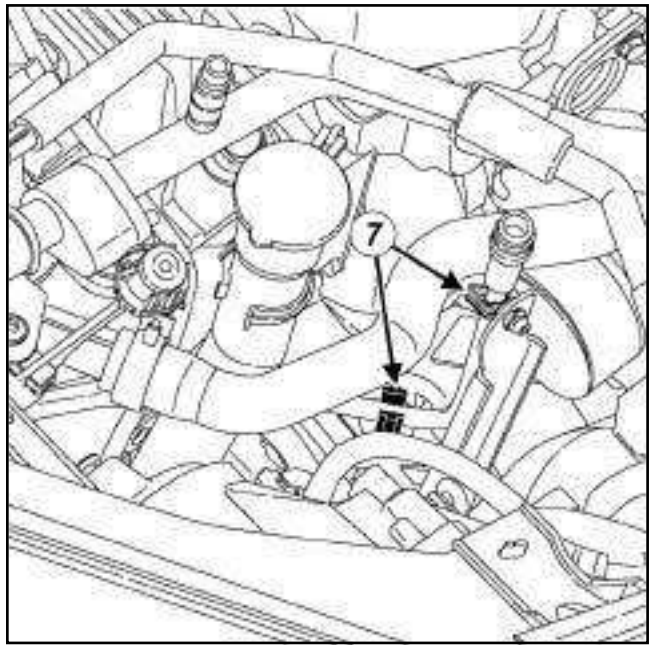
136479

❑ Remove the bolt (**5**) from the "condenser - expansion valve" connecting pipe on the front panel.

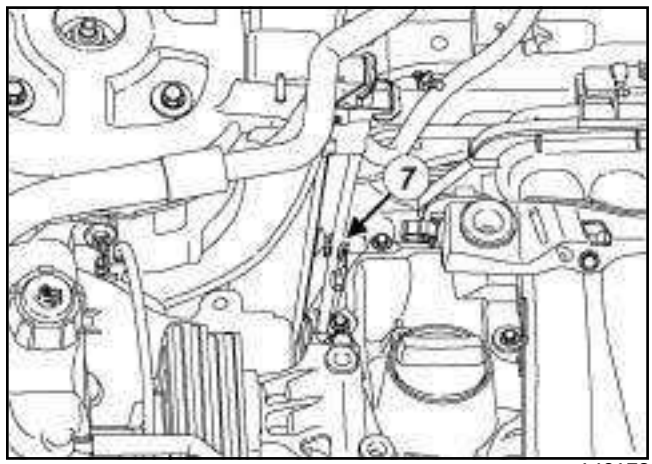


136484

❑ Remove the bolt (**6**) from the support of the "condenser - expansion valve" connecting pipe on the front right-hand side member reinforcement.



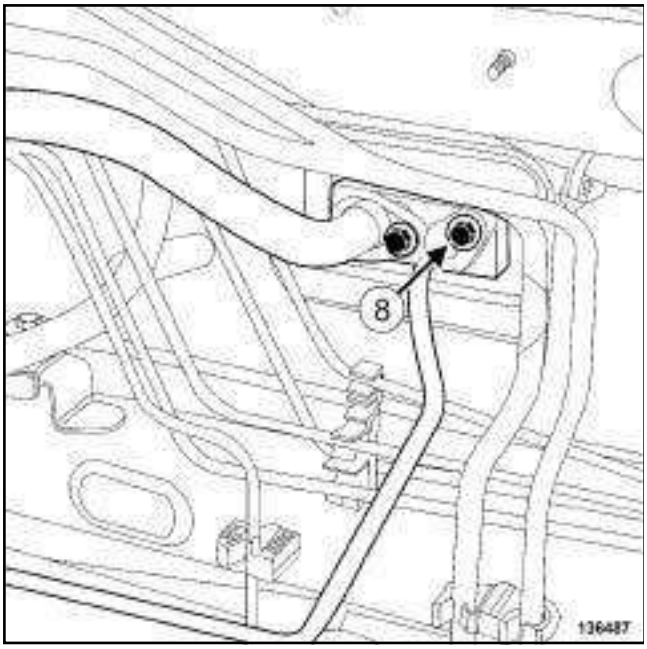
140172



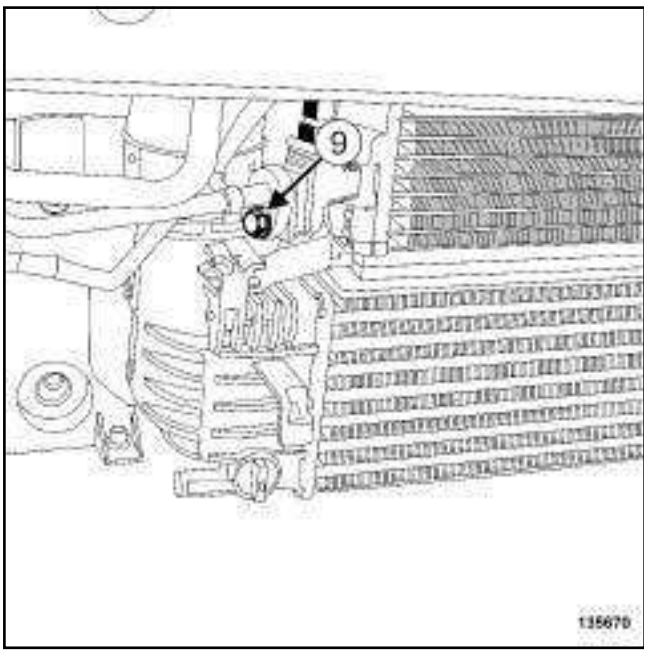
140173

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

EXPORT EQUIPMENT LEVEL ADDITIONAL



136487



135670

❑ Remove:

- the bolt (**8**) from the bracket of the "condenser - expansion valve" connecting pipe on the expansion valve,
- the bolt (**9**) from the bracket of the "condenser - expansion valve" connecting pipe on the condenser.

WARNING

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

❑ Disconnect:

- the "condenser - expansion valve" connecting pipe on the expansion valve,
- the "condenser - expansion valve" connecting pipe on the condenser.

❑ Fit blanking plugs on:

- the condenser,
- the expansion valve,
- the "condenser - expansion valve" connecting pipe.

❑ Remove the "condenser - expansion valve" connecting pipe.

REFITTING

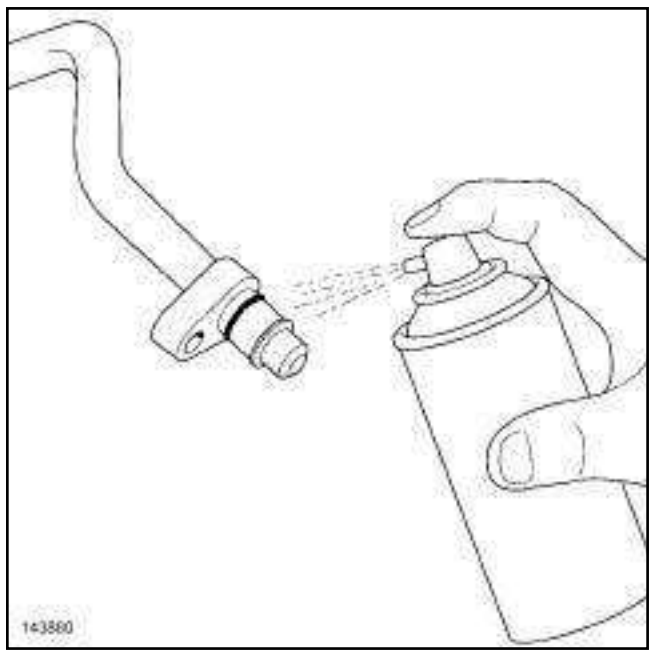
I - REFITTING PREPARATION OPERATION

❑

WARNING

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

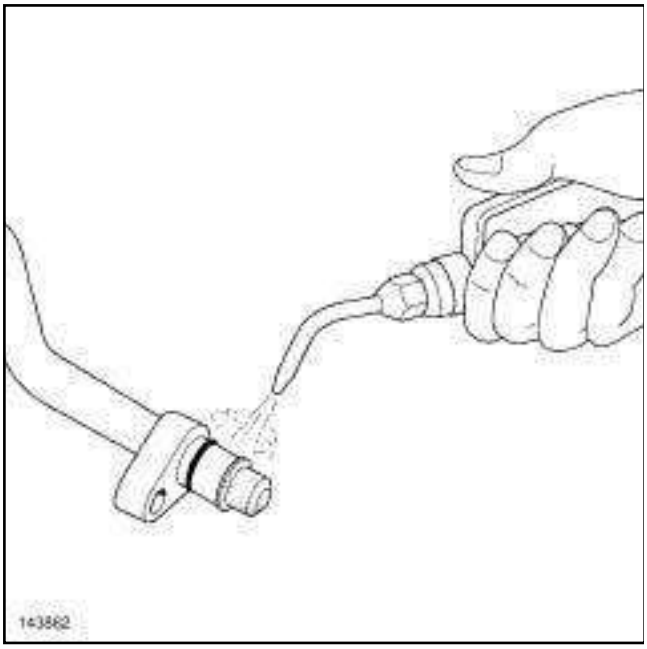
Also, do not remove the components from their packaging until they are to be fitted to the vehicle.



143880

❑ Clean the surface and seal of the pipe using **ENGINE CLEANER** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products).

EXPORT EQUIPMENT LEVEL ADDITIONAL



143882

❏ Use a **compressed air nozzle** to blow on the surface and the seal of the connecting pipe.

❏ Lubricate the surface of the connecting pipe and the seal with air conditioning oil (see **62A**, **Air conditioning**, **Air conditioning: Parts and consumables for the repair**, page **62A-3**) .

❏ Remove the blanking plugs.

II - REFITTING OPERATION

❏ Proceed in the reverse order to removal.

❏ Tighten to torque the **front right-hand side member tie rod bolts (105 N.m)**.

Note:

A summary table gives the quantities of refrigerant in the system according to the engine type (see **62A**, **Air conditioning**, **Air conditioning: Parts and consumables for the repair**, page **62A-3**) .

❏ Perform the following operations:

- refill the refrigerant circuit using the **refrigerant charging station** (see **Refrigerant circuit: Draining - Filling**) ,
- check for leaks (see **Refrigerant circuit: Check**) .

❏ Check that the air conditioning system is operating correctly (see **Air conditioning: Check**) .

❏ Adjust the headlight beams (see **Headlight: Adjustment**) (80B, Headlights).

EXPORT EQUIPMENT LEVEL ADDITIONAL

Equipment required
refrigerant charging station
compressed air nozzle

❑

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 **Air conditioning: Precautions for the repair**) .

WARNING

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

Note:

Use blanking plugs for the fuel circuits with part numbers **77 01 208 229** or **77 01 476 857** to plug any openings exposed to the open air. They must be clean. Do not use any which have already been used to plug a fuel circuit.

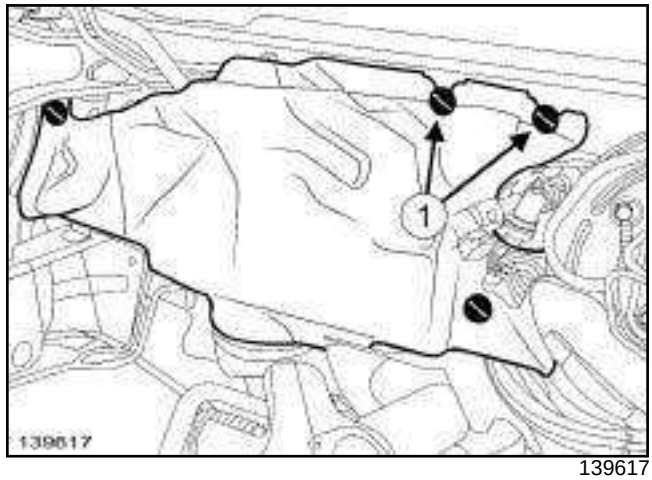
I - REMOVAL PREPARATION OPERATION

❑

WARNING

Consult the device's operating manual to avoid incorrect use.

❑ Drain the refrigerant circuit using the **refrigerant charging station** (see **Refrigerant circuit: Draining - Filling**) .



139617

❑ Remove the clips (**1**) from the bulkhead heat shield.

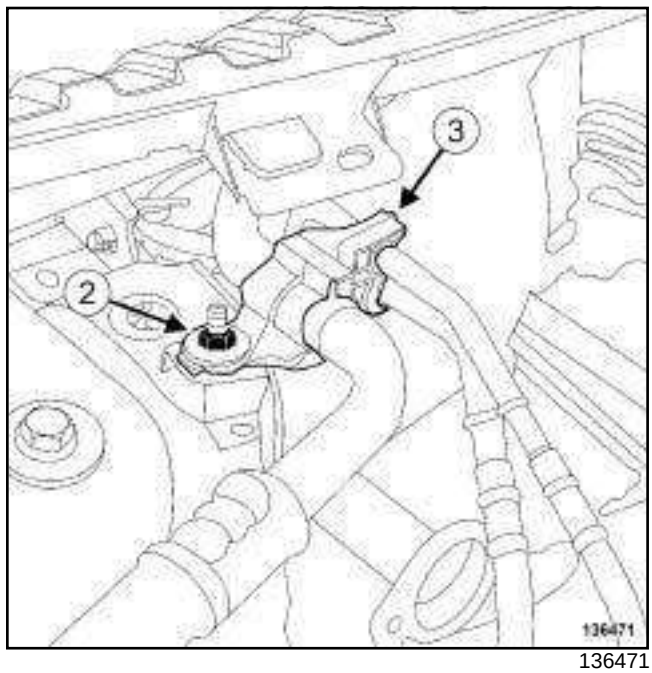
WARNING

To prevent the surrounding components from overheating, do not damage (tear, pierce, bend, etc.) a heat shield.

Any damaged heat shields must be replaced.

❑ Move the bulkhead heat shieldto one side.

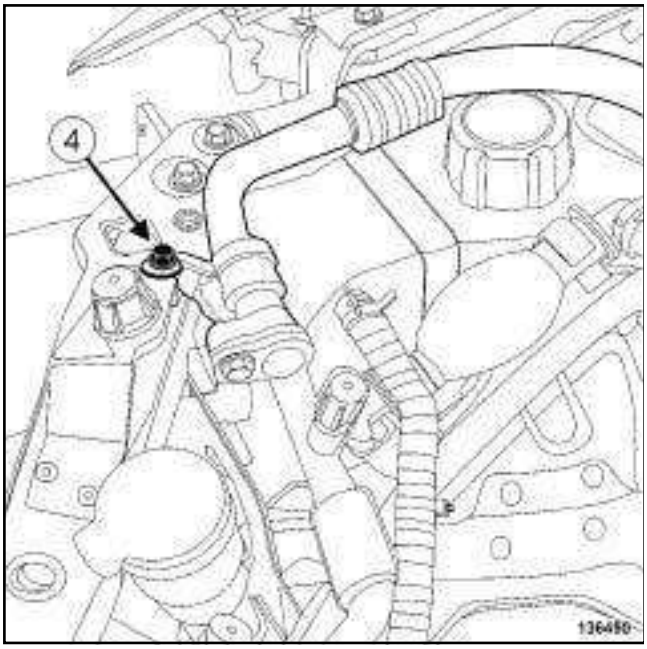
II - REMOVAL OPERATION



136471

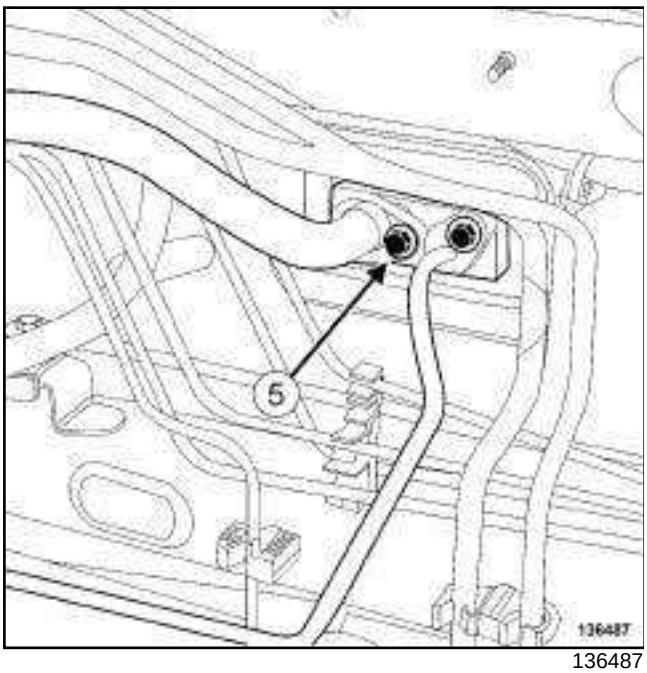
❑ Remove the nut (**2**) from the retaining bracket (**3**) of the "expansion valve - intermediate pipe" connecting pipe.

EXPORT EQUIPMENT LEVEL ADDITIONAL



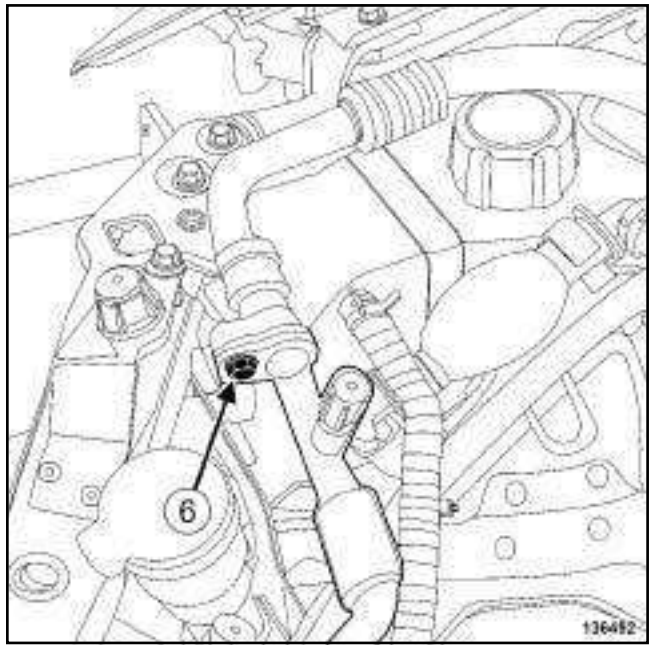
136490

❑ Remove the bolt (**4**) from the retaining bracket of the "expansion valve - intermediate pipe" connecting pipe.



136487

❑ Remove the bolt (**5**) from the bracket of the "expansion valve - intermediate pipe" connecting pipe on the expansion valve.



136492

❑ Remove the bolt (**6**) from the bracket of the "expansion valve - intermediate pipe" connecting pipe on the intermediate connecting pipe.

WARNING

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

❑ Disconnect:

- the "expansion valve- intermediate pipe" connecting pipe from the expansion valve,
- the "expansion valve - intermediate pipe" connecting pipe from the intermediate connecting pipe.

❑ Remove the "expansion valve- intermediate pipe" connecting pipe.

❑ Fit the blanking plugs on the openings of the connecting pipes and on the expansion valve.

REFITTING

I - REFITTING PREPARATION OPERATION

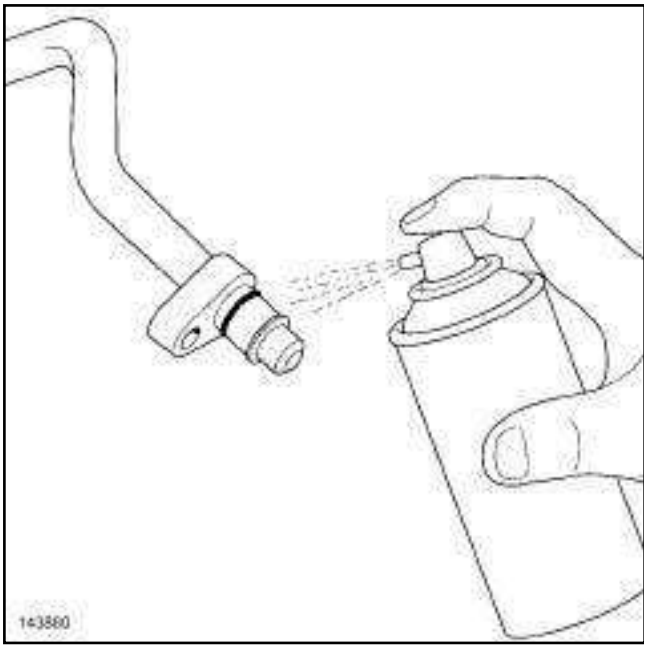
❑

WARNING

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

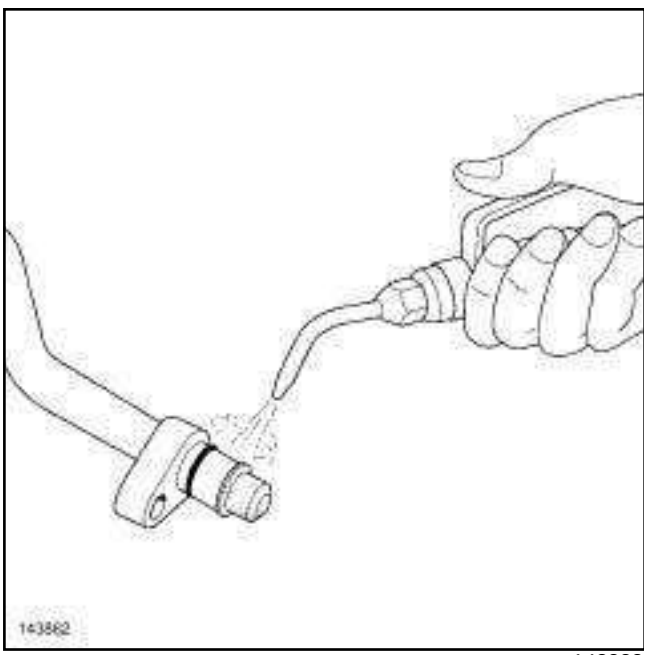
Also, do not remove the components from their packaging until they are to be fitted to the vehicle.

EXPORT EQUIPMENT LEVEL ADDITIONAL



143880

❑ Clean the surface and seal of the pipe using **ENGINE CLEANER** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products).



143882

❑ Use a **compressed air nozzle** to blow on the surface and the seal of the connecting pipe.

❑ Lubricate the surface of the connecting pipe and the seal with air conditioning oil (see **62A**, **Air conditioning**, **Air conditioning: Parts and consumables for the repair**, page **62A-3**) .

❑ Remove the blanking plugs.

II - REFITTING OPERATION

❑ Proceed in the reverse order to removal.

❑

Note:

A summary table gives the quantities of refrigerant in the system according to the engine type (see **62A**, **Air conditioning**, **Air conditioning: Parts and consumables for the repair**, page **62A-3**) .

❑ Fill up the refrigerant circuit using the **refrigerant charging station** (see **Refrigerant circuit: Draining - Filling**) .

❑ Check for leaks (see **Refrigerant circuit: Check**) .

❑ Check that the air conditioning system is operating correctly (see **Air conditioning: Check**) .

Tightening torques ▽	
pressure sensor	**9 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 **Air conditioning: Precautions for the repair**) .

Note:

An automatic shut-off valve isolates the circuit from the outside during removal; do not drain the refrigerant from the circuit.

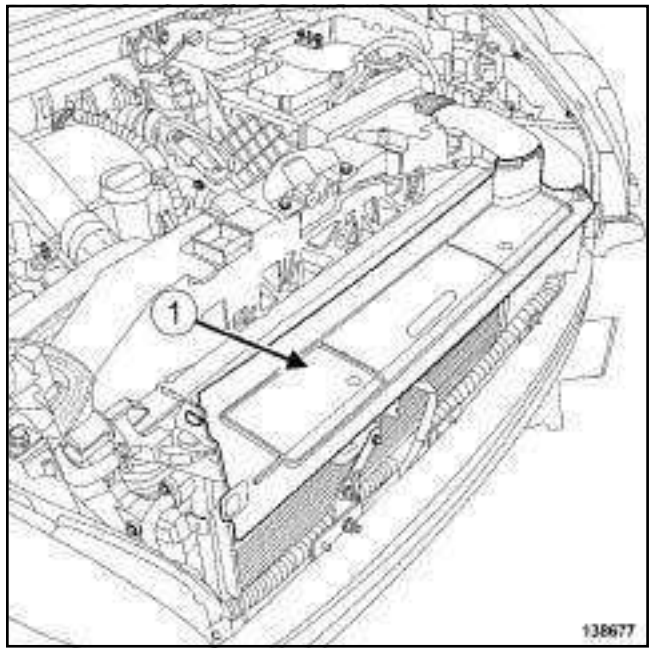
REMOVAL

I - REMOVAL PREPARATION OPERATION

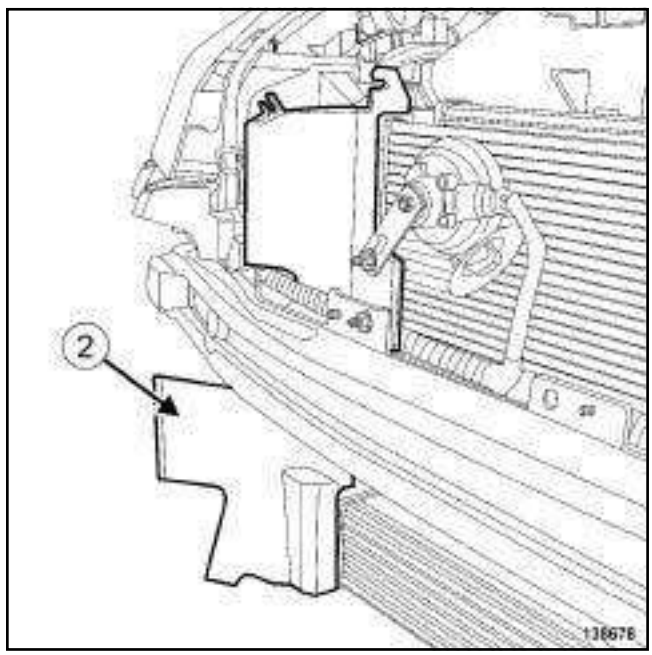
❑ Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).

❑ Remove:

- the front wheels (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres),
- the front section of the front wheel arch liners (see **Front wheel arch liner: Removal - Refitting**) (55A, Exterior protection),
- the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection).



138677

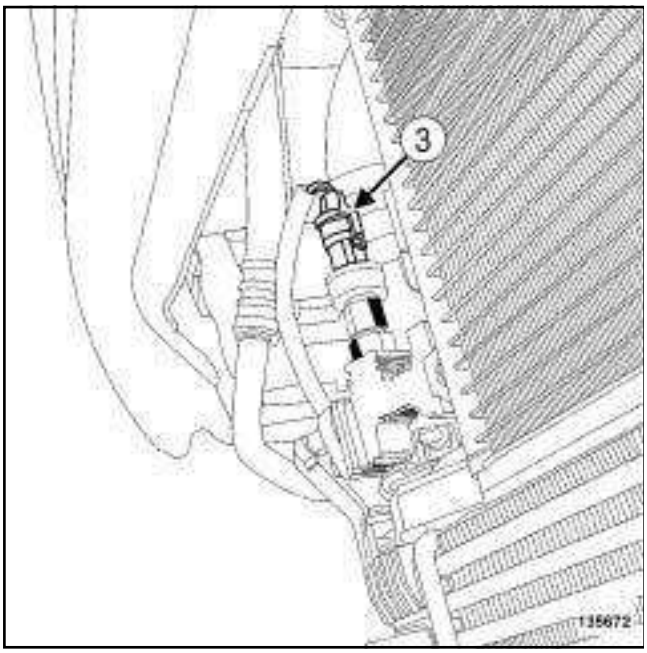


138678

❑ Unclip:

- the central deflector (**1**) ,
- the right-hand side deflector (**2**) .

II - OPERATION FOR REMOVAL OF PART CONCERNED



135672

❏ Disconnect the pressure sensor connector (**3**) .

❏ Remove the pressure sensor from the condenser.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

❏ Refit the pressure sensor.

❏ Torque tighten the **pressure sensor (9 N.m)**.

❏ Connect the pressure sensor connector.

II - FINAL OPERATION

❏ Clip:

- the right-hand side deflector,
- the central deflector.

❏ Refit:

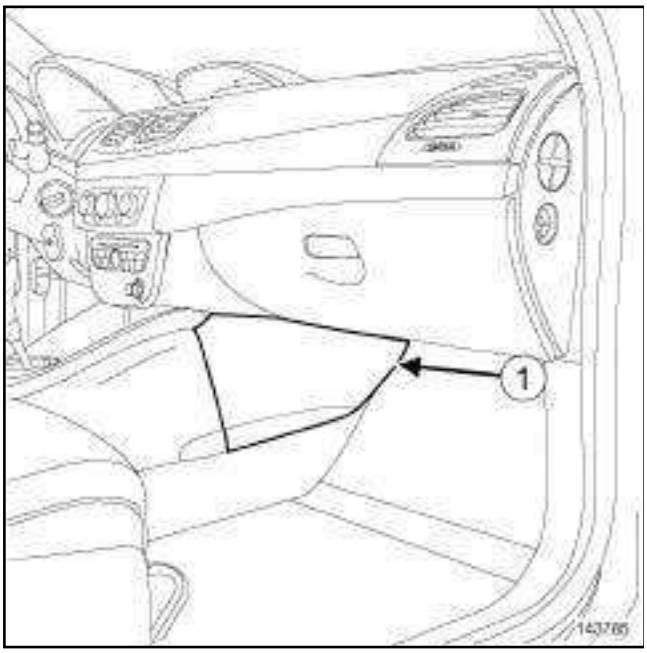
- the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection),
- the front section of the front wheel arch liners (see **Front wheel arch liner: Removal - Refitting**) (55A, Exterior protection),
- the front wheels (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres).

EXPORT EQUIPMENT LEVEL ADDITIONAL

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 **Air conditioning: Precautions for the repair**) .

REMOVAL

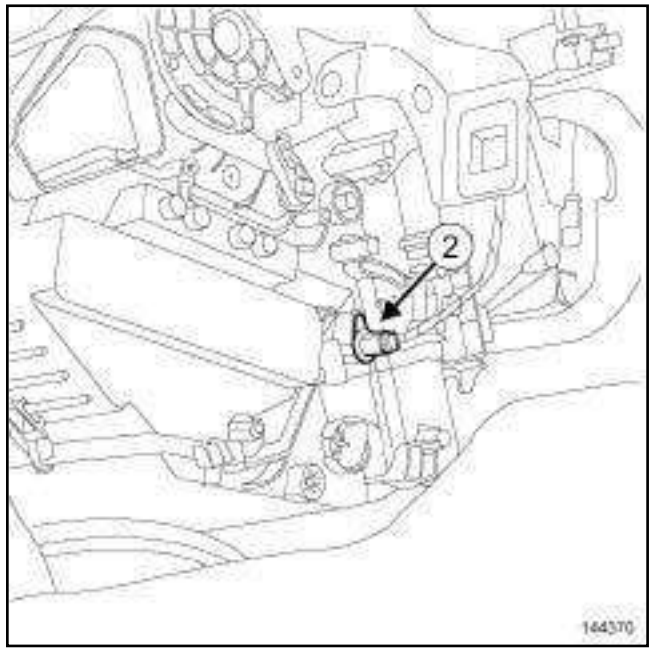
I - REMOVAL PREPARATION OPERATION



143785

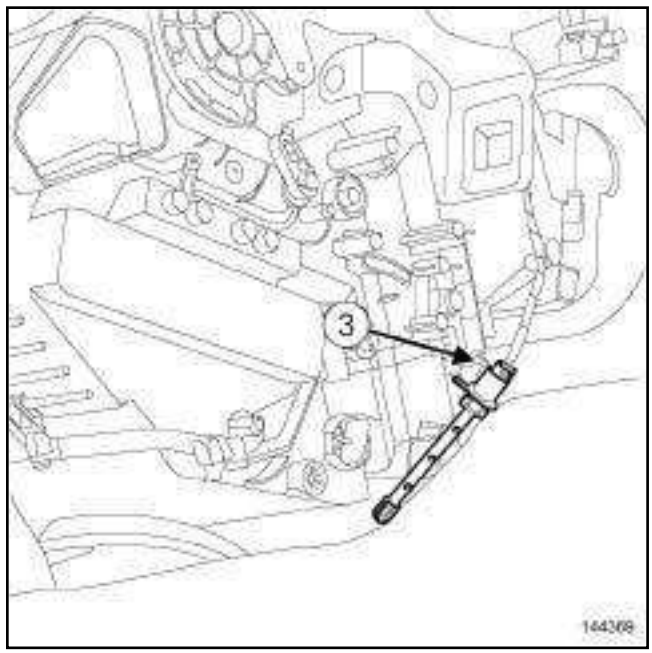
❑ Unclip the centre console side trim (**1**) .

II - REMOVAL OPERATION



144370

❑ Unclip the evaporator sensor (**2**) by turning it a quarter of a turn anti-clockwise.



144369

❑ Take the evaporator sensor out of its housing.

❑ Disconnect the evaporator sensor connector. (**3**)

REFITTING

❑ Proceed in the reverse order to removal.

EXPORT EQUIPMENT LEVEL ADDITIONAL

Equipment required
refrigerant charging station

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: Parts and consumables for the repair**, page **62A-3**) ,
- (see **Basic rules of structural repair: Precautions for the repair**) .

WARNING

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

Note:

Use blanking plugs for the fuel circuits with part numbers **77 01 208 229** or **77 01 476 857** to plug any openings exposed to the open air. They must be clean. Do not use any which have already been used to plug a fuel circuit.

REMOVAL

I - REMOVAL PREPARATION OPERATION

❏ Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).

❏ Remove the front engine cover.

WARNING

Consult the device's operating manual to avoid incorrect use.

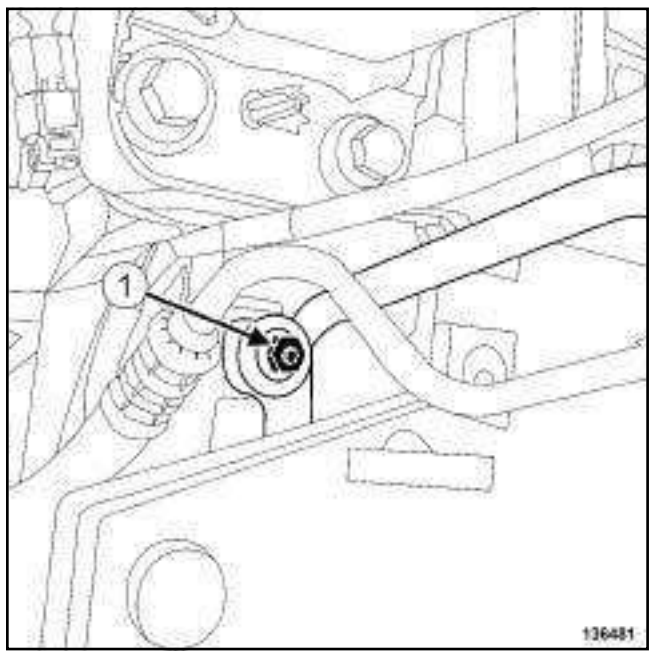
❏ Drain the refrigerant circuit using the **refrigerant charging station** (see **Refrigerant circuit: Draining - Filling**) .

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

❏ Remove:

- the front wheels (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres),
- the front section of the front wheel arch liners (see **Front bumper: Removal - Refitting**) (55A, Exterior protection),
- the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection).

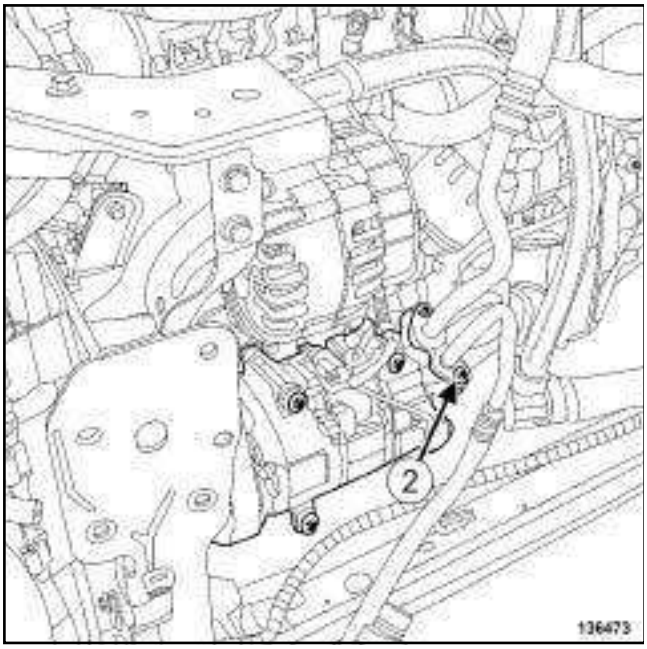
II - REMOVAL OPERATION



136481

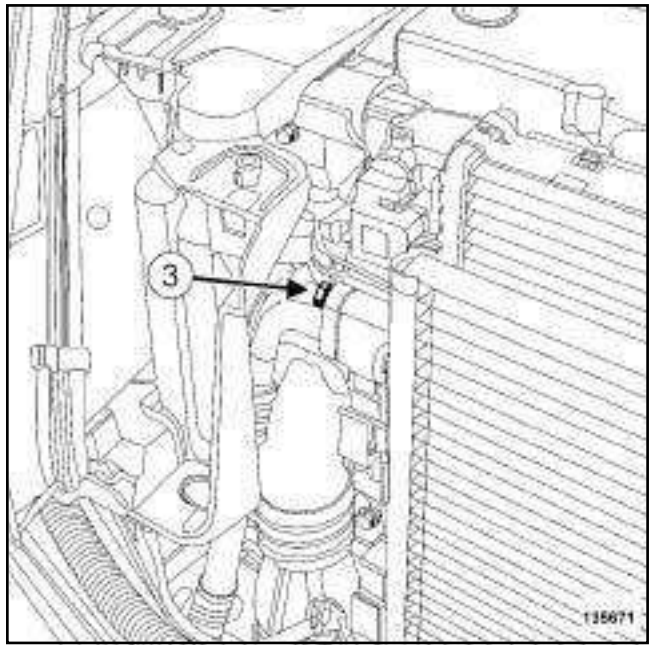
❏ Remove the bolt (**1**) from the support of "compressor - condenser" connecting pipe on the front panel.

EXPORT EQUIPMENT LEVEL ADDITIONAL



136473

❑ Remove the bolt (**2**) from the bracket of the "compressor - condenser" connecting pipe on the compressor.



135671

❑ Remove the bolt (**3**) from the bracket of the "compressor - condenser" connecting pipe on the condenser.

WARNING

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

❑ Disconnect:

- the "compressor - condenser" connecting pipe on the compressor,
- the "compressor - condenser" connecting pipe on the condenser.

❑ Remove the "compressor - condenser" connecting pipe.

❑ Fit blanking plugs on the openings:

- of the condenser,
- of the compressor,
- of the "compressor - condenser" connecting pipe.

EXPORT EQUIPMENT LEVEL ADDITIONAL

REFITTING

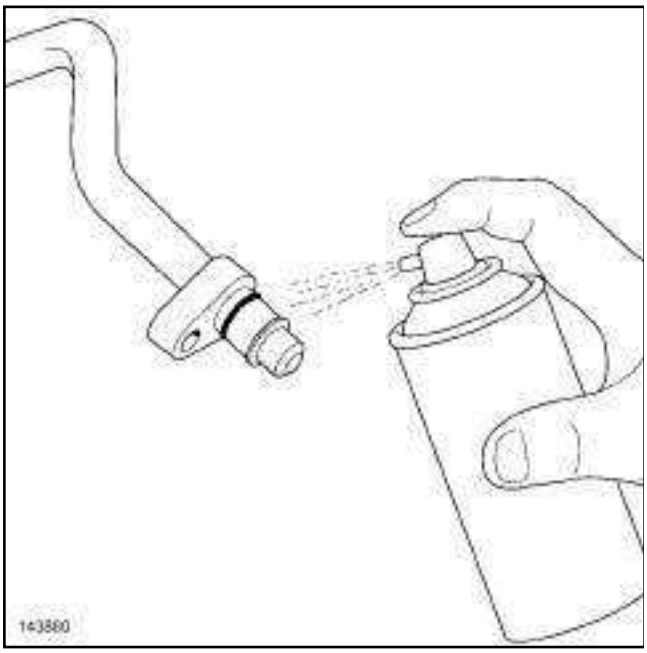
I - REFITTING PREPARATION OPERATION

❑

WARNING

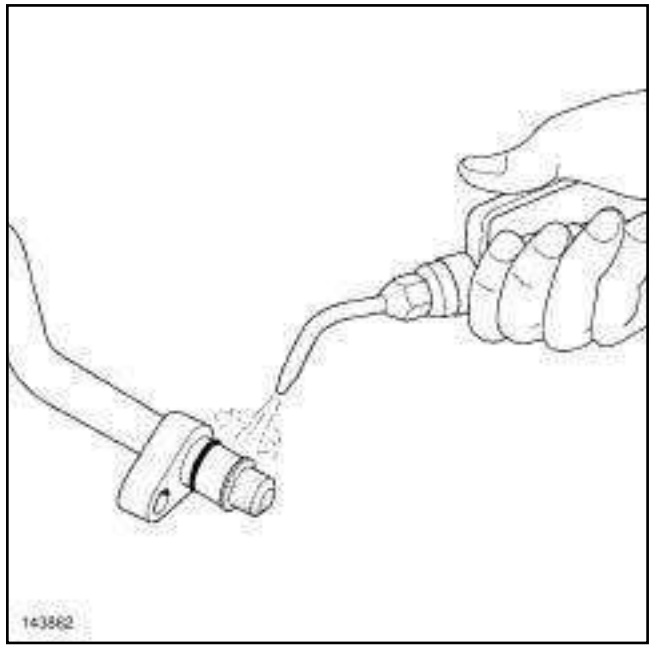
Do not remove the blanking plugs from each component until the last moment.

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



143880

❑ Clean the surface and seal of the pipe using **ENGINE CLEANER** (see **Vehicle: Parts and consumables for the repair**) .



143882

❑ Use a compressed air gun to blow the surface and the seal of the connecting pipe.

❑ Lubricate the surface of the connecting pipe and the seal with air conditioning oil (see **62A**, **Air conditioning**, **Air conditioning: Parts and consumables for the repair**, page **62A-3**) .

❑ Remove the blanking plugs.

II - REFITTING OPERATION

❑ Proceed in the reverse order to removal.

❑

Note:

A summary table gives the quantities of refrigerant in the system according to the engine types (see **62A**, **Air conditioning**, **Air conditioning: Parts and consumables for the repair**, page **62A-3**) .

❑ Perform the following operations:

- fill the refrigerant circuit with refrigerant (see **Refrigerant circuit: Draining - Filling**) ,
- a leak test (see **Refrigerant circuit: Check**) .

❑ Check that the air conditioning system is operating correctly (see **Air conditioning: Check**) .

EXPORT EQUIPMENT LEVEL ADDITIONAL

Equipment required
refrigerant charging station
compressed air nozzle

❑

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 **Air conditioning: Precautions for the repair**) .

WARNING

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

Note:

Use blanking plugs for the fuel circuits with part numbers **77 01 208 229** or **77 01 476 857** to plug any openings exposed to the open air. They must be clean. Do not use any which have already been used to plug a fuel circuit.

I - REMOVAL PREPARATION OPERATION

❑

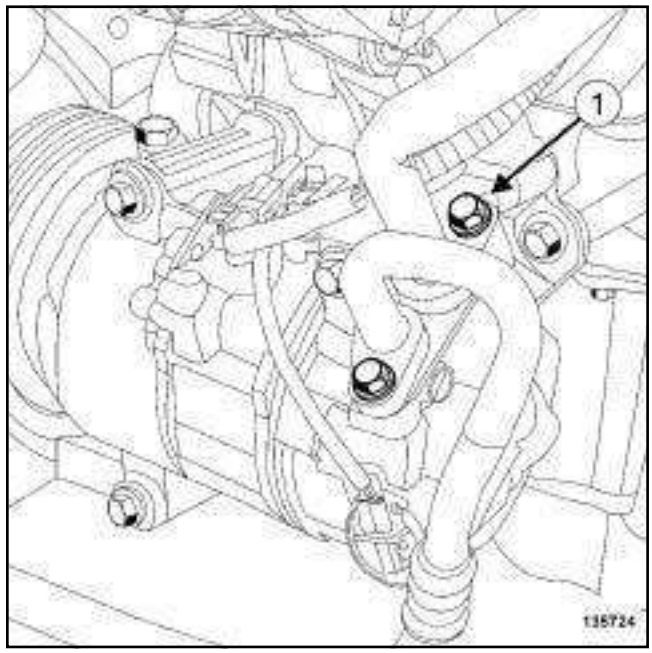
WARNING

Consult the device's operating manual to avoid incorrect use.

❑ Drain the refrigerant circuit using the **refrigerant charging station** (see **Refrigerant circuit: Draining - Filling**) .

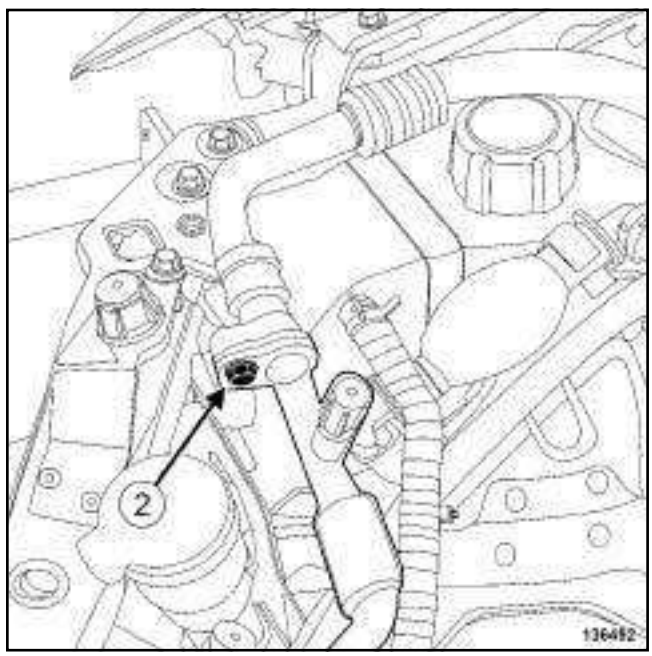
❑ Disconnect the battery (see **Battery: Removal - Refitting**) .

II - REMOVAL OPERATION



135724

❑ Remove the bolt (**1**) from the "intermediate pipe - compressor" connecting pipe bracket on the compressor.



136492

❑ Remove the bolt (**2**) from the "intermediate pipe - compressor" connecting pipe bracket on the intermediate pipe.

WARNING

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

EXPORT EQUIPMENT LEVEL ADDITIONAL

❑ Disconnect:

- the "intermediate pipe - compressor" connecting pipe from the compressor,
- the "intermediate pipe - compressor" connecting pipe from the intermediate pipe.

❑ Remove the "intermediate pipe - compressor" connecting pipe.

❑ Fit blanking plugs on the connecting pipe and on the compressor.

REFITTING

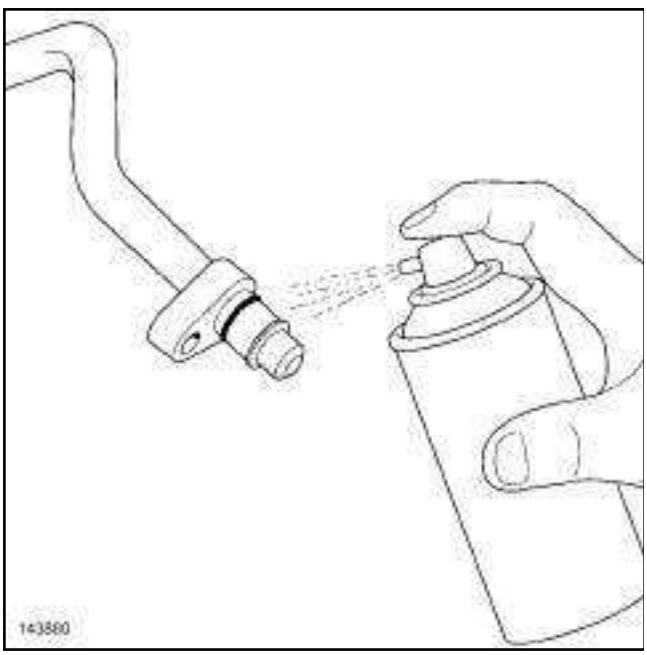
I - REFITTING PREPARATION OPERATION

❑

WARNING

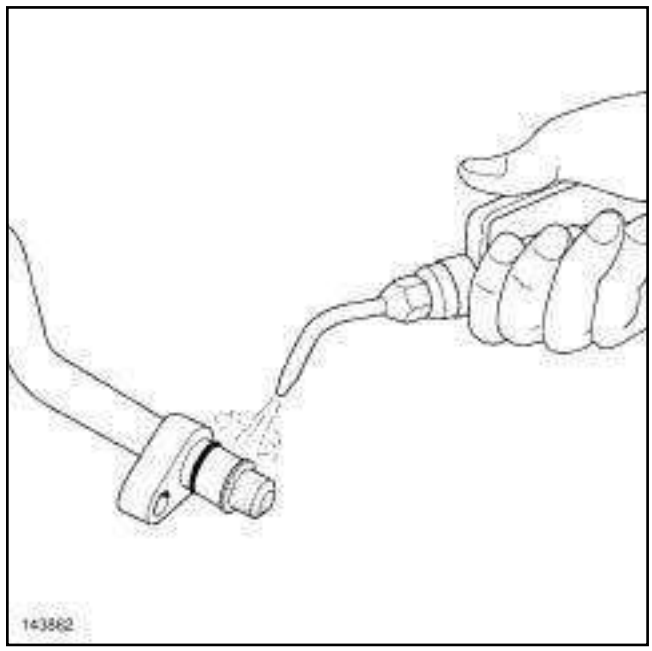
Do not remove the blanking plugs from each component until the last moment.

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



143880

❑ Clean the surface and seal of the pipe using **ENGINE CLEANER** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products).



143882

❑ Use a **compressed air nozzle** to blow on the surface and the seal of the connecting pipe.

❑ Lubricate the surface of the connecting pipe and the seal with air conditioning oil (see **62A**, **Air conditioning**, **Air conditioning: Parts and consumables for the repair**, page **62A-3**) .

❑ Remove the blanking plugs.

II - REFITTING OPERATION

❑ Proceed in the reverse order to removal.

❑

Note:

A summary table gives the quantities of refrigerant in the system according to the engine type (see **62A**, **Air conditioning**, **Air conditioning: Parts and consumables for the repair**, page **62A-3**) .

❑ Connect the battery (see **Battery: Removal - Refitting**) .

❑ Fill up the refrigerant circuit using the **refrigerant charging station** (see **Refrigerant circuit: Draining - Filling**) .

❑ Check for leaks (see **Refrigerant circuit: Check**) .

❑ Check that the air conditioning system is operating correctly (see **Air conditioning: Check**) .