

RENAULT

6 Air conditioning

61A HEATING

62A AIR CONDITIONING

X44

NOVEMBER 2009

EDITION ANGLAISE

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

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

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TWINGO - Chapitre 6

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62A AIR CONDITIONING

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Heating: List and location of components

I - LIST OF COMPONENTS

The air conditioning system consists of:

- the cabin filter,
- the distribution unit,
- the heater matrix,
- the blower unit,
- the passenger compartment blower unit control unit,
- the front left-hand side air distribution duct,
- the front right-hand side air distribution duct,
- the front centre air distribution duct,
- the front left-hand footwell air distribution duct,
- the front right-hand footwell air distribution duct,
- the heating resistor.

AIR CONDITIONING or STANDARD HEATING

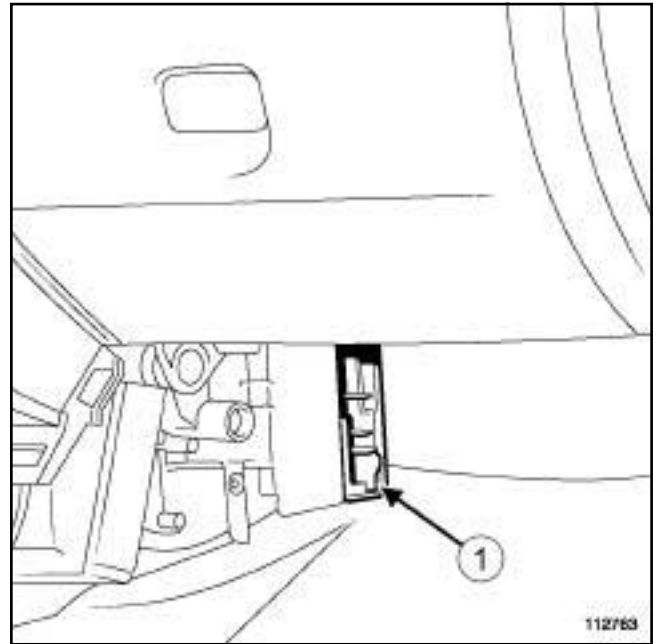
- the recirculation control cable,
- the air distribution cable,
- the air mixing cable.

CLIMATE CONTROL

- recirculation motor,
- distribution motor,
- air mixing motor.

II - LOCATION OF COMPONENTS

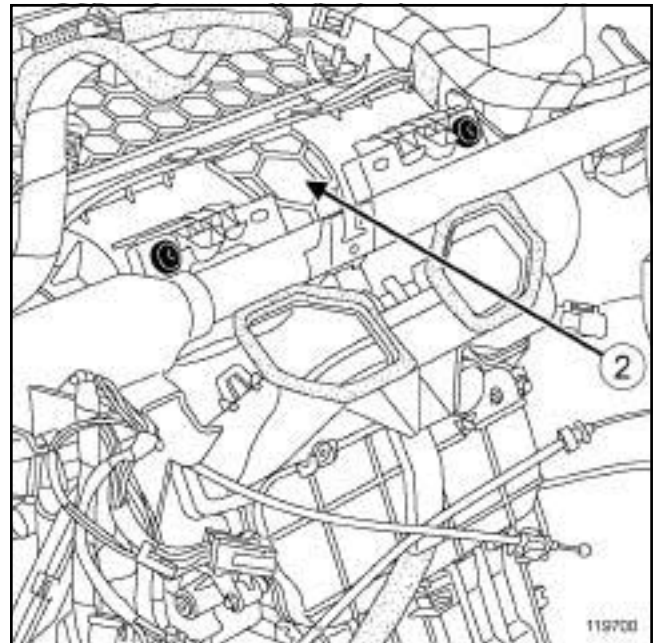
Cabin filter (1)



112763

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Distribution unit (2)

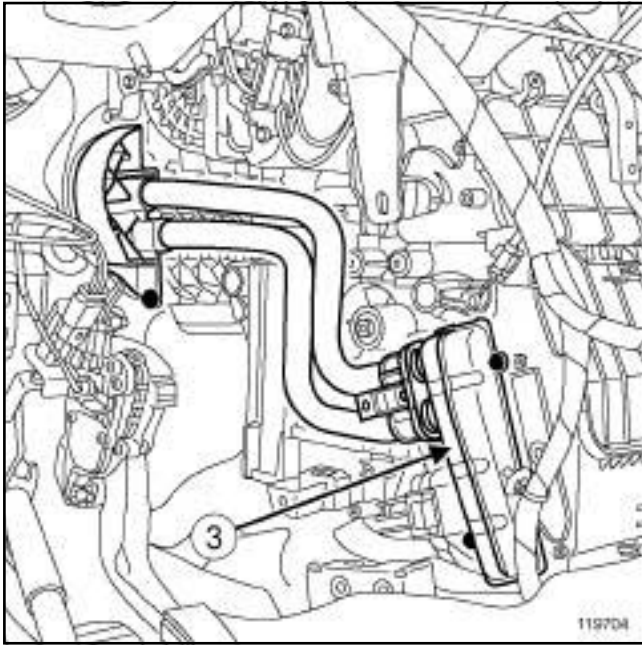


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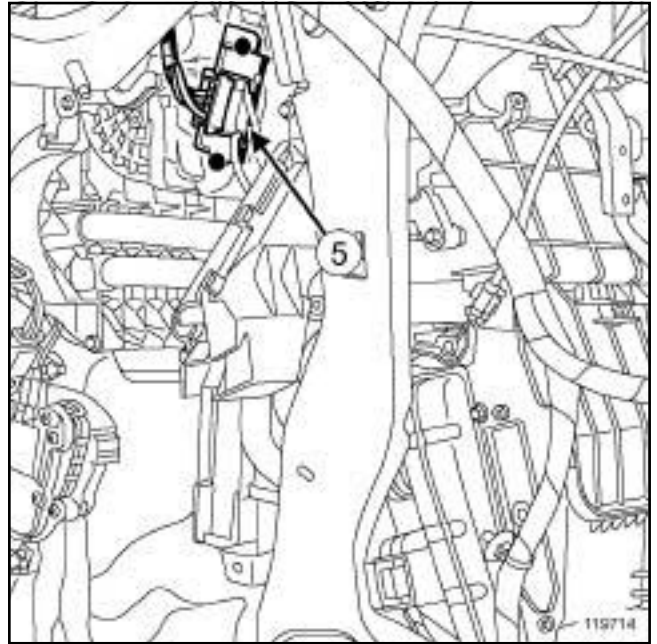
Heating: List and location of components

Heater matrix (3)



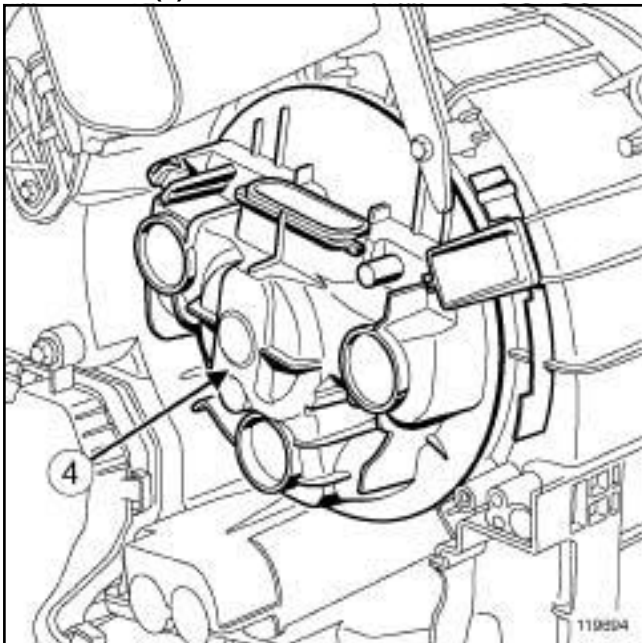
119704

Passenger compartment blower unit control unit (5)



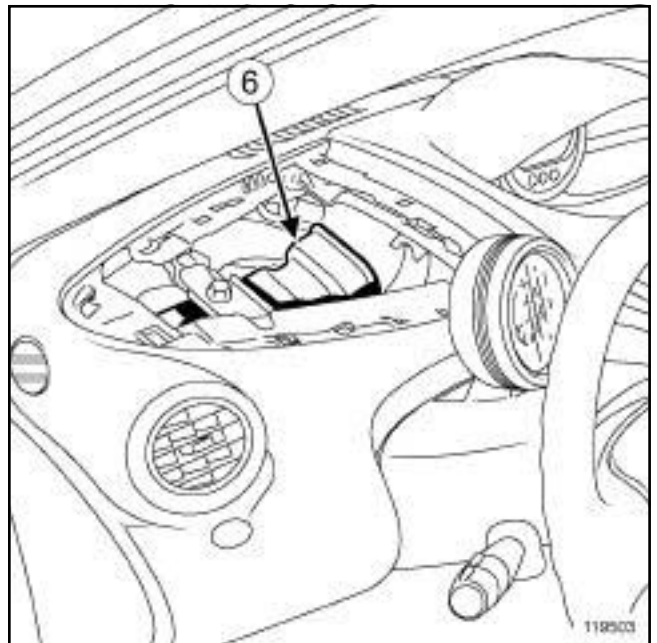
119714

Blower unit (4)



119694

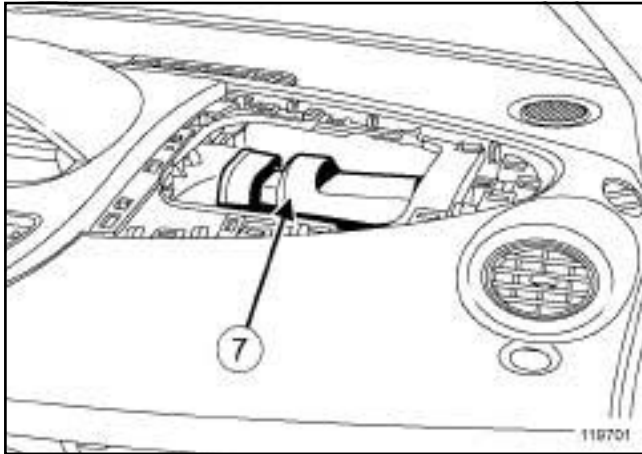
Front left-hand side air distribution duct (6)



119503

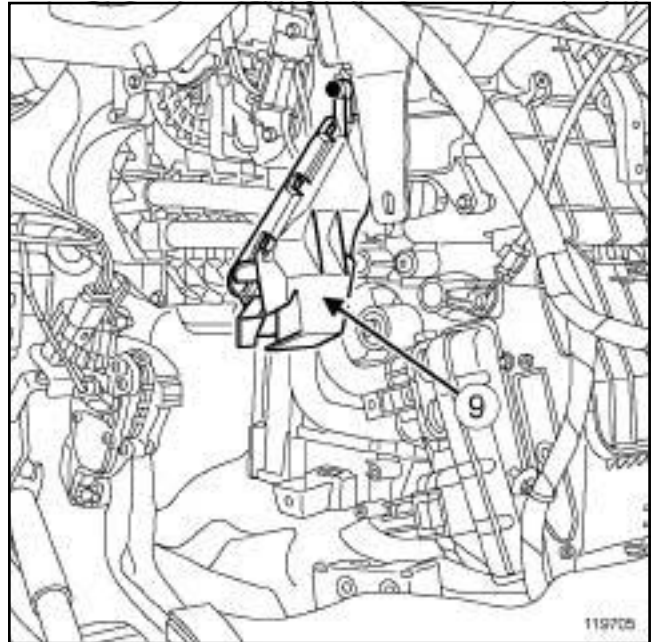
Heating: List and location of components

Front right-hand side air distribution duct (7)



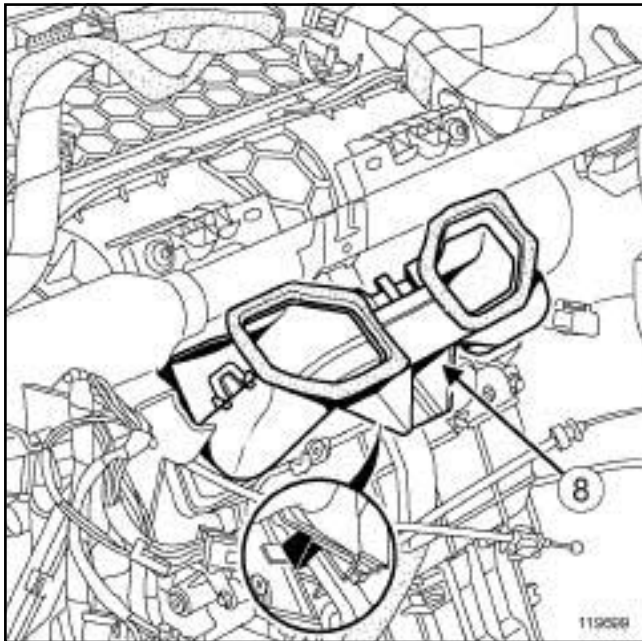
119701

Front left-hand footwell air distribution duct (9)



119705

Front centre air distribution duct (8)



119699

Front right-hand footwell air distribution duct (10)

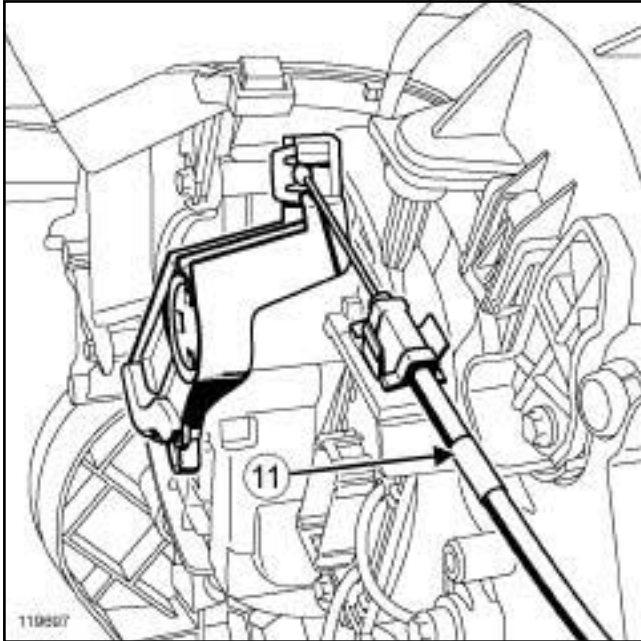


119703

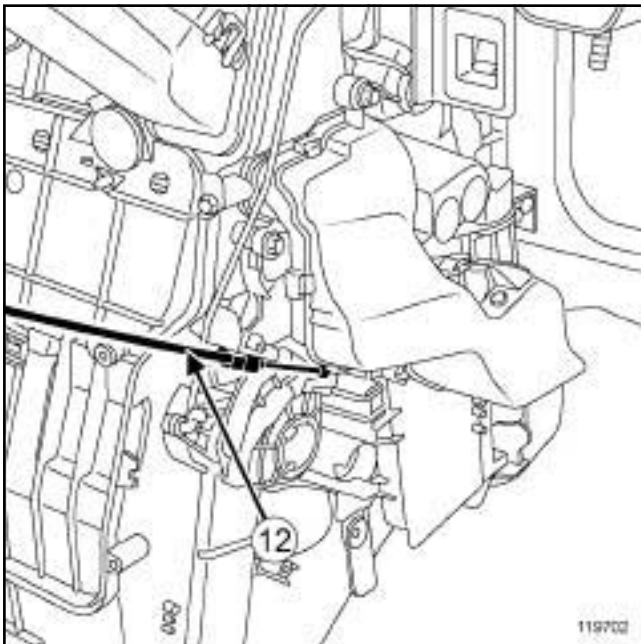
Heating: List and location of components

AIR CONDITIONING or STANDARD HEATING

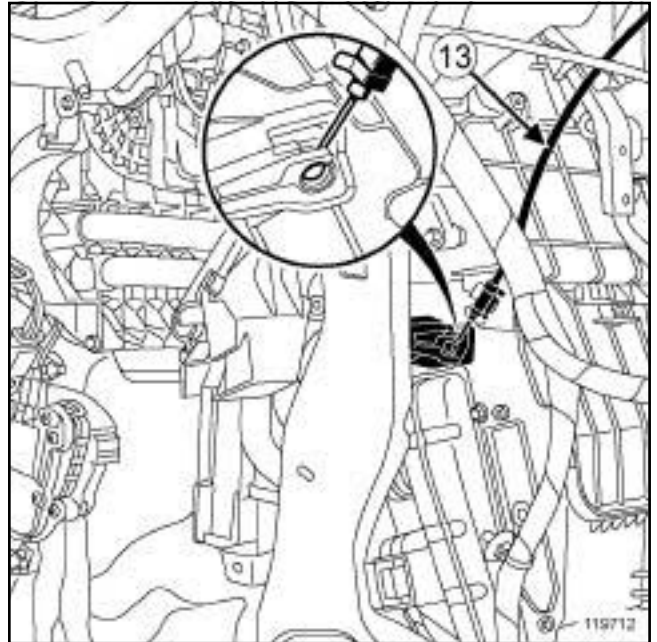
Recirculation control cable (11)



Air distribution cable (12)



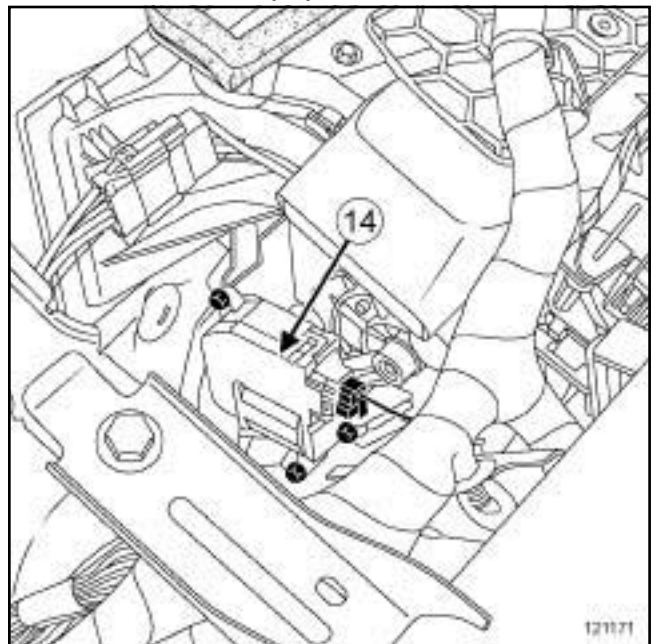
Air mixing cable (13)



119712

CLIMATE CONTROL

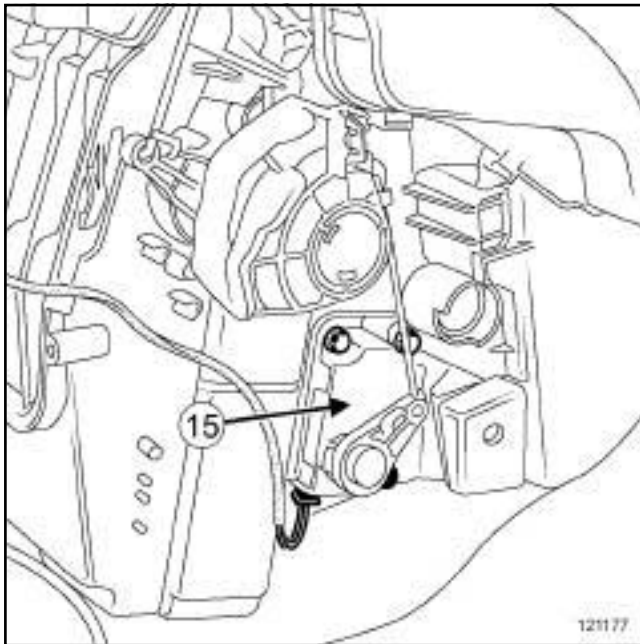
Recirculation motor (14)



121171

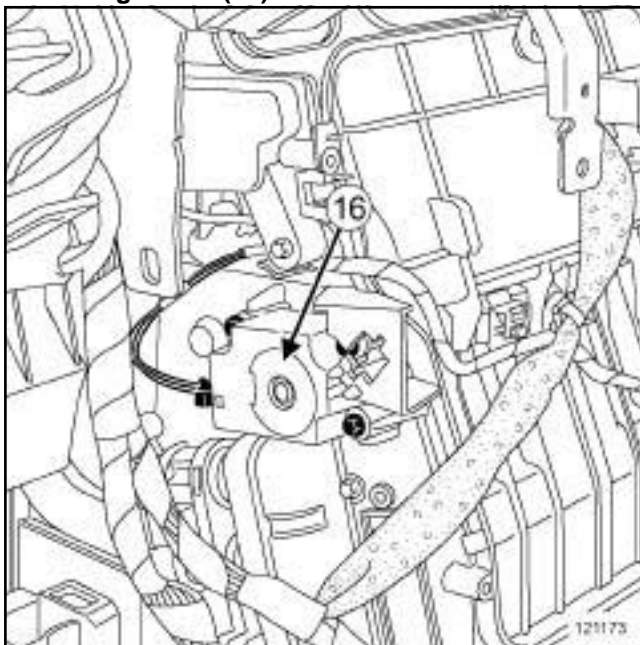
Heating: List and location of components

Distribution motor (15)



121177
121177

Air mixing motor (16)



121173
121173

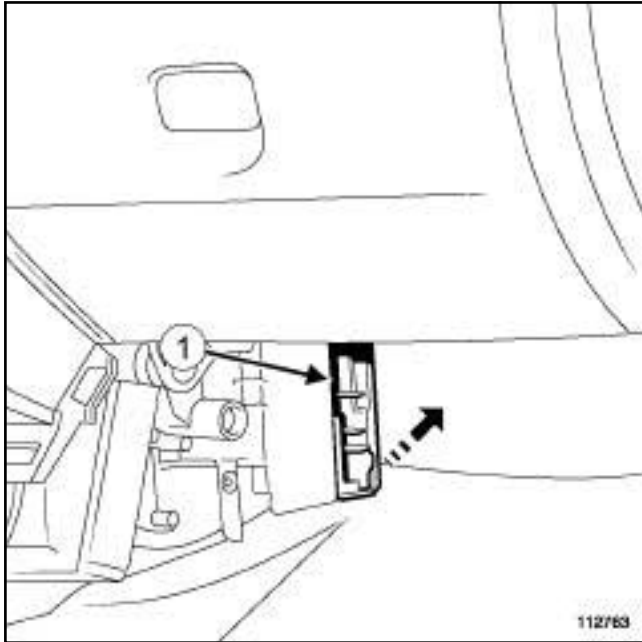
HEATING

Cabin filter: Removal - Refitting

61A

REMOVAL

OPERATION FOR REMOVAL OF PART CONCERNED



112763

- Unclip the passenger compartment filter (1) .

Note:

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

Remove the cabin filter with care so as to prevent foreign bodies getting into the evaporator.

- Remove the cabin filter.

REFITTING

I - REFITTING PREPARATIONS OPERATION

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

II - REFITTING OPERATION FOR PART CONCERNED

- Refit the cabin filter.
- Clip on the cabin filter.

Front side air distribution duct: Removal - Refitting

Equipment required

Diagnostic tool

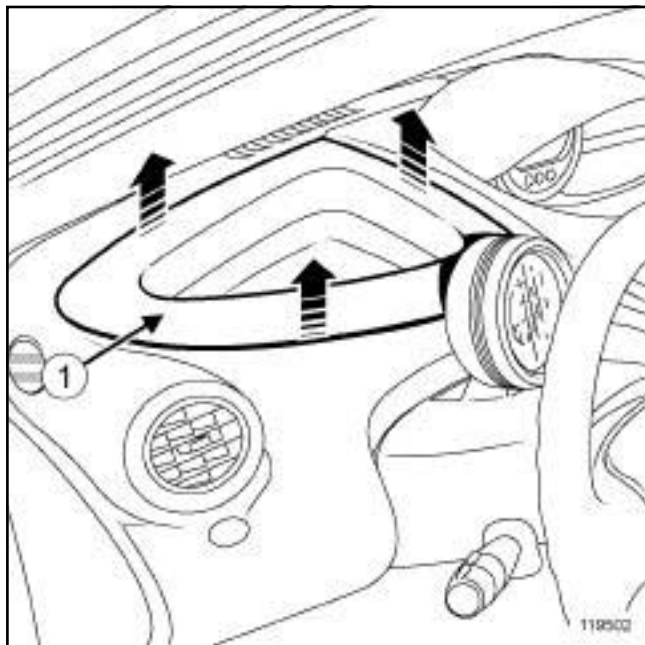
REMOVAL

I - REMOVAL PREPARATION OPERATION

1 - Front left-hand side air distribution duct:

- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413 Fault finding, 88C, Airbags and pretensioners).
- Disconnect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).
- Remove the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners).

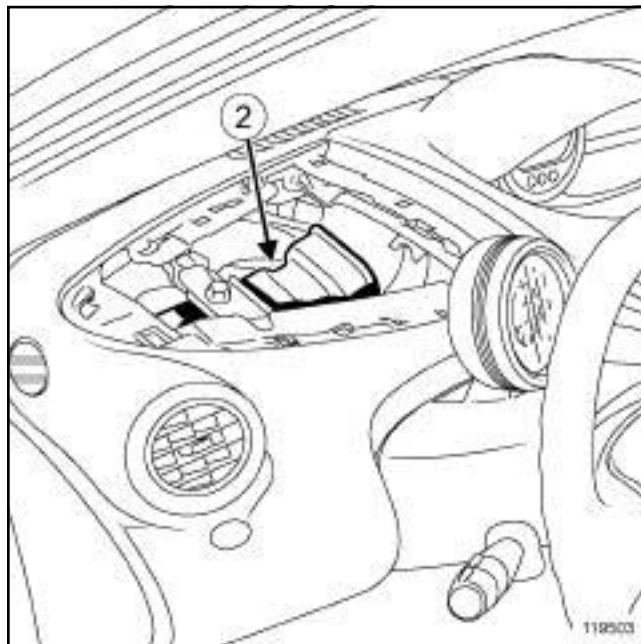
2 - Front right-hand side air distribution duct



- Unclip the upper storage compartment on the driver's side (1) .

II - OPERATION FOR REMOVAL OF PART CONCERNED

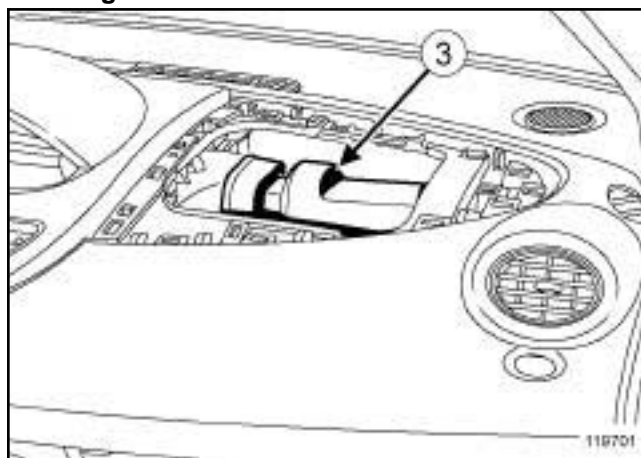
Front left-hand side air distribution duct:



119503

- Pull out the front left-hand side air distribution duct at (2) .
- Remove the front left-hand side air distribution duct from above.

Front right-hand side air distribution duct:



119701

- Pull out the front right-hand side air distribution duct at (3) .
- Remove the front right-hand side air distribution duct from above.

Front side air distribution duct: Removal - Refitting

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

- Refit the front right-hand side air distribution duct from above.
- Fit the front right-hand side air distribution duct.

II - FINAL OPERATION.

- Clip on the upper storage compartment on the driver's side.
- Refit the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners).
- Connect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).
- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413 Fault finding, 88C, Airbags and pretensioners).

Front centre air distribution duct: Removal - Refitting

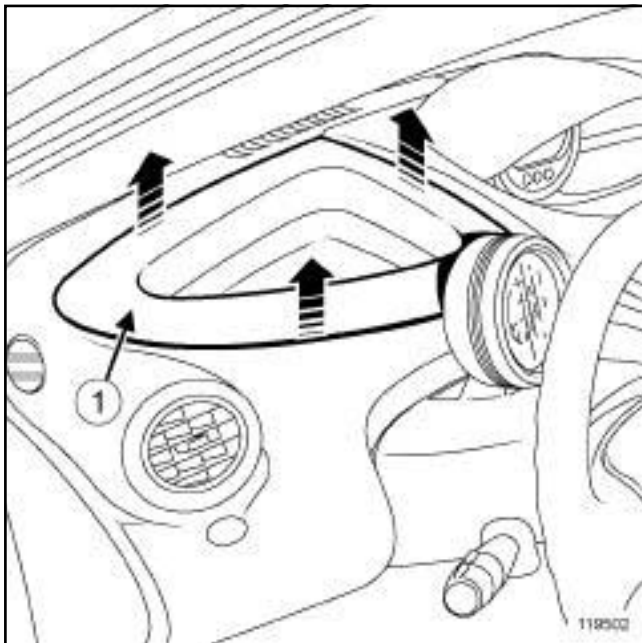
Equipment required

Diagnostic tool

REMOVAL

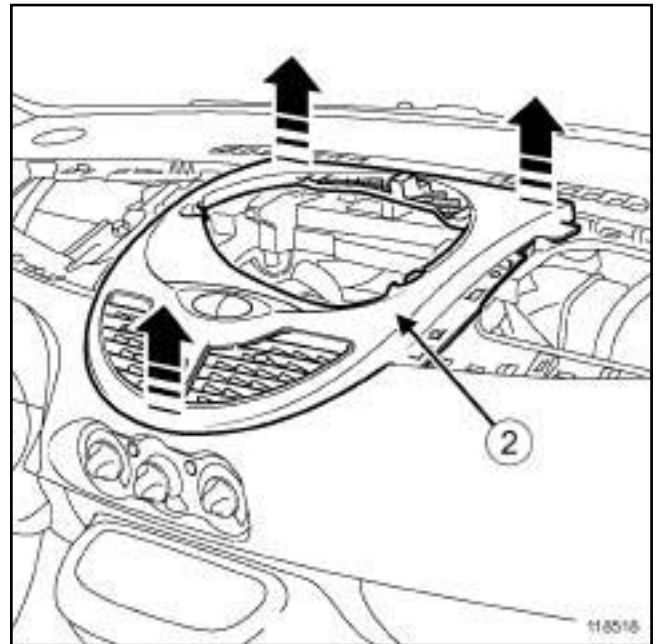
I - REMOVAL PREPARATION OPERATION

- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413 Fault finding, 88C, Airbags and pretensioners).
- Disconnect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).
- Remove the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners).



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- Unclip the upper storage compartment on the driver's side (1) .
- Remove the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel).

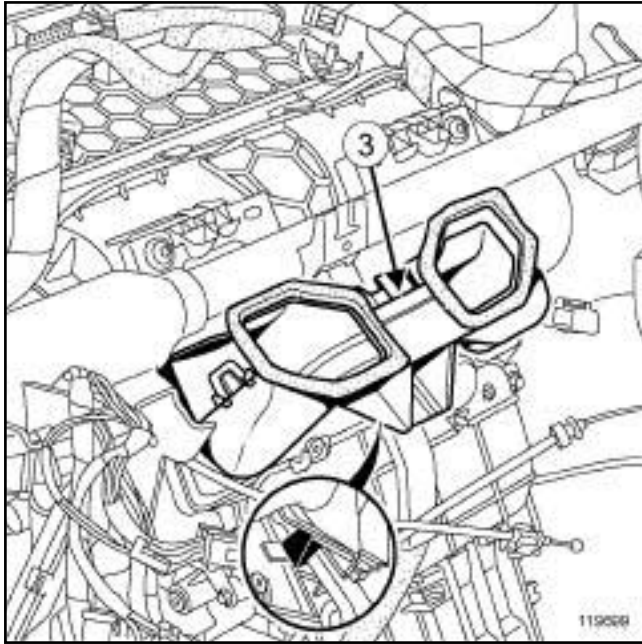


119518

- Unclip the centre air vent and trim (2) .
- Disconnect the hazard warning lights switch connector.
- Remove:
 - the centre air vent and trim,
 - the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) .

Front centre air distribution duct: Removal - Refitting

II - OPERATION FOR REMOVAL OF PART CONCERNED



- Remove the mounting bolt from the front centre air distribution duct.
- Unclip on the front centre air distribution duct (3) .
- Remove the front centre air distribution duct from above.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Refit the front centre air distribution duct from above.
- Clip on the front centre air distribution duct.
- Refit the mounting bolt from the front centre air distribution duct.

II - FINAL OPERATION.

- Connect the hazard warning lights switch connector.
- Refit:
 - the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page **61A-65**) ,
 - the centre air vent and trim.
- Clip on the centre air vent and trim.
- Refit the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel).

- Clip on the upper storage compartment on the driver's side.
- Refit the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners).
- Connect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).
- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413 Fault finding, 88C, Airbags and pretensioners).

Front footwell air distribution duct: Removal - Refitting

Equipment required

Diagnostic tool

REMOVAL

I - REMOVAL PREPARATION OPERATION

- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413 Fault finding, 88C, Airbags and pretensioners).
- Disconnect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).
- Remove:
 - the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners),
 - the steering wheel (see **Steering wheel: Removal - Refitting**) (MR 411, 36B, Power-assisted steering),
 - the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (MR 411, 84A, Control - Signals),
 - the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners),
 - the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel),
 - the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) .

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Remove the tweeter speakers (see **Tweeter: Removal - Refitting**) (MR 411, 86A, Radio).

RADIO NO. 01 or RADIO NO. 03

- Remove the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

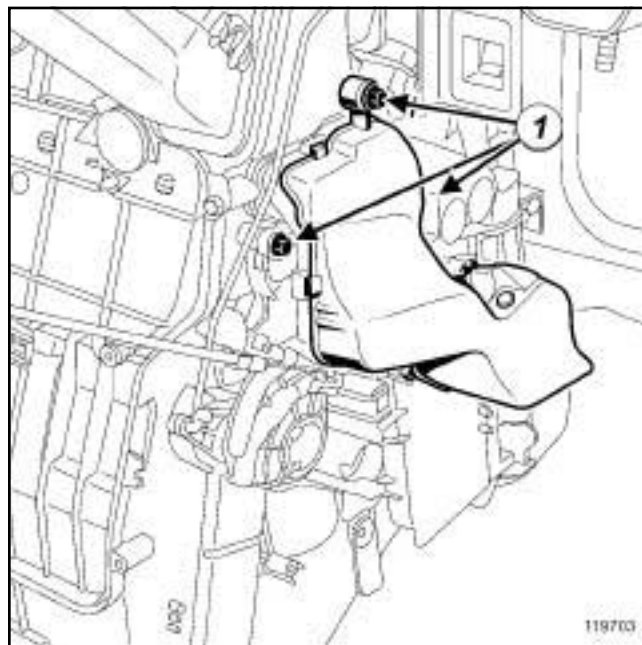
- Remove the glovebox.

- Remove:

- the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment),
- the dashboard (see **Dashboard: Removal - Refitting**) (MR 412, 57A, Interior equipment),
- the A-pillar trims (see **Windscreen pillar trim: Removal - Refitting**) (MR 412, 71A, Body internal trim).

II - OPERATION FOR REMOVAL OF PART CONCERNED

1 - Front right-hand footwell air distribution duct



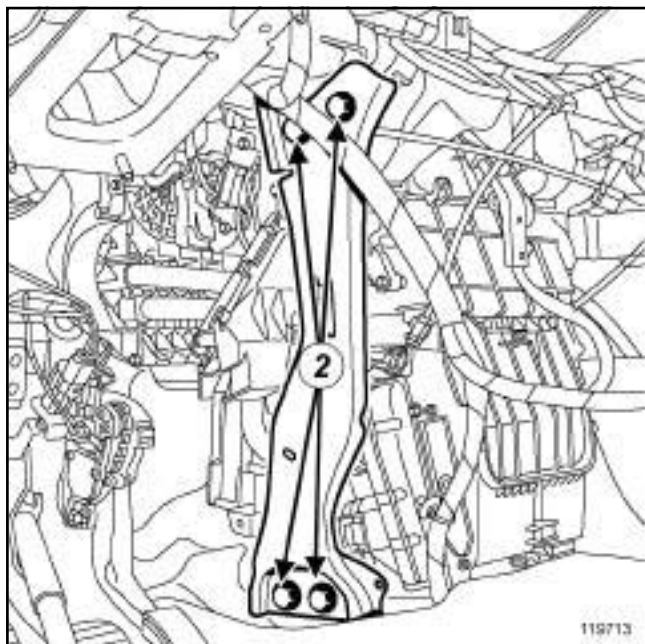
119703

- Remove:

- the bolts (1) from the front right-hand footwell air distribution duct.
- the front right-hand footwell air distribution duct.

Front footwell air distribution duct: Removal - Refitting

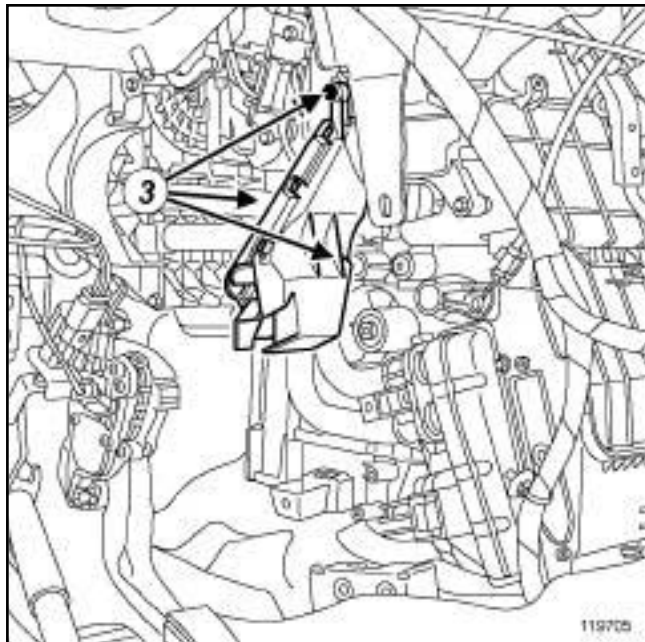
2 - Front left-hand footwell air distribution duct



119713

 Remove:

- the cross member stiffener bolts (2) ,
- the cross member stiffener.



119705

 Remove:

- the bolts (3) from the front left-hand footwell air distribution duct.
- the front left-hand footwell air distribution duct.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

1 - Front right-hand footwell air distribution duct

 Refit:

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

2 - Front left-hand footwell air distribution duct

 Refit:

- the front left-hand footwell air distribution duct,
- the front left-hand footwell air distribution duct bolts.
- the cross member stiffener,
- the cross member stiffener bolts.

II - FINAL OPERATION.

 Refit:

- the dashboard (see **Dashboard: Removal - Refitting**) (MR 412, 57A, Interior equipment),
- the A-pillar trims (see **Windscreen pillar trim: Removal - Refitting**) (MR 412, 71A, Body internal trim),
- the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

 Refit the glovebox.

RADIO NO. 01 or RADIO NO. 03

 Refit the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

Front footwell air distribution duct: Removal - Refitting

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Remove the tweeter speakers (see **Tweeter: Removal - Refitting**) (MR 411, 86A, Radio)

- Refit:
 - the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) ,
 - the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel),
 - the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners),
 - the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (MR 411, 84A, Control - Signals),
 - the steering wheel (see **Steering wheel: Removal - Refitting**) (MR 411, 36B, Power-assisted steering),
 - the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners).
- Connect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).
- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413 Fault finding, 88C, Airbags and pretensioners).

Recirculation control cable: Removal - Refitting

LEFT-HAND DRIVE, and AIR CONDITIONING or STANDARD HEATING

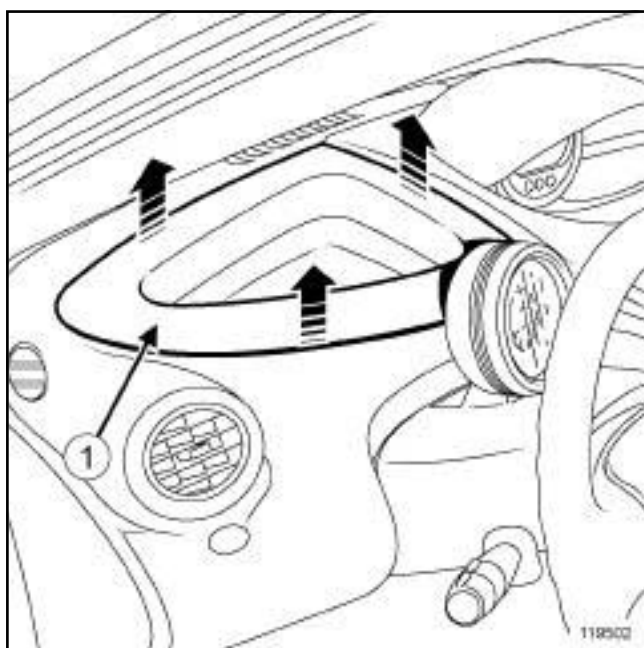
Equipment required

Diagnostic tool

REMOVAL

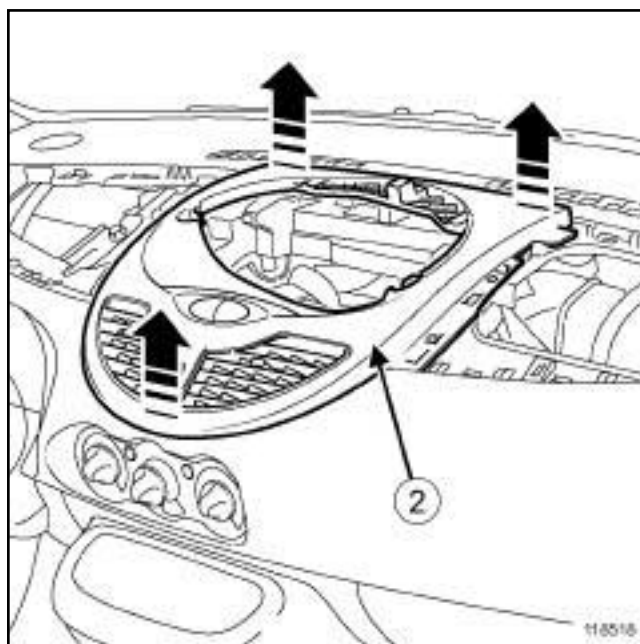
I - REMOVAL PREPARATION OPERATION

- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413 Fault finding, 88C, Airbags and pretensioners).
- Disconnect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).



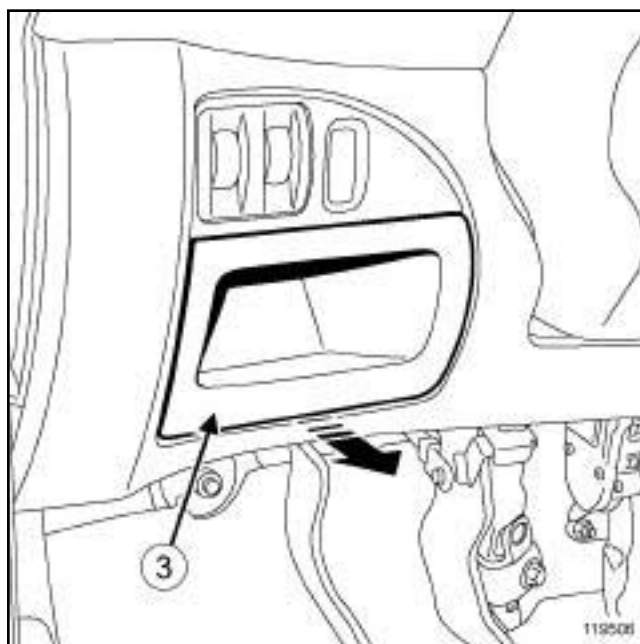
119502

- Unclip the upper storage compartment on the driver's side (1) .
- Remove:
 - the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners),
 - the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel).



119518

- Unclip the « trim - air vent » assembly (2) .
- Disconnect the hazard warning lights switch connector.
- Remove the « trim - air vent » assembly (2) .

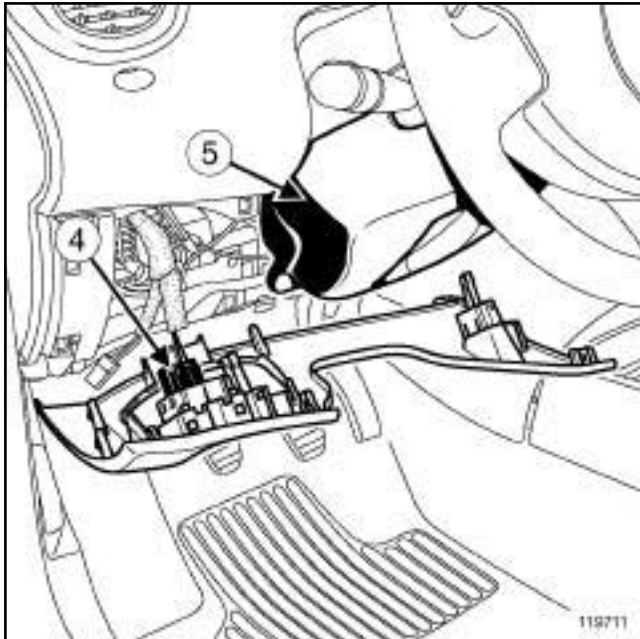


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- Unclip:
 - the fuse access flap (3) ,
 - the dashboard lower trim.

Recirculation control cable: Removal - Refitting

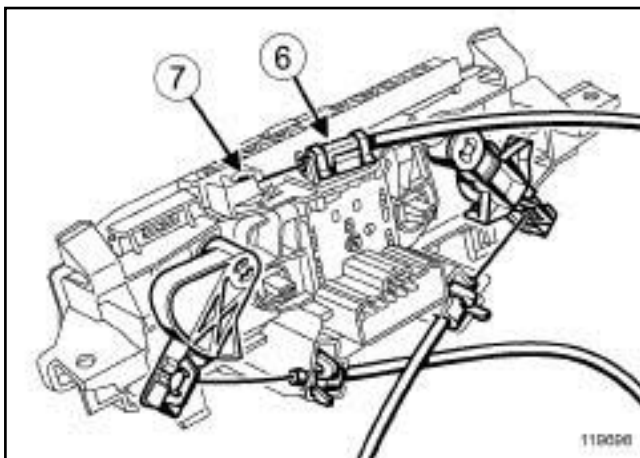
LEFT-HAND DRIVE, and AIR CONDITIONING or STANDARD HEATING



119711

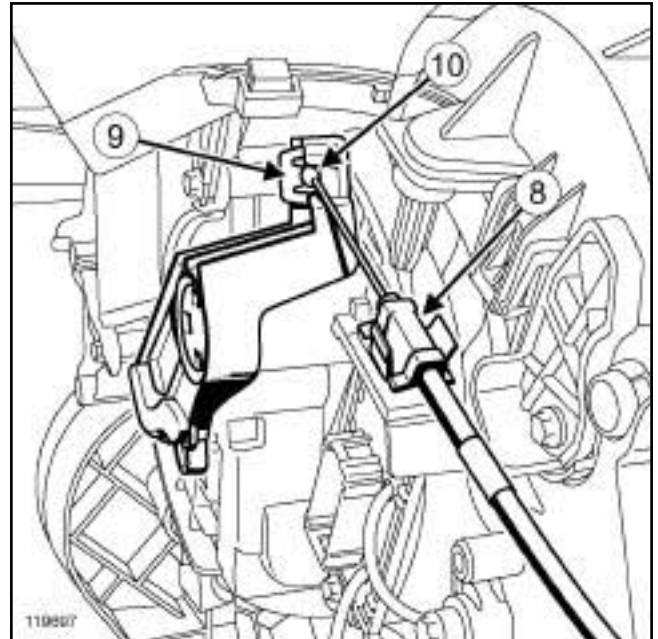
- Disconnect the connectors (4) .
- Remove:
 - the steering wheel lower cover bolt,
 - the steering wheel lower cover (5) .

II - OPERATION FOR REMOVAL OF PART CONCERNED



119696

- Unclip the recirculation control cable on the control panel (6) .
- Remove the control panel ball joint (7) .



119697

- Unclip the recirculation control cable (8) from the distribution unit.
- Press on the tab (9) .
- Remove the distribution unit ball joint (10) .
- Remove the recirculation control cable.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Refit the recirculation control cable.
- Fit the ball joint on the distribution unit.
- Press on the tab.
- Clip the recirculation control cable on the distribution unit.
- Fit the control panel ball joint.
- Clip the recirculation control cable on the control panel.

II - FINAL OPERATION.

- Refit:
 - the steering wheel lower cover,
 - the steering wheel lower cover bolt.
- Connect the connectors.
- Clip on:
 - the dashboard lower trim,

Recirculation control cable: Removal - Refitting

LEFT-HAND DRIVE, and AIR CONDITIONING or STANDARD HEATING

- the fuse access flap.
- Connect the hazard warning lights switch connector.
- Clip on the « trim - air vent » assembly.
- Refit:
 - the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel),
 - the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners).
- Clip on the upper storage compartment on the driver's side.
- Connect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).
- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413 Fault finding, 88C, Airbags and pretensioners).

Recirculation control cable: Removal - Refitting

RIGHT-HAND DRIVE, and AIR CONDITIONING or STANDARD HEATING

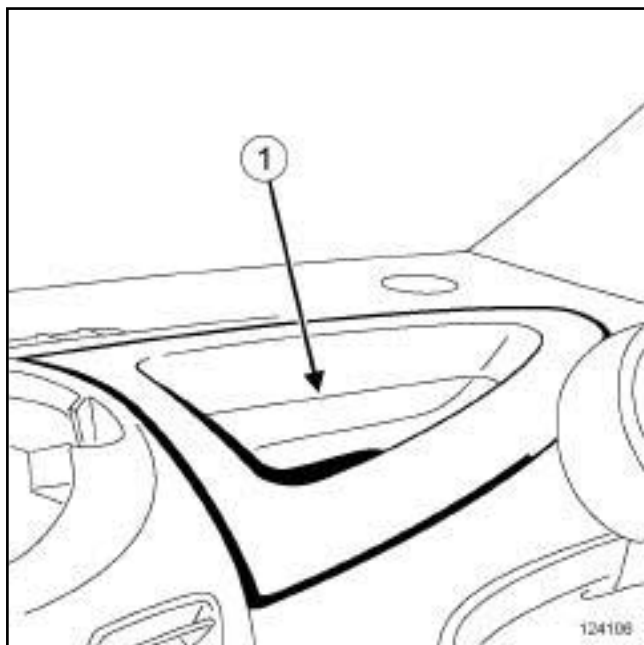
Equipment required

Diagnostic tool

REMOVAL

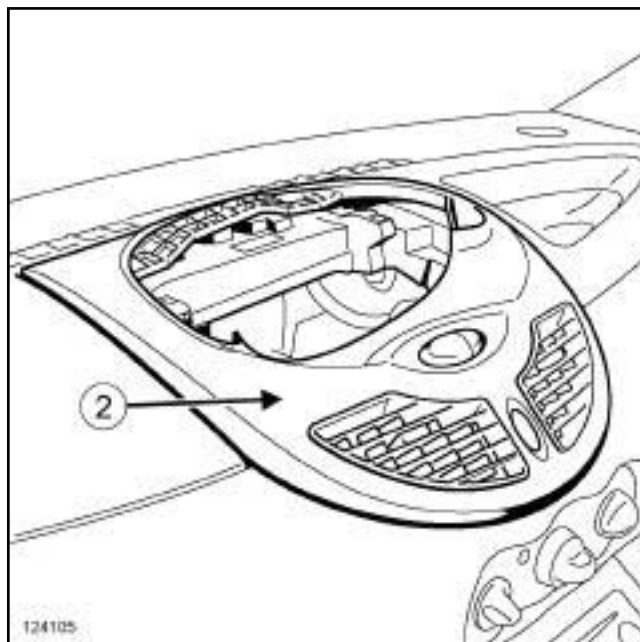
I - REMOVAL PREPARATION OPERATION

- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413, 88C, Airbags and pretensioners).
- Disconnect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).



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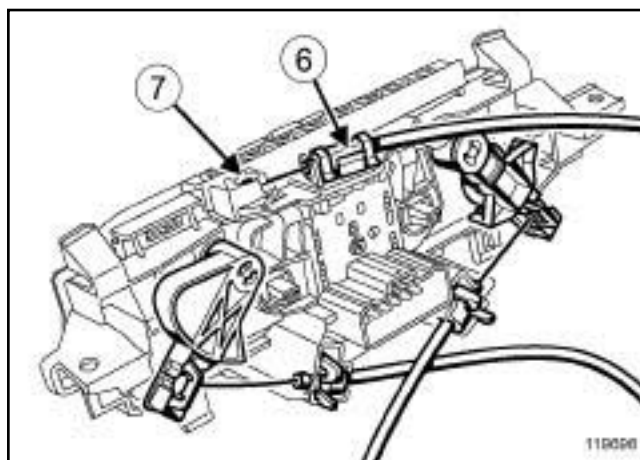
- Unclip the upper storage compartment on the driver's side.
- Remove:
 - the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and seat belt pretensioners),
 - the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel).



124105

- Unclip the « trim - air vent » assembly (2) .
- Disconnect the hazard warning lights switch connector.
- Remove the « trim - air vent » assembly (2) .

II - REMOVAL OPERATION FOR PART CONCERNED

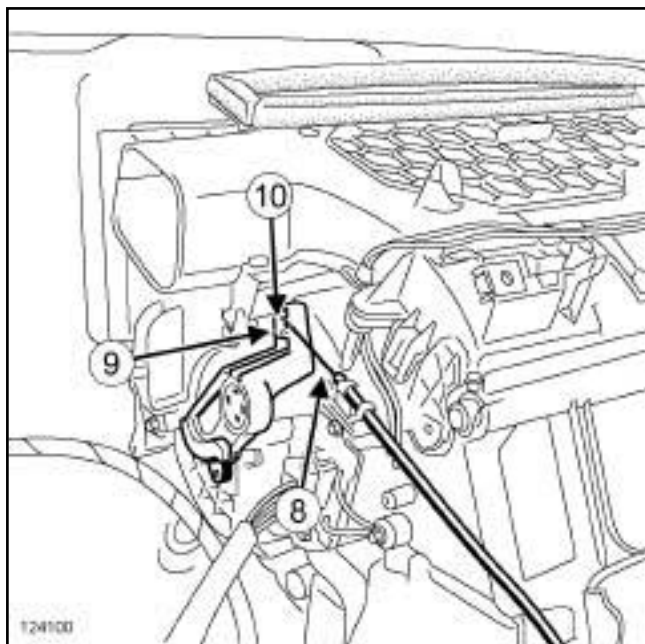


119696

- Unclip the recirculation control cable from the control panel (6) .
- Remove the control panel ball joint (7) .

Recirculation control cable: Removal - Refitting

RIGHT-HAND DRIVE, and AIR CONDITIONING or STANDARD HEATING



124100

- Unclip the recirculation control cable (8) from the distribution unit.
- Press on the tab (9) .
- Remove the distribution unit ball joint (10) .
- Remove the recirculation control cable.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Refit the recirculation control cable.
- Fit the ball joint on the distribution unit.
- Press on the tab.
- Clip the recirculation control cable on the distribution unit.
- Fit the ball joint to the control panel.
- Clip the recirculation control cable on the control panel.

II - FINAL OPERATION.

- Connect the connector to the hazard warning light switch.
- Refit the « trim - air vent » assembly
- Clip on the « trim - air vent » assembly.

 Refit:

- the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel),
- the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and seat belt pretensioners).
- Clip on the upper storage compartment, on the driver's side.
- Connect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).
- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413, 88C, Airbags and pretensioners).

Air distribution cable: Removal - Refitting

LEFT-HAND DRIVE, and AIR CONDITIONING or STANDARD HEATING

Equipment required

Diagnostic tool

REMOVAL

I - REMOVAL PREPARATION OPERATION

- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413 Fault finding, 88C, Airbags and pretensioners).
- Disconnect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).

ENGINE REV COUNTER

- Remove the rev counter (see **Rev counter: Removal - Refitting**) (MR 411, 83A, Instrument panel).

- Remove:

- the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners),
- the steering wheel (see **Steering wheel: Removal - Refitting**) (MR 411, 36B, Power-assisted steering),
- the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (MR 411, 84A, Control - Signals),
- the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners),
- the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel),
- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) .

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Remove the tweeter speakers (see **Tweeter: Removal - Refitting**) (MR 411, 86A, Radio).

RADIO NO. 01 or RADIO NO. 03

- Remove the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

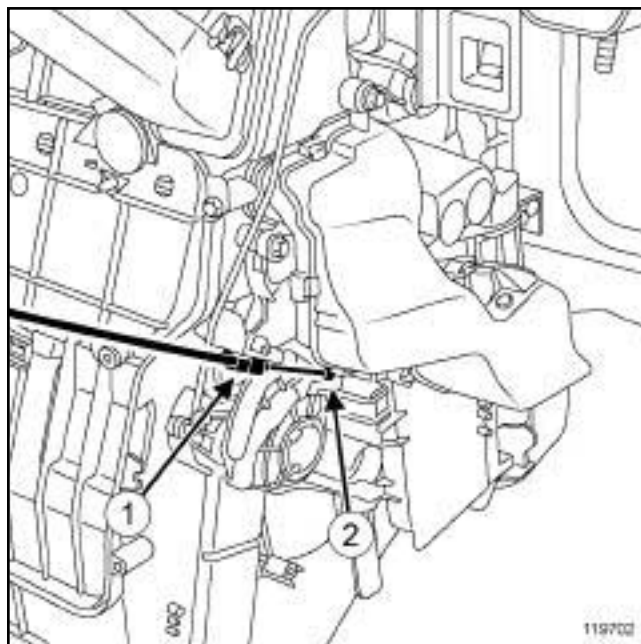
WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Remove the glovebox.

- Remove:

- the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment),
- the dashboard (see **Dashboard: Removal - Refitting**) (MR 412, 57A, Interior equipment).

II - OPERATION FOR REMOVAL OF PART CONCERNED



119702

119702

- Unclip the air distribution cable (1) .
- Press on the tab.
- Remove the distribution unit ball joint (2) .

Air distribution cable: Removal - Refitting

LEFT-HAND DRIVE, and AIR CONDITIONING or STANDARD HEATING

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Fit the ball joint on the distribution unit.
- Clip on the air distribution cable.

II - FINAL OPERATION.

- Refit:
 - the dashboard (see **Dashboard: Removal - Refitting**) (MR 412, 57A, Interior equipment),
 - the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Refit the glovebox.

RADIO NO. 01 or RADIO NO. 03

- Refit the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Remove the tweeter speakers (see **Tweeter: Removal - Refitting**) (MR 411, 86A, Radio).

- Refit:
 - the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) ,
 - the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel),
 - the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners),
 - the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (MR 411, 84A, Control - Signals),

- the steering wheel (see **Steering wheel: Removal - Refitting**) (MR 411, 36B, Power-assisted steering),
- the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners).

ENGINE REV COUNTER

- Remove the rev counter (see **Rev counter: Removal - Refitting**) (MR 411, 83A, Instrument panel).
- Connect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).
- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413 Fault finding, 88C, Airbags and pretensioners).

Air distribution cable: Removal - Refitting

RIGHT-HAND DRIVE, and AIR CONDITIONING or STANDARD HEATING

Equipment required

Diagnostic tool

REMOVAL

I - REMOVAL PREPARATION OPERATION

- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413, 88C, Airbags and pretensioners).
- Disconnect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).
- Remove:
 - the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and seat belt pretensioners),
 - the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel),
 - the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) .

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Remove the tweeter speakers (see **Tweeter: Removal - Refitting**) (MR 411, 86A, Radio).

RADIO NO. 01 or RADIO NO. 03

- Remove the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

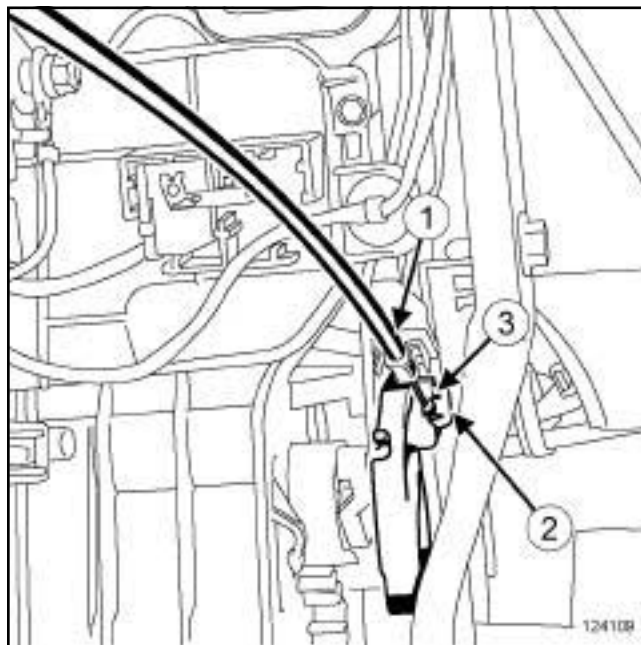
- Remove the glovebox.

- Remove:

- the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment),

- the trim under the steering wheel (see **Dashboard: Removal - Refitting**) (MR 412, 57A, Interior equipment).

II - REMOVAL OPERATION FOR PART CONCERNED



124109

- Unclip the air distribution cable (1) .
- Press on the tab (2) .
- Remove the distribution unit ball joint (3) .

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Fit the ball joint on the distribution unit.
- Clip on the air distribution cable.

II - FINAL OPERATION.

- Refit:

- the trim under the steering wheel (see **Dashboard: Removal - Refitting**) (MR 412, 57A, Interior equipment),
- the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment).

Air distribution cable: Removal - Refitting

RIGHT-HAND DRIVE, and AIR CONDITIONING or STANDARD HEATING

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Refit the glovebox.

RADIO NO. 01 or RADIO NO. 03

- Refit the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Refit the tweeter speakers (see **Tweeter: Removal - Refitting**) (MR 411, 86A, Radio).

- Refit:

- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) ,

- the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel),

- the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners),

- Connect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).

- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413, 88C, Airbags and pretensioners).

Air mixing cable: Removal - Refitting

LEFT-HAND DRIVE, and AIR CONDITIONING or STANDARD HEATING

Equipment required

Diagnostic tool

REMOVAL

I - REMOVAL PREPARATION OPERATION

- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413 Fault finding, 88C, Airbags and pretensioners).
- Disconnect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).

ENGINE REV COUNTER

- Remove the rev counter (see **Rev counter: Removal - Refitting**) (MR 411, 83A, instrument panel).

- Remove:

- the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners),
- the steering wheel (see **Steering wheel: Removal - Refitting**) (MR 411, 36B, Power-assisted steering),
- the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (MR 411, 84A, Control - Signals),
- the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners),
- the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel),
- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) .

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Remove the tweeter speakers (see **Tweeter: Removal - Refitting**) (MR 411, 86A, Radio).

RADIO NO. 01 or RADIO NO. 03

- Remove the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

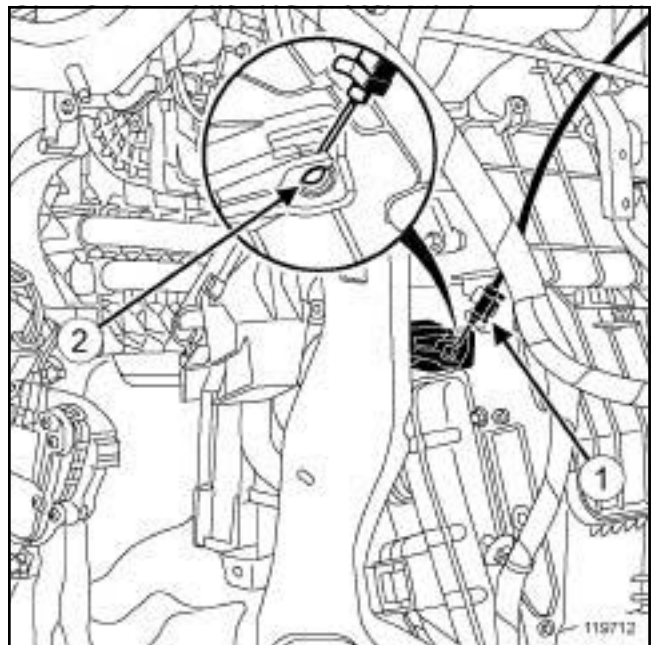
WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Remove the glovebox.

- Remove:

- the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment),
- the dashboard (see **Dashboard: Removal - Refitting**) (MR 412, 57A, Interior equipment).

II - OPERATION FOR REMOVAL OF PART CONCERNED



119712

- Unclip the air mixing cable (1) .
- Remove the distribution unit ball joint (2) .

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Fit the ball joint on the distribution unit.

Air mixing cable: Removal - Refitting

LEFT-HAND DRIVE, and AIR CONDITIONING or STANDARD HEATING

- Clip on the air mixing cable.

II - FINAL OPERATION.

- Refit:
 - the dashboard (see **Dashboard: Removal - Refitting**) (MR 412, 57A, Interior equipment),
 - the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Refit the glovebox.

RADIO NO. 01 or RADIO NO. 03

- Refit the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Remove the tweeter speakers (see **Tweeter: Removal - Refitting**) (MR 411, 86A, Radio).

- Refit:
 - the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65),
 - the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel),
 - the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners),
 - the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (MR 411, 84A, Control - Signals),
 - the steering wheel (see **Steering wheel: Removal - Refitting**) (MR 411, 36B, Power-assisted steering),
 - the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners).

ENGINE REV COUNTER

- Remove the rev counter (see **Rev counter: Removal - Refitting**) (MR 411, 83A, instrument panel).
- Connect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).
- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413 Fault finding, 88C, Airbags and pretensioners).

Air mixing cable: Removal - Refitting

RIGHT-HAND DRIVE, and AIR CONDITIONING or STANDARD HEATING

Equipment required

Diagnostic tool

REMOVAL

I - REMOVAL PREPARATION OPERATION

- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413, 88C, Airbags and pretensioners).
- Disconnect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).

ENGINE REV COUNTER

- Remove the rev counter (see **Rev counter: Removal - Refitting**) (MR 411, 83A, Instrument panel).

- Remove:

- the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners),
- the steering wheel (see **Steering wheel: Removal - Refitting**) (MR 411, 36B, Power-assisted steering),
- the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (MR 411, 84A, Control - Signals),
- the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners),
- the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel),
- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) .

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Remove the tweeter speakers (see **Tweeter: Removal - Refitting**) (MR 411, 86A, Radio).

RADIO NO. 01 or RADIO NO. 03

- Remove the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

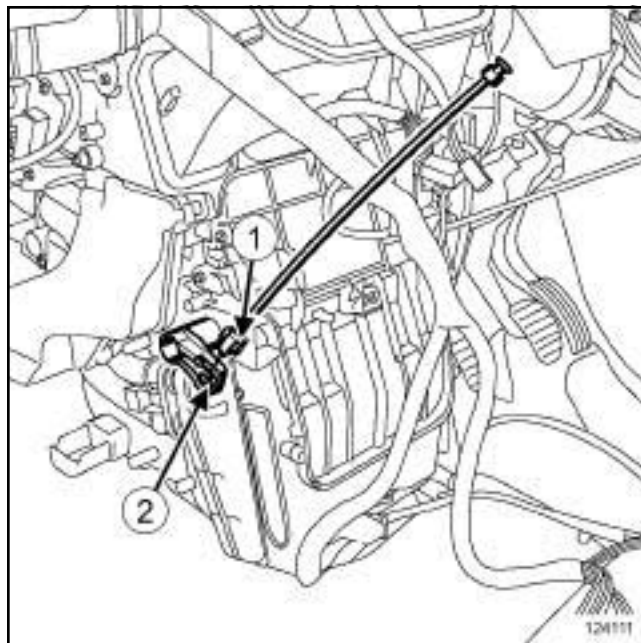
WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Remove the glovebox.

- Remove:

- the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment),
- the dashboard (see **Dashboard: Removal - Refitting**) (MR 412, 57A, Interior equipment).

II - REMOVAL OPERATION FOR PART CONCERNED



124111

- Unclip the air mixing cable (1) .
- Remove the distribution unit ball joint (2) .

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Fit the ball joint on the distribution unit.

Air mixing cable: Removal - Refitting

RIGHT-HAND DRIVE, and AIR CONDITIONING or STANDARD HEATING

- Clip on the air mixing cable.

II - FINAL OPERATION.

- Refit:
 - the dashboard (see **Dashboard: Removal - Refitting**) (MR 412, 57A, Interior equipment),
 - the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Refit the glovebox.

RADIO NO. 01 or RADIO NO. 03

- Refit the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Refit the tweeter speakers (see **Tweeter: Removal - Refitting**) (MR 411, 86A, Radio).

- Refit:
 - the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65),
 - the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel),
 - the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and seat belt pretensioners),
 - the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (MR 411, 84A, Control - Signals),
 - the steering wheel (see **Steering wheel: Removal - Refitting**) (MR 411, 36B, Power-assisted steering),
 - the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and seat belt pretensioners).

ENGINE REV COUNTER

- Remove the rev counter (see **Rev counter: Removal - Refitting**) (MR 411, 83A, Instrument panel).
- Connect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).
- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413, 88C, Airbags and pretensioners).

Distribution unit: Removal - Refitting

STANDARD HEATING

| Special tooling required | |
|--------------------------|--|
| Ms. 583 | Pipe clamps. |
| Mot. 1448 | Remote operation pliers for hose clips. |
| Mot. 1202-01 | Clip pliers for hose clips (large size). |
| Mot. 1202-02 | Clip pliers for hose clips (small size) |

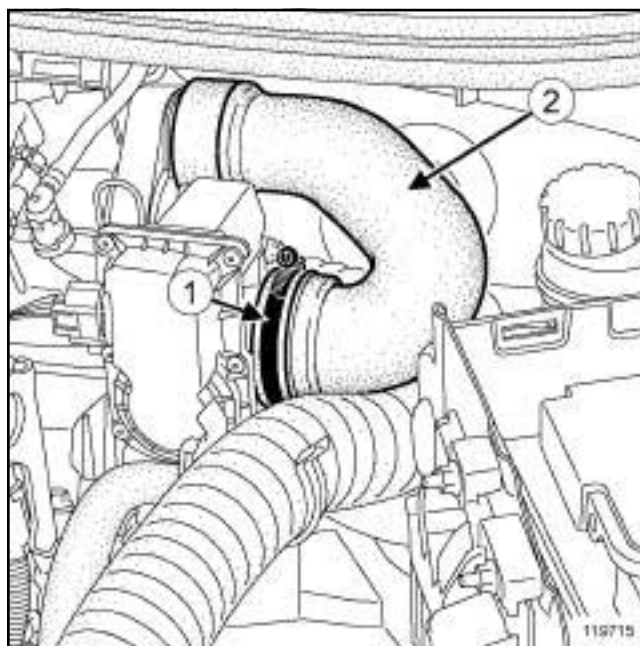
| Equipment required |
|--------------------|
| Diagnostic tool |

REMOVAL

I - REMOVAL PREPARATION OPERATION

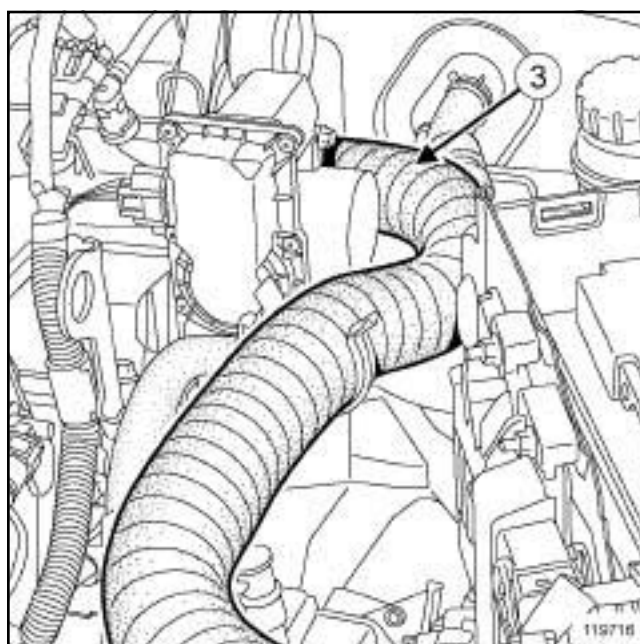
- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (88C, Airbags and pretensioners).
- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- Remove:
 - the windscreen wiper arms (see **Windscreen wiper arm: Removal - Refitting**) (85A, Wiping - Washing),
 - the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment),
 - the scoop under the scuttle panel grille (see **Scoop under the scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment).

D7F



119715

- Loosen the clip (1) of the air outlet pipe on the air filter unit.
- Remove the air outlet pipe from the air filter unit (2) .

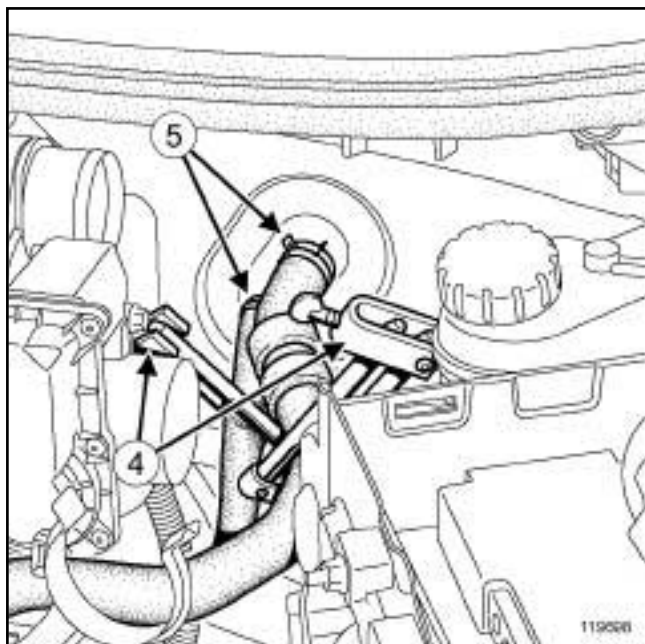


119716

- Disconnect the air filter unit air inlet pipe (3) on the air filter unit.
- Move aside the air inlet pipe from the air filter unit.

Distribution unit: Removal - Refitting

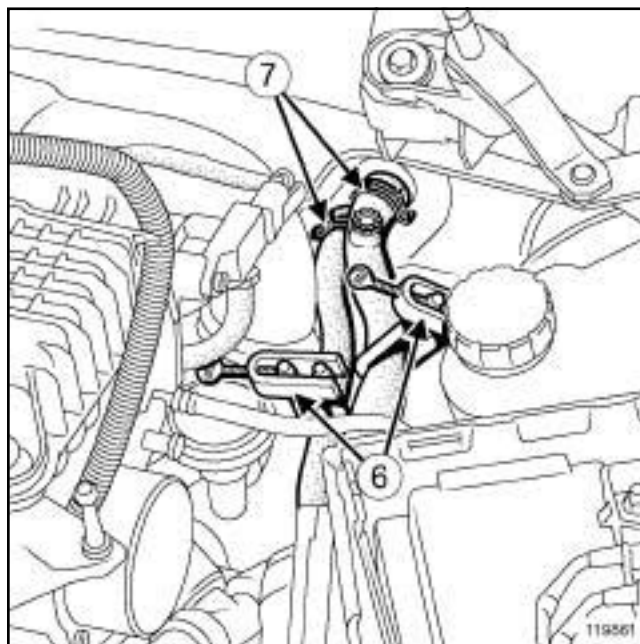
STANDARD HEATING



119698

- Fit the **(Ms. 583)** (4) on the heater matrix inlet and outlet hoses.
- Separate the heater matrix inlet and outlet hose clips (5) using the **(Mot. 1448)** or **(Mot. 1202-01)** or **(Mot. 1202-02)**.
- Disconnect the heater matrix inlet and outlet hoses.

K9K



119861

- Fit the **(Ms. 583)** (6) on the heater matrix inlet and outlet hoses.
- Separate the heater matrix inlet and outlet hose clips (7) using the **(Mot. 1448)** or **(Mot. 1202-01)** or **(Mot. 1202-02)**.
- Disconnect the heater matrix inlet and outlet hoses.

ENGINE REV COUNTER

- Remove the rev counter (see **Rev counter: Removal - Refitting**) (83A, Instrument panel).
- Remove:
 - the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (88C, Airbags and pretensioners),
 - the steering wheel (see **Steering wheel: Removal - Refitting**) (36A, Steering assembly),
 - the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (84A, Control - Signals),
 - the passenger front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (88C, Airbags and pretensioners),

Distribution unit: Removal - Refitting

STANDARD HEATING

- the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),
- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) .

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Remove the tweeters (see **Tweeter: Removal - Refitting**) (86A, Radio).

RADIO NO. 01 or RADIO NO. 03

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

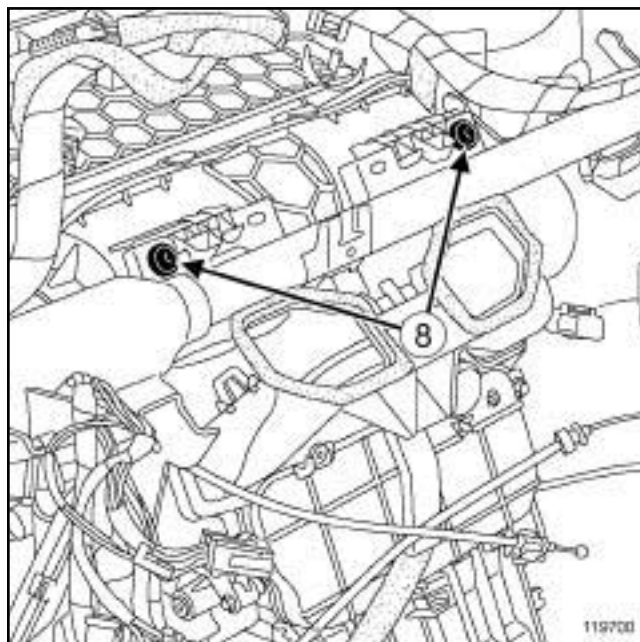
WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Remove the storage compartment.

- Remove:

- the centre console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
- the windscreen pillar trims (see **Windscreen pillar trim: Removal - Refitting**) (71A, Body internal trim),
- the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
- the steering column (see **Steering column: Removal - Refitting**) (36A, Steering assembly).

- Move aside the wiring.



119700

- Remove:

- the bolts (8) from the distribution unit,
- the dashboard cross member (see **Dashboard cross member: Removal - Refitting**) (42A, Upper front structure).

- Put a protective cover on the floor carpet.

II - OPERATION FOR REMOVAL OF PART CONCERNED

- Remove the distribution unit.

- Remove the components from the distribution unit:

- the A-pillar air distribution ducts,
- the passenger compartment fan assembly control unit,
- the fan assembly,
- the heater matrix,
- the air mixer cable.
- the air distribution cable,
- the air recirculation control cable,
- the cabin filter,
- the heating resistor.

Distribution unit: Removal - Refitting

STANDARD HEATING

REFITTING

I - REFITTING PREPARATION OPERATION

- Refit the components to the distribution unit:
 - the heating resistor,
 - the cabin filter,
 - the air recirculation control cable,
 - the air distribution cable,
 - the air mixer cable.
 - the heater matrix,
 - the fan assembly,
 - the passenger compartment fan assembly control unit,
 - the A-pillar air distribution ducts.

II - REFITTING OPERATION FOR PART CONCERNED

- Refit the distribution unit.

III - FINAL OPERATION

- Remove the protective cover on the floor carpet.
- Refit:
 - the dashboard cross member (see **Dashboard cross member: Removal - Refitting**) (42A, Upper front structure),
 - the distribution unit bolts.
- Fit the wiring.
- Refit:
 - the steering column (see **Steering column: Removal - Refitting**) (36A, Steering assembly),
 - the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
 - the windscreen pillar trims (see **Windscreen pillar trim: Removal - Refitting**) (71A, Body internal trim),
 - the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Refit the storage compartment.

RADIO NO. 01 or RADIO NO. 03

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

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Refit the tweeters (see **Tweeter: Removal - Refitting**) (86A, Radio).

- Refit:

- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) ,
- the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),
- the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (88C, Airbags and pretensioners),
- the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (84A, Control - Signals),
- the steering wheel (see **Steering wheel: Removal - Refitting**) (36A, Steering assembly),
- the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (88C, Airbags and seat belt pretensioners).

ENGINE REV COUNTER

- Refit the rev counter (see **Rev counter: Removal - Refitting**) (83A, Instrument panel).

- Connect:

- the air filter unit air inlet pipe onto the air filter unit,
- the heater matrix inlet and outlet hoses.

- Fit the heater matrix inlet and outlet hose clips using the (**Mot. 1448**) or (**Mot. 1202-01**) or (**Mot. 1202-02**).

- Remove the (**Ms. 583**) on the heater matrix inlet and outlet hoses.

Distribution unit: Removal - Refitting

STANDARD HEATING

D7F

- Refit the air outlet pipe onto the air filter unit.
 - Fit the air filter unit air inlet pipe.
-
- Refit:
 - the scoop under the scuttle panel grille (see **Scoop under the scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment),
 - the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment),
 - the windscreen wiper arms (see **Windscreen wiper arm: Removal - Refitting**) (85A, Wiping - Washing).
 - Connect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
 - Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (88C, Airbags and pretensioners).
 - Fill up and bleed the cooling system (see **Cooling system: Draining - Refilling**) (19A, Cooling).
 - Check the cooling circuit (see **Engine cooling system: Check**) (19A, Cooling).

Distribution unit: Removal - Refitting

AIR CONDITIONING

Special tooling required

| | |
|---------------------|--|
| Ms. 583 | Pipe clamps. |
| Mot. 1448 | Remote operation pliers for hose clips. |
| Mot. 1202-01 | Clip pliers for hose clips (large size). |
| Mot. 1202-02 | Clip pliers for hose clips (small size) |

Equipment required

refrigerant charging station

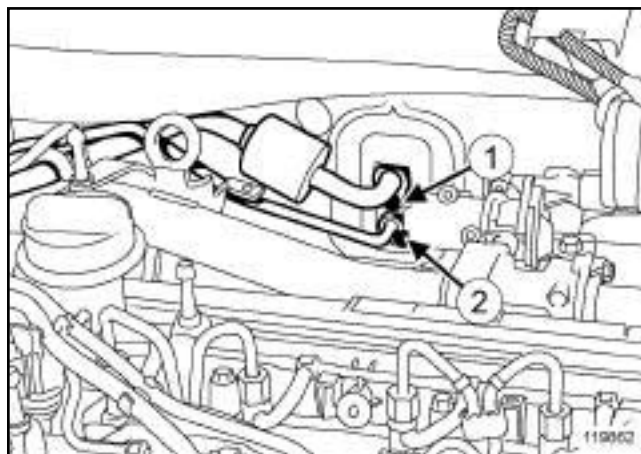
Diagnostic tool

IMPORTANT

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

REMOVAL**I - REMOVAL PREPARATION OPERATION**

- Drain the coolant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page 62A-8) .
- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (88C, Airbags and pretensioners).
- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- Remove:
 - the windscreen wiper arms (see **Windscreen wiper arm: Removal - Refitting**) (85A, Wiping - Washing),
 - the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment),
 - the scoop under the scuttle panel grille (see **Scoop under the scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment).



119862

**WARNING**

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

WARNING

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

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.

 Remove:

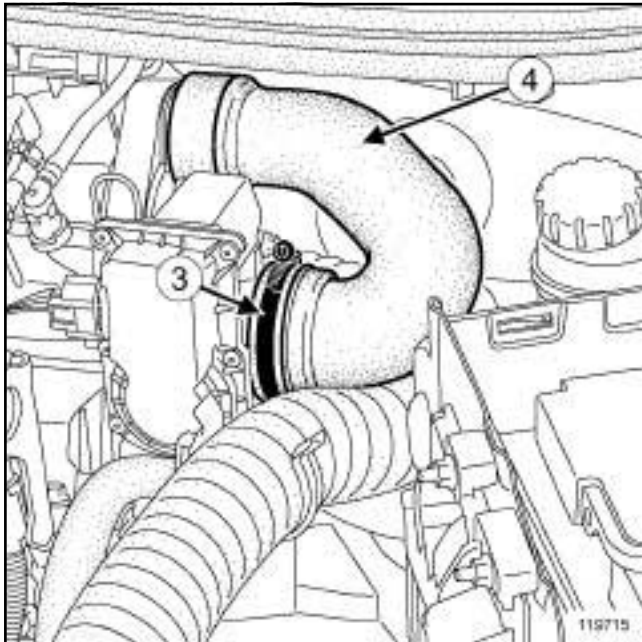
- the bolt (1) from the expansion valve - compressor connecting pipe.
- the bolt (2) from the condenser - expansion valve connecting pipe.

 Move aside the connecting pipes. Fit plugs to the openings.

Distribution unit: Removal - Refitting

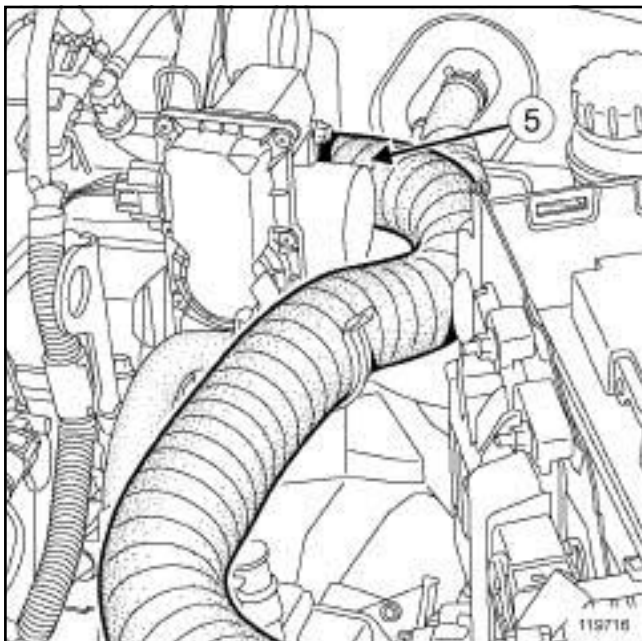
AIR CONDITIONING

D7F



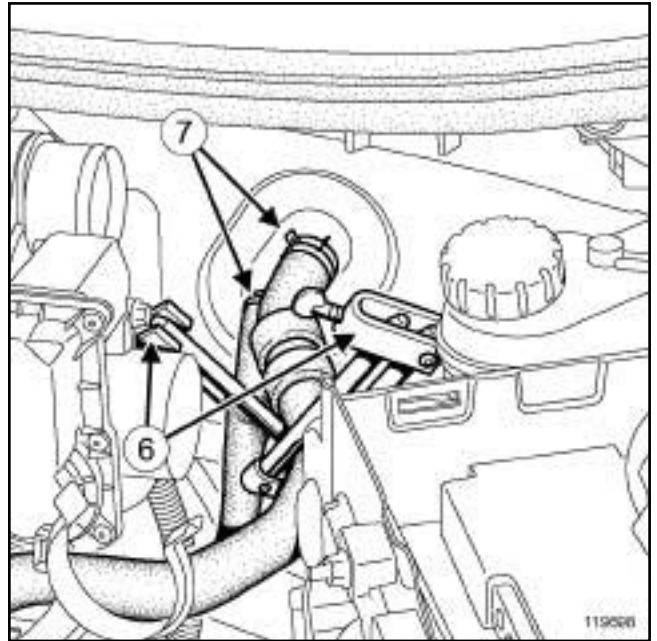
119715

- Loosen the clip (3) of the air outlet pipe on the air filter unit.
- Remove the air outlet pipe from the air filter unit (4) .



119716

- Disconnect the air filter unit air inlet pipe (5) on the air filter unit.
- Move aside the air inlet pipe from the air filter unit.



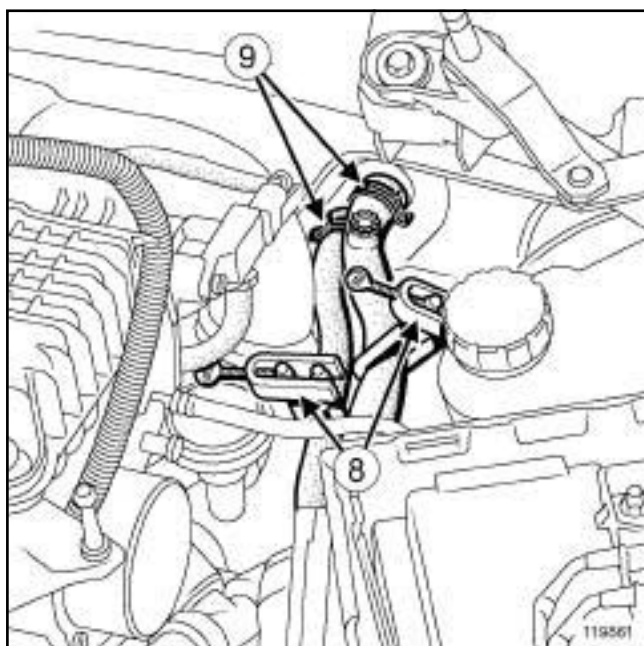
119698

- Fit the (Ms. 583) (6) on the heater matrix inlet and outlet hoses.
- Separate the heater matrix inlet and outlet hose clips (7) using the (Mot. 1448) or (Mot. 1202-01) or (Mot. 1202-02).
- Disconnect the heater matrix inlet and outlet hoses.

Distribution unit: Removal - Refitting

AIR CONDITIONING

K9K



119861

- Fit the **(Ms. 583)** (8) on the heater matrix inlet and outlet hoses.
- Separate the heater matrix inlet and outlet hose clips (9) using the **(Mot. 1448)** or **(Mot. 1202-01)** or **(Mot. 1202-02)**.
- Disconnect the heater matrix inlet and outlet hoses.

ENGINE REV COUNTER

- Remove the rev counter (see **Rev counter: Removal - Refitting**) (83A, Instrument panel).
- Remove:
 - the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (88C, Airbags and pretensioners),
 - the steering wheel (see **Steering wheel: Removal - Refitting**) (36A, Steering assembly),
 - the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (84A, Control - Signals),
 - the passenger front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (88C, Airbags and pretensioners),

- the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),
- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) .

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Remove the tweeters (see **Tweeter: Removal - Refitting**) (86A, Radio).

RADIO NO. 01 or RADIO NO. 03

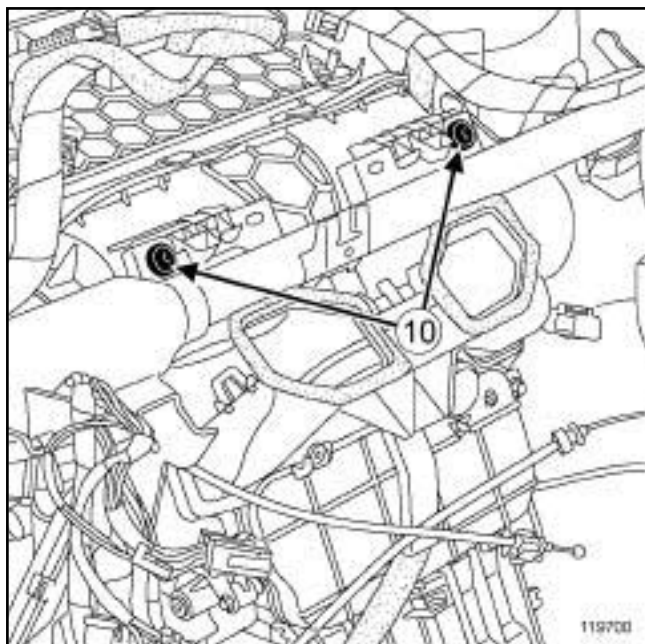
- Remove the radio (see **Radio: Removal - Refitting**) (86A, Radio).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Remove the storage compartment.
- Remove:
 - the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
 - the windscreen pillar trims (see **Windscreen pillar trim: Removal - Refitting**) (71A, Body internal trim),
 - the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
 - the steering column (see **Steering column: Removal - Refitting**) (36A, Steering assembly).
- Move aside the wiring.

Distribution unit: Removal - Refitting

AIR CONDITIONING



119700

 Remove:

- the bolts (10) from the distribution unit,
- the dashboard cross member (see **Dashboard cross member: Removal - Refitting**) (42A, Upper front structure).

 Put a protective cover on the floor carpet.

II - OPERATION FOR REMOVAL OF PART CONCERNED

- Remove the distribution unit.
- Remove the components from the distribution unit:
 - the A-pillar air distribution ducts,
 - the passenger compartment fan assembly control unit,
 - the fan assembly,
 - the heater matrix,
 - the air mixer cable.
 - the air distribution cable,
 - the air recirculation control cable,
 - the cabin filter,
 - the heating resistor,
 - the expansion valve.

REFITTING
I - REFITTING PREPARATION OPERATION

- Refit the components to the distribution unit:
 - the expansion valve,
 - the heating resistor,
 - the cabin filter,
 - the air recirculation control cable,
 - the air distribution cable,
 - the air mixer cable.
 - the heater matrix,
 - the fan assembly,
 - the passenger compartment fan assembly control unit,
 - the A-pillar air distribution ducts.

II - REFITTING OPERATION FOR PART CONCERNED

- Refit the distribution unit.

III - FINAL OPERATION

- Remove the protective cover on the floor carpet.
- Refit:
 - the dashboard cross member (see **Dashboard cross member: Removal - Refitting**) (42A, Upper front structure),
 - the distribution unit bolts.
- Fit the wiring.
- Refit:
 - the steering column (see **Steering column: Removal - Refitting**) (36A, Steering assembly),
 - the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
 - the windscreen pillar trims (see **Windscreen pillar trim: Removal - Refitting**) (71A, Body internal trim),
 - the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment).

Distribution unit: Removal - Refitting

AIR CONDITIONING

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Refit the storage compartment.

RADIO NO. 01 or RADIO NO. 03

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

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Refit the tweeters (see **Tweeter: Removal - Refitting**) (86A, Radio).

- Refit:

- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) ,
- the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),
- the passenger front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (88C, Airbags and pretensioners),
- the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (84A, Control - Signals),
- the steering wheel (see **Steering wheel: Removal - Refitting**) (36A, Steering assembly),
- the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (88C, Airbags and seat belt pretensioners).

ENGINE REV COUNTER

- Refit the rev counter (see **Rev counter: Removal - Refitting**) (83A, Instrument panel).

- Connect:

- the air filter unit air inlet pipe onto the air filter unit,
- the heater matrix inlet and outlet hoses.

- Fit the heater matrix inlet and outlet hose clips using the **(Mot. 1448)** or **(Mot. 1202-01)** or **(Mot. 1202-02)**.

- Remove the **(Ms. 583)** on the heater matrix inlet and outlet hoses.

D7F

- Refit the air outlet pipe onto the air filter unit.

- Fit the air filter unit air inlet pipe.

- Remove the plugs from the openings.

- Fit the connecting pipes.

- Refit:

- the bolt to the expansion valve - compressor connecting pipe,
- the bolt to the condenser - expansion valve connecting pipe.

- Refit:

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

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

- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (88C, Airbags and pretensioners).

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

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

- Consult the refrigerant and oil quantity values before filling the circuit (see **62A, Air conditioning, Air conditioning: Parts and consumables for the repair**, page 62A-2) .

- Fill the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page 62A-8) .

- Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page 62A-4) .

Distribution unit: Removal - Refitting

AIR CONDITIONING

- Check for leaks (see **62A, Air conditioning, Refrigerant circuit: Check**, page **62A-7**).

Distribution unit: Removal - Refitting

CLIMATE CONTROL

Special tooling required

| | |
|---------------------|--|
| Ms. 583 | Pipe clamps. |
| Mot. 1448 | Remote operation pliers for hose clips. |
| Mot. 1202-01 | Clip pliers for hose clips (large size). |
| Mot. 1202-02 | Clip pliers for hose clips (small size) |

Equipment required

refrigerant charging station

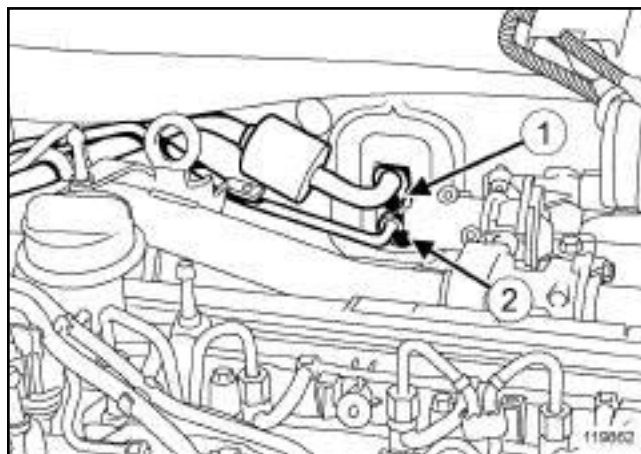
Diagnostic tool

IMPORTANT

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

REMOVAL**I - REMOVAL PREPARATION OPERATION**

- Drain the coolant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page 62A-8) .
- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (88C, Airbags and pretensioners).
- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- Remove:
 - the windscreen wiper arms (see **Windscreen wiper arm: Removal - Refitting**) (85A, Wiping - Washing),
 - the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment),
 - the scoop under the scuttle panel grille (see **Scoop under the scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment).



119862

**WARNING**

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

WARNING

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

Note:

Use blanking plugs for the fuel circuits with part no. **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.

- Remove:

- the bolt (1) from the expansion valve - compressor connecting pipe.
- the bolt (2) from the condenser - expansion valve connecting pipe.

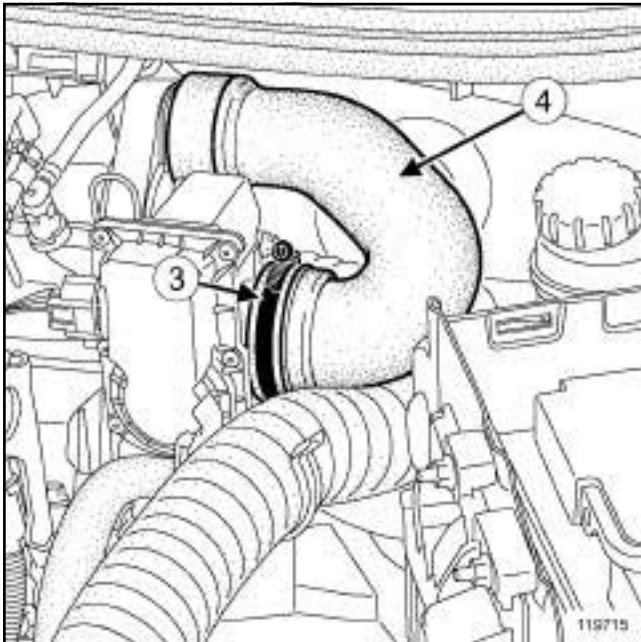
- Move aside the connecting pipes.

- Fit plugs to the openings.

Distribution unit: Removal - Refitting

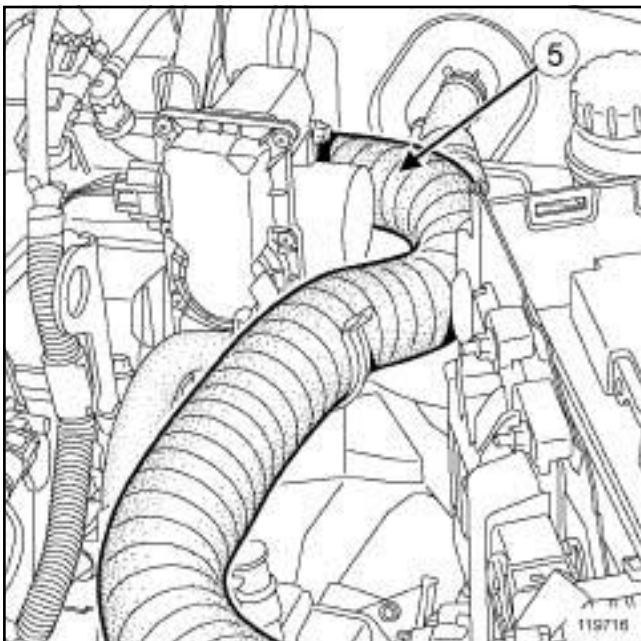
CLIMATE CONTROL

D7F



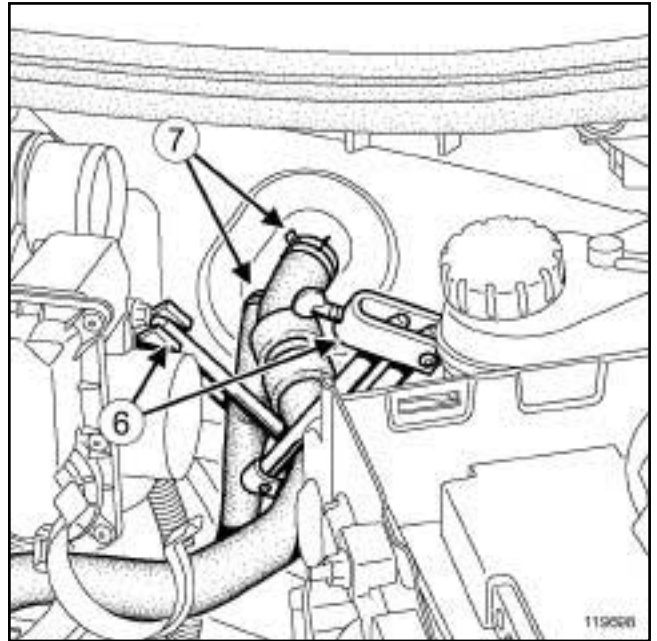
119715

- Loosen the clip (3) of the air outlet pipe on the air filter unit.
- Remove the air outlet pipe from the air filter unit (4) .



119716

- Disconnect the air filter unit air inlet pipe (5) on the air filter unit.
- Move aside the air inlet pipe from the air filter unit.



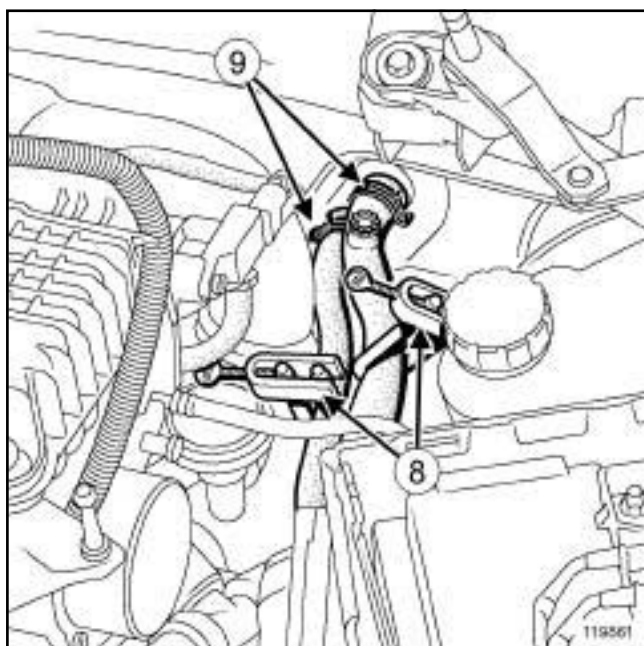
119698

- Fit the (Ms. 583) (6) on the heater matrix inlet and outlet hoses.
- Separate the heater matrix inlet and outlet hose clips (7) using the (Mot. 1448) or (Mot. 1202-01) or (Mot. 1202-02).
- Disconnect the heater matrix inlet and outlet hoses.

Distribution unit: Removal - Refitting

CLIMATE CONTROL

K9K



119861

- Fit the **(Ms. 583) (8)** on the heater matrix inlet and outlet hoses.
- Separate the heater matrix inlet and outlet hose clips **(9)** using the **(Mot. 1448)** or **(Mot. 1202-01)** or **(Mot. 1202-02)**.
- Disconnect the heater matrix inlet and outlet hoses.

ENGINE REV COUNTER

- Remove the rev counter (see **Rev counter: Removal - Refitting**) (83A, Instrument panel).
- Remove:
 - the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (88C, Airbags and pretensioners),
 - the steering wheel (see **Steering wheel: Removal - Refitting**) (36A, Steering assembly),
 - the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (84A, Control - Signals),
 - the passenger front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (88C, Airbags and pretensioners),

- the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),
- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) .

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Remove the tweeters (see **Tweeter: Removal - Refitting**) (86A, Radio).

RADIO NO. 01 or RADIO NO. 03

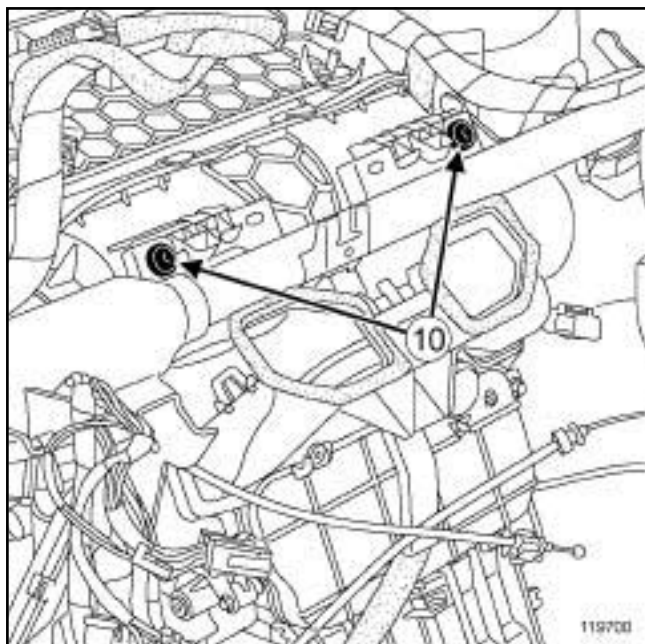
- Remove the radio (see **Radio: Removal - Refitting**) (86A, Radio).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Remove the storage compartment.
- Remove:
 - the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
 - the windscreen pillar trims (see **Windscreen pillar trim: Removal - Refitting**) (71A, Body internal trim),
 - the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
 - the steering column (see **Steering column: Removal - Refitting**) (36A, Steering assembly).
- Move aside the wiring.

Distribution unit: Removal - Refitting

CLIMATE CONTROL



119700

 Remove:

- the bolts (10) from the distribution unit,
- the dashboard cross member (see **Dashboard cross member: Removal - Refitting**) (42A, Upper front structure).

 Put a protective cover on the floor carpet.

II - OPERATION FOR REMOVAL OF PART CONCERNED

- Remove the distribution unit.
- Remove the components from the distribution unit:
 - the A-pillar air distribution ducts,
 - the passenger compartment fan assembly control unit,
 - the fan assembly,
 - the heater matrix,
 - the air mixing motor,
 - the air distribution motor,
 - the air recirculation control motor,
 - the cabin filter,
 - the heating resistor,
 - the expansion valve.

REFITTING
I - REFITTING PREPARATION OPERATION

- Refit the components to the distribution unit:
 - the expansion valve,
 - the heating resistor,
 - the cabin filter,
 - the air recirculation control motor,
 - the air distribution motor,
 - the air mixing motor,
 - the heater matrix,
 - the fan assembly,
 - the passenger compartment fan assembly control unit,
 - the A-pillar air distribution ducts.

II - REFITTING OPERATION FOR PART CONCERNED

- Refit the distribution unit.

III - FINAL OPERATION

- Remove the protective cover on the floor carpet.
- Refit:
 - the dashboard cross member (see **Dashboard cross member: Removal - Refitting**) (42A, Upper front structure),
 - the distribution unit bolts.
- Fit the wiring.
- Refit:
 - the steering column (see **Steering column: Removal - Refitting**) (36A, Steering assembly),
 - the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
 - the windscreen pillar trims (see **Windscreen pillar trim: Removal - Refitting**) (71A, Body internal trim),
 - the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment).

Distribution unit: Removal - Refitting

CLIMATE CONTROL

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Refit the storage compartment.

RADIO NO. 01 or RADIO NO. 03

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

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Refit the tweeters (see **Tweeter: Removal - Refitting**) (86A, Radio).

- Refit:

- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) ,
- the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),
- the passenger front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (88C, Airbags and pretensioners),
- the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (84A, Control - Signals),
- the steering wheel (see **Steering wheel: Removal - Refitting**) (36A, Steering assembly),
- the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (88C, Airbags and seat belt pretensioners).

ENGINE REV COUNTER

- Refit the rev counter (see **Rev counter: Removal - Refitting**) (83A, Instrument panel).

- Connect:

- the air filter unit air inlet pipe onto the air filter unit,
- the heater matrix inlet and outlet hoses.

- Fit the heater matrix inlet and outlet hose clips using the **(Mot. 1448)** or **(Mot. 1202-01)** or **(Mot. 1202-02)**.

- Remove the **(Ms. 583)** on the heater matrix inlet and outlet hoses.

D7F

- Refit the air outlet pipe onto the air filter unit.

- Fit the air filter unit air inlet pipe.

- Remove the plugs from the openings.

- Fit the connecting pipes.

- Refit:

- the bolt to the expansion valve - compressor connecting pipe,
- the bolt to the condenser - expansion valve connecting pipe.

- Refit:

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

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

- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (88C, Airbags and pretensioners).

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

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

- Consult the refrigerant and oil quantity values before filling the circuit (see **62A, Air conditioning, Air conditioning: Parts and consumables for the repair**, page 62A-2) .

- Fill the refrigerant circuit using the **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page 62A-8) .

- Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page 62A-4) .

Distribution unit: Removal - Refitting

CLIMATE CONTROL


- Check for leaks (see **62A, Air conditioning, Refrigerant circuit: Check**, page **62A-7**).

Heater matrix: Removal - Refitting

LEFT-HAND DRIVE

| Special tooling required | |
|--------------------------|--|
| Ms. 583 | Pipe clamps. |
| Mot. 1448 | Remote operation pliers for hose clips. |
| Mot. 1202-01 | Clip pliers for hose clips (large size). |
| Mot. 1202-02 | Clip pliers for hose clips (small size) |

| Equipment required | |
|--------------------|--|
| Diagnostic tool | |

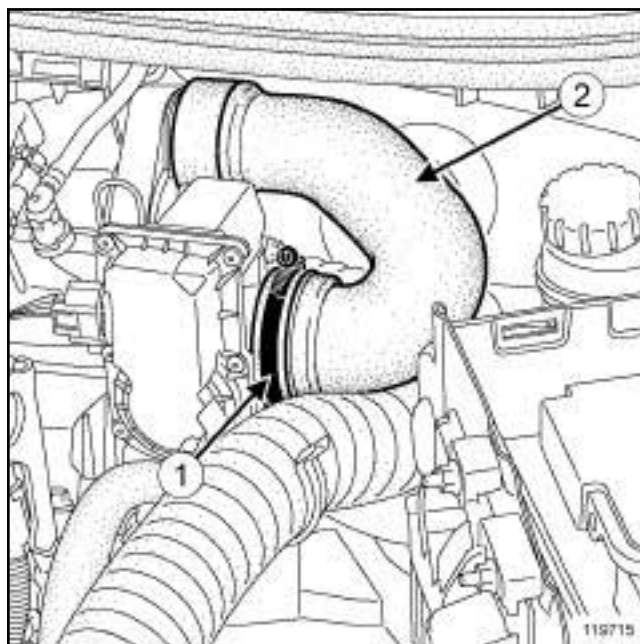
| Tightening torques  | |
|--|---------------|
| cross member reinforcement bolts | 21 N.m |

REMOVAL

I - REMOVAL PREPARATION OPERATION

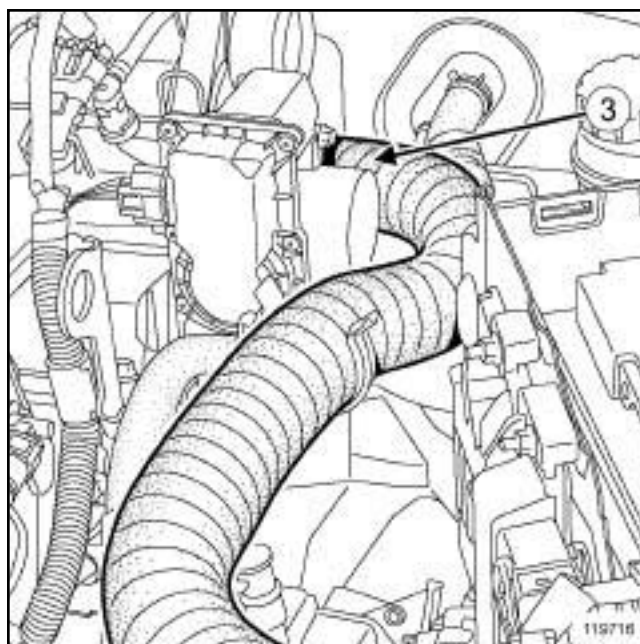
- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (88C, Airbags and pretensioners).
- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- Remove:
 - the windscreen wiper arms (see **Windscreen wiper arm: Removal - Refitting**) (85A, Wiping - Washing),
 - the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment),
 - the scoop under the scuttle panel grille (see **Scoop under the scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment).

D7F



119715

- Loosen the clip (1) of the air outlet pipe on the air filter unit.
- Remove the air outlet pipe from the air filter unit (2).

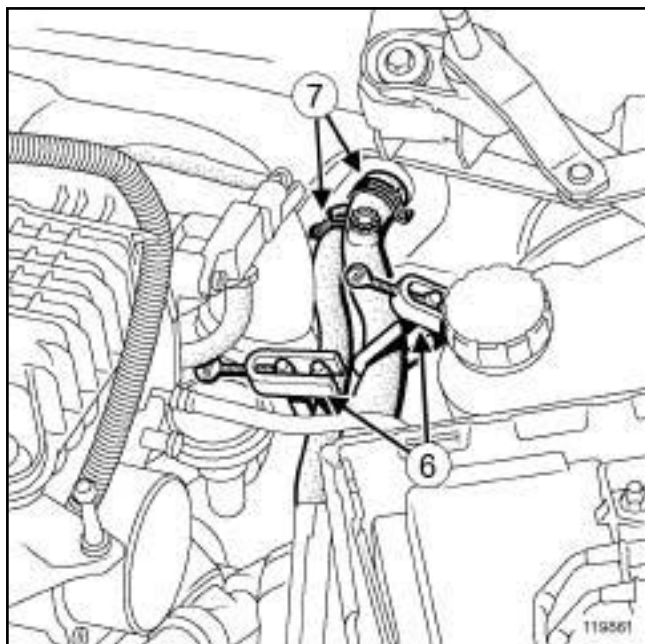


119716

- Disconnect the air filter unit air inlet pipe (3) on the air filter unit.
- Move aside the air inlet pipe from the air filter unit.

Heater matrix: Removal - Refitting

LEFT-HAND DRIVE



119861

- Fit the **(Ms. 583)** (6) on the heater matrix inlet and outlet hoses.
- Separate the heater matrix inlet and outlet hose clips (7) using the **(Mot. 1448)** or **(Mot. 1202-01)** or **(Mot. 1202-02)**.
- Disconnect the heater matrix inlet and outlet hoses.

ENGINE REV COUNTER

- Remove the rev counter (see **Rev counter: Removal - Refitting**) (83A, Instrument panel).
- Remove:
- the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (88C, Airbags and pretensioners),
 - the steering wheel (see **Steering wheel: Removal - Refitting**) (36A, Steering assembly),
 - the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (84A, Control - Signals),
 - the passenger front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (88C, Airbags and pretensioners),
 - the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),
 - the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) .

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Remove the tweeters (see **Tweeter: Removal - Refitting**) (86A, Radio).

RADIO NO. 01 or RADIO NO. 03

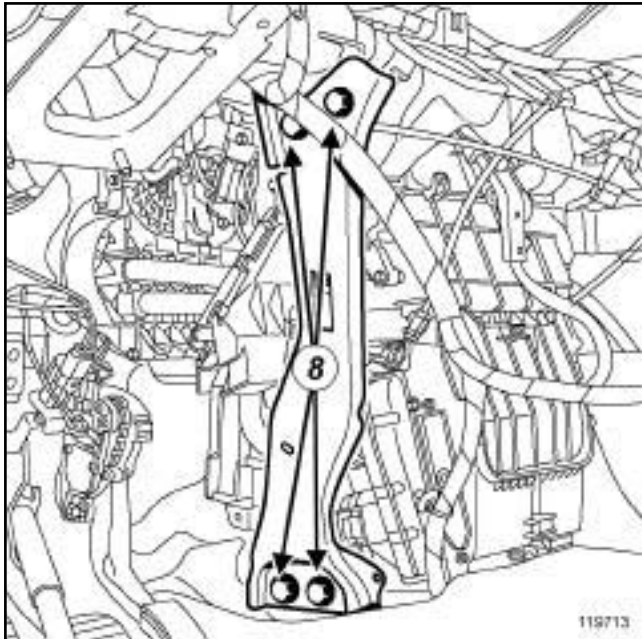
- Remove the radio (see **Radio: Removal - Refitting**) (86A, Radio).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Remove the storage compartment.
- Remove:
 - the centre console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
 - the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

Heater matrix: Removal - Refitting

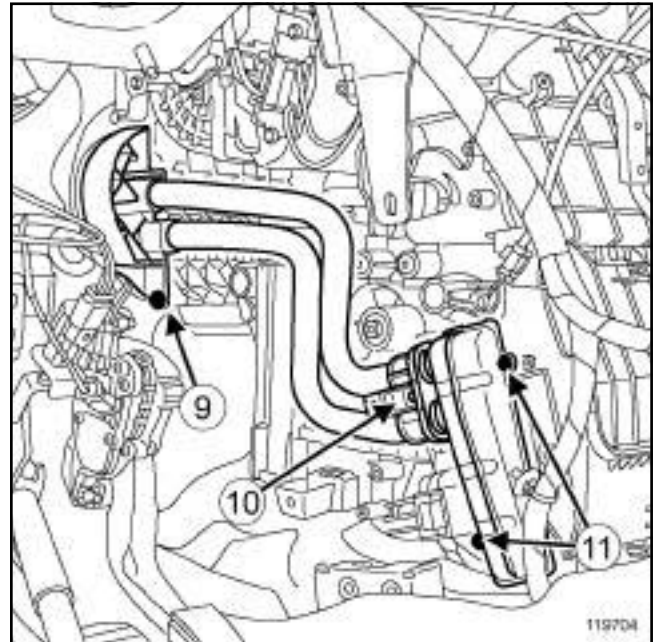
LEFT-HAND DRIVE



119713

- Remove:
 - the cross member reinforcement bolts (8) ,
 - the cross member reinforcement.
- Put a protective cover on the floor carpet.

II - OPERATION FOR REMOVAL OF PART CONCERNED



119704

- Remove:
 - the bolt (9) from the heater matrix pipe bracket on the distribution unit,
 - the heater matrix pipe bracket on the distribution unit,
 - the bolt (10) from the heater matrix pipe bracket.
 - the heater matrix pipe bracket,
 - the heater matrix bolts (11) .
- Put a container in place to recover the coolant.
- Remove the heater matrix and its pipes.
- Unclip the pipe bracket.
- Remove the heater matrix pipes.

REFITTING

I - REMOVAL PREPARATION OPERATION

- Replace the seals between the pipes and the heater matrix.

WARNING

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

Heater matrix: Removal - Refitting

LEFT-HAND DRIVE

II - REFITTING OPERATION FOR PART CONCERNED

- Fit the pipes on the heater matrix with new seals.
- Clip on the pipe bracket.
- Refit the heater matrix and its pipes.
- Refit:
 - the heater matrix bolts.
 - the heater matrix pipe bracket,
 - the bolt on the heater matrix pipe bracket,
 - the heater matrix pipe bracket on the distribution unit,
 - the heater matrix pipe bracket bolt on the distribution unit,

III - FINAL OPERATION

- Remove the protective cover on the floor carpet.
- Refit:
 - the cross member reinforcement,
 - the cross member reinforcement bolts,
- Torque tighten the **cross member reinforcement bolts (21 N.m)**.
- Refit:
 - the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
 - the centre console (see **Centre console: Removal - Refitting**) (57A, Interior equipment).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Refit the storage compartment.

RADIO NO. 01 or RADIO NO. 03

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

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Refit the tweeters (see **Tweeter: Removal - Refitting**) (86A, Radio).

- Refit:
 - the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) ,
 - the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),
 - the passenger front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (88C, Airbags and pretensioners),
 - the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (84A, Control - Signals),
 - the steering wheel (see **Centre console: Removal - Refitting**) (36A, Steering assembly),
 - the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (88C, Airbags and seat belt pretensioners).

ENGINE REV COUNTER

- Refit the rev counter (see **Rev counter: Removal - Refitting**) (83A, Instrument panel).

D7F

- Refit the air outlet pipe onto the air filter unit.
- Fit the air filter unit air inlet pipe.
- Refit the air filter unit air inlet pipe on the air filter unit

- Refit the heater matrix inlet and outlet hoses.
- Fit the heater matrix inlet and outlet hose clips using the **(Mot. 1448)** or **(Mot. 1202-01)** or **(Mot. 1202-02)**.
- Remove the **(Ms. 583)** on the heater matrix inlet and outlet hoses.

Heater matrix: Removal - Refitting

LEFT-HAND DRIVE

- Refit:
 - the scoop under the scuttle panel grille (see **Scoop under the scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment),
 - the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment),
 - the windscreen wiper arms (see **Windscreen wiper arm: Removal - Refitting**) (85A, Wiping - Washing).
- Connect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (88C, Airbags and pretensioners).
- Fill up and bleed the cooling system (see **Cooling system: Draining - Refilling**) (19A, Cooling).
- Check the cooling circuit (see **Engine cooling system: Check**) (19A, Cooling).

Heater matrix: Removal - Refitting

RIGHT-HAND DRIVE

Special tooling required

| | |
|---------------------|--|
| Ms. 583 | Pipe clamps. |
| Mot. 1448 | Remote operation pliers for hose clips. |
| Mot. 1202-01 | Clip pliers for hose clips (large size). |
| Mot. 1202-02 | Clip pliers for hose clips (small size) |

Equipment required

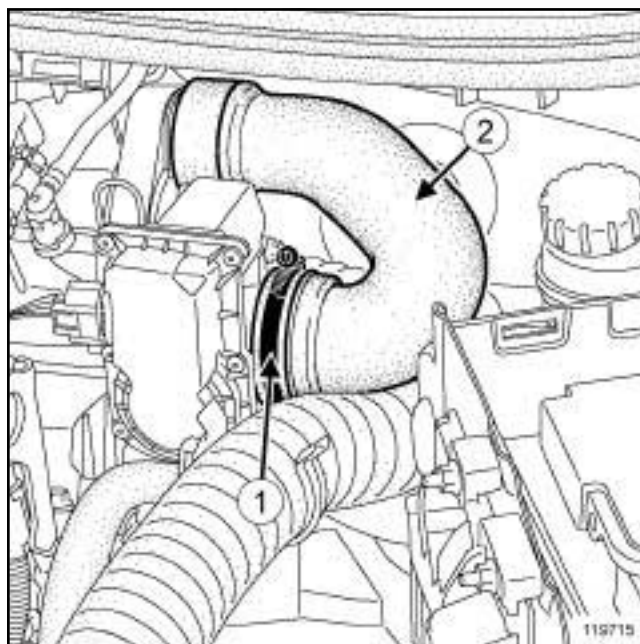
Diagnostic tool

REMOVAL

I - REMOVAL PREPARATION OPERATION

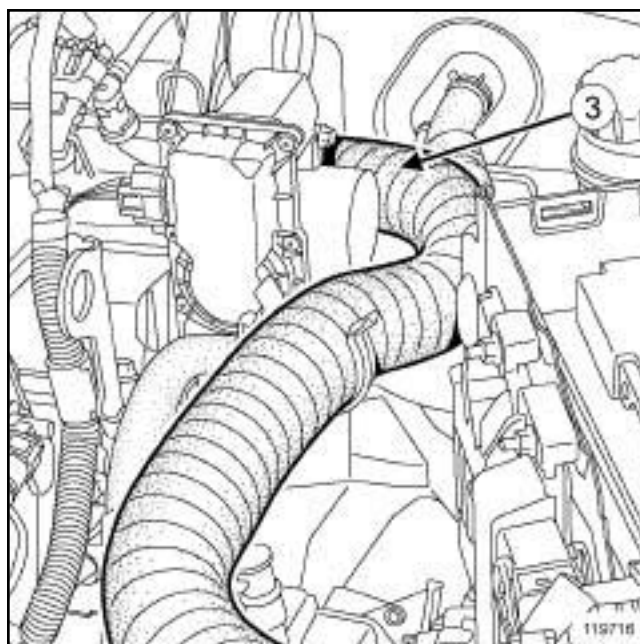
- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (88C, Airbags and pretensioners).
- Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- Remove:
 - the windscreen wiper arms (see **Windscreen wiper arm: Removal - Refitting**) (85A, Wiping - Washing),
 - the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment),
 - the scoop under the scuttle panel grille (see **Scoop under the scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment).

D7F



119715

- Loosen the clip (1) of the air outlet pipe on the air filter unit.
- Remove the air outlet pipe from the air filter unit (2).

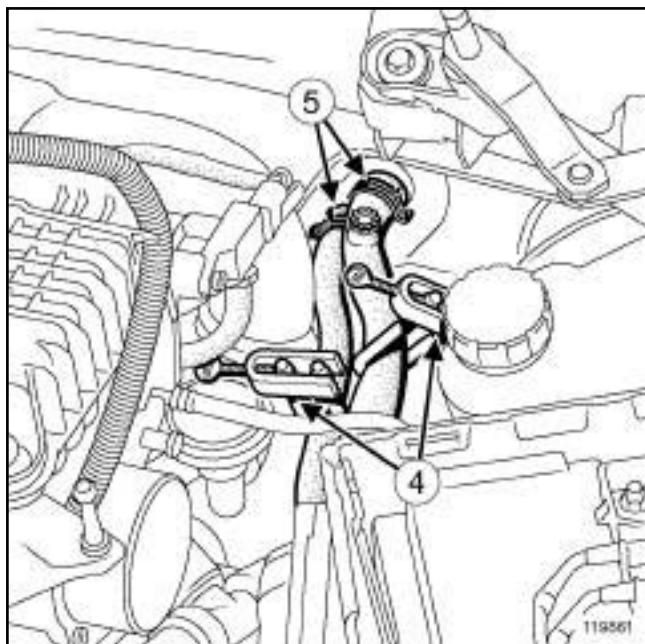


119716

- Disconnect the air filter unit air inlet pipe (3) on the air filter unit.
- Move aside the air inlet pipe from the air filter unit.

Heater matrix: Removal - Refitting

RIGHT-HAND DRIVE



119861

- Fit the (4) (**Ms. 583**) on the heater matrix inlet and outlet hoses.
- Separate the heater matrix inlet and outlet hose clips (5) using the (**Mot. 1448**) or (**Mot. 1202-01**) or (**Mot. 1202-02**).
- Disconnect the heater matrix inlet and outlet hoses.

ENGINE REV COUNTER

- Remove the rev counter (see **Rev counter: Removal - Refitting**) (83A, Instrument panel).

- Remove:

- the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (88C, Airbags and pretensioners),
- the steering wheel (see **Steering wheel: Removal - Refitting**) (36A, Steering assembly),
- the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (84A, Control - Signals),
- the passenger front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (88C, Airbags and pretensioners),
- the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),
- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65).

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Remove the tweeters (see **Tweeter: Removal - Refitting**) (86A, Radio).

RADIO NO. 01 or RADIO NO. 03

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

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Remove the storage compartment.

- Remove:

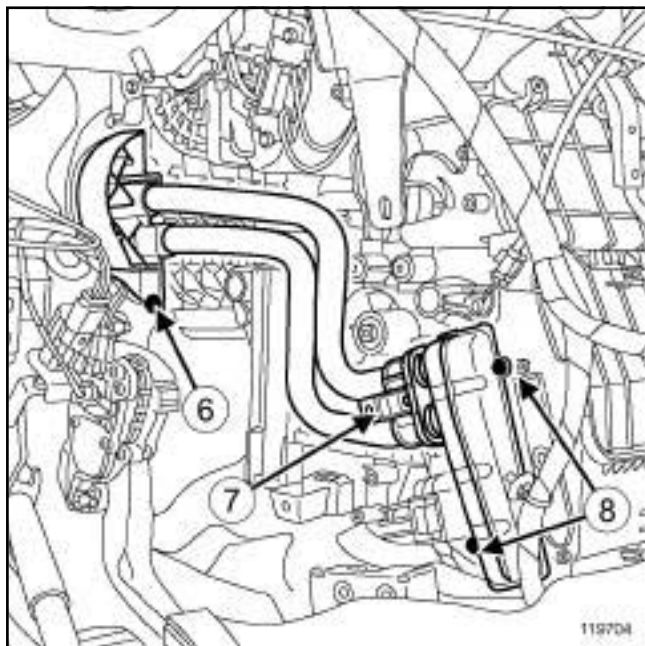
- the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment),
- the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment).

- Put a protective cover on the floor carpet.

Heater matrix: Removal - Refitting

RIGHT-HAND DRIVE

II - OPERATION FOR REMOVAL OF PART CONCERNED



119704

- Remove:
 - the bolt (6) from the heater matrix pipe bracket on the distribution unit,
 - the heater matrix pipe bracket on the distribution unit,
 - the bolt (7) from the heater matrix pipe bracket.
 - the heater matrix pipe bracket,
 - the heater matrix bolts (8) .
- Put a container in place to recover the coolant.
- Remove the heater matrix and its pipes.
- Unclip the pipe bracket.
- Remove the heater matrix pipes.

REFITTING

I - REMOVAL PREPARATION OPERATION

- Always replace the seals between the pipes and the heater matrix.

WARNING

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

II - REFITTING OPERATION FOR PART CONCERNED

- Fit the pipes on the heater matrix with new seals.
- Clip on the pipe bracket.
- Refit the heater matrix and its pipes.
- Refit:
 - the heater matrix bolts,
 - the heater matrix pipe bracket,
 - the bolt on the heater matrix pipe bracket,
 - the heater matrix pipe bracket on the distribution unit,
 - the heater matrix pipe bracket bolt on the distribution unit.

III - FINAL OPERATION

- Remove the protective cover on the floor carpet.
- Refit:
 - the dashboard (see **Dashboard: Removal - Refitting**) (57A, Interior equipment),
 - the central console (see **Centre console: Removal - Refitting**) (57A, Interior equipment).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Refit the storage compartment.

RADIO NO. 01 or RADIO NO. 03

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

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Refit the tweeters (see **Tweeter: Removal - Refitting**) (86A, Radio).

- Refit:
 - the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) ,

Heater matrix: Removal - Refitting

RIGHT-HAND DRIVE

- the instrument panel (see **Instrument panel: Removal - Refitting**) (83A, Instrument panel),
- the passenger front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (88C, Airbags and pretensioners),
- the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (84A, Control - Signals),
- the steering wheel (see **Centre console: Removal - Refitting**) (36A, Steering assembly),
- the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (88C, Airbags and seat belt pretensioners).

ENGINE REV COUNTER

- Refit the rev counter (see **Rev counter: Removal - Refitting**) (83A, Instrument panel).

D7F

- Refit the air outlet pipe onto the air filter unit.
- Fit the air filter unit air inlet pipe.
- Connect the air filter unit air inlet pipe on the air filter unit.
- Connect the heater matrix inlet and outlet hoses.
- Fit the heater matrix inlet and outlet hose clips using the **(Mot. 1448)** or **(Mot. 1202-01)** or **(Mot. 1202-02)**.
- Remove the **(Ms. 583)** from the heater matrix inlet and outlet hoses.
- Refit:
 - the scoop under the scuttle panel grille (see **Scoop under the scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment),
 - the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment),
 - the windscreen wiper arms (see **Windscreen wiper arm: Removal - Refitting**) (85A, Wiping - Washing).
- Connect the battery (see **Battery: Removal - Refitting**) (80A, Battery).

- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (88C, Airbags and pretensioners).
- Fill up and bleed the cooling system (see **Cooling system: Draining - Refilling**) (19A, Cooling).
- Check the cooling circuit (see **Engine cooling system: Check**) (19A, Cooling).

Fan assembly: Removal - Refitting

LEFT-HAND DRIVE

Equipment required

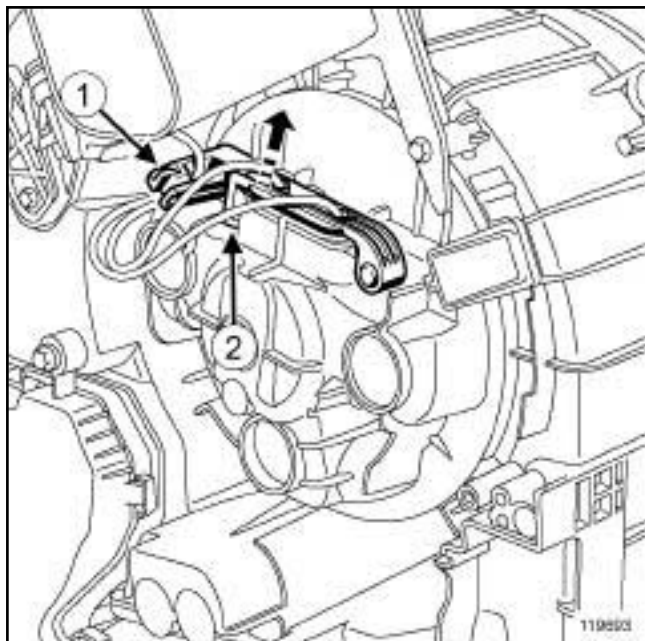
Diagnostic tool

REMOVAL

I - REMOVAL PREPARATION OPERATION

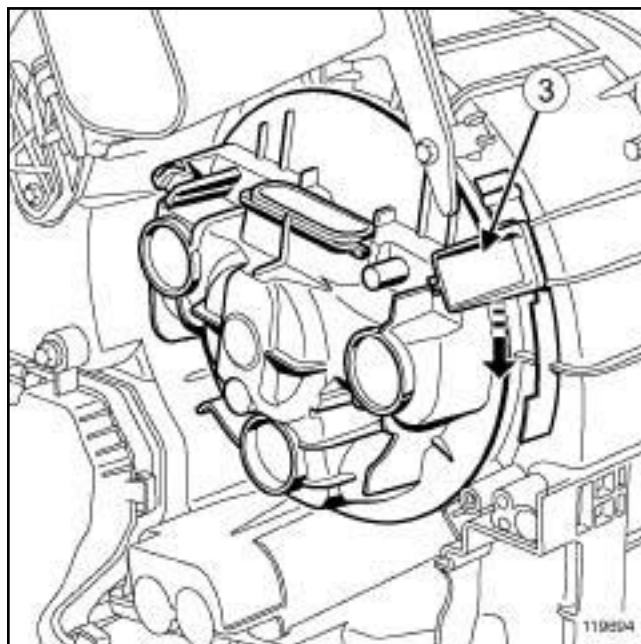
- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413 Fault finding, 88C, Airbags and pretensioners).
- Disconnect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).
- Remove:
 - the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners),
 - the front right-hand side air distribution duct (see **61A, Heating, Front side air distribution duct: Removal - Refitting**, page 61A-7) .

II - OPERATION FOR REMOVAL OF PART CONCERNED



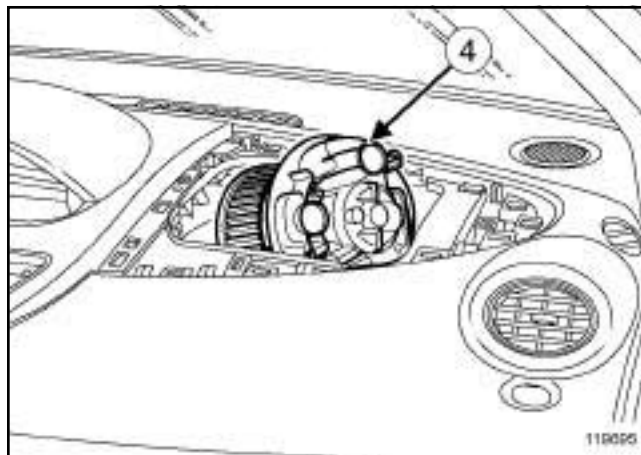
119693

- Unpick the blower unit wiring harness (1) .
- Unclip the blower unit connector (2) .
- Lift the blower unit connector.
- Disconnect the blower unit connector.



119694

- Press on the blower unit tab (3) .
- Turn the blower unit a quarter of a turn clockwise.



119695

- Remove the blower unit (4) .

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Refit the blower unit.
- Press on the blower unit tab.
- Turn the blower unit a quarter of a turn anti-clockwise.
- Check that the blower unit is in place.
- Connect the blower unit connector.

Fan assembly: Removal - Refitting

LEFT-HAND DRIVE

- Clip on the blower unit connector.
- Clip on the blower unit wiring connector.

II - FINAL OPERATION.

- Refit:
 - the front right-hand side air distribution duct (see **61A, Heating, Front side air distribution duct: Removal - Refitting**, page **61A-7**),
 - the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners).
- Connect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).
- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413 Fault finding, 88C, Airbags and pretensioners).

Fan assembly: Removal - Refitting

RIGHT-HAND DRIVE

Equipment required

Diagnostic tool

REMOVAL

I - REMOVAL PREPARATION OPERATION

- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413, 88C, Airbags and pretensioners).
- Disconnect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).
- Remove:
 - the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners),
 - the steering wheel (see **Steering wheel: Removal - Refitting**) (MR 411, 36B, Power-assisted steering),
 - the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (MR 411, 84A, Control - Signals),
 - the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and seat belt pretensioners),
 - the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel),
 - the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page **61A-65**).

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Remove the tweeter speakers (see **Tweeter: Removal - Refitting**) (MR 411, 86A, Radio).

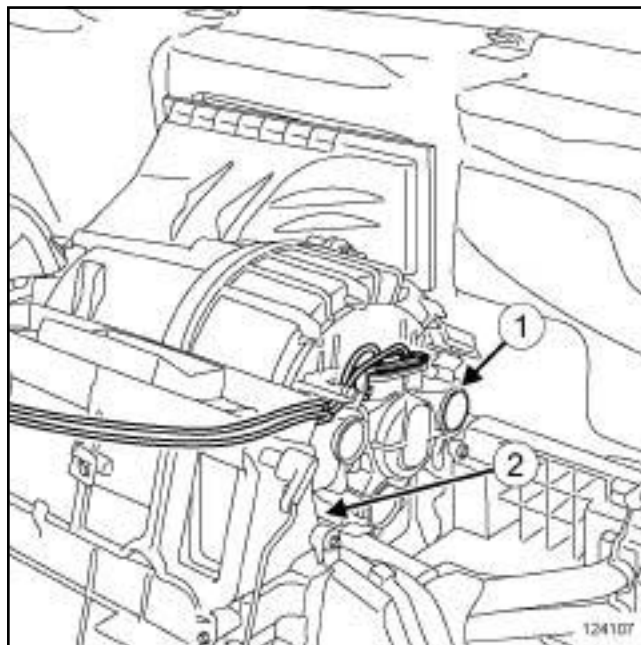
RADIO NO. 01 or RADIO NO. 03

- Remove the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Remove the glovebox.
- Remove:
 - the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment),
 - the dashboard (see **Dashboard: Removal - Refitting**) (MR 412, 57A, Interior equipment).

II - REMOVAL OPERATION FOR PART CONCERNED

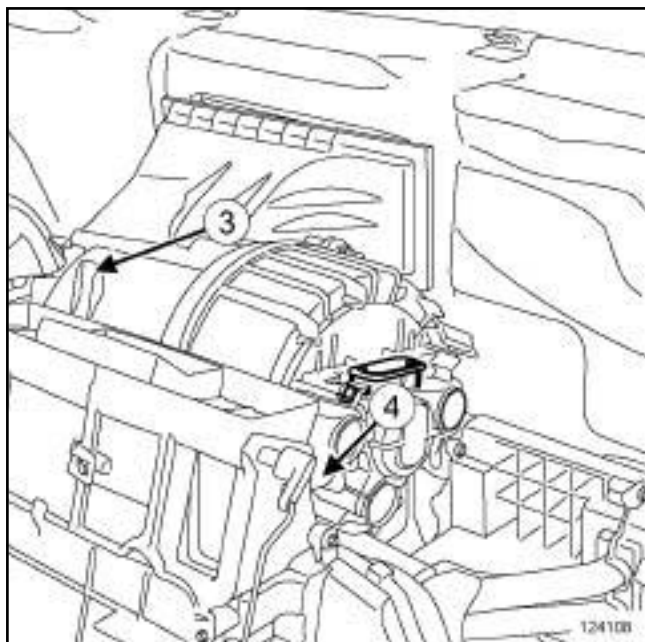


124107

- Unclip the fan assembly wiring (1).
- Unclip the blower unit connector (2).
- Lift the blower unit connector.
- Disconnect the blower unit connector.

Fan assembly: Removal - Refitting

RIGHT-HAND DRIVE



124108

- Press on the blower unit tab (3) .
- Turn the blower unit a quarter of a turn clockwise.
- Remove the blower unit (4) .

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Refit the blower unit.
- Press on the blower unit tab.
- Turn the blower unit a quarter of a turn anti-clockwise.
- Check that the blower unit is in place.
- Connect the blower unit connector.
- Clip on the blower unit connector.
- Clip on the fan assembly connector wiring.

II - FINAL OPERATION.

- Refit:
 - the dashboard (see **Dashboard: Removal - Refitting**) (MR 412, 57A, Interior equipment),
 - the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Refit the glovebox.

RADIO NO. 01 or RADIO NO. 03

- Refit the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Refit the tweeter speakers (see **Tweeter: Removal - Refitting**) (MR 411, 86A, Radio).

- Refit:

- the control panel (see **61A, Heating, Control panel: Removal - Refitting**, page 61A-65) ,
- the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel),
- the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and seat belt pretensioners),
- the steering column switch assembly (see **Steering column switch assembly: Removal - Refitting**) (MR 411, 84A, Control - Signals),
- the steering wheel (see **Steering wheel: Removal - Refitting**) (MR 411, 36B, Power-assisted steering),
- the driver's front airbag (see **Driver's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and seat belt pretensioners).

- Connect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).

- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413, 88C, Airbags and pretensioners).

Heating resistors: Removal - Refitting

LEFT-HAND DRIVE

REMOVAL

I - REMOVAL PREPARATION OPERATION

- Remove the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment).

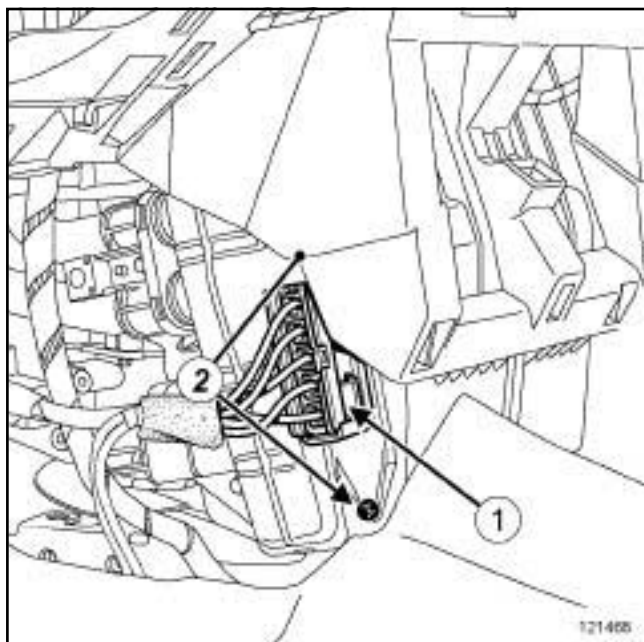
RADIO NO. 01 or RADIO NO. 03

- Remove the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

VEHICLE WITHOUT RADIO

- Unclip the glovebox.
- Remove the dashboard lower trim (see **Centre front panel: Removal - Refitting**) (MR 412, 57A, Interior equipment).

II - OPERATION FOR REMOVAL OF PART CONCERNED



121468

- Disconnect the connector (1) from the heating resistor.
- Remove:
 - the heating resistor bolts (2) ,
 - the heating resistor.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Refit:
 - the heating resistor,
 - the heating resistor bolts.
- Connect the heating resistor connector.

II - FINAL OPERATION.

- Refit the dashboard lower trim (see **Centre front panel: Removal - Refitting**) (MR 412, 57A, Interior equipment).

VEHICLE WITHOUT RADIO

- Clip the glovebox in position.

RADIO NO. 01 or RADIO NO. 03

- Refit the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

- Refit the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment).

LEFT-HAND DRIVE

Special tooling required

Car. 1363 Set of trim removal levers.

Equipment required

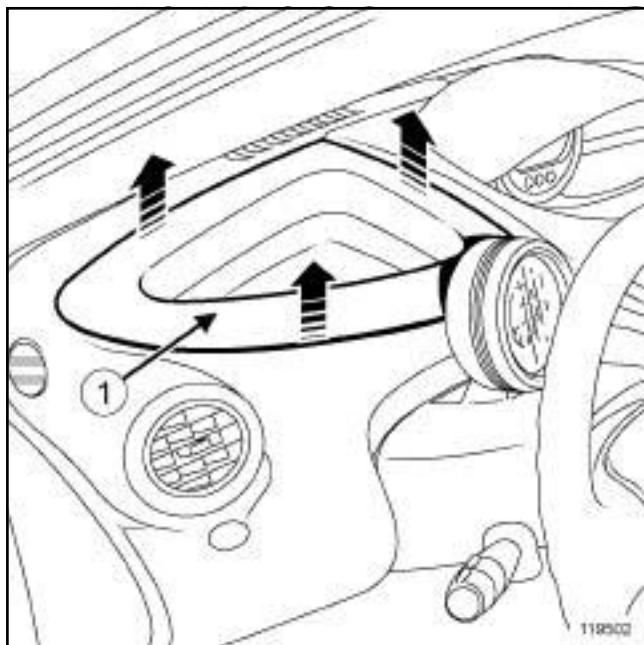
Diagnostic tool

REMOVAL

I - REMOVAL PREPARATION OPERATION

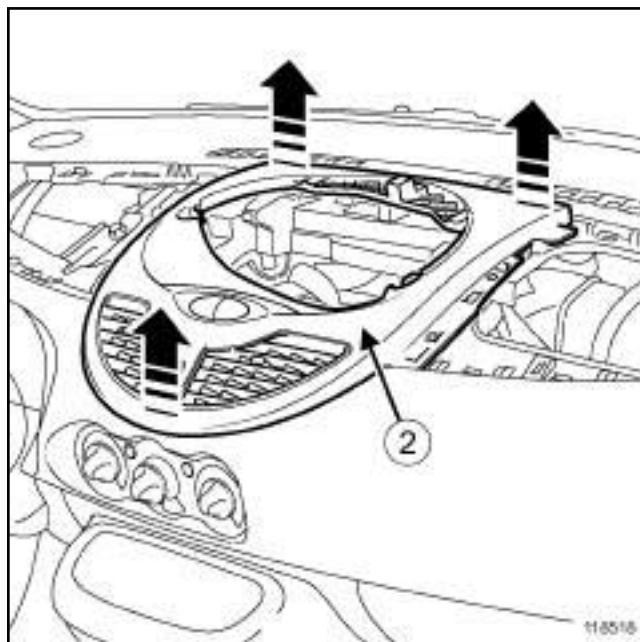
AIR CONDITIONING or STANDARD HEATING

- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**)(MR 413, 88C, Airbags and seat belt pretensioners).
- Disconnect the battery (see) (MR 411, 80A, Battery).



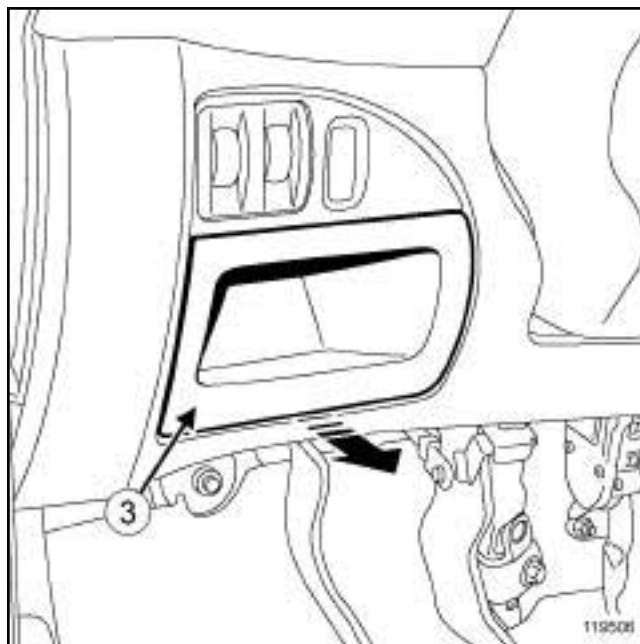
119502

- Unclip the upper storage compartment (1) on the driver's side using the (**Car. 1363**).
- Remove:
 - the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners),
 - the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel).



119518

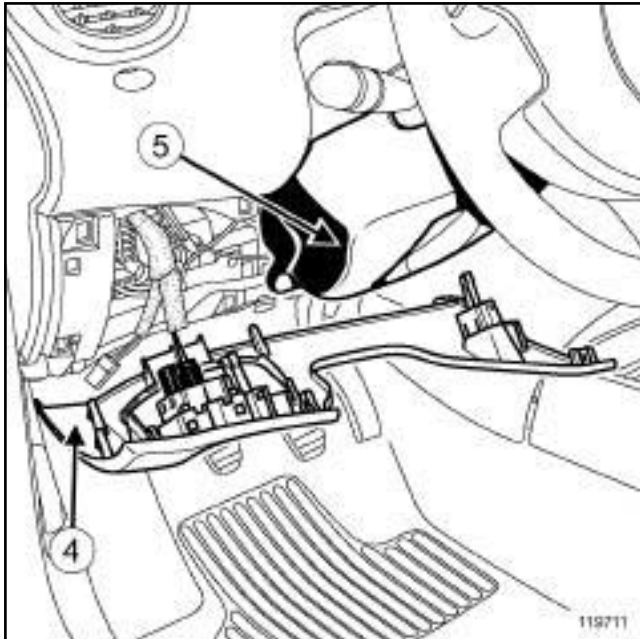
- Unclip the "trim - air vent" assembly (2) .
- Disconnect the hazard warning lights switch connector.



119506

- Unclip:
 - the fuse access flap (3) ,
 - the dashboard lower trim.

LEFT-HAND DRIVE

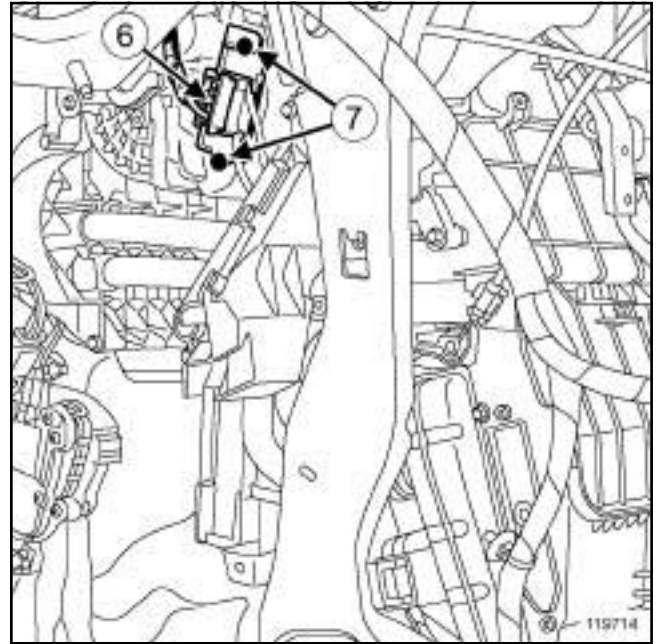


119711

- Disconnect the connectors from the lower trim on the dashboard (4) .
- Remove:
 - the steering wheel lower cover bolt,
 - the steering wheel lower cover (5) .

II - OPERATION FOR REMOVAL OF PART CONCERNED

CLIMATE CONTROL

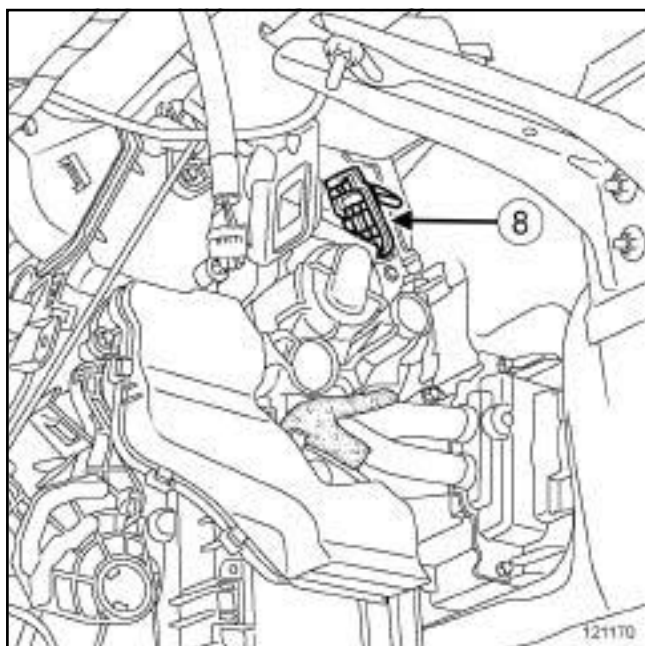


119714

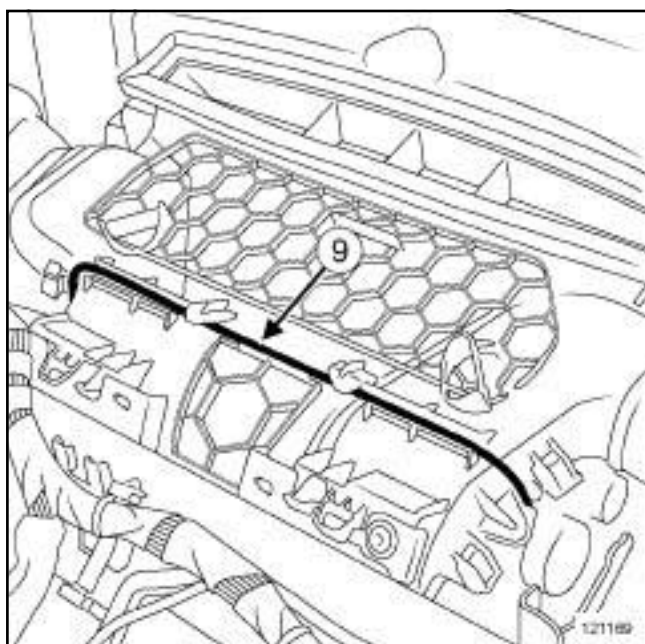
- Disconnect the connector (6) from the blower unit control unit on the left-hand side.
- Remove:
 - the blower unit control unit bolts (7) ,
 - the blower unit control unit.

LEFT-HAND DRIVE

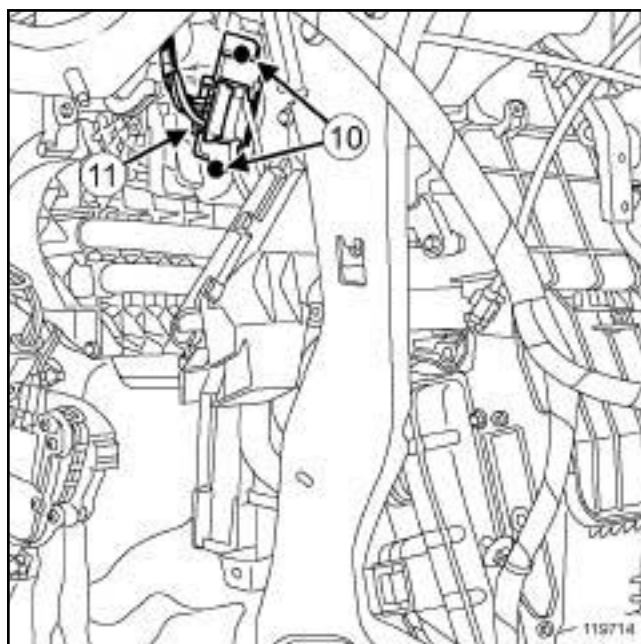
AIR CONDITIONING or STANDARD HEATING



- Disconnect the connector (8) from the blower unit control unit on the right-hand side.



- Move aside the blower unit control unit wiring harness (9).



119714

- Remove:
 - the blower unit control unit bolts (10),
 - the blower unit control unit (11).

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

AIR CONDITIONING or STANDARD HEATING

- Refit:
 - the blower unit control unit,
 - the bolts to the blower unit control unit.
- Fit the wiring harness on the blower unit control unit.
- Connect the blower unit control unit connector.

CLIMATE CONTROL

- Refit:
 - the blower unit control unit,
 - the bolts to the blower unit control unit.

LEFT-HAND DRIVE

- Connect the blower unit control unit connector.

II - FINAL OPERATION.

- Refit:
 - the steering wheel lower cover,
 - the steering wheel lower cover bolt.
- Connect the connectors to the lower trim on the dashboard.
- Clip on:
 - the dashboard lower trim,
 - the fuse access flap.

AIR CONDITIONING or STANDARD HEATING

- Connect the hazard warning lights switch connector.
- Clip on the "trim - air vent" assembly.
- Refit:
 - the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel),
 - the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners).
- Clip on the upper storage compartment on the driver's side.
- Connect the battery (see) (MR 411, 80A, Battery).
- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**)(MR 413, 88C, Airbags and seat belt pretensioners).

RIGHT-HAND DRIVE

Special tooling required

Car. 1363 Set of trim removal levers.

Equipment required

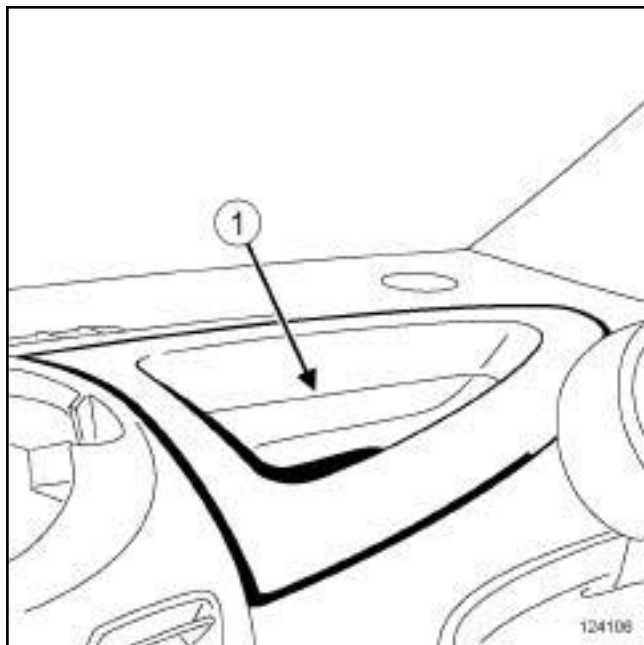
Diagnostic tool

REMOVAL

I - REMOVAL PREPARATION OPERATION

- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413, 88C, Airbags and pretensioners).
- Disconnect the battery (see) (MR 411, 80A, Battery).

AIR CONDITIONING or STANDARD HEATING

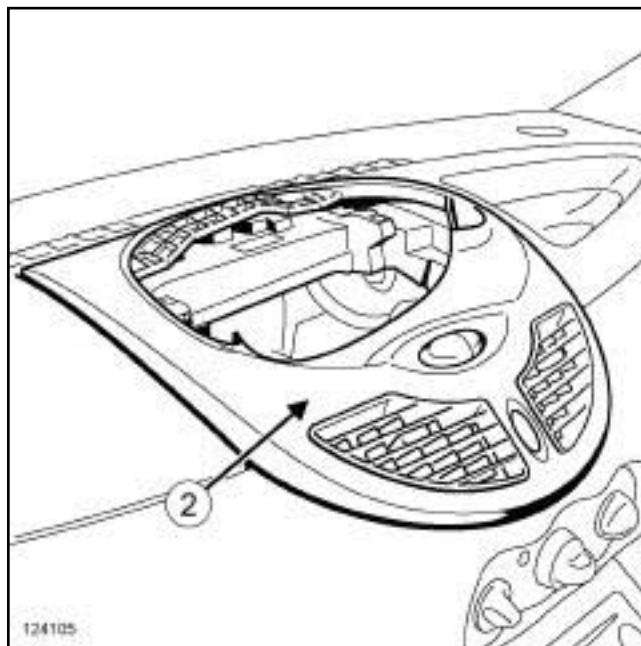


- Unclip the upper storage compartment (1) on the driver's side using the (**Car. 1363**).

- Remove the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and seat belt pretensioners).

AIR CONDITIONING or STANDARD HEATING

- Remove the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel).

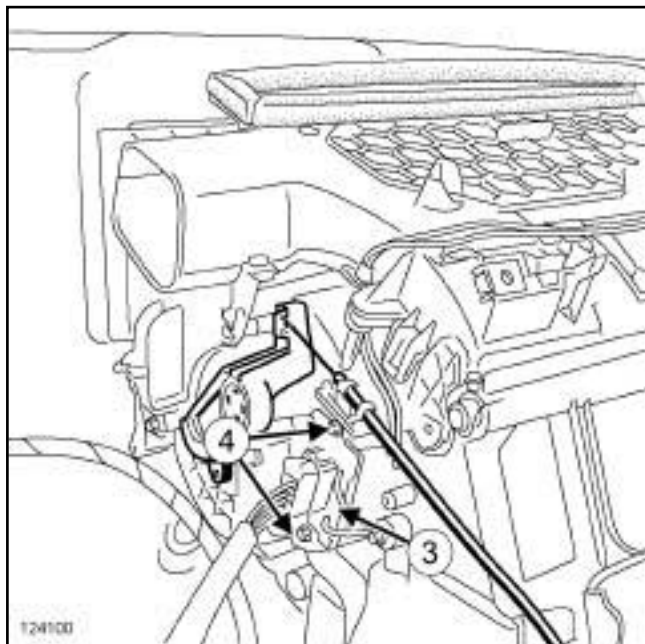


- Unclip the "trim - air vent" assembly.
- Disconnect the hazard warning lights switch connector.

RIGHT-HAND DRIVE

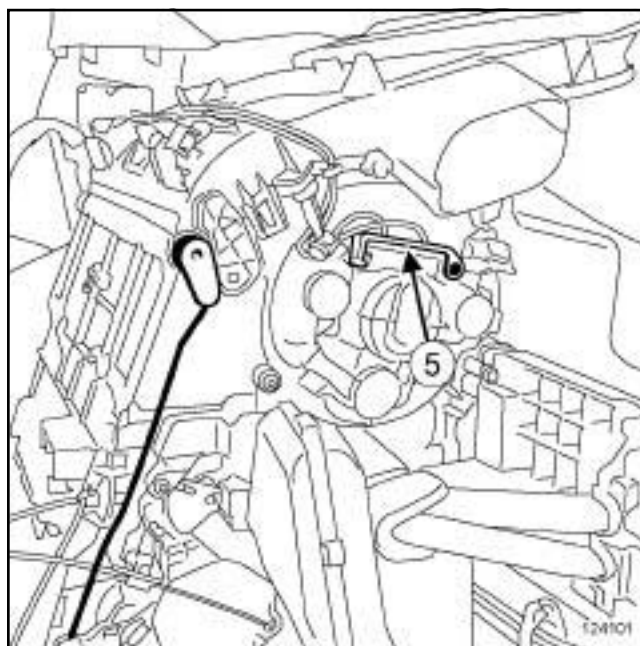
II - REMOVAL OPERATION FOR PART CONCERNED

CLIMATE CONTROL

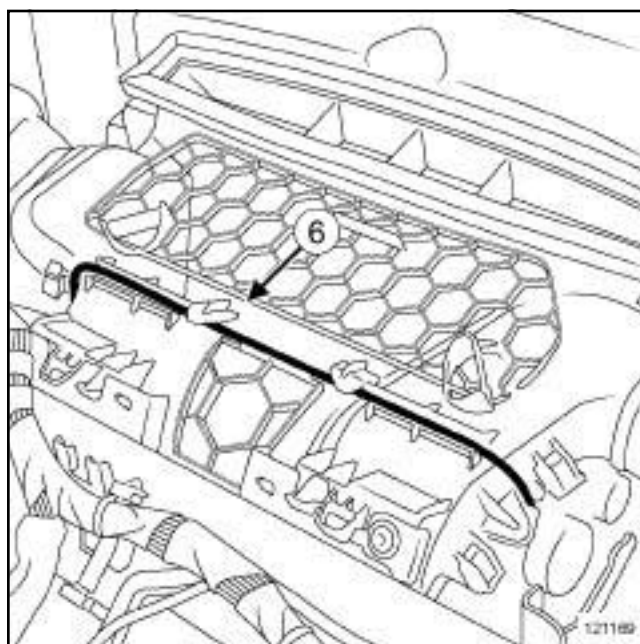


- Disconnect the connector (3) from the blower unit control unit on the left-hand side.
- Remove:
 - the blower unit control unit bolts (4) ,
 - the blower unit control unit.

AIR CONDITIONING or STANDARD HEATING

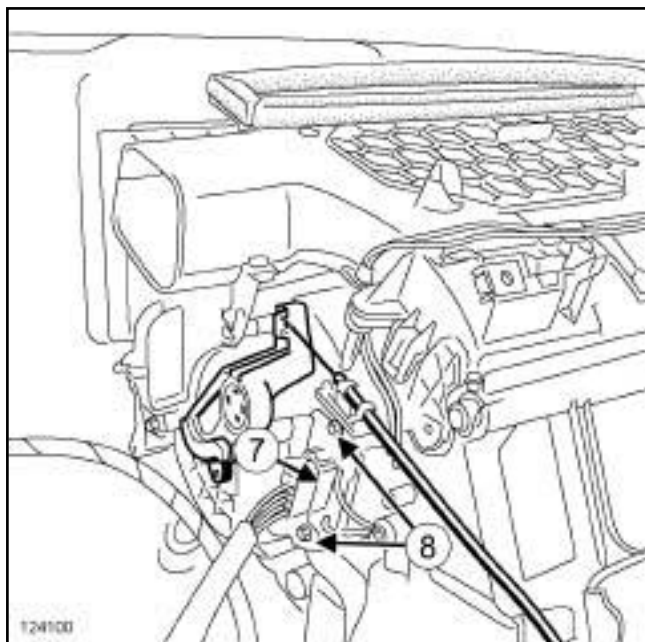


- Disconnect the connector (5) from the blower unit control unit on the right-hand side.



- Move the electrical wiring (6) away from the fan assembly control unit.

RIGHT-HAND DRIVE



124100

- Remove:
 - the blower unit control unit bolts (7) ,
 - the blower unit control unit (8) .

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

AIR CONDITIONING or STANDARD HEATING

- Refit:
 - the blower unit control unit,
 - the bolts to the blower unit control unit.
- Fit the fan assembly control unit electrical wiring.
- Connect the blower unit control unit connector.

CLIMATE CONTROL

- Refit:
 - the blower unit control unit,
 - the bolts to the blower unit control unit.

- Connect the blower unit control unit connector.

II - FINAL OPERATION.

AIR CONDITIONING or STANDARD HEATING

- Connect the hazard warning lights switch connector.
- Clip on the "trim - air vent" assembly.
- Refit the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel).

- Refit the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and seat belt pretensioners).

AIR CONDITIONING or STANDARD HEATING

- Clip on the upper storage compartment on the driver's side.
- Connect the battery (see) (MR 411, 80A, Battery).
- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413, 88C, Airbags and pretensioners).

Control panel: Removal - Refitting

Special tooling required

| | |
|-----------|-----------------------------|
| Car. 1363 | Set of trim removal levers. |
|-----------|-----------------------------|

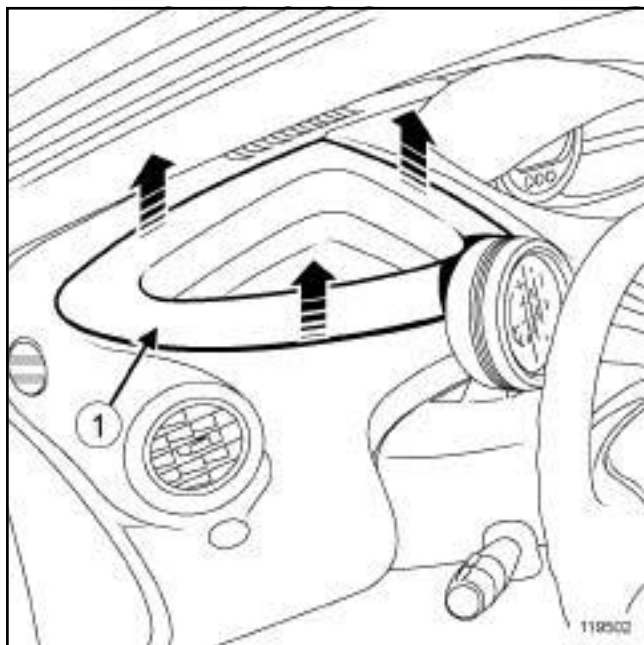
Equipment required

| |
|-----------------|
| Diagnostic tool |
|-----------------|

REMOVAL

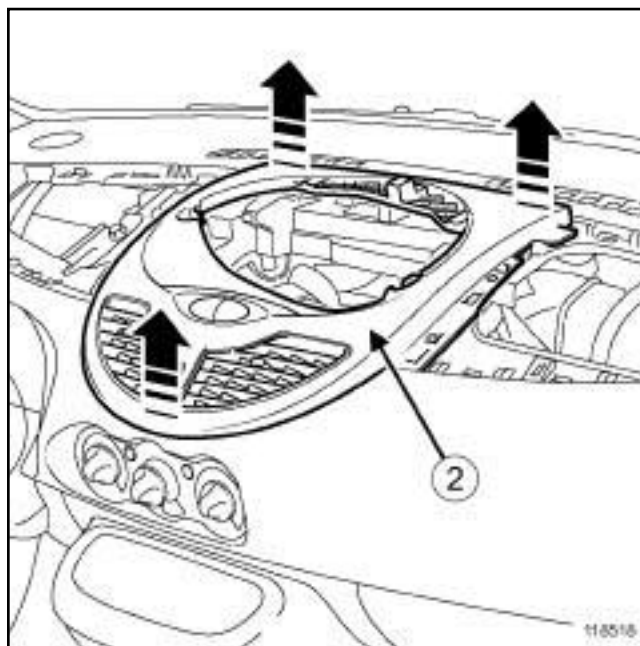
I - REMOVAL PREPARATION OPERATION

- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413, 88C, Airbags and seat belt pretensioners).
- Disconnect the battery (see) (MR 411, 80A, Battery).



119502

- Unclip the upper storage compartment (1) on the driver's side using the (**Car. 1363**).
- Remove:
 - the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners),
 - the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel).



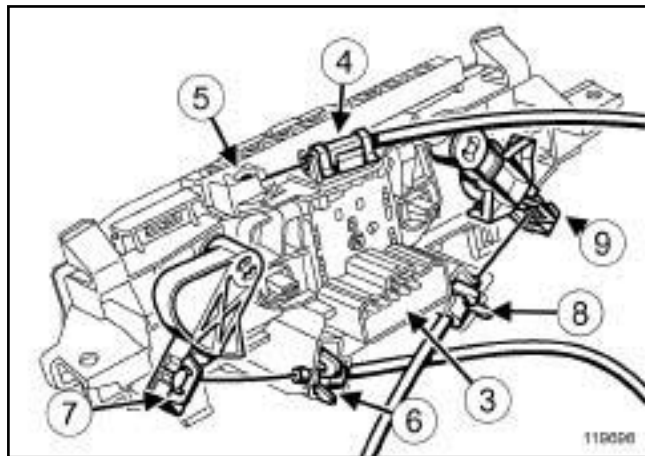
119518

- Unclip the « trim - air vent » assembly (2) .
- Disconnect the hazard warning lights switch connector.

Control panel: Removal - Refitting

II - OPERATION FOR REMOVAL OF PART CONCERNED

AIR CONDITIONING or STANDARD HEATING

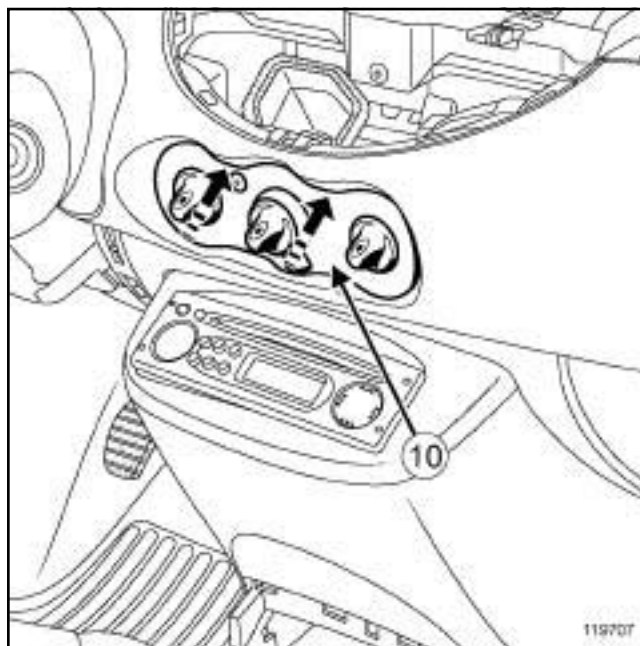


119696

- Disconnect the connector from the control panel (3) .
- Unclip the recirculation control cable (4) .
- Remove the control panel ball joint (5) .
- Unclip the air mixing control cable (6) .
- Press on the tab (7) .
- Remove the control panel ball joint.
- Unclip the air distribution control cable (8) .
- Press on the tab.
- Remove the control panel ball joint (9) .

CLIMATE CONTROL

- Disconnect the connectors from the control panel.

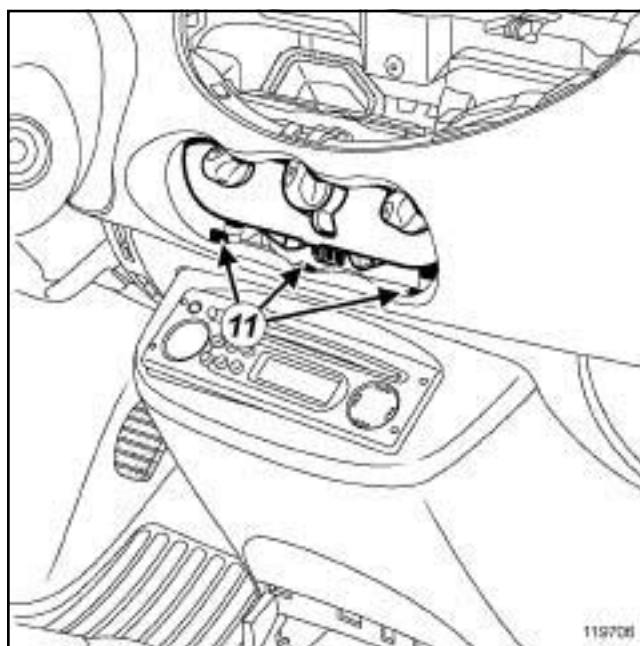


119707

- Unclip the control panel (10) .
- Remove the control panel from the dashboard from above.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED



119706

- Fit the control panel onto the dashboard from above.
- Clip on the control panel (11) .

Control panel: Removal - Refitting

CLIMATE CONTROL

- Connect the control panel connectors.

AIR CONDITIONING or STANDARD HEATING

- Press on the tab.
- Fit the control panel ball joint.
- Clip on the air distribution control cable.
- Press on the tab.
- Fit the control panel ball joint.
- Clip on the air mixing control cable.
- Fit the control panel ball joint.
- Clip on the recirculation control cable.
- Connect the control panel connector.

II - FINAL OPERATION.

- Connect the hazard warning lights switch connector.
- Clip on the « trim - air vent » assembly.
- Refit:
 - the instrument panel (see **Instrument panel: Removal - Refitting**) (MR 411, 83A, Instrument panel),
 - the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbags and pretensioners).
- Clip on the upper storage compartment on the driver's side.
- Connect the battery (see) (MR 411, 80A, Battery).
- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413, 88C, Airbags and seat belt pretensioners).

Recirculation motor: Removal - Refitting

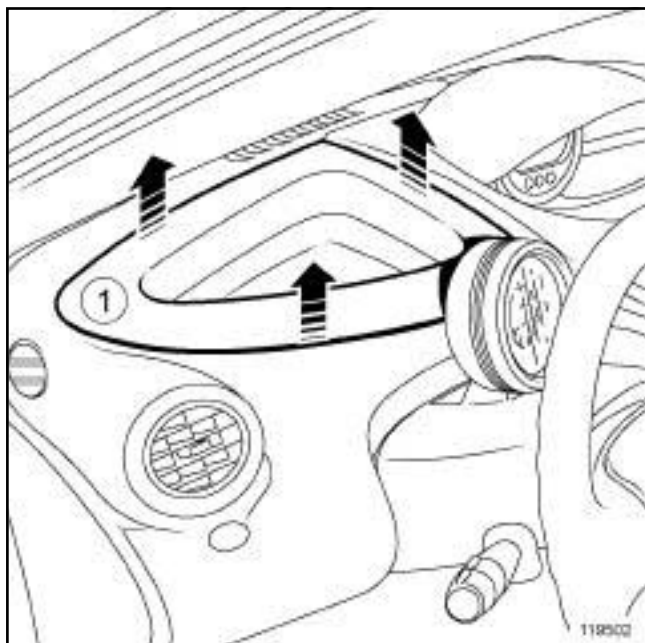
LEFT-HAND DRIVE, and CLIMATE CONTROL

Special tooling required

Car. 1363 Set of trim removal levers.

REMOVAL

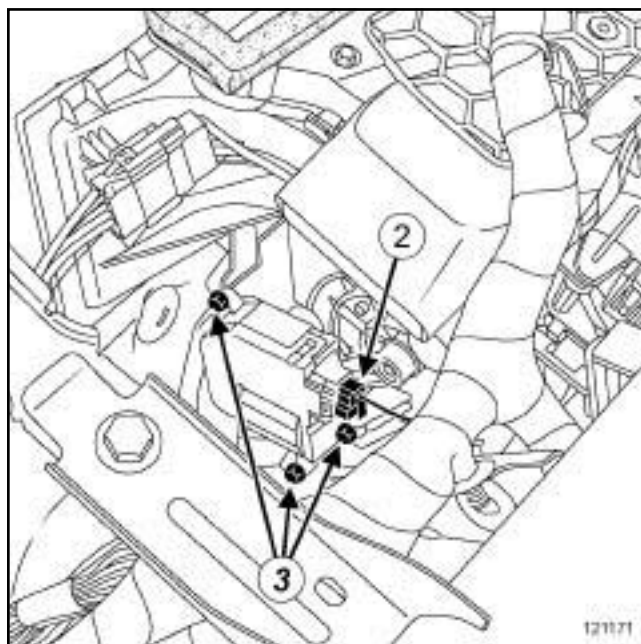
I - REMOVAL PREPARATION OPERATION



119502

- Unclip the upper storage compartment (1) on the driver's side using the (Car. 1363).
- Remove the front left-hand side air distribution duct (see 61A, Heating, Front side air distribution duct: Removal - Refitting, page 61A-7).

II - OPERATION FOR REMOVAL OF PART CONCERNED



121171

- Disconnect the connector (2) from the recirculation motor.
- Remove:
 - the bolts (3) from the recirculation motor,
 - the recirculation motor.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Refit:
 - the recirculation motor,
 - the recirculation motor bolts.

Note:

When refitting the recirculation motor, make sure that the drive system notches are correctly positioned.

- Connect the recirculation motor connector.

II - FINAL OPERATION

- Refit the front left-hand side air distribution duct (see 61A, Heating, Front side air distribution duct: Removal - Refitting, page 61A-7).
- Clip on the upper storage compartment on the driver's side.

Recirculation motor: Removal - Refitting

LEFT-HAND DRIVE, and CLIMATE CONTROL

- Check that the air recirculation is operating correctly.

Recirculation motor: Removal - Refitting

RIGHT-HAND DRIVE, and CLIMATE CONTROL

Equipment required

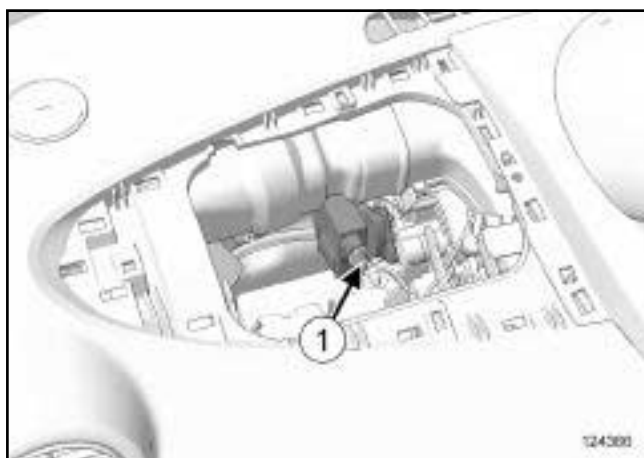
Diagnostic tool

REMOVAL

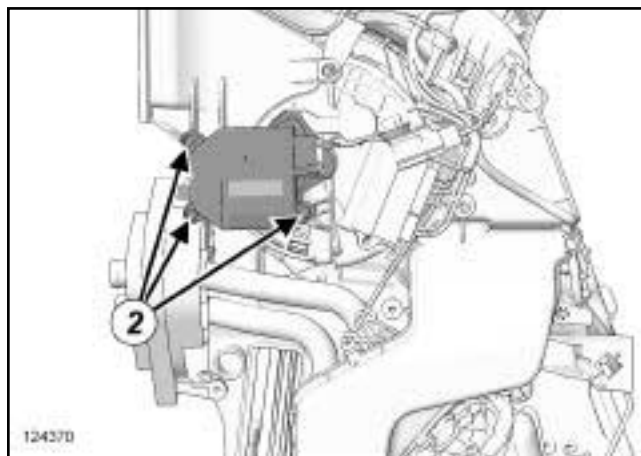
I - REMOVAL PREPARATION OPERATION

- Lock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413, 88C, Airbags and seat belt pretensioners).
- Disconnect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).
- Remove:
 - the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbag and pretensioners),
 - the front side air duct (see **61A, Heating, Front side air distribution duct: Removal - Refitting, page 61A-7**).

II - REMOVAL OPERATION FOR PART CONCERNED



- Disconnect the connector (1) from the recirculation motor.



- Remove:
 - the bolts (2) from the recirculation motor,
 - the recirculation motor.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Refit:
 - the recirculation motor,
 - the recirculation motor bolts.
- Connect the recirculation motor connector.

II - FINAL OPERATION.

- Refit the front side air duct (see **61A, Heating, Front side air distribution duct: Removal - Refitting, page 61A-7**).
- Refit the passenger's front airbag (see **Passenger's frontal airbag: Removal - Refitting**) (MR 411, 88C, Airbag and pretensioners).
- Connect the battery (see **Battery: Removal - Refitting**) (MR 411, 80A, Battery).
- Unlock the airbag computer using the **Diagnostic tool** (see **Fault finding - Replacement of components**) (MR 413, 88C, Airbags and seat belt pretensioners).

Mixing motor: Removal - Refitting

LEFT-HAND DRIVE, and CLIMATE CONTROL

Tightening torques 

| | |
|-------------|-------|
| strut bolts | 21 Nm |
|-------------|-------|

REMOVAL

I - REMOVAL PREPARATION OPERATION

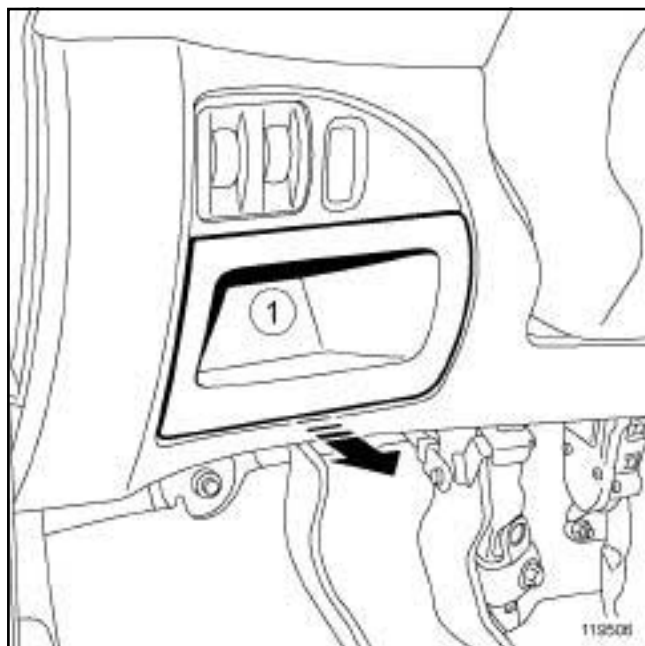
- Remove the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment).

RADIO NO. 01 or RADIO NO. 03

- Remove the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

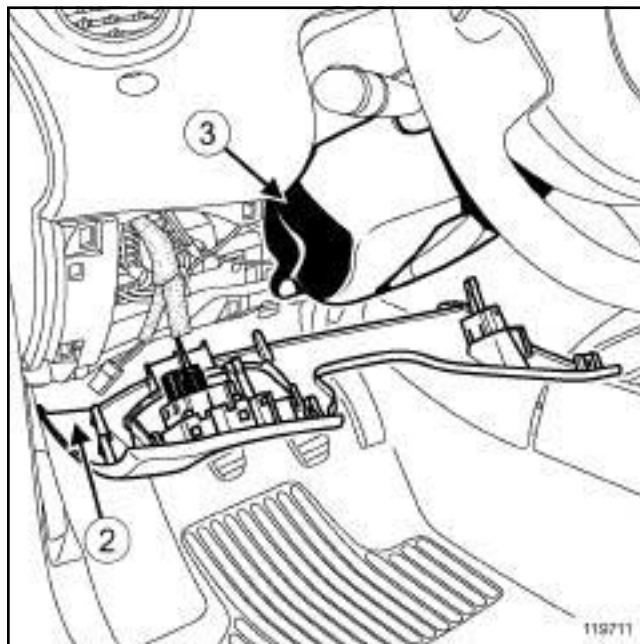
- Unclip the glovebox.
- Remove the dashboard lower trim (see **Centre front panel: Removal - Refitting**) (MR 412, 57A, Interior equipment).



119506

- Unclip:
 - the fuse access flap (1) ,

- the dashboard lower trim.

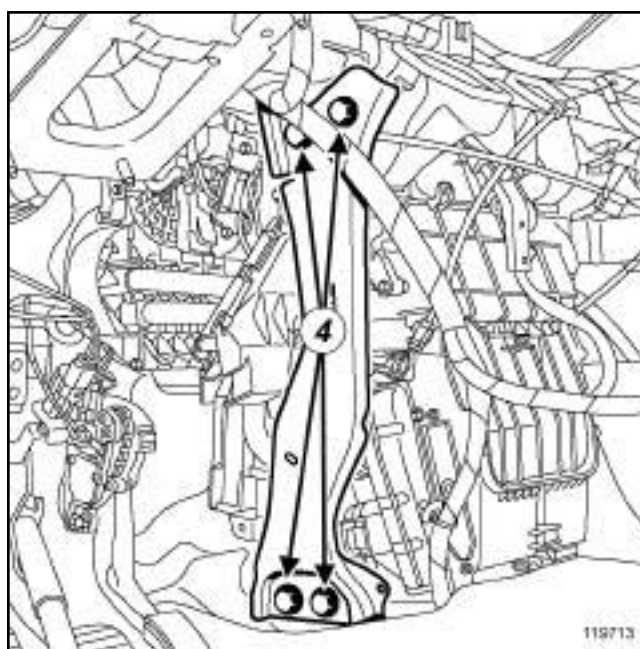


119711

- Disconnect the connectors from the lower trim on the dashboard (2) .

- Remove:

- the steering wheel lower cover bolts (3) ,
- the steering wheel lower cover.



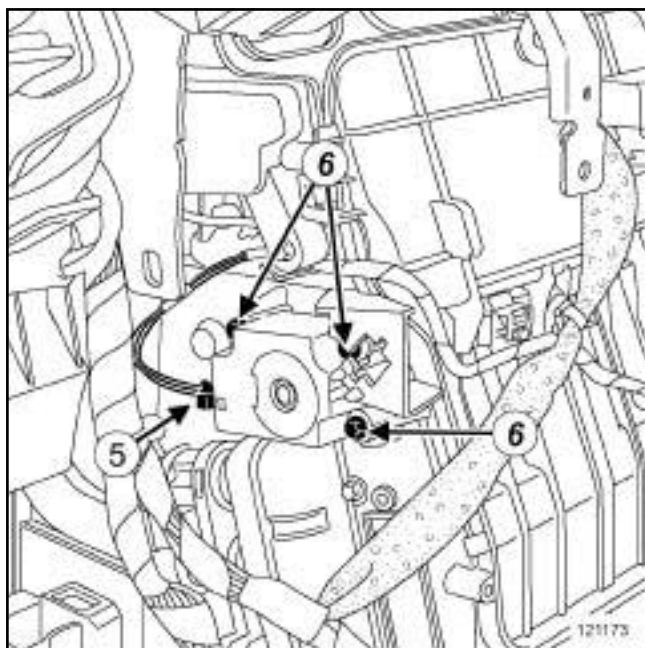
119713

- Remove:
 - the bolts (4) from the strut,
 - the strut.

Mixing motor: Removal - Refitting

LEFT-HAND DRIVE, and CLIMATE CONTROL

II - OPERATION FOR REMOVAL OF PART CONCERNED



121173

- Disconnect the connector (5) from the mixer motor.
- Remove:
 - the bolts (6) from the air mixing motor,
 - the air mixing motor.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

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

Note:

When refitting the mixer motor, make sure that the drive system notches are correctly positioned.

- Connect the air mixing motor connector.

II - FINAL OPERATION.

- Refit:
 - the strut,
 - the strut bolt.
- Torque tighten the **strut bolts (21 Nm)**.

- Refit:
 - the steering wheel lower cover,
 - the steering wheel lower cover bolt.
- Connect the connectors to the lower trim on the dashboard.
- Clip on:
 - the dashboard lower trim,
 - the fuse access flap.
- Refit the dashboard lower trim (see **Centre front panel: Removal - Refitting**) (MR 412, 57A, Interior equipment).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Clip the glovebox in position.

RADIO NO. 01 or RADIO NO. 03

- Refit the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).
- Refit the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment).
- Check that the air mixing function is operating correctly.

Mixing motor: Removal - Refitting

RIGHT-HAND DRIVE, and CLIMATE CONTROL

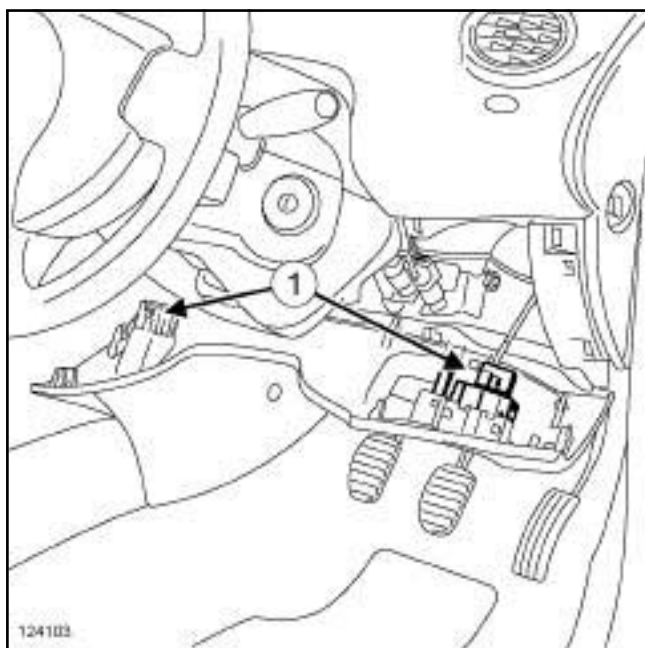
REMOVAL

I - REMOVAL PREPARATION OPERATION

- Disconnect the battery (see) (MR 411, 80A, Battery).

RADIO NO. 01 or RADIO NO. 03

- Remove the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).



124103

- Disconnect the connectors (1) from the dashboard lower trim.
- Remove the dashboard lower trim.
- Remove:
 - the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment),
 - the centre front panel (see **Centre front panel: Removal - Refitting**) (MR 412, 57A, Interior equipment).

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Remove the tweeter speakers (see **Tweeter: Removal - Refitting**) (MR 411, 86A, Radio).

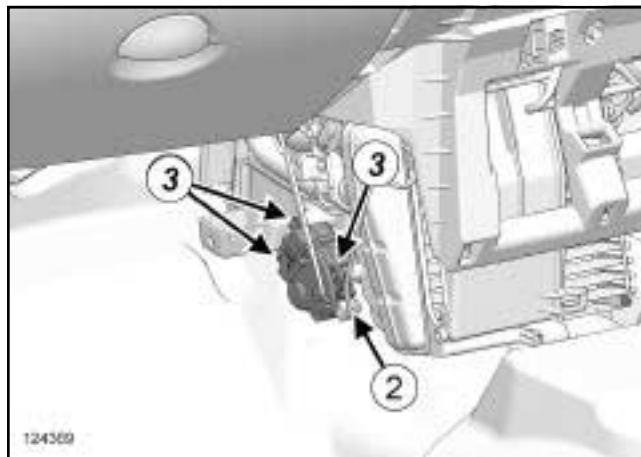
RADIO NO. 01 or RADIO NO. 03

- Remove the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Remove the glovebox.

II - REMOVAL OPERATION FOR PART CONCERNED

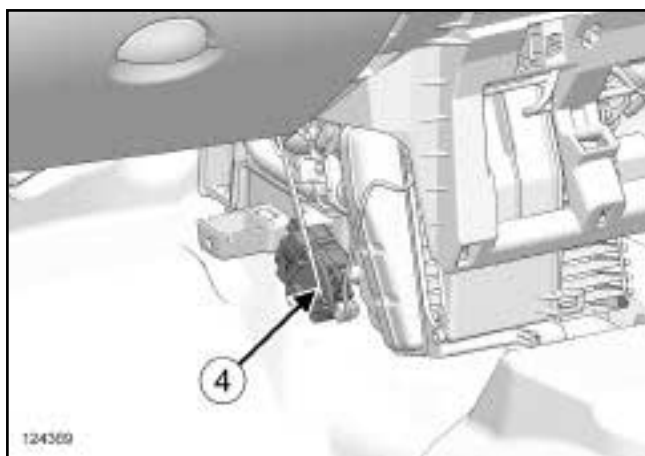


124369

- Disconnect the connector (2) from the mixer motor.
- Remove the air mixing motor bolts (3) .
- Move the air mixing motor aside.

Mixing motor: Removal - Refitting

RIGHT-HAND DRIVE, and CLIMATE CONTROL



- Unclip the rod (4) from the air mixing motor by tilting the motor downwards.
- Remove the air mixing motor.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Clip the rod onto the air mixing motor.
- Fit the air mixing motor.
- Refit:
 - the air mixing motor,
 - the air mixing motor bolts.

Note:

When refitting the mixer motor, make sure that the drive system notches are correctly positioned.

- Connect the air mixing motor connector.

II - FINAL OPERATION.

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Refit the glovebox.

RADIO NO. 01 or RADIO NO. 03

- Refit the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

WITH 2 SPEAKERS, WITHOUT RADIO or RADIO NO. 01 or RADIO NO. 03

- Refit the tweeter speakers (see **Tweeter: Removal - Refitting**) (MR 411, 86A, Radio).

- Refit:

- the centre front panel (see **Centre front panel: Removal - Refitting**) (MR 412, 57A, Interior equipment).
- the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment),

- Connect the connectors to the lower trim on the dashboard.

- Refit the dashboard lower trim.

RADIO NO. 01 or RADIO NO. 03

- Refit the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

- Connect the battery (see) (MR 411, 80A, Battery).

Distribution motor: Removal - Refitting

LEFT-HAND DRIVE, and CLIMATE CONTROL

REMOVAL

I - REMOVAL PREPARATION OPERATION

- Remove the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment).

RADIO NO. 01 or RADIO NO. 03

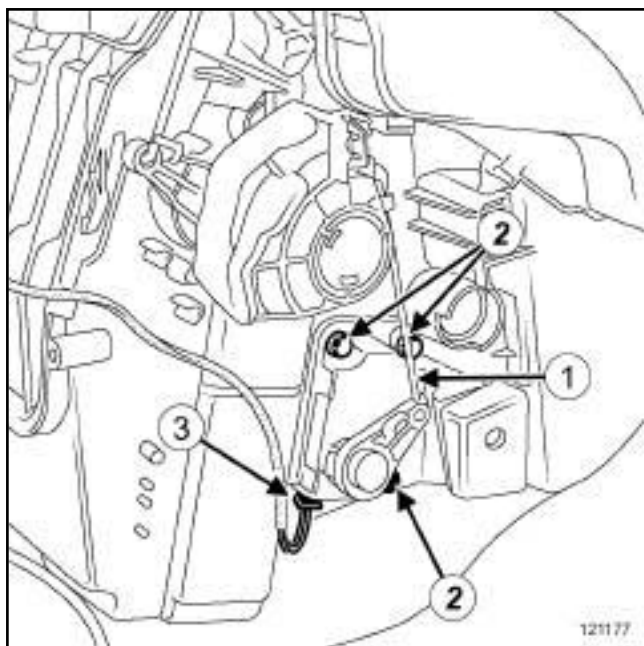
- Remove the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Unclip the glovebox.

- Remove the dashboard lower trim (see **Centre front panel: Removal - Refitting**) (MR 412, 57A, Interior equipment).

II - OPERATION FOR REMOVAL OF PART CONCERNED



- Unclip the distribution motor control rod (1) .
- Remove the distribution motor bolts (2) .
- Disconnect the distribution motor connector (3) .
- Remove the distribution motor.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Refit:
 - the distribution motor,
 - the distribution motor bolts.

Note:

When refitting the distribution motor, make sure that the drive system notches are correctly positioned.

- Connect the distribution motor connector.
- Clip on the distribution motor control rod.

II - FINAL OPERATION.

- Refit the dashboard lower trim (see **Centre front panel: Removal - Refitting**) (MR 412, 57A, Interior equipment).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Clip the glovebox in position.

RADIO NO. 01 or RADIO NO. 03

- Refit the radio (see **Radio: Removal - Refitting**) (MR 411, 86A, Radio).

- Refit the centre console (see **Centre console: Removal - Refitting**) (MR 412, 57A, Interior equipment).
- Check that the air distribution function is operating correctly.

Distribution motor: Removal - Refitting

RIGHT-HAND DRIVE, and CLIMATE CONTROL

Tightening torques 

| | |
|--|-------|
| dashboard cross member reinforcement bolts | 21 Nm |
|--|-------|

REMOVAL

I - REMOVAL PREPARATION OPERATION

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

RADIO NO. 01 or RADIO NO. 03

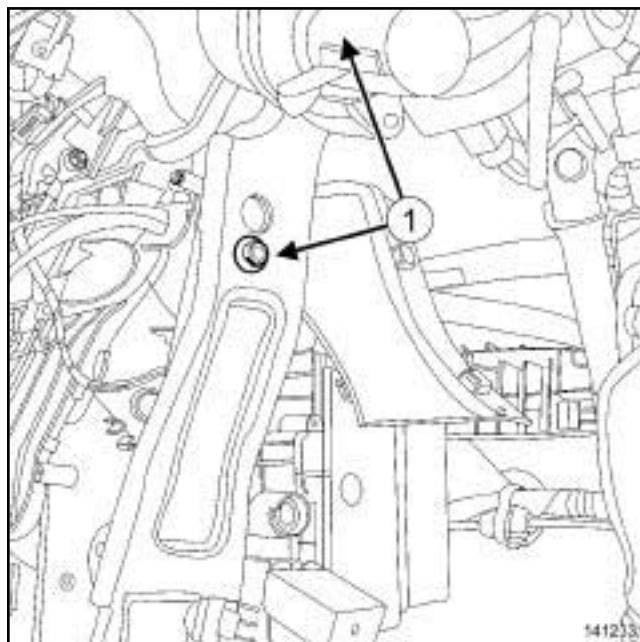
- Remove the radio (see **Radio: Removal - Refitting**) (86A, Radio).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Unclip the storage compartment.

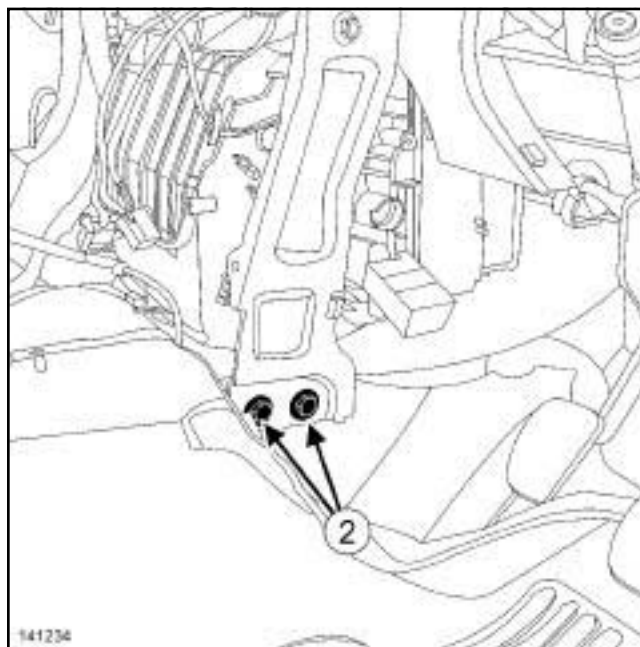
- Remove:

- the dashboard lower trim (see **Centre front panel: Removal - Refitting**) (57A, Interior equipment),
- the centre front panel (see **Centre front panel: Removal - Refitting**) (57A, Interior equipment).



141233

- Remove the upper bolts (1) from the dashboard cross member reinforcement.



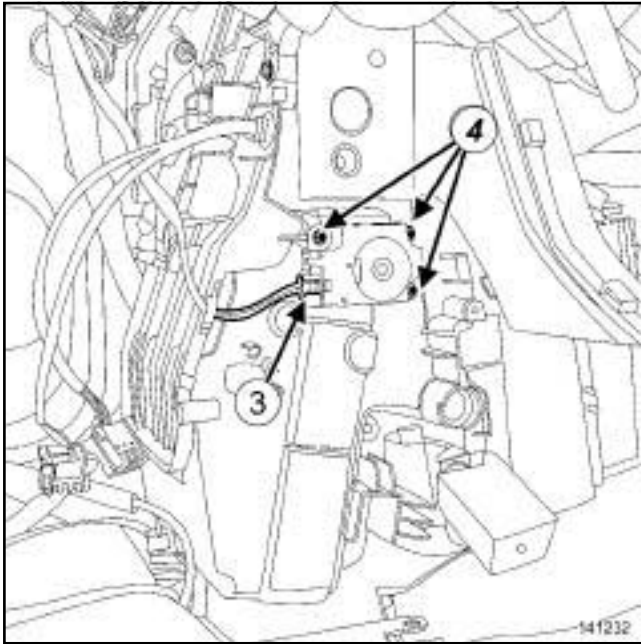
141234

- Remove the floor carpet on the driver's side.
- Remove the lower bolts (2) from the dashboard cross member reinforcement.

Distribution motor: Removal - Refitting

RIGHT-HAND DRIVE, and CLIMATE CONTROL

II - OPERATION FOR REMOVAL OF PART CONCERNED



141232

- Disconnect the connector (3) from the distribution motor.
- Remove:
 - the bolts (4) from the distribution motor,
 - the distribution motor.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Refit:
 - the distribution motor,
 - the distribution motor bolts.

Note:

When refitting the distribution motor, make sure that the drive system notches are correctly positioned.

- Connect the distribution motor connector.

II - FINAL OPERATION

- Refit the dashboard cross member reinforcement.
- Torque tighten the **dashboard cross member reinforcement bolts (21 Nm)**.

- Refit:

- the centre front panel (see **Centre front panel: Removal - Refitting**) (57A, Interior equipment),
- the dashboard lower trim (see **Centre front panel: Removal - Refitting**) (57A, Interior equipment).

WITH 2 SPEAKERS, WITHOUT RADIO or VEHICLE WITHOUT RADIO

- Clip the storage compartment in position.

RADIO NO. 01 or RADIO NO. 03

- Refit the radio (see **Radio: Removal - Refitting**) (86A, Radio).
- Refit the centre console (see **Centre console: Removal - Refitting**) (57A, Interior equipment).
- Check the air distribution system is operating correctly.

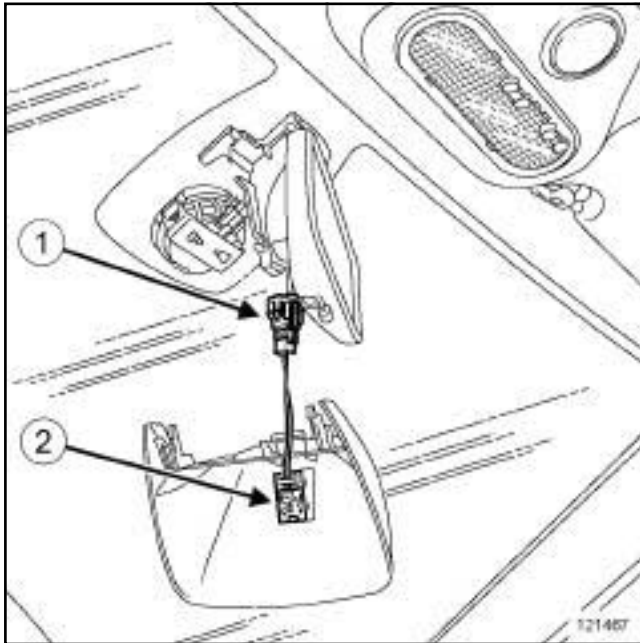
CLIMATE CONTROL

REMOVAL

I - REMOVAL PREPARATION OPERATION

- ❑ Remove the covers from the interior rear-view mirror (see **Interior rear-view mirror: Removal - Refitting**) (MR 412, 57A, Interior equipment).

II - OPERATION FOR REMOVAL OF PART CONCERNED



121467

- ❑ Disconnect the connector (1) from the passenger compartment temperature sensor.
- ❑ Unclip the passenger compartment temperature sensor (2) from the lower cover of the rear-view mirror.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- ❑ Clip the passenger compartment temperature sensor onto the lower cover of the rear-view mirror.
- ❑ Connect the passenger compartment temperature sensor connector.

II - FINAL OPERATION.

- ❑ Refit the covers on the interior rear-view mirror (see **Interior rear-view mirror: Removal - Refitting**) (MR 412, 57A, Interior equipment).

Air conditioning: Precautions for the repair

AIR CONDITIONING or CLIMATE CONTROL

I - SAFETY

IMPORTANT

The following must be worn when handling refrigerant:

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

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

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

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

IMPORTANT

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

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

Refrigerants are colourless and odourless fluids.

Refrigerant is heavier than air. As a result there is a risk of asphyxia for those working close to the ground and less than **5 m** away from the working area (pit, well, air vents, etc.).

Switch on gas extraction systems.

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

IMPORTANT

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

II - GENERAL RECOMMENDATIONS

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

IMPORTANT

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

Replace all faulty components.

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

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

WARNING

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

WARNING

To avoid damaging the surface of the air conditioning pipes when removing the seals, do not use a tool with a metallic end piece.

WARNING

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

WARNING

To prevent any leaks, check that the seal and surface of the pipe are in good condition. The seal and the surface must be clean and free from scratches.

WARNING

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

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

AIR CONDITIONING

Air conditioning: Parts and consumables for the repair

62A

AIR CONDITIONING or CLIMATE CONTROL

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.

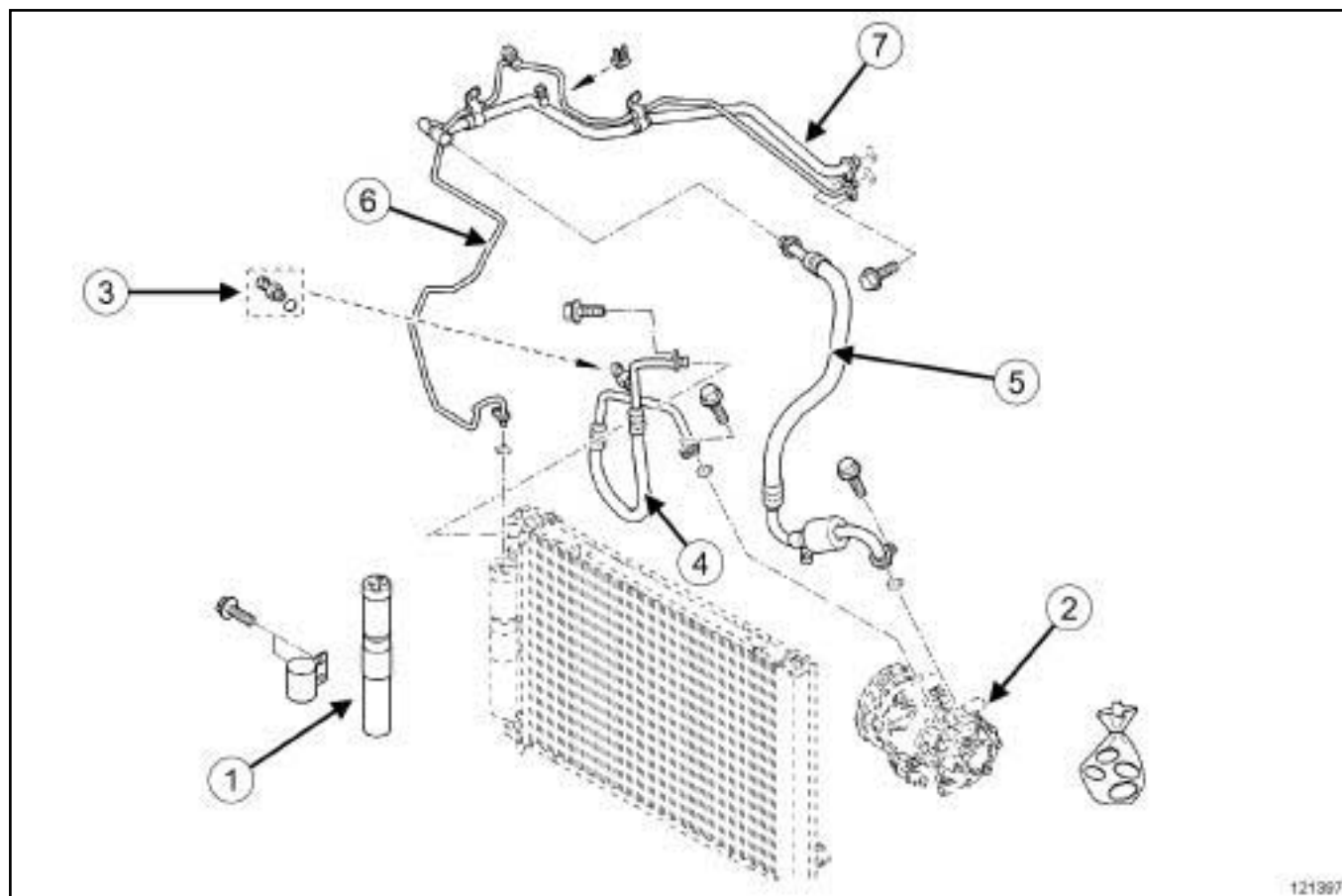
| Engine | Refrigerant capacity (g) | Type of compressor | Type of oil | Quantity of oil (ml) |
|---------|--------------------------|--------------------|-------------|----------------------|
| D4F 772 | 430 ± 35 | SANDEN SD6V12 | SANDEN SP10 | 135 ± 10 |
| D7F | | | | |
| K9K | 510 ± 35 | | | |
| D4F 780 | | | | |
| K4M 854 | | | | |

Table of quantities of oil to add when replacing components:

| Operation on the air conditioning circuit | Quantity of oil (ml orcc) |
|---|---|
| Circuit oil change | Measure the volume recovered and add the same quantity of new oil |
| Split hose or other rapid leak | 100 |
| Replacing a hose | Quantity recovered + 10 |
| Replacement of a condenser | Quantity recovered + 30 |
| Replacement of an evaporator | Quantity recovered + 30 |
| Replacement of the dehydrator canister | Quantity recovered + 15 |
| Removing and refitting a compressor | Quantity recovered |
| Replacing a compressor | No addition |
| Standard replacement of a compressor | Top up as necessary |
| Replacement of a compressor and one or more components of the heating and air conditioning system | No addition |
| Standard replacement of a compressor and replacement of one or more heating and air conditioning circuit components | Top up as necessary |

Air conditioning: List and location of components

AIR CONDITIONING or CLIMATE CONTROL



121397

121397

|

| No. | Description |
|-----|--|
| (1) | Dehydrator reservoir |
| 2() | Compressor |
| (3) | Pressure sensor |
| (4) | « Compressor - condenser » connecting pipe |
| (5) | « Compressor - intermediate pipe » connecting pipe |
| (6) | « Dehydrator reservoir - expansion valve » connecting pipe |
| (7) | « Expansion valve - intermediate pipe » connecting pipe |

AIR CONDITIONING

Air conditioning: Check

62A

AIR CONDITIONING or CLIMATE CONTROL

Equipment required

Dual-sensor temperature measuring device

Note:

When performing RENAULT maintenance, check the air conditioning system at the end of the vehicle's maintenance program so that the engine will be cold.

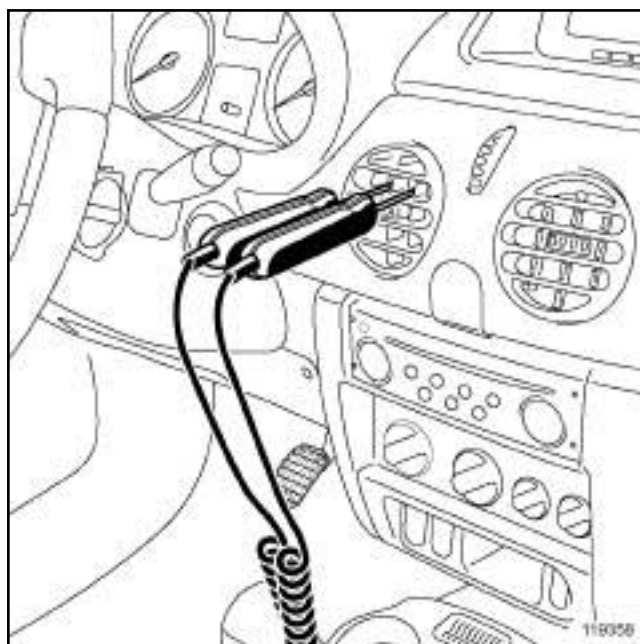
I - PREPARATION OPERATION FOR THE MEASUREMENT DEVICE

- Check that the measurement device functions properly (see the device's instruction manual).
- Set units to °C.
- Set the device's sensitivity to **0.1°C**.



119360

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



119358

- Check the two sensors T1 and T2 in order to calculate the correction (Δ) to be applied to the measurement ($T1 - T2$). the two sensors must indicate the same measurement under the same conditions. Check the sensors by:
 - bringing the ends of the 2 sensors together until they touch,
 - placing the sensors in the air flow of an air vent,
 - setting the passenger compartment fan assembly to top speed.
 - waiting for the value to become stable.
 - recording the correction value (Δ).

Note:

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

WARNING

Note the difference and sign as soon as the temperature becomes stable.

Calculate the correction $(\Delta) = - (T1 - T2)$ to be applied to the measurement (ΔT) .

Examples:

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

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

AIR CONDITIONING

Air conditioning: Check

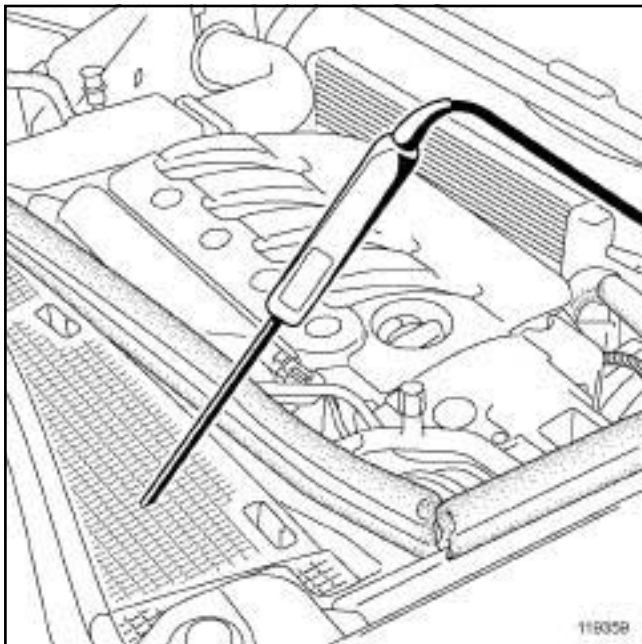
62A

AIR CONDITIONING or CLIMATE CONTROL

II - VEHICLE PREPARATION OPERATION

- Put the vehicle in the shade, where the temperature is greater than or equal to **15°C** minimum.
- Close the bonnet.
- Open the front windows.
- Start the engine and let it idle.
- Set the air conditioning controls with:
 - recirculation mode in the external position,
 - the ventilation distribution in "face" mode,
 - the temperature control to coldest temperature setting in front (and at the back, if it exists),
 - the speed of the passenger compartment fan assembly set to maximum (switch off the rear control if it exists),
 - the front side and centre air vents open with the vanes in a neutral position,
 - the air conditioning system must be turned on (indicator light illuminated).
- Wait 5 minutes with the engine idling before taking any measurements.**

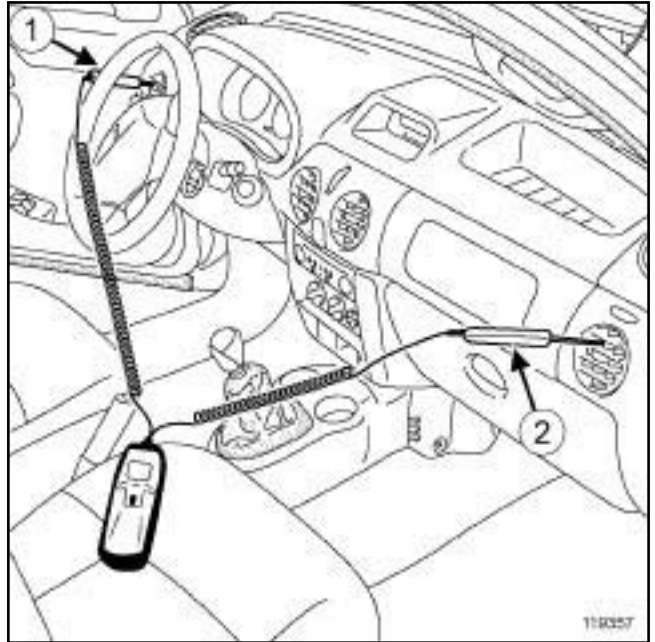
III - MEASUREMENTS



119359

- Record the air temperature at the scuttle panel grille (T3).
 - open the bonnet, depending on the vehicle, to access the scuttle panel grille.
 - place the sensor where air is drawn through the scuttle panel grille.

- wait for the value to become stable.
- record the T3 temperature value.
- close the bonnet if it was opened.



119357

- Record the air temperature at the left air vent (T1), and at the right air vent (T2).
 - fit sensor T1 in the left air vent (1) .
 - fit sensor T2 in the right air vent (2) .
- Record the differences in temperature once the (ΔT) value has stabilised:
 - between T3 and the higher of values T1 or T2, (T3 - highest value).
 - record this difference in temperature.
 - between T1 and T2 (read the (ΔT) value (T1-T2) display mode).
 - record the difference in temperature (ΔT) according to the correction (Δ) to be applied to the measurement.
- If the (ΔT)=(T1-T2) measurement is unstable, follow the procedure below:

Note:

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

AIR CONDITIONING

Air conditioning: Check

62A

AIR CONDITIONING or CLIMATE CONTROL

- Activate the engine cooling fan assembly operation by modifying the engine speed.
 - stabilise the engine speed at **2000 rpm** while T1 and T2 temperature measurements are being recorded.
 - check that the engine cooling fan assembly operating.
 - record the temperatures by following the instructions given in the paragraph MEASUREMENTS.

IV - FAULT FINDING PROCEDURE

- The following two following conditions must be met:
 - the difference between T3 and the higher of the two values T1 or T2, must be greater than or equal to **5°C**,
 - the difference between T1 and T2 must be less than or equal to **2°C**.

Note:

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

AIR CONDITIONING

Refrigerant circuit: Check

62A

AIR CONDITIONING or CLIMATE CONTROL

Equipment required

Diagnostic tool

IMPORTANT

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

Note:

After any work on air conditioning circuit leaks on the Laguna II, Vel Satis and Espace IV, check that filling fault **DF033 Refrigerant** is not present, using the **Diagnostic tool**. If it is present, clear it. The compressor cannot operate until the fault is cleared.

There are several types of detector:

- electronic detectors,
- trace detectors.

Note:

To carry out an after repair check, use the procedure for the electronic detector **(1)**. To carry out a more thorough check for leaks, use a trace detector **(2)**.

Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page **62A-4**).

REFRIGERANT CIRCUIT SEALING CHECKING OPERATION

1 - Electronic detectors:

WARNING

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

- Switch on the electronic detector.
- Start the engine.
- Let the air conditioning system run for **15 minutes**.
- Switch off the engine.

- Check the sealing of the refrigerant circuit using the electronic trace detector (follow the trace of the circuit as closely as possible, to limit variations due to other gases).

Note:

If replacing a defective part (see **62A, Air conditioning**).

2 - Trace detectors

WARNING

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

WARNING

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

- Check for dye on the cold loop components with the **ultraviolet light**.
- Inject the dye.
- Start the engine.
- Let the air conditioning system run for **15 minutes**.
- Switch off the engine.
- Check the refrigerant circuit sealing by scanning the circuit with the **ultraviolet light**.

Note:

If replacing a defective part (see **62A, Air conditioning**).

- Affix a label (supplied with the dye capsule), to indicate that dye has been used (as close as possible to the filler valves).

AIR CONDITIONING

Refrigerant circuit: Draining - Filling

62A

AIR CONDITIONING or CLIMATE CONTROL

Equipment required

refrigerant charging station

IMPORTANT

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

WARNING

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

WARNING

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

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-2) .

Refrigerant circuit: Draining - Filling

AIR CONDITIONING or CLIMATE CONTROL

I - RECOVERING REFRIGERANT FLUID



Note:

- If the air conditioning circuit is fitted with a single filler valve, some filling equipment only requires the use of the high pressure pipe (refer to the filling station instructions).
- Depending on the situation, run the system for a few minutes before recovering the coolant to improve drainage.

Note:

- It is essential to follow these procedures to prevent:
- gas escaping when the circuit is opened,
 - pollution of the environment through the release of gas into the atmosphere when the circuit is opened or when a vacuum is created.

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

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

Scenario A:

- Operate the air conditioning until the cooling fan assembly is triggered twice,
- Switch off the engine,
- drain for the first time (note down the original value),
- wait **15 minutes**,
- check that the relative pressure is no more than **0 bar**,
- repeat the cycles until the relative pressure is equal to or less than **0 bar**,
- add together the values of the various draining operations; the fill is confirmed as being correct if the volume of refrigerant fluid is the specified fill **+35g** or **-100g**.

Scenario B:

- run the engine until the cooling fan is triggered twice,
- Switch off the engine,

- drain for the first time (note down the value),
- wait **15 minutes**,
- run the engine until the cooling fan is triggered twice,
- Switch off the engine,
- drain for the second time (note down the value),
- repeat the cycles until the relative pressure is equal to or less than **0 bar**,
- add together the values of the various draining operations; the fill is confirmed as being correct if the volume of refrigerant fluid is the specified fill **+35g** or **-100g**.

Scenario C:

- drain for the first time (note down the value),
- wait **2 hours**,
- repeat the cycles until the relative pressure is equal to or less than **0 bar**,
- add together the values of the various draining operations; the fill is confirmed as being correct if the volume of refrigerant fluid is the specified fill **+35g** or **-100g**.

II - CREATING A VACUUM

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

There are two scenarios to consider:

- vacuum created immediately after discharge (scenario A),
- vacuum created after an interval of several hours or days (scenario B).

Scenario A:

- creation of a vacuum takes **20 minutes**.

Scenario B:

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

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

III - FILLING

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

AIR CONDITIONING

Refrigerant circuit: Draining - Filling

62A

AIR CONDITIONING or CLIMATE CONTROL

- Top up the oil with the recommended type and volume of oil and refrigerant, depending on the work carried out (see **62A, Air conditioning, Air conditioning: Parts and consumables for the repair**, page **62A-2**).
- Check there are no leaks using **the electronic detector** (see **62A, Air conditioning, Refrigerant circuit: Check**, page **62A-7**).

WARNING

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

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

- Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page **62A-4**).

AIR CONDITIONING

Condenser: Removal - Refitting

62A

AIR CONDITIONING or CLIMATE CONTROL

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 **62A, Air conditioning, Air conditioning: Precautions for the repair**, page 62A-1) ,
- (see **Vehicle: Precautions for the repair**) (01D, Mechanical introduction).

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.

WARNING

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

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 a **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page 62A-8) .

D4F, and 780 – K9K – K4M

- Drain the cooling system (see **Cooling system: Draining - Refilling**) (19A, Cooling).
- Disconnect the battery (see) (80A, Battery).

- Remove:

- the front wheels (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres),
- the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection),
- the radiator mounting cross member (see **Radiator mounting cross member: Removal - Refitting**) (41A, Front upper structure).

II - OPERATION FOR REMOVAL OF PART CONCERNED

D4F, and 780 – K9K – K4M

- Remove the cooling radiator (see **Cooling radiator: Removal - Refitting**) (19A, Cooling).

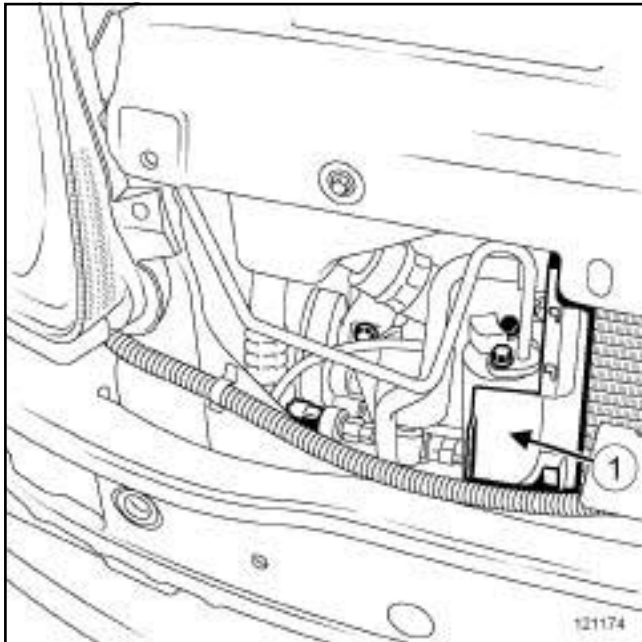
AIR CONDITIONING

Condenser: Removal - Refitting

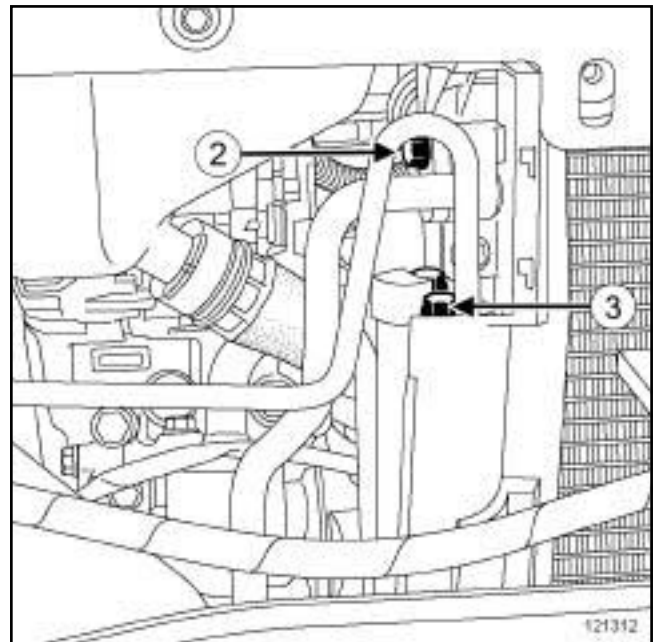
62A

AIR CONDITIONING or CLIMATE CONTROL

D7F – D4F, and 772



- ❑ Move aside the air deflector (1) .



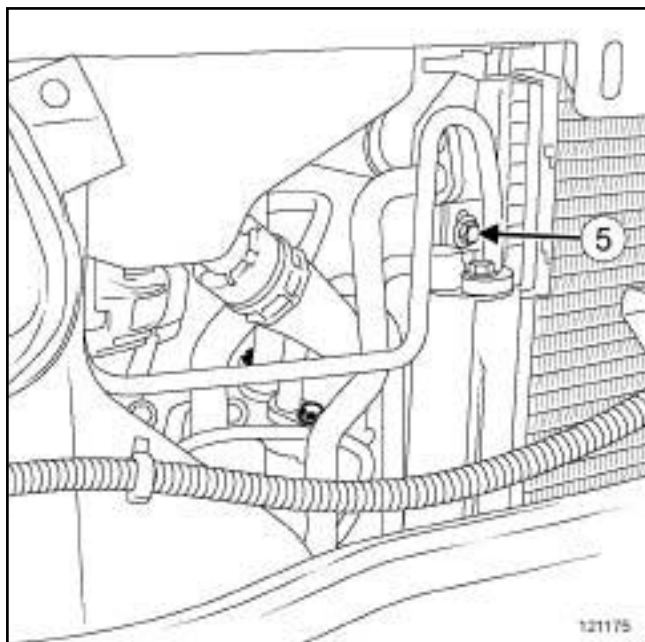
- ❑ Remove the bolt (2) from the «condenser - compressor » connecting pipe on the condenser.
- ❑ Remove the connecting pipe from the condenser.
- ❑ Remove the bolt (3) from the « dehydrator reservoir - expansion valve » connecting pipe on the dehydrator reservoir.
- ❑ Separate the « dehydrator reservoir - expansion valve » connecting pipe from the dehydrator reservoir.
- ❑ Fit blanking plugs into openings.

AIR CONDITIONING

Condenser: Removal - Refitting

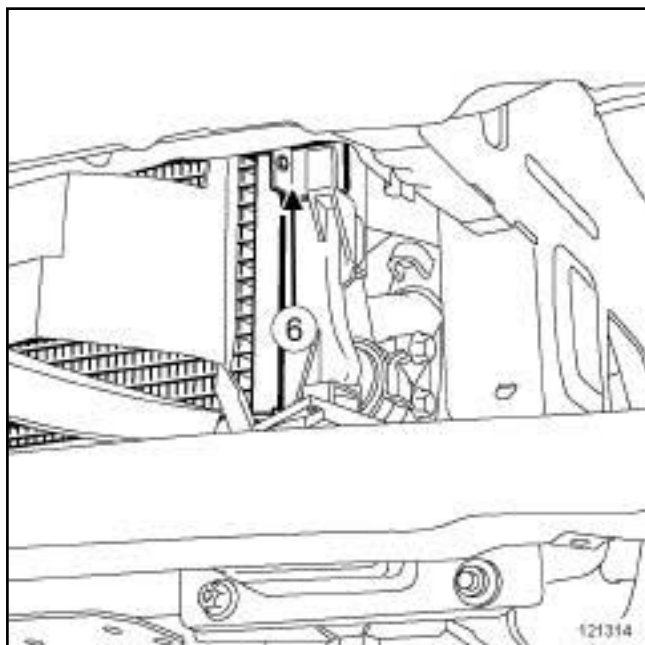
62A

AIR CONDITIONING or CLIMATE CONTROL



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- ❑ Remove the bolts (5) from each side of the condenser.



121314

- ❑ Unclip the retaining brackets (6) from each side of the condenser.
- ❑ Remove the condenser from underneath.

Note:

Take care not to damage the condenser vanes.

- ❑ Remove the dehydrator reservoir from the condenser (see **62A, Air conditioning, Dehydrator reservoir: Removal - Refitting**, page 62A-15).

REFITTING

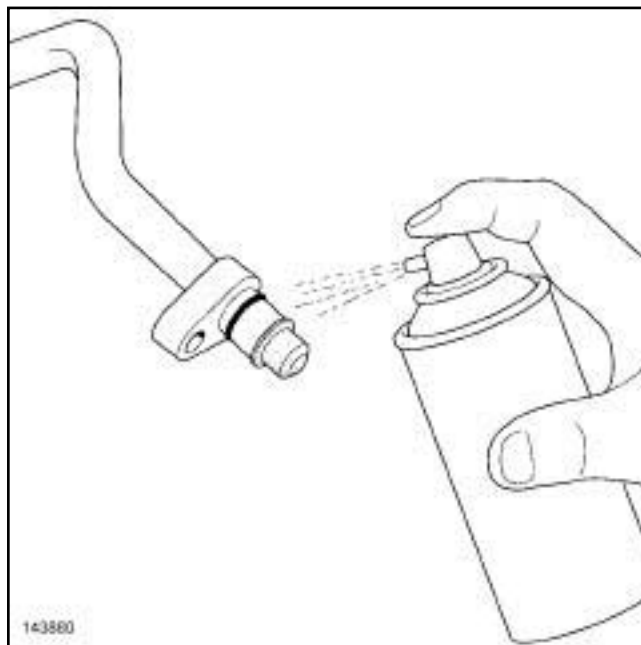
I - REFITTING PREPARATION OPERATION

- ❑

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.



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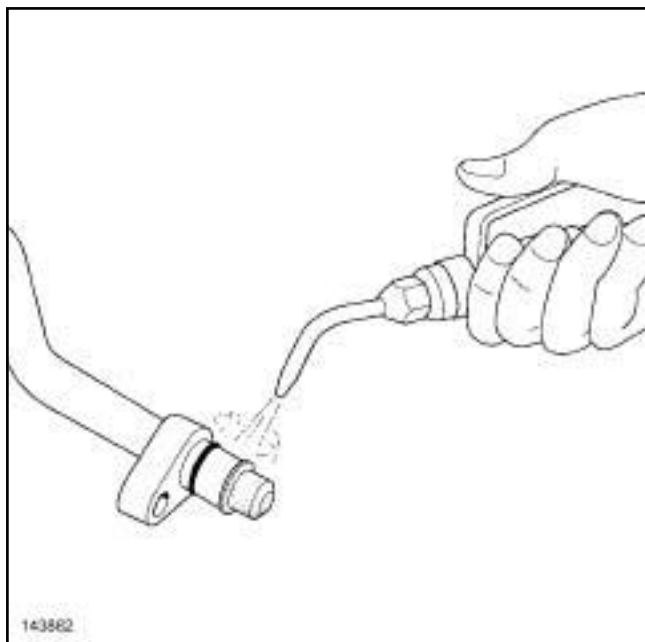
- ❑ Clean the surface and seal of the pipe using **ENGINE CLEANER** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products).

AIR CONDITIONING

Condenser: Removal - Refitting

62A

AIR CONDITIONING or CLIMATE CONTROL



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-2) .
- Remove the blanking plugs.

II - REFITTING OPERATION FOR PART CONCERNED

D7F – D4F, and 772

- Refit the condenser from underneath.
- Position the condenser on the cooling radiator.
- Clip the retaining brackets on each side of the condenser.
- Refit the bolts on each side of the condenser.
- Fit the « dehydrator reservoir - expansion valve » connecting pipe on the dehydrator reservoir.
- Refit the bolt of the « dehydrator reservoir - expansion valve » connecting pipe on the dehydrator reservoir.
- Fit the « condenser - compressor » connecting pipe on the condenser.
- Refit the bolt of the « condenser - compressor » connecting pipe on the condenser.

- Position the air deflector.

D4F, and 780 – K9K – K4M

- Refit the cooling radiator (see **Cooling radiator: Removal - Refitting**) (19A, Cooling).

III - FINAL OPERATION

- Refit:
 - the radiator mounting cross member (see **Radiator mounting cross member: Removal - Refitting**) (41A, Front upper structure),
 - the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection),
 - the front wheels (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres).

D4F, and 780 – K9K – K4M

- Fill up and bleed the cooling system (see **Cooling system: Draining - Refilling**) (19A, Cooling).
- Consult the amount of refrigerant and oil required before filling the air conditioning circuit (see **62A, Air conditioning, Air conditioning: Parts and consumables for the repair**, page 62A-2) .
- Fill the refrigerant circuit using a **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page 62A-8) .
- Check for leaks (see **62A, Air conditioning, Refrigerant circuit: Check**, page 62A-7) .
- Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page 62A-4) .

AIR CONDITIONING

Dehydrator reservoir: Removal - Refitting

62A

AIR CONDITIONING or CLIMATE CONTROL

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 **62A, Air conditioning, Air conditioning: Precautions for the repair**, page **62A-1**),
- (see **Vehicle: Precautions for the repair**) (01D, Mechanical introduction).

Note:

Use blanking plugs for the fuel circuits with part no. **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

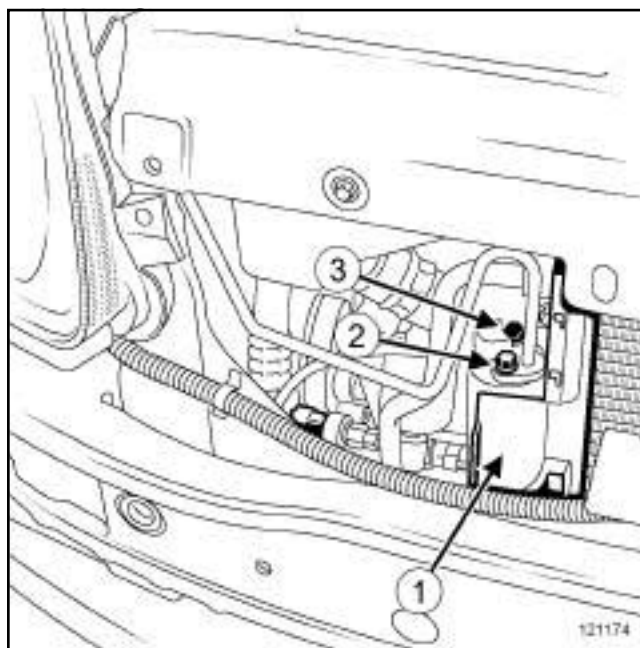
- Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).
- Drain the refrigerant circuit using a **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page **62A-8**).

WARNING

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

- Disconnect the battery (see) (80A, Battery).
- Remove:
 - the front wheels (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres),
 - 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).

II - OPERATION FOR REMOVAL OF PART CONCERNED



121174

- Move aside the air deflector (1).
- Remove:
 - the bolt (2) from the « expansion valve - dehydrator reservoir » connecting pipe,
 - the bolt (3) from the « condenser - dehydrator reservoir » connecting pipe.
- Remove:
 - the « expansion valve - dehydrator reservoir » connecting pipe from the dehydrator reservoir,
 - the « condenser - dehydrator reservoir » connecting pipe from the dehydrator reservoir.

WARNING

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

- Fit plugs into the openings.

WARNING

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

- Remove:
 - the dehydrator reservoir bolts on the condenser,
 - the dehydrator reservoir from underneath.

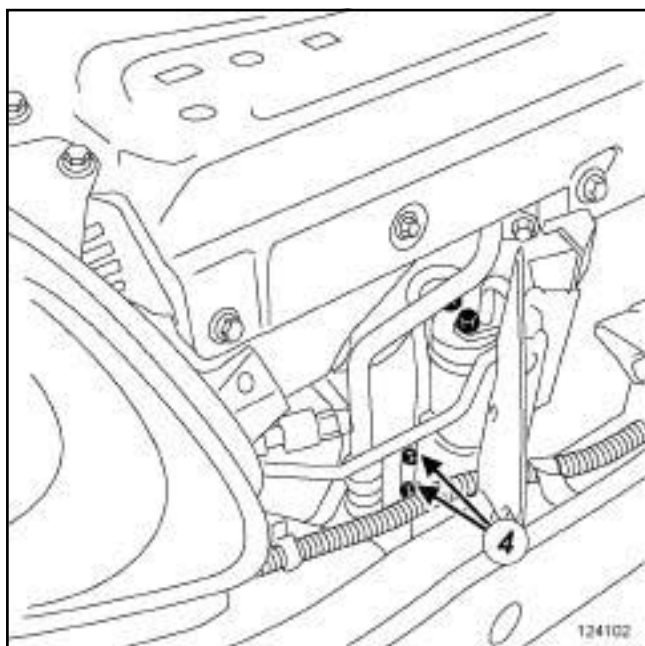
AIR CONDITIONING

Dehydrator reservoir: Removal - Refitting

62A

AIR CONDITIONING or CLIMATE CONTROL

D4F, and 780 – K9K



❑ Remove:

- the dehydrator reservoir bolts (4) ,
- the dehydrator reservoir.

REFITTING

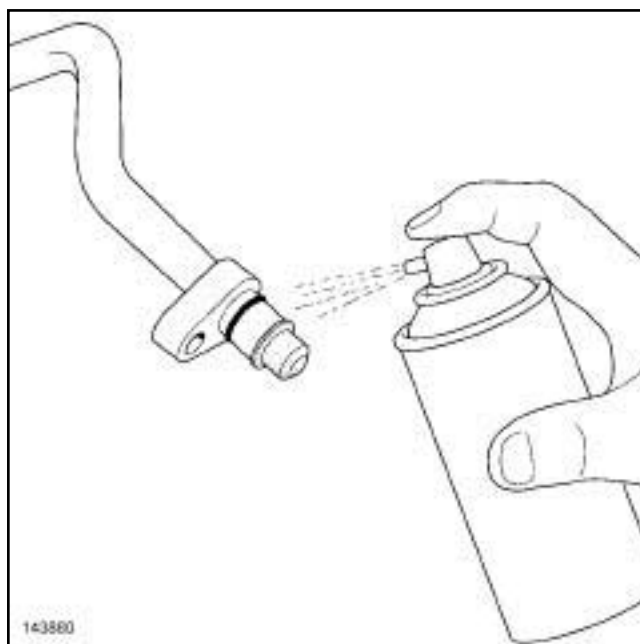
I - REFITTING PREPARATION OPERATION

❑

WARNING

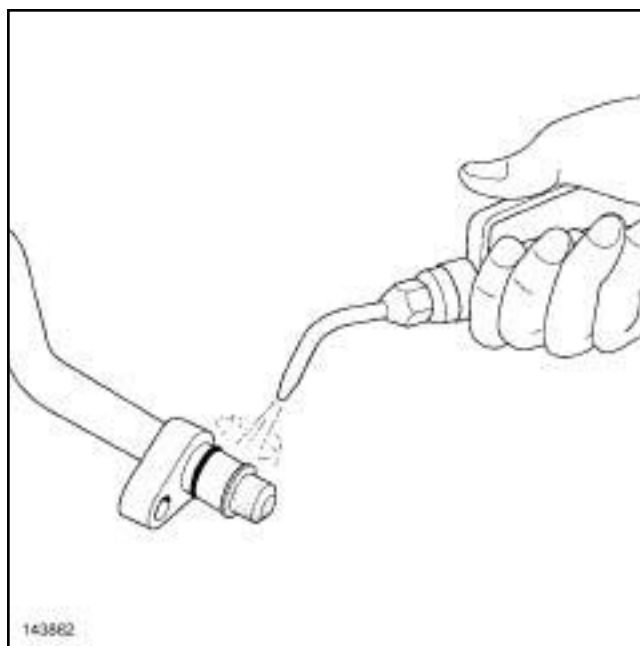
Do not remove the blanking plugs from each component until the last moment.

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-2) .
- ❑ Remove the blanking plugs.

AIR CONDITIONING

Dehydrator reservoir: Removal - Refitting

62A

AIR CONDITIONING or CLIMATE CONTROL

II - REFITTING OPERATION FOR PART CONCERNED

- Refit:
 - the dehydrator reservoir,
 - the dehydrator reservoir bolts on the condenser.
- Fit:
 - the « condenser - dehydrator reservoir » connecting pipe on the dehydrator reservoir,
 - the « expansion valve - dehydrator reservoir » connecting pipe on the dehydrator reservoir.
- Refit:
 - the bolt on the «condenser - dehydrator reservoir » connecting pipe,
 - the bolt on the « expansion valve - dehydrator reservoir » connecting pipe.
- Position the air deflector.

III - FINAL OPERATION

- Refit:
 - the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection),
 - 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).
- Connect the battery (see) (80A, Battery).
- Consult the refrigerant and oil quantity values before filling the circuit (see **62A, Air conditioning, Air conditioning: Parts and consumables for the repair**, page 62A-2) .

Note:

When replacing the dehydrator reservoir, add **15 ml** of the recommended oil to the quantity of oil recovered.

- Fill the refrigerant circuit using a **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page 62A-8) .
- Check for leaks (see **62A, Air conditioning, Refrigerant circuit: Check**, page 62A-7) .
- Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page 62A-4) .

AIR CONDITIONING

Compressor: Removal - Refitting

62A

AIR CONDITIONING or CLIMATE CONTROL

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 **62A, Air conditioning, Air conditioning: Precautions for the repair**, page 62A-1) ,
- (see **Vehicle: Precautions for the repair**) (01D, Mechanical introduction).

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.

WARNING

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

REMOVAL

I - REMOVAL PREPARATION OPERATION

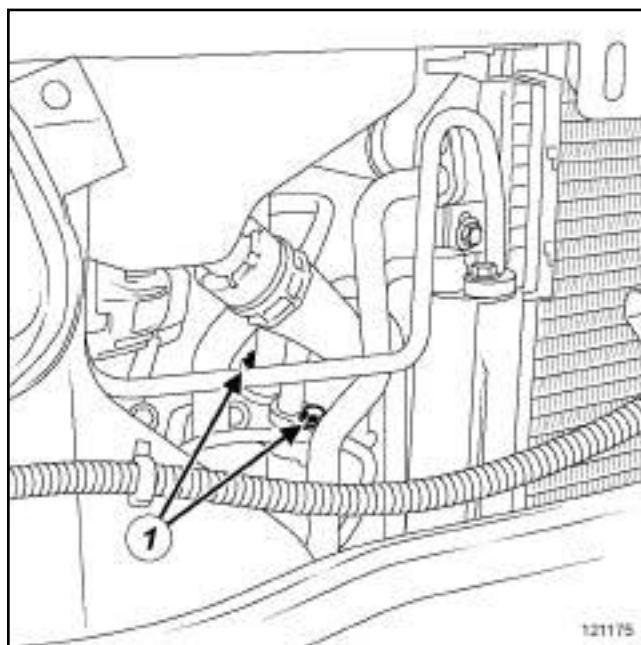
- Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).

WARNING

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

- Drain the refrigerant circuit using a **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page 62A-8) .
- Disconnect the battery (see) (80A, Battery).
- Remove:
 - the front wheels (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres),
 - 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 accessories belt (see **Accessories belt: Removal - Refitting**) (10A, Engine and peripherals).

II - OPERATION FOR REMOVAL OF PART CONCERNED



121175

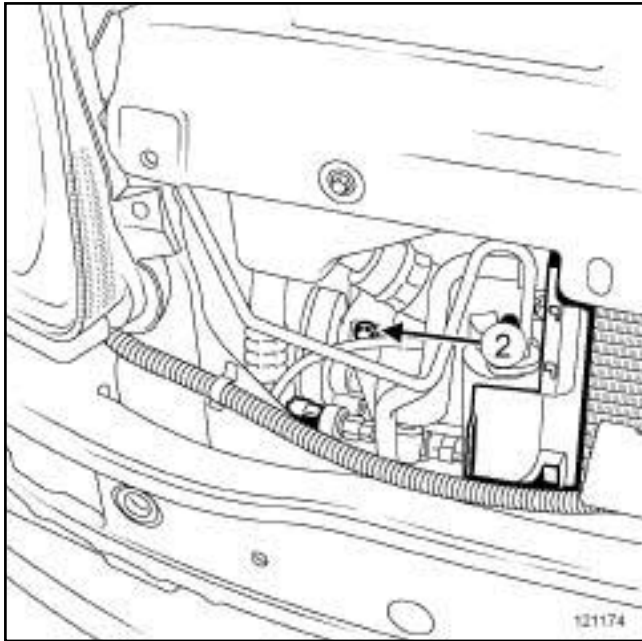
- Remove the bolts (1) from the connecting pipes on the compressor.

AIR CONDITIONING

Compressor: Removal - Refitting

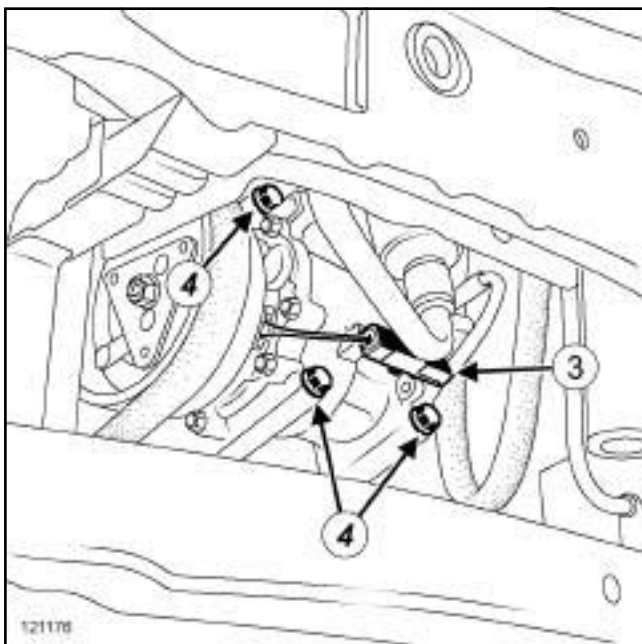
62A

AIR CONDITIONING or CLIMATE CONTROL



121174

- Remove the bolt (2) from the connecting pipe bracket on the compressor.
- Move aside the connecting pipes.
- Put blanking plugs in the openings.



121176

- Disconnect the compressor connector (3) .
- Remove:
 - the compressor bolts (4) ,
 - 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

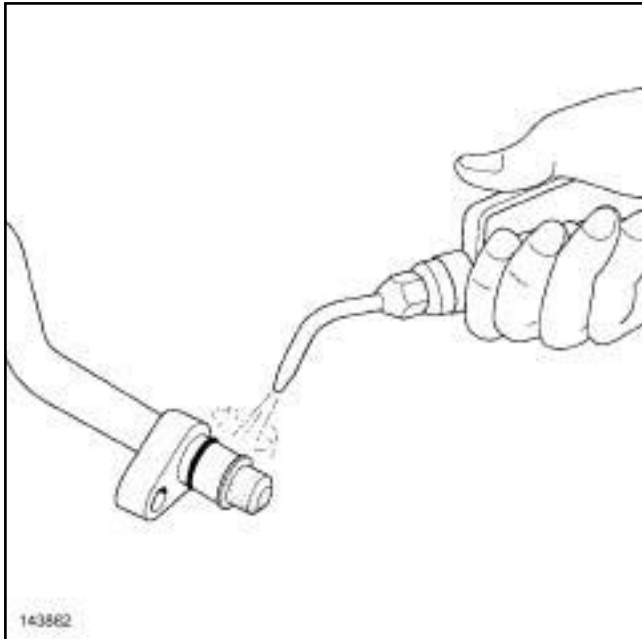
- Clean the surface and seal of the pipe using **ENGINE CLEANER** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products).

AIR CONDITIONING

Compressor: Removal - Refitting

62A

AIR CONDITIONING or CLIMATE CONTROL



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-2) .
- Remove the blanking plugs.

II - REFITTING OPERATION FOR PART CONCERNED

- Refit the compressor.
- Connect the compressor connector.
- Position the compressor connecting pipes.
- Refit:
 - the bolts of the connecting pipes on the compressor,
 - the bolt of the connecting pipe bracket on the compressor.

III - FINAL OPERATION

- Refit:
 - the accessories belt (see **Accessories belt: Removal - Refitting**) (10A, Engine and peripherals),
 - the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection),
 - 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).

- Connect the battery (see) (80A, Battery).
- Consult the amount of refrigerant and oil required before filling the air conditioning circuit (see **62A, Air conditioning, Air conditioning: Parts and consumables for the repair**, page 62A-2) .
- Fill the refrigerant circuit using a **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page 62A-8) .
- 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 **62A, Air conditioning, Refrigerant circuit: Check**, page 62A-7) .
- Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page 62A-4) .

AIR CONDITIONING

Expansion valve: Removal - Refitting

62A

AIR CONDITIONING or CLIMATE CONTROL

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 **62A, Air conditioning, Air conditioning: Precautions for the repair**, page 62A-1) ,
- (see **Vehicle: Precautions for the repair**) (01D, Mechanical introduction).

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.

WARNING

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

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.

REMOVAL

I - REMOVAL PREPARATION OPERATION



WARNING

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

- Drain the refrigerant circuit using a **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page 62A-8) .
- Disconnect the battery (see) (80A, Battery).
- Remove:
 - the wiper arms (see **Windscreen wiper arm: Removal - Refitting**) (85A, Wiping - Washing),
 - the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment),
 - the scoop under the scuttle panel grille (see **Scoop under the scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment).

D4F, and 780 – K4M, and 854



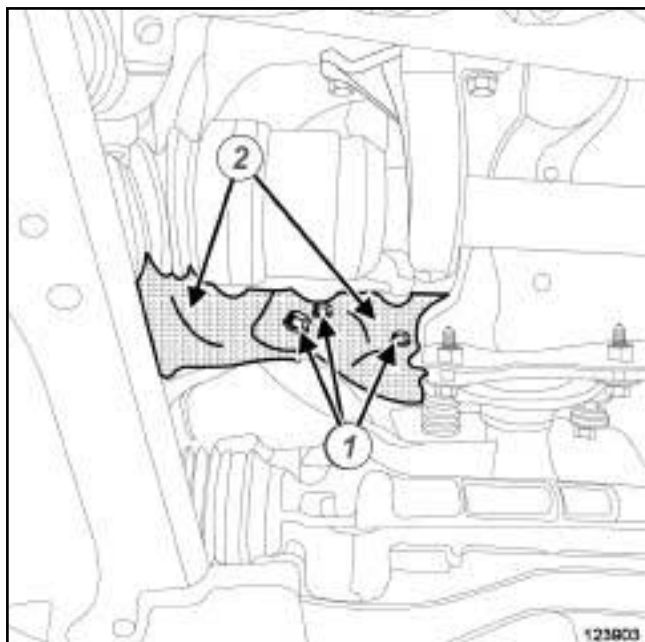
- the air filter unit (see **Air filter unit: Removal - Refitting**) (12A, Fuel mixture),
- the upstream oxygen sensor (see **Oxygen sensors: Removal - Refitting**) (17B, Petrol injection).

AIR CONDITIONING

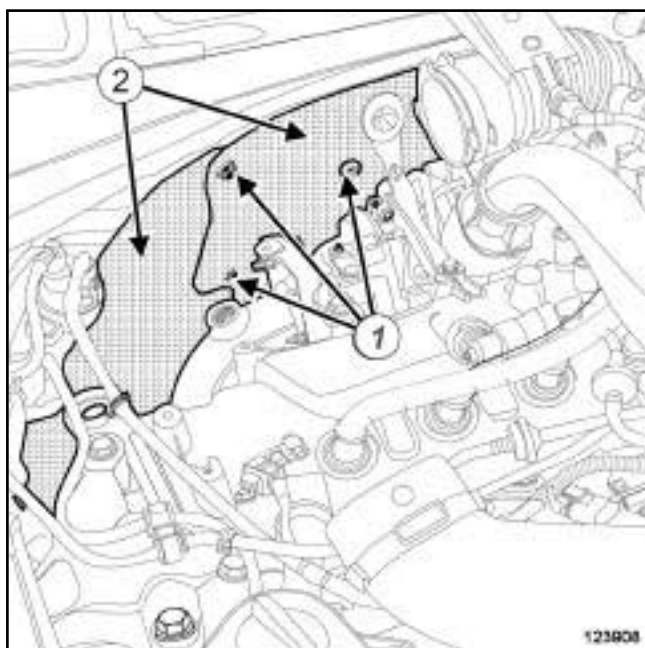
Expansion valve: Removal - Refitting

62A

AIR CONDITIONING or CLIMATE CONTROL



123903

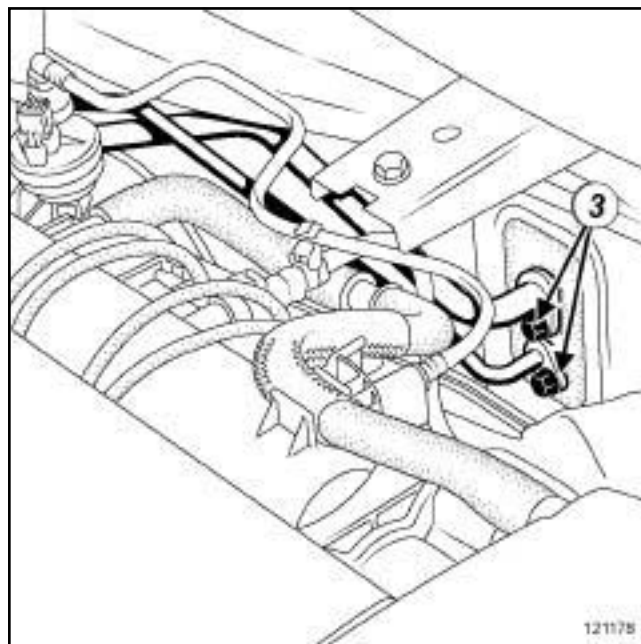


123908

Remove:

- the bolts (1) from the bulkhead heat-resistant protectors,
- the bulkhead heat-resistant protectors (2) .

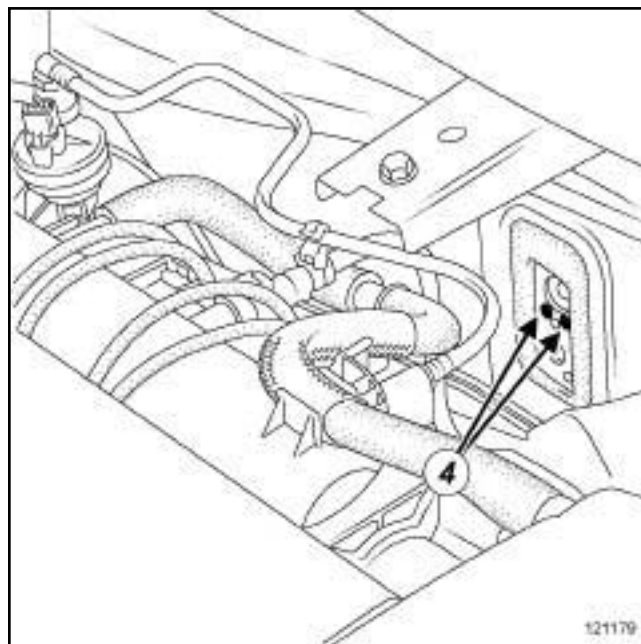
II - OPERATION FOR REMOVAL OF PART CONCERNED



121178

121178

- Remove the bolts (3) from the expansion valve connecting pipes.
- Move aside the connecting pipes.
- Put blanking plugs in the openings.



121179

121179

Remove:

- the bolts (4) from the expansion valve,
- the expansion valve.

AIR CONDITIONING

Expansion valve: Removal - Refitting

62A

AIR CONDITIONING or CLIMATE CONTROL

REFITTING

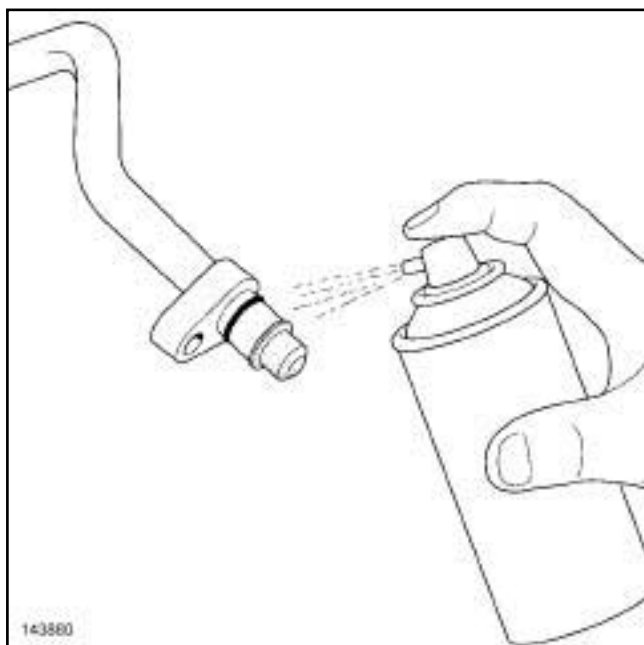
I - REFITTING PREPARATION OPERATION



WARNING

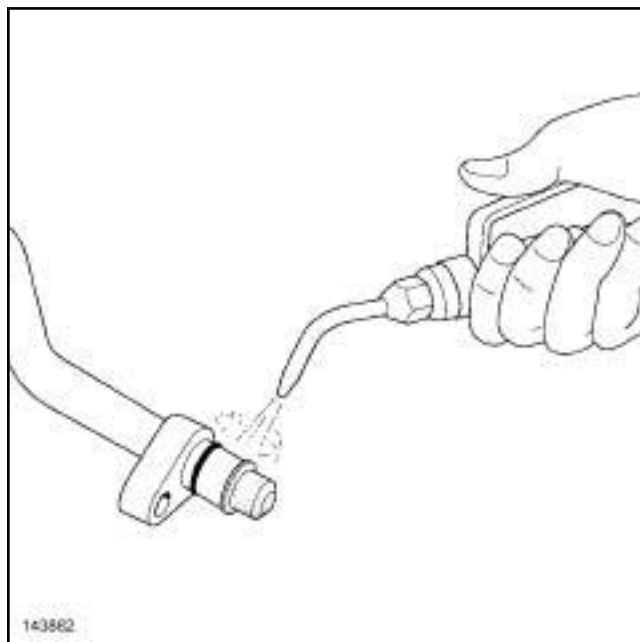
Do not remove the blanking plugs from each component until the last moment.

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-2**).
- Remove the blanking plugs.

II - REFITTING OPERATION FOR PART CONCERNED

- Refit the expansion valve.

Note:

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

- Fit the expansion valve connecting pipes.
- Refit the bolts of the connecting pipes on the expansion valve.

III - FINAL OPERATION

D4F, and 780 – K4M, and 854

- Refit:
- the bulkhead heat-resistant protectors,
 - the upstream oxygen sensor (see **Oxygen sensors: Removal - Refitting**) (17B, Petrol injection),

AIR CONDITIONING

Expansion valve: Removal - Refitting

62A

AIR CONDITIONING or CLIMATE CONTROL

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

Refit:

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

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

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

Connect the battery (see) (80A, Battery).

Consult the amount of refrigerant and oil required before filling the air conditioning circuit (see **62A, Air conditioning, Air conditioning: Parts and consumables for the repair**, page **62A-2**).

Fill the refrigerant circuit using a **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page **62A-8**).

Check for leaks (see **62A, Air conditioning, Refrigerant circuit: Check**, page **62A-7**).

Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page **62A-4**).

AIR CONDITIONING

Evaporator: Removal - Refitting

62A

AIR CONDITIONING or CLIMATE CONTROL

REMOVAL

OPERATION FOR REMOVAL OF PART CONCERNED

Note:

The evaporator is supplied already assembled in the distribution unit.

- Remove the distribution unit (see **61A, Heating, Distribution unit: Removal - Refitting**, page **61A-27**).

REFITTING

REFITTING OPERATION FOR PART CONCERNED

- Refit the distribution unit (see **61A, Heating, Distribution unit: Removal - Refitting**, page **61A-27**).

AIR CONDITIONING

Evaporator: Cleaning

62A

AIR CONDITIONING or CLIMATE CONTROL

CLEANING

I - CLEANING PREPARATION OPERATION

- Remove the cabin filter (see **61A, Heating, Cabin filter: Removal - Refitting**, page **61A-6**).

II - OPERATION FOR CLEANING PART CONCERNED

- Remove any foreign matter (leaves, insects, etc.) from the cabin filter housing.

-

Note:

For the part number for the air conditioning cleaner (see **Vehicle: Parts and consumables for the repair**) (MR 411, 04B, Consumables - Products).

Apply **AIR CONDITIONING CLEANER** using an extension piece. The end of the extension piece must be positioned at the base of the evaporator.

- Spray the entire contents of the can.
- Leave the product to work for **15 minutes**.
- Run the fan assembly very slowly for **5 minutes**.

WARNING

Do not spray the cleaner via the air inlet, as this could damage the fan assembly.

III - FINAL OPERATION.

- Refit the cabin filter (see **61A, Heating, Cabin filter: Removal - Refitting**, page **61A-6**).

AIR CONDITIONING or CLIMATE CONTROL

Equipment required

refrigerant charging station

IMPORTANT

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

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 plugs which have already been used to plug a fuel circuit.

Note:

The « expansion valve - intermediate pipe » and « expansion valve - dehydrator reservoir » connecting pipes cannot be separated.

REMOVAL

I - PREPARATION OPERATION

- Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (MR 411, 02A, Lifting equipment).
- Drain the coolant circuit using a **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page 62A-8) .

WARNING

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

- Disconnect the battery (see) (MR 411, 80A, Battery).
- Remove:
 - the wiper arms (see **Windscreen wiper arm: Removal - Refitting**) (MR 411, 85A, Wipers - Washers),
 - the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) (MR 412, 56A, Exterior equipment),

- the scoop under the scuttle panel grille (see **Scoop under the scuttle panel grille: Removal - Refitting**) (MR 412, 56A, Exterior equipment).

II - REMOVAL OPERATION FOR PART CONCERNED

- Remove the « dehydrator reservoir - expansion valve » and « expansion valve intermediate pipe » (see **62A, Air conditioning, Dehydrator reservoir - expansion valve connecting pipe: Removal - Refitting**, page 62A-28) connecting pipe assembly.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Refit the « expansion valve - intermediate pipe » - « expansion valve - dehydrator reservoir » (see **62A, Air conditioning, Dehydrator reservoir - expansion valve connecting pipe: Removal - Refitting**, page 62A-28) connecting pipe assembly.

II - FINAL OPERATION.

- Refit:
 - the scoop under the scuttle panel grille (see **Scoop under the scuttle panel grille: Removal - Refitting**) (MR 412, 56A, Exterior equipment),
 - the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) (MR 412, 56A, Exterior equipment),
 - the wiper arms (see **Windscreen wiper arm: Removal - Refitting**) (MR 411, 85A, Washing - wiping).
- Connect the battery (see) (MR 411, 80A, Battery).
- Consult the refrigerant and oil quantity values before filling the circuit (see **62A, Air conditioning, Air conditioning: Parts and consumables for the repair**, page 62A-2) .
- Fill the refrigerant circuit using a **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page 62A-8) .
- Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page 62A-4) .
- Check for leaks (see **62A, Air conditioning, Refrigerant circuit: Check**, page 62A-7) .

AIR CONDITIONING or CLIMATE CONTROL

Special tooling required

| | |
|------------------|---|
| Mot. 1410 | Set of refrigerant pipe union disconnection sockets. (dimensions in inches): 5/16, 3/8, 1/2, 5/8, 3/4, 7/8. |
|------------------|---|

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 **62A, Air conditioning, Air conditioning: Precautions for the repair**, page 62A-1) ,
- (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.

WARNING

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

Note:

Use blanking plugs for the fuel circuits with part numbers **77 01 2008 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 the surrounding components from overheating, do not damage (tear, pierce, bend, etc.) a heat shield.

Any damaged heat shields must be replaced.

Note:

The « expansion valve - intermediate pipe » and « expansion valve - dehydrator reservoir » connecting pipes cannot be separated.

REMOVAL

I - REMOVAL PREPARATION OPERATION

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

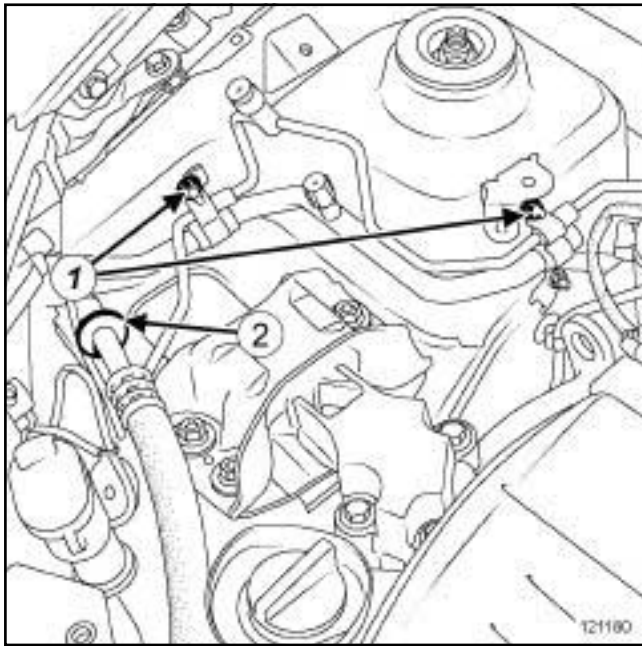
WARNING

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

- Drain the refrigerant circuit using a **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page 62A-8) .
- Disconnect the battery (see) (80A, Battery).
- Remove:
 - the wiper arms (see **Windscreen wiper arm: Removal - Refitting**) (85A, Wiping - Washing),
 - the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment),
 - the scoop under the scuttle panel grille (see **Scoop under the scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment).

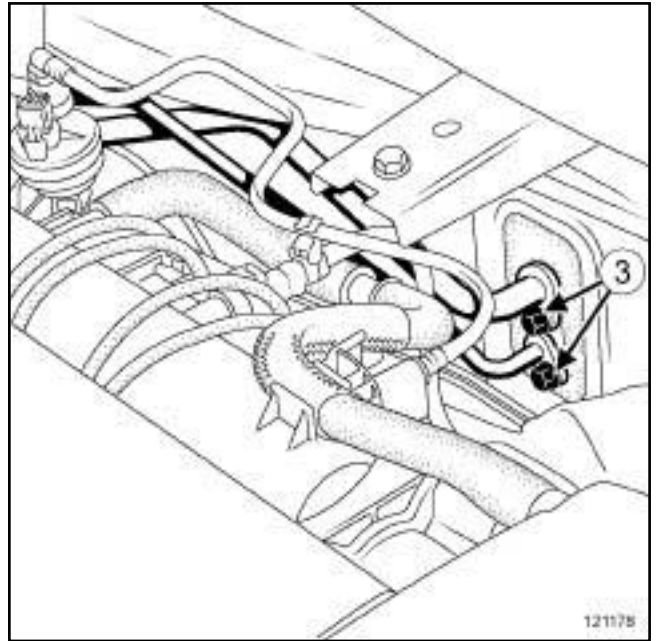
AIR CONDITIONING or CLIMATE CONTROL

II - OPERATION FOR REMOVAL OF PART CONCERNED



121180

- Remove the nuts (1) from the connecting pipe bracket.
- Move aside the connecting pipes on the body.
- Uncouple the « expansion valve - intermediate pipe » connecting pipe from the « compressor - intermediate pipe » connecting pipe using tool (Mot. 1410) at (2) .



121178

121178

- Remove the bolts (3) from the expansion valve connecting pipes.
- Remove the connecting pipes from the expansion valve.
- Insert the blanking plugs.

D4F, and 780

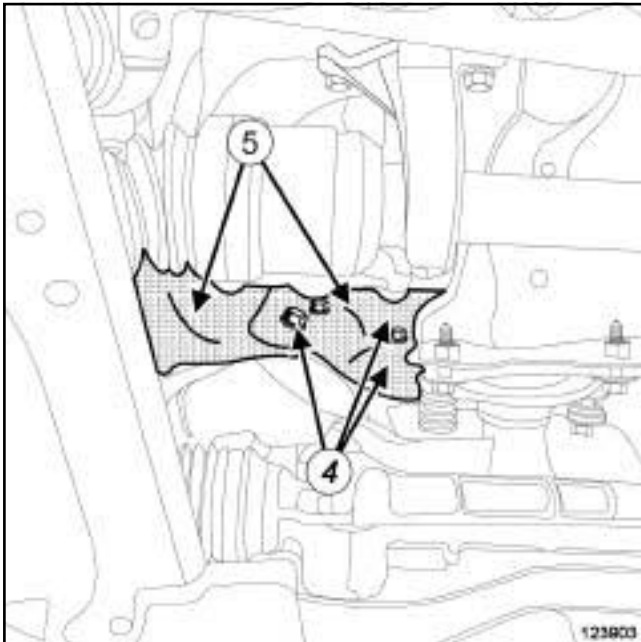
- Remove:
 - the air filter unit (see **Air filter unit: Removal - Refitting**) (12A, Fuel mixture),
 - the upstream oxygen sensor (see **Oxygen sensors: Removal - Refitting**) (17B, Petrol injection).

K4M

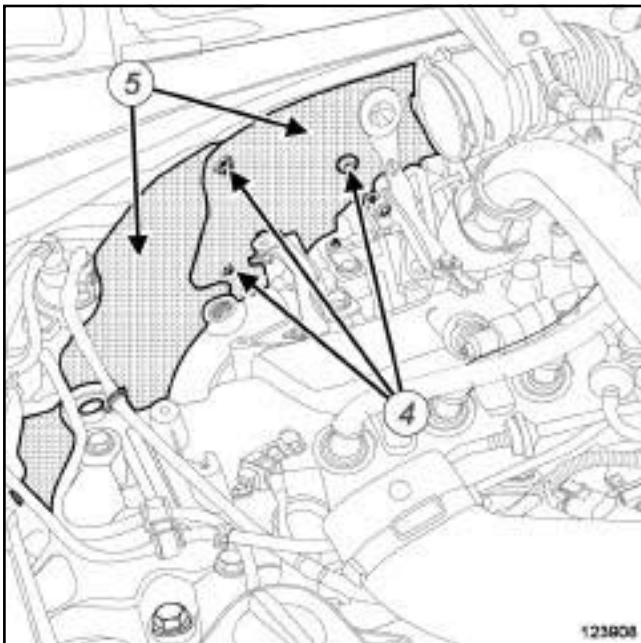
- Disconnect the air temperature sensor.

AIR CONDITIONING or CLIMATE CONTROL

D4F, and 780 – K4M

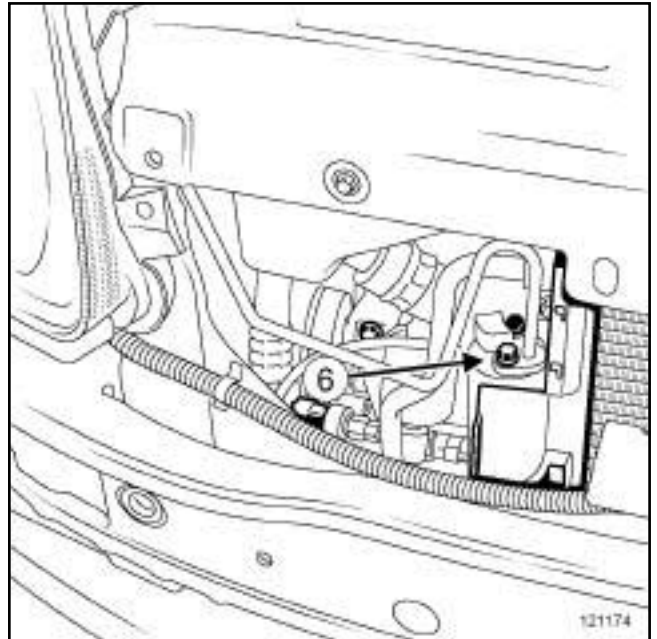


123903



123908

- Remove:
 - the bolts (4) from the bulkhead heat-resistant protectors,
 - the bulkhead heat-resistant protectors (5) .



121174

- Remove the bolt (6) from the « dehydrator reservoir - expansion valve » connecting pipe on the dehydrator reservoir.
- Separate the « dehydrator reservoir - expansion valve » connecting pipe from the dehydrator reservoir.
- Insert the blanking plugs.
- Remove all of the « dehydrator reservoir - expansion valve » and « expansion valve - intermediate pipe » connecting pipes.

REFITTING

I - REFITTING PREPARATION OPERATION

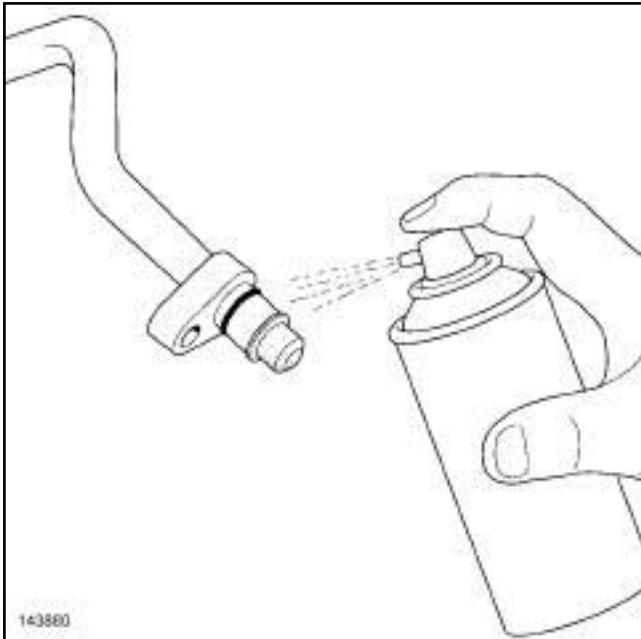
-

WARNING

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

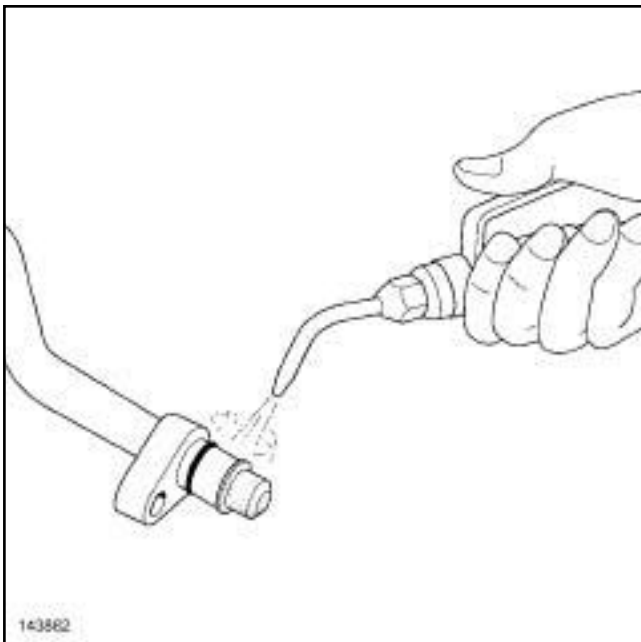
Also, do not remove the components from their packaging until they are to be fitted to the vehicle.

AIR CONDITIONING or CLIMATE CONTROL



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-2**).
- Remove the blanking plugs.

II - REFITTING OPERATION FOR PART CONCERNED

- Refit the assembly of the « dehydrator reservoir - expansion valve » and « expansion valve - intermediate pipe » connecting pipes.
- Fit:
 - the « dehydrator reservoir - expansion valve » connecting pipe on the dehydrator reservoir,
 - the connecting pipes on the expansion valve.
- Couple the « expansion valve - intermediate pipe » connecting pipe to the « compressor - intermediate pipe » connecting pipe.
- Refit:
 - the bolts of the connecting pipes on the expansion valve,
 - the bolt of the « dehydrator reservoir - expansion valve » connecting pipe on the dehydrator reservoir.
- Fit the connecting pipes on the body.
- Refit the connecting pipe bracket nuts on the body.

III - FINAL OPERATION

D4F, and 780 – K4M

- Refit the bulkhead heat-resistant protectors.

D4F, and 780

- Refit:
 - the upstream oxygen sensor (see **Oxygen sensors: Removal - Refitting**) (17B, Petrol injection),
 - the air filter box (see **Air filter unit: Removal - Refitting**) (12A, Fuel mixture).

K4M

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

AIR CONDITIONING or CLIMATE CONTROL

- the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) (56A, Exterior equipment),
- the wiper arms (see **Windscreen wiper arm: Removal - Refitting**) (85A, Wiping - Washing).
- Connect the battery (see) (80A, Battery).
- Consult the amount of refrigerant and oil required before filling the air conditioning circuit (see **62A, Air conditioning, Air conditioning: Parts and consumables for the repair**, page **62A-2**).
- Fill the refrigerant circuit using a **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page **62A-8**).
- Check for leaks (see **62A, Air conditioning, Refrigerant circuit: Check**, page **62A-7**).
- Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page **62A-4**).

AIR CONDITIONING or CLIMATE CONTROL

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 **62A, Air conditioning, Air conditioning: Precautions for the repair**, page **62A-1**),
- (see **Vehicle: Precautions for the repair**) (01D, Mechanical introduction).

Note:

Use blanking plugs for the fuel circuits with part no. **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

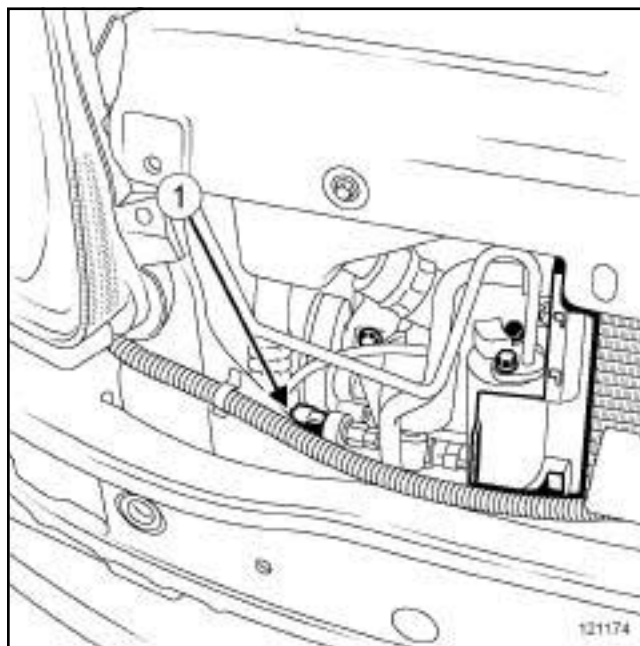
- Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).

WARNING

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

- Drain the refrigerant circuit using a **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page **62A-8**).
- Disconnect the battery (see) (80A, Battery).
- Remove:
 - the front wheels (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres),
 - 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).

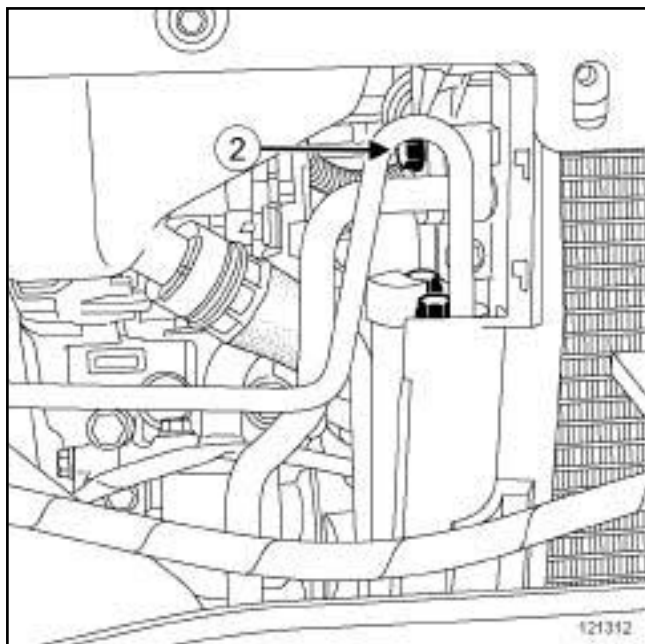
II - OPERATION FOR REMOVAL OF PART CONCERNED



121174

- Disconnect the pressure sensor connector (1).

AIR CONDITIONING or CLIMATE CONTROL



121312

- Remove the bolt (2) from the « compressor - condenser » connecting pipe on the condenser.
- Separate the « compressor - condenser » connecting pipe from the condenser.

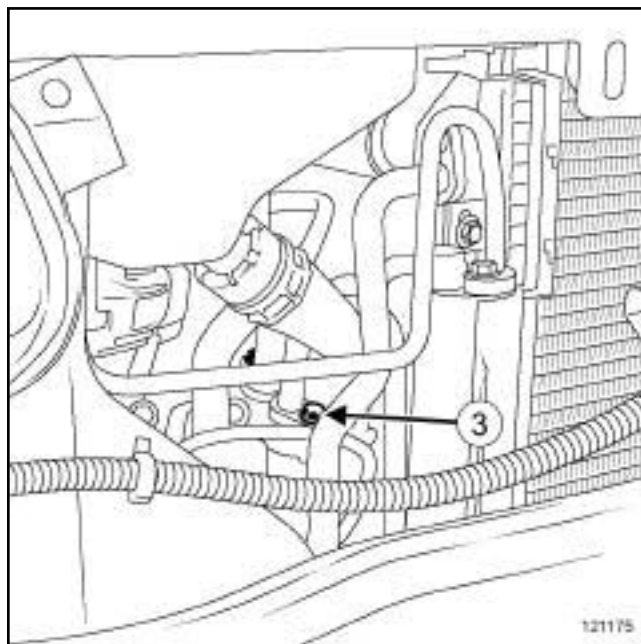
WARNING

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

- Fit plugs into the openings.

WARNING

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



121175

- Remove the bolt (3) from the « compressor - condenser » connecting pipe on the compressor.
- Separate the « compressor - condenser » connecting pipe from the compressor.

WARNING

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

- Fit plugs into the openings.

WARNING

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

- Remove the « compressor - condenser » connecting pipe.
- Remove the pressure sensor on the « compressor - condenser » connecting pipe.

AIR CONDITIONING or CLIMATE CONTROL

REFITTING

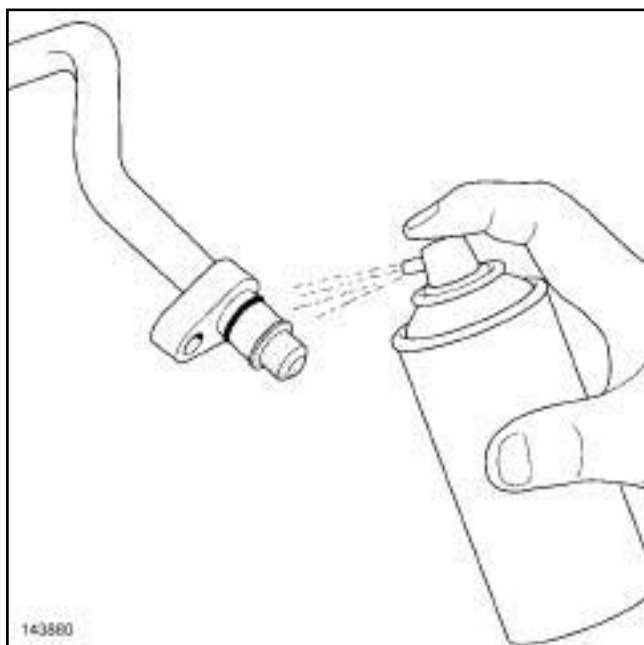
I - REFITTING PREPARATION OPERATION



WARNING

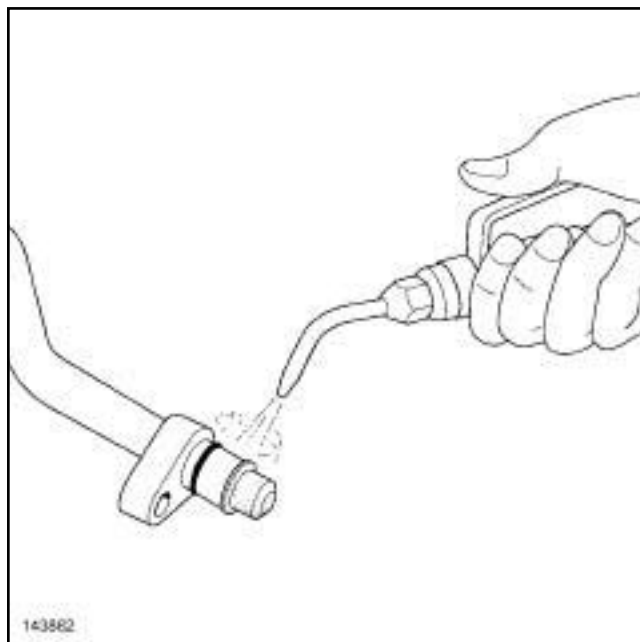
Do not remove the blanking plugs from each component until the last moment.

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

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-2) .
- ☐ Remove the blanking plugs.

II - REFITTING OPERATION FOR PART CONCERNED

- ☐ Refit the pressure sensor on the « compressor - condenser » connecting pipe.
- ☐ Fit:
 - the « compressor - condenser » connecting pipe on the compressor,
 - the « compressor - condenser » connecting pipe on the condenser.
- ☐ Refit:
 - the bolt on the « compressor - condenser » connecting pipe on the compressor,
 - the bolt on the « compressor - condenser » connecting pipe on the condenser.
- ☐ Connect the pressure sensor connector.

III - FINAL OPERATION

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

AIR CONDITIONING or CLIMATE CONTROL

- 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).
- Connect the battery (see) (80A, Battery).
- Consult the refrigerant and oil quantity values before filling the circuit (see **62A, Air conditioning, Air conditioning: Parts and consumables for the repair**, page **62A-2**).
- Fill the refrigerant circuit using a **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page **62A-8**).
- Check for leaks (see **62A, Air conditioning, Refrigerant circuit: Check**, page **62A-7**).
- Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page **62A-4**).

AIR CONDITIONING or CLIMATE CONTROL

Special tooling required

Mot. 1410 Set of refrigerant pipe union disconnection sockets. (dimensions in inches): 5/16, 3/8, 1/2, 5/8, 3/4, 7/8.

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 **62A, Air conditioning, Air conditioning: Precautions for the repair**, page **62A-1**),
- (see **Vehicle: Precautions for the repair**) (01D, Mechanical introduction).

Note:

Use blanking plugs for the fuel circuits with part no. **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).

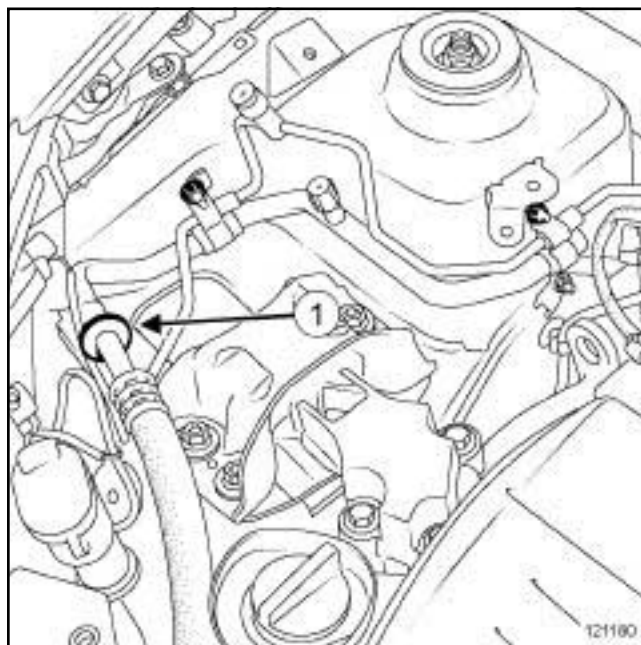
WARNING

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

- Drain the refrigerant circuit using a **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page **62A-8**).
- Disconnect the battery (see) (80A, Battery).
- Remove:
 - the front wheels (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres),

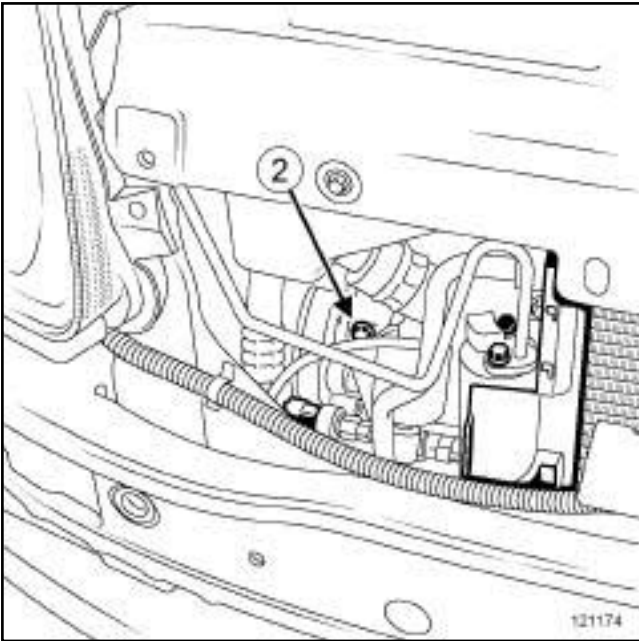
- the front wheel arch liners (see **Front wheel arch liner: Removal - Refitting**) (55A, Exterior protection),
- the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection).

II - OPERATION FOR REMOVAL OF PART CONCERNED



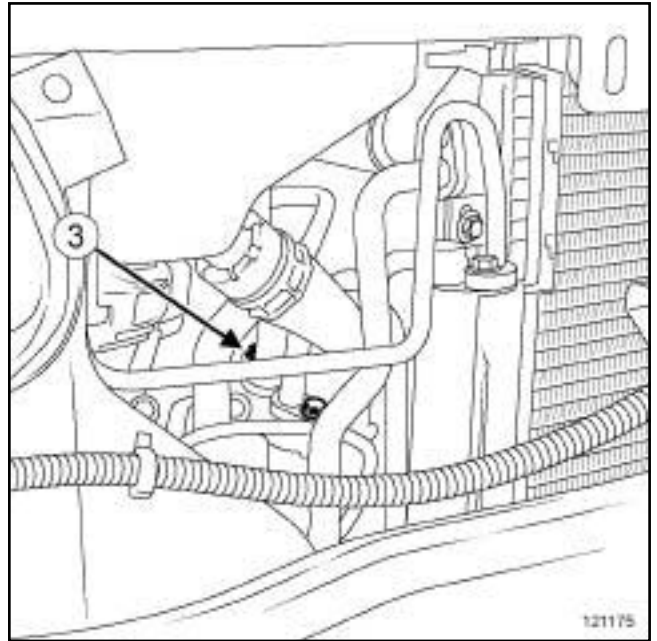
- Disconnect the « expansion valve - intermediate pipe » (1) connecting pipe on the « compressor - intermediate pipe » connecting pipe using the (**Mot. 1410**).

AIR CONDITIONING or CLIMATE CONTROL



121174

- Remove the bolt (2) from the « compressor - intermediate pipe » connecting pipe bracket on the compressor.



121175

- Remove the bolt (3) from the « compressor-intermediate pipe » connecting pipe on the compressor.
- Separate the « compressor - intermediate pipe » connecting pipe from the compressor.

WARNING

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

- Fit plugs into the openings.

WARNING

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

- Remove the « compressor - intermediate pipe » connecting pipe.

REFITTING

I - REFITTING PREPARATION OPERATION

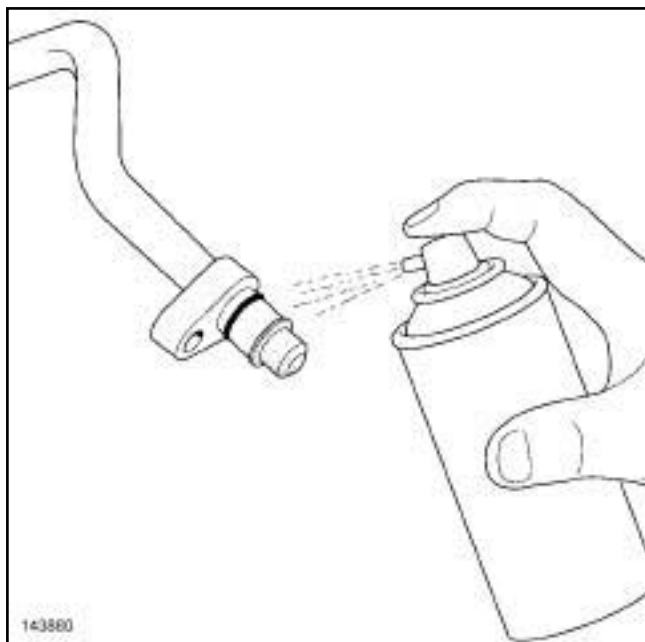
-

WARNING

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

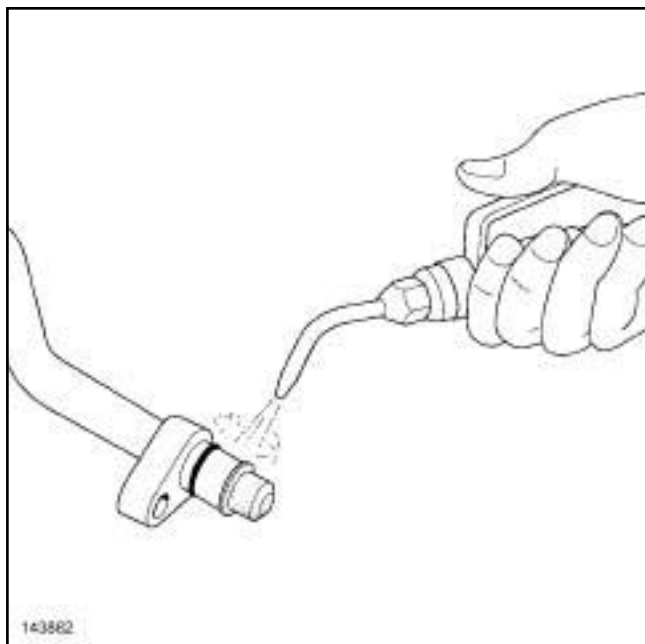
Also, do not remove the components from their packaging until they are to be fitted to the vehicle.

AIR CONDITIONING or CLIMATE CONTROL



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-2) .
- Remove the blanking plugs.

II - REFITTING OPERATION FOR PART CONCERNED

- Refit the « compressor - intermediate pipe » connecting pipe.
- Fit the « compressor - intermediate pipe » connecting pipe on the compressor.
- Refit:
 - the bolt on the « compressor - intermediate pipe » connecting pipe on the compressor,
 - the bolt on the « compressor - intermediate pipe » connecting pipe bracket on the compressor.
- Couple the « expansion valve - intermediate pipe » connecting pipe to the « compressor - intermediate pipe » connecting pipe.

III - FINAL OPERATION

- Refit:
 - the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection),
 - 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).
- Connect the battery (see) (80A, Battery).
- Consult the refrigerant and oil quantity values before filling the circuit (see **62A, Air conditioning, Air conditioning: Parts and consumables for the repair**, page 62A-2) .
- Fill the refrigerant circuit using a **refrigerant charging station** (see **62A, Air conditioning, Refrigerant circuit: Draining - Filling**, page 62A-8) .
- Check for leaks (see **62A, Air conditioning, Refrigerant circuit: Check**, page 62A-7) .
- Check that the air conditioning system is operating correctly (see **62A, Air conditioning, Air conditioning: Check**, page 62A-4) .

AIR CONDITIONING

Pressure sensor: Removal - Refitting

62A

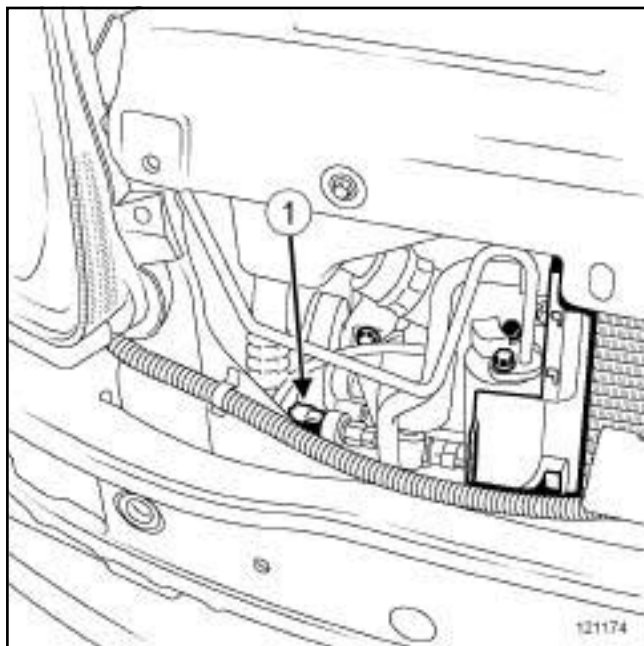
AIR CONDITIONING or CLIMATE CONTROL

REMOVAL

I - REMOVAL PREPARATION OPERATION

- Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (MR 411, 02A, Lifting equipment).
- Remove:
 - the front wheels (see **Wheel: Removal - Refitting**) (MR 411, 35A, Wheels and tyres),
 - the front wheel arch liners (see **Front wheel arch liner: Removal - Refitting**) (MR 412, 55A, Exterior protection),
 - the front bumper (see **Front bumper: Removal - Refitting**) (MR 412, 55A, Exterior protection).

II - OPERATION FOR REMOVAL OF PART CONCERNED



121174

- Disconnect the pressure sensor connector (1) .

Note:

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

- Remove the pressure sensor.

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Refit the pressure sensor.
- Connect the pressure sensor connector.

II - FINAL OPERATION.

- Remove:
 - the front bumper (see **Front bumper: Removal - Refitting**) (MR 412, 55A, Exterior protection),
 - the front wheel arch liners (see **Front wheel arch liner: Removal - Refitting**) (MR 412, 55A, Exterior protection),
 - the front wheels (see **Wheel: Removal - Refitting**) (MR 411, 35A, Wheels and tyres).

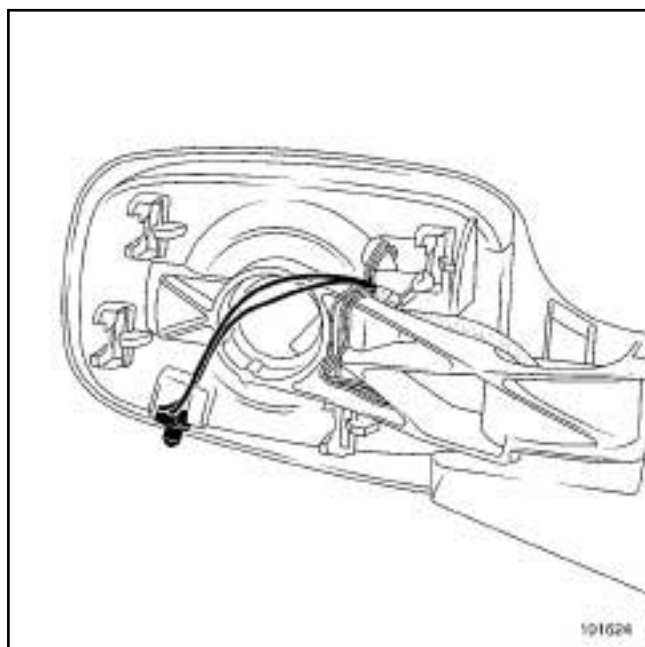
Exterior air temperature sensor: Removal - Refitting

REMOVAL

I - REMOVAL PREPARATION OPERATION

- Remove:
 - the right-hand door mirror glass (see **Door mirror glass: Removal - Refitting**) (MR 412, 56A, Exterior equipment),
 - the right-hand door mirror cover (see **Door mirror casing: Removal - Refitting**) (MR 412, 56A, Exterior equipment).

II - OPERATION FOR REMOVAL OF PART CONCERNED



101624

- Unclip the exterior air temperature sensor from its mounting using a flat-blade screwdriver.
- Cut the exterior air temperature sensor wires (see **Wiring: Repair**) (Technical Note 6015A, 88A, Wiring).

REFITTING

I - REFITTING OPERATION FOR PART CONCERNED

- Solder the exterior air temperature sensor feed wires (see **Wiring: Repair**) (Technical Note 6015A, 88A, Wiring).
- Clip the external air temperature sensor onto its support.

II - FINAL OPERATION.

- Refit:
 - the right-hand door mirror cover (see **Door mirror casing: Removal - Refitting**) (MR 412, 56A, Exterior equipment),
 - the right-hand door mirror glass (see **Door mirror glass: Removal - Refitting**) (MR 412, 56A, Exterior equipment).