

Engine cooling circuit: List and location of components

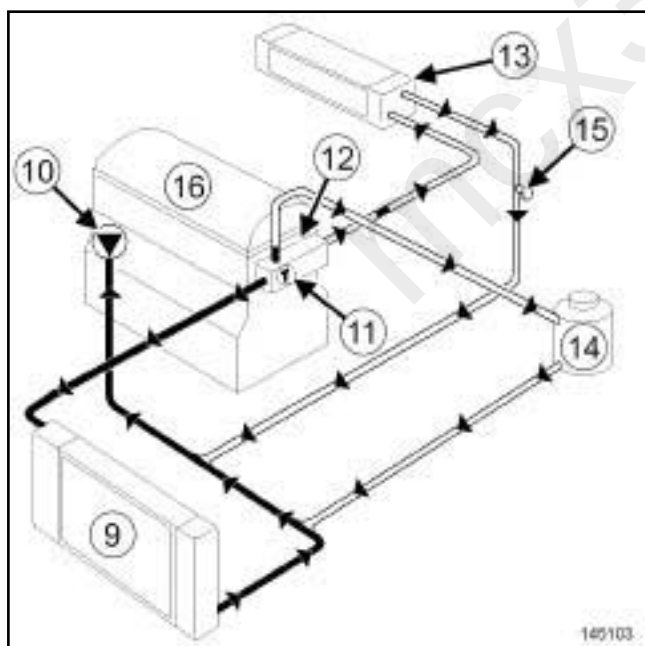
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I - LIST OF COMPONENTS

The engine cooling system is composed of:

- an engine cooling fan assembly (see **19A, Cooling, Engine cooling fan assembly: Removal - Refitting**, page **19A-27**) ,
- a cooling radiator (see **19A, Cooling, Cooling radiator: Removal - Refitting**, page **19A-9**) ,
- a coolant pump (see **19A, Cooling, Coolant pump: Removal - Refitting**, page **19A-13**) ,
- a thermostat (see **19A, Cooling, Thermostat: Removal - Refitting**, page **19A-19**) ,
- a water chamber (see **19A, Cooling, Water chamber: Removal - Refitting**, page **19A-22**) ,
- a coolant pump inlet pipe (see **19A, Cooling, Coolant pump inlet pipe: Removal - Refitting**, page **19A-34**) ,
- an expansion bottle (see **19A, Cooling, Expansion bottle: Removal - Refitting**, page **19A-38**) ,
- a coolant temperature sensor (see **19A, Cooling, Coolant temperature sensor: Removal - Refitting**, page **19A-40**) .

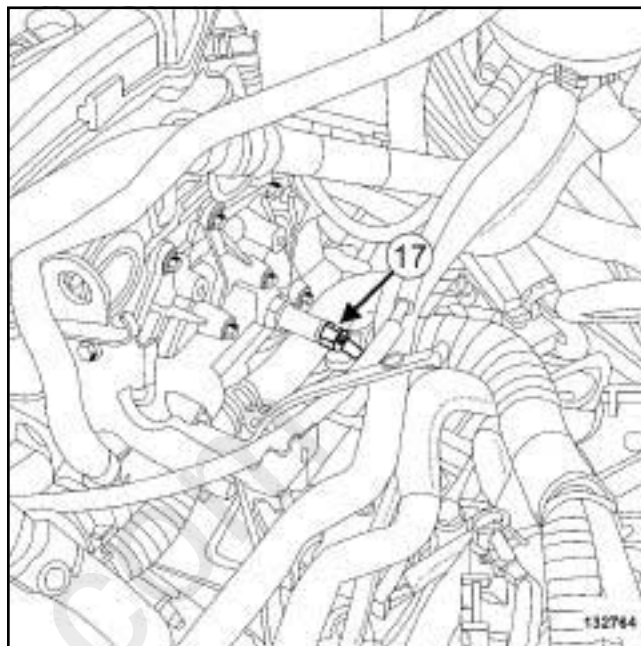
II - LOCATION OF COMPONENTS



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- (9) Cooling radiator
- (10) Water pump
- (11) Thermostat
- (12) Water chamber
- (13) Heater radiator

- (14) Expansion bottle
- (15) Bleed screw
- (16) Engine



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- (17) Coolant temperature sensor

Cooling system: Draining - Refilling

Special tooling required

Mot. 1448 Remote operation pliers for hose clips.

Car. 1363 Set of trim removal levers.

Equipment required

coolant recovery tray

compressed air nozzle

IMPORTANT

When working in the engine compartment, take care as the radiator fan(s) may start up unexpectedly (risk of being cut).

To avoid any risk of serious burns when the engine is hot:

- do not open the expansion bottle cap,
- do not drain the cooling system,
- do not open the bleed screw(s).

I - DRAINING

- ☐ Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).
- ☐ Remove:
 - the expansion bottle cap,
 - the engine undertray.
- ☐ Remove the front bumper (see **Front bumper assembly: Exploded view**) (55A, Exterior protection).
- ☐ Position the **coolant recovery tray** under the vehicle.
- ☐ Remove the cooling radiator bottom hose clip using theoror (**Mot. 1448**).
- ☐ Open the cooling system by removing the cooling radiator bottom hose using the tool (**Car. 1363**).
- ☐ Use a **compressed air nozzle** to blow air into the system through the expansion bottle opening to remove as much coolant as possible.

II - CLEANING

- ☐ Fill the cooling system with water through the expansion bottle.
- ☐ Let the water run until the water collected from the cooling radiator bottom hose becomes clear.

- ☐ Use a **compressed air nozzle** to blow air into the system through the expansion bottle opening to remove as much coolant as possible.
- ☐ Refit the cooling radiator bottom hose.

III - FILLING

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Note:

There are two procedures for filling the cooling system:

- the method using the tool, is recommended by Renault. It saves a considerable amount of time because it does not require the cooling system bleed screws to be opened,
- the procedure without a special tool.

1 - Filling procedure with the tool (Mot. 1700)

- ☐ Fill the cooling system with engine coolant recommended by the manufacturer (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) using the tool. Consult the user's manual for this tool (see) (Technical Note 3857A, 19A, Cooling).

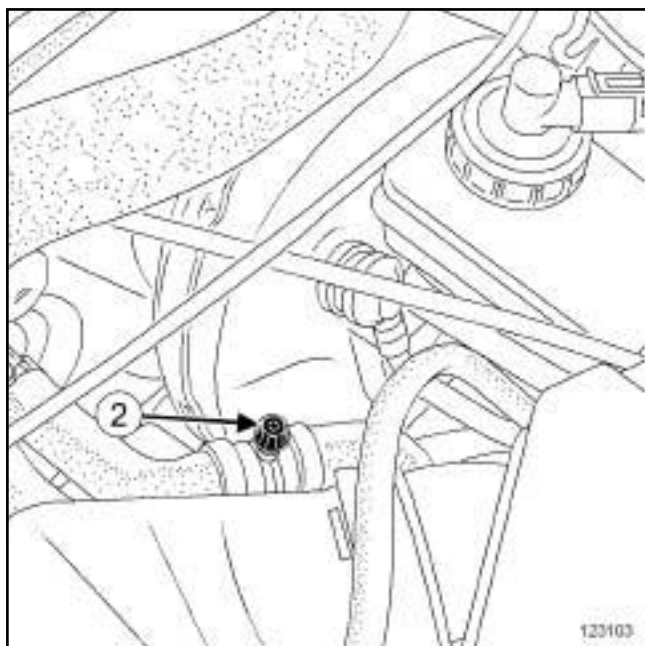
2 - Filling method without special tools

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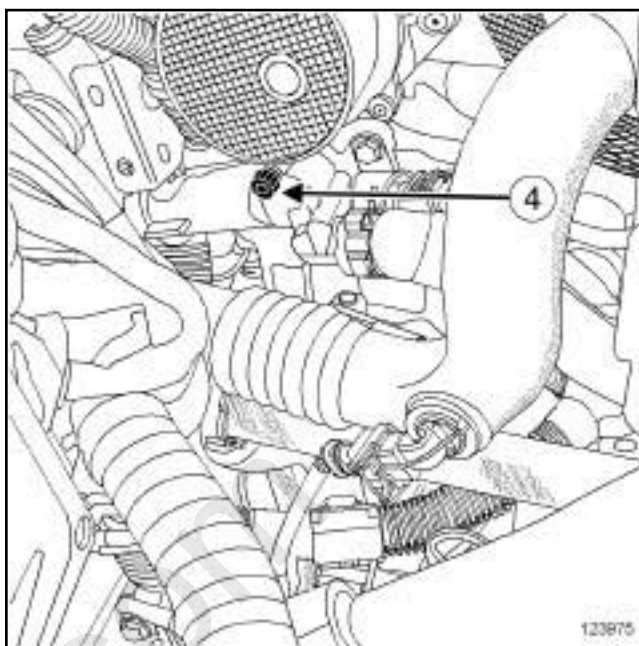
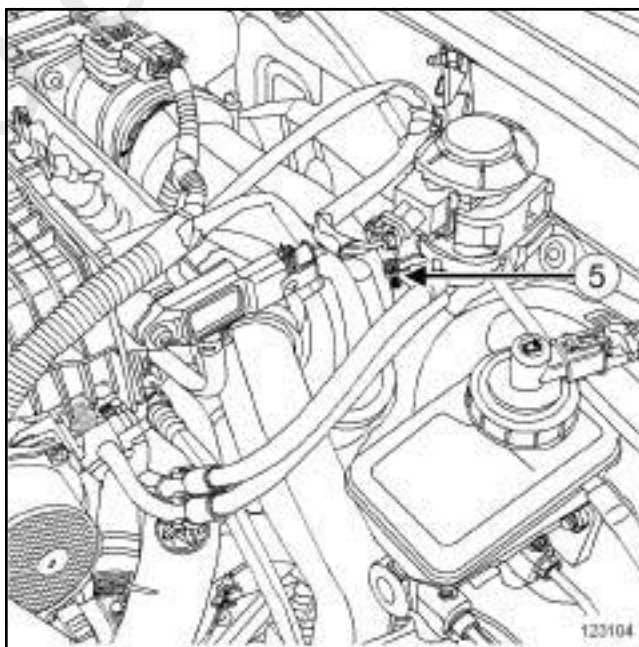
It is essential to open all of the bleed screws to remove as much as air as possible in the cooling system. Failure to perform this procedure may prevent the cooling system from filling properly and may damage the engine.

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- ❑ Open the bleed screw (2) .

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- ❑ Open the bleed screws (4) and (5) .
- ❑ Fill the cooling system with engine coolant recommended by the manufacturer (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) via the expansion bottle until it overflows.
- ❑ Close all the bleed screws as soon as the coolant starts to flow in a continuous stream.