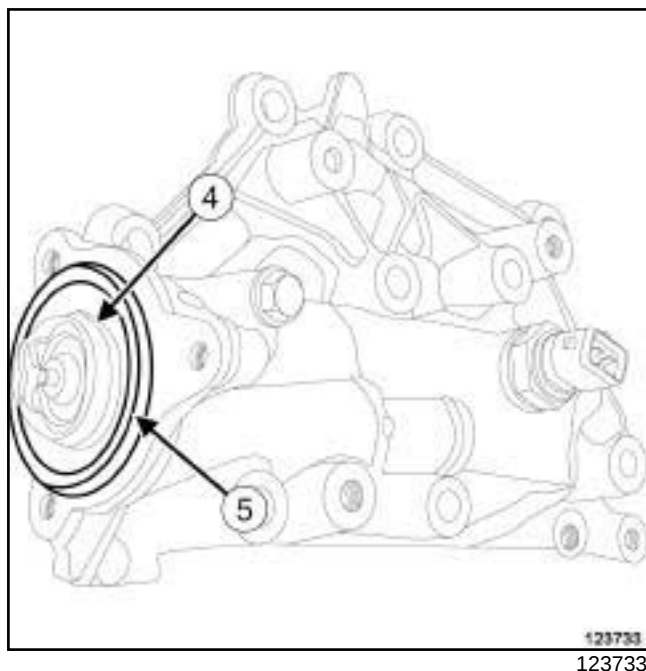


K4M

- the thermostat cover.



☐ Remove:

- the thermostat (4) ,
- the thermostat seal (5) .

REFITTING

I - REFITTING PREPARATION OPERATION

- ☐ Use **SURFACE CLEANER** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) to clean and degrease the thermostat housing.
- ☐ The thermostat seal must be replaced.

II - REFITTING OPERATION FOR PART CONCERNED

- ☐ Refit:
 - a new seal on the thermostat,
 - the thermostat,
 - the thermostat cover.
- ☐ Connect the following to the thermostat cover:
 - the expansion bottle hose,
 - the cooling radiator top hose.
- ☐ Using the **(Mot. 1448)** ororfit:
 - the expansion bottle hose clip,
 - the cooling radiator top hose clip.

III - FINAL OPERATION

- ☐ Fill and bleed the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page **19A-6**) .
- ☐ Refit:
 - the engine undertray,
 - the air resonator (see **12A, Fuel mixture, Air resonator: Removal - Refitting**, page **12A-2**) .

Water chamber: Removal - Refitting

K9K, and 796

Tightening torques

water chamber bolts	11 N.m
expansion bottle nuts	8 N.m

IMPORTANT

Wear leaktight gloves (Nitrile type) for this operation.

IMPORTANT

The circuits are designed to be pressurised, so be careful at high temperatures (risk of serious burns).
Do not remove the cap from the expansion bottle while the engine is hot.

Take care when carrying out a repair under the bonnet, as the radiator fan(s) may start to operate without warning.

Do not open the bleed screw(s) with the engine running.

WARNING

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

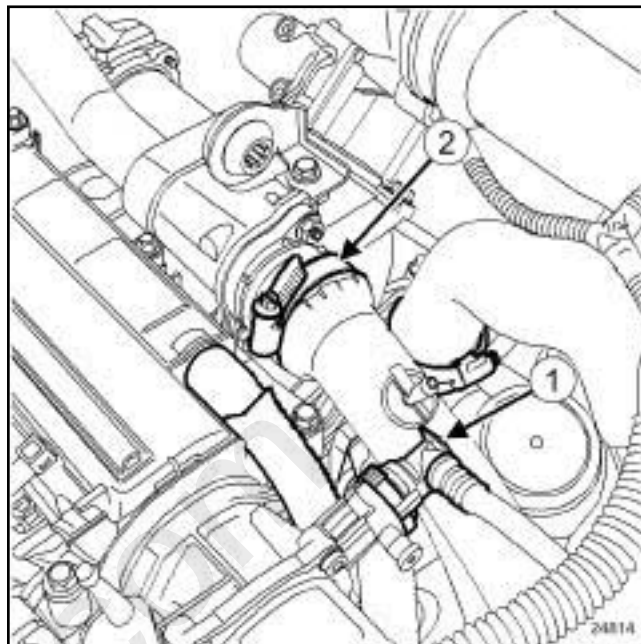
REMOVAL

I - REMOVAL PREPARATION OPERATION

- ☐ Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).
- ☐ Remove:
 - the engine cover,
 - the engine undertray bolts,
 - the engine undertray.
- ☐ Remove the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection).
- ☐ Drain the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page 19A-6).
- ☐ Remove:
 - the air filter unit (see **12A, Fuel mixture, Air filter unit: Removal - Refitting**, page 12A-6),

- the expansion bottle nuts.

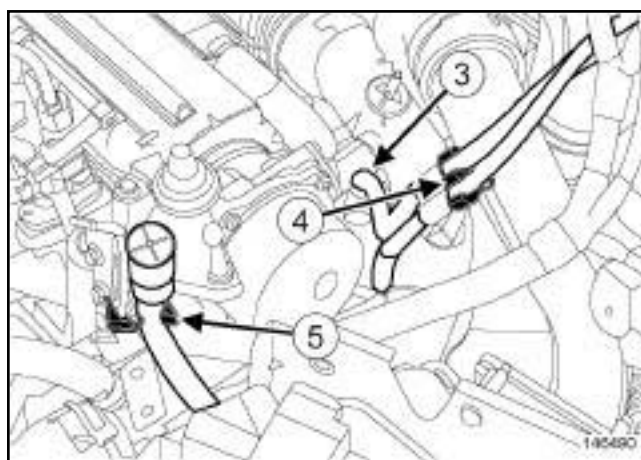
- ☐ Move aside the expansion bottle.



24814

- ☐ Disconnect:

- the union (1) on the vacuum pump,
- the air duct between the intercooler and the EGR assembly at (2).



146490

- ☐ Disconnect the EGR solenoid valve pipe at (3).

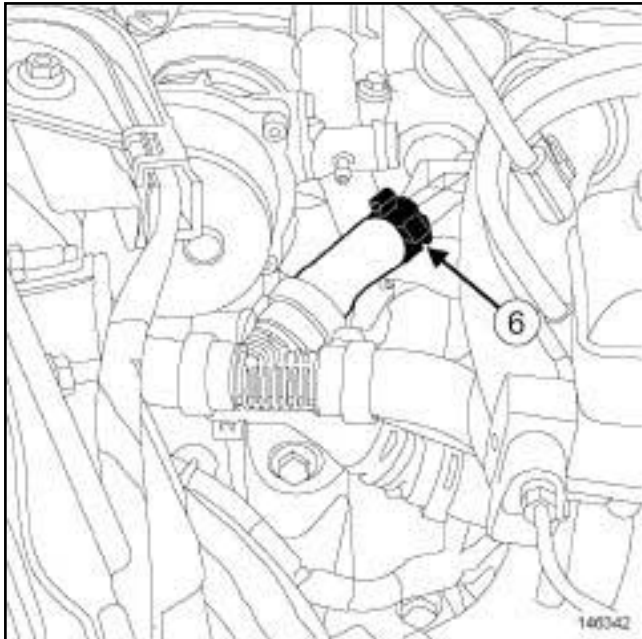
- ☐ Unclip:

- the EGR solenoid valve pipes at (4),
- the gearbox breather pipe at (5).

- ☐ Move aside the air duct between the intercooler and the EGR assembly.

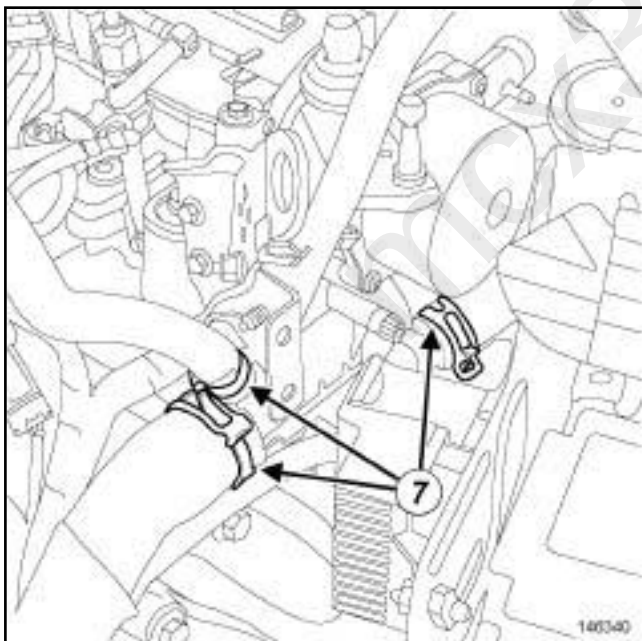
Water chamber: Removal - Refitting

K9K, and 796



146342

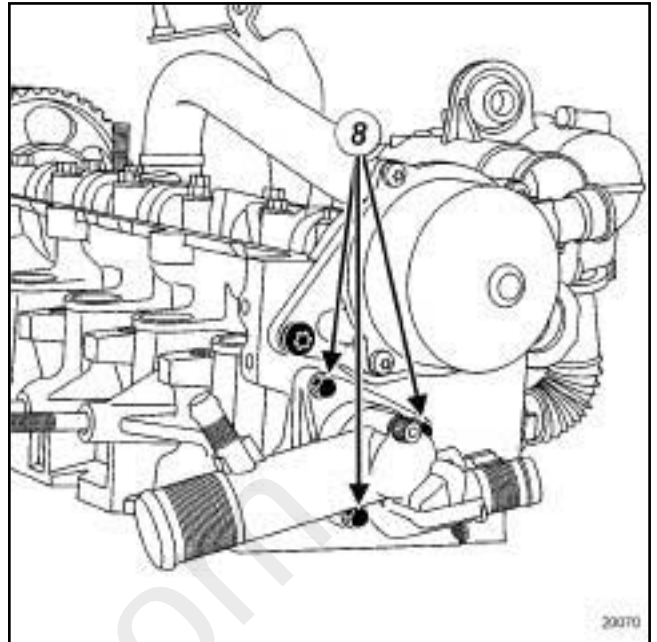
- ☐ Disconnect the EGR assembly outlet pipe at (6) .
- ☐ Move the EGR assembly outlet pipe aside.
- ☐ Disconnect the coolant temperature sensor connector.



146340

- ☐ Disconnect the cooling hoses on the water chamber at (7) .

II - REMOVAL OPERATION



20070

- ☐ Remove:
 - the water chamber bolts (8) ,
 - the water chamber,
 - the water chamber seal.

REFITTING

I - REFITTING PREPARATION OPERATION

- ☐ parts always to be replaced: Cylinder head coolant outlet unit seal.
- ☐ Use **SURFACE CLEANER** (see) to clean and degrease:
 - the cylinder head joint face,
 - the water chamber seal housing if it is to be reused.

WARNING

To ensure proper sealing, the gasket surfaces must be clean, dry and not greasy (avoid any finger marks).

WARNING

Do not scrape the joint faces of the aluminium, any damage caused to the joint face will result in a risk of leaks.

Water chamber: Removal - Refitting

K9K, and 796

II - REFITTING OPERATION

☐ Refit:

- a new water chamber seal in the water chamber housing,
- the water chamber.

☐ Torque tighten the **water chamber bolts (11 N.m)**.☐ Connect:

- the cooling hoses to the water chamber,
- the coolant temperature sensor connector,
- the EGR assembly outlet pipe,

☐ Position the air duct between the intercooler and the EGR assembly.☐ Connect:

- the air duct on the EGR assembly,
- the union to the vacuum pump.

☐ Connect the EGR solenoid valve pipe to the vacuum pump.☐ Clip on:

- the breather pipe from the gearbox,
- the EGR solenoid valve pipes.

☐ Position the expansion bottle.☐ Torque tighten the **expansion bottle nuts (8 N.m)**.

III - FINAL OPERATION

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

- the air filter unit (see **12A, Fuel mixture, Air filter unit: Removal - Refitting**, page **12A-6**),
- the engine undertray,
- the engine cover.

☐ Fill and bleed the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page **19A-6**).

Water chamber: Removal - Refitting

K4M

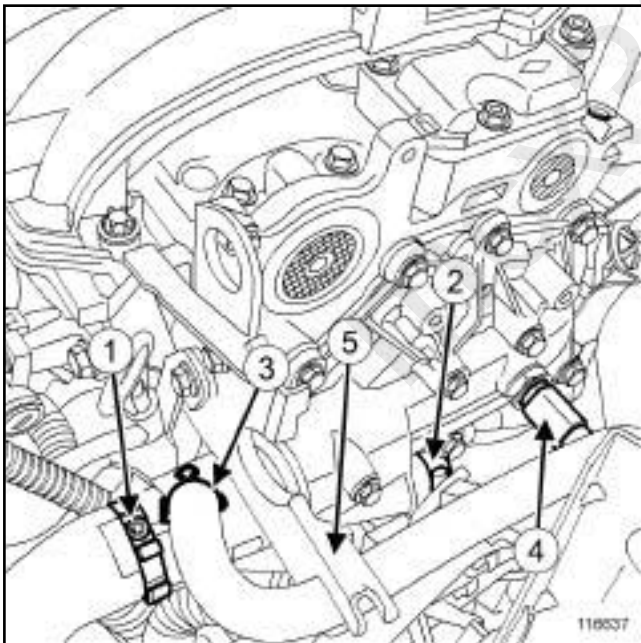
Tightening torques

coolant outlet unit bolts (initial torque)	4 N.m
water chamber bolts	12 N.m

REMOVAL

I - OPERATION FOR REMOVAL OF PART CONCERNED

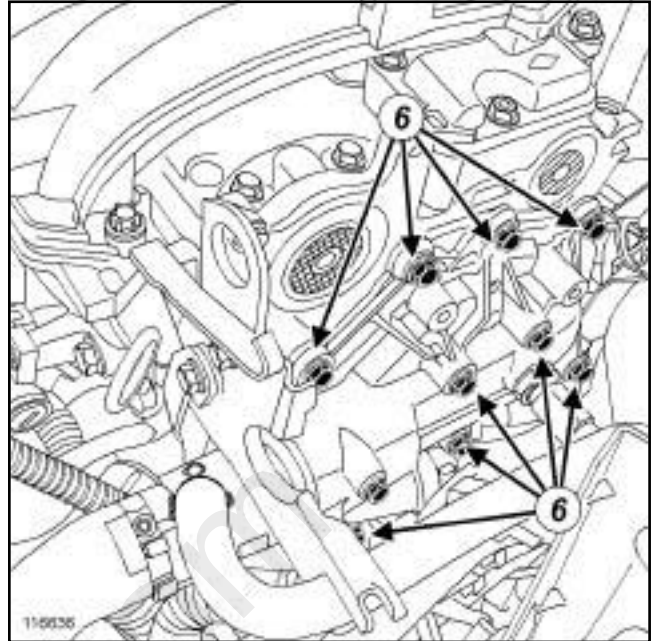
- ☐ Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).
- ☐ Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- ☐ Remove the air resonator (see **12A, Fuel mixture, Air resonator: Removal - Refitting**, page 12A-2) .
- ☐ Drain the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page 19A-6) .



116637

- ☐ Disconnect:
 - the radiator top hose (1) from the water chamber,
 - the passenger compartment heater hose (2) ,
 - the expansion bottle hose (3) ,
 - the coolant temperature sensor (4) .
- ☐ Unclip the hoses from their support at (5) .

II - REMOVAL OPERATION



116636

- ☐ Remove:
 - the water chamber bolts (6) ,
 - the water chamber.

REFITTING

I - REFITTING PREPARATION OPERATION

- ☐ parts always to be replaced: Cylinder head coolant outlet unit seal

WARNING

To ensure proper sealing, the gasket surfaces must be clean, dry and not greasy (avoid any finger marks).

- ☐ Use **SURFACE CLEANER** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) to clean and degrease:
 - the cylinder head joint face,
 - the water chamber joint face, if being reused.

II - REFITTING OPERATION

- ☐ Refit the water chamber.