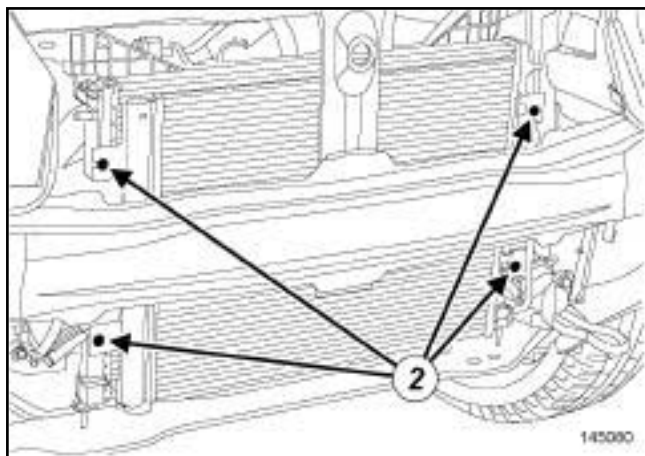
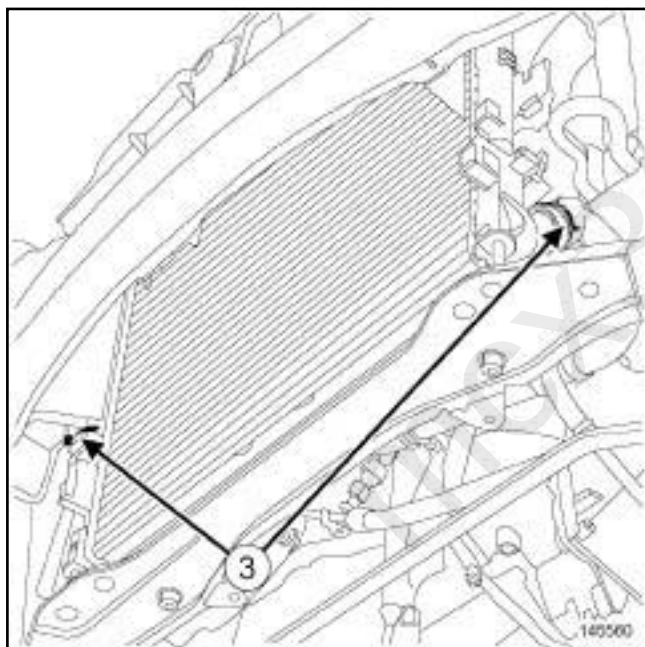


Cooling radiator: Removal - Refitting

K9K



- ☐ Remove the condenser bolts (2) .



- ☐ Remove the cooling radiator hose clips (3) using the tool (Mot. 1448).
- ☐ Disconnect the cooling radiator hoses using the (Car. 1363).
- ☐ Remove the engine cooling radiator from above the vehicle.

REFITTING

I - REFITTING PREPARATION OPERATION

- ☐ Always replace the cooling radiator hose clips.

II - REFITTING OPERATION

- ☐ Proceed in the reverse order to removal.
- ☐ Refill and bleed the cooling system (see 19A, Cooling, Cooling system: Draining - Refilling, page 19A-6) .
- ☐ Connect the battery (see Battery: Removal - Refitting) (80A, Battery).

Coolant pump: Removal - Refitting

K9K, and 796

Tightening torques 	
bolts of the coolant pump	10 N.m
inner timing cover bolts	9 N.m
alternator bolts	21 N.m

IMPORTANT

Wear leaktight gloves (Nitrile type) for this operation.

IMPORTANT

Wear heat protective gloves during the 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

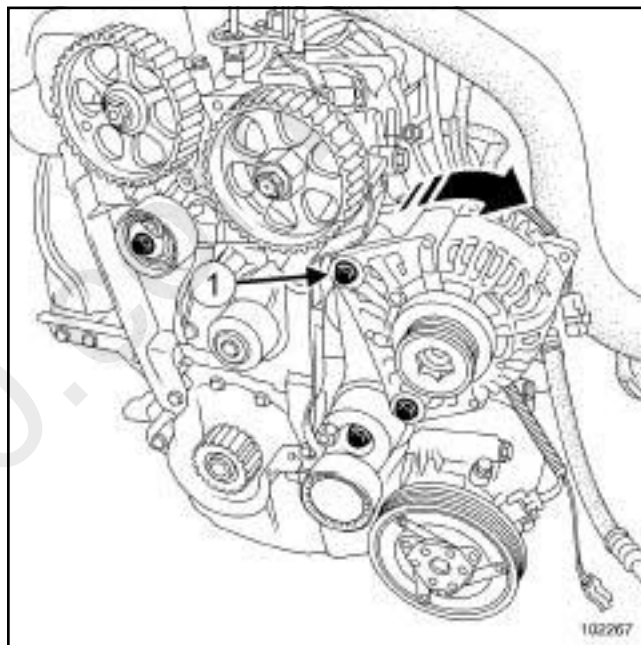
Prepare for the flow of fluid, and protect the surrounding components.

REMOVAL**I - REMOVAL PREPARATION OPERATION**

- ☐ Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).
- ☐ Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- ☐ 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 accessories belt (see **11A, Top and front of engine, Accessories belt: Removal - Refitting**, page 11A-2) ,
 - the timing belt (see **11A, Top and front of engine, Timing belt: Removal - Refitting**, page 11A-17) .

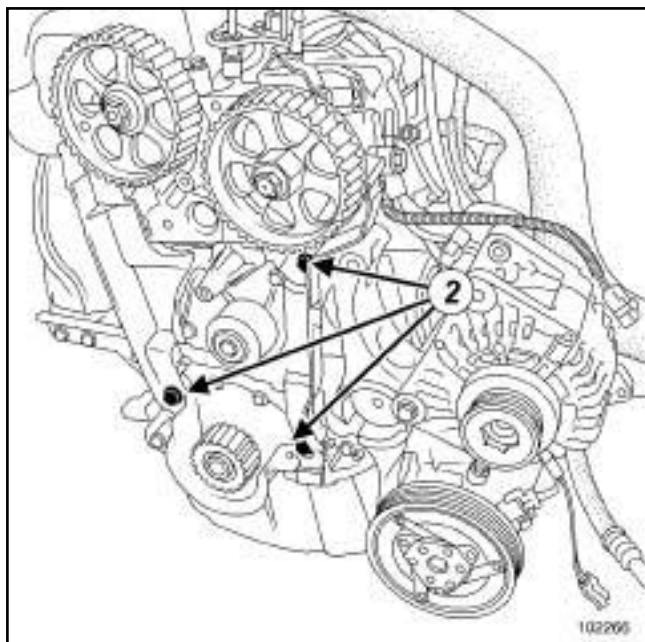


102267

- ☐ Disconnect the electrical connections from the alternator.
- ☐ Remove the alternator upper bolt (1) .
- ☐ Loosen the alternator lower bolt.
- ☐ Tilt the alternator forward.

Coolant pump: Removal - Refitting

K9K, and 796

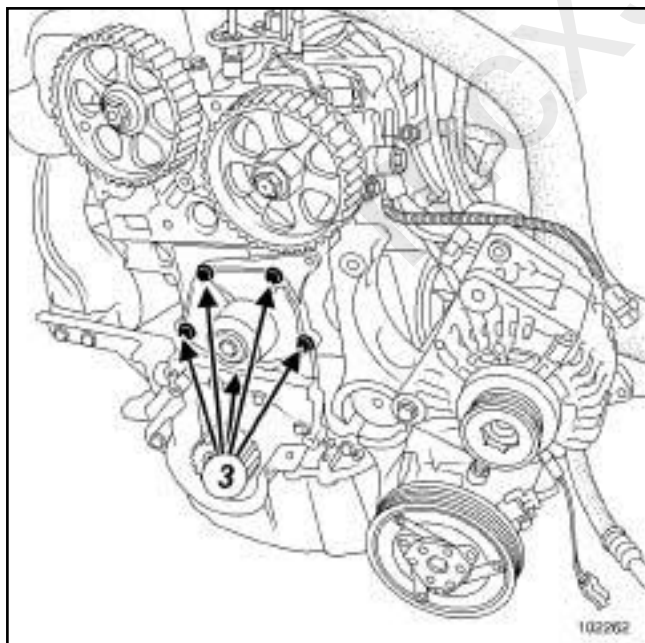


102266

❑ Remove:

- the inner timing cover bolts (2) ,
- the inner timing cover.

II - REMOVAL OPERATION



102262

❑ Remove:

- the coolant pump bolts (3) ,
- the coolant pump,
- the coolant pump seal.

REFITTING

I - REFITTING PREPARATION OPERATION

- ❑ parts always to be replaced: coolant pump seal.
- ❑ Use **SURFACE CLEANER** (see) (04B, Consumables - Products) to clean and degrease:
 - the coolant pump sealing face if it is to be reused,
 - the cylinder block gasket face.

WARNING

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

WARNING

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

- ❑ Apply **SUPER CLEANER FOR JOINT FACES** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) to the areas to be cleaned.
- ❑ Leave for approximately ten minutes.
- ❑ Remove the residue using a wooden spatula.
- ❑ Complete the cleaning of the parts using an abrasive pad.

WARNING

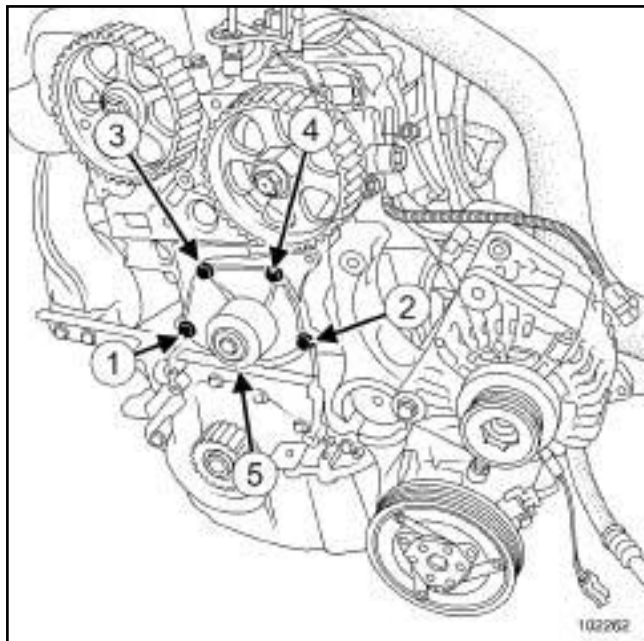
To ensure proper sealing, the gasket surfaces must be clean, dry and not greasy (avoid any finger marks).

- ❑ Use **SURFACE CLEANER** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) to degrease the joint faces.
- ❑ Always replace the coolant pump seal.

Coolant pump: Removal - Refitting

K9K, and 796

II - REFITTING OPERATION



102262

- ☐ Refit:
 - the coolant pump fitted with a new seal,
 - the coolant pump bolts.
- ☐ Torque tighten in order (1) (2) (3) (4) (5) the bolts of the coolant pump (10 N.m).
- ☐ Apply one or two drops of FRENETANCHE (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) to the coolant pump bolts.

III - FINAL OPERATION

- ☐ Refit the inner timing cover.
- ☐ Tighten to torque the inner timing cover bolts (9 N.m).
- ☐ Refit the alternator.
- ☐ Torque tighten the alternator bolts (21 N.m).
- ☐ Connect the alternator electrical connections.
- ☐ Refit:
 - the timing belt (see **11A, Top and front of engine, Timing belt: Removal - Refitting**, page 11A-17) ,
 - the accessories belt (see **11A, Top and front of engine, Accessories belt: Removal - Refitting**, page 11A-2) .
- ☐ Fill the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page 19A-6) .
- ☐ Refit the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection).

- ☐ Refit:
 - the engine undertray,
 - the engine undertray bolts,
 - the engine cover.
- ☐ Connect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- ☐ Bleed the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page 19A-6) .

Coolant pump: Removal - Refitting

K4M

Tightening torques

coolant pump M8 bolt	27 N.m
coolant pump M6 bolts	10 N.m

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).

WARNING

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

WARNING

When carrying out a repair that requires a complete change, it is essential to flush the circuit with clean water, blast compressed air through the circuit to drive out the water, fill and bleed the circuit and then measure the effective protection.

The criteria to be met are:

- protection down to $-25^{\circ}\text{C} \pm 2$ for cold and temperate countries,
- protection down to $-40^{\circ}\text{C} \pm 2$ for "extreme cold" countries.

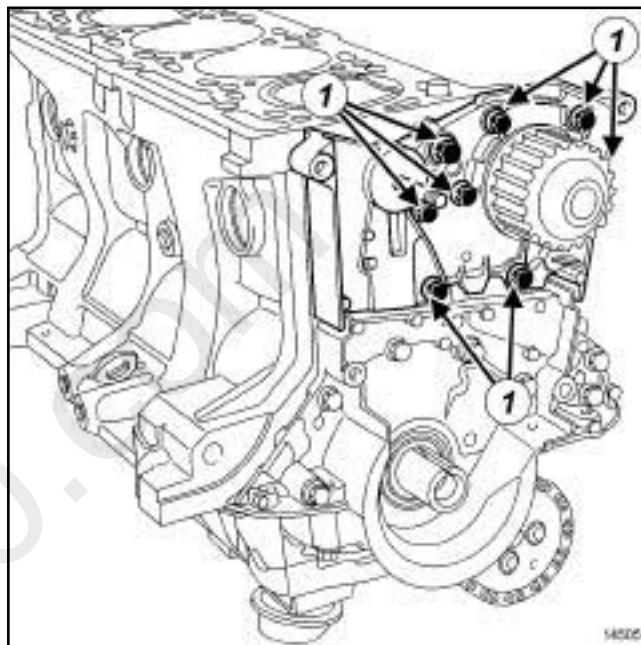
REMOVAL**I - REMOVAL PREPARATION OPERATION**

- ☐ 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 front right-hand wheel (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres),

- the accessories belt (see **11A, Top and front of engine, Accessories belt: Removal - Refitting**, page 11A-2) ,

- the timing belt (see **11A, Top and front of engine, Timing belt: Removal - Refitting**, page 11A-17) .

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

II - REMOVAL OPERATION

14505

- ☐ Remove:

- the coolant pump bolts (1) ,
- the coolant pump.

K4M

REFITTING

I - REFITTING PREPARATION OPERATION

**IMPORTANT**

Wear leaktight gloves (Nitrile type) for this operation.

IMPORTANT

Wear goggles with side protectors for this operation.

WARNING

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

- ☐ Use **SUPER CLEANING AGENT FOR JOINT FACES** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) to clean:

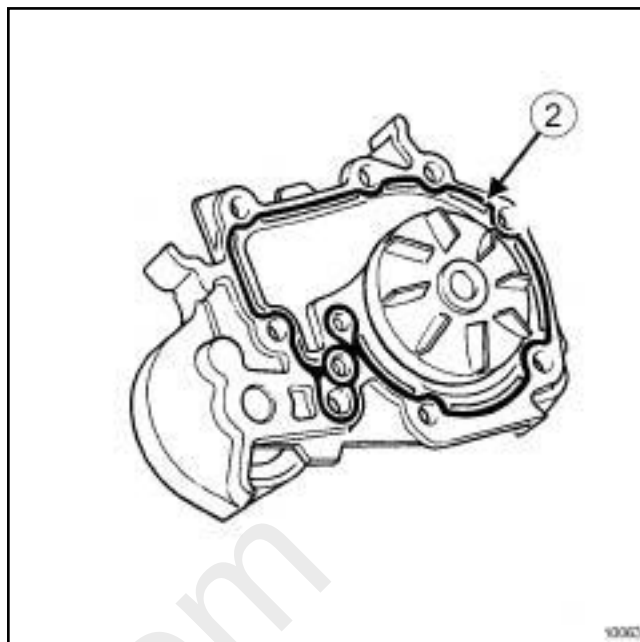
- the coolant pump sealing face if it is to be reused,
- the cylinder block gasket face.

- ☐ Apply the product to the surfaces to be cleaned.
- ☐ Leave for approximately ten minutes.
- ☐ Remove the residue using a wooden spatula.
- ☐ Complete the cleaning of the parts using an abrasive pad.

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 degrease the joint faces.



10063

**WARNING**

Applying excess sealant could cause it to be squeezed out when parts are tightened. A mixture of sealant and fluid could damage certain components (engine, radiator, etc.).

- ☐ Apply at (2) a bead of **RESIN ADHESIVE** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) **0.6 to 1 mm** wide.