

Cooling radiator: Removal - Refitting

D4F, and 784

- ☐ Clip the wiring harness onto the motor-driven fan assembly.
- ☐ Connect the motor-driven fan assembly connectors.

AIR CONDITIONING

- ☐ Connect the pressostat connector.
- ☐ Remove the blanking plugs.
- ☐ Refit:
 - the air conditioning pipes on the dehydrator reservoir and on the condenser,
 - the bolts for the air conditioning pipes on the dehydrator reservoir and on the condenser.
- ☐ Torque tighten the **air conditioning pipe bolts (8 Nm)**.

- ☐ Refit:
 - the expansion bottle,
 - the expansion bottle clip,
 - the front bumper (see **Front bumper: Removal - Refitting**) (MR 393, 55A, Exterior protection),
 - the air filter unit air inlet pipe.
- ☐ Connect the battery (see **Battery: Removal - Refitting**) (MR 392, 80A, Battery).

AIR CONDITIONING

- ☐ Fill the air conditioning circuit with **refrigerant charging station**.
- ☐ Fill and bleed the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page 19A-16) .
- ☐ Refit the engine undertray.

Coolant pump: Removal - Refitting

D4F, and 740 or 742 or 764

Tightening torques

coolant pump bolts 9 N.m

IMPORTANT

To avoid all risk of damage to the systems, apply the safety and cleanliness instructions and operation recommendations before carrying out any repair:

- (see **19A, Cooling, Engine cooling: Precautions for the repair**, page 19A-2) ,
- (see **Vehicle: Precautions for the repair**) (01D, Mechanical introduction).

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 front right-hand wheel arch liner (see **Front wheel arch liner: Removal - Refitting**) (55A, Exterior protection),
 - the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection),
 - the front right-hand deflector,
 - the accessories belt (see **11A, Top and front of engine, Accessories belt: Removal - Refitting**, page 11A-5) (11A, Top and front of engine),
 - the alternator (see **16A, Starting - Charging, Alternator: Removal - Refitting**, page 16A-5) (16A, Starting - Charging),
 - the timing belt (see **11A, Top and front of engine, Timing belt: Removal - Refitting**, page 11A-48) (11A, Top and front of engine).
- ☐ Drain the engine cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page 19A-16) (19A, Cooling).

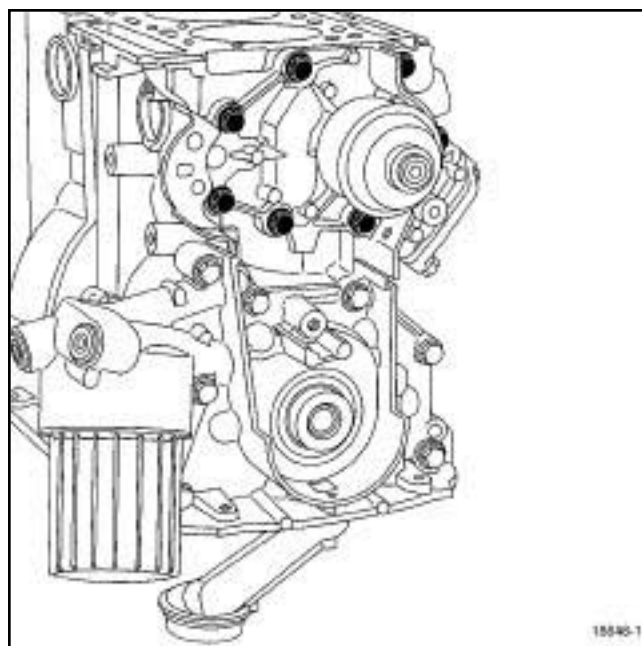
AIR CONDITIONING

- ☐ Disconnect the air conditioning compressor clutch connector.
- ☐ Remove the air conditioning compressor bolts.
- ☐ Attach the air conditioning compressor to the radiator lower cross member.

☐ Remove:

- the multifunction support (see **10A, Engine and cylinder block assembly, Multifunction support: Removal - Refitting**, page 10A-97) (10A, Engine and cylinder block assembly),
- the coolant pump inlet pipe (see **19A, Cooling, Coolant pump inlet pipe: Removal - Refitting**, page 19A-93) (19A, Cooling).

II - OPERATION FOR REMOVAL OF PART CONCERNED



18646-1

☐ Remove:

- the coolant pump bolts,
- the coolant pump,
- the coolant pump seal.

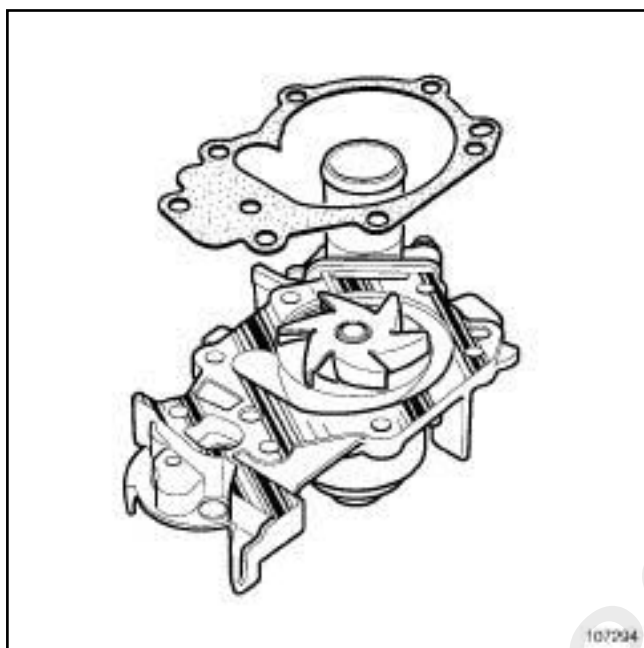
Coolant pump: Removal - Refitting

D4F, and 740 or 742 or 764

REFITTING

I - REFITTING PREPARATION OPERATION

- parts always to be replaced: coolant pump seal (10,06,01,21).



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□

WARNING

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

IMPORTANT

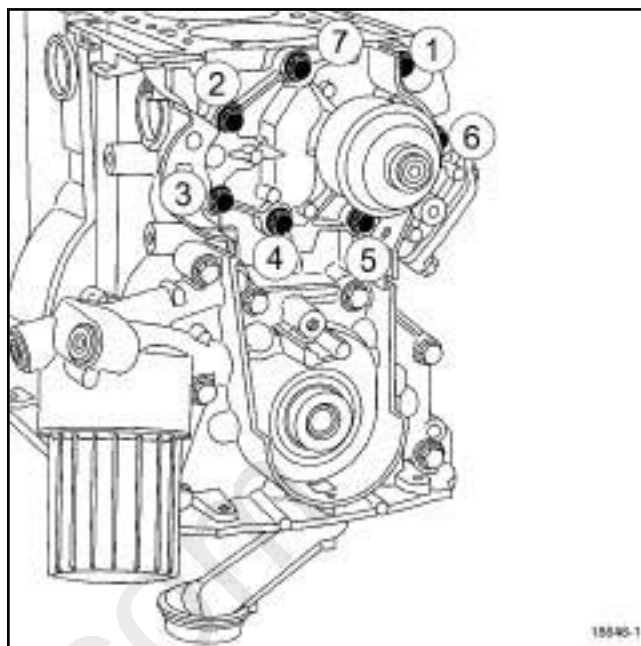
Wear leaktight gloves (Nitrile type) for this operation.

IMPORTANT

Wear goggles with side protectors for this operation.

- Clean the joint faces with **SUPER CLEANER FOR JOINT FACES** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) to dissolve any part of the seal still adhering.
- Apply the product to the section to be cleaned; wait approximately ten minutes, then remove the residue using a wooden spatula.

II - REFITTING OPERATION FOR PART CONCERNED



18646-1

□

WARNING

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

WARNING

To check the sealing of parts delivered with a seal, fit the seal without sealing resin.

- Refit a new coolant pump seal.

WARNING

Failure to observe the following procedure may cause irreparable damage to the coolant pump.

Note:

To fit the coolant pump on the two pins of the cylinder block, never use the coolant pump pinion for support. Instead, use the coolant pump bolts by pretightening them.

- Refit:

- the coolant pump,
- the coolant pump bolts.

- Tighten to torque and in order the **coolant pump bolts (9 N.m)**.

Coolant pump: Removal - Refitting

D4F, and 740 or 742 or 764

III - FINAL OPERATION

☐ Refit:

- the multifunction support (see **10A, Engine and cylinder block assembly, Multifunction support: Removal - Refitting**, page **10A-97**) (10A, Engine and cylinder block assembly),
- the coolant pump inlet pipe (see **19A, Cooling, Coolant pump inlet pipe: Removal - Refitting**, page **19A-93**) (19A, Cooling).

AIR CONDITIONING

- ☐ Refit the air conditioning compressor.
- ☐ Connect the air conditioning compressor clutch connector.

☐ Refit:

- the timing belt (see **11A, Top and front of engine, Timing belt: Removal - Refitting**, page **11A-48**) (11A, Top and front of engine),
 - the alternator (see **16A, Starting - Charging, Alternator: Removal - Refitting**, page **16A-5**) (16A, Starting - Charging),
 - the accessories belt (see **11A, Top and front of engine, Accessories belt: Removal - Refitting**, page **11A-5**) (11A, Top and front of engine),
 - the front right-hand deflector,
 - the front bumper (see **Front bumper: Removal - Refitting**) (55A, Exterior protection),
 - the front right-hand wheel arch liner (see **Front wheel arch liner: Removal - Refitting**) (55A, Exterior protection),
 - the front right-hand wheel (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres).
- ☐ Connect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
 - ☐ Fill up and bleed the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page **19A-16**) (19A, Cooling).

Coolant pump: Removal - Refitting

K4J or K4M

Tightening torques

bolts (2) to (8) of the coolant pump	10 N.m
bolt 1 of the coolant pump	27 N.m

REMOVAL

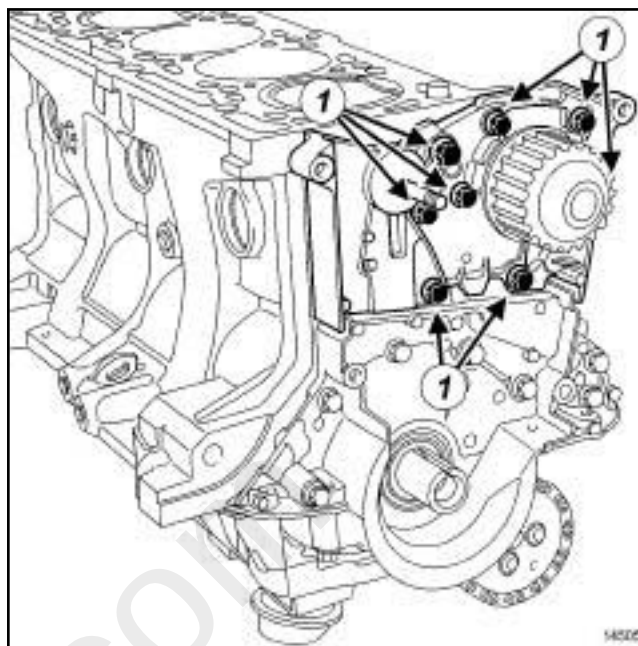
I - REMOVAL PREPARATION OPERATION

- ☐ 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 front right-hand wheel arch liner (see **Front wheel arch liner: Removal - Refitting**) (55A, Exterior protection),
 - the accessories belt (see **11A, Top and front of engine, Accessories belt: Removal - Refitting**, page **11A-5**),
 - the timing belt (see **11A, Top and front of engine, Timing belt: Removal - Refitting**, page **11A-48**).
- ☐ Drain the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page **19A-16**).

STANDARD HEATING

- ☐ Remove the multifunction support (see **10A, Engine and cylinder block assembly, Multifunction support: Removal - Refitting**, page **10A-97**).

II - OPERATION FOR REMOVAL OF PART CONCERNED



14505

- ☐ Remove:
 - the coolant pump bolts (1),
 - the coolant pump.

REFITTING

I - REFITTING PREPARATION OPERATION

☐

IMPORTANT

Wear goggles with side protectors for this operation.

IMPORTANT

Wear leaktight gloves (Nitrile type) 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.

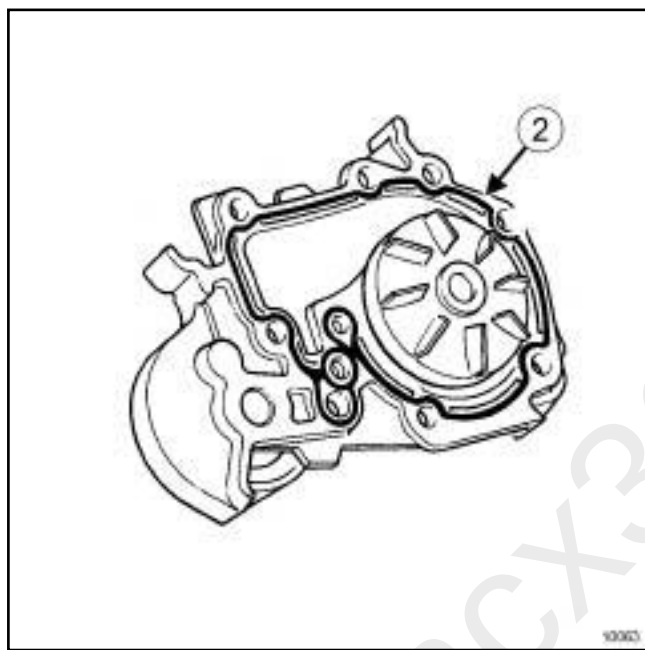
WARNING

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

Coolant pump: Removal - Refitting

K4J or K4M

- ❑ 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.
- ❑ Use **SURFACE CLEANER** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) to degrease:
 - the coolant pump joint face if the pump is to be reused,
 - the cylinder block joint face.

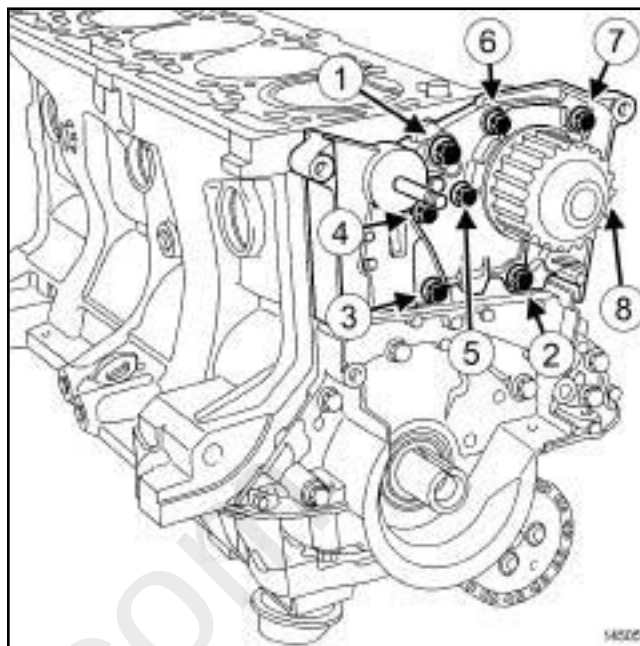


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WARNING

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.

II - REFITTING OPERATION FOR PART CONCERNED

14505

Note:

Apply one to two drops of **FRENETANCHE** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) to the coolant pump bolts (1) and (4) .

Note:

To fit the coolant pump on the two pins of the cylinder block, never use the coolant pump pinion for support. Instead, use the coolant pump bolts by pretightening them.

- ❑ Refit:
 - the coolant pump,
 - the coolant pump bolts.
- ❑ Tighten to torque and in order:
 - bolts (2) to (8) of the coolant pump (10 N.m),
 - bolt 1 of the coolant pump (27 N.m).

Coolant pump: Removal - Refitting

K4J or K4M

III - FINAL OPERATION

STANDARD HEATING

- ☐ Refit the multifunction support (see **10A, Engine and cylinder block assembly, Multifunction support: Removal - Refitting**, page **10A-97**) .
- ☐ Refit:
 - the timing belt (see **11A, Top and front of engine, Timing belt: Removal - Refitting**, page **11A-48**) ,
 - the accessories belt (see **11A, Top and front of engine, Accessories belt: Removal - Refitting**, page **11A-5**) ,
 - the front right-hand wheel arch liner (see **Front wheel arch liner: Removal - Refitting**) (55A, Exterior protection),
 - the front right-hand wheel (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres).
- ☐ Connect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- ☐ Fill and bleed the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page **19A-16**) .

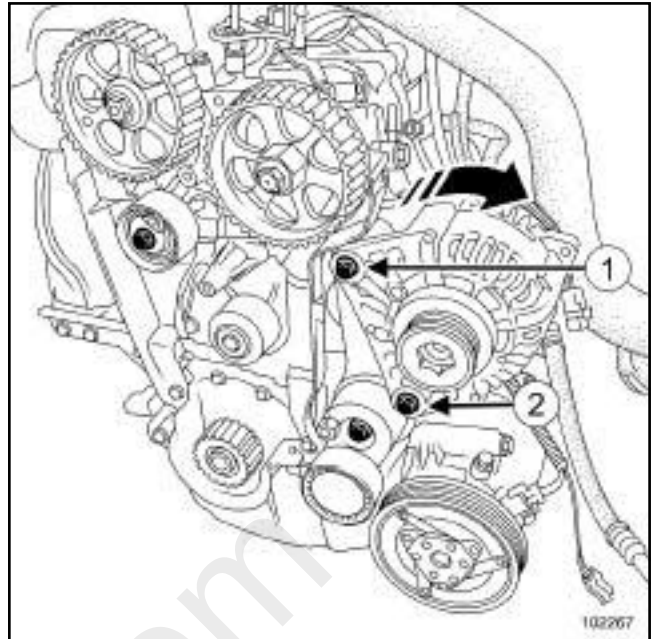
K9K

Tightening torques 	
coolant pump bolts	11 N.m
inner timing cover bolts	9 N.m
alternator bolts	21 N.m

REMOVAL

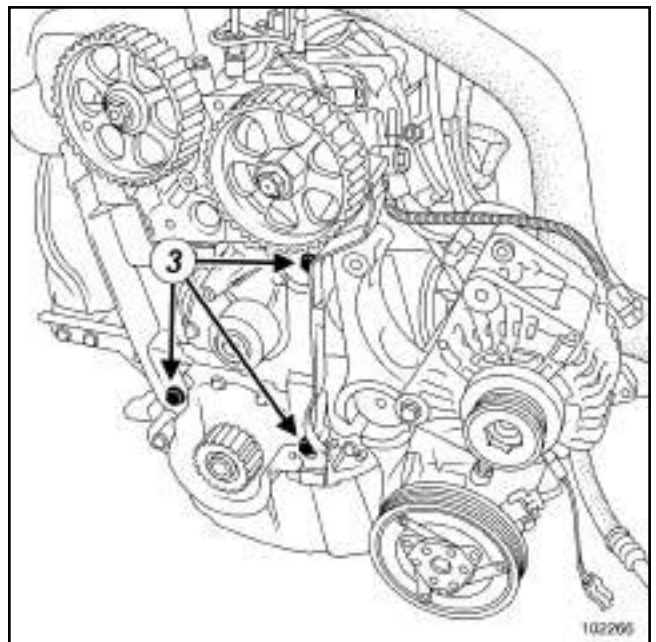
I - REMOVAL PREPARATION OPERATION

- ☐ Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (MR 392, 02A, Lifting equipment).
- ☐ Disconnect the battery (see **Battery: Removal - Refitting**) (MR 392, 80A, Battery).
- ☐ Remove:
 - the engine undertray,
 - the engine cover,
 - the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) (MR 393, 56A, Exterior equipment).
- ☐ Drain the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page 19A-16) .
- ☐ Clean the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page 19A-16) .
- ☐ Remove the timing belt (see **11A, Top and front of engine, Timing belt: Removal - Refitting**, page 11A-48) .



102267

- ☐ Disconnect the electrical connections from the alternator.
- ☐ Remove the alternator upper bolt (1) .
- ☐ Loosen the alternator lower bolt (2) .
- ☐ Tip the alternator towards the front of the vehicle.



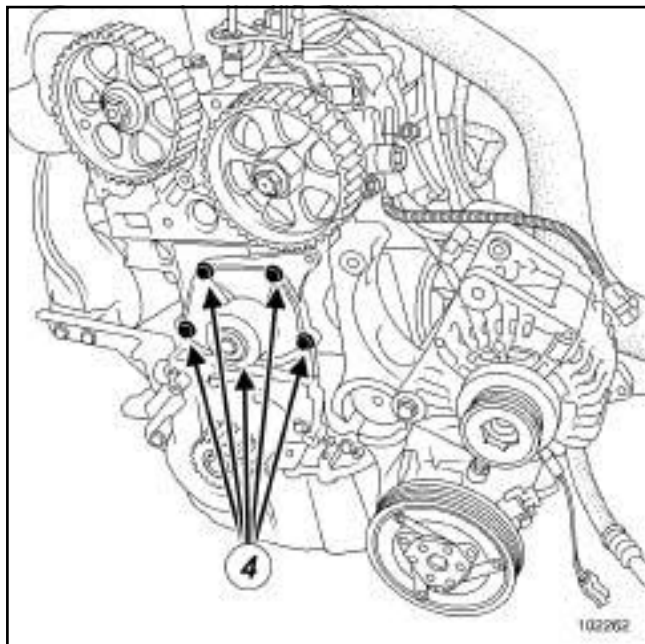
102266

- ☐ Remove:
 - the inner timing cover bolts (3) ,
 - the inner timing cover.

Coolant pump: Removal - Refitting

K9K

II - REMOVAL OF THE PART CONCERNED



102262

❑ Remove:

- the coolant pump bolts (4) ,
- the coolant pump,
- the coolant pump seal,

REFITTING

I - REFITTING PREPARATION OPERATION

- ❑ Clean the joint faces with **SUPER DÉCAPANT FOR JOINT FACES** to dissolve any remaining parts of the seal.

Apply the product to the sections to be cleaned; wait for approximately ten minutes, then remove the residue using a wooden spatula.

WARNING

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

IMPORTANT

Wear goggles with side protectors for this operation.

IMPORTANT

Wear gloves during this operation.

II - REFITTING PART CONCERNED

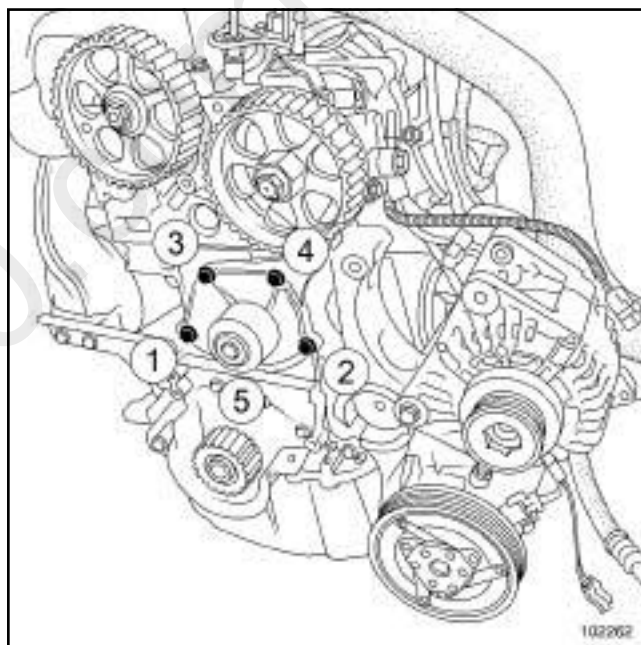
- ❑ Replace the coolant pump seal every time the coolant pump is removed.
- ❑ Position the coolant pump fitted with a new seal.

WARNING

The joint faces must be clean, dry and free from grease (avoid finger marks).

Note:

Apply one or two drops of **FRENETANCHE** on the coolant pump bolts.



102262

- ❑ Tighten to torque and in order the **coolant pump bolts (11 N.m)**.

III - FINAL OPERATION

❑ Refit:

- the inner timing cover,
- the inner timing cover bolts.

- ❑ Tighten to torque the **inner timing cover bolts (9 N.m)**.

- ❑ Refit the alternator upper bolt.

- ❑ Torque tighten the **alternator bolts (21 N.m)**.

- ❑ Connect the alternator electrical connections.

Coolant pump: Removal - Refitting

K9K

☐ Refit:

- the timing belt (see **11A, Top and front of engine, Timing belt: Removal - Refitting**, page **11A-48**) ,
- the engine undertray,
- the engine cover,
- the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) (MR 393, 56A, Exterior equipment).

☐ Connect the battery (see **Battery: Removal - Refitting**) (MR 392, 80A, Battery).☐ Perform the following operations:

- fill the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page **19A-16**) ,
- bleed the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page **19A-16**) .

Coolant pump: Removal - Refitting

M4R

Special tooling required

Mot. 1672 Lower engine support.

Tightening torques

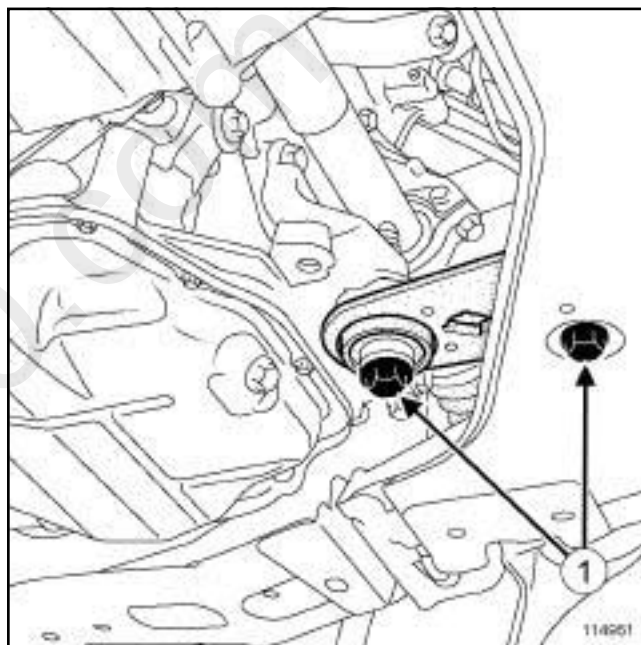
coolant pump mounting bolts	25 N.m
engine cover mounting bolts	62 N.m
bolts mounting the rubber mounting bush on the body	62 N.m
bolts mounting the rubber mounting bush on the engine	105 N.m
upper engine tie-bar mounting bolts	105 N.m
bolt mounting the engine tie-bar on the subframe	105 N.m
bolt mounting the engine tie-bar on the engine	180 N.m
radiator mounting cross member right-hand mounting bolt	105 N.m
subframe tie-rod left-hand mounting bolt	105 N.m

REMOVAL

I - REMOVAL PREPARATION OPERATION

- ☐ Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (MR 392, 02A, Lifting equipment).
- ☐ Disconnect the battery (see **Battery: Removal - Refitting**) (MR 392, 80A, Battery).
- ☐ Drain the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page 19A-16) .
- ☐ Remove:
 - the engine undertray,
 - the front bumper (see **Front bumper: Removal - Refitting**) (MR 393, 55A, Exterior protection),

- the frontal impact cross member (see **Front impact cross member: Removal - Refitting**) (MR 393, 41A, Front lower structure),
- the front end panel air resonator (see **12A, Fuel mixture, Air resonator: Removal - Refitting**, page 12A-10) ,
- the front right-hand wheel (see **Wheel: Removal - Refitting**) (MR 392, 35A, Wheels and tyres),
- the front section of the right-hand wheel arch liner see (see **Front wheel arch liner: Removal - Refitting**) (MR 393, 55A, Exterior protection),
- the accessories belt (see **11A, Top and front of engine, Accessories belt: Removal - Refitting**, page 11A-5) .



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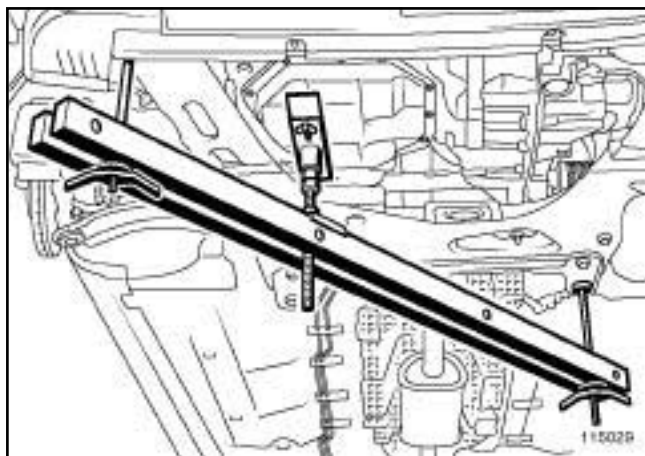
☐ Remove:

- the engine tie-bar mounting bolts (1) ,
- the engine tie-bar .

☐ Remove:

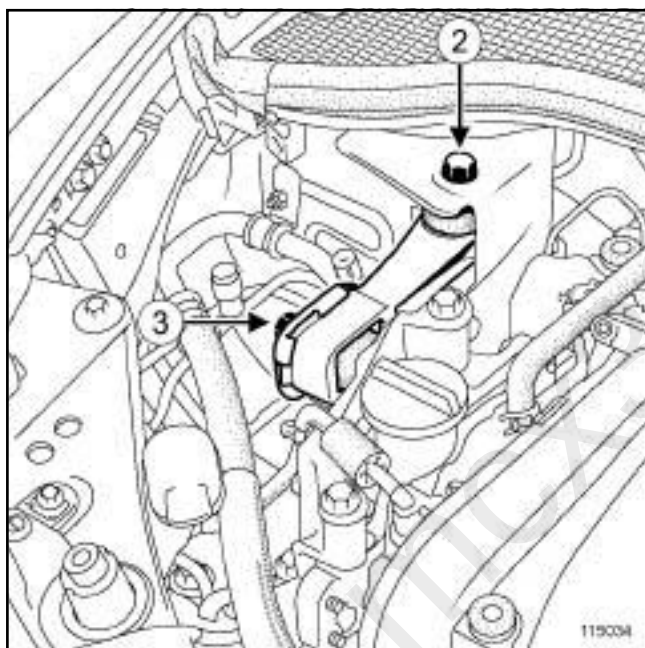
- the right-hand mounting bolt from the radiator support cross member,
- the left-hand mounting bolt from the sub-frame tie-rod.

M4R



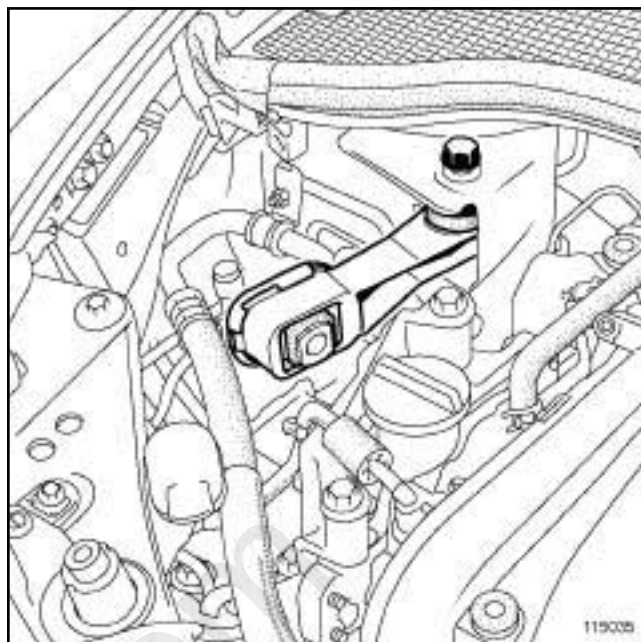
115029

- ❑ Fit the lower engine support tool (**Mot. 1672**).



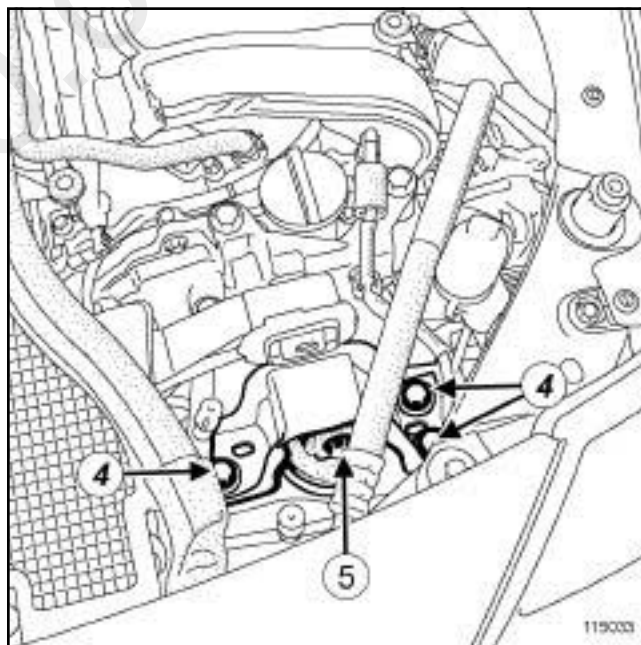
115034

- ❑ Undo the upper engine tie-bar mounting bolt (2) .
- ❑ Remove the upper engine tie-bar mounting bolt (3) .



115035

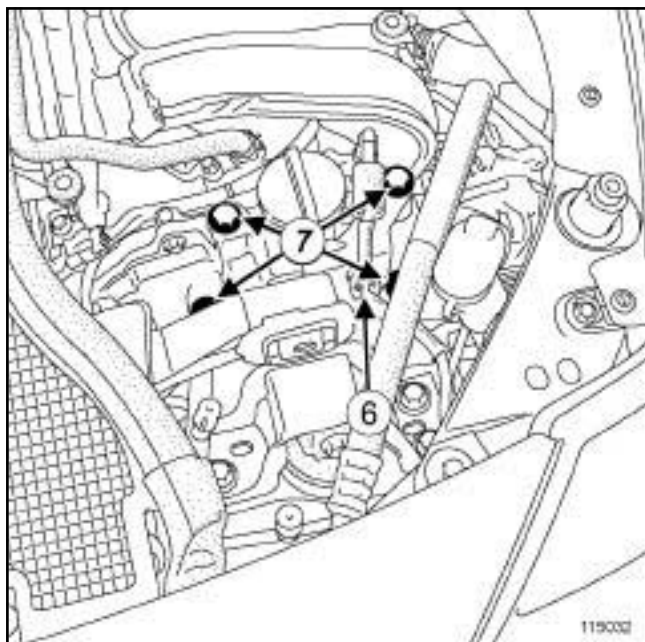
- ❑ Remove the upper engine tie-bar.



115033

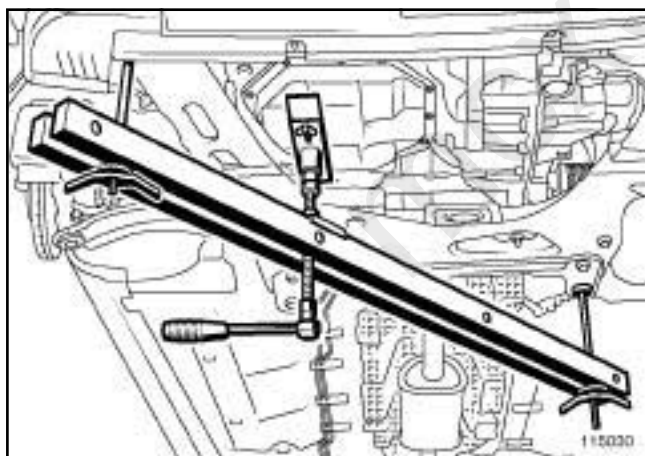
- ❑ Remove:
 - the engine cover rubber mounting bush mounting bolt (4) ,
 - the rubber mounting bush mounting bolts (5) on the body.

M4R



115032

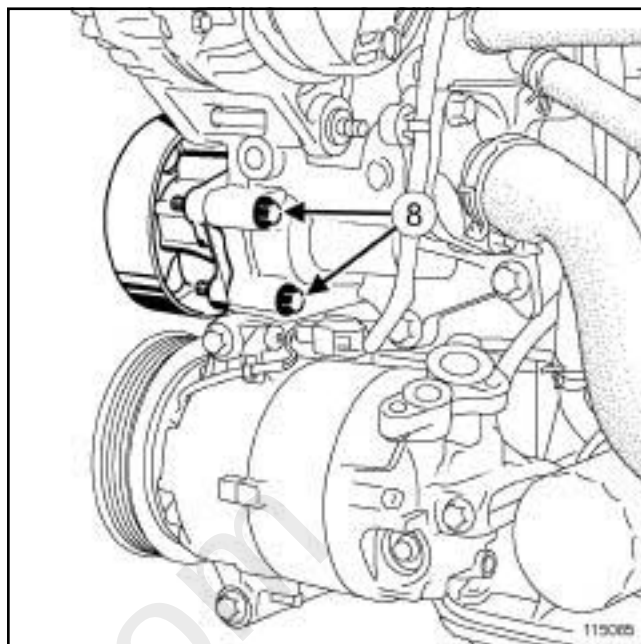
- ☐ Unclip the fuel supply pipe at (6) .
- ☐ Remove:
 - the engine cover mounting bolts (7) ,
 - the engine cover,
 - the rubber mounting bush.



115030

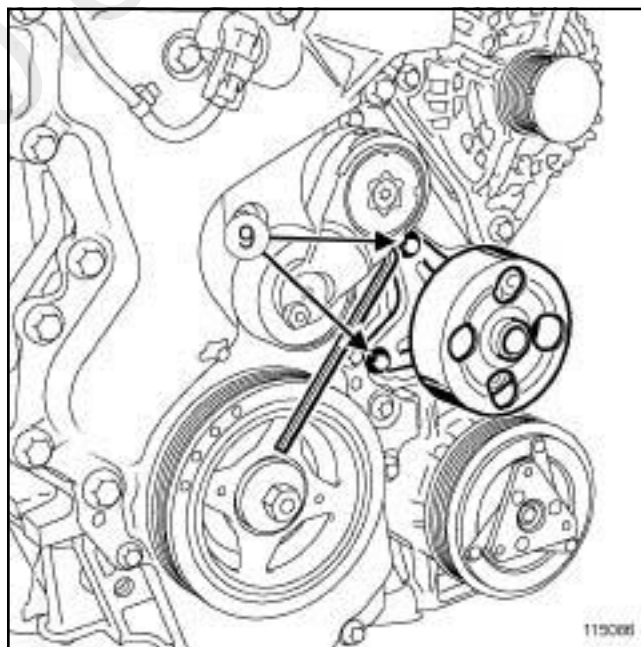
- ☐ Lower the engine until the timing cover makes contact with the half sub-frame.

II - REMOVAL OF PART CONCERNED



115085

- ☐ Remove the water pump mounting bolts (8) .



115086

- ☐
 - the coolant pump mounting bolts (9) ,
 - the coolant pump,
 - the coolant pump seal,

Coolant pump: Removal - Refitting

M4R

REFITTING

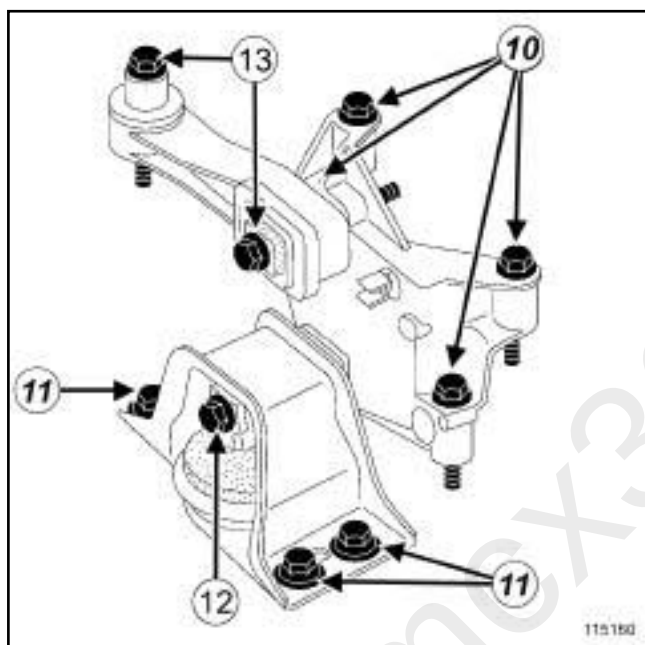
I - REFITTING PREPARATION OPERATION

- ☐ The coolant pump seal must be replaced.

II - REFITTING PART CONCERNED

- ☐ Refit the coolant pump.
- ☐ Tighten to torque the **coolant pump mounting bolts (25 N.m)**.

III - FINAL OPERATION



115160

- ☐ Fit:
 - the rubber mounting bush,
 - the engine cover.
- ☐ Pretighten:
 - the engine cover mounting bolts (10) ,
 - the rubber mounting bush mounting bolts (11) on the body.

Note:

Allow the two parts to move freely.

- ☐ Raise the engine to fit the bolt securing the rubber mounting bush to the engine cover.
- ☐ Tighten to torque and in order:
 - the **engine cover mounting bolts (62 N.m)** at (10)

- the **bolts mounting the rubber mounting bush on the body (62 N.m)** at (11) ,
- the **bolts mounting the rubber mounting bush on the engine (105 N.m)** at (12) ,
- the **upper engine tie-bar mounting bolts (105 N.m)** at (13) .

- ☐ Remove the lower engine support tool (**Mot. 1672**).

- ☐ Torque tighten:

- the **bolt mounting the engine tie-bar on the sub-frame (105 N.m)**,
- the **bolt mounting the engine tie-bar on the engine (180 N.m)**.
- the **radiator mounting cross member right-hand mounting bolt (105 N.m)**,
- the **subframe tie-rod left-hand mounting bolt (105 N.m)**.

- ☐ Refit:

- the accessories belt (see **11A, Top and front of engine, Accessories belt: Removal - Refitting**, page **11A-5**) ,
- the front section of the right-hand wheel arch liner (see **Front wheel arch liner: Removal - Refitting**) (MR 393, 55A, Exterior protection),
- the front right-hand wheel (see **Wheel: Removal - Refitting**) ,
- the front end panel air resonator (see **12A, Fuel mixture, Air resonator: Removal - Refitting**, page **12A-10**) ,
- the frontal impact cross member (see **Front impact cross member: Removal - Refitting**) (MR 393, 41A, Front lower structure),
- the front bumper (see **Front bumper: Removal - Refitting**) (MR 393, 55A, Exterior protection),
- the engine undertray.

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

- ☐ Perform the following operations:

- fill the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page **19A-16**) ,
- bleed the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page **19A-16**) .

Coolant pump: Removal - Refitting

F4R

Special tooling required

Mot. 1453	Engine anchorage support with multiple adjustments and retaining straps.
Mot. 1453-01	Additional handle nut for engine lifting support tool Mot. 1453.

Tightening torques

coolant pump mounting bolts	17 N.m
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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

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°C ± 2** for cold and temperate countries,
- protection down to **-40°C ± 2** for "extreme cold" countries.

WARNING

Drain with the engine warm.

Flush and refill with the engine cold or warm.

Never flush a hot engine (risk of major thermal shock).

REMOVAL

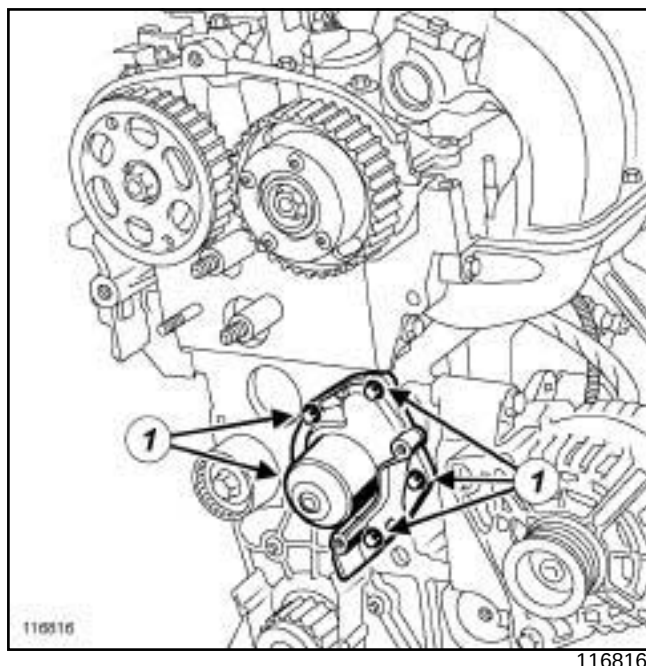
I - REMOVAL PREPARATION OPERATION

- ☐ Position the vehicle on a two-post lift (see **02A, Lifting equipment, Vehicle: Towing and lifting**).
- ☐ Disconnect the battery (see **80A, Battery, Battery: Removal - Refitting**).
- ☐ Remove:
 - the battery (see **80A, Battery, Battery: Removal - Refitting**),
 - the front right-hand wheel (**35A, Wheels and tyres, Wheel: Removal - Refitting**),
 - the accessories belt (see **11A, Top and front of engine, Accessories belt: Removal - Refitting**, page **11A-5**),
 - the engine undertray.
- ☐ Perform the following operations:
 - drain the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page **19A-16**),
 - flush the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page **19A-16**).
- ☐ Fit the engine lifting eye at the timing end (see **11A, Top and front of engine, Lifting eyes: Removal - Refitting**, page **11A-305**).
- ☐ Remove the timing belt (see **11A, Top and front of engine, Timing belt: Removal - Refitting**, page **11A-48**) using the (**Mot. 1453**) fitted with the (**Mot. 1453-01**).

Coolant pump: Removal - Refitting

F4R

II - OPERATION FOR REMOVAL OF PART CONCERNED


☐ Remove:

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

REFITTING

I - REFITTING PREPARATION OPERATION

- ☐
- Clean the joint faces.

IMPORTANT

Do not scratch the aluminium sealing surfaces.

Wear goggles.

Wear gloves during the operation.

II - REFITTING OPERATION FOR PART CONCERNED

- ☐ Position the coolant pump fitted with a new seal.
- ☐ Refit the coolant pump mounting bolts.
- ☐ Torque tighten the **coolant pump mounting bolts (17 N.m)**.

III - FINAL OPERATION

- ☐
- Refit:

- the timing belt (see **11A, Top and front of engine, Timing belt: Removal - Refitting**, page 11A-48) ,

- the accessories belt (see **11A, Top and front of engine, Accessories belt: Removal - Refitting**, page 11A-5) ,

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

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

- ☐ Remove the engine lifting eye at the timing end (see **11A, Top and front of engine, Lifting eyes: Removal - Refitting**, page 11A-305) .

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

- ☐ Perform the following operations:

- fill the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page 19A-16) ,

- bleed the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page 19A-16) .

- ☐ Check that there are no coolant leaks.

- ☐ Refit the engine undertray.

Coolant pump: Removal - Refitting

D4F, and 784

Tightening torques

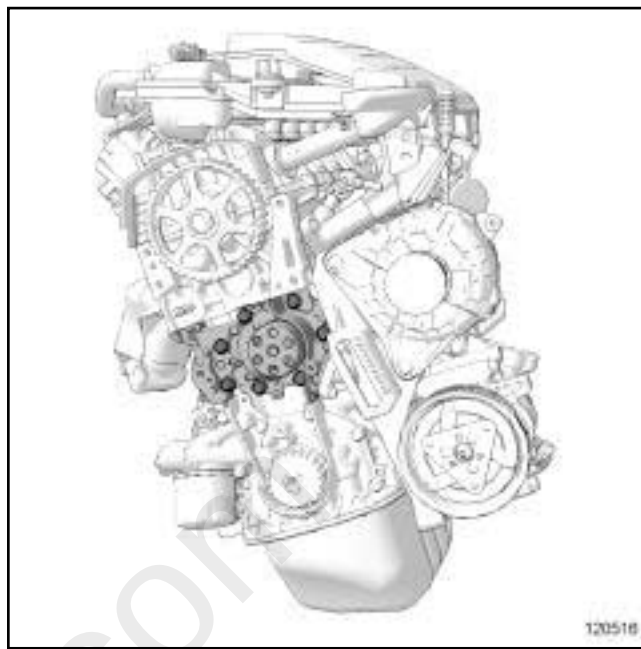
coolant pump bolts	10 N.m
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REMOVAL

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,
 - the accessories belt (see **11A, Top and front of engine, Accessories belt: Removal - Refitting**, page **11A-5**),
 - the right-hand suspended engine mounting (see **19D, Engine mounting, Right-hand suspended engine mounting: Removal - Refitting**, page **19D-22**),
 - the timing belt (see **11A, Top and front of engine, Timing belt: Removal - Refitting**, page **11A-48**).
- ☐ Drain the cooling system (see **19A, Cooling, Cooling system: Draining - Refilling**, page **19A-16**).

II - OPERATION FOR REMOVAL OF PART CONCERNED



120516

- ☐ Remove:
 - the coolant pump bolts,
 - the coolant pump,
 - the coolant pump seal,

REFITTING

I - REFITTING PREPARATION OPERATION

**WARNING**

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

IMPORTANT

Wear leaktight gloves (Nitrile type) for this operation.

IMPORTANT

Wear goggles with side protectors for this operation.

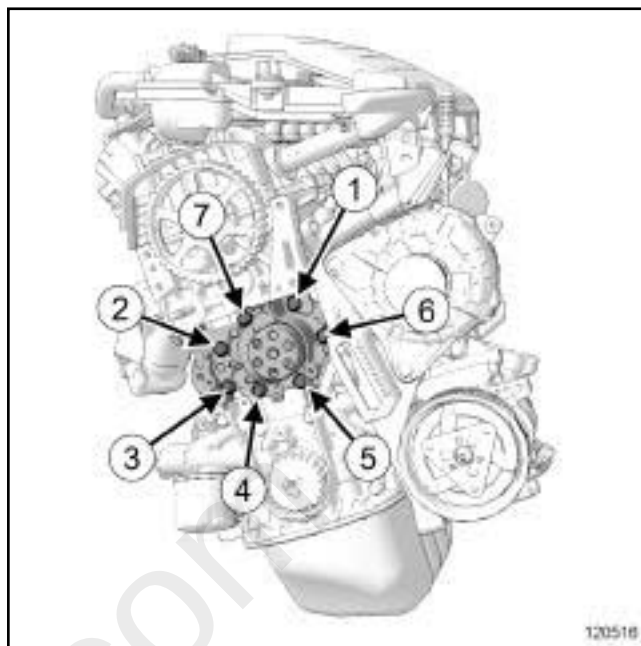
- ☐ Clean the joint faces with **SUPER CLEANER FOR JOINT FACES** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) to dissolve any part of the seal still adhering.

Coolant pump: Removal - Refitting

D4F, and 784

- ☐ Apply the product to the section to be cleaned; wait approximately ten minutes, then remove the residue using a wooden spatula.
- ☐ Always replace the coolant pump seal.

II - REFITTING OPERATION FOR PART CONCERNED



120516

**WARNING**

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

WARNING

To check the sealing of parts delivered with a seal, fit the seal without sealing resin.

- ☐ Refit a new seal for the coolant pump.

WARNING

Failure to observe the following procedure may cause irreparable damage to the coolant pump.

Note:

Do not push on the pinion when fitting the coolant pump, use the bolts instead.

- ☐ Refit the coolant pump.
- ☐ Tighten to torque and in order the **coolant pump bolts (10 N.m)**.