

TOP AND FRONT OF ENGINE

Timing chain: Removal - Refitting

11A

M4R

- ☐ Remove the engine from the component support (see **Engine support equipment: Use**) .

M4R, and 700

- ☐ Connect the manual gearbox to the engine (see **Manual gearbox: Removal - Refitting**) (21A, Manual gearbox).

M4R, and 701

- ☐ Connect the automatic gearbox to the engine (see **Automatic gearbox: Removal - Refitting**) (23A, Automatic transmission).

- ☐ Refit the «engine and gearbox» assembly (see **10A, Engine and cylinder block assembly, Engine - gearbox assembly: Removal - Refitting**, page **10A-162**) .

- ☐ Top up the engine oil (see **10A, Engine and cylinder block assembly, Engine oil: Draining - Refilling**, page **10A-13**) .

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

D4F, and 740 or 742 or 764

Tightening torques

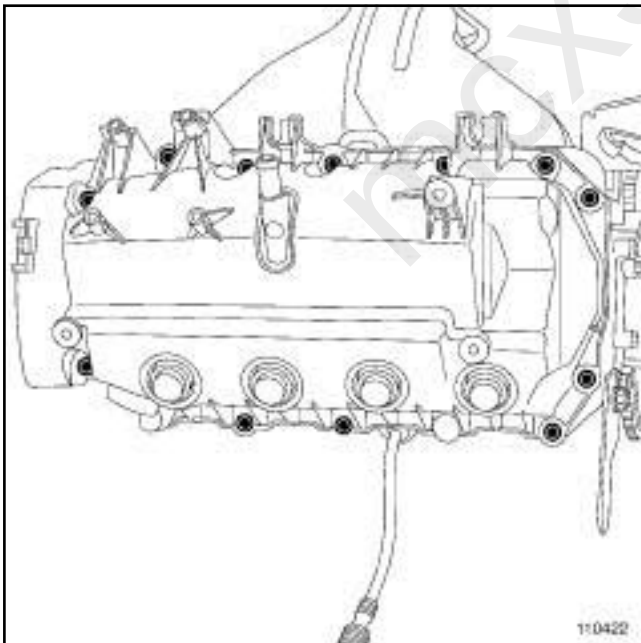
rocker cover mounting bolts	10 N.m
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REMOVAL

I - REMOVAL PREPARATION OPERATION

- ☐ Disconnect the battery (see **Battery: Removal - Refitting**) (MR 392, 80A, Battery).
- ☐ Remove:
 - the air filter box (see **12A, Fuel mixture, Air filter unit: Removal - Refitting**, page 12A-17) ,
 - the intake distributor (see **12A, Fuel mixture, Inlet distributor: Removal - Refitting**, page 12A-46) .
- ☐ Remove the ignition coil (see **17A, Ignition, Coils: Removal - Refitting**, page 17A-2) .
- ☐ Unclip the rocker cover electric wiring harnesses.

II - OPERATION FOR REMOVAL OF PART CONCERNED



- ☐ Remove:
 - the rocker cover mounting bolts,
 - the rocker cover,
 - the rocker cover gasket.

REFITTING

I - REFITTING PREPARATION OPERATION

- ☐ Clean the gasket faces with **DECAPJOINT** to dissolve off any part of the gasket still attached.

WARNING

do not allow solvent to drip on the paintwork.

Clean the cylinder head carefully to prevent foreign bodies from entering the oil supply and return galleries.

Failure to follow this advice could lead to the blocking of the various oil inlet galleries, which would quickly result in engine damage.

WARNING

Be sure to replace all seals that have been removed.

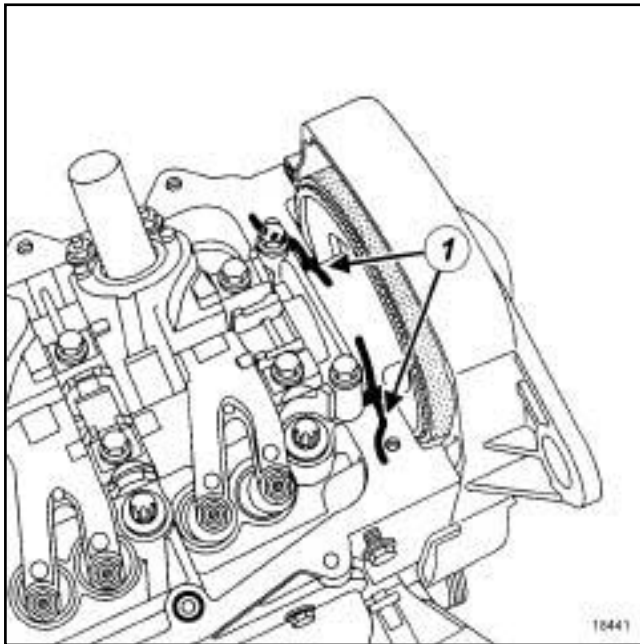
TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

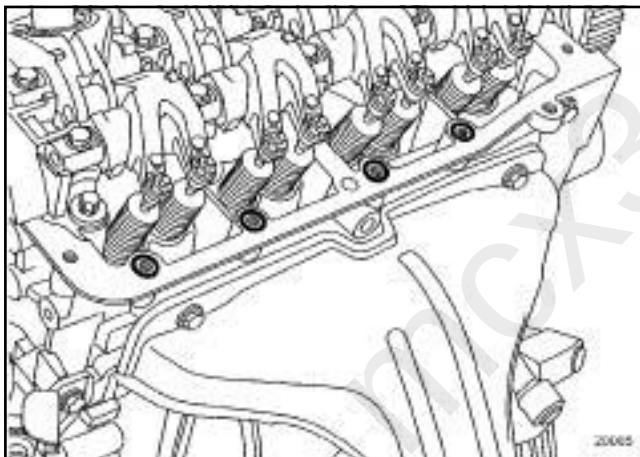
11A

D4F, and 740 or 742 or 764

II - REFITTING OPERATION FOR PART CONCERNED

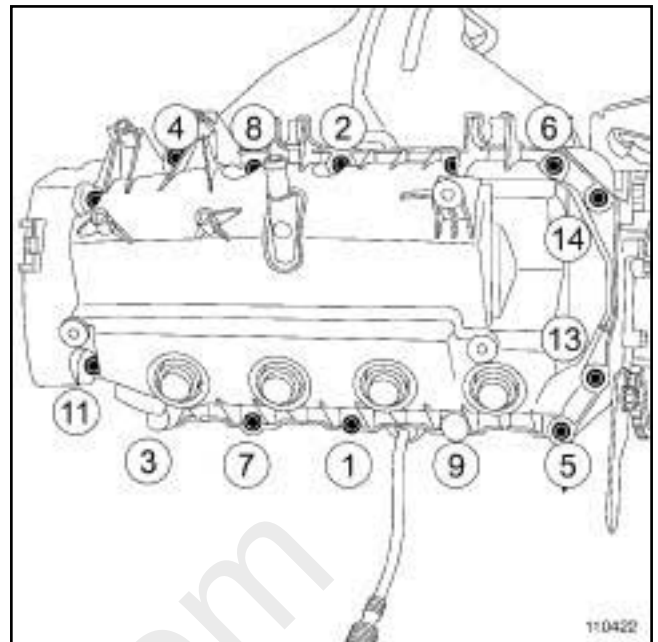


18441



20005

- ☐ Apply a bead (1) of **SILICONE ADHESIVE SEALANT 77 11 227 484** to camshaft bearings 1 and 5, and around the rear rocker cover mounting bolts.
- ☐ Fit the rocker cover with a new gasket.



110422

- ☐ Torque tighten in order the **rocker cover mounting bolts (10 N.m)**.

III - FINAL OPERATION.

- ☐ Clip the electric wiring harnesses onto the rocker cover.
- ☐ Refit:
 - the ignition coil (see **17A, Ignition, Coils: Removal - Refitting**, page **17A-2**) ,
 - the intake distributor (see **12A, Fuel mixture, Inlet distributor: Removal - Refitting**, page **12A-46**) ,
 - the air filter box (see **12A, Fuel mixture, Air filter unit: Removal - Refitting**, page **12A-17**) .
- ☐ Connect the battery (see **Battery: Removal - Refitting**) (MR 392, 80A, Battery).

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K4M

Tightening torques 	
rocker cover mounting bolts 1 to 17 and 20 to 22	14 N.m
mounting bolts 18, 19, 23, 24	12 N.m
camshaft position sensor mounting bolt	8 N.m

REMOVAL

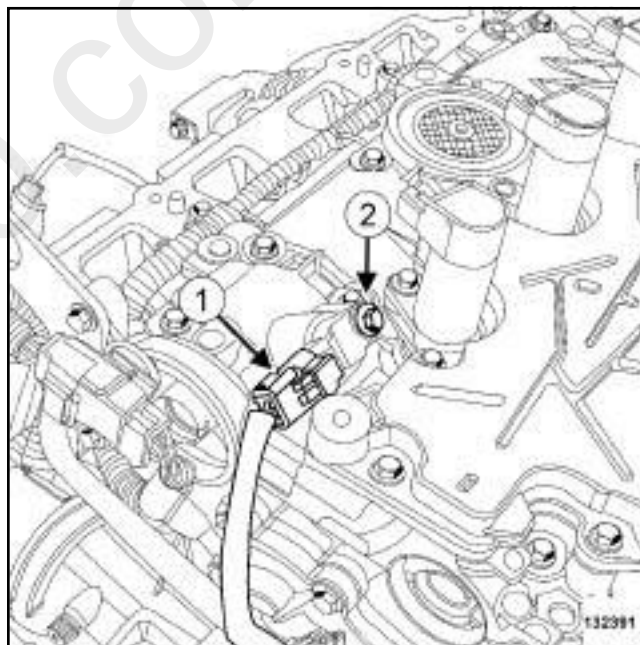
I - REMOVAL PREPARATION OPERATION

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

- ☐ Remove:

- the engine undertray bolts,
- the engine undertray,
- the battery (see **Battery: Removal - Refitting**) (80A, Battery),
- the battery tray (see **Battery tray: Removal - Refitting**) (80A, Battery),
- the air filter unit (see **12A, Fuel mixture, Air filter unit: Removal - Refitting**, page 12A-17) ,
- 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),
- the coils (see **17A, Ignition, Coils: Removal - Refitting**, page 17A-2) ,
- the throttle valve (see **12A, Fuel mixture, Throttle valve: Removal - Refitting**, page 12A-33) ,
- the inlet manifold (see **12A, Fuel mixture, Inlet distributor: Removal - Refitting**, page 12A-46) ,
- 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 lower engine tie-bar (see **19D, Engine mounting, Lower engine tie-bar: Removal - Refitting**, page 19D-13) ,
- the right-hand suspended engine mounting (see **19D, Engine mounting, Right-hand suspended engine mounting: Removal - Refitting**, page 19D-22) ,
- the accessories belt (see **11A, Top and front of engine, Accessories belt: Removal - Refitting**, page 11A-5) ,
- the crankshaft accessories pulley (see **11A, Top and front of engine, Crankshaft accessories pulley: Removal - Refitting**, page 11A-31) ,
- the timing belt (see **11A, Top and front of engine, Timing belt: Removal - Refitting**, page 11A-48) ,
- the camshaft dephaser (see **11A, Top and front of engine, Camshaft dephaser: Removal - Refitting**, page 11A-234) .



132391

- ☐ Disconnect the connector (1) from the camshaft position sensor.

- ☐ Remove:

- the bolt (2) from the camshaft position sensor,
- the camshaft position sensor,
- the camshaft position sensor seal,
- the camshaft dephaser solenoid valve (see **Camshaft dephaser solenoid valve: Removal - Refitting**) ,
- the oil separator (see **11A, Top and front of engine, Oil decanter: Removal - Refitting**, page 11A-302) .

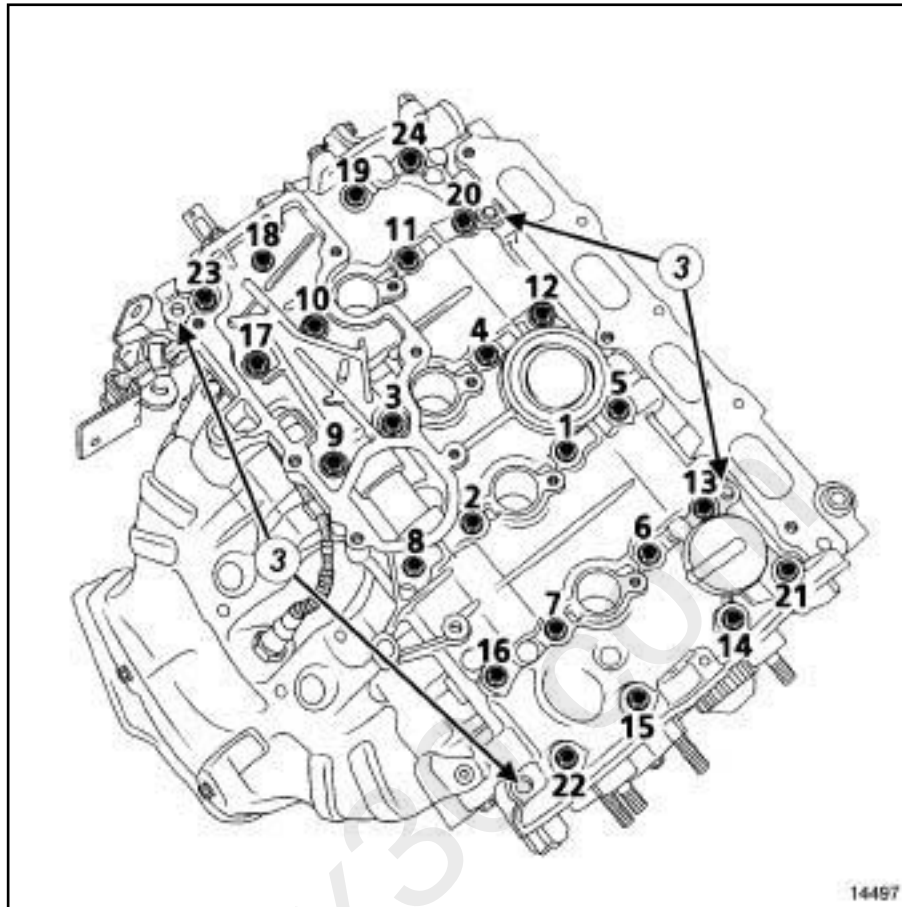
TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K4M

II - OPERATION FOR REMOVAL OF PART CONCERNED



14497

- ☐ Remove the rocker cover bolts.
- ☐ Remove the rocker cover vertically by tapping the lugs (3) with a screwdriver.
- ☐ Remove:
 - the rocker cover,
 - the camshaft seals on the timing end.

REFITTING

I - REFITTING PREPARATION OPERATION

- ☐ parts always to be replaced: Camshaft seal on timing end (10,02,02,02).
- ☐ parts always to be replaced: camshaft sensor seal (11,11,04,02).

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K4M

K4M, and 800 or 801 or 804

- ❑ Remove the square cam tappet (see **Cylinder head: Stripping**) (Technical Note 6023A, 10A, Engine and cylinder block assembly).

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 leaktight gloves (Nitrile type) for this operation.

WARNING

Do not allow this product to drip onto the paintwork.

Clean the cylinder head carefully to avoid any foreign bodies entering the oil return and supply pipes.

Failure to follow this advice could lead to the blocking of the various oil inlet galleries, which would quickly result in engine damage.

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

WARNING

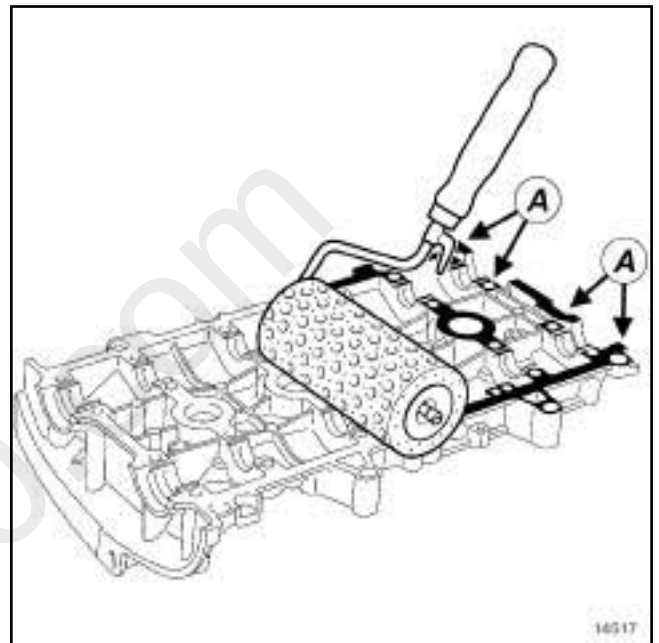
To ensure proper sealing, the gasket surfaces must be clean, dry and not greasy (avoid any finger marks).

- ❑ Lubricate the cylinder head camshaft bearings with engine oil.

Note:

Do not put oil on the joint face of the cylinder head rocker cover.

- ❑ Refit the square cam tappet (see **Cylinder head: Rebuilding**) (Technical Note 6023A, 10A, Engine and cylinder block assembly).



14517

- ❑ Use a stipple roller to apply **SEALING RESIN** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) on the section (A) of the rocker cover joint face until the joint face is correctly coated.

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.).

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K4M

K4M, and 862



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 leaktight gloves (Nitrile type) for this operation.

WARNING

Do not allow this product to drip onto the paintwork.

Clean the cylinder head carefully to avoid any foreign bodies entering the oil return and supply pipes.

Failure to follow this advice could lead to the blocking of the various oil inlet galleries, which would quickly result in engine damage.

Clean the joint face of the rocker cover with **SUPER CLEANING AGENT FOR JOINT FACES** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) to dissolve any seal still adhering.

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

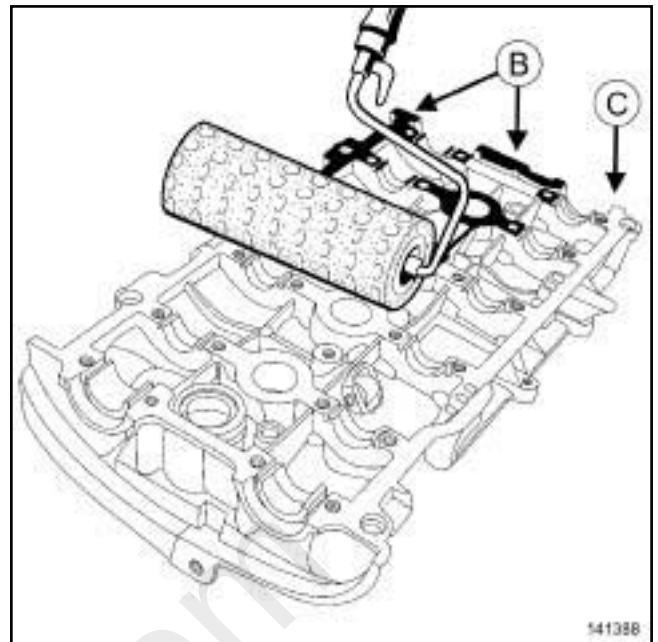
WARNING

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

- ❑ Lubricate the cylinder head camshaft bearings with engine oil.

Note:

Do not put oil on the joint face of the cylinder head rocker cover.



141388

- ❑ Use a stipple roller to apply **SEALING RESIN** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) on the section (B) of the rocker cover joint face until the joint face is correctly coated.
- ❑ Apply a bead of **SILICONE ADHESIVE SEALANT** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) with a diameter of **1 to 2 mm** on the section (C) of the rocker cover joint face.

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.).

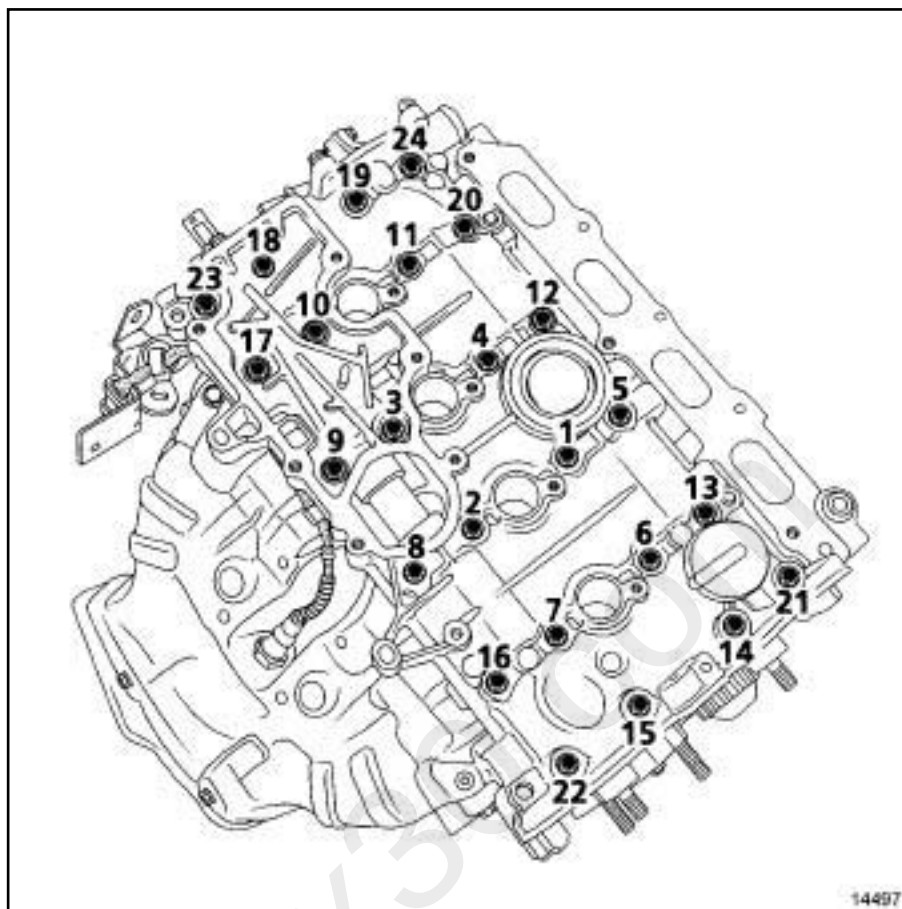
TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K4M

II - REFITTING OPERATION FOR PART CONCERNED



14497
14497

- ☐ Refit the rocker cover.
- ☐ Tighten to torque and in order:
 - **rocker cover mounting bolts 1 to 17 and 20 to 22 (14 N.m)**,
 - **mounting bolts 18, 19, 23, 24 (12 N.m)**.

III - FINAL OPERATION

- ☐ Refit:
 - the camshaft seals on the timing end (see **11A, Top and front of engine, Camshaft seal, timing end: Removal - Refitting**, page **11A-284**) ,
 - the oil separator (see **11A, Top and front of engine, Oil decanter: Removal - Refitting**, page **11A-302**) ,
 - the camshaft dephaser solenoid valve (see **Camshaft dephaser solenoid valve: Removal - Refitting**) ,
 - the camshaft position sensor fitted with a new seal.
- ☐ Torque tighten the **camshaft position sensor mounting bolt (8 N.m)**.

- ☐ Refit:
 - the camshaft dephaser (see **11A, Top and front of engine, Camshaft dephaser: Removal - Refitting**, page **11A-234**) ,
 - the timing belt (see **11A, Top and front of engine, Timing belt: Removal - Refitting**, page **11A-48**) ,
 - the crankshaft accessories pulley (see **11A, Top and front of engine, Crankshaft accessories pulley: Removal - Refitting**, page **11A-31**)
 - 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 lower engine tie-bar (see **19D, Engine mounting, Lower engine tie-bar: Removal - Refitting**, page **19D-13**) ,
 - the front right-hand wheel arch liner (see **Front wheel arch liner: Removal - Refitting**) (**55A, Exterior protection**),

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K4M

- the front right-hand wheel (see **Wheel: Removal - Refitting**) (35A, Wheels and tyres),
- the inlet manifold (see **12A, Fuel mixture, Inlet distributor: Removal - Refitting**, page 12A-46) ,
- the throttle valve (see **12A, Fuel mixture, Throttle valve: Removal - Refitting**, page 12A-33) ,
- the coils (see **17A, Ignition, Coils: Removal - Refitting**, page 17A-2) ,
- 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),
- the air filter unit (see **12A, Fuel mixture, Air filter unit: Removal - Refitting**, page 12A-17) ,
- the battery tray (see **Battery tray: Removal - Refitting**) (80A, Battery),
- the battery (see **Battery: Removal - Refitting**) (80A, Battery),
- the engine undertray.

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K4J

Special tooling required	
Mot. 1490-01	For locking and adjusting the camshaft pulleys.
Mot. 1503	Tool for fitting rocker cover adjuster.
Mot. 1632	Tool for fitting camshaft PTFE seal

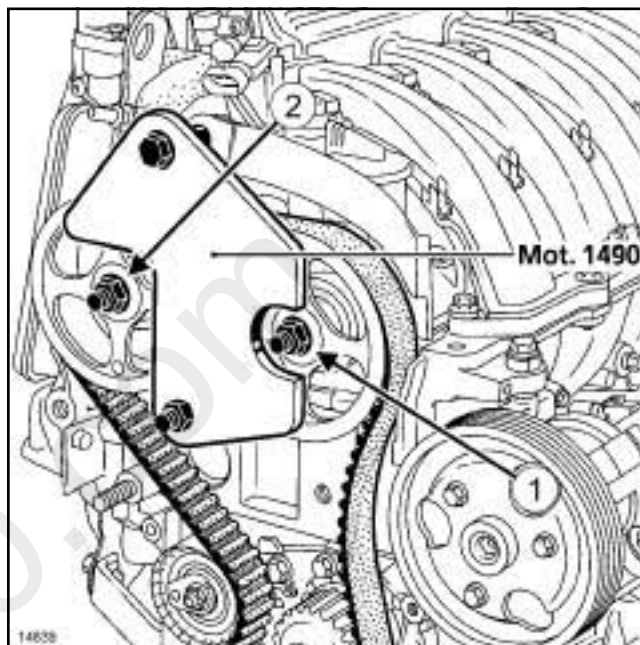
Tightening torques 	
new mounting bolts for the oil separator in the untapped holes	15 Nm
new mounting bolts for the oil separator in the tapped holes	10 Nm

REMOVAL

I - REMOVAL PREPARATION OPERATION

- ☐ Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (MR 392, 02A, Lifting equipment).
- ☐ Remove:
 - the battery (see **Battery: Removal - Refitting**) (MR 392, 80A, Battery),
 - the battery tray (see **Battery tray: Removal - Refitting**) (MR 392, 80A, Battery),
 - the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) (MR 393, 56A, Exterior equipment),
 - the scoop under the scuttle panel grille (see **Scoop under the scuttle panel grille: Removal - Refitting**) (MR 393, 56A, Exterior equipment),
 - the front right-hand wheel (see **Wheel: Removal - Refitting**) (MR 392, 35A, Wheels and tyres),
 - the front right-hand wheel arch liner (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) ,
 - the air filter box (see **12A, Fuel mixture, Air filter unit: Removal - Refitting**, page 12A-17) ,

- the throttle valve (see **12A, Fuel mixture, Throttle valve: Removal - Refitting**, page 12A-33) ,
- the right-hand suspended mounting support (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) .



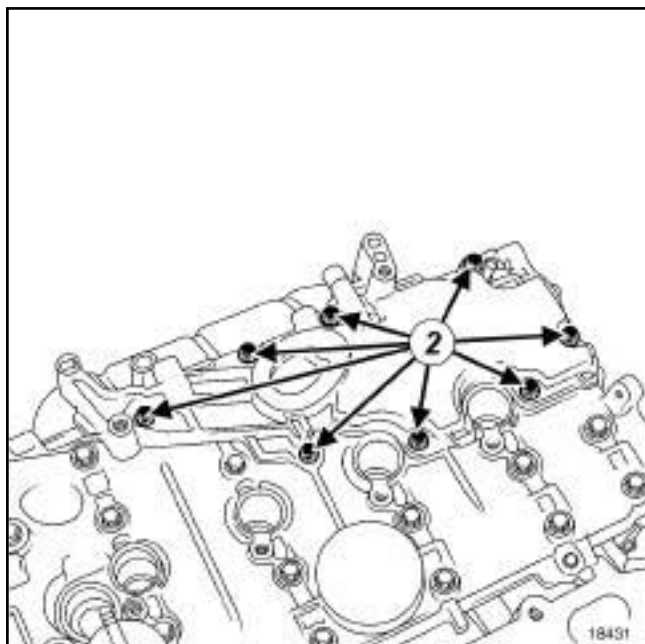
- ☐ Position the (**Mot. 1490-01**) on the camshaft pulleys.
- ☐ Remove:
 - the nut from the inlet camshaft pulley (1) and from the exhaust camshaft pulley (2) ,
 - the (**Mot. 1490-01**),
 - the camshaft pulleys.
- ☐ Remove:
 - the intake distributor (see **12A, Fuel mixture, Inlet distributor: Removal - Refitting**, page 12A-46) ,
 - the ignition coils (see **17A, Ignition, Coils: Removal - Refitting**, page 17A-2) ,
 - the spark plugs (see **17A, Ignition, Plugs: Removal - Refitting**, page 17A-11) .

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K4J

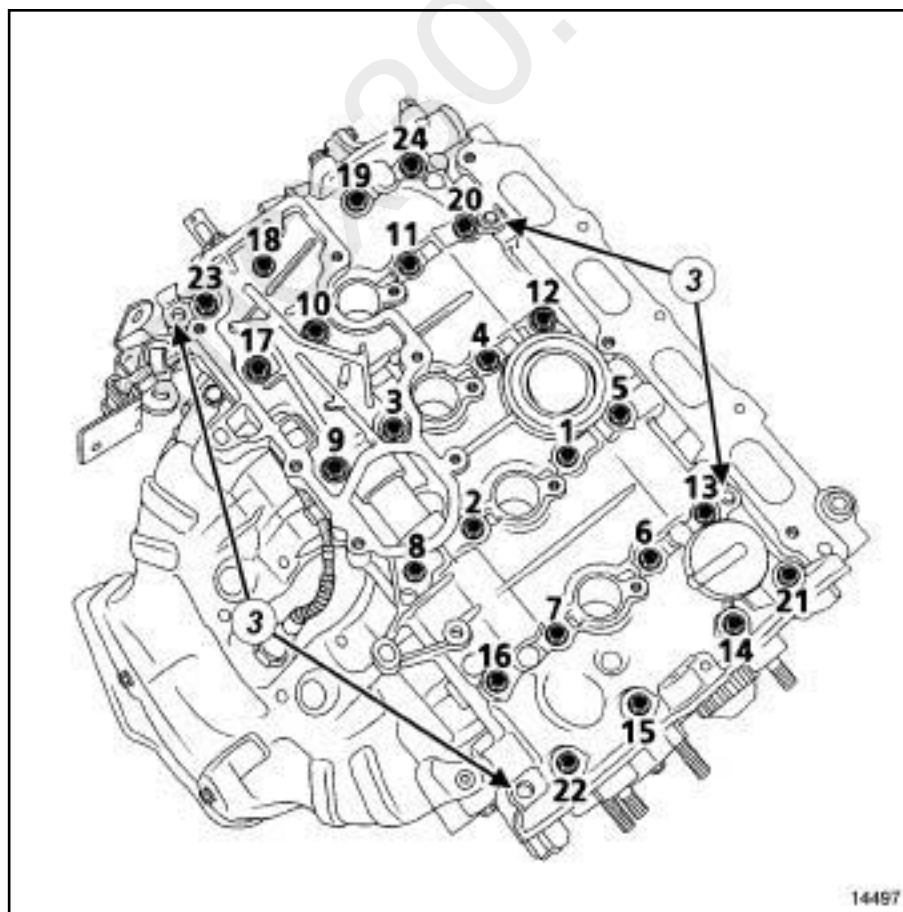


- the mounting bolts (2) from the oil decanter,
- the oil decanter.

II - OPERATION FOR REMOVAL OF PART CONCERNED

❑ Remove:

- the engine lifting eye at the timing end,



- ❑ Remove the rocker cover mounting bolts.
- ❑ Detach the rocker cover vertically by tapping the

- lugs (3) with a copper hammer.
- ❑ Remove the rocker cover.

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K4J

REFITTING

I - REFITTING PREPARATIONS OPERATION



IMPORTANT

Do not scratch the aluminium sealing surfaces.
Wear goggles.
Wear gloves during the operation.

WARNING

Do not allow this product to drip onto the paint-work.

Take care when cleaning to prevent any foreign bodies entering the oil pipes supplying oil under pressure to the hydraulic tappets, the camshafts (oil galleries are located both in the cylinder block and the cylinder head), and the oil return pipes.

Failure to follow this advice could block the oil-ways, and rapidly destroy the engine.

- ☐ Clean the rocker cover gasket face with **DECAP-JOINT** to dissolve any gasket still adhering.
- ☐ Apply the product to the section to be cleaned; wait approximately ten minutes, then remove the residue using a wooden spatula.

Note:

The gasket faces on the rocker cover must be clean, dry and free from grease (avoid finger marks).

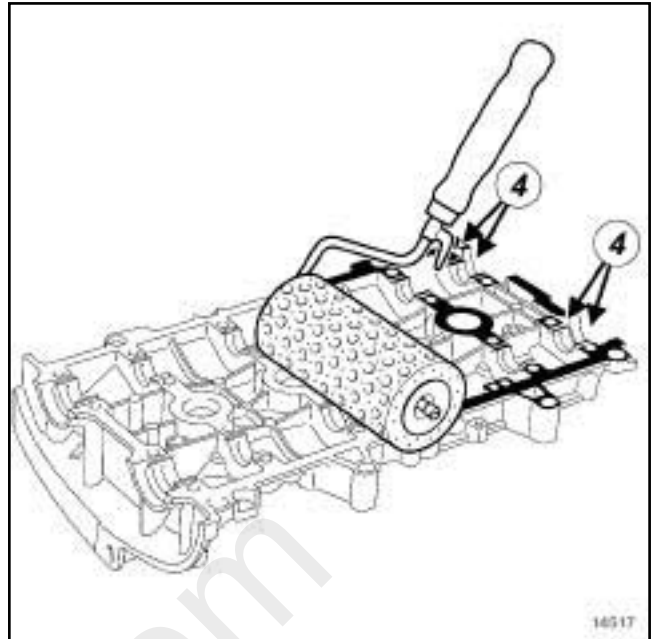
- ☐ Lubricate the cylinder head camshaft bearings with engine oil.

WARNING

Do not put oil on the cylinder head rocker cover.

WARNING

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



14517

- ☐ Using a stipple roller, apply **LOCTITE 518** to the gasket face until it turns reddish in colour.
- ☐ Use a cloth to remove any **LOCTITE 518** in the six bearing channels (4) on the rocker cover.

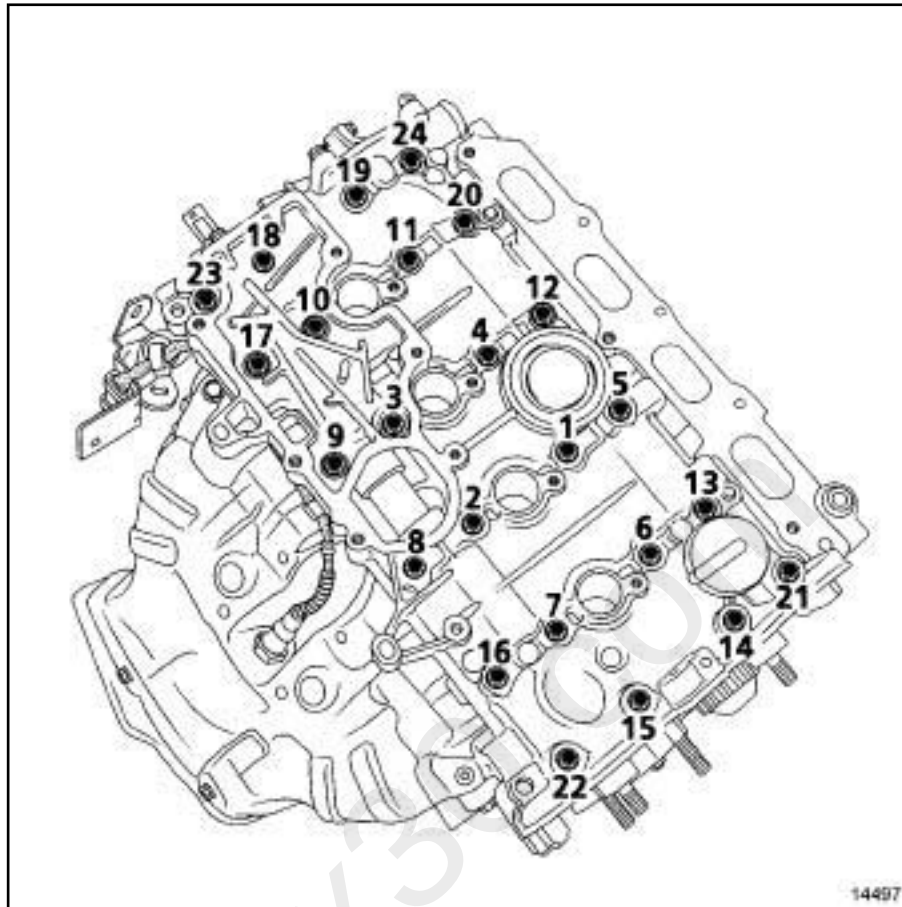
TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K4J

II - REFITTING OPERATION FOR PART CONCERNED



14497

- ☐ Refit the rocker cover.
- ☐ Tighten to torque and in order:
 - bolts 22, 23, 20, 13 (**8 Nm**),
 - bolts 1 to 12, 14 to 19 and 21 to 24 (**14.5 Nm**).
- ☐ Slacken bolts 22, 23, 20 and 13, in order.
- ☐ Tighten to torque and in order bolts 22, 23, 20, 13 (**14.5 Nm**)

III - FINAL OPERATION.

☐

Note:

The gasket face on the oil decanter must be clean, dry and free from grease (avoid finger marks).'

WARNING

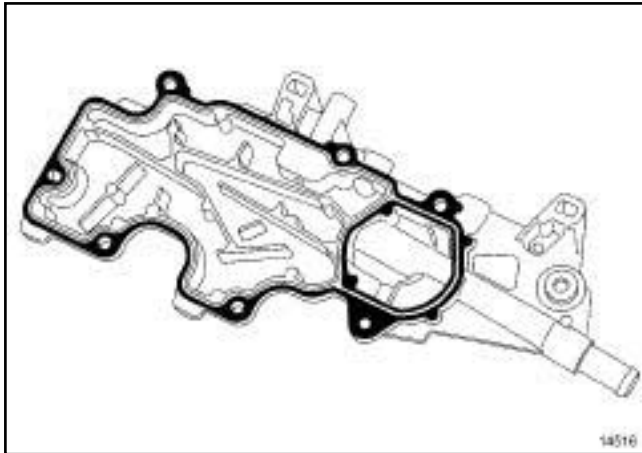
Applying excess sealant could cause it to be squeezed out when parts are tightened. The mixture of sealant and fluid may damage some components (engine, radiator, etc.).

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

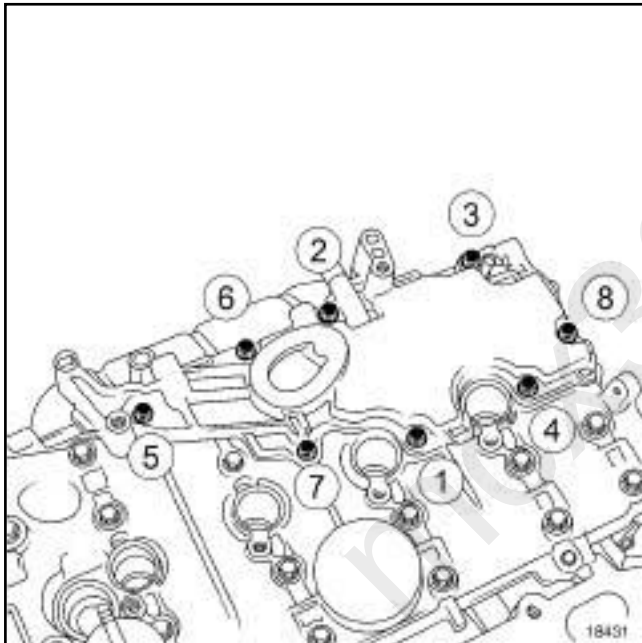
11A

K4J



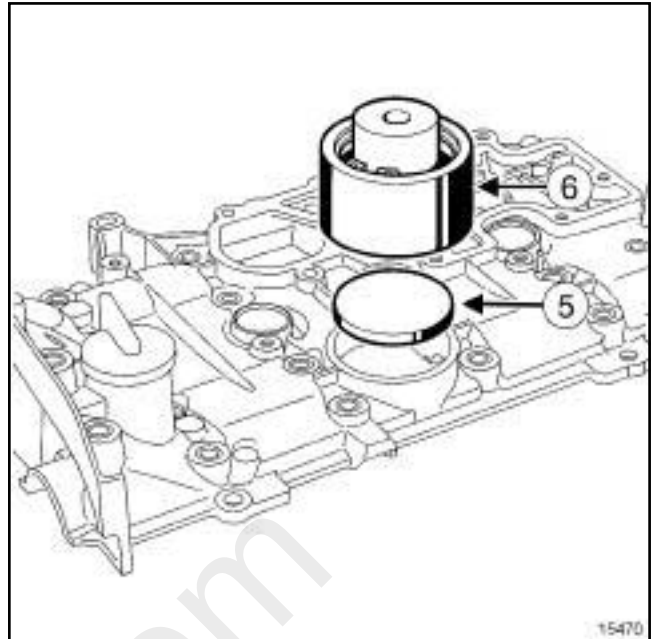
14516

- ❑ Using a stipple roller, apply **LOCTITE 518** to the gasket face until it turns reddish in colour.



18431

- ❑ Refit the oil decanter.
- ❑ Torque tighten and in order:
 - the **new mounting bolts for the oil separator in the untapped holes (15 Nm)**,
 - the **new mounting bolts for the oil separator in the tapped holes (10 Nm)**.
- ❑ Refit the engine lifting eye at the engine timing end.



15470

- ❑ Refit:
 - the rocker cover disc (5) using the (Mot. 1503) (6) ,
 - the spark plugs (see **17A, Ignition, Plugs: Removal - Refitting**, page 17A-11) ,
 - the ignition coils (see **17A, Ignition, Coils: Removal - Refitting**, page 17A-2) ,
 - the intake distributor (see **12A, Fuel mixture, Inlet distributor: Removal - Refitting**, page 12A-46) .

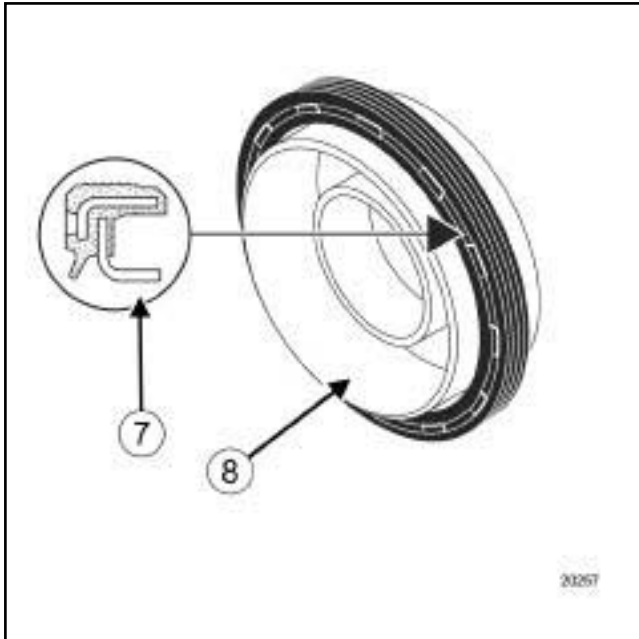
TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K4J

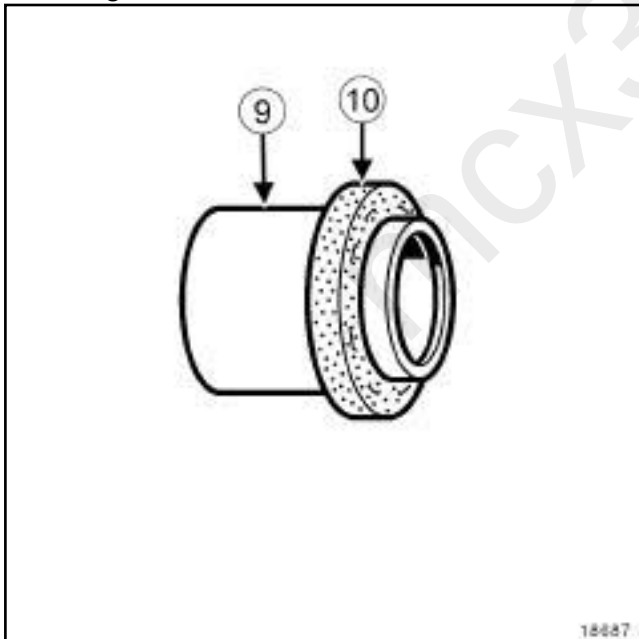
1 - Fitting the camshaft gaskets



20257

- ❑ The elastomer seals on these engines come fitted with a flat lip seal (7) and a protector (8) (also used to fit the seal on the engine).

2 - Fitting the exhaust camshaft seal

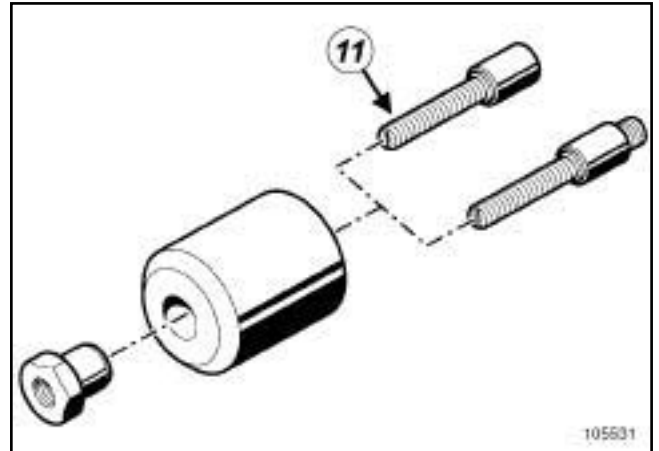


18687

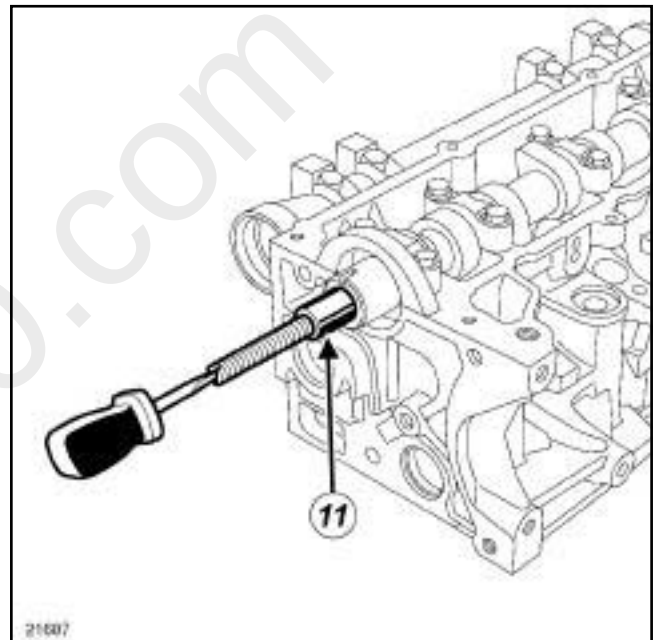
❑

WARNING

When handling, be sure to hold the seal by the protector (9), as this type of seal is highly FRAGILE. It is strictly forbidden to touch the elastomer seal (10) in order to prevent any oil leaks once the seal is fitted to the engine.



105531



21687

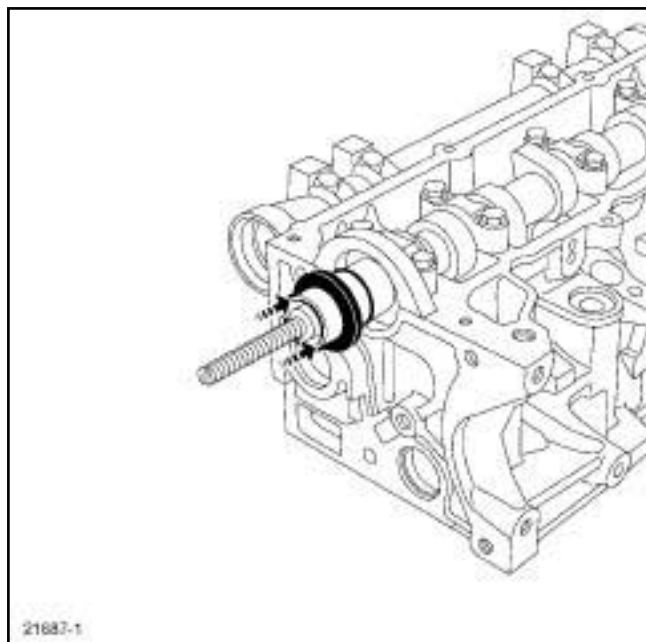
- ❑ Screw the stud (11) of the (Mot. 1632) onto the camshaft.

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

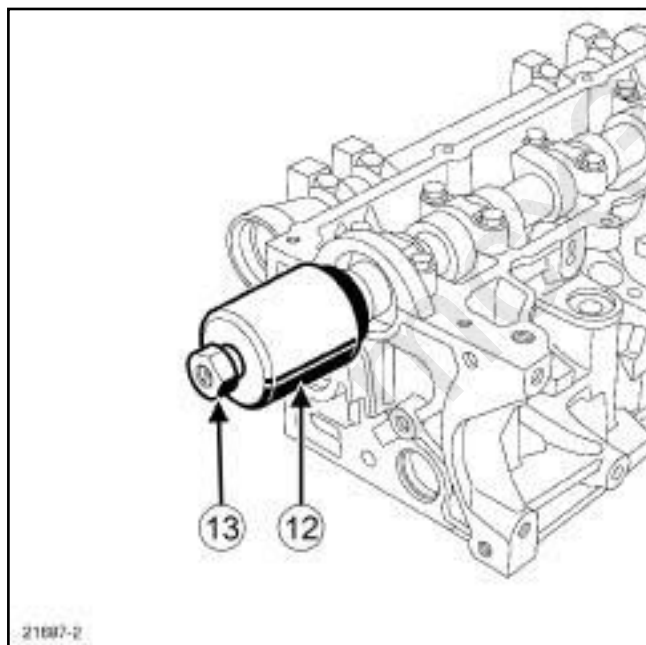
11A

K4J



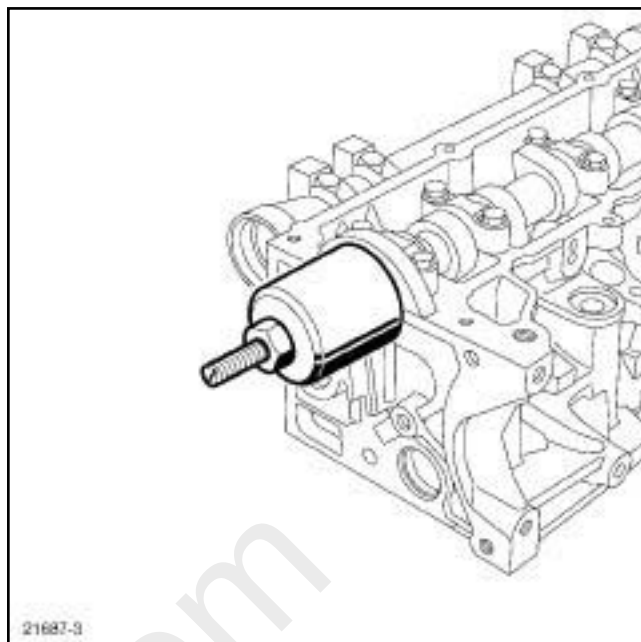
21687-1

- ❑ Mount the protector with its gasket in place onto the camshaft (taking care not to touch the gasket).



21687-2

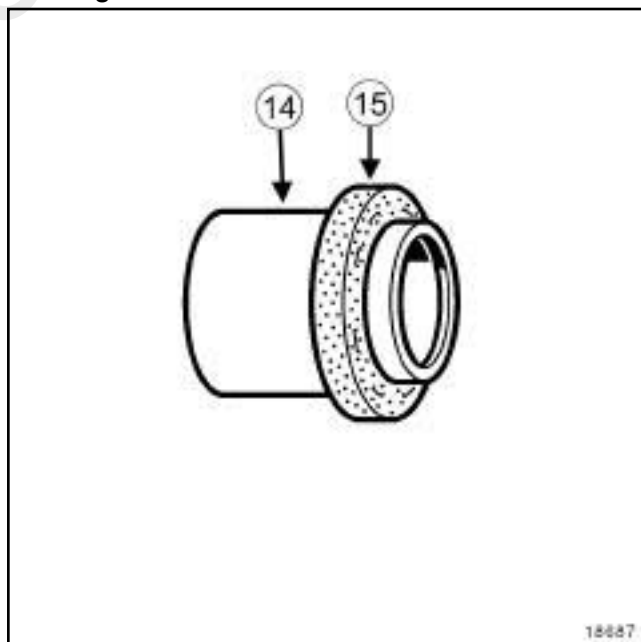
- ❑ Fit the cover (12) and the collar nut (13) of the (Mot. 1632).



21687-3

- ❑ Screw on the collar nut until the cover touches the cylinder head.
- ❑ Remove the nut, cover, protector and threaded rod.

3 Fitting the inlet camshaft seal



18687

❑

WARNING

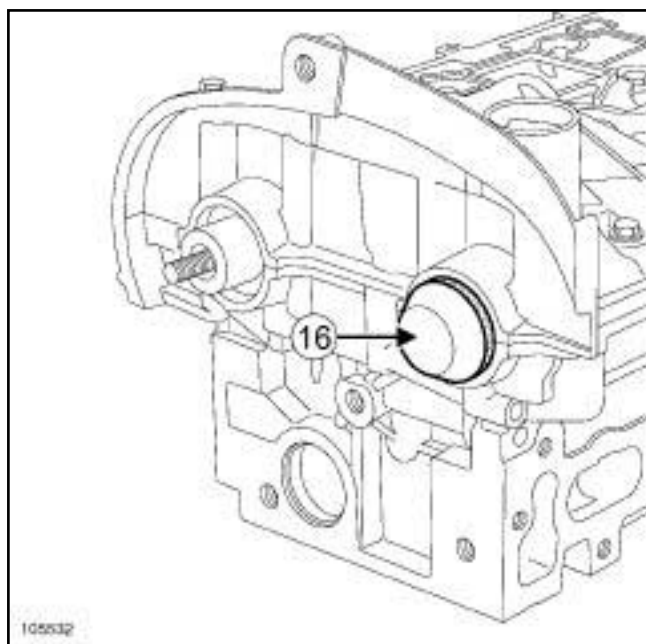
When handling, be sure to hold the seal by the protector (14), as this type of seal is highly FRAGILE. It is strictly forbidden to touch the elastomer seal (15) in order to prevent any oil leaks once the seal is fitted to the engine.

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

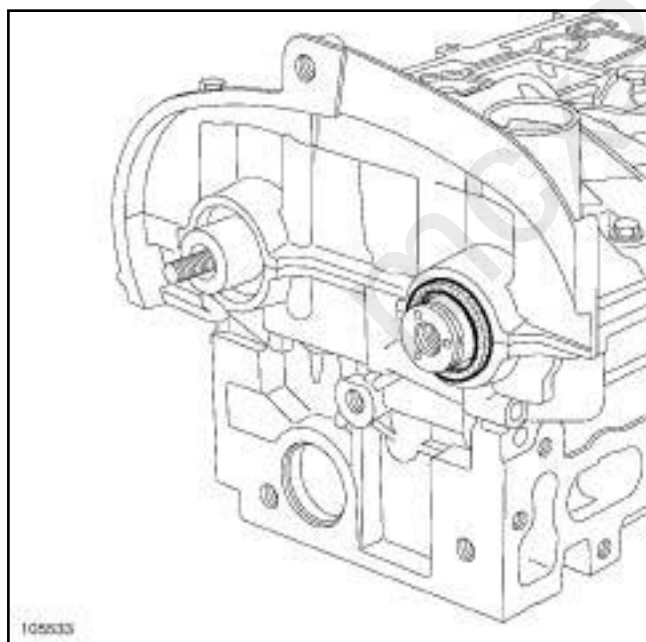
11A

K4J



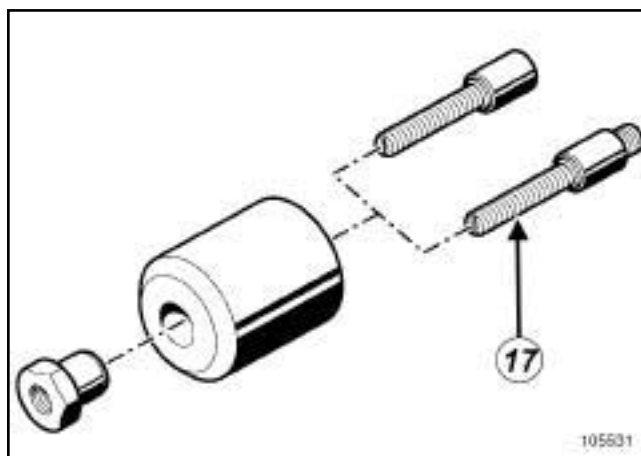
105532

- ❑ Fit the protector (16) fitted with the seal onto the camshaft (taking care not to touch the seal).
- ❑ Push the centre of the protector to force the seal into its housing.

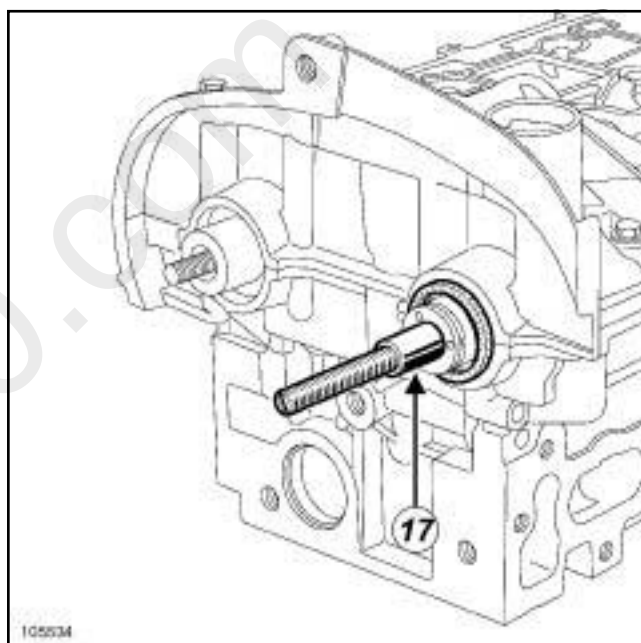


105533

- ❑ Remove the seal protector, taking care not to drop the seal.



105531



105534

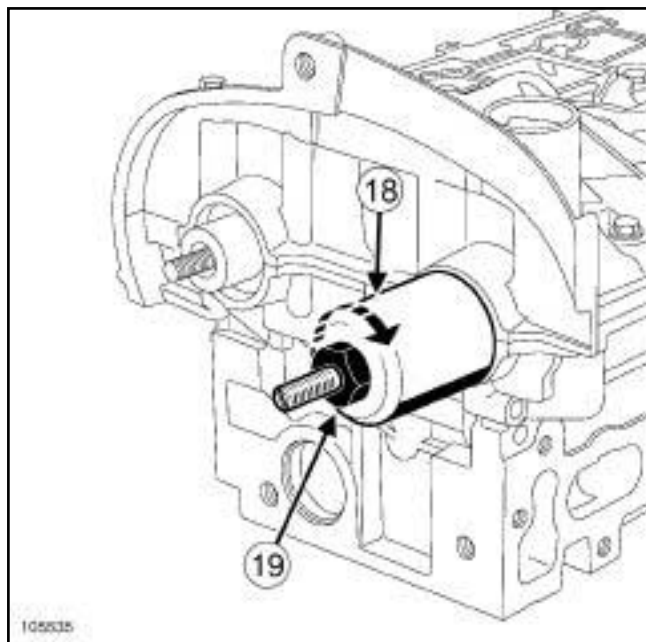
- ❑ Fit the stud (17) on the camshaft using the (Mot. 1632).

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K4J



105535

- ☐ Fit the cover (18) and the collar nut (19) of the (Mot. 1632).
- ☐ Screw on the collar nut until the cover touches the cylinder head.
- ☐ Remove the nut, cover and threaded rod.
- ☐ Refit the timing belt (see 11A, Top and front of engine, Timing belt: Removal - Refitting, page 11A-48) .

WARNING

Follow the second procedure for refitting the timing belt.

- ☐ Refit:
 - the right-hand suspended mounting support (see 19D, Engine mounting, Right-hand suspended engine mounting: Removal - Refitting, page 19D-22) ,
 - the throttle valve (see 12A, Fuel mixture, Throttle valve: Removal - Refitting, page 12A-33) ,
 - the air filter box (see 12A, Fuel mixture, Air filter unit: Removal - Refitting, page 12A-17) ,
 - 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) (MR 393, 55A, Exterior protection),
 - the front right-hand wheel (see Wheel: Removal - Refitting) (MR 392, 35A, Wheels and tyres),

- the scoop under the scuttle panel grille (see Scoop under the scuttle panel grille: Removal - Refitting) (MR 393, 56A, Exterior equipment),
- the scuttle panel grille (see Scuttle panel grille: Removal - Refitting) (MR 393, 56A, Exterior equipment),
- the battery tray (see Battery tray: Removal - Refitting) (MR 392, 80A, Battery),
- the battery (see Battery: Removal - Refitting) (MR 392, 80A, Battery).

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K9K, and 766 or 768

Special tooling required

Mot. 1448 Remote operation pliers for hose clips.

Tightening torques

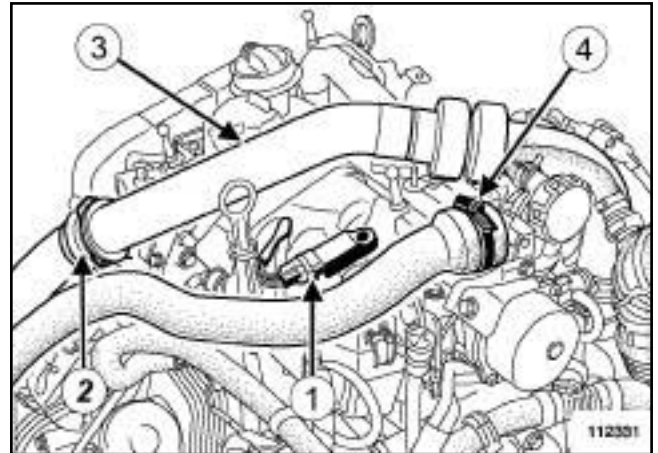
rocker cover bolts **10 N.m**

nut mounting the inter-cooler air inlet pipe on the alternator **8 N.m**

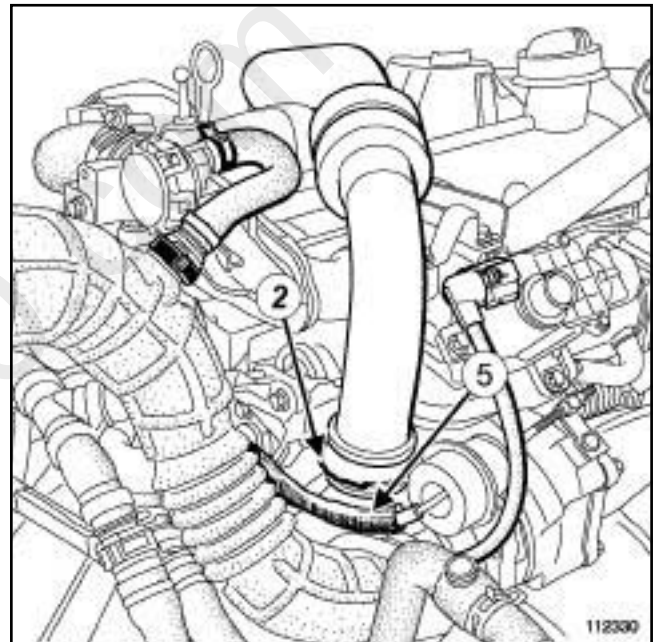
REMOVAL

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 cover,
 - the air inlet duct,
 - the front bumper (see **Front bumper: Removal - Refitting**) (MR 393, 55A, Exterior protection).



112331



112330

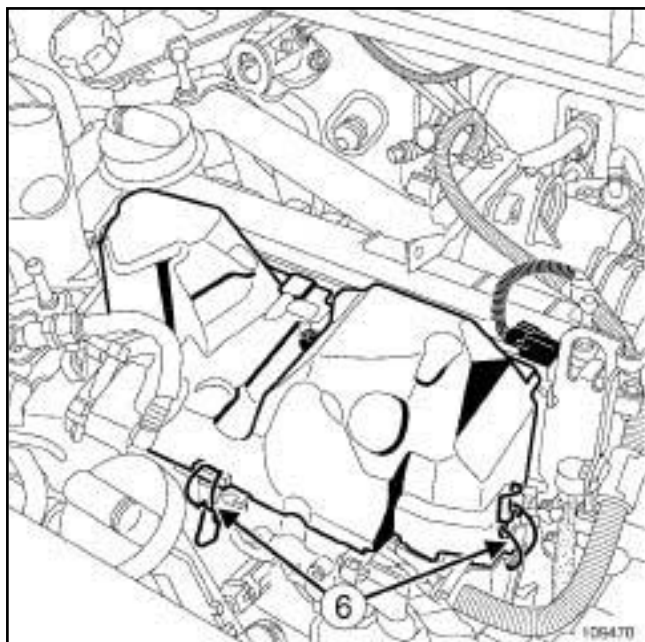
- ☐ Disconnect:
 - the pressure sensor (1) on the inlet duct,
 - the turbocharger pressure regulation pipe (5) .
- ☐ Cut the Rislan clip.
- ☐ Pull the clips (2) from the air duct.
- ☐ Remove:
 - the air pipe mounting nut on the alternator,
 - the air duct bolt on the rocker cover,
 - the air duct (3) .
- ☐ Undo the clip (4) from the intercooler tube on the inlet side.
- ☐ Remove the intercooler tube on the inlet side.

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

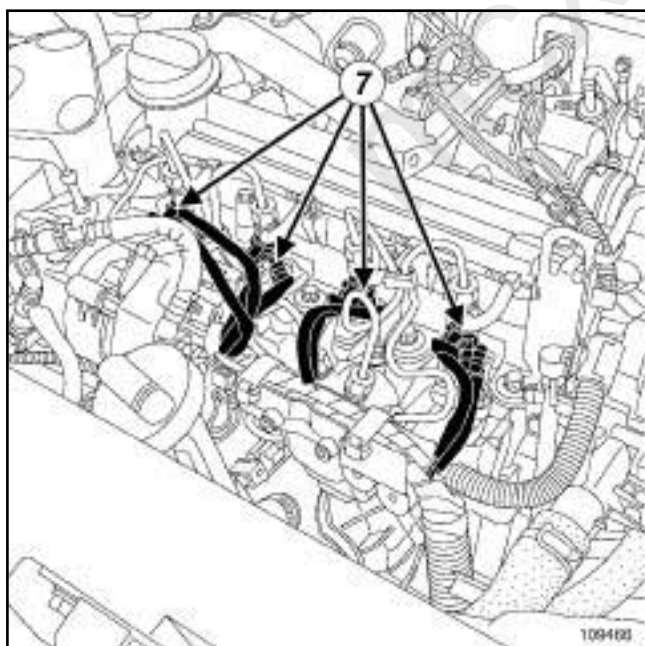
11A

K9K, and 766 or 768



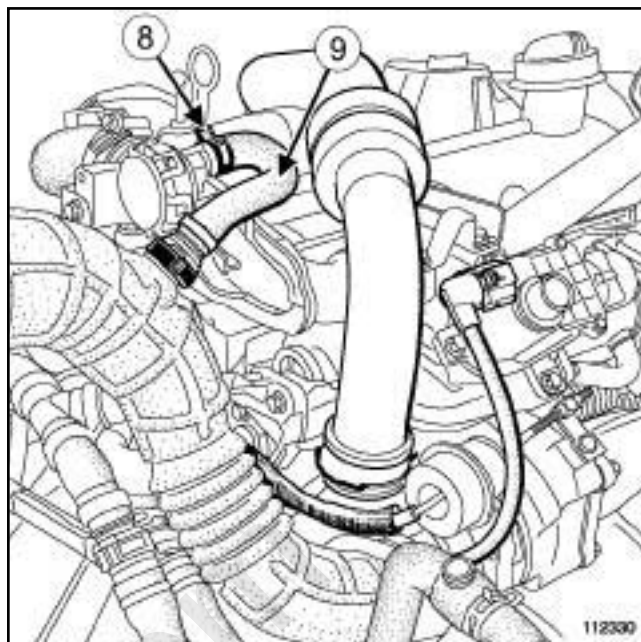
109470

- ❑ Unclip the clips (6) from the rail protector.
- ❑ Remove:
 - the rail protector mountings,
 - the retaining bracket of the engine cover on the gearbox side,
 - the rail protector.



109466

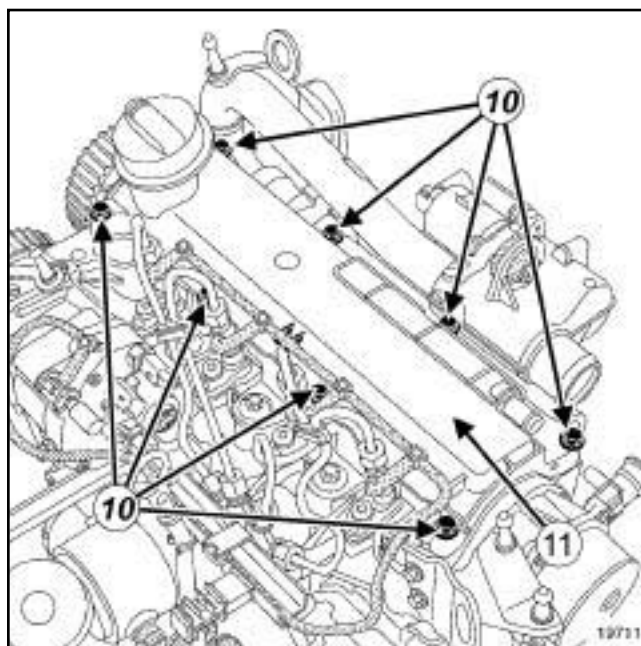
- ❑ Disconnect:
 - the heater plugs (7)
 - the injector connectors.



112330

- ❑ Undo the clip (8) from the oil vapour rebreathing pipe using the (Mot. 1448).
- ❑ Disconnect the oil vapour rebreathing pipe (9) .

II - OPERATION FOR REMOVAL OF PART CONCERNED



19711

- ❑ Remove:
 - the mounting bolts (10) from the rocker cover,
 - the rocker cover (11) .

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K9K, and 766 or 768

REFITTING

I - REFITTING PREPARATION OPERATION

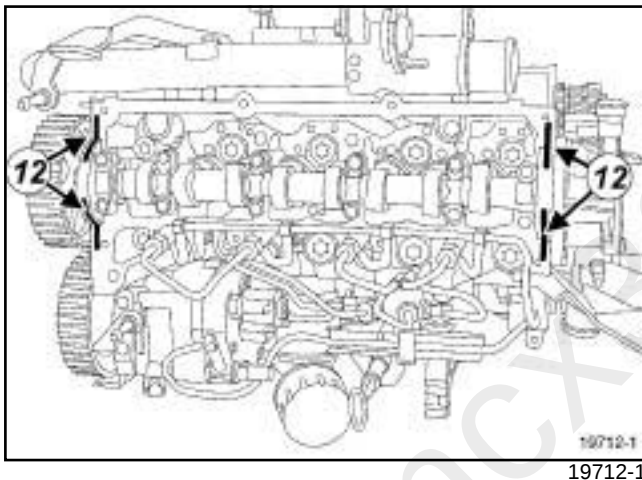
- ❑ Be sure to replace the rocker cover seal.

Note:

The cylinder head gasket and rocker cover faces must be clean, dry and free of grease (avoid finger marks).

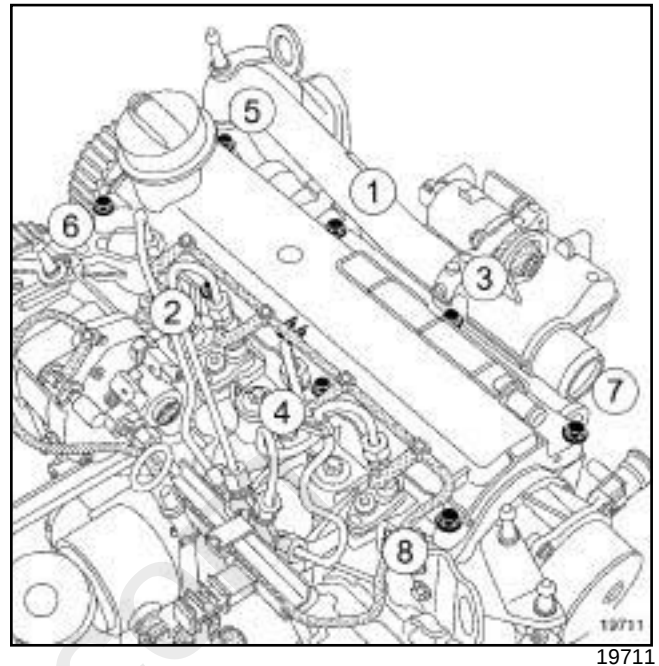
Note:

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 **LOCTITE 518 (12)** , **2 mm** in diameter

II - REFITTING OPERATION FOR PART CONCERNED



- ❑ Refit the rocker cover, fitted with a new gasket.
- ❑ Torque tighten in order the **rocker cover bolts (10 N.m)**.

III - FINAL OPERATION

- ❑ Connect the oil vapour rebreathing pipe.
- ❑ Unclip the clip from the oil vapour rebreathing pipe using the tool **(Mot. 1448)**.
- ❑ Refit the inner timing cover.
- ❑ Connect:
 - the injector connectors,
 - the heater plugs.
- ❑ Refit:
 - the rail protector,
 - the retaining bracket of the engine cover on the gearbox side,
 - the rail protector mountings,
 - the intercooler tube on the inlet side.
- ❑ Fasten the clip on the intercooler tube on the inlet side.
- ❑ Fit the air duct between the turbocharger and the air pipe at the intercooler inlet.
- ❑ Clip the air duct on the turbocharger and the inlet pipe of the intercooler.

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K9K, and 766 or 768

- ☐ Refit:
 - the air duct bolt on the rocker cover,
 - the air pipe mounting nut on the alternator,
 - a Rislan clip.
- ☐ Torque tighten the **nut mounting the intercooler air inlet pipe on the alternator (8 N.m)**.
- ☐ Connect:
 - the turbocharger pressure regulation pipe,
 - the pressure sensor on the inlet tube.
- ☐ Refit:
 - the front bumper (see **Front bumper: Removal - Refitting**) (MR 393, 55A, Exterior protection),
 - the air inlet duct,
 - the engine cover.
- ☐ Connect the battery (see **Battery: Removal - Refitting**) (MR 392, 80A, Battery).

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

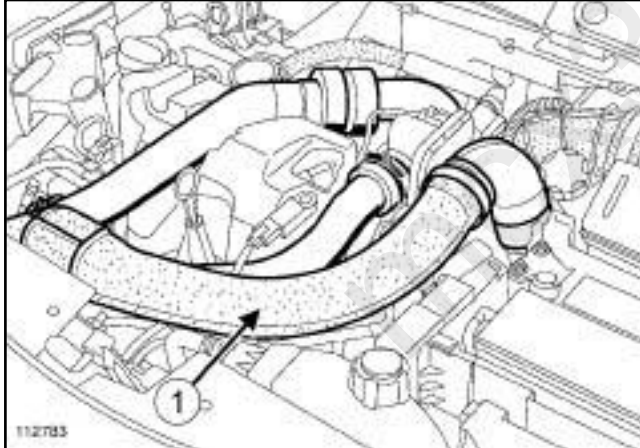
K9K, and 764 or 772

Tightening torques 	
rocker cover bolts	11 N.m
injector rail protector cover bolt	8 N.m
injector rail protector cover nut	8 N.m
intercooler outlet air pipe clip	5.5 N.m
the intercooler inlet and outlet pipe nut on the alternator	8 N.m

REMOVAL

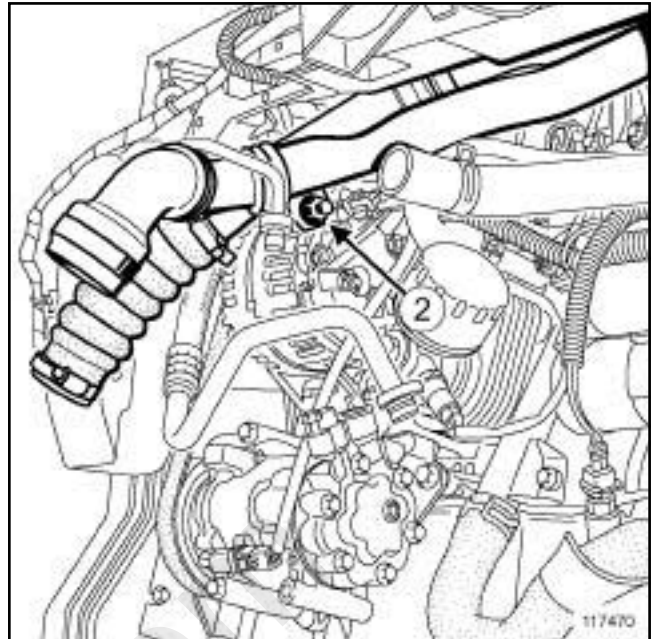
I - REMOVAL PREPARATION OPERATION

- ☐ Disconnect the battery (see **Battery: Removal - Refitting**) (MR 392, 80A, Battery).
- ☐ Remove the front engine cover.



112783

- ☐ Remove the air filter box air inlet pipe (1) .



117470

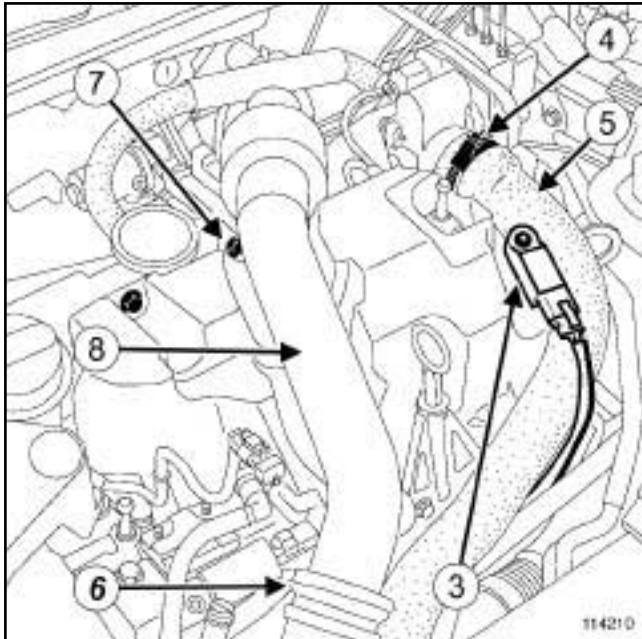
- ☐ Remove the intercooler inlet and outlet pipe nuts (2) on the alternator.

TOP AND FRONT OF ENGINE

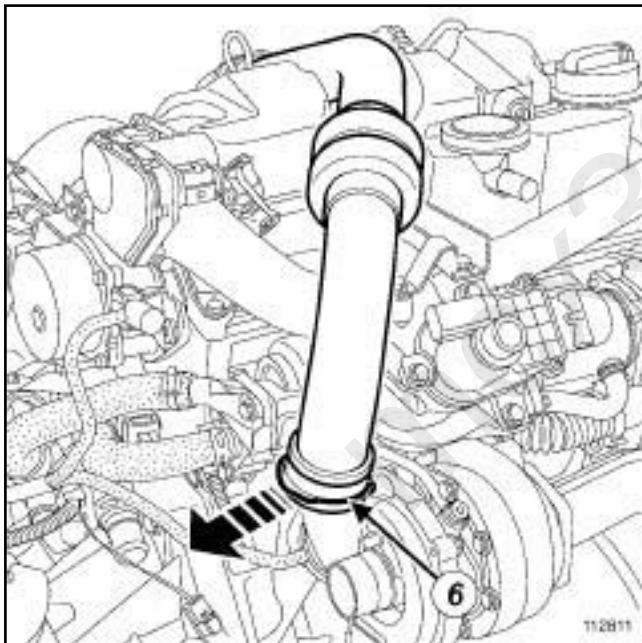
Rocker cover: Removal - Refitting

11A

K9K, and 764 or 772



114210



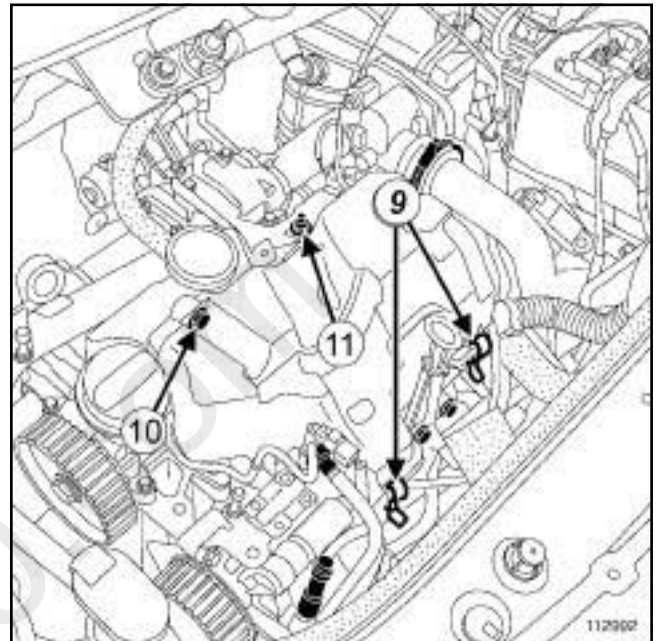
112811

- ❑ Disconnect the connector (3) from the inlet air pressure sensor.

K9K, and 764

- ❑ Disconnect the turbocharger pressure regulation pipe.

- ❑ Undo the clip (4) from the intercooler outlet pipe.
- ❑ Move the intercooler outlet air pipe to one side (5) .
- ❑ Remove:
 - the clips (6) from the intercooler inlet air pipe,
 - the bolt (7) on the rocker cover,
 - the intercooler air inlet pipe (8) .



112992

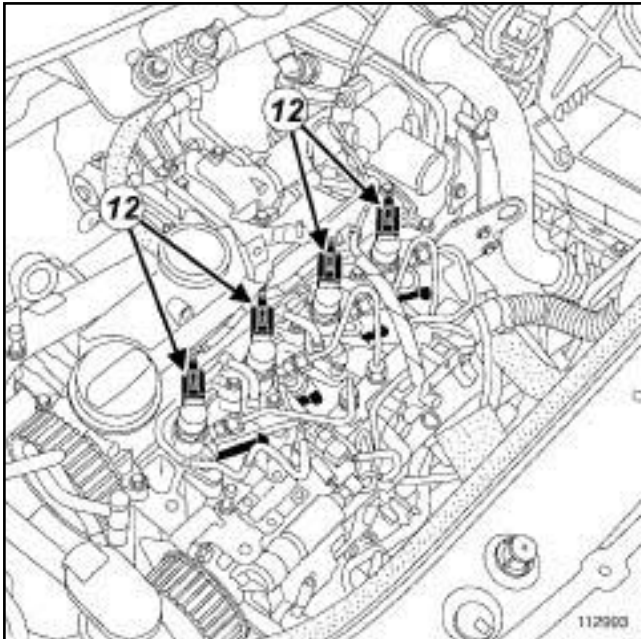
- ❑ Unclip the clips (9) from the injector rail protector cover.
- ❑ Remove:
 - the injector rail protector cover bolt (10) ,
 - the injector rail protector cover nut (11) ,
 - the injector rail protector cover.

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K9K, and 764 or 772

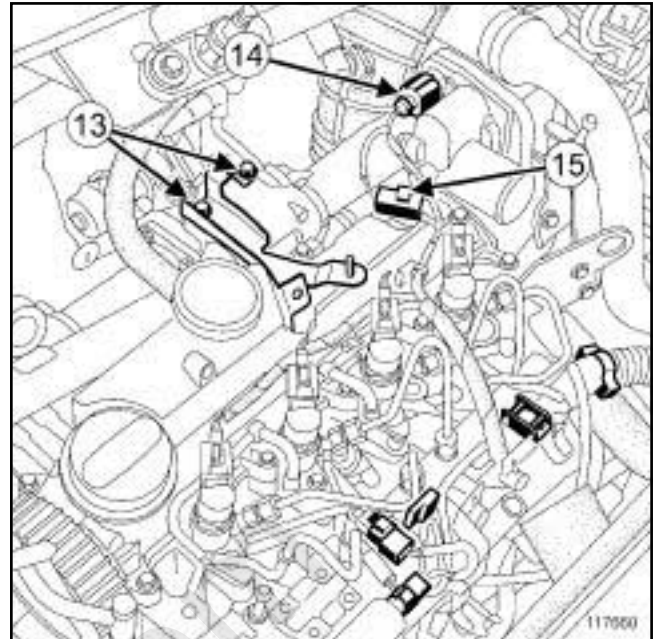


112993

- ☐ Disconnect the injector connectors (12) .
- ☐ Move the injector harness to one side.
- ☐ Unclip the diesel return pipe.

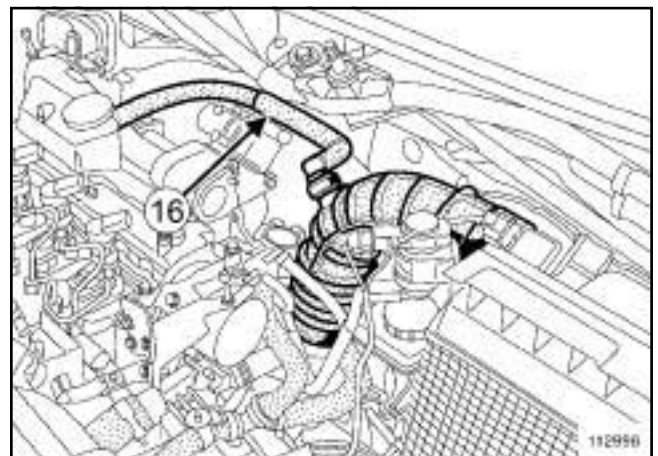
K9K, and 772

- ☐ Detach the turbocharger front temperature sensor wiring harness on the injector rail protector mounting.



117660

- ☐ Remove:
 - the injector rail protector mounting bolts (13) ,
 - the injector rail protector support.
- ☐ Disconnect:
 - the damper valve connector (14) (if equipped),
 - the camshaft position sensor connector (15) .
- ☐ Remove:
 - the damper valve (see **12A, Fuel mixture, Damper valve: Removal - Refitting**, page **12A-31**) (if equipped),
 - the camshaft position sensor.



112996

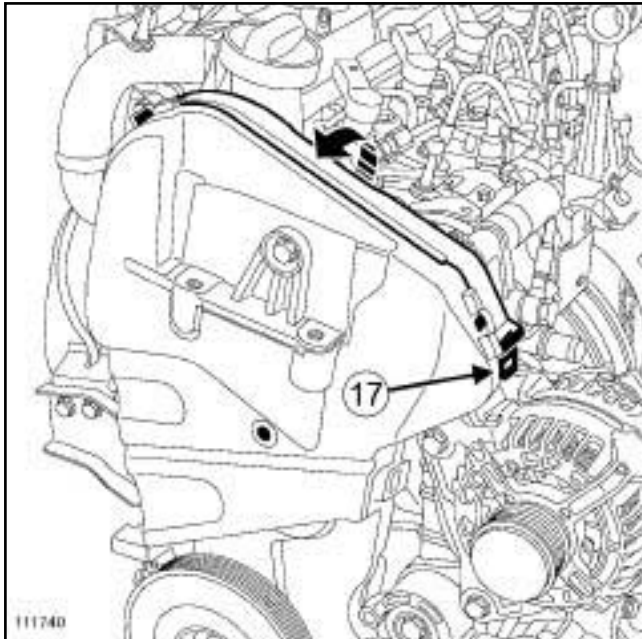
- ☐ Disconnect the oil vapour rebreathing pipe (16) on the rocker cover side.

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

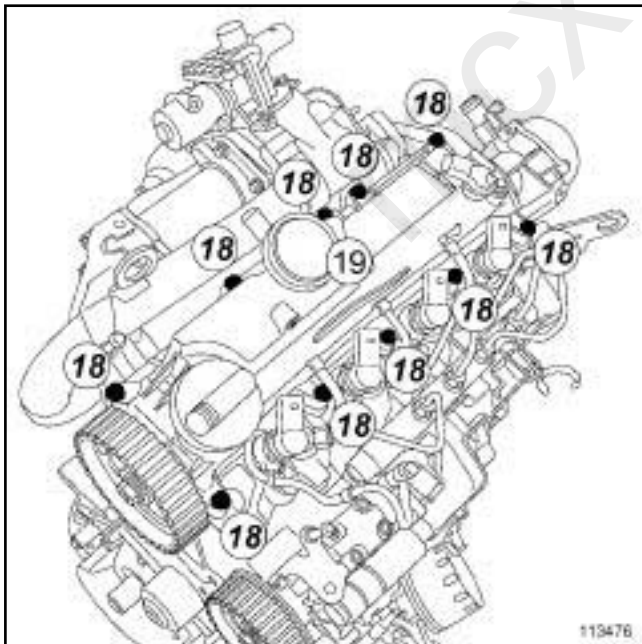
K9K, and 764 or 772



111740

- ☐ Unclip the tab (17) .
- ☐ Swivel the timing cover in the direction of the arrow.

II - OPERATION FOR REMOVAL OF PART CONCERNED



113476

- ☐ Remove:
 - the rocker cover bolts (18) ,
 - the rocker cover (19) .

REFITTING

I - REFITTING PREPARATION OPERATION

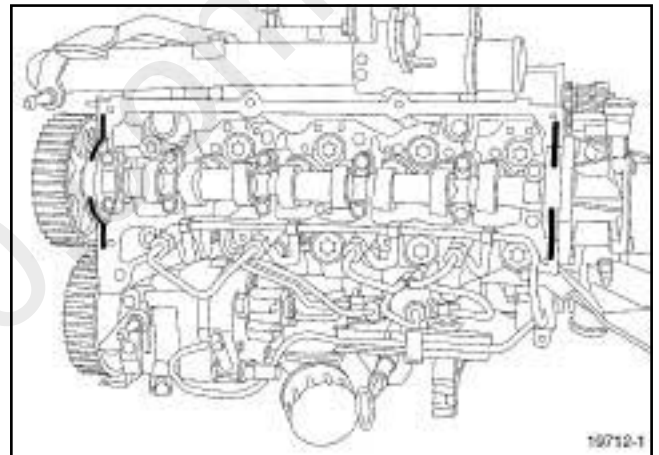
- ☐ Always replace the rocker cover seal.

WARNING

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

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.).



19712-1

- ☐ Apply **RESIN ADHESIVE** (diameter 2 mm).

II - REFITTING OPERATION FOR PART CONCERNED

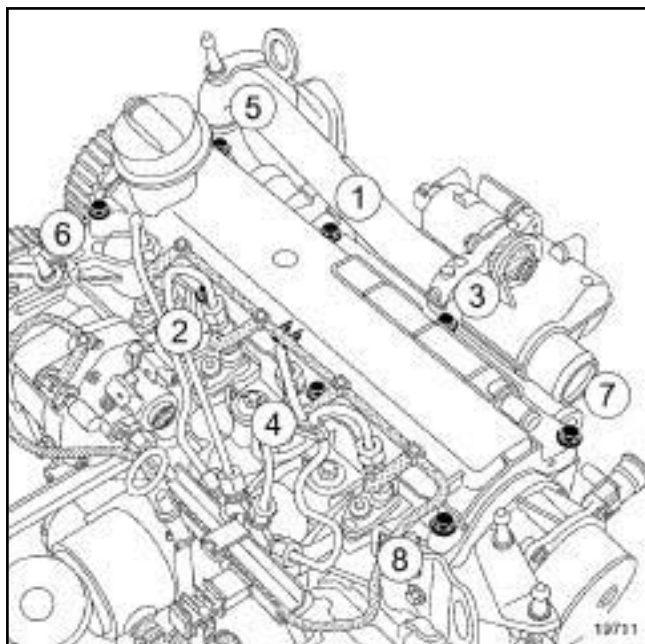
- ☐ Refit:
 - the rocker cover,
 - the rocker cover bolts.

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K9K, and 764 or 772



19711

- ☐ Tighten to torque and in order the **rocker cover bolts (11 N.m)**.

III - FINAL OPERATION

- ☐ Fit the timing cover.
- ☐ Clip on the tab.
- ☐ Connect the oil vapour rebreathing pipe on the rocker cover side.
- ☐ Refit:
 - the cylinder marking sensor,
 - the damper valve (see **12A, Fuel mixture, Damper valve: Removal - Refitting**, page **12A-31**) (if equipped).
- ☐ Connect:
 - the damper valve connector (**14**) (if equipped),
 - the camshaft position sensor connector (**15**) .
- ☐ Refit:
 - the injector rail protector support,
 - the injector rail protector mounting bolts.

K9K, and 772

- ☐ Clip on the turbocharger front temperature sensor wiring harness on the rail protector mounting.

- ☐ Clip on the diesel return pipe.

- ☐ Connect the injector connectors (**12**) .
- ☐ Position the injector wiring harness.
- ☐ Refit:
 - the injector rail protector cover,
 - the injector rail protector cover nut,
 - the injector rail protector cover bolt.
- ☐ Torque tighten:
 - the **injector rail protector cover bolt (8 N.m)**,
 - the **injector rail protector cover nut (8 N.m)**.
- ☐ Fasten the clips of the injector rail protector cover.
- ☐ Refit:
 - the intercooler air inlet pipe,
 - the clips to the intercooler inlet air pipe,
 - the bolt on the rocker cover.
- ☐ Fit the intercooler outlet air pipe.
- ☐ Torque tighten the **intercooler outlet air pipe clip (5.5 N.m)**.

K9K, and 764

- ☐ Connect the turbocharger pressure regulation pipe.
- ☐ Refit the intercooler inlet and outlet pipe nut on the alternator.
- ☐ Torque tighten **the intercooler inlet and outlet pipe nut on the alternator (8 N.m)**.
- ☐ Refit:
 - the air filter unit air inlet pipe,
 - the engine cover.
- ☐ Connect the battery (see **Battery: Removal - Refitting**) (MR 392, 80A, Battery).

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

M4R

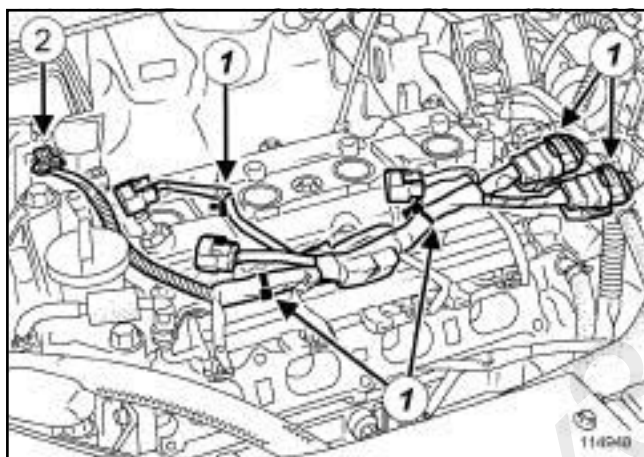
Tightening torques

rocker cover mounting bolts	8 Nm
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REMOVAL

I - REMOVAL PREPARATION OPERATION

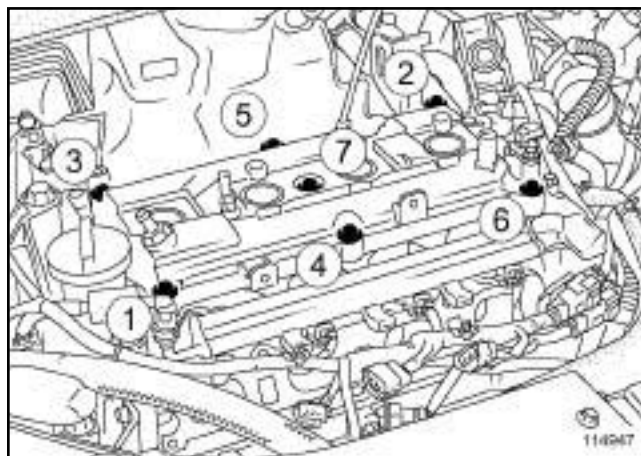
- ☐ Disconnect the battery (see **Battery: Removal - Refitting**).
- ☐ Remove the ignition coils (see **17A, Ignition, Coils: Removal - Refitting**, page 17A-2).



114948

- ☐ Unclip:
 - the wiring harness at (1),
 - the atmospheric pressure sensor (2).
- ☐ Move the wiring harness to one side.

II - REMOVAL OF PART CONCERNED



114947

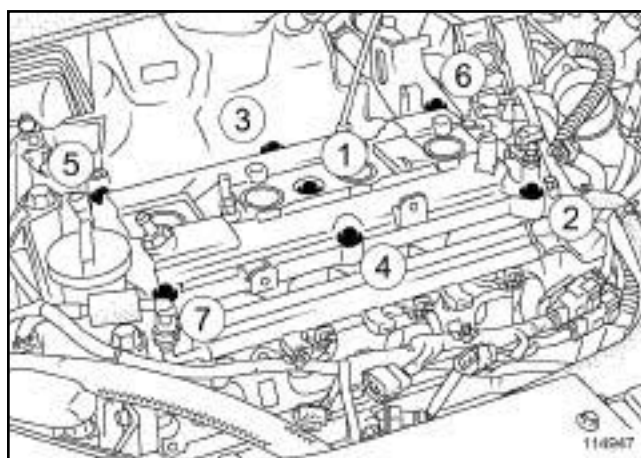
- ☐ Remove:
 - in order, the rocker cover mounting bolts,
 - the rocker cover,
 - the rocker cover seal.

REFITTING

I - REFITTING PREPARATION OPERATION

- ☐ The rocker cover seal must always be replaced.

II - REFITTING THE PART CONCERNED



114947

- ☐ Fit the rocker cover.
- ☐ Tighten to torque and in order the **rocker cover mounting bolts (2 Nm)**.
- ☐ Tighten to torque and in order the **rocker cover mounting bolts (8 Nm)**.

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

M4R

III - FINAL OPERATION

- ☐ Clip:
 - the atmospheric pressure sensor,
 - the wiring harness.
- ☐ Refit the ignition coils (see **17A, Ignition, Coils: Removal - Refitting**, page **17A-2**).
- ☐ Connect the battery (see **Battery: Removal - Refitting**).

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

F4R

Special tooling required

Mot. 1716 Removes housing with silicone seals.

Equipment required

Diagnostic tool

Tightening torques

rocker cover mounting bolts (22), (23), (20), (13) **8 Nm**

rocker cover mounting bolts (1) to (12), (14) to (19), (21) and (24) **12 Nm**

rocker cover mounting bolts (22), (23), (20), (13) **12 Nm**

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

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 throttle valve (see **12A, Fuel mixture, Throttle valve: Removal - Refitting**, page **12A-33**) ,
 - the inlet manifold (see **12A, Fuel mixture, Inlet distributor: Removal - Refitting**, page **12A-46**) ,
 - the ignition coils (see **17A, Ignition, Coils: Removal - Refitting**, page **17A-2**) ,
 - the oil decanter (see **11A, Top and front of engine, Oil decanter: Removal - Refitting**, page **11A-302**) ,
 - the battery (see **80A, Battery, Battery: Removal - Refitting**),
 - the air filter box (see **12A, Fuel mixture, Air filter unit: Removal - Refitting**, page **12A-17**) ,
 - the front right-hand wheel (see **35A, Wheels and tyres: Wheel: Removal - Refitting**),
 - the accessories belt (see **11A, Top and front of engine, Accessories belt: Removal - Refitting**, page **11A-5**) ,

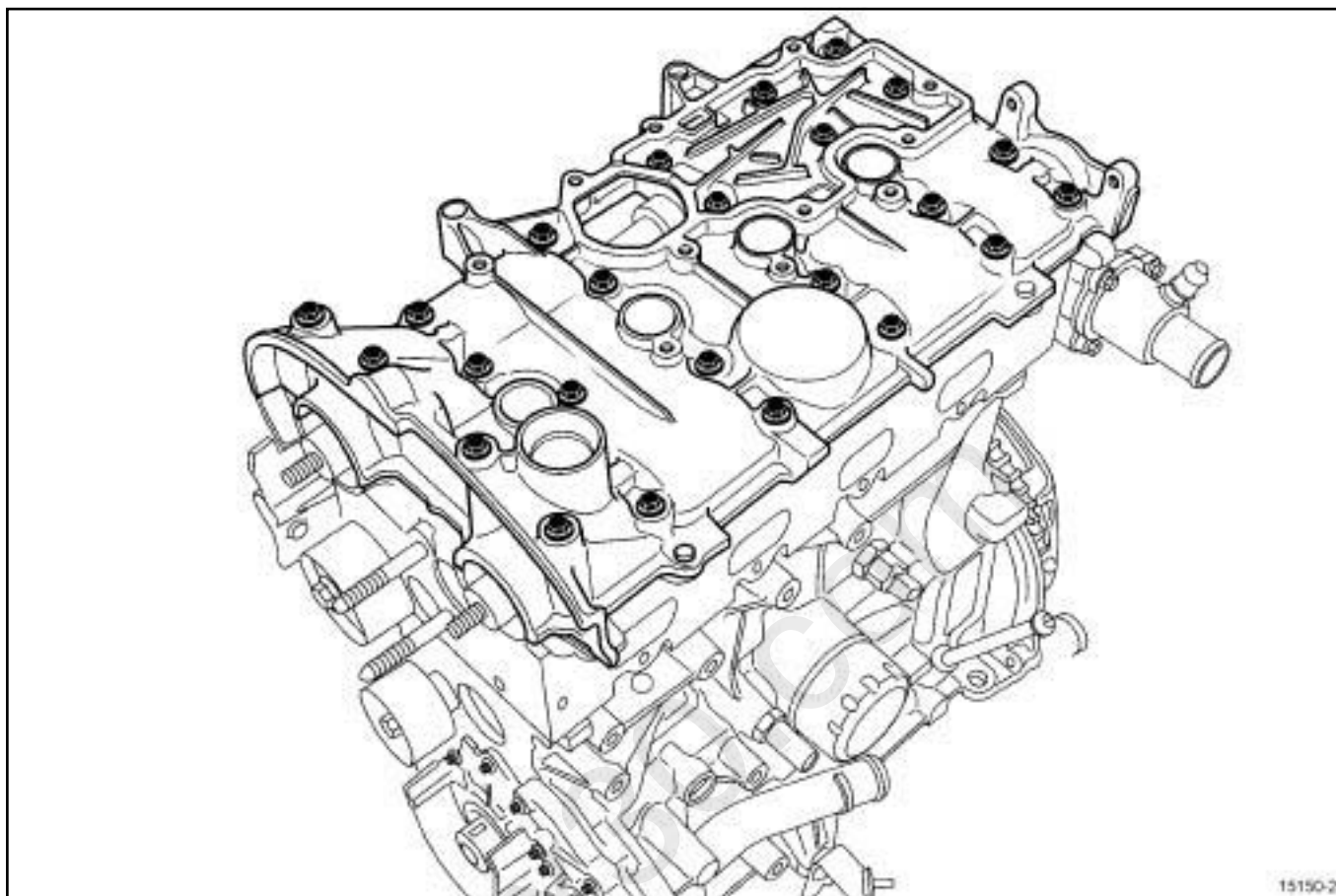
TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

F4R

II - OPERATION FOR REMOVAL OF PART CONCERNED



15150-2

15150-2

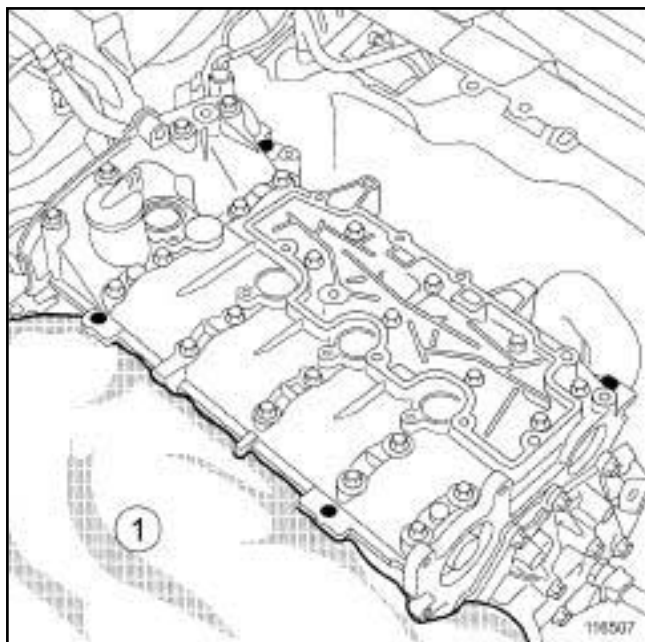
- ☐ Undo all the mounting bolts from the rocker cover.
- ☐ Remove the rocker cover bolts.

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

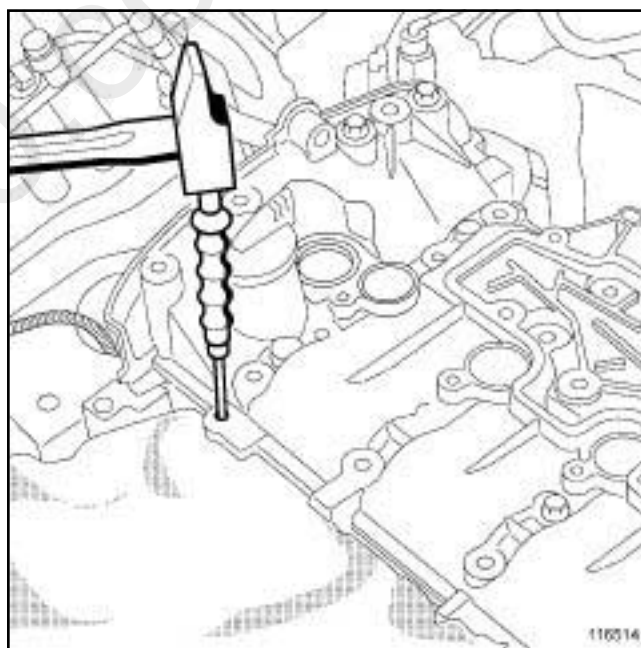
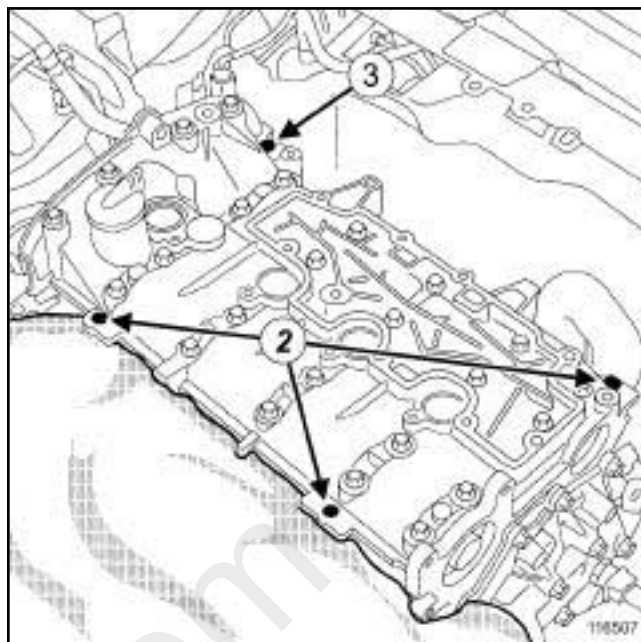
11A

F4R



❑ Using a clean cloth (1) , protect:

- the injector holder plate pipe openings to prevent any impurities from entering,
- the injector rail,
- the camshaft position sensor location.



❑ Remove the rocker cover centring devices (2) using a hammer and a drift to knock them out from above.

Note:

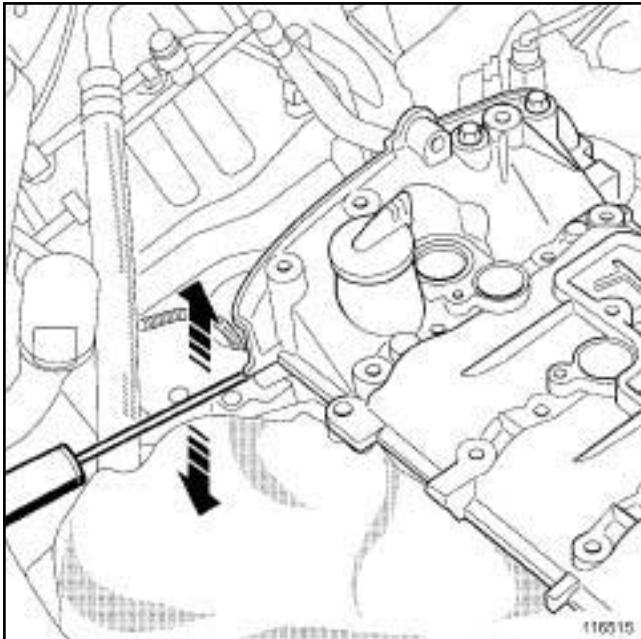
The centring device (3) must not be removed under any circumstances. Not following these instructions could damage the cylinder head.

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

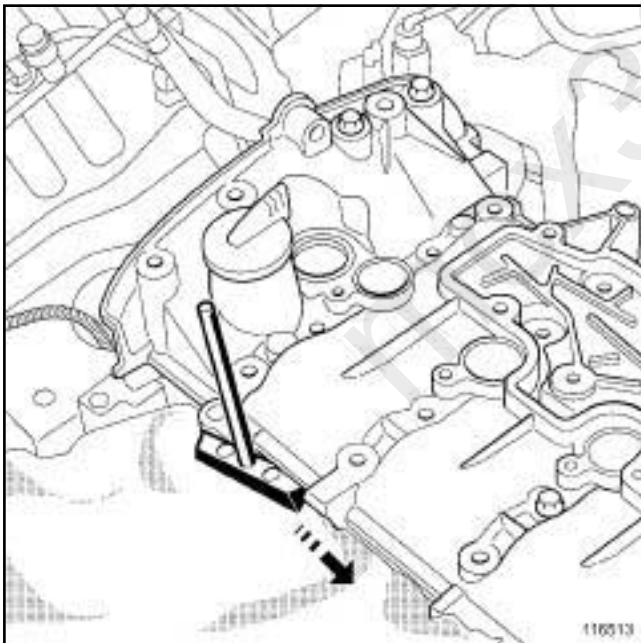
11A

F4R



116515

- ❑ Press a flat-blade screwdriver onto the injector holder plate and use it to gently remove the adhesive from the rocker cover.



116513

- ❑ Remove the rocker cover using the (Mot. 1716).
- ❑ Remove the rocker cover.

REFITTING

I - REFITTING PREPARATION OPERATION

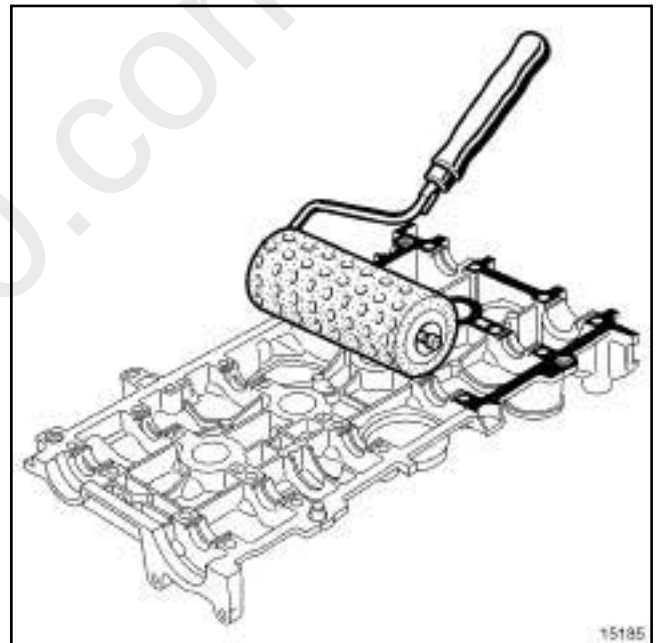
- ❑ Refit the centring devices on the cylinder head using a hammer and drift.

Note:

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

Excess sealant could be squeezed out when the parts are tightened. The product-fluid mix may damage some components (engine, radiator).

II - REFITTING OPERATION FOR PART CONCERNED



15185

- ❑ Apply some **RESIN ADHESIVE** to the rocker cover gasket face using a stipple roller.

Note:

Use a cloth to remove any **RESIN ADHESIVE** on the rocker cover bearings.

- ❑ Fit the rocker cover.

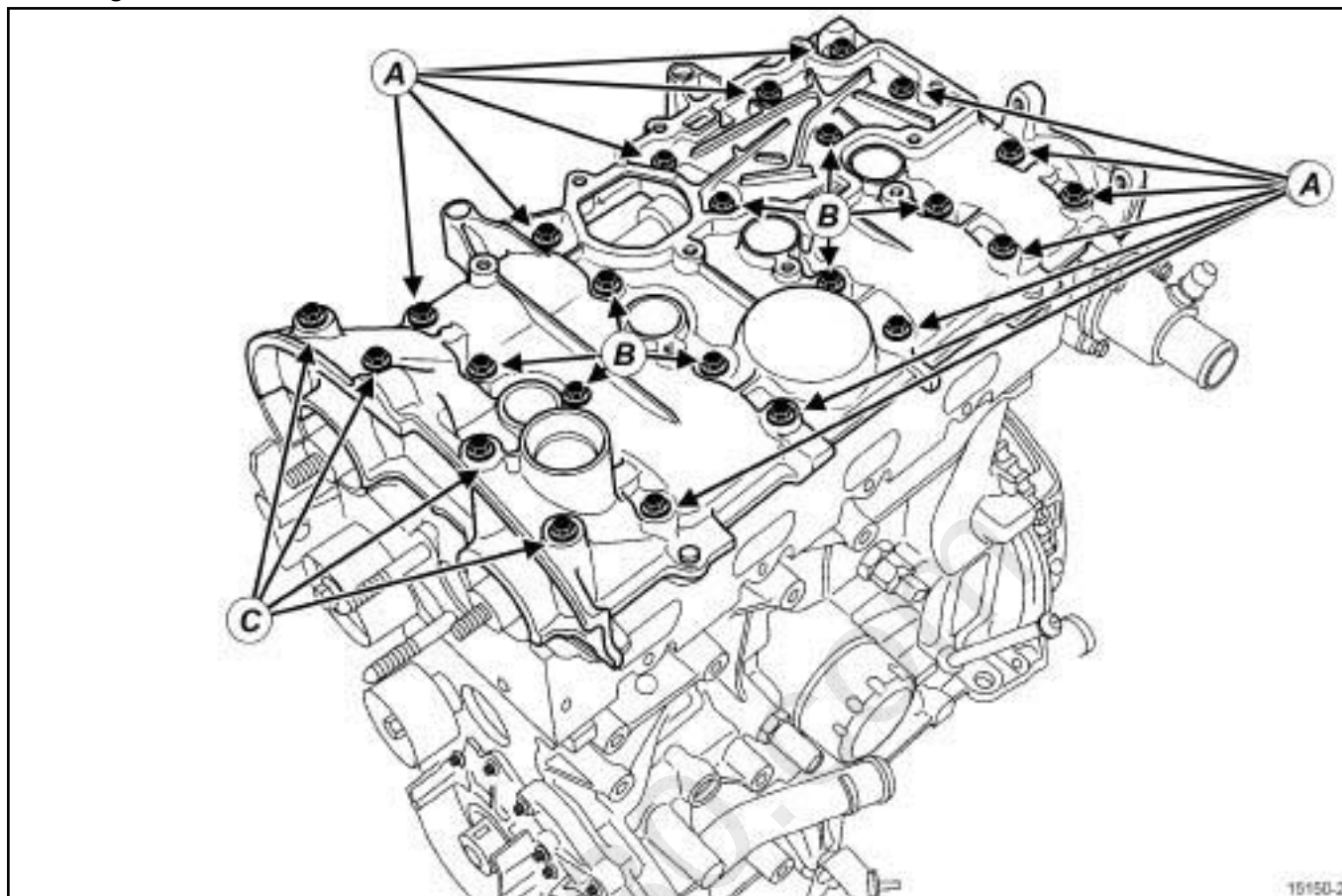
TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

F4R

mounting bolt location



15150-2

- (A) short bolts
- (B) medium bolts
- (C) long bolts

☐ Insert all the rocker cover mounting bolts.

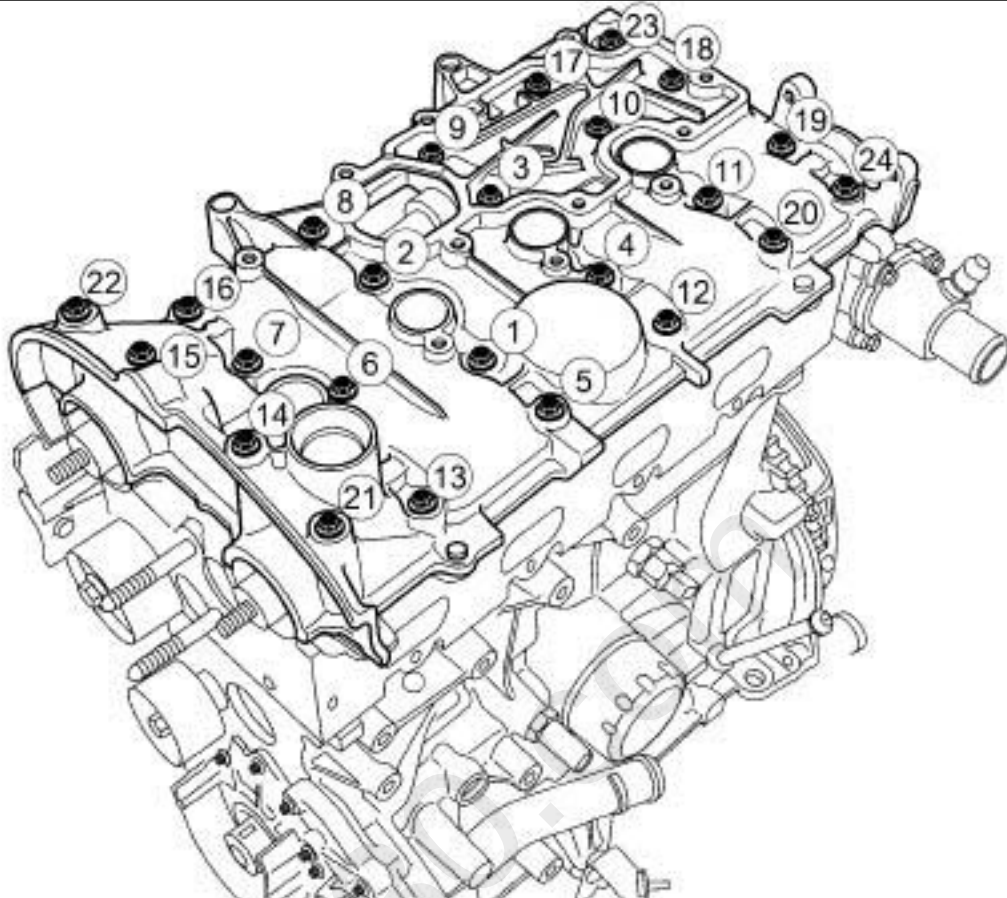
TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

F4R

tightening order for rocker cover mounting bolts



15150-2

15150-2

- ☐ Tighten in order and to torque the **rocker cover mounting bolts (22), (23), (20), (13) (8 Nm)** to correctly fit the rocker cover.
- ☐ Tighten in order and to torque the **rocker cover mounting bolts (1) to (12), (14) to (19), (21) and (24) (12 Nm)**.
- ☐ Loosen rocker cover mounting bolts (22), (23), (20) and (13).
- ☐ Tighten in order and to torque **rocker cover mounting bolts (22), (23), (20), (13) (12 Nm)**.

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 (see **35A, Wheels and tyres: Wheel: Removal - Refitting**),
- the air filter box (see **12A, Fuel mixture, Air filter unit: Removal - Refitting**, page 12A-17) ,

- the oil decanter (see **11A, Top and front of engine, Oil decanter: Removal - Refitting**, page 11A-302) ,
- the ignition coils (see **17A, Ignition, Coils: Removal - Refitting**, page 17A-2) ,
- the inlet manifold (see **12A, Fuel mixture, Inlet distributor: Removal - Refitting**, page 12A-46) ,
- the throttle valve (see **12A, Fuel mixture, Throttle valve: Removal - Refitting**, page 12A-33) .

- ☐ Connect the battery (see **80A, Battery, Battery: Removal - Refitting**),
- ☐ Using the **Diagnostic tool**, check that there are no faults stored by the injection computer and clear them if necessary.

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K9K, and 750 or 752

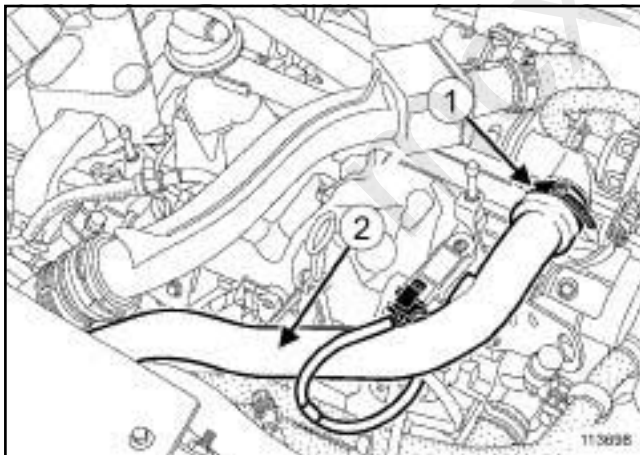
Tightening torques 	
rocker cover bolts	11 N.m
EGR solenoid valve strut nuts	12 N.m
injector rail protector bolt	8 N.m
gearbox side lifting eye bolts	21 N.m
nut mounting the inter-cooler inlet air pipe on the alternator	8 N.m
intercooler outlet air pipe clip	5.5 N.m

REMOVAL

I - REMOVAL PREPARATION OPERATION

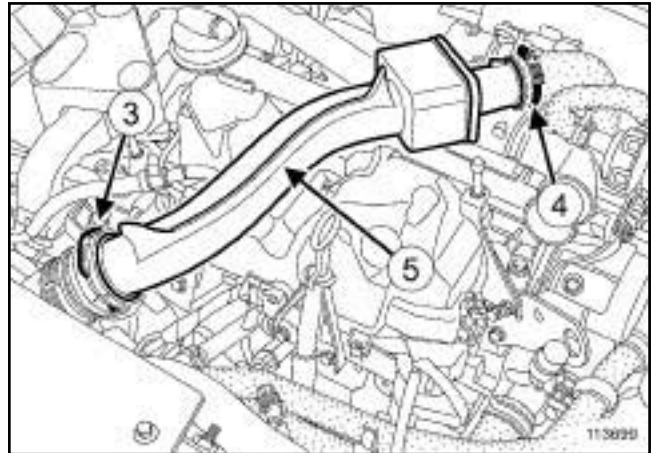
- ☐ Disconnect the battery (see **Battery: Removal - Refitting**) (MR 392, 80A, Battery).

K9K, and 750



113698

- ☐ Undo the clip (1) from the intercooler outlet pipe.
- ☐ Move the intercooler outlet air pipe to one side (2) .



113699

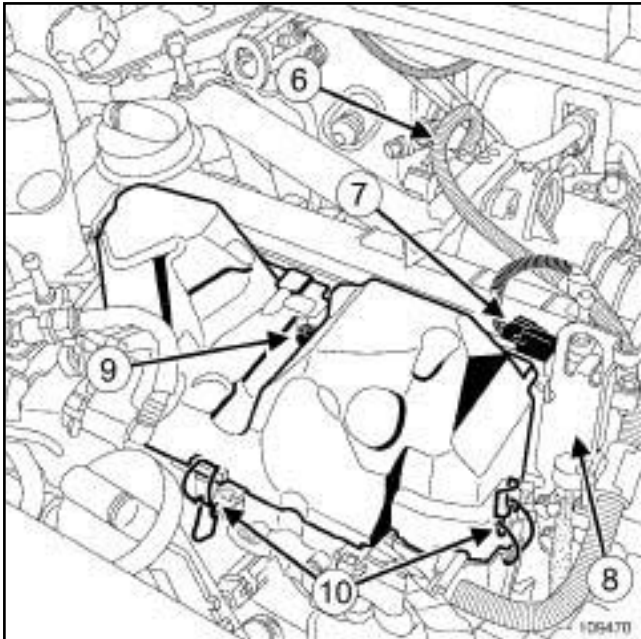
- ☐ Remove the turbocharger outlet air pipe retaining pin (3) .
- ☐ Loosen the turbocharger outlet air pipe clip (4) .
- ☐ Remove the turbocharger air outlet pipe (5) .

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

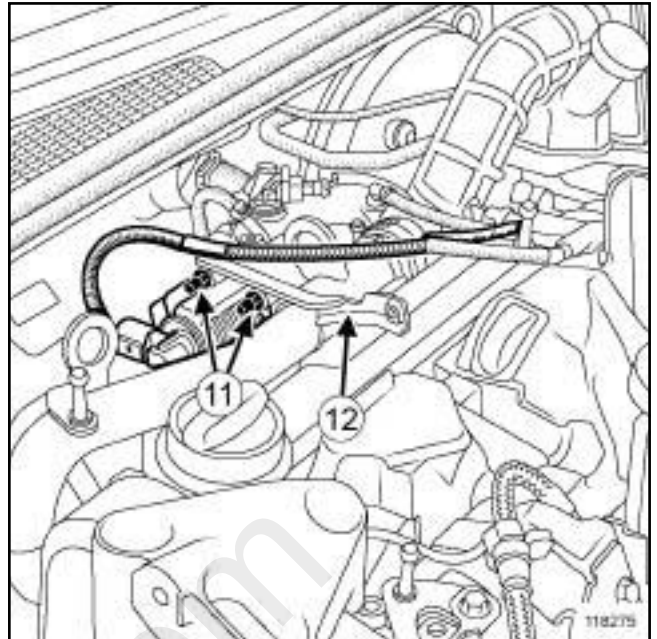
11A

K9K, and 750 or 752



109470

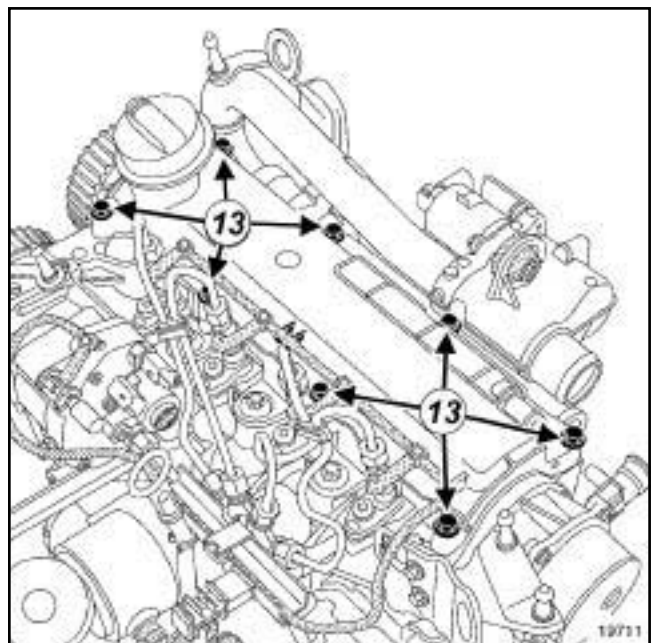
- ❑ Disconnect:
 - the oil vapour rebreathing pipe,
 - the connector (6) from the EGR solenoid valve,
 - the air pressure sensor connector (7) .
- ❑ Unclip the breather pipe from the gearbox.
- ❑ Remove:
 - the lifting eye bolts (8) on the gearbox side,
 - the gearbox side lifting eye.
- ❑ Move the wiring harness to one side.
- ❑ Unclip the clips (9) from the injector rail protector.
- ❑ Remove:
 - the injector rail protector bolt (10) ,
 - the injector rail protector.



118275

- ❑ Remove:
 - the nuts (11) from the EGR solenoid valve strut (12) ,
 - the strut on the EGR solenoid valve.

II - OPERATION FOR REMOVAL OF PART CONCERNED



19711

- ❑ Remove:
 - the rocker cover bolts (13) ,
 - the rocker cover.

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K9K, and 750 or 752

REFITTING

I - REFITTING PREPARATION OPERATION

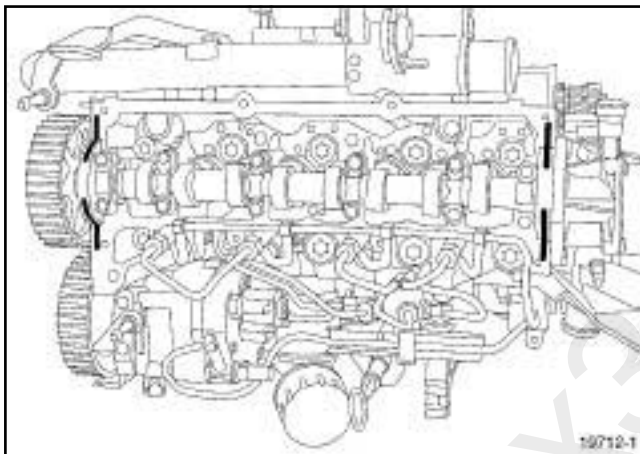


WARNING

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

WARNING

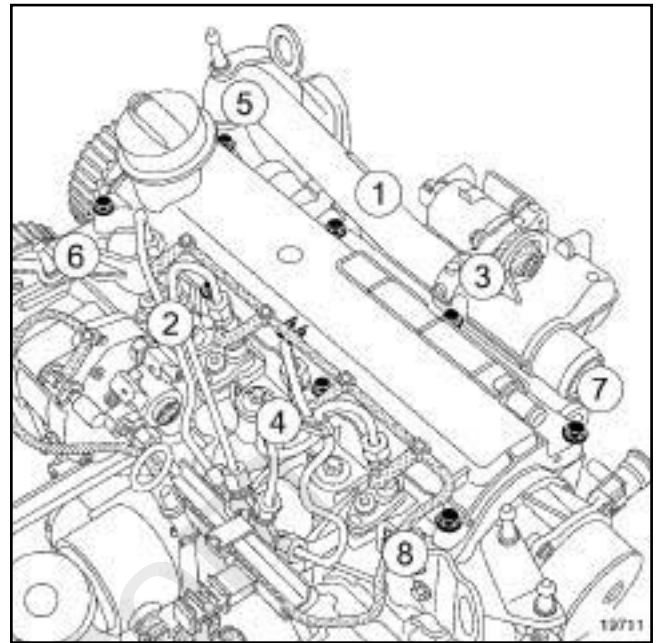
Applying excess sealant could cause it to be squeezed out when parts are tightened. A mixture of sealant and fluid could damage certain components (engine, radiator, etc.).



19712-1

- ❑ Apply **RESIN ADHESIVE**, 2 mm in diameter.

II - REFITTING OPERATION FOR PART CONCERNED



19711

- ❑ Refit the rocker cover, fitted with a new gasket.
- ❑ Fit without tightening the rocker cover bolts.
- ❑ Tighten to torque and in order the **rocker cover bolts (11 N.m)**.

III - FINAL OPERATION

- ❑ Refit:
 - the strut on the EGR solenoid valve,
 - the EGR solenoid valve strut nuts.
- ❑ Tighten to torque the **EGR solenoid valve strut nuts (12 N.m)**.
- ❑ Refit:
 - the injector rail protector,
 - the injector rail protector bolt.
- ❑ Torque tighten the **injector rail protector bolt (8 N.m)**.
- ❑ Clip the clips onto the injector rail protector.
- ❑ Refit:
 - the gearbox side lifting eye,
 - the gearbox side lifting eye bolts.
- ❑ Fit the wiring harness.
- ❑ Connect:
 - the air pressure sensor connector.

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

K9K, and 750 or 752

- the exhaust gas recirculation solenoid valve connector,
- the oil vapour rebreathing pipe .
- ☐ Clip the breather pipe to the gearbox.
- ☐ Tighten to torque the **gearbox side lifting eye bolts (21 N.m)**.

K9K, and 750

- ☐ Loosen the intercooler inlet air pipe nut on the alternator.
 - ☐ Fit:
 - the turbocharger air outlet pipe,
 - the turbocharger outlet air pipe retaining pins.
 - ☐ Click into place the turbocharger outlet air pipe.
 - ☐ Tighten the turbocharger outlet air pipe bolt on the rocker cover.
 - ☐ Torque tighten the **nut mounting the intercooler inlet air pipe on the alternator (8 N.m)**.
 - ☐ Fit the intercooler outlet air pipe.
 - ☐ Torque tighten the **intercooler outlet air pipe clip (5.5 N.m)**.
-
- ☐ Connect the battery (see **Battery: Removal - Refitting**) (MR 392, 80A, Battery).

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

D4F, and 784

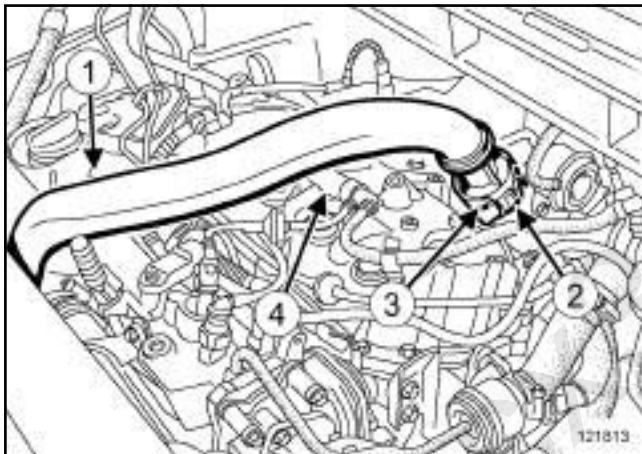
Tightening torques

rocker cover bolts (initial torque)	5 Nm
rocker cover bolts	13 Nm
heat shield bolts	8 Nm

REMOVAL

I - REMOVAL PREPARATION OPERATION

- ☐ Disconnect the battery (see **Battery: Removal - Refitting**) (MR 392, 80A, Battery).
- ☐ Remove the front engine cover



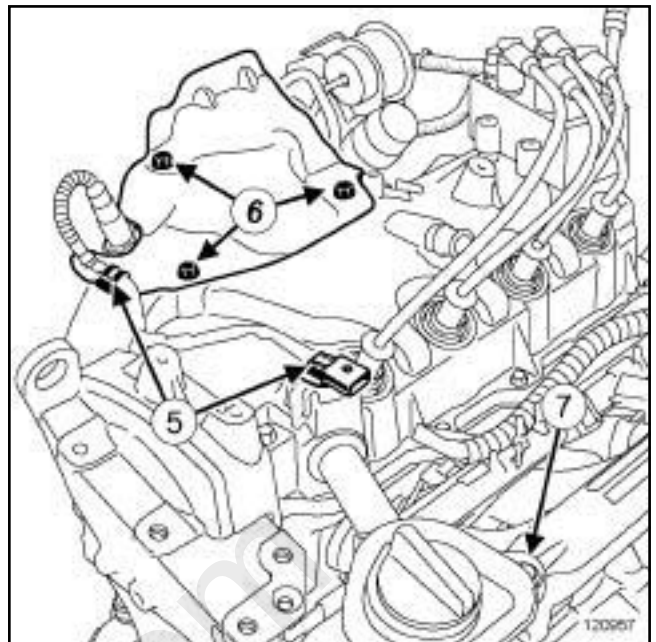
121813

- ☐ Remove the bolt (1) from the intercooler air inlet pipe on the intake distributor.
- ☐ Remove the intercooler air inlet pipe clip (2) on the turbocharger.

Note:

If the clip (3) is removed from the heat resistant protector, the latter must be replaced.

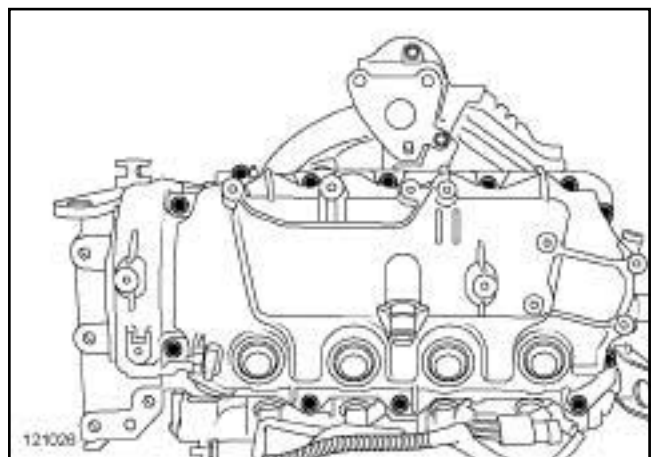
- ☐ Move the intercooler inlet air pipe to one side.
- ☐ Disconnect the oil vapour rebreathing circuit union (4) .



120957

- ☐ Unpick the wiring harness from the upstream oxygen sensor at (5) .
- ☐ Remove:
 - the bolts (6) from the heat shield,
 - the heat shield,
 - the filler neck bolt (7) ,
 - the filler neck,
 - the ignition coil (see **17A, Ignition, Coils: Removal - Refitting**, page 17A-2) .

II - OPERATION FOR REMOVAL OF PART CONCERNED



121026

- ☐ Remove:
 - the rocker cover bolts,

TOP AND FRONT OF ENGINE

Rocker cover: Removal - Refitting

11A

D4F, and 784

- the rocker cover,
- the rocker cover gasket.

REFITTING

I - REFITTING PREPARATIONS OPERATION

- ❑ Clean the joint faces using **SUPER CLEANING AGENT FOR JOINT FACES** (see **Vehicle: Parts and consumables for the repair**) (MR 392, 04B, Consumables - Products) to dissolve the part of the seal which is still attached.

WARNING

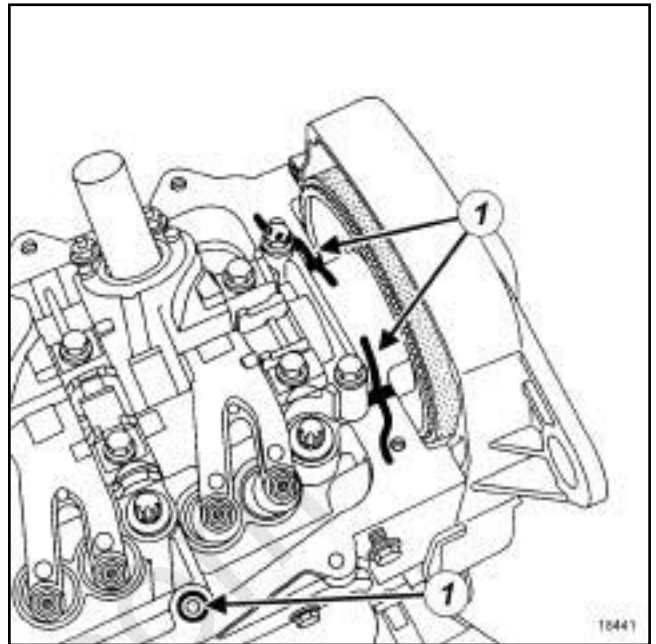
Do not allow this product to drip onto the paintwork.

Clean the cylinder head carefully to prevent foreign bodies from entering the oil supply and return galleries.

Failure to follow this advice could lead to the blocking of the various oil inlet galleries, which would quickly result in engine damage.

- ❑ Replace the rocker cover seal.

II - REFITTING OPERATION FOR PART CONCERNED



- ❑ Apply beads (1) of **MASTIXO** (see **Vehicle: Parts and consumables for the repair**) (MR 392, 04B, Consumables - Products) around the 4 rocker cover bolts (lower bolts, exhaust side) and on camshaft bearing **no.5**.

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.).

- ❑ Fit the new rocker cover seal, starting with bearing **No. 5**, then gradually insert the seal studs as the rocker cover fits into the groove.