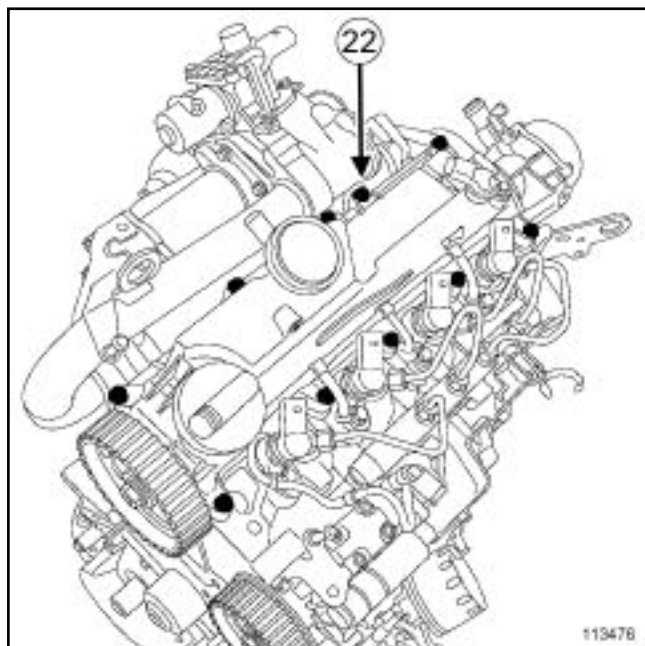


Timing - cylinder head: Removal

K9K, and 732 or 764

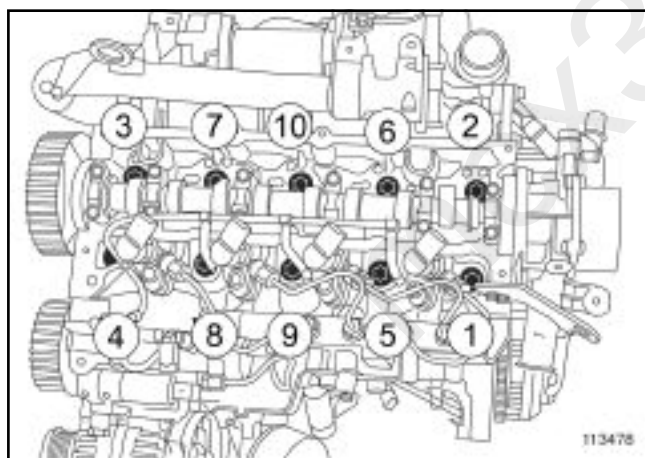
- the EGR valve retaining bracket (19) .



113476

Remove:

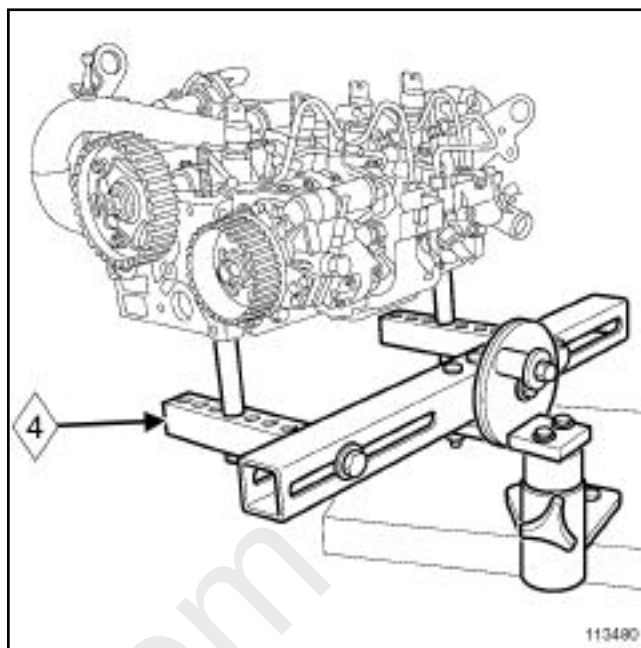
- the rocker cover mounting bolts (22) ,
- the rocker cover.



113478

Remove:

- the cylinder head bolts in the order specified using a female torx socket,
- the cylinder head.



113480

Fit the cylinder head onto the cylinder head support (4) (Mot. 1573) .

Remove the cylinder head gasket from the cylinder block.

K9K, and 260 or 270 or 272 or 700 or 702 or 704 or 706 or 710 or 712 or 722 or 724 or 728 or 729 or 750 or 752 or 760 or 762 or 790

Special tooling required	
Mot. 1566	Spanner for removing high pressure pipes.
Mot. 1746	Offset spanner for tightening high pressure pump pipes.
Mot. 1567	Long nose pliers for EGR duct clips.
Mot. 799-01	Timing gear wheel immobiliser.
Mot. 1502	Valve lifting tool for removing valves.

I - RECOMMENDATIONS FOR REPAIR

IMPORTANT

- It is essential to follow the cleanliness guidelines (see **10A, Engine and lower engine assembly, Engine: Precautions for repair, page 10A-4**),
- Wear latex safety gloves when using the cleaning agent,
- Wear safety goggles fitted with side shields.

WARNING

Do not blast with compressed air once the fuel circuit is open, otherwise impurities may enter the system. Use cleaning cloths only, if necessary.

II - PARTS AND CONSUMABLES FOR THE REPAIRS

Consumables

- Set of blanking plugs, part number **77 01 206 804**,
- Cleaning cloths, part number **77 11 211 707**,
- Brake cleaner, part number **77 11 226 128**,
- Injector cleaner, part number **77 11 224 188**.

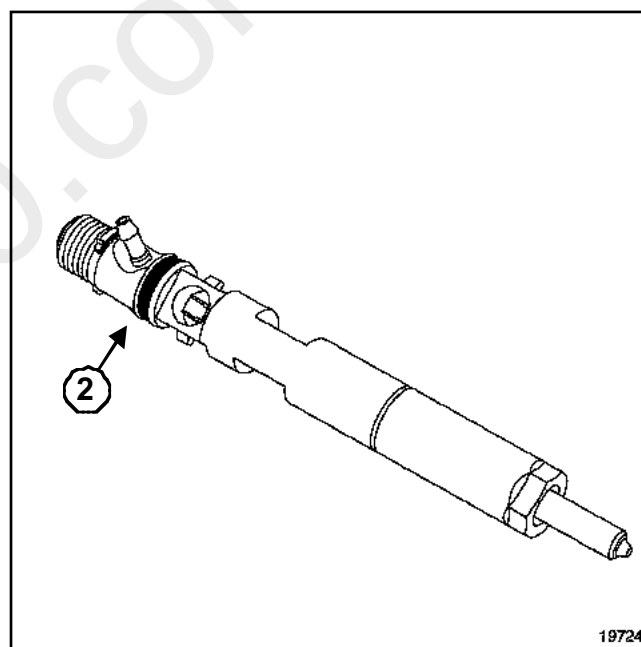
III - EQUIPMENT REQUIRED

- Protective goggles (with side shields),

- Latex protective gloves,
- Indelible marker,
- Plastic bags,
- Valve spring compressor,
- Tweezers,
- Spanner for the high pressure pipes,
- Crow foot spanner,
- Wrench with hinge for heater plugs,
- Male torx sockets.

IV - STRIPPING DOWN THE CYLINDER HEAD

Clean the high pressure pipe unions (see **10A, Engine and lower engine assembly, Engine: Precautions for repair, page 10A-4**).

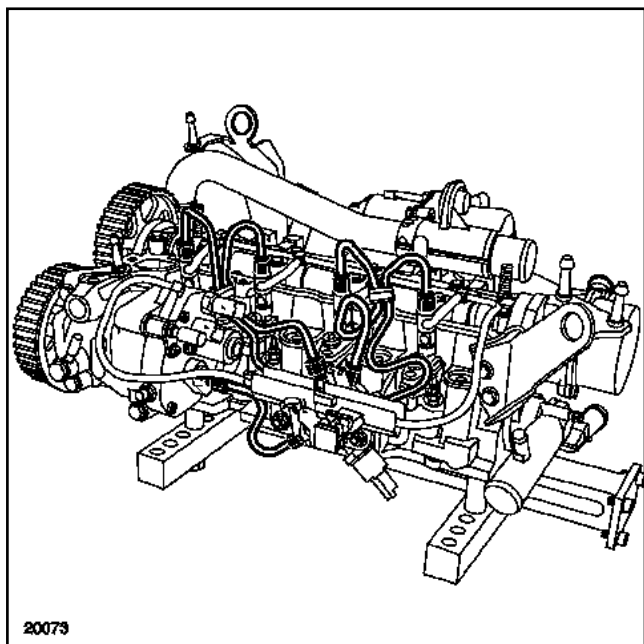


Note:

It is essential that the injector intermediate union (2) is secured when loosening the high pressure pipes.

Cylinder head: Dismantling

K9K, and 260 or 270 or 272 or 700 or 702 or 704 or 706 or 710 or 712 or 722 or 724 or 728 or 729 or 750 or 752 or 760 or 762 or 790

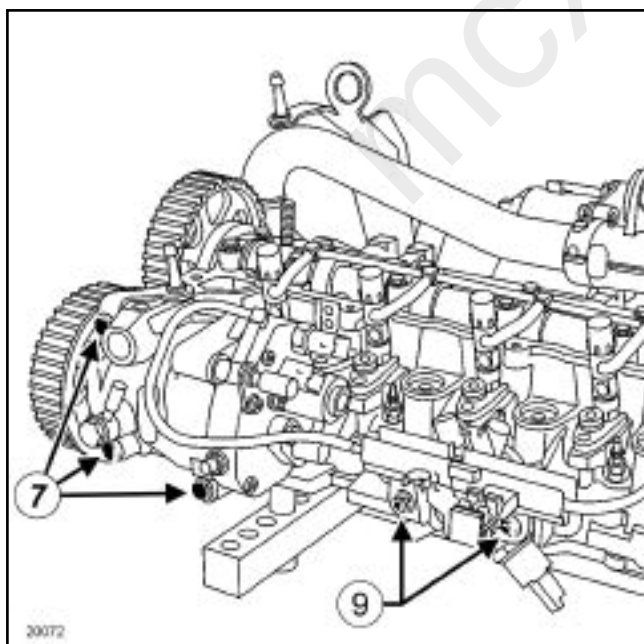


20073

Remove the high pressure pipes using the **(Mot. 1566)** and **(Mot. 1746)** or using a pipe wrench.

Fit blanking plugs:

- to the high pressure pump,
- to the rail,
- to the injectors.



20072

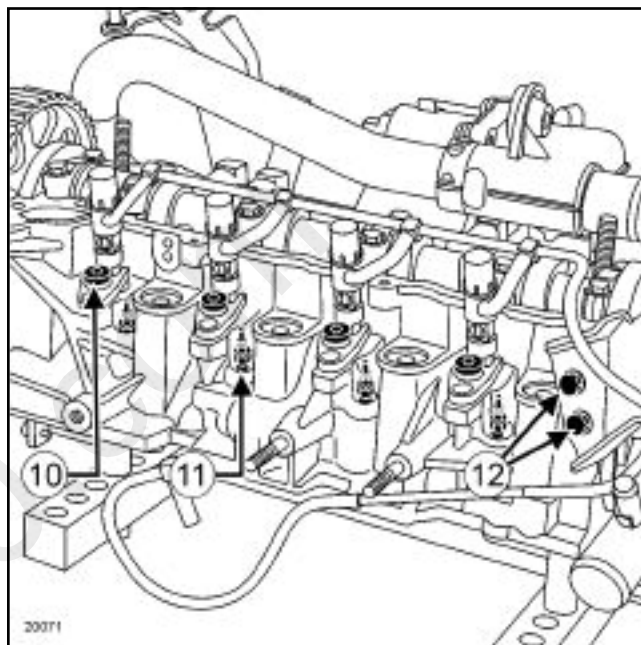
Remove:

- the high pressure pump mounting bolts **(7)** ,
- the high-pressure pump,

- the high pressure rail mounting nuts **(9)** ,
- the rail.

Note:

It is essential to match the injectors to their respective cylinders using an indelible marker.

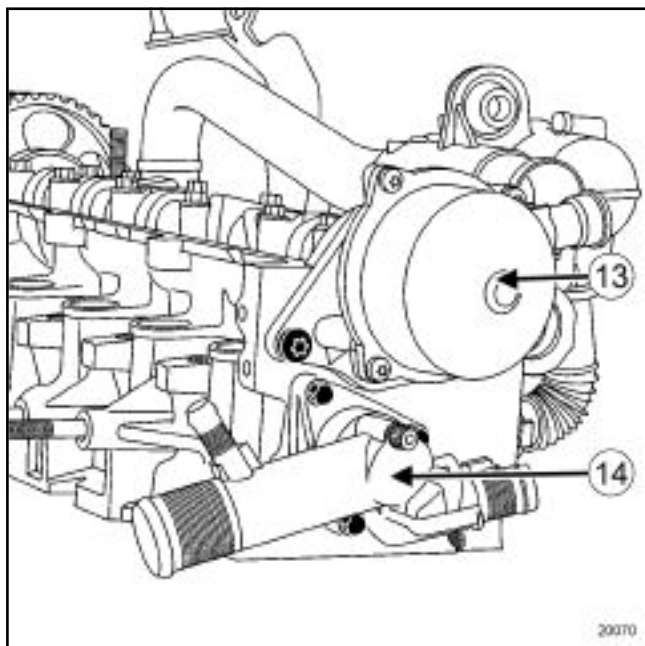


20071

Remove:

- the injector clamp bolts **(10)** ,
- the injectors,
- the heater plugs **(11)** using a hinged wrench,
- the engine lifting eye (flywheel end) bolts **(12)** ,
- the engine lifting eye (flywheel end),

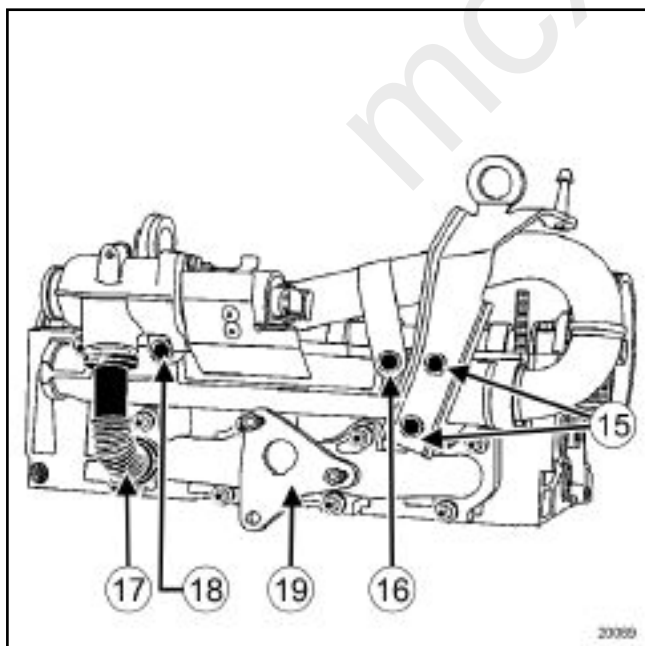
K9K, and 260 or 270 or 272 or 700 or 702 or 704 or 706 or 710 or 712 or 722 or 724 or 728 or 729 or 750 or 752 or 760 or 762 or 790



20070

Remove:

- the vacuum pump bolts (13) ,
- the vacuum pump,
- the cylinder head coolant outlet unit mounting bolts (14)
- the cylinder head coolant outlet housing

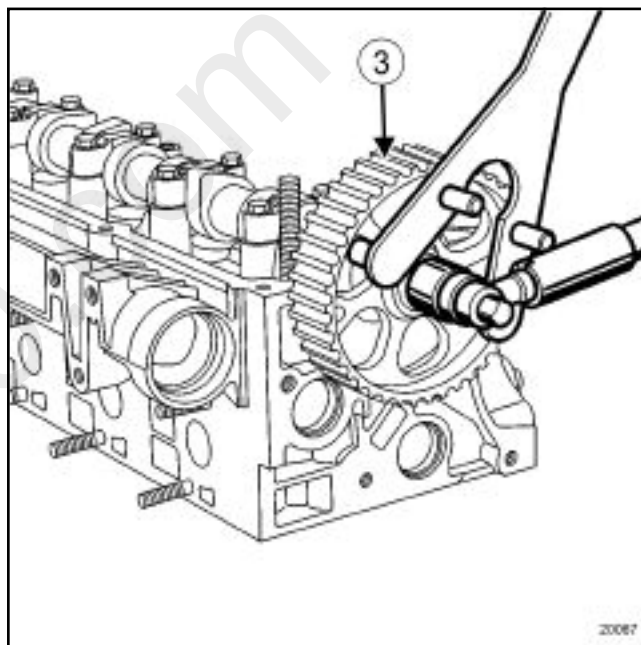


20069

Remove:

- the engine lifting eye (timing end) mounting bolts (15) ,

- the engine lifting eye (timing end),
- the exhaust gas recirculation pipe clips (17) using the (Mot. 1567) ,
- the exhaust gas recirculation pipe,
- the air inlet duct mounting bolt (16) ,
- the inlet duct,
- the exhaust gas recirculation valve mounting bolts (18) ,
- the exhaust gas recirculation valve,
- the exhaust manifold mounting nuts (19) ,
- the exhaust manifold.



20067

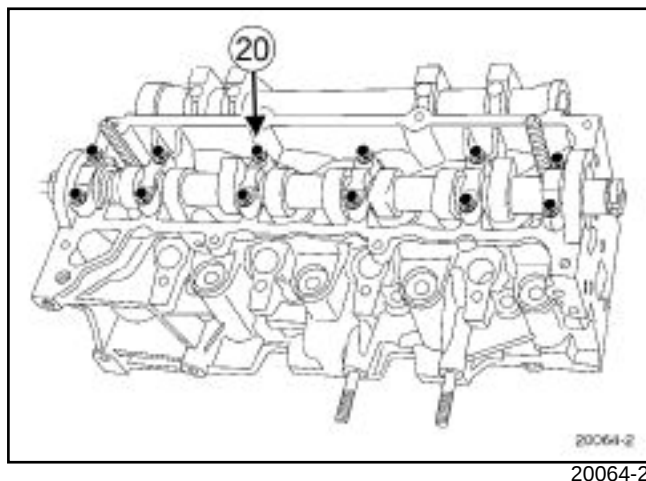
Lock the camshaft pulley using the (Mot. 799-01)

Remove:

- the camshaft pulley mounting nut,
- the camshaft pulley.

Cylinder head: Dismantling

K9K, and 260 or 270 or 272 or 700 or 702 or 704 or 706 or 710 or 712 or 722 or 724 or 728 or 729 or 750 or 752 or 760 or 762 or 790



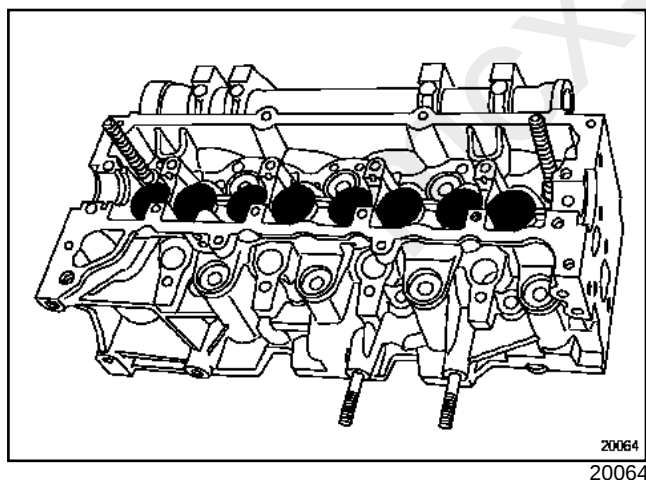
Remove:

- the camshaft bearing cap mounting bolts (20) ,
- the camshaft bearing caps.

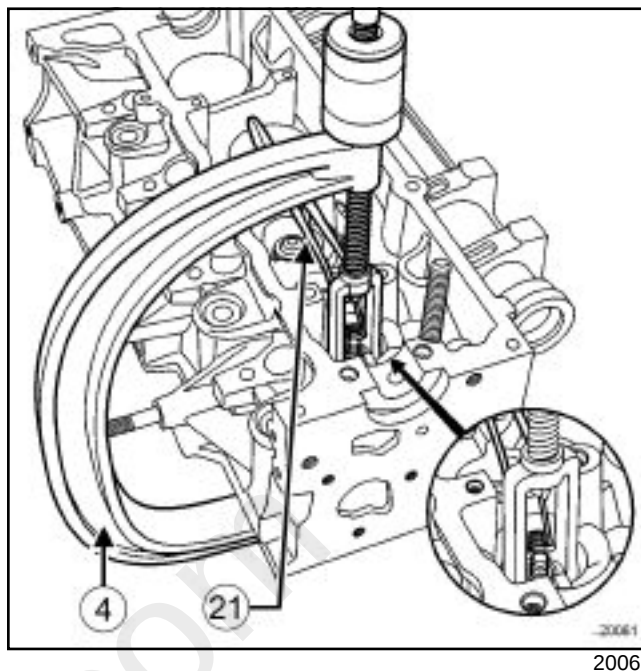
Remove the camshaft.

Note:

It is essential to match the valve tappets to their respective cylinders using an indelible marker.



Remove the valve tappets.



Compress the valve springs using the **(Mot. 1502)** (4) or using a valve spring compressor.

Remove:

- the collets using tweezers (21) ,
- the valve spring upper cups,
- the valve springs,
- the valves.

K9K, and 274 or 276 or 714 or 716 or 718 or 766 or 768

Special tooling required

Mot. 1566	Spanner for removing high pressure pipes.
Mot. 1746	Offset spanner for tightening high pressure pump pipes.
Mot. 799-01	Timing gear wheel immobiliser.
Mot. 1502	Valve lifting tool for removing valves.

I - RECOMMENDATIONS FOR REPAIR**IMPORTANT**

- It is essential to follow the cleanliness guidelines (see **10A, Engine and lower engine assembly, Engine: Precautions for repair, page 10A-4**),
- Wear latex gloves while using the cleaning product,
- Wear goggles with side guards,

WARNING

Do not blast with compressed air once the fuel circuit is open, otherwise impurities may enter the system. Use cleaning cloths only, if necessary.

II - PARTS AND CONSUMABLES FOR THE REPAIR**Consumables**

- Set of blanking plugs, part no. **77 01 206 804**,
- Cleaning cloths, part no. **77 11 211 707**,
- Brake cleaner, part no. **77 11 226 128**,
- Injector cleaner, part no. **77 11 224 188**,

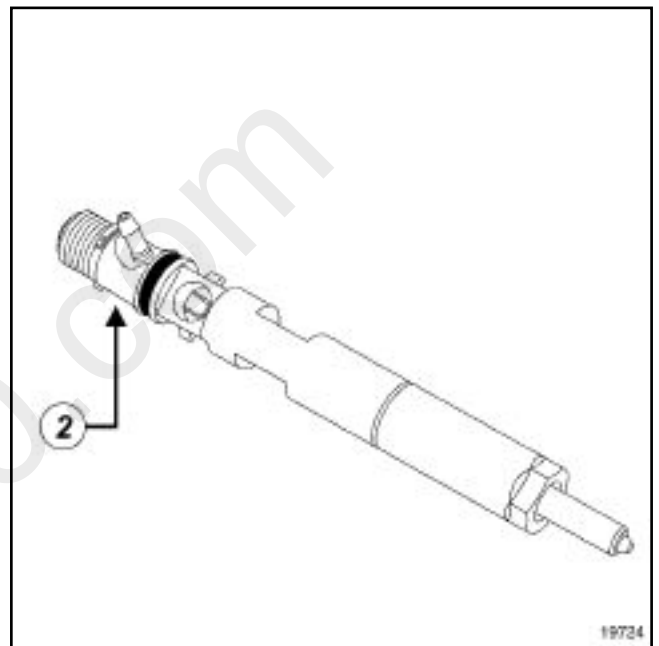
III - EQUIPMENT REQUIRED

- Protective goggles (with side guards),
- Latex protective gloves,
- Indelible pencil,
- Plastic bags,
- Valve wrench,

- Tweezers,
- Wrench for the high-pressure pipes,
- Crow foot wrench,
- Wrench with hinge for heater plugs,
- Male torx sockets.

IV - STRIPPING THE CYLINDER HEAD

Cleaning the high-pressure pipe unions (see **10A, Engine and lower engine assembly, Engine: Precautions for repair, page 10A-4**).

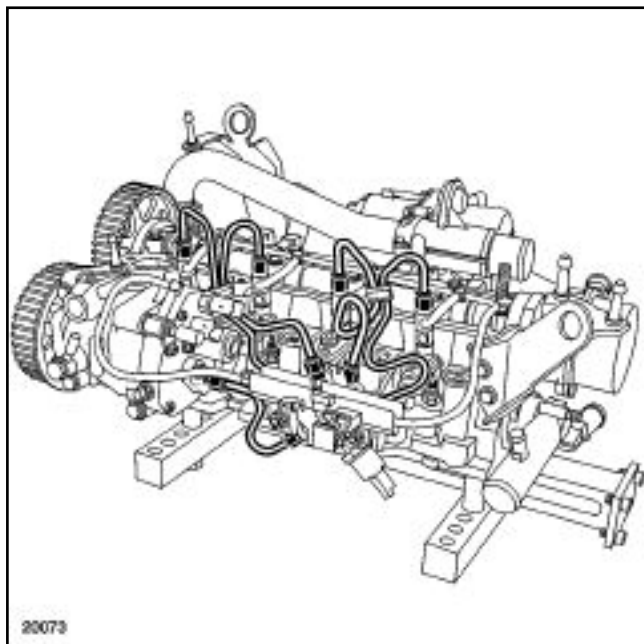


19724

Note:

When loosening the high-pressure pipes, it is essential to hold injector intermediate union (2).

K9K, and 274 or 276 or 714 or 716 or 718 or 766 or 768

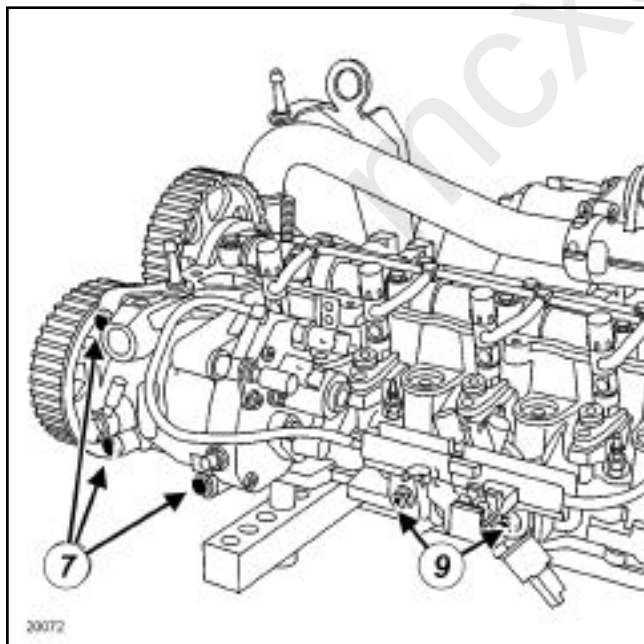


20073

Remove the high-pressure pipes using the **(Mot. 1566)** , **(Mot. 1746)** or with a pipe wrench.

Fit plugs to maintain cleanliness:

- on the high-pressure pump,
- on the rail,
- on the injectors.



20072

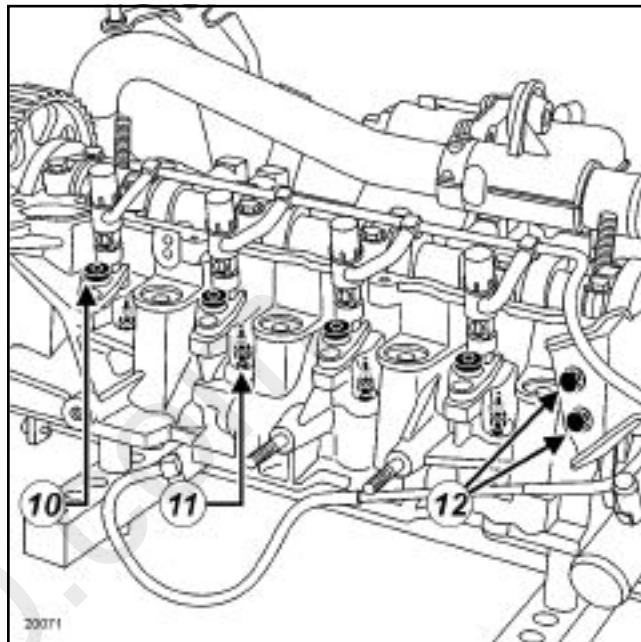
Remove:

- the high-pressure pump mounting bolts (7) ,
- the high-pressure pump,
- the high-pressure pump mounting nuts (9) ,

- the rail.

Note:

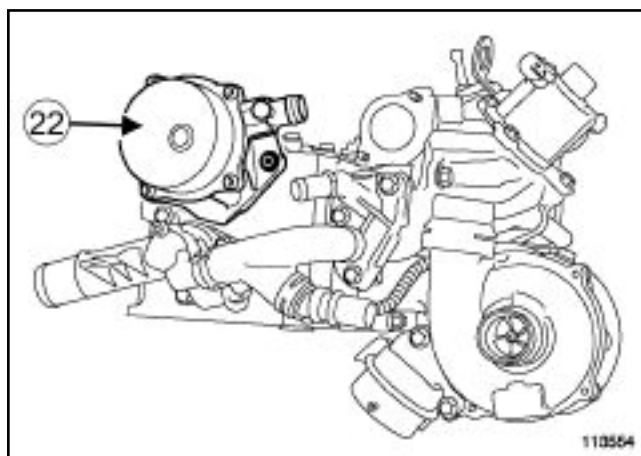
It is essential to mark the injectors relative to their cylinders using an indelible pencil.



20071

Remove:

- the injector bracket bolts (10) ,
- the injectors,
- the heater plugs (11) , using a wrench with hinge,
- the bolts (12) from the engine lifting eye (flywheel end),
- the engine lifting eye (flywheel end),



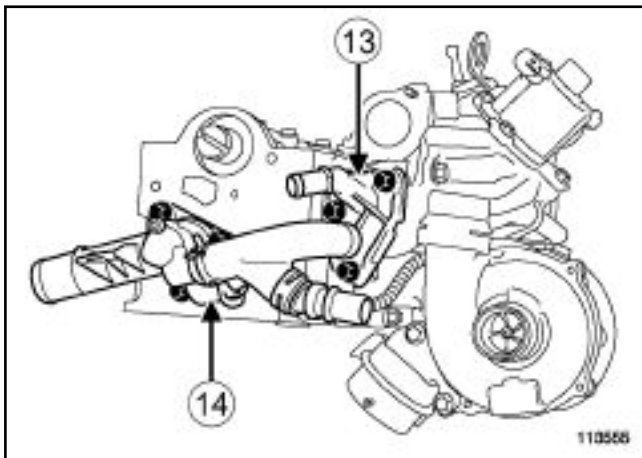
113554

Remove:

- the mounting bolts from the vacuum pump (22) ,

K9K, and 274 or 276 or 714 or 716 or 718 or 766 or 768

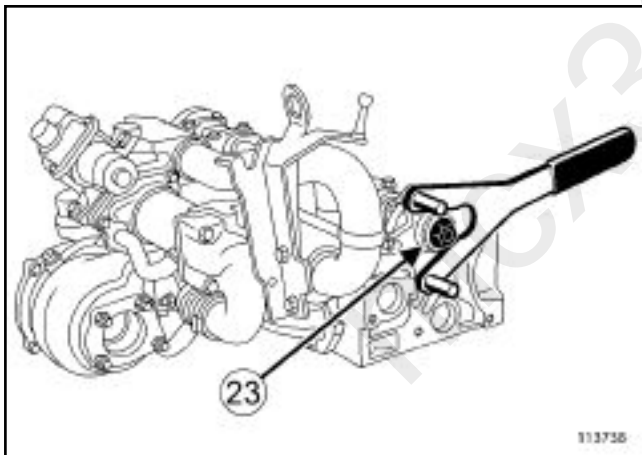
- the vacuum pump.



Remove:

- the EGR exchanger cover bolts (13) ,
- the EGR exchanger cover,
- the cylinder head coolant outlet unit bolts, (14)
- the cylinder head coolant outlet housing

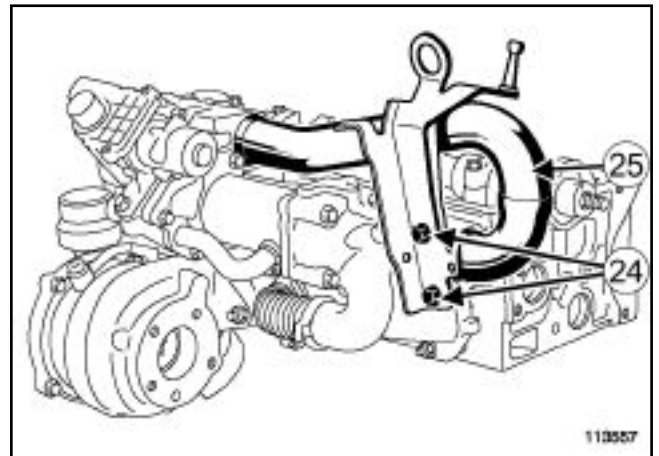
Remove the camshaft pulley.



Immobilise the camshaft pulley hub using the **(Mot. 799-01)** .

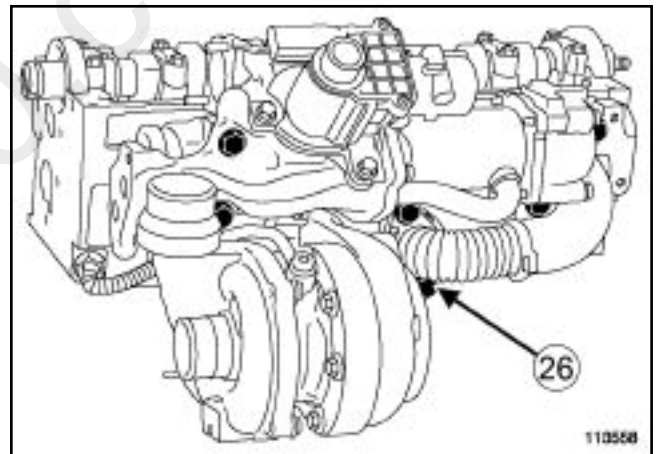
Remove:

- the camshaft pulley hub mounting nut (23) ,
- the camshaft pulley hub.



Remove:

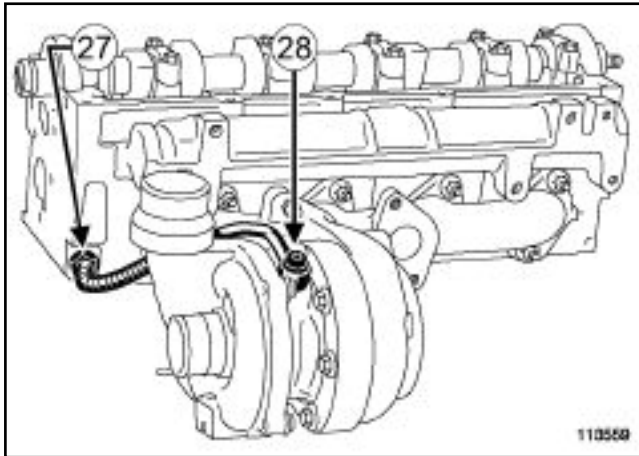
- the engine lifting eye mounting bolts (24) (timing end),
- the engine lifting eye (timing end),
- the inlet duct.



Remove:

- the six mounting bolts (26) from the EGR valve-exchanger assembly,
- the EGR valve-exchanger assembly.

K9K, and 274 or 276 or 714 or 716 or 718 or 766 or 768

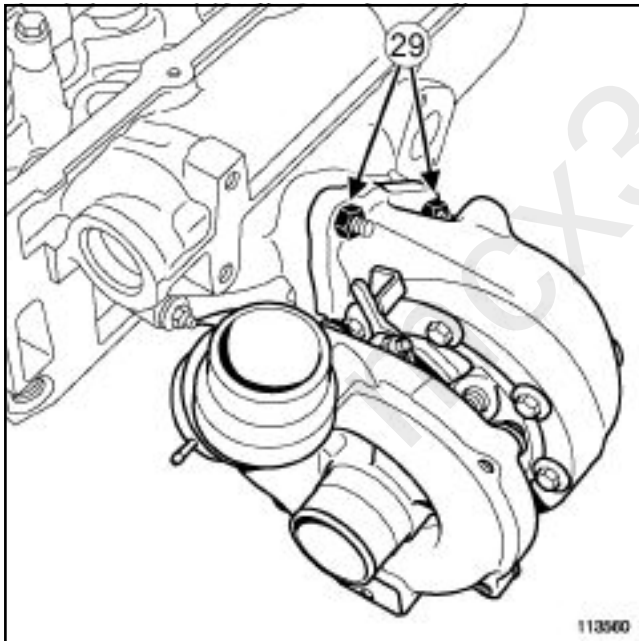


113559

Loosen the mounting nut (27) from the turbocharger oil supply pipe (cylinder head end).

Remove:

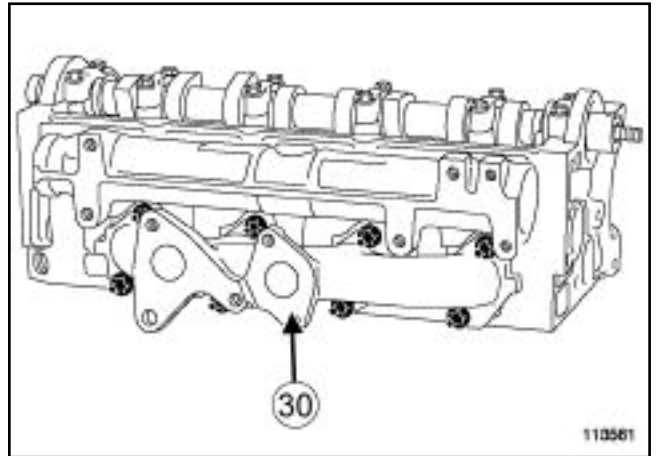
- the mounting bolt (28) from the turbocharger oil supply pipe (turbocharger end),
- the turbocharger oil supply pipe.



113560

Remove:

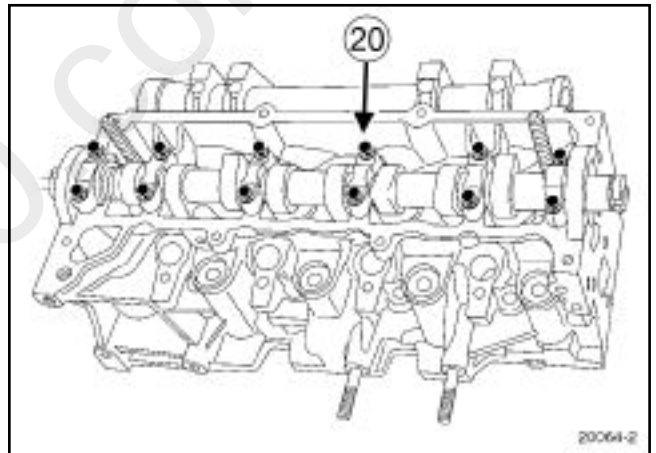
- the three turbocharger mounting nuts (29) ,
- the turbocharger.



113561

Remove:

- the mounting nuts from the exhaust manifold (30) ,
- the exhaust manifold.



20064-2

Remove:

- the mounting bolts (20) from the camshaft bearing caps,
- the camshaft bearing caps.

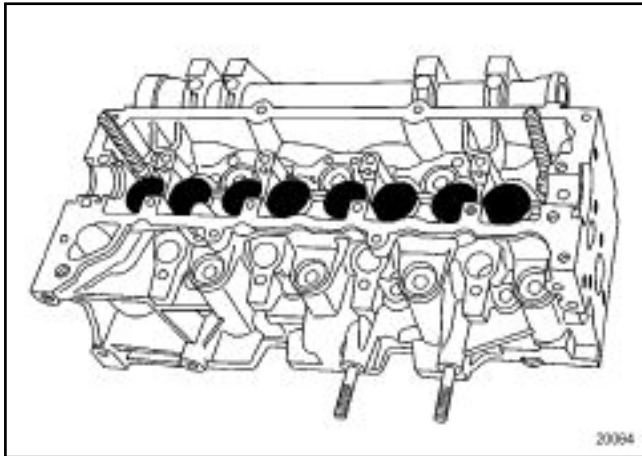
Remove the camshaft.

Note:

It is essential to mark the valve pushrods relative to their cylinders using an indelible pencil.

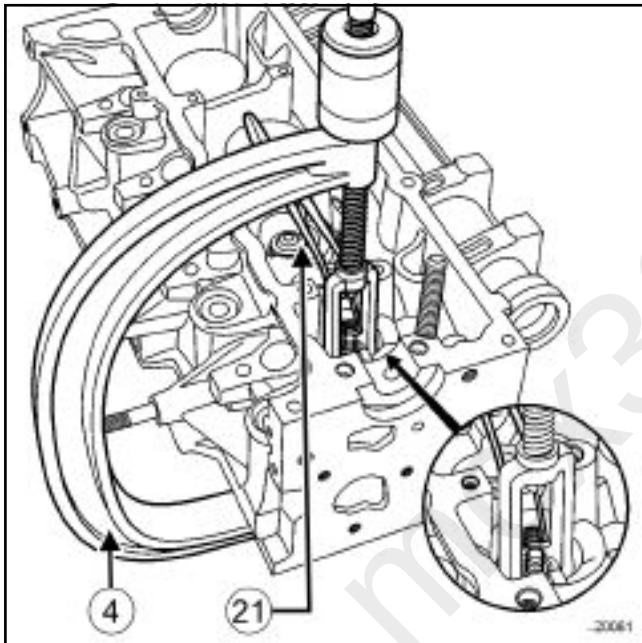
Cylinder head: Dismantling

K9K, and 274 or 276 or 714 or 716 or 718 or 766 or 768



20064

Remove the valve pushrods.



20061

Compress the valve springs using the (**Mot. 1502**) (**4**) or a valve wrench.

Remove:

- the cotters using tweezers (**21**) ,
- the valve spring upper cups,
- the valve springs,
- the valves.

Cylinder head: Dismantling

K9K, and 732 or 764

Special tooling required	
Mot. 1746	Offset spanner for tightening high pressure pump pipes.
Mot. 1566	Spanner for removing high pressure pipes.
Mot. 799-01	Timing gear wheel immobiliser.
Mot. 1502	Valve lifting tool for removing valves.

I - RECOMMENDATIONS FOR REPAIR

IMPORTANT

- It is essential to follow the cleanliness guidelines (see **10A, Engine and lower engine assembly, Engine: Precautions for repair, page 10A-4**),
- Wear latex gloves while using the cleaning product,
- Wear goggles with side guards,

WARNING

Do not blast with compressed air once the fuel circuit is open, otherwise impurities may enter the system. Use cleaning cloths only, if necessary.

II - PARTS AND CONSUMABLES FOR THE REPAIRS

Consumables

- Set of blanking plugs, part no. **77 01 476 857**,
- Cleaning cloths, part no. **77 11 211 707**,
- Brake cleaner, part no. **77 11 226 128**,
- Injector cleaner, part no. **77 11 224 188**,

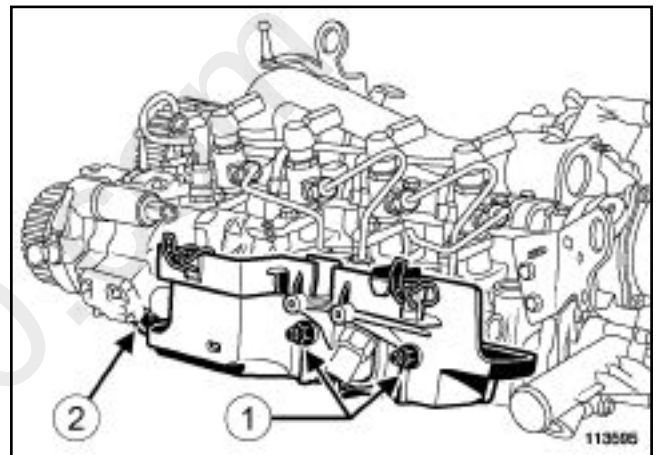
III - EQUIPMENT REQUIRED

- Protective goggles (with side guards),
- Latex protective gloves,
- Indelible pencil,
- Plastic bags,

- Valve wrench,
- Tweezers,
- Flat-blade and thin screwdriver,
- Wrench for the high-pressure pipes,
- Crow foot wrench,
- Wrench with hinge for heater plugs,
- Male torx sockets.

IV - STRIPPING THE CYLINDER HEAD

Cleaning the high-pressure pipe unions (see **10A, Engine and lower engine assembly, Engine: Precautions for repair, page 10A-4**).



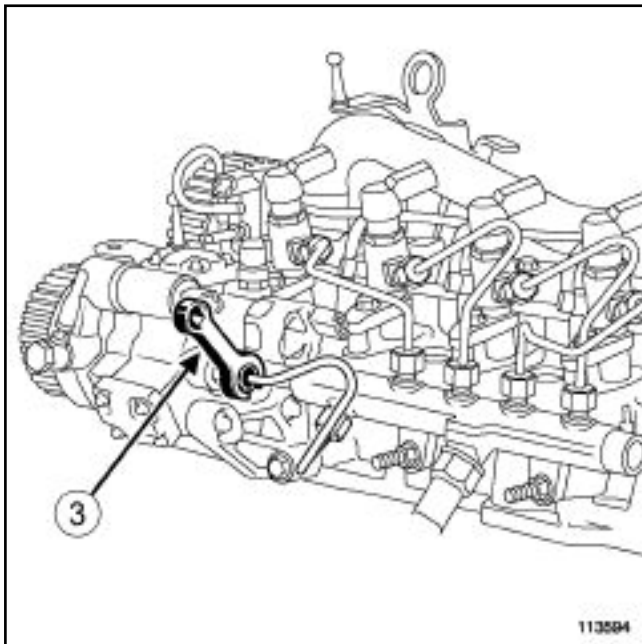
113595

Remove:

- the mounting bolt (2) and nuts (1) from the high-pressure protector,
- the high-pressure protector.

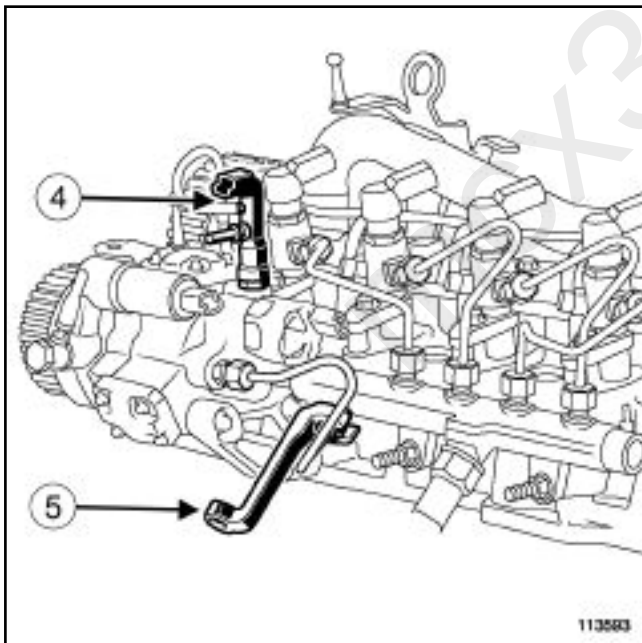
Clean the high-pressure pipe unions (see **10A, Engine and lower engine assembly, Engine: Precautions for repair, page 10A-4**).

K9K, and 732 or 764



113594

Loosen the high-pressure pipe nut (high-pressure pump side) using the **(Mot. 1746) (3)** or a crow foot wrench.



113593

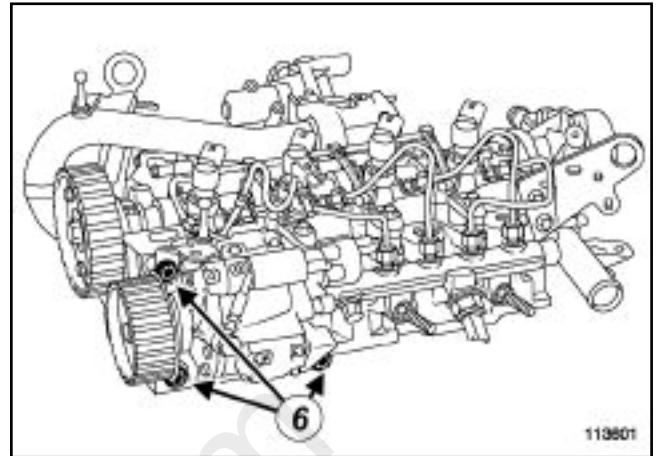
Remove the high-pressure pump fuel return union **(4)**.

Loosen the high-pressure pipe nut (high-pressure pump side) using the **(Mot. 1566) (5)** or a pipe wrench.

Remove the high-pressure pipe between the high-pressure pump and the rail.

Fit plugs to maintain cleanliness:

- on the high-pressure pump,
- on the rail.



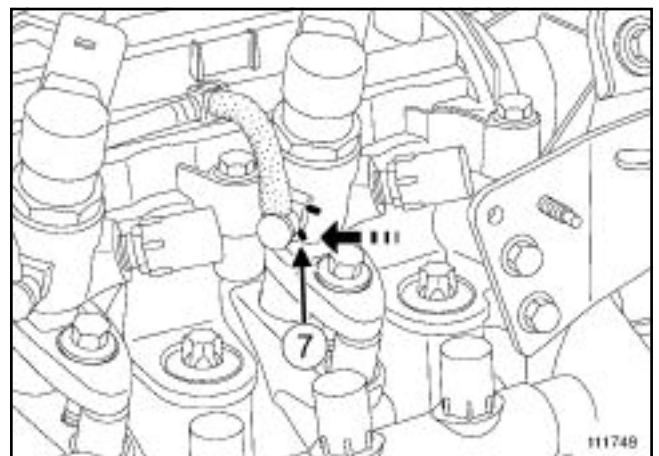
113601

Remove:

- the high-pressure pump mounting bolts **(6)**,
- the high-pressure pump.

Note:

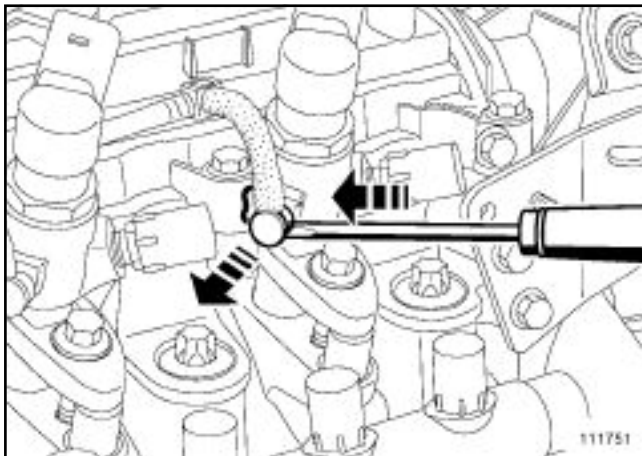
Take care not to completely remove the clip from its proper position as it may become deformed.



111749

Push in the direction of the arrow and at **(7)** on the lower section of the retaining clip of the fuel return pipe on the injector using a thin, flat-blade screwdriver.

K9K, and 732 or 764



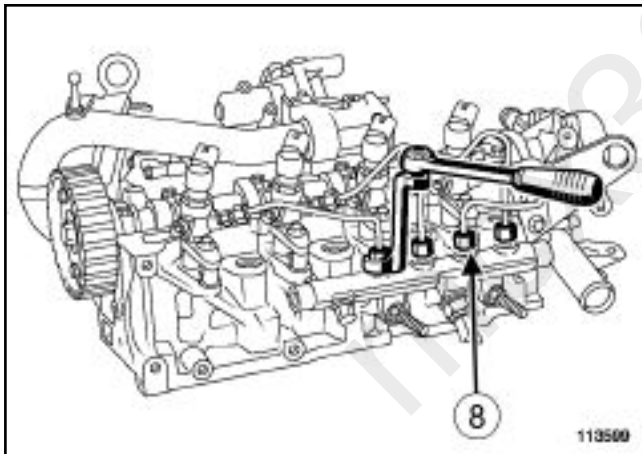
111751

Pushing the lower bracket of the retaining clip downwards, pull out the injector fuel return pipe union.

Remove the fuel return pipe from the injector.

Repeat the operation on the other fuel return pipe unions.

Fit the correct blanking plugs.

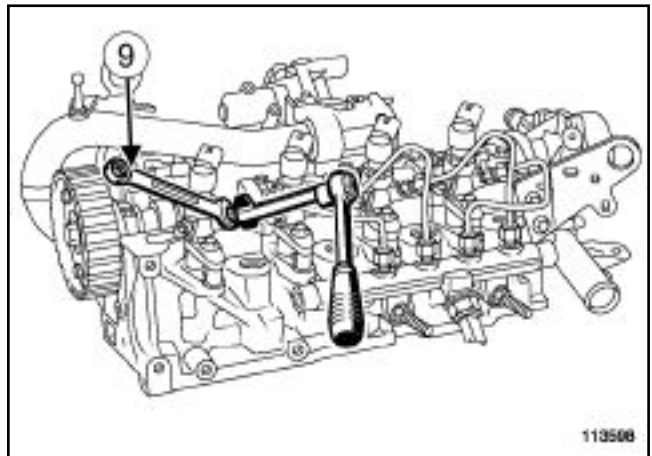


113599

Loosen the high-pressure pipe nuts on the rail side using the **(Mot. 1566)** or a pipe wrench.

Note:

When loosening the high-pressure pipe nuts, it is essential to hold the injector intermediate union with a wrench (9).



113598

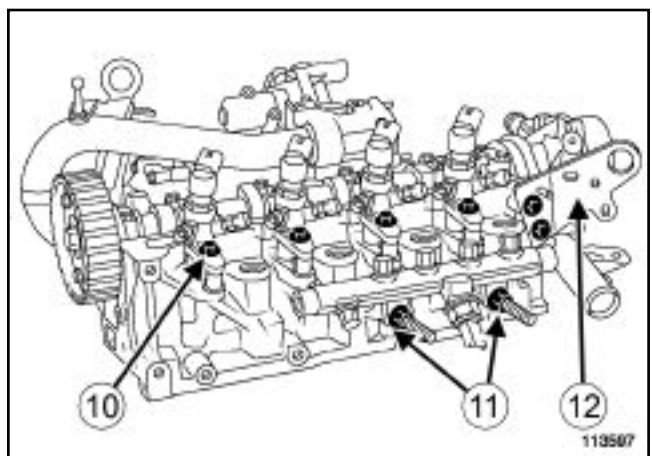
113598

Loosen the high-pressure pipe nuts on the injector side using the **(Mot. 1566)** or a pipe wrench, while holding the intermediate union with an open-jawed spanner.

Fit the correct blanking plugs.

Note:

It is essential to mark the injectors relative to their cylinders using an indelible pencil.



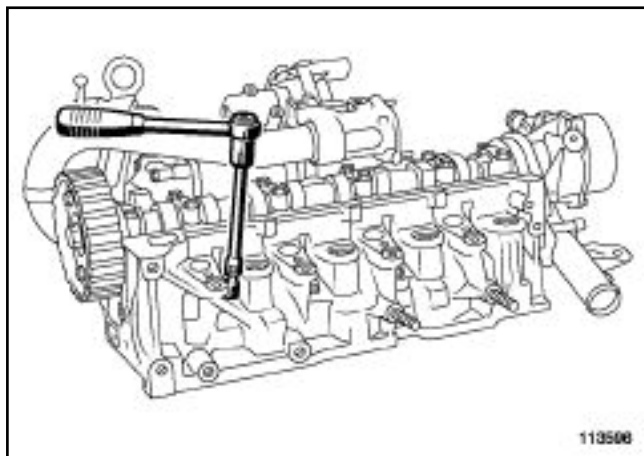
113597

113597

Remove:

- the mounting bolts from the engine lifting eye (12) (timing end),
- the engine lifting eye,
- the high-pressure pump mounting nuts (11) ,
- the high-pressure rail,
- the injector bracket bolts (10) ,
- the injectors.

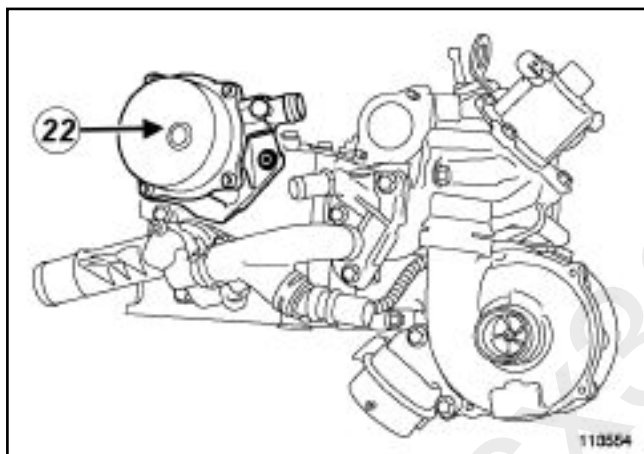
K9K, and 732 or 764



113596

113596

Remove the heater plugs using a wrench with hinge,

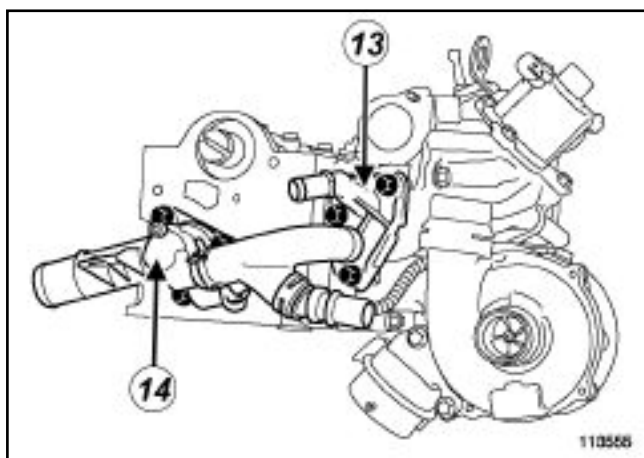


113554

113554

Remove:

- the mounting bolts from the vacuum pump (22) ,
- the vacuum pump.



113555

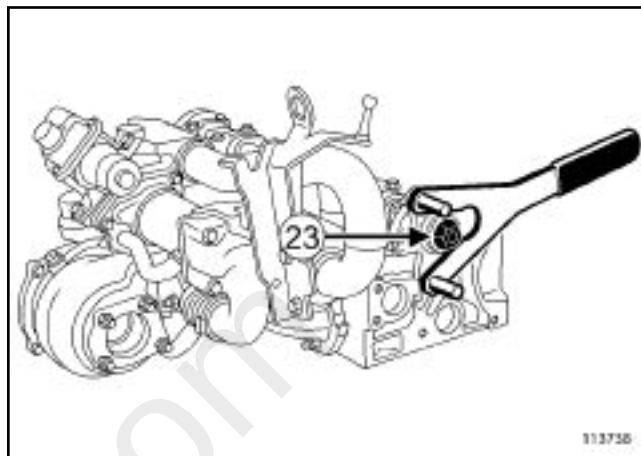
113555

Remove:

- the EGR exchanger cover bolts (13) ,

- the EGR exchanger cover,
- the cylinder head coolant outlet unit bolts (14) ,
- the cylinder head coolant outlet unit

Remove the camshaft pulley.



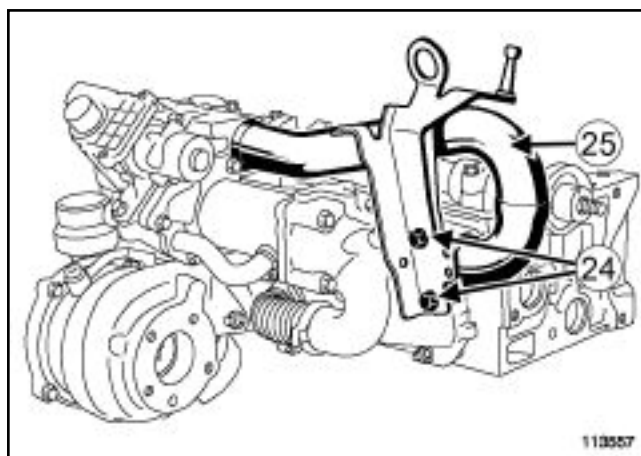
113738

113738

Immobilise the camshaft pulley hub using the **(Mot. 799-01)** .

Remove:

- the mounting nut (23) from the camshaft pulley hub,
- the camshaft pulley hub.



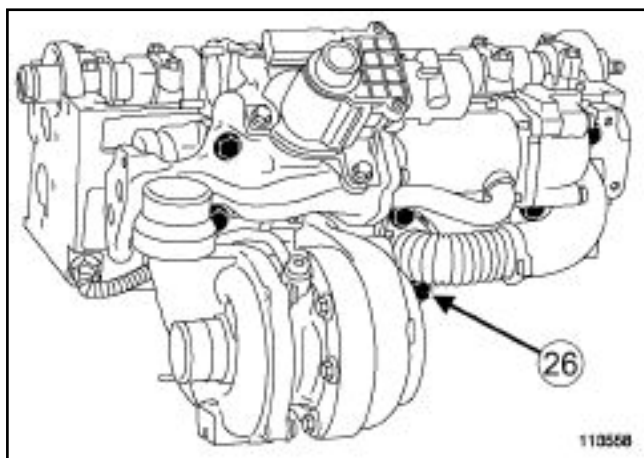
113557

113557

Remove:

- the mounting bolts (24) from the engine lifting eye (timing end),
- the engine lifting eye (timing end),
- the inlet duct.

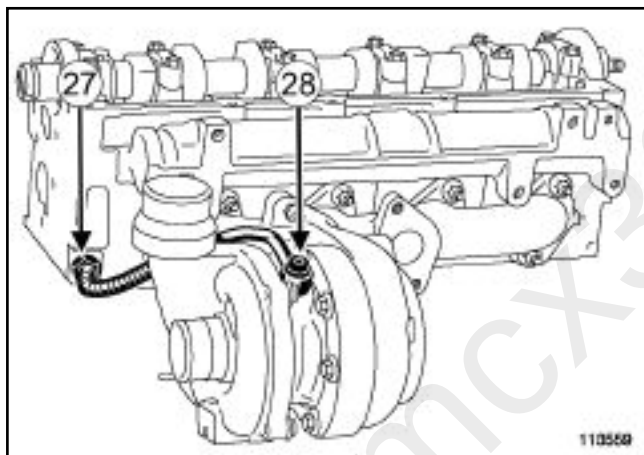
K9K, and 732 or 764



113558

Remove:

- the six mounting bolts (26) from the EGR valve-exchanger assembly,
- the EGR valve-exchanger assembly.

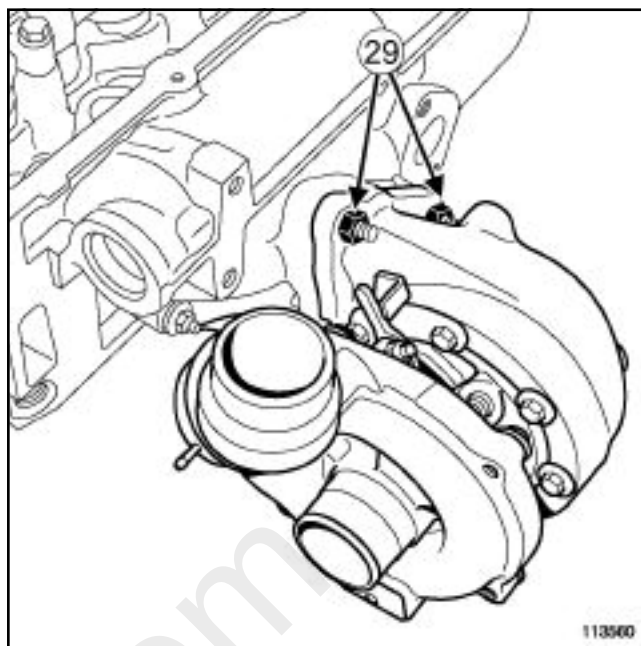


113559

Loosen the mounting nut (27) from the turbocharger oil supply pipe (cylinder head end).

Remove:

- the mounting nut (28) from the turbocharger oil supply pipe (turbocharger end),
- the turbocharger oil supply pipe.

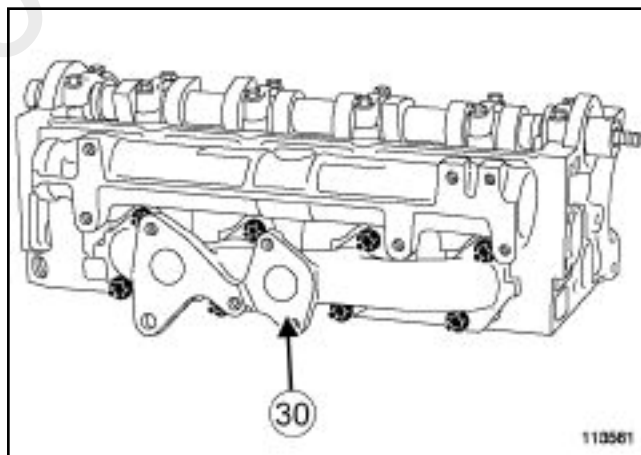


113560

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Remove:

- the three turbocharger mounting nuts (29) ,
- the turbocharger.



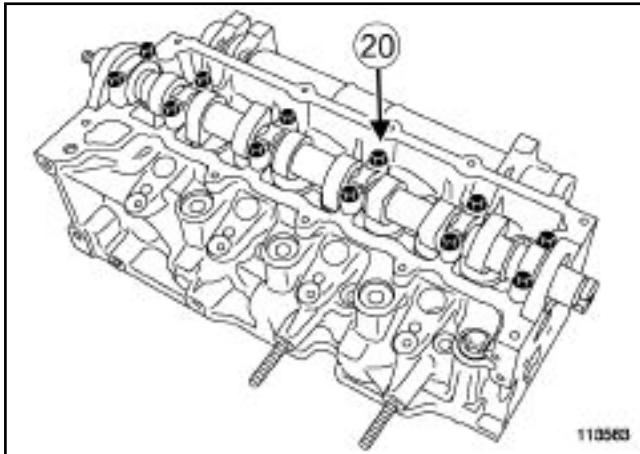
113561

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Remove:

- the mounting nuts from the exhaust manifold (30) ,
- the exhaust manifold.

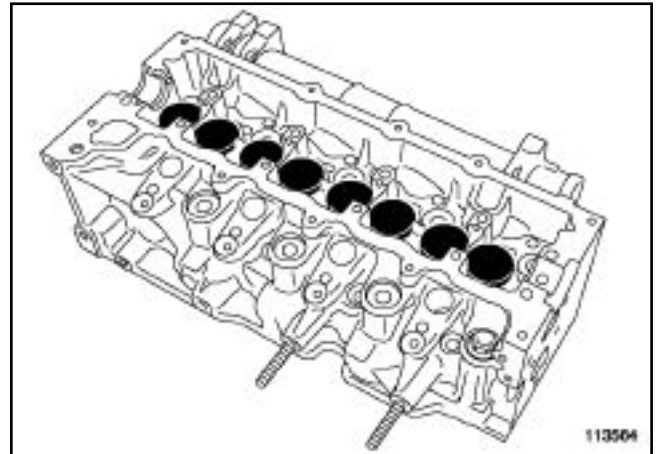
K9K, and 732 or 764



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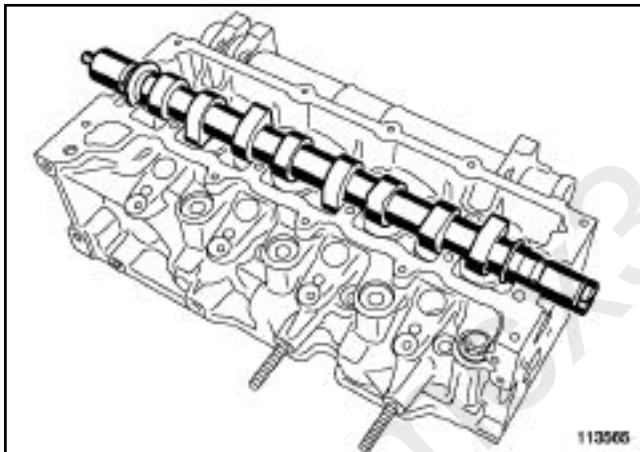
Remove:

- the mounting bolts (20) from the camshaft bearing caps,
- the camshaft bearing caps.



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Remove the valve pushrods.



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Remove the camshaft.

Note:

It is essential to mark the valve pushrods relative to their cylinders using an indelible pencil.