

Exhaust gas cooler: Removal - Refitting

K9K, and 764 or 766 or 768 or 772

2 - Second fitting of the exhaust gas cooler recirculation assembly

- ☐ Position the cooler mounting bolts on its support, avoiding contact so that the cooler can move.
- ☐ Refit the exhaust gas recirculation assembly equipped with the old exhaust gas recirculation rigid pipe on the cylinder head.
- ☐ Tighten the mounting bolts of the exhaust gas recirculation assembly on the cylinder head until contact is made.
- ☐ Adjust the exhaust gas cooler in relation to its support.
- ☐ Tighten the bolts mounting the exhaust gas cooler on its support until contact is made, in order to immobilise it.
- ☐ Remove the exhaust gas recirculation assembly.
- ☐ Remove the old exhaust gas recirculation rigid pipe and dispose of it in a waste bin.
- ☐ On the workbench, torque tighten the **mounting bolts of the exhaust gas cooler on the support at the flywheel end (12 N.m)**.

WARNING

Ensure that the seal between the cooler and its support is correctly positioned to avoid any coolant leaks.

III - FINAL OPERATION

- ☐ Refit:
 - the exhaust gas recirculation assembly (see **Exhaust gas recirculation assembly: Removal - Refitting**) ,
 - the exhaust gas recirculation rigid pipe (see **14A, Antipollution, Exhaust gas recirculation rigid pipe: Removal - Refitting**, page 14A-20) .

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- ☐ Refit the catalytic converter (see **19B, Exhaust, Catalytic converter: Removal - Refitting**, page 19B-27) .

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- ☐ Refit the catalytic pre-converter (see **19B, Exhaust, Catalytic pre-converter: Removal - Refitting**, page 19B-21) .
- ☐ Torque tighten:
 - the **coolant circulation cover mounting bolts (10 N.m)**,
 - the **mounting bolts of the lifting bracket at the timing end (10 N.m)**.

WARNING

Make sure that the exhaust gas cooler coolant inlet and outlet hoses are correctly fitted so that they do not bend.

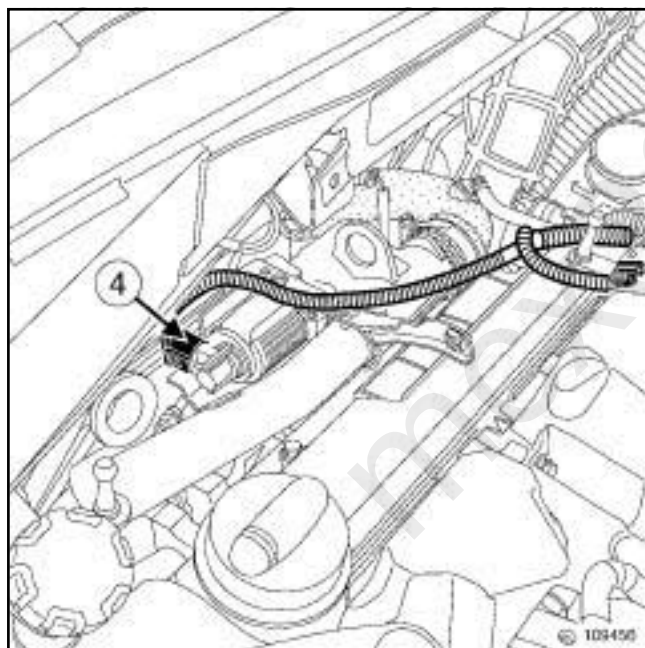
- ☐ Proceed in the reverse order to removal.
- ☐ Loosen the mounting nut of the air pipe at the intercooler inlet on the alternator.
- ☐ Fit the air duct between the turbocharger and the intercooler air inlet pipe.
- ☐ Snap the air duct to the turbocharger and to the air pipe at the intercooler inlet.
- ☐ Tighten the bolt of the air duct on the rocker cover.
- ☐ Torque tighten the **mounting nut of the pipe at the intercooler inlet on the alternator (8 N.m)**.
- ☐ Connect the battery (see **Battery: Removal - Refitting**) (MR 392, 80A, Battery).
- ☐ Bleed the cooling circuit (see **Cooling system: Bleed**) .
- ☐ Clear any faults stored by the computer using the **Diagnostic tool**.

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Tightening torques 	
exhaust gas recirculation unit mounting bolts	21 N.m
inlet air metal tube mounting bolts	21 N.m
lifting eye (timing end)	21 N.m
exhaust gas recirculation solenoid valve heat shield mounting bolts	12 N.m

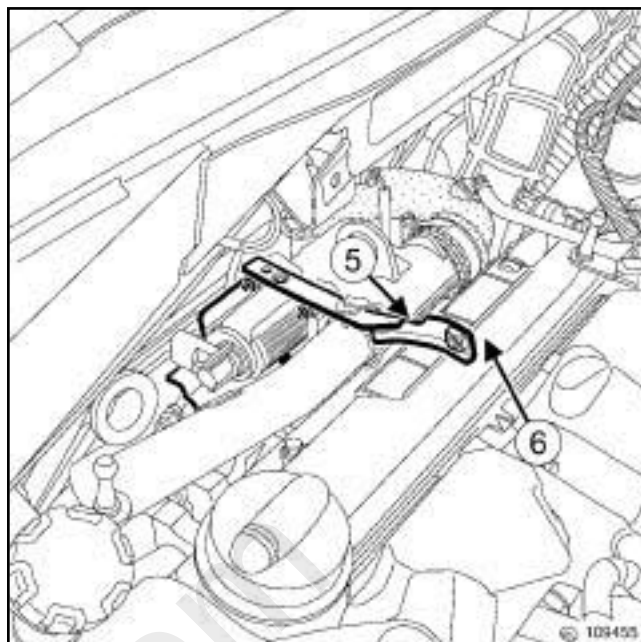
REMOVAL

- ☐ Position the vehicle on a two-post lift.
- ☐ Remove the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) .



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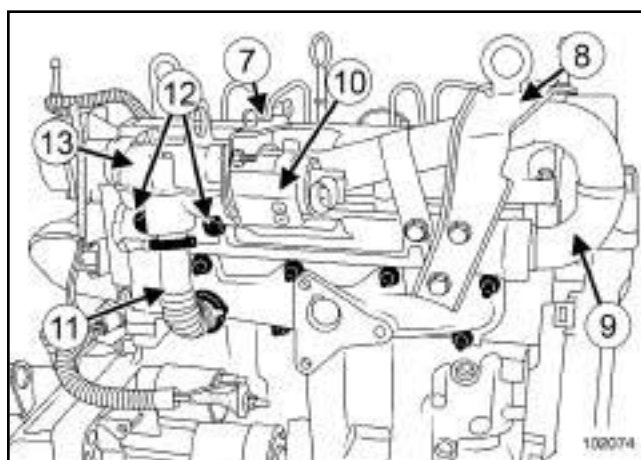
- ☐ Disconnect the exhaust gas recirculation solenoid valve electrical wiring harness (4) .
- ☐ Detach the electric wiring harness.



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- ☐ Disconnect:

- the rubber pipe (5) from the air duct turbocharging pressure control valve,
- the turbocharging air duct (6) from the exhaust gas recirculation unit.



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- ☐ Remove:

- the bracket (7) ,
- the engine lifting eye (8) ,
- the air inlet metal tube (9) ,
- the exhaust gas recirculation solenoid valve heat shield (10) ,
- the exhaust gas recirculation pipe (11) ,
- the EGR unit mounting bolts (12) ,
- the exhaust gas recirculation unit (13) .

Exhaust gas recirculation unit: Removal - Refitting

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REFITTING

- ☐ Replace the exhaust gas recirculation tube complete with new clips.
- ☐ Fit the new clips
- ☐ Tighten the new clips using tool (**Mot 1567**).
- ☐ Replace the O-rings on the metal air inlet tube.
- ☐ Torque tighten:
 - the **exhaust gas recirculation unit mounting bolts (21 N.m)**,
 - the **inlet air metal tube mounting bolts (21 N.m)**,
 - the **lifting eye (timing end) (21 N.m)**,
 - the **exhaust gas recirculation solenoid valve heat shield mounting bolts (12 N.m)**.
- ☐ Proceed in the reverse order to removal.
- ☐ Connect the battery, starting with the positive terminal.

WARNING

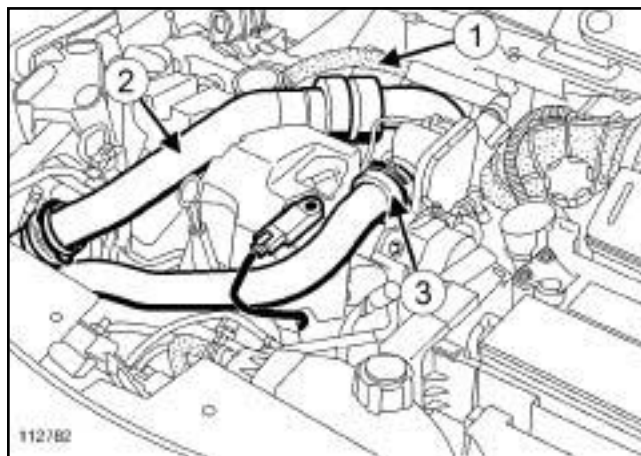
Carry out the necessary programming (see **Battery: Removal - Refitting**).

- ☐ Refit the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) .

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Special tooling required**Ms. 583** Pipe clamps.**Tightening torques** EGR unit assembly mounting bolts **25 N.m**exhaust gas inlet pipe bolts **35 N.m**mounting bolts of the lifting bracket on the timing end **10 N.m**coolant circulation cover mounting bolts **10 N.m**nut mounting the inter-cooler air inlet pipe on the alternator **8 N.m****REMOVAL****I - REMOVAL PREPARATION OPERATION**

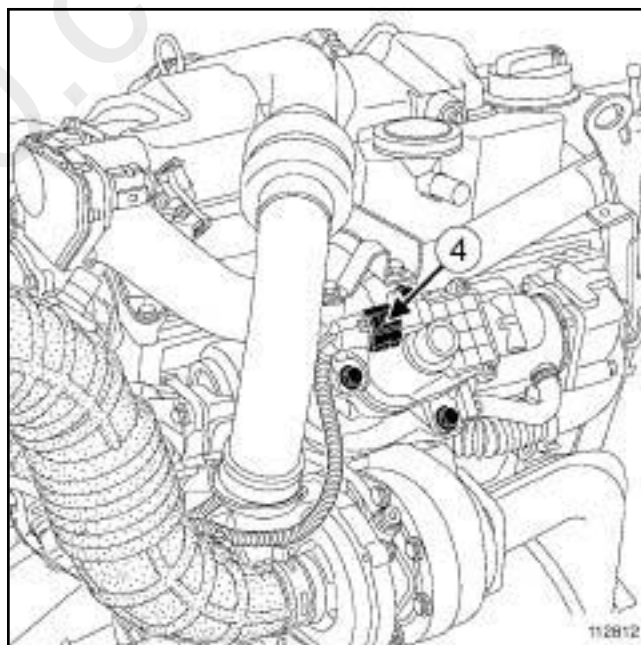
- ☐ Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (MR 392, 02A, Lifting equipment).
- ☐ Remove the engine undertray.
- ☐ Disconnect the battery (see **Battery: Removal - Refitting**) (MR 392, 80A, Battery).
- ☐ Remove:
 - the scuttle panel grille (see **Scuttle panel grille: Removal - Refitting**) (MR 393, 56A, Exterior equipment),
 - the water chamber (see **19A, Cooling, Water chamber: Removal - Refitting**, page 19A-63) (MR 392, 19A, Cooling).



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☐ Remove:

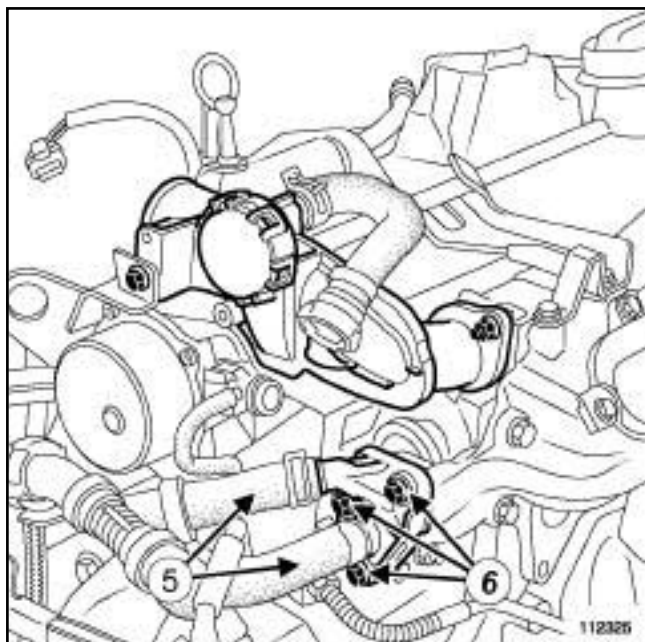
- the oil vapour rebreathing pipe (1) ,
- the air inlet duct (2) between the turbocharger and the intercooler,
- the air inlet duct clip (3) from the damper valve.



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- ☐ Disconnect the connector (4) from the exhaust gas recirculation solenoid valve.
- ☐ Remove the damper valve (see **12A, Fuel mixture, Damper valve: Removal - Refitting**, page 12A-31) (MR 392, 12A, Fuel mixture).

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- Position the tools (**Ms. 583**) or the hose clamps on the coolant inlet and outlet hoses (5) of the exhaust gas cooler.

- Remove:

- the coolant circulation cover mounting bolts (6) ,
- the coolant circulation cover,
- the seals of the coolant circulation cover.

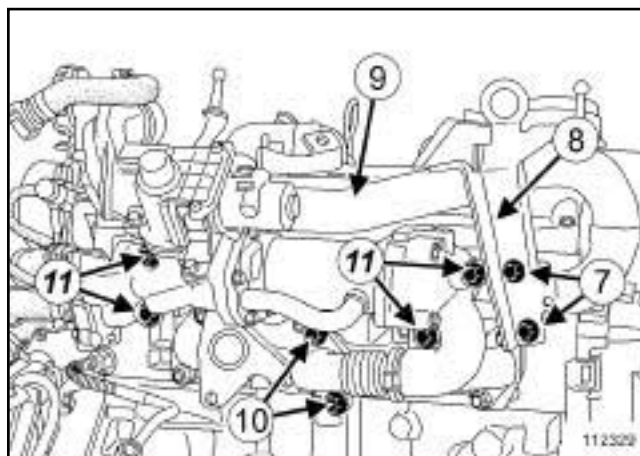
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Note:

Prepare for the outflow of coolant.

- Remove the catalytic converter (see **19B, Exhaust, Catalytic converter: Removal - Refitting**, page **19B-27**) (MR 392, 19B, Exhaust).

II - OPERATION FOR REMOVAL OF PART CONCERNED



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- Remove:

- the lifting bracket mounting bolts (7) from the timing end,
- the lifting bracket (8) on the timing end,
- the air inlet metal tube (9) ,
- the mounting bolts (10) from the exhaust gas inlet pipe,
- the mounting bolts (11) from the exhaust gas recirculation unit assembly,
- the exhaust gas recirculation unit assembly.

REFITTING

I - REFITTING PREPARATION OPERATION

- All the supporting surfaces on each removed part must be carefully cleaned.

WARNING

Take care not to damage the bearing faces to prevent any risk of coolant leaks.

Always replace:

- the air inlet metal tube and its O-rings,
- the seals of the coolant circulation cover,
- the seal between the cut-off valve downstream duct and the exhaust gas cooler mounting,
- the seal between the catalytic converter and the turbocharger.