

DIESEL INJECTION

Diesel return pipe: Removal - Refitting

13B

K9K, and 764 or 772

- ❑ Clip the injector diesel return unions onto the injectors, starting with injector number 4.

Note:

Check that the diesel return unions are clipped on properly.

- ❑ Clip the fuel return pipe onto the rocker cover.

III - FINAL OPERATION.

- ❑ Connect the diesel temperature sensor connector.
- ❑ Refit:
 - the rail protector cover,
 - the intercooler air outlet pipe,
 - the air pipe at the intercooler inlet,
 - the turbocharger outlet air pipe.
- ❑ Torque tighten the **intercooler inlet air pipe nut on the alternator (8 Nm.)**
- ❑ Refit the engine protector.
- ❑ Reprime the fuel circuit using the priming bulb.
- ❑ Connect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- ❑ Check the high pressure circuit (see **13B, Diesel injection, High pressure pipe: Check**, page **13B-99**) (13B, Injection).

High pressure pipe between pump and rail: Removal - Refitting

K9K, and 764 or 772

Special tooling required

Mot. 1746	Offset wrench for tightening High Pressure pump pipes.
Mot. 1566	Tool for removing high pressure pipes.

Equipment required

Diagnostic tool

Tightening torques

high pressure pipe nuts	24 Nm
intercooler inlet air pipe mounting nut on the alternator	8 Nm

WARNING

Before starting work on the vehicle, obtain:

- a new blanking plug kit (**part no. 77 01 476 857**),
- cleaning wipes (**part no. 77 11 211 707**),
- cleaning product (**part no. 77 11 224 188**).

WARNING

Parts always to be replaced:

- all the high pressure pipes which have been removed.

REMOVAL

I - REMOVAL PREPARATION OPERATION

- ☐ Position the vehicle on a lift (see **Vehicle: Towing and lifting**) (MR 392, 02A, Lifting equipment).

- ☐ Switch off the ignition and wait **30 seconds** before starting work on the injection system.

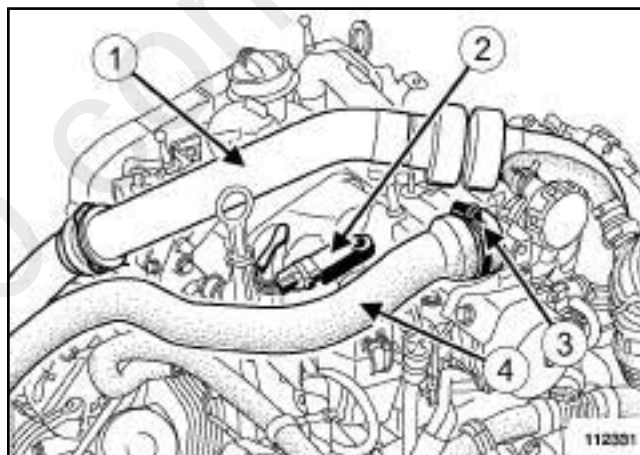
IMPORTANT

Before carrying out any work on the injection system, check using the **Diagnostic tool** :

- that the rail is not under pressure,
- that the fuel temperature is not too high.

It is essential to respect the safety and cleanliness advice whenever work is carried out on this system (see **13B, Diesel injection, Diesel injection: Precautions for the repair**, page **13B-1**) .

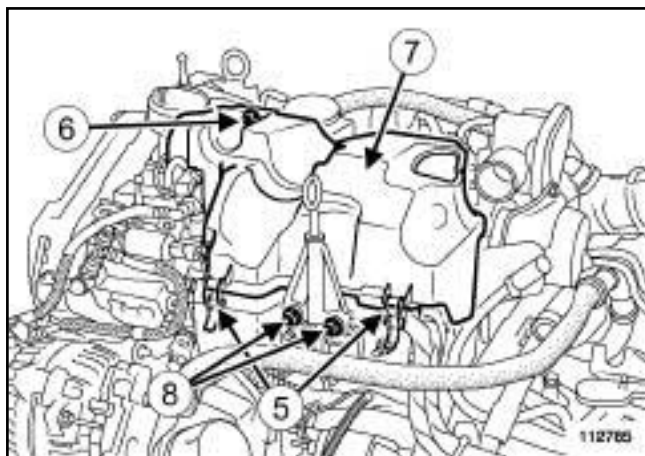
- ☐ Disconnect the battery (see **Battery: Removal - Refitting**) (MR 392, 80A, Battery).
- ☐ Remove the engine protector.



112331

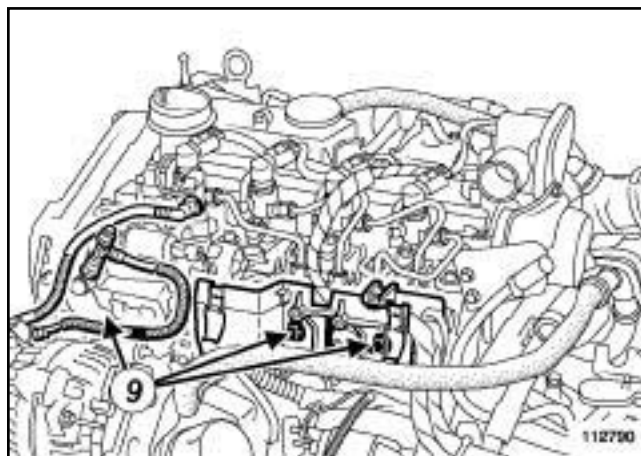
- ☐ Remove the upper section (1) of the turbocharging duct.
- ☐ Disconnect the inlet air pressure sensor (2)
- ☐ Loosen the clip (3) .
- ☐ Move the inlet duct to one side (4) .

K9K, and 764 or 772



112785

- ☐ Unclip the clips (5) from the injector rail protector cover.
- ☐ Remove:
 - the injector rail protector cover mounting bolt (6) ,
 - the injector rail protector cover (7) ,
 - the dipstick,
 - the dipstick tube (8) mounting bolts.
- ☐ Move the dipstick duct to one side.



112790

- ☐ Remove:
 - the injector rail protector support mounting bolts (9)
 - the injector rail protector mounting.
- ☐ Protect the alternator from fuel outflow.
- ☐ Pour cleaning product into a container.

IMPORTANT

Wear protective gloves when using cleaning product.

- ☐ Soak the brush with cleaning product, then clean the unions:
 - on the high-pressure pump fuel supply pipe,
 - on the high-pressure pump fuel return pipe, taking care not to soak the diesel fuel temperature sensor,
 - on the high-pressure pipe between the high-pressure pump and the injector rail,
- ☐ Blast the cleaned areas with compressed air, then wipe them with new cleaning cloths.

IMPORTANT

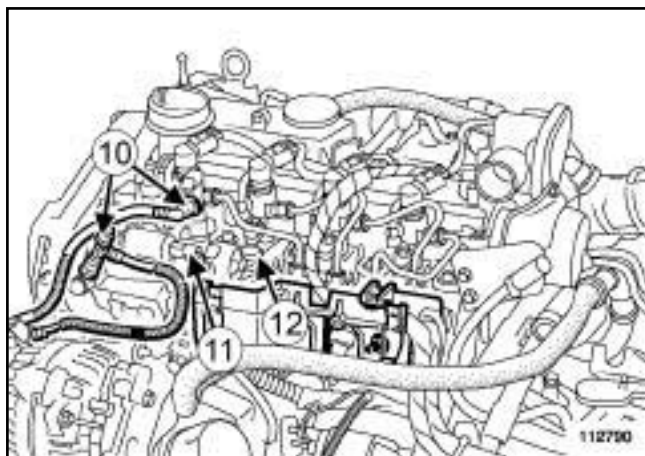
Wear protective glasses.

WARNING

Do not blow compressed air once the fuel circuit is open, otherwise impurities may enter the system. Use wipes if necessary.

High pressure pipe between pump and rail: Removal - Refitting

K9K, and 764 or 772



❑ Disconnect:

- the diesel fuel supply and return pipes (10) ,
- the pressure regulating valve connector (11) ,
- the volume regulating valve connector (12) ,

Note:

Be prepared for fuel outflow. Clean with new cloths.

❑ Fit the blanking plugs.

II - REMOVAL OF PART CONCERNED

❑ Remove the high-pressure pipe between the high-pressure pump and the injector rail and discard it.

Note:

Hold the intermediate nut between the pump-rail pipe and the high-pressure pump using a lock wrench.

❑ Fit the blanking plugs.

REFITTING

I - REFITTING PREPARATIONS OPERATION

❑

WARNING

Remove the blanking plugs only before reconnecting the fuel circuit pipes.

The blanking plugs are single-use only. Do not reuse them, and discard the whole kit once opened.

❑ Take the new high pressure pipe out of its plastic bag.

❑ Remove the blanking plugs.

II - REFITTING PART CONCERNED

❑ Fit the new high pressure pipe between the injector rail and the high pressure pump.

Note:

If the new pipe kit does not contain an applicator, lubrication of the nut threads will be unnecessary (as they are self-lubricating pipes).

❑ Hand-tighten the nut on the high-pressure pipe on the pump end, then the one on the rail end.

❑ Torque tighten the **high pressure pipe nuts (24 Nm)** using the **(Mot. 1746)** or **(Mot. 1566)**, starting with the nut on the high pressure pump side.

III - FINAL OPERATION.

❑ Connect:

- the volume regulating valve connector,
- the pressure regulating valve connector,
- diesel fuel supply and return pipes.

❑ Refit:

- the injector rail protector mounting,
- the dipstick duct mounting bolts.
- the dipstick,
- the injector rail protector cover,

❑ Refit the air inlet duct and tighten the clip.

❑ Connect the inlet air pressure sensor

❑ Loosen the intercooler inlet air pipe mounting nut on the alternator.

❑ Fit the air duct between the turbocharger and the intercooler air inlet pipe.

❑ Lock the air duct onto the turbocharger and the intercooler inlet air pipe.

❑ Tighten the bolt of the air duct on the rocker cover.

❑ Torque tighten the **intercooler inlet air pipe mounting nut on the alternator (8 Nm)**.

❑ Refit the engine cover.

❑ Reprime the fuel circuit.

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

K9K, and 764 or 772

- ☐ Check that there are no diesel leaks:
 - check the sealing after repair (see **13B, Diesel injection, High pressure pipe: Check**, page **13B-99**) ,
 - let the engine run at idle speed until the engine cooling fan starts to operate,
 - check that there are no diesel leaks.
- ☐ Use the **Diagnostic tool** to check for stored faults.
- ☐ Clear them if necessary.

High pressure pipe between pump and rail: Removal - Refitting

K9K, and 750 or 752 or 766 or 768

Special tooling required

Mot. 1746 Offset wrench for tightening High Pressure pump pipes.

Tightening torques

high pressure pipe between the pump and the rail **24 N.m**

□

IMPORTANT

Use the diagnostic tool before any operation is carried out on the injection circuit to check:

- that the rail is not under pressure,
- that the fuel temperature is not too high.

It is essential to respect the safety and cleanliness advice whenever work is carried out on this system.

Working on the circuit with the engine running is strictly forbidden.

WARNING

Before starting work on the vehicle, obtain:

- a new set of plug welds (part no.: **77 01 206 804**),
- cleaning cloths (part no.: **77 11 211 707**),
- cleaning product (part no.: **77 11 224 188**).

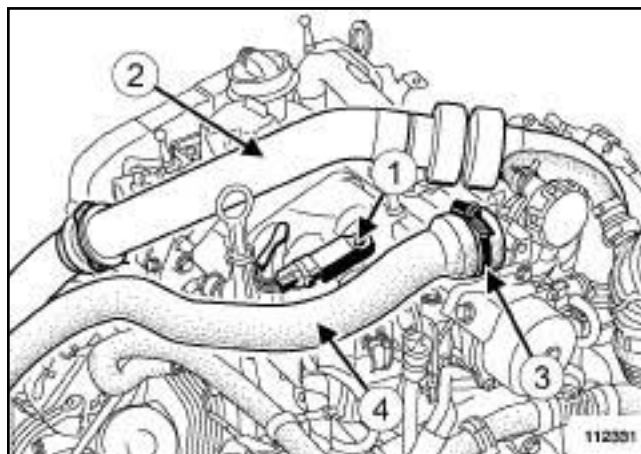
Note:

Vehicles equipped with the K9K*768 engine may or may not be equipped with an intercooler.

REMOVAL

I - REMOVAL PREPARATION OPERATION

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

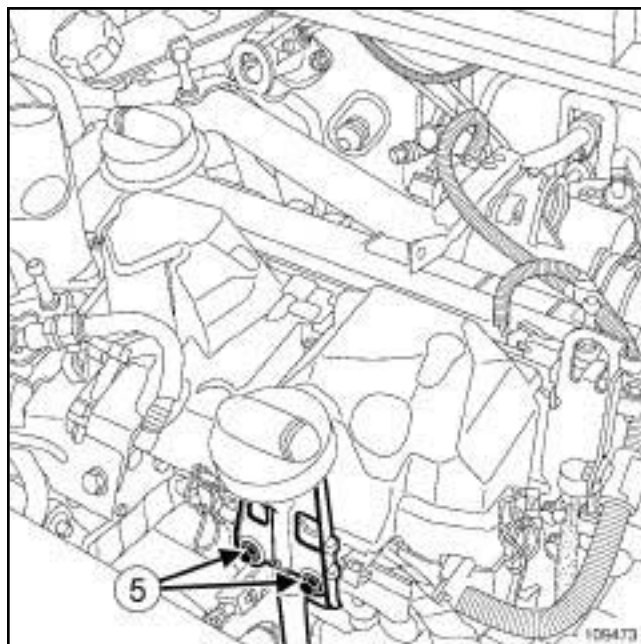


112331

- Disconnect the inlet air pressure sensor (1) .

K9K, and 750 or 766 or 768

- Remove the turbocharging duct (2) .
- Loosen the air inlet duct clip (3) .
- Move the inlet duct to one side (4) .



109473

- Remove the dipstick bolts (5) .
- Remove the dipstick.
- Disconnect the accelerometer connector.