

Crankshaft position sensor: Removal - Refitting

K9K, and 796

Tightening torques

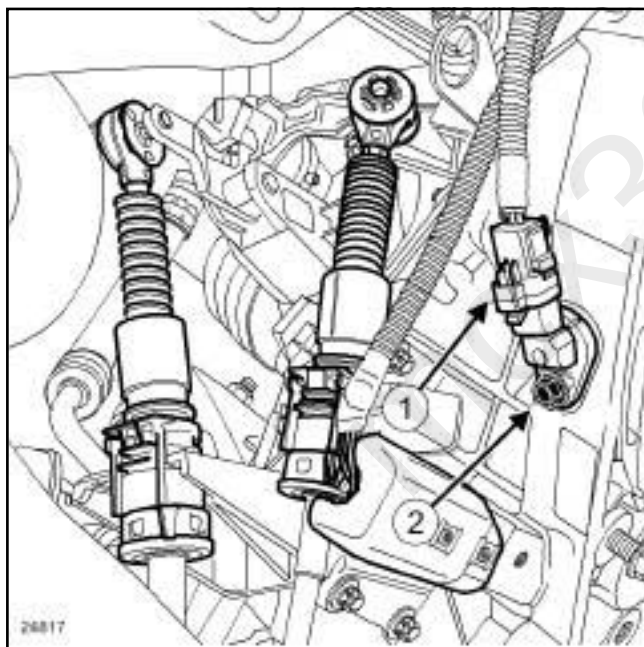
crankshaft position and speed sensor bolt	8 N.m
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REMOVAL

I - REMOVAL PREPARATION OPERATION

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

II - REMOVAL OPERATION



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- ☐ Disconnect the crankshaft position sensor connector (1) from underneath the vehicle.
- ☐ From underneath the vehicle, remove:
 - the crankshaft position sensor bolt (2) ,
 - the crankshaft position sensor.

REFITTING

I - REFITTING OPERATION

- ☐ Refit the crankshaft position sensor.

- ☐ Torque tighten the **crankshaft position and speed sensor bolt (8 N.m)**.
- ☐ Connect the crankshaft position sensor connector.

II - FINAL OPERATION

- ☐ Refit the engine undertray.

DIESEL INJECTION

High pressure pump: Removal - Refitting

13B

K9K, and 796

Equipment required

Diagnostic tool

Tightening torques

the high pressure pump bolts	23 N.m
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high pressure pump pulley nut	70 N.m
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dipstick guide and filler neck nuts on the high pressure rail	21 N.m
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IMPORTANT

To avoid all risk of damage to the systems, apply the safety and cleanliness instructions and operation recommendations before carrying out any repair (see **Diesel injection: Precautions for the repair**).

IMPORTANT

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

- that the injector 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.

IMPORTANT

Wear leaktight gloves (Nitrile type) for this operation.

WARNING

To avoid any corrosion or damage, protect the areas on which fuel is likely to run.

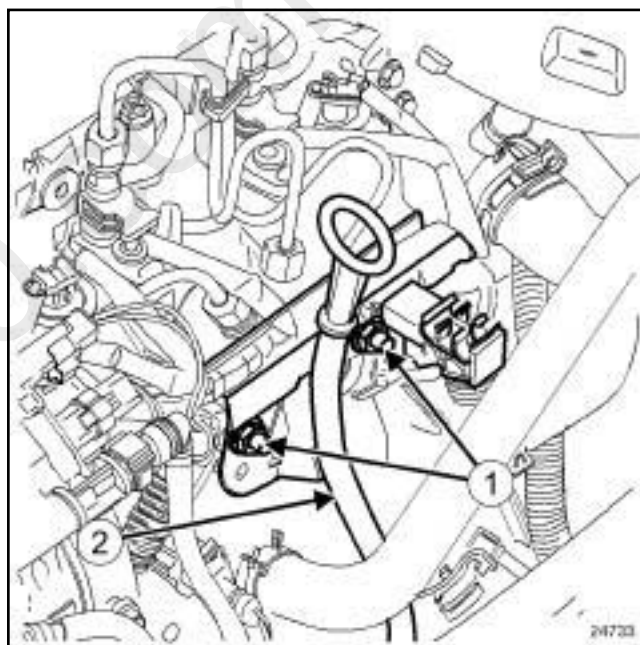
Note:

Never run the engine in the opposite direction to that of normal operation.

REMOVAL

I - REMOVAL PREPARATION OPERATION

- ☐ Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).
- ☐ Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- ☐ Remove the front engine cover.



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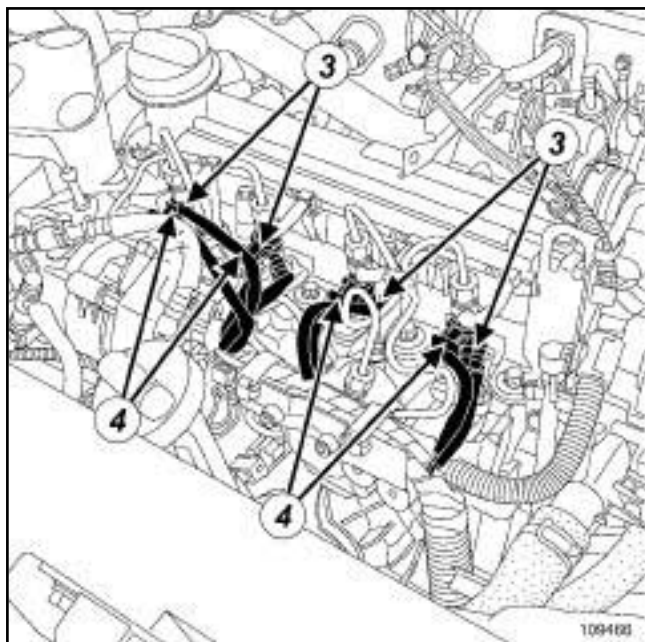
- ☐ Remove the dipstick guide and filler neck nuts (1).
- ☐ Put the dipstick guide to one side (2).

DIESEL INJECTION

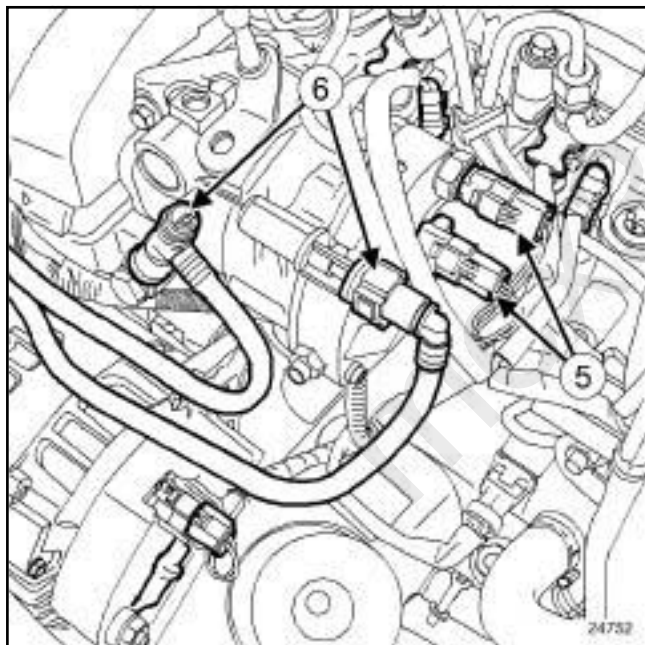
High pressure pump: Removal - Refitting

13B

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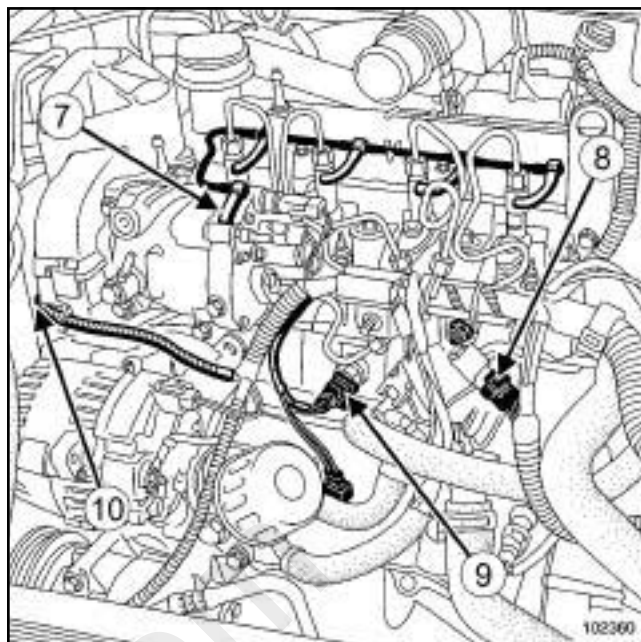
❑ Disconnect:

- the heater plugs (3) ,
- the injectors (4) ,
- the connectors from the high pressure pump (5) .

❑ Clean the diesel supply and return pipes (see **Diesel injection: Precautions for the repair**) .

❑ Disconnect the diesel supply and return pipes (6) .

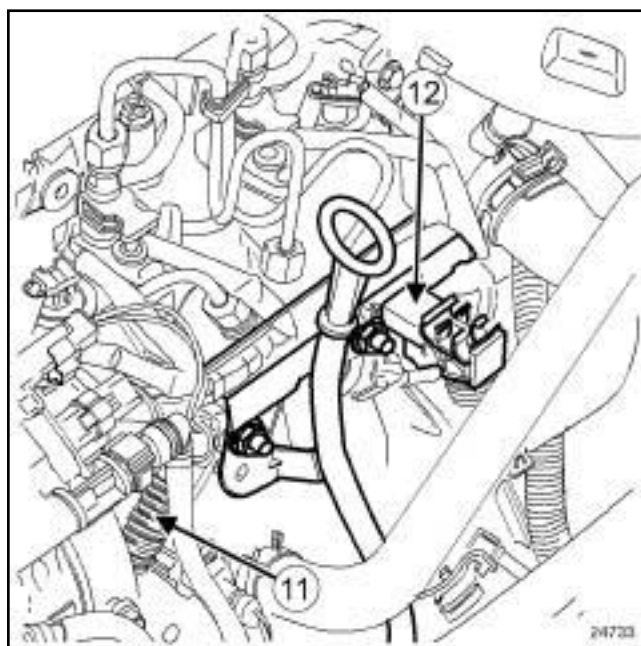
❑ Fit blanking plugs into the openings.



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❑ Disconnect:

- the fuel return pipe (7) connecting the injectors to the high-pressure pump ,
- the injector rail pressure sensor (8) ,
- the accelerometer (9) ,
- the camshaft position sensor (10) .



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❑ Unclamp the engine wiring (11) and move it to one side.

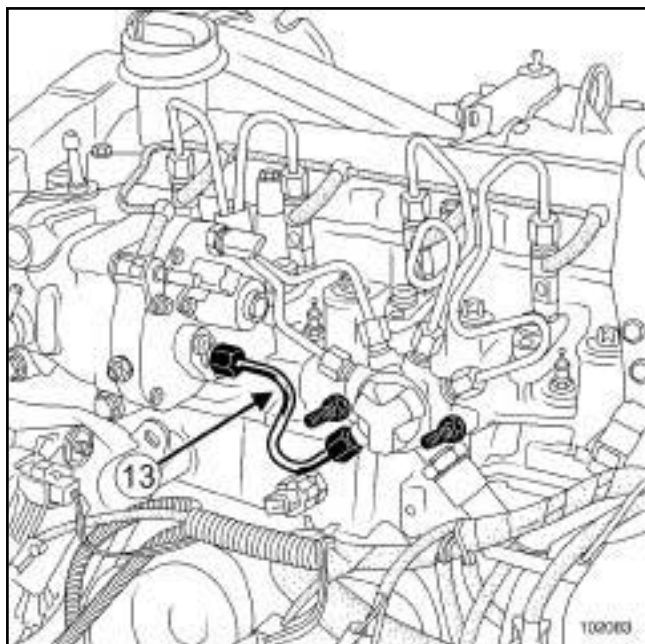
❑ Remove the channel (12) located on the injector rail.

DIESEL INJECTION

High pressure pump: Removal - Refitting

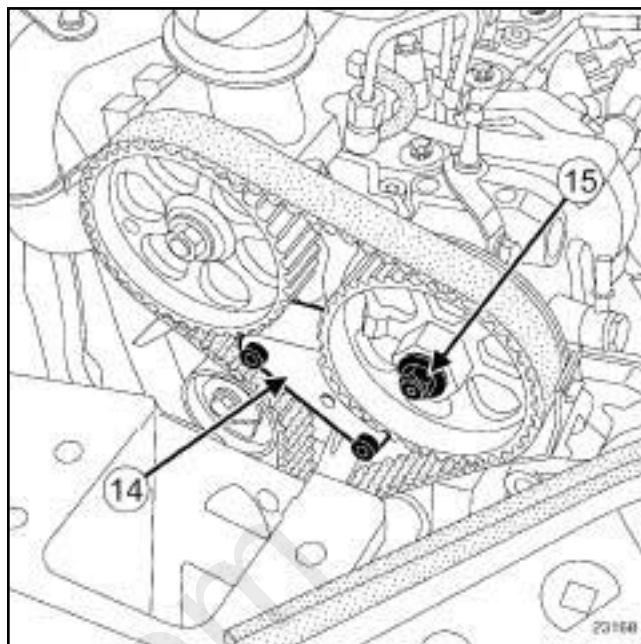
13B

K9K, and 796



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- ☐ Remove the high pressure pipe (13) between the injector rail and the high pressure pump (see 13B, Diesel injection, High pressure pipe between pump and rail: Removal - Refitting, page 13B-19) .
- ☐ Put blanking plugs in all the openings of the injection circuit.
- ☐ Remove:
 - the right-hand suspended engine mounting (see 19D, Engine mounting, Right-hand suspended engine mounting: Removal - Refitting, page 19D-4) ,
 - the camshaft position sensor (see 13B, Diesel injection, Camshaft position sensor: Removal - Refitting, page 13B-7) .
- ☐ Remove (see 11A, Top and front of engine, Timing belt: Removal - Refitting, page 11A-17) :
 - the upper timing cover,
 - the lower timing cover,
 - the cylinder head suspended mounting.
- ☐ Position the engine at top dead centre (see 11A, Top and front of engine, Timing belt: Removal - Refitting, page 11A-17) .



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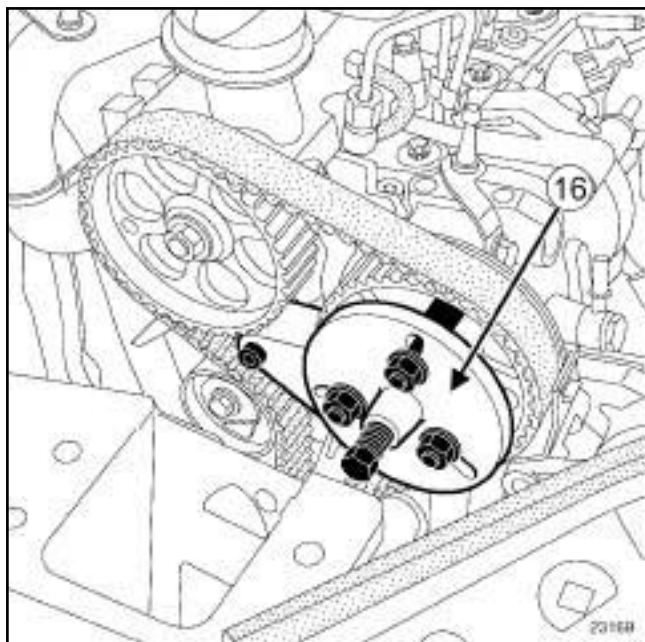
- ☐ Fit the high pressure pump pulley retaining tool (14) .
- ☐ If necessary, turn the engine slowly to adjust the position of the locking tool on the pump pulley teeth.
- ☐ Remove the high pressure pump pulley nut (15) , holding the pulley with a 32 mm open-jawed spanner.

DIESEL INJECTION

High pressure pump: Removal - Refitting

13B

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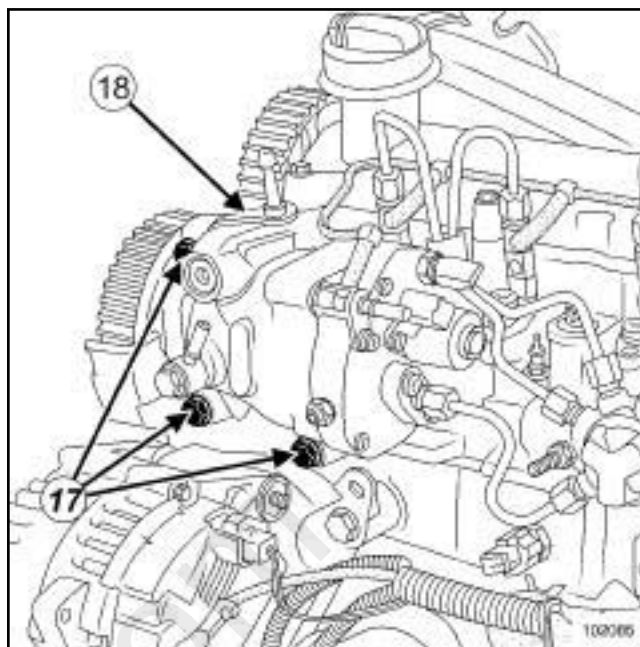
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- Position the (16) fitted with the.

WARNING

Ensure that the tool pushrod is correctly oriented and is pressing against the high pressure pump shaft.

II - REMOVAL OPERATION



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- Remove:
 - the high pressure pump bolts (17) ,
 - the bracket (18) from the engine cover.
- Screw the pushrod of the tool until the high pressure pump becomes detached.
- Remove:
 - the high pressure pump,
 - the.

REFITTING

I - REFITTING PREPARATION OPERATION

- Check for an index pin on the high pressure pump shaft.

II - REFITTING OPERATION

- Refit the high pressure pump on the cylinder head by inserting it into the high pressure pump pulley.

Note:

Check that the high pressure pump shaft is correctly orientated in relation to the high pressure pump pulley.

- Refit the engine cover bracket.
- Fit the high pressure pump bolts without tightening them.