



Note, one or more warnings are present in this procedure



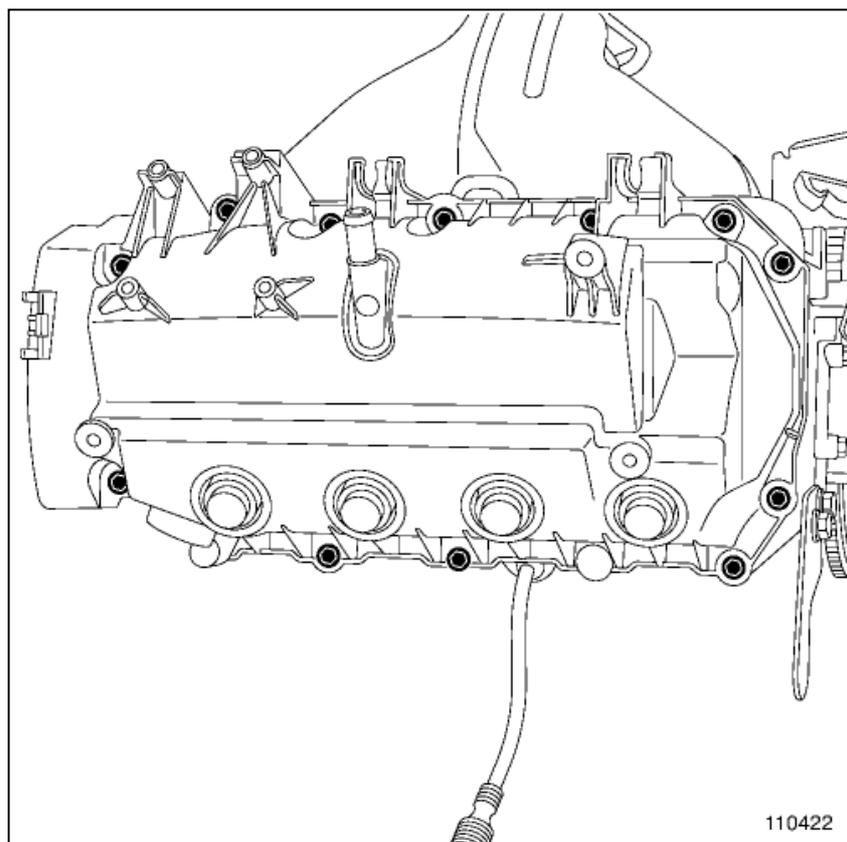
Tightening torques	
cylinder head mounting bolts	230° ± 6

Essential equipment	
cylinder head testing tool	

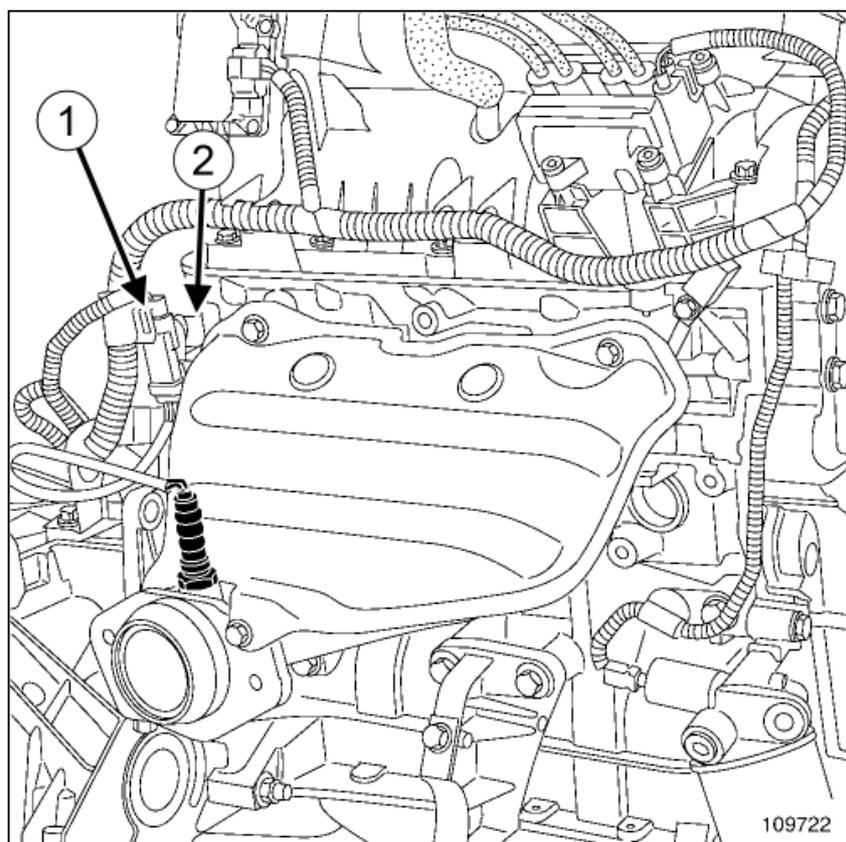
## REMOVAL

### 1. REMOVAL PREPARATION OPERATION

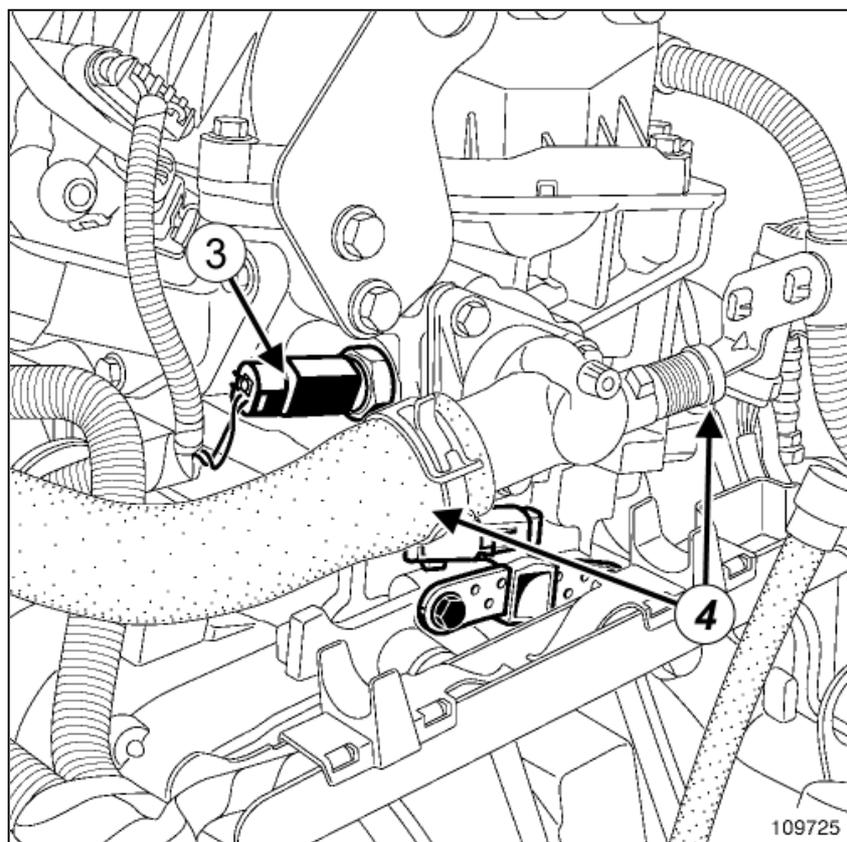
- Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (MR 392, 02A, Lifting equipment).
- Disconnect the battery (see **Battery : Removal - Refitting**) (MR 392, 80A, Battery).
- Remove the engine undertray.
- Drain the cooling system (see **Cooling circuit: Draining - Refilling**).
- Remove:
  - 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 **Accessories belt: Removal - Refitting**),
  - the accessories pulley (see **Crankshaft accessories pulley: Removal - Refitting**),
  - the timing belt (see **Timing belt: Removal - Refitting**),
  - the air filter box (see **Air filter unit: Removal - Refitting**),
  - the intake distributor (see **Inlet manifold: Removal - Refitting**).
- Remove the ignition coil (see **Coils Removal - Refitting**).
- Unclip the rocker cover electric wiring harnesses.



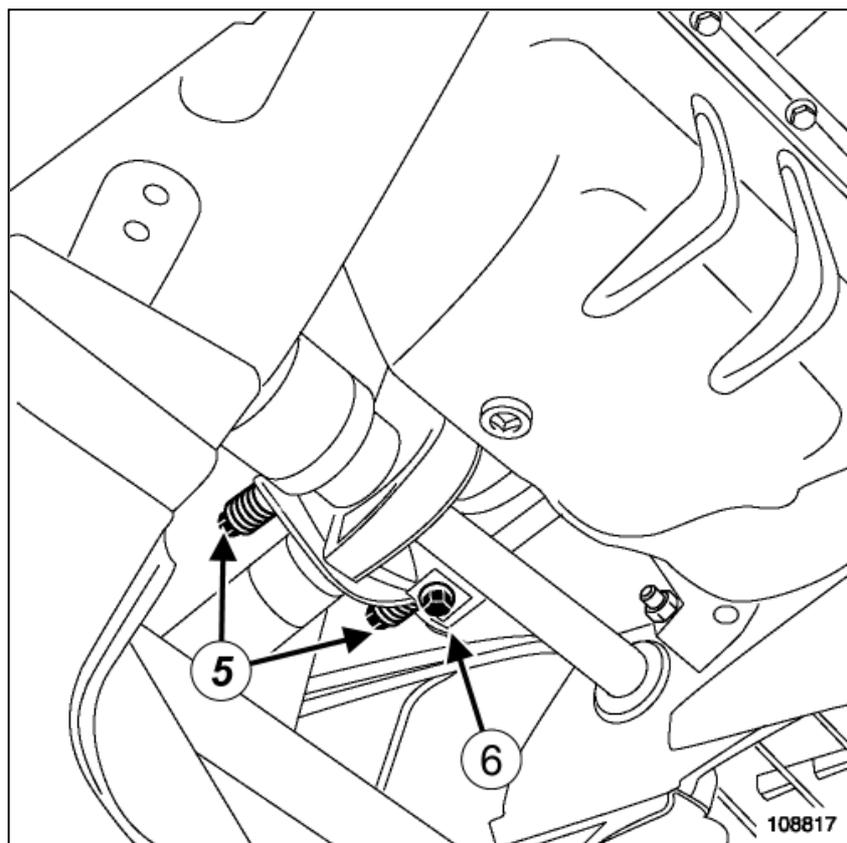
- Remove the rocker cover (see 10A, Engine and cylinder block assembly , Rocker cover: Removal - Refitting , page ).



- Disconnect the upstream oxygen sensor connector (1).
- Remove the mounting (2) from the upstream oxygen sensor connector.

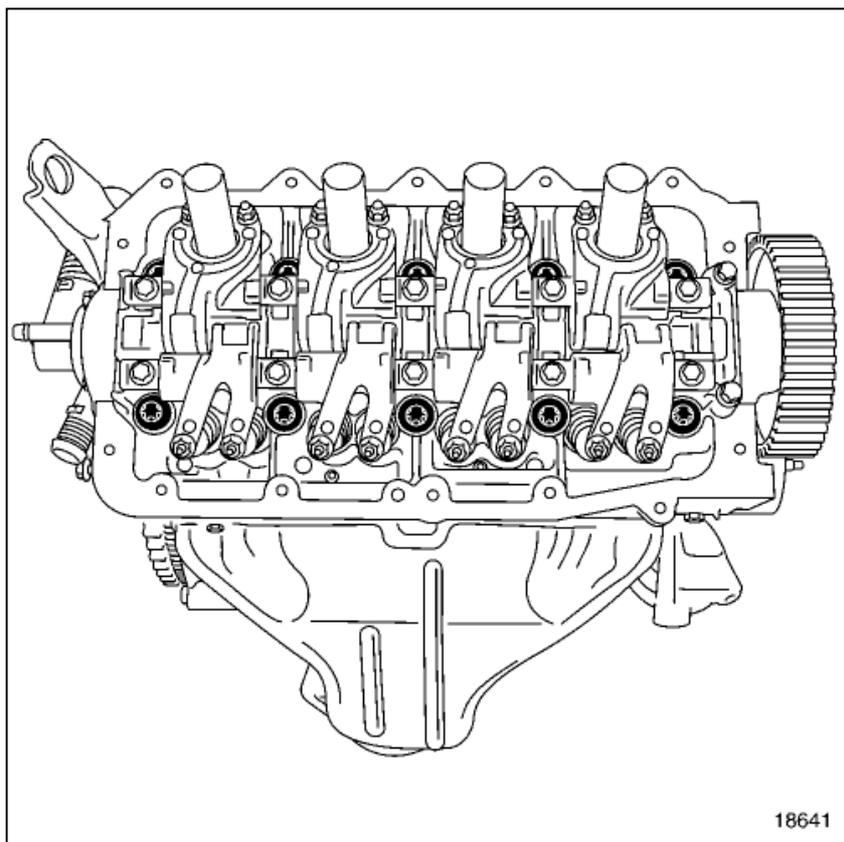


- Disconnect the coolant temperature sensor connector (3) .
- Remove the cooling hoses (4) from the thermostat unit.



- Remove:
- the exhaust bracket mounting bolts (5) ,
  - the strut bolt (6) .

## 2. OPERATION FOR REMOVAL OF PART CONCERNED



- Remove:
  - the cylinder head mounting bolts,
  - the cylinder head,
  - the cylinder head gasket.

## REFITTING

### 1. REFITTING PREPARATION OPERATION

#### 1- CLEANING THE CYLINDER HEAD

- Clean the cylinder head.



#### IMPORTANT

- Do not scratch the aluminium sealing surfaces.
- Wear goggles.
- Wear gloves during the operation.
- Clean the joint faces with DECAPJOINT.
- To dissolve any gasket which remains adhered, apply product to the surface to be cleaned, wait for approximately ten minutes then remove residues with a wooden spatula.

### 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.

### WARNING



The cylinder head bolts must be replaced each time they are removed and should not be oiled before being fitted.

## 2- CHECKING THE GASKET FACE

- With a ruler and set of feeler gauges, check for gasket face bow.

The maximum deformation is **0.05 mm** .

### WARNING



No regrinding of the cylinder head is permitted.

- Test the cylinder head for any cracks using the **CYLINDER HEAD TESTING TOOL** (see **Garage Equipment Catalogue** ).
- Refer to the (see **Cylinder head: Dismantling**) (Technical Note 6004, 10A Engine and peripherals) for the procedure for stripping down the cylinder head and for the valve clearance adjustment procedure (see **Valves: Adjusting** ) .

### WARNING



In order to ensure that the bolts are correctly tightened, use a syringe to remove any oil which may be in the cylinder head mounting holes.

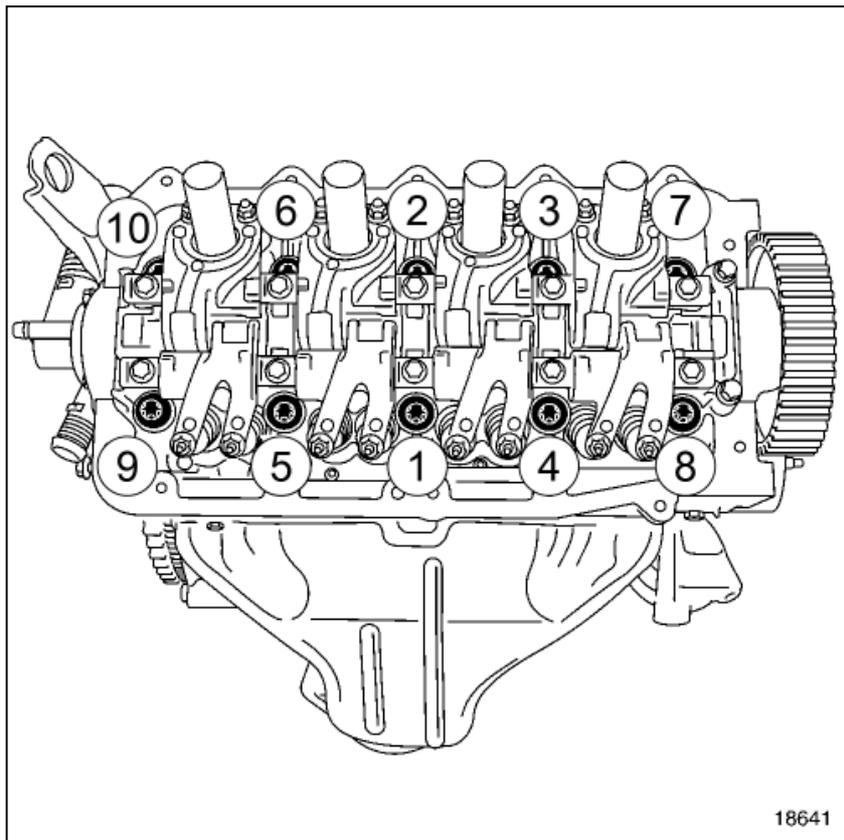
### WARNING



Be sure to replace all seals that have been removed.

## 2. REFITTING OPERATION FOR PART CONCERNED

- Bring the pistons to mid-stroke position to prevent them from coming into contact with the valves during the tightening of the cylinder head.
- Fit the cylinder head with a new gasket.



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■ Tightening the cylinder head:

- pre-tighten to torque and in order the **cylinder head mounting bolts (20 N.m)** ,
- check that all of the **cylinder head mounting bolts** are correctly tightened to **20 N.m** ,
- angle tighten, in order the cylinder head mounting bolts **230° ± 6** .

### 3. FINAL OPERATION.

■ Refit the upstream oxygen sensor connector attachment

■ Connect:

- the upstream oxygen sensor connector,
- the coolant temperature sensor connector,

■ Refit:

- the cooling hoses to the thermostat unit.
- the exhaust clamp mounting bolts,
- the strut bolt.
- the rocker cover (see 10A, Engine and cylinder block assembly , Rocker cover: Removal - Refitting , page ) .

■ Clip the electric wiring harnesses onto the rocker cover.

■ Refit:

- the ignition coil (see Coils Removal - Refitting ) ,
- the timing belt (see Timing belt: Removal - Refitting ) ,
- the accessories pulley (see Crankshaft accessories pulley: Removal - Refitting ) ,

- the accessories belt (see **Accessories belt: Removal - Refitting** ) ,
- 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 engine undertray,
- the intake distributor (see **Inlet manifold: Removal - Refitting** ) ,
- the air filter box (see **Air filter unit: Removal - Refitting** ) .

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

 Fill the cooling system (see **Cooling circuit: Draining - Refilling**) .

 Bleed the cooling circuit (see **Cooling circuit: Bleeding**) .



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