

Exhaust: Precautions for the repair

Note:

If there are leaks from the **EXHAUST SLEEVES WITH 1 BOLT**, apply **EXHAUST MASTIC** to the sleeve (see part no. in Technical Note 5068, 04B, Consumables - Products).

If the application of exhaust mastic does not fix the leak:

- remove and replace the used exhaust sleeve,
- check the condition of the exhaust pipes (condition of the pipe surface, deburring of the area cut, damage to the pipes).
- fit the new sleeve in accordance with the instructions given before.

Catalytic converter: Removal - Refitting

K9K, and 796

Tightening torques 	
turbocharger output studs	9 N.m
catalytic converter nuts on the turbocharger	28 N.m
upstream strut bolts on the engine	44 N.m
downstream strut bolt and nut on the gearbox	21 N.m
upstream strut bolts on the catalytic converter	26 N.m
downstream strut bolt on the catalytic converter	21 N.m
exhaust flange bolts	21 N.m

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 **19B, Exhaust, Exhaust: Precautions for the repair**, page **19B-6**).

IMPORTANT

Wear cut-resistant gloves during the operation.

IMPORTANT

Catalytic converters contain ceramic fibres, these are contained within a closed unit, and cannot disperse. Drilling or cutting catalytic converters is prohibited.

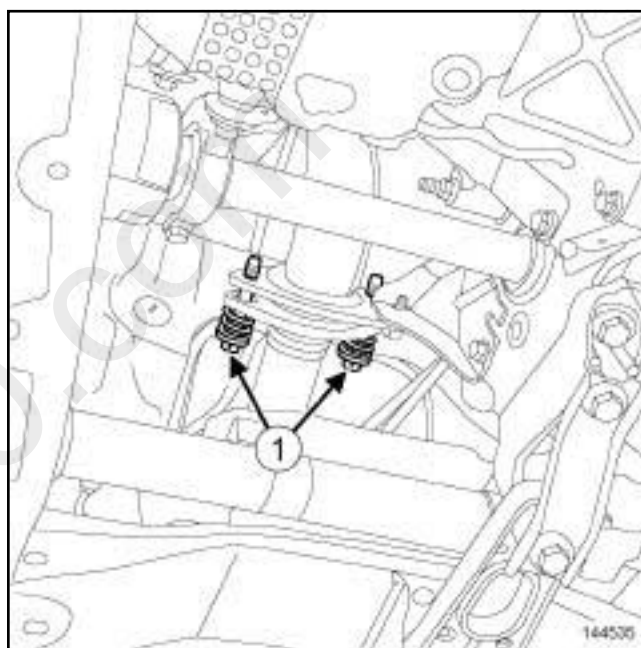
WARNING

To prevent the surrounding components from overheating, do not damage (tear, pierce, bend, etc.) a heat shield.

Any damaged heat shields must be replaced.

REMOVAL**I - REMOVAL PREPARATION OPERATION**

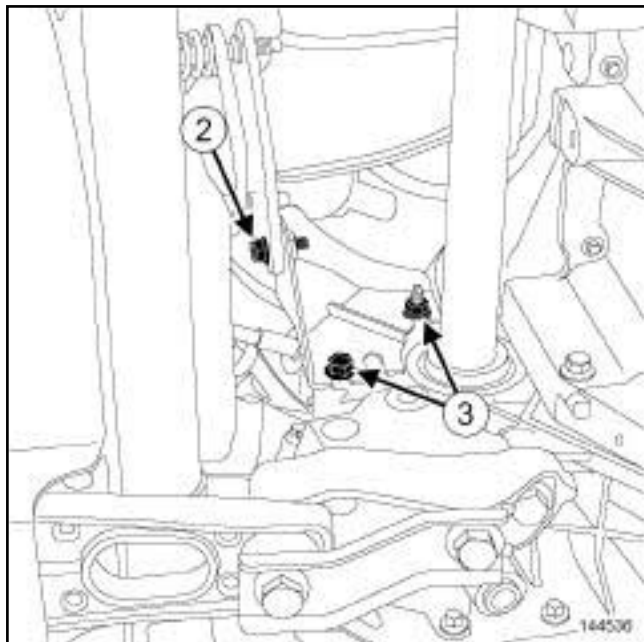
- ☐ Position the vehicle on a two-post lift (see **Vehicle: Towing and lifting**) (02A, Lifting equipment).
- ☐ Disconnect the battery (see **Battery: Removal - Refitting**) (80A, Battery).
- ☐ Remove the air filter unit (see **12A, Fuel mixture, Air filter unit: Removal - Refitting**, page **12A-6**).

II - REMOVAL OPERATION

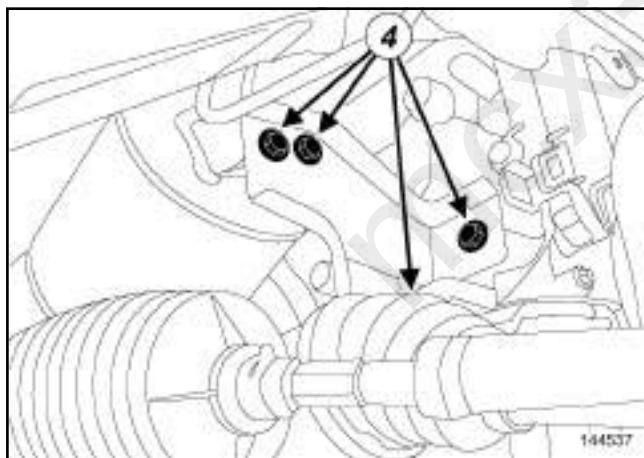
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- ☐ Remove the exhaust flange bolts (1).
- ☐ Withdraw the exhaust pipe.
- ☐ Attach the exhaust pipe to the front left-hand lower arm.

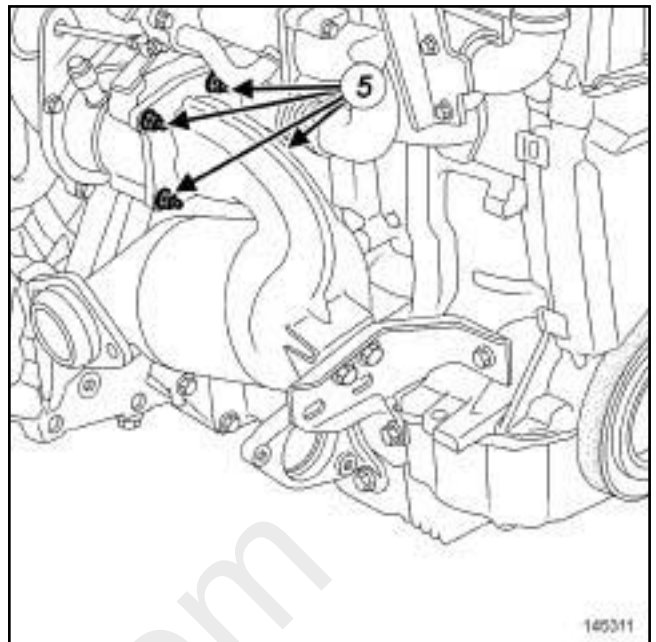
K9K, and 796



- ☐ Remove the bolt from the downstream strut on the catalytic converter (2) .
- ☐ Loosen the downstream strut bolt and nut on the gearbox (3) .
- ☐ Remove the downstream strut.



- ☐ Remove:
 - the bolts of the upstream strut (4) ,
 - the upstream strut.



- ☐ Remove the catalytic converter nuts on the turbocharger (5) .



- ☐ Remove:
 - the catalytic converter (6) ,
 - the seal between the turbocharger and the catalytic converter,
 - the exhaust flange sealing ring.

Catalytic converter: Removal - Refitting

K9K, and 796

REFITTING

I - REFITTING PREPARATION OPERATION

**WARNING**

To ensure proper sealing, the gasket surfaces must be clean, dry and not greasy (avoid any finger marks).

- ☐ Use **ABRASIVE PADS** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) to clean the joint face of:

- the intermediate pipe,
- the catalytic converter in case of reuse,
- the turbocharger.

- ☐ Use **SURFACE CLEANER** and **CLEAN CLOTHS** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products) to degrease the joint face of:

- the intermediate pipe,
- the catalytic converter in case of reuse,
- the turbocharger.



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- ☐ Always replace the exhaust flange sealing ring.
- ☐ **parts always to be replaced: seal between turbocharger and catalytic converter**

II - REFITTING OPERATION

**Note:**

If a stud loosens during this operation, coat it with **HIGH STRENGTH THREAD LOCK** (see **Vehicle: Parts and consumables for the repair**) (04B, Consumables - Products).

Torque tighten the **turbocharger output studs** (9 N.m).

- ☐ Fit:

- a new seal between the turbocharger and the catalytic converter,
- the catalytic converter on the turbocharger.

- ☐ Pretighten in order:

- the bolt and nut of the upstream strut on the engine,
- the downstream strut bolt and nut on the gearbox,
- the upstream strut bolts on the catalytic converter,
- the downstream strut bolt on the catalytic converter,
- the catalytic converter nuts on the turbocharger.

- ☐ Torque tighten in order:

- the **catalytic converter nuts on the turbocharger** (28 N.m),
- the **upstream strut bolts on the engine** (44 N.m),
- the **downstream strut bolt and nut on the gearbox** (21 N.m),
- the **upstream strut bolts on the catalytic converter** (26 N.m),
- the **downstream strut bolt on the catalytic converter** (21 N.m).

- ☐ Make sure there is no contact between the catalytic converter and the turbocharger oil return pipe.

- ☐ Proceed in the reverse order to removal.

- ☐ Torque tighten the **exhaust flange bolts** (21 N.m).

III - FINAL OPERATION

- ☐ Check:

- that all the exhaust pipe heat shields are in place and properly attached,
- that there is no contact with the underbody.

- ☐ Start the vehicle.

Catalytic converter: Removal - Refitting

K9K, and 796

- ☐ Check that there are no leaks and deal with them if necessary.

Catalytic converter: Removal - Refitting

K4M, and 4X2 TRANSMISSION

Special tooling required

Mot. 1199-01 Exhaust pipe cutter (diameter 35/50 mm and diameter 50/65mm). Complete kit in a case.

Equipment required

component jack

Tightening torques

bolt of the exhaust flange	21 N.m
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oxygen sensor	45 N.m
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IMPORTANT

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IMPORTANT

Wear cut-resistant gloves during the operation.

IMPORTANT

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WARNING

To prevent the surrounding components from overheating, do not damage (tear, pierce, bend, etc.) a heat shield.

Any damaged heat shields must be replaced.

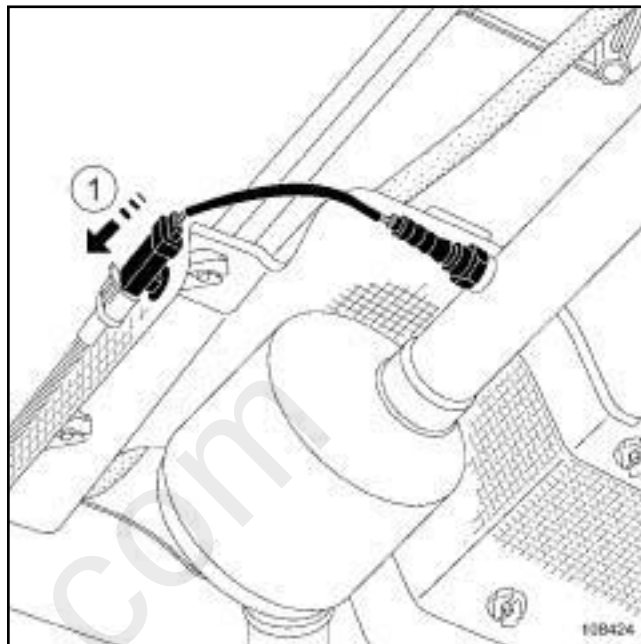
REMOVAL

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).

II - REMOVAL OPERATION

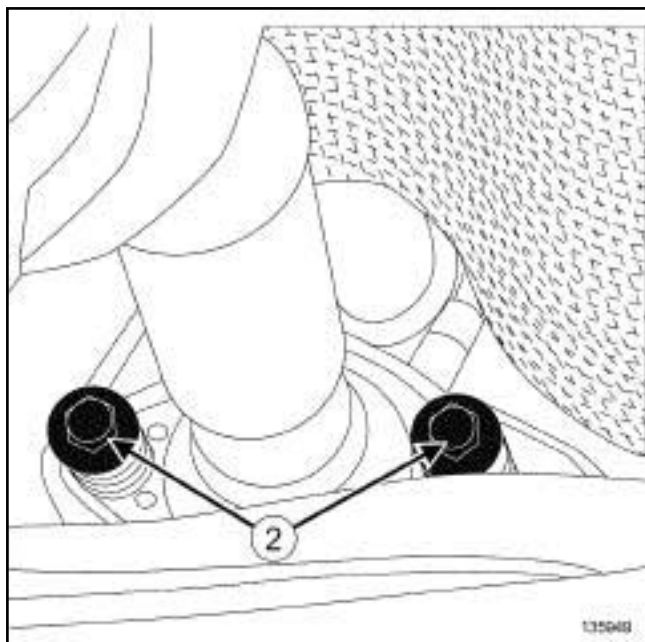


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- ☐ Remove the downstream oxygen sensor connector from its mounting by sliding it (1).
- ☐ Disconnect the downstream oxygen sensor connector.
- ☐ Put a **component jack** under the catalytic converter.
- ☐ Locate the area of the catalytic converter to be cut (see **19B, Exhaust, Exhaust: List and location of components**, page **19B-1**).
- ☐ Use the tool (**Mot. 1199-01**) to cut the exhaust pipe in the area to be cut (see **19B, Exhaust, Exhaust: Precautions for the repair**, page **19B-6**).

Catalytic converter: Removal - Refitting

K4M, and 4X2 TRANSMISSION



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☐ Remove:

- the exhaust flange bolts (2) ,
- the catalytic converter,
- the exhaust flange ring.

IF REPLACING THE CATALYTIC CONVERTER

- ☐
- Remove the downstream oxygen sensor on the catalytic converter (see).

REFITTING

I - REFITTING PREPARATION OPERATION

☐
WARNING

To ensure proper sealing, the gasket surfaces must be clean, dry and not greasy (avoid any finger marks).

- ☐
- Clean the bearing faces of the catalytic converter using
- ABRASIVE PADS**
- (see
- Vehicle: Parts and consumables for the repair**
-) (04B, Consumables - Products).

- ☐
- Degrease the bearing faces of the catalytic converter using
- SURFACE CLEANER**
- and clean cloths (see
- Vehicle: Parts and consumables for the repair**
-) (04B, Consumables - Products).



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- ☐
- parts always to be replaced: ring between exhaust manifold and catalytic converter

II - REFITTING OPERATION

☐ Refit:

- the downstream oxygen sensor (if replacing the catalytic converter),
- the catalytic converter.

- ☐
- Fit a new After-Sales sleeve between the catalytic converter and the expansion chamber (see
- 19B, Exhaust, Exhaust: Precautions for the repair**
- , page
- 19B-6**
-) .

IMPORTANT

Position the « nut and bolt securing the sleeve » assembly so that the assembly cannot come into contact with the underbody.

- ☐
- Tighten the sleeve bolt while guiding the exhaust pipe to ensure correct alignment.

☐ Torque tighten:

- the **bolt of the exhaust flange (21 N.m)**,
- the **oxygen sensor (45 N.m)**.

III - FINAL OPERATION

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

☐ Check:

- that all the exhaust pipe heat shields are in place and properly attached,
- that there is no contact with the underbody.

- ☐
- Start the vehicle.