

WJ26 - Replacing Coolant Pipe Between Engine Block and Left Cylinder Head (Workshop Campaign)

Vehicle Type: **Panamera 4S (971)/Panamera 4S Executive (971)/Panamera 4S Sport Turismo (971)**

Model Year: **As of 2017 up to 2018**

Subject: **Coolant pipe between engine block and left cylinder head (cyl. 4–6)**

Information: **The coolant pipe between the engine block and left cylinder head on the affected vehicles can crack over the service life of the vehicle due to vibrations in the cooling system.**

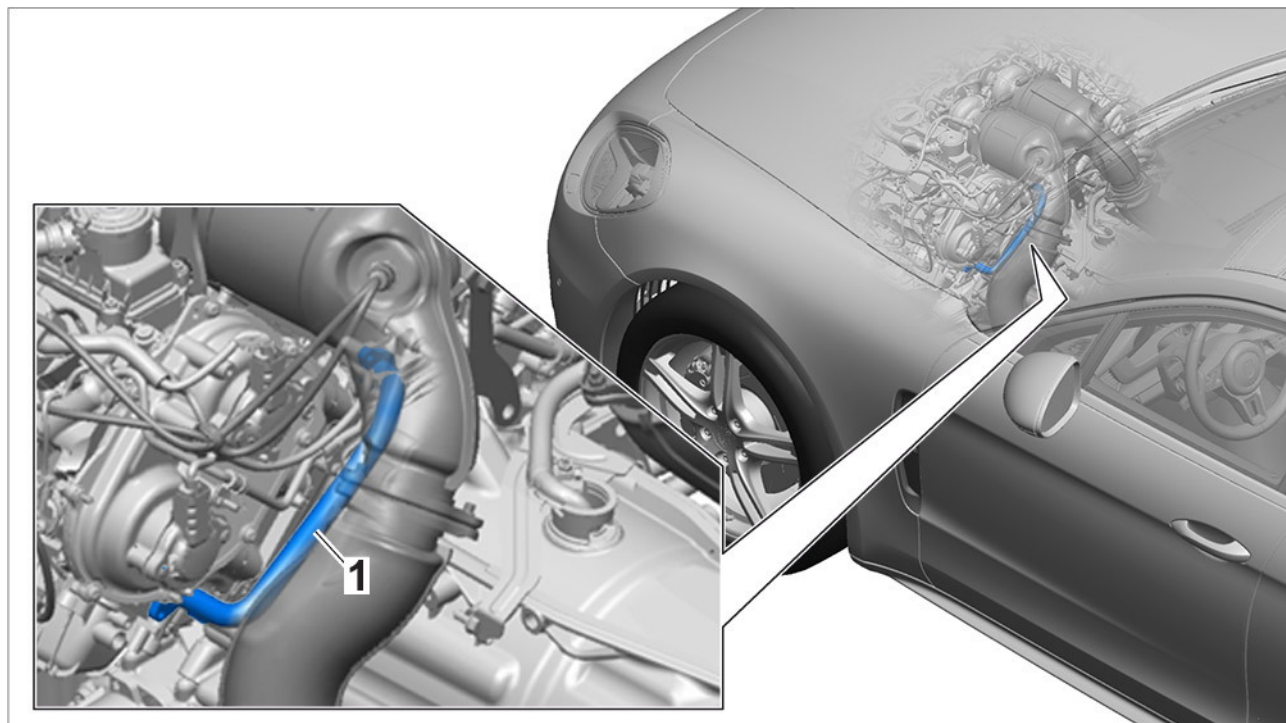
If this happens, coolant can leak out. If the coolant loss goes unnoticed, this will activate the coolant temperature light and the coolant level warning light in the instrument cluster.

Remedial Action: Replace coolant pipe with an improved coolant pipe.

Affected Vehicles: Only the vehicles assigned to the campaign (see also PIWIS Vehicle information). This campaign affects 1,170 vehicles in North America.

Installation

Position:



Installation position of rear coolant pipe

1 – Rear coolant pipe between engine block and left cylinder head (**replace**)

Required parts and materials

Please Note:

Parts Info: **An initial allocation of parts will be provided for up to 80% of the vehicles that are serviced at your dealership. After the initial allocation, parts will then remain open for normal ordering.**

Part No.	Designation – Use	Qty.
00004330411	⇒ Coolant pipe – Engine block to left cylinder head	1 ea.
00004330412	⇒ Repair kit – Coolant pipe for 971 V6 biturbo	1 ea.

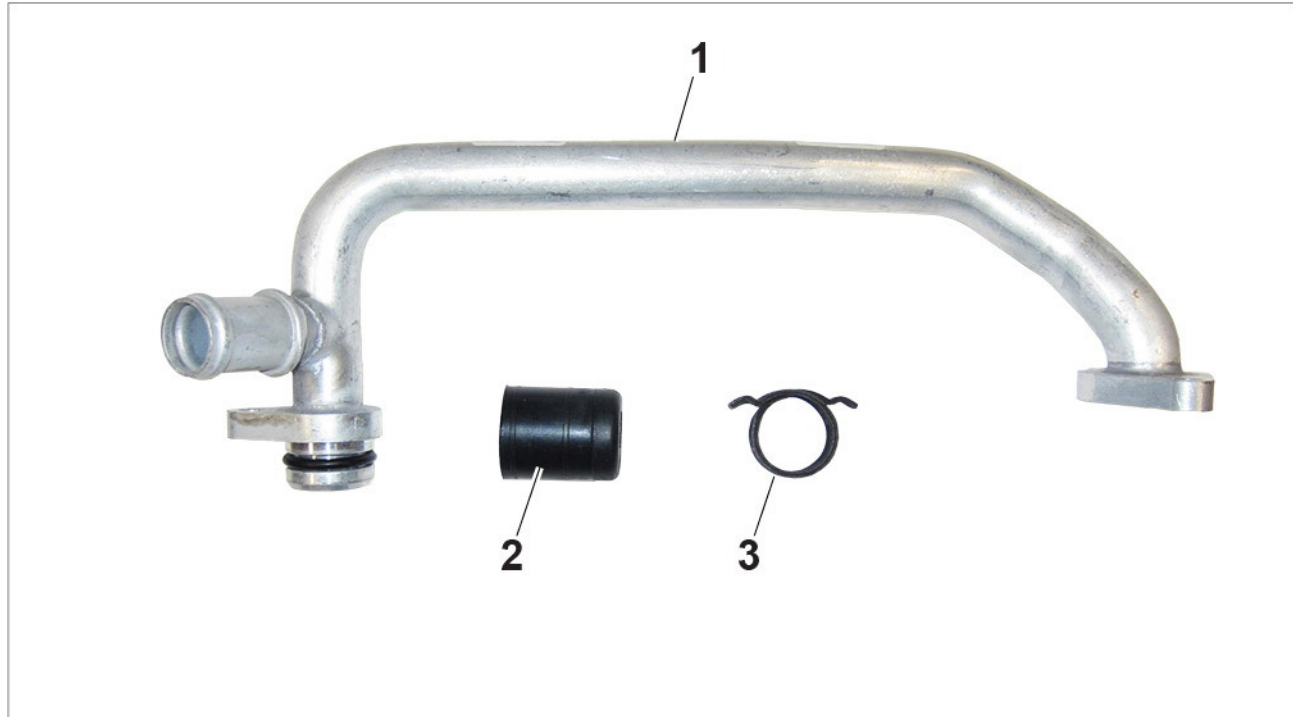
Materials: **Required materials** (usually already available in the Porsche dealership):

Part No.	Designation – Use	Qty.
00004330516	⇒ Antifreeze, 20-liter container – Cooling system	As much as required (approx. 2 liters required per vehicle)
00004320593	⇒ Klüberplus Gel lubricant, 100g tube – O-rings, coolant hoses	As much as required (approx. 10 grams required per vehicle)
00004320707	⇒ Optimol Paste MF grease, 100g tube – Oxygen sensor	As much as required (approx. 5 grams required per vehicle)

Information: **Repair kit, Part No. 00004330412, contains:**

Part No.	Designation – Use	Qty.
9A712132400	Cap – Coolant pipe for 971 V6 biturbo	1 ea.
99951265809	Clamp – Coolant pipe cap	1 ea.
9A712107000	Seal – Coolant pipe to engine block	1 ea.
9A725372500	V-band clamp – Primary catalytic converter to turbocharger	1 ea.
9A725311501	Seal – Primary catalytic converter to turbocharger	1 ea.
95811111300	Seal – Primary catalytic converter to exhaust pipe	1 ea.
N 91130801	Hexagon nut, M8 – Primary catalytic converter to exhaust pipe	3 ea.

Overview: **Overview of the coolant pipe to be installed:**



Coolant pipe repair kit

- 1 – Coolant pipe
- 2 – Cap for coolant pipe (for vehicles without hybrid drive)
- 3 – Clamp (for vehicles without hybrid drive)



Information

The coolant pipe to be installed during this campaign is also used on Panamera S E-Hybrid (971) vehicles. On the affected vehicles without a hybrid drive, the additional connection for the electric motor on the coolant pipe must therefore be closed off using a stopper and clamp.

Preparatory work

- Work Procedure: 1 Move the vehicle onto a lifting platform, but do not raise it yet ⇒ *Workshop Manual '4X00IN Lifting the vehicle'*.
- 2 Loosen front lid seal in the engine compartment trim panel area at the right.
For instructions, see ⇒ *Workshop Manual '553319 Removing and installing front lid seal'*.
- 3 Remove front trim panel (engine compartment) at the right ⇒ *Workshop Manual '700219 Removing and installing front trim panel (engine compartment)'*.

- 4 Remove cover for front underbody ⇒ *Workshop Manual '519219 Removing and installing cover for front underbody'*.

⚠ WARNING

Hot fluid

- **Danger of scalding**
- ⇒ **Avoid contact with hot fluid.**
- ⇒ **Wear personal protective gear.**

⚠ CAUTION

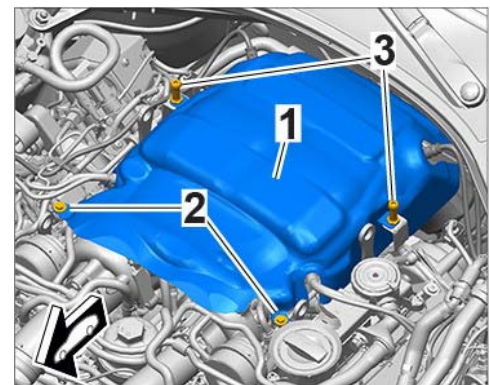
Hot components

- **Risk of burns**
- ⇒ **Let hot components cool down.**
- ⇒ **Wear personal protective gear.**

- 5 Drain coolant at the radiator connection in order to drain the engine cooling system. For instructions, see ⇒ *Workshop Manual '193817 Draining and filling coolant'*.
- 6 Remove strut (dome strut) ⇒ *Workshop Manual '408619 Removing and installing strut (dome strut)'*.
- 7 Remove engine cover (design cover) ⇒ *Workshop Manual '108319 Removing and installing engine cover (design cover) (V6 Turbo)'*.

Replacing coolant pipe

- Work Procedure: 1 Remove heat shield ⇒ *Removing heat shield on turbocharger -1-* for turbocharger.
- 1.1 Loosen and unscrew fastening screws ⇒ *Removing heat shield on turbocharger -2-* for the heat shield.
 - 1.2 Loosen and unscrew rear fastening pins for the engine cover (ball pins) ⇒ *Removing heat shield on turbocharger -3-*.
 - 1.3 Guide out and remove heat shield ⇒ *Removing heat shield on turbocharger -1-*.



Removing heat shield on turbocharger

CAUTION**Hot components**

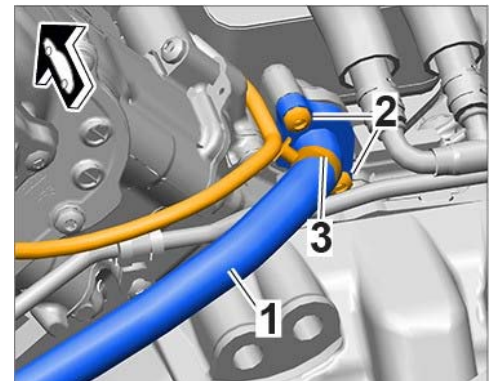
- Risk of burns
- ⇒ Let hot components cool down.
- ⇒ Wear personal protective gear.

- 2 Remove oxygen sensor downstream of catalytic converter on cylinder bank 2 (cyl. 4–6, left)
⇒ *Workshop Manual '247319 Removing and installing oxygen sensor downstream of catalytic converter (V6 biturbo)'*.
- 3 Remove primary catalytic converter on cylinder bank 2 (cyl. 4–6, left) ⇒ *Workshop Manual '267619 Removing and installing primary catalytic converter (V6 biturbo)'*.
- 4 Remove coolant pipe between engine block and left cylinder head.

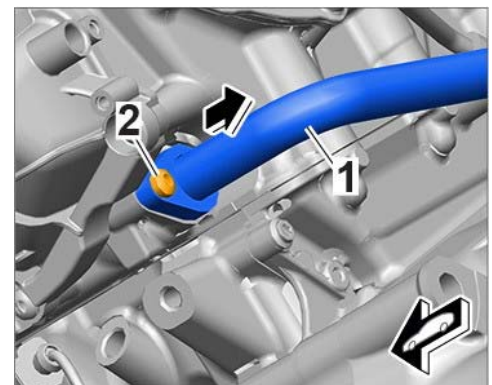
4.1 Unclip holder ⇒ *Disconnecting coolant pipe on engine block -3-* for engine wire harness at the coolant pipe ⇒ *Disconnecting coolant pipe on engine block -1-* and set it aside together with the engine wire harness.

4.2 Loosen and unscrew fastening screws ⇒ *Disconnecting coolant pipe on engine block -2-* for the coolant pipe on the engine block.

4.3 Loosen and unscrew fastening screw ⇒ *Disconnecting coolant pipe at cylinder head -2-* for the coolant pipe on the cylinder head.



Disconnecting coolant pipe on engine block



Disconnecting coolant pipe at cylinder head

CAUTION**Large quantity of remaining coolant will leak out**

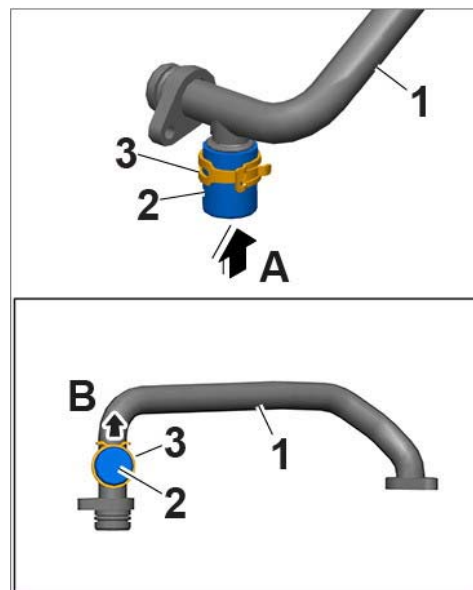
- Danger of scalding from hot coolant
- Components may be damaged or contaminated

- ⇒ Carefully loosen the coolant pipe initially and allow remaining coolant to drain.
- ⇒ Collect coolant using a suitable container.
- ⇒ Avoid contact with hot fluid.
- ⇒ Wear personal protective gear.

4.4 Carefully lever the coolant pipe ⇒ *Disconnecting coolant pipe at cylinder head -1-* off the cylinder head and remove it from the engine ⇒ *Disconnecting coolant pipe at cylinder head -arrow-*.
 A **large quantity** of remaining coolant can **leak out** at the cylinder head.

5 Prepare new coolant pipe for installation.

5.1 Push cap ⇒ *Preparing new coolant pipe -2-* as far as it will go onto the additional connection on the new coolant pipe ⇒ *Preparing new coolant pipe -1-* (⇒ *Preparing new coolant pipe -arrow A-*).



Preparing new coolant pipe

Part No.	Designation	Qty.
00004330411	Coolant pipe	1 ea.
9A712132400	Cap – from repair kit, Part No. 00004330412	1 ea.

5.2 Secure the cap ⇒ *Preparing new coolant pipe -2-* you have just fitted using the clamp ⇒ *Preparing new coolant pipe -3-* from the repair kit. Align the clamp so that it is facing the bend in the pipe as shown ⇒ *Preparing new coolant pipe -arrow B-*.

Part No.	Designation	Qty.
99951265809	Clamp – from repair kit, Part No. 00004330412	1 ea.

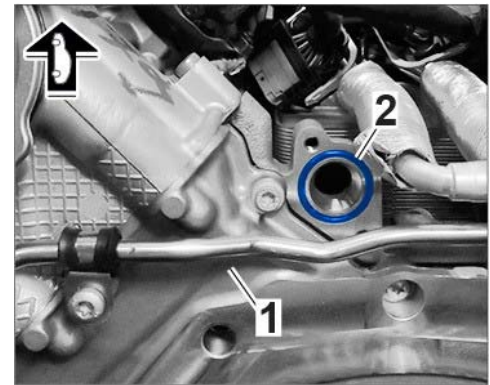
- 6 Install new coolant pipe between engine block and left cylinder head.



Information

- Coat O-rings, hoses and lines in the cooling system with Klüberplus Gel lubricant.

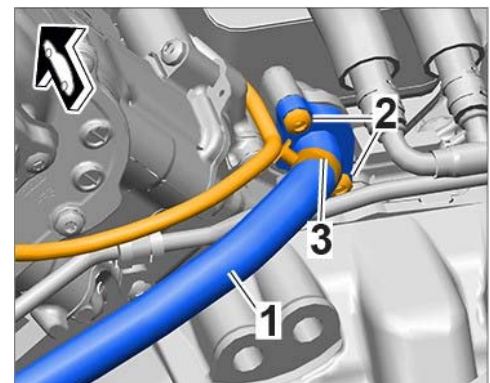
- 6.1 Carefully lever off the sealing ring ⇒ *Replacing sealing ring on engine block -2-* for the coolant pipe on the engine block ⇒ *Replacing sealing ring on engine block -1-* and fit a new sealing ring.



Replacing sealing ring on engine block

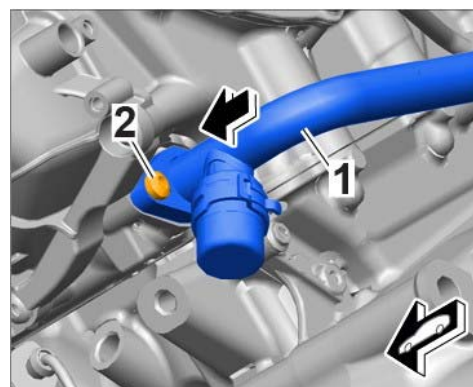
Part No.	Designation	Qty.
9A712107000	Seal – from repair kit, Part No. 00004330412	1 ea.

- 6.2 Position new coolant pipe ⇒ *Fitting coolant pipe on engine block -1-* on the engine block. Fit the fastening screws ⇒ *Fitting coolant pipe on engine block -2-* for the coolant pipe by only a few turns initially.



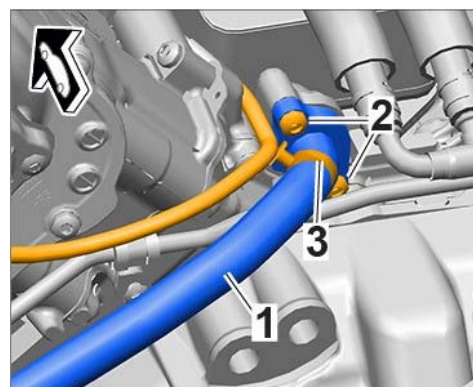
Fitting coolant pipe on engine block

- 6.3 Push in new coolant pipe ⇒ *Securing coolant pipe on cylinder head -1-* at the relevant connection on the cylinder head ⇒ *Securing coolant pipe on cylinder head -arrow-* and secure with the fastening screw ⇒ *Securing coolant pipe on cylinder head -2-*.
Tightening torque 9 Nm (6.5 ftlb.)



Securing coolant pipe on cylinder head

- 6.4 Secure coolant pipe ⇒ *Securing coolant pipe on engine block -1-* on the engine block with both fastening screws ⇒ *Securing coolant pipe on engine block -2-*.
Tightening torque 9 Nm (6.5 ftlb.)



Securing coolant pipe on engine block

- 6.5 Position engine wire harness and clip in holder ⇒ *Securing coolant pipe on engine block -3-* on the coolant pipe you have just fitted.

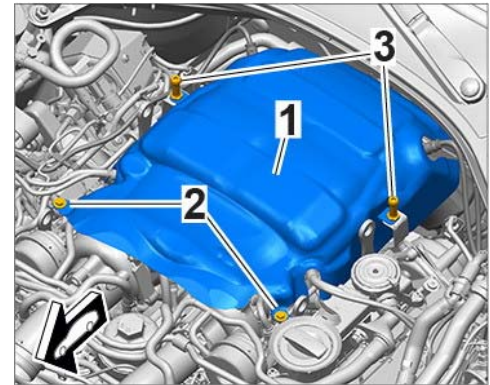
- 7 Install primary catalytic converter on cylinder bank 2 (cyl. 4–6, left) using new seals, fastening nuts and clamp.

Only position the primary catalytic converter loosely at first and **fit all fastening screws and nuts** to prevent strain.

For instructions, see ⇒ *Workshop Manual '267619 Removing and installing primary catalytic converter (V6 biturbo)'*.

Part No.	Designation	Qty.
9A725311501	Seal – from repair kit, Part No. 00004330412	1 ea.
95811111300	Seal – from repair kit, Part No. 00004330412	1 ea.
9A725372500	V-band clamp – from repair kit, Part No. 00004330412	1 ea.
N 91130801	Hexagon nut, M8 – from repair kit, Part No. 00004330412	3 ea.

- 8 Install oxygen sensor downstream of catalytic converter on cylinder bank 2 (cyl. 4–6, left) ⇒ *Workshop Manual '247319 Removing and installing oxygen sensor downstream of catalytic converter (V6 biturbo)'*.
- 9 Install heat shield ⇒ *Installing heat shield on turbocharger -1-* for turbocharger.
- 9.1 Guide in and position heat shield ⇒ *Installing heat shield on turbocharger -1-*.
- 9.2 Screw in and tighten fastening screws ⇒ *Installing heat shield on turbocharger -2-* for the heat shield.
Tightening torque 9 Nm (6.5 ftlb.)
- 9.3 Screw in and tighten rear fastening pins for engine cover (ball pins) ⇒ *Installing heat shield on turbocharger -3-*.
Tightening torque 4.8 Nm (3.4 ftlb.)



Installing heat shield on turbocharger

Concluding work

- Work Procedure: 1 Fill and bleed the cooling system ⇒ *Workshop Manual '193817 Draining and filling coolant'*.
- 2 Install engine cover (design cover) ⇒ *Workshop Manual '108319 Removing and installing engine cover (design cover) (V6 Turbo)'*.
- 3 Install strut (dome strut) ⇒ *Workshop Manual '408619 Removing and installing strut (dome strut)'*.
- 4 Install front trim panel (engine compartment) at the right ⇒ *Workshop Manual '700219 Removing and installing front trim panel (engine compartment)'*.
- 5 Secure front lid seal ⇒ *Workshop Manual '553319 Removing and installing front lid seal'*.
- 6 Install cover for front underbody ⇒ *Workshop Manual '519219 Removing and installing cover for front underbody'*.
- 7 Lower the vehicle and remove it from the lifting platform.
- 8 Enter the campaign in the Warranty and Maintenance booklet.

- References: ⇒ *Workshop Manual '108319 Removing and installing engine cover (design cover) (V6 Turbo)'*
 ⇒ *Workshop Manual '193817 Draining and filling coolant'*
 ⇒ *Workshop Manual '247319 Removing and installing oxygen sensor downstream of catalytic converter (V6 biturbo)'*
 ⇒ *Workshop Manual '267619 Removing and installing primary catalytic converter (V6 biturbo)'*
 ⇒ *Workshop Manual '4X00IN Lifting the vehicle'*

- ⇒ Workshop Manual '408619 Removing and installing strut (dome strut)'
- ⇒ Workshop Manual '519219 Removing and installing cover for front underbody'
- ⇒ Workshop Manual '553319 Removing and installing front lid seal'
- ⇒ Workshop Manual '700219 Removing and installing front trim panel (engine compartment)'

Warranty processing

Scope:

Working time:		
Replacing coolant pipe between engine block and left cylinder head		Labor time: 235 TU
Includes:	<ul style="list-style-type: none"> Raising and lowering the vehicle Loosening and securing front lid seal Removing and installing front trim panel (engine compartment) at the right Removing and installing cover for front underbody Draining and filling coolant Removing and installing strut (dome strut) Removing and installing engine cover (design cover) Removing and installing heat shield for turbocharger Removing and installing oxygen sensor downstream of catalytic converter on cylinder bank 2 Removing and installing primary catalytic converter on cylinder bank 2 	
Parts required:		
00004330411	Coolant pipe	1 ea.
00004330412	Repair kit	1 ea.
Required materials:		
00004330516	Antifreeze (20-liter container)	0.1 ea. (= approx. 2 liters)
00004320593	Klüberplus Gel lubricant (100g tube)	0.1 ea. (= approx. 10 g)
00004320707	Optimol Paste MF grease (100g tube)	0.05 ea. (= approx. 5 g)
⇒ Damage Code WJ26 066 000 2		

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