

Oil Leak on Cylinder Head Cover: Insert Microencapsulated Self-Locking Screw (166/21)

Model Lines: **Panamera (971)
Cayenne (9YA/9YB)**

Model Year: **As of 2017 up to 2021**

Equipment: **8-cylinder Otto engine (engine type: CVD)**

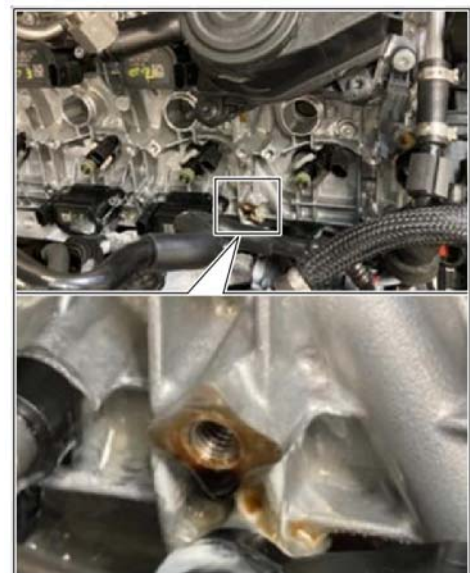
Concerns: **Oil leak around the cylinder head cover**

Information: The customer complains about an oil leak in the engine compartment. "Oil sweating" or drops of oil forming in the cylinder head cover area is detected in the workshop.



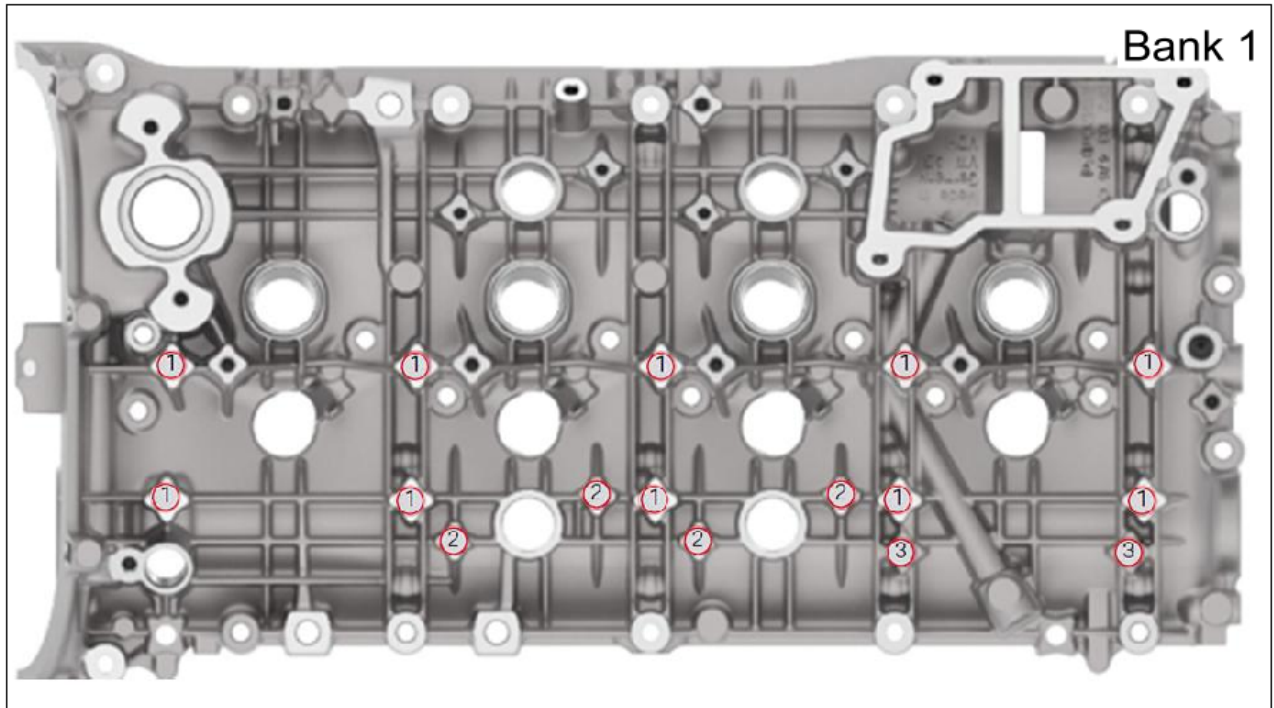
Information

The measure described here relates to a potential oil leak at the screws shown on the cylinder head cover. If the oil leak occurs at another location, the oil leak must be found and remedied. This Technical Information (TI) does not apply in this case.

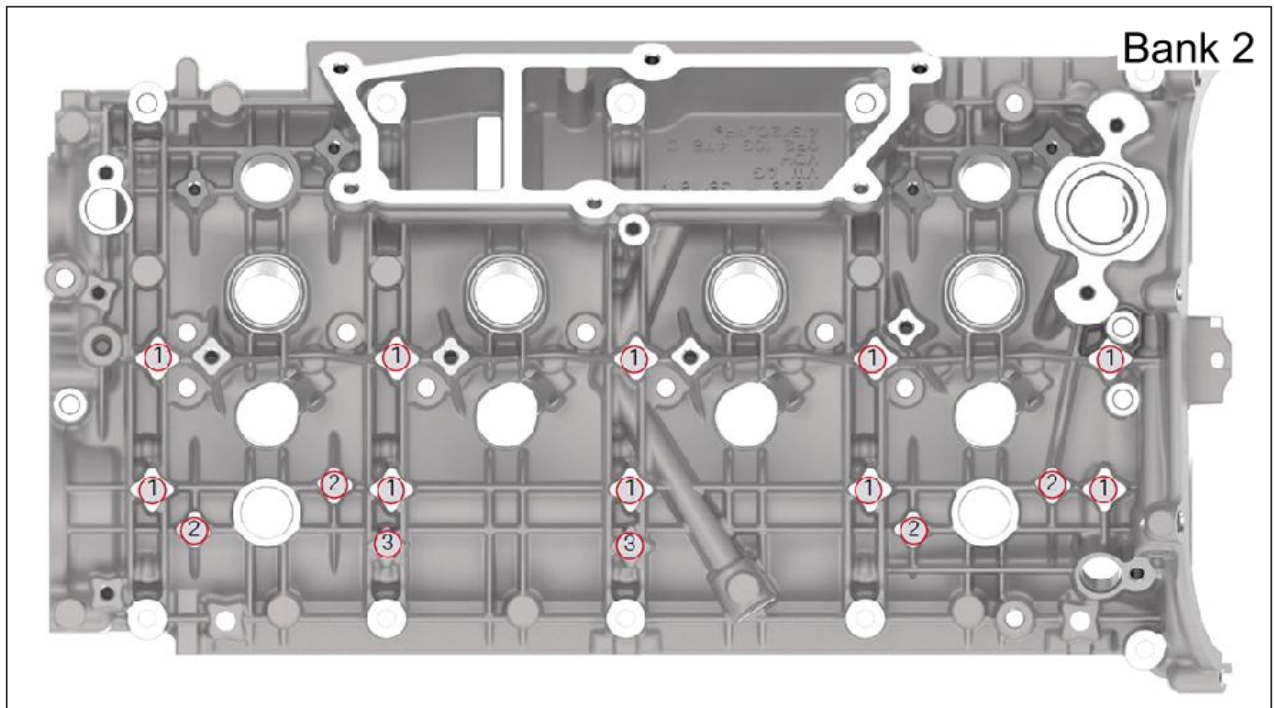


Example of an oil leak

Action required: Clean the affected area thoroughly and replace the affected screws and adjacent screws with micro-self-locking screws.



Overview of potentially affected screw points, bank 1



Overview of potentially affected screw points, bank 2



Information

To clearly identify an oil leak and avoid unnecessary repairs, always proceed as follows:

- Document the original complaint condition with meaningful photos
- Attach documentation to PCSS line.
- Clean the engine thoroughly
- Where applicable, spray large areas of the engine with leak search spray (“SpotCheck”) around the suspected leakage points
- Perform a test drive
- Check the engine for leaks and find the leak
- Produce photo documentation of the leakage point located
- Attach documentation to PCSS line.



Information

Definition and procedure for oil leaks:

- Oil sweating: Oil is visible; however, the amount of oil emerging is does not form drops of oil. There are no traces of oil on adjacent components. No further action is required in this case.
- Drops of oil: A significant amount of oil is clearly visible; the emerging oil forms drops of oil. There are also traces of oil on adjacent components. In this case, the leak must be located and remedied.

Parts required if necessary



Information

The number of screws required depends on the respective leakage point on the cylinder head cover.

Parts Info:

Required parts:

Screw No.	Part No.	Designation – Location	Number
1	N 10451409	⇒ Microencapsulated, self-locking screw, M6 x 16 – Cylinder head	As required
or			
2	N 10599501	⇒ Countersunk screw M5 x 20 – Cylinder head	As required

		or	
3	PAF101243	⇒ Internal hexagon round oval-head screw – Cylinder head	As required

Preparatory work

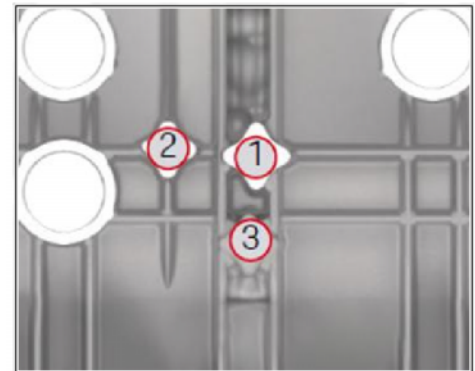
Work Procedure: 1 Remove fuel collection pipe.
For instructions, see:
⇒ *Workshop Manual '243019 Removing and installing fuel collection pipe (V8 Turbo)'*

Replace affected and adjacent screws



Information

The surrounding screws around the leakage must in principle also be replaced with microencapsulated self-locking screws analogous to the example shown in the graphic ⇒ *Example of "adjacent screws"*.



Example of "adjacent screws"

Work Procedure: 1 Unscrew the affected and adjacent screws.

2 Clean the affected area thoroughly.

3 Blow out bores using compressed air.

4 Screw in and tighten new microencapsulated self-locking screws at the relevant position.
Check the following while doing this:

- Screws for fuel collection pipe (item 1) **Initial tightening 7 Nm Final tightening 10 Nm** Also observe screw sequence. For instructions, see: ⇒ *Workshop Manual '243019 Removing and installing fuel collection pipe (V8 biturbo)'*
- Screw for solenoid hydraulic valve VHS (item 2) **Tightening torque 5 Nm**
- Screws for pressure converter holder (item 3) **Tightening torque 10 Nm**

Concluding work

Work Procedure: 1 Install fuel collection pipe.
For instructions, see:
⇒ *Workshop Manual '243019 Removing and installing fuel collection pipe (V8 Turbo)'*

Invoicing

Invoicing: For documentation and warranty invoicing, enter the working position and PCSS encryption specified below in the warranty claim:

APOS	Labor operation	I No.
15824931	Rework cylinder head cover	
15824932	Rework cylinder head cover	

PCSS encryption:

Location (FES5)	15820	Cylinder head cover
Damage type (SA4)	5043	oil loss

References: ⇒ *Workshop Manual '243019 Removing and installing fuel collection pipe (V8 Turbo)'*

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