

Complaint - Cylinder Head Cover Near the Injector Holes Leaking: Subsequent work on cylinder head (180/18)

Vehicle Type: **Macan S (95B)**

Model Year: **As of 2017 up to 2019**

Subject: **Cylinder head cover**

Information: **Complaint about injector hole leaks**

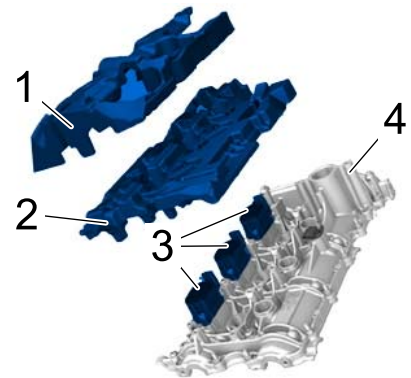


Information

- Due to a batch error in the casting procedure there may be cast residue in the cylinder head cover sealing groove.
- This cast residue may cause the injector holes to leak.

In the event of a complaint, the corresponding position of the leak(s) must be located **before doing any other work** and then rectified on a case-by-case basis, see section "**Procedure**".

Work Procedure: – **Cylinder head cover component overview:**



Component overview of cylinder head cover

- 1** – Insulation on top of cylinder head cover
- 2** – Insulation on bottom of cylinder head cover
- 3** – Hydraulic valve for valve lift switchover
- 4** – Cylinder head cover

**Information**

- Other electric plug connections and line guides must be disconnected to remove the cylinder head cover insulation.

1 Identify the cause of the leak(s):

- 1.1 Remove engine cover, see ⇒ *Workshop Manual '108319 Removing and installing engine cover (design cover) (V6 Turbo)'*.
- 1.2 Look to see whether both cylinder head covers have leaks, then continue on the relevant cylinder head with ⇒ 1.3.
- 1.3 Remove insulation on top of the cylinder head cover.
- 1.4 Remove hydraulic valves for valve lift switchover, see ⇒ *Workshop Manual '155519 Removing and installing hydraulic valve for valve lift switchover (V6 turbo)'*.
- 1.5 Check to see whether there is a large amount of oil under the hydraulic valves for valve lift switchover, see ⇒ *Fault type 1: Hydraulic valve for valve lift switchover leaking..*

If so:

- The O-ring on the hydraulic valve for valve lift switchover is the cause of the leak(s).
- Clean the engine compartment and replace affected hydraulic valve(s) fitted with O-rings.
- If the insulation on the top of the cylinder head cover is already soaked with oil, this must be replaced too.
- Continue with ⇒ 3.

If not:

- The hydraulic valves are not the cause of the leak(s).
- Continue with ⇒ 2.



Fault type 1: Hydraulic valve for valve lift switchover leaking.

2 **Subsequent work on cylinder head:**

2.1 Remove fuel collection pipe on the affected cylinder head, see ⇒ *Workshop Manual '243019 Removing and installing fuel collection pipe'*.

2.2 Remove insulation on bottom of the cylinder head cover.

2.3 **Identify the affected cylinder(s) by a visual inspection:**

2.3.1 Oil must have collected in the vicinity of the injector of the affected cylinder and the insulation on the bottom of the cylinder head cover should be fully soaked.

⇒ *Fault type 2: Cylinder head cover leaking*

2.3.2 If all affected cylinders are identified, make a note of them and continue with ⇒ 2.4.

2.4 To remove cylinder head cover and dispose of old seal, see ⇒ *Workshop Manual '158219 Removing and installing cylinder head cover (V6 turbo)'*.

2.5 Clean cylinder head cover.

2.6 Check the sealing groove (⇒ *Cylinder head cover sealing groove -1-*) of the cylinder head cover visually. Be particularly meticulous when doing this especially in the vicinity of the affected cylinder.

2.7 Carefully remove any cast residue (⇒ *Cylinder head cover sealing groove -2-*) using a small flat screwdriver, ensuring that the sealing groove is not damaged. There must be no more cast residue in the sealing groove after machining (⇒ *Cylinder head cover sealing groove -3-*).

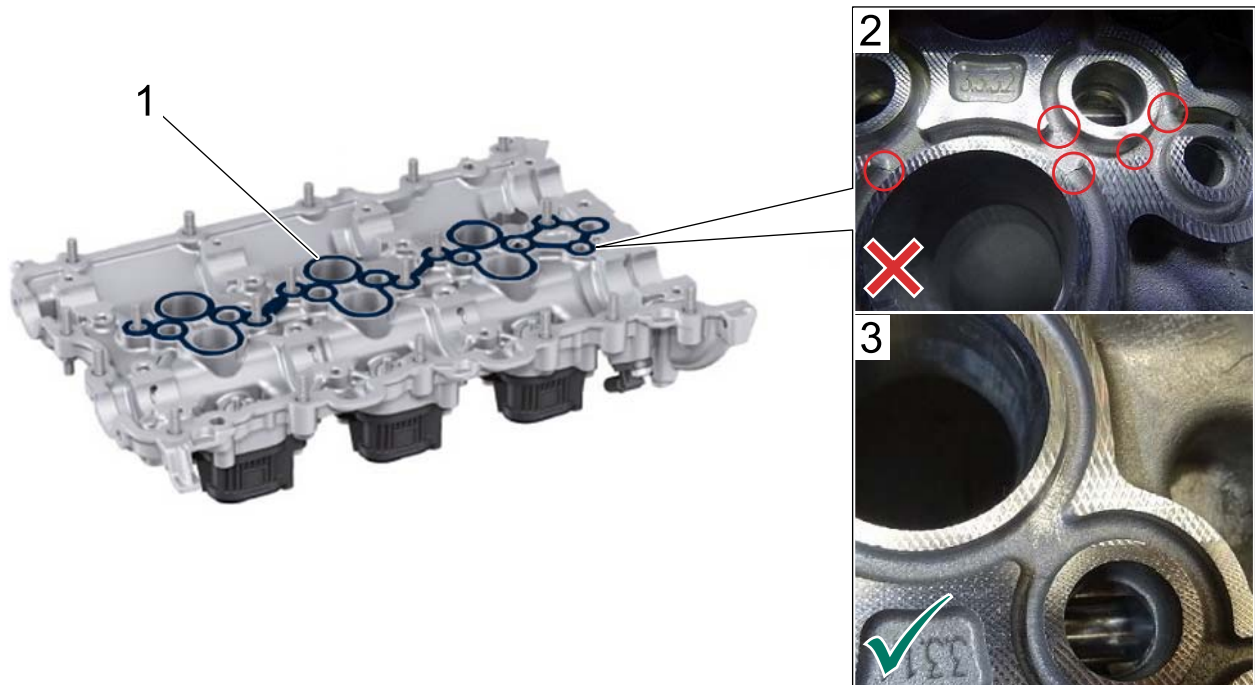
2.8 To install a new seal on the cylinder head cover, see ⇒ *Workshop Manual '158219 Removing and installing cylinder head cover (V6 turbo)'*.

2.9 Replace and install the insulation on the bottom of the cylinder head cover.

2.10 Install fuel collection pipe, see ⇒ *Workshop Manual '243019 Removing and installing fuel collection pipe'*.



Fault type 2: Cylinder head cover leaking



Cylinder head cover sealing groove

3 Subsequent work:

- 3.1 Install hydraulic valves for valve lift switchover, see ⇒ *Workshop Manual '155519 Removing and installing hydraulic valve for valve lift switchover (V6 turbo)'*.
- 3.2 Install insulation on top of the cylinder head cover.
- 3.3 Install engine cover, see ⇒ *Workshop Manual '108319 Removing and installing engine cover (design cover) (V6 Turbo)'*.

Invoicing: For documentation and warranty invoicing, enter the labor operations and PQIS coding specified below in the warranty claim:

APOS	Labor operation	I No.
15824922	Reworking cylinder head cover on cylinders 1–3 (96 TU)	
15824921	Reworking cylinder head cover on cylinders 4–6 (100 TU)	
15824924	Reworking cylinder head cover on cylinders 1–3 (1,998 TU)	
15824923	Reworking cylinder head cover on cylinders 4–6 (1,975 TU)	

PQIS coding

Location (FES5)	15800	Cylinder head cover seal
Damage type (SA4)	5041	Oil/grease leak

- References:
- ⇒ *Workshop Manual '108319 Removing and installing engine cover (design cover) (V6 Turbo)'*
 - ⇒ *Workshop Manual '155519 Removing and installing hydraulic valve for valve lift switchover (V6 Turbo)'*
 - ⇒ *Workshop Manual '243019 Removing and installing fuel collection pipe'*
 - ⇒ *Workshop Manual '158219 Removing and installing cylinder head cover (V6 Turbo)'*

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