

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

Model Line: **Cayenne (9YA) — LK2/LK3**

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

Subject: **Cylinder head cover**

Information: **Complaint about injector hole leaks**

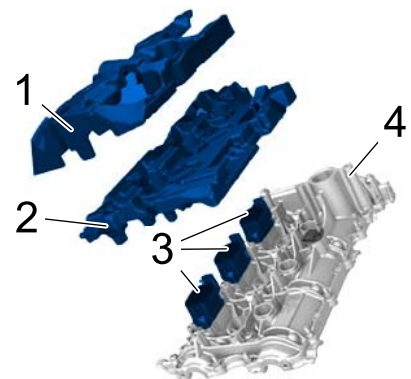


Information

- 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 "**Work 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** – Solenoid hydraulic valve for valve lift adjustment
- 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 To remove air filter housing, see ⇒ *Workshop Manual '242519 Removing and installing air filter housing'*.
- 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 To remove valve lift adjustment solenoid hydraulic valves, see ⇒ *Workshop Manual '155519 Removing and installing valve lift adjustment solenoid hydraulic valve (V6 turbo)'*.
- 1.5 Look and see whether there is a large quantity of oil under the valve lift adjustment solenoid hydraulic valve, see ⇒ *Fault type 1: Valve lift adjustment solenoid hydraulic valve leaking*.

If so:

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

If not:

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



Fault type 1: Valve lift adjustment solenoid hydraulic valve leaking

2 Subsequent work on cylinder head cover:

2.1 To remove fuel collection pipe on the affected cylinder head, see ⇒ *Workshop Manual '243019 Removing and installing fuel collection pipe (V6 turbo)'*.

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-*).

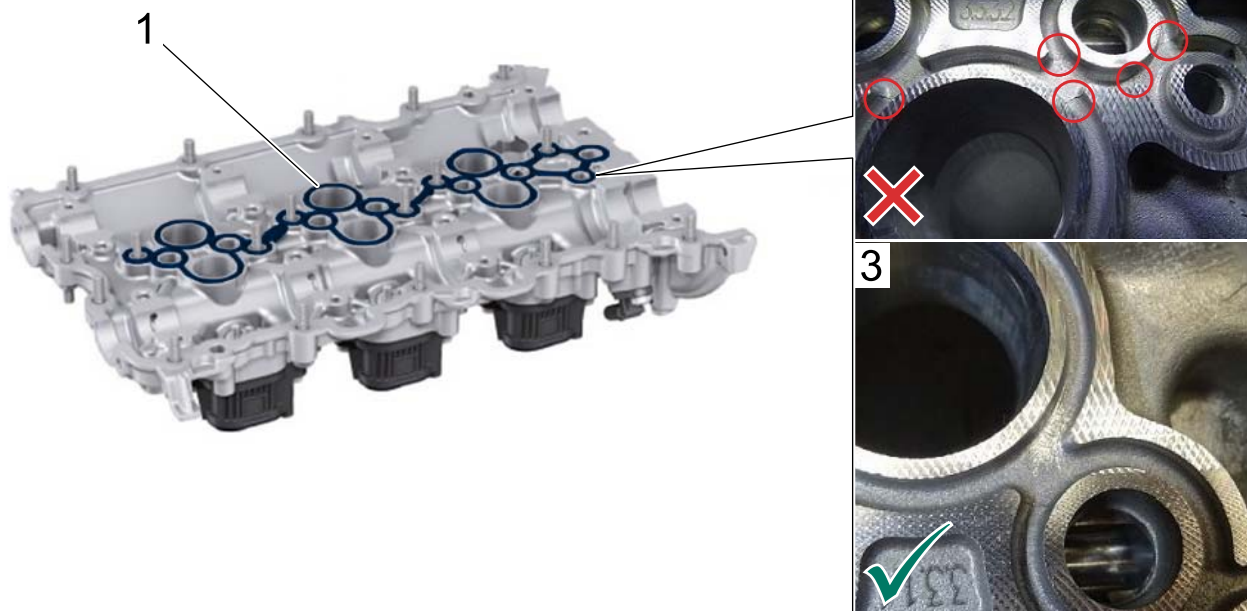
2.8 To install a new seal on the cylinder head cover, see ⇒ *Workshop Manual '158219 Removing and installing cylinder head cover (V6 turbo)'*.

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

2.10 To install fuel collection pipe, see ⇒ *Workshop Manual '243019 Removing and installing fuel collection pipe (V6 Turbo)'*.



Fault type 2: Cylinder head cover leaking



Cylinder head cover sealing groove

3 Subsequent work:

- 3.1 To install valve lift adjustment solenoid hydraulic valves, see ⇒ *Workshop Manual '155519 Removing and installing valve lift adjustment solenoid hydraulic valves (V6 turbo)'*.
- 3.2 Install insulation on top of the cylinder head cover.
- 3.3 To install air filter housing, see ⇒ *Workshop Manual '242519 Removing and installing air filter housing'*.

Invoicing: The work involved is invoiced under the labor items:

APOS	Labor operation	I No.
15824912	Replace valve lift adjustment solenoid hydraulic valves on cylinders 1 - 3 (9YAAA1, 9YAAE1)	
15824911	Replace valve lift adjustment solenoid hydraulic valves for cylinders 4 - 6 (9YAAA1, 9YAAE1)	
15824914	Subsequent work on cylinder head cover on cylinders 1-3 (9YAAA1, 9YAAE1)	
15824913	Subsequent work on cylinder head cover on cylinders 4-6 (9YAAA1, 9YAAE1)	

APOS	Labor operation	I No.
15824922	Replace valve lift adjustment solenoid hydraulic valves on cylinders 1 - 3 (9YABB1)	
15824921	Replace valve lift adjustment solenoid hydraulic valves on cylinders 4-6 (9YABB1)	
15824924	Subsequent work on cylinder head cover on cylinders 1-3 (9YABB1)	
15824923	Subsequent work on cylinder head cover on cylinders 4-6 (9YABB1)	

For invoicing and documentation using PQIS, enter the following coding:

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

References: ⇒ *Workshop Manual '242519 Removing and installing air cleaner housing '*
 ⇒ *Workshop Manual '155519 Removing and installing solenoid hydraulic valve for valve lift adjustment (V6 Turbo)'*
 ⇒ *Workshop Manual '243019 Removing and installing fuel collection pipe (V6 Turbo)'*
 ⇒ *Workshop Manual '158219 Removing and installing cylinder head cover (V6 Turbo)'*

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