

Engine Symptom - Loose/Broken Screws and Oil Leaks in the Area of the Chain Housing Cover and/or Camshaft Phaser (SY 210/21)

Revision: This bulletin replaces bulletin WTY 2000.2, dated March 30, 2021.

Model Year: **As of 2011 up to 2018**

Model Series: **Cayenne (92A)**

Concerns: **Chain housing cover and camshaft phaser**

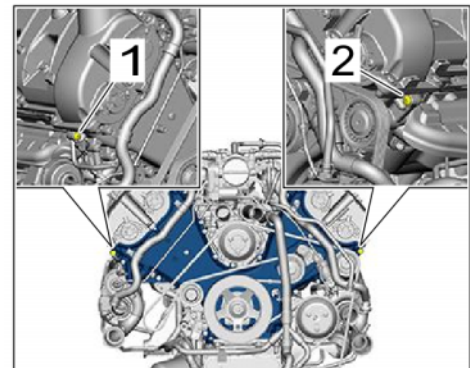
Symptom: Oil leak at the chain housing cover and/or camshaft phaser or a loose or broken screw in the chain housing cover. ⇒ *Screws for chain housing cover*



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 oil leak must be located and remedied.



Screws for chain housing cover

- Possible Causes:
- Loose or broken screw in the chain housing cover
 - Leak in the chain housing cover
 - Leak on cylinder head cover
 - Leak in the camshaft phaser

Remedial
Action:

Select the required remedial action depending on the type of problem.

- Problem 1: Loose or broken screws in the chain housing cover **without** an oil leak. For remedial action, see: ⇒ *Technical Information 'Problem 1: Loose or broken screws in the chain housing cover without an oil leak'*
- Problem 2: Loose or broken screws in the chain housing cover **with** an oil leak. For remedial action, see: ⇒ *Technical Information 'Problem 2: Loose or broken screws in the chain housing cover with an oil leak'*
- Problem 3: Oil leak in the area of the camshaft phaser. For remedial action, see: ⇒ *Technical Information 'Problem 3: Oil leak in the area of the camshaft phaser'*
- Problem 4: Oil leak around the cylinder head cover. For remedial action, see: ⇒ *Technical Information 'Problem 4: Oil leak around the cylinder head cover'*
- Problem 5: Oil leak in the area of the chain housing cover, remedial action 1, 2, 3 or 4 already performed. For remedial action, see: ⇒ *Technical Information 'Problem 5: Oil leak in the area of the chain housing cover, remedial action 1, 2, 3 or 4 already performed'*

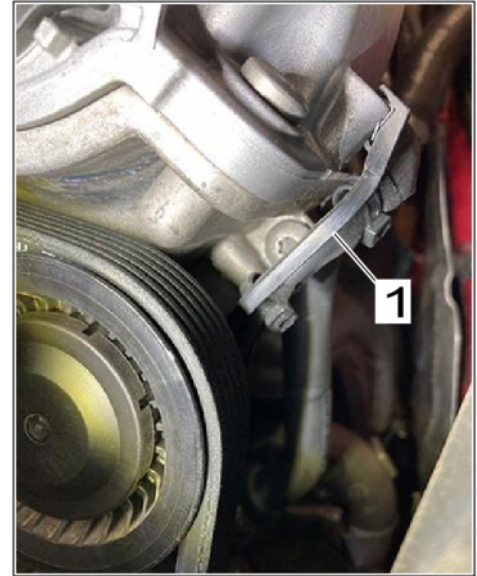
Parts required

Parts Info:

Part No.	Designation - Location	Number
N 91097101	⇒ Steel screw, M6 x 30 - Chain housing cover	2 ea.
99902519330	⇒ Aluminium washer - Chain housing cover	2 ea.

Preparatory work

- Work Procedure: 1 Remove air cleaner housing cover.
For instructions, see: ⇒ *Workshop Manual '242455 Replacing air-cleaner element'*



Holder for electric line

- 2 Unclip holder ⇒ *Holder for electric line -1-* for the electric line on the left cylinder head cover.

Problem 1: Loose or broken screws in the chain housing cover without an oil leak

Work

Procedure:



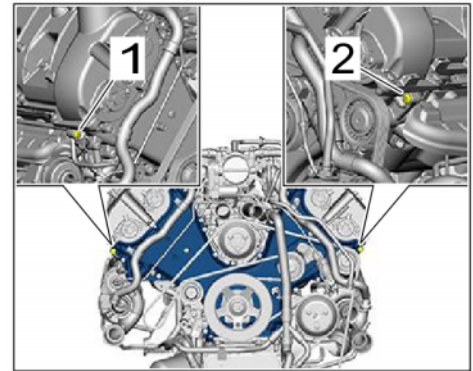
Sample illustration: Loose/broken screw in the chain housing cover



Information

If an oil leak is evident, continue with ⇒ *Technical Information '242455 Problem 2: Loose or broken screws in the chain housing cover with an oil leak'*.

- 1 Take photos of the complaint for PCSS. ⇒ *Sample illustration: Loose/broken screw in the chain housing cover*



Screws for chain housing cover

- 2 Replace screws ⇒ *Screws for chain housing cover-1, 2-* with specified steel screws and aluminium washers. **Tightening torque 10 Nm (7.4 ftlb.)**



Information

If the screw has broken off, clean the screw hole thoroughly and unscrew the broken screw using a suitable screwdriver.



Holder for electric line

- 3 Clip in holder ⇒ *Holder for electric line-1-* for the electric line on the left cylinder head cover.
- 4 Install air cleaner housing cover.
For instructions, see: ⇒ *Workshop Manual '242455 Replacing air-cleaner element'*
- 5 Perform a test drive.

6 Check the engine for oil leaks in the area of the chain housing cover.

Assessment		Action
(✓)	No oil leaks found.	⇒ End of remedial action.
(✗)	If oil leaks are found in the area of the chain housing cover despite having replaced screws.	⇒ Continue with Problem 5 . ⇒ <i>Technical Information '242455 Problem 5: Oil leak in the area of the chain housing cover, remedial action 1, 2, 3 or 4 already performed'</i>

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

APOS	Labor operation	I No.
15334900	Rework chain housing cover	

PCSS encryption:

Location (FES5)	15332	Fastening screw for the chain housing cover
Damage type (SA4)	1511	breakage

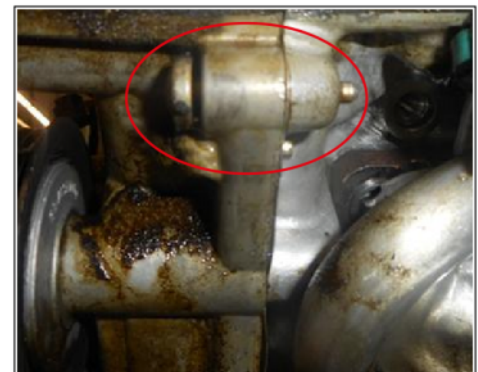
Problem 2: Loose or broken screws in the chain housing cover with an oil leak

Work
Procedure:

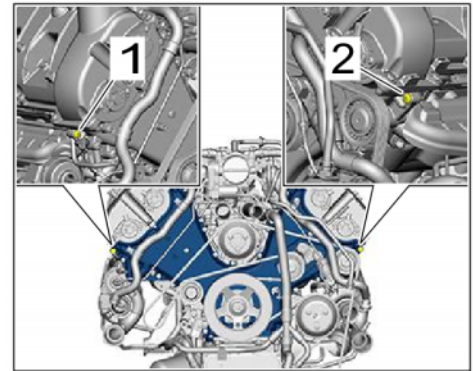


Information

- Oil leaks must be clearly identifiable and reproducible
 - Engine oil and coolant must have reached operating temperature during a test drive
- 1 Take photos of the complaint for PCSS. ⇒ *Sample illustration: Loose/broken screw in the chain housing cover*
 - 2 Clean the chain housing cover and oily areas using a suitable cleaning agent.



Sample illustration: Loose/broken screw in the chain housing cover



Screws for chain housing cover

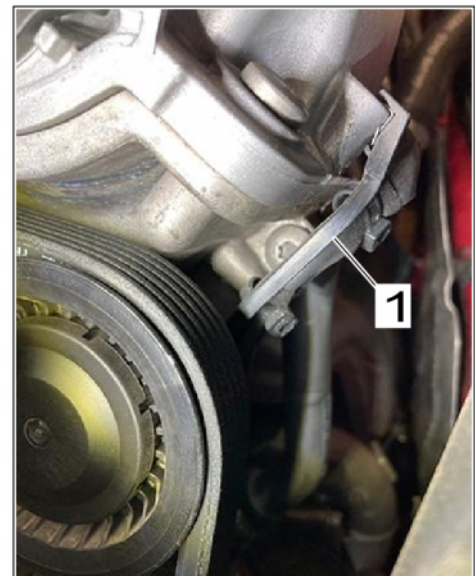
- 3 Replace screws \Rightarrow *Screws for chain housing cover -1, 2-* with specified steel screws and aluminium washers. **Tightening torque 10 Nm (7.4 ftlb.)**



Information

If the screw has broken off, clean the screw hole thoroughly and unscrew the broken screw using a suitable screwdriver.

- 4 Apply leak-locating spray or powder to suspected leakage points.



Holder for electric line

- 5 Clip in holder \Rightarrow *Holder for electric line -1-* for the electric line on the left cylinder head cover.
- 6 Install air cleaner housing cover.
For instructions, see: \Rightarrow *Workshop Manual '242455 Replacing air-cleaner element'*

- 7 Perform a test drive.
- 8 Check the engine for oil leaks in the area of the chain housing cover.

Assessment		Action
(✓)	No oil leaks found.	⇒ End of remedial action.
(x)	Oil leaks found in the area of the camshaft phaser.	⇒ Continue with Problem 3 . ⇒ <i>Technical Information '242455 Problem 3: Oil leak in the area of the camshaft phaser'</i>
(x)	Oil leaks found in the area of the cylinder head cover.	⇒ Continue with Problem 4 . ⇒ <i>Technical Information '242455 Problem 4: Oil leak around the cylinder head cover'</i>
(x)	If oil leaks are found in the area of the chain housing cover despite having replaced screws.	⇒ Continue with Problem 5 . ⇒ <i>Technical Information '242455 Problem 5: Oil leak in the area of the chain housing cover, remedial action 1, 2, 3 or 4 already performed'</i>

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

APOS	Labor operation	I No.
15334900	Rework chain housing cover	

PCSS encryption:

Location (FES5)	15332	Fastening screw for the chain housing cover
Damage type (SA4)	1511	breakage

Problem 3: Oil leak in the area of the camshaft phaser

Work
Procedure:



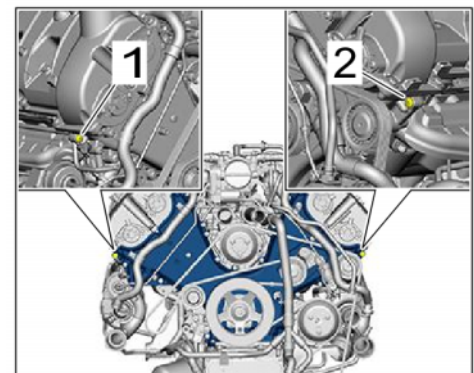
Information

- Oil leaks must be clearly identifiable and reproducible
- Engine oil and coolant must have reached operating temperature during a test drive

- 1 Take photos of the complaint for PCSS. ⇒ *Sample illustration: Oil leak in the camshaft phaser*
- 2 Clean the camshaft phaser and oily areas using a suitable cleaning agent.



Sample illustration: Oil leak in the camshaft phaser



Screws for chain housing cover

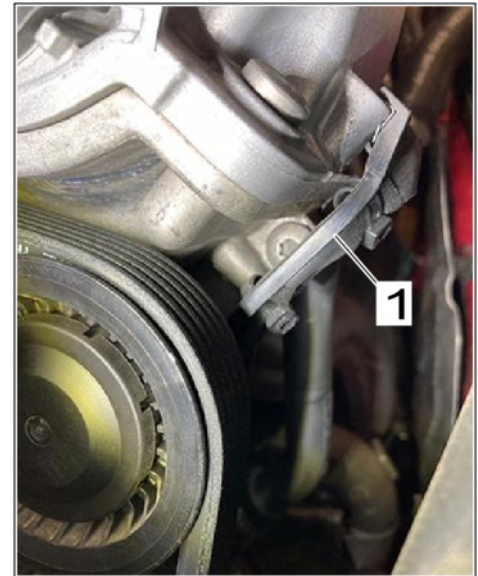
- 3 Replace screws ⇒ *Screws for chain housing cover -1, 2-* with specified steel screws and aluminium washers. **Tightening torque 10 Nm (7.4 ftlb.)**



Information

If the screw has broken off, clean the screw hole thoroughly and unscrew the broken screw using a suitable screwdriver.

- 4 Apply leak-locating spray or powder to suspected leakage points.



Holder for electric line

- 5 Clip in holder ⇒ *Holder for electric line -1-* for the electric line on the left cylinder head cover.
- 6 Install air cleaner housing cover.
For instructions, see: ⇒ *Workshop Manual '242455 Replacing air-cleaner element'*
- 7 Perform a test drive.
- 8 Check the engine for oil leaks in the area of the chain housing cover and camshaft phaser.

Assessment		Action
(✓)	No oil leaks found.	⇒ End of remedial action.
(✗)	Oil leaks found in the area of the cylinder head cover.	⇒ Continue with Problem 4 . ⇒ <i>Technical Information '242455 Problem 4: Oil leak around the cylinder head cover'</i>
(✗)	If oil leaks are found in the area of the chain housing cover despite having replaced screws.	⇒ Continue with Problem 5 . ⇒ <i>Technical Information '242455 Problem 5: Oil leak in the area of the chain housing cover, remedial action 1, 2, 3 or 4 already performed'</i>
(✗)	Oil leaks found at the camshaft phaser.	⇒ Remedy any oil leaks at the camshaft phaser.

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

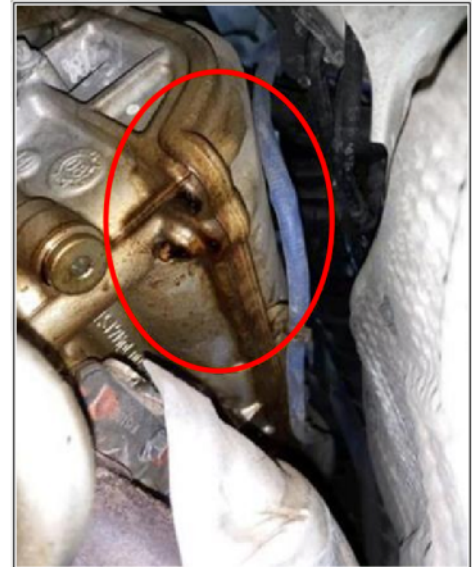
APOS	Labor operation	I No.
15900100	Check camshaft housing seal	

PCSS encryption

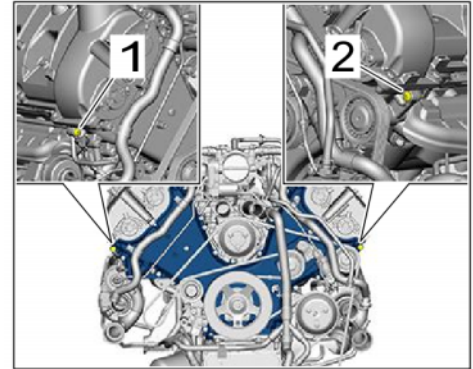
Location (FES5)	15900	Camshaft-housing seal
Damage type (SA4)	5043	oil loss

Problem 4: Oil leak around the cylinder head coverWork
Procedure:**Information**

- Oil leaks must be clearly identifiable and reproducible
 - Engine oil and coolant must have reached operating temperature during a test drive
- 1 Take photos of the complaint for PCSS. ⇒ *Sample illustration: Oil leak on cylinder head cover*
 - 2 Clean the cylinder head cover and oily areas using a suitable cleaning agent.



Sample illustration: Oil leak on cylinder head cover



Screws for chain housing cover

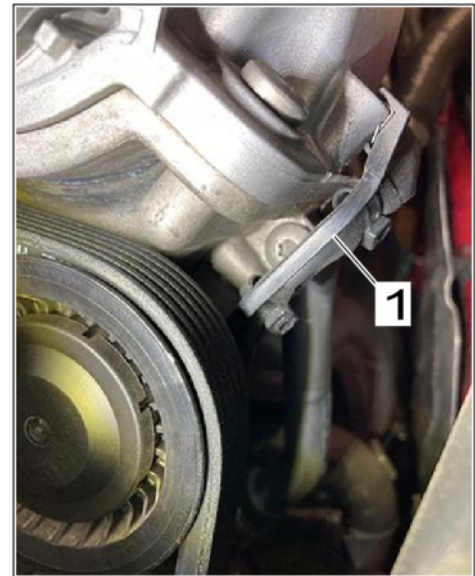
- 3 Replace screws \Rightarrow *Screws for chain housing cover -1, 2-* with specified steel screws and aluminium washers. **Tightening torque 10 Nm (7.4 ftlb.)**



Information

If the screw has broken off, clean the screw hole thoroughly and unscrew the broken screw using a suitable screwdriver.

- 4 Apply leak-locating spray or powder to suspected leakage points.



Holder for electric line

- 5 Clip in holder \Rightarrow *Holder for electric line -1-* for the electric line on the left cylinder head cover.
- 6 Install air cleaner housing cover.
For instructions, see: \Rightarrow *Workshop Manual '242455 Replacing air-cleaner element'*

- 7 Perform a test drive.
- 8 Check the engine for oil leaks in the area of the chain housing cover and cylinder head cover.

Assessment		Action
(✓)	No oil leaks found.	⇒ End of remedial action.
(X)	If oil leaks are found in the area of the chain housing cover despite having replaced screws.	⇒ Continue with Problem 5 . ⇒ <i>Technical Information '242455 Problem 5: Oil leak in the area of the chain housing cover, remedial action 1, 2, 3 or 4 already performed'</i>
(X)	Oil leaks found on the cylinder head cover.	⇒ Repair any oil leaks on the cylinder head cover.

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

APOS	Labor operation	I No.
15820100	Check the cylinder head cover	

PCSS encryption:

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

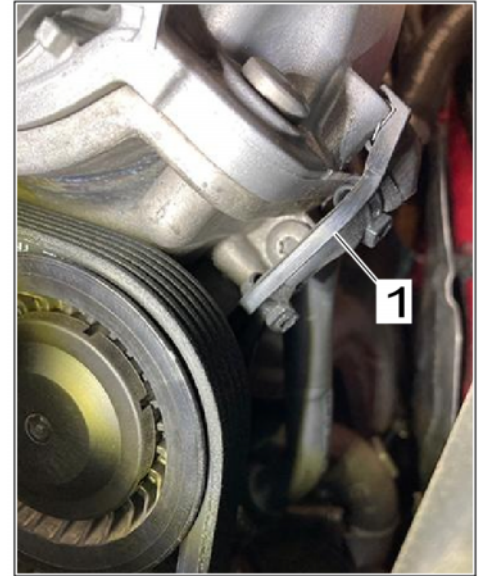
Problem 5: Oil leak in the area of the chain housing cover, remedial action 1, 2, 3 or 4 already performed

Work
Procedure:



Information

- Oil leaks must be clearly identifiable and reproducible
 - Engine oil and coolant must have reached operating temperature during a test drive
- 1 Take photos of the complaint for PCSS.
 - 2 Clean the chain housing cover and oily areas using a suitable cleaning agent.
 - 3 Apply leak-locating spray or powder to suspected leakage points.



Holder for electric line

- 4 Clip in holder ⇒ *Holder for electric line -1-* for the electric line on the left cylinder head cover.
- 5 Install air cleaner housing cover.
For instructions, see: ⇒ *Workshop Manual '242455 Replacing air-cleaner element'*
- 6 Perform a test drive.
- 7 Check the engine for oil leaks in the area of the chain housing cover and cylinder head cover.

Assessment		Action
(✓)	No oil leaks found.	⇒ End of remedial action.
(✗)	Oil leaks are still found in the area of the chain housing cover.	This repair measure may only be carried out if the two affected screws have already been replaced and this was not the cause of the leaks in the chain housing cover. ⇒ Remove the chain housing cover as described in the Workshop Manual. ⇒ <i>Workshop Manual '153351 Seal the chain housing cover (engine installed)'</i> There is no need to remove the engine for this.

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

APOS	Labor operation	I No.
15330100	Check the chain housing cover	

PCSS encryption:

Location (FES5)	15330	Chain housing cover
Damage type (SA4)	5043	oil loss

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